PUMP SCHEDULE

MANUFACTURER AS INDICATED OR APPROVED EQUAL

UNIT NO.	LOCATION	SYSTEM	CIRCULATING FLUID					MOTOR HP (WATTS)	MOTOR RPM	MOTOR SPEED	IMPELLER DIAMETER (IN.)	MIN. EFF. (%)	ELECTRICAL DATA VOLT/PH	MANUFACTURER	MODEL NO.	REMARKS
			FLUID	SPEC. GRAVITY	TEMP. (°F)	GPM	HEAD (FT.)									
CWP-1	BASEMENT MER	CHILLED WATER	PLAIN WATER	1.0	44	340	36	5	1750	VFD	6.875	84	460/3	B & G	SERIES 1510 3AD	1, 2
CWP-2	BASEMENT MER	CHILLED WATER	PLAIN WATER	1.0	44	340	36	5	1750	VFD	6.875	84	460/3	B & G	SERIES 1510 3AD	1, 2
HWP-1	BASEMENT MER	HOT WATER	PLAIN WATER	1.0	180	206	34	3	1750	VFD	6.625	80	460/3	B & G	SERIES 1510 2.5 AC-ES	1, 2
HWP-2	BASEMENT MER	HOT WATER	PLAIN WATER	1.0	180	206	34	3	1750	VFD	6.625	80	460/3	B & G	SERIES 1510 2.5 AC-ES	1, 2
BP-1	BASEMENT MER	BOILER #1	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
BP-2	BASEMENT MER	BOILER #2	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
BP-3	BASEMENT MER	BOILER DHW	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
BP-4	BASEMENT MER	BOILER DHW	PLAIN WATER	1.0	160	124	15	2.0	1750	CV	6.5	79	460/3	B & G	SERIES 80 5x5x7	1, 2
RP-1	BASEMENT MER	DOMESTIC HOT WATER	PLAIN WATER	1.0	110	14.6	15	1/8	1725	CV	–	65	120/1	TACO	0011 BF	1, 2, 3
RP-2	BASEMENT MER	KITCHEN HOT WATER	PLAIN WATER	1.0	140	11.2	15	1/8	1725	CV	–	65	120/1	TACO	0011 BF	1, 2, 3

NOTES:

1. IMPELLER DIAMETER INDICATED IS APPROXIMATE. FINAL IMPELLER DIAMETER TO BE DETERMINED BY PUMP MFTR. CONTRACTOR SHALL TRIM IMPELLER AFTER INITIAL FLOW BALANCING TO ACHIEVE OPTIMAL PUMP PERFORMANCE.
2. COORDINATE MOTOR REQ. WITH E.C.. E.C. TO FURNISH AND INSTALL MOTOR STARTERS.
3. DOMESTIC HOT WATER RECIRCULATION PUMPS SHALL BE OF BRONZE CONSTRUCTION.

BOILER SCHEDULE

BASED ON "AERCO"

UNIT TAG	LOCATION	BOILER TYPE	HEATING MEDIUM	FUEL	GAS PRESSURE		VENTING CATEGORY	VENTING SYSTEM		VENT DIA. (IN.)	BURNER INPUT (MBH)	GROSS OUTPUT (MBH)	THERMAL EFFICIENCY (%)	RELIEF VALVE (PSI)	ELECTRICAL DATA		WATER CONTENT (GAL)	WEIGHT (LBS)	MODEL	REMARKS
					MIN. (IN. WC)	DESIGN (IN. WC)		FIRING	BOILER STACK						BURNER CIRCUIT	CIRCUIT CONTROL				
B-1 & B-2	BASEMENT BOILER RM.	CONDENSING FIRE-TUBE	HOT WATER	NAT. GAS	4.0	7.0	IV	FORCED DRAFT	POSITIVE DRAFT	8	2,790	2,850	95	50	208/3	120/1	55	2,580	BMK3000	1-3
B-DHW	BASEMENT BOILER RM.	CONDENSING FIRE-TUBE	HOT WATER	NAT. GAS	4.0	7.0	IV	FORCED DRAFT	POSITIVE DRAFT	8	2,790	2,850	95	50	208/3	120/1	55	2,580	BMK3000	1-3

NOTES:

1. FURNISH ALL BOILERS WITH NEUTRALIZATION AND DRAIN KIT.
2. FURNISH WITH CATEGORY IV POSITIVE PRESSURE GAS VENT, DOUBLE WALL CONSTRUCTION WITH A 1" AIR SPACE. INNER WALL SHALL BE AL29-4C STAINLESS STEEL. OUTER WALL SHALL BE ALUMINIZED STEEL. METAL-FAB CORR/GUARD OR EQUIVALENT. DRAIN PIPING SHALL BE ROUTED TO ASSOCIATED NEUTRALIZATION DRAIN KIT AND TERMINATE TO NEAREST FLOOR DRAIN.
3. REFER TO SEQUENCE OF OPERATION FOR DETAILS ON SYSTEM CONTROLS.
4. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. COMBUSTION BLOWERS ARE VARIABLE SPEED WITH LINKAGELESS FUEL AIR CONTROL.

