Metropole
Project #6508378

Energy Analysis for Code Compliance
2015 Seattle Energy Code
Total Building Performance (Section C407)
Cycle 2 Corrections

Prepared by
Madison Engineering PS
https://madisonengineeringps.com

Kevin Madison
kevinm@madisonengineeringps.com
206-834-0002

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I. Executive Summary

Metropole is an existing four-story office building over basement and subbasement located at 423 2nd Ave Extension S, Seattle 98104. The building is being renovated to include new lighting and HVAC systems, glazing and some upgraded wall insulation. It is a substantial alteration and is required to be brought into full compliance with the Seattle Energy Code. Table 1 shows the breakdown of altered spaces.

Table 1 - Area per Proposed Use Breakdown

Altered Spaces	
Office/childcare/meeting/support space	Area (ft2)
Basement and subbasement	12,271
Level 1	6,771
Level 2	6,945
Level 3	6,888
Level 4	3,152
Total Altered Space	36,027

The project is a substantial alteration covered by SEC C503.8. Compliance is demonstrated following Section C407, "Total Building Performance", of the 2015 Seattle Energy Code (SEC). Two C406 options are incorporated into the proposed and baseline design: C406.3 Reduced lighting power and C403.6 Dedicated outside air system (DOAS). Per Section 503.2 Exception 2, the proposed design must be no more than 110 percent of the annual energy consumption allowed by C407.3. This project is following C407.3.3, which requires the proposed building energy use to be no more than 93 percent of the standard reference design energy use. Therefore, the standard reference design energy budget for the proposed building is established using the equations below. The proposed building annual energy use shall be no more than 102.3% of the standard reference design energy consumption.

$$Energy\ Use_{prop} \leq Energy\ Use_{SRD(C407)} \times 0.93 \times 1.10$$

$$Energy\ Use_{prop} \leq Energy\ Use_{SRD(C407)} \times 1.023$$

The project complies with all mandatory and prescriptive requirements of the 2015 SEC as listed in Section C503

The total energy consumption on a Btu-per-conditioned-square foot-per-year basis for both the standard reference and the proposed design is shown in Table 2, and includes all annual consumption for all end-uses including energy use of the unaltered portions of the building.

Table 2 - Estimated Annual Energy Consumption of Standard and Proposed Design

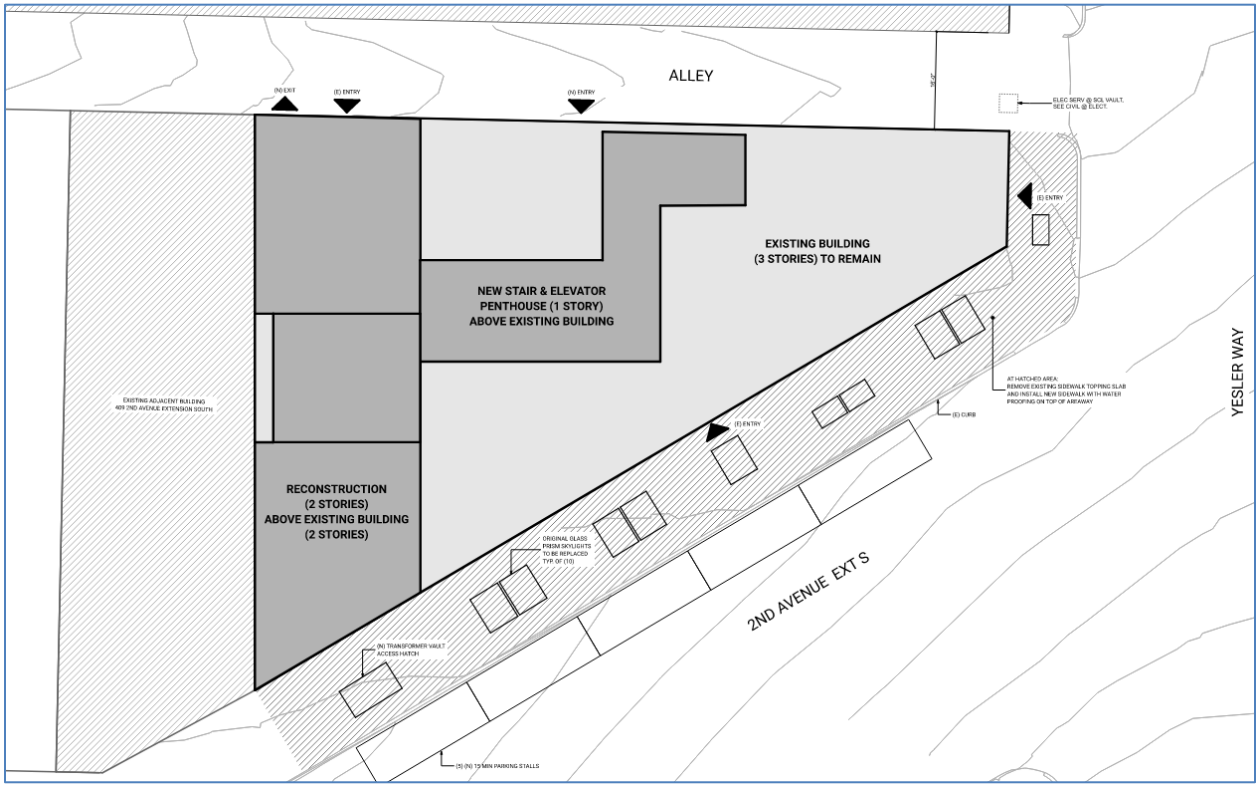
Design	Estimated Energy Consumption (kBtu/conditioned ft2/year)	
Standard	Modeled	18.19
	Allowed (102.3% of SRD)	18.61
Proposed	Modeled	17.69
	% of SRD	97.3%

Note that the project assumes that lighting will comply with C406.3 while the submission does not include a lighting design at this time. The permit applicant understands that : 1) an electrical permit application shall be submitted and approved prior to the issuance of the building permit per SEC C407.2 and TIP 423; and 2) the electrical/ lighting permit number and the Lighting Forms from the SDCI web site shall also be submitted for verification. All electrical documentation will be provided by others.

II. Project Description

The address of the project is 423 2nd Ave Extension S, Seattle 98104 and shown in Figure 1.

Figure 1 - Site Plan



The building includes four floors of self-storage space over a parking and vehicle storage ground floor and is approximately 56 feet tall.

The proposed HVAC system is described in Table 3

Table 3 - Proposed HVAC design

System	Proposed HVAC system
Heating and Cooling	Hydronic heating and cooling using air-to-water heat pumps serving mostly chilled beams and baseboard heating. Some spaces have 4-pipe fan coils.
Ventilation	Dedicated outside air systems directly serving the conditioned zones with fan operation decoupled from the primary heating and cooling systems.
Heated only spaces	Restrooms, corridors, and storage spaces are heated only. For the proposed design, these have been modeled with hot water heating and package air conditioners with a SEER of 14. As these areas are also served by DOAS systems, the fans of the air conditioners are modeled as cycling only when cooling is required (but not heating).

The project includes the following energy efficiency features:

1. Hydronic chilled beam and baseboard heating eliminate fan energy of typical compared to the baseline package heat pump systems.
2. All spaces include CO2 monitoring and VAV dampers on DOAS diffusers. DOAS ERVs are equipped with pressure regulated VSD fans that reduce overall flow rate when zonal dampers modulate.
3. The proposed building and SRD have DOAS with ERVs for ventilation air. The proposed building includes energy recovery systems with sensible and latent effectiveness in excess of 0.85 (see Appendix F.2.) while the SRD latent effectiveness is 0.7 per C403.6.
4. Openable windows are interlocked with cooling system greatly reducing mechanical cooling and ventilation needs during shoulder cooling periods.
5. Service water heating system uses air-to-water heat pumps compared to electric resistance used in the baseline.
6. Glazing U-Factor and SHGC exceed SEC requirements.

The following features of the building would not comply with prescriptive requirements:

- Opaque surface insulation: Most construction types, including below-grade walls, above grade mass walls and roofs over the area ways do not meet insulation requirements of Table C402.1.4.

Building Envelope

- **Opaque surfaces**: Table 4 summarizes the overall thermal performance of the opaque surfaces of the proposed and standard design.

Table 4 - Comparison of the Thermal Performance of the Proposed and Standard Design Opaque Envelope Components

Surface Type	Proposed Design Overall U-Value (Btu/h.ft2.F)	Standard Design Overall U-Value (Btu/h.ft2.F)
Exterior Wall (including Slab-Edge)	0.212	0.056
Underground Wall	0.068	0.070
Roof	0.063	0.030
Exposed Floors	0.098	0.029

- **Fenestration**: the proposed building has an overall glazing area of 4,733 ft2, which translates to a window-wall-ratio of 0.21. Table 5 and Table 6 summarize the overall thermal performance of the fenestration of the proposed and standard design.

Table 5 - Comparison of the U-Factor of the Proposed and Standard Design Fenestration Components

Proposed Design Overall U-Factor (Btu/h.ft2.F)	Standard Design Overall U-Factor (Btu/h.ft2.F)
0.213	0.316

Table 6 - Comparison of the Solar Heat Gain Coefficient (SHGC) of the Proposed and Standard Design Fenestration Components

Proposed Design Overall SHGC	Standard Design Overall SHGC	
0.443	North	0.53
	Non-North	0.35

Domestic Hot Water: Water heating is provided using three Sanden heat pump water heaters with external 119 storage tanks plus a single buffer tank with a supplemental electric heater. The heat pumps are controlled to produce a higher temperature than the building supply temperature (150F vs 120F), therefore it is not expected that the electric elements will operate.

HVAC: The primary HVAC system is chilled beams for cooling and baseboard heat for heating. Some spaces are served with four pipe fan coils. The hydronic loops are served by 12 identical air-to-water heat pumps. Ventilation is provide using decoupled DOAS systems with very high efficiency ERVs. DOE-2 does not have an explicit chilled beam plus radiant heat system type. However, it is accepted practice to use the Single Zone Reheat System (SZRH) with auto-sized airflow.

Lighting: Note that the project assumes that lighting will comply with C406.3 while the submission does note include a lighting design at this time. The permit applicant understands that : 1) an electrical permit application shall be submitted and approved prior to the issuance of the building permit per SEC C407.2 and TIP 423; and 2) the electrical/ lighting permit number and the Lighting Forms from the SDCI web site shall also be submitted for verification. All electrical documentation will be provided by others.

III. Methodology Description

The proposed and standard design models have been created using eQUEST 3.65, build 7175. The software used to run the simulation is DOE-2.3, version 50i. The combination of these versions of eQUEST and DOE-2 allow to model explicitly all the features included in both the proposed and standard reference designs. DOE-2 complies with all the requirements of Section C407.6. Figure 2 shows how the project appears in the eQUEST user interface.

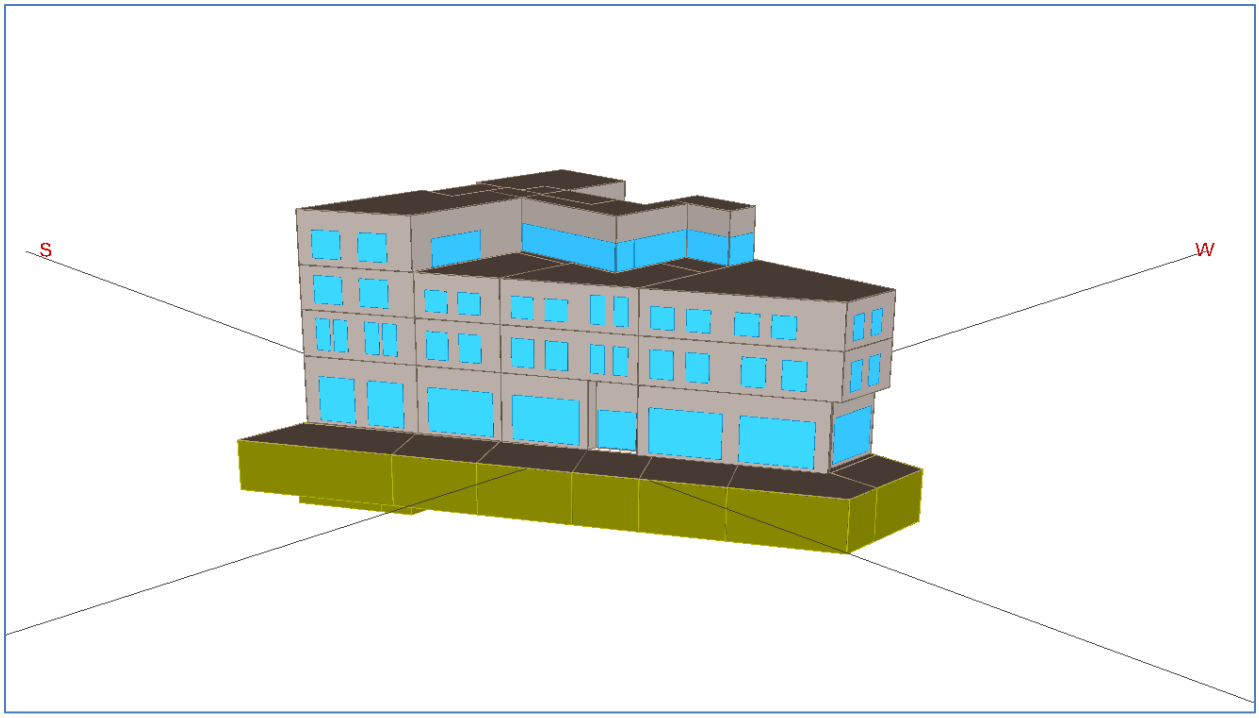


Figure 2 - EQUEST User Interface View

A. Operational Schedules

Operational schedules are based on the office occupancy from SEC Appendix E.

B. SRD HVAC System Determination

The proposed HVAC system consists of individually controlled arrays of chilled beams for cooling and baseboard heaters for heating with some areas equipped with four-pipe fan coils. Hydronic systems are served by air-to-water chiller/heat pumps that can operate in either heating or cooling mode.

The systems in this building are governed by C403.6 and therefore Table C407.5.1(2). According to Table C407.5.1(2) the proposed system falls into the category of: “Air/none” for Condenser Cooling Source and “Heat Pump” for Heating System Classification”. The SRD HVAC system is System 9, Package rooftop heat pump with decoupled DOAS meeting requirements of C503.6

C. Underground Surfaces

All below grade surfaces are modeled using DOE-2 UNDERGROUND-WALL input form using U-factors from SEC Appendix A.

D. Infiltration

Infiltration is calculated for each space using the total exterior surface area for that floor. Infiltration is modeled as an air-change-per-hour input. This allows DOE-2 to vary the infiltration rate due to varying wind speeds recorded in the TMY weather file. Table 7 summarizes infiltration inputs for each space.

Table 7 - Infiltration Summary

Space	Floor Area (ft2)	Volume (ft3)	Exterior Surface Area (ft2)	C407 Infiltration CFM	Modeled CFM	Modeled ACH
L1SW Perim Spc (G.SW1)	990	18,503	1,379	551.7	61.8	0.200
L1Core Spc (G.C2)	99	1,851	0	0.0	0.0	0.000
L1West Perim Spc (G.W3)	179	3,351	262	104.7	11.7	0.210
L1WNW Perim Spc (G.WNW4)	337	6,310	980	392.0	43.9	0.418
L1Core Spc (G.C5)	120	2,244	0	0.0	0.0	0.000
L1Core Spc (G.C6)	304	5,685	0	0.0	0.0	0.000
L1North Perim Spc (G.N7)	276	5,167	358	143.2	16.0	0.186
L1SSE Perim Spc (G.SSE8)	636	11,893	436	174.4	19.5	0.099
L1Core Spc (G.C9)	124	2,319	0	0.0	0.0	0.000
L1Core Spc (G.C10)	200	3,740	0	0.0	0.0	0.000
L1Core Spc (G.C11)	236	4,413	0	0.0	0.0	0.000
L1North Perim Spc (G.N12)	378	3,402	229	91.7	10.3	0.181
L1North Perim Spc (G.N13)	100	904	55	22.0	2.5	0.163
L1North Perim Spc (G.N14)	256	4,793	469	187.4	21.0	0.263
L1SSE Perim Spc (G.SSE15)	126	2,352	238	95.4	10.7	0.273
L1SE Perim Spc (G.SE16)	478	8,944	487	194.7	21.8	0.146
L1Core Spc (G.C17)	382	7,136	0	0.0	0.0	0.000
L1East Perim Spc (G.E18)	1,555	29,071	2,099	839.7	94.0	0.194
Space 84	479	4,643	306	122.5	13.7	0.177
L2SW Perim Spc (G.SW1)	916	11,721	944	377.6	42.3	0.216
L2Core Spc (G.C2)	173	2,212	0	0.0	0.0	0.000
L2West Perim Spc (G.W3)	243	3,113	243	97.3	10.9	0.210
L2West Perim Spc (G.W4)	68	866	111	44.5	5.0	0.346
L2Core Spc (G.C5)	120	1,536	0	0.0	0.0	0.000
L2NW Perim Spc (G.NW6)	857	10,975	674	269.6	30.2	0.165
L2SSE Perim Spc (G.SSE7)	580	7,424	298	119.4	13.4	0.108
L2Core Spc (G.C8)	180	2,304	0	0.0	0.0	0.000
L2Core Spc (G.C9)	200	2,560	0	0.0	0.0	0.000
L2Core Spc (G.C10)	381	4,874	0	0.0	0.0	0.000
L2North Perim Spc (G.N11)	297	3,798	166	66.6	7.5	0.118
L2North Perim Spc (G.N12)	212	2,715	218	87.0	9.7	0.215
L2North Perim Spc (G.N13)	253	3,239	269	107.6	12.0	0.223
L2SSE Perim Spc (G.SSE14)	1,033	13,215	467	186.6	20.9	0.095
L2East Perim Spc (G.E15)	1,425	18,243	1,461	584.4	65.5	0.215
L3SW Perim Spc (G.SW1)	916	11,080	929	371.5	41.6	0.225
L3Core Spc (G.C2)	173	2,091	0	0.0	0.0	0.000
L3West Perim Spc (G.W3)	186	2,253	230	92.0	10.3	0.274
L3WSW Perim Spc (G.WSW4)	111	1,348	142	56.6	6.3	0.282
L3Core Spc (G.C5)	120	1,452	0	0.0	0.0	0.000

Space	Floor Area (ft2)	Volume (ft3)	Exterior Surface Area (ft2)	C407 Infiltration CFM	Modeled CFM	Modeled ACH
L3NW Perim Spc (G.NW6)	814	9,846	637	254.9	28.5	0.174
L3SSE Perim Spc (G.SSE7)	580	7,018	282	112.9	12.6	0.108
L3Core Spc (G.C8)	180	2,178	0	0.0	0.0	0.000
L3Core Spc (G.C9)	200	2,420	0	0.0	0.0	0.000
L3Core Spc (G.C10)	381	4,607	0	0.0	0.0	0.000
L3North Perim Spc (G.N11)	297	3,590	157	62.9	7.0	0.118
L3North Perim Spc (G.N12)	212	2,566	206	82.3	9.2	0.215
L3North Perim Spc (G.N13)	253	3,062	254	101.7	11.4	0.223
L3SSE Perim Spc (G.SSE14)	1,033	12,493	441	176.4	19.8	0.095
L3East Perim Spc (G.E15)	1,425	17,245	1,381	552.4	61.9	0.215
L4 SSE Perim Spc (G.SSE1)	1,088	15,997	1,673	669.3	75.0	0.281
L4 West Perim Spc (G.W2)	186	2,737	279	111.7	12.5	0.274
L4 Core Spc (G.C3)	109	1,599	0	0.0	0.0	0.000
L4 NNW Perim Spc (G.NNW4)	811	11,920	1,275	509.9	57.1	0.287
L4 SSE Perim Spc (G.SSE5)	457	6,722	1,220	488.0	54.7	0.488
L4 North Perim Spc (G.N6)	205	3,014	301	120.5	13.5	0.269
L4 North Perim Spc (G.N7)	214	3,149	829	331.7	37.1	0.708
L4 Core Spc (G.C8)	81	1,191	0	0.0	0.0	0.000
B1SW Perim Spc (B.SW1)	1,235	17,043	1,356	542.3	60.7	0.214
B1Core Spc (B.C2)	506	6,981	0	0.0	0.0	0.000
B1West Perim Spc (B.W3)	154	2,127	104	41.4	4.6	0.131
B1West Perim Spc (B.W4)	247	3,409	266	106.5	11.9	0.210
B1Core Spc (B.C5)	110	1,524	0	0.0	0.0	0.000
B1West Perim Spc (B.W6)	270	3,732	179	71.8	8.0	0.129
B1SSE Perim Spc (B.SSE7)	385	5,318	315	125.9	14.1	0.159
B1Core Spc (B.C8)	637	8,789	0	0.0	0.0	0.000
B1Core Spc (B.C9)	140	1,932	0	0.0	0.0	0.000
B1Core Spc (B.C10)	636	8,770	0	0.0	0.0	0.000
B1SSE Perim Spc (B.SSE11)	291	4,016	233	93.2	10.4	0.156
B1SSE Perim Spc (B.SSE12)	411	5,666	344	137.4	15.4	0.163
B1Core Spc (B.C13)	389	5,361	0	0.0	0.0	0.000
B1SSE Perim Spc (B.SSE14)	370	5,108	298	119.3	13.4	0.157
B1Core Spc (B.C15)	200	2,760	0	0.0	0.0	0.000
B1NW Perim Spc (B.NW16)	418	5,762	567	226.9	25.4	0.265
B1North Perim Spc (B.N17)	103	1,427	97	38.6	4.3	0.182
B1North Perim Spc (B.N18)	221	3,047	184	73.4	8.2	0.162
B1North Perim Spc (B.N19)	271	3,745	231	92.2	10.3	0.166
B1SE Perim Spc (B.SE20)	506	6,987	550	220.0	24.6	0.212
B1NE Perim Spc (B.NE21)	261	3,606	451	180.5	20.2	0.336
B1North Perim Spc (B.N22)	1,843	25,434	943	377.1	42.2	0.100
B1Core Spc (B.C23)	180	2,484	0	0.0	0.0	0.000
B2SW Perim Spc (B.SW1)	643	5,468	525	210.2	23.5	0.258
B2East Perim Spc (B.E2)	663	5,632	538	215.2	24.1	0.257
B2West Perim Spc (B.W3)	247	2,100	164	65.6	7.3	0.210
B2North Perim Spc (B.N4)	926	7,869	802	320.9	35.9	0.274

Notes:

1. ACH is Infiltration Rate (CFM) X 60 min/hr / Floor Volume

IV. Discussion of Estimated Energy Consumption Differences

The estimated proposed design energy use intensity (EUI) is 17.7 kBtu per square foot of conditioned floor, which is 3% better than the allowed SRD energy use (see Table 8). Table 10 in Section V.A shows that the proposed design saves energy primarily in water heating and ventilation fan end-uses, with a small amount of savings in space cooling and heat pump supplemental heating. The proposed building uses significantly more energy for heating. Each of these is discussed below:

Table 8 - Estimated Annual Energy Consumption of Standard and Proposed Design

Design	Estimated Energy Consumption (kBtu/conditioned ft2/year)	
Standard	Modeled	18.19
	Allowed (102.3% of SRD)	18.61
Proposed	Modeled	17.69
	% of SRD	97.3%

A. Heating

(-13.6% total savings; -327% end-use savings) Heating energy is greater primarily due to the proposed building roofs and walls having much higher U-factors than allowed by the code.

B. Cooling

(1.1% total savings; 22.3% end-use savings) Cooling is not a significant end-use in the building. The small savings are likely due to: primary cooling COP; the use of chilled beams without ventilation fans; low fenestration SHGC; cooling through openable windows.

C. Ventilation Fans

(4.8% total savings; 43.1% end-use savings) There are two contributors to this savings: 1) The proposed system is primarily chilled beams and radiant heating without supply fans while the SRD system is rooftop heat pumps with fans. The SRD fans only operate when providing heating and cooling but still contribute to the SRD fan energy. 2) The proposed building is equipped with CO2 monitoring in all spaces served by DOAS systems with zonal dampers that reduce airflow from the DOAS. Each ERV is equipped with a VSD that will reduce airflow and fan power. Since none of the spaces is required to have DCV, the baseline DOAS is constant volume. Refer to the HVAC drawings for DCV design details and control sequences.

D. Water Heating

(12.0% total savings; 76.1% end-use savings) The heat pump water heating system is the primary contributor.

E. Pumping

(-1.7% total savings; -10,103% end-use savings) The proposed HVAC design includes hydronic heating and cooling systems while the baseline HVAC is dX unitary package heat pump equipment.

F. Heat Pump Supplemental Heat

(0.1% total savings; -100% end-use savings) There are no air-source heat pumps in the proposed building while the SRD is served entirely with single zone heat pumps (with supplemental electric heat) as the primary heating and cooling sources.

V. Appendices

A. Energy Analysis Summary Form

1. Energy Consumption by End-use

Table 9 - Project Information

SDCI Project Address:	423 2nd Ave Extension S, Seattle 98104			**SDCI Project Number:**	6508387
Project Name:	Metropole			**Date of this submittal:**	
Space Type:	**Conditioned Space**			**Unconditioned Space**	**Total**
Building Use:	**Group R**	**Commercial**	**Subtotal**		
Total Area (ft2)		36,027			

Table 10 - Energy Consumption by End-Use

Enduse	Fuel	Standard Reference			Proposed Building			Differences		
		kBtu	Btu/sf	%SRD	kBtu	Btu/sf	%SRD	kBtu	Btu/sf	% SRD
Lighting - interior	Elec	153,793	4,269	23.5%	153,793	4,269	23.5%	0	0	0.0%
Lighting - garage	Elec	0	0	0.0%	0	0	0.0%	0	0	0.0%
Lighting - exterior	Elec	0	0	0.0%	0	0	0.0%	0	0	0.0%
Space Heating	Elec	27,243	756	4.2%	116,243	3,227	17.7%	89,001	2470	13.6%
Heat Pump Supp. Heat	Elec	898	25	0.1%	0	0	0.0%	-898	-25	-0.1%
Space Cooling	Elec	32,331	897	4.9%	25,109	697	3.8%	-7,222	-200	-1.1%
Fans - interior ventilation	Elec	73,574	2,042	11.2%	41,837	1,161	6.4%	-31,737	-881	-4.8%
Fans - interior OA supply	Elec	7,242	201	1.1%	7,242	201	1.1%	0	0	0.0%
Fans - Parking garage	Elec	0	0	0.0%	0	0	0.0%	0	0	0.0%
Service water heating	Elec	103,025	2,860	15.7%	24,604	683	3.8%	-78,421	-2177	-12.0%
Pumps and Auxiliary	Elec	113	3	0.0%	11,492	319	1.8%	11,379	316	1.7%
Equipment	Elec	251,954	6,993	38.4%	251,954	6,993	38.4%	0	0	0.0%
Elevator & escalators	Elec	5,120	142	0.8%	5,120	142	0.8%	0	0	0.0%
Total	Elec	655,293	18,189	100.0%	637,395	17,692	97.3%	-17,898	-497	-2.7%

2. Design Parameter Comparison

Table 11 - Design Parameter Comparison

(Entire table updated per Cycle 2 corrections)

Element	Standard Design Value	(Page)	Proposed Design Value	(Page)
Glazing: total vertical + overhead area (ft2)	4,734	Page 59,LV-D Report	4,734	Page 310, LV-D Report
Vertical glazing area as a percentage of gross above-grade walls (%)	21.1	Page 59, LV-D Report	21.1	Page 310, LV-D Report
Vertical: total area (ft2)	4,665	Page 59, LV-D Report	4,665	Page 310, LV-D Report

Element	Standard Design Value	(Page)	Proposed Design Value	(Page)
Vertical: U-factor (weighted-average)	0.316	The U-Value reported in DOE-2's LV-D report do not correspond to the U-Factor at NFRC rating conditions, the value provided correspond to a weighted average of the inputs to the model	0.213	The U-Value reported in DOE-2's LV-D report do not correspond to the U-Factor at NFRC rating conditions, the value provided correspond to a weighted average of the inputs to the model
Vertical SHGC (weighted-average)	(modeled, not avg) North: 0.53 Non-North: 0.35	The SHGC value reported is a weighted average of the input.	0.443	The SHGC value reported is a weighted average of the input.
Roof: total area (ft2)	9,893	Page 59, LV-D Report	9,893	Page 310, LV-D Report
Opaque roof: net area (ft2)	9,893	Page 59, LV-D Report	9,893	Page 310, LV-D Report
Opaque roof U-value (weighted-average)	0.027	Page 59, LV-D Report	0.101	Page 310, LV-D Report
Wall: total above-grade area (ft2)	27,542	Page 59, LV-D Report	27,542	Page 310, LV-D Report
Opaque above-grade wall: net area (ft2) Above-grade wall U-Value (weighted-average)	0.055	Page 59, LV-D Report	0.154	Page 310, LV-D Report
Below-grade wall: net area (ft2)	8,145	Page 59, LV-D Report (note LV-D report includes below grade floors of 12,263 sf)	8,145 (note LV-D report includes below grade floors of 12,263 sf)	Page 310, LV-D Report
Below-grade wall U-Value (weighted-average)	0.070	Page 89, LV-I Report "InsUWCons"	0.350	Page 340, LV-I Report "NoInsUWCons"
Opaque Door: area (ft2)		-		
Opaque door U-Value (weighted-average)				
Exterior floor: area (ft2)				
Exterior floor U-Value:				
Slab-on-grade floor: perimeter (linear feet)				-
Slab-on-grade F-Factor (weighted-average)				-
Below-grade slab floor: net area (ft2)	12,263	Page 60, LV-E Report	12,263	Page 311, LV-E Report
Infiltration rate	0.040 cfm/ft2 of envelope area	Page 43, LV-B Report	0.040 cfm/ft2 of envelope area	Page 294, LV-B Report
Design heating load	180.5 kBtu/h	Page 90, LS-C Report	293.3 kBtu/h	Page 341, LS-C Report
Design sensible cooling load	288.2 kBtu/h	Page 90, LS-C Report	238.8 kBtu/h	Page 341, LS-C Report
Design total cooling load	337.8 kBtu/h	Page 90, LS-C Report	288.2 kBtu/h	Page 341, LS-C Report
Lighting				
Watts/ft2:	0.51	Page 43, LV-B Report	0.51	Page 294, LV-B Report
Façade (Exterior): total area (ft2)	-	-	-	-
Total watts				

Element	Standard Design Value	(Page)	Proposed Design Value	(Page)
HVAC System Description	DOAS	Pp 159 SV-A/SV-C Table 12 SRD columns	DOAS	Pp 352-371 SV-A/SV-C Table 12 Prop columns
	Rooftop Heat Pump	Pp 97-158 SV-A/SV-C Table 12 SRD columns	Chilled Beam w/Baseboard Heating	Pp 372-415 SV-A/SV-C Table 12 Prop columns
			Default Cooling w/Baseboard Heating	Pp 416-429 SV-A/SV-C Table 12 Prop columns
Central Plant Equipment	None		Air-to-water heat pumps	Pp 567-589 PS-H
Economizer	None	OA control not documented in DOE-2 output reports. See Table 12 SRD rows	None	OA control not documented in DOE-2 output reports. See Table 12 Prop rows
Supply Fan Power	DOAS	Pp 159 SV-A/SV-C Table 12 SRD columns	DOAS	Pp 352-371 SV-A/SV-C Table 12 Prop columns
	Rooftop Heat Pump	Pp 97-158 SV-A/SV-C Table 12 SRD columns	Chilled Beam w/Baseboard Heating	Pp 372-415 SV-A/SV-C Table 12 Prop columns
			Default Cooling w/Baseboard Heating	Pp 416-429 SV-A/SV-C Table 12 Prop columns
Elevator and escalator: capacity (kW)	1,500 kWh/year	P273 BEPU, “MISC EQUIP” for “Spar” ELECTRICITY METER	1,500 kWh/year	P524 BEPU, “MISC EQUIP” for “Spar” ELECTRICITY METER
C411 Renewable Energy Requirements (PV generating capacity)	None		None	

Table 12 - Proposed and Standard HVAC System Comparison

	System Description		Proposed Building					SRD Baseline Building					
			Airflow		Capacity kBtuh		Efficiency	Airflow		Capacity kBtuh		Efficiency	
System	Prop	Base	CFM	W/cfm	Clg	Htg	SEER/EIR	CFM	W/cfm	Clg	Htg	SEER/EIR	HSPF/EIR
ERV-B-2	DOAS	n/a – Proposed System Only	960	0.643	0	0	n/a	n/a – Proposed System Only					
ERV-B-1			370	1.399	0	0							
ERV-1-1			405	1.751	0	0							
ERV-1-2			410	1.721	0	0							
ERV-MEZZ			60	3.817	0	0							
ERV-2-2			340	1.897	0	0							
ERV-2-1			560	1.524	0	0							
ERV-3-2			360	1.556	0	0							
ERV-3-1			540	1.598	0	0							
ERV-4-1			170	1.488	0	0							
Sys1CB	Chilled Beam/Radiant Heat	Rooftop Heat Pump	Auto	0.000	18.6	23.1	n/a	1077	0.779	34.0	29.2	14/0.262	8.2/0.25
Sys2CB			Auto	0.000	2.8	10.9		362		3.3	8.9		
Sys3CB			Auto	0.000	10.6	11.1		555		17.4	14.6		
Sys4CB			Auto	0.000	13.2	25.7		1015		26.1	23.9		
Sys5CB			Auto	0.000	40.1	50		1919		65.2	48.1		
Sys6CB			Auto	0.000	15.9	36.6		769		27.1	18.6		
Sys7CB			Auto	0.000	16.4	16.6		623		20.7	14.6		
Sys8CB			Auto	0.000	9.0	8.5		307		13.5	7.4		
Sys9FC			306	0.090	9.1	8.3		354		17.0	4.2		
Sys10CB			Auto	0.000	14.5	14.8		570		20.3	14.0		
Sys11CB			Auto	0.000	23.9	35.8		1085		39.4	24.6		
Sys12CB			Auto	0.000	15.9	20.8		843		20.8	16.9		
Sys13CB			Auto	0.000	16.4	14.5		613		17.9	14.0		
Sys14CB			Auto	0.000	9.0	9.5		309		13.9	7.6		
Sys15FC			306	0.090	9.1	11.7		427		20.5	5.1		
Sys16CB			Auto	0.000	14.5	15.3		535		21.8	13.4		
Sys17CB			Auto	0.000	29.0	39.4		1179		46.5	23.1		
Sys18CB			Auto	0.000	16.9	18.6		896		31.3	17.6		
Sys19CB			Auto	0.000	17.1	14.2		713		32.3	14.0		
Sys20FC			3730	0.306	56.0	106.8		3193		103.9	81.4		
Sys21FC			2110	0.400	32.5	61.2		748		35.7	17.5		
Sys22CB			Auto	0.000	5.3	7.0		232		7.1	5.6		

	System Description		Proposed Building					SRD Baseline Building					
			Airflow		Capacity kBtuh		Efficiency	Airflow		Capacity kBtuh		Efficiency	
System	Prop	Base	CFM	W/cfm	Clg	Htg	SEER/EIR	CFM	W/cfm	Clg	Htg	SEER/EIR	HSPF/EIR
Sys23DfltClg	AC w/Hot Water Heat		77	0.779	1.1	1.9	14/0.262	83	0.779	2.4	2.2	14/0.262	8.2/0.25
Sys24DfltClg			67	0.779	1.1	3.8		115		2.5	2.3		
Sys25DfltClg			573	0.779	19.7	12.7		786		17.1	15.4		
Sys26DfltClg			248	0.779	2.2	5.0		279		7.3	6.6		
Sys27DfltClg			114	0.779	6.8	8.4		139		6.2	5.5		
Sys28DfltClg			83	0.779	1.1	2.7		79		2.3	2.1		
Sys29DfltClg			110	0.779	4.1	6.7		157		4.0	3.6		
DOAS-Base	n/a – Baseline System Only	DOAS	n/a – Baseline System Only					4175	0.779	0	0	n/a	n/a

B. General Information

1. Site Plan

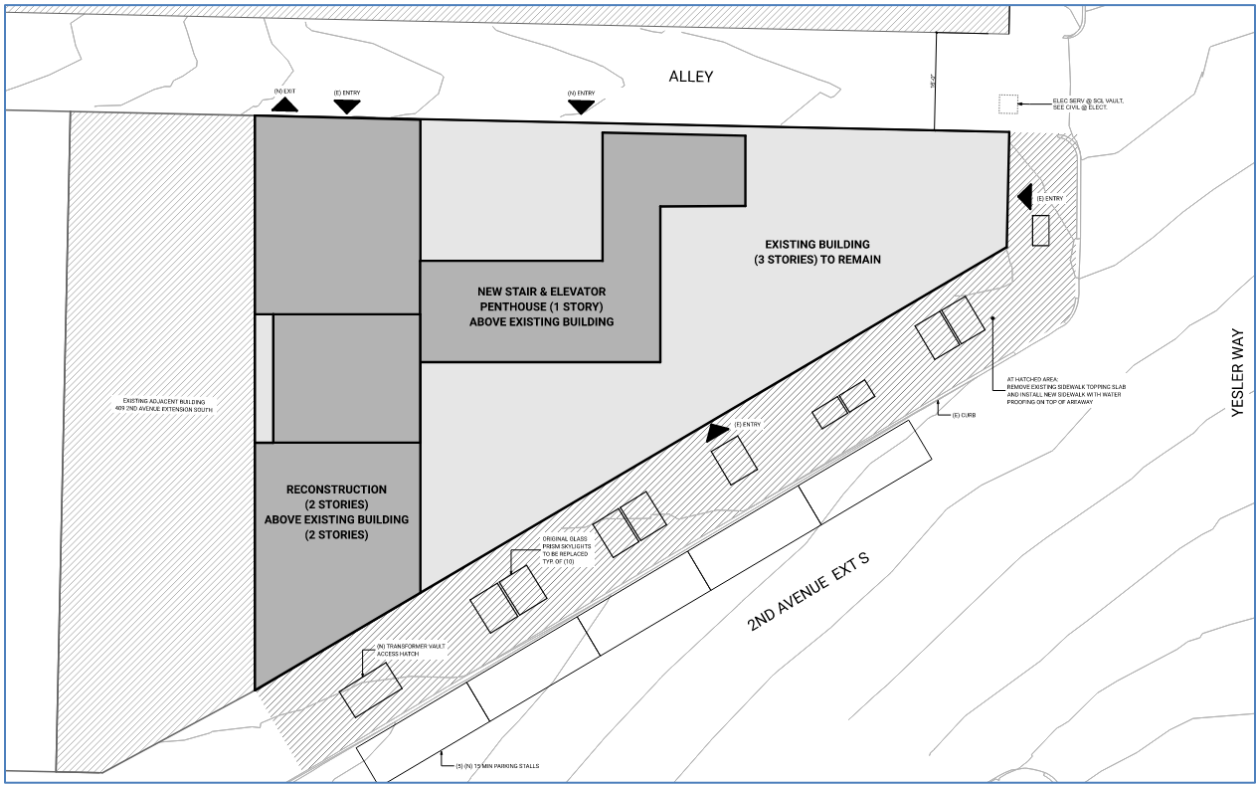


Figure 3 - Site Layout

C. Building Envelope

1. Fenestration

All fenestration is modeled in the proposed building exactly as shown in the architectural drawings. Storefront fenestration on the first floor complies with the exception to C303.1.3 for small manufacturers. These windows are from Unisom (a small company), and this exception has been allowed for Unisom windows on other projects. All other products are NFRC rated. Figure 4and Figure 5 provide NFRC product information for the Andersen windows. Table 13 lists each window in the building/model with its proposed and SRD U-Factor along with reference method for determining window performance (either NFRC or Exception to C303.1.3).

Qty	Line	Pos	Unit Type	Unit Width	Unit Height	Unit Sqft	Total Sqft	U-Factor	SHGC	VT	ER	Weighted Contribution to Entire Job	CPD Number
Rated Units:													
2	A	1	CAUX 3' 0" x 2' 9 3/4"	36"	33 3/4"	8.44	16.88	0.16	0.30	0.49		2.70	AND-N-159-00782-00004
1	B	1	CAUX 3' 0" x 5' 8 3/4"	36"	68 3/4"	17.19	17.19	0.16	0.30	0.49		2.75	AND-N-159-00782-00007
1	C	1	CAUX 3' 0" x 8' 7"	36"	103"	25.75	25.75	0.16	0.30	0.48		4.12	AND-N-159-00782-00010
1	D	1	CAUX 2' 8 1/2" x 8' 7"	32 1/2"	103"	23.25	23.25	0.16	0.30	0.48		3.72	AND-N-159-00782-00010
1	E*	Mull	CAUX 5' 0 7/8" x 4' 2 5/8"/CAUX 5' 0 7/8" x 2' 10 1/8"/CAUX 5' 0 7/8" x 7' 3 7/8"										
1	E*	1	CAUX 5' 0 7/8" x 4' 2 5/8"	60 7/8"	50 5/8"	21.40	21.40	0.16	0.30	0.48		3.42	AND-N-159-00782-00010
1	E*	2	CAUX 5' 0 7/8" x 2' 10 1/8"	60 7/8"	34 1/8"	14.43	14.43	0.16	0.30	0.48		2.31	AND-N-159-00782-00010
1	E*	3	CAUX 5' 0 7/8" x 7' 3 7/8"	60 7/8"	87 7/8"	37.15	37.15	0.16	0.30	0.48		5.94	AND-N-159-00782-00010
2	F	1	CAUX 3' 1 1/2" x 7' 3 3/4"	37 1/2"	87 3/4"	22.85	45.70	0.16	0.30	0.49		7.31	AND-N-159-00782-00007
1	G	1	CAUX 4' 2 1/8" x 5' 7 1/2"	50 1/8"	67 1/2"	23.50	23.50	0.16	0.30	0.49		3.76	AND-N-159-00782-00007
1	H	1	CAUX 3' 6 5/8" x 5' 7 1/2"	42 5/8"	67 1/2"	19.98	19.98	0.16	0.30	0.49		3.20	AND-N-159-00782-00007
1	I	1	CAUX 5' 7 1/2" x 5' 7 1/2"	67 1/2"	67 1/2"	31.64	31.64	0.16	0.30	0.48		5.06	AND-N-159-00782-00010
1	J	1	CAUX 5' 6 1/2" x 5' 7 1/2"	66 1/2"	67 1/2"	31.17	31.17	0.16	0.30	0.48		4.99	AND-N-159-00782-00010
16	K	1	TCLDH 3' 3 1/2" x 8' 0"	39 1/2"	96"	26.33	421.28	0.27	0.25	0.41		113.75	AND-N-171-01636-00004
4	L*	1	TCLDH 4' 4" x 8' 0"	52"	96"	34.67	138.68	0.27	0.25	0.41		37.44	AND-N-171-01636-00004
2	M* SPR*	1	TCLDH 4' 7" x 8' 0"	55"	96"	36.67	73.34	0.31	0.29	0.50		22.74	AND-N-171-01537-00016
20	N	1	TCLDH 3' 1" x 8' 1"	37"	97"	24.92	498.40	0.27	0.25	0.41		134.57	AND-N-171-01636-00004
8	O	1	TCLDH 3' 1" x 8' 9"	37"	105"	26.98	215.84	0.27	0.25	0.41		58.28	AND-N-171-01636-00004
2	P	Mull	TCLDH 3' 9 1/4" x 7' 1 3/4"-TCLDH 3' 9 1/4" x 7' 1 3/4"										
1	P	1	TCLDH 3' 9 1/4" x 7' 1 3/4"	45 1/4"	85 3/4"	26.95	26.95	0.27	0.25	0.41		7.28	AND-N-171-01636-00004
1	P	2	TCLDH 3' 9 1/4" x 7' 1 3/4"	45 1/4"	85 3/4"	26.95	26.95	0.27	0.25	0.41		7.28	AND-N-171-01636-00004
8	Q* SPR*	1	TCLDH 4' 1 3/4" x 8' 10 3/4"	49 3/4"	106 3/4"	36.88	295.04	0.31	0.29	0.50		91.46	AND-N-171-01537-00016
8	R	Mull	(HC7036)/(TCLDH 3' 4 1/4" x 5' 6"-TCLDH 3' 4 1/4" x 5' 6")										

Figure 4 - Andersen Window data

Qty	Line	Pos	Unit Type	Unit Width	Unit Height	Unit Sqft	Total Sqft	U-Factor	SHGC	VT	ER	Weighted Contribution to Entire Job	CPD Number
1	R	1	HC7036	84"	42"	24.50	24.50	0.16	0.30	0.48		3.92	AND-N-159-00782-00010
1	R	2	TCLDH 3' 4 1/4" x 5' 6"	40 1/4"	66"	18.45	18.45	0.27	0.26	0.41		4.98	AND-N-171-01636-00001
1	R	3	TCLDH 3' 4 1/4" x 5' 6"	40 1/4"	66"	18.45	18.45	0.27	0.26	0.41		4.98	AND-N-171-01636-00001
2	S	Mull	HC 4' 7 1/2" x 2' 3 3/4"/TCLDH 4' 7 1/2" x 6' 4"										
1	S	1	HC 4' 7 1/2" x 2' 3 3/4"	55 1/2"	27 3/4"	10.70	10.70	0.16	0.30	0.49		1.71	AND-N-159-00782-00007
1	S	2	TCLDH 4' 7 1/2" x 6' 4"	55 1/2"	76"	29.29	29.29	0.27	0.25	0.41		7.91	AND-N-171-01636-00004
4	T*	Mull	TCLDH 3' 11" x 8' 10 3/4"-TCLDH 3' 11" x 8' 10 3/4"										
1	T*	1	TCLDH 3' 11" x 8' 10 3/4"	47"	106 3/4"	34.84	34.84	0.27	0.25	0.41		9.41	AND-N-171-01636-00004
1	T*	2	TCLDH 3' 11" x 8' 10 3/4"	47"	106 3/4"	34.84	34.84	0.27	0.25	0.41		9.41	AND-N-171-01636-00004

Figure 5 - Andersen Window data

Table 13 - Fenestration Detail

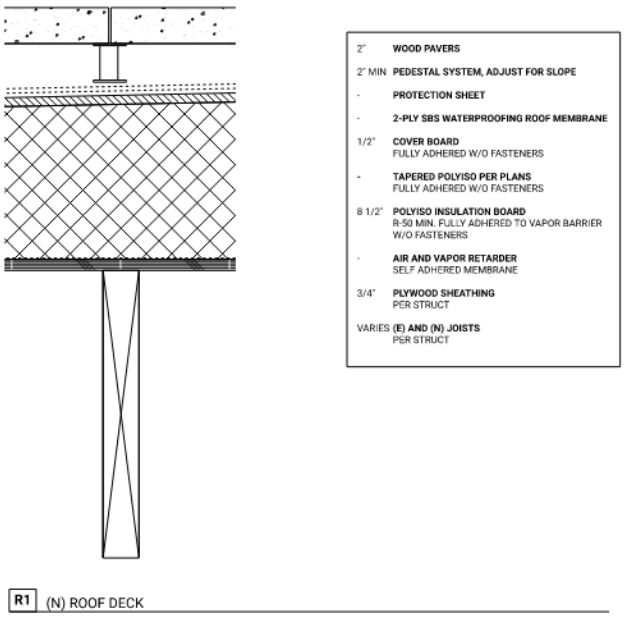
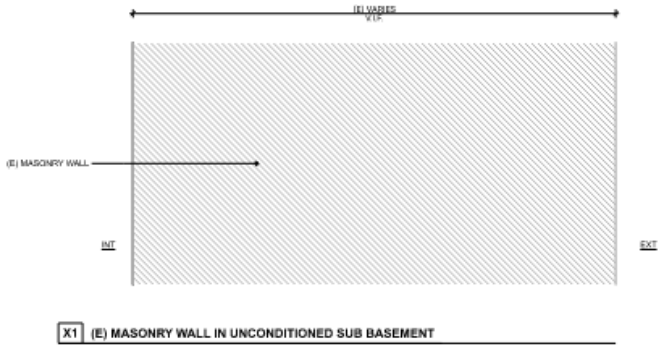
Name	Area	Glazing Type	North	Prop U-Factor	Prop SHGC	SRD U-Factor	SRD SHGC	Product Reference or NFRC CPD #
Window 1	126.4	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 2	126.4	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 32	26.3	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00010
Window 30	15.8	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00007
Window 31	26.3	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00010
Window 3	216.0	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 98	100.0	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 4	216.0	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 5	223.7	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 6	223.7	WdSFExt	FALSE	0.18	0.23	0.30	0.35	Table 303.1.3
Window 21	178.0	WdSFExtN	TRUE	0.18	0.23	0.30	0.53	Table 303.1.3
Window 24	6.3	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00004
Window 25	6.3	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00004
Window 26	66.4	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00010
Window 83	17.0	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00007
Window 84	18.4	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00007
Window 85	17.0	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00007
Window 7	34.7	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 8	34.7	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 9	34.7	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 10	34.7	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 61	60.5	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 62	60.5	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 11	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 12	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 55	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 56	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 51	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 53	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 54	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 45	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 46	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 47	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 13	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 14	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 15	28.1	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 16	28.1	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 22	31.9	MQAndN	TRUE	0.31	0.29	0.30	0.53	AND-N-171-01537-00016
Window 23	31.9	MQAndN	TRUE	0.31	0.29	0.30	0.53	AND-N-171-01537-00016
Window 33	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 34	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 35	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 36	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 37	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 38	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 17	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 18	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004

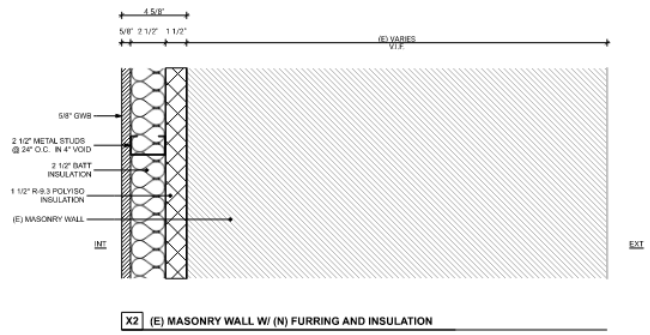
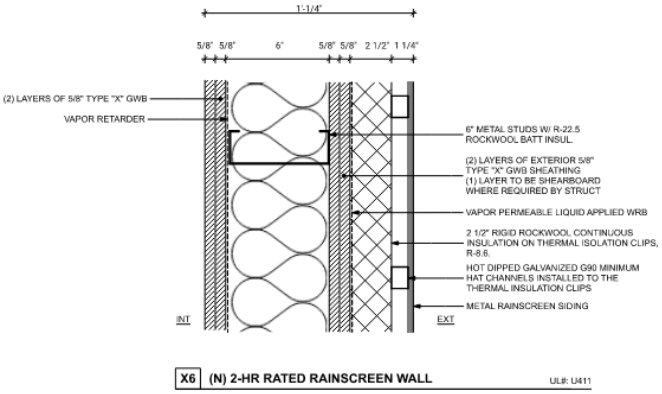
Name	Area	Glazing Type	North	Prop U-Factor	Prop SHGC	SRD U-Factor	SRD SHGC	Product Reference or NFRC CPD #
Window 19	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 20	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 73	60.0	MQAnd	FALSE	0.31	0.29	0.30	0.35	AND-N-171-01537-00016
Window 74	60.0	MQAnd	FALSE	0.31	0.29	0.30	0.35	AND-N-171-01537-00016
Window 86	9.5	PentFix	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 87	9.5	PentFix	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 77	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 78	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 63	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 64	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 59	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 60	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 52	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 57	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 58	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 48	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 49	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 50	20.6	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 65	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 66	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 67	28.1	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 68	28.1	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 81	25.4	AlumDblHgN	TRUE	0.27	0.28	0.30	0.53	AND-N-171-01636-00004
Window 82	25.4	AlumDblHgN	TRUE	0.27	0.28	0.30	0.53	AND-N-171-01636-00004
Window 39	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 40	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 41	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 42	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 43	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 44	19.2	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 69	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 70	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 71	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 72	34.3	RAnd	FALSE	0.27	0.26	0.30	0.35	AND-N-171-01636-00001
Window 75	60.0	MQAnd	FALSE	0.31	0.29	0.30	0.35	AND-N-171-01537-00016
Window 76	60.0	MQAnd	FALSE	0.31	0.29	0.30	0.35	AND-N-171-01537-00016
Window 92	121.9	WinWallN	TRUE	0.14	0.37	0.38	0.53	CWL-K-25-00011-00001
Window 88	9.5	PentFix	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 89	9.5	PentFix	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 90	9.5	PentFix	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 79	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 80	45.0	AlumDblHg	FALSE	0.27	0.28	0.30	0.35	AND-N-171-01636-00004
Window 91	270.0	WinWall	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 93	46.9	WinWallN	TRUE	0.14	0.37	0.38	0.53	CWL-K-25-00011-00001
Window 94	146.3	WinWallN	TRUE	0.14	0.37	0.38	0.53	CWL-K-25-00011-00001
Window 95	108.8	WinWall	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001
Window 96	71.3	WinWallN	TRUE	0.14	0.37	0.38	0.53	CWL-K-25-00011-00001
Window 97	153.8	WinWall	FALSE	0.14	0.37	0.38	0.35	CWL-K-25-00011-00001

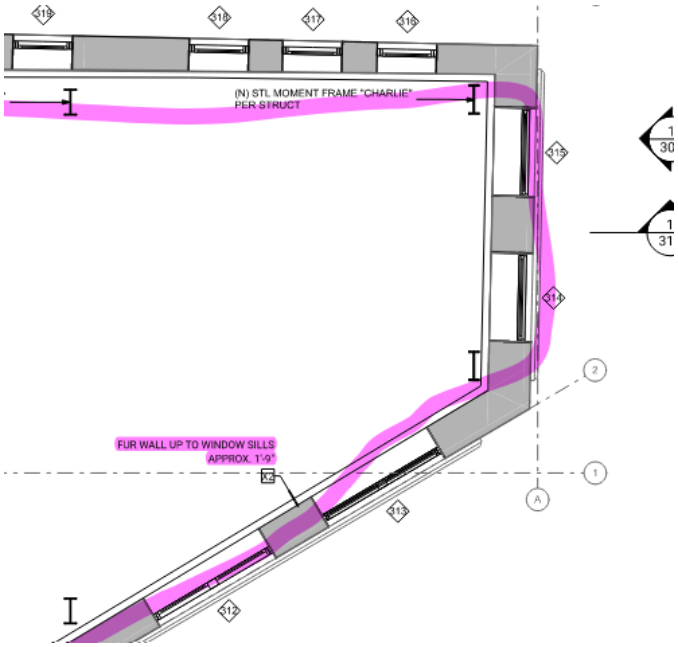
Name	Area	Glazing Type	North	Prop U-Factor	Prop SHGC	SRD U-Factor	SRD SHGC	Product Reference or NFRC CPD #
Window 99	17.3	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00007
Window 100	25.5	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00010
Window 101	25.5	AlumFix	FALSE	0.16	0.30	0.30	0.35	AND-N-159-00782-00010

2. Opaque Constructions

Table 14 - Opaque Construction Performance

Assembly	Performance Documentation
 **Figure 6 – F1/F2 Roof**	DOE-2 Construction: Roof Cons Finishes F1: Wood Pavers F2: Green roof Proposed U-Factor: 0.019 Reference: A102.1 SRD U-Factor: 0.027
 **Figure 7 - X1 Concrete Wall (Below or Above Grade)**	DOE-2 Constructions: Below Grade: NoInsUWCons Above Grade: MasonEWall Con Below Grade: Proposed U-Factor: 0.350 Reference: A104.1 Above Grade: Proposed U-Factor: 0.47 Reference: A105.3.7.1(1) SRD U-Factor (above grade): 0.057 SRD U-Factor (below grade): 0.070

Assembly	Performance Documentation
 **Figure 8 – X2 Concrete Wall (Below or Above Grade)**	DOE-2 Constructions Below Grade: InsUWCons Above Grade: FullInsMasEWall Con Proposed U-Factor: 0.042 Reference: A103.3.7.1(4) SRD U-Factor (above grade): 0.057 SRD U-Factor (below grade): 0.070
 **Figure 9 – X4/X6 Exterior Wall**	DOE-2 Constructions: MtlEWall Cons Finishes X4: Brick Veneer X6: Metal Siding Proposed U-Factor: 0.050 Reference: A103.3.6.1(1) SRD U-Factor: 0.055

Assembly	Performance Documentation
 Figure 10 – Weighted average of X1 & X2	DOE-2 Constructions: PartInsMasEWall Con Reference: $$\frac{UVal^1 * weight^1 + UVal^2 * weight^2}{weight^1 + weight^2}$$ $$\frac{0.042 * 3.5 + 0.471 * 21.4}{3.5 + 21.4}$$ Where the weights are equal to height of either the insulated or non insulated sections of the walls on floors 2 and 3. Proposed U-Factor: 0.410 SRD U-Factor: 0.057

3. Shading

Figure 11 Shows the project and surrounding buildings that have been represented in the models using BUILDING-SHADE commands.

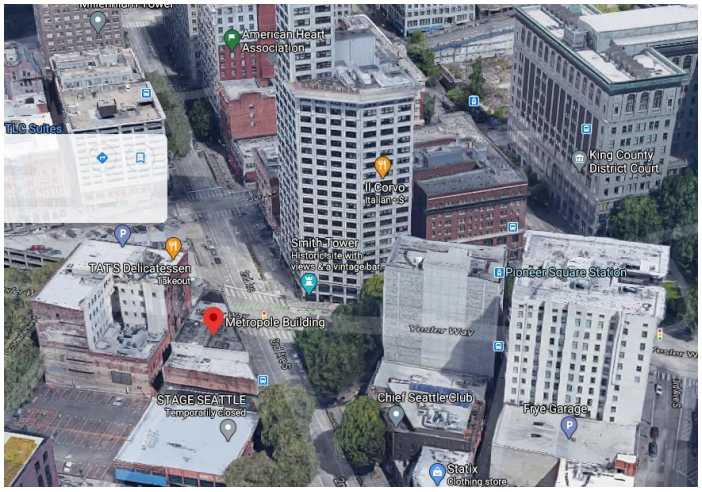


Figure 11 - Surrounding Buildings

4. Infiltration

Infiltration is calculated and input as required by Section C407. The maximum air leakage rate is 0.40 cfm/sf of exterior surface area under a pressure differential of

75 Pascals. Using the conversion constant for atmospheric conditions of 0.112 listed in Table C407.5.1(1) results in a program input value of 0.045 cfm/sf of exterior surface area. This in turn was converted to an air change/hour value using the volume of the space. Space level infiltration rates are shown in Table 7. For dwelling units, infiltration is assumed to be constant, adjusted for windspeed from the TMY3 weather file. Whole house fan exhaust is added to the infiltration rate.

D. HVAC Zoning

All HVAC systems are modeled explicitly and match the zoning of the actual building.

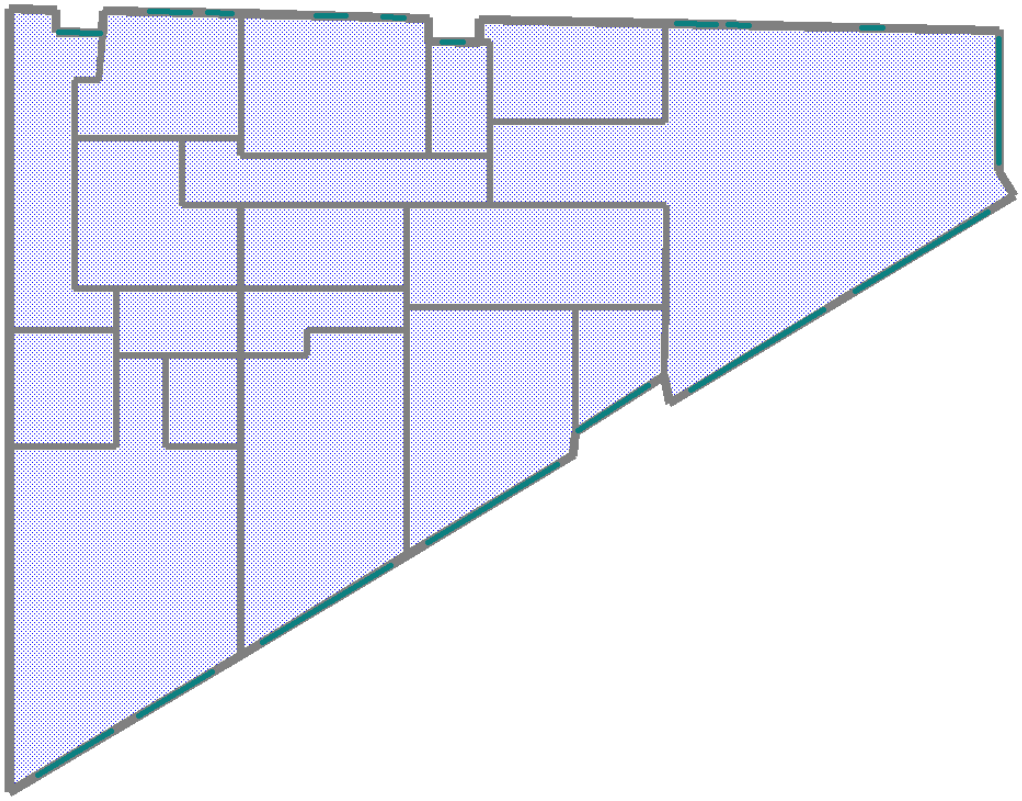


Figure 12 - Level 1

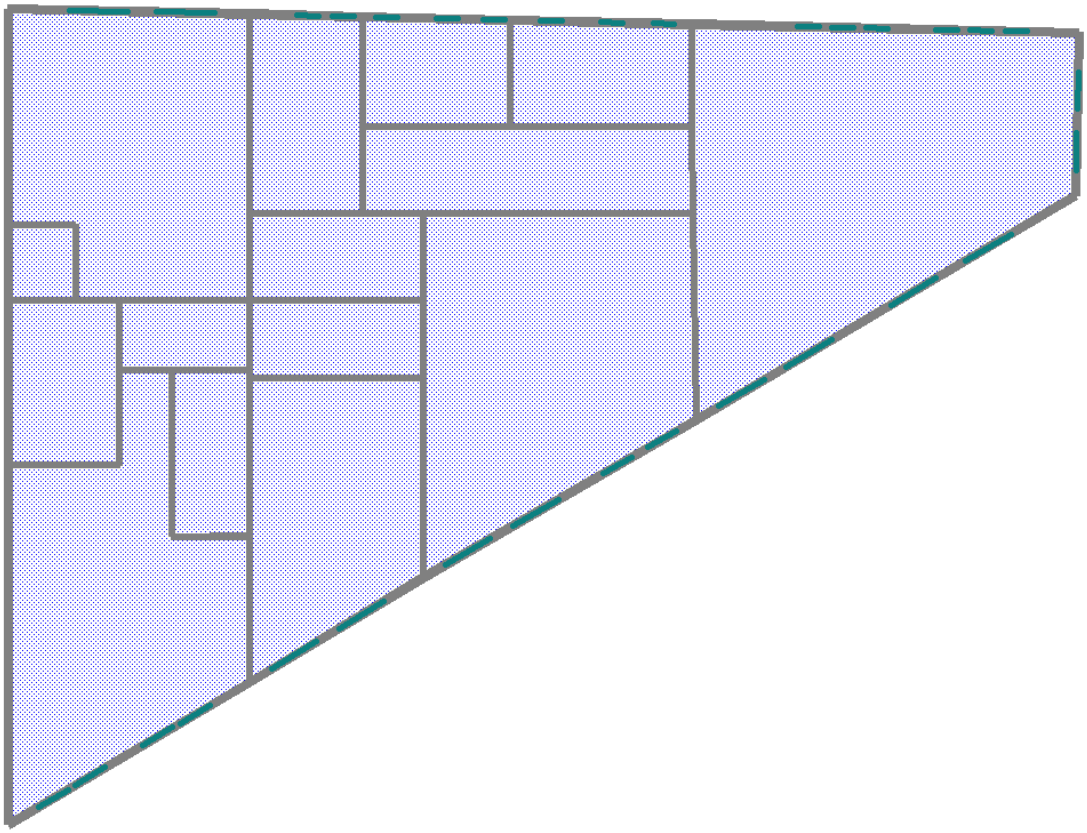


Figure 13 - Level 2

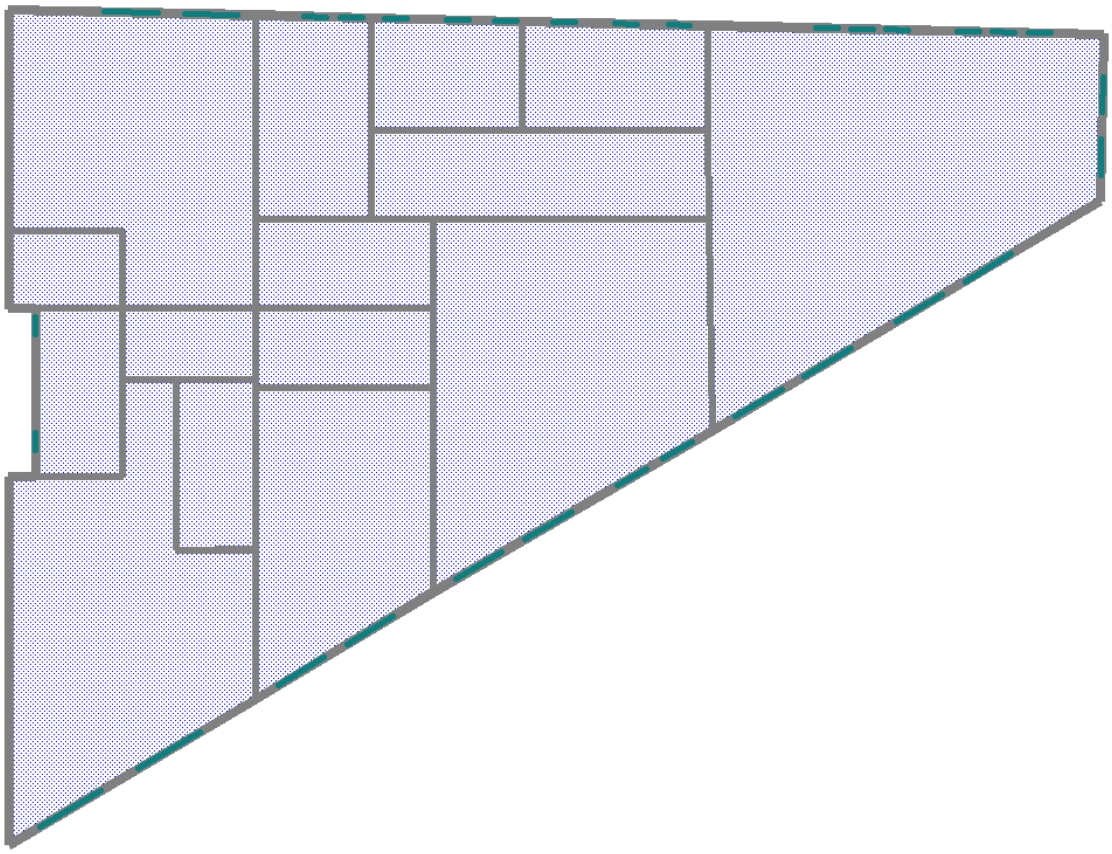


Figure 14 - Level 3

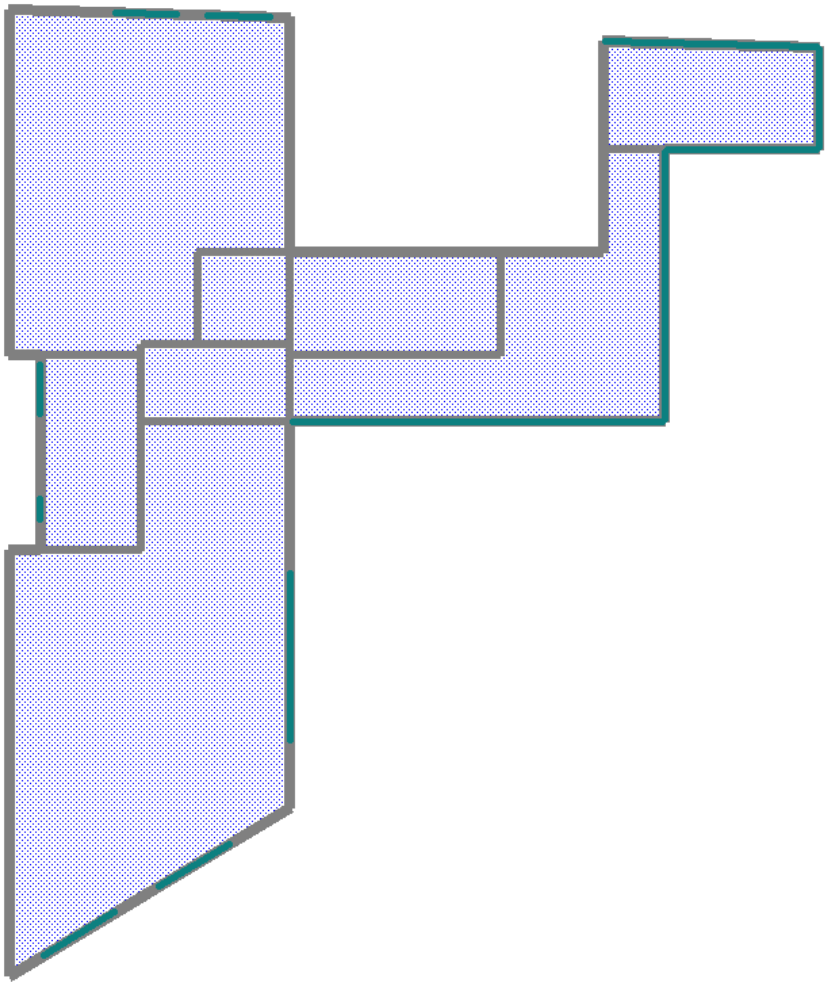


Figure 15 - Level 4

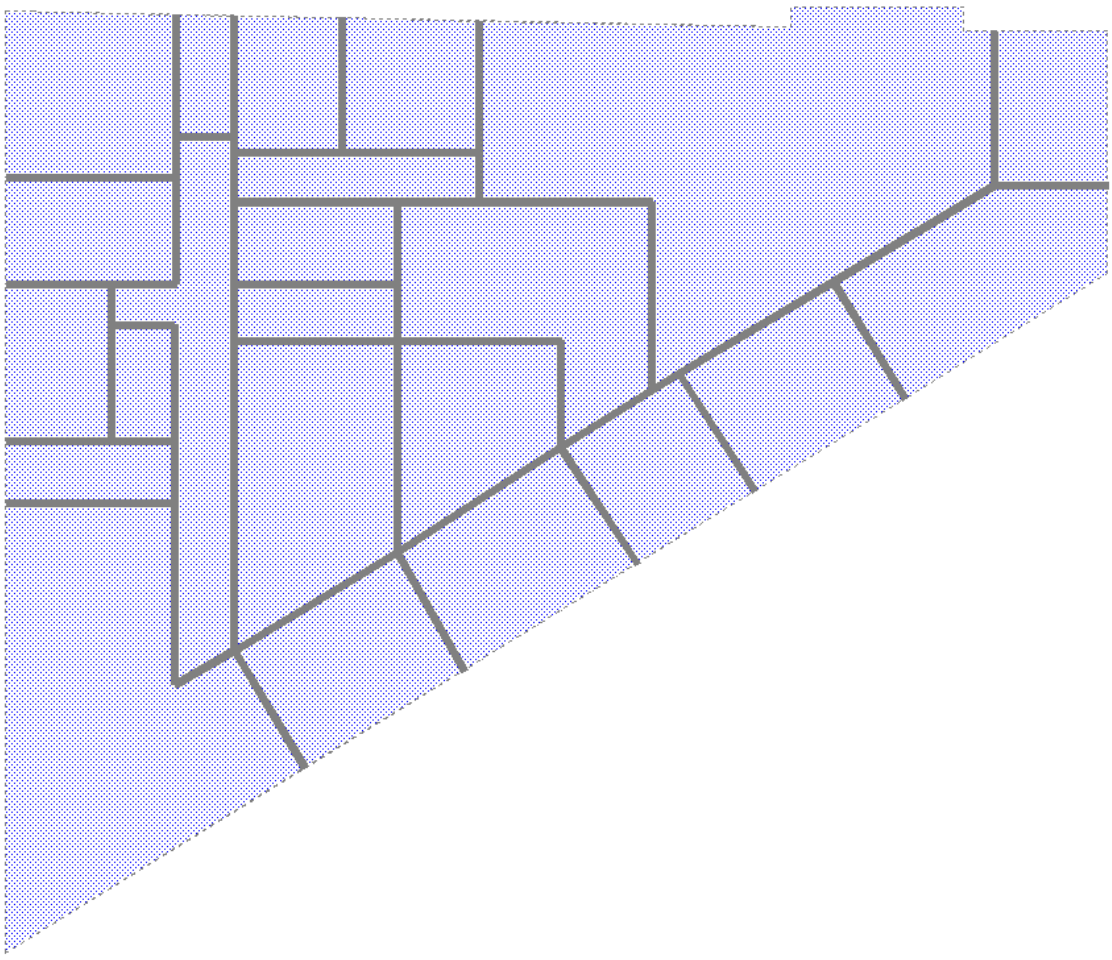


Figure 16 – Basement

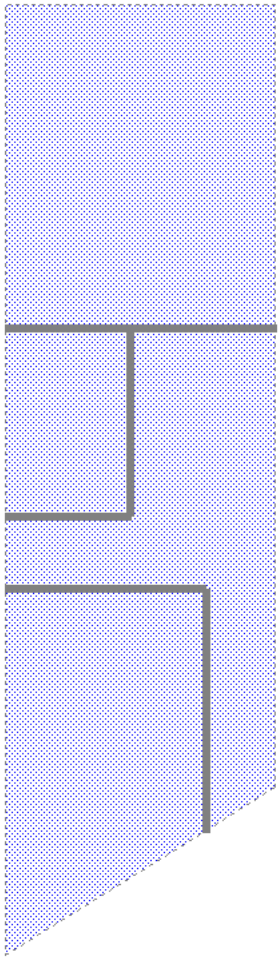


Figure 17 - Sub-Basement

E. Lighting System

The project assumes that lighting will comply with C406.3 while the submission does not include a lighting design at this time. The permit applicant understands that : 1) an electrical permit application shall be submitted and approved prior to the issuance of the building permit per SEC C407.2 and TIP 423; and 2) the electrical/ lighting permit number and the Lighting Forms from the SDCI web site shall also be submitted for verification. All electrical documentation will be provided by others.

Table 15 - Modeled Lighting Power Density

Space Type	C404 LPD	C406.3 LPD
Child care	0.90	0.6750
Storage	0.45	0.3375
Stairs	0.50	0.3750
Corridor	0.48	0.3600
Trash	0.45	0.3375
Kitchens	0.71	0.5325
Elevator and shaft	0	0
Vestibule	0.65	0.4875
Lobby	0.65	0.4875
Event space	0.88	0.6600
Bathrooms	0.70	0.5250
Open office	0.70	0.5250
Lounge	0.52	0.3900
Transformer vault	0.68	0.5100
Electrical/ Mechanical rooms	0.68	0.5100
Meeting room	0.88	0.6600

F. Space Heating and Space Cooling

1. Manufacturer's Specifications

HVAC schedules from permit drawings:

ENERGY RECOVERY VENTILATORS

TAG	LOCATION/ SERVICE	MANUFACTURER	MODEL	FLOW (CFM)	ECOVERY EFFICIENC		WEIGHT (LBS)	ELECTRICAL		NOTES
					SENSIBLE	LATENT		V/PH	MCA	
ERV-B-1	BASEMENT / EVENT	VENTACITY	VS400CM	370	86%	79%	260	208V/1Ph	15.1	
ERV-B-2	BASEMENT / EVENT	VENTACITY	VS1200CM	960	86%	77%	550	208V/1Ph	36.7	
ERV-1-1	LEVEL 1 / CHILDCARE	VENTACITY	VS900CM	405	86%	79%	400	208V/1Ph	29.1	
ERV-1-2	LEVEL 1 / EVENT	VENTACITY	VS900CM	410	86%	79%	400	208V/1Ph	29.1	
ERV-MEZZ	MEZZANINE	VENTACITY	VS250CM	60	85%	75%	160	208V/1Ph	8.2	
ERV-2-1	LEVEL 2 / CHILDCARE	VENTACITY	VS900CM	560	86%	79%	400	208V/1Ph	29.1	
ERV-2-2	LEVEL 2 / OFFICE	VENTACITY	VS400CM	340	86%	79%	260	208V/1Ph	15.1	
ERV-3-1	LEVEL 3 / CHILDCARE	VENTACITY	VS900CM	540	86%	79%	400	208V/1Ph	29.1	
ERV-3-2	LEVEL 3 / OFFICE	VENTACITY	VS400CM	360	86%	79%	260	208V/1Ph	15.1	
ERV-4-1	LEVEL 4 / CHILDCARE	VENTACITY	VS250CM	170	85%	75%	160	208V/1Ph	8.2	

NOTES:
1. BMS SHALL CONTROL FANS BASED ON STANDARD OCCUPANCY SCHEDULE. POWER FANS ON 1 HR BEFORE BUILDING OPENS AND 1 HOUR AFTER BUILDING CLOSES, OPEN AND SHUT MOTORIZED DAMPERS ALONG WITH FANS.

INVERTER DRIVEN AIR SOURCE HEAT PUMP

TAG	LOCATION / SERVICE	MFR	MODEL	REFRIGERANT	NOMINAL HEATING CAPACITY (BTUH)	NOMINAL COOLING CAPACITY (BTUH)	FLOW (GPM)		/ATER TEMP (HEATIN		/ATER TEMP (COOLIN		EER (SEER)	COP (@ 47°F)	VOLTS/ PHASE	MCA	WEIGHT (LBS)
							HEATING	COOLING	EWT (°F)	LWT (°F)	EWT (°F)	LWT (°F)					
ASHP-1	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-2	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-3	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-4	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-5	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-6	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-7	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-8	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-9	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-10	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-11	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525
ASHP-12	HEATING/COOLING	AERMEC	ANKI-045H-J5	R410A	41,300	40,800	5.9	9.7	95	105	65	55	10.63	3.04	220V/1Ph	34.6	525

CHILLED BEAMS

TAG	LOCATION/ SERVICE	MFR	MODEL	COOLING CAPACITY (BTUH)	EWT (°F)	LWT (°F)	FLOW (GPM)	PRESS DROP (ft wg)	DRY WEIGHT (LBS/ft.)	FILLED WEIGHT (LBS/ft.)	NOTES
CB-4	SEE PLANS / COOLING	SWEGON	FRB c-430-1.2-H	916	57	58.5	1.2	2.1	4.9	5.4	
CB-5	SEE PLANS / COOLING	SWEGON	FRB c-430-1.5-H	1156	57	58.9	1.2	2.5	4.9	5.4	
CB-6	SEE PLANS / COOLING	SWEGON	FRB c-430-1.8-H	1389	57	59.3	1.2	2.9	4.9	5.4	
CB-7	SEE PLANS / COOLING	SWEGON	FRB c-430-2.1-H	1614	57	59.7	1.2	3.4	4.9	5.4	
CB-8	SEE PLANS / COOLING	SWEGON	FRB c-430-2.4-H	1833	57	60.1	1.2	3.8	4.9	5.4	
CB-9	SEE PLANS / COOLING	SWEGON	FRB c-430-2.7-H	2046	57	60.4	1.2	4.2	4.9	5.4	
CB-10	SEE PLANS / COOLING	SWEGON	FRB c-430-3.0-H	2253	57	60.7	1.2	4.6	4.9	5.4	
CB-11	SEE PLANS / COOLING	SWEGON	FRB c-430-3.3-H	2453	57	61.1	1.2	5.0	4.9	5.4	
CB-12	SEE PLANS / COOLING	SWEGON	FRB c-430-3.6-H	2649	57	61.4	1.2	5.4	4.9	5.4	
CB-13	SEE PLANS / COOLING	SWEGON	FRB c-430-3.9-H	2838	57	61.7	1.2	5.9	4.9	5.4	

NOTES:

FAN COIL UNITS

TAG	LOCATION / SERVICE	MFR	MODEL	HEAT EXCHANGE FLUID	NOMINAL	NOMINAL	FLOW (GPM)		CHW WATER TEMP		HHW WATER TEMP		CFM	ESP (in wg)	VOLTS/ PHASE	MOT OR	WEIGHT (LBS)
					HEATING	COOLING	HEATING	COOLING	EWT (°F)	LWT (°F)	EWT (°F)	LWT (°F)					
FCU-BRK2	LEVEL 2 BREAK / HTG & CLG	SONKOR	PCG-08	WATER	4,878	9,129	0.2	1.8	57	67	103	88	306		120V/1	18	67
FCU-BRK3	LEVEL 3 BREAK / HTG & CLG	SONKOR	PCG-08	WATER	4,878	9,129	0.2	1.8	57	67	103	88	306		120V/1	18	67
FCU-EV2-1	BASEMENT EVENT / HTG & CLG	SONKOR	PDWB(4R+2)-1600	WATER	15,912	16,241	2.1	6.7	57	67	103	88	1055	0.24	208V/1	220	
FCU-EV2-2	BASEMENT EVENT / HTG & CLG	SONKOR	PDWB(4R+2)-1600	WATER	15,912	16,241	2.1	6.7	57	67	103	88	1055	0.24	208V/1	220	110
FCU-EV9-1	BASEMENT EVENT / HTG & CLG	SONKOR	PDWB(4R+2)-1200	WATER	27,481	27,978	3.6	11.4	57	67	103	88	1865	0.25	208V/1	220	128
FCU-EV9-2	BASEMENT EVENT / HTG & CLG	SONKOR	PDWB(4R+2)-1200	WATER	27,481	27,978	3.6	11.4	57	67	103	88	1865	0.25	208V/1	220	128

2. Energy Efficiency Ratings per AHRI Standards

Primary heating and cooling is provided by 12 identical air-to-water heat pumps with rated performance shown in Figure 18. Ventilation is provided using Ventacity energy recovery ventilators with rated performance shown in Figure 19.

PERFORMANCE SPECIFICATIONS

ANKI - (°)

Size		020	025	040	045
Cooling performance 54.1 °F / 44.1 °F (1)					
Cooling capacity	ton	1.7	2.1	2.7	3.4
Input power	kW	2.0	2.6	3.1	4.2
Cooling total input current	A	8.0	11.0	14.0	18.0
EER	BTU/W	10.16	9.55	10.18	9.51
IPLV	BTU/W	17.81	17.87	16.25	17.55
Water flow rate system side	gpm	4.5	5.5	7.1	8.9
Pressure drop system side	ft H_2O	5.35	7.36	4.34	6.35
Heating performance 104 °F / 113 °F (2)					
Heating capacity	BTU/h	21,261	26,600	31,915	42,077
Input power	kW	1.9	2.5	3.1	4.1
Heating total input current	A	8.0	10.0	13.0	18.0
COP	kW/kW	3.22	3.17	3.05	3.00
Water flow rate system side	gpm	4.7	6.0	7.3	9.4
Pressure drop system side	ft H_2O	4.68	7.02	3.34	5.68

(1) Data: System side water heat exchanger 54.1 °F / 44.1 °F; External air 95 °F
(2) Data: System side water heat exchanger 104 °F / 113 °F; External air 44.6 °F

Figure 18 – Air-to-Water Heat Pumps

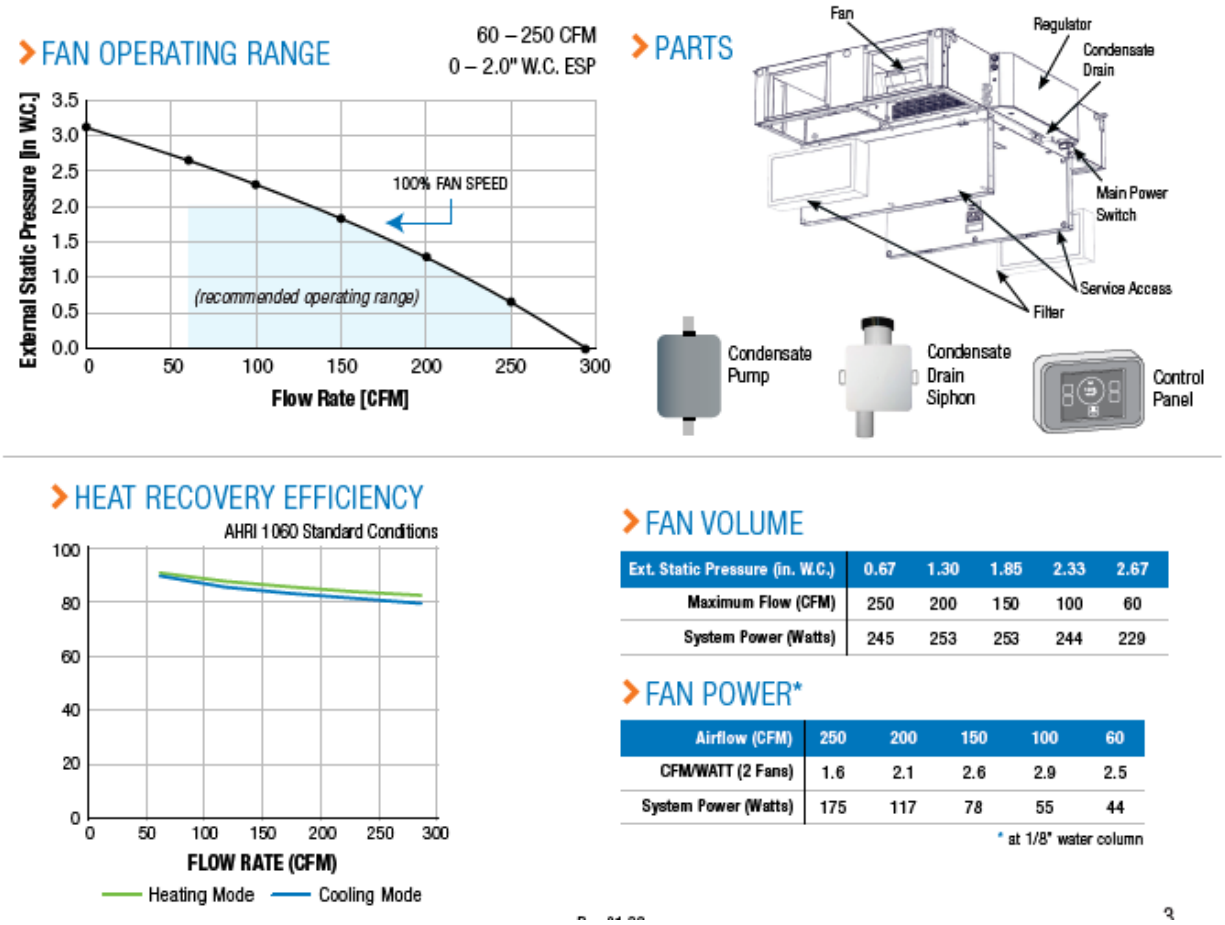


Figure 19 – Ventacity VS250CM: ERVs: ERV-MEZZ, ERV-4-1

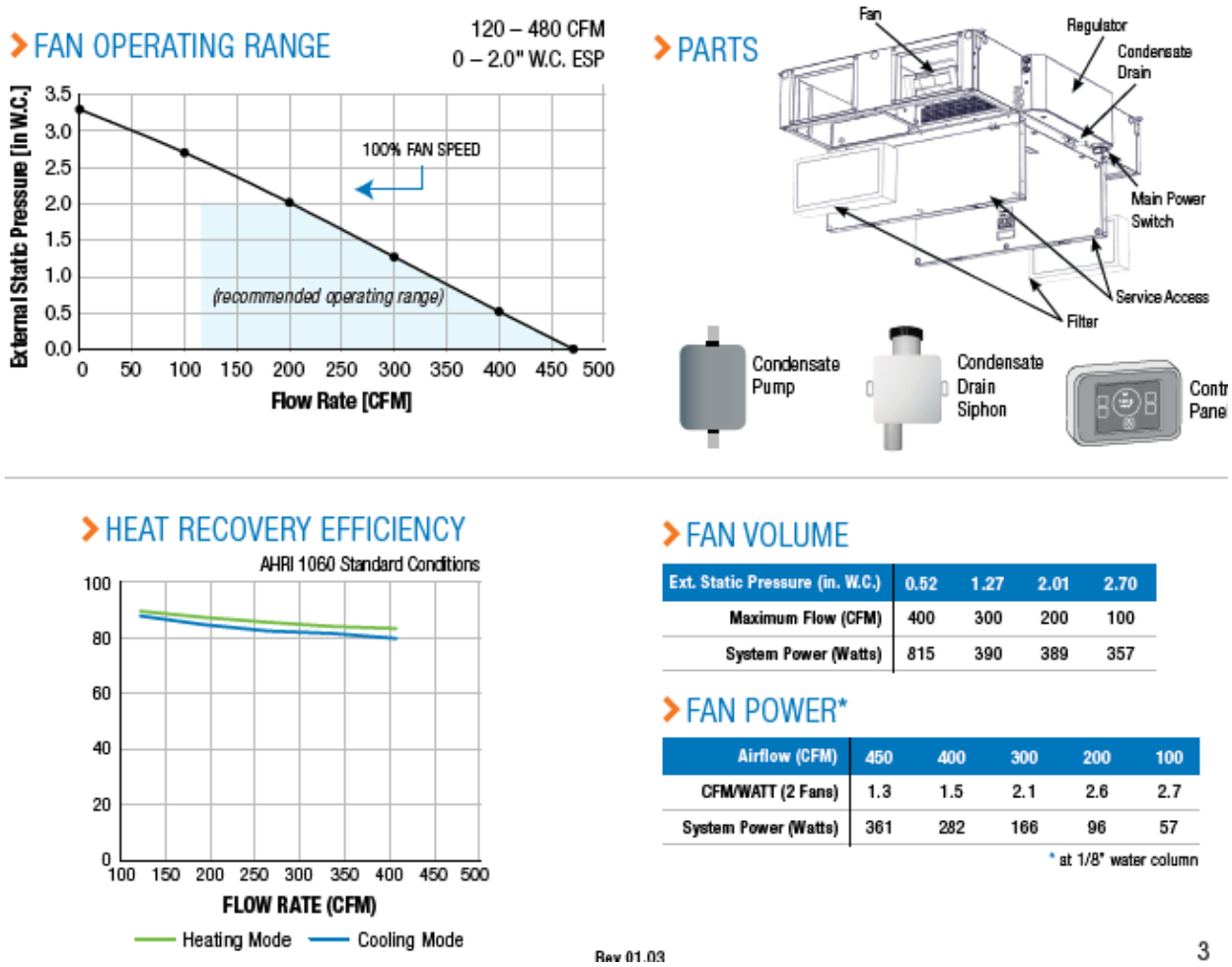


Figure 20 - Ventacity VS400CM: ERV-B-1, ERV-2-2, ERV-3-2

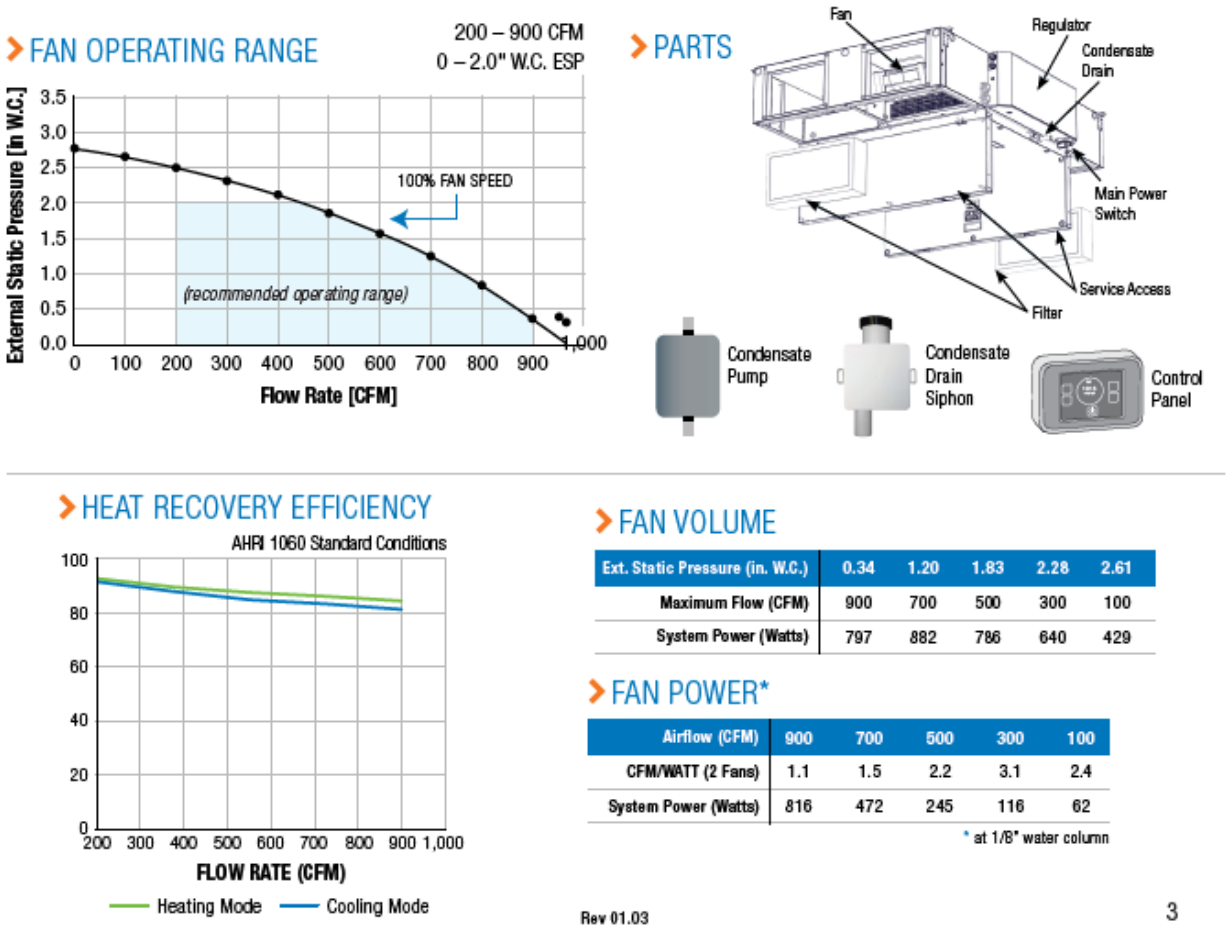


Figure 21 - Ventacity VS900CM: ERV-1-1, ERV-2-1, ERV-3-1

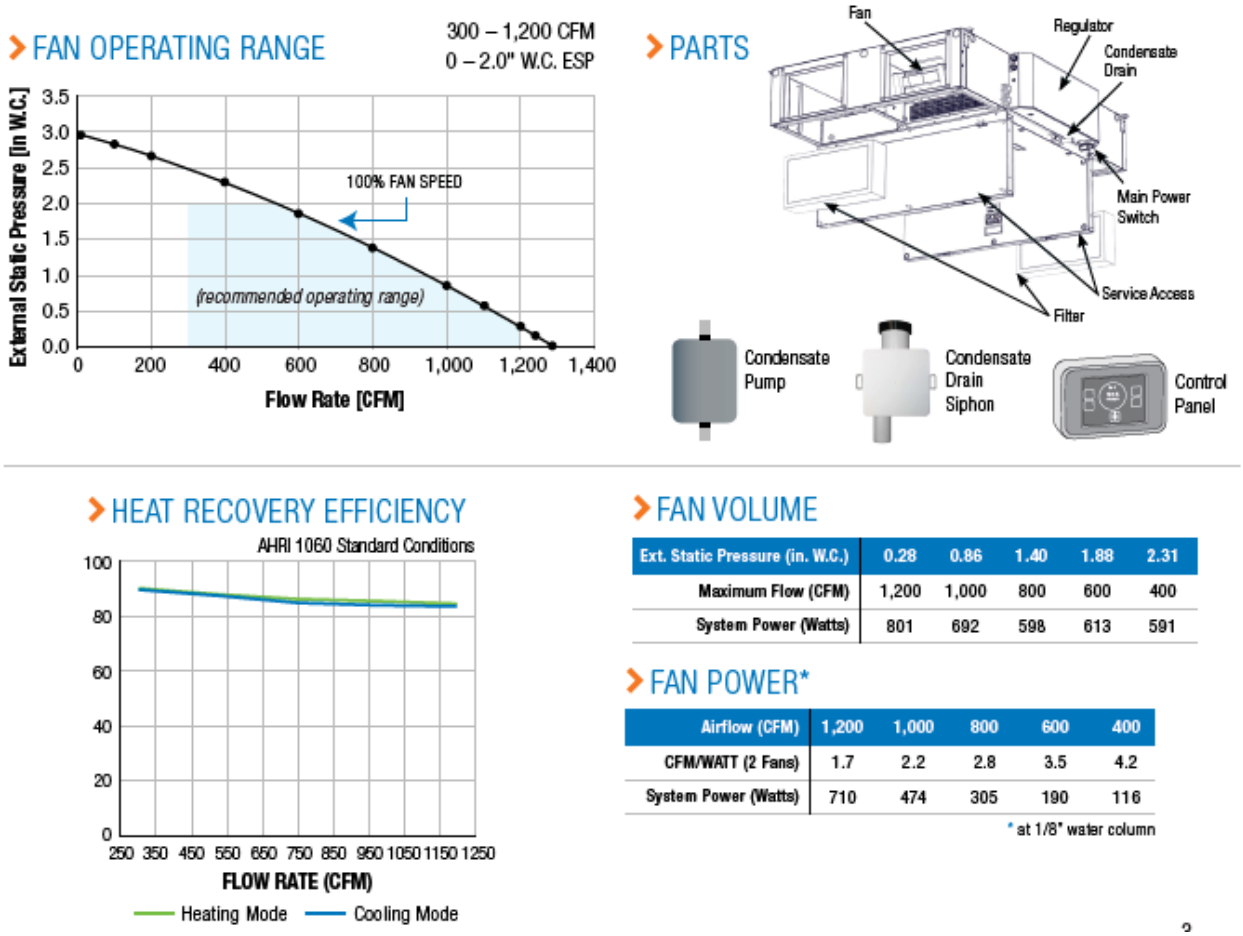


Figure 22 - Ventacity VS1200CM: ERV-B-2

3. Standard Design Equipment Size

The system heating and cooling capacities in the standard reference design were obtained by doing a sizing run of the standard reference design with a heating and cooling sizing ratio that is the identical to the ratio of heating and cooling capacity of the proposed design capacity to the capacity obtained from a sizing run of the proposed case. Table 12 shows that heating and cooling sizing ratios are identical for the proposed and SRD simulations. Seattle cooling and heating design day conditions are from the 2017 ASHRAE Fundamentals Handbook. As required by Table C407.5.1(1) of the 2015 SEC, Table 16 shows a total three hours of unmet cooling loads for the SRD model and 3 hours of unmet heating loads for both the SRD and proposed models.

