HEAT EXCHANGER PERFORMANCE SCHEDULE

BASIS OF DESIGN: ALFA LAVAL, TACO

TAG	TOTAL MBH	LMTD (°F)	DIMENSIONS (LxWxH)	WEIGHT (LBS)	SURFACE (SQFT)	DESIGN TEMP(°F)	DESIGN PRESS(PSI)	SIDE	FLUID	FLOW RATE	INLET TEMP (°F)	OUTLET TEMP (°F)	PLATE MATERIAL	PRESSURE DROP (PSI)	PRESSURE DROP (FTWG)	INLET PIPE SIZE (IN)	OUTLET PIPE SIZE (IN)	MODEL
HEX-1	1,612	4.0	57"x19"x43"	1500	463	150.0	150.0	HOT	WATER	320.0	98.0	88.0	TYPE 304 S.S.	2.9	-	4	4	AQ4-FG
								COLD	WATER	270.0	83.0	95.0	TYPE 304 S.S.	2.1	-	4	4	
HEX-2	295.4	31.3	12.2"X4.9"X9.8"	34.8	37.6	150.0	150.0	HOT	WATER	30.0	150.0	130.0	TYPE 304 S.S.	1.7	-	1 1/4	1 1/4	TMPN5X12-100(1-1/4"MPT)
								COLD	WATER	45.8	102.0	115.0	TYPE 304 S.S.	4.0	-	1 1/4	1 1/4	
HEX-3	295.4	31.3	12.2"X4.9"X9.8"	34.8	37.6	150.0	150.0	HOT	WATER	30.0	150.0	130.0	TYPE 304 S.S.	1.7	-	1 1/4	1 1/4	TMPN5X12-100(1-1/4"MPT)
								COLD	WATER	45.8	102.0	115.0	TYPE 304 S.S.	4.0	-	1 1/4	1 1/4	

FAN PERFORMANCE SCHEDULE

TAG	AIRFLOW LOW/HIGH (CFM)	T.S.P (IN.WG)	NOISE (SONES)	RPM	DRIVE	ELECTRICAL REQUIREMENTS					BASIS OF DESIGN = GREENHECK		
						HP	BHP	WATTS	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
EF-1	550	0.75	9.4	1140	DIRECT	-	1/2	-	9.8	120/1/60	FUTURE DISHWASHER	CENTRIFUGAL	SFD-9-B
EF-2	700	-	-	-	-	-	-	-	-	-	DISHWASHER	CENTRIFUGAL	-
EF-3	150	-	-	-	-	-	-	-	-	-	BATHROOM	CEILING	-
EF-4	500	-	-	-	-	-	-	-	-	-	MARKET	CENTRIFUGAL	-
EF-P	600	0.5	6.2	1725	DIRECT	-	1/4	-	3.9	120/1/60	POOL EXHAUST	INLINE	SQ-100-VG
EF-T	80	0.25	0.6	900	DIRECT	-	-	12.5	0.07	120/1/60	BATHROOMS	CEILING	(P) FV-08VF2
EF-KH1 & 2	5500	1.0	18.9	1725	BELT	3	2	-	-	208/3/60	KITCHEN HOODS	ROOF	CUBE-220-30
EF-TE1	247	0.49	7.5	1550	DIRECT	1/20	0.05	-	-	115/1/60	BATHROOMS	ROOF	CUE-080-D
EF-TE2-3	1600	0.5	9.2	1725	DIRECT	1/2	0.33	-	-	115/1/60	BATHROOMS	ROOF	GB-141-5
EF-TE3	465	0.54	7.5	1550	DIRECT	1/15	0.09	-	-	115/1/60	BATHROOMS	ROOF	CUE-090-D
EF-TE4-5	3200	0.5	10.1	1725	DIRECT	3/4	0.61	-	-	115/1/60	BATHROOMS	ROOF	GB-200-7
EF-TE5	1350	0.5	12.1	1725	DIRECT	1/3	0.27	-	-	115/1/60	BATHROOMS	ROOF	CUBE-121-3
EF-TE6	946	0.7	11.6	1725	DIRECT	1/3	0.25	-	-	115/1/60	BATHROOMS	ROOF	CUE-099-A
EF-TE7	1010	0.5	12.0	1725	DIRECT	1/4	0.25	-	-	115/1/60	BATHROOMS	ROOF	CUE-099-A
EF-TE8	675	0.5	8.5	1725	DIRECT	1/6	0.13	-	-	115/1/60	BATHROOMS	ROOF	CUE-095-VG
EF-M1	650	0.5	5.3	1725	DIRECT	1/4	0.12	-	-	115/1/60	VENDING	ROOF	GB-101-4
EF-EL	262	0.25	4.6	1550	DIRECT	1/30	0.03	-	-	115/1/60	ELEVATORS	ROOF	G-070-D

