REPORT- SV-A System Design Parameters for $\,$ P1B (B.N11) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	464.0	1.	0.1	.01 9.1	64	0.742	-8.247	0.266	0.271	-10.001
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAN	RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)
SUPPLY	306.	1.00	0.092	0.93	0.9	0.34	0.62	DRAW-THRU	CONSTANT	1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
PlB North Perim Zn (B.N11P	306.	0.	0.000	0.740	31.	0.00	0.00	7.23	0.00	-8.62	1.

WEATHER FILE- SEATTLE BOEING FI		TE - DE	MIITE	POLING	rт	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	2465.0	3.	0.1	107 46.1	38	0.742	-41.524	0.266	0.271	-50.356
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	<u>l</u>		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r controi	L (FRAC)	(FRAC)
SUPPLY	1539.	1.00	0.461	0.93	1.2	0.48	0.62	DRAW-THR	J CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
P1B North Perim Zn (B.N13P	1539.	0.	0.000	0.733	165.	0.00	0.00	39.58	0.00	-42.97	1.

REPORT- SV-F	System Design	Parameters	for	P1B	(B.NE14)	APT1 PT	ΓHΡ
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	WEATHER						
1G	COOLING	HEATIN	īG	HEAT	PUMP		
rv	FTD	r r	ΓR	CIIDD.	-нгът		

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE		IR CAPACI	TY SEI	NSIBLE (SHR)	HEATING CAPACITY (KBTU/HR) (COOLING EIR BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)	
PVVT	1.001	705.0	1.	0.1	02 13.8	93	0.742	-12.503	0.266	0.271	-15.162	
FAN	CAPACITY	DIVERSITY FACTOR	POWER DEMAND	FAN DELTA-T	STATIC PRESSURE	TOTAL EFF	MECH EFF		FAI	MAX FAN N RATIO		
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	L (FRAC)	(FRAC)	
SUPPLY	463.	1.00	0.139	0.93	1.0	0.40	0.62	DRAW-THRU	CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
P1B NE Perim Zn (B.NE14) 1	463.	0.	0.000	0.740	47.	0.00	0.00	9.99	0.00	-13.08	1.

REPORT-	SV-A	System	Design	Parameters	for	L1A	(G.E19)	APT2 PTHP
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	1033.8	1.	0.1	.31 15.8	14	0.742	-14.232	0.266	0.271	-17.259
		DILIDDATEL	DOMED		GMA MT G	moma r	MEGI			M27 F27	MIN DAN
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	1		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	I FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	L (FRAC)	(FRAC)
SUPPLY	528.	1.00	0.158	0.93	1.0	0.40	0.62	DRAW-THRU	J CONSTAN	г 1.00	0.30

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
LlA East Perim Zn (G.E19)T	528.	0.	0.000	0.700	69.	0.00	0.00	9.93	0.00	-14.06	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	749.2	1.	0.1	.61 9.2	87	0.742	-8.358	0.266	0.271	-10.136	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	H		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F F2	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)) PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	310.	1.00	0.093	0.93	0.9	0.34	0.62	2 DRAW-THI	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1A NNE Perim Zn (G.NNE24P	310.	0.	0.000	0.658	50.	0.00	0.00	8.03	0.00	-7.76	1.

	REPORT- SV-A	System Design	Parameters for	L1A (G.WNW27)	APT1 PTHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	493.5	1.	0.0	95 10.3	81	0.742	-9.343	0.266	0.271	-7.089	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	346.	1.00	0.104	0.94	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1A WNW Perim Zn (G.WNW27P	346.	0.	0.000	0.419	33.	0.00	0.00	10.35	0.00	-5.51	1.

REPORT- SV-A	System	Design	Parameters	for	L1A	(G.N28)	APT3	PTHP
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MEAIHER	r llr-	SEATILE	BOLING	rт	WA	

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1326.0	2.	0.1	107 24.6	80	0.742	-22.212	0.266	0.271	-14.826	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	823.	1.00	0.247	0.94	1.0	0.41	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1A North Perim Zn (G.N28P	823.	0.	0.000	0.336	89.	0.00	0.00	24.52	0.00	-10.51	1.

REPORT- SV-A System Design Parameters for $\,$ L1B (G.N5) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2580.0	3.	0.1	114 45.0	98	0.742	-40.588	0.266	0.271	-21.283	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTRO	L (FRAC)	(FRAC)	
SUPPLY	1504.	1.00	0.451	0.94	1.2	0.48	0.62	2 DRAW-THE	RU CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B North Perim Zn (G.N5)T	1504.	0.	0.000	0.224	172.	0.00	0.00	44.46	0.00	-12.77	1.

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REPORT-	SV-A	System	Design	Parameters	IOT	PTR	(G.EO)	APTI	PIHP

WEATHER FILE- SEATTLE BOEING FI V	MEAIHER	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	668.0	1.	0.1	11.8	19	0.742	-10.637	0.266	0.271	-8.179
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTRO	L (FRAC)	(FRAC)
SUPPLY	394.	1.00	0.118	0.94	1.0	0.37	0.62	DRAW-THR	U CONSTAN	т 1.00	0.30

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
I.1B East Perim Zn (G E6) 1	394	0	0 000	0 402	45	0 00	0 00	11 53	0 00	-6 02 1	

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.14 13.4	01	0.742	-12.061	0.266	0.271	-14.626	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	447.	1.00	0.134	0.93	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	Γ 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B West Perim Zn (G.W7) 1	447.	0.	0.000	0.722	51.	0.00	0.00	13.69	0.00	-12.29	1.

	,											
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.1	104 12.5	58	0.742	-11.302	0.266	0.271	-13.706	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	419.	1.00	0.126	0.93	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L1B West Perim Zn (G.W8) 1	419.	0.	0.000	0.736	44.	0.00	0.00	6.76	0.00	-11.73	1.

REPORT-	SV-A	System	Design	Parameters	for	L1B	(G.E9)	APT1	PTHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	713.5	1.	0.1	.13 12.5	83	0.742	-11.325	0.266	0.271	-13.734	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	420.	1.00	0.126	0.93	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L1B East Perim Zn (G.E9) 1	420.	0.	0.000	0.724	48.	0.00	0.00	7.36	0.00	-11.56	1.

WEATHER	FILE-	SEATTLE	BOETNG	FT	WΑ

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	519.0	1.	0.0	12.4	38	0.742	-11.194	0.266	0.271	-13.575	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	ı FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)	
SUPPLY	415.	1.00	0.124	0.93	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L1B East Perim Zn (G.E10)T	415.	0.	0.000	0.764	35.	0.00	0.00	7.62	0.00	-12.06	1.

				(,								
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1978.0	3.	0.1	101 39.1	.76	0.742	-35.258	0.266	0.271	-42.757	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAN	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	1307.	1.00	0.392	0.93	1.2	0.48	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B South Perim Zn (G.S11P	1307.	0.	0.000	0.740	132.	0.00	0.00	27.91	0.00	-36.76	1.

KEFORI SV		Design rara			AFII				WEATH			, r.
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	429.5	1.	0.0)96 8.9	78	0.742	-8.080	0.266	0.271	-6.447	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	300.	1.00	0.090	0.94	0.9	0.34	0.62	2 DRAW-THI	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L1B East Perim Zn (G.E29)T	300.	0.	0.000	0.446	29.	0.00	0.00	8.97	0.00	-5.08	1.

REPORT- SV-A System Design Parameters for L2A (G.E14) APT3 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	A System				AF13				WEATHI	SK FIDE SE		, r.
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1947.8	2.	0.2	248 15.6	95	0.742	-14.126	0.266	0.271	-13.573	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)	
SUPPLY	524.	1.00	0.157	0.94	1.0	0.40	0.62	DRAW-THR	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2A East Perim Zn (G.E14)T	524.	0.	0.000	0.358	130.	0.00	0.00	12.95	0.00	-7.13	1.