Table 16 - Unmet Load Hours

	Standard Reference Design	Proposed Design
Cooling unmet load hours	3	0
Heating unmet load hours	3	3

Table 17 - Proposed and Standard Design Sizing Ratio Capacity

	Proposed Building						SRD Baseline Building					
	Sim kBtuh		Auto kBtuh		Sizing Ratio		Sim kBtuh		Auto kBtuh		Sizing Ratio	
System	Clg	Htg	Clg	Htg	Clg	Htg	Clg	Htg	Clg	Htg	Clg	Htg
Sys1CB	18.6	23.1	17.9	23.1	1.04	1.00	34.0	29.2	32.4	29.2	1.04	1.00
Sys2CB	2.8	10.9	8.6	10.9	0.32	1.00	3.3	8.9	9.9	8.9	0.32	1.00
Sys3CB	10.6	11.1	9.9	11.1	1.07	1.00	17.4	14.6	16.2	14.6	1.07	1.00
Sys4CB	13.2	25.7	13.5	25.7	0.98	1.00	26.1	23.9	26.6	23.9	0.98	1.00
Sys5CB	40.1	50.0	33.0	50.0	1.22	1.00	65.2	48.1	53.5	48.1	1.22	1.00
Sys6CB	15.9	36.6	12.1	36.6	1.31	1.00	27.1	18.6	20.7	18.6	1.31	1.00
Sys7CB	16.4	16.6	12.9	16.6	1.27	1.00	20.7	14.6	16.3	14.6	1.27	1.00
Sys8CB	9.0	8.5	5.5	8.5	1.64	1.00	13.5	7.4	8.2	7.4	1.64	1.00
Sys9FC	9.1	8.3	2.5	8.3	3.60	1.00	17.0	4.2	4.7	4.2	3.60	1.00
Sys10CB	14.5	14.8	11.2	14.8	1.30	1.00	20.3	14.0	15.6	14.0	1.30	1.00
Sys11CB	23.9	35.8	16.7	35.8	1.43	1.00	39.4	24.6	27.3	24.6	1.43	1.00
Sys12CB	15.9	20.8	14.3	20.8	1.11	1.00	20.8	16.9	18.7	16.9	1.11	1.00
Sys13CB	16.4	14.5	14.3	14.5	1.15	1.00	17.9	14.0	15.6	14.0	1.15	1.00
Sys14CB	9.0	9.5	5.5	9.5	1.64	1.00	13.9	7.6	8.4	7.6	1.64	1.00
Sys15FC	9.1	11.7	2.5	11.7	3.63	1.00	20.5	5.1	5.6	5.1	3.63	1.00
Sys16CB	14.5	15.3	9.9	15.3	1.46	1.00	21.8	13.4	14.8	13.4	1.46	1.00
Sys17CB	29.0	39.4	16.1	39.4	1.80	1.00	46.5	23.1	25.7	23.1	1.80	1.00
Sys18CB	16.9	18.6	10.6	18.6	1.59	1.00	31.3	17.6	19.5	17.6	1.59	1.00
Sys19CB	17.1	14.2	8.2	14.2	2.08	1.00	32.3	14.0	15.5	14.0	2.08	1.00
Sys20FC	56.0	106.8	48.7	106.8	1.15	1.00	103.9	81.4	90.4	81.4	1.15	1.00
Sys21FC	32.5	61.2	17.8	61.2	1.82	1.00	35.7	17.5	19.5	17.5	1.82	1.00
Sys22CB	5.3	7.0	4.7	7.0	1.13	1.00	7.1	5.6	6.3	5.6	1.13	1.00
Sys23DfltClg	2.1	1.9	1.1	1.9	1.87	1.00	2.4	2.2	2.4	2.2	1.87	1.00
Sys24DfltClg	2.0	3.8	1.1	3.8	1.74	1.00	2.5	2.3	2.5	2.3	1.74	1.00
Sys25DfltClg	15.2	12.7	19.7	12.7	0.77	1.00	17.1	15.4	17.1	15.4	0.77	1.00
Sys26DfltClg	6.6	5.0	2.2	5.0	2.93	1.00	7.3	6.6	7.3	6.6	2.93	1.00
Sys27DfltClg	4.3	8.4	6.8	8.4	0.62	1.00	6.2	5.5	6.2	5.5	0.62	1.00
Sys28DfltClg	2.3	2.7	1.1	2.7	2.17	1.00	2.3	2.1	2.3	2.1	2.17	1.00
Sys29DfltClg	3.3	6.7	4.1	6.7	0.81	1.00	4.0	3.6	4.0	3.6	0.81	1.00

G. Ventilation

1. Space Conditioning Supply Fan Power

Standard Reference Design: The SRD system consists of rooftop package heat pumps. According to Table C407.5.1, fan power should be modeled as follow:

$$P_{fan} = \frac{746 \times BHP}{Fan\ Motor\ Efficiency}$$

Where "BHP" is the brake horsepower for constant volume fans from Table C403.2.11.1[1]. The final baseline fan input at 0.779 W/cfm.

Proposed Design: There are six fan coils serving event space and break rooms with supply fans. These are modeled as only running when there is a demand for heating or cooling. There are also several spaces with only baseboard heating and no cooling. These are modeled with package rooftop air conditioners and hot water baseboard heat. Fans are simulated as only operating when there is a cooling demand in the space. Fan power is modeled identically to the SRD at 0.779 W/cfm. Fan power for each proposed and a SRD system is shown in Table 12.

2. Outside Air Supply Fan Power

Outside air is supplied through DOAS systems. There are 10 DOAS systems with ERVs in the proposed building and a single DOAS with ERV in the SRD. Fan power for all proposed and SRD systems is shown in Table 12. Refer to energy efficiency ratings above for documentation of fan power for the proposed ERVs.

H. Interior Exhaust Fans

(not applicable)

I. Parking Garage Fans

(not applicable)

J. Service Water Heating

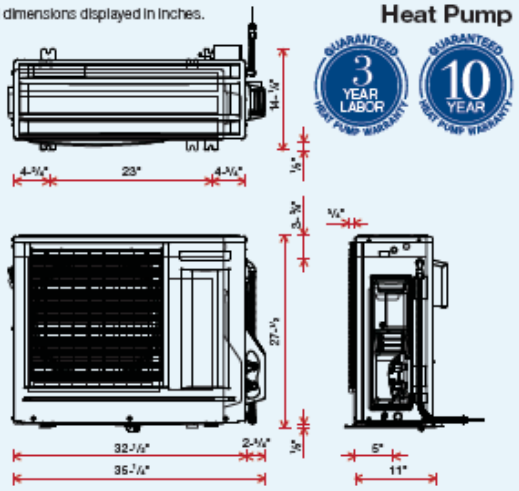
Water heating is provided using three Sanden heat pump water heaters with external 119 storage tanks plus a single buffer tank with a supplemental electric heater. The heat pumps are controlled to produce a higher temperature than the building supply temperature (150F vs 120F), therefore it is not expected that the electric elements will operate. The SRD baseline is configured identically with all water heating being electric resistance.

[1] 0.00094 BHP/cfm

SANCO2 GEN3 Specifications

All dimensions displayed in inches.

Heat Pump

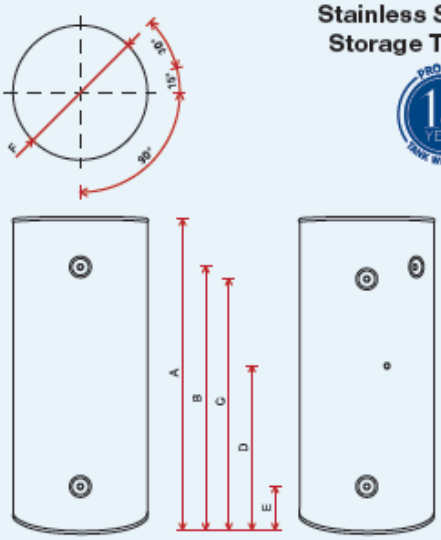


Outdoor Unit (Heat Pump) Model No. GS3-45HPA-US

Performance	43-gal. sys.	83-gal. sys.	119-gal. sys.
Uniform Energy Factor	2.65	3.34	3.23
First Hour Rating	65 gallons	109 gallons	130 gallons

Specifications	
Water Temperature Setting	130°F to 175°F
Ambient Air Operating Temperature	-20°F to +110°F
Heat Pump Capacity	15,400 Btu/h
Heat Pump Capacity	4.5 kW
Heat Pump COP	5.2
Refrigerant Type	R744 (CO_2)
Compressor Type	Inverter
Power Voltage	208/230v ~1Ph ~ 60Hz
Breaker Size	15 Amps
MCA	13 Amps
Outdoor Operating Noise Level	37 dB
Weight	106 lbs
Pipe Size (Tank to Heat Pump)	½" (Hot & Cold)
Max Length Inc Vertical	50 ft
Max Vertical Separation	16 ft
Max Water Pressure	95 Psig

Stainless Steel Storage Tank*



Tank Model No:	SAN-43SSAQA	SAN-83SSAQA	SAN-119GLBK*
A Height	38-¼"	68-⅛"	63-½"
B Hot Water Outlet & PR Valve	29-⅓"	60-¼"	56"
C Heat Pump Return	29-⅓"	60-¼"	60-¼"
D Sensor Port	9-¾"	40 ⅜"	56"
E Cold Water Inlet / Cold Water to HP	8-¾"	8-¾"	4"
F Diameter	24-⅓"	24-⅓"	28"
Weight (lbs)	88 lbs	115 lbs	345 lbs
Tank Capacity (gallons)	43 gallons	83 gallons	119 gallons
Warranty	15 years	15 years	10 years*

Connection Sizes	
Cold Water Inlet	¾" NPT
Hot Water Outlet	¾" NPT
Cold Water to Heat Pump	¾" NPT
Hot Water Return from Heat Pump	¾" NPT
Pressure Relief Valve Setting (Psig)	125 Psig

*SAN-119GLBK tank is a glass-lined steel tank with a 10 year warranty.
Note: Materials and specifications are subject to change without notice.

REV 050219

ENERGY STAR
Excludes SAN-119GLBK

For more information, please call **1-844-SANDCO2** or email **info@sandenwaterheater.com**.

K. Other End Uses

1. Elevators: Elevator energy use is estimated to be 1,500 kWh per year for both the proposed and SRD models.
2. Miscellaneous Equipment: Per SEC Appendix E.

L. Computer Printout of Inputs and Outputs

Standard Reference Design

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REPORT- LV-B Summary of Spaces WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF SPACES 84 EXTERIOR 50 INTERIOR 34

SPACE	SPACE*FLOOR MULTIPLIER	SPACE TYPE	AZIM	LIGHTS (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	ACH	AREA (SQFT)	VOLUME (CUFT)
Spaces on floor: L1Ground Flr										
L1SW Perim Spc (G.SW1)	1.0	EXT	-30.6	0.67	13.2	0.50	AIR-CHANGE	0.20	989.5	18503.2
L1Core Spc (G.C2)	1.0	INT	0.0	0.34	0.4	0.78	AIR-CHANGE	0.00	99.0	1851.3
L1West Perim Spc (G.W3)	1.0	EXT	0.0	0.37	0.7	0.75	AIR-CHANGE	0.21	179.2	3351.0
L1WNW Perim Spc (G.WNW4)	1.0	EXT	181.0	0.36	1.2	0.75	AIR-CHANGE	0.42	337.4	6309.9
L1Core Spc (G.C5)	1.0	INT	0.0	0.36	0.4	0.78	AIR-CHANGE	0.00	120.0	2244.0
L1Core Spc (G.C6)	1.0	INT	0.0	0.67	4.1	0.53	AIR-CHANGE	0.00	304.0	5684.8
L1North Perim Spc (G.N7)	1.0	EXT	92.2	0.34	1.0	0.75	AIR-CHANGE	0.19	276.3	5166.9
L1SSE Perim Spc (G.SSE8)	1.0	EXT	0.0	0.53	2.3	0.75	AIR-CHANGE	0.10	636.0	11893.2
L1Core Spc (G.C9)	1.0	INT	0.0	0.36	0.5	0.78	AIR-CHANGE	0.00	124.0	2318.8
L1Core Spc (G.C10)	1.0	INT	0.0	0.00	0.0	0.03	AIR-CHANGE	0.00	200.0	3740.0
L1Core Spc (G.C11)	1.0	INT	0.0	0.36	0.9	0.78	AIR-CHANGE	0.00	236.0	4413.2
L1North Perim Spc (G.N12)	1.0	EXT	-90.0	0.34	1.4	0.75	AIR-CHANGE	0.18	378.0	3401.9
L1North Perim Spc (G.N13)	1.0	EXT	90.0	0.36	0.4	0.75	AIR-CHANGE	0.16	100.4	903.8
L1North Perim Spc (G.N14)	1.0	EXT	90.0	0.38	0.9	0.75	AIR-CHANGE	0.26	256.3	4792.8
L1SSE Perim Spc (G.SSE15)	1.0	EXT	-32.5	0.49	0.5	0.75	AIR-CHANGE	0.27	125.8	2351.8
L1SE Perim Spc (G.SE16)	1.0	EXT	-90.0	0.49	1.7	0.75	AIR-CHANGE	0.15	478.3	8943.8
L1Core Spc (G.C17)	1.0	INT	0.0	0.49	1.4	0.78	AIR-CHANGE	0.00	381.6	7135.7
L1East Perim Spc (G.E18)	1.0	EXT	79.7	0.66	31.1	0.75	AIR-CHANGE	0.19	1554.6	29070.5
Space 84	1.0	EXT	-90.0	0.34	1.7	0.75	AIR-CHANGE	0.18	478.6	4642.7
Spaces on floor: L2Ground Flr										
L2SW Perim Spc (G.SW1)	1.0	EXT	-30.6	0.67	12.2	0.51	AIR-CHANGE	0.22	915.7	11721.2
L2Core Spc (G.C2)	1.0	INT	0.0	0.52	0.6	0.75	AIR-CHANGE	0.00	172.8	2211.8
L2West Perim Spc (G.W3)	1.0	EXT	0.0	0.37	0.9	0.76	AIR-CHANGE	0.26	243.2	3113.0
L2West Perim Spc (G.W4)	1.0	EXT	0.0	0.52	0.2	0.76	AIR-CHANGE	0.35	67.6	865.8
L2Core Spc (G.C5)	1.0	INT	0.0	0.36	0.4	0.75	AIR-CHANGE	0.00	120.0	1536.0
L2NW Perim Spc (G.NW6)	1.0	EXT	90.0	0.67	11.4	0.51	AIR-CHANGE	0.17	857.4	10974.8
L2SSE Perim Spc (G.SSE7)	1.0	EXT	0.0	0.53	2.1	0.76	AIR-CHANGE	0.11	580.0	7424.0
L2Core Spc (G.C8)	1.0	INT	0.0	0.36	0.7	0.75	AIR-CHANGE	0.00	180.0	2304.0
L2Core Spc (G.C9)	1.0	INT	0.0	0.00	0.0	0.00	AIR-CHANGE	0.00	200.0	2560.0
L2Core Spc (G.C10)	1.0	INT	0.0	0.36	1.4	0.75	AIR-CHANGE	0.00	380.8	4873.6
L2North Perim Spc (G.N11)	1.0	EXT	0.0	0.52	1.1	0.76	AIR-CHANGE	0.12	296.7	3798.1
L2North Perim Spc (G.N12)	1.0	EXT	0.0	0.39	0.8	0.76	AIR-CHANGE	0.22	212.1	2714.6
L2North Perim Spc (G.N13)	1.0	EXT	0.0	0.38	0.9	0.76	AIR-CHANGE	0.22	253.1	3239.0
L2SSE Perim Spc (G.SSE14)	1.0	EXT	0.0	0.53	3.8	0.76	AIR-CHANGE	0.10	1032.5	13215.4

L2East Perim Spc (G.E15)	1.0	EXT	-88.8	0.52	5.2	0.76	AIR-CHANGE	0.22	1425.2	18242.7
Spaces on floor: L3Ground Flr										
L3SW Perim Spc (G.SW1)	1.0	EXT	-30.6	0.67	12.2	0.51	AIR-CHANGE	0.23	915.7	11080.0
L3Core Spc (G.C2)	1.0	INT	0.0	0.52	0.6	0.75	AIR-CHANGE	0.00	172.8	2090.9
L3West Perim Spc (G.W3)	1.0	EXT	0.0	0.37	0.7	0.76	AIR-CHANGE	0.28	186.2	2253.0
L3WSW Perim Spc (G.WSW4)	1.0	EXT	0.0	0.52	0.4	0.76	AIR-CHANGE	0.28	111.4	1347.5

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REPORT- LV-B Summary of Spaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

L3Core Spc (G.C5)	1.0	INT	0.0	0.36	0.4	0.75	AIR-CHANGE	0.00	120.0	1452.0
L3NW Perim Spc (G.NW6)	1.0	EXT	90.0	0.68	10.8	0.51	AIR-CHANGE	0.17	813.7	9845.6
L3SSE Perim Spc (G.SSE7)	1.0	EXT	0.0	0.53	2.1	0.76	AIR-CHANGE	0.33	580.0	7018.0
L3Core Spc (G.C8)	1.0	EXT	0.0	0.36	0.7	0.75	AIR-CHANGE	0.06	180.0	2178.0
L3Core Spc (G.C9)	1.0	INT	0.0	0.00	0.0	0.00	AIR-CHANGE	0.00	200.0	2420.0
L3Core Spc (G.C10)	1.0	EXT	0.0	0.36	1.4	0.75	AIR-CHANGE	0.19	380.8	4607.1
L3North Perim Spc (G.N11)	1.0	EXT	0.0	0.52	1.1	0.76	AIR-CHANGE	0.34	296.7	3590.4
L3North Perim Spc (G.N12)	1.0	EXT	0.0	0.39	0.8	0.76	AIR-CHANGE	0.44	212.1	2566.1
L3North Perim Spc (G.N13)	1.0	EXT	0.0	0.38	0.9	0.76	AIR-CHANGE	0.26	253.1	3061.9
L3SSE Perim Spc (G.SSE14)	1.0	EXT	0.0	0.53	3.8	0.76	AIR-CHANGE	0.26	1032.5	12492.7
L3East Perim Spc (G.E15)	1.0	EXT	-88.8	0.52	5.2	0.76	AIR-CHANGE	0.44	1425.2	17245.1
Spaces on floor: L4 Ground Flr										
L4 SSE Perim Spc (G.SSE1)	1.0	EXT	-31.1	0.52	4.0	0.76	AIR-CHANGE	0.47	1088.3	15997.4
L4 West Perim Spc (G.W2)	1.0	EXT	0.0	0.37	0.7	0.76	AIR-CHANGE	0.46	186.2	2737.1
L4 Core Spc (G.C3)	1.0	EXT	-90.0	0.36	0.4	0.75	AIR-CHANGE	0.18	108.8	1598.6
L4 NNW Perim Spc (G.NNW4)	1.0	EXT	0.0	0.52	2.9	0.76	AIR-CHANGE	0.47	810.9	11919.6
L4 SSE Perim Spc (G.SSE5)	1.0	EXT	0.0	0.36	1.7	0.76	AIR-CHANGE	0.67	457.2	6721.6
L4 North Perim Spc (G.N6)	1.0	EXT	90.0	0.00	0.0	0.84	AIR-CHANGE	0.45	205.0	3013.5
L4 North Perim Spc (G.N7)	1.0	EXT	90.0	0.38	0.8	0.76	AIR-CHANGE	0.89	214.2	3148.7
L4 Core Spc (G.C8)	1.0	EXT	180.0	0.52	0.3	0.75	AIR-CHANGE	0.18	81.0	1190.7
Spaces on floor: B1Below-Grade Flr										
B1SW Perim Spc (B.SW1)	1.0	EXT	-31.9	0.51	4.5	0.76	AIR-CHANGE	0.10	1235.0	17043.4
B1Core Spc (B.C2)	1.0	INT	0.0	0.36	1.8	0.76	AIR-CHANGE	0.00	505.9	6981.1
B1West Perim Spc (B.W3)	1.0	INT	0.0	0.51	0.6	0.76	AIR-CHANGE	0.00	154.1	2126.9
B1West Perim Spc (B.W4)	1.0	INT	0.0	0.37	0.9	0.76	AIR-CHANGE	0.00	247.0	3409.2
B1Core Spc (B.C5)	1.0	INT	0.0	0.53	0.4	0.76	AIR-CHANGE	0.00	110.4	1524.0
B1West Perim Spc (B.W6)	1.0	INT	0.0	0.51	1.0	0.76	AIR-CHANGE	0.00	270.4	3731.5
B1SSE Perim Spc (B.SSE7)	1.0	EXT	0.0	0.66	7.7	0.76	AIR-CHANGE	0.20	385.4	5318.0
B1Core Spc (B.C8)	1.0	INT	0.0	0.66	12.7	0.76	AIR-CHANGE	0.00	636.9	8788.6
B1Core Spc (B.C9)	1.0	INT	0.0	0.36	0.5	0.76	AIR-CHANGE	0.00	140.0	1932.0
B1Core Spc (B.C10)	1.0	INT	0.0	0.49	2.3	0.76	AIR-CHANGE	0.00	635.5	8769.6
B1SSE Perim Spc (B.SSE11)	1.0	EXT	0.0	0.66	5.8	0.76	AIR-CHANGE	0.20	291.0	4016.3
B1SSE Perim Spc (B.SSE12)	1.0	EXT	0.0	0.66	8.2	0.76	AIR-CHANGE	0.20	410.6	5666.3
B1Core Spc (B.C13)	1.0	INT	0.0	0.38	1.4	0.76	AIR-CHANGE	0.00	388.5	5361.3
B1SSE Perim Spc (B.SSE14)	1.0	EXT	0.0	0.66	7.4	0.76	AIR-CHANGE	0.20	370.1	5107.8
B1Core Spc (B.C15)	1.0	INT	0.0	0.00	0.0	0.01	AIR-CHANGE	0.00	200.0	2760.0
B1NW Perim Spc (B.NW16)	1.0	INT	90.0	0.51	1.5	0.76	AIR-CHANGE	0.00	417.6	5762.3
B1North Perim Spc (B.N17)	1.0	INT	0.0	0.51	0.4	0.76	AIR-CHANGE	0.00	103.4	1427.3
B1North Perim Spc (B.N18)	1.0	INT	0.0	0.52	0.8	0.76	AIR-CHANGE	0.00	220.8	3046.8
B1North Perim Spc (B.N19)	1.0	INT	0.0	0.52	1.0	0.76	AIR-CHANGE	0.00	271.4	3745.0
B1SE Perim Spc (B.SE20)	1.0	EXT	-90.0	0.66	10.1	0.76	AIR-CHANGE	0.20	506.3	6986.6
B1NE Perim Spc (B.NE21)	1.0	EXT	180.0	0.34	1.0	0.76	AIR-CHANGE	0.20	261.3	3606.2
B1North Perim Spc (B.N22)	1.0	EXT	-90.0	0.66	36.9	0.76	AIR-CHANGE	0.01	1843.0	25434.0
B1Core Spc (B.C23)	1.0	INT	0.0	0.36	0.7	0.76	AIR-CHANGE	0.00	180.0	2484.0
Spaces on floor: B2Below-Grade Flr										

B2SW Perim Spc (B.SW1)	1.0	INT	-31.7	0.51	2.3	0.76	AIR-CHANGE	0.00	643.2	5467.6
B2East Perim Spc (B.E2)	1.0	INT	-90.0	0.36	2.4	0.76	AIR-CHANGE	0.00	662.6	5631.9
B2West Perim Spc (B.W3)	1.0	INT	0.0	0.37	0.9	0.76	AIR-CHANGE	0.00	247.0	2099.8
B2North Perim Spc (B.N4)	1.0	INT	180.0	0.34	3.4	0.76	AIR-CHANGE	0.00	925.7	7868.8
BUILDING TOTALS				0.51	273.7	0.71			36486.8	501185.1

CONDITIONED FLOOR AREA = 31768.1 SQFT
TOTAL INSTALLED LIGHTING POWER = 18.435 KW

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REPORT- LV-B Summary of Spaces WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SPACE	SPACE*FLOOR MULTIPLIER	SPACE TYPE	AZIM	LIGHTS (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	ACH	AREA (SQFT)	VOLUME (CUFT)

TOTAL INSTALLED EQUIPMENT POWER = 25.798 KW

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REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF EXTERIOR SURFACES 100
(U-VALUE INCLUDES OUTSIDE FILM; WINDOW INCLUDES FRAME AND CURB, IF DEFINED)

SURFACE	- - - W I N D O W S - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	- - - - W A L L - - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-W A L L + W I N D O W S- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
L1East Wall (G.WNW4.E5)	0.000	0.00	0.056	49.56	0.056	49.56	NORTH
in space: L1WNW Perim Spc (G.WNW4)							
L1East Wall (G.N12.E11)	0.000	0.00	0.056	25.65	0.056	25.65	NORTH
in space: L1North Perim Spc (G.N12)							
Exterior Wall 89	0.000	0.00	0.056	27.64	0.056	27.64	NORTH
in space: Space 84							
L4 East Wall (G.NNW4.E10)	0.000	0.00	0.054	335.89	0.054	335.89	NORTH
in space: L4 NNW Perim Spc (G.NNW4)							
L4 East Wall (G.SSE5.E15)	0.362	193.12	0.054	196.42	0.207	389.55	NORTH
in space: L4 SSE Perim Spc (G.SSE5)							
L4 East Wall (G.N7.E23)	0.362	71.25	0.054	74.28	0.205	145.53	NORTH
in space: L4 North Perim Spc (G.N7)							
L4 East Wall (G.SSE1.E2)	0.362	121.88	0.054	429.42	0.122	551.30	NORTH
in space: L4 SSE Perim Spc (G.SSE1)							
L1East Wall (G.E18.E22)	0.289	177.96	0.056	138.14	0.187	316.10	NORTH
in space: L1East Perim Spc (G.E18)							
L2East Wall (G.E15.E12)	0.289	68.00	0.056	173.28	0.121	241.28	NORTH
in space: L2East Perim Spc (G.E15)							
L3East Wall (G.E15.E14)	0.289	50.68	0.056	177.40	0.108	228.08	NORTH
in space: L3East Perim Spc (G.E15)							
L1East Wall (G.SE16.E18)	0.000	0.00	0.056	50.63	0.056	50.63	NORTH
in space: L1SE Perim Spc (G.SE16)							
L1SSE Wall (G.SSE15.E16)	0.289	100.00	0.056	138.43	0.154	238.43	NORTH-EAST
in space: L1SSE Perim Spc (G.SSE15)							
L4 SSE Wall (G.SSE1.E1)	0.289	120.00	0.054	348.49	0.114	468.49	NORTH-EAST
in space: L4 SSE Perim Spc (G.SSE1)							
L1SSE Wall (G.SE16.E17)	0.289	216.00	0.056	220.16	0.171	436.16	NORTH-EAST
in space: L1SE Perim Spc (G.SE16)							
L3SSE Wall (G.SSE7.E9)	0.289	68.56	0.056	213.66	0.112	282.22	NORTH-EAST
in space: L3SSE Perim Spc (G.SSE7)							
L1SSE Wall (G.SSE8.E10)	0.289	216.00	0.056	220.16	0.171	436.16	NORTH-EAST
in space: L1SSE Perim Spc (G.SSE8)							
L2SSE Wall (G.SSE7.E7)	0.289	90.00	0.056	208.54	0.126	298.54	NORTH-EAST
in space: L2SSE Perim Spc (G.SSE7)							
L1SSE Wall (G.E18.E20)	0.289	447.36	0.056	456.41	0.171	903.77	NORTH-EAST
in space: L1East Perim Spc (G.E18)							
L2SSE Wall (G.SW1.E1)	0.289	138.72	0.056	274.72	0.134	413.44	NORTH-EAST
in space: L2SW Perim Spc (G.SW1)							
L3SSE Wall (G.SW1.E1)	0.289	120.00	0.054	270.83	0.126	390.83	NORTH-EAST

in space: L3SW Perim Spc (G.SW1)							
L1SSE Wall (G.SW1.E1)	0.289	252.76	0.056	351.24	0.153	604.01	NORTH-EAST
in space: L1SW Perim Spc (G.SW1)							
L3SSE Wall (G.E15.E16)	0.289	137.12	0.056	476.06	0.108	613.18	NORTH-EAST
in space: L3East Perim Spc (G.E15)							
L2SSE Wall (G.E15.E14)	0.289	180.00	0.056	468.65	0.120	648.65	NORTH-EAST
in space: L2East Perim Spc (G.E15)							
L3SSE Wall (G.SSE14.E13)	0.289	124.81	0.056	316.21	0.122	441.02	NORTH-EAST
in space: L3SSE Perim Spc (G.SSE14)							

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REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

L2SSE Wall (G.SSE14.E11) in space: L2SSE Perim Spc (G.SSE14)	0.289	146.25	0.056	320.29	0.129	466.54	NORTH-EAST
L4 South Wall (G.SSE5.E14) in space: L4 SSE Perim Spc (G.SSE5)	0.362	270.00	0.054	266.55	0.209	536.55	EAST
L4 South Wall (G.NNW4.E9) in space: L4 NNW Perim Spc (G.NNW4)	0.000	0.00	0.054	44.10	0.054	44.10	EAST
L4 South Wall (G.N7.E22) in space: L4 North Perim Spc (G.N7)	0.362	108.75	0.054	111.75	0.206	220.50	EAST
L3South Wall (G.WSW4.E5) in space: L3WSW Perim Spc (G.WSW4)	0.000	0.00	0.054	36.30	0.054	36.30	EAST
L1West Wall (G.E18.E19) in space: L1East Perim Spc (G.E18)	0.000	0.00	0.056	62.65	0.056	62.65	SOUTH-EAST
L4 West Wall (G.SSE1.E4) in space: L4 SSE Perim Spc (G.SSE1)	0.000	0.00	0.054	609.26	0.054	609.26	SOUTH-EAST
L1West Wall (G.W3.E3) in space: L1West Perim Spc (G.W3)	0.000	0.00	0.056	261.80	0.056	261.80	SOUTH
L3West Wall (G.WSW4.E6) in space: L3WSW Perim Spc (G.WSW4)	0.000	0.00	0.054	105.27	0.054	105.27	SOUTH
L4 West Wall (G.W2.E6) in space: L4 West Perim Spc (G.W2)	0.362	28.50	0.054	250.80	0.085	279.30	SOUTH
L3West Wall (G.NW6.E7) in space: L3NW Perim Spc (G.NW6)	0.000	0.00	0.054	300.68	0.054	300.68	SOUTH
L1West Wall (G.N14.E14) in space: L1North Perim Spc (G.N14)	0.000	0.00	0.056	51.43	0.056	51.43	SOUTH
L4 West Wall (G.NNW4.E12) in space: L4 NNW Perim Spc (G.NNW4)	0.000	0.00	0.054	493.18	0.054	493.18	SOUTH
L2West Wall (G.W3.E3) in space: L2West Perim Spc (G.W3)	0.000	0.00	0.056	243.20	0.056	243.20	SOUTH
L2West Wall (G.W4.E4) in space: L2West Perim Spc (G.W4)	0.000	0.00	0.056	111.36	0.056	111.36	SOUTH
L4 West Wall (G.SSE5.E16) in space: L4 SSE Perim Spc (G.SSE5)	0.000	0.00	0.054	147.00	0.054	147.00	SOUTH
L4 West Wall (G.N7.E21) in space: L4 North Perim Spc (G.N7)	0.000	0.00	0.054	154.35	0.054	154.35	SOUTH
L2West Wall (G.NW6.E5) in space: L2NW Perim Spc (G.NW6)	0.000	0.00	0.056	318.08	0.056	318.08	SOUTH
L3West Wall (G.W3.E4) in space: L3West Perim Spc (G.W3)	0.362	19.00	0.054	210.90	0.079	229.90	SOUTH
L1West Wall (G.SW1.E2) in space: L1SW Perim Spc (G.SW1)	0.000	0.00	0.056	775.09	0.056	775.09	SOUTH
L2West Wall (G.SW1.E2) in space: L2SW Perim Spc (G.SW1)	0.000	0.00	0.056	530.54	0.056	530.54	SOUTH
L3West Wall (G.SW1.E3) in space: L3SW Perim Spc (G.SW1)	0.000	0.00	0.054	501.53	0.054	501.53	SOUTH
L1West Wall (G.WNW4.E7) in space: L1WNW Perim Spc (G.WNW4)	0.000	0.00	0.056	721.00	0.056	721.00	SOUTH
L1West Wall (G.N7.E8) in space: L1North Perim Spc (G.N7)	0.000	0.00	0.056	49.56	0.056	49.56	SOUTH
Exterior Wall 91 in space: Space 84	0.289	17.00	0.056	42.17	0.123	59.17	WEST

L4 North Wall (G.SSE5.E17) in space: L4 SSE Perim Spc (G.SSE5)	0.000	0.00	0.054	147.00	0.054	147.00	WEST
L4 North Wall (G.N6.E19) in space: L4 North Perim Spc (G.N6)	0.000	0.00	0.054	301.35	0.054	301.35	WEST
L4 North Wall (G.SSE1.E3) in space: L4 SSE Perim Spc (G.SSE1)	0.000	0.00	0.054	44.12	0.054	44.12	WEST
L3North Wall (G.SW1.E2) in space: L3SW Perim Spc (G.SW1)	0.000	0.00	0.054	36.29	0.054	36.29	WEST

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L1North Wall (G.N13.E13) in space: L1North Perim Spc (G.N13)	0.000	0.00	0.056	54.90	0.056	54.90	WEST
L1North Wall (G.WNW4.E4) in space: L1WNW Perim Spc (G.WNW4)	0.289	26.25	0.056	77.54	0.115	103.79	WEST
L1North Wall (G.N7.E9) in space: L1North Perim Spc (G.N7)	0.289	42.00	0.056	266.61	0.087	308.61	WEST
L2North Wall (G.NW6.E6) in space: L2NW Perim Spc (G.NW6)	0.289	120.95	0.056	234.96	0.135	355.91	WEST
L3North Wall (G.NW6.E8) in space: L3NW Perim Spc (G.NW6)	0.289	90.00	0.054	246.45	0.117	336.45	WEST
L1North Wall (G.E18.E23) in space: L1East Perim Spc (G.E18)	0.289	147.11	0.056	603.86	0.101	750.97	WEST
L3North Wall (G.N12.E11) in space: L3North Perim Spc (G.N12)	0.289	58.97	0.056	146.77	0.123	205.74	WEST
L2North Wall (G.N12.E9) in space: L2North Perim Spc (G.N12)	0.289	58.97	0.056	158.67	0.119	217.65	WEST
L3North Wall (G.E15.E15) in space: L3East Perim Spc (G.E15)	0.289	115.05	0.056	424.73	0.105	539.78	WEST
L2North Wall (G.E15.E13) in space: L2East Perim Spc (G.E15)	0.289	115.05	0.056	455.96	0.103	571.01	WEST
L1North Wall (G.N14.E15) in space: L1North Perim Spc (G.N14)	0.000	0.00	0.056	417.11	0.056	417.11	WEST
L2North Wall (G.N13.E10) in space: L2North Perim Spc (G.N13)	0.289	61.88	0.056	207.00	0.109	268.88	WEST
L3North Wall (G.N13.E12) in space: L3North Perim Spc (G.N13)	0.289	61.88	0.056	192.30	0.112	254.17	WEST
Exterior Wall 90 in space: Space 84	0.289	35.38	0.056	183.91	0.093	219.28	WEST
L1North Wall (G.N12.E12) in space: L1North Perim Spc (G.N12)	0.000	0.00	0.056	203.46	0.056	203.46	WEST
L4 North Wall (G.NNW4.E11) in space: L4 NNW Perim Spc (G.NNW4)	0.289	90.00	0.054	311.44	0.106	401.44	WEST
L1North Wall (G.WNW4.E6) in space: L1WNW Perim Spc (G.WNW4)	0.000	0.00	0.056	105.66	0.056	105.66	WEST
L3North Wall (G.N11.E10) in space: L3North Perim Spc (G.N11)	0.289	38.35	0.056	119.01	0.113	157.36	WEST
L2North Wall (G.N11.E8) in space: L2North Perim Spc (G.N11)	0.289	38.35	0.056	128.11	0.109	166.46	WEST
L4 North Wall (G.N7.E24) in space: L4 North Perim Spc (G.N7)	0.362	153.75	0.054	155.08	0.207	308.83	WEST
L1ENE Wall (G.E18.E21) in space: L1East Perim Spc (G.E18)	0.000	0.00	0.056	65.91	0.056	65.91	NORTH-WEST
Exterior Wall 81 in space: L3SSE Perim Spc (G.SSE14)	0.000	0.00	0.027	757.11	0.027	757.11	ROOF
Exterior Wall 99 in space: L3Core Spc (G.C10)	0.000	0.00	0.027	150.75	0.027	150.75	ROOF
Exterior Wall 88 in space: L2West Perim Spc (G.W3)	0.000	0.00	0.027	57.00	0.027	57.00	ROOF
Exterior Wall 84 in space: L3North Perim Spc (G.N11)	0.000	0.00	0.027	296.72	0.027	296.72	ROOF

L4 Roof (G.NNW4.E13) in space: L4 NNW Perim Spc (G.NNW4)	0.000	0.00	0.027	810.86	0.027	810.86	ROOF
Exterior Wall 82 in space: L3East Perim Spc (G.E15)	0.000	0.00	0.027	1425.21	0.027	1425.21	ROOF
Exterior Wall 80 in space: L3SSE Perim Spc (G.SSE7)	0.000	0.00	0.027	580.00	0.027	580.00	ROOF
Exterior Wall 83 in space: L3North Perim Spc (G.N12)	0.000	0.00	0.027	212.08	0.027	212.08	ROOF

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REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

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Exterior Wall 87 in space: L3Core Spc (G.C8)	0.000	0.00	0.027	50.00	0.027	50.00	ROOF
L4 Roof (G.SSE5.E18) in space: L4 SSE Perim Spc (G.SSE5)	0.000	0.00	0.027	457.25	0.027	457.25	ROOF
Exterior Wall 85 in space: L3North Perim Spc (G.N13)	0.000	0.00	0.027	42.00	0.027	42.00	ROOF
L4 Roof (G.N6.E20) in space: L4 North Perim Spc (G.N6)	0.000	0.00	0.027	205.00	0.027	205.00	ROOF
L4 Roof (G.SSE1.E5) in space: L4 SSE Perim Spc (G.SSE1)	0.000	0.00	0.027	1088.26	0.027	1088.26	ROOF
Exterior Wall 86 in space: L3Core Spc (G.C10)	0.000	0.00	0.027	170.00	0.027	170.00	ROOF
L4 Roof (G.W2.E7) in space: L4 West Perim Spc (G.W2)	0.000	0.00	0.027	186.20	0.027	186.20	ROOF
L4 Roof (G.C3.E8) in space: L4 Core Spc (G.C3)	0.000	0.00	0.027	108.75	0.027	108.75	ROOF
L4 Roof (G.N7.E25) in space: L4 North Perim Spc (G.N7)	0.000	0.00	0.027	214.20	0.027	214.20	ROOF
L4 Roof (G.C8.E26) in space: L4 Core Spc (G.C8)	0.000	0.00	0.027	81.00	0.027	81.00	ROOF
Exterior Wall 92 in space: B1SW Perim Spc (B.SW1)	0.000	0.00	0.027	645.08	0.027	645.08	ROOF
Exterior Wall 93 in space: B1SSE Perim Spc (B.SSE7)	0.000	0.00	0.027	385.36	0.027	385.36	ROOF
Exterior Wall 95 in space: B1SSE Perim Spc (B.SSE11)	0.000	0.00	0.027	291.04	0.027	291.04	ROOF
Exterior Wall 94 in space: B1SSE Perim Spc (B.SSE12)	0.000	0.00	0.027	410.60	0.027	410.60	ROOF
Exterior Wall 96 in space: B1SSE Perim Spc (B.SSE14)	0.000	0.00	0.027	370.13	0.027	370.13	ROOF
Exterior Wall 97 in space: B1SE Perim Spc (B.SE20)	0.000	0.00	0.027	506.28	0.027	506.28	ROOF
Exterior Wall 98 in space: B1NE Perim Spc (B.NE21)	0.000	0.00	0.027	261.32	0.027	261.32	ROOF
Exterior Wall 100 in space: B1North Perim Spc (B.N22)	0.000	0.00	0.027	131.28	0.027	131.28	ROOF
B1Flr (B.SW1.U1) in space: B1SW Perim Spc (B.SW1)	0.000	0.00	0.029	1235.03	0.029	1235.03	UNDERGRND
B1SSE Wall (B.SW1.U2) in space: B1SW Perim Spc (B.SW1)	0.000	0.00	0.070	594.09	0.070	594.09	UNDERGRND
B1West Wall (B.SW1.U3) in space: B1SW Perim Spc (B.SW1)	0.000	0.00	0.070	761.72	0.070	761.72	UNDERGRND
B1Flr (B.C2.U4) in space: B1Core Spc (B.C2)	0.000	0.00	0.029	505.88	0.029	505.88	UNDERGRND
B1Flr (B.W3.U5) in space: B1West Perim Spc (B.W3)	0.000	0.00	0.029	154.12	0.029	154.12	UNDERGRND
B1West Wall (B.W3.U6) in space: B1West Perim Spc (B.W3)	0.000	0.00	0.070	103.50	0.070	103.50	UNDERGRND
B1Flr (B.W4.U7) in space: B1West Perim Spc (B.W4)	0.000	0.00	0.029	247.04	0.029	247.04	UNDERGRND

B1West Wall (B.w4.U8) in space: B1West Perim Spc (B.w4)	0.000	0.00	0.070	266.34	0.070	266.34	UNDERGRND
B1Flr (B.C5.U9) in space: B1Core Spc (B.C5)	0.000	0.00	0.029	110.44	0.029	110.44	UNDERGRND
B1Flr (B.w6.U10) in space: B1West Perim Spc (B.w6)	0.000	0.00	0.029	270.40	0.029	270.40	UNDERGRND
B1West Wall (B.w6.U11) in space: B1West Perim Spc (B.w6)	0.000	0.00	0.070	179.40	0.070	179.40	UNDERGRND
B1Flr (B.SSE7.U12) in space: B1SSE Perim Spc (B.SSE7)	0.000	0.00	0.029	385.36	0.029	385.36	UNDERGRND

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SURFACE	- - - W I N D O W S - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	- - - - W A L L - - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-W A L L + W I N D O W S- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
B1SSE Wall (B.SSE7.U13)	0.000	0.00	0.070	314.66	0.070	314.66	UNDERGRND
in space: B1SSE Perim Spc (B.SSE7)							
B1Flr (B.C8.U14)	0.000	0.00	0.029	636.85	0.029	636.85	UNDERGRND
in space: B1Core Spc (B.C8)							
B1Flr (B.C9.U15)	0.000	0.00	0.029	140.00	0.029	140.00	UNDERGRND
in space: B1Core Spc (B.C9)							
B1Flr (B.C10.U16)	0.000	0.00	0.029	635.47	0.029	635.47	UNDERGRND
in space: B1Core Spc (B.C10)							
B1Flr (B.SSE11.U17)	0.000	0.00	0.029	291.04	0.029	291.04	UNDERGRND
in space: B1SSE Perim Spc (B.SSE11)							
B1SSE Wall (B.SSE11.U18)	0.000	0.00	0.070	233.02	0.070	233.02	UNDERGRND
in space: B1SSE Perim Spc (B.SSE11)							
B1Flr (B.SSE12.U19)	0.000	0.00	0.029	410.60	0.029	410.60	UNDERGRND
in space: B1SSE Perim Spc (B.SSE12)							
B1SSE Wall (B.SSE12.U20)	0.000	0.00	0.070	343.55	0.070	343.55	UNDERGRND
in space: B1SSE Perim Spc (B.SSE12)							
B1Flr (B.C13.U21)	0.000	0.00	0.029	388.50	0.029	388.50	UNDERGRND
in space: B1Core Spc (B.C13)							
B1Flr (B.SSE14.U22)	0.000	0.00	0.029	370.13	0.029	370.13	UNDERGRND
in space: B1SSE Perim Spc (B.SSE14)							
B1SSE Wall (B.SSE14.U23)	0.000	0.00	0.070	298.34	0.070	298.34	UNDERGRND
in space: B1SSE Perim Spc (B.SSE14)							
B1Flr (B.C15.U24)	0.000	0.00	0.029	200.00	0.029	200.00	UNDERGRND
in space: B1Core Spc (B.C15)							
B1Flr (B.NW16.U25)	0.000	0.00	0.029	417.56	0.029	417.56	UNDERGRND
in space: B1NW Perim Spc (B.NW16)							
B1West Wall (B.NW16.U26)	0.000	0.00	0.070	280.14	0.070	280.14	UNDERGRND
in space: B1NW Perim Spc (B.NW16)							
B1North Wall (B.NW16.U27)	0.000	0.00	0.070	287.11	0.070	287.11	UNDERGRND
in space: B1NW Perim Spc (B.NW16)							
B1Flr (B.N17.U28)	0.000	0.00	0.029	103.43	0.029	103.43	UNDERGRND
in space: B1North Perim Spc (B.N17)							
B1North Wall (B.N17.U29)	0.000	0.00	0.070	96.62	0.070	96.62	UNDERGRND
in space: B1North Perim Spc (B.N17)							
B1Flr (B.N18.U30)	0.000	0.00	0.029	220.78	0.029	220.78	UNDERGRND
in space: B1North Perim Spc (B.N18)							
B1North Wall (B.N18.U31)	0.000	0.00	0.070	183.56	0.070	183.56	UNDERGRND
in space: B1North Perim Spc (B.N18)							
B1Flr (B.N19.U32)	0.000	0.00	0.029	271.38	0.029	271.38	UNDERGRND
in space: B1North Perim Spc (B.N19)							
B1North Wall (B.N19.U33)	0.000	0.00	0.070	230.56	0.070	230.56	UNDERGRND
in space: B1North Perim Spc (B.N19)							
B1Flr (B.SE20.U34)	0.000	0.00	0.029	506.28	0.029	506.28	UNDERGRND

in space: B1SE Perim Spc (B.SE20)							
B1East Wall (B.SE20.U35)	0.000	0.00	0.070	148.35	0.070	148.35	UNDERGRND
in space: B1SE Perim Spc (B.SE20)							
B1SSE Wall (B.SE20.U36)	0.000	0.00	0.070	401.54	0.070	401.54	UNDERGRND
in space: B1SE Perim Spc (B.SE20)							
B1Flr (B.NE21.U37)	0.000	0.00	0.029	261.32	0.029	261.32	UNDERGRND
in space: B1NE Perim Spc (B.NE21)							
B1North Wall (B.NE21.U38)	0.000	0.00	0.070	191.82	0.070	191.82	UNDERGRND
in space: B1NE Perim Spc (B.NE21)							
B1East Wall (B.NE21.U39)	0.000	0.00	0.070	259.44	0.070	259.44	UNDERGRND
in space: B1NE Perim Spc (B.NE21)							

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REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

SURFACE	- - - W I N D O W S - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	- - - - W A L L - - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-W A L L + W I N D O W S- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
B1Flr (B.N22.U40) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.029	1843.04	0.029	1843.04	UNDERGRND
B1East Wall (B.N22.U41) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.070	40.02	0.070	40.02	UNDERGRND
B1North Wall (B.N22.U42) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.070	292.56	0.070	292.56	UNDERGRND
B1West Wall (B.N22.U43) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.070	33.12	0.070	33.12	UNDERGRND
B1North Wall (B.N22.U44) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.070	525.87	0.070	525.87	UNDERGRND
B1North Wall (B.N22.U45) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.070	51.06	0.070	51.06	UNDERGRND
B1Flr (B.C23.U46) in space: B1Core Spc (B.C23)	0.000	0.00	0.029	180.00	0.029	180.00	UNDERGRND
B2Flr (B.SW1.U1) in space: B2SW Perim Spc (B.SW1)	0.000	0.00	0.029	643.24	0.029	643.24	UNDERGRND
B2SSE Wall (B.SW1.U2) in space: B2SW Perim Spc (B.SW1)	0.000	0.00	0.070	205.36	0.070	205.36	UNDERGRND
B2West Wall (B.SW1.U3) in space: B2SW Perim Spc (B.SW1)	0.000	0.00	0.070	320.03	0.070	320.03	UNDERGRND
B2Flr (B.E2.U4) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.029	662.58	0.029	662.58	UNDERGRND
B2East Wall (B.E2.U5) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.070	401.62	0.070	401.62	UNDERGRND
B2West Wall (B.E2.U6) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.070	63.75	0.070	63.75	UNDERGRND
B2SSE Wall (B.E2.U7) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.070	72.53	0.070	72.53	UNDERGRND
B2Flr (B.W3.U8) in space: B2West Perim Spc (B.W3)	0.000	0.00	0.029	247.04	0.029	247.04	UNDERGRND
B2West Wall (B.W3.U9) in space: B2West Perim Spc (B.W3)	0.000	0.00	0.070	164.05	0.070	164.05	UNDERGRND
B2Flr (B.N4.U10) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.029	925.74	0.029	925.74	UNDERGRND
B2North Wall (B.N4.U11) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.070	236.30	0.070	236.30	UNDERGRND
B2West Wall (B.N4.U12) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.070	283.05	0.070	283.05	UNDERGRND
B2East Wall (B.N4.U13) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.070	283.05	0.070	283.05	UNDERGRND

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REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

	AVERAGE U-VALUE/WINDOWS (BTU/HR-SQFT-F)	AVERAGE U-VALUE/WALLS (BTU/HR-SQFT-F)	AVERAGE U-VALUE WALLS+WINDOWS (BTU/HR-SQFT-F)	WINDOW AREA (SQFT)	WALL AREA (SQFT)	WINDOW+WALL AREA (SQFT)
NORTH	0.330	0.054	0.134	682.89	1678.33	2361.23
NORTH-EAST	0.289	0.055	0.138	2357.58	4283.84	6641.42
EAST	0.362	0.054	0.193	378.75	458.70	837.45
SOUTH-EAST	0.000	0.054	0.054	0.00	671.90	671.90
SOUTH	0.362	0.055	0.058	47.50	5225.77	5273.27
WEST	0.298	0.055	0.102	1270.93	5264.45	6535.38
NORTH-WEST	0.000	0.056	0.056	0.00	65.91	65.91
ROOF	0.000	0.027	0.027	0.00	9893.48	9893.48
ALL WALLS	0.304	0.055	0.108	4737.67	17648.89	22386.56
WALLS+ROOFS	0.304	0.045	0.083	4737.67	27542.37	32280.03
UNDERGRND	0.000	0.045	0.045	0.00	20409.40	20409.40
BUILDING	0.304	0.045	0.068	4737.67	47951.77	52689.43

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REPORT- LV-E Details of Underground Surfaces WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF UNDERGROUND SURFACES 59

SURFACE NAME	MULTIPLIER	AREA (SQFT)	CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)
B1Flr (B.SW1.U1)	1.0	1235.03	UFCons	0.029
B1SSE Wall (B.SW1.U2)	1.0	594.09	NoInsUWCons	0.070
B1West Wall (B.SW1.U3)	1.0	761.72	NoInsUWCons	0.070
B1Flr (B.C2.U4)	1.0	505.88	UFCons	0.029
B1Flr (B.W3.U5)	1.0	154.12	UFCons	0.029
B1West Wall (B.W3.U6)	1.0	103.50	InsUWCons	0.070
B1Flr (B.W4.U7)	1.0	247.04	UFCons	0.029
B1West Wall (B.W4.U8)	1.0	266.34	InsUWCons	0.070
B1Flr (B.C5.U9)	1.0	110.44	UFCons	0.029
B1Flr (B.W6.U10)	1.0	270.40	UFCons	0.029
B1West Wall (B.W6.U11)	1.0	179.40	InsUWCons	0.070
B1Flr (B.SSE7.U12)	1.0	385.36	UFCons	0.029
B1SSE Wall (B.SSE7.U13)	1.0	314.66	NoInsUWCons	0.070
B1Flr (B.C8.U14)	1.0	636.85	UFCons	0.029
B1Flr (B.C9.U15)	1.0	140.00	UFCons	0.029
B1Flr (B.C10.U16)	1.0	635.47	UFCons	0.029
B1Flr (B.SSE11.U17)	1.0	291.04	UFCons	0.029
B1SSE Wall (B.SSE11.U18)	1.0	233.02	NoInsUWCons	0.070
B1Flr (B.SSE12.U19)	1.0	410.60	UFCons	0.029
B1SSE Wall (B.SSE12.U20)	1.0	343.55	NoInsUWCons	0.070
B1Flr (B.C13.U21)	1.0	388.50	UFCons	0.029
B1Flr (B.SSE14.U22)	1.0	370.13	UFCons	0.029
B1SSE Wall (B.SSE14.U23)	1.0	298.34	NoInsUWCons	0.070
B1Flr (B.C15.U24)	1.0	200.00	UFCons	0.029
B1Flr (B.NW16.U25)	1.0	417.56	UFCons	0.029
B1West Wall (B.NW16.U26)	1.0	280.14	InsUWCons	0.070
B1North Wall (B.NW16.U27)	1.0	287.11	InsUWCons	0.070
B1Flr (B.N17.U28)	1.0	103.43	UFCons	0.029
B1North Wall (B.N17.U29)	1.0	96.62	InsUWCons	0.070
B1Flr (B.N18.U30)	1.0	220.78	UFCons	0.029
B1North Wall (B.N18.U31)	1.0	183.56	InsUWCons	0.070
B1Flr (B.N19.U32)	1.0	271.38	UFCons	0.029
B1North Wall (B.N19.U33)	1.0	230.56	InsUWCons	0.070
B1Flr (B.SE20.U34)	1.0	506.28	UFCons	0.029
B1East Wall (B.SE20.U35)	1.0	148.35	NoInsUWCons	0.070
B1SSE Wall (B.SE20.U36)	1.0	401.54	NoInsUWCons	0.070
B1Flr (B.NE21.U37)	1.0	261.32	UFCons	0.029
B1North Wall (B.NE21.U38)	1.0	191.82	NoInsUWCons	0.070
B1East Wall (B.NE21.U39)	1.0	259.44	NoInsUWCons	0.070
B1Flr (B.N22.U40)	1.0	1843.04	UFCons	0.029
B1East Wall (B.N22.U41)	1.0	40.02	NoInsUWCons	0.070
B1North Wall (B.N22.U42)	1.0	292.56	NoInsUWCons	0.070

B1West Wall (B.N22.U43)	1.0	33.12	NoInsUWCons	0.070
B1North Wall (B.N22.U44)	1.0	525.87	NoInsUWCons	0.070
B1North Wall (B.N22.U45)	1.0	51.06	NoInsUWCons	0.070
B1Flr (B.C23.U46)	1.0	180.00	UFCons	0.029
B2Flr (B.SW1.U1)	1.0	643.24	UFCons	0.029
B2SSE Wall (B.SW1.U2)	1.0	205.36	NoInsUWCons	0.070
B2West Wall (B.SW1.U3)	1.0	320.03	NoInsUWCons	0.070
B2Flr (B.E2.U4)	1.0	662.58	UFCons	0.029
B2East Wall (B.E2.U5)	1.0	401.62	NoInsUWCons	0.070
B2West Wall (B.E2.U6)	1.0	63.75	NoInsUWCons	0.070

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LV-E Details of Underground Surfaces WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SURFACE NAME	MULTIPLIER	AREA (SQFT)	CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)
B2SSE Wall (B.E2.U7)	1.0	72.53	NoInsUWCons	0.070
B2Flr (B.W3.U8)	1.0	247.04	UFCons	0.029
B2West Wall (B.W3.U9)	1.0	164.05	NoInsUWCons	0.070
B2Flr (B.N4.U10)	1.0	925.74	UFCons	0.029
B2North Wall (B.N4.U11)	1.0	236.30	NoInsUWCons	0.070
B2West Wall (B.N4.U12)	1.0	283.05	NoInsUWCons	0.070
B2East Wall (B.N4.U13)	1.0	283.05	NoInsUWCons	0.070

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

Number of Interior Surfaces 255
(U-VALUE includes both air films)

SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L1East Wall (G.SW1.I1)	467.56	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SW1.I2)	168.18	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.SW1.I3)	205.73	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SW1.I4)	112.09	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.SW1.I5)	205.83	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SW1.I6)	239.28	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 233	989.47	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.C2.I7)	205.70	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 234	99.00	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 235	179.20	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.WNW4.I8)	239.40	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.WNW4.I9)	93.52	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.WNW4.I10)	93.52	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.WNW4.I11)	56.11	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.WNW4.I12)	105.99	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 236	337.43	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C5.I13)	168.30	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C5.I14)	56.10	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 237	120.00	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C6.I15)	280.50	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.C6.I16)	187.00	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C6.I17)	336.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 238	304.00	IntFlr Cons	DELAYED STANDARD	0.532
L1West Wall (G.N7.I18)	130.80	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.N7.I19)	243.09	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.N7.I20)	280.52	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 239	276.31	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.SSE8.I21)	504.90	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SSE8.I22)	224.40	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.SSE8.I23)	56.10	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SSE8.I24)	149.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 240	636.00	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.C9.I25)	51.43	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.C9.I26)	42.08	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.C9.I27)	374.00	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C9.I28)	149.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 241	124.00	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 242	200.00	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C11.I29)	130.90	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.C11.I30)	374.00	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.C11.I31)	187.00	IntWall Cons	DELAYED STANDARD	0.402

L1East Wall (G.C11.I32)	37.40	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.C11.I33)	130.90	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C11.I34)	149.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 243	236.00	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.N12.I35)	203.40	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.N12.I36)	122.40	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 244	377.99	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.N13.I37)	66.60	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.N13.I38)	11.70	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 245	100.42	IntFlr Cons	DELAYED STANDARD	0.532

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L1West Wall (G.N14.I39)	178.59	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 246	256.30	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.SSE15.I40)	153.36	IntWall Cons	DELAYED ADIABATIC	0.402
Interior Wall 247	125.76	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.SE16.I41)	281.44	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 248	478.28	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C17.I42)	377.74	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.C17.I43)	204.76	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.C17.I44)	229.08	IntWall Cons	DELAYED ADIABATIC	0.402
L1West Wall (G.C17.I45)	187.00	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 249	381.59	IntFlr Cons	DELAYED STANDARD	0.532
L1West Wall (G.E18.I46)	220.66	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.E18.I47)	392.69	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.E18.I48)	74.90	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.E18.I49)	112.13	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.E18.I50)	395.55	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.E18.I51)	382.37	IntWall Cons	DELAYED ADIABATIC	0.402
Interior Wall 250	1554.57	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 251	219.22	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 252	131.92	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 253	478.62	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 254	71.78	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 255	12.61	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.SW1.I1)	915.72	GFlr Cons	DELAYED STANDARD	0.029
L2East Wall (G.SW1.I2)	215.09	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.SW1.I3)	115.23	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.SW1.I4)	245.84	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.SW1.I5)	76.72	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.SW1.I6)	140.89	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.SW1.I7)	163.79	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.C2.I8)	172.80	GFlr Cons	DELAYED STANDARD	0.029
L2East Wall (G.C2.I9)	232.96	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.C2.I10)	12.80	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.C2.I11)	115.20	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.W3.I12)	243.20	GFlr Cons	DELAYED STANDARD	0.029
L2North Wall (G.W3.I13)	99.84	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.W4.I14)	67.64	GFlr Cons	DELAYED STANDARD	0.029
L2Flr (G.C5.I15)	120.00	GFlr Cons	DELAYED STANDARD	0.029
L2East Wall (G.C5.I16)	102.40	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.C5.I17)	102.40	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.NW6.I18)	857.40	GFlr Cons	DELAYED STANDARD	0.029
L2South Wall (G.NW6.I19)	99.20	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.NW6.I20)	111.36	IntWall Cons	DELAYED STANDARD	0.402
L2South Wall (G.NW6.I21)	64.00	IntWall Cons	DELAYED STANDARD	0.402
L2South Wall (G.NW6.I22)	192.00	IntWall Cons	DELAYED STANDARD	0.402

L2East Wall (G.NW6.I23)	128.00	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.NW6.I24)	294.40	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.SSE7.I25)	580.00	GFlr Cons	DELAYED STANDARD	0.029
L2North Wall (G.SSE7.I26)	256.00	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.C8.I27)	180.00	GFlr Cons	DELAYED STANDARD	0.029
L2North Wall (G.C8.I28)	256.00	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.C9.I29)	200.00	GFlr Cons	DELAYED STANDARD	0.029
L2Flr (G.C10.I30)	380.75	GFlr Cons	DELAYED STANDARD	0.029
L2South Wall (G.C10.I31)	89.60	IntWall Cons	DELAYED STANDARD	0.402
L2South Wall (G.C10.I32)	398.72	IntWall Cons	DELAYED STANDARD	0.402

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L2East Wall (G.C10.I33)	128.01	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.C10.I34)	268.80	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.C10.I35)	217.60	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.C10.I36)	128.00	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.N11.I37)	296.73	GFlr Cons	DELAYED STANDARD	0.029
L2South Wall (G.N11.I38)	166.40	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.N12.I39)	212.07	GFlr Cons	DELAYED STANDARD	0.029
L2East Wall (G.N12.I40)	157.44	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.N12.I41)	161.92	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.N13.I42)	253.05	GFlr Cons	DELAYED STANDARD	0.029
L2Flr (G.SSE14.I43)	1032.46	GFlr Cons	DELAYED STANDARD	0.029
L2West Wall (G.SSE14.I44)	128.00	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.SSE14.I45)	115.20	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.SSE14.I46)	294.40	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.SSE14.I47)	304.04	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.E15.I48)	1425.21	GFlr Cons	DELAYED STANDARD	0.029
L2West Wall (G.E15.I49)	151.07	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.SW1.I1)	915.70	GFlr Cons	DELAYED STANDARD	0.029
L3East Wall (G.SW1.I2)	203.33	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.SW1.I3)	108.93	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.SW1.I4)	232.40	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.SW1.I5)	72.53	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.SW1.I6)	133.18	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.SW1.I7)	118.53	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.C2.I8)	172.80	GFlr Cons	DELAYED STANDARD	0.029
L3East Wall (G.C2.I9)	220.22	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.C2.I10)	12.10	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.C2.I11)	108.90	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.W3.I12)	186.20	GFlr Cons	DELAYED STANDARD	0.029
L3North Wall (G.W3.I13)	118.58	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.WSW4.I14)	111.36	GFlr Cons	DELAYED STANDARD	0.029
L3Flr (G.C5.I15)	120.00	GFlr Cons	DELAYED STANDARD	0.029
L3East Wall (G.C5.I16)	96.80	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.C5.I17)	96.80	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.NW6.I18)	813.68	GFlr Cons	DELAYED STANDARD	0.029
L3South Wall (G.NW6.I19)	154.88	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.NW6.I20)	105.27	IntWall Cons	DELAYED STANDARD	0.402
L3South Wall (G.NW6.I21)	181.50	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.NW6.I22)	121.00	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.NW6.I23)	278.30	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.SSE7.I24)	580.00	GFlr Cons	DELAYED STANDARD	0.029
L3North Wall (G.SSE7.I25)	242.00	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.C8.I26)	180.00	GFlr Cons	DELAYED STANDARD	0.029
L3North Wall (G.C8.I27)	242.00	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.C9.I28)	200.00	GFlr Cons	DELAYED STANDARD	0.029

L3Flr (G.C10.I29)	380.75	GFlr Cons	DELAYED STANDARD	0.029
L3South Wall (G.C10.I30)	84.70	IntWall Cons	DELAYED STANDARD	0.402
L3South Wall (G.C10.I31)	376.91	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.C10.I32)	121.01	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.C10.I33)	254.10	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.C10.I34)	205.70	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.C10.I35)	121.00	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.N11.I36)	296.73	GFlr Cons	DELAYED STANDARD	0.029
L3South Wall (G.N11.I37)	157.30	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.N12.I38)	212.07	GFlr Cons	DELAYED STANDARD	0.029

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SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L3East Wall (G.N12.I39)	148.83	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.N12.I40)	153.07	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.N13.I41)	253.05	GFlr Cons	DELAYED STANDARD	0.029
L3Flr (G.SSE14.I42)	1032.46	GFlr Cons	DELAYED STANDARD	0.029
L3West Wall (G.SSE14.I43)	121.00	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.SSE14.I44)	108.90	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.SSE14.I45)	278.30	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.SSE14.I46)	287.42	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.E15.I47)	1425.21	GFlr Cons	DELAYED STANDARD	0.029
L3West Wall (G.E15.I48)	142.81	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.SSE1.I1)	1088.26	GFlr Cons	DELAYED STANDARD	0.029
L4 West Wall (G.SSE1.I2)	183.66	IntWall Cons	DELAYED STANDARD	0.402
L4 North Wall (G.SSE1.I3)	144.08	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.W2.I4)	186.20	GFlr Cons	DELAYED STANDARD	0.029
L4 Flr (G.C3.I5)	108.75	GFlr Cons	DELAYED STANDARD	0.029
L4 North Wall (G.C3.I6)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.C3.I7)	95.55	IntWall Cons	DELAYED STANDARD	0.402
L4 South Wall (G.C3.I8)	213.15	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.NNW4.I9)	810.86	GFlr Cons	DELAYED STANDARD	0.029
L4 South Wall (G.NNW4.I10)	144.06	IntWall Cons	DELAYED STANDARD	0.402
L4 East Wall (G.NNW4.I11)	14.70	IntWall Cons	DELAYED STANDARD	0.402
L4 South Wall (G.NNW4.I12)	80.85	IntWall Cons	DELAYED STANDARD	0.402
L4 East Wall (G.NNW4.I13)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 South Wall (G.NNW4.I14)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.SSE5.I15)	457.25	GFlr Cons	DELAYED STANDARD	0.029
L4 North Wall (G.SSE5.I16)	88.20	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.SSE5.I17)	147.00	IntWall Cons	DELAYED STANDARD	0.402
L4 North Wall (G.SSE5.I18)	301.35	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.SSE5.I19)	95.55	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.N6.I20)	205.00	GFlr Cons	DELAYED STANDARD	0.029
L4 West Wall (G.N6.I21)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.N6.I22)	14.70	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.N7.I23)	214.20	GFlr Cons	DELAYED STANDARD	0.029
L4 Flr (G.C8.I24)	81.00	GFlr Cons	DELAYED STANDARD	0.029
B1ENE Wall (B.SW1.I1)	231.58	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.SW1.I2)	283.64	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.C2.I3)	106.95	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I4)	196.65	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I5)	103.50	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I6)	307.05	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.C2.I7)	115.28	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.C2.I8)	288.42	IntWall Cons	DELAYED ADIABATIC	0.402
B1East Wall (B.C2.I9)	234.60	IntWall Cons	DELAYED ADIABATIC	0.402
B1East Wall (B.C2.I10)	96.60	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.C2.I11)	138.00	IntWall Cons	DELAYED STANDARD	0.402

B1East Wall (B.C2.I12)	82.80	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.C2.I13)	27.60	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C2.I14)	96.60	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I15)	69.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I16)	179.40	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C2.I17)	110.40	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I18)	69.69	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.W4.I19)	176.64	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.W4.I20)	176.64	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.C5.I21)	106.95	IntWall Cons	DELAYED STANDARD	0.402

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SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
B1West Wall (B.C5.I22)	196.65	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.W6.I23)	287.04	IntWall Cons	DELAYED STANDARD	0.402
B1ENE Wall (B.SSE7.I24)	229.88	IntWall Cons	DELAYED STANDARD	0.402
B1NNW Wall (B.SSE7.I25)	321.63	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C8.I26)	523.02	IntWall Cons	DELAYED ADIABATIC	0.402
B1East Wall (B.C8.I27)	356.73	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C8.I28)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C9.I29)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.C10.I30)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C10.I31)	179.40	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.C10.I32)	181.68	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C10.I33)	138.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C10.I34)	138.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C10.I35)	96.60	IntWall Cons	DELAYED STANDARD	0.402
B1ENE Wall (B.SSE11.I36)	237.14	IntWall Cons	DELAYED STANDARD	0.402
B1WSW Wall (B.SSE11.I37)	236.16	IntWall Cons	DELAYED STANDARD	0.402
B1NNW Wall (B.SSE12.I38)	328.06	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C15.I39)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.N17.I40)	202.86	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N17.I41)	204.93	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.N18.I42)	227.70	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.SE20.I43)	191.82	IntWall Cons	DELAYED STANDARD	0.402
B1WSW Wall (B.SE20.I44)	231.71	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N22.I45)	220.80	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N22.I46)	82.80	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.N22.I47)	291.87	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N22.I48)	317.40	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.N22.I49)	53.61	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.N22.I50)	303.18	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.N22.I51)	315.95	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.N22.I52)	259.44	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C23.I53)	230.46	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C23.I54)	183.54	IntWall Cons	DELAYED STANDARD	0.402
B2North Wall (B.E2.I1)	127.50	IntWall Cons	DELAYED STANDARD	0.402
B2West Wall (B.E2.I2)	164.05	IntWall Cons	DELAYED STANDARD	0.402
B2North Wall (B.E2.I3)	108.80	IntWall Cons	DELAYED STANDARD	0.402
B2South Wall (B.E2.I4)	174.67	IntWall Cons	DELAYED STANDARD	0.402
B2West Wall (B.E2.I5)	212.07	IntWall Cons	DELAYED STANDARD	0.402
B2South Wall (B.N4.I6)	108.80	IntWall Cons	DELAYED STANDARD	0.402

SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2

L1East Wall (G.SW1.I1)	L1SW Perim Spc (G.SW1)	L1SSE Perim Spc (G.SSE8)
L1North Wall (G.SW1.I2)	L1SW Perim Spc (G.SW1)	L1Core Spc (G.C2)
L1East Wall (G.SW1.I3)	L1SW Perim Spc (G.SW1)	L1Core Spc (G.C2)
L1North Wall (G.SW1.I4)	L1SW Perim Spc (G.SW1)	L1Core Spc (G.C5)
L1West Wall (G.SW1.I5)	L1SW Perim Spc (G.SW1)	L1West Perim Spc (G.W3)
L1North Wall (G.SW1.I6)	L1SW Perim Spc (G.SW1)	L1West Perim Spc (G.W3)
Interior Wall 233	L1SW Perim Spc (G.SW1)	B1SW Perim Spc (B.SW1)
L1East Wall (G.C2.I7)	L1Core Spc (G.C2)	L1SSE Perim Spc (G.SSE8)
Interior Wall 234	L1Core Spc (G.C2)	B1Core Spc (B.C2)
Interior Wall 235	L1West Perim Spc (G.W3)	B1West Perim Spc (B.W4)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L1South Wall (G.WNW4.I8)	L1WNW Perim Spc (G.WNW4)	L1West Perim Spc (G.W3)
L1East Wall (G.WNW4.I9)	L1WNW Perim Spc (G.WNW4)	L1Core Spc (G.C5)
L1North Wall (G.WNW4.I10)	L1WNW Perim Spc (G.WNW4)	L1Core Spc (G.C6)
L1South Wall (G.WNW4.I11)	L1WNW Perim Spc (G.WNW4)	L1North Perim Spc (G.N7)
L1East Wall (G.WNW4.I12)	L1WNW Perim Spc (G.WNW4)	L1North Perim Spc (G.N7)
Interior Wall 236	L1WNW Perim Spc (G.WNW4)	B1NW Perim Spc (B.NW16)
L1South Wall (G.C5.I13)	L1Core Spc (G.C5)	L1Core Spc (G.C2)
L1West Wall (G.C5.I14)	L1Core Spc (G.C5)	L1West Perim Spc (G.W3)
Interior Wall 237	L1Core Spc (G.C5)	B1Core Spc (B.C2)
L1South Wall (G.C6.I15)	L1Core Spc (G.C6)	L1Core Spc (G.C5)
L1East Wall (G.C6.I16)	L1Core Spc (G.C6)	L1Core Spc (G.C10)
L1West Wall (G.C6.I17)	L1Core Spc (G.C6)	L1WNW Perim Spc (G.WNW4)
Interior Wall 238	L1Core Spc (G.C6)	B1West Perim Spc (B.W6)
L1West Wall (G.N7.I18)	L1North Perim Spc (G.N7)	L1WNW Perim Spc (G.WNW4)
L1South Wall (G.N7.I19)	L1North Perim Spc (G.N7)	L1Core Spc (G.C6)
L1East Wall (G.N7.I20)	L1North Perim Spc (G.N7)	L1North Perim Spc (G.N12)
Interior Wall 239	L1North Perim Spc (G.N7)	B1North Perim Spc (B.N17)
L1East Wall (G.SSE8.I21)	L1SSE Perim Spc (G.SSE8)	L1SE Perim Spc (G.SE16)
L1North Wall (G.SSE8.I22)	L1SSE Perim Spc (G.SSE8)	L1Core Spc (G.C9)
L1West Wall (G.SSE8.I23)	L1SSE Perim Spc (G.SSE8)	L1Core Spc (G.C9)
L1North Wall (G.SSE8.I24)	L1SSE Perim Spc (G.SSE8)	L1Core Spc (G.C9)
Interior Wall 240	L1SSE Perim Spc (G.SSE8)	B1Core Spc (B.C8)
L1East Wall (G.C9.I25)	L1Core Spc (G.C9)	L1SE Perim Spc (G.SE16)
L1East Wall (G.C9.I26)	L1Core Spc (G.C9)	L1Core Spc (G.C17)
L1North Wall (G.C9.I27)	L1Core Spc (G.C9)	L1Core Spc (G.C10)
L1West Wall (G.C9.I28)	L1Core Spc (G.C9)	L1Core Spc (G.C5)
Interior Wall 241	L1Core Spc (G.C9)	B1Core Spc (B.C9)
Interior Wall 242	L1Core Spc (G.C10)	B1Core Spc (B.C15)
L1South Wall (G.C11.I29)	L1Core Spc (G.C11)	L1Core Spc (G.C6)
L1South Wall (G.C11.I30)	L1Core Spc (G.C11)	L1Core Spc (G.C10)
L1South Wall (G.C11.I31)	L1Core Spc (G.C11)	L1Core Spc (G.C17)
L1East Wall (G.C11.I32)	L1Core Spc (G.C11)	L1North Perim Spc (G.N12)
L1North Wall (G.C11.I33)	L1Core Spc (G.C11)	L1North Perim Spc (G.N7)
L1West Wall (G.C11.I34)	L1Core Spc (G.C11)	L1Core Spc (G.C6)
Interior Wall 243	L1Core Spc (G.C11)	B1Core Spc (B.C23)
L1South Wall (G.N12.I35)	L1North Perim Spc (G.N12)	L1Core Spc (G.C11)
L1East Wall (G.N12.I36)	L1North Perim Spc (G.N12)	L1North Perim Spc (G.N13)
Interior Wall 244	L1North Perim Spc (G.N12)	B1North Perim Spc (B.N18)
L1South Wall (G.N13.I37)	L1North Perim Spc (G.N13)	L1Core Spc (G.C11)
L1North Wall (G.N13.I38)	L1North Perim Spc (G.N13)	L1North Perim Spc (G.N14)
Interior Wall 245	L1North Perim Spc (G.N13)	B1North Perim Spc (B.N19)
L1West Wall (G.N14.I39)	L1North Perim Spc (G.N14)	L1North Perim Spc (G.N13)
Interior Wall 246	L1North Perim Spc (G.N14)	B1North Perim Spc (B.N22)
L1East Wall (G.SSE15.I40)	L1SSE Perim Spc (G.SSE15)	L1SSE Perim Spc (G.SSE15)

Interior Wall 247	L1SSE Perim Spc (G.SSE15)	B1Core Spc (B.C10)
L1East Wall (G.SE16.I41)	L1SE Perim Spc (G.SE16)	L1SSE Perim Spc (G.SSE15)
Interior Wall 248	L1SE Perim Spc (G.SE16)	B1Core Spc (B.C13)
L1South Wall (G.C17.I42)	L1Core Spc (G.C17)	L1SE Perim Spc (G.SE16)
L1South Wall (G.C17.I43)	L1Core Spc (G.C17)	L1SSE Perim Spc (G.SSE15)
L1East Wall (G.C17.I44)	L1Core Spc (G.C17)	L1Core Spc (G.C17)
L1West Wall (G.C17.I45)	L1Core Spc (G.C17)	L1Core Spc (G.C10)
Interior Wall 249	L1Core Spc (G.C17)	B1Core Spc (B.C10)
L1West Wall (G.E18.I46)	L1East Perim Spc (G.E18)	L1North Perim Spc (G.N14)
L1North Wall (G.E18.I47)	L1East Perim Spc (G.E18)	L1North Perim Spc (G.N14)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L1West Wall (G.E18.I48)	L1East Perim Spc (G.E18)	L1North Perim Spc (G.N13)
L1West Wall (G.E18.I49)	L1East Perim Spc (G.E18)	L1Core Spc (G.C11)
L1South Wall (G.E18.I50)	L1East Perim Spc (G.E18)	L1Core Spc (G.C17)
L1West Wall (G.E18.I51)	L1East Perim Spc (G.E18)	L1East Perim Spc (G.E18)
Interior Wall 250	L1East Perim Spc (G.E18)	B1North Perim Spc (B.N22)
Interior Wall 251	Space 84	L1Core Spc (G.C11)
Interior Wall 252	Space 84	L1North Perim Spc (G.N14)
Interior Wall 253	Space 84	L1North Perim Spc (G.N12)
Interior Wall 254	Space 84	L1Core Spc (G.C11)
Interior Wall 255	Space 84	L1North Perim Spc (G.N14)
L2Flr (G.SW1.I1)	L2SW Perim Spc (G.SW1)	L1SW Perim Spc (G.SW1)
L2East Wall (G.SW1.I2)	L2SW Perim Spc (G.SW1)	L2SSE Perim Spc (G.SSE7)
L2North Wall (G.SW1.I3)	L2SW Perim Spc (G.SW1)	L2Core Spc (G.C2)
L2East Wall (G.SW1.I4)	L2SW Perim Spc (G.SW1)	L2Core Spc (G.C2)
L2North Wall (G.SW1.I5)	L2SW Perim Spc (G.SW1)	L2Core Spc (G.C5)
L2West Wall (G.SW1.I6)	L2SW Perim Spc (G.SW1)	L2West Perim Spc (G.W3)
L2North Wall (G.SW1.I7)	L2SW Perim Spc (G.SW1)	L2West Perim Spc (G.W3)
L2Flr (G.C2.I8)	L2Core Spc (G.C2)	L1Core Spc (G.C2)
L2East Wall (G.C2.I9)	L2Core Spc (G.C2)	L2SSE Perim Spc (G.SSE7)
L2East Wall (G.C2.I10)	L2Core Spc (G.C2)	L2Core Spc (G.C8)
L2North Wall (G.C2.I11)	L2Core Spc (G.C2)	L2Core Spc (G.C5)
L2Flr (G.W3.I12)	L2West Perim Spc (G.W3)	L1West Perim Spc (G.W3)
L2North Wall (G.W3.I13)	L2West Perim Spc (G.W3)	L2West Perim Spc (G.W4)
L2Flr (G.W4.I14)	L2West Perim Spc (G.W4)	L1WNW Perim Spc (G.WNW4)
L2Flr (G.C5.I15)	L2Core Spc (G.C5)	L1Core Spc (G.C5)
L2East Wall (G.C5.I16)	L2Core Spc (G.C5)	L2Core Spc (G.C8)
L2West Wall (G.C5.I17)	L2Core Spc (G.C5)	L2West Perim Spc (G.W3)
L2Flr (G.NW6.I18)	L2NW Perim Spc (G.NW6)	L1Core Spc (G.C6)
L2South Wall (G.NW6.I19)	L2NW Perim Spc (G.NW6)	L2West Perim Spc (G.W4)
L2West Wall (G.NW6.I20)	L2NW Perim Spc (G.NW6)	L2West Perim Spc (G.W4)
L2South Wall (G.NW6.I21)	L2NW Perim Spc (G.NW6)	L2West Perim Spc (G.W3)
L2South Wall (G.NW6.I22)	L2NW Perim Spc (G.NW6)	L2Core Spc (G.C5)
L2East Wall (G.NW6.I23)	L2NW Perim Spc (G.NW6)	L2Core Spc (G.C9)
L2East Wall (G.NW6.I24)	L2NW Perim Spc (G.NW6)	L2North Perim Spc (G.N11)
L2Flr (G.SSE7.I25)	L2SSE Perim Spc (G.SSE7)	L1SSE Perim Spc (G.SSE8)
L2North Wall (G.SSE7.I26)	L2SSE Perim Spc (G.SSE7)	L2Core Spc (G.C8)
L2Flr (G.C8.I27)	L2Core Spc (G.C8)	L1Core Spc (G.C9)
L2North Wall (G.C8.I28)	L2Core Spc (G.C8)	L2Core Spc (G.C9)
L2Flr (G.C9.I29)	L2Core Spc (G.C9)	L1Core Spc (G.C10)
L2Flr (G.C10.I30)	L2Core Spc (G.C10)	L1Core Spc (G.C11)
L2South Wall (G.C10.I31)	L2Core Spc (G.C10)	L2Core Spc (G.C9)
L2South Wall (G.C10.I32)	L2Core Spc (G.C10)	L2SSE Perim Spc (G.SSE14)
L2East Wall (G.C10.I33)	L2Core Spc (G.C10)	L2East Perim Spc (G.E15)
L2North Wall (G.C10.I34)	L2Core Spc (G.C10)	L2North Perim Spc (G.N13)

L2North Wall (G.C10.I35)	L2Core Spc (G.C10)	L2North Perim Spc (G.N12)
L2West Wall (G.C10.I36)	L2Core Spc (G.C10)	L2North Perim Spc (G.N11)
L2Flr (G.N11.I37)	L2North Perim Spc (G.N11)	L1North Perim Spc (G.N12)
L2South Wall (G.N11.I38)	L2North Perim Spc (G.N11)	L2Core Spc (G.C9)
L2Flr (G.N12.I39)	L2North Perim Spc (G.N12)	L1North Perim Spc (G.N13)
L2East Wall (G.N12.I40)	L2North Perim Spc (G.N12)	L2North Perim Spc (G.N13)
L2West Wall (G.N12.I41)	L2North Perim Spc (G.N12)	L2North Perim Spc (G.N11)
L2Flr (G.N13.I42)	L2North Perim Spc (G.N13)	L1North Perim Spc (G.N14)
L2Flr (G.SSE14.I43)	L2SSE Perim Spc (G.SSE14)	L1SE Perim Spc (G.SE16)
L2West Wall (G.SSE14.I44)	L2SSE Perim Spc (G.SSE14)	L2Core Spc (G.C9)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L2West Wall (G.SSE14.I45)	L2SSE Perim Spc (G.SSE14)	L2Core Spc (G.C8)
L2West Wall (G.SSE14.I46)	L2SSE Perim Spc (G.SSE14)	L2SSE Perim Spc (G.SSE7)
L2East Wall (G.SSE14.I47)	L2SSE Perim Spc (G.SSE14)	L2East Perim Spc (G.E15)
L2Flr (G.E15.I48)	L2East Perim Spc (G.E15)	L1East Perim Spc (G.E18)
L2West Wall (G.E15.I49)	L2East Perim Spc (G.E15)	L2North Perim Spc (G.N13)
L3Flr (G.SW1.I1)	L3SW Perim Spc (G.SW1)	L2SW Perim Spc (G.SW1)
L3East Wall (G.SW1.I2)	L3SW Perim Spc (G.SW1)	L3SSE Perim Spc (G.SSE7)
L3North Wall (G.SW1.I3)	L3SW Perim Spc (G.SW1)	L3Core Spc (G.C2)
L3East Wall (G.SW1.I4)	L3SW Perim Spc (G.SW1)	L3Core Spc (G.C2)
L3North Wall (G.SW1.I5)	L3SW Perim Spc (G.SW1)	L3Core Spc (G.C5)
L3West Wall (G.SW1.I6)	L3SW Perim Spc (G.SW1)	L3West Perim Spc (G.W3)
L3North Wall (G.SW1.I7)	L3SW Perim Spc (G.SW1)	L3West Perim Spc (G.W3)
L3Flr (G.C2.I8)	L3Core Spc (G.C2)	L2Core Spc (G.C2)
L3East Wall (G.C2.I9)	L3Core Spc (G.C2)	L3SSE Perim Spc (G.SSE7)
L3East Wall (G.C2.I10)	L3Core Spc (G.C2)	L3Core Spc (G.C8)
L3North Wall (G.C2.I11)	L3Core Spc (G.C2)	L3Core Spc (G.C5)
L3Flr (G.W3.I12)	L3West Perim Spc (G.W3)	L2West Perim Spc (G.W3)
L3North Wall (G.W3.I13)	L3West Perim Spc (G.W3)	L3WSW Perim Spc (G.WSW4)
L3Flr (G.WSW4.I14)	L3WSW Perim Spc (G.WSW4)	L2West Perim Spc (G.W4)
L3Flr (G.C5.I15)	L3Core Spc (G.C5)	L2Core Spc (G.C5)
L3East Wall (G.C5.I16)	L3Core Spc (G.C5)	L3Core Spc (G.C8)
L3West Wall (G.C5.I17)	L3Core Spc (G.C5)	L3West Perim Spc (G.W3)
L3Flr (G.NW6.I18)	L3NW Perim Spc (G.NW6)	L2NW Perim Spc (G.NW6)
L3South Wall (G.NW6.I19)	L3NW Perim Spc (G.NW6)	L3WSW Perim Spc (G.WSW4)
L3West Wall (G.NW6.I20)	L3NW Perim Spc (G.NW6)	L3WSW Perim Spc (G.WSW4)
L3South Wall (G.NW6.I21)	L3NW Perim Spc (G.NW6)	L3Core Spc (G.C5)
L3East Wall (G.NW6.I22)	L3NW Perim Spc (G.NW6)	L3Core Spc (G.C9)
L3East Wall (G.NW6.I23)	L3NW Perim Spc (G.NW6)	L3North Perim Spc (G.N11)
L3Flr (G.SSE7.I24)	L3SSE Perim Spc (G.SSE7)	L2SSE Perim Spc (G.SSE7)
L3North Wall (G.SSE7.I25)	L3SSE Perim Spc (G.SSE7)	L3Core Spc (G.C8)
L3Flr (G.C8.I26)	L3Core Spc (G.C8)	L2Core Spc (G.C8)
L3North Wall (G.C8.I27)	L3Core Spc (G.C8)	L3Core Spc (G.C9)
L3Flr (G.C9.I28)	L3Core Spc (G.C9)	L2Core Spc (G.C9)
L3Flr (G.C10.I29)	L3Core Spc (G.C10)	L2Core Spc (G.C10)
L3South Wall (G.C10.I30)	L3Core Spc (G.C10)	L3Core Spc (G.C9)
L3South Wall (G.C10.I31)	L3Core Spc (G.C10)	L3SSE Perim Spc (G.SSE14)
L3East Wall (G.C10.I32)	L3Core Spc (G.C10)	L3East Perim Spc (G.E15)
L3North Wall (G.C10.I33)	L3Core Spc (G.C10)	L3North Perim Spc (G.N13)
L3North Wall (G.C10.I34)	L3Core Spc (G.C10)	L3North Perim Spc (G.N12)
L3West Wall (G.C10.I35)	L3Core Spc (G.C10)	L3North Perim Spc (G.N11)
L3Flr (G.N11.I36)	L3North Perim Spc (G.N11)	L2North Perim Spc (G.N11)
L3South Wall (G.N11.I37)	L3North Perim Spc (G.N11)	L3Core Spc (G.C9)
L3Flr (G.N12.I38)	L3North Perim Spc (G.N12)	L2North Perim Spc (G.N12)
L3East Wall (G.N12.I39)	L3North Perim Spc (G.N12)	L3North Perim Spc (G.N13)

L3West Wall (G.N12.I40)	L3North Perim Spc (G.N12)	L3North Perim Spc (G.N11)
L3Flr (G.N13.I41)	L3North Perim Spc (G.N13)	L2North Perim Spc (G.N13)
L3Flr (G.SSE14.I42)	L3SSE Perim Spc (G.SSE14)	L2SSE Perim Spc (G.SSE14)
L3West Wall (G.SSE14.I43)	L3SSE Perim Spc (G.SSE14)	L3Core Spc (G.C9)
L3West Wall (G.SSE14.I44)	L3SSE Perim Spc (G.SSE14)	L3Core Spc (G.C8)
L3West Wall (G.SSE14.I45)	L3SSE Perim Spc (G.SSE14)	L3SSE Perim Spc (G.SSE7)
L3East Wall (G.SSE14.I46)	L3SSE Perim Spc (G.SSE14)	L3East Perim Spc (G.E15)
L3Flr (G.E15.I47)	L3East Perim Spc (G.E15)	L2East Perim Spc (G.E15)
L3West Wall (G.E15.I48)	L3East Perim Spc (G.E15)	L3North Perim Spc (G.N13)
L4 Flr (G.SSE1.I1)	L4 SSE Perim Spc (G.SSE1)	L3SW Perim Spc (G.SW1)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L4 West Wall (G.SSE1.I2)	L4 SSE Perim Spc (G.SSE1)	L4 West Perim Spc (G.W2)
L4 North Wall (G.SSE1.I3)	L4 SSE Perim Spc (G.SSE1)	L4 West Perim Spc (G.W2)
L4 Flr (G.W2.I4)	L4 West Perim Spc (G.W2)	L3West Perim Spc (G.W3)
L4 Flr (G.C3.I5)	L4 Core Spc (G.C3)	L3Core Spc (G.C5)
L4 North Wall (G.C3.I6)	L4 Core Spc (G.C3)	L4 Core Spc (G.C8)
L4 West Wall (G.C3.I7)	L4 Core Spc (G.C3)	L4 West Perim Spc (G.W2)
L4 South Wall (G.C3.I8)	L4 Core Spc (G.C3)	L4 SSE Perim Spc (G.SSE1)
L4 Flr (G.NNW4.I9)	L4 NNW Perim Spc (G.NNW4)	L3NW Perim Spc (G.NW6)
L4 South Wall (G.NNW4.I10)	L4 NNW Perim Spc (G.NNW4)	L4 West Perim Spc (G.W2)
L4 East Wall (G.NNW4.I11)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C3)
L4 South Wall (G.NNW4.I12)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C3)
L4 East Wall (G.NNW4.I13)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C8)
L4 South Wall (G.NNW4.I14)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C8)
L4 Flr (G.SSE5.I15)	L4 SSE Perim Spc (G.SSE5)	L3SSE Perim Spc (G.SSE14)
L4 North Wall (G.SSE5.I16)	L4 SSE Perim Spc (G.SSE5)	L4 North Perim Spc (G.N7)
L4 West Wall (G.SSE5.I17)	L4 SSE Perim Spc (G.SSE5)	L4 North Perim Spc (G.N6)
L4 North Wall (G.SSE5.I18)	L4 SSE Perim Spc (G.SSE5)	L4 North Perim Spc (G.N6)
L4 West Wall (G.SSE5.I19)	L4 SSE Perim Spc (G.SSE5)	L4 Core Spc (G.C3)
L4 Flr (G.N6.I20)	L4 North Perim Spc (G.N6)	L3Core Spc (G.C9)
L4 West Wall (G.N6.I21)	L4 North Perim Spc (G.N6)	L4 Core Spc (G.C8)
L4 West Wall (G.N6.I22)	L4 North Perim Spc (G.N6)	L4 Core Spc (G.C3)
L4 Flr (G.N7.I23)	L4 North Perim Spc (G.N7)	L3North Perim Spc (G.N13)
L4 Flr (G.C8.I24)	L4 Core Spc (G.C8)	L3NW Perim Spc (G.NW6)
B1ENE Wall (B.SW1.I1)	B1SW Perim Spc (B.SW1)	B1SSE Perim Spc (B.SSE7)
B1North Wall (B.SW1.I2)	B1SW Perim Spc (B.SW1)	B1West Perim Spc (B.W3)
B1South Wall (B.C2.I3)	B1Core Spc (B.C2)	B1Core Spc (B.C5)
B1West Wall (B.C2.I4)	B1Core Spc (B.C2)	B1Core Spc (B.C5)
B1West Wall (B.C2.I5)	B1Core Spc (B.C2)	B1West Perim Spc (B.W3)
B1West Wall (B.C2.I6)	B1Core Spc (B.C2)	B1SW Perim Spc (B.SW1)
B1SSE Wall (B.C2.I7)	B1Core Spc (B.C2)	B1SW Perim Spc (B.SW1)
B1East Wall (B.C2.I8)	B1Core Spc (B.C2)	B1Core Spc (B.C2)
B1East Wall (B.C2.I9)	B1Core Spc (B.C2)	B1Core Spc (B.C2)
B1East Wall (B.C2.I10)	B1Core Spc (B.C2)	B1Core Spc (B.C9)
B1East Wall (B.C2.I11)	B1Core Spc (B.C2)	B1Core Spc (B.C15)
B1East Wall (B.C2.I12)	B1Core Spc (B.C2)	B1Core Spc (B.C23)
B1East Wall (B.C2.I13)	B1Core Spc (B.C2)	B1North Perim Spc (B.N18)
B1North Wall (B.C2.I14)	B1Core Spc (B.C2)	B1North Perim Spc (B.N17)
B1West Wall (B.C2.I15)	B1Core Spc (B.C2)	B1NW Perim Spc (B.NW16)
B1West Wall (B.C2.I16)	B1Core Spc (B.C2)	B1West Perim Spc (B.W6)
B1North Wall (B.C2.I17)	B1Core Spc (B.C2)	B1West Perim Spc (B.W6)
B1West Wall (B.C2.I18)	B1Core Spc (B.C2)	B1West Perim Spc (B.W4)
B1South Wall (B.W4.I19)	B1West Perim Spc (B.W4)	B1West Perim Spc (B.W3)
B1North Wall (B.W4.I20)	B1West Perim Spc (B.W4)	B1West Perim Spc (B.W6)
B1South Wall (B.C5.I21)	B1Core Spc (B.C5)	B1West Perim Spc (B.W3)