EF-P SHALL BE EPOXY COATED.
Notes "EF-T" represents multiple units. Verify quantites with Drawings. "EF-T" shall have ceiling fire dampers.

SPLIT-SYSTEM CONDENSING UNIT PERFORMANCE SCHEDULE

* - AT ARI CONDITIONS OF 95°F AMBIENT, 80°F/67°F INDOOR
** - AT ARI CONDITIONS OF 47°F AMBIENT, 70°F/60°F INDOOR

TAG	TOTAL COOLING (MBH)*	TOTAL HEATING (MBH)	REFRIGERANT	MINIMUM COOLING TEMP (°F)	MINIMUM HEATING TEMP(°F)	FOOTPRINT DIM (IN) (LxWxH)	OPERATING WEIGHT (LBS)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN = MITSUBISHI			
								MCA	MAX FUSE	V/PH/HZ	COMP. STAGING	SOUND (BEL)	SERVICE	MODEL
SCU-1	30.0	32.0	R-410A	0	-	38x14x54	265	28.0	40.0	208/1/60	0,40-100	53	SAC-1	PUYA-30NHA4
SCU-2	30.0	32.0	R-410A	0	-13°F	38x14x54	265	28.0	40.0	208/1/60	0,40-100	53	SAC-2	PUZ-HA30NHA4
SCU-3	30.0	32.0	R-410A	0	-	38x14x54	265	28.0	40.0	208/1/60	0,40-100	53	SAC-3	PUYA-30NHA4

UNIT HEATER PERFORMANCE SCHEDULE

HEATING PERFORMANCE BASED ON 1000 BTU/CF NG

TAG	OUTPUT (MBH)	FLOW RATE (GPM)	W.P.D (FT.WG)	AIRFLOW (CFM)	ROWS	MTG. HT.	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN: Reznor		
							HP	WATTS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
UH1	49.8	-	-	769	-	9'-0"	0.03	-	120/1/60	-	HORIZONTAL	UDAP 60
-	-	-	-	-	-	-	-	-	-	-	-	-

SPLIT-SYSTEM HEAT PUMP PERFORMANCE SCHEDULE

TAG	TOTAL COOLING (MBH)*	TOTAL HEATING (MBH)	AIRFLOW (CFM)	MOISTURE REMOVAL (PINTS/HR)	COND. DRAIN (IN)	SEER (BTUH/WATT)	SOUND RATING (DB)	WEIGHT (LBS)	REFRIGERANT PIPE SIZE (IN)		ELECTRICAL REQUIREMENTS			BASIS OF DESIGN = MITSUBISHI		
									LIQUID	GAS	MCA	MAX FUSE	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
SAC-1	30.0	32.0	750	8.9	1-1/4"	16.5	39	73	3/8"	5/8"	2.73	-	208/1/60	ELECTRICAL	-	PEAD-A30AA4
SAC-2	30.0	32.0	750	8.9	1-1/4"	16.5	39	73	3/8"	5/8"	2.73	-	208/1/60	VALET BOOTH	-	PEAD-A30AA4
SAC-3	30.0	32.0	750	8.9	1-1/4"	16.5	39	73	3/8"	5/8"	2.73	-	208/1/60	COMP./COMM.	-	PEAD-A30AA4