REPORT- SV-A System Design Parameters for $\,$ L2A (G.WNW18) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	1270.5	2.	0.1	09 23.2	98	0.742	-20.968	0.266	0.271	-14.660
		DILIDDATEL	DOMED		CMART C	moma r	MEGI			M2 17 E221	
		DIVERSITY	POWER	FAN	STATIC	TOTAL				MAX FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	n fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	777.	1.00	0.233	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L2A WNW Perim Zn (G.WNW18P	777.	0.	0.000	0.357	85.	0.00	0.00	22.60	0.00	-10.53	1.

REPORT- SV-A	System De	sign Parameters	for L2	(G N19)	APT2 PTHP

WEATHER F	ILE- SI	EATTLE 1	BOEING	FΙ	WA
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KEFORT SV	A System				, AF12				WEATH		ATIBE BOEING	, r.
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1039.0	1.	0.1	.22 17.0	58	0.742	-15.353	0.266	0.271	-8.948	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	569.	1.00	0.171	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2A North Perim Zn (G.N19P	569.	0.	0.000	0.256	69.	0.00	0.00	16.87	0.00	-5.53	1.

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	<i>I</i> 2	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	.29 45.3	29	0.742	-40.796	0.266	0.271	-22.210	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1512.	1.00	0.453	0.94	1.2	0.48	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B North Perim Zn (G.N4)T	1512.	0.	0.000	0.218	195.	0.00	0.00	44.38	0.00	-12.52	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	119 16.4	84	0.742	-14.835	0.266	0.271	-11.724	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	1		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			AN FAI			
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)) PLACEMEN	NT CONTROI	L (FRAC)	(FRAC)	
GIIDDI II	550.	1.00	0.165	0.94	1.0	0.40	0.62			1 00	0.20	
SUPPLY	550.	1.00	0.105	0.94	1.0	0.40	0.62	2 DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B East Perim Zn (G.E5) 1	550.	0.	0.000	0.409	66.	0.00	0.00	16.15	0.00	-8.53	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.38 11.1	.29	0.742	-10.016	0.266	0.271	-8.498	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	371.	1.00	0.111	0.94	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B West Perim Zn (G.W6) 1	371.	0.	0.000	0.426	51.	0.00	0.00	10.86	0.00	-6.01	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	26 5.8	03	0.742	-5.223	0.266	0.271	-3.345	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	194.	1.00	0.058	0.94	0.8	0.30	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B West Perim Zn (G.W7) 1	194.	0.	0.000	0.226	44.	0.00	0.00	4.69	0.00	-1.17	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	628.5	1.	0.2	222 5.6	60	0.742	-5.094	0.266	0.271	-3.124
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROI	(FRAC)	(FRAC)
SUPPLY	189.	1.00	0.057	0.94	0.8	0.30	0.62	DRAW-THR	U CONSTANT	1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
I.2B East Perim Zn (G E8) 1	189	0	0 000	0 222	42	0 00	0 00	4 64	0 00	-1 04 1	

KEFORT SV	A System				AFII F				WEATH	SK FIDE SE	ATIDE BOEIN	, r.
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	558.0	1.	0.1	.50 7.4	37	0.742	-6.693	0.266	0.271	-7.717	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	an fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	248.	1.00	0.074	0.94	0.9	0.34	0.62	2 DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L2B East Perim Zn (G.E9) 1	248.	0.	0.000	0.629	37.	0.00	0.00	6.34	0.00	-5.94	1.

REPORT- SV-A System Design Parameters for $\,$ L2B (G.S10) APT6 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	2721.0	3.	0.1	.51 36.0	21	0.742	-32.419	0.266	0.271	-21.296
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	' EFF	' FA	n fai	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	1202.	1.00	0.360	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2B South Perim Zn (G.S10P	1202.	0.	0.000	0.270	182.	0.00	0.00	36.20	0.00	-12.30	1.

				LZB (G	E23) APII				WEAIH	ER FILE- SE	AIILE BUEIN	G F1 W
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.1	18 12.1	23	0.742	-10.911	0.266	0.271	-10.072	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	404.	1.00	0.121	0.94	1.0	0.37	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
LOD Book Dowley Gray (C. DOO) III	404.	0	0.000	0.507	4.0	0.00	0.00	11 05	0 00	-7.79	1
L2B East Perim Zn (G.E23)T	404.	0.	0.000	0.507	48.	0.00	0.00	11.85	0.00	-7.79	1.

REPORT- SV-A System Design Parameters for L3A (G.E13) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	2229.8	3.	0.2	48 17.9	87	0.742	-16.189	0.266	0.271	-11.800
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA:	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)
SUPPLY	600.	1.00	0.180	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A East Perim Zn (G.E13)T	600.	0.	0.000	0.248	149.	0.00	0.00	14.52	0.00	-4.39	1.

REPORT- SV-A System Design Parameters for $\,$ L3A (G.NW17) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	915.5	1.	0.1	117 15.7	02	0.742	-14.132	0.266	0.271	-8.981	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEME	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	524.	1.00	0.157	0.94	1.0	0.40	0.62	2 DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A NW Perim Zn (G.NW17) 1	524.	0.	0.000	0.301	61.	0.00	0.00	14.18	0.00	-5.98	1.

REPORT- SV-A System Design Parameters for $\,$ L3A (G.N18) APT3 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1566.5	2.	0.1	.31 23.9	28	0.742	-21.535	0.266	0.271	-11.656	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	798.	1.00	0.239	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A North Perim Zn (G.N18P	798.	0.	0.000	0.214	105.	0.00	0.00	22.85	0.00	-6.47	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2478.2	3.	0.1	172 28.8	23	0.742	-25.941	0.266	0.271	-17.612	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	962.	1.00	0.288	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	ULT
L3A West Perim Zn (G.W21)T	962.	0.	0.000	0.258	165.	0.00	0.00	25.70	0.00	-9.40	1.

REPORT- SV-A	System Design	Parameters	for	L3A	(G.SW22)	APT1 P	THP
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	944.2	1.	0.1	.29 14.6	26	0.742	-13.163	0.266	0.271	-8.607	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	488.	1.00	0.146	0.94	1.0	0.40	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A SW Perim Zn (G.SW22) 1	488.	0.	0.000	0.297	63.	0.00	0.00	14.42	0.00	-5.50	1.

REPORT- SV-	System Des	gn Parameters	for L3A	(G.S24)	APT3 PTHP
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1832.5	2.	0.1	.44 25.3	80	0.742	-22.842	0.266	0.271	-13.031	
								_				
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	847.	1.00	0.254	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3A South Perim Zn (G.S24P	847.	0.	0.000	0.217	122.	0.00	0.00	26.65	0.00	-6.95	1.

REPORT- SV-	A System	Design	Parameters	for	L3B	(G.N4)	APT4	PTHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	136 43.0	03	0.742	-38.703	0.266	0.271	-20.644	
					ama m = a							
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	an fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1435.	1.00	0.430	0.94	1.2	0.48	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B North Perim Zn (G.N4)T	1435.	0.	0.000	0.201	195.	0.00	0.00	40.78	0.00	-10.93	1.

REPORT- SV-A System Design Parameters for L3B (G.E5) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	129 15.2	89	0.742	-13.760	0.266	0.271	-10.096	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	510.	1.00	0.153	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	Γ 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L3B East Perim Zn (G.E5) 1	510.	0.	0.000	0.356	66.	0.00	0.00	14.50	0.00	-6.88	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.36 11.2	89	0.742	-10.160	0.266	0.271	-7.680	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)	
SUPPLY	377.	1.00	0.113	0.94	1.0	0.37	0.62	DRAW-THRU	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
L3B West Perim Zn (G.W6) 1	377.	0.	0.000	0.362	51.	0.00	0.00	10.52	0.00	-5.18	1.