B1West Wall (B.C5.I22)	B1Core Spc (B.C5)	B1West Perim Spc (B.W4)
B1North Wall (B.W6.I23)	B1West Perim Spc (B.W6)	B1NW Perim Spc (B.NW16)
B1ENE Wall (B.SSE7.I24)	B1SSE Perim Spc (B.SSE7)	B1SSE Perim Spc (B.SSE12)
B1NNW Wall (B.SSE7.I25)	B1SSE Perim Spc (B.SSE7)	B1Core Spc (B.C8)
B1West Wall (B.C8.I26)	B1Core Spc (B.C8)	B1Core Spc (B.C8)
B1East Wall (B.C8.I27)	B1Core Spc (B.C8)	B1Core Spc (B.C13)
B1North Wall (B.C8.I28)	B1Core Spc (B.C8)	B1Core Spc (B.C9)
B1North Wall (B.C9.I29)	B1Core Spc (B.C9)	B1Core Spc (B.C15)
B1South Wall (B.C10.I30)	B1Core Spc (B.C10)	B1Core Spc (B.C13)
B1West Wall (B.C10.I31)	B1Core Spc (B.C10)	B1Core Spc (B.C13)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
B1SSE Wall (B.C10.I32)	B1Core Spc (B.C10)	B1SSE Perim Spc (B.SSE11)
B1North Wall (B.C10.I33)	B1Core Spc (B.C10)	B1Core Spc (B.C23)
B1West Wall (B.C10.I34)	B1Core Spc (B.C10)	B1Core Spc (B.C15)
B1West Wall (B.C10.I35)	B1Core Spc (B.C10)	B1Core Spc (B.C9)
B1ENE Wall (B.SSE11.I36)	B1SSE Perim Spc (B.SSE11)	B1SSE Perim Spc (B.SSE14)
B1WSW Wall (B.SSE11.I37)	B1SSE Perim Spc (B.SSE11)	B1SSE Perim Spc (B.SSE12)
B1NNW Wall (B.SSE12.I38)	B1SSE Perim Spc (B.SSE12)	B1Core Spc (B.C13)
B1North Wall (B.C15.I39)	B1Core Spc (B.C15)	B1Core Spc (B.C23)
B1East Wall (B.N17.I40)	B1North Perim Spc (B.N17)	B1North Perim Spc (B.N18)
B1West Wall (B.N17.I41)	B1North Perim Spc (B.N17)	B1NW Perim Spc (B.NW16)
B1East Wall (B.N18.I42)	B1North Perim Spc (B.N18)	B1North Perim Spc (B.N19)
B1North Wall (B.SE20.I43)	B1SE Perim Spc (B.SE20)	B1NE Perim Spc (B.NE21)
B1WSW Wall (B.SE20.I44)	B1SE Perim Spc (B.SE20)	B1SSE Perim Spc (B.SSE14)
B1West Wall (B.N22.I45)	B1North Perim Spc (B.N22)	B1North Perim Spc (B.N19)
B1West Wall (B.N22.I46)	B1North Perim Spc (B.N22)	B1Core Spc (B.C23)
B1South Wall (B.N22.I47)	B1North Perim Spc (B.N22)	B1Core Spc (B.C10)
B1West Wall (B.N22.I48)	B1North Perim Spc (B.N22)	B1Core Spc (B.C10)
B1SSE Wall (B.N22.I49)	B1North Perim Spc (B.N22)	B1SSE Perim Spc (B.SSE11)
B1SSE Wall (B.N22.I50)	B1North Perim Spc (B.N22)	B1SSE Perim Spc (B.SSE14)
B1SSE Wall (B.N22.I51)	B1North Perim Spc (B.N22)	B1SE Perim Spc (B.SE20)
B1East Wall (B.N22.I52)	B1North Perim Spc (B.N22)	B1NE Perim Spc (B.NE21)
B1North Wall (B.C23.I53)	B1Core Spc (B.C23)	B1North Perim Spc (B.N19)
B1North Wall (B.C23.I54)	B1Core Spc (B.C23)	B1North Perim Spc (B.N18)
B2North Wall (B.E2.I1)	B2East Perim Spc (B.E2)	B2North Perim Spc (B.N4)
B2West Wall (B.E2.I2)	B2East Perim Spc (B.E2)	B2West Perim Spc (B.W3)
B2North Wall (B.E2.I3)	B2East Perim Spc (B.E2)	B2West Perim Spc (B.W3)
B2South Wall (B.E2.I4)	B2East Perim Spc (B.E2)	B2SW Perim Spc (B.SW1)
B2West Wall (B.E2.I5)	B2East Perim Spc (B.E2)	B2SW Perim Spc (B.SW1)
B2South Wall (B.N4.I6)	B2North Perim Spc (B.N4)	B2West Perim Spc (B.W3)

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REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF WINDOWS 98

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES X (FT)	Y (FT)	FRAME AREA (SQFT)	CURB	FRAME U-VALUE (BTU/HR-SQFT-F)	CURB
Window 1	1.0	126.38	12.33	10.25	4.00	1.00	0.00	0.00	0.384	0.000
Window 2	1.0	126.38	12.33	10.25	18.00	1.00	0.00	0.00	0.384	0.000
Window 32	1.0	26.25	5.25	5.00	0.25	7.00	0.00	0.00	0.384	0.000
Window 30	1.0	15.75	5.25	3.00	1.00	9.00	0.00	0.00	0.384	0.000
Window 31	1.0	26.25	5.25	5.00	6.00	9.00	0.00	0.00	0.384	0.000
Window 3	1.0	216.00	12.00	18.00	3.00	1.00	0.00	0.00	0.384	0.000
Window 98	1.0	100.00	10.00	10.00	0.50	0.25	0.00	0.00	0.384	0.000
Window 4	1.0	216.00	12.00	18.00	3.00	1.00	0.00	0.00	0.384	0.000
Window 5	1.0	223.68	12.00	18.64	3.00	1.00	0.00	0.00	0.384	0.000
Window 6	1.0	223.68	12.00	18.64	26.00	1.00	0.00	0.00	0.384	0.000
Window 21	1.0	177.96	12.00	14.83	1.00	1.00	0.00	0.00	0.384	0.000
Window 24	1.0	6.25	2.50	2.50	5.50	7.00	0.00	0.00	0.384	0.000
Window 25	1.0	6.25	2.50	2.50	11.00	7.00	0.00	0.00	0.384	0.000
Window 26	1.0	66.36	14.00	4.74	34.00	0.50	0.00	0.00	0.384	0.000
Window 99	1.0	17.25	5.75	3.00	16.25	7.00	0.00	0.00	0.384	0.000
Window 100	1.0	25.50	8.50	3.00	24.50	4.00	0.00	0.00	0.384	0.000
Window 101	1.0	25.50	8.50	3.00	29.00	4.00	0.00	0.00	0.384	0.000
Window 83	1.0	17.00	6.80	2.50	3.00	0.25	0.00	0.00	0.384	0.000
Window 84	1.0	18.38	5.25	3.50	10.00	0.25	0.00	0.00	0.384	0.000
Window 85	1.0	17.00	6.80	2.50	2.00	0.25	0.00	0.00	0.384	0.000
Window 7	1.0	34.68	8.67	4.00	4.00	2.00	0.00	0.00	0.384	0.000
Window 8	1.0	34.68	8.67	4.00	9.00	2.00	0.00	0.00	0.384	0.000
Window 9	1.0	34.68	8.67	4.00	18.00	2.00	0.00	0.00	0.384	0.000
Window 10	1.0	34.68	8.67	4.00	23.00	2.00	0.00	0.00	0.384	0.000
Window 61	1.0	60.47	9.00	6.72	4.00	1.00	0.00	0.00	0.384	0.000
Window 62	1.0	60.47	9.00	6.72	14.00	1.00	0.00	0.00	0.384	0.000
Window 11	1.0	45.00	7.50	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 12	1.0	45.00	7.50	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 55	1.0	19.17	7.67	2.50	1.00	2.00	0.00	0.00	0.384	0.000
Window 56	1.0	19.17	7.67	2.50	5.00	2.00	0.00	0.00	0.384	0.000
Window 51	1.0	20.62	8.25	2.50	0.50	2.00	0.00	0.00	0.384	0.000
Window 53	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 54	1.0	19.17	7.67	2.50	13.00	2.00	0.00	0.00	0.384	0.000
Window 45	1.0	20.62	8.25	2.50	2.00	2.00	0.00	0.00	0.384	0.000
Window 46	1.0	20.62	8.25	2.50	8.00	2.00	0.00	0.00	0.384	0.000
Window 47	1.0	20.62	8.25	2.50	15.00	2.00	0.00	0.00	0.384	0.000
Window 13	1.0	45.00	7.50	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 14	1.0	45.00	7.50	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 15	1.0	28.12	7.50	3.75	24.00	2.00	0.00	0.00	0.384	0.000

window 16	1.0	28.12	7.50	3.75	30.00	2.00	0.00	0.00	0.384	0.000
Window 22	1.0	34.00	8.00	4.25	3.00	2.00	0.00	0.00	0.384	0.000
Window 23	1.0	34.00	8.00	4.25	10.00	2.00	0.00	0.00	0.384	0.000
Window 33	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 34	1.0	19.17	7.67	2.50	10.00	2.00	0.00	0.00	0.384	0.000
Window 35	1.0	19.17	7.67	2.50	14.00	2.00	0.00	0.00	0.384	0.000
Window 36	1.0	19.17	7.67	2.50	22.00	2.00	0.00	0.00	0.384	0.000
Window 37	1.0	19.17	7.67	2.50	26.00	2.00	0.00	0.00	0.384	0.000
Window 38	1.0	19.17	7.67	2.50	30.00	2.00	0.00	0.00	0.384	0.000
Window 17	1.0	45.00	7.50	6.00	3.00	2.00	0.00	0.00	0.384	0.000

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES X (FT)	Y (FT)	FRAME AREA (SQFT)	CURB AREA (SQFT)	FRAME U-VALUE (BTU/HR-SQFT-F)	CURB U-VALUE (BTU/HR-SQFT-F)
Window 18	1.0	45.00	7.50	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 19	1.0	45.00	7.50	6.00	26.00	2.00	0.00	0.00	0.384	0.000
Window 20	1.0	45.00	7.50	6.00	36.00	2.00	0.00	0.00	0.384	0.000
Window 73	1.0	60.00	7.50	8.00	4.00	2.00	0.00	0.00	0.384	0.000
Window 74	1.0	60.00	7.50	8.00	17.00	2.00	0.00	0.00	0.384	0.000
Window 86	1.0	9.50	4.75	2.00	1.00	1.00	0.00	0.00	0.384	0.000
Window 87	1.0	9.50	4.75	2.00	14.00	5.00	0.00	0.00	0.384	0.000
Window 77	1.0	45.00	7.50	6.00	2.00	2.00	0.00	0.00	0.384	0.000
Window 78	1.0	45.00	7.50	6.00	11.00	2.00	0.00	0.00	0.384	0.000
Window 63	1.0	34.28	5.71	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 64	1.0	34.28	5.71	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 59	1.0	19.17	7.67	2.50	1.00	2.00	0.00	0.00	0.384	0.000
Window 60	1.0	19.17	7.67	2.50	5.00	2.00	0.00	0.00	0.384	0.000
Window 52	1.0	20.62	8.25	2.50	0.50	2.00	0.00	0.00	0.384	0.000
Window 57	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 58	1.0	19.17	7.67	2.50	13.00	2.00	0.00	0.00	0.384	0.000
Window 48	1.0	20.62	8.25	2.50	2.00	2.00	0.00	0.00	0.384	0.000
Window 49	1.0	20.62	8.25	2.50	8.00	2.00	0.00	0.00	0.384	0.000
Window 50	1.0	20.62	8.25	2.50	15.00	2.00	0.00	0.00	0.384	0.000
Window 65	1.0	34.28	5.71	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 66	1.0	34.28	5.71	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 67	1.0	28.12	7.50	3.75	24.00	2.00	0.00	0.00	0.384	0.000
Window 68	1.0	28.12	7.50	3.75	30.00	2.00	0.00	0.00	0.384	0.000
Window 81	1.0	25.34	6.34	4.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 82	1.0	25.34	6.34	4.00	10.00	2.00	0.00	0.00	0.384	0.000
Window 39	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 40	1.0	19.17	7.67	2.50	10.00	2.00	0.00	0.00	0.384	0.000
Window 41	1.0	19.17	7.67	2.50	14.00	2.00	0.00	0.00	0.384	0.000
Window 42	1.0	19.17	7.67	2.50	22.00	2.00	0.00	0.00	0.384	0.000
Window 43	1.0	19.17	7.67	2.50	26.00	2.00	0.00	0.00	0.384	0.000
Window 44	1.0	19.17	7.67	2.50	30.00	2.00	0.00	0.00	0.384	0.000
Window 69	1.0	34.28	5.71	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 70	1.0	34.28	5.71	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 71	1.0	34.28	5.71	6.00	24.00	2.00	0.00	0.00	0.384	0.000
Window 72	1.0	34.28	5.71	6.00	33.00	2.00	0.00	0.00	0.384	0.000
Window 75	1.0	60.00	7.50	8.00	4.00	2.00	0.00	0.00	0.384	0.000
Window 76	1.0	60.00	7.50	8.00	17.00	2.00	0.00	0.00	0.384	0.000
Window 92	1.0	121.88	7.50	16.25	6.50	0.25	0.00	0.00	0.384	0.000
Window 88	1.0	9.50	4.75	2.00	1.00	1.00	0.00	0.00	0.384	0.000
Window 89	1.0	9.50	4.75	2.00	14.00	5.00	0.00	0.00	0.384	0.000
Window 90	1.0	9.50	2.00	4.75	1.00	8.00	0.00	0.00	0.384	0.000
Window 79	1.0	45.00	7.50	6.00	2.00	2.00	0.00	0.00	0.384	0.000

window 80	1.0	45.00	7.50	6.00	11.00	2.00	0.00	0.00	0.384	0.000
Window 91	1.0	270.00	7.50	36.00	0.25	0.25	0.00	0.00	0.384	0.000
Window 93	1.0	46.88	7.50	6.25	0.25	0.25	0.00	0.00	0.384	0.000
Window 94	1.0	146.25	7.50	19.50	6.75	0.25	0.00	0.00	0.384	0.000
Window 95	1.0	108.75	7.50	14.50	0.25	0.25	0.00	0.00	0.384	0.000
Window 96	1.0	71.25	7.50	9.50	0.25	0.25	0.00	0.00	0.384	0.000
Window 97	1.0	153.75	7.50	20.50	0.25	0.25	0.00	0.00	0.384	0.000

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
Window 1	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 2	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 32	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 30	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 31	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 3	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 98	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 4	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 5	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 6	0.00	0.52	1	0.289	0.529	0.878	1.000
Window 21	0.00	0.67	1	0.289	0.529	0.878	1.000
Window 24	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 25	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 26	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 99	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 100	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 101	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 83	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 84	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 85	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 7	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 8	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 9	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 10	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 61	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 62	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 11	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 12	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 55	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 56	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 51	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 53	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 54	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 45	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 46	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 47	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 13	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 14	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 15	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 16	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 22	0.00	0.67	1	0.289	0.490	0.878	1.000
Window 23	0.00	0.67	1	0.289	0.490	0.878	1.000
Window 33	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 34	0.00	0.52	1	0.289	0.490	0.878	1.000

Window 35	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 36	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 37	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 38	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 17	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 18	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 19	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 20	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 73	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 74	0.00	0.52	1	0.289	0.490	0.878	1.000

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
Window 86	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 87	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 77	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 78	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 63	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 64	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 59	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 60	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 52	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 57	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 58	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 48	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 49	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 50	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 65	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 66	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 67	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 68	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 81	0.00	0.67	1	0.289	0.490	0.878	1.000
Window 82	0.00	0.67	1	0.289	0.490	0.878	1.000
Window 39	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 40	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 41	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 42	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 43	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 44	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 69	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 70	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 71	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 72	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 75	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 76	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 92	0.00	0.67	1	0.362	0.630	0.878	1.000
Window 88	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 89	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 90	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 79	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 80	0.00	0.52	1	0.289	0.490	0.878	1.000
Window 91	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 93	0.00	0.67	1	0.362	0.630	0.878	1.000
Window 94	0.00	0.67	1	0.362	0.630	0.878	1.000
Window 95	0.00	0.52	1	0.362	0.630	0.878	1.000
Window 96	0.00	0.67	1	0.362	0.630	0.878	1.000
Window 97	0.00	0.52	1	0.362	0.630	0.878	1.000

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LV-I Details of Constructions WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF CONSTRUCTIONS 15 DELAYED 14 QUICK 1

CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)	SURFACE ABSORPTANCE	SURFACE ROUGHNESS INDEX	SURFACE TYPE	NUMBER OF RESPONSE FACTORS
MasonEWall Con	0.057	0.60	3	DELAYED	8
Ceilg Cons	0.514	0.70	3	DELAYED	3
IntWall Cons	0.402	0.70	3	DELAYED	4
IntFlr Cons	0.532	0.70	3	DELAYED	3
GFlr Cons	0.029	0.70	3	DELAYED	41
MtlEWall Cons	0.055	0.60	4	DELAYED	8
Roof Cons	0.027	0.60	1	DELAYED	6
UFCons	0.029	0.70	3	DELAYED	41
NoInsUWCons	0.070	0.70	3	DELAYED	40
InsUWCons	0.070	0.70	3	DELAYED	40
FullInsMasEWall Con	0.057	0.60	3	DELAYED	8
PartInsMasEWall Con	0.057	0.60	3	DELAYED	8
BmntRf Cons	0.027	0.60	1	DELAYED	6
TestCons	0.029	0.70	3	DELAYED	41
MtlRollup Door	0.340	0.70	3	QUICK	0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LS-C BuiLding Peak Load Components DESIGN DAY WEATHER FILE- SEATTLE BOEING FI WA

*** BUILDING ***

FLOOR AREA	31768	SQFT	2951	M2
VOLUME	448580	CUFT	12704	M3

	COOLING LOAD		HEATING LOAD	
TIME	AUG 1 11AM		DEC 21 6AM	
DRY-BULB TEMP	74 F	23 C	26 F	-4 C
WET-BULB TEMP	61 F	16 C	21 F	-6 C
TOT HORIZONTAL SOLAR RAD	218 BTU/H.SQFT	688 W/M2	0 BTU/H.SQFT	0 W/M2
WINDSPEED AT SPACE	3.8 KTS	1.9 M/S	7.0 KTS	3.6 M/S
CLOUD AMOUNT 0(CLEAR)-10	0		10	

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALL CONDUCTION	2.263	0.663	0.000	0.000	-41.298	-12.100
ROOF CONDUCTION	-0.047	-0.014	0.000	0.000	-10.767	-3.155
WINDOW GLASS+FRM COND	2.361	0.692	0.000	0.000	-59.454	-17.420
WINDOW GLASS SOLAR	98.779	28.942	0.000	0.000	1.020	0.299
DOOR CONDUCTION	0.088	0.026	0.000	0.000	-0.543	-0.159
INTERNAL SURFACE COND	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURF COND	-5.763	-1.689	0.000	0.000	-10.176	-2.981
OCCUPANTS TO SPACE	57.926	16.972	49.433	14.484	0.000	0.000
LIGHT TO SPACE	55.749	16.334	0.000	0.000	0.000	0.000
EQUIPMENT TO SPACE	76.221	22.333	0.000	0.000	0.000	0.000
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	0.662	0.194	0.105	0.031	-59.259	-17.363
TOTAL	288.238	84.454	49.538	14.515	-180.476	-52.880
TOTAL / AREA	0.009	0.029	0.002	0.005	-0.006	-0.018
TOTAL LOAD	337.777 KBTU/H		98.969 KW		-180.476 KBTU/H	-52.880 KW
TOTAL LOAD / AREA	10.63 BTU/H.SQFT		33.533 W/M2		5.681 BTU/H.SQFT	17.917 W/M2

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*****************************************************************
*                                                               *
*  NOTE  1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR      *
*  ----    LOADS                                                *
*        2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION        *
*          IN CONSIDERATION                                     *
*        3)THE ABOVE LOADS ARE CALCULATED ASSUMING A            *
*          CONSTANT INDOOR SPACE TEMPERATURE                    *
*                                                               *
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Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LS-D Building Monthly Loads Summary DESIGN DAY WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
FEB	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
MAR	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
APR	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
MAY	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
JUN	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
JUL	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
AUG	80.69798	1	10	74.F	61.F	288.239	0.000	0	0	0.F	0.F	0.000	15847.	44.019
SEP	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
OCT	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
NOV	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
DEC	0.00000	0	0	0.F	0.F	0.000	-39.073	21	6	26.F	21.F	-180.476	45.	0.171
TOTAL	80.698						-39.073						15892.	
MAX						288.239						-180.476		44.019

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LS-C BuiLding Peak Load Components WEATHER FILE- SEATTLE BOEING FI WA

*** BUILDING ***

FLOOR AREA	31768	SQFT	2951	M2
VOLUME	448580	CUFT	12704	M3

	COOLING LOAD		HEATING LOAD	
TIME	JUL 10 10AM		JAN 6 5AM	
DRY-BULB TEMP	73 F	23 C	27 F	-3 C
WET-BULB TEMP	62 F	17 C	23 F	-5 C
TOT HORIZONTAL SOLAR RAD	190 BTU/H.SQFT	598 W/M2	0 BTU/H.SQFT	0 W/M2
WINDSPEED AT SPACE	1.9 KTS	1.0 M/S	7.8 KTS	4.0 M/S
CLOUD AMOUNT 0(CLEAR)-10	0		10	

	SENSIBLE (KBTU/H)	SENSIBLE (KW)	LATENT (KBTU/H)	LATENT (KW)	SENSIBLE (KBTU/H)	SENSIBLE (KW)
WALL CONDUCTION	1.202	0.352	0.000	0.000	-39.786	-11.657
ROOF CONDUCTION	-1.131	-0.331	0.000	0.000	-10.668	-3.126
WINDOW GLASS+FRM COND	1.046	0.306	0.000	0.000	-57.871	-16.956
WINDOW GLASS SOLAR	120.715	35.370	0.000	0.000	1.751	0.513
DOOR CONDUCTION	0.085	0.025	0.000	0.000	-0.524	-0.154
INTERNAL SURFACE COND	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURF COND	-6.858	-2.009	0.000	0.000	-11.944	-3.499
OCCUPANTS TO SPACE	38.682	11.334	41.494	12.158	0.861	0.252
LIGHT TO SPACE	32.130	9.414	0.000	0.000	3.181	0.932
EQUIPMENT TO SPACE	63.533	18.615	0.000	0.000	3.801	1.114
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	0.277	0.081	0.360	0.106	-63.687	-18.660
TOTAL	249.681	73.156	41.854	12.263	-174.886	-51.242
TOTAL / AREA	0.008	0.025	0.001	0.004	-0.006	-0.017
TOTAL LOAD	291.535 KBTU/H		85.420 KW		-174.886 KBTU/H	-51.242 KW
TOTAL LOAD / AREA	9.18 BTU/H.SQFT		28.943 W/M2		5.505 BTU/H.SQFT	17.362 W/M2

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*****************************************************************
*                                                               *
*  NOTE  1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR      *
*  ----    LOADS                                                *
*        2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION        *
*          IN CONSIDERATION                                     *
*        3)THE ABOVE LOADS ARE CALCULATED ASSUMING A            *
*          CONSTANT INDOOR SPACE TEMPERATURE                    *
*                                                               *
*****************************************************************
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Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- LS-D Building Monthly Loads Summary WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	17.09834	15	14	52.F	50.F	104.417	-38.570	6	5	27.F	23.F	-174.886	10077.	35.673
FEB	17.78344	21	16	57.F	54.F	106.787	-29.242	12	4	36.F	33.F	-105.957	9147.	35.673
MAR	23.97328	21	15	68.F	50.F	146.626	-25.170	2	5	32.F	32.F	-106.673	10164.	35.673
APR	32.00177	30	10	59.F	50.F	165.570	-17.318	5	21	46.F	42.F	-93.251	10347.	35.673
MAY	38.22494	16	9	63.F	56.F	211.570	-12.443	11	5	48.F	44.F	-79.835	10164.	35.673
JUN	43.82056	20	9	70.F	60.F	240.228	-6.796	8	4	52.F	50.F	-53.789	9999.	35.673
JUL	58.22618	10	9	73.F	62.F	249.681	-2.743	5	4	54.F	51.F	-28.813	10425.	35.673
AUG	51.82341	8	9	66.F	60.F	228.435	-2.978	24	5	55.F	54.F	-39.724	10164.	35.673
SEP	41.18083	19	9	66.F	63.F	189.431	-6.472	28	6	43.F	42.F	-58.882	9999.	35.673
OCT	29.20151	6	15	79.F	53.F	165.268	-15.782	28	3	48.F	48.F	-78.453	10425.	35.673
NOV	18.24314	7	15	61.F	56.F	121.048	-27.205	3	5	41.F	39.F	-112.017	9042.	35.673
DEC	17.81798	16	15	52.F	49.F	97.581	-36.526	14	6	41.F	39.F	-121.341	10425.	35.673
TOTAL	389.395						-221.244						120383.	
MAX						249.681						-174.886		35.673

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Metropole                                                                    DOE-2.3-50h   10/14/2020    11:03:42  BDL RUN  3

REPORT- ATTN Simulation Messages For Review HVAC        Program                          WEATHER FILE- SEATTLE BOEING FI WA
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 **CAUTION**************************************************************************
            AHU: Sys2CB                          , has a specified or
            flow-limited cooling capacity of    7901.; corresponding to
            a design-day capacity of    8077.  The required design-day
            capacity is   10159.  Zone setpoints may not be maintained.
            Check reports SS-F and SS-O for comfort.

 **CAUTION**************************************************************************
            AHU: Sys3CB                          has zero outside air for
            design calculations.

 **CAUTION**************************************************************************
            AHU: Sys23DfltClg                    has zero outside air for
            design calculations.

 **CAUTION**************************************************************************
            AHU: Sys25DfltClg                    has zero outside air for
            design calculations.

 **CAUTION**************************************************************************
            AHU: Sys26DfltClg                    has zero outside air for
            design calculations.

 **CAUTION**************************************************************************
            AHU: Sys28DfltClg                    has zero outside air for
            design calculations.

 **CAUTION**************************************************************************
            AHU: Sys29DfltClg                    has zero outside air for
            design calculations.

 ***NOTE****************************************************************************
            Convergence issues in Simulation
            Hours Slow:    0;  Hours Failed:    6
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Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1088.5	14.	0.000	34.036	0.742	-29.173	0.261	0.250	-14.587

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1077.	1.00	0.838	2.42	3.5	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1SW Perim Zn (G.SW1)	991.	0.	0.000	1.000	235.	0.00	0.00	24.04	0.00	-21.89	1.
L1Core Zn (G.C2)	86.	0.	0.000	1.000	0.	0.00	0.00	2.07	0.00	-1.92	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 5/10	71.1	60.0	33.88	0.79	1077.	76.14	62.23	53.57	51.27	0.1884		71.09	
Design Capacity				35.57	0.77	1077.	76.14	62.23	52.87	50.70	0.1804		71.09	
Rated Capacity				34.04	0.74	1135.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/31/11	25.5	21.5	-12.16		1077.	70.02	46.37	80.28				25.50	
Design Capacity				-18.43		1077.	70.02	46.37	85.86				25.50	
Rated Capacity				-29.17		1081.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/31/11	25.5	21.5	-12.16		1077.	70.02	46.37	80.28					
Design Capacity				-14.59		1077.	70.02	46.37	82.56					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	304.0	4.	0.000	7.901	0.742	-8.946	0.261	0.250	-5.344

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	362.	1.00	0.282	2.42	3.1	0.47	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1Core Zn (G.C6)	362.	0.	0.000	1.000	25.	0.00	0.00	6.37	0.00	-8.20	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 4/11	73.7	60.9	10.16	0.85	362.	76.20	61.63	54.49	51.87	0.1980		73.71	
Design Capacity				8.08	0.93	362.	76.20	61.63	57.28	54.06	0.2344		73.71	
Rated Capacity				7.90	0.74	264.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/21/ 9	25.5	21.5	-5.34		362.	69.03	45.90	82.42				25.50	
Design Capacity				-5.65		362.	69.03	45.90	83.45				25.50	
Rated Capacity				-8.95		332.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/21/ 9	25.5	21.5	-5.34		362.	69.03	45.90	82.42					
Design Capacity				-5.34		362.	69.03	45.90	82.67					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	636.0	2.	0.000	17.358	0.742	-14.600	0.261	0.250	-7.300

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	555.	1.00	0.432	2.41	3.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1SSE Perim Zn (G.SSE8)	555.	0.	0.000	1.000	0.	0.00	0.00	14.86	0.00	-10.80	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 1/10	71.1	60.0	17.09	0.78	555.	76.37	62.80	54.57	52.24	0.1948		71.09	
Design Capacity				18.30	0.75	555.	76.37	62.80	53.60	51.44	0.1838		71.09	
Rated Capacity				17.36	0.74	579.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/21/10	25.5	21.5	-4.61		555.	69.67	46.21	77.22				25.50	
Design Capacity				-9.22		555.	69.67	46.21	85.04				25.50	
Rated Capacity				-14.60		541.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/21/10	25.5	21.5	-4.61		555.	69.67	46.21	77.22					
Design Capacity				-7.30		555.	69.67	46.21	81.84					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1103.9	4.	0.000	26.067	0.742	-23.939	0.261	0.250	-12.476

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1015.	1.00	0.790	2.42	3.5	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1SE Perim Zn (G.SE16)	480.	0.	0.000	1.000	75.	0.00	0.00	10.39	0.00	-12.16	1.
L1Core Zn (G.C5)	139.	0.	0.000	1.000	0.	0.00	0.00	3.19	0.00	-3.36	1.
L1Core Zn (G.C9)	137.	0.	0.000	1.000	0.	0.00	0.00	2.99	0.00	-3.28	1.
L1Core Zn (G.C17)	259.	0.	0.000	1.000	75.	0.00	0.00	5.48	0.00	-6.61	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 1/11	73.7	60.9	27.29	0.86	1015.	75.67	61.28	54.55	51.89	0.2023		73.71	
Design Capacity				26.50	0.87	1015.	75.67	61.28	54.94	52.21	0.2069		73.71	
Rated Capacity				26.07	0.74	870.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/30/11	25.5	21.5	-12.48		1015.	70.22	46.46	81.38				25.50	
Design Capacity				-15.12		1015.	70.22	46.46	84.00				25.50	
Rated Capacity				-23.94		887.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/30/11	25.5	21.5	-12.48		1015.	70.22	46.46	81.38					
Design Capacity				-12.48		1015.	70.22	46.46	81.59					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1790.6	32.	0.000	65.218	0.742	-48.111	0.261	0.250	-24.056

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1919.	1.00	1.494	2.42	3.5	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1East Perim Zn (G.E18)	1675.	0.	0.000	1.000	440.	0.00	0.00	41.57	0.00	-38.36	1.
L1Core Zn (G.C11)	244.	0.	0.000	1.000	0.	0.00	0.00	6.34	0.00	-5.56	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 1/11	73.7	60.9	55.48	0.83	1919.	77.61	62.75	55.60	52.91	0.1997		73.71	
Design Capacity				67.81	0.77	1919.	77.61	62.75	52.62	50.45	0.1697		73.71	
Rated Capacity				65.22	0.74	2176.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/27/12	25.5	21.5	-23.18		1919.	70.05	46.38	81.02				25.50	
Design Capacity				-30.39		1919.	70.05	46.38	84.70				25.50	
Rated Capacity				-48.11		1783.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/27/12	25.5	21.5	-23.18		1919.	70.05	46.38	81.02					
Design Capacity				-24.06		1919.	70.05	46.38	81.65					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1088.5	13.	0.423	27.142	0.742	-18.647	0.261	0.250	-23.564

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	769.	1.00	0.599	2.42	3.4	0.51	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2SW Perim Zn (G.SW1)	681.	0.	0.000	1.000	325.	0.00	0.00	17.22	0.00	-9.71	1.
L2Core Zn (G.C2)	89.	0.	0.000	1.000	0.	0.00	0.00	2.38	0.00	-1.16	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 5/10	71.1	60.0	21.19	0.81	769.	73.98	61.05	53.68	51.34	0.2014		71.09	
Design Capacity				27.86	0.74	769.	73.98	61.05	49.58	47.87	0.1608		71.09	
Rated Capacity				27.14	0.74	905.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/30/ 9	25.5	21.5	-23.56		769.	51.23	36.79	79.06				25.50	
Design Capacity				-11.78		769.	51.23	36.79	65.40				25.50	
Rated Capacity				-18.65		691.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/30/ 9	25.5	21.5	-23.56		769.	51.23	36.79	79.06					
Design Capacity				-23.56		769.	51.23	36.79	79.57					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	925.0	12.	0.000	20.671	0.742	-14.648	0.261	0.250	-10.713

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	565.	1.00	0.440	2.42	3.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2NW Perim Zn (G.NW6)	509.	0.	0.000	1.000	265.	0.00	0.00	13.50	0.00	-11.73	1.
L2West Perim Zn (G.W4)	56.	0.	0.000	1.000	0.	0.00	0.00	1.36	0.00	-1.29	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	16.26	0.83	565.	75.98	61.86	54.20	51.86	0.1839		81.23	
Design Capacity				20.42	0.76	565.	75.98	61.86	50.76	48.97	0.1513		81.23	
Rated Capacity				20.67	0.74	690.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/31/ 9	25.5	21.5	-10.71		565.	69.98	46.35	87.21				25.50	
Design Capacity				-9.25		565.	69.98	46.35	85.14				25.50	
Rated Capacity				-14.65		543.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/31/ 9	25.5	21.5	-10.71		565.	69.98	46.35	87.21					
Design Capacity				-10.71		565.	69.98	46.35	87.53					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	580.0	2.	0.000	13.471	0.742	-7.392	0.261	0.250	-4.237

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	307.	1.00	0.239	2.42	2.7	0.41	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2SSE Perim Zn (G.SSE7)	307.	0.	0.000	1.000	50.	0.00	0.00	10.35	0.00	-5.52	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 3/11	73.7	60.9	8.26	0.91	307.	76.09	60.54	53.80	50.98	0.1979		73.71	
Design Capacity				13.54	0.76	307.	76.09	60.54	45.27	43.72	0.1282		73.71	
Rated Capacity				13.47	0.74	449.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/26/ 8	25.5	21.5	-4.24		307.	69.94	46.33	82.49				25.50	
Design Capacity				-4.67		307.	69.94	46.33	84.03				25.50	
Rated Capacity				-7.39		274.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/26/ 8	25.5	21.5	-4.24		307.	69.94	46.33	82.49					
Design Capacity				-4.24		307.	69.94	46.33	82.73					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	212.1	1.	0.000	16.970	0.742	-4.243	0.261	0.250	-3.413

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	354.	1.00	0.275	2.42	3.1	0.47	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2North Perim Zn (G.N12)	354.	0.	0.000	1.000	70.	0.00	0.00	11.91	0.00	-4.23	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	3.33	1.00	201.	76.06	63.20	60.96	57.53	0.2475		81.23	
Design Capacity				17.12	0.63	201.	76.06	63.20	26.52	26.47	0.0621		81.23	
Rated Capacity				16.97	0.74	566.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/29/ 9	25.5	21.5	-3.41		201.	69.93	46.33	85.37				25.50	
Design Capacity				-2.68		354.	69.93	46.33	76.94				25.50	
Rated Capacity				-4.24		157.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/29/ 9	25.5	21.5	-3.41		201.	69.93	46.33	85.37					
Design Capacity				-3.41		354.	69.93	46.33	78.86					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1032.5	4.	0.000	20.253	0.742	-14.021	0.261	0.250	-7.011

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	570.	1.00	0.443	2.42	3.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2SSE Perim Zn (G.SSE14)	570.	0.	0.000	1.000	85.	0.00	0.00	16.26	0.00	-10.46	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 3/10	71.1	60.0	15.93	0.87	570.	76.09	61.02	53.88	51.15	0.1989		71.09	
Design Capacity				20.78	0.79	570.	76.09	61.02	49.75	47.72	0.1596		71.09	
Rated Capacity				20.25	0.74	676.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/27/ 8	25.5	21.5	-6.92		570.	69.95	46.34	80.99				25.50	
Design Capacity				-8.86		570.	69.95	46.34	84.34				25.50	
Rated Capacity				-14.02		520.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/27/ 8	25.5	21.5	-6.92		570.	69.95	46.34	80.99					
Design Capacity				-7.01		570.	69.95	46.34	81.34					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1806.0	7.	0.000	39.365	0.742	-24.603	0.261	0.250	-18.992

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1040.	1.00	0.810	2.42	3.5	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2East Perim Zn (G.E15)	824.	0.	0.000	1.000	200.	0.00	0.00	24.90	0.00	-19.24	1.
L2Core Zn (G.C10)	216.	0.	0.000	1.000	0.	0.00	0.00	6.30	0.00	-4.27	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 3/10	71.1	60.0	28.33	0.88	1040.	75.99	60.86	54.02	51.23	0.2019		71.09	
Design Capacity				40.29	0.78	1040.	75.99	60.86	48.42	46.55	0.1505		71.09	
Rated Capacity				39.36	0.74	1313.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/29/10	25.5	21.5	-18.99		1040.	70.55	46.61	87.14				25.50	
Design Capacity				-15.54		1040.	70.55	46.61	84.38				25.50	
Rated Capacity				-24.60		912.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/29/10	25.5	21.5	-18.99		1040.	70.55	46.61	87.14					
Design Capacity				-18.99		1040.	70.55	46.61	87.45					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1088.5	13.	0.000	20.801	0.742	-16.866	0.261	0.250	-14.034

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	771.	1.00	0.600	2.42	3.4	0.51	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3SW Perim Zn (G.SW1)	675.	0.	0.000	1.000	325.	0.00	0.00	14.07	0.00	-14.82	1.
L3Core Zn (G.C2)	96.	0.	0.000	1.000	0.	0.00	0.00	1.94	0.00	-1.80	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 4/11	73.7	60.9	19.62	0.87	771.	76.06	61.85	55.94	53.13	0.2143		73.71	
Design Capacity				21.34	0.84	771.	76.06	61.85	54.91	52.31	0.2013		73.71	
Rated Capacity				20.80	0.74	694.	80.00	67.00			0.1900		95.00	
HtPmpAir														
Design Day Peak	12/28/ 9	25.5	21.5	-14.03		771.	70.23	46.47	86.76				25.50	
Design Capacity				-10.65		771.	70.23	46.47	83.01				25.50	
Rated Capacity				-16.87		625.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/28/ 9	25.5	21.5	-14.03		771.	70.23	46.47	86.76					
Design Capacity				-14.03		771.	70.23	46.47	87.07					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	925.0	11.	0.000	17.900	0.742	-14.008	0.261	0.250	-10.517

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	555.	1.00	0.432	2.42	3.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3NW Perim Zn (G.NW6)	487.	0.	0.000	1.000	265.	0.00	0.00	11.61	0.00	-11.10	1.
L3WSW Perim Zn (G.WSW4)	68.	0.	0.000	1.000	0.	0.00	0.00	1.55	0.00	-1.56	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	15.60	0.83	555.	76.02	61.96	54.63	52.24	0.1881		81.23	
Design Capacity				17.71	0.79	555.	76.02	61.96	52.88	50.79	0.1693		81.23	
Rated Capacity				17.90	0.74	597.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/30/ 9	25.5	21.5	-10.52		555.	70.00	46.36	87.22				25.50	
Design Capacity				-8.85		555.	70.00	46.36	84.75				25.50	
Rated Capacity				-14.01		519.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/30/ 9	25.5	21.5	-10.52		555.	70.00	46.36	87.22					
Design Capacity				-10.52		555.	70.00	46.36	87.54					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	580.0	2.	0.000	13.880	0.742	-7.571	0.261	0.250	-5.200

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	309.	1.00	0.241	2.42	2.7	0.41	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3SSE Perim Zn (G.SSE7)	309.	0.	0.000	1.000	50.	0.00	0.00	9.81	0.00	-6.88	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 4/10	71.1	60.0	8.54	0.89	309.	76.10	60.69	53.66	50.87	0.1987		71.09	
Design Capacity				14.17	0.75	309.	76.10	60.69	44.63	43.15	0.1275		71.09	
Rated Capacity				13.88	0.74	463.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/27/ 9	25.5	21.5	-5.20		309.	69.93	46.33	85.22				25.50	
Design Capacity				-4.78		309.	69.93	46.33	84.25				25.50	
Rated Capacity				-7.57		281.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/27/ 9	25.5	21.5	-5.20		309.	69.93	46.33	85.22					
Design Capacity				-5.20		309.	69.93	46.33	85.51					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	212.1	1.	0.164	20.468	0.742	-5.060	0.261	0.250	-6.398

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	427.	1.00	0.332	2.43	3.1	0.47	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3North Perim Zn (G.N12)	427.	0.	0.000	1.000	70.	0.00	0.00	14.35	0.00	-4.20	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	3.34	1.00	165.	78.25	63.79	59.84	56.19	0.2458		81.23	
Design Capacity				20.84	0.69	165.	78.25	63.79	-2.29	-1.55	0.0363		81.23	
Rated Capacity				20.47	0.74	683.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/29/10	25.5	21.5	-6.40		165.	51.11	36.72	86.24				25.50	
Design Capacity				-3.20		427.	51.11	36.72	58.04				25.50	
Rated Capacity				-5.06		188.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/29/10	25.5	21.5	-6.40		165.	51.11	36.72	86.24					
Design Capacity				-6.40		427.	51.11	36.72	64.99					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1032.5	4.	0.000	21.810	0.742	-13.353	0.261	0.250	-9.364

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	535.	1.00	0.416	2.42	3.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3SSE Perim Zn (G.SSE14)	535.	0.	0.000	1.000	85.	0.00	0.00	15.47	0.00	-10.90	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 4/10	71.1	60.0	15.12	0.88	535.	76.10	60.76	53.44	50.72	0.1957		71.09	
Design Capacity				22.29	0.76	535.	76.10	60.76	46.85	45.14	0.1402		71.09	
Rated Capacity				21.81	0.74	728.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/27/ 9	25.5	21.5	-9.36		535.	69.93	46.33	85.84				25.50	
Design Capacity				-8.43		535.	69.93	46.33	84.52				25.50	
Rated Capacity				-13.35		495.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/27/ 9	25.5	21.5	-9.36		535.	69.93	46.33	85.84					
Design Capacity				-9.36		535.	69.93	46.33	86.13					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1806.0	7.	0.000	46.521	0.742	-23.131	0.261	0.250	-21.452

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1133.	1.00	0.882	2.42	3.5	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3East Perim Zn (G.E15)	944.	0.	0.000	1.000	200.	0.00	0.00	29.63	0.00	-23.88	1.
L3Core Zn (G.C10)	190.	0.	0.000	1.000	0.	0.00	0.00	6.08	0.00	-4.56	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 4/15	81.2	63.5	23.58	0.93	1133.	76.15	62.47	58.44	55.30	0.2371		81.23	
Design Capacity				46.39	0.72	1133.	76.15	62.47	49.00	47.48	0.1378		81.23	
Rated Capacity				46.52	0.74	1552.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/28/11	25.5	21.5	-21.45		1133.	70.15	46.43	87.35				25.50	
Design Capacity				-14.61		1133.	70.15	46.43	82.08				25.50	
Rated Capacity				-23.13		857.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/28/11	25.5	21.5	-21.45		1133.	70.15	46.43	87.35					
Design Capacity				-21.45		1133.	70.15	46.43	87.67					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1088.3	4.	0.000	31.266	0.742	-17.587	0.261	0.250	-16.678

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	877.	1.00	0.683	2.42	3.4	0.51	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 SSE Perim Zn (G.SSE1)	877.	0.	0.000	1.000	85.	0.00	0.00	24.67	0.00	-23.77	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 2/11	73.7	60.9	13.61	0.98	877.	76.06	64.78	62.21	59.19	0.2577		73.71	
Design Capacity				33.55	0.67	877.	76.06	64.78	52.63	51.00	0.1693		73.71	
Rated Capacity				31.27	0.74	1043.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/26/11	25.5	21.5	-16.68		877.	69.02	45.90	86.29				25.50	
Design Capacity				-11.11		877.	69.02	45.90	80.74				25.50	
Rated Capacity				-17.59		652.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/26/11	25.5	21.5	-16.68		877.	69.02	45.90	86.29					
Design Capacity				-16.68		877.	69.02	45.90	86.61					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	891.9	3.	0.000	32.329	0.742	-13.988	0.261	0.250	-13.362

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	696.	1.00	0.542	2.42	3.2	0.48	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 NNW Perim Zn (G.NNW4)	620.	0.	0.000	1.000	75.	0.00	0.00	20.88	0.00	-16.21	1.
L4 Core Zn (G.C8)	76.	0.	0.000	1.000	0.	0.00	0.00	2.46	0.00	-2.01	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/16	81.6	63.6	11.96	0.94	696.	75.95	64.12	61.16	58.17	0.2502		81.60	
Design Capacity				33.02	0.65	696.	75.95	64.12	47.76	46.68	0.1267		81.60	
Rated Capacity				32.33	0.74	1078.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/28/11	25.5	21.5	-13.36		696.	69.95	46.34	87.39				25.50	
Design Capacity				-8.84		696.	69.95	46.34	81.70				25.50	
Rated Capacity				-13.99		518.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/28/11	25.5	21.5	-13.36		696.	69.95	46.34	87.39					
Design Capacity				-13.36		696.	69.95	46.34	87.72					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	4445.1	72.	0.000	103.950	0.742	-81.352	0.261	0.250	-40.676

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	3049.	1.00	2.374	2.42	3.6	0.54	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
B1North Perim Zn (B.N22)	1438.	0.	0.000	1.000	137.	0.00	0.00	28.13	0.00	-24.55	1.
B1Core Zn (B.C10)	337.	0.	0.000	1.000	137.	0.00	0.00	6.65	0.00	-6.47	1.
B1SSE Perim Zn (B.SSE11)	210.	0.	0.000	1.000	137.	0.00	0.00	3.80	0.00	-4.73	1.
B1SSE Perim Zn (B.SSE12)	252.	0.	0.000	1.000	137.	0.00	0.00	4.72	0.00	-5.55	1.
B1Core Zn (B.C13)	258.	0.	0.000	1.000	137.	0.00	0.00	4.63	0.00	-5.05	1.
B1SSE Perim Zn (B.SSE14)	235.	0.	0.000	1.000	137.	0.00	0.00	4.45	0.00	-5.26	1.
B1SE Perim Zn (B.SE20)	319.	0.	0.000	1.000	137.	0.00	0.00	6.07	0.00	-7.11	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 1/10	71.1	60.0	92.37	0.77	3049.	75.86	62.61	54.48	52.19	0.1956		71.09	
Design Capacity				109.27	0.73	3049.	75.86	62.61	51.95	50.07	0.1705		71.09	
Rated Capacity				103.95	0.74	3468.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/31/ 9	25.5	21.5	-40.33		3049.	68.29	45.56	80.31				25.50	
Design Capacity				-51.39		3049.	68.29	45.56	83.89				25.50	
Rated Capacity				-81.35		3015.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/31/ 9	25.5	21.5	-40.33		3049.	68.29	45.56	80.31					
Design Capacity				-40.68		3049.	68.29	45.56	80.64					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	1022.2	20.	0.000	35.676	0.742	-17.546	0.261	0.250	-13.769

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	744.	1.00	0.579	2.42	3.4	0.51	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
B1Core Zn (B.C8)	496.	0.	0.000	1.000	280.	0.00	0.00	13.06	0.00	-8.64	1.
B1SSE Perim Zn (B.SSE7)	248.	0.	0.000	1.000	90.	0.00	0.00	6.51	0.00	-4.56	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	20.08	0.81	689.	76.19	62.37	54.66	52.36	0.1858		81.23	
Design Capacity				35.52	0.68	689.	76.19	62.37	44.01	43.01	0.1088		81.23	
Rated Capacity				35.68	0.74	1190.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/31/ 8	25.5	21.5	-13.77		689.	69.94	46.33	88.09				25.50	
Design Capacity				-11.08		744.	69.94	46.33	83.73				25.50	
Rated Capacity				-17.55		650.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/31/ 8	25.5	21.5	-13.77		689.	69.94	46.33	88.09					
Design Capacity				-13.77		744.	69.94	46.33	87.07					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	478.6	2.	0.000	7.085	0.742	-5.643	0.261	0.250	-4.019

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	221.	1.00	0.172	2.42	2.6	0.40	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
Thermal Zone 84	221.	0.	0.000	1.000	50.	0.00	0.00	5.41	0.00	-6.69	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/12	76.2	61.8	6.31	0.87	221.	76.10	60.94	53.42	50.85	0.1876		76.22	
Design Capacity				7.08	0.83	221.	76.10	60.94	51.76	49.49	0.1707		76.22	
Rated Capacity				7.08	0.74	236.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/31/11	25.5	21.5	-4.02		221.	69.93	46.33	86.42				25.50	
Design Capacity				-3.56		221.	69.93	46.33	84.82				25.50	
Rated Capacity				-5.64		209.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/31/11	25.5	21.5	-4.02		221.	69.93	46.33	86.42					
Design Capacity				-4.02		221.	69.93	46.33	86.72					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	120.0	0.	0.000	2.427	0.742	-2.184	0.261	0.250	-1.092

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	83.	1.00	0.065	2.42	2.3	0.34	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3Core Zn (G.C5)	83.	0.	0.000	1.000	0.	0.00	0.00	1.82	0.00	-1.60	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 9/ 9	68.6	59.1	2.48	0.86	83.	76.10	60.72	52.60	50.00	0.1886		70.00	
Design Capacity				2.49	0.86	83.	76.10	60.72	52.57	49.99	0.1881		70.00	
Rated Capacity				2.43	0.74	81.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/29/ 8	25.5	21.5	-0.75		83.	69.96	58.28	78.12				25.50	
Design Capacity				-1.38		83.	69.96	58.28	85.16				25.50	
Rated Capacity				-2.18		81.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/29/ 8	25.5	21.5	-0.75		83.	69.96	58.28	78.12					
Design Capacity				-1.09		83.	69.96	58.28	81.99					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	108.8	0.	0.000	2.502	0.742	-2.252	0.261	0.250	-2.164

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	115.	1.00	0.089	2.41	2.3	0.34	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 Core Zn (G.C3)	115.	0.	0.000	1.000	0.	0.00	0.00	1.91	0.00	-2.73	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 5/ 8	66.4	58.3	1.96	0.83	115.	76.06	65.61	63.09	60.40	0.2661		70.00	
Design Capacity				2.77	0.71	115.	76.06	65.61	60.52	58.09	0.2515		70.00	
Rated Capacity				2.50	0.74	83.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/21/10	25.5	21.5	-2.16		115.	69.23	46.00	86.36				25.50	
Design Capacity				-1.42		115.	69.23	46.00	80.70				25.50	
Rated Capacity				-2.25		83.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/21/10	25.5	21.5	-2.16		115.	69.23	46.00	86.36					
Design Capacity				-2.16		115.	69.23	46.00	86.68					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	457.2	2.	0.000	17.129	0.742	-15.416	0.261	0.250	-14.984

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	786.	1.00	0.612	2.41	3.4	0.51	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 SSE Perim Zn (G.SSE5)	786.	0.	0.000	1.000	0.	0.00	0.00	14.71	0.00	-22.46	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 5/11	73.7	60.9	15.06	0.95	786.	76.07	63.06	59.53	56.26	0.2522		73.71	
Design Capacity				17.90	0.87	786.	76.07	63.06	58.02	54.99	0.2396		73.71	
Rated Capacity				17.13	0.74	571.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/21/14	25.5	21.5	-14.98		786.	69.81	46.27	87.13				25.50	
Design Capacity				-9.74		786.	69.81	46.27	81.28				25.50	
Rated Capacity				-15.42		571.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/21/14	25.5	21.5	-14.98		786.	69.81	46.27	87.13					
Design Capacity				-14.98		786.	69.81	46.27	87.45					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	220.8	1.	0.000	7.344	0.742	-6.610	0.261	0.250	-3.453

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	279.	1.00	0.218	2.42	2.7	0.41	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
B1North Perim Zn (B.N18)	279.	0.	0.000	1.000	0.	0.00	0.00	5.86	0.00	-4.91	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 3/ 9	68.6	59.1	7.56	0.89	279.	76.20	60.89	54.22	51.35	0.2049		70.00	
Design Capacity				7.56	0.89	279.	76.20	60.89	54.23	51.36	0.2050		70.00	
Rated Capacity				7.34	0.74	245.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/31/ 8	25.5	21.5	-3.45		279.	69.95	58.28	81.04				25.50	
Design Capacity				-4.18		279.	69.95	58.28	83.61				25.50	
Rated Capacity				-6.61		245.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/31/ 8	25.5	21.5	-3.45		279.	69.95	58.28	81.04					
Design Capacity				-3.45		279.	69.95	58.28	81.25					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	296.7	1.	0.718	6.159	0.742	-5.543	0.261	0.250	-7.012

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	139.	1.00	0.109	2.43	2.5	0.37	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2North Perim Zn (G.N11)	139.	100.	0.009	1.000	0.	0.00	0.00	4.72	0.00	-2.35	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	3.99	0.90	139.	79.78	62.86	56.14	53.17	0.1906		81.23	
Design Capacity				6.18	0.77	139.	79.78	62.86	48.67	46.91	0.1295		81.23	
Rated Capacity				6.16	0.74	205.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/30/ 8	25.5	21.5	-7.01		139.	38.03	29.28	83.72				25.50	
Design Capacity				-3.50		139.	38.03	29.28	61.27				25.50	
Rated Capacity				-5.54		205.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/30/ 8	25.5	21.5	-7.01		139.	38.03	29.28	83.72					
Design Capacity				-7.01		139.	38.03	29.28	84.57					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	120.0	0.	0.000	2.292	0.742	-2.063	0.261	0.250	-1.032

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	79.	1.00	0.062	2.42	2.0	0.30	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2Core Zn (G.C5)	79.	0.	0.000	1.000	0.	0.00	0.00	1.71	0.00	-1.51	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/11/ 9	68.6	59.1	2.35	0.86	79.	76.10	60.78	52.82	50.20	0.1904		70.00	
Design Capacity				2.36	0.86	79.	76.10	60.78	52.79	50.19	0.1899		70.00	
Rated Capacity				2.29	0.74	76.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/21/ 7	25.5	21.5	-0.74		79.	68.86	57.87	77.29				25.50	
Design Capacity				-1.30		79.	68.86	57.87	83.89				25.50	
Rated Capacity				-2.06		76.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/21/ 7	25.5	21.5	-0.74		79.	68.86	57.87	77.29					
Design Capacity				-1.03		79.	68.86	57.87	80.76					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	296.7	1.	0.000	4.020	0.742	-3.618	0.261	0.250	-2.838

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	157.	1.00	0.122	2.42	2.5	0.37	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3North Perim Zn (G.N11)	157.	0.	0.000	1.000	0.	0.00	0.00	3.04	0.00	-3.68	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 1/ 8	66.4	58.3	4.32	0.79	157.	76.95	63.70	57.23	54.60	0.2188		70.00	
Design Capacity				4.32	0.78	157.	76.95	63.70	57.27	54.63	0.2188		70.00	
Rated Capacity				4.02	0.74	134.	80.00	67.00			0.1900		95.00	
Heating HtPmpAir														
Design Day Peak	12/28/ 9	25.5	21.5	-2.84		157.	69.93	46.33	86.33				25.50	
Design Capacity				-2.29		157.	69.93	46.33	83.38				25.50	
Rated Capacity				-3.62		134.	70.00						47.00	
HtPmSupp Electric														
Design Day Peak	12/28/ 9	25.5	21.5	-2.84		157.	69.93	46.33	86.33					
Design Capacity				-2.84		157.	69.93	46.33	86.64					

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Uncon WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SUM	1.001	10729.5	35.	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2Core Zn (G.C8)	0.	0.	0.000	0.000	50.	0.00	0.00	2.86	0.00	-1.67	1.
									-1.67	(BASEBOARDS)	
B1SW Perim Zn (B.SW1)	0.	0.	0.000	0.000	0.	0.00	0.00	13.21	0.00	-16.01	1.
									-16.01	(BASEBOARDS)	
L3Core Zn (G.C8)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C2)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1West Perim Zn (B.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1West Perim Zn (B.W4)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
B1Core Zn (B.C5)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1West Perim Zn (B.W6)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1West Perim Zn (G.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1WNW Perim Zn (G.WNW4)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N7)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1Core Zn (G.C10)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N12)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N13)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N14)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1SSE Perim Zn (G.SSE15)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
L2West Perim Zn (G.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L2Core Zn (G.C9)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L2North Perim Zn (G.N13)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L3West Perim Zn (G.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
L3Core Zn (G.C9)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L3North Perim Zn (G.N13)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L4 West Perim Zn (G.W2)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L4 North Perim Zn (G.N6)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L4 North Perim Zn (G.N7)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C9)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C15)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1NW Perim Zn (B.NW16)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.

B1North Perim Zn (B.N17)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1North Perim Zn (B.N19)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1NE Perim Zn (B.NE21)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C23)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B2SW Perim Zn (B.SW1)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for Uncon WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

B2East Perim Zn (B.E2)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B2West Perim Zn (B.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
B2North Perim Zn (B.N4)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for Uncon WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Zonal Coils														
L2Core Zn (G.C8)														
AuxCool Sum														
Design Day Peak	8/ 7/ 6	63.6	57.2	2.86			77.00							
Design Capacity				2.86			77.00							
BaseBrd Sum														
Design Day Peak	12/31/ 6	25.5	21.5	-1.67			70.00							
Design Capacity				-1.67			70.00							
B1SW Perim Zn (B.SW1)														
AuxCool Sum														
Design Day Peak	8/15/ 7	64.7	57.6	13.21			76.00							
Design Capacity				13.21			76.00							
BaseBrd Sum														
Design Day Peak	12/31/ 6	25.5	21.5	-16.01			70.00							
Design Capacity				-16.01			70.00							

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for DOAS-Base WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	22309.2	217.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	3988.	0.00	1.552	1.21	1.7	0.52	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	3988.	1.00	1.552	1.21	1.7	0.52	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys1CB			
L1SW Perim Zn (G.SW1)	0.	235.	1.
L1Core Zn (G.C2)	0.	0.	1.
Sys2CB			
L1Core Zn (G.C6)	0.	25.	1.
Sys4CB			
L1SE Perim Zn (G.SE16)	0.	75.	1.
L1Core Zn (G.C5)	0.	0.	1.
L1Core Zn (G.C9)	0.	0.	1.
L1Core Zn (G.C17)	0.	75.	1.
Sys5CB			
L1East Perim Zn (G.E18)	0.	440.	1.
L1Core Zn (G.C11)	0.	0.	1.
Sys7CB			
L2NW Perim Zn (G.NW6)	0.	265.	1.
L2West Perim Zn (G.W4)	0.	0.	1.
Sys8CB			
L2SSE Perim Zn (G.SSE7)	0.	50.	1.
Sys9FC			
L2North Perim Zn (G.N12)	0.	70.	1.
Sys10CB			
L2SSE Perim Zn (G.SSE14)	0.	85.	1.
Sys11CB			
L2East Perim Zn (G.E15)	0.	200.	1.
L2Core Zn (G.C10)	0.	0.	1.
Sys12CB			
L3SW Perim Zn (G.SW1)	0.	325.	1.
L3Core Zn (G.C2)	0.	0.	1.
Sys13CB			

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   L3NW Perim Zn (G.NW6)                0.       265.      1.
   L3WSW Perim Zn (G.WSW4)              0.         0.      1.
Sys14CB
   L3SSE Perim Zn (G.SSE7)              0.        50.      1.
Sys16CB
   L3SSE Perim Zn (G.SSE14)             0.        85.      1.
Sys17CB
   L3East Perim Zn (G.E15)              0.       200.      1.
   L3Core Zn (G.C10)                    0.         0.      1.
Sys18CB
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Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-A System Design Parameters for DOAS-Base WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

L4 SSE Perim Zn (G.SSE1)	0.	85.	1.
Sys19CB			
L4 NNW Perim Zn (G.NNW4)	0.	75.	1.
L4 Core Zn (G.C8)	0.	0.	1.
Sys20FC			
B1North Perim Zn (B.N22)	0.	137.	1.
B1Core Zn (B.C10)	0.	137.	1.
B1SSE Perim Zn (B.SSE11)	0.	137.	1.
B1SSE Perim Zn (B.SSE12)	0.	137.	1.
B1Core Zn (B.C13)	0.	137.	1.
B1SSE Perim Zn (B.SSE14)	0.	137.	1.
B1SE Perim Zn (B.SE20)	0.	137.	1.
Sys21FC			
B1Core Zn (B.C8)	0.	280.	1.
B1SSE Perim Zn (B.SSE7)	0.	90.	1.
Sys22CB			
Thermal Zone 84	0.	50.	1.
Sys24DfltClg			
L4 Core Zn (G.C3)	0.	0.	1.
TOTAL:	0.	3988.	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SV-C System Coil Sizing Summary for DOAS-Base WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-D Building HVAC Load Summary WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00454	29	16	54.F	53.F	2.063	-26.779	6	7	27.F	23.F	-463.835	15029.	102.302
FEB	0.04803	26	9	43.F	35.F	5.872	-17.167	10	7	37.F	36.F	-261.879	12342.	53.906
MAR	1.31367	29	11	72.F	52.F	35.592	-10.998	3	7	41.F	39.F	-230.106	12705.	47.245
APR	4.76279	18	11	55.F	44.F	62.547	-4.160	7	7	39.F	39.F	-180.416	12399.	44.134
MAY	11.50632	16	16	72.F	60.F	171.956	-1.429	12	7	48.F	44.F	-106.783	12484.	53.464
JUN	20.71748	20	11	72.F	61.F	245.289	-0.182	3	7	54.F	50.F	-19.271	12957.	59.985
JUL	45.49680	22	11	75.F	63.F	314.263	-0.001	8	7	57.F	55.F	-0.674	15672.	69.272
AUG	38.41657	11	16	81.F	64.F	276.627	-0.004	25	7	54.F	53.F	-1.728	14686.	64.517
SEP	21.63286	19	15	81.F	63.F	225.097	-0.274	29	7	48.F	45.F	-34.073	13063.	59.840
OCT	5.19955	7	17	77.F	55.F	119.094	-3.574	22	7	37.F	36.F	-98.397	12507.	49.597
NOV	0.23170	7	16	61.F	56.F	23.375	-11.533	28	7	37.F	34.F	-222.099	11450.	46.960
DEC	0.00044	16	17	52.F	48.F	0.319	-24.279	29	7	37.F	35.F	-320.079	14834.	63.294
TOTAL	149.331						-100.380						160129.	
MAX						314.263						-463.835		102.302

MAXIMUM DAILY INTEGRATED COOLING LOAD (DES DAY) 0.000 (KBTU)
MAXIMUM DAILY INTEGRATED COOLING LOAD (WTH FILE) 0.000 (KBTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.947	6	7	27.F	23.F	-21.672	503.	3.908
FEB	0.00000	28	24	40.F	38.F	0.000	-0.562	24	7	37.F	31.F	-13.215	411.	2.432
MAR	0.06054	29	11	72.F	52.F	6.875	-0.459	3	7	41.F	39.F	-12.986	433.	1.955
APR	0.22923	17	10	54.F	49.F	9.467	-0.269	7	7	39.F	39.F	-11.246	419.	1.918
MAY	0.58245	16	10	63.F	55.F	15.006	-0.124	10	7	45.F	43.F	-7.924	436.	2.394
JUN	1.07673	20	10	70.F	59.F	17.657	-0.027	3	7	54.F	50.F	-2.752	458.	2.625
JUL	2.29639	22	10	73.F	64.F	22.896	-0.000	8	7	57.F	55.F	-0.022	584.	3.126
AUG	2.22202	12	10	70.F	62.F	20.378	0.000	31	1	59.F	55.F	0.000	569.	2.848
SEP	1.44198	19	10	66.F	63.F	15.774	-0.019	27	7	45.F	43.F	-3.157	491.	2.448
OCT	0.23023	7	17	77.F	55.F	7.739	-0.177	22	7	37.F	36.F	-7.916	416.	1.827
NOV	0.00000	30	24	46.F	44.F	0.000	-0.405	28	7	37.F	34.F	-11.564	392.	1.824
DEC	0.00000	31	24	45.F	41.F	0.000	-0.835	29	7	37.F	35.F	-14.958	489.	2.655
TOTAL	8.140						-3.824						5602.	
MAX						22.896						-21.672		3.908

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	2.	0.061	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.005
APR	7.	0.229	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.019
MAY	18.	0.582	0.124	0.000	0.000	0.000	0.000	0.000	0.000	0.048
JUN	33.	1.077	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.088
JUL	71.	2.296	0.519	0.000	0.000	0.000	0.000	0.000	0.000	0.191
AUG	67.	2.222	0.489	0.000	0.000	0.000	0.000	0.000	0.000	0.181
SEP	44.	1.442	0.314	0.000	0.000	0.000	0.000	0.000	0.000	0.119
OCT	7.	0.230	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.019
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	248.	8.140	1.789	0.000	0.000	0.000	0.000	0.000	0.000	0.669

CSPF (WITH PARASITICS) = 3.31 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.55 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	43.	-0.947	0.312	0.000	-0.003	0.003	0.000	0.000	-0.027	0.121
FEB	24.	-0.562	0.177	0.000	0.000	0.000	0.000	0.000	-0.015	0.068
MAR	18.	-0.459	0.130	0.000	-0.000	0.000	0.000	0.000	-0.006	0.050
APR	10.	-0.269	0.073	0.000	0.000	0.000	0.000	0.000	-0.002	0.028
MAY	4.	-0.124	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.012
JUN	1.	-0.027	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUL	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	1.	-0.019	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002
OCT	7.	-0.177	0.048	0.000	-0.000	0.000	0.000	0.000	-0.002	0.018
NOV	15.	-0.405	0.114	0.000	-0.000	0.000	0.000	0.000	-0.005	0.044
DEC	35.	-0.835	0.263	0.000	0.000	0.000	0.000	0.000	-0.023	0.101
ANNUAL	158.	-3.824	1.161	0.000	-0.003	0.003	0.000	0.000	-0.079	0.447

HSPF (WITH PARASITICS) = 2.60 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.22 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.164	6	7	27.F	23.F	-8.493	130.	1.761
FEB	0.00000	28	24	40.F	38.F	0.000	-0.126	18	7	45.F	44.F	-5.313	114.	0.769
MAR	0.00000	31	1	48.F	44.F	0.000	-0.092	3	7	41.F	39.F	-4.700	119.	0.559
APR	0.00275	18	17	64.F	52.F	0.567	-0.043	7	7	39.F	39.F	-3.612	111.	0.621
MAY	0.06692	16	16	72.F	60.F	1.802	-0.016	5	7	46.F	45.F	-2.693	115.	0.485
JUN	0.20076	20	17	77.F	61.F	2.493	-0.001	2	7	54.F	53.F	-0.727	123.	0.565
JUL	0.50447	24	16	81.F	66.F	3.284	0.000	31	1	60.F	51.F	0.000	158.	0.677
AUG	0.58212	22	16	66.F	64.F	3.404	0.000	31	1	59.F	55.F	0.000	164.	0.657
SEP	0.43715	19	16	82.F	63.F	3.151	0.000	30	1	53.F	51.F	0.000	146.	0.648
OCT	0.17714	9	16	57.F	56.F	2.620	-0.003	27	7	50.F	49.F	-0.935	125.	0.560
NOV	0.01028	7	17	57.F	54.F	1.594	-0.043	24	7	46.F	45.F	-3.437	106.	0.504
DEC	0.00000	31	24	45.F	41.F	0.000	-0.123	29	7	37.F	35.F	-5.608	125.	0.938
TOTAL	1.982						-0.611						1536.	
MAX						3.404						-8.493		1.761

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	8.	0.067	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.008
JUN	25.	0.201	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.023
JUL	65.	0.504	0.113	0.000	0.000	0.000	0.000	0.000	0.000	0.059
AUG	74.	0.582	0.127	0.000	0.000	0.000	0.000	0.000	0.000	0.067
SEP	56.	0.437	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.051
OCT	22.	0.177	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.020
NOV	1.	0.010	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	252.	1.982	0.433	0.000	0.000	0.000	0.000	0.000	0.000	0.228

CSPF (WITH PARASITICS) = 3.00 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.57 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	23.	-0.164	0.052	0.000	-0.003	0.003	0.000	0.000	-0.005	0.022
FEB	17.	-0.126	0.040	0.000	0.000	0.000	0.000	0.000	-0.003	0.017
MAR	12.	-0.092	0.026	0.000	-0.000	0.000	0.000	0.000	-0.001	0.011
APR	5.	-0.043	0.012	0.000	0.000	0.000	0.000	0.000	-0.000	0.005
MAY	2.	-0.016	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUN	0.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	-0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	5.	-0.043	0.012	0.000	-0.000	0.000	0.000	0.000	-0.001	0.005
DEC	17.	-0.123	0.039	0.000	0.000	0.000	0.000	0.000	-0.003	0.016
ANNUAL	82.	-0.611	0.186	0.000	-0.003	0.003	0.000	0.000	-0.014	0.079

HSPF (WITH PARASITICS) = 2.53 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.17 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.221	6	7	27.F	23.F	-9.719	208.	1.685
FEB	0.01803	26	9	43.F	35.F	3.945	-0.134	10	7	37.F	36.F	-5.666	180.	1.016
MAR	0.21529	28	11	52.F	47.F	6.234	-0.111	3	7	41.F	39.F	-5.533	210.	1.187
APR	0.59219	17	10	54.F	49.F	8.873	-0.058	7	7	39.F	39.F	-4.582	240.	1.416
MAY	0.76765	16	10	63.F	55.F	12.593	-0.018	12	7	48.F	44.F	-2.848	246.	1.740
JUN	0.91518	20	11	72.F	61.F	10.766	-0.000	3	7	54.F	50.F	-0.097	255.	1.601
JUL	1.23324	10	11	77.F	62.F	11.261	0.000	31	1	60.F	51.F	0.000	294.	1.699
AUG	1.20137	12	10	70.F	62.F	13.745	0.000	31	1	59.F	55.F	0.000	284.	1.839
SEP	0.94517	22	10	64.F	59.F	11.431	-0.001	29	7	48.F	45.F	-0.536	258.	1.639
OCT	0.43198	7	10	57.F	50.F	7.573	-0.036	27	7	50.F	49.F	-2.415	225.	1.305
NOV	0.02597	7	15	61.F	56.F	3.125	-0.097	28	7	37.F	34.F	-4.879	170.	0.914
DEC	0.00000	31	24	45.F	41.F	0.000	-0.209	29	7	37.F	35.F	-6.807	212.	1.220
TOTAL	6.346						-0.885						2780.	
MAX						13.745						-9.719		1.839

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	1.	0.018	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.001
MAR	13.	0.215	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.018
APR	36.	0.592	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.049
MAY	46.	0.768	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.064
JUN	55.	0.915	0.195	0.000	0.000	0.000	0.000	0.000	0.000	0.077
JUL	76.	1.233	0.273	0.000	0.000	0.000	0.000	0.000	0.000	0.105
AUG	73.	1.201	0.261	0.000	0.000	0.000	0.000	0.000	0.000	0.101
SEP	57.	0.945	0.203	0.000	0.000	0.000	0.000	0.000	0.000	0.080
OCT	26.	0.432	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.036
NOV	1.	0.026	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	384.	6.346	1.369	0.000	0.000	0.000	0.000	0.000	0.000	0.533

CSPF (WITH PARASITICS) = 3.34 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.64 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	20.	-0.221	0.073	0.000	-0.000	0.000	0.000	0.000	-0.006	0.029
FEB	12.	-0.134	0.043	0.000	0.000	0.000	0.000	0.000	-0.004	0.017
MAR	9.	-0.111	0.032	0.000	-0.000	0.000	0.000	0.000	-0.002	0.013
APR	4.	-0.058	0.016	0.000	-0.000	0.000	0.000	0.000	-0.001	0.006
MAY	1.	-0.018	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUN	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	3.	-0.036	0.010	0.000	-0.000	0.000	0.000	0.000	-0.000	0.004
NOV	8.	-0.097	0.028	0.000	-0.000	0.000	0.000	0.000	-0.001	0.011
DEC	18.	-0.209	0.066	0.000	0.000	0.000	0.000	0.000	-0.006	0.026
ANNUAL	74.	-0.885	0.274	0.000	-0.000	0.000	0.000	0.000	-0.020	0.108

HSPF (WITH PARASITICS) = 2.54 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.15 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.315	6	7	27.F	23.F	-26.277	482.	5.874
FEB	0.00515	26	9	43.F	35.F	1.927	-0.748	10	7	37.F	36.F	-15.051	365.	2.804
MAR	0.07708	29	11	72.F	52.F	7.662	-0.564	3	7	41.F	39.F	-14.577	369.	2.150
APR	0.40241	17	10	54.F	49.F	12.395	-0.272	7	7	39.F	39.F	-12.532	369.	2.281
MAY	0.67824	16	11	64.F	57.F	16.042	-0.080	12	7	48.F	44.F	-7.831	364.	2.549
JUN	1.31987	20	10	70.F	59.F	26.475	-0.007	3	7	54.F	50.F	-2.015	411.	3.410
JUL	2.51982	11	10	70.F	61.F	26.478	0.000	31	1	60.F	51.F	0.000	541.	3.496
AUG	1.79465	8	10	66.F	60.F	25.705	0.000	31	1	59.F	55.F	0.000	461.	3.354
SEP	1.04282	2	10	61.F	53.F	17.388	-0.025	27	7	45.F	43.F	-3.973	389.	2.673
OCT	0.20215	7	10	57.F	50.F	10.500	-0.208	22	7	37.F	36.F	-8.520	345.	2.040
NOV	0.00000	30	24	46.F	44.F	0.000	-0.590	28	7	37.F	34.F	-13.605	327.	2.227
DEC	0.00000	31	24	45.F	41.F	0.000	-1.278	29	7	37.F	35.F	-17.795	476.	3.416
TOTAL	8.042						-5.087						4899.	
MAX						26.478						-26.277		5.874

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
MAR	3.	0.077	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.008
APR	16.	0.402	0.085	0.000	0.000	0.000	0.000	0.000	0.000	0.041
MAY	27.	0.678	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.069
JUN	53.	1.320	0.281	0.000	0.000	0.000	0.000	0.000	0.000	0.134
JUL	102.	2.520	0.559	0.000	0.000	0.000	0.000	0.000	0.000	0.260
AUG	72.	1.795	0.393	0.000	0.000	0.000	0.000	0.000	0.000	0.182
SEP	42.	1.043	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.106
OCT	8.	0.202	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.021
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	322.	8.042	1.751	0.000	0.000	0.000	0.000	0.000	0.000	0.821

CSPF (WITH PARASITICS) = 3.13 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.59 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	69.	-1.315	0.416	0.000	-0.017	0.017	0.000	0.000	-0.033	0.186
FEB	38.	-0.748	0.227	0.000	0.000	0.000	0.000	0.000	-0.016	0.101
MAR	26.	-0.564	0.158	0.000	-0.000	0.000	0.000	0.000	-0.006	0.070
APR	12.	-0.272	0.074	0.000	0.000	0.000	0.000	0.000	-0.002	0.033
MAY	3.	-0.080	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.009
JUN	0.	-0.007	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	1.	-0.025	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.003
OCT	9.	-0.208	0.056	0.000	-0.000	0.000	0.000	0.000	-0.002	0.025
NOV	27.	-0.590	0.161	0.000	-0.000	0.000	0.000	0.000	-0.005	0.071
DEC	64.	-1.278	0.390	0.000	-0.002	0.002	0.000	0.000	-0.030	0.172
ANNUAL	251.	-5.087	1.509	0.000	-0.020	0.020	0.000	0.000	-0.094	0.671

HSPF (WITH PARASITICS) = 2.58 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.28 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00356	29	16	54.F	53.F	2.063	-2.225	6	7	27.F	23.F	-40.496	841.	8.082
FEB	0.01068	21	16	57.F	53.F	3.445	-1.483	24	7	37.F	31.F	-25.324	673.	4.917
MAR	0.51449	21	11	54.F	47.F	15.755	-1.112	3	7	41.F	39.F	-23.915	704.	3.787
APR	1.63781	11	11	57.F	51.F	20.648	-0.511	7	7	39.F	39.F	-20.981	737.	3.799
MAY	3.05310	16	10	63.F	55.F	39.902	-0.165	10	7	45.F	43.F	-14.241	804.	5.303
JUN	4.26635	20	10	70.F	59.F	50.623	-0.028	3	7	54.F	50.F	-4.900	887.	6.210
JUL	6.98115	22	10	73.F	64.F	55.531	-0.001	8	7	57.F	55.F	-0.652	1160.	6.720
AUG	5.56232	8	10	66.F	60.F	45.318	0.000	31	1	59.F	55.F	0.000	1009.	5.753
SEP	3.15227	19	11	70.F	65.F	32.781	-0.076	27	7	45.F	43.F	-8.777	802.	4.940
OCT	1.30039	6	15	79.F	53.F	23.200	-0.445	22	7	37.F	36.F	-16.560	706.	4.092
NOV	0.10139	7	14	61.F	56.F	10.396	-1.062	28	7	37.F	34.F	-22.383	598.	3.743
DEC	0.00000	31	24	45.F	41.F	0.000	-2.062	26	7	34.F	34.F	-27.758	823.	5.159
TOTAL	26.584						-9.170						9744.	
MAX						55.531						-40.496		8.082

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.011	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
MAR	8.	0.514	0.110	0.000	0.000	0.000	0.000	0.000	0.000	0.039
APR	26.	1.638	0.347	0.000	0.000	0.000	0.000	0.000	0.000	0.124
MAY	48.	3.053	0.649	0.000	0.000	0.000	0.000	0.000	0.000	0.232
JUN	68.	4.266	0.911	0.000	0.000	0.000	0.000	0.000	0.000	0.325
JUL	112.	6.981	1.558	0.000	0.000	0.000	0.000	0.000	0.000	0.540
AUG	88.	5.562	1.218	0.000	0.000	0.000	0.000	0.000	0.000	0.421
SEP	50.	3.152	0.687	0.000	0.000	0.000	0.000	0.000	0.000	0.240
OCT	20.	1.300	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.097
NOV	2.	0.101	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.007
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	422.	26.584	5.784	0.000	0.000	0.000	0.000	0.000	0.000	2.025

CSPF (WITH PARASITICS) = 3.40 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.60 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	59.	-2.225	0.711	0.000	-0.012	0.012	0.000	0.000	-0.056	0.300
FEB	37.	-1.483	0.449	0.000	0.000	0.000	0.000	0.000	-0.031	0.188
MAR	26.	-1.112	0.308	0.000	-0.000	0.000	0.000	0.000	-0.011	0.129
APR	11.	-0.511	0.136	0.000	0.000	0.000	0.000	0.000	-0.003	0.057
MAY	3.	-0.165	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.017
JUN	1.	-0.028	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.003
JUL	0.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	2.	-0.076	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.008
OCT	10.	-0.445	0.120	0.000	-0.000	0.000	0.000	0.000	-0.003	0.049
NOV	24.	-1.062	0.290	0.000	-0.000	0.000	0.000	0.000	-0.009	0.121
DEC	52.	-2.062	0.633	0.000	-0.000	0.000	0.000	0.000	-0.051	0.263
ANNUAL	224.	-9.170	2.716	0.000	-0.012	0.012	0.000	0.000	-0.163	1.135

HSPF (WITH PARASITICS) = 2.63 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.31 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.919	6	7	27.F	23.F	-25.747	535.	6.078
FEB	0.01239	22	17	54.F	52.F	1.863	-0.185	4	7	30.F	30.F	-15.963	364.	3.521
MAR	0.32226	29	16	79.F	55.F	5.764	-0.008	3	7	41.F	39.F	-2.874	399.	1.503
APR	0.91841	21	11	63.F	54.F	6.178	0.000	30	1	52.F	48.F	0.000	446.	1.631
MAY	1.36850	16	10	63.F	55.F	9.180	0.000	31	1	56.F	51.F	0.000	486.	1.886
JUN	1.75307	30	12	70.F	64.F	10.912	0.000	30	1	61.F	55.F	0.000	508.	2.039
JUL	2.72064	23	17	90.F	67.F	13.942	0.000	31	1	60.F	51.F	0.000	611.	2.516
AUG	2.49943	11	16	81.F	64.F	13.256	0.000	31	1	59.F	55.F	0.000	585.	2.345
SEP	1.90951	22	10	64.F	59.F	11.021	0.000	30	1	53.F	51.F	0.000	523.	2.119
OCT	0.76830	8	16	66.F	61.F	6.533	0.000	31	1	45.F	43.F	0.000	439.	1.682
NOV	0.05342	7	16	61.F	56.F	3.311	-0.036	28	7	37.F	34.F	-10.328	351.	1.650
DEC	0.00000	31	24	45.F	41.F	0.000	-0.467	29	7	37.F	35.F	-17.319	450.	3.609
TOTAL	12.326						-1.615						5697.	
MAX						13.942						-25.747		6.078

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.012	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001
MAR	12.	0.322	0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.024
APR	35.	0.918	0.196	0.000	0.000	0.000	0.000	0.000	0.000	0.069
MAY	53.	1.368	0.291	0.000	0.000	0.000	0.000	0.000	0.000	0.102
JUN	68.	1.753	0.374	0.000	0.000	0.000	0.000	0.000	0.000	0.130
JUL	105.	2.721	0.606	0.000	0.000	0.000	0.000	0.000	0.000	0.203
AUG	96.	2.499	0.546	0.000	0.000	0.000	0.000	0.000	0.000	0.185
SEP	74.	1.910	0.413	0.000	0.000	0.000	0.000	0.000	0.000	0.142
OCT	29.	0.768	0.164	0.000	0.000	0.000	0.000	0.000	0.000	0.057
NOV	2.	0.053	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.004
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	475.	12.326	2.672	0.000	0.000	0.000	0.000	0.000	0.000	0.916

CSPF (WITH PARASITICS) = 3.44 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.61 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	58.	-0.919	0.267	0.000	-0.162	0.162	0.000	0.000	-0.029	0.119
FEB	13.	-0.185	0.060	0.000	-0.009	0.009	0.000	0.000	-0.008	0.026
MAR	1.	-0.008	0.002	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	2.	-0.036	0.011	0.000	-0.000	0.000	0.000	0.000	-0.001	0.005
DEC	32.	-0.467	0.149	0.000	-0.027	0.027	0.000	0.000	-0.019	0.064
ANNUAL	105.	-1.615	0.490	0.000	-0.198	0.198	0.000	0.000	-0.056	0.215

HSPF (WITH PARASITICS) = 2.18 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 2.55 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.745	6	7	27.F	23.F	-12.649	426.	2.523
FEB	0.00000	28	24	40.F	38.F	0.000	-0.446	4	7	30.F	30.F	-7.110	348.	1.377
MAR	0.00589	29	16	79.F	55.F	1.943	-0.219	3	7	41.F	39.F	-5.757	348.	1.247
APR	0.00000	30	1	52.F	48.F	0.000	-0.041	7	7	39.F	39.F	-4.049	323.	0.947
MAY	0.06325	16	16	72.F	60.F	4.438	-0.012	6	7	43.F	41.F	-1.993	328.	1.319
JUN	0.27165	30	15	75.F	65.F	8.135	0.000	30	1	61.F	55.F	0.000	334.	1.647
JUL	1.16023	22	15	86.F	65.F	11.235	0.000	31	1	60.F	51.F	0.000	427.	2.074
AUG	1.01533	11	15	79.F	64.F	10.832	0.000	31	1	59.F	55.F	0.000	409.	1.928
SEP	0.43547	22	14	81.F	62.F	8.224	0.000	30	1	53.F	51.F	0.000	349.	1.712
OCT	0.02855	7	17	77.F	55.F	4.303	-0.020	22	7	37.F	36.F	-2.534	329.	1.332
NOV	0.00000	30	24	46.F	44.F	0.000	-0.205	28	7	37.F	34.F	-6.212	321.	1.097
DEC	0.00000	31	24	45.F	41.F	0.000	-0.636	29	7	37.F	35.F	-8.277	410.	1.573
TOTAL	2.980						-2.326						4354.	
MAX						11.235						-12.649		2.523

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	3.	0.063	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.004
JUN	13.	0.272	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.019
JUL	59.	1.160	0.269	0.000	0.000	0.000	0.000	0.000	0.000	0.084
AUG	51.	1.015	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.072
SEP	22.	0.435	0.098	0.000	0.000	0.000	0.000	0.000	0.000	0.031
OCT	1.	0.029	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.002
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	150.	2.980	0.676	0.000	0.000	0.000	0.000	0.000	0.000	0.213

CSPF (WITH PARASITICS) = 3.35 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.41 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	67.	-0.745	0.246	0.000	-0.005	0.005	0.000	0.000	-0.022	0.100
FEB	37.	-0.446	0.138	0.000	0.000	0.000	0.000	0.000	-0.010	0.055
MAR	17.	-0.219	0.063	0.000	-0.000	0.000	0.000	0.000	-0.003	0.025
APR	3.	-0.041	0.012	0.000	-0.000	0.000	0.000	0.000	-0.001	0.005
MAY	1.	-0.012	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	2.	-0.020	0.006	0.000	-0.000	0.000	0.000	0.000	-0.000	0.002
NOV	16.	-0.205	0.058	0.000	-0.000	0.000	0.000	0.000	-0.002	0.023
DEC	54.	-0.636	0.200	0.000	-0.000	0.000	0.000	0.000	-0.018	0.080
ANNUAL	196.	-2.326	0.726	0.000	-0.005	0.005	0.000	0.000	-0.056	0.293

HSPF (WITH PARASITICS) = 2.51 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.11 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.148	6	7	27.F	23.F	-5.220	183.	1.051
FEB	0.00000	28	24	40.F	38.F	0.000	-0.030	10	7	37.F	36.F	-2.110	149.	0.589
MAR	0.03503	28	11	52.F	47.F	1.533	-0.002	3	7	41.F	39.F	-0.802	164.	0.711
APR	0.28123	11	10	54.F	50.F	3.094	0.000	30	1	52.F	48.F	0.000	187.	0.835
MAY	0.48836	16	10	63.F	55.F	4.875	0.000	31	1	56.F	51.F	0.000	200.	0.977
JUN	0.66739	20	11	72.F	61.F	5.817	0.000	30	1	61.F	55.F	0.000	213.	1.062
JUL	1.08483	22	10	73.F	64.F	6.686	0.000	31	1	60.F	51.F	0.000	256.	1.151
AUG	0.93498	12	10	70.F	62.F	6.266	0.000	31	1	59.F	55.F	0.000	237.	1.092
SEP	0.66317	22	10	64.F	59.F	5.376	0.000	30	1	53.F	51.F	0.000	213.	1.017
OCT	0.17498	7	17	77.F	55.F	2.958	0.000	31	1	45.F	43.F	0.000	180.	0.848
NOV	0.00000	30	24	46.F	44.F	0.000	-0.010	28	7	37.F	34.F	-1.749	143.	0.589
DEC	0.00000	31	24	45.F	41.F	0.000	-0.110	29	7	37.F	35.F	-3.455	182.	0.778
TOTAL	4.330						-0.301						2308.	
MAX						6.686						-5.220		1.151

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	3.	0.035	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.002
APR	22.	0.281	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.017
MAY	38.	0.488	0.104	0.000	0.000	0.000	0.000	0.000	0.000	0.029
JUN	52.	0.667	0.143	0.000	0.000	0.000	0.000	0.000	0.000	0.040
JUL	86.	1.085	0.242	0.000	0.000	0.000	0.000	0.000	0.000	0.066
AUG	73.	0.935	0.204	0.000	0.000	0.000	0.000	0.000	0.000	0.056
SEP	52.	0.663	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.040
OCT	13.	0.175	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.010
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	338.	4.330	0.943	0.000	0.000	0.000	0.000	0.000	0.000	0.261

CSPF (WITH PARASITICS) = 3.60 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.59 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	28.	-0.148	0.052	0.000	-0.000	0.000	0.000	0.000	-0.005	0.023
FEB	5.	-0.030	0.010	0.000	0.000	0.000	0.000	0.000	-0.001	0.004
MAR	0.	-0.002	0.001	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	2.	-0.010	0.003	0.000	-0.000	0.000	0.000	0.000	-0.000	0.001
DEC	19.	-0.110	0.036	0.000	0.000	0.000	0.000	0.000	-0.004	0.015
ANNUAL	54.	-0.301	0.102	0.000	-0.000	0.000	0.000	0.000	-0.010	0.044

HSPF (WITH PARASITICS) = 2.29 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 2.85 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.310	6	7	27.F	23.F	-4.202	110.	1.044
FEB	0.00000	28	24	40.F	38.F	0.000	-0.219	18	7	45.F	44.F	-2.248	84.	0.527
MAR	0.00000	31	1	48.F	44.F	0.000	-0.118	3	7	41.F	39.F	-2.070	72.	0.377
APR	0.00000	30	1	52.F	48.F	0.000	-0.025	7	7	39.F	39.F	-1.556	59.	0.357
MAY	0.00498	16	15	72.F	62.F	0.908	-0.006	12	7	48.F	44.F	-0.923	55.	0.269
JUN	0.02901	20	15	75.F	62.F	1.964	0.000	30	1	61.F	55.F	0.000	55.	0.358
JUL	0.18874	22	15	86.F	65.F	2.918	0.000	31	1	60.F	51.F	0.000	71.	0.469
AUG	0.14344	12	15	81.F	63.F	2.763	0.000	31	1	59.F	55.F	0.000	65.	0.440
SEP	0.04522	19	16	82.F	63.F	1.722	0.000	30	1	53.F	51.F	0.000	57.	0.350
OCT	0.00102	7	17	77.F	55.F	0.522	-0.018	22	7	37.F	36.F	-1.032	58.	0.254
NOV	0.00000	30	24	46.F	44.F	0.000	-0.133	28	7	37.F	34.F	-2.048	67.	0.424
DEC	0.00000	31	24	45.F	41.F	0.000	-0.296	29	7	37.F	35.F	-2.753	105.	0.602
TOTAL	0.412						-1.125						857.	
MAX						2.918						-4.202		1.044

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	0.	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	2.	0.029	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUL	12.	0.189	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.011
AUG	9.	0.143	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.008
SEP	3.	0.045	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.003
OCT	0.	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	26.	0.412	0.096	0.000	0.000	0.000	0.000	0.000	0.000	0.023

CSPF (WITH PARASITICS) = 3.47 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.31 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	92.	-0.310	0.098	0.000	-0.002	0.002	0.000	0.000	-0.007	0.086
FEB	59.	-0.219	0.063	0.000	0.000	0.000	0.000	0.000	-0.003	0.055
MAR	30.	-0.118	0.032	0.000	-0.000	0.000	0.000	0.000	-0.001	0.028
APR	6.	-0.025	0.007	0.000	0.000	0.000	0.000	0.000	-0.000	0.006
MAY	2.	-0.006	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	5.	-0.018	0.005	0.000	-0.000	0.000	0.000	0.000	-0.000	0.004
NOV	34.	-0.133	0.036	0.000	-0.000	0.000	0.000	0.000	-0.001	0.031
DEC	83.	-0.296	0.089	0.000	-0.000	0.000	0.000	0.000	-0.006	0.077
ANNUAL	310.	-1.125	0.331	0.000	-0.002	0.002	0.000	0.000	-0.019	0.290

HSPF (WITH PARASITICS) = 2.24 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.33 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.251	6	7	27.F	23.F	-8.345	324.	1.794
FEB	0.00000	28	24	40.F	38.F	0.000	-0.066	10	7	37.F	36.F	-3.824	268.	1.049
MAR	0.00926	28	16	61.F	50.F	1.308	-0.008	3	7	41.F	39.F	-2.189	288.	1.159
APR	0.32854	18	11	55.F	44.F	4.425	-0.000	7	7	39.F	39.F	-0.203	321.	1.419
MAY	0.79260	16	10	63.F	55.F	8.141	0.000	31	1	56.F	51.F	0.000	353.	1.730
JUN	1.14561	20	10	70.F	59.F	9.919	0.000	30	1	61.F	55.F	0.000	379.	1.885
JUL	1.92638	22	10	73.F	64.F	11.380	0.000	31	1	60.F	51.F	0.000	463.	2.041
AUG	1.57317	12	11	72.F	63.F	9.849	0.000	31	1	59.F	55.F	0.000	421.	1.889
SEP	1.04242	22	10	64.F	59.F	7.625	0.000	30	1	53.F	51.F	0.000	371.	1.729
OCT	0.21626	7	17	77.F	55.F	4.616	0.000	31	1	45.F	43.F	0.000	313.	1.465
NOV	0.00000	30	24	46.F	44.F	0.000	-0.031	28	7	37.F	34.F	-3.310	257.	1.049
DEC	0.00000	31	24	45.F	41.F	0.000	-0.202	29	7	37.F	35.F	-5.812	324.	1.367
TOTAL	7.034						-0.558						4082.	
MAX						11.380						-8.345		2.041