GAS BOILER PERFORMANCE SCHEDULE

* BASED ON D.O.E. (DEPT. OF ENERGY) TEST PROCEDURE

TAG	INPUT (MBH)	HEATING CAPACITY (MBH)	PRESS. DROP (FT HD)	FUEL	EFF. (%)	INTAKE/VENT(IN)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN = HYDROTHERM KN SERIES	
							AMP	WATTS	V/PH/HZ	SERVICE	MODEL
B-1	1000	927	-	NAT GAS	92.7	6"	10.0	-	120/1/60	HWS/R	KN-10
B-2	1000	927	-	NAT GAS	92.7	6"	10.0	-	120/1/60	HWS/R	KN-10
B-3	1000	927	-	NAT GAS	92.7	6"	10.0	-	120/1/60	HWS/R	KN-10

COOLING TOWER PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	E.W.T. (DEG. F)	L.W.T. (DEG. F)	DESIGN WB (DEG. F)	HEAT REJECTION (MBH)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN = MARLEY AQUATOWER			
						FAN HP	BASIN HTR. KW	V/PH/HZ	SERVICE	SOUND (DBA)	WT (LBS)	MODEL
CT-1	270.0	100.0	88.0	74.0	1,613	4.0	4.5	208/3/60	LWS/R	65	8400	495K

PROVIDE WITH LOW SOUND FAN, ELECTRICALLY HEATED BASIN, VFD FAN MOTOR.

PUMP PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	HEAD (FT.WG)	IMPEL. SIZE	RPM	EFF %	ELECTRICAL REQUIREMENTS					BASIS OF DESIGN = (T)TACO, (W)WILO		
						HP	BHP	VFD	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
BP-1	75.0	25.0	5.5	1750	65	1.0	0.85	N	-	208/3/60	B-1	INLINE	(T)1935
BP-2	75.0	25.0	5.5	1750	65	1.0	0.85	N	-	208/3/60	B-2	INLINE	(T)1935
BP-3	75.0	25.0	5.5	1750	65	1.0	0.85	N	-	208/3/60	B-3	INLINE	(T)1935
CP-1	320.0	55.0	8.1	1760	74	7.5	7.1	Y	-	208/3/60	LWS/R	CLOSE COUPLED	(T)C13009
CP-2	320.0	55.0	8.1	1760	74	7.5	7.1	Y	-	208/3/60	LWS/R	CLOSE COUPLED	(T)C13009
CP-3	270.0	35.0	6.1	1760	75	5.0	3.99	Y	-	208/3/60	CTS/R	CLOSE COUPLED	(T)C13007
CP-4	270.0	35.0	6.1	1760	75	5.0	3.99	Y	-	208/3/60	CTS/R	CLOSE COUPLED	(T)C13007
CP-5	45.0	30.0	-	4600	-	1/2	-	N	2.0	208/3/60	Pool HEX1, 2	INLINE	(W) Stratos 1.5x3-40 3ϕ
CP-6	10.0	19.0	-	3450	-	1/6	-	N	2.0	120/1/60	PDH-1	INLINE	(T)1400-40B
CP-7,8,9	60.0	12.0	-	3450	-	1/3	-	N	3.6	120/1/60	IFWH-1,2,3	INLINE	(T)2400-65

CP-6 SHALL BE BRONZE OR STAINLESS STEEL CONSTRUCTION

MAKE-UP AIR HANDLER PERFORMANCE SCHEDULE

BASIS OF DESIGN = GREENHECK

TAG	AIRFLOW (CFM)	MIN.OA. (CFM)	FAN	T.S.P (IN.WG)	E.S.P (IN.WG)	FUEL	RPM	HEATING				COOLING				ELECTRICAL REQUIREMENTS							WEIGHT (POUNDS)	SERVICE	MODEL	SOUND POWER (dB RE 10^{-12} WATTS) OCTAVE BAND & CENTER FREQUENCY (HZ)							
																										1	2	3	4	5	6	7	8
								E.D.B. (°F)	L.D.B. (°F)	INPUT CAP (MBH)	OUTPUT CAP (MBH)	E.D.B. (°F)	E.W.B. (°F)	TOT CAP (MBH)	SEN CAP (MBH)	HP	BHP	VFD	MCA	LRA	MOCP	VOLTAGE				63	125	250	500	1000	2000	4000	8000
MUA-1	5000	5000	SUPPLY	1.8	.75	NAT GAS	1002	-7.0	87.0	452.0	415.8	N/A	N/A	N/A	N/A	5	3.32	N	22.8	-	35.0	208/3/60	878	KH-1	DG-115-H20	101	91	81	80	78	75	72	64
MUA-2	5000	5000	SUPPLY	1.8	.75	NAT GAS	1002	-7.0	87.0	452.0	415.8	N/A	N/A	N/A	N/A	5	3.32	N	22.8	-	35.0	208/3/60	878	KH-2	DG-115-H20	101	91	81	80	78	75	72	64