REPORT- SV-A System Design Parameters for $\,$ L3B (G.W7) APT1 PTHP $\,$

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	122 5.9	03	0.742	-5.313	0.266	0.271	-3.738	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAN	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)	
SUPPLY	197.	1.00	0.059	0.94	0.8	0.30	0.62	DRAW-THRU	CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B West Perim Zn (G.W7) 1	197.	0.	0.000	0.222	44.	0.00	0.00	4.63	0.00	-1.56	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.2	219 5.7	46	0.742	-5.172	0.266	0.271	-3.380	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA:	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	192.	1.00	0.057	0.94	0.8	0.30	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L3B East Perim Zn (G.E8) 1	192.	0.	0.000	0.219	42.	0.00	0.00	4.62	0.00	-1.29	1.

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	789.0	1.	0.1	10.0	06	0.742	-9.006	0.266	0.271	-9.058	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	H		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)) PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	334.	1.00	0.100	0.94	1.0	0.37	0.62	2 DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L3B East Perim Zn (G.E9) 1	334.	0.	0.000	0.513	53.	0.00	0.00	9.59	0.00	-6.50	1.

REPORT- SV-	A System	Design	Parameters	for	L3B	(G.S10)	APT7	PTHP
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MEATHER	FILE-	SEATTLE	BOETNG	ΔW TH

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.1	.59 50.1	20	0.742	-45.108	0.266	0.271	-27.900	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	an fan	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	1672.	1.00	0.501	0.94	1.2	0.48	0.62	2 DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B South Perim Zn (G.S10P	1672.	0.	0.000	0.232	266.	0.00	0.00	47.57	0.00	-14.69	1.

REPORT- SV-A System Design Parameters for L3B (G.E19) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.1	.27 11.2	80	0.742	-10.152	0.266	0.271	-8.565	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	i i		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FAI	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	376.	1.00	0.113	0.94	1.0	0.37	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L3B East Perim Zn (G.E19)T	376.	0.	0.000	0.438	48.	0.00	0.00	10.69	0.00	-6.25	1.

REPORT- SV-A System Design Parameters for L4A (G.E13) APT4 PTHP

MEVLIED	RTI.R.	SEATTLE	PORTNO	RΤ	TaT 7\
WEATHER	r illi-	SEALILE	BOLING	rт	WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2229.8	3.	0.2	246 18.0	99	0.742	-16.289	0.266	0.271	-11.413	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	(FRAC)	(FRAC)	
SUPPLY	604.	1.00	0.181	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZON	NE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MUI	LT
L4A East Perim Zn (G.E13)T	604.	0.	0.000	0.246	149.	0.00	0.00	14.64	0.00	-4.00 1	1.

REPORT- SV-A System Design Parameters for $\,$ L4A (G.NW17) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

				(
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	915.5	1.	0.1	.15 15.8	64	0.742	-14.278	0.266	0.271	-8.395	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	529.	1.00	0.159	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L4A NW Perim Zn (G.NW17) 1	529.	0.	0.000	0.268	61.	0.00	0.00	14.58	0.00	-5.38	1.

REPORT-	SV-A	System	Design	Parameters	for	L4A	(G.N18)	APT3 I	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	1566.5	2.	0.1	.30 24.1	76	0.742	-21.758	0.266	0.271	-11.246
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	Į.		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	806.	1.00	0.242	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L4A North Perim Zn (G.N18P	806.	0.	0.000	0.198	105.	0.00	0.00	23.13	0.00	-6.05	1.

REPORT- SV-A System Design Parameters for $\,$ L4A (G.W21) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	2478.2	3.	0.1	173 28.6	61	0.742	-25.795	0.266	0.271	-15.678
		DIVERSITY	POWER	FAN	STATIC	TOTAI	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	956.	1.00	0.287	0.94	1.2	0.47	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION		
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT	
I.4A West Perim Zn (G W21)T	956.	0	0.000	0.205	165	0 00	0 00	24 46	0 00	-7 43	1	

KEPORI- SV		Design Para			AFII				WEAINI	SE	AIILE BOEING	, FI (
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	944.2	1.	0.1	.28 14.7	87	0.742	-13.308	0.266	0.271	-8.213	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	493.	1.00	0.148	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	ULT
L4A SW Perim Zn (G.SW22) 1	493.	0.	0.000	0.273	63.	0.00	0.00	14.99	0.00	-5.10	1.

REPORT-	SV-A	System	Design	Parameters	for	L4A	(G.S24)	APT3	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	1832.5	2.	0.1	.48 24.8	348	0.742	-22.363	0.266	0.271	-11.694
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	829.	1.00	0.248	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4A South Perim Zn (G.S24P	829.	0.	0.000	0.178	122.	0.00	0.00	23.98	0.00	-5.60	1.

REPORT- SV	/-A System	Design Para	meters for	L4В (С	.N4) APT4 P	THP			WEATH	EK FILE- SE	ATTLE BOEIN	G FI WA
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	135 43.3	884	0.742	-39.045	0.266	0.271	-19.969	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	' EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1447.	1.00	0.434	0.94	1.2	0.48	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4B North Perim Zn (G.N4)T	1447.	0.	0.000	0.187	195.	0.00	0.00	41.23	0.00	-10.24	1.

		5		,								
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	127 15.5	25	0.742	-13.973	0.266	0.271	-9.668	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ī		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF			n FAI			
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	518.	1.00	0.155	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L4B East Perim Zn (G.E5) 1	518.	0.	0.000	0.328	66.	0.00	0.00	14.76	0.00	-6.44	1.

REPORT-	SV-A	System	Design	Parameters	for	L4B	(G.W6)	APT1	PTHP
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	12.1	.13	0.742	-10.901	0.266	0.271	-7.332	
		DIVIDOGENIA	DOMED	T7337	OMA MIT O	moma r	MEGN			MAY DAN	MTN FIN	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	Į.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	I FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROI	L (FRAC)	(FRAC)	
SUPPLY	404.	1.00	0.121	0.94	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L4B West Perim Zn (G.W6) 1	404.	0.	0.000	0.315	51.	0.00	0.00	11.14	0.00	-4.82	1.

REPORT- SV-A System Design Parameters for $\,$ L4B (G.W7) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI V	MEAIHER	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	219 5.9	79	0.742	-5.381	0.266	0.271	-3.629	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	199.	1.00	0.060	0.94	0.8	0.30	0.62	2 DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4B West Perim Zn (G.W7) 1	199.	0.	0.000	0.219	44.	0.00	0.00	4.69	0.00	-1.45	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.2	217 5.7	98	0.742	-5.218	0.266	0.271	-3.263	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	193.	1.00	0.058	0.94	0.8	0.30	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L4B East Perim Zn (G.E8) 1	193.	0.	0.000	0.217	42.	0.00	0.00	4.68	0.00	-1.17	1.

REPORT- SV-A System Design Parameters for $\,$ L4B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

				(
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	I A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	789.0	1.	0.1	157 10.0	47	0.742	-9.042	0.266	0.271	-8.296
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROI	L (FRAC)	(FRAC)
SUPPLY	335.	1.00	0.100	0.94	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L4B East Perim Zn (G.E9) 1	335.	0.	0.000	0.450	53.	0.00	0.00	10.40	0.00	-5.72	1.

KEFORT SV	A System				AF17				WEATH			3 F.L
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.1	162 49.2	79	0.742	-44.351	0.266	0.271	-25.591	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1644.	1.00	0.493	0.94	1.2	0.48	0.62	DRAW-THE	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L4B South Perim Zn (G.S10P	1644.	0.	0.000	0.198	266.	0.00	0.00	47.04	0.00	-12.35	1.

REPORT SV		Design Fara	IOI) dru) APII				WEAIRI	SE	AIILE BOEIN	
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.1	.23 11.6	43	0.742	-10.479	0.266	0.271	-8.179	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r controi	L (FRAC)	(FRAC)	
SUPPLY	388.	1.00	0.116	0.94	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	NE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	LT
L4B East Perim Zn (G.E19)T	388.	0.	0.000	0.398	48.	0.00	0.00	11.06	0.00	-5.86	1.