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.009	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
APR	17.	0.329	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.024
MAY	41.	0.793	0.168	0.000	0.000	0.000	0.000	0.000	0.000	0.058
JUN	59.	1.146	0.245	0.000	0.000	0.000	0.000	0.000	0.000	0.084
JUL	101.	1.926	0.428	0.000	0.000	0.000	0.000	0.000	0.000	0.144
AUG	81.	1.573	0.344	0.000	0.000	0.000	0.000	0.000	0.000	0.116
SEP	54.	1.042	0.225	0.000	0.000	0.000	0.000	0.000	0.000	0.077
OCT	11.	0.216	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.016
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	365.	7.034	1.528	0.000	0.000	0.000	0.000	0.000	0.000	0.519

CSPF (WITH PARASITICS) = 3.44 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.60 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	25.	-0.251	0.088	0.000	0.000	0.000	0.000	0.000	-0.008	0.037
FEB	6.	-0.066	0.021	0.000	0.000	0.000	0.000	0.000	-0.002	0.009
MAR	1.	-0.008	0.002	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
APR	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	3.	-0.031	0.009	0.000	-0.000	0.000	0.000	0.000	-0.001	0.004
DEC	18.	-0.202	0.066	0.000	0.000	0.000	0.000	0.000	-0.006	0.027
ANNUAL	53.	-0.558	0.187	0.000	-0.000	0.000	0.000	0.000	-0.017	0.079

HSPF (WITH PARASITICS) = 2.33 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 2.89 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-2.071	6	7	27.F	23.F	-27.075	781.	6.142
FEB	0.00000	28	24	40.F	38.F	0.000	-1.232	10	7	37.F	36.F	-14.380	597.	2.736
MAR	0.00000	31	1	48.F	44.F	0.000	-0.622	3	7	41.F	39.F	-12.658	563.	2.592
APR	0.01577	18	17	64.F	52.F	2.074	-0.066	7	7	39.F	39.F	-9.461	511.	1.965
MAY	0.76503	16	15	72.F	62.F	13.976	-0.004	12	7	48.F	44.F	-3.027	553.	2.969
JUN	1.57044	20	10	70.F	59.F	18.052	0.000	30	1	61.F	55.F	0.000	613.	3.301
JUL	3.64368	22	10	73.F	64.F	22.007	0.000	31	1	60.F	51.F	0.000	819.	3.899
AUG	2.71578	11	15	79.F	64.F	20.572	0.000	31	1	59.F	55.F	0.000	720.	3.662
SEP	1.09279	22	14	81.F	62.F	13.345	0.000	30	1	53.F	51.F	0.000	576.	3.032
OCT	0.03392	7	17	77.F	55.F	5.716	-0.157	22	7	37.F	36.F	-7.064	526.	2.302
NOV	0.00000	30	24	46.F	44.F	0.000	-0.993	28	7	37.F	34.F	-13.870	544.	2.749
DEC	0.00000	31	24	45.F	41.F	0.000	-2.080	29	7	37.F	35.F	-18.500	777.	3.627
TOTAL	9.837						-7.226						7581.	
MAX						22.007						-27.075		6.142

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.016	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001
MAY	20.	0.765	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.053
JUN	42.	1.570	0.336	0.000	0.000	0.000	0.000	0.000	0.000	0.108
JUL	99.	3.644	0.818	0.000	0.000	0.000	0.000	0.000	0.000	0.257
AUG	72.	2.716	0.597	0.000	0.000	0.000	0.000	0.000	0.000	0.188
SEP	29.	1.093	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.076
OCT	1.	0.034	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.002
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	263.	9.837	2.166	0.000	0.000	0.000	0.000	0.000	0.000	0.685

CSPF (WITH PARASITICS) = 3.45 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.54 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	105.	-2.071	0.645	0.000	-0.024	0.024	0.000	0.000	-0.049	0.289
FEB	58.	-1.232	0.358	0.000	0.000	0.000	0.000	0.000	-0.019	0.159
MAR	28.	-0.622	0.172	0.000	-0.000	0.000	0.000	0.000	-0.005	0.076
APR	3.	-0.066	0.019	0.000	0.000	0.000	0.000	0.000	-0.001	0.008
MAY	0.	-0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	7.	-0.157	0.043	0.000	-0.000	0.000	0.000	0.000	-0.001	0.019
NOV	43.	-0.993	0.264	0.000	-0.000	0.000	0.000	0.000	-0.005	0.117
DEC	99.	-2.080	0.617	0.000	-0.001	0.001	0.000	0.000	-0.042	0.273
ANNUAL	343.	-7.226	2.117	0.000	-0.026	0.026	0.000	0.000	-0.123	0.941

HSPF (WITH PARASITICS) = 2.62 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.33 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.057	6	7	27.F	23.F	-16.546	527.	3.588
FEB	0.00000	28	24	40.F	38.F	0.000	-0.599	4	7	30.F	30.F	-9.412	416.	1.895
MAR	0.01945	29	16	79.F	55.F	4.139	-0.303	3	7	41.F	39.F	-7.437	412.	1.557
APR	0.00258	21	16	63.F	53.F	0.809	-0.044	7	7	39.F	39.F	-5.425	374.	1.186
MAY	0.24557	16	16	72.F	60.F	7.343	-0.009	12	7	48.F	44.F	-2.094	395.	1.783
JUN	0.59275	30	15	75.F	65.F	10.685	0.000	30	1	61.F	55.F	0.000	414.	2.110
JUL	1.82148	23	17	90.F	67.F	14.329	0.000	31	1	60.F	51.F	0.000	548.	2.683
AUG	1.58505	11	16	81.F	64.F	13.676	0.000	31	1	59.F	55.F	0.000	519.	2.481
SEP	0.84769	22	14	81.F	62.F	11.548	0.000	30	1	53.F	51.F	0.000	439.	2.273
OCT	0.05041	7	17	77.F	55.F	6.074	-0.060	22	7	37.F	36.F	-4.565	387.	1.704
NOV	0.00000	30	24	46.F	44.F	0.000	-0.384	28	7	37.F	34.F	-8.656	389.	1.496
DEC	0.00000	31	24	45.F	41.F	0.000	-0.998	29	7	37.F	35.F	-10.829	514.	2.015
TOTAL	5.165						-3.455						5333.	
MAX						14.329						-16.546		3.588

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	1.	0.019	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.002
APR	0.	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	12.	0.246	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.023
JUN	29.	0.593	0.128	0.000	0.000	0.000	0.000	0.000	0.000	0.056
JUL	92.	1.821	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.177
AUG	78.	1.585	0.353	0.000	0.000	0.000	0.000	0.000	0.000	0.151
SEP	42.	0.848	0.188	0.000	0.000	0.000	0.000	0.000	0.000	0.082
OCT	3.	0.050	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.005
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	257.	5.165	1.155	0.000	0.000	0.000	0.000	0.000	0.000	0.496

CSPF (WITH PARASITICS) = 3.13 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.47 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	81.	-1.057	0.341	0.000	-0.012	0.012	0.000	0.000	-0.030	0.165
FEB	43.	-0.599	0.183	0.000	0.000	0.000	0.000	0.000	-0.013	0.088
MAR	20.	-0.303	0.086	0.000	-0.000	0.000	0.000	0.000	-0.004	0.041
APR	3.	-0.044	0.013	0.000	-0.000	0.000	0.000	0.000	-0.001	0.006
MAY	1.	-0.009	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	4.	-0.060	0.017	0.000	-0.000	0.000	0.000	0.000	-0.001	0.008
NOV	25.	-0.384	0.106	0.000	-0.000	0.000	0.000	0.000	-0.004	0.051
DEC	72.	-0.998	0.307	0.000	-0.000	0.000	0.000	0.000	-0.025	0.146
ANNUAL	249.	-3.455	1.058	0.000	-0.012	0.012	0.000	0.000	-0.077	0.507

HSPF (WITH PARASITICS) = 2.47 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.17 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.767	6	7	27.F	23.F	-12.585	426.	2.573
FEB	0.00000	28	24	40.F	38.F	0.000	-0.501	4	7	30.F	30.F	-7.374	352.	1.438
MAR	0.00608	29	15	79.F	55.F	2.181	-0.282	3	7	41.F	39.F	-6.213	353.	1.312
APR	0.00000	30	1	52.F	48.F	0.000	-0.071	7	7	39.F	39.F	-4.681	324.	0.946
MAY	0.06089	16	15	72.F	62.F	4.949	-0.021	6	7	43.F	41.F	-2.652	326.	1.374
JUN	0.24932	30	15	75.F	65.F	8.014	0.000	30	1	61.F	55.F	0.000	330.	1.657
JUL	1.08427	23	17	90.F	67.F	10.876	0.000	31	1	60.F	51.F	0.000	420.	2.086
AUG	0.95914	11	15	79.F	64.F	10.307	0.000	31	1	59.F	55.F	0.000	404.	1.923
SEP	0.43966	19	15	81.F	63.F	8.433	0.000	30	1	53.F	51.F	0.000	348.	1.758
OCT	0.02413	7	17	77.F	55.F	3.950	-0.049	22	7	37.F	36.F	-3.575	329.	1.311
NOV	0.00000	30	24	46.F	44.F	0.000	-0.274	28	7	37.F	34.F	-6.587	326.	1.166
DEC	0.00000	31	24	45.F	41.F	0.000	-0.686	29	7	37.F	35.F	-8.298	414.	1.596
TOTAL	2.823						-2.652						4351.	
MAX						10.876						-12.585		2.573

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	3.	0.061	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.005
JUN	14.	0.249	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.020
JUL	64.	1.084	0.252	0.000	0.000	0.000	0.000	0.000	0.000	0.089
AUG	55.	0.959	0.215	0.000	0.000	0.000	0.000	0.000	0.000	0.077
SEP	26.	0.440	0.099	0.000	0.000	0.000	0.000	0.000	0.000	0.036
OCT	1.	0.024	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.002
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	164.	2.823	0.641	0.000	0.000	0.000	0.000	0.000	0.000	0.228

CSPF (WITH PARASITICS) = 3.25 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.40 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	72.	-0.767	0.251	0.000	-0.006	0.006	0.000	0.000	-0.022	0.105
FEB	43.	-0.501	0.153	0.000	0.000	0.000	0.000	0.000	-0.011	0.064
MAR	23.	-0.282	0.080	0.000	-0.000	0.000	0.000	0.000	-0.003	0.033
APR	6.	-0.071	0.020	0.000	-0.000	0.000	0.000	0.000	-0.001	0.008
MAY	2.	-0.021	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	4.	-0.049	0.014	0.000	-0.000	0.000	0.000	0.000	-0.001	0.006
NOV	22.	-0.274	0.076	0.000	-0.000	0.000	0.000	0.000	-0.003	0.032
DEC	60.	-0.686	0.214	0.000	-0.000	0.000	0.000	0.000	-0.018	0.088
ANNUAL	231.	-2.652	0.814	0.000	-0.006	0.006	0.000	0.000	-0.059	0.338

HSPF (WITH PARASITICS) = 2.54 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.17 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.337	6	7	27.F	23.F	-7.850	210.	1.745
FEB	0.00000	28	24	40.F	38.F	0.000	-0.160	3	7	46.F	43.F	-3.857	166.	0.709
MAR	0.00000	31	1	48.F	44.F	0.000	-0.053	3	7	41.F	39.F	-3.170	168.	0.663
APR	0.05820	18	17	64.F	52.F	1.716	-0.002	7	7	39.F	39.F	-1.474	170.	0.729
MAY	0.30194	16	16	72.F	60.F	3.874	-0.000	12	7	48.F	44.F	-0.099	185.	0.903
JUN	0.55371	20	11	72.F	61.F	5.124	0.000	30	1	61.F	55.F	0.000	203.	1.004
JUL	1.02825	22	11	75.F	63.F	6.040	0.000	31	1	60.F	51.F	0.000	252.	1.129
AUG	0.87159	12	11	72.F	63.F	5.614	0.000	31	1	59.F	55.F	0.000	232.	1.073
SEP	0.53093	22	10	64.F	59.F	4.426	0.000	30	1	53.F	51.F	0.000	202.	0.973
OCT	0.06764	7	17	77.F	55.F	2.331	-0.002	22	7	37.F	36.F	-0.465	172.	0.792
NOV	0.00000	30	24	46.F	44.F	0.000	-0.106	24	7	46.F	45.F	-3.621	154.	0.719
DEC	0.00000	31	24	45.F	41.F	0.000	-0.329	29	7	37.F	35.F	-5.016	210.	0.952
TOTAL	3.412						-0.990						2323.	
MAX						6.040						-7.850		1.745

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	4.	0.058	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.003
MAY	23.	0.302	0.064	0.000	0.000	0.000	0.000	0.000	0.000	0.018
JUN	42.	0.554	0.119	0.000	0.000	0.000	0.000	0.000	0.000	0.033
JUL	79.	1.028	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.062
AUG	66.	0.872	0.191	0.000	0.000	0.000	0.000	0.000	0.000	0.051
SEP	40.	0.531	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.031
OCT	5.	0.068	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.004
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	259.	3.412	0.748	0.000	0.000	0.000	0.000	0.000	0.000	0.202

CSPF (WITH PARASITICS) = 3.59 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.56 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	58.	-0.337	0.110	0.000	-0.004	0.004	0.000	0.000	-0.010	0.048
FEB	25.	-0.160	0.049	0.000	0.000	0.000	0.000	0.000	-0.003	0.021
MAR	8.	-0.053	0.015	0.000	0.000	0.000	0.000	0.000	-0.001	0.007
APR	0.	-0.002	0.001	0.000	-0.000	0.000	0.000	0.000	-0.000	0.000
MAY	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	-0.002	0.001	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
NOV	15.	-0.106	0.029	0.000	-0.000	0.000	0.000	0.000	-0.001	0.012
DEC	52.	-0.329	0.101	0.000	-0.000	0.000	0.000	0.000	-0.008	0.043
ANNUAL	160.	-0.990	0.306	0.000	-0.004	0.004	0.000	0.000	-0.023	0.130

HSPF (WITH PARASITICS) = 2.50 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.14 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.489	6	7	27.F	23.F	-7.573	149.	1.994
FEB	0.00000	28	24	40.F	38.F	0.000	-0.304	4	7	30.F	30.F	-4.452	99.	1.164
MAR	0.00000	31	1	48.F	44.F	0.000	-0.158	3	7	41.F	39.F	-3.567	78.	0.674
APR	0.00021	18	17	64.F	52.F	0.115	-0.030	7	7	39.F	39.F	-3.025	60.	0.679
MAY	0.03543	16	15	72.F	62.F	1.694	-0.009	12	7	48.F	44.F	-1.554	58.	0.334
JUN	0.09936	20	15	75.F	62.F	1.877	0.000	30	1	61.F	55.F	0.000	61.	0.355
JUL	0.28276	22	15	86.F	65.F	2.377	0.000	31	1	60.F	51.F	0.000	79.	0.418
AUG	0.24760	12	15	81.F	63.F	2.287	0.000	31	1	59.F	55.F	0.000	74.	0.402
SEP	0.12672	19	15	81.F	63.F	1.823	0.000	30	1	53.F	51.F	0.000	63.	0.358
OCT	0.00036	8	17	64.F	60.F	0.191	-0.030	22	7	37.F	36.F	-2.104	60.	0.492
NOV	0.00000	30	24	46.F	44.F	0.000	-0.193	28	7	37.F	34.F	-4.023	76.	0.819
DEC	0.00000	31	24	45.F	41.F	0.000	-0.424	29	7	37.F	35.F	-5.125	130.	1.260
TOTAL	0.792						-1.636						987.	
MAX						2.377						-7.573		1.994

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	2.	0.035	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUN	5.	0.099	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.006
JUL	15.	0.283	0.065	0.000	0.000	0.000	0.000	0.000	0.000	0.017
AUG	13.	0.248	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.014
SEP	7.	0.127	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.007
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	41.	0.792	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.046

CSPF (WITH PARASITICS) = 3.52 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.43 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	116.	-0.489	0.146	0.000	-0.037	0.037	0.000	0.000	-0.012	0.131
FEB	69.	-0.304	0.088	0.000	-0.004	0.004	0.000	0.000	-0.005	0.078
MAR	34.	-0.158	0.044	0.000	0.000	0.000	0.000	0.000	-0.002	0.039
APR	7.	-0.030	0.008	0.000	0.000	0.000	0.000	0.000	-0.000	0.007
MAY	2.	-0.009	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	6.	-0.030	0.008	0.000	-0.000	0.000	0.000	0.000	-0.000	0.007
NOV	41.	-0.193	0.052	0.000	-0.000	0.000	0.000	0.000	-0.002	0.046
DEC	99.	-0.424	0.127	0.000	-0.007	0.007	0.000	0.000	-0.010	0.112
ANNUAL	374.	-1.636	0.475	0.000	-0.048	0.048	0.000	0.000	-0.031	0.422

HSPF (WITH PARASITICS) = 2.19 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.16 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.582	6	7	27.F	23.F	-12.883	370.	2.790
FEB	0.00000	28	24	40.F	38.F	0.000	-0.276	18	7	45.F	44.F	-6.626	294.	1.258
MAR	0.00000	31	1	48.F	44.F	0.000	-0.104	3	7	41.F	39.F	-5.403	299.	1.184
APR	0.06836	18	17	64.F	52.F	2.731	-0.006	7	7	39.F	39.F	-2.950	300.	1.270
MAY	0.51380	16	10	63.F	55.F	7.117	-0.000	12	7	48.F	44.F	-0.499	328.	1.625
JUN	0.97327	20	11	72.F	61.F	9.222	0.000	30	1	61.F	55.F	0.000	362.	1.811
JUL	1.87435	22	11	75.F	63.F	10.771	0.000	31	1	60.F	51.F	0.000	454.	2.001
AUG	1.54223	12	11	72.F	63.F	9.952	0.000	31	1	59.F	55.F	0.000	414.	1.909
SEP	0.87028	19	15	81.F	63.F	7.138	0.000	30	1	53.F	51.F	0.000	355.	1.703
OCT	0.09204	7	17	77.F	55.F	3.887	-0.008	27	7	50.F	49.F	-1.388	304.	1.389
NOV	0.00000	30	24	46.F	44.F	0.000	-0.199	24	7	46.F	45.F	-6.178	276.	1.284
DEC	0.00000	31	24	45.F	41.F	0.000	-0.561	29	7	37.F	35.F	-8.520	370.	1.690
TOTAL	5.934						-1.737						4127.	
MAX						10.771						-12.883		2.790

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	3.	0.068	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.004
MAY	25.	0.514	0.109	0.000	0.000	0.000	0.000	0.000	0.000	0.033
JUN	47.	0.973	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.062
JUL	91.	1.874	0.418	0.000	0.000	0.000	0.000	0.000	0.000	0.122
AUG	74.	1.542	0.337	0.000	0.000	0.000	0.000	0.000	0.000	0.099
SEP	42.	0.870	0.189	0.000	0.000	0.000	0.000	0.000	0.000	0.056
OCT	4.	0.092	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.006
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	286.	5.934	1.297	0.000	0.000	0.000	0.000	0.000	0.000	0.383

CSPF (WITH PARASITICS) = 3.53 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.58 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	57.	-0.582	0.191	0.000	-0.005	0.005	0.000	0.000	-0.017	0.081
FEB	25.	-0.276	0.083	0.000	0.000	0.000	0.000	0.000	-0.005	0.035
MAR	9.	-0.104	0.030	0.000	-0.000	0.000	0.000	0.000	-0.001	0.013
APR	1.	-0.006	0.002	0.000	-0.000	0.000	0.000	0.000	-0.000	0.001
MAY	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	1.	-0.008	0.002	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
NOV	16.	-0.199	0.055	0.000	-0.000	0.000	0.000	0.000	-0.002	0.023
DEC	51.	-0.561	0.172	0.000	-0.000	0.000	0.000	0.000	-0.013	0.071
ANNUAL	159.	-1.737	0.535	0.000	-0.005	0.005	0.000	0.000	-0.039	0.224

HSPF (WITH PARASITICS) = 2.52 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.15 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-2.618	6	7	27.F	23.F	-33.215	873.	8.183
FEB	0.00000	28	24	40.F	38.F	0.000	-1.781	18	7	45.F	44.F	-17.397	672.	3.392
MAR	0.00000	31	1	48.F	44.F	0.000	-1.080	3	7	41.F	39.F	-15.710	621.	3.018
APR	0.00000	30	1	52.F	48.F	0.000	-0.233	7	7	39.F	39.F	-12.356	530.	2.429
MAY	0.36170	16	15	72.F	62.F	12.650	-0.044	12	7	48.F	44.F	-7.835	524.	2.836
JUN	1.07163	20	15	75.F	62.F	15.821	0.000	30	1	61.F	55.F	0.000	571.	3.143
JUL	3.07885	22	15	86.F	65.F	20.308	0.000	31	1	60.F	51.F	0.000	767.	3.802
AUG	2.23725	11	15	79.F	64.F	19.131	0.000	31	1	59.F	55.F	0.000	676.	3.503
SEP	0.80413	19	15	81.F	63.F	13.613	-0.005	29	7	48.F	45.F	-2.295	551.	3.028
OCT	0.00490	7	17	77.F	55.F	3.131	-0.388	22	7	37.F	36.F	-9.485	550.	2.117
NOV	0.00000	30	24	46.F	44.F	0.000	-1.507	24	7	46.F	45.F	-16.865	608.	3.105
DEC	0.00000	31	24	45.F	41.F	0.000	-2.664	29	7	37.F	35.F	-22.248	865.	4.722
TOTAL	7.558						-10.320						7806.	
MAX						20.308						-33.215		8.183

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	8.	0.362	0.078	0.000	0.000	0.000	0.000	0.000	0.000	0.023
JUN	24.	1.072	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.068
JUL	71.	3.079	0.697	0.000	0.000	0.000	0.000	0.000	0.000	0.200
AUG	50.	2.237	0.494	0.000	0.000	0.000	0.000	0.000	0.000	0.143
SEP	18.	0.804	0.178	0.000	0.000	0.000	0.000	0.000	0.000	0.052
OCT	0.	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	172.	7.558	1.678	0.000	0.000	0.000	0.000	0.000	0.000	0.486

CSPF (WITH PARASITICS) = 3.49 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.50 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	136.	-2.618	0.784	0.000	-0.073	0.073	0.000	0.000	-0.056	0.408
FEB	87.	-1.781	0.504	0.000	-0.002	0.002	0.000	0.000	-0.023	0.260
MAR	50.	-1.080	0.291	0.000	0.000	0.000	0.000	0.000	-0.007	0.150
APR	11.	-0.233	0.063	0.000	0.000	0.000	0.000	0.000	-0.002	0.032
MAY	2.	-0.044	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.006
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	-0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
OCT	17.	-0.388	0.101	0.000	-0.000	0.000	0.000	0.000	-0.002	0.051
NOV	68.	-1.507	0.393	0.000	-0.000	0.000	0.000	0.000	-0.007	0.202
DEC	132.	-2.664	0.771	0.000	-0.014	0.014	0.000	0.000	-0.048	0.397
ANNUAL	503.	-10.320	2.920	0.000	-0.089	0.089	0.000	0.000	-0.144	1.507

HSPF (WITH PARASITICS) = 2.61 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.41 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-2.240	6	7	27.F	23.F	-28.224	633.	7.072
FEB	0.00000	28	24	40.F	38.F	0.000	-1.644	18	7	45.F	44.F	-15.935	485.	3.219
MAR	0.00000	31	1	48.F	44.F	0.000	-1.112	3	7	41.F	39.F	-14.607	436.	2.253
APR	0.00000	30	1	52.F	48.F	0.000	-0.406	7	7	39.F	39.F	-12.292	358.	2.327
MAY	0.11724	16	17	72.F	60.F	6.342	-0.143	12	7	48.F	44.F	-9.483	328.	1.646
JUN	0.42908	20	11	72.F	61.F	8.157	-0.010	2	7	54.F	53.F	-2.487	335.	1.833
JUL	1.48088	23	17	90.F	67.F	11.636	0.000	31	1	60.F	51.F	0.000	443.	2.309
AUG	1.14977	11	17	81.F	63.F	10.489	-0.000	25	7	54.F	53.F	-0.173	401.	2.093
SEP	0.37711	19	16	82.F	63.F	7.281	-0.028	29	7	48.F	45.F	-5.292	334.	1.794
OCT	0.00000	31	1	45.F	43.F	0.000	-0.555	14	7	50.F	47.F	-9.134	375.	1.794
NOV	0.00000	30	24	46.F	44.F	0.000	-1.402	24	7	46.F	45.F	-14.945	430.	2.566
DEC	0.00000	31	24	45.F	41.F	0.000	-2.291	29	7	37.F	35.F	-19.602	622.	4.357
TOTAL	3.554						-9.830						5181.	
MAX						11.636						-28.224		7.072

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	4.	0.117	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.009
JUN	14.	0.429	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.031
JUL	51.	1.481	0.338	0.000	0.000	0.000	0.000	0.000	0.000	0.111
AUG	38.	1.150	0.255	0.000	0.000	0.000	0.000	0.000	0.000	0.084
SEP	13.	0.377	0.084	0.000	0.000	0.000	0.000	0.000	0.000	0.028
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	120.	3.554	0.794	0.000	0.000	0.000	0.000	0.000	0.000	0.263

CSPF (WITH PARASITICS) = 3.36 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.47 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	150.	-2.240	0.656	0.000	-0.087	0.087	0.000	0.000	-0.046	0.348
FEB	104.	-1.644	0.459	0.000	-0.007	0.007	0.000	0.000	-0.020	0.242
MAR	67.	-1.112	0.297	0.000	0.000	0.000	0.000	0.000	-0.007	0.155
APR	24.	-0.406	0.107	0.000	0.000	0.000	0.000	0.000	-0.002	0.056
MAY	8.	-0.143	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.019
JUN	1.	-0.010	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	2.	-0.028	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.004
OCT	32.	-0.555	0.142	0.000	0.000	0.000	0.000	0.000	-0.002	0.073
NOV	82.	-1.402	0.363	0.000	-0.001	0.001	0.000	0.000	-0.006	0.190
DEC	148.	-2.291	0.655	0.000	-0.024	0.024	0.000	0.000	-0.039	0.344
ANNUAL	617.	-9.830	2.725	0.000	-0.119	0.119	0.000	0.000	-0.121	1.432

HSPF (WITH PARASITICS) = 2.63 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.46 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.647	6	7	27.F	23.F	-22.542	490.	5.654
FEB	0.00000	28	24	40.F	38.F	0.000	-1.285	18	7	45.F	44.F	-13.084	389.	2.464
MAR	0.00000	31	1	48.F	44.F	0.000	-0.985	3	7	41.F	39.F	-11.834	365.	1.808
APR	0.00000	30	1	52.F	48.F	0.000	-0.512	7	7	39.F	39.F	-10.248	313.	1.964
MAY	0.01783	16	16	72.F	60.F	4.173	-0.227	12	7	48.F	44.F	-8.699	274.	1.347
JUN	0.12032	20	16	75.F	62.F	7.171	-0.036	2	7	54.F	53.F	-3.932	258.	1.501
JUL	0.75031	23	16	88.F	65.F	10.041	0.000	31	1	60.F	51.F	0.000	319.	1.868
AUG	0.54423	11	16	81.F	64.F	9.415	-0.000	25	7	54.F	53.F	-0.447	293.	1.746
SEP	0.10757	19	15	81.F	63.F	5.553	-0.033	29	7	48.F	45.F	-4.544	257.	1.393
OCT	0.00000	31	1	45.F	43.F	0.000	-0.475	14	7	50.F	47.F	-7.735	309.	1.370
NOV	0.00000	30	24	46.F	44.F	0.000	-1.040	24	7	46.F	45.F	-11.862	340.	1.897
DEC	0.00000	31	24	45.F	41.F	0.000	-1.653	29	7	37.F	35.F	-15.250	480.	3.368
TOTAL	1.540						-7.892						4086.	
MAX						10.041						-22.542		5.654

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	1.	0.018	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	4.	0.120	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.007
JUL	25.	0.750	0.176	0.000	0.000	0.000	0.000	0.000	0.000	0.044
AUG	18.	0.544	0.123	0.000	0.000	0.000	0.000	0.000	0.000	0.031
SEP	4.	0.108	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.006
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	51.	1.540	0.354	0.000	0.000	0.000	0.000	0.000	0.000	0.089

CSPF (WITH PARASITICS) = 3.48 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.35 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	140.	-1.647	0.487	0.000	-0.056	0.056	0.000	0.000	-0.034	0.257
FEB	102.	-1.285	0.358	0.000	-0.004	0.004	0.000	0.000	-0.015	0.188
MAR	74.	-0.985	0.260	0.000	0.000	0.000	0.000	0.000	-0.005	0.136
APR	37.	-0.512	0.132	0.000	-0.000	0.000	0.000	0.000	-0.002	0.068
MAY	16.	-0.227	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.029
JUN	2.	-0.036	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.004
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	2.	-0.033	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.004
OCT	34.	-0.475	0.121	0.000	0.000	0.000	0.000	0.000	-0.001	0.062
NOV	77.	-1.040	0.270	0.000	-0.000	0.000	0.000	0.000	-0.005	0.141
DEC	135.	-1.653	0.475	0.000	-0.016	0.016	0.000	0.000	-0.029	0.248
ANNUAL	619.	-7.892	2.176	0.000	-0.076	0.076	0.000	0.000	-0.091	1.137

HSPF (WITH PARASITICS) = 2.66 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.50 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.827	6	7	27.F	23.F	-50.018	1559.	8.762
FEB	0.00000	28	24	40.F	38.F	0.000	-1.170	18	7	45.F	44.F	-38.268	1327.	5.903
MAR	0.00000	31	1	48.F	44.F	0.000	-0.642	3	7	41.F	39.F	-29.747	1382.	5.358
APR	0.00062	18	17	64.F	52.F	0.621	-0.186	7	7	39.F	39.F	-23.050	1359.	4.817
MAY	0.39992	16	17	72.F	60.F	18.630	-0.034	12	7	48.F	44.F	-10.370	1342.	6.350
JUN	1.55231	20	17	77.F	61.F	28.869	0.000	30	1	61.F	55.F	0.000	1419.	7.350
JUL	4.69541	24	16	81.F	66.F	38.085	0.000	31	1	60.F	51.F	0.000	1757.	8.656
AUG	4.65554	13	17	77.F	63.F	37.246	0.000	31	1	59.F	55.F	0.000	1703.	8.189
SEP	2.92602	19	16	82.F	63.F	32.110	0.000	30	1	53.F	51.F	0.000	1538.	7.789
OCT	0.95306	9	17	57.F	56.F	19.383	-0.006	14	7	50.F	47.F	-3.517	1425.	6.371
NOV	0.01568	7	17	57.F	54.F	6.562	-0.218	24	7	46.F	45.F	-18.477	1178.	5.307
DEC	0.00000	31	24	45.F	41.F	0.000	-1.151	29	7	37.F	35.F	-36.469	1506.	6.618
TOTAL	15.199						-5.234						17496.	
MAX						38.085						-50.018		8.762

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	4.	0.400	0.086	0.000	0.000	0.000	0.000	0.000	0.000	0.029
JUN	15.	1.552	0.334	0.000	0.000	0.000	0.000	0.000	0.000	0.115
JUL	46.	4.695	1.056	0.000	0.000	0.000	0.000	0.000	0.000	0.352
AUG	45.	4.656	1.018	0.000	0.000	0.000	0.000	0.000	0.000	0.342
SEP	29.	2.926	0.634	0.000	0.000	0.000	0.000	0.000	0.000	0.218
OCT	9.	0.953	0.203	0.000	0.000	0.000	0.000	0.000	0.000	0.070
NOV	0.	0.016	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	148.	15.199	3.333	0.000	0.000	0.000	0.000	0.000	0.000	1.128

CSPF (WITH PARASITICS) = 3.41 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.56 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	30.	-1.827	0.609	0.000	0.000	0.000	0.000	0.000	-0.053	0.240
FEB	17.	-1.170	0.357	0.000	0.000	0.000	0.000	0.000	-0.024	0.138
MAR	9.	-0.642	0.185	0.000	-0.000	0.000	0.000	0.000	-0.008	0.072
APR	3.	-0.186	0.053	0.000	-0.000	0.000	0.000	0.000	-0.002	0.020
MAY	0.	-0.034	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.004
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	-0.006	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
NOV	3.	-0.218	0.063	0.000	-0.000	0.000	0.000	0.000	-0.003	0.024
DEC	18.	-1.151	0.372	0.000	0.000	0.000	0.000	0.000	-0.035	0.143
ANNUAL	80.	-5.234	1.649	0.000	-0.000	0.000	0.000	0.000	-0.125	0.642

HSPF (WITH PARASITICS) = 2.51 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.10 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.758	6	7	27.F	23.F	-14.614	420.	2.991
FEB	0.00000	28	24	40.F	38.F	0.000	-0.471	18	7	45.F	44.F	-9.744	342.	1.712
MAR	0.00000	31	1	48.F	44.F	0.000	-0.275	3	7	41.F	39.F	-8.273	343.	1.338
APR	0.00000	30	1	52.F	48.F	0.000	-0.098	7	7	39.F	39.F	-7.465	329.	1.407
MAY	0.05296	16	17	72.F	60.F	5.542	-0.022	12	7	48.F	44.F	-3.773	316.	1.567
JUN	0.19977	20	17	77.F	61.F	10.179	-0.000	2	7	54.F	53.F	-0.043	322.	1.979
JUL	1.10512	23	17	90.F	67.F	14.598	0.000	31	1	60.F	51.F	0.000	412.	2.535
AUG	0.94686	11	16	81.F	64.F	12.818	0.000	31	1	59.F	55.F	0.000	386.	2.260
SEP	0.44518	19	16	82.F	63.F	11.780	0.000	30	1	53.F	51.F	0.000	342.	2.168
OCT	0.04646	7	17	77.F	55.F	7.350	-0.016	22	7	37.F	36.F	-1.954	325.	1.754
NOV	0.00000	30	24	46.F	44.F	0.000	-0.192	28	7	37.F	34.F	-7.120	297.	1.301
DEC	0.00000	31	24	45.F	41.F	0.000	-0.609	29	7	37.F	35.F	-10.437	405.	1.881
TOTAL	2.796						-2.439						4240.	
MAX						14.598						-14.614		2.991

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	2.	0.053	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.003
JUN	6.	0.200	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.011
JUL	33.	1.105	0.258	0.000	0.000	0.000	0.000	0.000	0.000	0.061
AUG	27.	0.947	0.212	0.000	0.000	0.000	0.000	0.000	0.000	0.050
SEP	13.	0.445	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.024
OCT	1.	0.046	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.003
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	81.	2.796	0.636	0.000	0.000	0.000	0.000	0.000	0.000	0.151

CSPF (WITH PARASITICS) = 3.55 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.39 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	57.	-0.758	0.248	0.000	-0.004	0.004	0.000	0.000	-0.021	0.111
FEB	32.	-0.471	0.143	0.000	0.000	0.000	0.000	0.000	-0.010	0.063
MAR	18.	-0.275	0.078	0.000	-0.000	0.000	0.000	0.000	-0.003	0.034
APR	6.	-0.098	0.027	0.000	0.000	0.000	0.000	0.000	-0.001	0.012
MAY	1.	-0.022	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.003
JUN	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	1.	-0.016	0.005	0.000	0.000	0.000	0.000	0.000	-0.000	0.002
NOV	12.	-0.192	0.054	0.000	-0.000	0.000	0.000	0.000	-0.002	0.024
DEC	43.	-0.609	0.193	0.000	-0.000	0.000	0.000	0.000	-0.017	0.085
ANNUAL	170.	-2.439	0.753	0.000	-0.004	0.004	0.000	0.000	-0.055	0.334

HSPF (WITH PARASITICS) = 2.49 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.15 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00095	29	17	54.F	53.F	0.243	-0.189	6	7	27.F	23.F	-7.182	143.	1.681
FEB	0.00072	21	17	57.F	53.F	0.514	-0.129	18	7	45.F	44.F	-3.895	122.	0.659
MAR	0.01174	28	17	59.F	49.F	0.874	-0.096	3	7	41.F	39.F	-3.858	128.	0.526
APR	0.05138	11	17	66.F	54.F	1.390	-0.056	7	7	39.F	39.F	-3.089	130.	0.570
MAY	0.13852	15	17	73.F	60.F	2.606	-0.021	5	7	46.F	45.F	-2.495	130.	0.659
JUN	0.24062	20	17	77.F	61.F	3.206	-0.002	2	7	54.F	53.F	-0.886	136.	0.724
JUL	0.50062	23	17	90.F	67.F	3.849	0.000	31	1	60.F	51.F	0.000	165.	0.834
AUG	0.47712	12	17	82.F	63.F	3.534	0.000	31	1	59.F	55.F	0.000	158.	0.772
SEP	0.32092	19	16	82.F	63.F	3.357	-0.000	29	7	48.F	45.F	-0.178	143.	0.754
OCT	0.13839	7	17	77.F	55.F	2.482	-0.018	27	7	50.F	49.F	-1.628	134.	0.658
NOV	0.01923	7	17	57.F	54.F	1.469	-0.073	24	7	46.F	45.F	-3.236	112.	0.553
DEC	0.00044	16	17	52.F	48.F	0.319	-0.157	29	7	37.F	35.F	-4.685	141.	0.891
TOTAL	1.901						-0.742						1642.	
MAX						3.849						-7.182		1.681

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	2.	0.012	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
APR	8.	0.051	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.004
MAY	20.	0.139	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.011
JUN	35.	0.241	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.020
JUL	74.	0.501	0.113	0.000	0.000	0.000	0.000	0.000	0.000	0.041
AUG	70.	0.477	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.039
SEP	47.	0.321	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.026
OCT	20.	0.138	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.011
NOV	3.	0.019	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.002
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	279.	1.901	0.417	0.000	0.000	0.000	0.000	0.000	0.000	0.155

CSPF (WITH PARASITICS) = 3.33 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.56 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	42.	-0.189	0.060	0.000	-0.006	0.006	0.000	0.000	-0.005	0.025
FEB	28.	-0.129	0.040	0.000	0.000	0.000	0.000	0.000	-0.003	0.016
MAR	19.	-0.096	0.027	0.000	-0.000	0.000	0.000	0.000	-0.001	0.011
APR	11.	-0.056	0.015	0.000	0.000	0.000	0.000	0.000	-0.000	0.006
MAY	4.	-0.021	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUN	0.	-0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	3.	-0.018	0.005	0.000	-0.000	0.000	0.000	0.000	-0.000	0.002
NOV	14.	-0.073	0.020	0.000	-0.000	0.000	0.000	0.000	-0.001	0.008
DEC	34.	-0.157	0.049	0.000	-0.001	0.001	0.000	0.000	-0.004	0.020
ANNUAL	156.	-0.742	0.222	0.000	-0.007	0.007	0.000	0.000	-0.015	0.091

HSPF (WITH PARASITICS) = 2.57 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.20 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.009	6	7	27.F	23.F	-1.141	31.	0.201
FEB	0.00000	28	24	40.F	38.F	0.000	-0.003	18	7	45.F	44.F	-0.504	27.	0.109
MAR	0.00000	31	1	48.F	44.F	0.000	-0.000	3	7	41.F	39.F	-0.272	30.	0.109
APR	0.01306	18	15	64.F	52.F	0.566	0.000	30	1	52.F	48.F	0.000	31.	0.157
MAY	0.06068	23	17	64.F	53.F	0.698	0.000	31	1	56.F	51.F	0.000	35.	0.171
JUN	0.11105	26	17	63.F	56.F	0.743	0.000	30	1	61.F	55.F	0.000	39.	0.175
JUL	0.17984	14	12	61.F	55.F	0.848	0.000	31	1	60.F	51.F	0.000	47.	0.190
AUG	0.16159	11	11	64.F	58.F	0.865	0.000	31	1	59.F	55.F	0.000	44.	0.191
SEP	0.13216	15	17	57.F	55.F	0.764	0.000	30	1	53.F	51.F	0.000	41.	0.180
OCT	0.02367	8	16	66.F	61.F	0.574	0.000	31	1	45.F	43.F	0.000	33.	0.159
NOV	0.00000	30	24	46.F	44.F	0.000	-0.001	24	7	46.F	45.F	-0.356	26.	0.109
DEC	0.00000	31	24	45.F	41.F	0.000	-0.007	29	7	37.F	35.F	-0.732	31.	0.133
TOTAL	0.682						-0.020						415.	
MAX						0.865						-1.141		0.201

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	5.	0.013	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001
MAY	25.	0.061	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.005
JUN	47.	0.111	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.010
JUL	79.	0.180	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.016
AUG	70.	0.162	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.015
SEP	57.	0.132	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.012
OCT	10.	0.024	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	293.	0.682	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.061

CSPF (WITH PARASITICS) = 3.27 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.62 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	6.	-0.009	0.003	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
FEB	2.	-0.003	0.001	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
MAR	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	1.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
DEC	4.	-0.007	0.002	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
ANNUAL	12.	-0.020	0.007	0.000	0.000	0.000	0.000	0.000	-0.001	0.003

HSPF (WITH PARASITICS) = 2.40 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 2.95 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.133	6	7	27.F	23.F	-3.642	47.	0.910
FEB	0.00000	28	24	40.F	38.F	0.000	-0.095	18	7	45.F	44.F	-2.174	37.	0.425
MAR	0.00000	31	1	48.F	44.F	0.000	-0.063	3	7	41.F	39.F	-1.957	35.	0.255
APR	0.00000	30	1	52.F	48.F	0.000	-0.027	7	7	39.F	39.F	-1.609	31.	0.300
MAY	0.00325	16	17	72.F	60.F	0.483	-0.011	12	7	48.F	44.F	-1.313	28.	0.159
JUN	0.02383	20	17	77.F	61.F	0.549	-0.001	2	7	54.F	53.F	-0.339	29.	0.155
JUL	0.10740	23	17	90.F	67.F	0.725	0.000	31	1	60.F	51.F	0.000	38.	0.183
AUG	0.07996	11	17	81.F	63.F	0.790	0.000	31	1	59.F	55.F	0.000	35.	0.183
SEP	0.02084	22	17	79.F	60.F	0.505	-0.001	29	7	48.F	45.F	-0.431	29.	0.151
OCT	0.00000	31	1	45.F	43.F	0.000	-0.026	14	7	50.F	47.F	-1.254	31.	0.165
NOV	0.00000	30	24	46.F	44.F	0.000	-0.080	24	7	46.F	45.F	-2.079	33.	0.339
DEC	0.00000	31	24	45.F	41.F	0.000	-0.130	29	7	37.F	35.F	-2.805	46.	0.641
TOTAL	0.235						-0.566						420.	
MAX						0.790						-3.642		0.910

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	1.	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	9.	0.024	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.003
JUL	44.	0.107	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.013
AUG	32.	0.080	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.009
SEP	8.	0.021	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.002
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	95.	0.235	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.027

CSPF (WITH PARASITICS) = 2.96 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.51 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	71.	-0.133	0.040	0.000	-0.006	0.006	0.000	0.000	-0.003	0.022
FEB	49.	-0.095	0.028	0.000	-0.001	0.001	0.000	0.000	-0.002	0.015
MAR	31.	-0.063	0.017	0.000	-0.000	0.000	0.000	0.000	-0.001	0.009
APR	13.	-0.027	0.007	0.000	0.000	0.000	0.000	0.000	-0.000	0.004
MAY	5.	-0.011	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	0.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	12.	-0.026	0.007	0.000	-0.000	0.000	0.000	0.000	-0.000	0.004
NOV	38.	-0.080	0.021	0.000	-0.000	0.000	0.000	0.000	-0.001	0.011
DEC	67.	-0.130	0.038	0.000	-0.003	0.003	0.000	0.000	-0.003	0.020
ANNUAL	286.	-0.566	0.162	0.000	-0.010	0.010	0.000	0.000	-0.009	0.086

HSPF (WITH PARASITICS) = 2.53 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.30 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-2.512	6	7	27.F	23.F	-25.104	481.	6.248
FEB	0.00000	28	24	40.F	38.F	0.000	-1.811	10	7	37.F	36.F	-14.943	337.	3.308
MAR	0.00443	29	12	73.F	52.F	2.066	-1.287	3	7	41.F	39.F	-13.160	268.	1.989
APR	0.01367	18	12	59.F	48.F	2.435	-0.552	7	7	39.F	39.F	-11.699	182.	2.224
MAY	0.22756	16	11	64.F	57.F	9.341	-0.199	12	7	48.F	44.F	-8.374	157.	1.320
JUN	0.67064	20	10	70.F	59.F	14.050	-0.032	4	7	54.F	50.F	-3.245	180.	1.799
JUL	1.80449	23	11	75.F	63.F	15.647	0.000	31	1	60.F	51.F	0.000	299.	1.973
AUG	1.23470	12	11	72.F	63.F	12.877	-0.004	23	7	57.F	56.F	-1.216	236.	1.687
SEP	0.46659	22	11	70.F	59.F	8.549	-0.086	29	7	48.F	45.F	-5.621	167.	1.241
OCT	0.00955	7	12	66.F	54.F	1.812	-0.827	22	7	37.F	36.F	-9.710	210.	1.831
NOV	0.00000	30	24	46.F	44.F	0.000	-1.676	28	7	37.F	34.F	-14.443	295.	2.711
DEC	0.00000	31	24	45.F	41.F	0.000	-2.592	29	7	37.F	35.F	-18.272	467.	4.166
TOTAL	4.432						-11.577						3280.	
MAX						15.647						-25.104		6.248

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
APR	1.	0.014	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.002
MAY	14.	0.228	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.027
JUN	41.	0.671	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.080
JUL	111.	1.804	0.404	0.000	0.000	0.000	0.000	0.000	0.000	0.218
AUG	75.	1.235	0.272	0.000	0.000	0.000	0.000	0.000	0.000	0.148
SEP	28.	0.467	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.056
OCT	1.	0.010	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	270.	4.432	0.977	0.000	0.000	0.000	0.000	0.000	0.000	0.532

CSPF (WITH PARASITICS) = 2.94 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.54 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	186.	-2.512	0.716	0.000	-0.111	0.111	0.000	0.000	-0.045	0.388
FEB	129.	-1.811	0.496	0.000	-0.020	0.020	0.000	0.000	-0.020	0.267
MAR	88.	-1.287	0.339	0.000	0.000	0.000	0.000	0.000	-0.007	0.182
APR	37.	-0.552	0.143	0.000	-0.001	0.001	0.000	0.000	-0.002	0.076
MAY	13.	-0.199	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.027
JUN	2.	-0.032	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.004
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	-0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	5.	-0.086	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.011
OCT	53.	-0.827	0.207	0.000	0.000	0.000	0.000	0.000	-0.002	0.109
NOV	111.	-1.676	0.430	0.000	-0.004	0.004	0.000	0.000	-0.006	0.230
DEC	188.	-2.592	0.729	0.000	-0.037	0.037	0.000	0.000	-0.041	0.392
ANNUAL	811.	-11.577	3.139	0.000	-0.172	0.172	0.000	0.000	-0.123	1.687

HSPF (WITH PARASITICS) = 2.66 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.51 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.187	6	7	27.F	23.F	-4.937	88.	0.933
FEB	0.00000	28	24	40.F	38.F	0.000	-0.136	18	7	45.F	44.F	-3.973	73.	0.540
MAR	0.00000	31	1	48.F	44.F	0.000	-0.077	3	7	41.F	39.F	-3.010	71.	0.380
APR	0.00000	30	1	52.F	48.F	0.000	-0.024	7	7	39.F	39.F	-2.305	66.	0.419
MAY	0.00000	31	1	56.F	51.F	0.000	-0.006	12	7	48.F	44.F	-1.289	62.	0.224
JUN	0.02702	20	17	77.F	61.F	1.046	-0.000	2	7	54.F	53.F	-0.132	63.	0.324
JUL	0.17210	24	17	81.F	65.F	1.490	0.000	31	1	60.F	51.F	0.000	79.	0.384
AUG	0.20417	13	17	77.F	63.F	1.545	0.000	31	1	59.F	55.F	0.000	80.	0.380
SEP	0.14306	19	17	81.F	62.F	1.414	0.000	30	1	53.F	51.F	0.000	74.	0.368
OCT	0.03021	3	17	59.F	49.F	1.041	-0.000	14	7	50.F	47.F	-0.062	66.	0.318
NOV	0.00000	30	24	46.F	44.F	0.000	-0.019	24	7	46.F	45.F	-1.782	56.	0.275
DEC	0.00000	31	24	45.F	41.F	0.000	-0.107	29	7	37.F	35.F	-3.526	78.	0.616
TOTAL	0.577						-0.557						856.	
MAX						1.545						-4.937		0.933

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	3.	0.027	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.002
JUL	24.	0.172	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.017
AUG	29.	0.204	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.020
SEP	20.	0.143	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.014
OCT	4.	0.030	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.003
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	80.	0.577	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.056

CSPF (WITH PARASITICS) = 3.17 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.56 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	37.	-0.187	0.061	0.000	-0.001	0.001	0.000	0.000	-0.005	0.027
FEB	24.	-0.136	0.040	0.000	0.000	0.000	0.000	0.000	-0.002	0.018
MAR	13.	-0.077	0.022	0.000	-0.000	0.000	0.000	0.000	-0.001	0.010
APR	4.	-0.024	0.007	0.000	0.000	0.000	0.000	0.000	-0.000	0.003
MAY	1.	-0.006	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
JUN	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	3.	-0.019	0.005	0.000	0.000	0.000	0.000	0.000	-0.000	0.002
DEC	20.	-0.107	0.034	0.000	0.000	0.000	0.000	0.000	-0.003	0.015
ANNUAL	102.	-0.557	0.171	0.000	-0.001	0.001	0.000	0.000	-0.012	0.075

HSPF (WITH PARASITICS) = 2.52 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.18 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.292	6	7	27.F	23.F	-7.555	132.	1.732
FEB	0.00000	28	24	40.F	38.F	0.000	-0.087	4	7	30.F	30.F	-5.103	87.	1.106
MAR	0.00000	31	1	48.F	44.F	0.000	-0.012	3	7	41.F	39.F	-2.475	84.	0.302
APR	0.00156	18	17	64.F	52.F	0.407	-0.001	7	7	39.F	39.F	-1.169	85.	0.335
MAY	0.05771	16	15	72.F	62.F	1.487	0.000	31	1	56.F	51.F	0.000	87.	0.424
JUN	0.14307	30	15	75.F	65.F	2.074	0.000	30	1	61.F	55.F	0.000	93.	0.476
JUL	0.34917	23	15	86.F	66.F	2.916	0.000	31	1	60.F	51.F	0.000	115.	0.574
AUG	0.31828	11	15	79.F	64.F	2.654	0.000	31	1	59.F	55.F	0.000	109.	0.535
SEP	0.18230	19	16	82.F	63.F	1.841	0.000	30	1	53.F	51.F	0.000	97.	0.469
OCT	0.02141	8	16	66.F	61.F	0.885	0.000	31	1	45.F	43.F	0.000	87.	0.379
NOV	0.00000	30	24	46.F	44.F	0.000	-0.019	28	7	37.F	34.F	-4.247	75.	0.622
DEC	0.00000	31	24	45.F	41.F	0.000	-0.155	29	7	37.F	35.F	-5.366	109.	1.072
TOTAL	1.074						-0.565						1160.	
MAX						2.916						-7.555		1.732

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	10.	0.058	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.004
JUN	24.	0.143	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.009
JUL	59.	0.349	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.022
AUG	54.	0.318	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.019
SEP	31.	0.182	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.012
OCT	4.	0.021	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.001
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	183.	1.074	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.068

CSPF (WITH PARASITICS) = 3.49 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.48 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	61.	-0.292	0.084	0.000	-0.055	0.055	0.000	0.000	-0.009	0.023
FEB	19.	-0.087	0.027	0.000	-0.007	0.007	0.000	0.000	-0.003	0.007
MAR	3.	-0.012	0.004	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
APR	0.	-0.001	0.000	0.000	-0.000	0.000	0.000	0.000	-0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	4.	-0.019	0.006	0.000	-0.000	0.000	0.000	0.000	-0.001	0.002
DEC	35.	-0.155	0.050	0.000	-0.011	0.011	0.000	0.000	-0.007	0.013
ANNUAL	123.	-0.565	0.170	0.000	-0.073	0.073	0.000	0.000	-0.020	0.046

HSPF (WITH PARASITICS) = 2.30 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 2.54 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.005	6	7	27.F	23.F	-0.979	30.	0.175
FEB	0.00000	28	24	40.F	38.F	0.000	-0.001	3	7	46.F	43.F	-0.221	27.	0.109
MAR	0.00153	14	17	57.F	50.F	0.317	0.000	31	1	48.F	44.F	0.000	30.	0.135
APR	0.02877	11	16	66.F	54.F	0.484	0.000	30	1	52.F	48.F	0.000	33.	0.150
MAY	0.06196	14	14	72.F	57.F	0.590	0.000	31	1	56.F	51.F	0.000	35.	0.161
JUN	0.09657	26	17	63.F	56.F	0.625	0.000	30	1	61.F	55.F	0.000	38.	0.167
JUL	0.15248	14	10	57.F	54.F	0.761	0.000	31	1	60.F	51.F	0.000	44.	0.181
AUG	0.13895	11	9	61.F	57.F	0.788	0.000	31	1	59.F	55.F	0.000	42.	0.183
SEP	0.11886	15	12	55.F	54.F	0.697	0.000	30	1	53.F	51.F	0.000	40.	0.174
OCT	0.04446	8	16	66.F	61.F	0.543	0.000	31	1	45.F	43.F	0.000	34.	0.159
NOV	0.00022	7	17	57.F	54.F	0.176	0.000	30	24	46.F	44.F	0.000	26.	0.123
DEC	0.00000	31	24	45.F	41.F	0.000	-0.003	29	7	37.F	35.F	-0.553	31.	0.109
TOTAL	0.644						-0.008						410.	
MAX						0.788						-0.979		0.183

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	1.	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	11.	0.029	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.002
MAY	27.	0.062	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.005
JUN	43.	0.097	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.009
JUL	70.	0.152	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.014
AUG	64.	0.139	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.013
SEP	54.	0.119	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.011
OCT	19.	0.044	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.004
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	289.	0.644	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.057

CSPF (WITH PARASITICS) = 3.28 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.63 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	4.	-0.005	0.002	0.000	0.000	0.000	0.000	0.000	-0.000	0.001
FEB	0.	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	2.	-0.003	0.001	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
ANNUAL	5.	-0.008	0.003	0.000	0.000	0.000	0.000	0.000	-0.000	0.001

HSPF (WITH PARASITICS) = 2.28 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 2.79 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.162	6	7	27.F	23.F	-4.460	106.	1.052
FEB	0.00000	28	24	40.F	38.F	0.000	-0.099	18	7	45.F	44.F	-2.346	87.	0.385
MAR	0.00000	31	1	48.F	44.F	0.000	-0.044	3	7	41.F	39.F	-2.020	88.	0.361
APR	0.00019	18	17	64.F	52.F	0.182	-0.005	7	7	39.F	39.F	-1.157	85.	0.317
MAY	0.05066	16	15	72.F	62.F	1.522	-0.002	12	7	48.F	44.F	-0.704	87.	0.443
JUN	0.13517	20	15	75.F	62.F	1.734	0.000	30	1	61.F	55.F	0.000	94.	0.468
JUL	0.32077	22	15	86.F	65.F	2.101	0.000	31	1	60.F	51.F	0.000	116.	0.527
AUG	0.28193	11	15	79.F	64.F	2.071	0.000	31	1	59.F	55.F	0.000	109.	0.511
SEP	0.16521	19	15	81.F	63.F	1.636	0.000	30	1	53.F	51.F	0.000	97.	0.468
OCT	0.00749	8	17	64.F	60.F	0.630	-0.003	27	7	50.F	49.F	-0.584	86.	0.360
NOV	0.00000	30	24	46.F	44.F	0.000	-0.056	24	7	46.F	45.F	-2.091	79.	0.370
DEC	0.00000	31	24	45.F	41.F	0.000	-0.151	29	7	37.F	35.F	-2.817	105.	0.531
TOTAL	0.961						-0.521						1139.	
MAX						2.101						-4.460		1.052

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Cooling Summary for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)		INDOOR FAN ENERGY (MBTU)
JAN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FEB	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
APR	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAY	12.	0.051	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.005
JUN	34.	0.135	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.013
JUL	83.	0.321	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.033
AUG	72.	0.282	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.028
SEP	42.	0.165	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.016
OCT	2.	0.007	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001
NOV	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DEC	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANNUAL	246.	0.961	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.097

CSPF (WITH PARASITICS) = 3.13 (KBTU/HR)

CSPF (WITHOUT PARASITICS) = 4.56 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-Q Heat Pump Heating Summary for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	UNIT RUN TIME (HOURS)	TOTAL LOAD ON UNIT (MBTU)	ENERGY IN TO UNIT (MBTU)	AUXILIARY ENERGY (MBTU)	SUP UNIT LOAD (MBTU)	SUP UNIT ENERGY (MBTU)	WASTE HEAT GENERATED (MBTU)	WASTE HEAT USE (MBTU)	DEFROST LOAD (MBTU)	INDOOR FAN ENERGY (MBTU)
JAN	58.	-0.162	0.052	0.000	-0.003	0.003	0.000	0.000	-0.005	0.024
FEB	32.	-0.099	0.030	0.000	0.000	0.000	0.000	0.000	-0.002	0.013
MAR	14.	-0.044	0.012	0.000	-0.000	0.000	0.000	0.000	-0.001	0.006
APR	2.	-0.005	0.001	0.000	-0.000	0.000	0.000	0.000	-0.000	0.001
MAY	0.	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUN	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
JUL	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AUG	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SEP	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OCT	1.	-0.003	0.001	0.000	0.000	0.000	0.000	0.000	-0.000	0.000
NOV	17.	-0.056	0.015	0.000	-0.000	0.000	0.000	0.000	-0.001	0.007
DEC	50.	-0.151	0.046	0.000	-0.000	0.000	0.000	0.000	-0.004	0.021
ANNUAL	174.	-0.521	0.158	0.000	-0.003	0.003	0.000	0.000	-0.011	0.072

HSPF (WITH PARASITICS) = 2.50 (KBTU/HR)

HSPF (WITHOUT PARASITICS) = 3.17 (BTU/BTU)

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for Uncon WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00003	17	17	48.F	45.F	0.031	-1.651	6	6	27.F	24.F	-17.677	2599.	9.333
FEB	0.00105	28	17	48.F	38.F	0.206	-1.384	18	6	45.F	44.F	-16.693	2358.	9.333
MAR	0.03060	14	17	57.F	50.F	0.552	-1.111	3	6	41.F	39.F	-14.054	2618.	9.333
APR	0.11585	18	17	64.F	52.F	0.706	-0.622	7	6	39.F	38.F	-11.501	2676.	9.333
MAY	0.16762	23	17	64.F	53.F	0.797	-0.255	12	6	45.F	40.F	-8.661	2618.	9.333
JUN	0.21192	30	17	72.F	61.F	0.843	-0.038	2	6	54.F	51.F	-4.873	2582.	9.333
JUL	0.44869	24	17	81.F	65.F	3.370	0.000	31	1	60.F	51.F	0.000	2694.	9.333
AUG	0.53601	13	17	77.F	63.F	3.707	0.000	31	1	59.F	55.F	0.000	2618.	9.333
SEP	0.39963	19	17	81.F	62.F	3.159	0.000	30	1	53.F	51.F	0.000	2582.	9.333
OCT	0.12044	3	17	59.F	49.F	1.546	-0.047	20	6	55.F	55.F	-3.934	2694.	9.333
NOV	0.00551	7	17	57.F	54.F	0.442	-0.490	24	6	46.F	44.F	-10.647	2317.	9.333
DEC	0.00000	31	24	45.F	41.F	0.000	-1.314	29	6	37.F	35.F	-16.142	2694.	9.333
TOTAL	2.037						-6.911						31048.	
MAX						3.707						-17.677		9.333

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- SS-A System Loads Summary for DOAS-Base WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - H E A T I N G - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	1191.	3.101
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	1092.	3.101
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	1228.	3.101
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	1240.	3.101
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	1228.	3.101
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	1191.	3.101
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	1240.	3.101
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	1228.	3.101
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	1191.	3.101
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	1240.	3.101
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	1079.	3.101
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	1240.	3.101
TOTAL	0.000						0.000						14390.	
MAX						0.000						0.000		3.101

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- ERV Energy Recovery Summary for: DOAS-Base WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
3988.	3988.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON		HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-28.485	0.000	-39.439	0.000	-28.484	0.000	0.000	0.000	0.000	384	0
	PEAK	-121.922	0.000	-163.382	0.000	-121.922	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-24.008	0.000	-33.892	0.000	-24.006	0.000	0.000	0.000	0.000	352	0
	PEAK	-111.698	0.000	-135.073	0.000	-111.698	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 7	0/ 0	24/ 7	0/ 0	27/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-22.404	0.024	-31.973	0.000	-22.391	0.000	0.000	0.000	0.000	385	4
	PEAK	-84.449	9.671	-125.627	0.000	-84.449	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/15	5/17	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-18.022	0.000	-25.007	0.000	-17.995	0.000	0.000	0.000	0.000	394	0
	PEAK	-91.375	0.000	-117.990	0.000	-91.375	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 7	0/ 0	4/17	0/ 0	24/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-12.113	0.000	-15.991	0.000	-12.082	0.000	0.000	0.000	0.000	349	0
	PEAK	-73.869	0.000	-143.622	0.000	-73.869	0.000	0.000	0.000	0.000		
	DAY/HR	9/11	0/ 0	9/17	0/ 0	9/11	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-6.270	0.000	-7.858	0.000	-6.243	0.000	0.000	0.000	0.000	277	1
	PEAK	-58.703	0.179	-76.429	0.000	-58.703	0.000	0.000	0.000	0.000		
	DAY/HR	12/ 7	20/17	6/10	0/ 0	12/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-2.616	0.846	-3.101	1.496	-2.601	0.000	0.000	0.000	0.000	164	68
	PEAK	-48.117	33.754	-58.162	51.464	-47.962	0.000	0.000	0.000	0.000		
	DAY/HR	5/ 7	23/18	1/ 9	23/20	5/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-2.469	0.257	-2.795	0.365	-2.457	0.000	0.000	0.000	0.000	154	30
	PEAK	-48.253	18.383	-59.475	28.982	-48.068	0.000	0.000	0.000	0.000		
	DAY/HR	25/ 7	9/15	25/ 7	9/18	25/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-7.261	0.149	-9.100	0.070	-7.235	0.000	0.000	0.000	0.000	253	22
	PEAK	-71.236	13.418	-84.691	14.165	-71.236	0.000	0.000	0.000	0.000		

	DAY/HR	27/ 7	13/18	26/ 9	13/18	27/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
OCT	SUM	-17.536	0.013	-24.569	0.000	-17.503	0.000	0.000	0.000	0.000	376	4
	PEAK	-89.412	6.029	-115.843	0.000	-89.412	0.000	0.000	0.000	0.000		
	DAY/HR	22/ 7	6/15	22/ 7	0/ 0	22/ 7	0/ 0	0/ 0	0/ 0	0/ 0		
NOV	SUM	-21.001	0.000	-30.277	0.000	-20.994	0.000	0.000	0.000	0.000	348	0
	PEAK	-91.134	0.000	-124.188	0.000	-91.134	0.000	0.000	0.000	0.000		
	DAY/HR	5/ 7	0/ 0	25/17	0/ 0	5/ 7	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- ERV Energy Recovery Summary for: DOAS-Base WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

DEC	SUM	-28.349	0.000	-39.796	0.000	-28.347	0.000	0.000	0.000	0.000	400	0
	PEAK	-105.926	0.000	-143.618	0.000	-105.926	0.000	0.000	0.000	0.000		
	DAY/HR	24/22	0/ 0	26/17	0/ 0	24/22	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-190.534	1.290	-263.799	1.931	-190.338	0.000	0.000	0.000	0.000	3836	129
	PEAK	-121.922	33.754	-163.382	51.464	-121.922	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PV-A Plant Design Parameters WEATHER FILE- SEATTLE BOEING FI WA

*** CIRCULATION LOOPS ***

	HEATING DEMAND (MBTU/HR)	COOLING DEMAND (MBTU/HR)	LOOP FLOW (GPM)	TOTAL HEAD (FT)	SUPPLY UA PRODUCT (BTU/HR-F)	SUPPLY LOSS DT (F)	RETURN UA PRODUCT (BTU/HR-F)	RETURN LOSS DT (F)	LOOP VOLUME (GAL)	FLUID HEAT CAPACITY (BTU/LB-F)
DHW-Loop	-0.239	0.000	1.4	23.4	0.0	0.00	0.0	0.00	2.1	1.00

*** PUMPS ***

	ATTACHED TO	FLOW (GPM)	HEAD (FT)	HEAD SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
DHW Circ Pump	1 PUMP(s)							
DHW-Loop PRIMARY LOOP		0.5	25.8	0.0	VAR-SPEED	0.008	0.770	0.400

*** PRIMARY EQUIPMENT ***

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	HEAD (FT)
HP1-DHW				
ELEC DW-HEATER	DHW-Loop	-0.015	0.7	
HP2-DHW				
ELEC DW-HEATER	DHW-Loop	-0.015	0.7	
HP3-DHW				
ELEC DW-HEATER	DHW-Loop	-0.015	0.7	
Elec-DHW				
ELEC DW-HEATER	DHW-Loop	-0.012	0.5	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-E Energy End-Use Summary for all Electric Meters WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
KWH	3772.	0.	6305.	2285.	0.	0.	3.	2461.	0.	203.	2813.	0.	17843.
MAX KW	12.631	0.000	23.042	32.185	0.128	0.000	0.007	18.314	0.000	44.616	10.313	0.000	101.770
DAY/HR	2/10	0/ 0	2/10	6/ 7	29/16	0/ 0	2/13	6/ 7	0/ 0	6/ 7	27/13	0/ 0	6/ 7
PEAK ENDUSE	1.682	0.000	2.593	32.185	0.000	0.000	0.007	18.314	0.000	44.616	2.373	0.000	
PEAK PCT	1.7	0.0	2.5	31.6	0.0	0.0	0.0	18.0	0.0	43.8	2.3	0.0	
FEB													
KWH	3426.	0.	5721.	1355.	3.	0.	2.	1904.	0.	16.	2618.	0.	15046.
MAX KW	12.631	0.000	23.042	25.433	0.365	0.000	0.007	15.035	0.000	5.329	10.581	0.000	53.340
DAY/HR	3/10	0/ 0	3/10	4/ 7	26/ 9	0/ 0	3/13	4/ 7	0/ 0	4/ 7	24/13	0/ 0	10/ 9
PEAK ENDUSE	11.497	0.000	22.083	6.381	0.000	0.000	0.007	6.529	0.000	0.000	6.842	0.000	
PEAK PCT	21.6	0.0	41.4	12.0	0.0	0.0	0.0	12.2	0.0	0.0	12.8	0.0	
MAR													
KWH	3811.	0.	6354.	795.	81.	0.	3.	1820.	0.	0.	2920.	0.	15782.
MAX KW	12.631	0.000	23.042	17.646	2.267	0.000	0.007	11.738	0.000	0.100	10.599	0.000	54.204
DAY/HR	3/10	0/ 0	3/10	3/ 7	29/11	0/ 0	3/13	3/ 7	0/ 0	10/ 8	3/13	0/ 0	3/11
PEAK ENDUSE	12.631	0.000	23.042	5.165	0.000	0.000	0.007	5.817	0.000	0.000	7.542	0.000	
PEAK PCT	23.3	0.0	42.5	9.5	0.0	0.0	0.0	10.7	0.0	0.0	13.9	0.0	
APR													
KWH	3859.	0.	6488.	278.	289.	0.	3.	1652.	0.	0.	2893.	0.	15462.
MAX KW	12.631	0.000	23.042	18.273	3.861	0.000	0.007	11.490	0.000	0.312	10.477	0.000	52.358
DAY/HR	1/10	0/ 0	1/10	7/ 7	18/11	0/ 0	1/13	7/ 7	0/ 0	7/ 7	7/13	0/ 0	11/14
PEAK ENDUSE	12.631	0.000	23.042	0.000	2.477	0.000	0.007	4.247	0.000	0.000	9.954	0.000	
PEAK PCT	24.1	0.0	44.0	0.0	4.7	0.0	0.0	8.1	0.0	0.0	19.0	0.0	
MAY													
KWH	3811.	0.	6354.	87.	708.	0.	3.	1704.	0.	0.	2759.	0.	15426.
MAX KW	12.631	0.000	23.042	7.381	10.900	0.000	0.007	7.134	0.000	0.000	9.989	0.000	61.544
DAY/HR	1/10	0/ 0	1/10	12/ 7	16/16	0/ 0	1/13	16/16	0/ 0	7/ 7	5/13	0/ 0	16/14
PEAK ENDUSE	12.631	0.000	23.042	0.000	9.650	0.000	0.007	6.738	0.000	0.000	9.476	0.000	
PEAK PCT	20.5	0.0	37.4	0.0	15.7	0.0	0.0	10.9	0.0	0.0	15.4	0.0	
JUN													
KWH	3738.	0.	6261.	11.	1287.	0.	3.	1834.	0.	0.	2565.	0.	15699.
MAX KW	12.631	0.000	23.042	1.206	15.501	0.000	0.007	9.054	0.000	0.000	9.497	0.000	66.960
DAY/HR	2/10	0/ 0	2/10	3/ 7	20/11	0/ 0	2/13	20/11	0/ 0	7/ 7	2/13	0/ 0	20/11
PEAK ENDUSE	12.631	0.000	23.042	0.000	15.501	0.000	0.007	9.054	0.000	0.000	6.725	0.000	
PEAK PCT	18.9	0.0	34.4	0.0	23.1	0.0	0.0	13.5	0.0	0.0	10.0	0.0	
JUL													
KWH	3894.	0.	6532.	0.	2973.	0.	3.	2454.	0.	0.	2543.	0.	18399.
MAX KW	12.631	0.000	23.042	0.063	23.336	0.000	0.007	10.602	0.000	0.000	9.044	0.000	76.653

DAY/HR	1/10	0/ 0	1/10	8/ 7	23/17	0/ 0	1/13	22/11	0/ 0	7/ 7	7/13	0/ 0	23/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	23.336	0.000	0.007	10.505	0.000	0.000	7.131	0.000	
PEAK PCT	16.5	0.0	30.1	0.0	30.4	0.0	0.0	13.7	0.0	0.0	9.3	0.0	
AUG													
KWH	3811.	0.	6354.	0.	2441.	0.	3.	2261.	0.	0.	2419.	0.	17288.
MAX KW	12.631	0.000	23.042	0.130	19.423	0.000	0.007	9.663	0.000	0.000	8.750	0.000	71.080
DAY/HR	1/10	0/ 0	1/10	25/ 7	11/16	0/ 0	1/13	11/16	0/ 0	7/ 7	4/13	0/ 0	11/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	18.950	0.000	0.007	9.532	0.000	0.000	6.918	0.000	
PEAK PCT	17.8	0.0	32.4	0.0	26.7	0.0	0.0	13.4	0.0	0.0	9.7	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-E Energy End-Use Summary for all Electric Meters WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

SEP													
KWH	3738.	0.	6261.	20.	1358.	0.	3.	1859.	0.	0.	2355.	0.	15595.
MAX KW	12.631	0.000	23.042	2.507	15.921	0.000	0.007	8.489	0.000	0.000	8.716	0.000	67.235
DAY/HR	2/10	0/ 0	2/10	29/ 7	19/16	0/ 0	2/13	19/16	0/ 0	7/ 7	2/13	0/ 0	22/14
PEAK ENDUSE	12.631	0.000	23.042	0.000	14.983	0.000	0.007	8.287	0.000	0.000	8.285	0.000	
PEAK PCT	18.8	0.0	34.3	0.0	22.3	0.0	0.0	12.3	0.0	0.0	12.3	0.0	
OCT													
KWH	3894.	0.	6532.	270.	319.	0.	3.	1667.	0.	0.	2503.	0.	15188.
MAX KW	12.631	0.000	23.042	10.720	8.035	0.000	0.007	8.303	0.000	0.081	8.934	0.000	56.898
DAY/HR	1/10	0/ 0	1/10	22/ 7	7/17	0/ 0	1/13	22/ 7	0/ 0	24/ 7	20/13	0/ 0	7/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	8.035	0.000	0.007	6.131	0.000	0.000	7.051	0.000	
PEAK PCT	22.2	0.0	40.5	0.0	14.1	0.0	0.0	10.8	0.0	0.0	12.4	0.0	
NOV													
KWH	3412.	0.	5630.	864.	14.	0.	2.	1681.	0.	2.	2350.	0.	13955.
MAX KW	12.631	0.000	23.042	20.756	1.425	0.000	0.007	12.726	0.000	1.171	9.360	0.000	52.498
DAY/HR	3/10	0/ 0	3/10	28/ 7	7/16	0/ 0	3/13	28/ 7	0/ 0	28/ 7	24/13	0/ 0	28/ 9
PEAK ENDUSE	11.497	0.000	22.083	6.449	0.000	0.000	0.007	6.398	0.000	0.000	6.064	0.000	
PEAK PCT	21.9	0.0	42.1	12.3	0.0	0.0	0.0	12.2	0.0	0.0	11.6	0.0	
DEC													
KWH	3894.	0.	6532.	2016.	0.	0.	3.	2381.	0.	42.	2753.	0.	17621.
MAX KW	12.631	0.000	23.042	28.577	0.020	0.000	0.007	16.063	0.000	10.127	9.861	0.000	65.557
DAY/HR	1/10	0/ 0	1/10	29/ 7	16/17	0/ 0	1/13	29/ 7	0/ 0	29/ 7	29/13	0/ 0	29/ 9
PEAK ENDUSE	11.497	0.000	22.083	15.248	0.000	0.000	0.007	10.291	0.000	0.039	6.391	0.000	
PEAK PCT	17.5	0.0	33.7	23.3	0.0	0.0	0.0	15.7	0.0	0.1	9.7	0.0	
KWH	45061.	0.	75323.	7982.	9473.	0.	33.	23679.	0.	263.	31490.	0.	193303.
MAX KW	12.631	0.000	23.042	32.185	23.336	0.000	0.007	18.314	0.000	44.616	10.599	0.000	101.770
MON/DY	1/ 2	0/ 0	1/ 2	1/ 6	7/23	0/ 0	1/ 2	1/ 6	0/ 0	1/ 6	3/ 3	0/ 0	1/ 6
PEAK ENDUSE	1.682	0.000	2.593	32.185	0.000	0.000	0.007	18.314	0.000	44.616	2.373	0.000	
PEAK PCT	1.7	0.0	2.5	31.6	0.0	0.0	0.0	18.0	0.0	43.8	2.3	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-E Energy End-Use Summary for all Fuel Meters WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FEB													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAR													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
APR													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAY													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUN													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUL													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AUG													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-E Energy End-Use Summary for all Fuel Meters WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SEP													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
OCT													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NOV													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DEC													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	========
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MON/DY	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-F Energy End-Use Summary for Spare Meter WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2694.	0.	3004.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.152	0.000	10.573
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	2/13	1/ 1	0/ 0	0/ 0	27/13	0/ 0	27/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.152	0.000	
PEAK PCT	0.0	0.0	1.6	0.0	0.0	0.0	0.1	2.3	0.0	0.0	96.0	0.0	
FEB													
KWH	0.	0.	115.	0.	0.	0.	2.	163.	0.	0.	2507.	0.	2787.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.415	0.000	10.836
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	3/13	1/ 1	0/ 0	0/ 0	24/13	0/ 0	24/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.415	0.000	
PEAK PCT	0.0	0.0	1.6	0.0	0.0	0.0	0.1	2.2	0.0	0.0	96.1	0.0	
MAR													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2795.	0.	3106.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.434	0.000	10.854
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	3/13	1/ 1	0/ 0	0/ 0	3/13	0/ 0	3/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.434	0.000	
PEAK PCT	0.0	0.0	1.6	0.0	0.0	0.0	0.1	2.2	0.0	0.0	96.1	0.0	
APR													
KWH	0.	0.	123.	0.	0.	0.	3.	174.	0.	0.	2774.	0.	3075.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.313	0.000	10.733
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	7/13	0/ 0	7/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.313	0.000	
PEAK PCT	0.0	0.0	1.6	0.0	0.0	0.0	0.1	2.3	0.0	0.0	96.1	0.0	
MAY													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2641.	0.	2951.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.829	0.000	10.249
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	5/13	0/ 0	5/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.829	0.000	
PEAK PCT	0.0	0.0	1.7	0.0	0.0	0.0	0.1	2.4	0.0	0.0	95.9	0.0	
JUN													
KWH	0.	0.	123.	0.	0.	0.	3.	174.	0.	0.	2457.	0.	2758.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.343	0.000	9.764
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	2/13	1/ 2	0/ 0	0/ 0	2/13	0/ 0	2/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.343	0.000	
PEAK PCT	0.0	0.0	1.8	0.0	0.0	0.0	0.1	2.5	0.0	0.0	95.7	0.0	
JUL													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2439.	0.	2750.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.902	0.000	9.323

DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	7/13	0/ 0	7/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.902	0.000	
PEAK PCT	0.0	0.0	1.8	0.0	0.0	0.0	0.1	2.6	0.0	0.0	95.5	0.0	
AUG													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2321.	0.	2631.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.617	0.000	9.037
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	4/13	0/ 0	4/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.617	0.000	
PEAK PCT	0.0	0.0	1.9	0.0	0.0	0.0	0.1	2.7	0.0	0.0	95.3	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-F Energy End-Use Summary for Spare Meter WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SEP													
KWH	0.	0.	123.	0.	0.	0.	3.	174.	0.	0.	2261.	0.	2562.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.586	0.000	9.006
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	2/13	1/ 2	0/ 0	0/ 0	2/13	0/ 0	2/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.586	0.000	
PEAK PCT	0.0	0.0	1.9	0.0	0.0	0.0	0.1	2.7	0.0	0.0	95.3	0.0	
OCT													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2405.	0.	2715.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.802	0.000	9.222
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	20/13	0/ 0	20/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	8.802	0.000	
PEAK PCT	0.0	0.0	1.9	0.0	0.0	0.0	0.1	2.6	0.0	0.0	95.4	0.0	
NOV													
KWH	0.	0.	123.	0.	0.	0.	2.	174.	0.	0.	2249.	0.	2549.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.220	0.000	9.640
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	3/13	1/ 2	0/ 0	0/ 0	24/13	0/ 0	24/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.220	0.000	
PEAK PCT	0.0	0.0	1.8	0.0	0.0	0.0	0.1	2.5	0.0	0.0	95.6	0.0	
DEC													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	2643.	0.	2953.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.709	0.000	10.130
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	1/13	1/ 1	0/ 0	0/ 0	29/13	0/ 0	29/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	9.709	0.000	
PEAK PCT	0.0	0.0	1.7	0.0	0.0	0.0	0.1	2.4	0.0	0.0	95.8	0.0	
KWH	0.	0.	1500.	0.	0.	0.	33.	2122.	0.	0.	30186.	0.	33841.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.434	0.000	10.854
MON/DY	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	1/ 2	1/ 1	0/ 0	0/ 0	3/ 3	0/ 0	3/ 3
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	10.434	0.000	
PEAK PCT	0.0	0.0	1.6	0.0	0.0	0.0	0.1	2.2	0.0	0.0	96.1	0.0	

YEARLY TRANSFORMER LOSSES = 0.0 KWH

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-F Energy End-Use Summary for EM1 WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
KWH	3772.	0.	6178.	2285.	0.	0.	0.	2281.	0.	203.	119.	0.	14838.
MAX KW	12.631	0.000	22.871	32.185	0.128	0.000	0.000	18.072	0.000	44.616	0.167	0.000	99.139
DAY/HR	2/10	0/ 0	2/10	6/ 7	29/16	0/ 0	0/ 0	6/ 7	0/ 0	6/ 7	27/ 5	0/ 0	6/ 7
PEAK ENDUSE	1.682	0.000	2.421	32.185	0.000	0.000	0.000	18.072	0.000	44.616	0.162	0.000	
PEAK PCT	1.7	0.0	2.4	32.5	0.0	0.0	0.0	18.2	0.0	45.0	0.2	0.0	
FEB													
KWH	3426.	0.	5606.	1355.	3.	0.	0.	1741.	0.	16.	111.	0.	12258.
MAX KW	12.631	0.000	22.871	25.433	0.365	0.000	0.000	14.793	0.000	5.329	0.172	0.000	49.824
DAY/HR	3/10	0/ 0	3/10	4/ 7	26/ 9	0/ 0	0/ 0	4/ 7	0/ 0	4/ 7	24/ 5	0/ 0	4/ 7
PEAK ENDUSE	1.682	0.000	2.421	25.433	0.000	0.000	0.000	14.793	0.000	5.329	0.166	0.000	
PEAK PCT	3.4	0.0	4.9	51.0	0.0	0.0	0.0	29.7	0.0	10.7	0.3	0.0	
MAR													
KWH	3811.	0.	6226.	795.	81.	0.	0.	1639.	0.	0.	124.	0.	12676.
MAX KW	12.631	0.000	22.871	17.646	2.267	0.000	0.000	11.496	0.000	0.100	0.172	0.000	46.407
DAY/HR	3/10	0/ 0	3/10	3/ 7	29/11	0/ 0	0/ 0	3/ 7	0/ 0	10/ 8	3/ 5	0/ 0	3/11
PEAK ENDUSE	12.631	0.000	22.871	5.165	0.000	0.000	0.000	5.575	0.000	0.000	0.165	0.000	
PEAK PCT	27.2	0.0	49.3	11.1	0.0	0.0	0.0	12.0	0.0	0.0	0.4	0.0	
APR													
KWH	3859.	0.	6365.	278.	289.	0.	0.	1478.	0.	0.	119.	0.	12388.
MAX KW	12.631	0.000	22.871	18.273	3.861	0.000	0.000	11.248	0.000	0.312	0.171	0.000	44.122
DAY/HR	1/10	0/ 0	1/10	7/ 7	18/11	0/ 0	0/ 0	7/ 7	0/ 0	7/ 7	7/ 5	0/ 0	18/11
PEAK ENDUSE	12.631	0.000	22.871	0.000	3.861	0.000	0.000	4.600	0.000	0.000	0.159	0.000	
PEAK PCT	28.6	0.0	51.8	0.0	8.7	0.0	0.0	10.4	0.0	0.0	0.4	0.0	
MAY													
KWH	3811.	0.	6226.	87.	708.	0.	0.	1524.	0.	0.	118.	0.	12475.
MAX KW	12.631	0.000	22.871	7.381	10.900	0.000	0.000	6.892	0.000	0.000	0.166	0.000	53.444
DAY/HR	1/10	0/ 0	1/10	12/ 7	16/16	0/ 0	0/ 0	16/16	0/ 0	0/ 0	5/ 5	0/ 0	16/16
PEAK ENDUSE	12.631	0.000	22.871	0.000	10.900	0.000	0.000	6.892	0.000	0.000	0.151	0.000	
PEAK PCT	23.6	0.0	42.8	0.0	20.4	0.0	0.0	12.9	0.0	0.0	0.3	0.0	
JUN													
KWH	3738.	0.	6138.	11.	1287.	0.	0.	1660.	0.	0.	108.	0.	12941.
MAX KW	12.631	0.000	22.871	1.206	15.501	0.000	0.000	8.812	0.000	0.000	0.161	0.000	59.956
DAY/HR	2/10	0/ 0	2/10	3/ 7	20/11	0/ 0	0/ 0	20/11	0/ 0	0/ 0	2/ 5	0/ 0	20/11
PEAK ENDUSE	12.631	0.000	22.871	0.000	15.501	0.000	0.000	8.812	0.000	0.000	0.142	0.000	
PEAK PCT	21.1	0.0	38.1	0.0	25.9	0.0	0.0	14.7	0.0	0.0	0.2	0.0	
JUL													
KWH	3894.	0.	6404.	0.	2973.	0.	0.	2274.	0.	0.	104.	0.	15649.
MAX KW	12.631	0.000	22.871	0.063	23.336	0.000	0.000	10.359	0.000	0.000	0.149	0.000	69.233

DAY/HR	1/10	0/ 0	1/10	8/ 7	23/17	0/ 0	0/ 0	22/11	0/ 0	0/ 0	7/ 5	0/ 0	23/17
PEAK ENDUSE	12.631	0.000	22.871	0.000	23.336	0.000	0.000	10.263	0.000	0.000	0.132	0.000	
PEAK PCT	18.2	0.0	33.0	0.0	33.7	0.0	0.0	14.8	0.0	0.0	0.2	0.0	
AUG													
KWH	3811.	0.	6226.	0.	2441.	0.	0.	2081.	0.	0.	98.	0.	14657.
MAX KW	12.631	0.000	22.871	0.130	19.423	0.000	0.000	9.421	0.000	0.000	0.139	0.000	64.475
DAY/HR	1/10	0/ 0	1/10	25/ 7	11/16	0/ 0	0/ 0	11/16	0/ 0	0/ 0	4/ 5	0/ 0	11/16
PEAK ENDUSE	12.631	0.000	22.871	0.000	19.423	0.000	0.000	9.421	0.000	0.000	0.129	0.000	
PEAK PCT	19.6	0.0	35.5	0.0	30.1	0.0	0.0	14.6	0.0	0.0	0.2	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-F Energy End-Use Summary for EM1 WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

SEP													
KWH	3738.	0.	6138.	20.	1358.	0.	0.	1685.	0.	0.	94.	0.	13033.
MAX KW	12.631	0.000	22.871	2.507	15.921	0.000	0.000	8.246	0.000	0.000	0.136	0.000	59.791
DAY/HR	2/10	0/ 0	2/10	29/ 7	19/16	0/ 0	0/ 0	19/16	0/ 0	0/ 0	2/ 5	0/ 0	19/16
PEAK ENDUSE	12.631	0.000	22.871	0.000	15.921	0.000	0.000	8.246	0.000	0.000	0.123	0.000	
PEAK PCT	21.1	0.0	38.3	0.0	26.6	0.0	0.0	13.8	0.0	0.0	0.2	0.0	
OCT													
KWH	3894.	0.	6404.	270.	319.	0.	0.	1487.	0.	0.	98.	0.	12473.
MAX KW	12.631	0.000	22.871	10.720	8.035	0.000	0.000	8.061	0.000	0.081	0.139	0.000	49.552
DAY/HR	1/10	0/ 0	1/10	22/ 7	7/17	0/ 0	0/ 0	22/ 7	0/ 0	24/ 7	20/ 5	0/ 0	7/17
PEAK ENDUSE	12.631	0.000	22.871	0.000	8.035	0.000	0.000	5.889	0.000	0.000	0.126	0.000	
PEAK PCT	25.5	0.0	46.2	0.0	16.2	0.0	0.0	11.9	0.0	0.0	0.3	0.0	
NOV													
KWH	3412.	0.	5507.	864.	14.	0.	0.	1506.	0.	2.	101.	0.	11406.
MAX KW	12.631	0.000	22.871	20.756	1.425	0.000	0.000	12.484	0.000	1.171	0.148	0.000	46.153
DAY/HR	3/10	0/ 0	3/10	28/ 7	7/16	0/ 0	0/ 0	28/ 7	0/ 0	28/ 7	30/24	0/ 0	28/ 9
PEAK ENDUSE	11.497	0.000	21.912	6.449	0.000	0.000	0.000	6.155	0.000	0.000	0.140	0.000	
PEAK PCT	24.9	0.0	47.5	14.0	0.0	0.0	0.0	13.3	0.0	0.0	0.3	0.0	
DEC													
KWH	3894.	0.	6404.	2016.	0.	0.	0.	2201.	0.	42.	111.	0.	14668.
MAX KW	12.631	0.000	22.871	28.577	0.020	0.000	0.000	15.821	0.000	10.127	0.158	0.000	58.897
DAY/HR	1/10	0/ 0	1/10	29/ 7	16/17	0/ 0	0/ 0	29/ 7	0/ 0	29/ 7	29/ 5	0/ 0	29/ 9
PEAK ENDUSE	11.497	0.000	21.912	15.248	0.000	0.000	0.000	10.049	0.000	0.039	0.152	0.000	
PEAK PCT	19.5	0.0	37.2	25.9	0.0	0.0	0.0	17.1	0.0	0.1	0.3	0.0	
	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	========
KWH	45061.	0.	73822.	7982.	9473.	0.	0.	21557.	0.	263.	1304.	0.	159463.
MAX KW	12.631	0.000	22.871	32.185	23.336	0.000	0.000	18.072	0.000	44.616	0.172	0.000	99.139
MON/DY	1/ 2	0/ 0	1/ 2	1/ 6	7/23	0/ 0	0/ 0	1/ 6	0/ 0	1/ 6	2/24	0/ 0	1/ 6
PEAK ENDUSE	1.682	0.000	2.421	32.185	0.000	0.000	0.000	18.072	0.000	44.616	0.162	0.000	
PEAK PCT	1.7	0.0	2.4	32.5	0.0	0.0	0.0	18.2	0.0	45.0	0.2	0.0	

YEARLY TRANSFORMER LOSSES = 0.0 KWH

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-F Energy End-Use Summary for FM1 WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FEB													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAR													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
APR													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAY													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUN													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUL													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AUG													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-F Energy End-Use Summary for FM1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SEP													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
OCT													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NOV													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DEC													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	========
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MON/DY	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- BEPS Building Energy Performance WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
Spar ELECTRICITY													
MBTU	0.0	0.0	5.1	0.0	0.0	0.0	0.1	7.2	0.0	0.0	103.0	0.0	115.5
EM1 ELECTRICITY													
MBTU	153.8	0.0	252.0	27.2	32.3	0.0	0.0	73.6	0.0	0.9	4.5	0.0	544.2
FM1 NATURAL-GAS													
MBTU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU	153.8	0.0	257.1	27.2	32.3	0.0	0.1	80.8	0.0	0.9	107.5	0.0	659.7

TOTAL SITE ENERGY 659.74 MBTU 20.8 KBTU/SQFT-YR GROSS-AREA 20.8 KBTU/SQFT-YR NET-AREA
TOTAL SOURCE ENERGY 1979.22 MBTU 62.3 KBTU/SQFT-YR GROSS-AREA 62.3 KBTU/SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 0.07
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 3
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 3

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- BEPU Building Utility Performance WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
Spar ELECTRICITY													
KWH	0.	0.	1500.	0.	0.	0.	33.	2122.	0.	0.	30186.	0.	33841.
EM1 ELECTRICITY													
KWH	45061.	0.	73822.	7982.	9473.	0.	0.	21557.	0.	263.	1304.	0.	159463.
FM1 NATURAL-GAS													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 193304. KWH 6.085 KWH /SQFT-YR GROSS-AREA 6.085 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 0.07
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 3
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 3

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for DHW-Loop WEATHER FILE- SEATTLE BOEING FI WA

HEATING CAPACITY (MBTU/HR)	COOLING CAPACITY (MBTU/HR)	LOOP FLOW (GPM)	TOTAL HEAD (FT)	SUPPLY UA PRODUCT (BTU/HR-F)	SUPPLY LOSS DT (F)	RETURN UA PRODUCT (BTU/HR-F)	RETURN LOSS DT (F)	LOOP VOLUME (GAL)	FLUID HEAT CAPACITY (BTU/LB-F)
-0.239	0.000	1.4	23.4	0.0	0.00	0.0	0.00	2.1	1.00

MON		COIL LOAD (MBTU) (KBTU/HR)	PIPE GAIN (MBTU) (KBTU/HR)	NET LOAD (MBTU) (KBTU/HR)	OVERLOAD (MBTU) (KBTU/HR)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-7.312	0.000	-7.309	0.000	HEAT 660	84	0	0	0	0	0	0	0	0	0	744	
	PEAK	-32.114	0.000	-32.104	0.000	FLOW 350	10	0	0	58	112	25	105	42	21	21	744	
	DAY/HR	2/13	0/ 0	2/13	0/ 0													
FEB	SUM	-6.818	0.000	-6.815	0.000	HEAT 596	76	0	0	0	0	0	0	0	0	0	672	
	PEAK	-32.957	0.000	-32.947	0.000	FLOW 311	9	0	0	54	104	23	95	38	19	19	672	
	DAY/HR	3/13	0/ 0	3/13	0/ 0													
MAR	SUM	-7.603	0.000	-7.599	0.000	HEAT 660	84	0	0	0	0	0	0	0	0	0	744	
	PEAK	-33.025	0.000	-33.015	0.000	FLOW 338	10	0	0	62	119	26	105	42	21	21	744	
	DAY/HR	3/13	0/ 0	3/13	0/ 0													
APR	SUM	-7.607	0.000	-7.603	0.000	HEAT 632	88	0	0	0	0	0	0	0	0	0	720	
	PEAK	-32.624	0.000	-32.615	0.000	FLOW 312	8	0	0	60	116	26	110	44	22	22	720	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
MAY	SUM	-7.140	0.000	-7.136	0.000	HEAT 660	84	0	0	0	0	0	0	0	0	0	744	
	PEAK	-31.018	0.000	-31.009	0.000	FLOW 338	10	0	0	62	119	26	105	42	21	21	744	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
JUN	SUM	-6.641	0.000	-6.637	0.000	HEAT 657	63	0	0	0	0	0	0	0	0	0	720	
	PEAK	-29.420	0.000	-29.410	0.000	FLOW 327	9	0	0	58	112	25	105	42	21	21	720	
	DAY/HR	2/13	0/ 0	2/13	0/ 0													
JUL	SUM	-6.592	0.000	-6.588	0.000	HEAT 700	44	0	0	0	0	0	0	0	0	0	744	
	PEAK	-28.034	0.000	-28.024	0.000	FLOW 335	9	0	0	60	116	26	110	44	22	22	744	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
AUG	SUM	-6.251	0.000	-6.247	0.000	HEAT 702	42	0	0	0	0	0	0	0	0	0	744	
	PEAK	-27.156	0.000	-27.147	0.000	FLOW 338	10	0	0	62	119	26	105	42	21	21	744	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
SEP	SUM	-6.113	0.000	-6.110	0.000	HEAT 678	42	0	0	0	0	0	0	0	0	0	720	
	PEAK	-27.082	0.000	-27.072	0.000	FLOW 327	9	0	0	58	112	25	105	42	21	21	720	
	DAY/HR	2/13	0/ 0	2/13	0/ 0													