PROVIDE WITH 25-1 MODULATING GAS HEAT, ROOM OVERRIDE SENSOR.

AIR DEVICE PERFORMANCE SCHEDULE

TAG	PANEL SIZE(IN)	NECK SIZE(IN)	AIRFLOW (CFM)	SP.LOSS (IN.WG.)	THROW(L)	Nc	BASIS OF DESIGN - PRICE		
							DUCT CONN.(IN)	PATTERN	MODEL
S1	-	12x6	50-350	0.10	-	-	SEE DWGS	SEE DWGS	RCG
S2	-	12x12	300-500	0.10	-	-	SEE DWGS	SEE DWGS	RCG
S3	-	16X8	500	0.10	-	-	SEE DWGS	SEE DWGS	RCG
S4	-	8"ø	300	0.10	-	-	SEE DWGS	SEE DWGS	PPD2
S5	-	6x6	50-120	0.10	-	-	SEE DWGS	SEE DWGS	SMX-FR
S11	-	6x6	40-125	0.10	-	-	SEE DWGS	SEE DWGS	SMX-FR
S12	-	9x9	150-300	0.10	-	-	SEE DWGS	SEE DWGS	SMX-FR
S13	-	12x12	350-500	0.10	-	-	SEE DWGS	SEE DWGS	SMX-FR
E1	-	6x6	50-100	0.03	-	-	SEE DWGS	¾", 45°	60D
E2	-	12x12	150-450	0.03	-	-	SEE DWGS	¾", 45°	60D
E10	-	6x6	50	0.03	-	-	SEE DWGS	¾", 45°	60D
R1	-	12X12	400	-	-	-	SEE DWGS	¾", 45°	60D
R2	-	18X18	700	-	-	-	SEE DWGS	¾", 45°	60D
R3	-	24X24	1100	-	-	-	SEE DWGS	¾", 45°	60D
R4	-	6X6	65-120	-	-	-	SEE DWGS	¾", 45°	60D
R5	-	30X30	1800	0.03	-	-	SEE DWGS	¾", 45°	60D
R6		24X60	3000	-	-	-	SEE DWGS	¾", 45°	60D
R7		18X48	2000	-	-	-	SEE DWGS	¾", 45°	60D

PROVIDE WITH ADJUSTABLE VOLUME DAMPERS. CEILING GRILLES AND DIFFUSERS SHALL HAVE CEILING RADIATION DAMPERS (CRD).

EXPANSION TANK PERFORMANCE SCHEDULE

TAG	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	MIN. REQ'D. ACCEPT.VOL. (GAL)	MAX. WORK'G. TEMPERATURE (DEG F)	MAX. WORK'G. PRESSURE (PSI)	WEIGHT (LBS)	BASIS OF DESIGN = TACO		
							MOUNTING	SERVICE	MODEL
ET-1	158.0	158.0	144.0	240	125	1800	FLOOR	LWS/R	CA-600

AIR SEPARATOR PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	W.P.D (PSI)	Cv FACTOR	STRAINER (Y) OR (N)	MAX. WORK'G. TEMPERATURE (DEGREES F)	MAX. WORK'G. PRESSURE (PSI)	BASIS OF DESIGN = TACO		
							SERVICE	PIPE SIZE(IN)	MODEL
AS-1	320.0	0.5	-	N	270	150	LWS/R	5"	4905HAD