REPORT- SV-A System Design Parameters for L5A (G.E13) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REFORT BY	, H Dybeem											, , , , , , , , , , , , , , , , , , , ,
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2229.8	3.	0.2	244 18.2	73	0.742	-16.445	0.266	0.271	-11.417	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	610.	1.00	0.183	0.94	1.0	0.40	0.62	2 DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5A East Perim Zn (G.E13)T	610.	0.	0.000	0.244	149.	0.00	0.00	14.88	0.00	-4.01	1.

DEDODE	O17 7	Creation	Dogian	Parameters	£ 0.00	TEA	(G.NW17)	7 D/D1	DITTID
KEPORI-	5 V - A	System	Desidi	Parameters	TOT	LDA	(G.NWI/)	APII	PIMP

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 					 			 	 	 		-		

FLOOR				OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT		
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)		
PVVT	1.001	915.5	1.	0.1	.11 16.4	80	0.742	-14.832	0.266	0.271	-8.778		
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN		
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO		
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)		
SUPPLY	550.	1.00	0.165	0.94	1.0	0.40	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30		

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5A NW Perim Zn (G.NW17) 1	550.	0.	0.000	0.277	61.	0.00	0.00	15.13	0.00	-5.77	1.

REPORT- SV-A	System De	esign E	Parameters	for	L5A	(G.N18)	APT3	PTHP
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1566.5	2.	0.1	.26 24.8	42	0.742	-22.358	0.266	0.271	-11.596	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	829.	1.00	0.248	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L5A North Perim Zn (G.N18P	829.	0.	0.000	0.204	105.	0.00	0.00	23.80	0.00	-6.40	1.

REPORT- SV-	A System	Design	Parameters	for	L5A	(G.W21)	APT4	PTHP
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MEATHER	FILE-	SEATTLE	BOETNG	ΔW TH

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		FLOOR		OUTS	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. 1	AIR CAPACITY SENSIBLE		CAPACITY	EIR	EIR	SUPP-HEAT		
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	RATIO (KBTU/HR) (SHR) ((KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)		
PVVT	1.001	2478.2	3.	0.1	173 28.6	97	0.742	-25.827	0.266	0.271	-15.679	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH]		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)	
SUPPLY	957.	1.00	0.287	0.94	1.2	0.47	0.62	DRAW-THR	J CONSTANT	г 1.00	0.30	

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
I.5A West Perim Zn (G W21)T	957	0	0 000	0 205	165	0 00	0 00	24 50	0 00	-7 43 1	

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	944.2	1.	0.1	14.9	06	0.742	-13.416	0.266	0.271	-8.213
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	eff.	FA FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	497.	1.00	0.149	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
I.5A SW Perim Zn (G SW22) 1	497	0	0 000	0 271	63	0 00	0 00	15 43	0.00	-5 10	1

REPORT- SV-A System Design Parameters for $\,$ L5A (G.S24) APT3 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1832.5	2.	0.1	.47 24.8	65	0.742	-22.378	0.266	0.271	-11.694	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	829.	1.00	0.249	0.94	1.0	0.41	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5A South Perim Zn (G.S24P	829.	0.	0.000	0.178	122.	0.00	0.00	24.00	0.00	-5.59	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.N4) APT4 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

	,											
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	135 43.5	520	0.742	-39.168	0.266	0.271	-19.970	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1452.	1.00	0.435	0.94	1.2	0.48	0.62	DRAW-THR	U CONSTAN	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B North Perim Zn (G.N4)T	1452.	0.	0.000	0.186	195.	0.00	0.00	41.36	0.00	-10.24	1.

REFORT BY	, H Dybecm	Debign rara										
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	126 15.6	03	0.742	-14.043	0.266	0.271	-9.669	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	an fan	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	521.	1.00	0.156	0.94	1.0	0.40	0.62	2 DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L5B East Perim Zn (G.E5) 1	521.	0.	0.000	0.326	66.	0.00	0.00	14.84	0.00	-6.44	1.

REPORT- SV-	A System	Design	Parameters	for	L5B	(G.W6)	APT1 PTHE	2
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.25 12.2	75	0.742	-11.047	0.266	0.271	-7.335	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	409.	1.00	0.123	0.94	1.0	0.37	0.62	2 DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B West Perim Zn (G.W6) 1	409.	0.	0.000	0.311	51.	0.00	0.00	11.26	0.00	-4.83	1.

REPORT- ST	V-A	System	Design	Parameters	for	L5B	(G.W7)	APT1	PTHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	216 6.0	69	0.742	-5.462	0.266	0.271	-3.629	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	202.	1.00	0.061	0.94	0.8	0.30	0.62	DRAW-THE	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B West Perim Zn (G.W7) 1	202.	0.	0.000	0.216	44.	0.00	0.00	4.75	0.00	-1.45	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.E8) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	628.5	1.	0.2	216 5.8	324	0.742	-5.241	0.266	0.271	-3.263
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTRO	L (FRAC)	(FRAC)
SUPPLY	194.	1.00	0.058	0.94	0.8	0.30	0.62	DRAW-THR	U CONSTAN	т 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B East Perim Zn (G.E8) 1	194.	0.	0.000	0.216	42.	0.00	0.00	4.70	0.00	-1.17	1.

REPORT- SV-A System Design Parameters for $\,$ L5B (G.E9) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		J		- , -	,							
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	K A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	789.0	1.	0.1	.49 10.6	04	0.742	-9.543	0.266	0.271	-8.296	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r controi	(FRAC)	(FRAC)	
SUPPLY	354.	1.00	0.106	0.94	1.0	0.37	0.62	DRAW-THRU	J CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B East Perim Zn (G.E9) 1	354.	0.	0.000	0.426	53.	0.00	0.00	11.54	0.00	-5.72	1.

REPORT- SV-A	System Design	Parameters	for L5	B (G.S10)	APT7 PTHP
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WEATHER FILE- SEATTLE BOE	ING I	ľΙ	WA
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REFORT BY	, H Dybecm	Debign rara										
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.1	.62 49.3	00	0.742	-44.370	0.266	0.271	-25.591	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	L (FRAC)	(FRAC)	
SUPPLY	1645.	1.00	0.493	0.94	1.2	0.48	0.62	DRAW-THE	RU CONSTANT	Γ 1.00	0.30	

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L5B South Perim Zn (G.S10P	1645.	0.	0.000	0.198	266.	0.00	0.00	47.06	0.00	-12.35	1.

KEFORT SV	A System		IOI		AFII				WEATH	SK FIDE SE	ATIDE BOEIN	, ri
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	714.0	1.	0.1	12.0	49	0.742	-10.844	0.266	0.271	-8.301	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	402.	1.00	0.120	0.94	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZON	E
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MUL	Т
L5B East Perim Zn (G.E19)T	402.	0.	0.000	0.392	48.	0.00	0.00	11.45	0.00	-5.98 1	

REPORT- SV-A	System	Design	Parameters	for	L6A	(G.E13)	APT4	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2229.8	3.	0.2	230 19.3	89	0.742	-17.450	0.266	0.271	-12.200	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	647.	1.00	0.194	0.94	1.0	0.41	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30	

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
L6A East Perim Zn (G.E13)T	647.	0.	0.000	0.230	149.	0.00	0.00	16.08	0.00	-4.78	1.

REPORT- S	SV-A	System	Design	Parameters	for	L6A	(G.NW17)	APT1	PTHP
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WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA	

	,			(-							
		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	ENSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	731.2	1.	0.0)95 15.3	30	0.742	-13.797	0.266	0.271	-8.225
		DIVERSITY	POWER	FAN	STATIC	TOTAL	_ MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	e EFF	FA FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTRO	L (FRAC)	(FRAC)
SUPPLY	511.	1.00	0.153	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	т 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
L6A NW Perim Zn (G NW17) 1	511	0	0 000	0 301	49	0 00	0 00	14 33	0 00	-5 84 1	

REPORT- SV-A	System	Design	Parameters	for	L6A	(G.N18)	APT3 PTHP	1
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WEATHER E	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1404.0	2.	0.1	.04 26.9	28	0.742	-24.235	0.266	0.271	-12.118	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	(FRAC)	(FRAC)	
SUPPLY	898.	1.00	0.269	0.94	1.2	0.47	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A North Perim Zn (G.N18P	898.	0.	0.000	0.213	94.	0.00	0.00	26.51	0.00	-7.26	1.

