

15.0 Appendix C – VAV Electric Panels

Voltage: 480/277 Main Breaker: 800 A Feeder: 2 sets of 4 #500 MCM & 1#1/0 GRD - 3 1/2" C (#, size wire & conduit)

Description	LOAD (VA)			Brk. Trip (A)	5HL1				LOAD (VA)			Brk. Trip (A)	Description
	A	B	C		Cond. Size	Ckt. #	Cond. Size	A	B	C			
Panel 5HL4	36676			200	2 1/2	1 2	2 1/2	10000			50	Transformer T5-7	
		31877		/	/	3 4	/		10000		/		
			33825	/	/	5 6	/			10000	/		
Transformer T5-3	375000			175	2	7 8	2 1/2	9432			200	Panel 5HL5	
		375000		/	/	9 10	/		9432		/		
			375000	/	/	11 12	/			9432	/		
Panel 5HL6	30789			200	2 1/2	13 14		5600			30	Garage Door Openers	
		30789		/	/	15 16	/		5600		/		
			28296	/	/	17 18	/			5600	/		
Transformer T5-5	10000			50	1	19 20		6000			30	Dock Levelers	
		10000		/	/	21 22	/		6000		/		
			10000	/	/	23 24	/			6000	/		
Panel 5HL2	105871			400	4	25 26							
		104740		/	/	27 28	/				/		
			103932	/	/	29 30	/				/		
Panel 5HL3	68042			400	4	31 32							
		65976		/	/	33 34	/				/		
			63669	/	/	35 36	/				/		
				/	/	37 38	/				/		
				/	/	39 40	/				/		
				/	/	41 42	/				/		
	626378	618382	614722					31032	31032	31032			

Total Load on Phase A: 657,410 VA
 Total Load on Phase B: 649,414 VA
 Total Load on Phase C: 645,754 VA

Total Load on Panel: 1,953 kVA Demand
2,350 A

Voltage: 480/277

Main Breaker: 400 A

Feeder: 4 #500 MCM & 1 #3 GRD in 4"C
 (#, size wire & conduit)

Description	LOAD (VA)			Brk. Trip (A)	5HL2			LOAD (VA)			Brk. Trip (A)	Description	
	A	B	C		Cond. Size	Ckt. #	Cond. Size	A	B	C			
VAVS	1939			15	1/2	1	2		2493			20	Zone 4 Ltg
VAVS		1939		15	1/2	3	4			2493		20	Zone 5 Ltg
VAVS			1939	15	1/2	5	6				2493	20	Ltg
VAVS	1939			15	1/2	7	8		2493			20	Office Ltg
FPB-14,15,16,17		748		15	1/2	9	10			2493		20	Restroom Ltg
FPB-9,11,12,13			688	15	1/2	11	12				2493	20	Break-Out Ltg
FPB-4,5,7,10	688			15	1/2	13	14		2493			20	Restroom Ltg
FPB-1,2,6,8		748		15	1/2	15	16			2493		20	Ltg
FPB-14,15,16,17			6000	40	1 1/4	17	18				2493	20	Ltg
	6000			/	/	19	20		2493			20	Ltg
		6000		/	/	21	22			2493		20	Ltg
FPB-7,9,10,11,12,13			7333	30	1 1/4	23	24				2493	20	Ltg
	7333			/	/	25	26		13000			70	Eleveator South
		7333		/	/	27	28			13000		/	
FPB-1,2,6,8			6000	30	1 1/4	29	30				13000	/	
	6000			/	/	31	32		20000			100	Panel 5HL7
		6000		/	/	33	34			20000		/	
FPB-4,5			4000	30	1 1/4	35	36				20000	/	
	4000			/	/	37	38		35000			175	Transformer T5-2
		4000		/	/	39	40			35000		/	
				/	/	41	42				35000	/	
	27899	26768	25960						77972	77972	77972		

Total Load on Phase A: 105871 VA
 Total Load on Phase B: 104740 VA
 Total Load on Phase C: 103932 VA