OCT	SUM	-6.536	0.000	-6.532	0.000	HEAT	700	44	0	0	0	0	0	0	0	0	0	744
	PEAK	-27.796	0.000	-27.786	0.000	FLOW	335	9	0	0	60	116	26	110	44	22	22	744
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
NOV	SUM	-6.001	0.000	-5.998	0.000	HEAT	666	54	0	0	0	0	0	0	0	0	0	720
	PEAK	-29.146	0.000	-29.136	0.000	FLOW	360	12	0	0	56	107	23	90	36	18	18	720
	DAY/HR	3/13	0/ 0	3/13	0/ 0													
DEC	SUM	-7.218	0.000	-7.214	0.000	HEAT	656	88	0	0	0	0	0	0	0	0	0	744
	PEAK	-30.696	0.000	-30.686	0.000	FLOW	335	9	0	0	60	116	26	110	44	22	22	744
	DAY/HR	1/13	0/ 0	1/13	0/ 0													

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REPORT- PS-H Loads and Energy Usage for DHW-Loop WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

Yr	SUM	-81.833	0.000	-81.788	0.000	HEAT7967	793	0	0	0	0	0	0	0	0	0	8760
	PEAK	-33.025	0.000	-33.015	0.000	FLOW4006	114	0	0	710	1368	303	1255	502	251	251	8760
	MON/DAY	3/ 3	0/ 0	3/ 3	0/ 0												

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for DHW Circ Pump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
DHW-Loop PRIMARY LOOP	0.5	25.8	0.0	VAR-SPEED	0.008	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	ENERGY USE SUM (KWH)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
	PEAK	(KBTU/HR)	(KW)													
JAN	SUM	0.0	2.7	FLOW	0	0	0	0	0	0	0	0	0	384	0	384
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	384	0	384
	DAY/HR	2/13	2/13	ELEC	0	0	0	0	0	0	0	0	384	0	0	384
FEB	SUM	0.0	2.5	FLOW	0	0	0	0	0	0	0	0	0	352	0	352
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	352	0	352
	DAY/HR	3/13	3/13	ELEC	0	0	0	0	0	0	0	0	352	0	0	352
MAR	SUM	0.0	2.8	FLOW	0	0	0	0	0	0	0	0	0	396	0	396
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	396	0	396
	DAY/HR	3/13	3/13	ELEC	0	0	0	0	0	0	0	0	396	0	0	396
APR	SUM	0.0	2.8	FLOW	0	0	0	0	0	0	0	0	0	400	0	400
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	400	0	400
	DAY/HR	1/13	1/13	ELEC	0	0	0	0	0	0	0	0	400	0	0	400
MAY	SUM	0.0	2.8	FLOW	0	0	0	0	0	0	0	0	0	396	0	396
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	396	0	396
	DAY/HR	1/13	1/13	ELEC	0	0	0	0	0	0	0	0	396	0	0	396
JUN	SUM	0.0	2.7	FLOW	0	0	0	0	0	0	0	0	0	384	0	384
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	384	0	384
	DAY/HR	2/13	2/13	ELEC	0	0	0	0	0	0	0	0	384	0	0	384
JUL	SUM	0.0	2.8	FLOW	0	0	0	0	0	0	0	0	0	400	0	400
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	400	0	400
	DAY/HR	1/13	1/13	ELEC	0	0	0	0	0	0	0	0	400	0	0	400
AUG	SUM	0.0	2.8	FLOW	0	0	0	0	0	0	0	0	0	396	0	396
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	396	0	396
	DAY/HR	1/13	1/13	ELEC	0	0	0	0	0	0	0	0	396	0	0	396
SEP	SUM	0.0	2.7	FLOW	0	0	0	0	0	0	0	0	0	384	0	384
	PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	384	0	384

DAY/HR	2/13	2/13	ELEC	0	0	0	0	0	0	0	0	384	0	0	384
OCT SUM	0.0	2.8	FLOW	0	0	0	0	0	0	0	0	0	400	0	400
PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	400	0	400
DAY/HR	1/13	1/13	ELEC	0	0	0	0	0	0	0	0	400	0	0	400
NOV SUM	0.0	2.5	FLOW	0	0	0	0	0	0	0	0	0	348	0	348
PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	348	0	348
DAY/HR	3/13	3/13	ELEC	0	0	0	0	0	0	0	0	348	0	0	348

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REPORT- PS-H Loads and Energy Usage for DHW Circ Pump WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

DEC	SUM	0.0	2.8			FLOW	0	0	0	0	0	0	0	0	0	400	0	400
	PEAK	0.010	0.007			RPM	0	0	0	0	0	0	0	0	0	400	0	400
	DAY/HR	1/13	1/13			ELEC	0	0	0	0	0	0	0	0	400	0	0	400
Yr	SUM	0.0	32.8			FLOW	0	0	0	0	0	0	0	0	0	4640	0	4640
	PEAK	0.010	0.007			RPM	0	0	0	0	0	0	0	0	0	4640	0	4640
	MON/DAY	1/ 2	1/ 2			ELEC	0	0	0	0	0	0	0	0	4640	0	0	4640

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for HP1-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	DHW-Loop	-0.015	0.7	1.000	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-2.436	897.953	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.701	3.384	0.000	0.000	ELEC	21	393	90	51	63	63	21	42	0	0	0	744
	DAY/HR	2/13	27/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	-2.272	835.709	0.000	0.000	LOAD	501	171	0	0	0	0	0	0	0	0	0	672
	PEAK	-10.982	3.472	0.000	0.000	ELEC	19	351	81	50	57	38	38	38	0	0	0	672
	DAY/HR	4/13	24/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	-2.533	931.789	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-11.005	3.478	0.000	0.000	ELEC	21	384	93	57	63	42	42	42	0	0	0	744
	DAY/HR	3/13	3/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	-2.534	924.676	0.000	0.000	LOAD	522	198	0	0	0	0	0	0	0	0	0	720
	PEAK	-10.872	3.438	0.000	0.000	ELEC	22	354	90	56	66	44	44	44	0	0	0	720
	DAY/HR	4/13	7/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	-2.379	880.288	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.336	3.276	0.000	0.000	ELEC	21	389	93	52	63	63	42	21	0	0	0	744
	DAY/HR	19/13	5/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	-2.212	819.068	0.000	0.000	LOAD	552	168	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.803	3.114	0.000	0.000	ELEC	93	301	112	25	105	42	42	0	0	0	0	720
	DAY/HR	2/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	-2.196	813.081	0.000	0.000	LOAD	612	132	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.341	2.967	0.000	0.000	ELEC	112	293	119	22	110	44	44	0	0	0	0	744
	DAY/HR	2/13	7/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	-2.082	773.537	0.000	0.000	LOAD	618	126	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.049	2.872	0.000	0.000	ELEC	116	299	119	62	64	42	42	0	0	0	0	744
	DAY/HR	4/13	4/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	-2.037	753.743	0.000	0.000	LOAD	594	126	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.024	2.862	0.000	0.000	ELEC	114	284	112	63	65	40	42	0	0	0	0	720
	DAY/HR	5/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	-2.177	801.630	0.000	0.000	LOAD	612	132	0	0	0	0	0	0	0	0	0	744

PEAK	-9.262	2.934	0.000	0.000	ELEC	112	296	116	44	88	44	44	0	0	0	0	744
DAY/HR	1/13	20/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV SUM	-1.999	749.752	0.000	0.000	LOAD	594	126	0	0	0	0	0	0	0	0	0	720
PEAK	-9.712	3.073	0.000	0.000	ELEC	145	283	107	23	90	36	36	0	0	0	0	720
DAY/HR	6/13	24/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC SUM	-2.405	880.864	0.000	0.000	LOAD	546	198	0	0	0	0	0	0	0	0	0	744
PEAK	-10.229	3.236	0.000	0.000	ELEC	22	382	116	26	88	53	35	22	0	0	0	744
DAY/HR	2/13	29/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for HP1-DHW WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

Yr	SUM	-27.263	10062.089	0.000	0.000	LOAD	6816	1944	0	0	0	0	0	0	0	0	0	8760
	PEAK	-11.005	3.478	0.000	0.000	ELEC	818	4009	1248	531	922	551	472	209	0	0	0	8760
	MON/DAY	3/ 3	3/ 3	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	-0.015	4.512	1.0000	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.015	1.00	0.70	43.78	150.00
Ambient					57.27

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for HP2-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	DHW-Loop	-0.015	0.7	1.000	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-2.436	897.953	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.701	3.384	0.000	0.000	ELEC	21	393	90	51	63	63	21	42	0	0	0	744
	DAY/HR	2/13	27/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	-2.272	835.709	0.000	0.000	LOAD	501	171	0	0	0	0	0	0	0	0	0	672
	PEAK	-10.982	3.472	0.000	0.000	ELEC	19	351	81	50	57	38	38	38	0	0	0	672
	DAY/HR	4/13	24/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	-2.533	931.789	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-11.005	3.478	0.000	0.000	ELEC	21	384	93	57	63	42	42	42	0	0	0	744
	DAY/HR	3/13	3/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	-2.534	924.676	0.000	0.000	LOAD	522	198	0	0	0	0	0	0	0	0	0	720
	PEAK	-10.872	3.438	0.000	0.000	ELEC	22	354	90	56	66	44	44	44	0	0	0	720
	DAY/HR	4/13	7/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	-2.379	880.288	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.336	3.276	0.000	0.000	ELEC	21	389	93	52	63	63	42	21	0	0	0	744
	DAY/HR	19/13	5/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	-2.212	819.068	0.000	0.000	LOAD	552	168	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.803	3.114	0.000	0.000	ELEC	93	301	112	25	105	42	42	0	0	0	0	720
	DAY/HR	2/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	-2.196	813.081	0.000	0.000	LOAD	612	132	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.341	2.967	0.000	0.000	ELEC	112	293	119	22	110	44	44	0	0	0	0	744
	DAY/HR	2/13	7/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	-2.082	773.537	0.000	0.000	LOAD	618	126	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.049	2.872	0.000	0.000	ELEC	116	299	119	62	64	42	42	0	0	0	0	744
	DAY/HR	4/13	4/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	-2.037	753.743	0.000	0.000	LOAD	594	126	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.024	2.862	0.000	0.000	ELEC	114	284	112	63	65	40	42	0	0	0	0	720
	DAY/HR	5/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	-2.177	801.630	0.000	0.000	LOAD	612	132	0	0	0	0	0	0	0	0	0	744

PEAK	-9.262	2.934	0.000	0.000	ELEC	112	296	116	44	88	44	44	0	0	0	0	744
DAY/HR	1/13	20/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV SUM	-1.999	749.752	0.000	0.000	LOAD	594	126	0	0	0	0	0	0	0	0	0	720
PEAK	-9.712	3.073	0.000	0.000	ELEC	145	283	107	23	90	36	36	0	0	0	0	720
DAY/HR	6/13	24/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC SUM	-2.405	880.864	0.000	0.000	LOAD	546	198	0	0	0	0	0	0	0	0	0	744
PEAK	-10.229	3.236	0.000	0.000	ELEC	22	382	116	26	88	53	35	22	0	0	0	744
DAY/HR	2/13	29/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for HP2-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr	SUM	-27.263	10062.089	0.000	0.000	LOAD	6816	1944	0	0	0	0	0	0	0	0	0	8760
	PEAK	-11.005	3.478	0.000	0.000	ELEC	818	4009	1248	531	922	551	472	209	0	0	0	8760
	MON/DAY	3/ 3	3/ 3	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	-0.015	4.512	1.0000	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.015	1.00	0.70	43.78	150.00
Ambient					57.27

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for HP3-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	DHW-Loop	-0.015	0.7	1.000	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-2.436	897.953	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.701	3.384	0.000	0.000	ELEC	21	393	90	51	63	63	21	42	0	0	0	744
	DAY/HR	2/13	27/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	-2.272	835.709	0.000	0.000	LOAD	501	171	0	0	0	0	0	0	0	0	0	672
	PEAK	-10.982	3.472	0.000	0.000	ELEC	19	351	81	50	57	38	38	38	0	0	0	672
	DAY/HR	4/13	24/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	-2.533	931.789	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-11.005	3.478	0.000	0.000	ELEC	21	384	93	57	63	42	42	42	0	0	0	744
	DAY/HR	3/13	3/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	-2.534	924.676	0.000	0.000	LOAD	522	198	0	0	0	0	0	0	0	0	0	720
	PEAK	-10.872	3.438	0.000	0.000	ELEC	22	354	90	56	66	44	44	44	0	0	0	720
	DAY/HR	4/13	7/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	-2.379	880.288	0.000	0.000	LOAD	555	189	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.336	3.276	0.000	0.000	ELEC	21	389	93	52	63	63	42	21	0	0	0	744
	DAY/HR	19/13	5/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	-2.212	819.068	0.000	0.000	LOAD	552	168	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.803	3.114	0.000	0.000	ELEC	93	301	112	25	105	42	42	0	0	0	0	720
	DAY/HR	2/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	-2.196	813.081	0.000	0.000	LOAD	612	132	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.341	2.967	0.000	0.000	ELEC	112	293	119	22	110	44	44	0	0	0	0	744
	DAY/HR	2/13	7/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	-2.082	773.537	0.000	0.000	LOAD	618	126	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.049	2.872	0.000	0.000	ELEC	116	299	119	62	64	42	42	0	0	0	0	744
	DAY/HR	4/13	4/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	-2.037	753.743	0.000	0.000	LOAD	594	126	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.024	2.862	0.000	0.000	ELEC	114	284	112	63	65	40	42	0	0	0	0	720
	DAY/HR	5/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	-2.177	801.630	0.000	0.000	LOAD	612	132	0	0	0	0	0	0	0	0	0	744

PEAK	-9.262	2.934	0.000	0.000	ELEC	112	296	116	44	88	44	44	0	0	0	0	744
DAY/HR	1/13	20/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV SUM	-1.999	749.752	0.000	0.000	LOAD	594	126	0	0	0	0	0	0	0	0	0	720
PEAK	-9.712	3.073	0.000	0.000	ELEC	145	283	107	23	90	36	36	0	0	0	0	720
DAY/HR	6/13	24/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC SUM	-2.405	880.864	0.000	0.000	LOAD	546	198	0	0	0	0	0	0	0	0	0	744
PEAK	-10.229	3.236	0.000	0.000	ELEC	22	382	116	26	88	53	35	22	0	0	0	744
DAY/HR	2/13	29/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for HP3-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	-27.263	10062.089	0.000	0.000	LOAD	6816	1944	0	0	0	0	0	0	0	0	0	8760
PEAK	-11.005	3.478	0.000	0.000	ELEC	818	4009	1248	531	922	551	472	209	0	0	0	8760
MON/DAY	3/ 3	3/ 3	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	-0.015	4.512	1.0000	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.015	1.00	0.70	43.78	150.00
Ambient					57.27

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for Elec-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	DHW-Loop	-0.012	0.5	1.000	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	118.737	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.167	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	27/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	0.000	111.074	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.172	0.000	0.000	ELEC	672	0	0	0	0	0	0	0	0	0	0	672
	DAY/HR	0/ 0	24/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	0.000	124.187	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.172	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	3/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	0.000	118.847	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.171	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	7/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	0.000	117.900	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.166	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	5/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	0.000	107.521	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.161	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	2/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	0.000	104.246	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.149	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	7/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	0.000	97.980	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.139	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	4/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	0.000	93.748	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.136	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	2/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	0.000	98.271	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

	PEAK	0.000	0.139	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	20/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV	SUM	0.000	100.689	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.148	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	30/24	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC	SUM	0.000	110.906	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.158	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	29/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

REPORT- PS-H Loads and Energy Usage for Elec-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr	SUM	0.000	1304.107	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.172	0.000	0.000	ELEC	8760	0	0	0	0	0	0	0	0	0	0	8760
	MON/DAY	0/ 0	2/24	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	-0.012	3.516	1.0000	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.012	1.00	0.55	43.78	120.00
Ambient					57.27

Metropole DOE-2.3-50h 10/14/2020 11:03:42 BDL RUN 3

HOURLY REPORT- Hourly Report HVAC WEATHER FILE- SEATTLE BOEING FI WA Pg: 1 - 1

MMDDHH	EM1 LIGHT END USE KWH	EM1 TASK END USE KWH	EM1 EQUIP END USE KWH	EM1 HEAT END USE KWH	EM1 COOL END USE KWH	EM1 HTREJ END USE KWH	EM1 AUX END USE KWH	EM1 VENT END USE KWH	EM1 REFG END USE KWH	EM1 SUPP END USE KWH
	----(1)	----(2)	----(3)	----(4)	----(5)	----(6)	----(7)	----(8)	----(9)	----(10)
YEARLY SUMMARY										
MN	0.922	0.000	1.271	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MX	12.631	0.000	22.871	32.185	23.336	0.000	0.000	18.072	0.000	44.616
SM	45060.672	0.000	73822.547	7981.829	9473.344	0.000	0.000	21556.682	0.000	263.341
AV	5.144	0.000	8.427	0.911	1.081	0.000	0.000	2.461	0.000	0.030

MMDDHH	EM1 DHW END USE KWH	EM1 EXT END USE KWH	EM1 TOTAL USAGE KWH	FM1 LIGHT END USE BTU	FM1 TASK END USE BTU	FM1 EQUIP END USE BTU	FM1 HEAT END USE BTU	FM1 COOL END USE BTU	FM1 HTREJ END USE BTU	FM1 AUX END USE BTU	FM1 VENT END USE BTU
	----(11)	----(12)	----(20)	----(1)	----(2)	----(3)	----(4)	----(5)	----(6)	----(7)	----(8)
YEARLY SUMMARY											
MN	0.122	0.000	2.321	0.	0.	0.	0.	0.	0.	0.	0.
MX	0.172	0.000	99.139	0.	0.	0.	0.	0.	0.	0.	0.
SM	1304.107	0.000	159462.500	0.	0.	0.	0.	0.	0.	0.	0.
AV	0.149	0.000	18.203	0.	0.	0.	0.	0.	0.	0.	0.

MMDDHH	FM1 REFG END USE BTU	FM1 SUPP END USE BTU	FM1 DHW END USE BTU	FM1 EXT END USE BTU	FM1 TOTAL USAGE BTU
	----(9)	----(10)	----(11)	----(12)	----(20)
YEARLY SUMMARY					
MN	0.	0.	0.	0.	0.
MX	0.	0.	0.	0.	0.
SM	0.	0.	0.	0.	0.
AV	0.	0.	0.	0.	0.

Proposed Design

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-B Summary of Spaces WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF SPACES 84 EXTERIOR 50 INTERIOR 34

SPACE	SPACE*FLOOR MULTIPLIER	SPACE TYPE	AZIM	LIGHTS (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	ACH	AREA (SQFT)	VOLUME (CUFT)
Spaces on floor: L1Ground Flr										
L1SW Perim Spc (G.SW1)	1.0	EXT	-30.6	0.67	13.2	0.50	AIR-CHANGE	0.20	989.5	18503.2
L1Core Spc (G.C2)	1.0	INT	0.0	0.34	0.4	0.78	AIR-CHANGE	0.00	99.0	1851.3
L1West Perim Spc (G.W3)	1.0	EXT	0.0	0.37	0.7	0.75	AIR-CHANGE	0.21	179.2	3351.0
L1WNW Perim Spc (G.WNW4)	1.0	EXT	181.0	0.36	1.2	0.75	AIR-CHANGE	0.42	337.4	6309.9
L1Core Spc (G.C5)	1.0	INT	0.0	0.36	0.4	0.78	AIR-CHANGE	0.00	120.0	2244.0
L1Core Spc (G.C6)	1.0	INT	0.0	0.67	4.1	0.53	AIR-CHANGE	0.00	304.0	5684.8
L1North Perim Spc (G.N7)	1.0	EXT	92.2	0.34	1.0	0.75	AIR-CHANGE	0.19	276.3	5166.9
L1SSE Perim Spc (G.SSE8)	1.0	EXT	0.0	0.53	2.3	0.75	AIR-CHANGE	0.10	636.0	11893.2
L1Core Spc (G.C9)	1.0	INT	0.0	0.36	0.5	0.78	AIR-CHANGE	0.00	124.0	2318.8
L1Core Spc (G.C10)	1.0	INT	0.0	0.00	0.0	0.03	AIR-CHANGE	0.00	200.0	3740.0
L1Core Spc (G.C11)	1.0	INT	0.0	0.36	0.9	0.78	AIR-CHANGE	0.00	236.0	4413.2
L1North Perim Spc (G.N12)	1.0	EXT	-90.0	0.34	1.4	0.75	AIR-CHANGE	0.18	378.0	3401.9
L1North Perim Spc (G.N13)	1.0	EXT	90.0	0.36	0.4	0.75	AIR-CHANGE	0.16	100.4	903.8
L1North Perim Spc (G.N14)	1.0	EXT	90.0	0.38	0.9	0.75	AIR-CHANGE	0.26	256.3	4792.8
L1SSE Perim Spc (G.SSE15)	1.0	EXT	-32.5	0.49	0.5	0.75	AIR-CHANGE	0.27	125.8	2351.8
L1SE Perim Spc (G.SE16)	1.0	EXT	-90.0	0.49	1.7	0.75	AIR-CHANGE	0.15	478.3	8943.8
L1Core Spc (G.C17)	1.0	INT	0.0	0.49	1.4	0.78	AIR-CHANGE	0.00	381.6	7135.7
L1East Perim Spc (G.E18)	1.0	EXT	79.7	0.66	31.1	0.75	AIR-CHANGE	0.19	1554.6	29070.5
Space 84	1.0	EXT	-90.0	0.34	1.7	0.75	AIR-CHANGE	0.18	478.6	4642.7
Spaces on floor: L2Ground Flr										
L2SW Perim Spc (G.SW1)	1.0	EXT	-30.6	0.67	12.2	0.51	AIR-CHANGE	0.22	915.7	11721.2
L2Core Spc (G.C2)	1.0	INT	0.0	0.52	0.6	0.75	AIR-CHANGE	0.00	172.8	2211.8
L2West Perim Spc (G.W3)	1.0	EXT	0.0	0.37	0.9	0.76	AIR-CHANGE	0.26	243.2	3113.0
L2West Perim Spc (G.W4)	1.0	EXT	0.0	0.52	0.2	0.76	AIR-CHANGE	0.35	67.6	865.8
L2Core Spc (G.C5)	1.0	INT	0.0	0.36	0.4	0.75	AIR-CHANGE	0.00	120.0	1536.0
L2NW Perim Spc (G.NW6)	1.0	EXT	90.0	0.67	11.4	0.51	AIR-CHANGE	0.17	857.4	10974.8
L2SSE Perim Spc (G.SSE7)	1.0	EXT	0.0	0.53	2.1	0.76	AIR-CHANGE	0.11	580.0	7424.0
L2Core Spc (G.C8)	1.0	INT	0.0	0.36	0.7	0.75	AIR-CHANGE	0.00	180.0	2304.0
L2Core Spc (G.C9)	1.0	INT	0.0	0.00	0.0	0.00	AIR-CHANGE	0.00	200.0	2560.0
L2Core Spc (G.C10)	1.0	INT	0.0	0.36	1.4	0.75	AIR-CHANGE	0.00	380.8	4873.6
L2North Perim Spc (G.N11)	1.0	EXT	0.0	0.52	1.1	0.76	AIR-CHANGE	0.12	296.7	3798.1
L2North Perim Spc (G.N12)	1.0	EXT	0.0	0.39	0.8	0.76	AIR-CHANGE	0.22	212.1	2714.6
L2North Perim Spc (G.N13)	1.0	EXT	0.0	0.38	0.9	0.76	AIR-CHANGE	0.22	253.1	3239.0
L2SSE Perim Spc (G.SSE14)	1.0	EXT	0.0	0.53	3.8	0.76	AIR-CHANGE	0.10	1032.5	13215.4

L2East Perim Spc (G.E15)	1.0	EXT	-88.8	0.52	5.2	0.76	AIR-CHANGE	0.22	1425.2	18242.7
Spaces on floor: L3Ground Flr										
L3SW Perim Spc (G.SW1)	1.0	EXT	-30.6	0.67	12.2	0.51	AIR-CHANGE	0.23	915.7	11080.0
L3Core Spc (G.C2)	1.0	INT	0.0	0.52	0.6	0.75	AIR-CHANGE	0.00	172.8	2090.9
L3West Perim Spc (G.W3)	1.0	EXT	0.0	0.37	0.7	0.76	AIR-CHANGE	0.28	186.2	2253.0
L3WSW Perim Spc (G.WSW4)	1.0	EXT	0.0	0.52	0.4	0.76	AIR-CHANGE	0.28	111.4	1347.5

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-B Summary of Spaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

L3Core Spc (G.C5)	1.0	INT	0.0	0.36	0.4	0.75	AIR-CHANGE	0.00	120.0	1452.0
L3NW Perim Spc (G.NW6)	1.0	EXT	90.0	0.68	10.8	0.51	AIR-CHANGE	0.17	813.7	9845.6
L3SSE Perim Spc (G.SSE7)	1.0	EXT	0.0	0.53	2.1	0.76	AIR-CHANGE	0.33	580.0	7018.0
L3Core Spc (G.C8)	1.0	EXT	0.0	0.36	0.7	0.75	AIR-CHANGE	0.06	180.0	2178.0
L3Core Spc (G.C9)	1.0	INT	0.0	0.00	0.0	0.00	AIR-CHANGE	0.00	200.0	2420.0
L3Core Spc (G.C10)	1.0	EXT	0.0	0.36	1.4	0.75	AIR-CHANGE	0.19	380.8	4607.1
L3North Perim Spc (G.N11)	1.0	EXT	0.0	0.52	1.1	0.76	AIR-CHANGE	0.34	296.7	3590.4
L3North Perim Spc (G.N12)	1.0	EXT	0.0	0.39	0.8	0.76	AIR-CHANGE	0.44	212.1	2566.1
L3North Perim Spc (G.N13)	1.0	EXT	0.0	0.38	0.9	0.76	AIR-CHANGE	0.26	253.1	3061.9
L3SSE Perim Spc (G.SSE14)	1.0	EXT	0.0	0.53	3.8	0.76	AIR-CHANGE	0.26	1032.5	12492.7
L3East Perim Spc (G.E15)	1.0	EXT	-88.8	0.52	5.2	0.76	AIR-CHANGE	0.44	1425.2	17245.1
Spaces on floor: L4 Ground Flr										
L4 SSE Perim Spc (G.SSE1)	1.0	EXT	-31.1	0.52	4.0	0.76	AIR-CHANGE	0.47	1088.3	15997.4
L4 West Perim Spc (G.W2)	1.0	EXT	0.0	0.37	0.7	0.76	AIR-CHANGE	0.46	186.2	2737.1
L4 Core Spc (G.C3)	1.0	EXT	-90.0	0.36	0.4	0.75	AIR-CHANGE	0.18	108.8	1598.6
L4 NNW Perim Spc (G.NNW4)	1.0	EXT	0.0	0.52	2.9	0.76	AIR-CHANGE	0.47	810.9	11919.6
L4 SSE Perim Spc (G.SSE5)	1.0	EXT	0.0	0.36	1.7	0.76	AIR-CHANGE	0.67	457.2	6721.6
L4 North Perim Spc (G.N6)	1.0	EXT	90.0	0.00	0.0	0.84	AIR-CHANGE	0.45	205.0	3013.5
L4 North Perim Spc (G.N7)	1.0	EXT	90.0	0.38	0.8	0.76	AIR-CHANGE	0.89	214.2	3148.7
L4 Core Spc (G.C8)	1.0	EXT	180.0	0.52	0.3	0.75	AIR-CHANGE	0.18	81.0	1190.7
Spaces on floor: B1Below-Grade Flr										
B1SW Perim Spc (B.SW1)	1.0	EXT	-31.9	0.51	4.5	0.76	AIR-CHANGE	0.10	1235.0	17043.4
B1Core Spc (B.C2)	1.0	INT	0.0	0.36	1.8	0.76	AIR-CHANGE	0.00	505.9	6981.1
B1West Perim Spc (B.W3)	1.0	INT	0.0	0.51	0.6	0.76	AIR-CHANGE	0.00	154.1	2126.9
B1West Perim Spc (B.W4)	1.0	INT	0.0	0.37	0.9	0.76	AIR-CHANGE	0.00	247.0	3409.2
B1Core Spc (B.C5)	1.0	INT	0.0	0.53	0.4	0.76	AIR-CHANGE	0.00	110.4	1524.0
B1West Perim Spc (B.W6)	1.0	INT	0.0	0.51	1.0	0.76	AIR-CHANGE	0.00	270.4	3731.5
B1SSE Perim Spc (B.SSE7)	1.0	EXT	0.0	0.66	7.7	0.76	AIR-CHANGE	0.20	385.4	5318.0
B1Core Spc (B.C8)	1.0	INT	0.0	0.66	12.7	0.76	AIR-CHANGE	0.00	636.9	8788.6
B1Core Spc (B.C9)	1.0	INT	0.0	0.36	0.5	0.76	AIR-CHANGE	0.00	140.0	1932.0
B1Core Spc (B.C10)	1.0	INT	0.0	0.49	2.3	0.76	AIR-CHANGE	0.00	635.5	8769.6
B1SSE Perim Spc (B.SSE11)	1.0	EXT	0.0	0.66	5.8	0.76	AIR-CHANGE	0.20	291.0	4016.3
B1SSE Perim Spc (B.SSE12)	1.0	EXT	0.0	0.66	8.2	0.76	AIR-CHANGE	0.20	410.6	5666.3
B1Core Spc (B.C13)	1.0	INT	0.0	0.38	1.4	0.76	AIR-CHANGE	0.00	388.5	5361.3
B1SSE Perim Spc (B.SSE14)	1.0	EXT	0.0	0.66	7.4	0.76	AIR-CHANGE	0.20	370.1	5107.8
B1Core Spc (B.C15)	1.0	INT	0.0	0.00	0.0	0.01	AIR-CHANGE	0.00	200.0	2760.0
B1NW Perim Spc (B.NW16)	1.0	INT	90.0	0.51	1.5	0.76	AIR-CHANGE	0.00	417.6	5762.3
B1North Perim Spc (B.N17)	1.0	INT	0.0	0.51	0.4	0.76	AIR-CHANGE	0.00	103.4	1427.3
B1North Perim Spc (B.N18)	1.0	INT	0.0	0.52	0.8	0.76	AIR-CHANGE	0.00	220.8	3046.8
B1North Perim Spc (B.N19)	1.0	INT	0.0	0.52	1.0	0.76	AIR-CHANGE	0.00	271.4	3745.0
B1SE Perim Spc (B.SE20)	1.0	EXT	-90.0	0.66	10.1	0.76	AIR-CHANGE	0.20	506.3	6986.6
B1NE Perim Spc (B.NE21)	1.0	EXT	180.0	0.34	1.0	0.76	AIR-CHANGE	0.20	261.3	3606.2
B1North Perim Spc (B.N22)	1.0	EXT	-90.0	0.66	36.9	0.76	AIR-CHANGE	0.01	1843.0	25434.0
B1Core Spc (B.C23)	1.0	INT	0.0	0.36	0.7	0.76	AIR-CHANGE	0.00	180.0	2484.0
Spaces on floor: B2Below-Grade Flr										

B2SW Perim Spc (B.SW1)	1.0	INT	-31.7	0.51	2.3	0.76	AIR-CHANGE	0.00	643.2	5467.6
B2East Perim Spc (B.E2)	1.0	INT	-90.0	0.36	2.4	0.76	AIR-CHANGE	0.00	662.6	5631.9
B2West Perim Spc (B.W3)	1.0	INT	0.0	0.37	0.9	0.76	AIR-CHANGE	0.00	247.0	2099.8
B2North Perim Spc (B.N4)	1.0	INT	180.0	0.34	3.4	0.76	AIR-CHANGE	0.00	925.7	7868.8
BUILDING TOTALS				0.51	273.7	0.71			36486.8	501185.1

CONDITIONED FLOOR AREA = 31768.1 SQFT
TOTAL INSTALLED LIGHTING POWER = 18.435 KW

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-B Summary of Spaces WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SPACE	SPACE*MULTIPLIER	FLOOR SPACE TYPE	AZIM	LIGHTS (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	ACH	AREA (SQFT)	VOLUME (CUFT)

TOTAL INSTALLED EQUIPMENT POWER = 25.798 KW

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF EXTERIOR SURFACES 100
(U-VALUE INCLUDES OUTSIDE FILM; WINDOW INCLUDES FRAME AND CURB, IF DEFINED)

SURFACE	- - - W I N D O W S - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	- - - - W A L L - - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-W A L L + W I N D O W S- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
L1East Wall (G.WNW4.E5)	0.000	0.00	0.041	49.56	0.041	49.56	NORTH
in space: L1WNW Perim Spc (G.WNW4)							
L1East Wall (G.N12.E11)	0.000	0.00	0.041	25.65	0.041	25.65	NORTH
in space: L1North Perim Spc (G.N12)							
Exterior Wall 89	0.000	0.00	0.041	27.64	0.041	27.64	NORTH
in space: Space 84							
L4 East Wall (G.NNW4.E10)	0.000	0.00	0.049	335.89	0.049	335.89	NORTH
in space: L4 NNW Perim Spc (G.NNW4)							
L4 East Wall (G.SSE5.E15)	0.138	193.12	0.049	196.42	0.093	389.55	NORTH
in space: L4 SSE Perim Spc (G.SSE5)							
L4 East Wall (G.N7.E23)	0.138	71.25	0.049	74.28	0.092	145.53	NORTH
in space: L4 North Perim Spc (G.N7)							
L4 East Wall (G.SSE1.E2)	0.138	121.88	0.049	429.42	0.069	551.30	NORTH
in space: L4 SSE Perim Spc (G.SSE1)							
L1East Wall (G.E18.E22)	0.176	177.96	0.396	138.14	0.272	316.10	NORTH
in space: L1East Perim Spc (G.E18)							
L2East Wall (G.E15.E12)	0.298	68.00	0.352	173.28	0.337	241.28	NORTH
in space: L2East Perim Spc (G.E15)							
L3East Wall (G.E15.E14)	0.261	50.68	0.352	177.40	0.332	228.08	NORTH
in space: L3East Perim Spc (G.E15)							
L1East Wall (G.SE16.E18)	0.000	0.00	0.396	50.63	0.396	50.63	NORTH
in space: L1SE Perim Spc (G.SE16)							
L1SSE Wall (G.SSE15.E16)	0.176	100.00	0.396	138.43	0.304	238.43	NORTH-EAST
in space: L1SSE Perim Spc (G.SSE15)							
L4 SSE Wall (G.SSE1.E1)	0.298	120.00	0.049	348.49	0.113	468.49	NORTH-EAST
in space: L4 SSE Perim Spc (G.SSE1)							
L1SSE Wall (G.SE16.E17)	0.176	216.00	0.396	220.16	0.287	436.16	NORTH-EAST
in space: L1SE Perim Spc (G.SE16)							
L3SSE Wall (G.SSE7.E9)	0.261	68.56	0.352	213.66	0.330	282.22	NORTH-EAST
in space: L3SSE Perim Spc (G.SSE7)							
L1SSE Wall (G.SSE8.E10)	0.176	216.00	0.396	220.16	0.287	436.16	NORTH-EAST
in space: L1SSE Perim Spc (G.SSE8)							
L2SSE Wall (G.SSE7.E7)	0.261	90.00	0.352	208.54	0.325	298.54	NORTH-EAST
in space: L2SSE Perim Spc (G.SSE7)							
L1SSE Wall (G.E18.E20)	0.176	447.36	0.396	456.41	0.287	903.77	NORTH-EAST
in space: L1East Perim Spc (G.E18)							
L2SSE Wall (G.SW1.E1)	0.261	138.72	0.352	274.72	0.321	413.44	NORTH-EAST
in space: L2SW Perim Spc (G.SW1)							
L3SSE Wall (G.SW1.E1)	0.298	120.00	0.049	270.83	0.126	390.83	NORTH-EAST

in space: L3SW Perim Spc (G.SW1)							
L1SSE Wall (G.SW1.E1)	0.176	252.76	0.396	351.24	0.304	604.01	NORTH-EAST
in space: L1SW Perim Spc (G.SW1)							
L3SSE Wall (G.E15.E16)	0.261	137.12	0.352	476.06	0.332	613.18	NORTH-EAST
in space: L3East Perim Spc (G.E15)							
L2SSE Wall (G.E15.E14)	0.261	180.00	0.352	468.65	0.327	648.65	NORTH-EAST
in space: L2East Perim Spc (G.E15)							
L3SSE Wall (G.SSE14.E13)	0.261	124.81	0.352	316.21	0.326	441.02	NORTH-EAST
in space: L3SSE Perim Spc (G.SSE14)							

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L2SSE Wall (G.SSE14.E11) in space: L2SSE Perim Spc (G.SSE14)	0.261	146.25	0.352	320.29	0.324	466.54	NORTH-EAST
L4 South Wall (G.SSE5.E14) in space: L4 SSE Perim Spc (G.SSE5)	0.138	270.00	0.049	266.55	0.094	536.55	EAST
L4 South Wall (G.NNW4.E9) in space: L4 NNW Perim Spc (G.NNW4)	0.000	0.00	0.049	44.10	0.049	44.10	EAST
L4 South Wall (G.N7.E22) in space: L4 North Perim Spc (G.N7)	0.138	108.75	0.049	111.75	0.093	220.50	EAST
L3South Wall (G.WSW4.E5) in space: L3WSW Perim Spc (G.WSW4)	0.000	0.00	0.049	36.30	0.049	36.30	EAST
L1West Wall (G.E18.E19) in space: L1East Perim Spc (G.E18)	0.000	0.00	0.396	62.65	0.396	62.65	SOUTH-EAST
L4 West Wall (G.SSE1.E4) in space: L4 SSE Perim Spc (G.SSE1)	0.000	0.00	0.049	609.26	0.049	609.26	SOUTH-EAST
L1West Wall (G.W3.E3) in space: L1West Perim Spc (G.W3)	0.000	0.00	0.041	261.80	0.041	261.80	SOUTH
L3West Wall (G.WSW4.E6) in space: L3WSW Perim Spc (G.WSW4)	0.000	0.00	0.049	105.27	0.049	105.27	SOUTH
L4 West Wall (G.W2.E6) in space: L4 West Perim Spc (G.W2)	0.138	28.50	0.049	250.80	0.058	279.30	SOUTH
L3West Wall (G.NW6.E7) in space: L3NW Perim Spc (G.NW6)	0.000	0.00	0.049	300.68	0.049	300.68	SOUTH
L1West Wall (G.N14.E14) in space: L1North Perim Spc (G.N14)	0.000	0.00	0.396	51.43	0.396	51.43	SOUTH
L4 West Wall (G.NNW4.E12) in space: L4 NNW Perim Spc (G.NNW4)	0.000	0.00	0.049	493.18	0.049	493.18	SOUTH
L2West Wall (G.W3.E3) in space: L2West Perim Spc (G.W3)	0.000	0.00	0.041	243.20	0.041	243.20	SOUTH
L2West Wall (G.W4.E4) in space: L2West Perim Spc (G.W4)	0.000	0.00	0.041	111.36	0.041	111.36	SOUTH
L4 West Wall (G.SSE5.E16) in space: L4 SSE Perim Spc (G.SSE5)	0.000	0.00	0.049	147.00	0.049	147.00	SOUTH
L4 West Wall (G.N7.E21) in space: L4 North Perim Spc (G.N7)	0.000	0.00	0.049	154.35	0.049	154.35	SOUTH
L2West Wall (G.NW6.E5) in space: L2NW Perim Spc (G.NW6)	0.000	0.00	0.041	318.08	0.041	318.08	SOUTH
L3West Wall (G.W3.E4) in space: L3West Perim Spc (G.W3)	0.138	19.00	0.049	210.90	0.056	229.90	SOUTH
L1West Wall (G.SW1.E2) in space: L1SW Perim Spc (G.SW1)	0.000	0.00	0.041	775.09	0.041	775.09	SOUTH
L2West Wall (G.SW1.E2) in space: L2SW Perim Spc (G.SW1)	0.000	0.00	0.041	530.54	0.041	530.54	SOUTH
L3West Wall (G.SW1.E3) in space: L3SW Perim Spc (G.SW1)	0.000	0.00	0.049	501.53	0.049	501.53	SOUTH
L1West Wall (G.WNW4.E7) in space: L1WNW Perim Spc (G.WNW4)	0.000	0.00	0.041	721.00	0.041	721.00	SOUTH
L1West Wall (G.N7.E8) in space: L1North Perim Spc (G.N7)	0.000	0.00	0.041	49.56	0.041	49.56	SOUTH
Exterior Wall 91 in space: Space 84	0.157	17.00	0.041	42.17	0.075	59.17	WEST

L4 North Wall (G.SSE5.E17) in space: L4 SSE Perim Spc (G.SSE5)	0.000	0.00	0.049	147.00	0.049	147.00	WEST
L4 North Wall (G.N6.E19) in space: L4 North Perim Spc (G.N6)	0.000	0.00	0.049	301.35	0.049	301.35	WEST
L4 North Wall (G.SSE1.E3) in space: L4 SSE Perim Spc (G.SSE1)	0.000	0.00	0.049	44.12	0.049	44.12	WEST
L3North Wall (G.SW1.E2) in space: L3SW Perim Spc (G.SW1)	0.000	0.00	0.049	36.29	0.049	36.29	WEST

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L1North Wall (G.N13.E13) in space: L1North Perim Spc (G.N13)	0.000	0.00	0.396	54.90	0.396	54.90	WEST
L1North Wall (G.WNW4.E4) in space: L1WNW Perim Spc (G.WNW4)	0.157	26.25	0.041	77.54	0.071	103.79	WEST
L1North Wall (G.N7.E9) in space: L1North Perim Spc (G.N7)	0.157	42.00	0.041	266.61	0.057	308.61	WEST
L2North Wall (G.NW6.E6) in space: L2NW Perim Spc (G.NW6)	0.261	120.95	0.352	234.96	0.321	355.91	WEST
L3North Wall (G.NW6.E8) in space: L3NW Perim Spc (G.NW6)	0.261	90.00	0.049	246.45	0.106	336.45	WEST
L1North Wall (G.E18.E23) in space: L1East Perim Spc (G.E18)	0.157	147.11	0.396	603.86	0.349	750.97	WEST
L3North Wall (G.N12.E11) in space: L3North Perim Spc (G.N12)	0.261	58.97	0.352	146.77	0.326	205.74	WEST
L2North Wall (G.N12.E9) in space: L2North Perim Spc (G.N12)	0.261	58.97	0.352	158.67	0.327	217.65	WEST
L3North Wall (G.E15.E15) in space: L3East Perim Spc (G.E15)	0.261	115.05	0.352	424.73	0.333	539.78	WEST
L2North Wall (G.E15.E13) in space: L2East Perim Spc (G.E15)	0.261	115.05	0.352	455.96	0.334	571.01	WEST
L1North Wall (G.N14.E15) in space: L1North Perim Spc (G.N14)	0.000	0.00	0.396	417.11	0.396	417.11	WEST
L2North Wall (G.N13.E10) in space: L2North Perim Spc (G.N13)	0.261	61.88	0.352	207.00	0.331	268.88	WEST
L3North Wall (G.N13.E12) in space: L3North Perim Spc (G.N13)	0.261	61.88	0.352	192.30	0.330	254.17	WEST
Exterior Wall 90 in space: Space 84	0.157	35.38	0.041	183.91	0.060	219.28	WEST
L1North Wall (G.N12.E12) in space: L1North Perim Spc (G.N12)	0.000	0.00	0.041	203.46	0.041	203.46	WEST
L4 North Wall (G.NNW4.E11) in space: L4 NNW Perim Spc (G.NNW4)	0.261	90.00	0.049	311.44	0.097	401.44	WEST
L1North Wall (G.WNW4.E6) in space: L1WNW Perim Spc (G.WNW4)	0.000	0.00	0.041	105.66	0.041	105.66	WEST
L3North Wall (G.N11.E10) in space: L3North Perim Spc (G.N11)	0.261	38.35	0.352	119.01	0.330	157.36	WEST
L2North Wall (G.N11.E8) in space: L2North Perim Spc (G.N11)	0.261	38.35	0.352	128.11	0.331	166.46	WEST
L4 North Wall (G.N7.E24) in space: L4 North Perim Spc (G.N7)	0.138	153.75	0.049	155.08	0.093	308.83	WEST
L1ENE Wall (G.E18.E21) in space: L1East Perim Spc (G.E18)	0.000	0.00	0.396	65.91	0.396	65.91	NORTH-WEST
Exterior Wall 81 in space: L3SSE Perim Spc (G.SSE14)	0.000	0.00	0.019	757.11	0.019	757.11	ROOF
Exterior Wall 99 in space: L3Core Spc (G.C10)	0.000	0.00	0.019	150.75	0.019	150.75	ROOF
Exterior Wall 88 in space: L2West Perim Spc (G.W3)	0.000	0.00	0.019	57.00	0.019	57.00	ROOF
Exterior Wall 84 in space: L3North Perim Spc (G.N11)	0.000	0.00	0.019	296.72	0.019	296.72	ROOF

L4 Roof (G.NNW4.E13) in space: L4 NNW Perim Spc (G.NNW4)	0.000	0.00	0.019	810.86	0.019	810.86	ROOF
Exterior Wall 82 in space: L3East Perim Spc (G.E15)	0.000	0.00	0.019	1425.21	0.019	1425.21	ROOF
Exterior Wall 80 in space: L3SSE Perim Spc (G.SSE7)	0.000	0.00	0.019	580.00	0.019	580.00	ROOF
Exterior Wall 83 in space: L3North Perim Spc (G.N12)	0.000	0.00	0.019	212.08	0.019	212.08	ROOF

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Exterior Wall 87	0.000	0.00	0.019	50.00	0.019	50.00	ROOF
in space: L3Core Spc (G.C8)							
L4 Roof (G.SSE5.E18)	0.000	0.00	0.019	457.25	0.019	457.25	ROOF
in space: L4 SSE Perim Spc (G.SSE5)							
Exterior Wall 85	0.000	0.00	0.019	42.00	0.019	42.00	ROOF
in space: L3North Perim Spc (G.N13)							
L4 Roof (G.N6.E20)	0.000	0.00	0.019	205.00	0.019	205.00	ROOF
in space: L4 North Perim Spc (G.N6)							
L4 Roof (G.SSE1.E5)	0.000	0.00	0.019	1088.26	0.019	1088.26	ROOF
in space: L4 SSE Perim Spc (G.SSE1)							
Exterior Wall 86	0.000	0.00	0.019	170.00	0.019	170.00	ROOF
in space: L3Core Spc (G.C10)							
L4 Roof (G.W2.E7)	0.000	0.00	0.019	186.20	0.019	186.20	ROOF
in space: L4 West Perim Spc (G.W2)							
L4 Roof (G.C3.E8)	0.000	0.00	0.019	108.75	0.019	108.75	ROOF
in space: L4 Core Spc (G.C3)							
L4 Roof (G.N7.E25)	0.000	0.00	0.019	214.20	0.019	214.20	ROOF
in space: L4 North Perim Spc (G.N7)							
L4 Roof (G.C8.E26)	0.000	0.00	0.019	81.00	0.019	81.00	ROOF
in space: L4 Core Spc (G.C8)							
Exterior Wall 92	0.000	0.00	0.289	645.08	0.289	645.08	ROOF
in space: B1SW Perim Spc (B.SW1)							
Exterior Wall 93	0.000	0.00	0.289	385.36	0.289	385.36	ROOF
in space: B1SSE Perim Spc (B.SSE7)							
Exterior Wall 95	0.000	0.00	0.289	291.04	0.289	291.04	ROOF
in space: B1SSE Perim Spc (B.SSE11)							
Exterior Wall 94	0.000	0.00	0.289	410.60	0.289	410.60	ROOF
in space: B1SSE Perim Spc (B.SSE12)							
Exterior Wall 96	0.000	0.00	0.289	370.13	0.289	370.13	ROOF
in space: B1SSE Perim Spc (B.SSE14)							
Exterior Wall 97	0.000	0.00	0.289	506.28	0.289	506.28	ROOF
in space: B1SE Perim Spc (B.SE20)							
Exterior Wall 98	0.000	0.00	0.289	261.32	0.289	261.32	ROOF
in space: B1NE Perim Spc (B.NE21)							
Exterior Wall 100	0.000	0.00	0.289	131.28	0.289	131.28	ROOF
in space: B1North Perim Spc (B.N22)							
B1Flr (B.SW1.U1)	0.000	0.00	0.029	1235.03	0.029	1235.03	UNDERGRND
in space: B1SW Perim Spc (B.SW1)							
B1SSE Wall (B.SW1.U2)	0.000	0.00	0.350	594.09	0.350	594.09	UNDERGRND
in space: B1SW Perim Spc (B.SW1)							
B1West Wall (B.SW1.U3)	0.000	0.00	0.350	761.72	0.350	761.72	UNDERGRND
in space: B1SW Perim Spc (B.SW1)							
B1Flr (B.C2.U4)	0.000	0.00	0.029	505.88	0.029	505.88	UNDERGRND
in space: B1Core Spc (B.C2)							
B1Flr (B.W3.U5)	0.000	0.00	0.029	154.12	0.029	154.12	UNDERGRND
in space: B1West Perim Spc (B.W3)							
B1West Wall (B.W3.U6)	0.000	0.00	0.070	103.50	0.070	103.50	UNDERGRND
in space: B1West Perim Spc (B.W3)							
B1Flr (B.W4.U7)	0.000	0.00	0.029	247.04	0.029	247.04	UNDERGRND
in space: B1West Perim Spc (B.W4)							

B1West Wall (B.w4.U8) in space: B1West Perim Spc (B.w4)	0.000	0.00	0.070	266.34	0.070	266.34	UNDERGRND
B1Flr (B.C5.U9) in space: B1Core Spc (B.C5)	0.000	0.00	0.029	110.44	0.029	110.44	UNDERGRND
B1Flr (B.w6.U10) in space: B1West Perim Spc (B.w6)	0.000	0.00	0.029	270.40	0.029	270.40	UNDERGRND
B1West Wall (B.w6.U11) in space: B1West Perim Spc (B.w6)	0.000	0.00	0.070	179.40	0.070	179.40	UNDERGRND
B1Flr (B.SSE7.U12) in space: B1SSE Perim Spc (B.SSE7)	0.000	0.00	0.029	385.36	0.029	385.36	UNDERGRND

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SURFACE	- - - W I N D O W S - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	- - - - W A L L - - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-W A L L + W I N D O W S- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
B1SSE Wall (B.SSE7.U13)	0.000	0.00	0.350	314.66	0.350	314.66	UNDERGRND
in space: B1SSE Perim Spc (B.SSE7)							
B1Flr (B.C8.U14)	0.000	0.00	0.029	636.85	0.029	636.85	UNDERGRND
in space: B1Core Spc (B.C8)							
B1Flr (B.C9.U15)	0.000	0.00	0.029	140.00	0.029	140.00	UNDERGRND
in space: B1Core Spc (B.C9)							
B1Flr (B.C10.U16)	0.000	0.00	0.029	635.47	0.029	635.47	UNDERGRND
in space: B1Core Spc (B.C10)							
B1Flr (B.SSE11.U17)	0.000	0.00	0.029	291.04	0.029	291.04	UNDERGRND
in space: B1SSE Perim Spc (B.SSE11)							
B1SSE Wall (B.SSE11.U18)	0.000	0.00	0.350	233.02	0.350	233.02	UNDERGRND
in space: B1SSE Perim Spc (B.SSE11)							
B1Flr (B.SSE12.U19)	0.000	0.00	0.029	410.60	0.029	410.60	UNDERGRND
in space: B1SSE Perim Spc (B.SSE12)							
B1SSE Wall (B.SSE12.U20)	0.000	0.00	0.350	343.55	0.350	343.55	UNDERGRND
in space: B1SSE Perim Spc (B.SSE12)							
B1Flr (B.C13.U21)	0.000	0.00	0.029	388.50	0.029	388.50	UNDERGRND
in space: B1Core Spc (B.C13)							
B1Flr (B.SSE14.U22)	0.000	0.00	0.029	370.13	0.029	370.13	UNDERGRND
in space: B1SSE Perim Spc (B.SSE14)							
B1SSE Wall (B.SSE14.U23)	0.000	0.00	0.350	298.34	0.350	298.34	UNDERGRND
in space: B1SSE Perim Spc (B.SSE14)							
B1Flr (B.C15.U24)	0.000	0.00	0.029	200.00	0.029	200.00	UNDERGRND
in space: B1Core Spc (B.C15)							
B1Flr (B.NW16.U25)	0.000	0.00	0.029	417.56	0.029	417.56	UNDERGRND
in space: B1NW Perim Spc (B.NW16)							
B1West Wall (B.NW16.U26)	0.000	0.00	0.070	280.14	0.070	280.14	UNDERGRND
in space: B1NW Perim Spc (B.NW16)							
B1North Wall (B.NW16.U27)	0.000	0.00	0.070	287.11	0.070	287.11	UNDERGRND
in space: B1NW Perim Spc (B.NW16)							
B1Flr (B.N17.U28)	0.000	0.00	0.029	103.43	0.029	103.43	UNDERGRND
in space: B1North Perim Spc (B.N17)							
B1North Wall (B.N17.U29)	0.000	0.00	0.070	96.62	0.070	96.62	UNDERGRND
in space: B1North Perim Spc (B.N17)							
B1Flr (B.N18.U30)	0.000	0.00	0.029	220.78	0.029	220.78	UNDERGRND
in space: B1North Perim Spc (B.N18)							
B1North Wall (B.N18.U31)	0.000	0.00	0.070	183.56	0.070	183.56	UNDERGRND
in space: B1North Perim Spc (B.N18)							
B1Flr (B.N19.U32)	0.000	0.00	0.029	271.38	0.029	271.38	UNDERGRND
in space: B1North Perim Spc (B.N19)							
B1North Wall (B.N19.U33)	0.000	0.00	0.070	230.56	0.070	230.56	UNDERGRND
in space: B1North Perim Spc (B.N19)							
B1Flr (B.SE20.U34)	0.000	0.00	0.029	506.28	0.029	506.28	UNDERGRND

in space: B1SE Perim Spc (B.SE20)							
B1East Wall (B.SE20.U35)	0.000	0.00	0.350	148.35	0.350	148.35	UNDERGRND
in space: B1SE Perim Spc (B.SE20)							
B1SSE Wall (B.SE20.U36)	0.000	0.00	0.350	401.54	0.350	401.54	UNDERGRND
in space: B1SE Perim Spc (B.SE20)							
B1Flr (B.NE21.U37)	0.000	0.00	0.029	261.32	0.029	261.32	UNDERGRND
in space: B1NE Perim Spc (B.NE21)							
B1North Wall (B.NE21.U38)	0.000	0.00	0.350	191.82	0.350	191.82	UNDERGRND
in space: B1NE Perim Spc (B.NE21)							
B1East Wall (B.NE21.U39)	0.000	0.00	0.350	259.44	0.350	259.44	UNDERGRND
in space: B1NE Perim Spc (B.NE21)							

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

SURFACE	- - - W I N D O W S - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	- - - - W A L L - - - - U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-W A L L + W I N D O W S- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
B1Flr (B.N22.U40) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.029	1843.04	0.029	1843.04	UNDERGRND
B1East Wall (B.N22.U41) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.350	40.02	0.350	40.02	UNDERGRND
B1North Wall (B.N22.U42) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.350	292.56	0.350	292.56	UNDERGRND
B1West Wall (B.N22.U43) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.350	33.12	0.350	33.12	UNDERGRND
B1North Wall (B.N22.U44) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.350	525.87	0.350	525.87	UNDERGRND
B1North Wall (B.N22.U45) in space: B1North Perim Spc (B.N22)	0.000	0.00	0.350	51.06	0.350	51.06	UNDERGRND
B1Flr (B.C23.U46) in space: B1Core Spc (B.C23)	0.000	0.00	0.029	180.00	0.029	180.00	UNDERGRND
B2Flr (B.SW1.U1) in space: B2SW Perim Spc (B.SW1)	0.000	0.00	0.029	643.24	0.029	643.24	UNDERGRND
B2SSE Wall (B.SW1.U2) in space: B2SW Perim Spc (B.SW1)	0.000	0.00	0.350	205.36	0.350	205.36	UNDERGRND
B2West Wall (B.SW1.U3) in space: B2SW Perim Spc (B.SW1)	0.000	0.00	0.350	320.03	0.350	320.03	UNDERGRND
B2Flr (B.E2.U4) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.029	662.58	0.029	662.58	UNDERGRND
B2East Wall (B.E2.U5) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.350	401.62	0.350	401.62	UNDERGRND
B2West Wall (B.E2.U6) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.350	63.75	0.350	63.75	UNDERGRND
B2SSE Wall (B.E2.U7) in space: B2East Perim Spc (B.E2)	0.000	0.00	0.350	72.53	0.350	72.53	UNDERGRND
B2Flr (B.W3.U8) in space: B2West Perim Spc (B.W3)	0.000	0.00	0.029	247.04	0.029	247.04	UNDERGRND
B2West Wall (B.W3.U9) in space: B2West Perim Spc (B.W3)	0.000	0.00	0.350	164.05	0.350	164.05	UNDERGRND
B2Flr (B.N4.U10) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.029	925.74	0.029	925.74	UNDERGRND
B2North Wall (B.N4.U11) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.350	236.30	0.350	236.30	UNDERGRND
B2West Wall (B.N4.U12) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.350	283.05	0.350	283.05	UNDERGRND
B2East Wall (B.N4.U13) in space: B2North Perim Spc (B.N4)	0.000	0.00	0.350	283.05	0.350	283.05	UNDERGRND

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-D Details of Exterior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

	AVERAGE U-VALUE/WINDOWS (BTU/HR-SQFT-F)	AVERAGE U-VALUE/WALLS (BTU/HR-SQFT-F)	AVERAGE U-VALUE WALLS+WINDOWS (BTU/HR-SQFT-F)	WINDOW AREA (SQFT)	WALL AREA (SQFT)	WINDOW+WALL AREA (SQFT)
NORTH	0.173	0.151	0.157	682.89	1678.33	2361.23
NORTH-EAST	0.220	0.322	0.286	2357.58	4283.84	6641.42
EAST	0.138	0.049	0.089	378.75	458.70	837.45
SOUTH-EAST	0.000	0.081	0.081	0.00	671.90	671.90
SOUTH	0.138	0.048	0.049	47.50	5225.77	5273.27
WEST	0.224	0.238	0.235	1270.93	5264.45	6535.38
NORTH-WEST	0.000	0.396	0.396	0.00	65.91	65.91
ROOF	0.000	0.101	0.101	0.00	9893.48	9893.48
ALL WALLS	0.207	0.184	0.189	4737.67	17648.89	22386.56
WALLS+ROOFS	0.207	0.154	0.162	4737.67	27542.37	32280.03
UNDERGRND	0.000	0.135	0.135	0.00	20409.40	20409.40
BUILDING	0.207	0.146	0.151	4737.67	47951.77	52689.43

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-E Details of Underground Surfaces WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF UNDERGROUND SURFACES 59

SURFACE NAME	MULTIPLIER	AREA (SQFT)	CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)
B1Flr (B.SW1.U1)	1.0	1235.03	UFCons	0.029
B1SSE Wall (B.SW1.U2)	1.0	594.09	NoInsUWCons	0.350
B1West Wall (B.SW1.U3)	1.0	761.72	NoInsUWCons	0.350
B1Flr (B.C2.U4)	1.0	505.88	UFCons	0.029
B1Flr (B.W3.U5)	1.0	154.12	UFCons	0.029
B1West Wall (B.W3.U6)	1.0	103.50	InsUWCons	0.070
B1Flr (B.W4.U7)	1.0	247.04	UFCons	0.029
B1West Wall (B.W4.U8)	1.0	266.34	InsUWCons	0.070
B1Flr (B.C5.U9)	1.0	110.44	UFCons	0.029
B1Flr (B.W6.U10)	1.0	270.40	UFCons	0.029
B1West Wall (B.W6.U11)	1.0	179.40	InsUWCons	0.070
B1Flr (B.SSE7.U12)	1.0	385.36	UFCons	0.029
B1SSE Wall (B.SSE7.U13)	1.0	314.66	NoInsUWCons	0.350
B1Flr (B.C8.U14)	1.0	636.85	UFCons	0.029
B1Flr (B.C9.U15)	1.0	140.00	UFCons	0.029
B1Flr (B.C10.U16)	1.0	635.47	UFCons	0.029
B1Flr (B.SSE11.U17)	1.0	291.04	UFCons	0.029
B1SSE Wall (B.SSE11.U18)	1.0	233.02	NoInsUWCons	0.350
B1Flr (B.SSE12.U19)	1.0	410.60	UFCons	0.029
B1SSE Wall (B.SSE12.U20)	1.0	343.55	NoInsUWCons	0.350
B1Flr (B.C13.U21)	1.0	388.50	UFCons	0.029
B1Flr (B.SSE14.U22)	1.0	370.13	UFCons	0.029
B1SSE Wall (B.SSE14.U23)	1.0	298.34	NoInsUWCons	0.350
B1Flr (B.C15.U24)	1.0	200.00	UFCons	0.029
B1Flr (B.NW16.U25)	1.0	417.56	UFCons	0.029
B1West Wall (B.NW16.U26)	1.0	280.14	InsUWCons	0.070
B1North Wall (B.NW16.U27)	1.0	287.11	InsUWCons	0.070
B1Flr (B.N17.U28)	1.0	103.43	UFCons	0.029
B1North Wall (B.N17.U29)	1.0	96.62	InsUWCons	0.070
B1Flr (B.N18.U30)	1.0	220.78	UFCons	0.029
B1North Wall (B.N18.U31)	1.0	183.56	InsUWCons	0.070
B1Flr (B.N19.U32)	1.0	271.38	UFCons	0.029
B1North Wall (B.N19.U33)	1.0	230.56	InsUWCons	0.070
B1Flr (B.SE20.U34)	1.0	506.28	UFCons	0.029
B1East Wall (B.SE20.U35)	1.0	148.35	NoInsUWCons	0.350
B1SSE Wall (B.SE20.U36)	1.0	401.54	NoInsUWCons	0.350
B1Flr (B.NE21.U37)	1.0	261.32	UFCons	0.029
B1North Wall (B.NE21.U38)	1.0	191.82	NoInsUWCons	0.350
B1East Wall (B.NE21.U39)	1.0	259.44	NoInsUWCons	0.350
B1Flr (B.N22.U40)	1.0	1843.04	UFCons	0.029
B1East Wall (B.N22.U41)	1.0	40.02	NoInsUWCons	0.350
B1North Wall (B.N22.U42)	1.0	292.56	NoInsUWCons	0.350

B1West Wall (B.N22.U43)	1.0	33.12	NoInsUWCons	0.350
B1North Wall (B.N22.U44)	1.0	525.87	NoInsUWCons	0.350
B1North Wall (B.N22.U45)	1.0	51.06	NoInsUWCons	0.350
B1Flr (B.C23.U46)	1.0	180.00	UFCons	0.029
B2Flr (B.SW1.U1)	1.0	643.24	UFCons	0.029
B2SSE Wall (B.SW1.U2)	1.0	205.36	NoInsUWCons	0.350
B2West Wall (B.SW1.U3)	1.0	320.03	NoInsUWCons	0.350
B2Flr (B.E2.U4)	1.0	662.58	UFCons	0.029
B2East Wall (B.E2.U5)	1.0	401.62	NoInsUWCons	0.350
B2West Wall (B.E2.U6)	1.0	63.75	NoInsUWCons	0.350

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-E Details of Underground Surfaces WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SURFACE NAME	MULTIPLIER	AREA (SQFT)	CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)
B2SSE Wall (B.E2.U7)	1.0	72.53	NoInsUWCons	0.350
B2Flr (B.W3.U8)	1.0	247.04	UFCons	0.029
B2West Wall (B.W3.U9)	1.0	164.05	NoInsUWCons	0.350
B2Flr (B.N4.U10)	1.0	925.74	UFCons	0.029
B2North Wall (B.N4.U11)	1.0	236.30	NoInsUWCons	0.350
B2West Wall (B.N4.U12)	1.0	283.05	NoInsUWCons	0.350
B2East Wall (B.N4.U13)	1.0	283.05	NoInsUWCons	0.350

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA

Number of Interior Surfaces 255
(U-VALUE includes both air films)

SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L1East Wall (G.SW1.I1)	467.56	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SW1.I2)	168.18	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.SW1.I3)	205.73	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SW1.I4)	112.09	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.SW1.I5)	205.83	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SW1.I6)	239.28	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 233	989.47	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.C2.I7)	205.70	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 234	99.00	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 235	179.20	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.WNW4.I8)	239.40	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.WNW4.I9)	93.52	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.WNW4.I10)	93.52	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.WNW4.I11)	56.11	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.WNW4.I12)	105.99	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 236	337.43	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C5.I13)	168.30	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C5.I14)	56.10	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 237	120.00	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C6.I15)	280.50	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.C6.I16)	187.00	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C6.I17)	336.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 238	304.00	IntFlr Cons	DELAYED STANDARD	0.532
L1West Wall (G.N7.I18)	130.80	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.N7.I19)	243.09	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.N7.I20)	280.52	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 239	276.31	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.SSE8.I21)	504.90	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SSE8.I22)	224.40	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.SSE8.I23)	56.10	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.SSE8.I24)	149.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 240	636.00	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.C9.I25)	51.43	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.C9.I26)	42.08	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.C9.I27)	374.00	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C9.I28)	149.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 241	124.00	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 242	200.00	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C11.I29)	130.90	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.C11.I30)	374.00	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.C11.I31)	187.00	IntWall Cons	DELAYED STANDARD	0.402

L1East Wall (G.C11.I32)	37.40	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.C11.I33)	130.90	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.C11.I34)	149.60	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 243	236.00	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.N12.I35)	203.40	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.N12.I36)	122.40	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 244	377.99	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.N13.I37)	66.60	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.N13.I38)	11.70	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 245	100.42	IntFlr Cons	DELAYED STANDARD	0.532

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L1West Wall (G.N14.I39)	178.59	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 246	256.30	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.SSE15.I40)	153.36	IntWall Cons	DELAYED ADIABATIC	0.402
Interior Wall 247	125.76	IntFlr Cons	DELAYED STANDARD	0.532
L1East Wall (G.SE16.I41)	281.44	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 248	478.28	IntFlr Cons	DELAYED STANDARD	0.532
L1South Wall (G.C17.I42)	377.74	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.C17.I43)	204.76	IntWall Cons	DELAYED STANDARD	0.402
L1East Wall (G.C17.I44)	229.08	IntWall Cons	DELAYED ADIABATIC	0.402
L1West Wall (G.C17.I45)	187.00	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 249	381.59	IntFlr Cons	DELAYED STANDARD	0.532
L1West Wall (G.E18.I46)	220.66	IntWall Cons	DELAYED STANDARD	0.402
L1North Wall (G.E18.I47)	392.69	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.E18.I48)	74.90	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.E18.I49)	112.13	IntWall Cons	DELAYED STANDARD	0.402
L1South Wall (G.E18.I50)	395.55	IntWall Cons	DELAYED STANDARD	0.402
L1West Wall (G.E18.I51)	382.37	IntWall Cons	DELAYED ADIABATIC	0.402
Interior Wall 250	1554.57	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 251	219.22	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 252	131.92	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 253	478.62	IntFlr Cons	DELAYED STANDARD	0.532
Interior Wall 254	71.78	IntWall Cons	DELAYED STANDARD	0.402
Interior Wall 255	12.61	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.SW1.I1)	915.72	GFlr Cons	DELAYED STANDARD	0.081
L2East Wall (G.SW1.I2)	215.09	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.SW1.I3)	115.23	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.SW1.I4)	245.84	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.SW1.I5)	76.72	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.SW1.I6)	140.89	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.SW1.I7)	163.79	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.C2.I8)	172.80	GFlr Cons	DELAYED STANDARD	0.081
L2East Wall (G.C2.I9)	232.96	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.C2.I10)	12.80	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.C2.I11)	115.20	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.W3.I12)	243.20	GFlr Cons	DELAYED STANDARD	0.081
L2North Wall (G.W3.I13)	99.84	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.W4.I14)	67.64	GFlr Cons	DELAYED STANDARD	0.081
L2Flr (G.C5.I15)	120.00	GFlr Cons	DELAYED STANDARD	0.081
L2East Wall (G.C5.I16)	102.40	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.C5.I17)	102.40	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.NW6.I18)	857.40	GFlr Cons	DELAYED STANDARD	0.081
L2South Wall (G.NW6.I19)	99.20	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.NW6.I20)	111.36	IntWall Cons	DELAYED STANDARD	0.402
L2South Wall (G.NW6.I21)	64.00	IntWall Cons	DELAYED STANDARD	0.402
L2South Wall (G.NW6.I22)	192.00	IntWall Cons	DELAYED STANDARD	0.402

L2East Wall (G.NW6.I23)	128.00	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.NW6.I24)	294.40	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.SSE7.I25)	580.00	GFlr Cons	DELAYED STANDARD	0.081
L2North Wall (G.SSE7.I26)	256.00	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.C8.I27)	180.00	GFlr Cons	DELAYED STANDARD	0.081
L2North Wall (G.C8.I28)	256.00	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.C9.I29)	200.00	GFlr Cons	DELAYED STANDARD	0.081
L2Flr (G.C10.I30)	380.75	GFlr Cons	DELAYED STANDARD	0.081
L2South Wall (G.C10.I31)	89.60	IntWall Cons	DELAYED STANDARD	0.402
L2South Wall (G.C10.I32)	398.72	IntWall Cons	DELAYED STANDARD	0.402

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L2East Wall (G.C10.I33)	128.01	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.C10.I34)	268.80	IntWall Cons	DELAYED STANDARD	0.402
L2North Wall (G.C10.I35)	217.60	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.C10.I36)	128.00	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.N11.I37)	296.73	GFlr Cons	DELAYED STANDARD	0.081
L2South Wall (G.N11.I38)	166.40	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.N12.I39)	212.07	GFlr Cons	DELAYED STANDARD	0.081
L2East Wall (G.N12.I40)	157.44	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.N12.I41)	161.92	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.N13.I42)	253.05	GFlr Cons	DELAYED STANDARD	0.081
L2Flr (G.SSE14.I43)	1032.46	GFlr Cons	DELAYED STANDARD	0.081
L2West Wall (G.SSE14.I44)	128.00	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.SSE14.I45)	115.20	IntWall Cons	DELAYED STANDARD	0.402
L2West Wall (G.SSE14.I46)	294.40	IntWall Cons	DELAYED STANDARD	0.402
L2East Wall (G.SSE14.I47)	304.04	IntWall Cons	DELAYED STANDARD	0.402
L2Flr (G.E15.I48)	1425.21	GFlr Cons	DELAYED STANDARD	0.081
L2West Wall (G.E15.I49)	151.07	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.SW1.I1)	915.70	GFlr Cons	DELAYED STANDARD	0.081
L3East Wall (G.SW1.I2)	203.33	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.SW1.I3)	108.93	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.SW1.I4)	232.40	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.SW1.I5)	72.53	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.SW1.I6)	133.18	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.SW1.I7)	118.53	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.C2.I8)	172.80	GFlr Cons	DELAYED STANDARD	0.081
L3East Wall (G.C2.I9)	220.22	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.C2.I10)	12.10	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.C2.I11)	108.90	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.W3.I12)	186.20	GFlr Cons	DELAYED STANDARD	0.081
L3North Wall (G.W3.I13)	118.58	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.WSW4.I14)	111.36	GFlr Cons	DELAYED STANDARD	0.081
L3Flr (G.C5.I15)	120.00	GFlr Cons	DELAYED STANDARD	0.081
L3East Wall (G.C5.I16)	96.80	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.C5.I17)	96.80	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.NW6.I18)	813.68	GFlr Cons	DELAYED STANDARD	0.081
L3South Wall (G.NW6.I19)	154.88	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.NW6.I20)	105.27	IntWall Cons	DELAYED STANDARD	0.402
L3South Wall (G.NW6.I21)	181.50	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.NW6.I22)	121.00	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.NW6.I23)	278.30	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.SSE7.I24)	580.00	GFlr Cons	DELAYED STANDARD	0.081
L3North Wall (G.SSE7.I25)	242.00	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.C8.I26)	180.00	GFlr Cons	DELAYED STANDARD	0.081
L3North Wall (G.C8.I27)	242.00	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.C9.I28)	200.00	GFlr Cons	DELAYED STANDARD	0.081

L3Flr (G.C10.I29)	380.75	GFlr Cons	DELAYED STANDARD	0.081
L3South Wall (G.C10.I30)	84.70	IntWall Cons	DELAYED STANDARD	0.402
L3South Wall (G.C10.I31)	376.91	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.C10.I32)	121.01	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.C10.I33)	254.10	IntWall Cons	DELAYED STANDARD	0.402
L3North Wall (G.C10.I34)	205.70	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.C10.I35)	121.00	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.N11.I36)	296.73	GFlr Cons	DELAYED STANDARD	0.081
L3South Wall (G.N11.I37)	157.30	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.N12.I38)	212.07	GFlr Cons	DELAYED STANDARD	0.081

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
L3East Wall (G.N12.I39)	148.83	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.N12.I40)	153.07	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.N13.I41)	253.05	GFlr Cons	DELAYED STANDARD	0.081
L3Flr (G.SSE14.I42)	1032.46	GFlr Cons	DELAYED STANDARD	0.081
L3West Wall (G.SSE14.I43)	121.00	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.SSE14.I44)	108.90	IntWall Cons	DELAYED STANDARD	0.402
L3West Wall (G.SSE14.I45)	278.30	IntWall Cons	DELAYED STANDARD	0.402
L3East Wall (G.SSE14.I46)	287.42	IntWall Cons	DELAYED STANDARD	0.402
L3Flr (G.E15.I47)	1425.21	GFlr Cons	DELAYED STANDARD	0.081
L3West Wall (G.E15.I48)	142.81	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.SSE1.I1)	1088.26	GFlr Cons	DELAYED STANDARD	0.081
L4 West Wall (G.SSE1.I2)	183.66	IntWall Cons	DELAYED STANDARD	0.402
L4 North Wall (G.SSE1.I3)	144.08	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.W2.I4)	186.20	GFlr Cons	DELAYED STANDARD	0.081
L4 Flr (G.C3.I5)	108.75	GFlr Cons	DELAYED STANDARD	0.081
L4 North Wall (G.C3.I6)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.C3.I7)	95.55	IntWall Cons	DELAYED STANDARD	0.402
L4 South Wall (G.C3.I8)	213.15	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.NNW4.I9)	810.86	GFlr Cons	DELAYED STANDARD	0.081
L4 South Wall (G.NNW4.I10)	144.06	IntWall Cons	DELAYED STANDARD	0.402
L4 East Wall (G.NNW4.I11)	14.70	IntWall Cons	DELAYED STANDARD	0.402
L4 South Wall (G.NNW4.I12)	80.85	IntWall Cons	DELAYED STANDARD	0.402
L4 East Wall (G.NNW4.I13)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 South Wall (G.NNW4.I14)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.SSE5.I15)	457.25	GFlr Cons	DELAYED STANDARD	0.081
L4 North Wall (G.SSE5.I16)	88.20	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.SSE5.I17)	147.00	IntWall Cons	DELAYED STANDARD	0.402
L4 North Wall (G.SSE5.I18)	301.35	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.SSE5.I19)	95.55	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.N6.I20)	205.00	GFlr Cons	DELAYED STANDARD	0.081
L4 West Wall (G.N6.I21)	132.30	IntWall Cons	DELAYED STANDARD	0.402
L4 West Wall (G.N6.I22)	14.70	IntWall Cons	DELAYED STANDARD	0.402
L4 Flr (G.N7.I23)	214.20	GFlr Cons	DELAYED STANDARD	0.081
L4 Flr (G.C8.I24)	81.00	GFlr Cons	DELAYED STANDARD	0.081
B1ENE Wall (B.SW1.I1)	231.58	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.SW1.I2)	283.64	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.C2.I3)	106.95	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I4)	196.65	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I5)	103.50	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I6)	307.05	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.C2.I7)	115.28	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.C2.I8)	288.42	IntWall Cons	DELAYED ADIABATIC	0.402
B1East Wall (B.C2.I9)	234.60	IntWall Cons	DELAYED ADIABATIC	0.402
B1East Wall (B.C2.I10)	96.60	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.C2.I11)	138.00	IntWall Cons	DELAYED STANDARD	0.402

B1East Wall (B.C2.I12)	82.80	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.C2.I13)	27.60	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C2.I14)	96.60	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I15)	69.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I16)	179.40	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C2.I17)	110.40	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C2.I18)	69.69	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.W4.I19)	176.64	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.W4.I20)	176.64	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.C5.I21)	106.95	IntWall Cons	DELAYED STANDARD	0.402

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
B1West Wall (B.C5.I22)	196.65	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.W6.I23)	287.04	IntWall Cons	DELAYED STANDARD	0.402
B1ENE Wall (B.SSE7.I24)	229.88	IntWall Cons	DELAYED STANDARD	0.402
B1NNW Wall (B.SSE7.I25)	321.63	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C8.I26)	523.02	IntWall Cons	DELAYED ADIABATIC	0.402
B1East Wall (B.C8.I27)	356.73	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C8.I28)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C9.I29)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.C10.I30)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C10.I31)	179.40	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.C10.I32)	181.68	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C10.I33)	138.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C10.I34)	138.00	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.C10.I35)	96.60	IntWall Cons	DELAYED STANDARD	0.402
B1ENE Wall (B.SSE11.I36)	237.14	IntWall Cons	DELAYED STANDARD	0.402
B1WSW Wall (B.SSE11.I37)	236.16	IntWall Cons	DELAYED STANDARD	0.402
B1NNW Wall (B.SSE12.I38)	328.06	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C15.I39)	276.00	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.N17.I40)	202.86	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N17.I41)	204.93	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.N18.I42)	227.70	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.SE20.I43)	191.82	IntWall Cons	DELAYED STANDARD	0.402
B1WSW Wall (B.SE20.I44)	231.71	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N22.I45)	220.80	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N22.I46)	82.80	IntWall Cons	DELAYED STANDARD	0.402
B1South Wall (B.N22.I47)	291.87	IntWall Cons	DELAYED STANDARD	0.402
B1West Wall (B.N22.I48)	317.40	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.N22.I49)	53.61	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.N22.I50)	303.18	IntWall Cons	DELAYED STANDARD	0.402
B1SSE Wall (B.N22.I51)	315.95	IntWall Cons	DELAYED STANDARD	0.402
B1East Wall (B.N22.I52)	259.44	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C23.I53)	230.46	IntWall Cons	DELAYED STANDARD	0.402
B1North Wall (B.C23.I54)	183.54	IntWall Cons	DELAYED STANDARD	0.402
B2North Wall (B.E2.I1)	127.50	IntWall Cons	DELAYED STANDARD	0.402
B2West Wall (B.E2.I2)	164.05	IntWall Cons	DELAYED STANDARD	0.402
B2North Wall (B.E2.I3)	108.80	IntWall Cons	DELAYED STANDARD	0.402
B2South Wall (B.E2.I4)	174.67	IntWall Cons	DELAYED STANDARD	0.402
B2West Wall (B.E2.I5)	212.07	IntWall Cons	DELAYED STANDARD	0.402
B2South Wall (B.N4.I6)	108.80	IntWall Cons	DELAYED STANDARD	0.402

SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2

L1East Wall (G.SW1.I1)	L1SW Perim Spc (G.SW1)	L1SSE Perim Spc (G.SSE8)
L1North Wall (G.SW1.I2)	L1SW Perim Spc (G.SW1)	L1Core Spc (G.C2)
L1East Wall (G.SW1.I3)	L1SW Perim Spc (G.SW1)	L1Core Spc (G.C2)
L1North Wall (G.SW1.I4)	L1SW Perim Spc (G.SW1)	L1Core Spc (G.C5)
L1West Wall (G.SW1.I5)	L1SW Perim Spc (G.SW1)	L1West Perim Spc (G.W3)
L1North Wall (G.SW1.I6)	L1SW Perim Spc (G.SW1)	L1West Perim Spc (G.W3)
Interior Wall 233	L1SW Perim Spc (G.SW1)	B1SW Perim Spc (B.SW1)
L1East Wall (G.C2.I7)	L1Core Spc (G.C2)	L1SSE Perim Spc (G.SSE8)
Interior Wall 234	L1Core Spc (G.C2)	B1Core Spc (B.C2)
Interior Wall 235	L1West Perim Spc (G.W3)	B1West Perim Spc (B.W4)

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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L1South Wall (G.WNW4.I8)	L1WNW Perim Spc (G.WNW4)	L1West Perim Spc (G.W3)
L1East Wall (G.WNW4.I9)	L1WNW Perim Spc (G.WNW4)	L1Core Spc (G.C5)
L1North Wall (G.WNW4.I10)	L1WNW Perim Spc (G.WNW4)	L1Core Spc (G.C6)
L1South Wall (G.WNW4.I11)	L1WNW Perim Spc (G.WNW4)	L1North Perim Spc (G.N7)
L1East Wall (G.WNW4.I12)	L1WNW Perim Spc (G.WNW4)	L1North Perim Spc (G.N7)
Interior Wall 236	L1WNW Perim Spc (G.WNW4)	B1NW Perim Spc (B.NW16)
L1South Wall (G.C5.I13)	L1Core Spc (G.C5)	L1Core Spc (G.C2)
L1West Wall (G.C5.I14)	L1Core Spc (G.C5)	L1West Perim Spc (G.W3)
Interior Wall 237	L1Core Spc (G.C5)	B1Core Spc (B.C2)
L1South Wall (G.C6.I15)	L1Core Spc (G.C6)	L1Core Spc (G.C5)
L1East Wall (G.C6.I16)	L1Core Spc (G.C6)	L1Core Spc (G.C10)
L1West Wall (G.C6.I17)	L1Core Spc (G.C6)	L1WNW Perim Spc (G.WNW4)
Interior Wall 238	L1Core Spc (G.C6)	B1West Perim Spc (B.W6)
L1West Wall (G.N7.I18)	L1North Perim Spc (G.N7)	L1WNW Perim Spc (G.WNW4)
L1South Wall (G.N7.I19)	L1North Perim Spc (G.N7)	L1Core Spc (G.C6)
L1East Wall (G.N7.I20)	L1North Perim Spc (G.N7)	L1North Perim Spc (G.N12)
Interior Wall 239	L1North Perim Spc (G.N7)	B1North Perim Spc (B.N17)
L1East Wall (G.SSE8.I21)	L1SSE Perim Spc (G.SSE8)	L1SE Perim Spc (G.SE16)
L1North Wall (G.SSE8.I22)	L1SSE Perim Spc (G.SSE8)	L1Core Spc (G.C9)
L1West Wall (G.SSE8.I23)	L1SSE Perim Spc (G.SSE8)	L1Core Spc (G.C9)
L1North Wall (G.SSE8.I24)	L1SSE Perim Spc (G.SSE8)	L1Core Spc (G.C9)
Interior Wall 240	L1SSE Perim Spc (G.SSE8)	B1Core Spc (B.C8)
L1East Wall (G.C9.I25)	L1Core Spc (G.C9)	L1SE Perim Spc (G.SE16)
L1East Wall (G.C9.I26)	L1Core Spc (G.C9)	L1Core Spc (G.C17)
L1North Wall (G.C9.I27)	L1Core Spc (G.C9)	L1Core Spc (G.C10)
L1West Wall (G.C9.I28)	L1Core Spc (G.C9)	L1Core Spc (G.C5)
Interior Wall 241	L1Core Spc (G.C9)	B1Core Spc (B.C9)
Interior Wall 242	L1Core Spc (G.C10)	B1Core Spc (B.C15)
L1South Wall (G.C11.I29)	L1Core Spc (G.C11)	L1Core Spc (G.C6)
L1South Wall (G.C11.I30)	L1Core Spc (G.C11)	L1Core Spc (G.C10)
L1South Wall (G.C11.I31)	L1Core Spc (G.C11)	L1Core Spc (G.C17)
L1East Wall (G.C11.I32)	L1Core Spc (G.C11)	L1North Perim Spc (G.N12)
L1North Wall (G.C11.I33)	L1Core Spc (G.C11)	L1North Perim Spc (G.N7)
L1West Wall (G.C11.I34)	L1Core Spc (G.C11)	L1Core Spc (G.C6)
Interior Wall 243	L1Core Spc (G.C11)	B1Core Spc (B.C23)
L1South Wall (G.N12.I35)	L1North Perim Spc (G.N12)	L1Core Spc (G.C11)
L1East Wall (G.N12.I36)	L1North Perim Spc (G.N12)	L1North Perim Spc (G.N13)
Interior Wall 244	L1North Perim Spc (G.N12)	B1North Perim Spc (B.N18)
L1South Wall (G.N13.I37)	L1North Perim Spc (G.N13)	L1Core Spc (G.C11)
L1North Wall (G.N13.I38)	L1North Perim Spc (G.N13)	L1North Perim Spc (G.N14)
Interior Wall 245	L1North Perim Spc (G.N13)	B1North Perim Spc (B.N19)
L1West Wall (G.N14.I39)	L1North Perim Spc (G.N14)	L1North Perim Spc (G.N13)
Interior Wall 246	L1North Perim Spc (G.N14)	B1North Perim Spc (B.N22)
L1East Wall (G.SSE15.I40)	L1SSE Perim Spc (G.SSE15)	L1SSE Perim Spc (G.SSE15)

Interior Wall 247	L1SSE Perim Spc (G.SSE15)	B1Core Spc (B.C10)
L1East Wall (G.SE16.I41)	L1SE Perim Spc (G.SE16)	L1SSE Perim Spc (G.SSE15)
Interior Wall 248	L1SE Perim Spc (G.SE16)	B1Core Spc (B.C13)
L1South Wall (G.C17.I42)	L1Core Spc (G.C17)	L1SE Perim Spc (G.SE16)
L1South Wall (G.C17.I43)	L1Core Spc (G.C17)	L1SSE Perim Spc (G.SSE15)
L1East Wall (G.C17.I44)	L1Core Spc (G.C17)	L1Core Spc (G.C17)
L1West Wall (G.C17.I45)	L1Core Spc (G.C17)	L1Core Spc (G.C10)
Interior Wall 249	L1Core Spc (G.C17)	B1Core Spc (B.C10)
L1West Wall (G.E18.I46)	L1East Perim Spc (G.E18)	L1North Perim Spc (G.N14)
L1North Wall (G.E18.I47)	L1East Perim Spc (G.E18)	L1North Perim Spc (G.N14)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L1West Wall (G.E18.I48)	L1East Perim Spc (G.E18)	L1North Perim Spc (G.N13)
L1West Wall (G.E18.I49)	L1East Perim Spc (G.E18)	L1Core Spc (G.C11)
L1South Wall (G.E18.I50)	L1East Perim Spc (G.E18)	L1Core Spc (G.C17)
L1West Wall (G.E18.I51)	L1East Perim Spc (G.E18)	L1East Perim Spc (G.E18)
Interior Wall 250	L1East Perim Spc (G.E18)	B1North Perim Spc (B.N22)
Interior Wall 251	Space 84	L1Core Spc (G.C11)
Interior Wall 252	Space 84	L1North Perim Spc (G.N14)
Interior Wall 253	Space 84	L1North Perim Spc (G.N12)
Interior Wall 254	Space 84	L1Core Spc (G.C11)
Interior Wall 255	Space 84	L1North Perim Spc (G.N14)
L2Flr (G.SW1.I1)	L2SW Perim Spc (G.SW1)	L1SW Perim Spc (G.SW1)
L2East Wall (G.SW1.I2)	L2SW Perim Spc (G.SW1)	L2SSE Perim Spc (G.SSE7)
L2North Wall (G.SW1.I3)	L2SW Perim Spc (G.SW1)	L2Core Spc (G.C2)
L2East Wall (G.SW1.I4)	L2SW Perim Spc (G.SW1)	L2Core Spc (G.C2)
L2North Wall (G.SW1.I5)	L2SW Perim Spc (G.SW1)	L2Core Spc (G.C5)
L2West Wall (G.SW1.I6)	L2SW Perim Spc (G.SW1)	L2West Perim Spc (G.W3)
L2North Wall (G.SW1.I7)	L2SW Perim Spc (G.SW1)	L2West Perim Spc (G.W3)
L2Flr (G.C2.I8)	L2Core Spc (G.C2)	L1Core Spc (G.C2)
L2East Wall (G.C2.I9)	L2Core Spc (G.C2)	L2SSE Perim Spc (G.SSE7)
L2East Wall (G.C2.I10)	L2Core Spc (G.C2)	L2Core Spc (G.C8)
L2North Wall (G.C2.I11)	L2Core Spc (G.C2)	L2Core Spc (G.C5)
L2Flr (G.W3.I12)	L2West Perim Spc (G.W3)	L1West Perim Spc (G.W3)
L2North Wall (G.W3.I13)	L2West Perim Spc (G.W3)	L2West Perim Spc (G.W4)
L2Flr (G.W4.I14)	L2West Perim Spc (G.W4)	L1WNW Perim Spc (G.WNW4)
L2Flr (G.C5.I15)	L2Core Spc (G.C5)	L1Core Spc (G.C5)
L2East Wall (G.C5.I16)	L2Core Spc (G.C5)	L2Core Spc (G.C8)
L2West Wall (G.C5.I17)	L2Core Spc (G.C5)	L2West Perim Spc (G.W3)
L2Flr (G.NW6.I18)	L2NW Perim Spc (G.NW6)	L1Core Spc (G.C6)
L2South Wall (G.NW6.I19)	L2NW Perim Spc (G.NW6)	L2West Perim Spc (G.W4)
L2West Wall (G.NW6.I20)	L2NW Perim Spc (G.NW6)	L2West Perim Spc (G.W4)
L2South Wall (G.NW6.I21)	L2NW Perim Spc (G.NW6)	L2West Perim Spc (G.W3)
L2South Wall (G.NW6.I22)	L2NW Perim Spc (G.NW6)	L2Core Spc (G.C5)
L2East Wall (G.NW6.I23)	L2NW Perim Spc (G.NW6)	L2Core Spc (G.C9)
L2East Wall (G.NW6.I24)	L2NW Perim Spc (G.NW6)	L2North Perim Spc (G.N11)
L2Flr (G.SSE7.I25)	L2SSE Perim Spc (G.SSE7)	L1SSE Perim Spc (G.SSE8)
L2North Wall (G.SSE7.I26)	L2SSE Perim Spc (G.SSE7)	L2Core Spc (G.C8)
L2Flr (G.C8.I27)	L2Core Spc (G.C8)	L1Core Spc (G.C9)
L2North Wall (G.C8.I28)	L2Core Spc (G.C8)	L2Core Spc (G.C9)
L2Flr (G.C9.I29)	L2Core Spc (G.C9)	L1Core Spc (G.C10)
L2Flr (G.C10.I30)	L2Core Spc (G.C10)	L1Core Spc (G.C11)
L2South Wall (G.C10.I31)	L2Core Spc (G.C10)	L2Core Spc (G.C9)
L2South Wall (G.C10.I32)	L2Core Spc (G.C10)	L2SSE Perim Spc (G.SSE14)
L2East Wall (G.C10.I33)	L2Core Spc (G.C10)	L2East Perim Spc (G.E15)
L2North Wall (G.C10.I34)	L2Core Spc (G.C10)	L2North Perim Spc (G.N13)

L2North Wall (G.C10.I35)
L2West Wall (G.C10.I36)
L2Flr (G.N11.I37)
L2South Wall (G.N11.I38)
L2Flr (G.N12.I39)
L2East Wall (G.N12.I40)
L2West Wall (G.N12.I41)
L2Flr (G.N13.I42)
L2Flr (G.SSE14.I43)
L2West Wall (G.SSE14.I44)
L2Core Spc (G.C10)
L2Core Spc (G.C10)
L2North Perim Spc (G.N11)
L2North Perim Spc (G.N11)
L2North Perim Spc (G.N12)
L2North Perim Spc (G.N12)
L2North Perim Spc (G.N12)
L2North Perim Spc (G.N13)
L2SSE Perim Spc (G.SSE14)
L2SSE Perim Spc (G.SSE14)
L2North Perim Spc (G.N12)
L2North Perim Spc (G.N11)
L1North Perim Spc (G.N12)
L2Core Spc (G.C9)
L1North Perim Spc (G.N13)
L2North Perim Spc (G.N13)
L2North Perim Spc (G.N11)
L1North Perim Spc (G.N14)
L1SE Perim Spc (G.SE16)
L2Core Spc (G.C9)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L2West Wall (G.SSE14.I45)	L2SSE Perim Spc (G.SSE14)	L2Core Spc (G.C8)
L2West Wall (G.SSE14.I46)	L2SSE Perim Spc (G.SSE14)	L2SSE Perim Spc (G.SSE7)
L2East Wall (G.SSE14.I47)	L2SSE Perim Spc (G.SSE14)	L2East Perim Spc (G.E15)
L2Flr (G.E15.I48)	L2East Perim Spc (G.E15)	L1East Perim Spc (G.E18)
L2West Wall (G.E15.I49)	L2East Perim Spc (G.E15)	L2North Perim Spc (G.N13)
L3Flr (G.SW1.I1)	L3SW Perim Spc (G.SW1)	L2SW Perim Spc (G.SW1)
L3East Wall (G.SW1.I2)	L3SW Perim Spc (G.SW1)	L3SSE Perim Spc (G.SSE7)
L3North Wall (G.SW1.I3)	L3SW Perim Spc (G.SW1)	L3Core Spc (G.C2)
L3East Wall (G.SW1.I4)	L3SW Perim Spc (G.SW1)	L3Core Spc (G.C2)
L3North Wall (G.SW1.I5)	L3SW Perim Spc (G.SW1)	L3Core Spc (G.C5)
L3West Wall (G.SW1.I6)	L3SW Perim Spc (G.SW1)	L3West Perim Spc (G.W3)
L3North Wall (G.SW1.I7)	L3SW Perim Spc (G.SW1)	L3West Perim Spc (G.W3)
L3Flr (G.C2.I8)	L3Core Spc (G.C2)	L2Core Spc (G.C2)
L3East Wall (G.C2.I9)	L3Core Spc (G.C2)	L3SSE Perim Spc (G.SSE7)
L3East Wall (G.C2.I10)	L3Core Spc (G.C2)	L3Core Spc (G.C8)
L3North Wall (G.C2.I11)	L3Core Spc (G.C2)	L3Core Spc (G.C5)
L3Flr (G.W3.I12)	L3West Perim Spc (G.W3)	L2West Perim Spc (G.W3)
L3North Wall (G.W3.I13)	L3West Perim Spc (G.W3)	L3WSW Perim Spc (G.WSW4)
L3Flr (G.WSW4.I14)	L3WSW Perim Spc (G.WSW4)	L2West Perim Spc (G.W4)
L3Flr (G.C5.I15)	L3Core Spc (G.C5)	L2Core Spc (G.C5)
L3East Wall (G.C5.I16)	L3Core Spc (G.C5)	L3Core Spc (G.C8)
L3West Wall (G.C5.I17)	L3Core Spc (G.C5)	L3West Perim Spc (G.W3)
L3Flr (G.NW6.I18)	L3NW Perim Spc (G.NW6)	L2NW Perim Spc (G.NW6)
L3South Wall (G.NW6.I19)	L3NW Perim Spc (G.NW6)	L3WSW Perim Spc (G.WSW4)
L3West Wall (G.NW6.I20)	L3NW Perim Spc (G.NW6)	L3WSW Perim Spc (G.WSW4)
L3South Wall (G.NW6.I21)	L3NW Perim Spc (G.NW6)	L3Core Spc (G.C5)
L3East Wall (G.NW6.I22)	L3NW Perim Spc (G.NW6)	L3Core Spc (G.C9)
L3East Wall (G.NW6.I23)	L3NW Perim Spc (G.NW6)	L3North Perim Spc (G.N11)
L3Flr (G.SSE7.I24)	L3SSE Perim Spc (G.SSE7)	L2SSE Perim Spc (G.SSE7)
L3North Wall (G.SSE7.I25)	L3SSE Perim Spc (G.SSE7)	L3Core Spc (G.C8)
L3Flr (G.C8.I26)	L3Core Spc (G.C8)	L2Core Spc (G.C8)
L3North Wall (G.C8.I27)	L3Core Spc (G.C8)	L3Core Spc (G.C9)
L3Flr (G.C9.I28)	L3Core Spc (G.C9)	L2Core Spc (G.C9)
L3Flr (G.C10.I29)	L3Core Spc (G.C10)	L2Core Spc (G.C10)
L3South Wall (G.C10.I30)	L3Core Spc (G.C10)	L3Core Spc (G.C9)
L3South Wall (G.C10.I31)	L3Core Spc (G.C10)	L3SSE Perim Spc (G.SSE14)
L3East Wall (G.C10.I32)	L3Core Spc (G.C10)	L3East Perim Spc (G.E15)
L3North Wall (G.C10.I33)	L3Core Spc (G.C10)	L3North Perim Spc (G.N13)
L3North Wall (G.C10.I34)	L3Core Spc (G.C10)	L3North Perim Spc (G.N12)
L3West Wall (G.C10.I35)	L3Core Spc (G.C10)	L3North Perim Spc (G.N11)
L3Flr (G.N11.I36)	L3North Perim Spc (G.N11)	L2North Perim Spc (G.N11)
L3South Wall (G.N11.I37)	L3North Perim Spc (G.N11)	L3Core Spc (G.C9)
L3Flr (G.N12.I38)	L3North Perim Spc (G.N12)	L2North Perim Spc (G.N12)
L3East Wall (G.N12.I39)	L3North Perim Spc (G.N12)	L3North Perim Spc (G.N13)