REPORT- S	SV-A	System	Design	Parameters	for	L6A	(G.W21)	APT4	PTHP
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	WEATHER	FILE-	SEATTLE		BOEING	FI	WA	
IG	COOLING	HEATIN	īG	HEAT	PUMP			
Ϋ́	EIR	E	ΙR	SUPP-	-HEAT			

SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE		IR CAPACIT	TY SEN	SIBLE	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)	
PVVT	1.001	2478.2	3.	0.15	31.31	4	0.742	-28.182	0.266	0.271	-17.255	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH			MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	I FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F) ((IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	CONTROI	(FRAC)	(FRAC)	
SUPPLY	1045.	1.00	0.313	0.94	1.2	0.47	0.62	DRAW-THR	J CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A West Perim Zn (G.W21)T	1045.	0.	0.000	0.228	165.	0.00	0.00	27.45	0.00	-9.03	1.

REPORT- SV-A System Design Parameters for $\,$ L6A (G.SW22) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	Z Z	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	944.2	1.	0.1	.25 15.0	71	0.742	-13.564	0.266	0.271	-8.326
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	' EFF	F FA	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)
SUPPLY	503.	1.00	0.151	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L6A SW Perim Zn (G.SW22) 1	503.	0.	0.000	0.274	63.	0.00	0.00	15.83	0.00	-5.22	1.

REPORT- SV		Design Para	IOI		API3				HIRAW	ER FILE- SE	AIILE BOEING	3 FI W.
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1832.5	2.	0.1	145 25.3	52	0.742	-22.817	0.266	0.271	-12.869	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r controi	L (FRAC)	(FRAC)	
SUPPLY	846.	1.00	0.254	0.94	1.0	0.41	0.62	DRAW-THRU	J CONSTANT	Γ 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6A South Perim Zn (G.S24P	846.	0.	0.000	0.212	122.	0.00	0.00	24.55	0.00	-6.79	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2928.0	4.	0.1	.31 44.6	29	0.742	-40.166	0.266	0.271	-20.535	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	(FRAC)	(FRAC)	
SUPPLY	1489.	1.00	0.446	0.94	1.2	0.48	0.62	DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B North Perim Zn (G.N4)T	1489.	0.	0.000	0.192	195.	0.00	0.00	42.50	0.00	-10.81	1.

REPORT- SV-A System Design Parameters for L6B (G.E5) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

REFORT BY	, H Dybeem								WEISTIN			
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	984.0	1.	0.1	123 16.0	66	0.742	-14.460	0.266	0.271	-9.812	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	536.	1.00	0.161	0.94	1.0	0.40	0.62	2 DRAW-THR	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZO	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MU	JLT
L6B East Perim Zn (G.E5) 1	536.	0.	0.000	0.324	66.	0.00	0.00	15.29	0.00	-6.59	1.

KEFOKI SV	A System	Design rara	IOI	100 (0	wo, AFII F				WEATH	SK FIDE SE	ATTHE BOETNO	,
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	.23 12.4	84	0.742	-11.236	0.266	0.271	-7.343	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	416.	1.00	0.125	0.94	1.0	0.37	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B West Perim Zn (G.W6) 1	416.	0.	0.000	0.306	51.	0.00	0.00	11.48	0.00	-4.83	1.

REPORT-	SV-A	System	Design	Parameters	for	L6B	(G.W7)	APT1	PTHP
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	WEA	THER	FILE-	SEATTLE	BOEING	FΙ	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RA	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.2	206 6.3	51	0.742	-5.716	0.266	0.271	-3.631	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTRO	L (FRAC)	(FRAC)	
SUPPLY	212.	1.00	0.064	0.94	0.9	0.34	0.62	2 DRAW-TH	RU CONSTAN	T 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L6B West Perim Zn (G.W7) 1	212.	0.	0.000	0.206	44.	0.00	0.00	5.08	0.00	-1.45	1.

REPORT- SV-A System Design Parameters for	· 1,6B (G.E8)	APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI V	MEAIHER	WA
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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.2	214 5.8	183	0.742	-5.295	0.266	0.271	-3.265	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F.F.F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	196.	1.00	0.059	0.94	0.8	0.30	0.62	DRAW-THE	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L6B East Perim Zn (G.E8) 1	196.	0.	0.000	0.214	42.	0.00	0.00	4.76	0.00	-1.18	1.

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. I	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	789.0	1.	0.1	.34 11.7	50	0.742	-10.575	0.266	0.271	-8.298	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	an fan	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	392.	1.00	0.118	0.94	1.0	0.37	0.62	P DRAW-THE	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L6B East Perim Zn (G.E9) 1	392.	0.	0.000	0.385	53.	0.00	0.00	10.96	0.00	-5.72	1.

REPORT- SV-A	System Des	gn Parameters	for L6B	(G.S10)	APT7 PTHP
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		WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA
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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.1	.61 49.3	54	0.742	-44.419	0.266	0.271	-25.593	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1646.	1.00	0.494	0.94	1.2	0.48	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L6B South Perim Zn (G.S10P	1646.	0.	0.000	0.198	266.	0.00	0.00	47.12	0.00	-12.35	1.

REPORT- SV-	A System	Design	Parameters	for	L6B	(G.E19)	APT1 I	PTHP
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	SEATTLE		

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	659.0	1.	0.1	.00 13.1	70	0.742	-11.853	0.266	0.271	-8.815
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)
SUPPLY	439.	1.00	0.132	0.94	1.0	0.40	0.62	DRAW-TH	RU CONSTANT	г 1.00	0.30

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	CONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	IULT
L6B East Perim Zn (G.E19)T	439.	0.	0.000	0.401	44.	0.00	0.00	12.76	0.00	-6.69	1.

REPORT- SV-	A System	Design	Parameters	for	L7A	(G.E13)	APT2 PTHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	956.8	1.	0.2	225 8.5	08	0.742	-7.657	0.266	0.271	-5.771	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	284.	1.00	0.085	0.94	0.9	0.34	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L7A East Perim Zn (G.E13)T	284.	0.	0.000	0.241	64.	0.00	0.00	7.31	0.00	-2.58	1.

REPORT- SV-A System Design Parameters	for	L7A	(G.W18)	APT2	PTHP
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REFORT BY	, H Dybeem			E/A (G.WIO) ALIZ TIM					WEATHER TIBE CHATTER BORING IT WA			
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	999.0	1.	0.1	.64 12.1	55	0.742	-10.940	0.266	0.271	-7.086	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	IT CONTROL	(FRAC)	(FRAC)	
SUPPLY	405.	1.00	0.122	0.94	1.0	0.37	0.62	2 DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZON	ΙE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MUL	Т
L7A West Perim Zn (G.W18)T	405.	0.	0.000	0.246	67.	0.00	0.00	11.15	0.00	-3.77 1	

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		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	891.8	1.	0.1	122 14.6	08	0.742	-13.147	0.266	0.271	-8.062	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	487.	1.00	0.146	0.94	1.0	0.40	0.62	DRAW-THI	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L7A SW Perim Zn (G.SW19) 1	487.	0.	0.000	0.278	60.	0.00	0.00	14.19	0.00	-5.13	1.

REPORT- SV-A System Design Parameters for $\,$ L7A (G.SSE23) APT2 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	1282.5	2.	0.1	142 18.0	11	0.742	-16.210	0.266	0.271	-10.459	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	601.	1.00	0.180	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7A SSE Perim Zn (G.SSE23P	601.	0.	0.000	0.273	86.	0.00	0.00	17.54	0.00	-6.22	1.