Total Load on Panel: 315 kVA Demand
379 A

Voltage: 480/277 Main Breaker: 400 A Feeder: 4 #500 MCM & 1 #3 GRD in 4" C
 (#, size wire & conduit)

Description	LOAD (VA)			Brk. Trip (A)	5HL3			LOAD (VA)			Brk. Trip (A)	Description
	A	B	C		Cond. Size	Ckt. #	Cond. Size	A	B	C		
VAVS	1939			15		1 2		2493			20	Open Office Ltg
VAVS		1939		15		3 4			2493		20	Open Office Ltg
VAVS			1939	15		5 6				2493	20	Mezzanine Ltg
VAVS	1939			15		7 8		2493			20	Office Ltg
FPB-22,29		747		15		9 10			2493		20	Exhibition Ltg
FPB-23,24,28			933	15		11 12				2493	20	Exhibition Ltg
FPB-25,26,27,30,31	874			15		13 14		2493			20	Lobby Ltg
HEAT FPB - 22,23,25,28,29		5666		30		15 16			2493		20	Mezz Office Ltg
			5666			17 18				2493	20	Open Office Ltg
	5666					19 20		2493			20	Open Office Ltg
HEAT FPB-24,26,27,30,31		6000		30		21 22			2493		20	Open Office Ltg
			6000			23 24				2493	20	Open Office Ltg
	6000					25 26		2493			20	Office Ltg
Ltg - Atrium		2493		20		27 28			2493		20	Mezzanine Ltg
SPARE				20		29 30				2493	20	Restroom Ltg
SPARE				20		31 32		2493			20	Office Ltg
SPARE				20		33 34					20	SPARE
SPARE				20		35 36					20	SPARE
SPARE				20		37 38		36666			175	Transformer T5-1
SPARE				20		39 40			36666			
SPARE				20		41 42				36666		
	16418	16845	14538					51624	49131	49131		

Total Load on Phase A: 68042 VA
 Total Load on Phase B: 65976 VA
 Total Load on Phase C: 63669 VA

Total Load on Panel: 198 kVA Demand
238 A

Voltage: 480/277 Main Breaker: 225 A Feeder: 4 #4/0 & 1 GRD in 2-1/2" C
 (#, size wire & conduit)

Description	LOAD (VA)			Brk. Trip (A)	5HL4			LOAD (VA)			Brk. Trip (A)	Description
	A	B	C		Cond. Size	Ckt. #	Cond. Size	A	B	C		
Mech Eq Ltg	2493			20		1 2		2493			20	Warehouse Ltg
VAVS		1939		15		3 4			2493		20	Corridor Ltg
VAVS			1939	15		5 6				2493	20	Ltg
VAVS	1939			15		7 8		2493			20	Pack. Puri. Water Ltg.
VAVS		1939		15		9 10			2493		20	Ltg
VAVS			1939	15		11 12				4000	20	Manufacturing Ltg
VAVS	1939			15		13 14		4000			20	Manufacturing Ltg
FPB-3		187		15		15 16			4000		20	Manufacturing Ltg
FPB-18,19,20,21			628	15		17 18				4000	20	Manufacturing Ltg
FPB-3,18,19	3000			30		19 20		4000			20	Manufacturing Ltg
		3000				21 22			4000		20	Manufacturing Ltg
			3000			23 24				4000	20	Manufacturing Ltg
FPB-20,21	5333			30		25 26		4000			20	Manufacturing Ltg
		5333				27 28			4000		20	Manufacturing Ltg
			5333			29 30				4000	20	Manufacturing Ltg
SPARE						31 32		2493			20	Locker Room Ltg
SPARE						33 34			2493		20	Ltg
SPARE						35 36				2493	20	Ltg
SPARE						37 38		2493			20	Restroom Ltg
SPARE						39 40					20	SPARE
SPARE						41 42					20	SPARE
	14704	12398	12839					21972	19479	20986		