L3West Wall (G.N12.I40)	L3North Perim Spc (G.N12)	L3North Perim Spc (G.N11)
L3Flr (G.N13.I41)	L3North Perim Spc (G.N13)	L2North Perim Spc (G.N13)
L3Flr (G.SSE14.I42)	L3SSE Perim Spc (G.SSE14)	L2SSE Perim Spc (G.SSE14)
L3West Wall (G.SSE14.I43)	L3SSE Perim Spc (G.SSE14)	L3Core Spc (G.C9)
L3West Wall (G.SSE14.I44)	L3SSE Perim Spc (G.SSE14)	L3Core Spc (G.C8)
L3West Wall (G.SSE14.I45)	L3SSE Perim Spc (G.SSE14)	L3SSE Perim Spc (G.SSE7)
L3East Wall (G.SSE14.I46)	L3SSE Perim Spc (G.SSE14)	L3East Perim Spc (G.E15)
L3Flr (G.E15.I47)	L3East Perim Spc (G.E15)	L2East Perim Spc (G.E15)
L3West Wall (G.E15.I48)	L3East Perim Spc (G.E15)	L3North Perim Spc (G.N13)
L4 Flr (G.SSE1.I1)	L4 SSE Perim Spc (G.SSE1)	L3SW Perim Spc (G.SW1)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
L4 West Wall (G.SSE1.I2)	L4 SSE Perim Spc (G.SSE1)	L4 West Perim Spc (G.W2)
L4 North Wall (G.SSE1.I3)	L4 SSE Perim Spc (G.SSE1)	L4 West Perim Spc (G.W2)
L4 Flr (G.W2.I4)	L4 West Perim Spc (G.W2)	L3West Perim Spc (G.W3)
L4 Flr (G.C3.I5)	L4 Core Spc (G.C3)	L3Core Spc (G.C5)
L4 North Wall (G.C3.I6)	L4 Core Spc (G.C3)	L4 Core Spc (G.C8)
L4 West Wall (G.C3.I7)	L4 Core Spc (G.C3)	L4 West Perim Spc (G.W2)
L4 South Wall (G.C3.I8)	L4 Core Spc (G.C3)	L4 SSE Perim Spc (G.SSE1)
L4 Flr (G.NNW4.I9)	L4 NNW Perim Spc (G.NNW4)	L3NW Perim Spc (G.NW6)
L4 South Wall (G.NNW4.I10)	L4 NNW Perim Spc (G.NNW4)	L4 West Perim Spc (G.W2)
L4 East Wall (G.NNW4.I11)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C3)
L4 South Wall (G.NNW4.I12)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C3)
L4 East Wall (G.NNW4.I13)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C8)
L4 South Wall (G.NNW4.I14)	L4 NNW Perim Spc (G.NNW4)	L4 Core Spc (G.C8)
L4 Flr (G.SSE5.I15)	L4 SSE Perim Spc (G.SSE5)	L3SSE Perim Spc (G.SSE14)
L4 North Wall (G.SSE5.I16)	L4 SSE Perim Spc (G.SSE5)	L4 North Perim Spc (G.N7)
L4 West Wall (G.SSE5.I17)	L4 SSE Perim Spc (G.SSE5)	L4 North Perim Spc (G.N6)
L4 North Wall (G.SSE5.I18)	L4 SSE Perim Spc (G.SSE5)	L4 North Perim Spc (G.N6)
L4 West Wall (G.SSE5.I19)	L4 SSE Perim Spc (G.SSE5)	L4 Core Spc (G.C3)
L4 Flr (G.N6.I20)	L4 North Perim Spc (G.N6)	L3Core Spc (G.C9)
L4 West Wall (G.N6.I21)	L4 North Perim Spc (G.N6)	L4 Core Spc (G.C8)
L4 West Wall (G.N6.I22)	L4 North Perim Spc (G.N6)	L4 Core Spc (G.C3)
L4 Flr (G.N7.I23)	L4 North Perim Spc (G.N7)	L3North Perim Spc (G.N13)
L4 Flr (G.C8.I24)	L4 Core Spc (G.C8)	L3NW Perim Spc (G.NW6)
B1ENE Wall (B.SW1.I1)	B1SW Perim Spc (B.SW1)	B1SSE Perim Spc (B.SSE7)
B1North Wall (B.SW1.I2)	B1SW Perim Spc (B.SW1)	B1West Perim Spc (B.W3)
B1South Wall (B.C2.I3)	B1Core Spc (B.C2)	B1Core Spc (B.C5)
B1West Wall (B.C2.I4)	B1Core Spc (B.C2)	B1Core Spc (B.C5)
B1West Wall (B.C2.I5)	B1Core Spc (B.C2)	B1West Perim Spc (B.W3)
B1West Wall (B.C2.I6)	B1Core Spc (B.C2)	B1SW Perim Spc (B.SW1)
B1SSE Wall (B.C2.I7)	B1Core Spc (B.C2)	B1SW Perim Spc (B.SW1)
B1East Wall (B.C2.I8)	B1Core Spc (B.C2)	B1Core Spc (B.C2)
B1East Wall (B.C2.I9)	B1Core Spc (B.C2)	B1Core Spc (B.C2)
B1East Wall (B.C2.I10)	B1Core Spc (B.C2)	B1Core Spc (B.C9)
B1East Wall (B.C2.I11)	B1Core Spc (B.C2)	B1Core Spc (B.C15)
B1East Wall (B.C2.I12)	B1Core Spc (B.C2)	B1Core Spc (B.C23)
B1East Wall (B.C2.I13)	B1Core Spc (B.C2)	B1North Perim Spc (B.N18)
B1North Wall (B.C2.I14)	B1Core Spc (B.C2)	B1North Perim Spc (B.N17)
B1West Wall (B.C2.I15)	B1Core Spc (B.C2)	B1NW Perim Spc (B.NW16)
B1West Wall (B.C2.I16)	B1Core Spc (B.C2)	B1West Perim Spc (B.W6)
B1North Wall (B.C2.I17)	B1Core Spc (B.C2)	B1West Perim Spc (B.W6)
B1West Wall (B.C2.I18)	B1Core Spc (B.C2)	B1West Perim Spc (B.W4)
B1South Wall (B.W4.I19)	B1West Perim Spc (B.W4)	B1West Perim Spc (B.W3)
B1North Wall (B.W4.I20)	B1West Perim Spc (B.W4)	B1West Perim Spc (B.W6)
B1South Wall (B.C5.I21)	B1Core Spc (B.C5)	B1West Perim Spc (B.W3)

B1West Wall (B.C5.I22)	B1Core Spc (B.C5)	B1West Perim Spc (B.W4)
B1North Wall (B.W6.I23)	B1West Perim Spc (B.W6)	B1NW Perim Spc (B.NW16)
B1ENE Wall (B.SSE7.I24)	B1SSE Perim Spc (B.SSE7)	B1SSE Perim Spc (B.SSE12)
B1NNW Wall (B.SSE7.I25)	B1SSE Perim Spc (B.SSE7)	B1Core Spc (B.C8)
B1West Wall (B.C8.I26)	B1Core Spc (B.C8)	B1Core Spc (B.C8)
B1East Wall (B.C8.I27)	B1Core Spc (B.C8)	B1Core Spc (B.C13)
B1North Wall (B.C8.I28)	B1Core Spc (B.C8)	B1Core Spc (B.C9)
B1North Wall (B.C9.I29)	B1Core Spc (B.C9)	B1Core Spc (B.C15)
B1South Wall (B.C10.I30)	B1Core Spc (B.C10)	B1Core Spc (B.C13)
B1West Wall (B.C10.I31)	B1Core Spc (B.C10)	B1Core Spc (B.C13)

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REPORT- LV-F Details of Interior Surfaces WEATHER FILE- SEATTLE BOEING FI WA
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SURFACE NAME	ADJACENT SPACES SPACE-1	SPACE-2
B1SSE Wall (B.C10.I32)	B1Core Spc (B.C10)	B1SSE Perim Spc (B.SSE11)
B1North Wall (B.C10.I33)	B1Core Spc (B.C10)	B1Core Spc (B.C23)
B1West Wall (B.C10.I34)	B1Core Spc (B.C10)	B1Core Spc (B.C15)
B1West Wall (B.C10.I35)	B1Core Spc (B.C10)	B1Core Spc (B.C9)
B1ENE Wall (B.SSE11.I36)	B1SSE Perim Spc (B.SSE11)	B1SSE Perim Spc (B.SSE14)
B1WSW Wall (B.SSE11.I37)	B1SSE Perim Spc (B.SSE11)	B1SSE Perim Spc (B.SSE12)
B1NNW Wall (B.SSE12.I38)	B1SSE Perim Spc (B.SSE12)	B1Core Spc (B.C13)
B1North Wall (B.C15.I39)	B1Core Spc (B.C15)	B1Core Spc (B.C23)
B1East Wall (B.N17.I40)	B1North Perim Spc (B.N17)	B1North Perim Spc (B.N18)
B1West Wall (B.N17.I41)	B1North Perim Spc (B.N17)	B1NW Perim Spc (B.NW16)
B1East Wall (B.N18.I42)	B1North Perim Spc (B.N18)	B1North Perim Spc (B.N19)
B1North Wall (B.SE20.I43)	B1SE Perim Spc (B.SE20)	B1NE Perim Spc (B.NE21)
B1WSW Wall (B.SE20.I44)	B1SE Perim Spc (B.SE20)	B1SSE Perim Spc (B.SSE14)
B1West Wall (B.N22.I45)	B1North Perim Spc (B.N22)	B1North Perim Spc (B.N19)
B1West Wall (B.N22.I46)	B1North Perim Spc (B.N22)	B1Core Spc (B.C23)
B1South Wall (B.N22.I47)	B1North Perim Spc (B.N22)	B1Core Spc (B.C10)
B1West Wall (B.N22.I48)	B1North Perim Spc (B.N22)	B1Core Spc (B.C10)
B1SSE Wall (B.N22.I49)	B1North Perim Spc (B.N22)	B1SSE Perim Spc (B.SSE11)
B1SSE Wall (B.N22.I50)	B1North Perim Spc (B.N22)	B1SSE Perim Spc (B.SSE14)
B1SSE Wall (B.N22.I51)	B1North Perim Spc (B.N22)	B1SE Perim Spc (B.SE20)
B1East Wall (B.N22.I52)	B1North Perim Spc (B.N22)	B1NE Perim Spc (B.NE21)
B1North Wall (B.C23.I53)	B1Core Spc (B.C23)	B1North Perim Spc (B.N19)
B1North Wall (B.C23.I54)	B1Core Spc (B.C23)	B1North Perim Spc (B.N18)
B2North Wall (B.E2.I1)	B2East Perim Spc (B.E2)	B2North Perim Spc (B.N4)
B2West Wall (B.E2.I2)	B2East Perim Spc (B.E2)	B2West Perim Spc (B.W3)
B2North Wall (B.E2.I3)	B2East Perim Spc (B.E2)	B2West Perim Spc (B.W3)
B2South Wall (B.E2.I4)	B2East Perim Spc (B.E2)	B2SW Perim Spc (B.SW1)
B2West Wall (B.E2.I5)	B2East Perim Spc (B.E2)	B2SW Perim Spc (B.SW1)
B2South Wall (B.N4.I6)	B2North Perim Spc (B.N4)	B2West Perim Spc (B.W3)

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF WINDOWS 98

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES X (FT)	Y (FT)	FRAME AREA (SQFT)	CURB	FRAME U-VALUE (BTU/HR-SQFT-F)	CURB
Window 1	1.0	126.38	12.33	10.25	4.00	1.00	0.00	0.00	0.384	0.000
Window 2	1.0	126.38	12.33	10.25	18.00	1.00	0.00	0.00	0.384	0.000
Window 32	1.0	26.25	5.25	5.00	0.25	7.00	0.00	0.00	0.384	0.000
Window 30	1.0	15.75	5.25	3.00	1.00	9.00	0.00	0.00	0.384	0.000
Window 31	1.0	26.25	5.25	5.00	6.00	9.00	0.00	0.00	0.384	0.000
Window 3	1.0	216.00	12.00	18.00	3.00	1.00	0.00	0.00	0.384	0.000
Window 98	1.0	100.00	10.00	10.00	0.50	0.25	0.00	0.00	0.384	0.000
Window 4	1.0	216.00	12.00	18.00	3.00	1.00	0.00	0.00	0.384	0.000
Window 5	1.0	223.68	12.00	18.64	3.00	1.00	0.00	0.00	0.384	0.000
Window 6	1.0	223.68	12.00	18.64	26.00	1.00	0.00	0.00	0.384	0.000
Window 21	1.0	177.96	12.00	14.83	1.00	1.00	0.00	0.00	0.384	0.000
Window 24	1.0	6.25	2.50	2.50	5.50	7.00	0.00	0.00	0.384	0.000
Window 25	1.0	6.25	2.50	2.50	11.00	7.00	0.00	0.00	0.384	0.000
Window 26	1.0	66.36	14.00	4.74	34.00	0.50	0.00	0.00	0.384	0.000
Window 99	1.0	17.25	5.75	3.00	16.25	7.00	0.00	0.00	0.384	0.000
Window 100	1.0	25.50	8.50	3.00	24.50	4.00	0.00	0.00	0.384	0.000
Window 101	1.0	25.50	8.50	3.00	29.00	4.00	0.00	0.00	0.384	0.000
Window 83	1.0	17.00	6.80	2.50	3.00	0.25	0.00	0.00	0.384	0.000
Window 84	1.0	18.38	5.25	3.50	10.00	0.25	0.00	0.00	0.384	0.000
Window 85	1.0	17.00	6.80	2.50	2.00	0.25	0.00	0.00	0.384	0.000
Window 7	1.0	34.68	8.67	4.00	4.00	2.00	0.00	0.00	0.384	0.000
Window 8	1.0	34.68	8.67	4.00	9.00	2.00	0.00	0.00	0.384	0.000
Window 9	1.0	34.68	8.67	4.00	18.00	2.00	0.00	0.00	0.384	0.000
Window 10	1.0	34.68	8.67	4.00	23.00	2.00	0.00	0.00	0.384	0.000
Window 61	1.0	60.47	9.00	6.72	4.00	1.00	0.00	0.00	0.384	0.000
Window 62	1.0	60.47	9.00	6.72	14.00	1.00	0.00	0.00	0.384	0.000
Window 11	1.0	45.00	7.50	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 12	1.0	45.00	7.50	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 55	1.0	19.17	7.67	2.50	1.00	2.00	0.00	0.00	0.384	0.000
Window 56	1.0	19.17	7.67	2.50	5.00	2.00	0.00	0.00	0.384	0.000
Window 51	1.0	20.62	8.25	2.50	0.50	2.00	0.00	0.00	0.384	0.000
Window 53	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 54	1.0	19.17	7.67	2.50	13.00	2.00	0.00	0.00	0.384	0.000
Window 45	1.0	20.62	8.25	2.50	2.00	2.00	0.00	0.00	0.384	0.000
Window 46	1.0	20.62	8.25	2.50	8.00	2.00	0.00	0.00	0.384	0.000
Window 47	1.0	20.62	8.25	2.50	15.00	2.00	0.00	0.00	0.384	0.000
Window 13	1.0	45.00	7.50	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 14	1.0	45.00	7.50	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 15	1.0	28.12	7.50	3.75	24.00	2.00	0.00	0.00	0.384	0.000

window 16	1.0	28.12	7.50	3.75	30.00	2.00	0.00	0.00	0.384	0.000
Window 22	1.0	34.00	8.00	4.25	3.00	2.00	0.00	0.00	0.384	0.000
Window 23	1.0	34.00	8.00	4.25	10.00	2.00	0.00	0.00	0.384	0.000
Window 33	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 34	1.0	19.17	7.67	2.50	10.00	2.00	0.00	0.00	0.384	0.000
Window 35	1.0	19.17	7.67	2.50	14.00	2.00	0.00	0.00	0.384	0.000
Window 36	1.0	19.17	7.67	2.50	22.00	2.00	0.00	0.00	0.384	0.000
Window 37	1.0	19.17	7.67	2.50	26.00	2.00	0.00	0.00	0.384	0.000
Window 38	1.0	19.17	7.67	2.50	30.00	2.00	0.00	0.00	0.384	0.000
Window 17	1.0	45.00	7.50	6.00	3.00	2.00	0.00	0.00	0.384	0.000

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES X (FT)	Y (FT)	FRAME AREA (SQFT)	CURB AREA (SQFT)	FRAME U-VALUE (BTU/HR-SQFT-F)	CURB U-VALUE (BTU/HR-SQFT-F)
Window 18	1.0	45.00	7.50	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 19	1.0	45.00	7.50	6.00	26.00	2.00	0.00	0.00	0.384	0.000
Window 20	1.0	45.00	7.50	6.00	36.00	2.00	0.00	0.00	0.384	0.000
Window 73	1.0	60.00	7.50	8.00	4.00	2.00	0.00	0.00	0.384	0.000
Window 74	1.0	60.00	7.50	8.00	17.00	2.00	0.00	0.00	0.384	0.000
Window 86	1.0	9.50	4.75	2.00	1.00	1.00	0.00	0.00	0.384	0.000
Window 87	1.0	9.50	4.75	2.00	14.00	5.00	0.00	0.00	0.384	0.000
Window 77	1.0	45.00	7.50	6.00	2.00	2.00	0.00	0.00	0.384	0.000
Window 78	1.0	45.00	7.50	6.00	11.00	2.00	0.00	0.00	0.384	0.000
Window 63	1.0	34.28	5.71	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 64	1.0	34.28	5.71	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 59	1.0	19.17	7.67	2.50	1.00	2.00	0.00	0.00	0.384	0.000
Window 60	1.0	19.17	7.67	2.50	5.00	2.00	0.00	0.00	0.384	0.000
Window 52	1.0	20.62	8.25	2.50	0.50	2.00	0.00	0.00	0.384	0.000
Window 57	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 58	1.0	19.17	7.67	2.50	13.00	2.00	0.00	0.00	0.384	0.000
Window 48	1.0	20.62	8.25	2.50	2.00	2.00	0.00	0.00	0.384	0.000
Window 49	1.0	20.62	8.25	2.50	8.00	2.00	0.00	0.00	0.384	0.000
Window 50	1.0	20.62	8.25	2.50	15.00	2.00	0.00	0.00	0.384	0.000
Window 65	1.0	34.28	5.71	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 66	1.0	34.28	5.71	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 67	1.0	28.12	7.50	3.75	24.00	2.00	0.00	0.00	0.384	0.000
Window 68	1.0	28.12	7.50	3.75	30.00	2.00	0.00	0.00	0.384	0.000
Window 81	1.0	25.34	6.34	4.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 82	1.0	25.34	6.34	4.00	10.00	2.00	0.00	0.00	0.384	0.000
Window 39	1.0	19.17	7.67	2.50	6.00	2.00	0.00	0.00	0.384	0.000
Window 40	1.0	19.17	7.67	2.50	10.00	2.00	0.00	0.00	0.384	0.000
Window 41	1.0	19.17	7.67	2.50	14.00	2.00	0.00	0.00	0.384	0.000
Window 42	1.0	19.17	7.67	2.50	22.00	2.00	0.00	0.00	0.384	0.000
Window 43	1.0	19.17	7.67	2.50	26.00	2.00	0.00	0.00	0.384	0.000
Window 44	1.0	19.17	7.67	2.50	30.00	2.00	0.00	0.00	0.384	0.000
Window 69	1.0	34.28	5.71	6.00	3.00	2.00	0.00	0.00	0.384	0.000
Window 70	1.0	34.28	5.71	6.00	12.00	2.00	0.00	0.00	0.384	0.000
Window 71	1.0	34.28	5.71	6.00	24.00	2.00	0.00	0.00	0.384	0.000
Window 72	1.0	34.28	5.71	6.00	33.00	2.00	0.00	0.00	0.384	0.000
Window 75	1.0	60.00	7.50	8.00	4.00	2.00	0.00	0.00	0.384	0.000
Window 76	1.0	60.00	7.50	8.00	17.00	2.00	0.00	0.00	0.384	0.000
Window 92	1.0	121.88	7.50	16.25	6.50	0.25	0.00	0.00	0.384	0.000
Window 88	1.0	9.50	4.75	2.00	1.00	1.00	0.00	0.00	0.384	0.000
Window 89	1.0	9.50	4.75	2.00	14.00	5.00	0.00	0.00	0.384	0.000
Window 90	1.0	9.50	2.00	4.75	1.00	8.00	0.00	0.00	0.384	0.000
Window 79	1.0	45.00	7.50	6.00	2.00	2.00	0.00	0.00	0.384	0.000

Window 80	1.0	45.00	7.50	6.00	11.00	2.00	0.00	0.00	0.384	0.000
Window 91	1.0	270.00	7.50	36.00	0.25	0.25	0.00	0.00	0.384	0.000
Window 93	1.0	46.88	7.50	6.25	0.25	0.25	0.00	0.00	0.384	0.000
Window 94	1.0	146.25	7.50	19.50	6.75	0.25	0.00	0.00	0.384	0.000
Window 95	1.0	108.75	7.50	14.50	0.25	0.25	0.00	0.00	0.384	0.000
Window 96	1.0	71.25	7.50	9.50	0.25	0.25	0.00	0.00	0.384	0.000
Window 97	1.0	153.75	7.50	20.50	0.25	0.25	0.00	0.00	0.384	0.000

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
Window 1	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 2	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 32	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 30	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 31	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 3	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 98	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 4	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 5	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 6	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 21	0.00	0.26	1	0.176	0.529	0.878	1.000
Window 24	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 25	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 26	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 99	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 100	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 101	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 83	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 84	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 85	0.00	0.34	1	0.157	0.490	0.878	1.000
Window 7	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 8	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 9	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 10	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 61	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 62	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 11	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 12	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 55	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 56	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 51	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 53	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 54	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 45	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 46	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 47	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 13	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 14	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 15	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 16	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 22	0.00	0.33	1	0.298	0.490	0.878	1.000
Window 23	0.00	0.33	1	0.298	0.490	0.878	1.000
Window 33	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 34	0.00	0.32	1	0.261	0.490	0.878	1.000

Window 35	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 36	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 37	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 38	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 17	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 18	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 19	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 20	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 73	0.00	0.33	1	0.298	0.490	0.878	1.000
Window 74	0.00	0.33	1	0.298	0.490	0.878	1.000

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-H Details of Windows WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
Window 86	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 87	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 77	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 78	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 63	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 64	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 59	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 60	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 52	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 57	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 58	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 48	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 49	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 50	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 65	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 66	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 67	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 68	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 81	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 82	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 39	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 40	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 41	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 42	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 43	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 44	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 69	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 70	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 71	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 72	0.00	0.30	1	0.261	0.490	0.878	1.000
Window 75	0.00	0.33	1	0.298	0.490	0.878	1.000
Window 76	0.00	0.33	1	0.298	0.490	0.878	1.000
Window 92	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 88	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 89	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 90	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 79	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 80	0.00	0.32	1	0.261	0.490	0.878	1.000
Window 91	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 93	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 94	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 95	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 96	0.00	0.43	1	0.138	0.630	0.878	1.000
Window 97	0.00	0.43	1	0.138	0.630	0.878	1.000

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LV-I Details of Constructions WEATHER FILE- SEATTLE BOEING FI WA

NUMBER OF CONSTRUCTIONS 15 DELAYED 14 QUICK 1

CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)	SURFACE ABSORPTANCE	SURFACE ROUGHNESS INDEX	SURFACE TYPE	NUMBER OF RESPONSE FACTORS
MasonEWall Con	0.471	0.60	3	DELAYED	15
Ceilg Cons	0.514	0.70	3	DELAYED	3
IntWall Cons	0.402	0.70	3	DELAYED	4
IntFlr Cons	0.532	0.70	3	DELAYED	3
GFlr Cons	0.081	0.70	3	DELAYED	8
MtlEWall Cons	0.050	0.60	4	DELAYED	20
Roof Cons	0.019	0.60	1	DELAYED	5
UFCons	0.029	0.70	3	DELAYED	41
NoInsUWCons	0.350	0.70	3	DELAYED	25
InsUWCons	0.070	0.70	3	DELAYED	40
FullInsMasEWall Con	0.042	0.60	3	DELAYED	8
PartInsMasEWall Con	0.410	0.60	3	DELAYED	6
BmntRf Cons	0.327	0.60	1	DELAYED	5
TestCons	0.029	0.70	3	DELAYED	41
MtlRollup Door	1.150	0.70	3	QUICK	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LS-C BuiLding Peak Load Components DESIGN DAY WEATHER FILE- SEATTLE BOEING FI WA

*** BUILDING ***

FLOOR AREA	31768	SQFT	2951	M2
VOLUME	448580	CUFT	12704	M3

	COOLING LOAD		HEATING LOAD	
TIME	AUG 1 4PM		DEC 21 6AM	
DRY-BULB TEMP	82 F	28 C	26 F	-4 C
WET-BULB TEMP	64 F	18 C	21 F	-6 C
TOT HORIZONTAL SOLAR RAD	236 BTU/H.SQFT	744 W/M2	0 BTU/H.SQFT	0 W/M2
WINDSPEED AT SPACE	3.8 KTS	1.9 M/S	7.0 KTS	3.6 M/S
CLOUD AMOUNT 0(CLEAR)-10	0		10	

	SENSIBLE		LATENT		SENSIBLE	
	(KBTU/H)	(KW)	(KBTU/H)	(KW)	(KBTU/H)	(KW)
WALL CONDUCTION	17.507	5.130	0.000	0.000	-135.679	-39.754
ROOF CONDUCTION	12.734	3.731	0.000	0.000	-33.712	-9.878
WINDOW GLASS+FRM COND	7.271	2.130	0.000	0.000	-40.141	-11.761
WINDOW GLASS SOLAR	27.356	8.015	0.000	0.000	0.486	0.142
DOOR CONDUCTION	0.536	0.157	0.000	0.000	-1.454	-0.426
INTERNAL SURFACE COND	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURF COND	-13.356	-3.913	0.000	0.000	-23.581	-6.909
OCCUPANTS TO SPACE	55.376	16.225	49.433	14.484	0.000	0.000
LIGHT TO SPACE	54.044	15.835	0.000	0.000	0.000	0.000
EQUIPMENT TO SPACE	75.270	22.054	0.000	0.000	0.000	0.000
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	2.070	0.606	0.000	0.000	-59.259	-17.363
TOTAL	238.808	69.971	49.433	14.484	-293.341	-85.949
TOTAL / AREA	0.008	0.024	0.002	0.005	-0.009	-0.029

TOTAL LOAD	288.241	KBTU/H	84.455	KW	-293.341 KBTU/H	-85.949 KW
TOTAL LOAD / AREA	9.07	BTU/H.SQFT	28.616	W/M2	9.234 BTU/H.SQFT	29.122 W/M2

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*****************************************************************
*                                                               *
*  NOTE  1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR      *
*  ----    LOADS                                                *
*        2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION        *
*          IN CONSIDERATION                                     *
*        3)THE ABOVE LOADS ARE CALCULATED ASSUMING A            *
*          CONSTANT INDOOR SPACE TEMPERATURE                    *
*                                                               *
*****************************************************************
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Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LS-D Building Monthly Loads Summary DESIGN DAY WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
FEB	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
MAR	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
APR	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
MAY	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
JUN	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
JUL	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
AUG	76.02767	1	15	82.F	64.F	238.808	-0.069	15	7	66.F	58.F	-0.655	15847.	44.019
SEP	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
OCT	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
NOV	0.00000	0	0	0.F	0.F	0.000	0.000	0	0	0.F	0.F	0.000	0.	0.000
DEC	0.00000	0	0	0.F	0.F	0.000	-68.994	21	6	26.F	21.F	-293.341	45.	0.171
TOTAL	76.028						-69.063						15892.	
MAX						238.808						-293.341		44.019

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LS-C BuiLding Peak Load Components WEATHER FILE- SEATTLE BOEING FI WA

*** BUILDING ***

FLOOR AREA	31768	SQFT	2951	M2
VOLUME	448580	CUFT	12704	M3

	COOLING LOAD		HEATING LOAD	
TIME	JUL 23 4PM		JAN 6 5AM	
DRY-BULB TEMP	88 F	31 C	27 F	-3 C
WET-BULB TEMP	66 F	19 C	23 F	-5 C
TOT HORIZONTAL SOLAR RAD	233 BTU/H.SQFT	734 W/M2	0 BTU/H.SQFT	0 W/M2
WINDSPEED AT SPACE	2.6 KTS	1.3 M/S	7.8 KTS	4.0 M/S
CLOUD AMOUNT 0(CLEAR)-10	0		10	

	SENSIBLE (KBTU/H)	SENSIBLE (KW)	LATENT (KBTU/H)	LATENT (KW)	SENSIBLE (KBTU/H)	SENSIBLE (KW)
WALL CONDUCTION	27.721	8.122	0.000	0.000	-126.836	-37.163
ROOF CONDUCTION	16.500	4.834	0.000	0.000	-32.042	-9.388
WINDOW GLASS+FRM COND	11.609	3.401	0.000	0.000	-39.028	-11.435
WINDOW GLASS SOLAR	29.129	8.535	0.000	0.000	0.820	0.240
DOOR CONDUCTION	0.709	0.208	0.000	0.000	-1.410	-0.413
INTERNAL SURFACE COND	0.000	0.000	0.000	0.000	0.000	0.000
UNDERGROUND SURF COND	-15.892	-4.656	0.000	0.000	-27.679	-8.110
OCCUPANTS TO SPACE	44.612	13.071	45.139	13.226	0.591	0.173
LIGHT TO SPACE	34.356	10.066	0.000	0.000	2.902	0.850
EQUIPMENT TO SPACE	65.417	19.167	0.000	0.000	3.644	1.068
PROCESS TO SPACE	0.000	0.000	0.000	0.000	0.000	0.000
INFILTRATION	2.207	0.647	0.000	0.000	-63.687	-18.660
TOTAL	216.368	63.396	45.139	13.226	-282.723	-82.838
TOTAL / AREA	0.007	0.021	0.001	0.004	-0.009	-0.028

TOTAL LOAD	261.507	KBTU/H	76.622	KW	-282.723	KBTU/H	-82.838 KW
TOTAL LOAD / AREA	8.23	BTU/H.SQFT	25.962	W/M2	8.900	BTU/H.SQFT	28.068 W/M2

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*****************************************************************
*                                                               *
*  NOTE  1)THE ABOVE LOADS EXCLUDE OUTSIDE VENTILATION AIR      *
*  ----    LOADS                                                *
*        2)TIMES GIVEN IN STANDARD TIME FOR THE LOCATION        *
*          IN CONSIDERATION                                     *
*        3)THE ABOVE LOADS ARE CALCULATED ASSUMING A            *
*          CONSTANT INDOOR SPACE TEMPERATURE                    *
*                                                               *
*****************************************************************
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Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- LS-D Building Monthly Loads Summary WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	9.75452	29	16	54.F	53.F	58.598	-88.466	6	5	27.F	23.F	-282.723	10077.	35.673
FEB	9.20153	21	16	57.F	54.F	59.758	-70.897	12	4	36.F	33.F	-183.286	9147.	35.673
MAR	12.83185	21	15	68.F	50.F	90.879	-63.137	19	4	39.F	38.F	-180.752	10164.	35.673
APR	18.17002	11	16	66.F	54.F	107.490	-45.866	5	21	46.F	42.F	-160.541	10347.	35.673
MAY	24.24548	15	15	73.F	60.F	158.605	-34.104	10	3	43.F	41.F	-142.243	10164.	35.673
JUN	30.79715	20	10	72.F	61.F	181.972	-19.402	8	4	52.F	50.F	-96.241	9999.	35.673
JUL	48.20774	23	15	88.F	66.F	216.368	-8.353	5	4	54.F	51.F	-58.549	10425.	35.673
AUG	41.61673	12	15	82.F	65.F	189.283	-8.197	24	5	55.F	54.F	-71.875	10164.	35.673
SEP	29.37499	19	16	81.F	63.F	163.234	-16.417	28	6	43.F	42.F	-101.651	9999.	35.673
OCT	17.91655	7	16	77.F	56.F	128.345	-38.889	31	4	46.F	45.F	-127.326	10425.	35.673
NOV	10.67163	7	16	61.F	56.F	74.483	-62.629	3	5	41.F	39.F	-175.442	9042.	35.673
DEC	10.28001	16	16	54.F	50.F	58.871	-82.435	14	6	41.F	39.F	-199.165	10425.	35.673
TOTAL	263.068						-538.791						120383.	
MAX						216.368						-282.723		35.673

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ATTN Simulation Messages For Review HVAC Program WEATHER FILE- SEATTLE BOEING FI WA

CAUTION********
Loop: Clg2PipeLoop has more than one
EQUIP-CTRL, but none is specified as the default via the
COOL-EQUIP-CTRL keyword. In this case, EQUIP-CTRLs will be
ignored unless enabled by LOAD-MANAGEMENT.

CAUTION********
Loop: Htg2PipeLoop has more than one
EQUIP-CTRL, but none is specified as the default via the
COOL-EQUIP-CTRL keyword. In this case, EQUIP-CTRLs will be
ignored unless enabled by LOAD-MANAGEMENT.

NOTE*******
CHW coil: Sys2CB is dry at the rated
conditions.

CAUTION********
AHU: Sys2CB , has a specified or
flow-limited cooling capacity of 2778.; corresponding to
a design-day capacity of 2779. The required design-day
capacity is 8572. Zone setpoints may not be maintained.
Check reports SS-F and SS-O for comfort.

CAUTION********
AHU: Sys3CB has zero outside air for
design calculations.

NOTE*******
CHW coil: Sys4CB is dry at the rated
conditions.

NOTE*******
CHW coil: Sys6CB is dry at the rated
conditions.

NOTE*******
CHW coil: Sys11CB is dry at the rated
conditions.

NOTE*******
CHW coil: Sys12CB is dry at the rated
conditions.

NOTE*******
CHW coil: Sys17CB is dry at the rated
conditions.

NOTE*******

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            CHW coil: Sys20FC                          is dry at the rated
            conditions.

***NOTE*****************************************************************
            CHW coil: Sys21FC                          is dry at the rated
            conditions.

***NOTE*****************************************************************
            CHW coil: Sys22CB                          is dry at the rated
            conditions.

**CAUTION***************************************************************
            AHU: Sys23DfltClg                      has zero outside air for
            design calculations.

**CAUTION***************************************************************
            Zone: L3Core Zn (G.C5)                 has a minimum flow ratio
            of only 0.01 and the thermostat is not reverse acting.
            Excessive thermal stratification may result during heating.

**CAUTION***************************************************************
            Zone: L3Core Zn (G.C5)                 has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**CAUTION***************************************************************
            Zone: L4 Core Zn (G.C3)                has a minimum flow ratio
            of only 0.01 and the thermostat is not reverse acting.
            Excessive thermal stratification may result during heating.

**CAUTION***************************************************************
            Zone: L4 Core Zn (G.C3)                has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**CAUTION***************************************************************
            AHU: Sys25DfltClg                      has zero outside air for
            design calculations.

**CAUTION***************************************************************
            Zone: L4 SSE Perim Zn (G.SSE5)         has a minimum flow ratio
            of only 0.01 and the thermostat is not reverse acting.
            Excessive thermal stratification may result during heating.

**CAUTION***************************************************************
            Zone: L4 SSE Perim Zn (G.SSE5)         has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**CAUTION***************************************************************
            AHU: Sys26DfltClg                      has zero outside air for
            design calculations.

**CAUTION***************************************************************
            Zone: B1North Perim Zn (B.N18)         has a minimum flow ratio
            of only 0.01 and the thermostat is not reverse acting.
            Excessive thermal stratification may result during heating.
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**CAUTION**************************************************************************
            Zone: B1North Perim Zn (B.N18)         has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**CAUTION**************************************************************************
            Zone: L2North Perim Zn (G.N11)         has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**CAUTION**************************************************************************
            AHU: Sys28DfltClg                      has zero outside air for
            design calculations.

**CAUTION**************************************************************************
            Zone: L2Core Zn (G.C5)                 has a minimum flow ratio
            of only 0.01 and the thermostat is not reverse acting.
            Excessive thermal stratification may result during heating.

**CAUTION**************************************************************************
            Zone: L2Core Zn (G.C5)                 has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**CAUTION**************************************************************************
            AHU: Sys29DfltClg                      has zero outside air for
            design calculations.

**CAUTION**************************************************************************
            Zone: L3North Perim Zn (G.N11)         has a minimum flow ratio
            of only 0.01 and the thermostat is not reverse acting.
            Excessive thermal stratification may result during heating.

**CAUTION**************************************************************************
            Zone: L3North Perim Zn (G.N11)         has a VAV control with
            proportional thermostat; HMAX-FLOW-RATIO is ignored.

**WARNING**************************************************************************
            Chiller: HP1Htg                            has no design-day
            cooling capacity. Chiller will be sized on heating demand
            only.  Check report PS-D for cooling overloads.

**WARNING**************************************************************************
            Chiller: HP2Htg                            has no design-day
            cooling capacity. Chiller will be sized on heating demand
            only.  Check report PS-D for cooling overloads.

**WARNING**************************************************************************
            Chiller: HP3Htg                            has no design-day
            cooling capacity. Chiller will be sized on heating demand
            only.  Check report PS-D for cooling overloads.