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	2668.0	3.	0.1	.06 50.2	32	0.742	-45.209	0.266	0.271	-23.194	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	1676.	1.00	0.502	0.94	1.2	0.48	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B North Perim Zn (G.N4)T	1676.	0.	0.000	0.227	178.	0.00	0.00	49.44	0.00	-14.40	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	919.0	1.	0.1	.00 18.3	80	0.742	-16.542	0.266	0.271	-11.039	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ł.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r F	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	613.	1.00	0.184	0.94	1.0	0.40	0.62	2 DRAW-THI	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B East Perim Zn (G.E5) 1	613.	0.	0.000	0.346	61.	0.00	0.00	17.92	0.00	-8.05	1.

CEFORI SV									WEATH		ATTHE BOETNO	, r.
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	rio (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	765.0	1.	0.1	102 15.0	62	0.742	-13.556	0.266	0.271	-9.205	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I.		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	502.	1.00	0.151	0.94	1.0	0.40	0.62	2 DRAW-THE	RU CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L7B West Perim Zn (G.W6) 1	502.	0.	0.000	0.353	51.	0.00	0.00	14.09	0.00	-6.72	1.

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	654.5	1.	0.1	49 8.7	79	0.742	-7.901	0.266	0.271	-5.819	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FAI	n FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)	
SUPPLY	293.	1.00	0.088	0.94	0.9	0.34	0.62	DRAW-THR	U CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B West Perim Zn (G.W7) 1	293.	0.	0.000	0.330	44.	0.00	0.00	7.62	0.00	-3.67	1.

REPORT- SV	V-A	System	Design	Parameters	for	L7B	(G.E8)	APT1	PTHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	628.5	1.	0.1	159 7.9	12	0.742	-7.120	0.266	0.271	-5.388	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROI	(FRAC)	(FRAC)	
SUPPLY	264.	1.00	0.079	0.94	0.9	0.34	0.62	2 DRAW-THR	U CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	MULT
L7B East Perim Zn (G.E8) 1	264.	0.	0.000	0.332	42.	0.00	0.00	6.85	0.00	-3.32	1.

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	789.0	1.	0.0	16.1	14	0.742	-14.502	0.266	0.271	-10.144	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	r FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	(FRAC)	(FRAC)	
SUPPLY	538.	1.00	0.161	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	EXTRACTION		HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B East Perim Zn (G.E9) 1	538.	0.	0.000	0.372	53.	0.00	0.00	15.68	0.00	-7.59	1.

REPORT- SV-A System Design Parameters for $\,$ L7B (G.SSW10) APT7 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSIDE COOLING			HEATING	COOLING	HEATING	HEAT PUMP		
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	3981.5	5.	0.1	.40 57.0	42	0.742	-51.337	0.266	0.271	-37.305	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA1	I FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	r control	(FRAC)	(FRAC)	
SUPPLY	1903.	1.00	0.570	0.94	1.2	0.48	0.62	DRAW-THRU	J CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7B SSW Perim Zn (G.SSW10P	1903.	0.	0.000	0.336	266.	0.00	0.00	57.58	0.00	-24.24	1.

REPORT- SV-A System Design Parameters for $\,$ L8A (G.E3) APT2 PTHP $\,$

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	956.8	1.	0.1	.73 11.0	52	0.742	-9.947	0.266	0.271	-7.759	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	ı		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)) PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	369.	1.00	0.111	0.94	1.0	0.37	0.62	2 DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE 2	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) N	MULT
L8A East Perim Zn (G.E3) 2	369.	0.	0.000	0.329	64.	0.00	0.00	9.62	0.00	-4.60	1.

REPORT- SV-A System Design Parameters for L8A (G.W8) APT2 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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FLOOR					DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	891.0	1.	0.1	0.131 13.558		0.742	-12.202	0.266	0.271	-8.171	
								_				
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FA	n fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	452.	1.00	0.136	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE ZONE	
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) MULT	
I.8A West Perim Zn (G W8) 2	452	0	0 000	0 306	59	0 00	0 00	13 07	0 00	-5 24 1	

REPORT- SV-A	System Design	Parameters 1	for I.8A	(G.SW9)	APT1 PTHP

MEVLHEB	FILE-	SEATTLE	BOETNG	FТ	TAT Z

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	I	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	688.5	1.	0.1	.05 13.0	162	0.742	-11.756	0.266	0.271	-7.779	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F FA	AN FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	NT CONTROL	L (FRAC)	(FRAC)	
SUPPLY	436.	1.00	0.131	0.94	1.0	0.40	0.62	DRAW-THE	RU CONSTANT	г 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	I	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L8A SW Perim Zn (G.SW9) A	436.	0.	0.000	0.335	46.	0.00	0.00	12.20	0.00	-5.54	1.

REPORT- SV-A System Design Parameters for $\,$ L8A (G.NW11) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

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		FLOOR		OUTS	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX		AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	IR)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	776.5	1.	0.0	18.8	21	0.742	-16.939	0.266	0.271	-9.454	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	, FA	N FAI	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	628.	1.00	0.188	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTANT	r 1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L8A NW Perim Zn (G.NW11) 1	628.	0.	0.000	0.291	52.	0.00	0.00	18.32	0.00	-6.93	1.

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REPORT-	SV-A	System	Design	Parameters	Ior	L8A	(G.NE12)	APTI	PITHP

WEATHER	FILE-	SEATTLE	BOEING	FΙ	WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)
PVVT	1.001	948.8	1.	0.1	02 18.6	53	0.742	-16.788	0.266	0.271	-9.789
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	' FAI	N FAI	N RATIO	RATIO
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN'	r control	L (FRAC)	(FRAC)
SUPPLY	622.	1.00	0.187	0.94	1.0	0.40	0.62	DRAW-THR	U CONSTAN	r 1.00	0.30

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

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE :	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) I	MULT
L8A NE Perim Zn (G.NE12) 1	622.	0.	0.000	0.283	63.	0.00	0.00	18.37	0.00	-6.68	1.

REPORT- SV	/-A System	Design Parai	meters for	L8A (G	SI3) APTI	PIHP			WEATHE	SK FILE- SE	ATTLE BOEIN	G FI WA
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	A	IR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	IO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	540.0	1.	0.1	.25 8.6	13	0.742	-7.752	0.266	0.271	-4.938	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	N FAN	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	287.	1.00	0.086	0.94	0.9	0.34	0.62	DRAW-THR	U CONSTANT	1.00	0.30	
TYPE	(CFM)	FACTOR (FRAC)	DEMAND (KW)	DELTA-T (F)	PRESSURE (IN-WATER)	EFF (FRAC)	EFF (FRAC)	PLACEMEN	T CONTROI	RATIO (FRAC)	RATIO (FRAC)	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L8A South Perim Zn (G.S13P	287.	0.	0.000	0.290	36.	0.00	0.00	8.49	0.00	-3.16	1.

REPORT- SV-A System Design Parameters for $\,$ L8A (G.SE14) APT1 PTHP

WEATHER FILE- SEATTLE BOEING FI WA

		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	IR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	'IO (KBTU/H	R)	(SHR)	(KBTU/HR) (BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PVVT	1.001	540.0	1.	0.1	.22 8.8	84	0.742	-7.996	0.266	0.271	-6.356	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FAN	I FAN	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMENT	CONTROL	(FRAC)	(FRAC)	
SUPPLY	296.	1.00	0.089	0.94	0.9	0.34	0.62	DRAW-THRU	J CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE Z	ONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR) M	ULT
L8A SE Perim Zn (G.SE14) 1	296.	0.	0.000	0.409	36.	0.00	0.00	8.86	0.00	-4.60	1.