Total Load on Phase A: 36676 VA
 Total Load on Phase B: 31877 VA
 Total Load on Phase C: 33825 VA

Total Load on Panel: 102 kVA Demand
123 A

Voltage: 480/277

Main Breaker: 800 A

Feeder: 2 Sets of 4 #500 MCM &
 1 #1/0 GRD in 3-1/2" C
 (#, size wire & conduit)

Description	LOAD (VA)			Brk. Trip (A)	2MCC-1				LOAD (VA)			Brk. Trip (A)	Description
	A	B	C		Cond. Size	Ckt. #	Cond. Size	A	B	C			
RTU-1	27091			150	2	1	2	2	27091			150	RTU-8
		27091		/	/	3	4	/		27091		/	
			27091	/	/	5	6	/			27091	/	
RTU-2	27091			150	2	7	8	2	27091			150	RTU-9
		27091		/	/	9	10	/		27091		/	
			27091	/	/	11	12	/			27091	/	
RTU-3	3657			20	3/4	13	14	2	27091			150	RTU-10
		3657		/	/	15	16	/		27091		/	
			3657	/	/	17	18	/			27091	/	
RTU-4	27091			150	2	19	20	3/4	388			-	PRV-3
		27091		/	/	21	22	/		388		/	
			27091	/	/	23	24	/			388	/	
RTU-5	16870			90	1 1/2	25	26	3/4	388			-	PRV-16
		16870		/	/	27	28	/		388		/	
			16870	/	/	29	30	/			388	/	
RTU-6	16870			90	1 1/2	31	32	3/4	693			-	CP-1
		16870		/	/	33	34	/		693		/	
			16870	/	/	35	36	/			693	/	
RTU-7	27091			150	2	37	38	3/4	5540			20	EAC-1
		27091		/	/	39	40	/		5540		/	
			27091	/	/	41	42	/			5540	/	
	145761	145761	145761						88282	88282	88282		

Total Load on Phase A: 234043 VA

Total Load on Phase B: 234043 VA

Total Load on Phase C: 234043 VA

Total Load on Panel: 702 kVA Demand

845 A

Voltage: 480/277 Main Breaker: A Feeder: 4 #1 & 1#6 GRD IN 3" C
 (#, size wire & conduit)

Description	LOAD (VA)			Brk. Trip (A)	10MCC-1			LOAD (VA)			Brk. Trip (A)	Description
	A	B	C		Cond. Size	Ckt. #	Cond. Size	A	B	C		
PUMP P1	1330			-	3/4	1 2	3/4	1330			-	PUMP P8
		1330		/	/	3 4	/		1330		/	
			1330	/	/	5 6	/			1330	/	
PUMP P2	1330			-	3/4	7 8	3/4	1330			-	PUMP P9
		1330		/	/	9 10	/		1330		/	
			1330	/	/	11 12	/			1330	/	
PUMP P3	1330			-	3/4	13 14	3/4	1330			-	PUMP P10
		1330		/	/	15 16	/		1330		/	
			1330	/	/	17 18	/			1330	/	
PUMP P4	1330			-	3/4	19 20						SPARE
		1330		/	/	21 22	/				/	
			1330	/	/	23 24	/				/	
PUMP P5	1330			-	3/4	25 26						SPARE
		1330		/	/	27 28	/				/	
			1330	/	/	29 30	/				/	
PUMP P6	1330			-	3/4	31 32						SPARE
		1330		/	/	33 34	/				/	
			1330	/	/	35 36	/				/	
PUMP P7	1330			-	3/4	37 38						SPARE
		1330		/	/	39 40	/				/	
			1330	/	/	41 42	/				/	
	9310	9310	9310					3990	3990	3990		

Total Load on Phase A: 13300 VA
 Total Load on Phase B: 13300 VA
 Total Load on Phase C: 13300 VA

Total Load on Panel: 40 kVA Demand
48 A