**WARNING**************************************************************************
            Chiller: HP4Htg                            has no design-day
            cooling capacity. Chiller will be sized on heating demand
            only.  Check report PS-D for cooling overloads.
```

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**CAUTION**************************************************************************
          Loop: Clg2PipeLoop                    primary equipment maximum
          flow is less than the design flow;   122.4 vs.   200.0 gpm.
          If hourly flow exceeds the maximum equipment flow, the
          excess flow will be bypassed around the equipment, and the
          equipment supply setpoint will be lowered in an attempt to
          maintain the loop setpoint.  Verify user-specified
          capacities, equipment MAX-FLOW ratios, and design secondary
          coil loads.

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-B-2                           has
          condensation on the exhaust outlet.  First occurrence:  1  2  9
          OA T&W:  32.0  0.0034   Return T&W:  69.7  0.0104

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-B-1                           has
          condensation on the exhaust outlet.  First occurrence:  1  2  9
          OA T&W:  32.0  0.0034   Return T&W:  70.4  0.0110

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-1-2                           has
          condensation on the exhaust outlet.  First occurrence:  1  2 14
          OA T&W:  37.0  0.0044   Return T&W:  73.5  0.0117

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-B-2                           has
          frost on the exhaust outlet.  First occurrence:  1  6 14
          OA T&W:  28.0  0.0027   Return T&W:  69.2  0.0122

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-B-1                           has
          frost on the exhaust outlet.  First occurrence:  1  6 14
          OA T&W:  28.0  0.0027   Return T&W:  70.0  0.0116

**CAUTION**************************************************************************
          Energy-recovery ventilator: ERV-4-1                           has an
          exhaust flow less than 50% of the supply flow.  Performance
          may be compromised.  OA & Exhaust:      147.       46.
          First occurrence:  1/ 8/18

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-1-2                           has
          frost on the exhaust outlet.  First occurrence: 12 24 22
          OA T&W:  30.2  0.0032   Return T&W:  71.7  0.0134

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-1-1                           has
          condensation on the exhaust outlet.  First occurrence: 12 26 19
          OA T&W:  32.2  0.0035   Return T&W:  72.4  0.0107

**WARNING**************************************************************************
          Energy-recovery ventilator: ERV-2-1                           has
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            condensation on the exhaust outlet.  First occurrence: 12 26 19
            OA T&W:  32.2  0.0035   Return T&W:  72.0  0.0107

 **WARNING**************************************************************************
            Energy-recovery ventilator: ERV-3-1                          has
            condensation on the exhaust outlet.  First occurrence: 12 26 19
            OA T&W:  32.2  0.0035   Return T&W:  72.2  0.0099
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Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-B-2 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	4445.1	72.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	952.	0.00	0.305	1.00	1.3	0.47	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	952.	1.00	0.305	1.00	1.3	0.47	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys20FC			
B1North Perim Zn (B.N22)	0.	137.	1.
B1Core Zn (B.C10)	0.	137.	1.
B1SSE Perim Zn (B.SSE11)	0.	137.	1.
B1SSE Perim Zn (B.SSE12)	0.	137.	1.
B1Core Zn (B.C13)	0.	137.	1.
B1SSE Perim Zn (B.SSE14)	0.	137.	1.
B1SE Perim Zn (B.SE20)	0.	137.	1.
TOTAL:	0.	961.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-B-2 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-B-1 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	1022.2	20.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	368.	0.00	0.257	2.18	2.8	0.47	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	368.	1.00	0.257	2.18	2.8	0.47	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys21FC			
B1Core Zn (B.C8)	0.	280.	1.
B1SSE Perim Zn (B.SSE7)	0.	90.	1.
TOTAL:	0.	370.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-B-1 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-1-1 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	2496.3	22.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	400.	0.00	0.350	2.73	3.5	0.47	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	400.	1.00	0.350	2.73	3.5	0.47	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys1CB			
L1SW Perim Zn (G.SW1)	0.	235.	1.
L1Core Zn (G.C2)	0.	0.	1.
Sys2CB			
L1Core Zn (G.C6)	0.	25.	1.
Sys4CB			
L1SE Perim Zn (G.SE16)	0.	75.	1.
L1Core Zn (G.C5)	0.	0.	1.
L1Core Zn (G.C9)	0.	0.	1.
L1Core Zn (G.C17)	0.	75.	1.
TOTAL:	0.	410.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-1-1 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-1-2 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	1790.6	32.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	428.	0.00	0.368	2.68	3.5	0.47	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	428.	1.00	0.368	2.68	3.5	0.47	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys5CB			
L1East Perim Zn (G.E18)	0.	440.	1.
L1Core Zn (G.C11)	0.	0.	1.
TOTAL:	0.	440.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-1-2 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-MEZZ WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	478.6	2.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	48.	0.00	0.092	5.94	5.5	0.34	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	48.	1.00	0.092	5.94	5.5	0.34	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys22CB			
Thermal Zone 84	0.	50.	1.
TOTAL:	0.	50.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-MEZZ WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	FLOW (GPM)	SOURCE ENT T (F)	DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-2-2 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	3630.5	13.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	393.	0.00	0.373	2.96	3.8	0.47	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	393.	1.00	0.373	2.96	3.8	0.47	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys8CB			
L2SSE Perim Zn (G.SSE7)	0.	50.	1.
Sys9FC			
L2North Perim Zn (G.N12)	0.	70.	1.
Sys10CB			
L2SSE Perim Zn (G.SSE14)	0.	85.	1.
Sys11CB			
L2East Perim Zn (G.E15)	0.	200.	1.
L2Core Zn (G.C10)	0.	0.	1.
TOTAL:	0.	405.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-2-2 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-2-1 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	925.0	12.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	262.	0.00	0.199	2.37	2.7	0.41	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	262.	1.00	0.199	2.37	2.7	0.41	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys7CB			
L2NW Perim Zn (G.NW6)	0.	265.	1.
L2West Perim Zn (G.W4)	0.	0.	1.
TOTAL:	0.	265.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-2-1 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-3-2 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	3418.4	12.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	310.	0.00	0.241	2.42	2.7	0.41	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	310.	1.00	0.241	2.42	2.7	0.41	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys14CB			
L3SSE Perim Zn (G.SSE7)	0.	50.	1.
Sys16CB			
L3SSE Perim Zn (G.SSE14)	0.	85.	1.
Sys17CB			
L3East Perim Zn (G.E15)	0.	200.	1.
L3Core Zn (G.C10)	0.	0.	1.
TOTAL:	0.	335.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-3-2 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-3-1 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	2013.5	24.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	582.	0.00	0.465	2.49	3.2	0.48	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	582.	1.00	0.465	2.49	3.2	0.48	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys12CB			
L3SW Perim Zn (G.SW1)	0.	325.	1.
L3Core Zn (G.C2)	0.	0.	1.
Sys13CB			
L3NW Perim Zn (G.NW6)	0.	265.	1.
L3WSW Perim Zn (G.WSW4)	0.	0.	1.
TOTAL:	0.	590.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-3-1 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for ERV-4-1 WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
DOAS	1.001	2088.9	8.	1.000	0.000	0.000	0.000	0.310	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	134.	0.00	0.099	2.32	2.4	0.37	0.62	DRAW-THRU	SPEED	1.10	0.10
RETURN	134.	1.00	0.099	2.32	2.4	0.37	0.62	RETURN	SPEED	1.10	0.10

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

SYSTEM NAME / ZONE NAME	OA ATTACHED TO MIXED AIR (CFM)	OA ATTACHED TO ZONE (CFM)	MULT
Sys18CB			
L4 SSE Perim Zn (G.SSE1)	0.	85.	1.
Sys19CB			
L4 NNW Perim Zn (G.NNW4)	0.	75.	1.
L4 Core Zn (G.C8)	0.	0.	1.
Sys24DfltClg			
L4 Core Zn (G.C3)	0.	0.	1.
TOTAL:	0.	160.	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for ERV-4-1 WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)

No coils in this System

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1088.5	14.	0.000	18.642	0.808	-23.138	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	862.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1SW Perim Zn (G.SW1)	760.	0.	0.000	1.000	235.	0.00	0.00	13.49	0.00	-21.22	1.
L1Core Zn (G.C2)	101.	0.	0.000	1.000	0.	0.00	0.00	1.82	0.00	-2.66	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 6/10	71.1	60.0	17.85	0.89	862.	76.06	65.28	59.26	58.84	0.0370		55.00	
Design Capacity				18.84	0.96	862.	80.00	67.00	60.98	60.19	0.0597	3.7	55.00	10.00
Heating HotWtr														
Design Day Peak	12/31/ 8	25.5	21.5	-19.84		862.	70.16	46.43	91.46				0.00	
Design Capacity				-23.14		862.	70.16	46.43	95.00			4.6	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	304.0	4.	0.000	2.778	0.808	-10.896	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	397.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1Core Zn (G.C6)	397.	0.	0.000	1.000	25.	0.00	0.00	3.05	0.00	-11.05	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	ENT T (F)	DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/15/11	73.7	60.9	8.57	0.87	397.	76.11	65.31	59.00	58.58	0.0370		55.00	
Design Capacity				2.78	1.00	397.	80.00	67.00	73.64	64.77	0.0663	0.6	55.00	10.00
Heating HotWtr														
Design Day Peak	12/31/ 7	25.5	21.5	-8.34		397.	69.92	58.27	89.11				0.00	
Design Capacity				-10.90		397.	69.92	58.27	95.00			2.2	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	636.0	2.	0.000	10.596	0.808	-11.128	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	410.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1SSE Perim Zn (G.SSE8)	410.	0.	0.000	1.000	0.	0.00	0.00	7.81	0.00	-11.58	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 5/10	71.1	60.0	9.91	0.78	410.	76.10	66.17	59.08	58.70	0.0370		55.00	
Design Capacity				10.65	0.87	410.	80.00	67.00	59.42	58.83	0.0465	2.1	55.00	10.00
Heating HotWtr														
Design Day Peak	12/29/ 8	25.5	21.5	-9.67		410.	69.91	46.32	91.72				0.00	
Design Capacity				-11.13		410.	69.91	46.32	95.00			2.2	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1103.9	4.	0.000	13.184	0.808	-25.711	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	996.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1SE Perim Zn (G.SE16)	476.	0.	0.000	1.000	75.	0.00	0.00	5.44	0.00	-13.47	1.
L1Core Zn (G.C5)	165.	0.	0.000	1.000	0.	0.00	0.00	2.58	0.00	-4.01	1.
L1Core Zn (G.C9)	143.	0.	0.000	1.000	0.	0.00	0.00	2.02	0.00	-3.62	1.
L1Core Zn (G.C17)	212.	0.	0.000	1.000	75.	0.00	0.00	2.96	0.00	-5.79	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	EDB (F)	EWB (F)	LDB (F)	LWB (F)	BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/11	73.7	60.9	13.47	1.00	996.	76.13	64.26	63.82	60.07	0.0370		55.00	
Design Capacity				13.19	1.00	996.	80.00	67.00	67.97	62.91	0.0663	2.6	55.00	10.00
Heating HotWtr														
Design Day Peak	12/31/ 8	25.5	21.5	-23.95		996.	71.11	46.88	93.36				0.00	
Design Capacity				-25.71		996.	71.11	46.88	95.00			5.1	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1790.6	32.	0.000	40.116	0.808	-49.970	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1906.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L1East Perim Zn (G.E18)	1578.	0.	0.000	1.000	440.	0.00	0.00	25.45	0.00	-45.75	1.
L1Core Zn (G.C11)	327.	0.	0.000	1.000	0.	0.00	0.00	5.82	0.00	-7.99	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/10	71.1	60.0	32.99	0.91	1906.	76.14	66.62	61.86	61.46	0.0370		55.00	
Design Capacity				40.52	0.97	1906.	80.00	67.00	61.21	60.39	0.0619	8.0	55.00	10.00
Heating HotWtr														
Design Day Peak	12/30/ 9	25.5	21.5	-48.90		1906.	70.74	46.70	94.48				0.00	
Design Capacity				-49.97		1906.	70.74	46.70	95.00			10.0	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1088.5	13.	0.418	15.858	0.808	-36.563	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	777.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2SW Perim Zn (G.SW1)	679.	0.	0.000	1.000	325.	0.00	0.00	11.59	0.00	-18.66	1.
L2Core Zn (G.C2)	99.	0.	0.000	1.000	0.	0.00	0.00	1.86	0.00	-2.54	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 2/10	71.1	60.0	12.12	1.00	777.	74.00	62.65	59.79	57.60	0.0370		55.00	
Design Capacity				15.90	0.99	777.	80.00	67.00	61.52	60.65	0.0645	3.2	55.00	10.00
Heating HotWtr														
Design Day Peak	12/27/ 8	25.5	21.5	-29.88		777.	51.47	36.93	87.04				0.00	
Design Capacity				-36.56		777.	51.47	36.93	95.00			7.3	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	925.0	12.	0.000	16.368	0.808	-16.568	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	608.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2NW Perim Zn (G.NW6)	541.	0.	0.000	1.000	265.	0.00	0.00	10.59	0.00	-14.88	1.
L2West Perim Zn (G.W4)	68.	0.	0.000	1.000	0.	0.00	0.00	1.25	0.00	-1.91	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/15/15	81.2	63.5	12.90	0.86	608.	75.95	65.60	59.44	59.03	0.0370		55.00	
Design Capacity				16.42	0.86	608.	80.00	67.00	59.01	58.47	0.0437	3.3	55.00	10.00
Heating HotWtr														
Design Day Peak	12/21/ 7	25.5	21.5	-12.27		608.	69.80	46.26	88.46				0.00	
Design Capacity				-16.57		608.	69.80	46.26	95.00			3.3	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	580.0	2.	0.000	9.012	0.808	-8.480	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	291.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2SSE Perim Zn (G.SSE7)	291.	0.	0.000	1.000	50.	0.00	0.00	6.20	0.00	-8.26	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/11	73.7	60.9	5.51	0.97	291.	76.10	64.77	59.29	58.85	0.0370		55.00	
Design Capacity				8.99	0.81	301.	80.10	66.81	57.96	57.52	0.0370	1.8	55.00	10.00
Heating HotWtr														
Design Day Peak	12/22/ 7	25.5	21.5	-7.51		291.	68.01	45.43	91.91				0.00	
Design Capacity				-8.48		291.	68.01	45.43	95.00			1.7	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	212.1	1.	0.000	9.130	0.811	-8.299	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	306.	1.00	0.028	0.28	0.2	0.25	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2North Perim Zn (G.N12)	306.	0.	0.000	1.000	70.	0.00	0.00	6.35	0.00	-8.51	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/15/15	81.2	63.5	2.54	1.00	306.	76.04	64.53	68.50	62.02	0.0370		55.00	
Design Capacity				9.13	0.81	306.	80.00	67.00	57.94	57.51	0.0370	1.8	55.00	10.00
Heating HotWtr														
Design Day Peak	12/28/ 8	25.5	21.5	-6.10		306.	69.93	46.33	88.35				0.00	
Design Capacity				-8.30		306.	69.93	46.33	95.00			1.7	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1032.5	4.	0.000	14.511	0.808	-14.758	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	544.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2SSE Perim Zn (G.SSE14)	544.	0.	0.000	1.000	85.	0.00	0.00	11.02	0.00	-14.99	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/10	71.1	60.0	11.18	0.92	544.	76.11	64.99	59.00	58.57	0.0370		55.00	
Design Capacity				14.57	0.86	544.	80.00	67.00	59.11	58.56	0.0443	2.9	55.00	10.00
Heating HotWtr														
Design Day Peak	12/24/ 8	25.5	21.5	-11.75		544.	69.92	46.32	89.89				0.00	
Design Capacity				-14.76		544.	69.92	46.32	95.00			2.9	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1806.0	7.	0.000	23.860	0.808	-35.847	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1361.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2East Perim Zn (G.E15)	1112.	0.	0.000	1.000	200.	0.00	0.00	16.40	0.00	-31.59	1.
L2Core Zn (G.C10)	250.	0.	0.000	1.000	0.	0.00	0.00	3.70	0.00	-6.14	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/15	81.2	63.5	16.66	1.00	1361.	76.07	65.15	64.95	61.45	0.0370		55.00	
Design Capacity				23.86	1.00	1361.	80.00	67.00	64.07	61.58	0.0663	4.8	55.00	10.00
Heating HotWtr														
Design Day Peak	12/29/ 9	25.5	21.5	-35.29		1361.	70.64	46.66	94.62				0.00	
Design Capacity				-35.85		1361.	70.64	46.66	95.00			7.2	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1088.5	13.	0.000	15.858	0.808	-20.826	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	769.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	EXTRACTION SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3SW Perim Zn (G.SW1)	672.	0.	0.000	1.000	325.	0.00	0.00	11.71	0.00	-18.50	1.
L3Core Zn (G.C2)	97.	0.	0.000	1.000	0.	0.00	0.00	1.61	0.00	-2.58	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 2/10	71.1	60.0	14.31	1.00	769.	76.11	64.54	59.17	58.71	0.0370		55.00	
Design Capacity				15.96	0.99	769.	80.00	67.00	61.40	60.55	0.0636	3.2	55.00	10.00
Heating HotWtr														
Design Day Peak	12/21/ 7	25.5	21.5	-12.75		769.	69.93	46.33	85.28				0.00	
Design Capacity				-20.83		769.	69.93	46.33	95.00			4.2	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	925.0	11.	0.000	16.368	0.808	-14.535	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	531.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3NW Perim Zn (G.NW6)	462.	0.	0.000	1.000	265.	0.00	0.00	9.41	0.00	-12.69	1.
L3WSW Perim Zn (G.WSW4)	70.	0.	0.000	1.000	0.	0.00	0.00	1.40	0.00	-2.08	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/12/ 6	63.6	57.2	14.28	0.65	531.	77.09	68.80	61.22	60.89	0.0370		55.00	
Design Capacity				16.33	0.81	546.	80.10	66.81	57.96	57.52	0.0370	3.3	55.00	10.00
Heating HotWtr														
Design Day Peak	12/31/ 6	25.5	21.5	-9.71		531.	69.69	46.22	86.59				0.00	
Design Capacity				-14.54		531.	69.69	46.22	95.00			2.9	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	580.0	2.	0.000	9.012	0.808	-9.486	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	350.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3SSE Perim Zn (G.SSE7)	350.	0.	0.000	1.000	50.	0.00	0.00	6.71	0.00	-9.95	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 2/10	71.1	60.0	5.49	1.00	350.	76.08	64.99	61.81	60.18	0.0370		55.00	
Design Capacity				9.06	0.87	350.	80.00	67.00	59.43	58.85	0.0466	1.8	55.00	10.00
Heating HotWtr														
Design Day Peak	12/23/ 8	25.5	21.5	-9.26		350.	69.90	46.31	94.41				0.00	
Design Capacity				-9.49		350.	69.90	46.31	95.00			1.9	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	212.1	1.	0.229	9.130	0.811	-11.665	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	306.	1.00	0.028	0.28	0.2	0.25	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3North Perim Zn (G.N12)	306.	0.	0.000	1.000	70.	0.00	0.00	6.38	0.00	-8.52	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/15/15	81.2	63.5	2.51	1.00	306.	77.23	62.59	69.73	59.99	0.0370		55.00	
Design Capacity				9.13	0.81	306.	80.00	67.00	57.94	57.51	0.0370	1.8	55.00	10.00
Heating HotWtr														
Design Day Peak	12/24/ 8	25.5	21.5	-9.97		306.	59.75	41.35	89.89				0.00	
Design Capacity				-11.67		306.	59.75	41.35	95.00			2.3	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1032.5	4.	0.000	14.511	0.808	-15.320	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	565.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3SSE Perim Zn (G.SSE14)	565.	0.	0.000	1.000	85.	0.00	0.00	10.70	0.00	-15.86	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/10	71.1	60.0	9.94	0.99	565.	76.09	65.23	60.26	59.82	0.0370		55.00	
Design Capacity				14.58	0.88	565.	80.00	67.00	59.46	58.88	0.0468	2.9	55.00	10.00
Heating HotWtr														
Design Day Peak	12/23/ 8	25.5	21.5	-14.70		565.	69.90	46.31	93.98				0.00	
Design Capacity				-15.32		565.	69.90	46.31	95.00			3.1	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1806.0	7.	0.000	28.977	0.808	-39.421	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	1473.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3East Perim Zn (G.E15)	1242.	0.	0.000	1.000	200.	0.00	0.00	20.47	0.00	-35.97	1.
L3Core Zn (G.C10)	230.	0.	0.000	1.000	0.	0.00	0.00	4.11	0.00	-6.14	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/15	81.2	63.5	16.08	1.00	1473.	76.20	65.17	66.28	61.89	0.0370		55.00	
Design Capacity				28.98	1.00	1473.	80.00	67.00	62.12	60.90	0.0663	5.8	55.00	10.00
Heating HotWtr														
Design Day Peak	12/26/ 9	25.5	21.5	-38.98		1473.	70.23	46.47	94.73				0.00	
Design Capacity				-39.42		1473.	70.23	46.47	95.00			7.9	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1088.3	4.	0.000	16.939	0.808	-18.563	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	684.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 SSE Perim Zn (G.SSE1)	684.	0.	0.000	1.000	85.	0.00	0.00	13.09	0.00	-19.52	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/10	71.1	60.0	10.63	1.00	684.	76.08	64.83	61.95	60.05	0.0370		55.00	
Design Capacity				17.04	0.89	684.	80.00	67.00	59.81	59.18	0.0494	3.4	55.00	10.00
Heating HotWtr														
Design Day Peak	12/23/ 8	25.5	21.5	-18.40		684.	69.90	46.31	94.78				0.00	
Design Capacity				-18.56		684.	69.90	46.31	95.00			3.7	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	891.9	3.	0.000	17.110	0.808	-14.200	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	527.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 NNW Perim Zn (G.NNW4)	465.	0.	0.000	1.000	75.	0.00	0.00	9.88	0.00	-13.30	1.
L4 Core Zn (G.C8)	62.	0.	0.000	1.000	0.	0.00	0.00	1.36	0.00	-1.67	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/15/16	81.6	63.6	8.23	1.00	527.	75.97	66.02	61.79	61.34	0.0370		55.00	
Design Capacity				17.07	0.81	571.	80.10	66.81	57.96	57.52	0.0370	3.4	55.00	10.00
Heating HotWtr														
Design Day Peak	12/24/ 8	25.5	21.5	-13.91		527.	70.07	46.39	94.48				0.00	
Design Capacity				-14.20		527.	70.07	46.39	95.00			2.8	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys2OFC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	4445.1	72.	0.000	55.960	1.000	-106.814	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	3733.	1.00	1.140	0.94	1.4	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
B1North Perim Zn (B.N22)	1247.	0.	0.000	1.000	137.	0.00	0.00	15.26	0.00	-35.94	1.
B1Core Zn (B.C10)	374.	0.	0.000	1.000	137.	0.00	0.00	4.87	0.00	-9.76	1.
B1SSE Perim Zn (B.SSE11)	356.	0.	0.000	1.000	137.	0.00	0.00	2.98	0.00	-11.14	1.
B1SSE Perim Zn (B.SSE12)	475.	0.	0.000	1.000	137.	0.00	0.00	3.84	0.00	-15.19	1.
B1Core Zn (B.C13)	189.	0.	0.000	1.000	137.	0.00	0.00	2.24	0.00	-5.26	1.
B1SSE Perim Zn (B.SSE14)	444.	0.	0.000	1.000	137.	0.00	0.00	3.61	0.00	-13.97	1.
B1SE Perim Zn (B.SE20)	648.	0.	0.000	1.000	137.	0.00	0.00	4.67	0.00	-20.49	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 6/15	81.2	63.5	48.70	0.83	3733.	74.65	68.23	64.84	64.53	0.0370		55.00	
Design Capacity				55.96	1.00	3733.	80.00	67.00	66.37	62.37	0.0370	11.2	55.00	10.00
Heating HotWtr														
Design Day Peak	12/21/ 7	25.5	21.5	-79.62		3733.	68.53	45.80	88.26				0.00	
Design Capacity				-106.81		3733.	68.53	45.80	95.00			21.3	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	1022.2	20.	0.000	32.480	1.000	-61.195	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	2112.	1.00	0.844	1.24	1.8	0.52	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
B1Core Zn (B.C8)	1180.	0.	0.000	1.000	280.	0.00	0.00	11.76	0.00	-33.22	1.
B1SSE Perim Zn (B.SSE7)	932.	0.	0.000	1.000	90.	0.00	0.00	7.13	0.00	-35.77	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 9/16	81.6	63.6	17.80	0.92	2112.	74.98	69.98	68.00	67.72	0.0370		55.00	
Design Capacity				32.48	1.00	2112.	80.00	67.00	66.02	62.25	0.0370	6.5	55.00	10.00
Heating HotWtr														
Design Day Peak	12/30/ 7	25.5	21.5	-11.73		2112.	68.18	45.51	73.32				0.00	
Design Capacity				-61.20		2112.	68.18	45.51	95.00			12.2	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SZRH	1.001	478.6	2.	0.000	5.298	0.808	-6.993	0.000	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	258.	1.00	0.000	0.00	0.0	0.00	0.62	DRAW-THRU	CONSTANT	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
Thermal Zone 84	258.	0.	0.000	1.000	50.	0.00	0.00	5.02	0.00	-7.10	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling ChillWtr														
Design Day Peak	8/ 1/11	73.7	60.9	4.69	1.00	258.	76.24	64.35	59.70	58.65	0.0370		55.00	
Design Capacity				5.32	0.99	258.	80.00	67.00	61.46	60.60	0.0640	1.1	55.00	10.00
Heating HotWtr														
Design Day Peak	12/31/ 8	25.5	21.5	-4.33		258.	69.94	46.33	85.47				0.00	
Design Capacity				-6.99		258.	69.94	46.33	95.00			1.4	0.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	120.0	0.	0.000	2.129	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	77.	1.00	0.060	2.43	2.0	0.30	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3Core Zn (G.C5)	77.	0.	0.000	0.010	0.	0.00	0.00	1.78	0.00	-1.80	1.
									-1.80	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 5/ 9	68.6	59.1	2.10	0.92	75.	76.10	60.00	52.57	49.69	0.1946		70.00	
Design Capacity				2.16	0.92	77.	76.10	60.00	52.58	49.70	0.1946		70.00	
Rated Capacity				2.13	0.74	71.	80.00	67.00			0.1900		95.00	
Zonal Coils														
L3Core Zn (G.C5)														
BaseBrd HotWtr														
Design Day Peak	12/28/ 6	25.5	21.5	-1.80			70.00						105.00	
Design Capacity				-1.80			70.00					0.4	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	108.8	0.	0.000	1.975	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	67.	1.00	0.052	2.43	2.0	0.30	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 Core Zn (G.C3)	67.	0.	0.000	0.010	0.	0.00	0.00	1.59	0.00	-3.61	1.
									-3.60	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/ 8	66.4	58.3	1.86	0.86	61.	76.58	60.85	52.57	49.94	0.1868		70.00	
Design Capacity				2.03	0.86	67.	76.58	60.85	52.59	49.96	0.1865		70.00	
Rated Capacity				1.98	0.74	66.	80.00	67.00			0.1900		95.00	
Zonal Coils														
L4 Core Zn (G.C3)														
BaseBrd HotWtr														
Design Day Peak	12/25/ 6	25.5	21.5	-3.60			70.00						105.00	
Design Capacity				-3.60			70.00					0.7	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	457.2	2.	0.000	15.198	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	573.	1.00	0.446	2.43	3.2	0.48	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L4 SSE Perim Zn (G.SSE5)	573.	0.	0.000	0.010	0.	0.00	0.00	19.22	0.00	-13.89	1.
									-13.86	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 2/11	73.7	60.9	14.32	0.97	541.	76.09	60.00	52.57	49.48	0.1974		73.71	
Design Capacity				15.16	0.97	573.	76.09	60.00	52.57	49.49	0.1975		73.71	
Rated Capacity				15.20	0.74	507.	80.00	67.00			0.1900		95.00	
Zonal Coils														
L4 SSE Perim Zn (G.SSE5)														
BaseBrd HotWtr														
Design Day Peak	12/25/ 6	25.5	21.5	-13.86			70.00						105.00	
Design Capacity				-13.86			70.00					2.8	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	220.8	1.	0.000	6.572	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	248.	1.00	0.193	2.43	2.7	0.41	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
B1North Perim Zn (B.N18)	248.	0.	0.000	0.010	0.	0.00	0.00	5.74	0.00	-4.66	1.
									-4.64	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/ 9	68.6	59.1	6.40	0.95	238.	76.10	60.00	52.57	49.48	0.2005		70.00	
Design Capacity				6.68	0.95	248.	76.10	60.00	52.57	49.48	0.2006		70.00	
Rated Capacity				6.57	0.74	219.	80.00	67.00			0.1900		95.00	
Zonal Coils														
B1North Perim Zn (B.N18)														
BaseBrd HotWtr														
Design Day Peak	12/31/ 6	25.5	21.5	-4.64			70.00						105.00	
Design Capacity				-4.64			70.00					0.9	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	296.7	1.	0.880	4.257	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	114.	1.00	0.089	2.43	2.3	0.34	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2North Perim Zn (G.N11)	114.	100.	0.009	0.880	0.	0.00	0.00	5.22	0.00	-6.66	1.
									-8.59	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/15/15	81.2	63.5	3.87	0.83	102.	81.12	63.37	52.57	50.22	0.1529		81.23	
Design Capacity				4.31	0.82	114.	81.12	63.37	52.61	50.26	0.1530		81.23	
Rated Capacity				4.26	0.74	142.	80.00	67.00			0.1900		95.00	
Zonal Coils														
L2North Perim Zn (G.N11)														
BaseBrd HotWtr														
Design Day Peak	12/31/ 7	25.5	21.5	-8.59			70.00						105.00	
Design Capacity				-8.59			70.00					1.7	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	120.0	0.	0.000	2.315	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	83.	1.00	0.064	2.43	2.3	0.34	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2Core Zn (G.C5)	83.	0.	0.000	0.010	0.	0.00	0.00	1.97	0.00	-2.58	1.
									-2.57	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 2/ 9	68.6	59.1	2.17	0.90	76.	76.12	60.05	52.57	49.76	0.1924		70.00	
Design Capacity				2.35	0.90	83.	76.12	60.05	52.58	49.78	0.1924		70.00	
Rated Capacity				2.31	0.74	77.	80.00	67.00			0.1900		95.00	
Zonal Coils														
L2Core Zn (G.C5)														
BaseBrd HotWtr														
Design Day Peak	12/31/ 6	25.5	21.5	-2.57			70.00						105.00	
Design Capacity				-2.57			70.00					0.5	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
PVVT	1.001	296.7	1.	0.000	3.315	0.742	0.000	0.261	0.000	0.000

FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	FAN PLACEMENT	FAN CONTROL	MAX FAN RATIO (FRAC)	MIN FAN RATIO (FRAC)
SUPPLY	110.	1.00	0.086	2.43	2.3	0.34	0.62	DRAW-THRU	BY USER	1.00	0.30

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L3North Perim Zn (G.N11)	110.	0.	0.000	0.010	0.	0.00	0.00	2.47	0.00	-6.48	1.
									-6.48	(BASEBOARDS)	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Central Airhandler Coils														
Cooling DX Air														
Design Day Peak	8/ 7/ 8	66.4	58.3	3.42	0.83	110.	76.10	61.23	52.57	50.14	0.1851		70.00	
Design Capacity				3.43	0.82	110.	76.10	61.23	52.60	50.17	0.1852		70.00	
Rated Capacity				3.32	0.74	111.	80.00	67.00			0.1900		95.00	
Zonal Coils														
L3North Perim Zn (G.N11)														
BaseBrd HotWtr														
Design Day Peak	12/26/ 6	25.5	21.5	-6.48			70.00						105.00	
Design Capacity				-6.48			70.00					1.3	105.00	-10.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Uncon WEATHER FILE- SEATTLE BOEING FI WA

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE	OUTSIDE AIR RATIO	COOLING CAPACITY (KBTU/HR)	SENSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)
SUM	1.001	10729.5	35.	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** THE ABOVE CHARACTERISTICS ARE FOR EACH OF: 1 AIR HANDLERS

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN (KW)	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE (FRAC)	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	ZONE MULT
L2Core Zn (G.C8)	0.	0.	0.000	0.000	50.	0.00	0.00	3.02	0.00	-3.24	1.
									-3.24	(BASEBOARDS)	
B1SW Perim Zn (B.SW1)	0.	0.	0.000	0.000	0.	0.00	0.00	2.91	0.00	-28.90	1.
									-28.90	(BASEBOARDS)	
L3Core Zn (G.C8)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C2)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1West Perim Zn (B.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1West Perim Zn (B.W4)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C5)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1West Perim Zn (B.W6)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1West Perim Zn (G.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1WNW Perim Zn (G.WNW4)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N7)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1Core Zn (G.C10)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N12)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N13)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L1North Perim Zn (G.N14)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
L1SSE Perim Zn (G.SSE15)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
L2West Perim Zn (G.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L2Core Zn (G.C9)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L2North Perim Zn (G.N13)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L3West Perim Zn (G.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L3Core Zn (G.C9)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L3North Perim Zn (G.N13)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L4 West Perim Zn (G.W2)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L4 North Perim Zn (G.N6)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
L4 North Perim Zn (G.N7)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
B1Core Zn (B.C9)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C15)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1NW Perim Zn (B.NW16)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.

B1North Perim Zn (B.N17)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1North Perim Zn (B.N19)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1NE Perim Zn (B.NE21)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B1Core Zn (B.C23)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B2SW Perim Zn (B.SW1)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-A System Design Parameters for Uncon WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

B2East Perim Zn (B.E2)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.
B2West Perim Zn (B.W3)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00	1.
B2North Perim Zn (B.N4)	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.00	1.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SV-C System Coil Sizing Summary for Uncon WEATHER FILE- SEATTLE BOEING FI WA

ALTITUDE FACTOR: 1.001

COIL LOCATION / FUNCTION TYPE	TIME/OUTDOOR MO/DY/HR	DBT (F)	WBT (F)	CAPACITY TOTAL (KBTU/HR)	CAPACITY SHR (FRAC)	AIRSIDE AIRFLOW (CFM)	AIRSIDE EDB (F)	AIRSIDE EWB (F)	AIRSIDE LDB (F)	AIRSIDE LWB (F)	AIRSIDE BYPASS FACTOR	SOURCE FLOW (GPM)	SOURCE ENT T (F)	SOURCE DELTA (F)
Zonal Coils														
L2Core Zn (G.C8)														
AuxCool Sum														
Design Day Peak	8/ 6/ 6	63.6	57.2	3.02			77.00							
Design Capacity				3.02			77.00							
BaseBrd Sum														
Design Day Peak	12/30/ 6	25.5	21.5	-3.24			70.00							
Design Capacity				-3.24			70.00							
B1SW Perim Zn (B.SW1)														
AuxCool Sum														
Design Day Peak	8/13/ 6	63.6	57.2	2.91			76.00							
Design Capacity				2.91			76.00							
BaseBrd Sum														
Design Day Peak	12/31/ 6	25.5	21.5	-28.90			70.00							
Design Capacity				-28.90			70.00							

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-D Building HVAC Load Summary WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.18431	15	16	50.F	49.F	6.021	-66.598	6	7	27.F	23.F	-607.455	11181.	41.129
FEB	0.20390	22	17	54.F	52.F	10.003	-53.270	18	7	45.F	44.F	-443.416	10135.	41.004
MAR	0.99385	28	17	59.F	49.F	21.087	-46.065	3	7	41.F	39.F	-404.227	11238.	40.876
APR	3.35300	18	11	55.F	44.F	42.658	-31.500	7	7	39.F	39.F	-373.783	11421.	40.962
MAY	6.94814	16	17	72.F	60.F	86.336	-18.847	12	7	48.F	44.F	-282.837	11202.	41.276
JUN	10.59816	20	17	77.F	61.F	124.226	-8.133	2	7	54.F	53.F	-161.356	11047.	41.446
JUL	25.45375	23	17	90.F	67.F	215.139	-2.151	8	7	57.F	55.F	-67.736	11646.	42.800
AUG	19.74331	12	17	82.F	63.F	175.563	-1.709	25	7	54.F	53.F	-72.479	11290.	42.211
SEP	10.45523	19	17	81.F	62.F	126.387	-5.733	29	7	48.F	45.F	-163.905	11015.	41.882
OCT	2.56558	7	17	77.F	55.F	44.635	-22.268	14	7	50.F	47.F	-257.366	11466.	41.118
NOV	0.41015	7	16	61.F	56.F	10.928	-40.271	28	7	37.F	34.F	-378.072	9968.	40.913
DEC	0.16010	18	17	46.F	41.F	3.588	-62.517	29	7	37.F	35.F	-498.088	11537.	41.228
TOTAL	81.069						-359.062						133145.	
MAX						215.139						-607.455		42.800

MAXIMUM DAILY INTEGRATED COOLING LOAD (DES DAY) 0.000 (KBTU)
MAXIMUM DAILY INTEGRATED COOLING LOAD (WTH FILE) 1952.081 (KBTU)

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-B-2 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	100.	0.564
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	90.	0.564
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	100.	0.564
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	104.	0.564
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	100.	0.564
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	100.	0.564
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	105.	0.564
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	100.	0.558
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	100.	0.564
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	105.	0.564
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	87.	0.564
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	105.	0.564
TOTAL	0.000						0.000						1197.	
MAX						0.000						0.000		0.564

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-B-2 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
960.	960.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON	SUM / PEAK	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-4.391	0.000	-10.064	0.000	-4.386	0.000	0.000	0.000	0.000	384	0
	PEAK	-38.297	0.000	-75.021	0.000	-38.297	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-3.547	0.000	-8.776	0.000	-3.541	0.000	0.000	0.000	0.000	352	0
	PEAK	-30.363	0.000	-61.031	0.000	-30.363	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	27/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-3.150	0.004	-8.033	0.000	-3.144	0.000	0.000	0.000	0.000	385	8
	PEAK	-26.150	0.794	-54.582	0.000	-26.103	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/12	13/ 9	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-2.245	0.000	-6.045	0.000	-2.240	0.000	0.000	0.000	0.000	394	0
	PEAK	-22.028	0.000	-49.190	0.000	-21.995	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	24/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-1.331	0.002	-3.707	0.000	-1.328	0.000	0.000	0.000	0.000	349	7
	PEAK	-19.147	0.412	-49.131	0.000	-19.100	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	14/16	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.670	0.008	-2.034	0.000	-0.669	0.000	0.000	0.000	0.000	277	20
	PEAK	-12.959	1.742	-31.290	0.000	-12.913	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	30/14	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.272	0.216	-1.418	0.000	-0.271	0.000	0.000	0.000	0.000	164	92
	PEAK	-9.983	11.555	-26.547	0.000	-9.957	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	11/15	0/ 0	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.224	0.069	-0.943	0.000	-0.223	0.000	0.000	0.000	0.000	154	60
	PEAK	-8.002	5.117	-24.474	0.000	-7.995	0.000	0.000	0.000	0.000		
	DAY/HR	15/ 9	12/16	26/17	0/ 0	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.776	0.074	-2.454	0.000	-0.774	0.000	0.000	0.000	0.000	253	47
	PEAK	-16.924	5.977	-33.105	0.000	-16.909	0.000	0.000	0.000	0.000		

DAY/HR	26/ 9	19/16	26/ 9	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT SUM	-2.173	0.029	-5.975	0.000	-2.167	0.000	0.000	0.000	0.000	376	11
PEAK	-21.988	6.786	-50.152	0.000	-21.943	0.000	0.000	0.000	0.000		
DAY/HR	24/ 9	6/15	15/10	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV SUM	-2.839	0.000	-7.123	0.000	-2.833	0.000	0.000	0.000	0.000	348	0
PEAK	-26.047	0.000	-53.762	0.000	-26.024	0.000	0.000	0.000	0.000		
DAY/HR	28/ 9	0/ 0	18/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-B-2 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-4.335	0.000	-10.204	0.000	-4.328	0.000	0.000	0.000	0.000	400	0
	PEAK	-30.594	0.000	-63.967	0.000	-30.594	0.000	0.000	0.000	0.000		
	DAY/HR	26/ 9	0/ 0	26/17	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-25.954	0.402	-66.776	0.000	-25.907	0.000	0.000	0.000	0.000	3836	245
	PEAK	-38.297	11.555	-75.021	0.000	-38.297	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	0/ 0	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	179	9	0	0	188

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-B-1 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	85.	0.472
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	76.	0.472
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	84.	0.472
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	88.	0.472
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	85.	0.472
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	84.	0.472
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	88.	0.472
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	85.	0.469
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	84.	0.472
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	89.	0.472
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	73.	0.472
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	88.	0.472
TOTAL	0.000						0.000						1010.	
MAX						0.000						0.000		0.472

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-B-1 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
370.	370.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON		HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-1.708	0.000	-3.466	0.000	-1.706	0.000	0.000	0.000	0.000	384	0
	PEAK	-15.096	0.000	-27.055	0.000	-15.096	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-1.375	0.000	-2.925	0.000	-1.373	0.000	0.000	0.000	0.000	352	0
	PEAK	-11.971	0.000	-22.939	0.000	-11.959	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	13/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-1.221	0.001	-2.592	0.000	-1.220	0.000	0.000	0.000	0.000	385	8
	PEAK	-10.055	0.288	-19.767	0.000	-10.047	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/15	13/ 9	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.870	0.000	-1.839	0.000	-0.868	0.000	0.000	0.000	0.000	394	0
	PEAK	-8.480	0.000	-17.086	0.000	-8.472	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	24/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.516	0.000	-1.067	0.000	-0.516	0.000	0.000	0.000	0.000	349	1
	PEAK	-7.347	0.036	-15.042	0.000	-7.341	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	15/19	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.259	0.000	-0.524	0.000	-0.259	0.000	0.000	0.000	0.000	277	2
	PEAK	-4.992	0.340	-9.133	0.000	-4.983	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	20/17	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.105	0.079	-0.362	0.000	-0.105	0.000	0.000	0.000	0.000	164	82
	PEAK	-3.843	4.441	-8.226	0.054	-3.840	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	11/15	23/20	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.087	0.021	-0.251	0.000	-0.087	0.000	0.000	0.000	0.000	154	46
	PEAK	-3.102	1.799	-6.143	0.000	-3.084	0.000	0.000	0.000	0.000		
	DAY/HR	15/ 9	12/17	26/17	0/ 0	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.300	0.018	-0.674	0.000	-0.300	0.000	0.000	0.000	0.000	253	30
	PEAK	-6.539	1.940	-10.589	0.000	-6.520	0.000	0.000	0.000	0.000		

	DAY/HR	26/ 9	19/16	26/ 9	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT	SUM	-0.839	0.004	-1.740	0.000	-0.838	0.000	0.000	0.000	0.000	376	6
	PEAK	-8.457	1.177	-17.032	0.000	-8.449	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	6/15	15/10	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV	SUM	-1.098	0.000	-2.300	0.000	-1.096	0.000	0.000	0.000	0.000	348	0
	PEAK	-10.038	0.000	-20.135	0.000	-10.031	0.000	0.000	0.000	0.000		
	DAY/HR	28/ 9	0/ 0	28/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-B-1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-1.680	0.000	-3.434	0.000	-1.679	0.000	0.000	0.000	0.000	400	0
	PEAK	-11.949	0.000	-22.447	0.000	-11.938	0.000	0.000	0.000	0.000		
	DAY/HR	26/10	0/ 0	26/10	0/ 0	26/10	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-10.059	0.124	-21.175	0.000	-10.046	0.000	0.000	0.000	0.000	3836	175
	PEAK	-15.096	4.441	-27.055	0.054	-15.096	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	62	8	0	0	70

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-1-1 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	85.	0.547
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	76.	0.525
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	84.	0.531
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	87.	0.525
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	85.	0.547
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	84.	0.547
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	88.	0.547
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	86.	0.531
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	84.	0.547
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	89.	0.547
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	76.	0.547
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	87.	0.547
TOTAL	0.000						0.000						1011.	
MAX						0.000						0.000		0.547

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-1-1 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
405.	405.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON		HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-1.705	0.000	-2.791	0.000	-1.703	0.000	0.000	0.000	0.000	384	0
	PEAK	-13.714	0.000	-20.973	0.000	-13.703	0.000	0.000	0.000	0.000		
	DAY/HR	6/16	0/ 0	3/16	0/ 0	6/16	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-1.323	0.000	-2.257	0.000	-1.321	0.000	0.000	0.000	0.000	352	0
	PEAK	-8.511	0.000	-14.270	0.000	-8.506	0.000	0.000	0.000	0.000		
	DAY/HR	27/12	0/ 0	24/16	0/ 0	27/12	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-1.139	0.001	-1.934	0.000	-1.137	0.000	0.000	0.000	0.000	385	3
	PEAK	-7.987	0.521	-11.886	0.000	-7.982	0.000	0.000	0.000	0.000		
	DAY/HR	3/12	29/15	3/14	0/ 0	3/12	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.800	0.000	-1.349	0.000	-0.799	0.000	0.000	0.000	0.000	394	0
	PEAK	-6.418	0.000	-10.357	0.000	-6.402	0.000	0.000	0.000	0.000		
	DAY/HR	4/17	0/ 0	28/16	0/ 0	4/17	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.493	0.000	-0.802	0.000	-0.492	0.000	0.000	0.000	0.000	349	0
	PEAK	-6.061	0.000	-12.268	0.000	-6.047	0.000	0.000	0.000	0.000		
	DAY/HR	9/12	0/ 0	9/17	0/ 0	9/12	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.227	0.000	-0.342	0.000	-0.227	0.000	0.000	0.000	0.000	277	0
	PEAK	-3.724	0.000	-5.015	0.000	-3.720	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	0/ 0	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.080	0.065	-0.215	0.001	-0.080	0.000	0.000	0.000	0.000	164	67
	PEAK	-2.315	3.674	-6.491	0.367	-2.303	0.000	0.000	0.000	0.000		
	DAY/HR	3/10	23/17	11/16	23/19	3/10	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.066	0.018	-0.159	0.000	-0.066	0.000	0.000	0.000	0.000	154	31
	PEAK	-1.763	1.419	-3.654	0.000	-1.760	0.000	0.000	0.000	0.000		
	DAY/HR	15/10	9/15	8/17	0/ 0	15/10	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.256	0.011	-0.460	0.000	-0.256	0.000	0.000	0.000	0.000	253	20
	PEAK	-3.782	1.215	-5.861	0.000	-3.779	0.000	0.000	0.000	0.000		

	DAY/HR	30/12	19/16	30/12	0/ 0	30/12	0/ 0	0/ 0	0/ 0	0/ 0		
OCT	SUM	-0.789	0.001	-1.384	0.000	-0.788	0.000	0.000	0.000	0.000	376	2
	PEAK	-6.535	0.574	-10.958	0.000	-6.532	0.000	0.000	0.000	0.000		
	DAY/HR	15/12	6/15	15/12	0/ 0	15/12	0/ 0	0/ 0	0/ 0	0/ 0		
NOV	SUM	-1.098	0.000	-1.905	0.000	-1.096	0.000	0.000	0.000	0.000	348	0
	PEAK	-8.172	0.000	-13.738	0.000	-8.167	0.000	0.000	0.000	0.000		
	DAY/HR	25/16	0/ 0	25/16	0/ 0	25/16	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-1-1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-1.661	0.000	-2.753	0.000	-1.659	0.000	0.000	0.000	0.000	400	0
	PEAK	-10.019	0.000	-16.509	0.000	-10.011	0.000	0.000	0.000	0.000		
	DAY/HR	26/17	0/ 0	26/17	0/ 0	26/17	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-9.637	0.096	-16.350	0.001	-9.623	0.000	0.000	0.000	0.000	3836	123
	PEAK	-13.714	3.674	-20.973	0.367	-13.703	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	4	0	0	0	4

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-1-2 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	121.	0.704
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	108.	0.704
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	119.	0.704
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	124.	0.704
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	119.	0.704
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	120.	0.704
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	126.	0.704
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	120.	0.685
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	120.	0.704
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	127.	0.704
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	105.	0.704
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	125.	0.704
TOTAL	0.000						0.000						1435.	
MAX						0.000						0.000		0.704

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-1-2 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
410.	410.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON	SUM / PEAK	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-1.953	0.000	-3.640	0.000	-1.950	0.000	0.000	0.000	0.000	384	0
	PEAK	-17.630	0.000	-30.099	0.000	-17.623	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-1.562	0.000	-3.059	0.000	-1.560	0.000	0.000	0.000	0.000	352	0
	PEAK	-14.208	0.000	-24.897	0.000	-14.195	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	27/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-1.380	0.000	-2.689	0.000	-1.378	0.000	0.000	0.000	0.000	385	5
	PEAK	-11.944	0.158	-22.328	0.000	-11.933	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/15	13/ 9	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.986	0.000	-1.995	0.000	-0.985	0.000	0.000	0.000	0.000	393	0
	PEAK	-9.984	0.000	-18.031	0.000	-9.975	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	24/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.582	0.000	-1.142	0.000	-0.581	0.000	0.000	0.000	0.000	349	0
	PEAK	-8.728	0.000	-18.978	0.000	-8.721	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	0/ 0	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.296	0.000	-0.553	0.000	-0.295	0.000	0.000	0.000	0.000	277	0
	PEAK	-5.794	0.000	-10.397	0.000	-5.784	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	0/ 0	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.120	0.060	-0.292	0.003	-0.120	0.000	0.000	0.000	0.000	164	70
	PEAK	-4.493	4.506	-7.941	1.064	-4.490	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	11/17	23/17	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.098	0.012	-0.214	0.000	-0.098	0.000	0.000	0.000	0.000	154	37
	PEAK	-3.641	1.386	-5.893	0.000	-3.622	0.000	0.000	0.000	0.000		
	DAY/HR	14/ 9	12/16	26/17	0/ 0	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.343	0.010	-0.723	0.000	-0.343	0.000	0.000	0.000	0.000	253	25
	PEAK	-7.643	1.447	-11.183	0.000	-7.623	0.000	0.000	0.000	0.000		

DAY/HR	26/ 9	19/16	26/ 9	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT SUM	-0.966	0.002	-2.030	0.000	-0.965	0.000	0.000	0.000	0.000	376	4
PEAK	-9.897	1.037	-18.507	0.000	-9.889	0.000	0.000	0.000	0.000		
DAY/HR	24/ 9	6/15	15/10	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV SUM	-1.256	0.000	-2.489	0.000	-1.255	0.000	0.000	0.000	0.000	347	0
PEAK	-11.894	0.000	-21.263	0.000	-11.882	0.000	0.000	0.000	0.000		
DAY/HR	28/ 9	0/ 0	18/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-1-2 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-1.908	0.000	-3.601	0.000	-1.906	0.000	0.000	0.000	0.000	399	0
	PEAK	-14.155	0.000	-25.483	0.000	-14.142	0.000	0.000	0.000	0.000		
	DAY/HR	26/10	0/ 0	26/17	0/ 0	26/10	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-11.449	0.084	-22.427	0.003	-11.436	0.000	0.000	0.000	0.000	3833	141
	PEAK	-17.630	4.506	-30.099	1.064	-17.623	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	16	1	0	0	17

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-MEZZ WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	30.	0.179
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	27.	0.179
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	29.	0.179
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	31.	0.179
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	30.	0.179
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	30.	0.179
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	31.	0.179
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	30.	0.172
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	30.	0.179
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	32.	0.179
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	26.	0.179
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	31.	0.179
TOTAL	0.000						0.000						357.	
MAX						0.000						0.000		0.179

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-MEZZ WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
60.	60.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON	SUM / PEAK	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-0.217	0.000	-0.263	0.000	-0.217	0.000	0.000	0.000	0.000	383	0
	PEAK	-1.965	0.000	-2.290	0.000	-1.963	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-0.174	0.000	-0.208	0.000	-0.173	0.000	0.000	0.000	0.000	352	0
	PEAK	-1.603	0.000	-1.903	0.000	-1.601	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	13/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-0.153	0.000	-0.180	0.000	-0.153	0.000	0.000	0.000	0.000	384	5
	PEAK	-1.348	0.009	-1.701	0.000	-1.347	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/15	13/ 9	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.110	0.000	-0.127	0.000	-0.109	0.000	0.000	0.000	0.000	393	0
	PEAK	-1.125	0.000	-1.343	0.000	-1.124	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	24/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.065	0.000	-0.074	0.000	-0.064	0.000	0.000	0.000	0.000	349	0
	PEAK	-0.988	0.000	-1.197	0.000	-0.986	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	0/ 0	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.033	0.000	-0.038	0.000	-0.033	0.000	0.000	0.000	0.000	276	0
	PEAK	-0.650	0.000	-0.730	0.000	-0.649	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	0/ 0	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.013	0.003	-0.018	0.000	-0.013	0.000	0.000	0.000	0.000	164	47
	PEAK	-0.507	0.353	-0.653	0.105	-0.506	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	1/ 9	23/17	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.011	0.000	-0.013	0.000	-0.011	0.000	0.000	0.000	0.000	154	20
	PEAK	-0.410	0.057	-0.455	0.000	-0.409	0.000	0.000	0.000	0.000		
	DAY/HR	15/ 9	12/18	15/ 9	9/18	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.038	0.000	-0.044	0.000	-0.038	0.000	0.000	0.000	0.000	252	8
	PEAK	-0.860	0.020	-0.936	0.000	-0.859	0.000	0.000	0.000	0.000		

	DAY/HR	26/ 9	19/18	26/ 9	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT	SUM	-0.108	0.000	-0.126	0.000	-0.108	0.000	0.000	0.000	0.000	375	0
	PEAK	-1.112	0.000	-1.381	0.000	-1.111	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	15/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV	SUM	-0.140	0.000	-0.166	0.000	-0.140	0.000	0.000	0.000	0.000	347	0
	PEAK	-1.345	0.000	-1.650	0.000	-1.344	0.000	0.000	0.000	0.000		
	DAY/HR	28/ 9	0/ 0	28/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-MEZZ WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-0.212	0.000	-0.254	0.000	-0.212	0.000	0.000	0.000	0.000	397	0
	PEAK	-1.600	0.000	-1.918	0.000	-1.599	0.000	0.000	0.000	0.000		
	DAY/HR	26/10	0/ 0	26/10	0/ 0	26/10	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-1.274	0.004	-1.510	0.000	-1.273	0.000	0.000	0.000	0.000	3826	80
	PEAK	-1.965	0.353	-2.290	0.105	-1.963	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-2-2 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	135.	0.728
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	120.	0.728
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	133.	0.728
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	139.	0.728
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	133.	0.728
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	134.	0.728
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	140.	0.728
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	135.	0.707
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	134.	0.728
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	142.	0.728
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	118.	0.728
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	139.	0.728
TOTAL	0.000						0.000						1602.	
MAX						0.000						0.000		0.728

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-2-2 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
340.	340.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON	SUM / PEAK	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-2.105	0.000	-2.811	0.000	-2.103	0.000	0.000	0.000	0.000	384	0
	PEAK	-16.281	0.000	-21.293	0.000	-16.265	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-1.693	0.000	-2.316	0.000	-1.691	0.000	0.000	0.000	0.000	352	0
	PEAK	-13.124	0.000	-17.112	0.000	-13.110	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	27/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-1.489	0.002	-2.011	0.001	-1.487	0.000	0.000	0.000	0.000	385	6
	PEAK	-11.046	0.581	-15.958	0.256	-11.034	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/15	13/ 9	29/15	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-1.080	0.000	-1.452	0.000	-1.079	0.000	0.000	0.000	0.000	394	0
	PEAK	-9.231	0.000	-12.465	0.000	-9.222	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	24/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.654	0.000	-0.844	0.000	-0.653	0.000	0.000	0.000	0.000	349	0
	PEAK	-8.074	0.000	-13.051	0.000	-8.068	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	0/ 0	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.331	0.000	-0.411	0.000	-0.331	0.000	0.000	0.000	0.000	277	0
	PEAK	-5.355	0.000	-6.759	0.000	-5.347	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	0/ 0	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.136	0.060	-0.198	0.016	-0.135	0.000	0.000	0.000	0.000	164	67
	PEAK	-4.162	4.022	-5.603	2.216	-4.159	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	1/ 9	23/17	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.116	0.014	-0.161	0.002	-0.116	0.000	0.000	0.000	0.000	154	33
	PEAK	-3.358	1.166	-3.993	0.458	-3.357	0.000	0.000	0.000	0.000		
	DAY/HR	15/ 9	12/16	15/ 9	9/18	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.386	0.010	-0.518	0.001	-0.386	0.000	0.000	0.000	0.000	253	24
	PEAK	-7.077	1.287	-8.244	0.312	-7.057	0.000	0.000	0.000	0.000		

	DAY/HR	26/ 9	19/16	26/ 9	13/18	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT	SUM	-1.052	0.002	-1.473	0.000	-1.051	0.000	0.000	0.000	0.000	376	4
	PEAK	-9.145	1.146	-13.178	0.000	-9.137	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	6/15	15/10	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV	SUM	-1.372	0.000	-1.896	0.000	-1.370	0.000	0.000	0.000	0.000	348	0
	PEAK	-11.011	0.000	-15.073	0.000	-10.999	0.000	0.000	0.000	0.000		
	DAY/HR	28/ 9	0/ 0	18/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-2-2 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-2.058	0.000	-2.773	0.000	-2.055	0.000	0.000	0.000	0.000	400	0
	PEAK	-13.097	0.000	-17.149	0.000	-13.084	0.000	0.000	0.000	0.000		
	DAY/HR	26/10	0/ 0	26/17	0/ 0	26/10	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-12.473	0.089	-16.864	0.019	-12.458	0.000	0.000	0.000	0.000	3836	134
	PEAK	-16.281	4.022	-21.293	2.216	-16.265	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-2-1 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	45.	0.268
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	41.	0.264
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	47.	0.268
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	46.	0.268
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	47.	0.268
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	45.	0.268
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	47.	0.268
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	47.	0.264
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	45.	0.268
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	47.	0.268
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	42.	0.268
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	47.	0.268
TOTAL	0.000						0.000						546.	
MAX						0.000						0.000		0.268

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-2-1 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
560.	560.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON	SUM / PEAK	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-1.083	0.000	-1.832	0.000	-1.082	0.000	0.000	0.000	0.000	338	0
	PEAK	-8.443	0.000	-13.637	0.000	-8.440	0.000	0.000	0.000	0.000		
	DAY/HR	4/17	0/ 0	4/17	0/ 0	4/17	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-0.826	0.000	-1.443	0.000	-0.825	0.000	0.000	0.000	0.000	310	0
	PEAK	-4.992	0.000	-8.891	0.000	-4.984	0.000	0.000	0.000	0.000		
	DAY/HR	24/16	0/ 0	24/16	0/ 0	24/16	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-0.701	0.001	-1.222	0.000	-0.701	0.000	0.000	0.000	0.000	338	2
	PEAK	-4.702	0.389	-7.762	0.000	-4.694	0.000	0.000	0.000	0.000		
	DAY/HR	3/12	29/15	24/16	0/ 0	3/12	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.487	0.000	-0.841	0.000	-0.486	0.000	0.000	0.000	0.000	346	0
	PEAK	-4.284	0.000	-6.930	0.000	-4.277	0.000	0.000	0.000	0.000		
	DAY/HR	5/12	0/ 0	5/12	0/ 0	5/12	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.309	0.000	-0.512	0.000	-0.309	0.000	0.000	0.000	0.000	303	0
	PEAK	-3.462	0.000	-7.263	0.000	-3.458	0.000	0.000	0.000	0.000		
	DAY/HR	9/12	0/ 0	9/17	0/ 0	9/12	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.132	0.000	-0.205	0.000	-0.132	0.000	0.000	0.000	0.000	235	0
	PEAK	-2.300	0.000	-3.649	0.000	-2.289	0.000	0.000	0.000	0.000		
	DAY/HR	7/12	0/ 0	7/12	0/ 0	7/12	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.041	0.048	-0.093	0.009	-0.041	0.000	0.000	0.000	0.000	129	66
	PEAK	-1.134	2.260	-3.372	1.341	-1.132	0.000	0.000	0.000	0.000		
	DAY/HR	3/10	23/17	11/16	23/17	3/10	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.034	0.015	-0.074	0.000	-0.034	0.000	0.000	0.000	0.000	118	30
	PEAK	-1.023	1.288	-1.875	0.000	-1.023	0.000	0.000	0.000	0.000		
	DAY/HR	16/11	9/16	8/16	0/ 0	16/11	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.145	0.009	-0.257	0.000	-0.145	0.000	0.000	0.000	0.000	209	19
	PEAK	-2.280	0.916	-3.647	0.000	-2.280	0.000	0.000	0.000	0.000		

DAY/HR	27/12	13/16	27/12	0/ 0	27/12	0/ 0	0/ 0	0/ 0	0/ 0		
OCT SUM	-0.477	0.001	-0.840	0.000	-0.476	0.000	0.000	0.000	0.000	328	3
PEAK	-3.796	0.391	-6.657	0.000	-3.791	0.000	0.000	0.000	0.000		
DAY/HR	15/12	6/15	15/12	0/ 0	15/12	0/ 0	0/ 0	0/ 0	0/ 0		
NOV SUM	-0.696	0.000	-1.229	0.000	-0.695	0.000	0.000	0.000	0.000	307	0
PEAK	-5.012	0.000	-8.782	0.000	-5.002	0.000	0.000	0.000	0.000		
DAY/HR	25/16	0/ 0	25/16	0/ 0	25/16	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-2-1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-1.055	0.000	-1.812	0.000	-1.054	0.000	0.000	0.000	0.000	352	0
	PEAK	-6.682	0.000	-11.295	0.000	-6.680	0.000	0.000	0.000	0.000		
	DAY/HR	27/12	0/ 0	27/12	0/ 0	27/12	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-5.986	0.074	-10.361	0.009	-5.979	0.000	0.000	0.000	0.000	3313	120
	PEAK	-8.443	2.260	-13.637	1.341	-8.440	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 4	7/23	1/ 4	7/23	1/ 4	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	3	0	0	0	3

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-3-2 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	79.	0.507
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	68.	0.507
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	74.	0.507
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	78.	0.507
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	75.	0.507
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	78.	0.507
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	81.	0.507
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	77.	0.468
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	77.	0.507
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	84.	0.507
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	69.	0.507
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	79.	0.507
TOTAL	0.000						0.000						919.	
MAX						0.000						0.000		0.507

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-3-2 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
360.	360.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON	SUM / PEAK	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-1.353	0.000	-1.819	0.000	-1.351	0.000	0.000	0.000	0.000	350	0
	PEAK	-11.997	0.000	-16.041	0.000	-11.990	0.000	0.000	0.000	0.000		
	DAY/HR	6/ 9	0/ 0	3/17	0/ 0	6/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-1.069	0.000	-1.495	0.000	-1.067	0.000	0.000	0.000	0.000	326	0
	PEAK	-10.757	0.000	-14.187	0.000	-10.749	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	27/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-0.934	0.000	-1.281	0.000	-0.933	0.000	0.000	0.000	0.000	343	1
	PEAK	-9.059	0.015	-13.667	0.000	-9.051	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	29/12	13/ 9	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.670	0.000	-0.939	0.000	-0.669	0.000	0.000	0.000	0.000	371	0
	PEAK	-7.430	0.000	-9.642	0.000	-7.424	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	2/10	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.390	0.000	-0.523	0.000	-0.389	0.000	0.000	0.000	0.000	311	0
	PEAK	-6.614	0.000	-10.224	0.000	-6.610	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	0/ 0	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.203	0.000	-0.264	0.000	-0.203	0.000	0.000	0.000	0.000	267	0
	PEAK	-4.155	0.000	-5.203	0.000	-4.150	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	0/ 0	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.083	0.042	-0.129	0.011	-0.083	0.000	0.000	0.000	0.000	159	61
	PEAK	-3.292	3.439	-4.489	2.086	-3.290	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	11/17	23/17	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.066	0.008	-0.095	0.000	-0.066	0.000	0.000	0.000	0.000	143	26
	PEAK	-2.695	1.029	-3.227	0.031	-2.680	0.000	0.000	0.000	0.000		
	DAY/HR	15/ 9	12/16	15/ 9	12/14	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.239	0.007	-0.338	0.000	-0.239	0.000	0.000	0.000	0.000	235	18
	PEAK	-5.595	1.157	-6.356	0.000	-5.581	0.000	0.000	0.000	0.000		

	DAY/HR	26/ 9	19/16	26/ 9	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT	SUM	-0.683	0.002	-1.000	0.000	-0.682	0.000	0.000	0.000	0.000	349	5
	PEAK	-7.234	1.084	-10.097	0.000	-7.229	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	6/15	30/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV	SUM	-0.876	0.000	-1.246	0.000	-0.875	0.000	0.000	0.000	0.000	318	0
	PEAK	-9.015	0.000	-11.718	0.000	-9.008	0.000	0.000	0.000	0.000		
	DAY/HR	28/ 9	0/ 0	18/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-3-2 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-1.317	0.000	-1.803	0.000	-1.316	0.000	0.000	0.000	0.000	340	0
	PEAK	-10.723	0.000	-13.961	0.000	-10.715	0.000	0.000	0.000	0.000		
	DAY/HR	26/10	0/ 0	4/ 9	0/ 0	26/10	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-7.881	0.059	-10.932	0.011	-7.871	0.000	0.000	0.000	0.000	3512	111
	PEAK	-11.997	3.439	-16.041	2.086	-11.990	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 6	7/23	1/ 3	7/23	1/ 6	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-3-1 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	106.	0.626
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	96.	0.615
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	109.	0.626
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	108.	0.626
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	109.	0.626
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	105.	0.626
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	109.	0.626
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	110.	0.615
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	105.	0.626
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	110.	0.626
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	98.	0.626
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	109.	0.626
TOTAL	0.000						0.000						1274.	
MAX						0.000						0.000		0.626

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-3-1 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
540.	540.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON		HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-2.407	0.000	-3.809	0.000	-2.405	0.000	0.000	0.000	0.000	338	0
	PEAK	-18.766	0.000	-28.541	0.000	-18.754	0.000	0.000	0.000	0.000		
	DAY/HR	4/17	0/ 0	4/17	0/ 0	4/17	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-1.837	0.000	-2.982	0.000	-1.834	0.000	0.000	0.000	0.000	310	0
	PEAK	-11.082	0.000	-18.341	0.000	-11.075	0.000	0.000	0.000	0.000		
	DAY/HR	24/16	0/ 0	24/16	0/ 0	24/16	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-1.559	0.001	-2.420	0.000	-1.556	0.000	0.000	0.000	0.000	338	2
	PEAK	-10.439	0.703	-16.347	0.000	-10.432	0.000	0.000	0.000	0.000		
	DAY/HR	3/12	29/15	3/16	0/ 0	3/12	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-1.081	0.000	-1.571	0.000	-1.080	0.000	0.000	0.000	0.000	346	0
	PEAK	-9.508	0.000	-14.086	0.000	-9.503	0.000	0.000	0.000	0.000		
	DAY/HR	5/12	0/ 0	5/12	0/ 0	5/12	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.687	0.000	-0.964	0.000	-0.686	0.000	0.000	0.000	0.000	303	0
	PEAK	-7.706	0.000	-13.325	0.000	-7.690	0.000	0.000	0.000	0.000		
	DAY/HR	9/12	0/ 0	9/17	0/ 0	9/12	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.293	0.000	-0.395	0.000	-0.293	0.000	0.000	0.000	0.000	235	0
	PEAK	-5.091	0.000	-6.923	0.000	-5.088	0.000	0.000	0.000	0.000		
	DAY/HR	7/12	0/ 0	7/12	0/ 0	7/12	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.091	0.097	-0.198	0.013	-0.091	0.000	0.000	0.000	0.000	129	64
	PEAK	-2.531	4.785	-7.421	2.487	-2.519	0.000	0.000	0.000	0.000		
	DAY/HR	3/10	23/17	11/16	23/17	3/10	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.075	0.031	-0.157	0.000	-0.075	0.000	0.000	0.000	0.000	118	28
	PEAK	-2.280	2.698	-4.272	0.000	-2.274	0.000	0.000	0.000	0.000		
	DAY/HR	16/11	9/15	8/16	0/ 0	16/11	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.323	0.018	-0.503	0.000	-0.322	0.000	0.000	0.000	0.000	209	18
	PEAK	-5.071	1.868	-7.111	0.000	-5.068	0.000	0.000	0.000	0.000		

DAY/HR	27/12	13/16	27/12	0/ 0	27/12	0/ 0	0/ 0	0/ 0	0/ 0		
OCT SUM	-1.060	0.001	-1.597	0.000	-1.058	0.000	0.000	0.000	0.000	328	2
PEAK	-8.444	0.716	-13.302	0.000	-8.422	0.000	0.000	0.000	0.000		
DAY/HR	15/12	6/15	15/12	0/ 0	15/12	0/ 0	0/ 0	0/ 0	0/ 0		
NOV SUM	-1.547	0.000	-2.496	0.000	-1.545	0.000	0.000	0.000	0.000	307	0
PEAK	-11.125	0.000	-17.907	0.000	-11.117	0.000	0.000	0.000	0.000		
DAY/HR	25/16	0/ 0	25/16	0/ 0	25/16	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-3-1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-2.344	0.000	-3.792	0.000	-2.342	0.000	0.000	0.000	0.000	352	0
	PEAK	-14.866	0.000	-23.708	0.000	-14.853	0.000	0.000	0.000	0.000		
	DAY/HR	27/12	0/ 0	27/12	0/ 0	27/12	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-13.305	0.149	-20.883	0.013	-13.286	0.000	0.000	0.000	0.000	3313	114
	PEAK	-18.766	4.785	-28.541	2.487	-18.754	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 4	7/23	1/ 4	7/23	1/ 4	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	3	0	0	0	3

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for ERV-4-1 WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	0.000	31	24	39.F	38.F	0.000	32.	0.237
FEB	0.00000	28	24	40.F	38.F	0.000	0.000	28	24	40.F	38.F	0.000	26.	0.237
MAR	0.00000	31	1	48.F	44.F	0.000	0.000	31	1	48.F	44.F	0.000	28.	0.237
APR	0.00000	30	1	52.F	48.F	0.000	0.000	30	1	52.F	48.F	0.000	30.	0.237
MAY	0.00000	31	1	56.F	51.F	0.000	0.000	31	1	56.F	51.F	0.000	29.	0.237
JUN	0.00000	30	1	61.F	55.F	0.000	0.000	30	1	61.F	55.F	0.000	31.	0.237
JUL	0.00000	31	1	60.F	51.F	0.000	0.000	31	1	60.F	51.F	0.000	32.	0.237
AUG	0.00000	31	1	59.F	55.F	0.000	0.000	31	1	59.F	55.F	0.000	31.	0.212
SEP	0.00000	30	1	53.F	51.F	0.000	0.000	30	1	53.F	51.F	0.000	31.	0.237
OCT	0.00000	31	1	45.F	43.F	0.000	0.000	31	1	45.F	43.F	0.000	35.	0.237
NOV	0.00000	30	24	46.F	44.F	0.000	0.000	30	24	46.F	44.F	0.000	29.	0.237
DEC	0.00000	31	24	45.F	41.F	0.000	0.000	31	24	45.F	41.F	0.000	31.	0.237
TOTAL	0.000						0.000						365.	
MAX						0.000						0.000		0.237

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-4-1 WEATHER FILE- SEATTLE BOEING FI WA

AIR FLOW			POWER CONSUMPTION			
OUTDOOR (CFM)	EXHAUST (CFM)	PURGE (CFM)	OA FAN (KW)	EXH FAN (KW)	HT EXCH (KW)	PREHEAT (KBTU/HR)
170.	170.	0.	0.000	0.000	0.000	0.

		SENSIBLE		TOTAL		EXCESS SENSIBLE		POWER	PREHEAT		HOURS	
MON		HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	HEATING (MBTU) (KBTU/HR)	COOLING (MBTU) (KBTU/HR)	FANS&HX (KWH) (KW)	HEATING (MBTU) (KBTU/HR)	ELECTRIC (KWH) (KW)	HEAT	COOL
JAN	SUM	-0.558	0.000	-0.722	0.000	-0.558	0.000	0.000	0.000	0.000	290	0
	PEAK	-5.277	0.000	-6.303	0.000	-5.272	0.000	0.000	0.000	0.000		
	DAY/HR	2/ 9	0/ 0	3/17	0/ 0	2/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
FEB	SUM	-0.429	0.000	-0.580	0.000	-0.428	0.000	0.000	0.000	0.000	264	0
	PEAK	-4.963	0.000	-6.313	0.000	-4.958	0.000	0.000	0.000	0.000		
	DAY/HR	27/ 9	0/ 0	27/ 9	0/ 0	27/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAR	SUM	-0.370	0.000	-0.490	0.000	-0.370	0.000	0.000	0.000	0.000	275	0
	PEAK	-4.181	0.000	-6.190	0.000	-4.176	0.000	0.000	0.000	0.000		
	DAY/HR	13/ 9	0/ 0	13/ 9	0/ 0	13/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
APR	SUM	-0.267	0.000	-0.358	0.000	-0.267	0.000	0.000	0.000	0.000	294	0
	PEAK	-3.429	0.000	-4.274	0.000	-3.426	0.000	0.000	0.000	0.000		
	DAY/HR	24/ 9	0/ 0	2/10	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
MAY	SUM	-0.154	0.000	-0.196	0.000	-0.154	0.000	0.000	0.000	0.000	235	0
	PEAK	-3.052	0.000	-4.026	0.000	-3.049	0.000	0.000	0.000	0.000		
	DAY/HR	9/10	0/ 0	9/17	0/ 0	9/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUN	SUM	-0.082	0.000	-0.101	0.000	-0.082	0.000	0.000	0.000	0.000	200	0
	PEAK	-1.775	0.000	-2.057	0.000	-1.772	0.000	0.000	0.000	0.000		
	DAY/HR	6/10	0/ 0	6/10	0/ 0	6/10	0/ 0	0/ 0	0/ 0	0/ 0		
JUL	SUM	-0.034	0.018	-0.047	0.010	-0.034	0.000	0.000	0.000	0.000	119	49
	PEAK	-1.465	1.587	-1.853	1.322	-1.464	0.000	0.000	0.000	0.000		
	DAY/HR	1/ 9	23/17	1/ 9	23/17	1/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
AUG	SUM	-0.026	0.003	-0.033	0.000	-0.026	0.000	0.000	0.000	0.000	98	19
	PEAK	-1.222	0.441	-1.343	0.286	-1.215	0.000	0.000	0.000	0.000		
	DAY/HR	14/ 9	12/17	15/ 9	12/14	15/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
SEP	SUM	-0.098	0.003	-0.127	0.000	-0.098	0.000	0.000	0.000	0.000	198	15
	PEAK	-2.484	0.513	-2.702	0.000	-2.483	0.000	0.000	0.000	0.000		

DAY/HR	26/ 9	19/16	26/ 9	0/ 0	26/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
OCT SUM	-0.288	0.001	-0.407	0.000	-0.288	0.000	0.000	0.000	0.000	300	4
PEAK	-3.220	0.316	-4.507	0.000	-3.217	0.000	0.000	0.000	0.000		
DAY/HR	24/ 9	6/15	30/ 9	0/ 0	24/ 9	0/ 0	0/ 0	0/ 0	0/ 0		
NOV SUM	-0.367	0.000	-0.508	0.000	-0.366	0.000	0.000	0.000	0.000	268	0
PEAK	-4.160	0.000	-5.039	0.000	-4.156	0.000	0.000	0.000	0.000		
DAY/HR	28/ 9	0/ 0	18/ 9	0/ 0	28/ 9	0/ 0	0/ 0	0/ 0	0/ 0		

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- ERV Energy Recovery Summary for: ERV-4-1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	-0.541	0.000	-0.717	0.000	-0.541	0.000	0.000	0.000	0.000	289	0
	PEAK	-4.947	0.000	-6.169	0.000	-4.942	0.000	0.000	0.000	0.000		
	DAY/HR	26/10	0/ 0	4/ 9	0/ 0	26/10	0/ 0	0/ 0	0/ 0	0/ 0		
YR	SUM	-3.215	0.024	-4.286	0.011	-3.211	0.000	0.000	0.000	0.000	2830	87
	PEAK	-5.277	1.587	-6.313	1.322	-5.272	0.000	0.000	0.000	0.000		
	MON/DAY	1/ 2	7/23	2/27	7/23	1/ 2	0/ 0	0/ 0	0/ 0	0/ 0		

	--- EXHAUST OUTLET ---		--- MAKE-UP OUTLET ---		CONDENSATE
	WET	FROSTED	WET	FROSTED	CONTROL
ANNUAL HOURS:	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys1CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.735	6	7	27.F	23.F	-25.110	368.	1.102
FEB	0.00000	28	24	40.F	38.F	0.000	-1.273	3	7	46.F	43.F	-15.438	335.	1.102
MAR	0.01376	22	15	64.F	54.F	1.961	-0.920	3	7	41.F	39.F	-15.277	373.	1.102
APR	0.15267	18	10	54.F	45.F	7.160	-0.470	7	7	39.F	39.F	-13.902	370.	1.102
MAY	0.46222	23	10	57.F	49.F	9.529	-0.314	5	7	46.F	45.F	-10.946	373.	1.102
JUN	0.60127	13	11	61.F	52.F	8.768	-0.147	9	7	55.F	51.F	-6.671	362.	1.102
JUL	1.13879	23	16	88.F	65.F	9.493	-0.033	8	7	57.F	55.F	-5.032	376.	1.102
AUG	0.95601	12	16	82.F	64.F	7.993	-0.026	18	7	61.F	58.F	-4.251	373.	1.102
SEP	0.66139	10	10	57.F	51.F	11.379	-0.130	29	7	48.F	45.F	-6.499	362.	1.102
OCT	0.07338	8	10	55.F	51.F	3.372	-0.454	27	7	50.F	49.F	-9.983	376.	1.102
NOV	0.00000	30	24	46.F	44.F	0.000	-0.942	28	7	37.F	34.F	-15.198	344.	1.102
DEC	0.00000	31	24	45.F	41.F	0.000	-1.688	29	7	37.F	35.F	-19.378	376.	1.102
TOTAL	4.059						-8.131						4386.	
MAX						11.379						-25.110		1.102

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys2CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00195	17	17	48.F	45.F	0.354	-0.148	6	7	27.F	23.F	-9.145	106.	0.311
FEB	0.00025	27	17	45.F	38.F	0.129	-0.117	18	7	45.F	44.F	-6.192	96.	0.311
MAR	0.00383	21	17	64.F	50.F	0.352	-0.097	3	7	41.F	39.F	-5.386	107.	0.311
APR	0.00941	18	17	64.F	52.F	0.502	-0.065	7	7	39.F	39.F	-4.662	106.	0.311
MAY	0.04027	16	17	72.F	60.F	1.200	-0.036	5	7	46.F	45.F	-3.770	107.	0.311
JUN	0.11821	20	17	77.F	61.F	1.485	-0.010	2	7	54.F	53.F	-2.371	104.	0.311
JUL	0.31075	24	17	81.F	65.F	2.027	-0.000	5	7	54.F	52.F	-0.266	108.	0.311
AUG	0.35699	12	17	82.F	63.F	2.029	0.000	31	1	59.F	55.F	0.000	107.	0.311
SEP	0.24010	19	17	81.F	62.F	2.045	-0.001	29	7	48.F	45.F	-0.680	104.	0.311
OCT	0.10145	7	17	77.F	55.F	1.415	-0.017	14	7	50.F	47.F	-2.730	108.	0.311
NOV	0.02073	7	17	57.F	54.F	0.792	-0.061	24	7	46.F	45.F	-4.389	99.	0.311
DEC	0.00530	19	16	45.F	44.F	0.322	-0.120	29	7	37.F	35.F	-6.255	108.	0.311
TOTAL	1.209						-0.672						1260.	
MAX						2.045						-9.145		0.311

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys3CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	12	43.F	40.F	0.000	-0.731	6	7	27.F	23.F	-12.499	176.	0.649
FEB	0.00000	27	16	46.F	38.F	0.000	-0.458	18	7	45.F	44.F	-8.885	160.	0.649
MAR	0.01668	21	10	50.F	46.F	1.711	-0.354	3	7	41.F	39.F	-8.194	177.	0.649
APR	0.14504	11	11	57.F	51.F	3.514	-0.195	7	7	39.F	39.F	-7.704	182.	0.649
MAY	0.29683	23	11	57.F	49.F	4.180	-0.103	5	7	46.F	45.F	-5.571	177.	0.649
JUN	0.39485	20	11	72.F	61.F	4.569	-0.029	2	7	54.F	53.F	-2.955	175.	0.649
JUL	0.70054	23	11	75.F	63.F	5.698	-0.002	5	8	54.F	51.F	-1.939	183.	0.649
AUG	0.61253	12	10	70.F	62.F	5.472	-0.002	25	7	54.F	53.F	-1.267	177.	0.649
SEP	0.41303	10	11	59.F	53.F	4.373	-0.029	29	7	48.F	45.F	-3.273	175.	0.649
OCT	0.10006	8	10	55.F	51.F	2.735	-0.164	14	7	50.F	47.F	-5.156	183.	0.649
NOV	0.00183	7	16	61.F	56.F	0.527	-0.394	28	7	37.F	34.F	-8.395	156.	0.649
DEC	0.00000	30	15	45.F	40.F	0.000	-0.685	29	7	37.F	35.F	-10.712	183.	0.649
TOTAL	2.681						-3.146						2105.	
MAX						5.698						-12.499		0.649

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys4CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-2.811	6	7	27.F	23.F	-29.899	291.	1.075
FEB	0.00000	28	24	40.F	38.F	0.000	-2.096	18	7	45.F	44.F	-22.447	264.	1.075
MAR	0.00000	31	1	48.F	44.F	0.000	-1.694	3	7	41.F	39.F	-20.378	293.	1.075
APR	0.03367	18	10	54.F	45.F	5.906	-0.837	7	7	39.F	39.F	-19.306	300.	1.075
MAY	0.17743	23	11	57.F	49.F	8.405	-0.449	12	7	48.F	44.F	-13.517	293.	1.075
JUN	0.44549	13	10	59.F	52.F	14.623	-0.128	7	7	54.F	50.F	-6.726	289.	1.075
JUL	1.18680	23	10	72.F	62.F	10.754	-0.007	8	7	57.F	55.F	-5.031	302.	1.075
AUG	0.71119	12	11	72.F	63.F	6.428	-0.016	18	7	61.F	58.F	-4.637	293.	1.075
SEP	0.31291	10	10	57.F	51.F	9.626	-0.194	29	7	48.F	45.F	-8.997	289.	1.075
OCT	0.01876	8	10	55.F	51.F	2.552	-1.027	14	7	50.F	47.F	-13.249	302.	1.075
NOV	0.00000	30	24	46.F	44.F	0.000	-1.918	28	7	37.F	34.F	-21.222	258.	1.075
DEC	0.00000	31	24	45.F	41.F	0.000	-2.825	29	7	37.F	35.F	-26.635	302.	1.075
TOTAL	2.886						-14.002						3473.	
MAX						14.623						-29.899		1.075

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys5CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-7.069	6	7	27.F	23.F	-58.378	525.	1.931
FEB	0.00000	28	24	40.F	38.F	0.000	-5.705	18	7	45.F	44.F	-40.911	476.	1.931
MAR	0.00000	31	1	48.F	44.F	0.000	-4.974	3	7	41.F	39.F	-39.491	529.	1.931
APR	0.00000	30	1	52.F	48.F	0.000	-3.115	7	7	39.F	39.F	-37.532	542.	1.931
MAY	0.30157	14	10	63.F	53.F	12.474	-1.516	12	7	48.F	44.F	-26.638	529.	1.931
JUN	0.72797	20	17	77.F	61.F	15.993	-0.535	7	7	54.F	50.F	-14.776	522.	1.931
JUL	2.70938	23	17	90.F	67.F	27.168	-0.061	8	7	57.F	55.F	-10.400	545.	1.931
AUG	1.75041	11	17	81.F	63.F	20.731	-0.149	18	7	61.F	58.F	-10.075	529.	1.931
SEP	0.56412	19	17	81.F	62.F	15.276	-0.706	29	7	48.F	45.F	-18.417	522.	1.931
OCT	0.01725	7	17	77.F	55.F	4.280	-2.918	27	7	50.F	49.F	-25.149	545.	1.931
NOV	0.00000	30	24	46.F	44.F	0.000	-4.768	28	7	37.F	34.F	-40.758	466.	1.931
DEC	0.00000	31	24	45.F	41.F	0.000	-6.966	29	7	37.F	35.F	-49.816	545.	1.931
TOTAL	6.071						-38.483						6276.	
MAX						27.168						-58.378		1.931

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys6CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	21	17	45.F	41.F	0.000	-1.819	6	7	27.F	23.F	-34.003	366.	1.113
FEB	0.01335	22	17	54.F	52.F	2.686	-1.057	10	7	37.F	36.F	-16.821	333.	1.113
MAR	0.13673	22	18	61.F	56.F	5.562	-0.670	3	7	41.F	39.F	-15.362	371.	1.113
APR	0.62236	18	18	63.F	49.F	6.828	-0.297	7	7	39.F	39.F	-13.764	368.	1.113
MAY	0.91094	23	10	57.F	49.F	11.833	-0.135	12	7	48.F	44.F	-8.844	371.	1.113
JUN	1.00262	14	16	61.F	52.F	9.846	-0.022	7	7	54.F	50.F	-3.467	360.	1.113
JUL	1.57063	23	17	90.F	67.F	10.661	0.000	31	1	60.F	51.F	0.000	374.	1.113
AUG	1.39479	11	16	81.F	64.F	8.337	0.000	31	1	59.F	55.F	0.000	371.	1.113
SEP	1.10121	10	11	59.F	53.F	10.455	-0.027	30	8	52.F	50.F	-4.242	360.	1.113
OCT	0.39824	11	17	61.F	53.F	5.809	-0.291	23	7	43.F	43.F	-8.990	374.	1.113
NOV	0.02067	7	16	61.F	56.F	1.916	-0.793	28	7	37.F	34.F	-16.516	341.	1.113
DEC	0.00000	23	16	43.F	40.F	0.000	-1.639	29	7	37.F	35.F	-23.440	374.	1.113
TOTAL	7.172						-6.749						4365.	
MAX						11.833						-34.003		1.113

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys7CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.023	6	7	27.F	23.F	-14.165	317.	0.947
FEB	0.00000	28	24	40.F	38.F	0.000	-0.772	18	7	45.F	44.F	-8.767	288.	0.947
MAR	0.01192	29	16	79.F	55.F	1.814	-0.536	3	7	41.F	39.F	-8.126	321.	0.947
APR	0.06284	12	18	66.F	55.F	3.598	-0.284	7	7	39.F	39.F	-7.196	318.	0.947
MAY	0.28788	23	16	64.F	51.F	4.851	-0.153	12	7	48.F	44.F	-5.629	321.	0.947
JUN	0.47677	28	17	66.F	60.F	5.549	-0.041	2	7	54.F	53.F	-2.831	312.	0.947
JUL	1.08797	23	16	88.F	65.F	8.167	-0.003	5	8	54.F	51.F	-2.330	323.	0.947
AUG	0.97915	9	15	84.F	63.F	7.539	-0.000	25	7	54.F	53.F	-0.235	321.	0.947
SEP	0.59484	5	18	64.F	56.F	6.467	-0.023	30	8	52.F	50.F	-2.997	312.	0.947
OCT	0.11038	10	16	57.F	52.F	2.712	-0.200	23	7	43.F	43.F	-4.945	323.	0.947
NOV	0.00000	30	24	46.F	44.F	0.000	-0.512	24	7	46.F	45.F	-7.863	297.	0.947
DEC	0.00000	31	24	45.F	41.F	0.000	-0.949	29	7	37.F	35.F	-11.047	323.	0.947
TOTAL	3.612						-4.496						3777.	
MAX						8.167						-14.165		0.947

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys8CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.833	6	7	27.F	23.F	-8.979	160.	0.589
FEB	0.00000	28	24	40.F	38.F	0.000	-0.563	18	7	45.F	44.F	-6.355	145.	0.589
MAR	0.00332	21	17	64.F	50.F	1.034	-0.354	3	7	41.F	39.F	-5.587	161.	0.589
APR	0.05377	11	17	66.F	54.F	1.643	-0.141	7	7	39.F	39.F	-5.104	165.	0.589
MAY	0.18773	15	10	64.F	57.F	2.472	-0.065	12	7	48.F	44.F	-3.583	161.	0.589
JUN	0.30651	20	11	72.F	61.F	3.042	-0.011	2	7	54.F	53.F	-1.609	159.	0.589
JUL	0.65422	23	17	90.F	67.F	4.398	0.000	31	1	60.F	51.F	0.000	166.	0.589
AUG	0.52362	11	17	81.F	63.F	3.795	-0.000	25	7	54.F	53.F	-0.286	161.	0.589
SEP	0.30481	22	16	81.F	60.F	2.942	-0.014	29	7	48.F	45.F	-1.982	159.	0.589
OCT	0.03897	7	17	77.F	55.F	1.207	-0.168	14	7	50.F	47.F	-3.606	166.	0.589
NOV	0.00000	30	24	46.F	44.F	0.000	-0.502	28	7	37.F	34.F	-5.816	142.	0.589
DEC	0.00000	31	24	45.F	41.F	0.000	-0.831	29	7	37.F	35.F	-7.806	166.	0.589
TOTAL	2.073						-3.482						1910.	
MAX						4.398						-8.979		0.589

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys9FC WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.993	6	7	27.F	23.F	-8.527	56.	0.215
FEB	0.00000	28	24	40.F	38.F	0.000	-0.831	18	7	45.F	44.F	-5.391	51.	0.209
MAR	0.00000	31	1	48.F	44.F	0.000	-0.767	3	7	41.F	39.F	-5.152	56.	0.207
APR	0.00000	30	1	52.F	48.F	0.000	-0.615	7	7	39.F	39.F	-4.775	57.	0.208
MAY	0.00100	16	17	72.F	60.F	0.258	-0.419	5	7	46.F	45.F	-3.999	55.	0.206
JUN	0.00938	20	17	77.F	61.F	0.966	-0.221	9	7	55.F	51.F	-2.690	54.	0.203
JUL	0.12982	23	17	90.F	67.F	2.367	-0.047	5	8	54.F	51.F	-2.252	56.	0.206
AUG	0.06980	12	15	81.F	63.F	1.969	-0.052	25	8	57.F	55.F	-1.823	54.	0.204
SEP	0.01107	19	17	81.F	62.F	1.085	-0.178	29	7	48.F	45.F	-2.531	53.	0.203
OCT	0.00000	31	1	45.F	43.F	0.000	-0.537	14	7	50.F	47.F	-3.565	57.	0.205
NOV	0.00000	30	24	46.F	44.F	0.000	-0.709	28	7	37.F	34.F	-5.054	49.	0.208
DEC	0.00000	31	24	45.F	41.F	0.000	-0.976	29	7	37.F	35.F	-6.554	58.	0.210
TOTAL	0.221						-6.345						656.	
MAX						2.367						-8.527		0.215

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys10CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.377	6	7	27.F	23.F	-16.410	284.	1.049
FEB	0.00000	28	24	40.F	38.F	0.000	-0.911	18	7	45.F	44.F	-11.321	258.	1.049
MAR	0.00474	21	17	64.F	50.F	1.010	-0.608	3	7	41.F	39.F	-9.681	287.	1.049
APR	0.08123	11	17	66.F	54.F	2.527	-0.249	7	7	39.F	39.F	-8.885	294.	1.049
MAY	0.30281	15	10	64.F	57.F	4.321	-0.110	12	7	48.F	44.F	-6.166	287.	1.049
JUN	0.50157	20	11	72.F	61.F	5.710	-0.017	7	7	54.F	50.F	-2.415	283.	1.049
JUL	1.16744	23	17	90.F	67.F	7.687	0.000	31	1	60.F	51.F	0.000	295.	1.049
AUG	0.87381	11	17	81.F	63.F	6.501	-0.000	25	7	54.F	53.F	-0.376	287.	1.049
SEP	0.44341	19	17	81.F	62.F	4.604	-0.028	29	7	48.F	45.F	-3.861	283.	1.049
OCT	0.05631	8	10	55.F	51.F	1.816	-0.294	14	7	50.F	47.F	-6.629	295.	1.049
NOV	0.00000	30	24	46.F	44.F	0.000	-0.822	28	7	37.F	34.F	-9.991	252.	1.049
DEC	0.00000	31	24	45.F	41.F	0.000	-1.351	29	7	37.F	35.F	-13.671	295.	1.049
TOTAL	3.431						-5.768						3399.	
MAX						7.687						-16.410		1.049

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys11CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-6.198	6	7	27.F	23.F	-42.252	486.	1.794
FEB	0.00000	28	24	40.F	38.F	0.000	-4.945	18	7	45.F	44.F	-29.625	441.	1.794
MAR	0.00000	31	1	48.F	44.F	0.000	-4.261	3	7	41.F	39.F	-28.113	489.	1.794
APR	0.00000	30	1	52.F	48.F	0.000	-2.802	7	7	39.F	39.F	-25.857	502.	1.794
MAY	0.13455	15	10	64.F	57.F	10.210	-1.388	12	7	48.F	44.F	-18.956	489.	1.794
JUN	0.40334	20	17	77.F	61.F	9.178	-0.482	2	7	54.F	53.F	-9.928	483.	1.794
JUL	1.64749	23	17	90.F	67.F	15.094	-0.038	8	7	57.F	55.F	-6.668	504.	1.794
AUG	0.96584	12	17	82.F	63.F	10.898	-0.117	23	10	59.F	55.F	-6.052	489.	1.794
SEP	0.14175	19	17	81.F	62.F	5.667	-0.729	29	7	48.F	45.F	-13.476	483.	1.794
OCT	0.00000	31	1	45.F	43.F	0.000	-2.909	14	7	50.F	47.F	-18.678	504.	1.794
NOV	0.00000	30	24	46.F	44.F	0.000	-4.308	28	7	37.F	34.F	-28.741	431.	1.794
DEC	0.00000	31	24	45.F	41.F	0.000	-6.180	29	7	37.F	35.F	-36.590	504.	1.794
TOTAL	3.293						-34.358						5806.	
MAX						15.094						-42.252		1.794

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys12CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.01084	15	16	50.F	49.F	1.967	-0.586	6	7	27.F	23.F	-15.879	366.	1.113
FEB	0.03343	22	17	54.F	52.F	4.104	-0.288	18	7	45.F	44.F	-8.642	333.	1.113
MAR	0.33324	22	16	64.F	54.F	6.627	-0.181	3	7	41.F	39.F	-7.074	371.	1.113
APR	0.89142	18	10	54.F	45.F	8.110	-0.062	7	7	39.F	39.F	-6.025	368.	1.113
MAY	1.08891	23	10	57.F	49.F	10.389	-0.025	12	7	48.F	44.F	-3.976	371.	1.113
JUN	1.09204	13	10	59.F	52.F	10.121	-0.001	9	7	55.F	51.F	-0.427	360.	1.113
JUL	1.67617	26	12	63.F	57.F	10.166	0.000	31	1	60.F	51.F	0.000	374.	1.113
AUG	1.54876	11	16	81.F	64.F	9.431	0.000	31	1	59.F	55.F	0.000	371.	1.113
SEP	1.24511	10	11	59.F	53.F	10.995	-0.001	29	7	48.F	45.F	-0.858	360.	1.113
OCT	0.57893	8	10	55.F	51.F	7.321	-0.072	20	8	55.F	55.F	-4.023	374.	1.113
NOV	0.07961	14	16	52.F	52.F	3.397	-0.227	24	7	46.F	45.F	-7.725	341.	1.113
DEC	0.00000	31	24	45.F	41.F	0.000	-0.502	29	7	37.F	35.F	-11.934	374.	1.113
TOTAL	8.578						-1.946						4365.	
MAX						10.995						-15.879		1.113

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys13CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	TIME OF MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.06251	16	16	48.F	45.F	2.862	-0.412	6	6	27.F	24.F	-9.714	314.	0.946
FEB	0.04916	22	17	54.F	52.F	3.213	-0.251	18	6	45.F	44.F	-7.347	285.	0.946
MAR	0.25323	28	15	59.F	50.F	4.755	-0.171	3	6	41.F	39.F	-6.314	318.	0.946
APR	0.57920	11	15	64.F	53.F	6.241	-0.070	7	6	39.F	38.F	-5.097	315.	0.946
MAY	0.77282	23	15	64.F	52.F	7.850	-0.037	12	6	45.F	40.F	-4.289	318.	0.946
JUN	0.80554	26	12	63.F	56.F	7.784	-0.002	2	7	54.F	53.F	-0.877	309.	0.946
JUL	1.31053	3	18	64.F	53.F	8.478	0.000	31	1	60.F	51.F	0.000	320.	0.946
AUG	1.23534	11	16	81.F	64.F	7.896	0.000	31	1	59.F	55.F	0.000	318.	0.946
SEP	0.98233	5	18	64.F	56.F	8.002	-0.001	29	7	48.F	45.F	-0.637	309.	0.946
OCT	0.53570	10	16	57.F	52.F	5.917	-0.059	14	6	52.F	49.F	-3.640	320.	0.946
NOV	0.14276	7	16	61.F	56.F	4.230	-0.179	24	6	46.F	44.F	-6.261	293.	0.946
DEC	0.02307	18	17	46.F	41.F	1.808	-0.340	29	6	37.F	35.F	-8.242	320.	0.946
TOTAL	6.752						-1.522						3740.	
MAX						8.478						-9.714		0.946

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys14CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.008	6	7	27.F	23.F	-10.876	160.	0.589
FEB	0.00000	28	24	40.F	38.F	0.000	-0.720	18	7	45.F	44.F	-7.883	145.	0.589
MAR	0.00205	21	17	64.F	50.F	0.860	-0.498	3	7	41.F	39.F	-7.066	161.	0.589
APR	0.03090	11	17	66.F	54.F	1.449	-0.214	7	7	39.F	39.F	-6.372	165.	0.589
MAY	0.15000	16	16	72.F	60.F	2.452	-0.110	12	7	48.F	44.F	-4.749	161.	0.589
JUN	0.27737	20	17	77.F	61.F	3.161	-0.019	2	7	54.F	53.F	-2.161	159.	0.589
JUL	0.64372	23	17	90.F	67.F	4.685	0.000	31	1	60.F	51.F	0.000	166.	0.589
AUG	0.50887	11	17	81.F	63.F	4.005	-0.001	25	7	54.F	53.F	-0.484	161.	0.589
SEP	0.25579	22	16	81.F	60.F	3.061	-0.024	29	7	48.F	45.F	-2.553	159.	0.589
OCT	0.02285	7	17	77.F	55.F	1.123	-0.240	14	7	50.F	47.F	-4.561	166.	0.589
NOV	0.00000	30	24	46.F	44.F	0.000	-0.621	24	7	46.F	45.F	-7.301	142.	0.589
DEC	0.00000	31	24	45.F	41.F	0.000	-1.016	29	7	37.F	35.F	-9.605	166.	0.589
TOTAL	1.892						-4.470						1910.	
MAX						4.685						-10.876		0.589

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys15FC WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.153	6	7	27.F	23.F	-12.087	56.	0.216
FEB	0.00000	15	11	48.F	42.F	0.000	-0.924	24	7	37.F	31.F	-6.735	51.	0.209
MAR	0.00000	31	1	48.F	44.F	0.000	-0.792	3	7	41.F	39.F	-6.608	56.	0.207
APR	0.00000	30	1	52.F	48.F	0.000	-0.539	7	7	39.F	39.F	-6.171	56.	0.207
MAY	0.00573	16	17	72.F	60.F	0.588	-0.312	5	7	46.F	45.F	-4.853	54.	0.205
JUN	0.02149	20	15	75.F	62.F	1.011	-0.129	9	7	55.F	51.F	-2.868	53.	0.203
JUL	0.14885	23	17	90.F	67.F	2.124	-0.022	5	8	54.F	51.F	-2.181	56.	0.204
AUG	0.09770	12	15	81.F	63.F	1.556	-0.020	25	8	57.F	55.F	-1.747	54.	0.203
SEP	0.02123	19	15	81.F	63.F	0.968	-0.102	29	7	48.F	45.F	-2.832	53.	0.202
OCT	0.00000	31	1	45.F	43.F	0.000	-0.491	14	7	50.F	47.F	-4.217	56.	0.205
NOV	0.00000	30	24	46.F	44.F	0.000	-0.758	28	7	37.F	34.F	-6.702	49.	0.208
DEC	0.00000	31	24	45.F	41.F	0.000	-1.117	29	7	37.F	35.F	-8.703	58.	0.209
TOTAL	0.295						-6.358						652.	
MAX						2.124						-12.087		0.216

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys16CB WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.630	6	7	27.F	23.F	-17.688	284.	1.049
FEB	0.00000	8	13	50.F	45.F	0.000	-1.146	18	7	45.F	44.F	-13.322	258.	1.049
MAR	0.00457	21	17	64.F	50.F	1.184	-0.821	3	7	41.F	39.F	-11.631	287.	1.049
APR	0.06557	11	17	66.F	54.F	2.554	-0.350	7	7	39.F	39.F	-10.654	294.	1.049
MAY	0.28425	16	16	72.F	60.F	4.317	-0.176	12	7	48.F	44.F	-7.819	287.	1.049
JUN	0.49004	20	17	77.F	61.F	5.567	-0.031	2	7	54.F	53.F	-3.343	283.	1.049
JUL	1.16786	23	17	90.F	67.F	8.003	0.000	31	1	60.F	51.F	0.000	295.	1.049
AUG	0.89336	11	16	81.F	64.F	6.958	-0.001	25	7	54.F	53.F	-0.798	287.	1.049
SEP	0.42382	22	16	81.F	60.F	4.754	-0.043	29	7	48.F	45.F	-4.714	283.	1.049
OCT	0.04443	8	16	66.F	61.F	1.707	-0.412	14	7	50.F	47.F	-8.067	295.	1.049
NOV	0.00000	30	24	46.F	44.F	0.000	-1.019	24	7	46.F	45.F	-11.976	252.	1.049
DEC	0.00000	31	24	45.F	41.F	0.000	-1.627	29	7	37.F	35.F	-15.764	295.	1.049
TOTAL	3.374						-7.257						3399.	
MAX						8.003						-17.688		1.049

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys17CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-6.377	6	7	27.F	23.F	-47.217	486.	1.794
FEB	0.00000	28	24	40.F	38.F	0.000	-5.120	18	7	45.F	44.F	-33.430	441.	1.794
MAR	0.00000	15	13	48.F	44.F	0.000	-4.421	3	7	41.F	39.F	-31.863	489.	1.794
APR	0.00000	30	1	52.F	48.F	0.000	-2.905	7	7	39.F	39.F	-29.286	502.	1.794
MAY	0.12440	15	10	64.F	57.F	6.425	-1.546	5	7	46.F	45.F	-22.123	489.	1.794
JUN	0.39636	20	17	77.F	61.F	9.515	-0.583	2	7	54.F	53.F	-12.245	483.	1.794
JUL	1.60940	23	17	90.F	67.F	16.082	-0.064	8	7	57.F	55.F	-7.712	504.	1.794
AUG	0.92620	11	17	81.F	63.F	11.499	-0.151	23	7	57.F	56.F	-6.976	489.	1.794
SEP	0.16651	19	17	81.F	62.F	6.508	-0.803	29	7	48.F	45.F	-14.941	483.	1.794
OCT	0.00000	31	1	45.F	43.F	0.000	-3.049	14	7	50.F	47.F	-21.204	504.	1.794
NOV	0.00000	30	24	46.F	44.F	0.000	-4.461	28	7	37.F	34.F	-32.728	431.	1.794
DEC	0.00000	31	24	45.F	41.F	0.000	-6.388	29	7	37.F	35.F	-41.286	504.	1.794
TOTAL	3.223						-35.868						5806.	
MAX						16.082						-47.217		1.794

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys18CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.752	6	7	27.F	23.F	-21.282	300.	1.106
FEB	0.00000	28	24	40.F	38.F	0.000	-1.267	18	7	45.F	44.F	-15.228	272.	1.106
MAR	0.00733	21	17	64.F	50.F	1.927	-0.858	3	7	41.F	39.F	-14.007	302.	1.106
APR	0.12737	11	17	66.F	54.F	3.328	-0.352	7	7	39.F	39.F	-12.210	310.	1.106
MAY	0.39203	16	17	72.F	60.F	4.819	-0.177	12	7	48.F	44.F	-9.519	302.	1.106
JUN	0.62782	20	17	77.F	61.F	5.763	-0.029	2	7	54.F	53.F	-3.893	298.	1.106
JUL	1.26348	23	17	90.F	67.F	8.231	0.000	31	1	60.F	51.F	0.000	311.	1.106
AUG	1.03642	11	17	81.F	63.F	7.209	-0.004	25	8	57.F	55.F	-2.563	302.	1.106
SEP	0.59214	22	17	79.F	60.F	5.391	-0.043	29	7	48.F	45.F	-4.986	298.	1.106
OCT	0.07207	9	16	57.F	56.F	2.279	-0.415	14	7	50.F	47.F	-9.206	311.	1.106
NOV	0.00000	30	24	46.F	44.F	0.000	-1.087	24	7	46.F	45.F	-14.611	266.	1.106
DEC	0.00000	31	24	45.F	41.F	0.000	-1.802	29	7	37.F	35.F	-18.063	311.	1.106
TOTAL	4.119						-7.787						3583.	
MAX						8.231						-21.282		1.106

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys19CB WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.332	6	7	27.F	23.F	-16.268	246.	0.906
FEB	0.00000	28	24	40.F	38.F	0.000	-1.033	18	7	45.F	44.F	-12.500	223.	0.906
MAR	0.00013	21	16	68.F	50.F	0.126	-0.797	3	7	41.F	39.F	-11.455	247.	0.906
APR	0.02488	18	16	64.F	54.F	1.840	-0.418	7	7	39.F	39.F	-10.163	254.	0.906
MAY	0.15698	23	16	64.F	51.F	3.170	-0.231	12	7	48.F	44.F	-8.593	247.	0.906
JUN	0.31160	20	16	75.F	62.F	4.825	-0.054	9	7	55.F	51.F	-4.359	244.	0.906
JUL	0.78102	23	16	88.F	65.F	6.706	-0.004	5	8	54.F	51.F	-2.818	255.	0.906
AUG	0.63877	11	16	81.F	64.F	6.083	-0.004	25	8	57.F	55.F	-2.556	247.	0.906
SEP	0.33216	19	15	81.F	63.F	4.090	-0.046	29	7	48.F	45.F	-3.907	244.	0.906
OCT	0.03752	3	15	61.F	52.F	2.210	-0.370	14	7	50.F	47.F	-7.731	255.	0.906
NOV	0.00000	30	24	46.F	44.F	0.000	-0.843	24	7	46.F	45.F	-11.737	218.	0.906
DEC	0.00000	31	24	45.F	41.F	0.000	-1.346	29	7	37.F	35.F	-14.075	255.	0.906
TOTAL	2.283						-6.478						2936.	
MAX						6.706						-16.268		0.906

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys20FC WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-12.782	6	7	27.F	23.F	-112.649	1428.	5.530
FEB	0.00000	28	24	40.F	38.F	0.000	-11.686	18	7	45.F	44.F	-103.392	1297.	5.438
MAR	0.00000	31	1	48.F	44.F	0.000	-11.486	3	7	41.F	39.F	-89.219	1425.	5.316
APR	0.00000	30	1	52.F	48.F	0.000	-9.377	7	7	39.F	39.F	-83.947	1436.	5.259
MAY	0.00000	31	1	56.F	51.F	0.000	-5.983	12	7	48.F	44.F	-66.954	1368.	5.131
JUN	0.00000	30	1	61.F	55.F	0.000	-2.611	2	7	54.F	53.F	-50.054	1316.	4.974
JUL	0.42021	23	17	90.F	67.F	19.982	-0.554	5	7	54.F	52.F	-27.364	1359.	5.179
AUG	0.32150	12	17	82.F	63.F	16.926	-0.251	25	7	54.F	53.F	-26.779	1315.	5.122
SEP	0.02276	19	17	81.F	62.F	7.989	-0.911	29	7	48.F	45.F	-38.548	1298.	4.933
OCT	0.00000	31	1	45.F	43.F	0.000	-3.536	14	7	50.F	47.F	-55.486	1381.	5.033
NOV	0.00000	30	24	46.F	44.F	0.000	-6.899	24	7	46.F	45.F	-70.207	1222.	5.133
DEC	0.00000	31	24	45.F	41.F	0.000	-11.007	29	7	37.F	35.F	-93.035	1459.	5.333
TOTAL	0.764						-77.083						16305.	
MAX						19.982						-112.649		5.530

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys21FC WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.665	6	7	27.F	23.F	-21.405	316.	1.244
FEB	0.00000	28	24	40.F	38.F	0.000	-0.481	18	7	45.F	44.F	-16.818	285.	1.215
MAR	0.00000	31	1	48.F	44.F	0.000	-0.339	3	7	41.F	39.F	-13.015	314.	1.180
APR	0.00000	30	1	52.F	48.F	0.000	-0.193	7	7	39.F	39.F	-11.935	320.	1.163
MAY	0.04224	16	17	72.F	60.F	4.244	-0.092	12	7	48.F	44.F	-8.783	312.	1.269
JUN	0.14395	20	17	77.F	61.F	7.764	-0.026	2	7	54.F	53.F	-5.504	311.	1.373
JUL	0.82282	23	17	90.F	67.F	11.766	0.000	31	1	60.F	51.F	0.000	345.	1.475
AUG	0.73969	12	17	82.F	63.F	10.791	-0.001	25	7	54.F	53.F	-0.588	333.	1.449
SEP	0.28301	19	17	81.F	62.F	9.397	-0.007	29	7	48.F	45.F	-3.621	315.	1.411
OCT	0.02014	7	17	77.F	55.F	4.467	-0.075	14	7	50.F	47.F	-8.056	321.	1.278
NOV	0.00000	30	24	46.F	44.F	0.000	-0.265	24	7	46.F	45.F	-11.114	277.	1.159
DEC	0.00000	31	24	45.F	41.F	0.000	-0.528	29	7	37.F	35.F	-15.817	326.	1.203
TOTAL	2.052						-2.671						3774.	
MAX						11.766						-21.405		1.475

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys22CB WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.10901	10	16	50.F	48.F	1.721	-0.151	6	7	27.F	23.F	-6.995	115.	0.428
FEB	0.10764	21	17	57.F	53.F	1.471	-0.109	18	7	45.F	44.F	-4.280	104.	0.428
MAR	0.15396	28	16	61.F	50.F	1.647	-0.093	3	7	41.F	39.F	-4.073	116.	0.428
APR	0.22057	18	17	64.F	52.F	1.983	-0.067	7	7	39.F	39.F	-3.627	119.	0.428
MAY	0.25312	21	17	63.F	59.F	2.193	-0.040	5	7	46.F	45.F	-2.973	116.	0.428
JUN	0.29388	20	17	77.F	61.F	2.355	-0.015	9	7	55.F	51.F	-1.801	114.	0.428
JUL	0.47510	23	17	90.F	67.F	3.204	-0.002	5	8	54.F	51.F	-1.212	120.	0.428
AUG	0.45244	12	17	82.F	63.F	2.925	-0.000	25	7	54.F	53.F	-0.398	116.	0.428
SEP	0.36278	19	16	82.F	63.F	2.751	-0.004	29	7	48.F	45.F	-1.208	114.	0.428
OCT	0.24622	9	17	57.F	56.F	2.306	-0.036	14	7	50.F	47.F	-2.332	120.	0.428
NOV	0.14455	7	15	61.F	56.F	1.852	-0.076	24	7	46.F	45.F	-3.675	102.	0.428
DEC	0.13172	18	17	46.F	41.F	1.462	-0.131	29	7	37.F	35.F	-5.124	120.	0.428
TOTAL	2.951						-0.725						1376.	
MAX						3.204						-6.995		0.428

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys23DfltClg WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF DY	MAX HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.027	6	6	27.F	24.F	-1.908	36.	0.127
FEB	0.00000	28	24	40.F	38.F	0.000	-0.013	18	6	45.F	44.F	-1.593	33.	0.127
MAR	0.00000	31	1	48.F	44.F	0.000	-0.005	3	6	41.F	39.F	-1.089	37.	0.127
APR	0.00000	30	1	52.F	48.F	0.000	-0.002	7	6	39.F	38.F	-0.865	38.	0.127
MAY	0.00945	16	16	72.F	60.F	0.753	-0.001	12	6	45.F	40.F	-0.520	37.	0.176
JUN	0.03895	19	16	75.F	60.F	0.763	0.000	30	1	61.F	55.F	0.000	39.	0.178
JUL	0.12020	14	16	66.F	58.F	0.797	0.000	31	1	60.F	51.F	0.000	47.	0.190
AUG	0.10536	11	12	70.F	62.F	0.865	0.000	31	1	59.F	55.F	0.000	44.	0.188
SEP	0.05081	12	17	79.F	59.F	0.763	0.000	30	1	53.F	51.F	0.000	40.	0.182
OCT	0.00321	7	17	77.F	55.F	0.368	-0.001	14	6	52.F	49.F	-0.496	38.	0.160
NOV	0.00000	30	24	46.F	44.F	0.000	-0.009	24	6	46.F	44.F	-1.213	32.	0.127
DEC	0.00000	31	24	45.F	41.F	0.000	-0.022	29	6	37.F	35.F	-1.853	38.	0.127
TOTAL	0.328						-0.080						459.	
MAX						0.865						-1.908		0.190

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys24DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.143	6	6	27.F	24.F	-3.791	33.	0.114
FEB	0.00000	28	24	40.F	38.F	0.000	-0.080	18	6	45.F	44.F	-3.063	30.	0.114
MAR	0.00000	31	1	48.F	44.F	0.000	-0.051	3	6	41.F	39.F	-2.895	33.	0.114
APR	0.00000	30	1	52.F	48.F	0.000	-0.025	7	6	39.F	38.F	-2.547	34.	0.114
MAY	0.00563	16	17	72.F	60.F	0.612	-0.013	12	6	45.F	40.F	-2.238	33.	0.155
JUN	0.01884	20	17	77.F	61.F	0.653	-0.002	2	6	54.F	51.F	-0.744	34.	0.159
JUL	0.08546	23	16	88.F	65.F	0.786	0.000	31	1	60.F	51.F	0.000	40.	0.177
AUG	0.06435	11	15	79.F	64.F	0.845	0.000	31	1	59.F	55.F	0.000	38.	0.174
SEP	0.01694	19	17	81.F	62.F	0.662	-0.001	29	6	48.F	46.F	-0.578	34.	0.162
OCT	0.00000	31	1	45.F	43.F	0.000	-0.022	14	6	52.F	49.F	-2.071	34.	0.114
NOV	0.00000	30	24	46.F	44.F	0.000	-0.062	24	6	46.F	44.F	-2.918	29.	0.114
DEC	0.00000	31	24	45.F	41.F	0.000	-0.125	29	6	37.F	35.F	-3.255	34.	0.114
TOTAL	0.191						-0.524						405.	
MAX						0.845						-3.791		0.177

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys25DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-2.081	6	6	27.F	24.F	-12.667	163.	0.549
FEB	0.00007	22	11	54.F	53.F	0.071	-1.259	24	6	39.F	32.F	-9.753	148.	0.549
MAR	0.04833	29	12	73.F	52.F	3.548	-0.782	3	6	41.F	39.F	-9.604	160.	0.686
APR	0.25209	18	11	55.F	44.F	5.706	-0.296	28	6	46.F	40.F	-8.136	160.	0.906
MAY	0.53833	16	11	64.F	57.F	10.999	-0.099	12	6	45.F	40.F	-7.270	182.	1.318
JUN	1.00530	20	10	70.F	59.F	13.929	-0.008	2	6	54.F	51.F	-2.681	218.	1.554
JUL	2.00977	21	10	70.F	61.F	15.114	0.000	31	1	60.F	51.F	0.000	306.	1.643
AUG	1.50085	8	10	66.F	60.F	13.440	-0.001	23	6	57.F	56.F	-0.568	256.	1.507
SEP	0.77267	22	10	64.F	59.F	9.937	-0.030	25	6	54.F	49.F	-3.842	199.	1.211
OCT	0.08452	7	11	63.F	52.F	5.008	-0.417	27	6	50.F	48.F	-7.576	164.	0.869
NOV	0.00000	30	24	46.F	44.F	0.000	-1.255	3	6	43.F	40.F	-9.739	146.	0.549
DEC	0.00000	31	24	45.F	41.F	0.000	-2.102	26	6	34.F	34.F	-10.677	170.	0.549
TOTAL	6.212						-8.328						2272.	
MAX						15.114						-12.667		1.643