LOUVER PERFORMANCE SCHEDULE

TAG	AIR FLOW (CFM)	SP LOSS (IN.WG)	AIR VEL. (FPM)	SIZE (INCHES) (W x H)	FREE AREA (SQ.FT)	DRAINABLE (Y) OR (N)	BLADE ANGLE & FRAME DEPTH	BASIS OF DESIGN = RUSKIN	
								SERVICE	MODEL
L-1	350	0.01	200	24x16	1.21	Y	35°, 6"	PDH-1, O.A.	ELF6375DX
L-2	450	0.02	371	24x16	1.21	Y	35°, 6"	EF-P, E.A.	ELF6375DX
L-3	550	0.03	453	24X16	1.21	Y	35°, 6"	EF-1	ELF6375DX
L-4	700	0.05	577	24x16	1.21	Y	35°, 6"	EF-2	ELF6375DX
L-5	150	0.01	123	24x16	1.21	Y	35°, 6"	EF-3	ELF6375DX
L-6	500	0.03	412	24X16	1.21	Y	35°, 6"	EF-4	ELF6375DX
L-L	3300	0.10	647	60x24	5.1	Y	35°, 6"	LAUNDRY MUA	ELF6375DX

LINEAR SLOT DIFFUSER PERFORMANCE SCHEDULE

TAG	SIZE (INCHES)	AIRFLOW (CFM)	TP LOSS (in. W.G.)	THROW (FEET)	NC	FRAME STYLE	PATTERN	BASIS OF DESIGN = PRICE			
								NO. OF SLOTS	SLOT WIDTH	INLET	MODEL
LD-1	48	150	0.10	6-12-19	18	T-BAR w/ PLENUM	ADJUST.	2	1"	6"ø	SDS100
LD-2	48	320	0.10	8-14-25	20	T-BAR w/ PLENUM	ADJUST.	4	1"	8"ø	SDS100
LD-3	48	470	0.10	14-21-30	30	T-BAR w/ PLENUM	ADJUST.	4	1"	10"ø	SDS100

PROVIDE WITH ADJUSTABLE VOLUME DAMPERS.
UNITS SCHEDULED MAY REPRESENT MULTIPLE UNITS, COORDINATE WITH DRAWINGS.

ELECTRIC HEATER PERFORMANCE SCHEDULE

TAG	OUTPUT (KW)	OUTPUT (MBH)	AIRFLOW (CFM)	ELECTRICAL REQUIREMENTS		BASIS OF DESIGN = QMARK		
				AMPS	V/PH/HZ	MOUNT	SERVICE	MODEL
EWH	1.8	6.1	100	15.0	208/1/60	SURFACE	HEAT	CWH3180

PROVIDE WITH SURFACE MOUNT BOX AND WALL MOUNTED THERMOSTAT.

CONTROL VALVE SCHEDULE

TAG	FLOW RATE (GPM)	Cv	VALVE SIZE (IN)	TYPE	SERVICE
V-1	2.0, 2.5	2.2	½"	2-WAY, 2-POSITION	HP
V-2	4.0, 5.0	3.6	½"	2-WAY, 2-POSITION	HP
V-3	6.0	5.0	¾"	2-WAY, 2-POSITION	HP
V-4	8.0	6.2	¾"	2-WAY, 2-POSITION	HP
V-5	15.0	8.2	1"	2-WAY, 2-POSITION	HP
-	-	-	-	-	-

BENNETT ENGINEERING
MECHANICAL • ELECTRICAL
(207) 865-9475

REVISION SCHEDULE

DATE	REVISION DESCRIPTION	BY

OPECHEE
CONSTRUCTION CORPORATION
11 CORPORATE DRIVE, BELMONT NH 03220
PHONE (603) 527-9090 FAX (603) 527-9191

MECHANICAL SCHEDULES

PROJECT:
COMMERCIAL & MAPLE STREET MIXED USE DEVELOPMENT
PORTLAND ME.

DATE: 05-2013
SCALE: 1/8" = 1'-0"
DRAWN BY:
SHEET: M1

STATE OF MAINE
STEPHEN P. DOEL
No. 3887
PROFESSIONAL ENGINEER