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)
UHT	1.001	55590.5	0.	0.000	0.000	0.000	0.000	0.000	0.000	0.000

MAME CAME	ZONE	SUPPLY FLOW	EXHAUST FLOW	FAN	MINIMUM FLOW	OUTSIDE AIR FLOW	COOLING CAPACITY	I SENSIBLE	EXTRACTION RATE	HEATING CAPACITY	ADDITION RATE ZONE
LAA COTE AN IOL COLUMN C											
LEA CECE ZA (G.CL) ENY S. S. S. S. S. S. S. S	L2B South Perim Zn (G.S27E	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
PLA MEET PETIN ZA (R.97) N	L6A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
LAZ CORRE AN	P1A West Perim 7n (B.W7) H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
LAA COME ZIN (G.C.LIS) TREM										0.00	(BASEBOARDS)
LAA CORE 2M (G.CLE) TREM	L2A Core Zn (G.C16) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
LAA CORE AM (G.CIS) TREME	L3A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 1.
LSA CORE ZA (G.CLE) TREME	L4A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 1.
L6A CORE ZM (G.C15) TREM	L5A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
LAA CORE ZAI (G.C15) TESH 0. 0. 0.0000 0.000 0.000 0.0000 0.0000 0.0000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.00	L6A Core Zn (G.C15) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
1.8. 1.8.	173 Como 72 / C C1E \ EDCH	0	0	0 000	0 000	0	0.00	0.00	0 00		
P2A NNN Perim Zn (B.NNH3K	L/A COTE ZII (G.CIS) IRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
PAR NNW Perim Zn (B.NNW6) X	L8A Core Zn (G.C5) TRSH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
P2B NW Perim Zn (B.NW6) X	P2A NNW Perim Zn (B.NNW13K	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-15.62 1.
Page South Perim Zn (B.S10K 0. 0. 0.00	P2B NW Perim Zn (B.NW6) X	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
P28 NNE Perim Zn (8.NNE12K 0	P2B South Perim Zn (B S10K	0	0	0 000	0 000	0	0 00	0 00	0 00		
PIB SOUTH PERMINER S. COR C. COR	125 boddi 1011 Bir (5.510	٠.	٠.			٠.			0.00		
P1B South Perim Zn (B.S6)G	P2B NNE Perim Zn (B.NNE12K	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
Fig NNE Perim Zn (B.NNE9)G 0. 0. 0.00 0.00	P1B South Perim Zn (B.S6)G	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-55.54 1.
L1A East Perim Zn (G.E18)H	P1B NNE Perim Zn (B.NNE9)G	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L1A CORE ZN (G.C20) TSHF	L1A East Perim Zn (G.E18)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L2A East Perim Zn (G.E13)H	L1A Core Zn (G.C20) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L2A Core Zn (G.C15) TSHF		0	0	0 000	0 000	0	0.00	0.00	0 00	-0.43	(BASEBOARDS)
L3A East Perim Zn (G.E12)H										-0.70	(BASEBOARDS)
L3A Core Zn (G.C14) TSHF	L2A Core Zn (G.C15) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L3A Core Zn (G.C14) TSHF 0. 0. 0.0000 0.0000 0.000 0.0000 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000	L3A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L4A East Perim Zn (G.E12)H 0. 0. 0.000 0.000 0.000 0.000 0.00 0.	L3A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.27 1.
Companies Comp	L4A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L5A East Perim Zn (G.E12)H											(BASEBOARDS)
L5A Core Zn (G.C14) TSHF 0. 0. 0. 0.0000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	L4A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L5A Core Zn (G.C14) TSHF 0. 0. 0.000	L5A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.74 1.
L6A East Perim Zn (G.E12)H 0. 0. 0.000 0.000 0.000 0.000 0.00 0.	L5A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.27 1.
L6A Core Zn (G.C14) TSHF 0. 0. 0.000 0.000 0.000 0.000 0.00 0.	L6A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	-0.74 1.
L7A East Perim Zn (G.E12)H 0. 0. 0.000 0.000 0.000 0.00 0.00 0.0	L6A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L7A Core Zn (G.C14) TSHF 0. 0. 0.000 0.000 0.000 0.00 0.00 0.0	L7A East Perim Zn (G.E12)H	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
L8A East Perim Zn (G.E2) F 0. 0.000 0.000 0.00 0.00 0.00 0.00 0	L7A Core Zn (G.C14) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		
-0.83 (BASEBOARDS)	L8A East Perim Zn (G E2) F	0	0	0.000	0 000	0	0 00	0 00	0 00		
L8A Core Zn (G.C4) TSHF 0. 0. 0.000 0.000 0. 0.00 0.00 0.00 -0.33 1.										-0.83	(BASEBOARDS)
-0.33 (BASEBOARDS)	L8A Core Zn (G.C4) TSHF	0.	0.	0.000	0.000	0.	0.00	0.00	0.00		

P2A Core Zn (B.C1) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2A Core Zn (B.C2) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2B Core Zn (B.C4) MECH	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2B Core Zn (B.C5) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P2B SE Perim Zn (B.SE8) M	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
PlA Core Zn (B.C1) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P1A Core Zn (B.C2) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
PlA NNW Perim Zn (B.NNW8)C	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
P1B Core Zn (B.C4) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P1B SE Perim Zn (B.SE5) M	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
P1B ENE Perim Zn (B.ENE10E	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
L1A Core Zn (G.C1) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)
L1A Core Zn (G.C2) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00 0.00 1.
									0.00 (BASEBOARDS)

EPORT- SV-A System Design Pa:		Free	ze Protect							ING FI WA UED)
1B Core Zn (G.C3) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
2A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
2A NNW Perim Zn (G.NNW24T	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
2B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
3A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
3A Core Zn (G.C20) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
3B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
4A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
4A Core Zn (G.C20) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
4B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
5A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
5A Core Zn (G.C20) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
5B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
6A Core Zn (G.C20) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
6B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7A Core Zn (G.C17) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7B Core Zn (G.C2) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
8A Core Zn (G.C1) ELV	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
8A Core Zn (G.C7) STR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
2B NNE Perim Zn (B.NNE11L	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
lA Core Zn (G.C23) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
LA SW Perim Zn (G.SW26) C	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
lB Core Zn (G.C12) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
On Come Zm /C C17\ FIEC	0	0	0.000	0.000	0	0.00	0.00	0.00		
A Core Zn (G.C17) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
2B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
BA Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
)D G F (G G11) BLEG	0	0.	0.000	0.000	0.	0.00	0.00	0.00		(BASEBOARDS
BB Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS 0.00
-	0		0.000	0.000	0	0.00	0.00	0.00		(BASEBOARDS
SA Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
5B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
5A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS 0.00
									0.00	(BASEBOARDS
5B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
'A Core Zn (G.C16) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
7B Core Zn (G.C11) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS 0.00
									0.00	(BASEBOARDS
BA Core Zn (G.C6) ELEC	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
RA Core Zn (B.C7) STO	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
B NE Perim Zn (B.NE9) S	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	(BASEBOARDS 0.00
AD TOTAL BIT (BIND), D	٠.	٠.			٠.					(BASEBOARDS
A Core Zn (G.C16) RR	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00 (BASEBOARDS
A WNW Perim Zn (G.WNW25T	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00
									0.00	(BASEBOARDS
2A West Perim Zn (G.W25)0	0.	0.	0.000	0.000	0.	0.00	0.00	0.00	0.00	0.00

REPORT-	SV-A	System	Design	Parameters	for	L2A	(G.SW20)	RST	PSZHP
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	WEATHER	FILE-	SEATTLE	BOEING	FI	WA
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TUDE OILE DV	11 5/500	Debign rara		LLII (C		- 0 - 111			***************************************			0 11 1111
SYSTEM TYPE	ALTITUDE FACTOR	FLOOR AREA (SQFT)	MAX PEOPLE		AIR CAPACI	TY SEI	NSIBLE (SHR)	HEATING CAPACITY (KBTU/HR)	COOLING EIR (BTU/BTU)	HEATING EIR (BTU/BTU)	HEAT PUMP SUPP-HEAT (KBTU/HR)	
PSZ	1.001	2287.5	76.	0.0	380.1	97	0.742	-342.177	0.251	0.274	-414.952	
FAN TYPE	CAPACITY (CFM)	DIVERSITY FACTOR (FRAC)	POWER DEMAND (KW)	FAN DELTA-T (F)	STATIC PRESSURE (IN-WATER)	TOTAL EFF (FRAC)	MECH EFF (FRAC)	, FAI				
SUPPLY	12683.	1.00	9.619	2.36	3.5	0.55	0.62	DRAW-THR	J CONSTANT	1.00	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	EXTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L2A SW Perim Zn (G.SW20)	12683.	12683.	3.719	1.000	572.	0.00	0.00	70.74	0.00	-30.66	1.