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys26DfltClg WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.281	6	6	27.F	24.F	-5.010	83.	0.282
FEB	0.00000	28	24	40.F	38.F	0.000	-0.209	18	6	45.F	44.F	-4.894	76.	0.282
MAR	0.00000	31	1	48.F	44.F	0.000	-0.146	3	6	41.F	39.F	-4.697	84.	0.282
APR	0.00000	30	1	52.F	48.F	0.000	-0.087	7	6	39.F	38.F	-4.182	86.	0.282
MAY	0.00000	31	1	56.F	51.F	0.000	-0.040	12	6	45.F	40.F	-3.054	84.	0.282
JUN	0.00014	20	17	77.F	61.F	0.129	-0.008	2	6	54.F	51.F	-1.864	83.	0.293
JUL	0.06624	24	17	81.F	65.F	1.631	0.000	31	1	60.F	51.F	0.000	92.	0.419
AUG	0.09457	13	17	77.F	63.F	1.651	0.000	31	1	59.F	55.F	0.000	92.	0.412
SEP	0.01829	19	17	81.F	62.F	1.244	0.000	30	1	53.F	51.F	0.000	84.	0.396
OCT	0.00000	31	1	45.F	43.F	0.000	-0.013	14	6	52.F	49.F	-2.105	86.	0.282
NOV	0.00000	30	24	46.F	44.F	0.000	-0.064	24	6	46.F	44.F	-3.429	74.	0.282
DEC	0.00000	31	24	45.F	41.F	0.000	-0.175	29	6	37.F	35.F	-4.849	86.	0.282
TOTAL	0.179						-1.023						1011.	
MAX						1.651						-5.010		0.419

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys27DfltClg WEATHER FILE- SEATTLE BOEING FI WA

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MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-1.660	6	7	27.F	23.F	-8.417	115.	0.388
FEB	0.00000	28	24	40.F	38.F	0.000	-1.265	4	7	30.F	30.F	-6.442	105.	0.388
MAR	0.00000	31	1	48.F	44.F	0.000	-0.993	3	7	41.F	39.F	-5.624	117.	0.388
APR	0.00000	30	1	52.F	48.F	0.000	-0.643	7	7	39.F	39.F	-5.638	119.	0.388
MAY	0.00002	16	17	72.F	60.F	0.025	-0.346	5	7	46.F	45.F	-4.513	117.	0.391
JUN	0.00609	20	17	77.F	61.F	1.364	-0.104	2	7	54.F	53.F	-2.579	115.	0.484
JUL	0.17044	23	17	90.F	67.F	3.867	-0.010	5	7	54.F	52.F	-1.655	132.	0.681
AUG	0.07848	12	16	82.F	64.F	2.707	-0.005	25	7	54.F	53.F	-1.525	123.	0.582
SEP	0.01495	19	16	82.F	63.F	1.566	-0.092	29	7	48.F	45.F	-3.085	116.	0.502
OCT	0.00000	31	1	45.F	43.F	0.000	-0.546	22	7	37.F	36.F	-4.765	120.	0.388
NOV	0.00000	30	24	46.F	44.F	0.000	-0.979	28	7	37.F	34.F	-5.911	103.	0.388
DEC	0.00000	31	24	45.F	41.F	0.000	-1.556	26	7	34.F	34.F	-6.568	120.	0.388
TOTAL	0.270						-8.201						1400.	
MAX						3.867						-8.417		0.681

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys28DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.049	6	6	27.F	24.F	-2.735	37.	0.128
FEB	0.00000	28	24	40.F	38.F	0.000	-0.026	18	6	45.F	44.F	-2.290	33.	0.128
MAR	0.00000	31	1	48.F	44.F	0.000	-0.015	3	6	41.F	39.F	-1.844	37.	0.128
APR	0.00000	30	1	52.F	48.F	0.000	-0.005	7	6	39.F	38.F	-1.538	38.	0.128
MAY	0.00486	16	17	72.F	60.F	0.587	-0.003	12	6	45.F	40.F	-1.021	38.	0.172
JUN	0.02244	20	17	77.F	61.F	0.695	-0.000	2	6	54.F	51.F	-0.133	38.	0.178
JUL	0.08701	14	17	68.F	58.F	0.749	0.000	31	1	60.F	51.F	0.000	45.	0.186
AUG	0.08041	11	12	70.F	62.F	0.833	0.000	31	1	59.F	55.F	0.000	43.	0.186
SEP	0.03269	22	16	81.F	60.F	0.708	0.000	30	1	53.F	51.F	0.000	39.	0.180
OCT	0.00149	7	17	77.F	55.F	0.273	-0.004	14	6	52.F	49.F	-0.923	38.	0.152
NOV	0.00000	30	24	46.F	44.F	0.000	-0.018	24	6	46.F	44.F	-1.881	33.	0.128
DEC	0.00000	31	24	45.F	41.F	0.000	-0.038	29	6	37.F	35.F	-2.536	38.	0.128
TOTAL	0.229						-0.159						458.	
MAX						0.833						-2.735		0.186

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Sys29DfltClg WEATHER FILE- SEATTLE BOEING FI WA

	- - - - - - - - C O O L I N G - - - - - - - -						- - - - - - - - - H E A T I N G - - - - - - - - -						- - - E L E C - - -	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-0.691	6	6	27.F	24.F	-6.694	92.	0.327
FEB	0.00000	28	24	40.F	38.F	0.000	-0.464	24	6	39.F	32.F	-5.005	83.	0.327
MAR	0.00000	31	1	48.F	44.F	0.000	-0.293	3	6	41.F	39.F	-4.996	93.	0.327
APR	0.00000	30	1	52.F	48.F	0.000	-0.157	7	6	39.F	38.F	-4.367	95.	0.327
MAY	0.00370	16	17	72.F	60.F	0.909	-0.079	5	6	46.F	45.F	-3.982	93.	0.392
JUN	0.01355	20	15	75.F	62.F	1.534	-0.020	2	6	54.F	51.F	-2.216	92.	0.427
JUL	0.14093	10	15	84.F	64.F	2.108	-0.000	5	6	54.F	52.F	-0.319	106.	0.506
AUG	0.09104	11	15	79.F	64.F	1.986	-0.000	25	6	54.F	53.F	-0.293	99.	0.473
SEP	0.01294	19	17	81.F	62.F	1.401	-0.013	29	6	48.F	46.F	-1.835	92.	0.423
OCT	0.00000	31	1	45.F	43.F	0.000	-0.114	14	6	52.F	49.F	-3.656	95.	0.327
NOV	0.00000	30	24	46.F	44.F	0.000	-0.338	3	6	43.F	40.F	-4.945	82.	0.327
DEC	0.00000	31	24	45.F	41.F	0.000	-0.619	29	6	37.F	35.F	-5.476	95.	0.327
TOTAL	0.262						-2.789						1116.	
MAX						2.108						-6.694		0.506

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- SS-A System Loads Summary for Uncon WEATHER FILE- SEATTLE BOEING FI WA

	COOLING						HEATING						ELEC	
MONTH	COOLING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM COOLING LOAD (KBTU/HR)	HEATING ENERGY (MBTU)	TIME OF MAX DY	HR	DRY-BULB TEMP	WET-BULB TEMP	MAXIMUM HEATING LOAD (KBTU/HR)	ELEC-TRICAL ENERGY (KWH)	MAXIMUM ELEC LOAD (KW)
JAN	0.00000	31	24	39.F	38.F	0.000	-9.081	6	6	27.F	24.F	-32.135	2599.	9.333
FEB	0.00000	28	24	40.F	38.F	0.000	-8.203	18	6	45.F	44.F	-30.666	2358.	9.333
MAR	0.00000	31	1	48.F	44.F	0.000	-8.086	3	6	41.F	39.F	-29.994	2618.	9.333
APR	0.00002	18	17	64.F	52.F	0.016	-6.668	7	6	39.F	38.F	-28.020	2676.	9.333
MAY	0.01240	16	17	72.F	60.F	0.659	-4.849	12	6	45.F	40.F	-24.482	2618.	9.333
JUN	0.04480	20	17	77.F	61.F	0.748	-2.847	2	6	54.F	51.F	-19.544	2582.	9.333
JUL	0.15071	23	17	90.F	67.F	0.886	-1.303	5	6	54.F	52.F	-13.806	2694.	9.333
AUG	0.13507	11	16	81.F	64.F	0.963	-0.907	25	6	54.F	53.F	-11.934	2618.	9.333
SEP	0.05967	22	17	79.F	60.F	0.743	-1.552	29	6	48.F	46.F	-15.843	2582.	9.333
OCT	0.00372	7	17	77.F	55.F	0.361	-3.414	14	6	52.F	49.F	-20.720	2694.	9.333
NOV	0.00000	30	24	46.F	44.F	0.000	-5.384	3	6	43.F	40.F	-25.850	2317.	9.333
DEC	0.00000	31	24	45.F	41.F	0.000	-7.868	29	6	37.F	35.F	-30.072	2694.	9.333
TOTAL	0.406						-60.160						31048.	
MAX						0.963						-32.135		9.333

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PV-A Plant Design Parameters WEATHER FILE- SEATTLE BOEING FI WA

*** CIRCULATION LOOPS ***

	HEATING DEMAND (MBTU/HR)	COOLING DEMAND (MBTU/HR)	LOOP FLOW (GPM)	TOTAL HEAD (FT)	SUPPLY UA PRODUCT (BTU/HR-F)	SUPPLY LOSS DT (F)	RETURN UA PRODUCT (BTU/HR-F)	RETURN LOSS DT (F)	LOOP VOLUME (GAL)	FLUID HEAT CAPACITY (BTU/LB-F)
Clg2PipeLoop	0.000	0.566	200.0	155.0	0.0	0.00	0.0	0.00	300.0	1.00
Htg2PipeLoop	-0.598	0.000	120.3	130.0	0.0	0.00	0.0	0.00	180.4	1.00
DHW-Loop	-0.288	0.000	1.4	23.4	0.0	0.00	0.0	0.00	2.1	1.00

*** PUMPS ***

	ATTACHED TO	FLOW (GPM)	HEAD (FT)	HEAD SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
ClgPump	1 PUMP(s)							
Clg2PipeLoop		210.0	170.5	16.0	VAR-SPEED	9.626	0.770	0.910
PRIMARY LOOP								
HtgPump	1 PUMP(s)							
Htg2PipeLoop		126.3	143.0	11.0	VAR-SPEED	4.819	0.770	0.917
PRIMARY LOOP								
HP1ClgPump	1 PUMP(s)							
HP1Clg		32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)							
HP2ClgPump	1 PUMP(s)							
HP2Clg		32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)							
HP3ClgPump	1 PUMP(s)							
HP3Clg		32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)							
HP4ClgPump	1 PUMP(s)							
HP4Clg		32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)							
HP1HtgPump	1 PUMP(s)							
HP1Htg		32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)							

HP2HtgPump		1 PUMP(s)							
HP2Htg			32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)								
HP3HtgPump		1 PUMP(s)							
HP3Htg			32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)								

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PV-A Plant Design Parameters WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

HP4HtgPump		1 PUMP(s)						
HP4Htg			32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400
EVAPORATOR	(RUN-AROUND)							
DHW Circ Pump		1 PUMP(s)						
DHW-Loop			0.5	25.8	0.0	VAR-SPEED	0.008	0.770	0.400
PRIMARY LOOP								

*** PRIMARY EQUIPMENT ***

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	HEAD (FT)
HP1Clg				
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.1
HP1Htg				
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.1
HP2Clg				
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.1
HP3Clg				
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.1
HP4Clg				
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.1
HP2Htg				
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.1
HP3Htg				
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.1
HP4Htg				
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.1
HP1-DHW				
HEAT-PUMP DW-HTR	DHW-Loop	-0.016	0.4	
HP2-DHW				
HEAT-PUMP DW-HTR	DHW-Loop	-0.016	0.4	
HP3-DHW				
HEAT-PUMP DW-HTR	DHW-Loop	-0.016	0.4	
Elec-DHW				
ELEC DW-HEATER	DHW-Loop	-0.012	0.5	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-E Energy End-Use Summary for all Electric Meters WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
KWH	3772.	0.	6305.	6694.	13.	0.	305.	1283.	0.	0.	812.	0.	19185.
MAX KW	12.631	0.000	23.042	77.951	1.640	0.000	3.037	5.699	0.000	0.000	2.410	0.000	97.472
DAY/HR	2/10	0/ 0	2/10	6/ 7	10/16	0/ 0	6/ 7	21/16	0/ 0	0/ 0	21/13	0/ 0	6/ 9
PEAK ENDUSE	11.497	0.000	22.083	56.085	0.000	0.000	1.487	4.649	0.000	0.000	1.670	0.000	
PEAK PCT	11.8	0.0	22.7	57.5	0.0	0.0	1.5	4.8	0.0	0.0	1.7	0.0	
FEB													
KWH	3426.	0.	5721.	5016.	4.	0.	246.	1151.	0.	0.	765.	0.	16328.
MAX KW	12.631	0.000	23.042	46.947	1.118	0.000	1.585	5.573	0.000	0.000	2.526	0.000	63.450
DAY/HR	3/10	0/ 0	3/10	10/ 7	27/17	0/ 0	18/ 7	18/12	0/ 0	0/ 0	18/13	0/ 0	24/ 9
PEAK ENDUSE	11.497	0.000	22.083	23.233	0.000	0.000	0.414	4.469	0.000	0.000	1.753	0.000	
PEAK PCT	18.1	0.0	34.8	36.6	0.0	0.0	0.7	7.0	0.0	0.0	2.8	0.0	
MAR													
KWH	3811.	0.	6354.	4214.	49.	0.	239.	1252.	0.	0.	853.	0.	16771.
MAX KW	12.631	0.000	23.042	40.966	2.634	0.000	1.264	5.392	0.000	0.000	2.518	0.000	61.414
DAY/HR	3/10	0/ 0	3/10	3/ 7	29/16	0/ 0	3/ 7	31/16	0/ 0	0/ 0	31/13	0/ 0	3/ 9
PEAK ENDUSE	11.497	0.000	22.083	21.132	0.000	0.000	0.417	4.531	0.000	0.000	1.754	0.000	
PEAK PCT	18.7	0.0	36.0	34.4	0.0	0.0	0.7	7.4	0.0	0.0	2.9	0.0	
APR													
KWH	3859.	0.	6488.	2839.	108.	0.	226.	1239.	0.	0.	830.	0.	15591.
MAX KW	12.631	0.000	23.042	38.837	3.062	0.000	1.166	5.350	0.000	0.000	2.471	0.000	59.271
DAY/HR	1/10	0/ 0	1/10	7/ 7	30/15	0/ 0	11/14	21/16	0/ 0	0/ 0	1/13	0/ 0	7/ 9
PEAK ENDUSE	11.497	0.000	22.083	18.959	0.000	0.000	0.411	4.600	0.000	0.000	1.721	0.000	
PEAK PCT	19.4	0.0	37.3	32.0	0.0	0.0	0.7	7.8	0.0	0.0	2.9	0.0	
MAY													
KWH	3811.	0.	6354.	1676.	354.	0.	247.	1185.	0.	0.	780.	0.	14407.
MAX KW	12.631	0.000	23.042	27.172	10.207	0.000	1.168	5.431	0.000	0.000	2.303	0.000	53.361
DAY/HR	1/10	0/ 0	1/10	12/ 7	16/17	0/ 0	2/14	20/16	0/ 0	0/ 0	1/13	0/ 0	16/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	10.207	0.000	0.780	4.893	0.000	0.000	1.807	0.000	
PEAK PCT	23.7	0.0	43.2	0.0	19.1	0.0	1.5	9.2	0.0	0.0	3.4	0.0	
JUN													
KWH	3738.	0.	6261.	697.	839.	0.	287.	1149.	0.	0.	704.	0.	13676.
MAX KW	12.631	0.000	23.042	13.566	14.429	0.000	1.166	5.541	0.000	0.000	2.117	0.000	57.440
DAY/HR	2/10	0/ 0	2/10	2/ 7	20/17	0/ 0	4/13	25/16	0/ 0	0/ 0	2/13	0/ 0	20/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	14.429	0.000	0.780	4.901	0.000	0.000	1.656	0.000	
PEAK PCT	22.0	0.0	40.1	0.0	25.1	0.0	1.4	8.5	0.0	0.0	2.9	0.0	
JUL													
KWH	3894.	0.	6532.	137.	2537.	0.	286.	1215.	0.	0.	684.	0.	15285.
MAX KW	12.631	0.000	23.042	7.570	24.915	0.000	1.166	6.002	0.000	0.000	1.948	0.000	68.881

DAY/HR	1/10	0/ 0	1/10	8/ 7	23/17	0/ 0	7/19	23/16	0/ 0	0/ 0	1/13	0/ 0	23/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	24.915	0.000	0.780	5.969	0.000	0.000	1.543	0.000	
PEAK PCT	18.3	0.0	33.5	0.0	36.2	0.0	1.1	8.7	0.0	0.0	2.2	0.0	
AUG													
KWH	3811.	0.	6354.	123.	2012.	0.	279.	1168.	0.	0.	648.	0.	14395.
MAX KW	12.631	0.000	23.042	7.269	19.704	0.000	1.166	5.660	0.000	0.000	1.823	0.000	63.030
DAY/HR	1/10	0/ 0	1/10	18/ 7	12/17	0/ 0	25/10	11/16	0/ 0	0/ 0	4/13	0/ 0	12/17
PEAK ENDUSE	12.631	0.000	23.042	0.000	19.704	0.000	0.780	5.395	0.000	0.000	1.478	0.000	
PEAK PCT	20.0	0.0	36.6	0.0	31.3	0.0	1.2	8.6	0.0	0.0	2.3	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-E Energy End-Use Summary for all Electric Meters WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

SEP													
KWH	3738.	0.	6261.	541.	956.	0.	303.	1129.	0.	0.	629.	0.	13557.
MAX KW	12.631	0.000	23.042	14.138	15.260	0.000	1.166	5.682	0.000	0.000	1.814	0.000	58.511
DAY/HR	2/10	0/ 0	2/10	29/ 7	19/17	0/ 0	16/13	22/16	0/ 0	0/ 0	2/13	0/ 0	19/16
PEAK ENDUSE	12.631	0.000	23.042	0.000	15.214	0.000	0.780	5.641	0.000	0.000	1.203	0.000	
PEAK PCT	21.6	0.0	39.4	0.0	26.0	0.0	1.3	9.6	0.0	0.0	2.1	0.0	
OCT													
KWH	3894.	0.	6532.	2189.	369.	0.	336.	1217.	0.	0.	672.	0.	15209.
MAX KW	12.631	0.000	23.042	23.164	6.392	0.000	1.168	5.440	0.000	0.000	1.887	0.000	52.045
DAY/HR	1/10	0/ 0	1/10	14/ 7	7/17	0/ 0	7/13	30/16	0/ 0	0/ 0	14/13	0/ 0	27/ 9
PEAK ENDUSE	11.497	0.000	22.083	12.715	0.000	0.000	0.393	4.026	0.000	0.000	1.330	0.000	
PEAK PCT	22.1	0.0	42.4	24.4	0.0	0.0	0.8	7.7	0.0	0.0	2.6	0.0	
NOV													
KWH	3412.	0.	5630.	3841.	87.	0.	299.	1100.	0.	0.	661.	0.	15030.
MAX KW	12.631	0.000	23.042	42.293	1.993	0.000	1.164	5.482	0.000	0.000	2.030	0.000	60.230
DAY/HR	3/10	0/ 0	3/10	28/ 7	4/15	0/ 0	6/13	18/16	0/ 0	0/ 0	17/13	0/ 0	24/ 9
PEAK ENDUSE	11.497	0.000	22.083	20.513	0.000	0.000	0.424	4.283	0.000	0.000	1.429	0.000	
PEAK PCT	19.1	0.0	36.7	34.1	0.0	0.0	0.7	7.1	0.0	0.0	2.4	0.0	
DEC													
KWH	3894.	0.	6532.	6092.	29.	0.	315.	1292.	0.	0.	770.	0.	18923.
MAX KW	12.631	0.000	23.042	55.675	1.126	0.000	2.103	5.797	0.000	0.000	2.222	0.000	70.771
DAY/HR	1/10	0/ 0	1/10	29/ 7	18/16	0/ 0	29/ 7	29/16	0/ 0	0/ 0	29/13	0/ 0	29/10
PEAK ENDUSE	12.631	0.000	23.042	27.645	0.000	0.000	0.548	5.259	0.000	0.000	1.647	0.000	
PEAK PCT	17.8	0.0	32.6	39.1	0.0	0.0	0.8	7.4	0.0	0.0	2.3	0.0	
KWH	45061.	0.	75323.	34059.	7357.	0.	3368.	14380.	0.	0.	8810.	0.	188357.
MAX KW	12.631	0.000	23.042	77.951	24.915	0.000	3.037	6.002	0.000	0.000	2.526	0.000	97.472
MON/DY	1/ 2	0/ 0	1/ 2	1/ 6	7/23	0/ 0	1/ 6	7/23	0/ 0	0/ 0	2/18	0/ 0	1/ 6
PEAK ENDUSE	11.497	0.000	22.083	56.085	0.000	0.000	1.487	4.649	0.000	0.000	1.670	0.000	
PEAK PCT	11.8	0.0	22.7	57.5	0.0	0.0	1.5	4.8	0.0	0.0	1.7	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-E Energy End-Use Summary for all Fuel Meters WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FEB													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAR													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
APR													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAY													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUN													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUL													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AUG													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-E Energy End-Use Summary for all Fuel Meters WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SEP													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
OCT													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NOV													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DEC													
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	========
MBTU	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX MBTU/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MON/DY	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-F Energy End-Use Summary for Spare Meter WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	667.	0.	977.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.214	0.000	2.635
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	2/13	1/ 1	0/ 0	0/ 0	21/13	0/ 0	21/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.214	0.000	
PEAK PCT	0.0	0.0	6.5	0.0	0.0	0.0	0.3	9.2	0.0	0.0	84.0	0.0	
FEB													
KWH	0.	0.	115.	0.	0.	0.	3.	163.	0.	0.	630.	0.	910.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.325	0.000	2.746
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	3/13	1/ 1	0/ 0	0/ 0	18/13	0/ 0	18/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.325	0.000	
PEAK PCT	0.0	0.0	6.2	0.0	0.0	0.0	0.3	8.8	0.0	0.0	84.7	0.0	
MAR													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	703.	0.	1013.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.319	0.000	2.739
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	3/13	1/ 1	0/ 0	0/ 0	31/13	0/ 0	31/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.319	0.000	
PEAK PCT	0.0	0.0	6.3	0.0	0.0	0.0	0.3	8.8	0.0	0.0	84.6	0.0	
APR													
KWH	0.	0.	123.	0.	0.	0.	3.	174.	0.	0.	687.	0.	987.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.273	0.000	2.693
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	1/13	0/ 0	1/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.273	0.000	
PEAK PCT	0.0	0.0	6.4	0.0	0.0	0.0	0.3	9.0	0.0	0.0	84.4	0.0	
MAY													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	639.	0.	949.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.111	0.000	2.532
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	1/13	0/ 0	1/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.111	0.000	
PEAK PCT	0.0	0.0	6.8	0.0	0.0	0.0	0.3	9.6	0.0	0.0	83.4	0.0	
JUN													
KWH	0.	0.	123.	0.	0.	0.	3.	174.	0.	0.	575.	0.	876.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.934	0.000	2.355
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	2/13	1/ 2	0/ 0	0/ 0	2/13	0/ 0	2/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.934	0.000	
PEAK PCT	0.0	0.0	7.3	0.0	0.0	0.0	0.3	10.3	0.0	0.0	82.1	0.0	
JUL													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	558.	0.	868.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.775	0.000	2.196

DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	1/13	0/ 0	1/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.775	0.000	
PEAK PCT	0.0	0.0	7.8	0.0	0.0	0.0	0.3	11.0	0.0	0.0	80.8	0.0	
AUG													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	526.	0.	836.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.659	0.000	2.080
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	4/13	0/ 0	4/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.659	0.000	
PEAK PCT	0.0	0.0	8.2	0.0	0.0	0.0	0.4	11.6	0.0	0.0	79.8	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-F Energy End-Use Summary for Spare Meter WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SEP													
KWH	0.	0.	123.	0.	0.	0.	3.	174.	0.	0.	511.	0.	812.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.651	0.000	2.072
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	2/13	1/ 2	0/ 0	0/ 0	2/13	0/ 0	2/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.651	0.000	
PEAK PCT	0.0	0.0	8.3	0.0	0.0	0.0	0.4	11.7	0.0	0.0	79.7	0.0	
OCT													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	548.	0.	858.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.719	0.000	2.140
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	1/13	1/ 2	0/ 0	0/ 0	14/13	0/ 0	14/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.719	0.000	
PEAK PCT	0.0	0.0	8.0	0.0	0.0	0.0	0.3	11.3	0.0	0.0	80.3	0.0	
NOV													
KWH	0.	0.	123.	0.	0.	0.	2.	174.	0.	0.	534.	0.	834.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.855	0.000	2.276
DAY/HR	0/ 0	0/ 0	1/ 2	0/ 0	0/ 0	0/ 0	3/13	1/ 2	0/ 0	0/ 0	17/13	0/ 0	17/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	1.855	0.000	
PEAK PCT	0.0	0.0	7.5	0.0	0.0	0.0	0.3	10.6	0.0	0.0	81.5	0.0	
DEC													
KWH	0.	0.	127.	0.	0.	0.	3.	180.	0.	0.	632.	0.	942.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.036	0.000	2.457
DAY/HR	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	1/13	1/ 1	0/ 0	0/ 0	29/13	0/ 0	29/13
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.036	0.000	
PEAK PCT	0.0	0.0	7.0	0.0	0.0	0.0	0.3	9.9	0.0	0.0	82.9	0.0	
	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	========
KWH	0.	0.	1500.	0.	0.	0.	33.	2122.	0.	0.	7209.	0.	10864.
MAX KW	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.325	0.000	2.746
MON/DY	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	1/ 2	1/ 1	0/ 0	0/ 0	2/18	0/ 0	2/18
PEAK ENDUSE	0.000	0.000	0.171	0.000	0.000	0.000	0.007	0.242	0.000	0.000	2.325	0.000	
PEAK PCT	0.0	0.0	6.2	0.0	0.0	0.0	0.3	8.8	0.0	0.0	84.7	0.0	

YEARLY TRANSFORMER LOSSES = 0.0 KWH

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-F Energy End-Use Summary for EM1 WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
KWH	3772.	0.	6178.	6694.	13.	0.	302.	1103.	0.	0.	146.	0.	18208.
MAX KW	12.631	0.000	22.871	77.951	1.640	0.000	3.030	5.456	0.000	0.000	0.202	0.000	95.575
DAY/HR	2/10	0/ 0	2/10	6/ 7	10/16	0/ 0	6/ 7	21/16	0/ 0	0/ 0	21/ 5	0/ 0	6/ 9
PEAK ENDUSE	11.497	0.000	21.912	56.085	0.000	0.000	1.480	4.407	0.000	0.000	0.194	0.000	
PEAK PCT	12.0	0.0	22.9	58.7	0.0	0.0	1.5	4.6	0.0	0.0	0.2	0.0	
FEB													
KWH	3426.	0.	5606.	5016.	4.	0.	243.	988.	0.	0.	135.	0.	15418.
MAX KW	12.631	0.000	22.871	46.947	1.118	0.000	1.577	5.331	0.000	0.000	0.208	0.000	61.477
DAY/HR	3/10	0/ 0	3/10	10/ 7	27/17	0/ 0	18/ 7	18/12	0/ 0	0/ 0	18/ 5	0/ 0	24/ 9
PEAK ENDUSE	11.497	0.000	21.912	23.233	0.000	0.000	0.407	4.227	0.000	0.000	0.201	0.000	
PEAK PCT	18.7	0.0	35.6	37.8	0.0	0.0	0.7	6.9	0.0	0.0	0.3	0.0	
MAR													
KWH	3811.	0.	6226.	4214.	49.	0.	236.	1072.	0.	0.	150.	0.	15758.
MAX KW	12.631	0.000	22.871	40.966	2.634	0.000	1.257	5.149	0.000	0.000	0.207	0.000	59.440
DAY/HR	3/10	0/ 0	3/10	3/ 7	29/16	0/ 0	3/ 7	31/16	0/ 0	0/ 0	31/ 5	0/ 0	3/ 9
PEAK ENDUSE	11.497	0.000	21.912	21.132	0.000	0.000	0.410	4.289	0.000	0.000	0.200	0.000	
PEAK PCT	19.3	0.0	36.9	35.6	0.0	0.0	0.7	7.2	0.0	0.0	0.3	0.0	
APR													
KWH	3859.	0.	6365.	2839.	108.	0.	223.	1065.	0.	0.	143.	0.	14603.
MAX KW	12.631	0.000	22.871	38.837	3.062	0.000	1.159	5.108	0.000	0.000	0.205	0.000	57.328
DAY/HR	1/10	0/ 0	1/10	7/ 7	30/15	0/ 0	1/17	21/16	0/ 0	0/ 0	1/ 5	0/ 0	7/ 9
PEAK ENDUSE	11.497	0.000	21.912	18.959	0.000	0.000	0.403	4.358	0.000	0.000	0.198	0.000	
PEAK PCT	20.1	0.0	38.2	33.1	0.0	0.0	0.7	7.6	0.0	0.0	0.3	0.0	
MAY													
KWH	3811.	0.	6226.	1676.	354.	0.	244.	1005.	0.	0.	141.	0.	13458.
MAX KW	12.631	0.000	22.871	27.172	10.207	0.000	1.161	5.189	0.000	0.000	0.199	0.000	51.379
DAY/HR	1/10	0/ 0	1/10	12/ 7	16/17	0/ 0	1/16	20/16	0/ 0	0/ 0	1/ 2	0/ 0	16/16
PEAK ENDUSE	12.631	0.000	22.871	0.000	10.012	0.000	0.773	4.911	0.000	0.000	0.182	0.000	
PEAK PCT	24.6	0.0	44.5	0.0	19.5	0.0	1.5	9.6	0.0	0.0	0.4	0.0	
JUN													
KWH	3738.	0.	6138.	697.	839.	0.	284.	975.	0.	0.	129.	0.	12800.
MAX KW	12.631	0.000	22.871	13.566	14.429	0.000	1.159	5.299	0.000	0.000	0.190	0.000	55.534
DAY/HR	2/10	0/ 0	2/10	2/ 7	20/17	0/ 0	2/16	25/16	0/ 0	0/ 0	1/ 2	0/ 0	20/17
PEAK ENDUSE	12.631	0.000	22.871	0.000	14.429	0.000	0.773	4.659	0.000	0.000	0.171	0.000	
PEAK PCT	22.7	0.0	41.2	0.0	26.0	0.0	1.4	8.4	0.0	0.0	0.3	0.0	
JUL													
KWH	3894.	0.	6404.	137.	2537.	0.	284.	1035.	0.	0.	127.	0.	14417.
MAX KW	12.631	0.000	22.871	7.570	24.915	0.000	1.159	5.759	0.000	0.000	0.180	0.000	67.080

DAY/HR	1/10	0/ 0	1/10	8/ 7	23/17	0/ 0	1/21	23/16	0/ 0	0/ 0	1/ 2	0/ 0	23/17
PEAK ENDUSE	12.631	0.000	22.871	0.000	24.915	0.000	0.773	5.727	0.000	0.000	0.163	0.000	
PEAK PCT	18.8	0.0	34.1	0.0	37.1	0.0	1.2	8.5	0.0	0.0	0.2	0.0	
AUG													
KWH	3811.	0.	6226.	123.	2012.	0.	276.	988.	0.	0.	122.	0.	13558.
MAX KW	12.631	0.000	22.871	7.269	19.704	0.000	1.159	5.418	0.000	0.000	0.170	0.000	61.492
DAY/HR	1/10	0/ 0	1/10	18/ 7	12/17	0/ 0	16/10	11/16	0/ 0	0/ 0	4/ 5	0/ 0	12/16
PEAK ENDUSE	12.631	0.000	22.871	0.000	19.666	0.000	0.773	5.392	0.000	0.000	0.159	0.000	
PEAK PCT	20.5	0.0	37.2	0.0	32.0	0.0	1.3	8.8	0.0	0.0	0.3	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-F Energy End-Use Summary for EM1 WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

SEP													
KWH	3738.	0.	6138.	541.	956.	0.	300.	955.	0.	0.	118.	0.	12746.
MAX KW	12.631	0.000	22.871	14.138	15.260	0.000	1.159	5.439	0.000	0.000	0.170	0.000	57.043
DAY/HR	2/10	0/ 0	2/10	29/ 7	19/17	0/ 0	2/10	22/16	0/ 0	0/ 0	2/ 5	0/ 0	19/16
PEAK ENDUSE	12.631	0.000	22.871	0.000	15.214	0.000	0.773	5.399	0.000	0.000	0.156	0.000	
PEAK PCT	22.1	0.0	40.1	0.0	26.7	0.0	1.4	9.5	0.0	0.0	0.3	0.0	
OCT													
KWH	3894.	0.	6404.	2189.	369.	0.	333.	1037.	0.	0.	125.	0.	14350.
MAX KW	12.631	0.000	22.871	23.164	6.392	0.000	1.161	5.198	0.000	0.000	0.174	0.000	50.461
DAY/HR	1/10	0/ 0	1/10	14/ 7	7/17	0/ 0	2/17	30/16	0/ 0	0/ 0	14/ 5	0/ 0	27/ 9
PEAK ENDUSE	11.497	0.000	21.912	12.715	0.000	0.000	0.386	3.784	0.000	0.000	0.167	0.000	
PEAK PCT	22.8	0.0	43.4	25.2	0.0	0.0	0.8	7.5	0.0	0.0	0.3	0.0	
NOV													
KWH	3412.	0.	5507.	3841.	87.	0.	296.	925.	0.	0.	127.	0.	14195.
MAX KW	12.631	0.000	22.871	42.293	1.993	0.000	1.156	5.240	0.000	0.000	0.182	0.000	58.556
DAY/HR	3/10	0/ 0	3/10	28/ 7	4/15	0/ 0	3/17	18/16	0/ 0	0/ 0	30/24	0/ 0	24/ 9
PEAK ENDUSE	11.497	0.000	21.912	20.513	0.000	0.000	0.417	4.041	0.000	0.000	0.175	0.000	
PEAK PCT	19.6	0.0	37.4	35.0	0.0	0.0	0.7	6.9	0.0	0.0	0.3	0.0	
DEC													
KWH	3894.	0.	6404.	6092.	29.	0.	312.	1111.	0.	0.	138.	0.	17981.
MAX KW	12.631	0.000	22.871	55.675	1.126	0.000	2.096	5.555	0.000	0.000	0.193	0.000	68.975
DAY/HR	1/10	0/ 0	1/10	29/ 7	18/16	0/ 0	29/ 7	29/16	0/ 0	0/ 0	29/ 5	0/ 0	29/ 9
PEAK ENDUSE	11.497	0.000	21.912	30.260	0.000	0.000	0.596	4.523	0.000	0.000	0.186	0.000	
PEAK PCT	16.7	0.0	31.8	43.9	0.0	0.0	0.9	6.6	0.0	0.0	0.3	0.0	
KWH	45061.	0.	73822.	34059.	7357.	0.	3334.	12258.	0.	0.	1601.	0.	177492.
MAX KW	12.631	0.000	22.871	77.951	24.915	0.000	3.030	5.759	0.000	0.000	0.208	0.000	95.575
MON/DY	1/ 2	0/ 0	1/ 2	1/ 6	7/23	0/ 0	1/ 6	7/23	0/ 0	0/ 0	2/18	0/ 0	1/ 6
PEAK ENDUSE	11.497	0.000	21.912	56.085	0.000	0.000	1.480	4.407	0.000	0.000	0.194	0.000	
PEAK PCT	12.0	0.0	22.9	58.7	0.0	0.0	1.5	4.6	0.0	0.0	0.2	0.0	

YEARLY TRANSFORMER LOSSES = 0.0 KWH

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-F Energy End-Use Summary for FM1 WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
JAN													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FEB													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAR													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
APR													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MAY													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUN													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
JUL													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AUG													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-F Energy End-Use Summary for FM1 WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

SEP													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
OCT													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NOV													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DEC													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	=======	========
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
MAX THERM/HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MON/DY	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0	0/ 0
PEAK ENDUSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PEAK PCT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- BEPS Building Energy Performance WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
Spar ELECTRICITY													
MBTU	0.0	0.0	5.1	0.0	0.0	0.0	0.1	7.2	0.0	0.0	24.6	0.0	37.1
EM1 ELECTRICITY													
MBTU	153.8	0.0	252.0	116.2	25.1	0.0	11.4	41.8	0.0	0.0	5.5	0.0	605.8
FM1 NATURAL-GAS													
MBTU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU	153.8	0.0	257.1	116.2	25.1	0.0	11.5	49.1	0.0	0.0	30.1	0.0	642.9

TOTAL SITE ENERGY 642.86 MBTU 20.2 KBTU/SQFT-YR GROSS-AREA 20.2 KBTU/SQFT-YR NET-AREA
TOTAL SOURCE ENERGY 1928.57 MBTU 60.7 KBTU/SQFT-YR GROSS-AREA 60.7 KBTU/SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 0.03
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 0
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 3

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- BEPU Building Utility Performance WEATHER FILE- SEATTLE BOEING FI WA

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
Spar ELECTRICITY													
KWH	0.	0.	1500.	0.	0.	0.	33.	2122.	0.	0.	7209.	0.	10864.
EM1 ELECTRICITY													
KWH	45061.	0.	73822.	34059.	7357.	0.	3334.	12258.	0.	0.	1601.	0.	177492.
FM1 NATURAL-GAS													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 188357. KWH 5.929 KWH /SQFT-YR GROSS-AREA 5.929 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 0.03
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 0
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 3

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for Clg2PipeLoop WEATHER FILE- SEATTLE BOEING FI WA

HEATING CAPACITY (MBTU/HR)	COOLING CAPACITY (MBTU/HR)	LOOP FLOW (GPM)	TOTAL HEAD (FT)	SUPPLY UA PRODUCT (BTU/HR-F)	SUPPLY LOSS DT (F)	RETURN UA PRODUCT (BTU/HR-F)	RETURN LOSS DT (F)	LOOP VOLUME (GAL)	FLUID HEAT CAPACITY (BTU/LB-F)
0.000	0.566	200.0	155.0	0.0	0.00	0.0	0.00	300.0	1.00

MON		COIL LOAD SUM (MBTU)	PIPE GAIN SUM (MBTU)	NET LOAD SUM (MBTU)	OVERLOAD SUM (MBTU)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
	PEAK	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)													
JAN	SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JAN	SUM	0.002	0.000	0.041	0.000	COOL	14	0	0	0	0	0	0	0	0	0	0	14
	PEAK	0.354	0.000	7.785	0.000	FLOW	0	0	14	0	0	0	0	0	0	0	0	14
	DAY/HR	17/17	0/ 0	10/16	0/ 0													
FEB	SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
FEB	SUM	0.000	0.000	0.010	0.000	COOL	4	0	0	0	0	0	0	0	0	0	0	4
	PEAK	0.129	0.000	2.505	0.000	FLOW	0	0	4	0	0	0	0	0	0	0	0	4
	DAY/HR	27/17	0/ 0	27/17	0/ 0													
MAR	SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAR	SUM	0.061	0.000	0.137	0.000	COOL	32	0	0	0	0	0	0	0	0	0	0	32
	PEAK	12.191	0.000	14.494	0.000	FLOW	0	0	32	0	0	0	0	0	0	0	0	32
	DAY/HR	29/16	0/ 0	29/16	0/ 0													
APR	SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
APR	SUM	0.012	0.000	0.139	0.000	COOL	53	0	0	0	0	0	0	0	0	0	0	53
	PEAK	1.349	0.000	3.721	0.000	FLOW	0	0	53	0	0	0	0	0	0	0	0	53
	DAY/HR	12/17	0/ 0	12/17	0/ 0													
MAY	SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAY	SUM	1.121	0.000	1.415	0.000	COOL	116	7	0	0	0	0	0	0	0	0	0	123
	PEAK	77.099	0.000	79.398	0.000	FLOW	0	0	123	0	0	0	0	0	0	0	0	123
	DAY/HR	16/17	0/ 0	16/17	0/ 0													
JUN	SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0

PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUN SUM	3.716	0.000	4.279	0.000	COOL	212	23	1	0	0	0	0	0	0	0	0	236
PEAK	112.044	0.000	114.204	0.000	FLOW	0	0	236	0	0	0	0	0	0	0	0	236
DAY/HR	20/17	0/ 0	20/17	0/ 0													
JUL SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for Clg2PipeLoop WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

JUL SUM	16.947	0.000	17.747	0.000	COOL	204	79	41	11	0	0	0	0	0	0	0	335
PEAK	196.704	0.000	198.820	0.000	FLOW	0	0	335	0	0	0	0	0	0	0	0	335
DAY/HR	23/17	0/ 0	23/17	0/ 0													
AUG SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
AUG SUM	12.738	0.000	13.516	0.000	COOL	224	88	14	0	0	0	0	0	0	0	0	326
PEAK	159.815	0.000	162.192	0.000	FLOW	0	0	326	0	0	0	0	0	0	0	0	326
DAY/HR	12/17	0/ 0	12/17	0/ 0													
SEP SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
SEP SUM	4.013	0.000	4.719	0.000	COOL	277	16	2	0	0	0	0	0	0	0	0	295
PEAK	114.701	0.000	117.003	0.000	FLOW	0	0	295	0	0	0	0	0	0	0	0	295
DAY/HR	19/17	0/ 0	19/17	0/ 0													
OCT SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
OCT SUM	0.329	0.000	0.823	0.000	COOL	207	0	0	0	0	0	0	0	0	0	0	207
PEAK	40.907	0.000	42.860	0.000	FLOW	0	0	207	0	0	0	0	0	0	0	0	207
DAY/HR	7/17	0/ 0	7/17	0/ 0													
NOV SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
NOV SUM	0.022	0.000	0.191	0.000	COOL	71	0	0	0	0	0	0	0	0	0	0	71
PEAK	1.432	0.000	3.793	0.000	FLOW	0	0	71	0	0	0	0	0	0	0	0	71
DAY/HR	6/16	0/ 0	6/16	0/ 0													
DEC SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
DEC SUM	0.005	0.000	0.091	0.000	COOL	36	0	0	0	0	0	0	0	0	0	0	36
PEAK	0.322	0.000	2.704	0.000	FLOW	0	0	36	0	0	0	0	0	0	0	0	36
DAY/HR	19/16	0/ 0	19/17	0/ 0													
Yr SUM	0.000	0.000	0.000	0.000	HEAT	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
MON/DAY	0/ 0	0/ 0	0/ 0	0/ 0													
Yr SUM	38.967	0.000	43.109	0.000	COOL	1450	213	58	11	0	0	0	0	0	0	0	1732
PEAK	196.704	0.000	198.820	0.000	FLOW	0	0	1732	0	0	0	0	0	0	0	0	1732
MON/DAY	7/23	0/ 0	7/23	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for Htg2PipeLoop WEATHER FILE- SEATTLE BOEING FI WA

HEATING CAPACITY (MBTU/HR)	COOLING CAPACITY (MBTU/HR)	LOOP FLOW (GPM)	TOTAL HEAD (FT)	SUPPLY UA PRODUCT (BTU/HR-F)	SUPPLY LOSS DT (F)	RETURN UA PRODUCT (BTU/HR-F)	RETURN LOSS DT (F)	LOOP VOLUME (GAL)	FLUID HEAT CAPACITY (BTU/LB-F)
-0.598	0.000	120.3	130.0	0.0	0.00	0.0	0.00	180.4	1.00

MON		COIL LOAD (MBTU) (KBTU/HR)	PIPE GAIN (MBTU) (KBTU/HR)	NET LOAD (MBTU) (KBTU/HR)	OVERLOAD (MBTU) (KBTU/HR)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-57.517	0.000	-56.613	0.000	HEAT	278	138	100	50	27	10	7	2	1	1	0	614
	PEAK	-580.194	0.000	-562.179	0.000	FLOW	0	0	602	41	20	10	5	2	1	0	0	681
	DAY/HR	6/ 7	0/ 0	6/ 7	0/ 0													
JAN	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
FEB	SUM	-45.067	0.000	-44.330	0.000	HEAT	206	177	95	24	17	5	3	0	0	0	0	527
	PEAK	-419.830	0.000	-406.985	0.000	FLOW	0	0	551	23	12	4	3	0	0	0	0	593
	DAY/HR	18/ 7	0/ 0	18/ 7	0/ 0													
FEB	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAR	SUM	-37.979	0.000	-37.332	0.000	HEAT	215	168	57	25	9	1	1	0	0	0	0	476
	PEAK	-381.038	0.000	-369.244	0.000	FLOW	0	0	506	18	7	2	0	0	0	0	0	533
	DAY/HR	3/ 7	0/ 0	3/ 7	0/ 0													
MAR	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
APR	SUM	-24.832	0.000	-24.272	0.000	HEAT	318	87	33	9	2	1	0	0	0	0	0	450
	PEAK	-351.610	0.000	-340.291	0.000	FLOW	0	0	458	8	2	1	0	0	0	0	0	469
	DAY/HR	7/ 7	0/ 0	7/ 7	0/ 0													
APR	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAY	SUM	-13.998	0.000	-13.533	0.000	HEAT	287	57	11	4	2	0	0	0	0	0	0	361
	PEAK	-263.411	0.000	-253.615	0.000	FLOW	0	0	382	2	1	0	0	0	0	0	0	385
	DAY/HR	12/ 7	0/ 0	12/ 7	0/ 0													
MAY	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUN	SUM	-5.286	0.000	-4.971	0.000	HEAT	209	19	1	0	0	0	0	0	0	0	0	229

PEAK	-145.474	0.000	-136.807	0.000	FLOW	0	0	264	0	0	0	0	0	0	0	0	264
DAY/HR	2/ 7	0/ 0	2/ 7	0/ 0													
JUN SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUL SUM	-0.848	0.000	-0.771	0.000	HEAT	55	0	0	0	0	0	0	0	0	0	0	55
PEAK	-58.304	0.000	-54.427	0.000	FLOW	0	0	64	0	0	0	0	0	0	0	0	64
DAY/HR	8/ 7	0/ 0	8/ 7	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for Htg2PipeLoop WEATHER FILE- SEATTLE BOEING FI WA (CONTINUED)

JUL	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
AUG	SUM	-0.802	0.000	-0.726	0.000	HEAT	45	0	0	0	0	0	0	0	0	0	0	45
	PEAK	-62.119	0.000	-58.034	0.000	FLOW	0	0	63	0	0	0	0	0	0	0	0	63
	DAY/HR	25/ 7	0/ 0	25/ 7	0/ 0													
AUG	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
SEP	SUM	-4.182	0.000	-3.954	0.000	HEAT	151	14	1	0	0	0	0	0	0	0	0	166
	PEAK	-151.090	0.000	-141.917	0.000	FLOW	0	0	188	0	0	0	0	0	0	0	0	188
	DAY/HR	29/ 7	0/ 0	29/ 7	0/ 0													
SEP	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
OCT	SUM	-18.854	0.000	-18.313	0.000	HEAT	305	76	22	6	0	0	0	0	0	0	0	409
	PEAK	-241.382	0.000	-231.741	0.000	FLOW	0	0	445	3	0	0	0	0	0	0	0	448
	DAY/HR	14/ 7	0/ 0	14/ 7	0/ 0													
OCT	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
NOV	SUM	-34.888	0.000	-34.164	0.000	HEAT	245	188	45	18	9	3	0	0	0	0	0	508
	PEAK	-359.145	0.000	-347.673	0.000	FLOW	0	0	586	19	4	3	0	0	0	0	0	612
	DAY/HR	28/ 7	0/ 0	28/ 7	0/ 0													
NOV	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
DEC	SUM	-54.649	0.000	-53.756	0.000	HEAT	287	176	123	40	17	4	4	2	0	0	0	653
	PEAK	-475.690	0.000	-461.102	0.000	FLOW	0	0	641	31	14	5	4	1	0	0	0	696
	DAY/HR	29/ 7	0/ 0	29/ 7	0/ 0													
DEC	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
		==========	==========	==========	==========		====	====	====	====	====	====	====	====	====	====	====	====
Yr	SUM	-298.902	0.000	-292.735	0.000	HEAT	2601	1100	488	176	83	24	15	4	1	1	0	4493
	PEAK	-580.194	0.000	-562.179	0.000	FLOW	0	0	4750	145	60	25	12	3	1	0	0	4996
	MON/DAY	1/ 6	0/ 0	1/ 6	0/ 0													
Yr	SUM	0.000	0.000	0.000	0.000	COOL	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	MON/DAY	0/ 0	0/ 0	0/ 0	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for DHW-Loop WEATHER FILE- SEATTLE BOEING FI WA

HEATING CAPACITY (MBTU/HR)	COOLING CAPACITY (MBTU/HR)	LOOP FLOW (GPM)	TOTAL HEAD (FT)	SUPPLY UA PRODUCT (BTU/HR-F)	SUPPLY LOSS DT (F)	RETURN UA PRODUCT (BTU/HR-F)	RETURN LOSS DT (F)	LOOP VOLUME (GAL)	FLUID HEAT CAPACITY (BTU/LB-F)
-0.288	0.000	1.4	23.4	0.0	0.00	0.0	0.00	2.1	1.00

MON		COIL LOAD (MBTU) (KBTU/HR)	PIPE GAIN (MBTU) (KBTU/HR)	NET LOAD (MBTU) (KBTU/HR)	OVERLOAD (MBTU) (KBTU/HR)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-7.312	0.000	-7.309	0.000	HEAT 702	42	0	0	0	0	0	0	0	0	0	744	
	PEAK	-32.114	0.000	-32.104	0.000	FLOW 350	10	0	0	58	112	25	105	42	21	21	744	
	DAY/HR	2/13	0/ 0	2/13	0/ 0													
FEB	SUM	-6.818	0.000	-6.815	0.000	HEAT 634	38	0	0	0	0	0	0	0	0	0	672	
	PEAK	-32.957	0.000	-32.947	0.000	FLOW 311	9	0	0	54	104	23	95	38	19	19	672	
	DAY/HR	3/13	0/ 0	3/13	0/ 0													
MAR	SUM	-7.603	0.000	-7.599	0.000	HEAT 702	42	0	0	0	0	0	0	0	0	0	744	
	PEAK	-33.025	0.000	-33.015	0.000	FLOW 338	10	0	0	62	119	26	105	42	21	21	744	
	DAY/HR	3/13	0/ 0	3/13	0/ 0													
APR	SUM	-7.607	0.000	-7.603	0.000	HEAT 676	44	0	0	0	0	0	0	0	0	0	720	
	PEAK	-32.624	0.000	-32.614	0.000	FLOW 312	8	0	0	60	116	26	110	44	22	22	720	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
MAY	SUM	-7.140	0.000	-7.136	0.000	HEAT 702	42	0	0	0	0	0	0	0	0	0	744	
	PEAK	-31.018	0.000	-31.008	0.000	FLOW 338	10	0	0	62	119	26	105	42	21	21	744	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
JUN	SUM	-6.641	0.000	-6.637	0.000	HEAT 699	21	0	0	0	0	0	0	0	0	0	720	
	PEAK	-29.420	0.000	-29.410	0.000	FLOW 327	9	0	0	58	112	25	105	42	21	21	720	
	DAY/HR	2/13	0/ 0	2/13	0/ 0													
JUL	SUM	-6.592	0.000	-6.588	0.000	HEAT 744	0	0	0	0	0	0	0	0	0	0	744	
	PEAK	-28.034	0.000	-28.024	0.000	FLOW 335	9	0	0	60	116	26	110	44	22	22	744	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
AUG	SUM	-6.251	0.000	-6.247	0.000	HEAT 744	0	0	0	0	0	0	0	0	0	0	744	
	PEAK	-27.156	0.000	-27.146	0.000	FLOW 338	10	0	0	62	119	26	105	42	21	21	744	
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
SEP	SUM	-6.113	0.000	-6.110	0.000	HEAT 720	0	0	0	0	0	0	0	0	0	0	720	
	PEAK	-27.082	0.000	-27.072	0.000	FLOW 327	9	0	0	58	112	25	105	42	21	21	720	
	DAY/HR	2/13	0/ 0	2/13	0/ 0													

OCT	SUM	-6.536	0.000	-6.532	0.000	HEAT	744	0	0	0	0	0	0	0	0	0	0	744
	PEAK	-27.796	0.000	-27.786	0.000	FLOW	335	9	0	0	60	116	26	110	44	22	22	744
	DAY/HR	1/13	0/ 0	1/13	0/ 0													
NOV	SUM	-6.001	0.000	-5.998	0.000	HEAT	702	18	0	0	0	0	0	0	0	0	0	720
	PEAK	-29.146	0.000	-29.136	0.000	FLOW	360	12	0	0	56	107	23	90	36	18	18	720
	DAY/HR	3/13	0/ 0	3/13	0/ 0													
DEC	SUM	-7.218	0.000	-7.214	0.000	HEAT	700	44	0	0	0	0	0	0	0	0	0	744
	PEAK	-30.696	0.000	-30.686	0.000	FLOW	335	9	0	0	60	116	26	110	44	22	22	744
	DAY/HR	1/13	0/ 0	1/13	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for DHW-Loop WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

Yr	SUM	-81.833	0.000	-81.787	0.000	HEAT8469	291	0	0	0	0	0	0	0	0	0	8760
	PEAK	-33.025	0.000	-33.015	0.000	FLOW4006	114	0	0	710	1368	303	1255	502	251	251	8760
	MON/DAY	3/ 3	0/ 0	3/ 3	0/ 0												

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for ClgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
Clg2PipeLoop PRIMARY LOOP	210.0	170.5	16.0	VAR-SPEED	9.626	0.770	0.910

MON		HEAT GAIN SUM (MBTU) PEAK (KBTU/HR)	ENERGY USE SUM (KWH) PEAK (KW)			Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0	10.7		FLOW	0	0	14	0	0	0	0	0	0	0	0	14
	PEAK	2.380	0.766		RPM	0	0	0	0	14	0	0	0	0	0	0	14
	DAY/HR	10/16	10/16		ELEC	14	0	0	0	0	0	0	0	0	0	0	14
FEB	SUM	0.0	3.1		FLOW	0	0	4	0	0	0	0	0	0	0	0	4
	PEAK	2.380	0.766		RPM	0	0	0	0	4	0	0	0	0	0	0	4
	DAY/HR	7/16	7/16		ELEC	4	0	0	0	0	0	0	0	0	0	0	4
MAR	SUM	0.1	24.5		FLOW	0	0	32	0	0	0	0	0	0	0	0	32
	PEAK	2.380	0.766		RPM	0	0	0	0	32	0	0	0	0	0	0	32
	DAY/HR	7/16	7/16		ELEC	32	0	0	0	0	0	0	0	0	0	0	32
APR	SUM	0.1	40.6		FLOW	0	0	53	0	0	0	0	0	0	0	0	53
	PEAK	2.380	0.766		RPM	0	0	0	0	53	0	0	0	0	0	0	53
	DAY/HR	1/17	1/17		ELEC	53	0	0	0	0	0	0	0	0	0	0	53
MAY	SUM	0.3	94.3		FLOW	0	0	123	0	0	0	0	0	0	0	0	123
	PEAK	2.380	0.766		RPM	0	0	0	0	123	0	0	0	0	0	0	123
	DAY/HR	1/15	1/15		ELEC	123	0	0	0	0	0	0	0	0	0	0	123
JUN	SUM	0.6	180.9		FLOW	0	0	236	0	0	0	0	0	0	0	0	236
	PEAK	2.380	0.766		RPM	0	0	0	0	236	0	0	0	0	0	0	236
	DAY/HR	2/16	2/16		ELEC	236	0	0	0	0	0	0	0	0	0	0	236
JUL	SUM	0.8	256.7		FLOW	0	0	335	0	0	0	0	0	0	0	0	335
	PEAK	2.380	0.766		RPM	0	0	0	0	335	0	0	0	0	0	0	335
	DAY/HR	1/11	1/11		ELEC	335	0	0	0	0	0	0	0	0	0	0	335
AUG	SUM	0.8	249.8		FLOW	0	0	326	0	0	0	0	0	0	0	0	326
	PEAK	2.380	0.766		RPM	0	0	0	0	326	0	0	0	0	0	0	326
	DAY/HR	1/10	1/10		ELEC	326	0	0	0	0	0	0	0	0	0	0	326
SEP	SUM	0.7	226.1		FLOW	0	0	295	0	0	0	0	0	0	0	0	295
	PEAK	2.380	0.766		RPM	0	0	0	0	295	0	0	0	0	0	0	295

DAY/HR	2/10	2/10	ELEC	295	0	0	0	0	0	0	0	0	0	0	295
OCT SUM	0.5	158.6	FLOW	0	0	207	0	0	0	0	0	0	0	0	207
PEAK	2.380	0.766	RPM	0	0	0	0	207	0	0	0	0	0	0	207
DAY/HR	1/11	1/11	ELEC	207	0	0	0	0	0	0	0	0	0	0	207
NOV SUM	0.2	54.4	FLOW	0	0	71	0	0	0	0	0	0	0	0	71
PEAK	2.380	0.766	RPM	0	0	0	0	71	0	0	0	0	0	0	71
DAY/HR	3/17	3/17	ELEC	71	0	0	0	0	0	0	0	0	0	0	71

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for ClgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC SUM	0.1	27.6			FLOW	0	0	36	0	0	0	0	0	0	0	0	36
PEAK	2.380	0.766			RPM	0	0	0	0	36	0	0	0	0	0	0	36
DAY/HR	3/16	3/16			ELEC	36	0	0	0	0	0	0	0	0	0	0	36
Yr SUM	4.1	1327.3			FLOW	0	0	1732	0	0	0	0	0	0	0	0	1732
PEAK	2.380	0.766			RPM	0	0	0	0	1732	0	0	0	0	0	0	1732
MON/DAY	1/10	1/10			ELEC	1732	0	0	0	0	0	0	0	0	0	0	1732

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HtgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
Htg2PipeLoop PRIMARY LOOP	126.3	143.0	11.0	VAR-SPEED	4.819	0.770	0.917

MON		HEAT GAIN SUM (MBTU) PEAK (KBTU/HR)	ENERGY USE SUM (KWH) PEAK (KW)			Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.9	289.4		FLOW	0	0	610	39	15	9	5	2	1	0	0	681
	PEAK	9.455	3.021		RPM	0	0	0	0	657	12	9	2	1	0	0	681
	DAY/HR	6/ 7	6/ 7		ELEC	627	37	9	5	2	0	1	0	0	0	0	681
FEB	SUM	0.7	238.7		FLOW	0	0	556	20	12	4	1	0	0	0	0	593
	PEAK	4.923	1.573		RPM	0	0	0	0	582	7	4	0	0	0	0	593
	DAY/HR	18/ 7	18/ 7		ELEC	565	23	4	1	0	0	0	0	0	0	0	593
MAR	SUM	0.7	209.8		FLOW	0	0	510	16	6	1	0	0	0	0	0	533
	PEAK	3.920	1.253		RPM	0	0	0	0	528	4	1	0	0	0	0	533
	DAY/HR	3/ 7	3/ 7		ELEC	515	17	1	0	0	0	0	0	0	0	0	533
APR	SUM	0.6	181.4		FLOW	0	0	461	6	1	1	0	0	0	0	0	469
	PEAK	3.299	1.054		RPM	0	0	0	0	468	1	0	0	0	0	0	469
	DAY/HR	7/ 7	7/ 7		ELEC	465	3	1	0	0	0	0	0	0	0	0	469
MAY	SUM	0.5	148.2		FLOW	0	0	383	2	0	0	0	0	0	0	0	385
	PEAK	1.874	0.599		RPM	0	0	0	0	385	0	0	0	0	0	0	385
	DAY/HR	12/ 7	12/ 7		ELEC	383	2	0	0	0	0	0	0	0	0	0	385
JUN	SUM	0.3	101.3		FLOW	0	0	264	0	0	0	0	0	0	0	0	264
	PEAK	1.201	0.384		RPM	0	0	0	0	264	0	0	0	0	0	0	264
	DAY/HR	2/ 6	2/ 6		ELEC	264	0	0	0	0	0	0	0	0	0	0	264
JUL	SUM	0.1	24.6		FLOW	0	0	64	0	0	0	0	0	0	0	0	64
	PEAK	1.201	0.384		RPM	0	0	0	0	64	0	0	0	0	0	0	64
	DAY/HR	1/ 7	1/ 7		ELEC	64	0	0	0	0	0	0	0	0	0	0	64
AUG	SUM	0.1	24.2		FLOW	0	0	63	0	0	0	0	0	0	0	0	63
	PEAK	1.201	0.384		RPM	0	0	0	0	63	0	0	0	0	0	0	63
	DAY/HR	1/ 7	1/ 7		ELEC	63	0	0	0	0	0	0	0	0	0	0	63
SEP	SUM	0.2	72.1		FLOW	0	0	188	0	0	0	0	0	0	0	0	188
	PEAK	1.201	0.384		RPM	0	0	0	0	188	0	0	0	0	0	0	188

DAY/HR	2/ 7	2/ 7	ELEC	188	0	0	0	0	0	0	0	0	0	0	188
OCT SUM	0.5	172.2	FLOW	0	0	445	3	0	0	0	0	0	0	0	448
PEAK	1.605	0.513	RPM	0	0	0	0	448	0	0	0	0	0	0	448
DAY/HR	14/ 7	14/ 7	ELEC	447	1	0	0	0	0	0	0	0	0	0	448
NOV SUM	0.8	239.7	FLOW	0	0	590	15	4	3	0	0	0	0	0	612
PEAK	3.421	1.093	RPM	0	0	0	0	606	6	0	0	0	0	0	612
DAY/HR	28/ 7	28/ 7	ELEC	598	11	3	0	0	0	0	0	0	0	0	612

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HtgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC SUM	0.9	282.6			FLOW	0	0	650	28	10	4	3	1	0	0	0	696
PEAK	6.540	2.090			RPM	0	0	0	0	681	9	5	1	0	0	0	696
DAY/HR	29/ 7	29/ 7			ELEC	661	27	6	1	1	0	0	0	0	0	0	696
Yr SUM	6.2	1984.3			FLOW	0	0	4784	129	48	22	9	3	1	0	0	4996
PEAK	9.455	3.021			RPM	0	0	0	0	4934	39	19	3	1	0	0	4996
MON/DAY	1/ 6	1/ 6			ELEC	4840	121	24	7	3	0	1	0	0	0	0	4996

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1ClgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP1Clg EVAPORATOR (RUN-AROUND)	32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	HEAT GAIN PEAK (KBTU/HR)	ENERGY USE SUM (KWH)	ENERGY USE PEAK (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	14	14
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	14	14
	DAY/HR		10/16		10/16	ELEC	0	0	0	0	0	0	0	0	0	0	14	14
FEB	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	4	4
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	4	4
	DAY/HR		7/16		7/16	ELEC	0	0	0	0	0	0	0	0	0	0	4	4
MAR	SUM	0.0		0.1		FLOW	0	0	0	0	0	0	0	0	0	0	32	32
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	32	32
	DAY/HR		7/16		7/16	ELEC	0	0	0	0	0	0	0	0	0	0	32	32
APR	SUM	0.0		0.1		FLOW	0	0	0	0	0	0	0	0	0	0	53	53
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	53	53
	DAY/HR		1/17		1/17	ELEC	0	0	0	0	0	0	0	0	0	0	53	53
MAY	SUM	0.0		0.3		FLOW	0	0	0	0	0	0	0	0	0	0	123	123
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	123	123
	DAY/HR		1/15		1/15	ELEC	0	0	0	0	0	0	0	0	0	0	123	123
JUN	SUM	0.0		0.5		FLOW	0	0	0	0	0	0	0	0	0	0	236	236
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	236	236
	DAY/HR		2/16		2/16	ELEC	0	0	0	0	0	0	0	0	0	0	236	236
JUL	SUM	0.0		0.7		FLOW	0	0	0	0	0	0	0	0	0	0	335	335
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	335	335
	DAY/HR		1/11		1/11	ELEC	0	0	0	0	0	0	0	0	0	0	335	335
AUG	SUM	0.0		0.7		FLOW	0	0	0	0	0	0	0	0	0	0	326	326
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	326	326
	DAY/HR		1/10		1/10	ELEC	0	0	0	0	0	0	0	0	0	0	326	326
SEP	SUM	0.0		0.6		FLOW	0	0	0	0	0	0	0	0	0	0	295	295
	PEAK		0.003		0.002	RPM	0	0	0	0	0	0	0	0	0	0	295	295

DAY/HR	2/10	2/10	ELEC	0	0	0	0	0	0	0	0	0	0	295	295
OCT SUM	0.0	0.4	FLOW	0	0	0	0	0	0	0	0	0	0	207	207
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	207	207
DAY/HR	1/11	1/11	ELEC	0	0	0	0	0	0	0	0	0	0	207	207
NOV SUM	0.0	0.2	FLOW	0	0	0	0	0	0	0	0	0	0	71	71
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	71	71
DAY/HR	3/17	3/17	ELEC	0	0	0	0	0	0	0	0	0	0	71	71

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1ClgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	0.0	0.1			FLOW	0	0	0	0	0	0	0	0	0	0	36	36
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	36	36
	DAY/HR	3/16	3/16			ELEC	0	0	0	0	0	0	0	0	0	0	36	36
Yr	SUM	0.0	3.7			FLOW	0	0	0	0	0	0	0	0	0	0	1732	1732
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	1732	1732
	MON/DAY	1/10	1/10			ELEC	0	0	0	0	0	0	0	0	0	0	1732	1732

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2ClgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP2Clg EVAPORATOR (RUN-AROUND)	32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	HEAT GAIN PEAK (KBTU/HR)	ENERGY USE SUM (KWH)	ENERGY USE PEAK (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	0.0		0.1		FLOW	0	0	0	0	0	0	0	0	0	0	32	32
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	32	32
	DAY/HR	7/16		7/16		ELEC	0	0	0	0	0	0	0	0	0	0	32	32
APR	SUM	0.0		0.1		FLOW	0	0	0	0	0	0	0	0	0	0	53	53
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	53	53
	DAY/HR	1/17		1/17		ELEC	0	0	0	0	0	0	0	0	0	0	53	53
MAY	SUM	0.0		0.3		FLOW	0	0	0	0	0	0	0	0	0	0	123	123
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	123	123
	DAY/HR	1/15		1/15		ELEC	0	0	0	0	0	0	0	0	0	0	123	123
JUN	SUM	0.0		0.5		FLOW	0	0	0	0	0	0	0	0	0	0	236	236
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	236	236
	DAY/HR	2/16		2/16		ELEC	0	0	0	0	0	0	0	0	0	0	236	236
JUL	SUM	0.0		0.7		FLOW	0	0	0	0	0	0	0	0	0	0	335	335
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	335	335
	DAY/HR	1/11		1/11		ELEC	0	0	0	0	0	0	0	0	0	0	335	335
AUG	SUM	0.0		0.7		FLOW	0	0	0	0	0	0	0	0	0	0	326	326
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	326	326
	DAY/HR	1/10		1/10		ELEC	0	0	0	0	0	0	0	0	0	0	326	326
SEP	SUM	0.0		0.6		FLOW	0	0	0	0	0	0	0	0	0	0	295	295
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	295	295

DAY/HR	2/10	2/10	ELEC	0	0	0	0	0	0	0	0	0	0	295	295
OCT SUM	0.0	0.4	FLOW	0	0	0	0	0	0	0	0	0	0	207	207
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	207	207
DAY/HR	1/11	1/11	ELEC	0	0	0	0	0	0	0	0	0	0	207	207
NOV SUM	0.0	0.2	FLOW	0	0	0	0	0	0	0	0	0	0	71	71
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	71	71
DAY/HR	3/17	3/17	ELEC	0	0	0	0	0	0	0	0	0	0	71	71

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2ClgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC SUM	0.0	0.0			FLOW	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000			RPM	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0			ELEC	0	0	0	0	0	0	0	0	0	0	0	0
Yr SUM	0.0	3.6			FLOW	0	0	0	0	0	0	0	0	0	0	1678	1678
PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	1678	1678
MON/DAY	3/ 7	3/ 7			ELEC	0	0	0	0	0	0	0	0	0	0	1678	1678

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3ClgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP3Clg EVAPORATOR (RUN-AROUND)	32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	HEAT GAIN PEAK (KBTU/HR)	ENERGY USE SUM (KWH)	ENERGY USE PEAK (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	0.0		0.1		FLOW	0	0	0	0	0	0	0	0	0	0	53	53
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	53	53
	DAY/HR	1/17		1/17		ELEC	0	0	0	0	0	0	0	0	0	0	53	53
MAY	SUM	0.0		0.3		FLOW	0	0	0	0	0	0	0	0	0	0	123	123
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	123	123
	DAY/HR	1/15		1/15		ELEC	0	0	0	0	0	0	0	0	0	0	123	123
JUN	SUM	0.0		0.5		FLOW	0	0	0	0	0	0	0	0	0	0	236	236
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	236	236
	DAY/HR	2/16		2/16		ELEC	0	0	0	0	0	0	0	0	0	0	236	236
JUL	SUM	0.0		0.7		FLOW	0	0	0	0	0	0	0	0	0	0	335	335
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	335	335
	DAY/HR	1/11		1/11		ELEC	0	0	0	0	0	0	0	0	0	0	335	335
AUG	SUM	0.0		0.7		FLOW	0	0	0	0	0	0	0	0	0	0	326	326
	PEAK	0.003	0.002	0.002		RPM	0	0	0	0	0	0	0	0	0	0	326	326
	DAY/HR	1/10		1/10		ELEC	0	0	0	0	0	0	0	0	0	0	326	326
SEP	SUM	0.0		0.6		FLOW	0	0	0	0	0	0	0	0	0	0	295	295
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	295	295

DAY/HR	2/10	2/10	ELEC	0	0	0	0	0	0	0	0	0	0	295	295
OCT SUM	0.0	0.4	FLOW	0	0	0	0	0	0	0	0	0	0	207	207
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	207	207
DAY/HR	1/11	1/11	ELEC	0	0	0	0	0	0	0	0	0	0	207	207
NOV SUM	0.0	0.0	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3ClgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC SUM	0.0	0.0			FLOW	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000			RPM	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0			ELEC	0	0	0	0	0	0	0	0	0	0	0	0
Yr SUM	0.0	3.4			FLOW	0	0	0	0	0	0	0	0	0	0	1575	1575
PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	1575	1575
MON/DAY	4/ 1	4/ 1			ELEC	0	0	0	0	0	0	0	0	0	0	1575	1575

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4ClgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP4Clg EVAPORATOR (RUN-AROUND)	32.1	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	HEAT GAIN PEAK (KBTU/HR)	ENERGY USE SUM (KWH)	ENERGY USE PEAK (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR		0/ 0		0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK		0.000		0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0

	DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	0.0	0.0	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
NOV	SUM	0.0	0.0	FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4ClgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC SUM	0.0	0.0			FLOW	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000			RPM	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0			ELEC	0	0	0	0	0	0	0	0	0	0	0	0
Yr SUM	0.0	0.0			FLOW	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000			RPM	0	0	0	0	0	0	0	0	0	0	0	0
MON/DAY	0/ 0	0/ 0			ELEC	0	0	0	0	0	0	0	0	0	0	0	0

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1HtgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP1Htg EVAPORATOR (RUN-AROUND)	32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	ENERGY USE SUM (KWH)			Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0	1.2		FLOW	0	0	0	0	0	0	0	0	0	0	566	566
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	566	566
	DAY/HR	1/ 1	1/ 1		ELEC	0	0	0	0	0	0	0	0	0	0	566	566
FEB	SUM	0.0	0.9		FLOW	0	0	0	0	0	0	0	0	0	0	435	435
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	435	435
	DAY/HR	1/ 7	1/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	435	435
MAR	SUM	0.0	0.7		FLOW	0	0	0	0	0	0	0	0	0	0	330	330
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	330	330
	DAY/HR	1/ 2	1/ 2		ELEC	0	0	0	0	0	0	0	0	0	0	330	330
APR	SUM	0.0	0.9		FLOW	0	0	0	0	0	0	0	0	0	0	413	413
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	413	413
	DAY/HR	1/ 6	1/ 6		ELEC	0	0	0	0	0	0	0	0	0	0	413	413
MAY	SUM	0.0	0.7		FLOW	0	0	0	0	0	0	0	0	0	0	317	317
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	317	317
	DAY/HR	1/ 6	1/ 6		ELEC	0	0	0	0	0	0	0	0	0	0	317	317
JUN	SUM	0.0	0.6		FLOW	0	0	0	0	0	0	0	0	0	0	264	264
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	264	264
	DAY/HR	2/ 6	2/ 6		ELEC	0	0	0	0	0	0	0	0	0	0	264	264
JUL	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	64	64
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	64	64
	DAY/HR	1/ 7	1/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	64	64
AUG	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	63	63
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	63	63
	DAY/HR	1/ 7	1/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	63	63
SEP	SUM	0.0	0.4		FLOW	0	0	0	0	0	0	0	0	0	0	188	188
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	188	188

DAY/HR	2/ 7	2/ 7	ELEC	0	0	0	0	0	0	0	0	0	0	188	188
OCT SUM	0.0	0.6	FLOW	0	0	0	0	0	0	0	0	0	0	286	286
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	286	286
DAY/HR	1/ 6	1/ 6	ELEC	0	0	0	0	0	0	0	0	0	0	286	286
NOV SUM	0.0	0.7	FLOW	0	0	0	0	0	0	0	0	0	0	325	325
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	325	325
DAY/HR	1/ 3	1/ 3	ELEC	0	0	0	0	0	0	0	0	0	0	325	325

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1HtgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	0.0	1.2			FLOW	0	0	0	0	0	0	0	0	0	0	534	534
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	534	534
	DAY/HR	1/ 7	1/ 7			ELEC	0	0	0	0	0	0	0	0	0	0	534	534
Yr	SUM	0.0	8.2			FLOW	0	0	0	0	0	0	0	0	0	0	3785	3785
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	3785	3785
	MON/DAY	1/ 1	1/ 1			ELEC	0	0	0	0	0	0	0	0	0	0	3785	3785

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2HtgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP2Htg EVAPORATOR (RUN-AROUND)	32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN (MBTU) (KBTU/HR)	ENERGY USE (KWH) (KW)			Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0	0.3		FLOW	0	0	0	0	0	0	0	0	0	0	146	146
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	146	146
	DAY/HR	2/ 7	2/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	146	146
FEB	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	39	39
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	39	39
	DAY/HR	1/ 1	1/ 1		ELEC	0	0	0	0	0	0	0	0	0	0	39	39
MAR	SUM	0.0	0.2		FLOW	0	0	0	0	0	0	0	0	0	0	74	74
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	74	74
	DAY/HR	1/ 2	1/ 2		ELEC	0	0	0	0	0	0	0	0	0	0	74	74
APR	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	37	37
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	37	37
	DAY/HR	5/ 4	5/ 4		ELEC	0	0	0	0	0	0	0	0	0	0	37	37
MAY	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	25	25
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	25	25
	DAY/HR	1/16	1/16		ELEC	0	0	0	0	0	0	0	0	0	0	25	25
JUN	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0

DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
OCT SUM	0.0	0.1	FLOW	0	0	0	0	0	0	0	0	0	0	39	39
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	39	39
DAY/HR	2/17	2/17	ELEC	0	0	0	0	0	0	0	0	0	0	39	39
NOV SUM	0.0	0.3	FLOW	0	0	0	0	0	0	0	0	0	0	118	118
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	118	118
DAY/HR	1/ 3	1/ 3	ELEC	0	0	0	0	0	0	0	0	0	0	118	118

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2HtgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	0.0	0.1			FLOW	0	0	0	0	0	0	0	0	0	0	46	46
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	46	46
	DAY/HR	1/ 7	1/ 7			ELEC	0	0	0	0	0	0	0	0	0	0	46	46
Yr	SUM	0.0	1.1			FLOW	0	0	0	0	0	0	0	0	0	0	524	524
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	524	524
	MON/DAY	1/ 2	1/ 2			ELEC	0	0	0	0	0	0	0	0	0	0	524	524

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3HtgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP3Htg EVAPORATOR (RUN-AROUND)	32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN (MBTU) (KBTU/HR)	ENERGY USE (KWH) (KW)			Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	34	34
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	34	34
	DAY/HR	2/ 7	2/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	34	34
FEB	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	58	58
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	58	58
	DAY/HR	1/ 7	1/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	58	58
MAR	SUM	0.0	0.2		FLOW	0	0	0	0	0	0	0	0	0	0	89	89
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	89	89
	DAY/HR	1/ 2	1/ 2		ELEC	0	0	0	0	0	0	0	0	0	0	89	89
APR	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	41	41
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	41	41
	DAY/HR	5/ 6	5/ 6		ELEC	0	0	0	0	0	0	0	0	0	0	41	41
MAY	SUM	0.0	0.1		FLOW	0	0	0	0	0	0	0	0	0	0	67	67
	PEAK	0.003	0.002		RPM	0	0	0	0	0	0	0	0	0	0	67	67
	DAY/HR	1/18	1/18		ELEC	0	0	0	0	0	0	0	0	0	0	67	67
JUN	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	0.0	0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0

DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
OCT SUM	0.0	0.3	FLOW	0	0	0	0	0	0	0	0	0	0	156	156
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	156	156
DAY/HR	2/18	2/18	ELEC	0	0	0	0	0	0	0	0	0	0	156	156
NOV SUM	0.0	0.3	FLOW	0	0	0	0	0	0	0	0	0	0	117	117
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	117	117
DAY/HR	1/ 3	1/ 3	ELEC	0	0	0	0	0	0	0	0	0	0	117	117

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3HtgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC SUM	0.0	0.1			FLOW	0	0	0	0	0	0	0	0	0	0	38	38
PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	38	38
DAY/HR	2/ 7	2/ 7			ELEC	0	0	0	0	0	0	0	0	0	0	38	38
Yr SUM	0.0	1.3			FLOW	0	0	0	0	0	0	0	0	0	0	600	600
PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	600	600
MON/DAY	1/ 2	1/ 2			ELEC	0	0	0	0	0	0	0	0	0	0	600	600

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4HtgPump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
HP4Htg EVAPORATOR (RUN-AROUND)	32.0	0.1	0.0	ONE-SPEED	0.002	0.770	0.400

MON		HEAT GAIN SUM (MBTU)	HEAT GAIN PEAK (KBTU/HR)	ENERGY USE SUM (KWH)	ENERGY USE PEAK (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0		0.1		FLOW	0	0	0	0	0	0	0	0	0	0	26	26
	PEAK	0.003		0.002		RPM	0	0	0	0	0	0	0	0	0	0	26	26
	DAY/HR	2/ 7		2/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	26	26
FEB	SUM	0.0		0.2		FLOW	0	0	0	0	0	0	0	0	0	0	98	98
	PEAK	0.003		0.002		RPM	0	0	0	0	0	0	0	0	0	0	98	98
	DAY/HR	4/ 7		4/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	98	98
MAR	SUM	0.0		0.4		FLOW	0	0	0	0	0	0	0	0	0	0	171	171
	PEAK	0.003		0.002		RPM	0	0	0	0	0	0	0	0	0	0	171	171
	DAY/HR	1/ 5		1/ 5		ELEC	0	0	0	0	0	0	0	0	0	0	171	171
APR	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	2	2
	PEAK	0.003		0.002		RPM	0	0	0	0	0	0	0	0	0	0	2	2
	DAY/HR	24/ 7		24/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	2	2
MAY	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	2	2
	PEAK	0.003		0.002		RPM	0	0	0	0	0	0	0	0	0	0	2	2
	DAY/HR	5/ 7		5/ 7		ELEC	0	0	0	0	0	0	0	0	0	0	2	2
JUN	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000		0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000		0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000		0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0		0/ 0		ELEC	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	0.0		0.0		FLOW	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000		0.000		RPM	0	0	0	0	0	0	0	0	0	0	0	0

DAY/HR	0/ 0	0/ 0	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
OCT SUM	0.0	0.0	FLOW	0	0	0	0	0	0	0	0	0	0	6	6
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	6	6
DAY/HR	9/17	9/17	ELEC	0	0	0	0	0	0	0	0	0	0	6	6
NOV SUM	0.0	0.6	FLOW	0	0	0	0	0	0	0	0	0	0	273	273
PEAK	0.003	0.002	RPM	0	0	0	0	0	0	0	0	0	0	273	273
DAY/HR	1/ 5	1/ 5	ELEC	0	0	0	0	0	0	0	0	0	0	273	273

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4HtgPump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	0.0	0.3			FLOW	0	0	0	0	0	0	0	0	0	0	128	128
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	128	128
	DAY/HR	1/ 1	1/ 1			ELEC	0	0	0	0	0	0	0	0	0	0	128	128
Yr	SUM	0.0	1.5			FLOW	0	0	0	0	0	0	0	0	0	0	706	706
	PEAK	0.003	0.002			RPM	0	0	0	0	0	0	0	0	0	0	706	706
	MON/DAY	1/ 2	1/ 2			ELEC	0	0	0	0	0	0	0	0	0	0	706	706

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for DHW Circ Pump WEATHER FILE- SEATTLE BOEING FI WA

NOTE: DATA BELOW IS FOR THE SUM OF 1 PUMP(s)

ATTACHED TO	FLOW (GPM)	HEAD (FT)	SETPOINT (FT)	CAPACITY CONTROL	POWER (KW)	MECHANICAL EFFICIENCY (FRAC)	MOTOR EFFICIENCY (FRAC)
DHW-Loop PRIMARY LOOP	0.5	25.8	0.0	VAR-SPEED	0.008	0.770	0.400

MON		HEAT GAIN (MBTU) (KBTU/HR)	ENERGY USE (KWH) (KW)			Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.0	2.8		FLOW	0	0	0	0	0	0	0	0	0	384	0	384
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	384	0	384
	DAY/HR	2/13	2/13		ELEC	0	0	0	0	0	0	0	0	384	0	0	384
FEB	SUM	0.0	2.5		FLOW	0	0	0	0	0	0	0	0	0	352	0	352
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	352	0	352
	DAY/HR	3/13	3/13		ELEC	0	0	0	0	0	0	0	0	352	0	0	352
MAR	SUM	0.0	2.8		FLOW	0	0	0	0	0	0	0	0	0	396	0	396
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	396	0	396
	DAY/HR	3/13	3/13		ELEC	0	0	0	0	0	0	0	0	396	0	0	396
APR	SUM	0.0	2.9		FLOW	0	0	0	0	0	0	0	0	0	400	0	400
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	400	0	400
	DAY/HR	1/13	1/13		ELEC	0	0	0	0	0	0	0	0	400	0	0	400
MAY	SUM	0.0	2.8		FLOW	0	0	0	0	0	0	0	0	0	396	0	396
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	396	0	396
	DAY/HR	1/13	1/13		ELEC	0	0	0	0	0	0	0	0	396	0	0	396
JUN	SUM	0.0	2.8		FLOW	0	0	0	0	0	0	0	0	0	384	0	384
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	384	0	384
	DAY/HR	2/13	2/13		ELEC	0	0	0	0	0	0	0	0	384	0	0	384
JUL	SUM	0.0	2.9		FLOW	0	0	0	0	0	0	0	0	0	400	0	400
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	400	0	400
	DAY/HR	1/13	1/13		ELEC	0	0	0	0	0	0	0	0	400	0	0	400
AUG	SUM	0.0	2.8		FLOW	0	0	0	0	0	0	0	0	0	396	0	396
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	396	0	396
	DAY/HR	1/13	1/13		ELEC	0	0	0	0	0	0	0	0	396	0	0	396
SEP	SUM	0.0	2.8		FLOW	0	0	0	0	0	0	0	0	0	384	0	384
	PEAK	0.010	0.007		RPM	0	0	0	0	0	0	0	0	0	384	0	384

DAY/HR	2/13	2/13	ELEC	0	0	0	0	0	0	0	0	384	0	0	384
OCT SUM	0.0	2.9	FLOW	0	0	0	0	0	0	0	0	0	400	0	400
PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	400	0	400
DAY/HR	1/13	1/13	ELEC	0	0	0	0	0	0	0	0	400	0	0	400
NOV SUM	0.0	2.5	FLOW	0	0	0	0	0	0	0	0	0	348	0	348
PEAK	0.010	0.007	RPM	0	0	0	0	0	0	0	0	0	348	0	348
DAY/HR	3/13	3/13	ELEC	0	0	0	0	0	0	0	0	348	0	0	348

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for DHW Circ Pump WEATHER FILE- SEATTLE BOEING FI WA
(CONTINUED)

DEC	SUM	0.0	2.9			FLOW	0	0	0	0	0	0	0	0	0	400	0	400
	PEAK	0.010	0.007			RPM	0	0	0	0	0	0	0	0	0	400	0	400
	DAY/HR	1/13	1/13			ELEC	0	0	0	0	0	0	0	0	400	0	0	400
Yr	SUM	0.0	33.3			FLOW	0	0	0	0	0	0	0	0	0	4640	0	4640
	PEAK	0.010	0.007			RPM	0	0	0	0	0	0	0	0	0	4640	0	4640
	MON/DAY	1/ 2	1/ 2			ELEC	0	0	0	0	0	0	0	0	4640	0	0	4640

Hours pump could not meet flow requirements: 0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1Clg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.259	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.041	0.000	12.827	0.000	LOAD	14	0	0	0	0	0	0	0	0	0	0	14
	PEAK	7.785	0.000	1.640	0.000	ELEC	7	7	0	0	0	0	0	0	0	0	0	14
	DAY/HR	10/16	0/ 0	10/16	0/ 0													
FEB	SUM	0.010	0.000	3.968	0.000	LOAD	4	0	0	0	0	0	0	0	0	0	0	4
	PEAK	2.505	0.000	1.118	0.000	ELEC	1	3	0	0	0	0	0	0	0	0	0	4
	DAY/HR	27/17	0/ 0	27/17	0/ 0													
MAR	SUM	0.069	0.000	23.893	0.000	LOAD	32	0	0	0	0	0	0	0	0	0	0	32
	PEAK	7.247	0.000	1.276	0.000	ELEC	28	4	0	0	0	0	0	0	0	0	0	32
	DAY/HR	29/16	0/ 0	29/16	0/ 0													
APR	SUM	0.046	0.000	33.175	0.000	LOAD	53	0	0	0	0	0	0	0	0	0	0	53
	PEAK	1.240	0.000	0.969	0.000	ELEC	53	0	0	0	0	0	0	0	0	0	0	53
	DAY/HR	12/17	0/ 0	12/14	0/ 0													
MAY	SUM	0.472	0.000	107.225	0.000	LOAD	111	12	0	0	0	0	0	0	0	0	0	123
	PEAK	26.466	0.000	3.214	0.000	ELEC	100	13	9	1	0	0	0	0	0	0	0	123
	DAY/HR	16/17	0/ 0	16/17	0/ 0													
JUN	SUM	1.426	0.000	255.422	0.000	LOAD	197	29	10	0	0	0	0	0	0	0	0	236
	PEAK	38.068	0.000	4.549	0.000	ELEC	167	41	17	9	2	0	0	0	0	0	0	236
	DAY/HR	20/17	0/ 0	20/17	0/ 0													
JUL	SUM	5.916	0.000	783.726	0.000	LOAD	176	69	41	30	16	3	0	0	0	0	0	335
	PEAK	66.273	0.000	7.838	0.000	ELEC	118	74	47	37	30	17	10	2	0	0	0	335
	DAY/HR	23/17	0/ 0	23/17	0/ 0													
AUG	SUM	4.505	0.000	624.959	0.000	LOAD	186	88	39	8	5	0	0	0	0	0	0	326
	PEAK	54.064	0.000	6.205	0.000	ELEC	112	99	58	38	12	7	0	0	0	0	0	326
	DAY/HR	12/17	0/ 0	12/17	0/ 0													
SEP	SUM	1.573	0.000	298.518	0.000	LOAD	260	26	7	2	0	0	0	0	0	0	0	295
	PEAK	39.001	0.000	4.814	0.000	ELEC	211	60	14	5	5	0	0	0	0	0	0	295
	DAY/HR	19/17	0/ 0	19/17	0/ 0													
OCT	SUM	0.274	0.000	121.493	0.000	LOAD	206	1	0	0	0	0	0	0	0	0	0	207

PEAK	14.287	0.000	2.032	0.000	ELEC	200	7	0	0	0	0	0	0	0	0	0	207
DAY/HR	7/17	0/ 0	7/17	0/ 0													
NOV SUM	0.096	0.000	43.312	0.000	LOAD	71	0	0	0	0	0	0	0	0	0	0	71
PEAK	1.897	0.000	0.997	0.000	ELEC	71	0	0	0	0	0	0	0	0	0	0	71
DAY/HR	6/16	0/ 0	4/15	0/ 0													
DEC SUM	0.091	0.000	28.776	0.000	LOAD	36	0	0	0	0	0	0	0	0	0	0	36
PEAK	2.704	0.000	1.126	0.000	ELEC	24	12	0	0	0	0	0	0	0	0	0	36
DAY/HR	19/17	0/ 0	18/16	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1Clg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	14.519	0.000	2337.292	0.000	LOAD1346	225	97	40	21	3	0	0	0	0	0	1732
PEAK	66.273	0.000	7.838	0.000	ELEC1092	320	145	90	49	24	10	2	0	0	0	1732
MON/DAY	7/23	0/ 0	7/23	0/ 0												

Normalized (ARI) Capacity at Peak: 0.102 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 65.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	11.801	0.0346	0.0216	0.864	0.2588	0.9100	0.000	11.797	0.3289

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Clg2PipeLoop		0.142	0.10	0.00	30.60	2.59	9.25	55.00
	Heating Mode	-0.122	0.00	0.00	0.00	0.00	-10.00	105.00
Air-Cooled		0.178						65.00
	Heating Mode	-0.082						47.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1Htg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.359	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	-35.903	4157.339	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-228.003	23.003	0.000	ELEC	157	41	41	46	58	65	39	30	19	6	0	502
	DAY/HR	0/ 0	14/ 7	14/ 7	0/ 0													
FEB	SUM	0.000	-25.804	2870.589	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-222.268	22.927	0.000	ELEC	136	18	26	41	50	57	22	13	13	2	0	378
	DAY/HR	0/ 0	3/ 9	7/ 8	0/ 0													
MAR	SUM	0.000	-22.367	2508.560	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-204.634	22.620	0.000	ELEC	7	33	77	51	33	32	21	10	8	1	0	273
	DAY/HR	0/ 0	10/ 8	10/ 8	0/ 0													
APR	SUM	0.000	-21.185	2474.290	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-212.722	21.812	0.000	ELEC	36	134	115	48	20	19	14	3	5	0	0	394
	DAY/HR	0/ 0	8/ 7	8/ 7	0/ 0													
MAY	SUM	0.000	-10.925	1343.438	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-191.871	19.884	0.000	ELEC	96	93	51	24	14	11	1	2	1	0	0	293
	DAY/HR	0/ 0	6/ 7	6/ 7	0/ 0													
JUN	SUM	0.000	-4.971	697.473	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-136.807	13.566	0.000	ELEC	127	64	15	18	4	1	0	0	0	0	0	229
	DAY/HR	0/ 0	2/ 7	2/ 7	0/ 0													
JUL	SUM	0.000	-0.771	137.179	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-54.427	7.570	0.000	ELEC	32	17	5	1	0	0	0	0	0	0	0	55
	DAY/HR	0/ 0	8/ 7	8/ 7	0/ 0													
AUG	SUM	0.000	-0.726	122.552	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-58.034	7.269	0.000	ELEC	23	18	3	1	0	0	0	0	0	0	0	45
	DAY/HR	0/ 0	25/ 7	18/ 7	0/ 0													
SEP	SUM	0.000	-3.954	540.633	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-141.917	14.138	0.000	ELEC	89	39	23	9	5	1	0	0	0	0	0	166
	DAY/HR	0/ 0	29/ 7	29/ 7	0/ 0													
OCT	SUM	0.000	-9.356	1150.457	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

	PEAK	0.000	-177.055	17.987	0.000	ELEC	75	79	49	18	13	8	3	2	0	0	0	247
	DAY/HR	0/ 0	6/ 7	23/ 7	0/ 0													
NOV	SUM	0.000	-20.103	2182.745	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-209.634	21.196	0.000	ELEC	5	25	26	53	58	31	10	6	8	0	0	222
	DAY/HR	0/ 0	17/ 8	5/ 8	0/ 0													
DEC	SUM	0.000	-35.858	4001.922	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-227.971	22.949	0.000	ELEC	180	28	25	47	63	60	37	30	20	7	0	497
	DAY/HR	0/ 0	15/ 9	11/ 7	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1Htg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	0.000	-191.924	22187.176	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	-228.003	23.003	0.000	ELEC	963	589	456	357	318	285	147	96	74	16	0	3301
MON/DAY	0/ 0	1/14	1/14	0/ 0													

Normalized (ARI) Capacity at Peak: 0.192 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 95.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	19.273	0.0400	0.0250	0.647	0.3588	1.2615	0.000	20.195	0.4609

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Htg2PipeLoop		0.231	0.10	0.00	30.51	1.58	15.15	55.00
	Heating Mode	-0.150	0.00	0.00	0.00	0.00	-9.94	105.00
Air-Cooled		0.314						95.00
	Heating Mode	-0.081						25.50

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2Clg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.259	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
FEB	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAR	SUM	0.069	0.000	23.893	0.000	LOAD	32	0	0	0	0	0	0	0	0	0	0	32
	PEAK	7.247	0.000	1.276	0.000	ELEC	28	4	0	0	0	0	0	0	0	0	0	32
	DAY/HR	29/16	0/ 0	29/16	0/ 0													
APR	SUM	0.046	0.000	33.175	0.000	LOAD	53	0	0	0	0	0	0	0	0	0	0	53
	PEAK	1.240	0.000	0.969	0.000	ELEC	53	0	0	0	0	0	0	0	0	0	0	53
	DAY/HR	12/17	0/ 0	12/14	0/ 0													
MAY	SUM	0.472	0.000	107.225	0.000	LOAD	111	12	0	0	0	0	0	0	0	0	0	123
	PEAK	26.466	0.000	3.214	0.000	ELEC	100	13	9	1	0	0	0	0	0	0	0	123
	DAY/HR	16/17	0/ 0	16/17	0/ 0													
JUN	SUM	1.426	0.000	255.422	0.000	LOAD	197	29	10	0	0	0	0	0	0	0	0	236
	PEAK	38.068	0.000	4.549	0.000	ELEC	167	41	17	9	2	0	0	0	0	0	0	236
	DAY/HR	20/17	0/ 0	20/17	0/ 0													
JUL	SUM	5.916	0.000	783.726	0.000	LOAD	176	69	41	30	16	3	0	0	0	0	0	335
	PEAK	66.273	0.000	7.838	0.000	ELEC	118	74	47	37	30	17	10	2	0	0	0	335
	DAY/HR	23/17	0/ 0	23/17	0/ 0													
AUG	SUM	4.505	0.000	624.959	0.000	LOAD	186	88	39	8	5	0	0	0	0	0	0	326
	PEAK	54.064	0.000	6.205	0.000	ELEC	112	99	58	38	12	7	0	0	0	0	0	326
	DAY/HR	12/17	0/ 0	12/17	0/ 0													
SEP	SUM	1.573	0.000	298.518	0.000	LOAD	260	26	7	2	0	0	0	0	0	0	0	295
	PEAK	39.001	0.000	4.814	0.000	ELEC	211	60	14	5	5	0	0	0	0	0	0	295
	DAY/HR	19/17	0/ 0	19/17	0/ 0													
OCT	SUM	0.274	0.000	121.493	0.000	LOAD	206	1	0	0	0	0	0	0	0	0	0	207

PEAK	14.287	0.000	2.032	0.000	ELEC	200	7	0	0	0	0	0	0	0	0	0	207
DAY/HR	7/17	0/ 0	7/17	0/ 0													
NOV SUM	0.096	0.000	43.312	0.000	LOAD	71	0	0	0	0	0	0	0	0	0	0	71
PEAK	1.897	0.000	0.997	0.000	ELEC	71	0	0	0	0	0	0	0	0	0	0	71
DAY/HR	6/16	0/ 0	4/15	0/ 0													
DEC SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2Clg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	14.377	0.000	2291.722	0.000	LOAD1292	225	97	40	21	3	0	0	0	0	0	1678
PEAK	66.273	0.000	7.838	0.000	ELEC1060	298	145	90	49	24	10	2	0	0	0	1678
MON/DAY	7/23	0/ 0	7/23	0/ 0												

Normalized (ARI) Capacity at Peak: 0.102 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 65.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	11.801	0.0346	0.0216	0.864	0.2588	0.9100	0.000	11.797	0.3289

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Clg2PipeLoop		0.142	0.10	0.00	30.60	2.59	9.25	55.00
	Heating Mode	-0.122	0.00	0.00	0.00	0.00	-10.00	105.00
Air-Cooled		0.178						65.00
	Heating Mode	-0.082						47.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3Clg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.259	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
FEB	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAR	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
APR	SUM	0.046	0.000	33.175	0.000	LOAD	53	0	0	0	0	0	0	0	0	0	0	53
	PEAK	1.240	0.000	0.969	0.000	ELEC	53	0	0	0	0	0	0	0	0	0	0	53
	DAY/HR	12/17	0/ 0	12/14	0/ 0													
MAY	SUM	0.472	0.000	107.225	0.000	LOAD	111	12	0	0	0	0	0	0	0	0	0	123
	PEAK	26.466	0.000	3.214	0.000	ELEC	100	13	9	1	0	0	0	0	0	0	0	123
	DAY/HR	16/17	0/ 0	16/17	0/ 0													
JUN	SUM	1.426	0.000	255.422	0.000	LOAD	197	29	10	0	0	0	0	0	0	0	0	236
	PEAK	38.068	0.000	4.549	0.000	ELEC	167	41	17	9	2	0	0	0	0	0	0	236
	DAY/HR	20/17	0/ 0	20/17	0/ 0													
JUL	SUM	5.916	0.000	783.726	0.000	LOAD	176	69	41	30	16	3	0	0	0	0	0	335
	PEAK	66.273	0.000	7.838	0.000	ELEC	118	74	47	37	30	17	10	2	0	0	0	335
	DAY/HR	23/17	0/ 0	23/17	0/ 0													
AUG	SUM	4.505	0.000	624.959	0.000	LOAD	186	88	39	8	5	0	0	0	0	0	0	326
	PEAK	54.064	0.000	6.205	0.000	ELEC	112	99	58	38	12	7	0	0	0	0	0	326
	DAY/HR	12/17	0/ 0	12/17	0/ 0													
SEP	SUM	1.573	0.000	298.518	0.000	LOAD	260	26	7	2	0	0	0	0	0	0	0	295
	PEAK	39.001	0.000	4.814	0.000	ELEC	211	60	14	5	5	0	0	0	0	0	0	295
	DAY/HR	19/17	0/ 0	19/17	0/ 0													
OCT	SUM	0.274	0.000	121.493	0.000	LOAD	206	1	0	0	0	0	0	0	0	0	0	207

PEAK	14.287	0.000	2.032	0.000	ELEC	200	7	0	0	0	0	0	0	0	0	0	207
DAY/HR	7/17	0/ 0	7/17	0/ 0													
NOV SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
DEC SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3Clg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	14.213	0.000	2224.518	0.000	LOAD1189	225	97	40	21	3	0	0	0	0	0	1575
PEAK	66.273	0.000	7.838	0.000	ELEC 961	294	145	90	49	24	10	2	0	0	0	1575
MON/DAY	7/23	0/ 0	7/23	0/ 0												

Normalized (ARI) Capacity at Peak: 0.102 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 65.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	11.801	0.0346	0.0216	0.864	0.2588	0.9100	0.000	11.797	0.3289

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Clg2PipeLoop		0.142	0.10	0.00	30.60	2.59	9.25	55.00
	Heating Mode	-0.122	0.00	0.00	0.00	0.00	-10.00	105.00
Air-Cooled		0.178						65.00
	Heating Mode	-0.082						47.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4Clg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Clg2PipeLoop	0.142	30.6	0.259	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
FEB	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAR	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
APR	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
MAY	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUL	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
AUG	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
SEP	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
OCT	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
NOV SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
DEC SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4Clg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	MON/DAY	0/ 0	0/ 0	0/ 0	0/ 0													

Normalized (ARI) Capacity at Peak: 0.102 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 65.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	11.801	0.0346	0.0216	0.864	0.2588	0.9100	0.000	11.797	0.3289

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Clg2PipeLoop		0.142	0.10	0.00	30.60	2.59	9.25	55.00
	Heating Mode	-0.122	0.00	0.00	0.00	0.00	-10.00	105.00
Air-Cooled		0.178						65.00
	Heating Mode	-0.082						47.00

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2Htg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.359	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	-14.179	1708.031	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-216.097	22.725	0.000	ELEC	32	1	3	4	16	21	33	20	11	2	0	143
	DAY/HR	0/ 0	23/ 8	23/ 8	0/ 0													
FEB	SUM	0.000	-4.390	526.907	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-203.492	21.595	0.000	ELEC	5	1	0	0	2	10	11	7	3	0	0	39
	DAY/HR	0/ 0	18/ 7	18/ 7	0/ 0													
MAR	SUM	0.000	-2.237	251.759	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-184.622	20.483	0.000	ELEC	0	0	0	0	1	7	7	1	1	0	0	17
	DAY/HR	0/ 0	3/ 7	3/ 7	0/ 0													
APR	SUM	0.000	-1.338	152.804	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-170.145	19.419	0.000	ELEC	0	3	8	2	1	2	0	2	0	0	0	18
	DAY/HR	0/ 0	7/ 7	7/ 7	0/ 0													
MAY	SUM	0.000	-0.127	13.586	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-126.808	13.586	0.000	ELEC	0	0	0	0	0	1	0	0	0	0	0	1
	DAY/HR	0/ 0	12/ 7	12/ 7	0/ 0													
JUN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUL	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
AUG	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
SEP	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
OCT	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
NOV SUM	0.000	-2.022	225.323	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	-173.837	21.146	0.000	ELEC	0	0	0	0	0	7	5	2	1	0	0	15
DAY/HR	0/ 0	28/ 7	28/ 7	0/ 0													
DEC SUM	0.000	-5.860	687.663	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	-194.088	21.630	0.000	ELEC	0	0	0	0	3	21	13	5	4	0	0	46
DAY/HR	0/ 0	8/ 7	8/ 7	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2Htg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr	SUM	0.000	-30.152	3566.073	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-216.097	22.725	0.000	ELEC	37	5	11	6	23	69	69	37	20	2	0	279
	MON/DAY	0/ 0	1/23	1/23	0/ 0													

Normalized (ARI) Capacity at Peak: 0.192 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 95.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	19.273	0.0400	0.0250	0.647	0.3588	1.2615	0.000	20.195	0.4609

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Htg2PipeLoop		0.231	0.10	0.00	30.51	1.58	15.15	55.00
	Heating Mode	-0.150	0.00	0.00	0.00	0.00	-9.94	105.00
Air-Cooled		0.314						95.00
	Heating Mode	-0.081						25.50

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3Htg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.359	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	-3.974	511.179	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-168.983	21.547	0.000	ELEC	0	0	0	0	3	15	9	3	4	0	0	34
	DAY/HR	0/ 0	7/12	7/12	0/ 0													
FEB	SUM	0.000	-5.631	655.625	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-159.365	19.310	0.000	ELEC	5	2	0	4	8	13	15	6	0	0	0	53
	DAY/HR	0/ 0	24/10	12/ 9	0/ 0													
MAR	SUM	0.000	-2.874	321.428	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-153.774	18.155	0.000	ELEC	0	0	6	9	11	3	2	1	0	0	0	32
	DAY/HR	0/ 0	19/ 9	19/ 9	0/ 0													
APR	SUM	0.000	-1.539	185.332	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-193.116	20.021	0.000	ELEC	24	5	0	0	9	1	0	1	1	0	0	41
	DAY/HR	0/ 0	5/ 7	5/ 7	0/ 0													
MAY	SUM	0.000	-2.358	303.426	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-180.435	18.187	0.000	ELEC	20	26	4	12	2	0	2	1	0	0	0	67
	DAY/HR	0/ 0	10/ 7	10/ 7	0/ 0													
JUN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUL	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
AUG	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
SEP	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
OCT	SUM	0.000	-8.868	1024.688	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

	PEAK	0.000	-231.741	23.164	0.000	ELEC	19	51	31	34	4	3	6	4	3	1	0	156
	DAY/HR	0/ 0	14/ 7	14/ 7	0/ 0													
NOV	SUM	0.000	-1.119	125.994	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-132.444	14.732	0.000	ELEC	0	1	3	4	5	0	1	0	0	0	0	14
	DAY/HR	0/ 0	4/ 9	4/ 9	0/ 0													
DEC	SUM	0.000	-4.245	496.823	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-153.701	18.558	0.000	ELEC	0	0	0	2	10	12	10	3	0	0	0	37
	DAY/HR	0/ 0	29/ 7	29/ 7	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3Htg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr	SUM	0.000	-30.607	3624.496	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-231.741	23.164	0.000	ELEC	68	85	44	65	52	47	45	19	8	1	0	434
	MON/DAY	0/ 0	10/14	10/14	0/ 0													

Normalized (ARI) Capacity at Peak: 0.192 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 95.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	19.273	0.0400	0.0250	0.647	0.3588	1.2615	0.000	20.195	0.4609

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Htg2PipeLoop		0.231	0.10	0.00	30.51	1.58	15.15	55.00
	Heating Mode	-0.150	0.00	0.00	0.00	0.00	-9.94	105.00
Air-Cooled		0.314						95.00
	Heating Mode	-0.081						25.50

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4Htg WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	AUXILIARY (KW)
HEAT-PUMP	Htg2PipeLoop	0.231	30.5	0.359	0.000

MON		COOL LOAD (MBTU) (KBTU/HR)	HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	-2.556	317.550	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-163.174	19.502	0.000	ELEC	0	0	5	5	4	3	4	3	2	0	0	26
	DAY/HR	0/ 0	17/ 8	6/ 7	0/ 0													
FEB	SUM	0.000	-8.505	962.504	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-150.450	19.277	0.000	ELEC	6	3	8	17	33	15	11	1	0	0	0	94
	DAY/HR	0/ 0	13/ 9	13/ 9	0/ 0													
MAR	SUM	0.000	-9.854	1132.273	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-229.502	22.894	0.000	ELEC	49	25	24	29	26	6	1	5	3	3	0	171
	DAY/HR	0/ 0	18/ 7	26/ 7	0/ 0													
APR	SUM	0.000	-0.210	26.829	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-111.243	13.760	0.000	ELEC	0	0	0	0	0	2	0	0	0	0	0	2
	DAY/HR	0/ 0	29/ 7	29/ 7	0/ 0													
MAY	SUM	0.000	-0.124	15.306	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	-122.717	13.411	0.000	ELEC	1	0	0	0	0	1	0	0	0	0	0	2
	DAY/HR	0/ 0	5/ 7	5/ 7	0/ 0													
JUN	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
JUL	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
AUG	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
SEP	SUM	0.000	0.000	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.000	0.000	0.000	ELEC	0	0	0	0	0	0	0	0	0	0	0	0
	DAY/HR	0/ 0	0/ 0	0/ 0	0/ 0													
OCT	SUM	0.000	-0.089	13.786	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

PEAK	0.000	-25.595	3.317	0.000	ELEC	4	2	0	0	0	0	0	0	0	0	0	6
DAY/HR	0/ 0	9/22	9/22	0/ 0													
NOV SUM	0.000	-10.920	1308.444	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	-213.881	22.481	0.000	ELEC	138	33	18	33	27	9	6	5	1	3	0	273
DAY/HR	0/ 0	22/ 7	22/ 7	0/ 0													
DEC SUM	0.000	-7.793	905.717	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	-161.600	18.558	0.000	ELEC	45	4	5	13	31	14	7	4	0	0	0	123
DAY/HR	0/ 0	9/ 9	29/ 7	0/ 0													

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP4Htg WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	0.000	-40.052	4682.408	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	-229.502	22.894	0.000	ELEC	243	67	60	97	121	50	29	18	6	6	0	697
MON/DAY	0/ 0	3/18	3/26	0/ 0													

Normalized (ARI) Capacity at Peak: 0.192 MBTU/HR at CHW T/Adjusted Condenser T: 55.0F 95.0F and Drybulb/Wetbulb: 0.F 0.F

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (TONS)	START-UP (HOURS)	HT/CL CAP (FRAC)	COOL ELEC (KW)	COOL EIR (BTU/BTU)	COOL EFF (KW/TON)	AUX ELEC (KW)	HEAT ELEC (KW)	HEAT EIR (BTU/BTU)
HEAT-PUMP	19.273	0.0400	0.0250	0.647	0.3588	1.2615	0.000	20.195	0.4609

		THERMAL (MBTU/HR)	HEAD (FT)	STATIC (FT)	FLOW (GPM)	FLOW/CAP (GPM/TON)	DELTA T (F)	DESIGN T (F)
Htg2PipeLoop		0.231	0.10	0.00	30.51	1.58	15.15	55.00
	Heating Mode	-0.150	0.00	0.00	0.00	0.00	-9.94	105.00
Air-Cooled		0.314						95.00
	Heating Mode	-0.081						25.50

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
HEAT-PUMP DW-HTR	DHW-Loop	-0.016	0.4	0.216	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-2.436	222.236	0.000	0.000	LOAD	660	84	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.701	0.738	0.000	0.000	ELEC	0	373	99	83	63	63	42	21	0	0	0	744
	DAY/HR	2/13	21/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	-2.272	210.006	0.000	0.000	LOAD	596	76	0	0	0	0	0	0	0	0	0	672
	PEAK	-10.982	0.775	0.000	0.000	ELEC	0	292	113	77	56	60	36	38	0	0	0	672
	DAY/HR	6/13	18/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	-2.533	234.273	0.000	0.000	LOAD	660	84	0	0	0	0	0	0	0	0	0	744
	PEAK	-11.005	0.773	0.000	0.000	ELEC	0	317	129	88	63	63	42	42	0	0	0	744
	DAY/HR	3/13	31/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	-2.534	228.977	0.000	0.000	LOAD	632	88	0	0	0	0	0	0	0	0	0	720
	PEAK	-10.871	0.758	0.000	0.000	ELEC	0	301	113	98	66	75	23	44	0	0	0	720
	DAY/HR	1/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	-2.379	212.905	0.000	0.000	LOAD	680	64	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.336	0.704	0.000	0.000	ELEC	0	385	90	80	98	49	42	0	0	0	0	744
	DAY/HR	5/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	-2.212	191.728	0.000	0.000	LOAD	657	63	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.803	0.645	0.000	0.000	ELEC	0	386	119	43	105	44	23	0	0	0	0	720
	DAY/HR	12/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	-2.196	185.890	0.000	0.000	LOAD	700	44	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.341	0.592	0.000	0.000	ELEC	0	403	121	87	88	45	0	0	0	0	0	744
	DAY/HR	1/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	-2.082	175.328	0.000	0.000	LOAD	702	42	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.049	0.553	0.000	0.000	ELEC	0	410	136	104	52	42	0	0	0	0	0	744
	DAY/HR	1/13	4/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	-2.037	170.373	0.000	0.000	LOAD	678	42	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.024	0.550	0.000	0.000	ELEC	0	394	131	105	48	42	0	0	0	0	0	720
	DAY/HR	2/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	-2.177	182.632	0.000	0.000	LOAD	700	44	0	0	0	0	0	0	0	0	0	744

PEAK	-9.262	0.573	0.000	0.000	ELEC	0	404	120	89	87	44	0	0	0	0	0	744
DAY/HR	1/13	14/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV SUM	-1.999	178.021	0.000	0.000	LOAD	684	36	0	0	0	0	0	0	0	0	0	720
PEAK	-9.712	0.618	0.000	0.000	ELEC	0	420	116	50	80	36	18	0	0	0	0	720
DAY/HR	3/13	17/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC SUM	-2.405	210.645	0.000	0.000	LOAD	678	66	0	0	0	0	0	0	0	0	0	744
PEAK	-10.229	0.679	0.000	0.000	ELEC	0	396	93	57	110	44	44	0	0	0	0	744
DAY/HR	1/13	29/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP1-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	-27.263	2403.013	0.000	0.000	LOAD	8027	733	0	0	0	0	0	0	0	0	0	8760
PEAK	-11.005	0.775	0.000	0.000	ELEC	0	4481	1380	961	916	607	270	145	0	0	0	8760
MON/DAY	3/ 3	2/18	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
HEAT-PUMP DW-HTR	-0.016	1.008	0.2158	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.016	1.00	0.43	73.78	150.00
Ambient					51.99

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
HEAT-PUMP DW-HTR	DHW-Loop	-0.016	0.4	0.216	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-2.436	222.236	0.000	0.000	LOAD	660	84	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.701	0.738	0.000	0.000	ELEC	0	373	99	83	63	63	42	21	0	0	0	744
	DAY/HR	2/13	21/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	-2.272	210.006	0.000	0.000	LOAD	596	76	0	0	0	0	0	0	0	0	0	672
	PEAK	-10.982	0.775	0.000	0.000	ELEC	0	292	113	77	56	60	36	38	0	0	0	672
	DAY/HR	6/13	18/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	-2.533	234.273	0.000	0.000	LOAD	660	84	0	0	0	0	0	0	0	0	0	744
	PEAK	-11.005	0.773	0.000	0.000	ELEC	0	317	129	88	63	63	42	42	0	0	0	744
	DAY/HR	3/13	31/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	-2.534	228.977	0.000	0.000	LOAD	632	88	0	0	0	0	0	0	0	0	0	720
	PEAK	-10.871	0.758	0.000	0.000	ELEC	0	301	113	98	66	75	23	44	0	0	0	720
	DAY/HR	1/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	-2.379	212.905	0.000	0.000	LOAD	680	64	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.336	0.704	0.000	0.000	ELEC	0	385	90	80	98	49	42	0	0	0	0	744
	DAY/HR	5/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	-2.212	191.728	0.000	0.000	LOAD	657	63	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.803	0.645	0.000	0.000	ELEC	0	386	119	43	105	44	23	0	0	0	0	720
	DAY/HR	12/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	-2.196	185.890	0.000	0.000	LOAD	700	44	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.341	0.592	0.000	0.000	ELEC	0	403	121	87	88	45	0	0	0	0	0	744
	DAY/HR	1/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	-2.082	175.328	0.000	0.000	LOAD	702	42	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.049	0.553	0.000	0.000	ELEC	0	410	136	104	52	42	0	0	0	0	0	744
	DAY/HR	1/13	4/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	-2.037	170.373	0.000	0.000	LOAD	678	42	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.024	0.550	0.000	0.000	ELEC	0	394	131	105	48	42	0	0	0	0	0	720
	DAY/HR	2/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	-2.177	182.632	0.000	0.000	LOAD	700	44	0	0	0	0	0	0	0	0	0	744

PEAK	-9.262	0.573	0.000	0.000	ELEC	0	404	120	89	87	44	0	0	0	0	0	744
DAY/HR	1/13	14/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV SUM	-1.999	178.021	0.000	0.000	LOAD	684	36	0	0	0	0	0	0	0	0	0	720
PEAK	-9.712	0.618	0.000	0.000	ELEC	0	420	116	50	80	36	18	0	0	0	0	720
DAY/HR	3/13	17/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC SUM	-2.405	210.645	0.000	0.000	LOAD	678	66	0	0	0	0	0	0	0	0	0	744
PEAK	-10.229	0.679	0.000	0.000	ELEC	0	396	93	57	110	44	44	0	0	0	0	744
DAY/HR	1/13	29/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP2-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr	SUM	-27.263	2403.013	0.000	0.000	LOAD	8027	733	0	0	0	0	0	0	0	0	0	8760
	PEAK	-11.005	0.775	0.000	0.000	ELEC	0	4481	1380	961	916	607	270	145	0	0	0	8760
	MON/DAY	3/ 3	2/18	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
HEAT-PUMP DW-HTR	-0.016	1.008	0.2158	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.016	1.00	0.43	73.78	150.00
Ambient					51.99

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
HEAT-PUMP DW-HTR	DHW-Loop	-0.016	0.4	0.216	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	-2.436	222.236	0.000	0.000	LOAD	660	84	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.701	0.738	0.000	0.000	ELEC	0	373	99	83	63	63	42	21	0	0	0	744
	DAY/HR	2/13	21/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	-2.272	210.006	0.000	0.000	LOAD	596	76	0	0	0	0	0	0	0	0	0	672
	PEAK	-10.982	0.775	0.000	0.000	ELEC	0	292	113	77	56	60	36	38	0	0	0	672
	DAY/HR	6/13	18/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	-2.533	234.273	0.000	0.000	LOAD	660	84	0	0	0	0	0	0	0	0	0	744
	PEAK	-11.005	0.773	0.000	0.000	ELEC	0	317	129	88	63	63	42	42	0	0	0	744
	DAY/HR	3/13	31/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	-2.534	228.977	0.000	0.000	LOAD	632	88	0	0	0	0	0	0	0	0	0	720
	PEAK	-10.871	0.758	0.000	0.000	ELEC	0	301	113	98	66	75	23	44	0	0	0	720
	DAY/HR	1/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	-2.379	212.905	0.000	0.000	LOAD	680	64	0	0	0	0	0	0	0	0	0	744
	PEAK	-10.336	0.704	0.000	0.000	ELEC	0	385	90	80	98	49	42	0	0	0	0	744
	DAY/HR	5/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	-2.212	191.728	0.000	0.000	LOAD	657	63	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.803	0.645	0.000	0.000	ELEC	0	386	119	43	105	44	23	0	0	0	0	720
	DAY/HR	12/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	-2.196	185.890	0.000	0.000	LOAD	700	44	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.341	0.592	0.000	0.000	ELEC	0	403	121	87	88	45	0	0	0	0	0	744
	DAY/HR	1/13	1/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	-2.082	175.328	0.000	0.000	LOAD	702	42	0	0	0	0	0	0	0	0	0	744
	PEAK	-9.049	0.553	0.000	0.000	ELEC	0	410	136	104	52	42	0	0	0	0	0	744
	DAY/HR	1/13	4/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	-2.037	170.373	0.000	0.000	LOAD	678	42	0	0	0	0	0	0	0	0	0	720
	PEAK	-9.024	0.550	0.000	0.000	ELEC	0	394	131	105	48	42	0	0	0	0	0	720
	DAY/HR	2/13	2/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	-2.177	182.632	0.000	0.000	LOAD	700	44	0	0	0	0	0	0	0	0	0	744

PEAK	-9.262	0.573	0.000	0.000	ELEC	0	404	120	89	87	44	0	0	0	0	0	744
DAY/HR	1/13	14/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV SUM	-1.999	178.021	0.000	0.000	LOAD	684	36	0	0	0	0	0	0	0	0	0	720
PEAK	-9.712	0.618	0.000	0.000	ELEC	0	420	116	50	80	36	18	0	0	0	0	720
DAY/HR	3/13	17/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC SUM	-2.405	210.645	0.000	0.000	LOAD	678	66	0	0	0	0	0	0	0	0	0	744
PEAK	-10.229	0.679	0.000	0.000	ELEC	0	396	93	57	110	44	44	0	0	0	0	744
DAY/HR	1/13	29/13	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

REPORT- PS-H Loads and Energy Usage for HP3-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	-27.263	2403.013	0.000	0.000	LOAD	8027	733	0	0	0	0	0	0	0	0	0	8760
PEAK	-11.005	0.775	0.000	0.000	ELEC	0	4481	1380	961	916	607	270	145	0	0	0	8760
MON/DAY	3/ 3	2/18	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
HEAT-PUMP DW-HTR	-0.016	1.008	0.2158	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.016	1.00	0.43	73.78	150.00
Ambient					51.99

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REPORT- PS-H Loads and Energy Usage for Elec-DHW WEATHER FILE- SEATTLE BOEING FI WA

EQUIPMENT TYPE	ATTACHED TO	CAPACITY (MBTU/HR)	FLOW (GPM)	EIR (FRAC)	HIR (FRAC)	AUXILIARY (KW)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	DHW-Loop	-0.012	0.5	1.000	0.000	0.000	119.0	10.00

MON		HEAT LOAD (MBTU) (KBTU/HR)	ELEC USE (KWH) (KW)	FUEL USE (MBTU) (KBTU/HR)	AUX ENERGY (KWH) (KW)		Number of hours within each PART LOAD range 00-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100+	TOTAL RUN HOURS
JAN	SUM	0.000	145.659	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.202	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	21/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
FEB	SUM	0.000	135.094	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.208	0.000	0.000	ELEC	672	0	0	0	0	0	0	0	0	0	0	672
	DAY/HR	0/ 0	18/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAR	SUM	0.000	150.024	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.207	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	31/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
APR	SUM	0.000	143.361	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.205	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	1/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
MAY	SUM	0.000	141.177	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.199	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	1/ 2	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUN	SUM	0.000	129.121	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.190	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	1/ 2	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
JUL	SUM	0.000	126.703	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.180	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	1/ 2	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
AUG	SUM	0.000	121.992	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.170	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	4/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
SEP	SUM	0.000	117.680	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.170	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	2/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
OCT	SUM	0.000	124.533	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0

	PEAK	0.000	0.174	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	14/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
NOV	SUM	0.000	127.043	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.182	0.000	0.000	ELEC	720	0	0	0	0	0	0	0	0	0	0	720
	DAY/HR	0/ 0	30/24	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0
DEC	SUM	0.000	138.364	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
	PEAK	0.000	0.193	0.000	0.000	ELEC	744	0	0	0	0	0	0	0	0	0	0	744
	DAY/HR	0/ 0	29/ 5	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

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REPORT- PS-H Loads and Energy Usage for Elec-DHW WEATHER FILE- SEATTLE BOEING FI WA

(CONTINUED)

Yr SUM	0.000	1600.751	0.000	0.000	LOAD	0	0	0	0	0	0	0	0	0	0	0	0
PEAK	0.000	0.208	0.000	0.000	ELEC	8760	0	0	0	0	0	0	0	0	0	0	8760
MON/DAY	0/ 0	2/18	0/ 0	0/ 0	FUEL	0	0	0	0	0	0	0	0	0	0	0	0

DETAILED SIZING INFORMATION

EQUIPMENT TYPE	CAPACITY (MBTU/HR)	ELECTRIC (KW)	HEAT EIR (BTU/BTU)	AUX ELEC (KW)	FUEL (MBTU/HR)	HEAT HIR (BTU/BTU)	TANK (GAL)	TANK UA (BTU/HR-F)
ELEC DW-HEATER	-0.012	3.516	1.0000	0.000	0.000	0.0000	119.0	10.00

ATTACHED TO	THERMAL (MBTU/HR)	HEAD (FT)	FLOW (GPM)	DELTA T (F)	DESIGN T (F)
DHW-Loop	-0.012	1.00	0.55	43.78	120.00
Ambient					51.99

Metropole DOE-2.3-50h 10/14/2020 11:06:06 BDL RUN 4

HOURLY REPORT- Hourly Report HVAC WEATHER FILE- SEATTLE BOEING FI WA Pg: 1 - 1

MMDDHH	EM1 LIGHT END USE KWH	EM1 TASK END USE KWH	EM1 EQUIP END USE KWH	EM1 HEAT END USE KWH	EM1 COOL END USE KWH	EM1 HTREJ END USE KWH	EM1 AUX END USE KWH	EM1 VENT END USE KWH	EM1 REFG END USE KWH	EM1 SUPP END USE KWH
	----(1)	----(2)	----(3)	----(4)	----(5)	----(6)	----(7)	----(8)	----(9)	----(10)
YEARLY SUMMARY										
MN	0.922	0.000	1.271	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MX	12.631	0.000	22.871	77.951	24.915	0.000	3.030	5.759	0.000	0.000
SM	45060.672	0.000	73822.547	34058.660	7357.061	0.000	3334.394	12258.387	0.000	0.000
AV	5.144	0.000	8.427	3.888	0.840	0.000	0.381	1.399	0.000	0.000

MMDDHH	EM1 DHW END USE KWH	EM1 EXT END USE KWH	EM1 TOTAL USAGE KWH	FM1 LIGHT END USE BTU	FM1 TASK END USE BTU	FM1 EQUIP END USE BTU	FM1 HEAT END USE BTU	FM1 COOL END USE BTU	FM1 HTREJ END USE BTU	FM1 AUX END USE BTU	FM1 VENT END USE BTU
	----(11)	----(12)	----(20)	----(1)	----(2)	----(3)	----(4)	----(5)	----(6)	----(7)	----(8)
YEARLY SUMMARY											
MN	0.156	0.000	2.355	0.	0.	0.	0.	0.	0.	0.	0.
MX	0.208	0.000	95.575	0.	0.	0.	0.	0.	0.	0.	0.
SM	1600.751	0.000	177492.469	0.	0.	0.	0.	0.	0.	0.	0.
AV	0.183	0.000	20.262	0.	0.	0.	0.	0.	0.	0.	0.

MMDDHH	FM1 REFG END USE BTU	FM1 SUPP END USE BTU	FM1 DHW END USE BTU	FM1 EXT END USE BTU	FM1 TOTAL USAGE BTU
	----(9)	----(10)	----(11)	----(12)	----(20)
YEARLY SUMMARY					
MN	0.	0.	0.	0.	0.
MX	0.	0.	0.	0.	0.
SM	0.	0.	0.	0.	0.
AV	0.	0.	0.	0.	0.

M. Cycle 2 Comment Responses

Codes Reviewed

This project has been reviewed for conformance with the following codes: 2015 Seattle Mechanical Code (SMC); 2015 Seattle Energy Code (SEC); 2015 Seattle Fuel Gas Code (SFGC); and 2015 Seattle Building Code (SBC).

Corrections

1. C407 report compliance with 2015 Seattle Energy Code:

a. Page 4: This project is a substantial alteration, and in compliance with SEC section 505.8. Provide a statement in report. Also, to include the two options selected for Additional Efficiency Package options per section C406.

Madison Engineering specific response: Please see underlined revisions in the Executive Summary on Page 4 of the cycle 2 report.

b. Page 23: infiltration has an error message.

Madison Engineering specific response: Table reference on page 23 has been updated.

c. Page 14, "Energy consumption by end-use": The proposed for service water heating and pumps are not matching BEPS report page 519. Please explain.

Madison Engineering specific response: Results have been updated and values between Table 10 and the BEPS/BEPU reports are identical in the cycle 2 report.

d. Page 20:

d.1) Please include product information such as U factor & SHGC, NFRC CPD numbers or simulation report for the proposed fenestrations. Provide calculations for the area weighted average U factor. Are the existing windows included in energy modeling?

Madison Engineering specific response: Manufacturer information on all fenestration products has been included in Appendix C.1. All fenestration products are new/replacements and are modeled explicitly so area weighted averaging is not needed. Additionally, first floor glazing complies with the Exception to C303.1.3 and U-factors are determined accordingly with Table C303.1(5).

d.2) Please include roof R2, thermal floor over trash area (this floor ID is missing on drawing), and thermal walls between trash area and heated/conditioned spaces such as B2 & A1.

Madison Engineering specific response: The entire building has been modeled as conditioned space including the trash area. In the SRD model, the exterior surfaces, including the roll-up door, are modeled according to requirements of C402.1.5. Please see thermal envelope boundary details added by others to the architectural drawings.

d.3) Provide thermal envelope diagram to identify conditioned/heated spaces.

Madison Engineering specific response: Please see thermal envelope boundary details added by others to the architectural drawings.

e. Page 9: SRD HVAC system states DOAS meeting section C503.6 is incorrect. Please revise.

Madison Engineering specific response: Reference has been updated to C403.6.

f. page 32: This page states there are six air to water heat pumps, and M004 equipment schedule shows 12 inverter driven air source heat pumps. Are these the same equipment?

Madison Engineering specific response: Appendix F.2. has been revised to 12 heat pumps to reflect the HVAC drawings. Furthermore, we have revised the model to reflect a limitation in DOE-2 of no more than 10 primary equipment components attached to a circulation loop. According to the mechanical engineer, the preliminary control strategy will be to stage heat pumps in groups of 3 (either in heating or cooling mode, but not both) with the load spread equally across those heat pumps. Then other groups of 3 will be staged on as the load increases. We have revised the model to include 4 heat pumps attached to the loop, each representing the equivalent of 3 heat pumps used in the actual design.

g. Page 12: The control to reduce flowrate and fan power for ERV is missing on M004 ERV schedule. Please explain.

Madison Engineering specific response: Please see revisions by others describing the control sequences.

h. Page 7: DOAS with energy recovery is required for offices per section C403.6, provide discussion on DOAS regarding the efficiencies in baseline and proposed design. Provide reference M sheet number.

Madison Engineering specific response: Please see added detail in Table 3 covering the design and heat recovery efficiencies of the DOAS systems included in the proposed design. Also we have added additional discussion to Section III.B. SRD HVAC System Determination to include design description and efficiency of the baseline DOAS system.

i. Page 7: Provide discussion regarding the interlock for the openable windows and cooling equipments with reference drawing number for the control.

Madison Engineering specific response: We have added a discussion of the control sequence for windows and ventilation systems. Please see revisions by others describing the control sequences.