REPORT- SV-A System Design Parameters for Sys 8 - VAV+PFP L1

WEATHER FILE- SEATTLE BOEING FI WA

REFORT SV					VAV FFF D				WEATHE	SE		
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	. A	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	CIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PIU	1.001	2105.5	17.	0.6	505 11.0	96	0.742	0.000	0.000	0.000	0.000	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA FA	N FAN	RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)	
SUPPLY	286.	1.00	0.324	3.53	5.3	0.55	0.72	DRAW-THR	U SPEED	1.10	0.30	

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L1B SSW Perim Zn (G.SSW130	303.	0.	0.080	0.699	73.	0.00	0.00	2.33	-12.82	-11.41	1.
L1B Core Zn (G.C14) OFF	170.	0.	0.052	0.212	22.	0.00	0.00	2.37	-8.27	-7.82	1.
L1A SSW Perim Zn (G.SSW15I	675.	0.	0.209	1.000	78.	0.00	0.00	1.28	-33.33	-31.65	1.

REPORT- SV	/-A System	Design Para	meters for	Sys 8	- VAV+PFP C	orr (LI	-18)	WEATHER FILE- SEATTLE BOEING FI WA				
		FLOOR		OUTSI	DE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP	
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SE	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT	
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	RATIO (KBTU/HR		(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)	
PIU	1.001	20700.8	102.	0.6	93 81.8	31	0.742	0.000	0.000	0.000	0.000	
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN	
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	F F	an fai	N RATIO	RATIO	
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	L (FRAC)	(FRAC)	
SUPPLY	2219.	0.98	2.507	3.53	6.0	0.62	0.72	DRAW-THE	RU SPEEI	1.10	0.30	

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

ZONE NAME	SUPPLY FLOW (CFM)	EXHAUST FLOW (CFM)	FAN	MINIMUM FLOW (FRAC)	OUTSIDE AIR FLOW (CFM)	COOLING CAPACITY (KBTU/HR)	SENSIBLE	EXTRACTION RATE (KBTU/HR)	HEATING CAPACITY (KBTU/HR)	ADDITION RATE (KBTU/HR)	
L8A Core Zn (G.C10) COR	56.	0.	0.004	1.000	45.	0.00	0.00	1.40	-0.61	-0.00	1.
L1A Core Zn (G.C21) COR	5.	0.	0.001	1.000	3.	0.00	0.00	0.09	-0.12	-0.11	1.
P1B Core Zn (B.C12) COR	72.	0.	0.016	1.000	28.	0.00	0.00	0.56	-2.49	-2.60	1.
L1A Core Zn (G.C22) COR	36.	0.	0.007	1.000	15.	0.00	0.00	0.36	-1.16	-1.19	1.
L1B Core Zn (G.C4) COR	65.	0.	0.005	1.000	52.	0.00	0.00	1.27	-0.70	-0.25	1.
L2A Core Zn (G.C26) COR	77.	0.	0.005	1.000	61.	0.00	0.00	1.47	-0.83	0.00	1.
L2B Core Zn (G.C3) COR	86.	0.	0.006	1.000	69.	0.00	0.00	1.77	-0.93	0.00	1.
L3A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.08	-0.55	0.00	1.
L3B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	3.02	-1.42	0.00	1.
L4A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.08	-0.55	0.00	1.
L4B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	3.05	-1.42	0.00	1.
L5A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.08	-0.55	0.00	1.
L5B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	3.07	-1.42	0.00	1.
L6A Core Zn (G.C23) COR	51.	0.	0.004	1.000	41.	0.00	0.00	1.11	-0.55	0.00	1.
L6B North Perim Zn (G.N3)R	131.	0.	0.009	1.000	105.	0.00	0.00	3.13	-1.42	0.00	1.
L7A Core Zn (G.C20) COR	54.	0.	0.005	0.691	37.	0.00	0.00	1.73	-0.73	-0.14	1.
L7B North Perim Zn (G.N3)R	232.	0.	0.020	0.453	105.	0.00	0.00	7.55	-3.13	-2.43	1.
P2A Core Zn (B.C3) COR	60.	0.	0.005	0.238	14.	0.00	0.00	0.78	-0.81	-0.81	1.
P1A Core Zn (B.C3) COR	22.	0.	0.003	1.000	14.	0.00	0.00	0.41	-0.45	-0.38	1.
L1A South Perim Zn (G.S170	819.	0.	0.197	1.000	257.	0.00	0.00	5.37	-31.34	-24.87	1.
L2B SSW Perim Zn (G.SSW120	719.	0.	0.106	0.351	252.	0.00	0.00	17.02	-16.80	-10.97	1.
L2A Core Zn (G.C21) MAIL	64.	0.	0.006	0.010	0.	0.00	0.00	1.33	-0.86	-0.81	1.
L2A Core Zn (G.C22) MAIL	14.	0.	0.002	0.010	0.	0.00	0.00	0.31	-0.38	-0.37	1.

										WEATHER TIES CHATTES SORING IT WA				
		FLOOR		OUTSI	IDE COOLI	NG		HEATING	COOLING	HEATING	HEAT PUMP			
SYSTEM	ALTITUDE	AREA	MAX	P	AIR CAPACI	TY SEI	NSIBLE	CAPACITY	EIR	EIR	SUPP-HEAT			
TYPE	FACTOR	(SQFT)	PEOPLE	RAT	TIO (KBTU/H	R)	(SHR)	(KBTU/HR)	(BTU/BTU)	(BTU/BTU)	(KBTU/HR)			
PIU	1.001	1607.5	0.	0.0	067 44.3	50	0.742	-39.915	0.360	0.370	-19.958			
		DIVERSITY	POWER	FAN	STATIC	TOTAL	MECH	I		MAX FAN	MIN FAN			
FAN	CAPACITY	FACTOR	DEMAND	DELTA-T	PRESSURE	EFF	EFF	FA	AN FAI	N RATIO	RATIO			
TYPE	(CFM)	(FRAC)	(KW)	(F)	(IN-WATER)	(FRAC)	(FRAC)	PLACEMEN	T CONTROL	(FRAC)	(FRAC)			
SUPPLY	1445.	1.00	1.171	2.53	4.2	0.60	0.72	DRAW-THE	RU CONSTANT	r 1.10	0.30			

	SUPPLY	EXHAUST		MINIMUM	OUTSIDE	COOLING	E	XTRACTION	HEATING	ADDITION	
ZONE	FLOW	FLOW	FAN	FLOW	AIR FLOW	CAPACITY	SENSIBLE	RATE	CAPACITY	RATE	ZONE
NAME	(CFM)	(CFM)	(KW)	(FRAC)	(CFM)	(KBTU/HR)	(FRAC)	(KBTU/HR)	(KBTU/HR)	(KBTU/HR)	MULT
L7A NW Perim Zn (G.NW21)	1162.	0.	0.145	1.000	47.	0.00	0.00	16.55	-26.48	-11.01	1.
L7A NE Perim Zn (G.NE22)	1105.	0.	0.142	1.000	50.	0.00	0.00	15.13	-25.71	-11.24	1.