REFRIGERATION MACHINE SCHEDULE

"McQUAY" AS STANDARD OR APPROVED EQUAL

UNIT NO.	LOCATION	TYPE	CAPACITY TONS	EER	REF.	NO. UNLOADING STEPS	EVAPORATOR					ELECTRICAL DATA				UNIT WEIGHT LBS.	MODEL NO.	REMARKS
							FLUID	GPM	EWT (°F)	LWT (°F)	P.D. (FT)	VOLTS/ PHASE	ELECT. INPUT (KW)	MOCP	MCA			
CH-1	BASEMENT MER	SCROLL	78.3	15.8	R-410a	4	PLAIN WATER	170	54	44	10.2	460/3	313	150	131	2,649	WGZ-0800DA	1-4
CH-2	BASEMENT MER	SCROLL	78.3	15.8	R-410a	4	PLAIN WATER	170	54	44	10.2	460/3	313	150	131	2,649	WGZ-0800DA	1-4

NOTES:

1. FURNISH WITH WYE-DELTA START OPTION.
2. CONTROL TRANSFORMER SHALL BE FURNISHED WITH THE CHILLER.
3. VIBRATION ISOLATORS PROVIDED BY MANUFACTURER AND INSTALLED BY HVAC CONTRACTOR.
4. FLOW SWITCH PROVIDED BY MANUFACTURER AND INSTALLED BY HVAC CONTRACTOR.

Return/Exhaust Grill Schedule

Symbol	CFM Range	Neck Size (In.)	Nom. Face Size (In.)	Blade Deflection	Blade Spacing	Finish	Manufacturer & Model No.	Remarks
RG-1	0-110	6x6	12x12	35º	3/4	White	Titus 350R	----
RG-2	0-110	6x6	24x24	35º	3/4	White	Titus 350R	----
RG-3	111-170	8x6	24x24	35º	3/4	White	Titus 350R	----
RG-4	171-220	10x6	24x24	35º	3/4	White	Titus 350R	----
RG-5	221-320	10x8	24x24	35º	3/4	White	Titus 350R	----
RG-6	321-425	10x10	24x24	35º	3/4	White	Titus 350R	----
EG-1	0-110	6x6	12x12	35º	3/4	White	Titus 350R	----
EG-2	0-110	6x6	24x24	35º	3/4	White	Titus 350R	----
EG-3	111-170	8x6	24x24	35º	3/4	White	Titus 350R	----
EG-4	171-220	10x6	24x24	35º	3/4	White	Titus 350R	----
EG-5	221-320	10x8	24x24	35º	3/4	White	Titus 350R	----
EG-6	321-425	10x10	24x24	35º	3/4	White	Titus 350R	----

Diffuser Schedule

Symbol	CFM Range	Neck Dia (In.)	Nom. Face Size (In.)	Finish	Manufacturer & Model	Accessories	Remarks
CD-1	0-110	6	12x12	White	Titus TMS	None	----
CD-2	0-140	6	24x24	White	Titus TMS	None	----
CD-3	141-220	8	24x24	White	Titus TMS	None	----
CD-4	221-320	10	24x24	White	Titus TMS	None	----
SG-1	0-110	6x6	6x6	White	Titus 350R	None	----
SG-2	111-180	8x6	8x6	White	Titus 350R	None	----

Linear Diffuser/Grille Schedule

Symbol	CFM/LF (CFM)	Nom. Face Size (in.)	No. Slots	Slot Width (in.)	Finish	Manufacturer & Model No.	Remarks
LCD-1	15-30 (90-180)	72	3	0.5	White	Titus ML-37	----
LRG-1	85-120 (160-240)	24	6	0.5	White	Titus ML-37	----
LEG-1	85-120 (160-240)	24	6	0.5	White	Titus ML-37	----

Energy Recovery Ventilator Schedule

Unit No.	CFM		Supply Fan Data			Exhaust Fan Data			Media Type	Wheel Face Area (ft^2/side)	Summer Operation					Winter Operation					Volt/Phase	Amps	MCA	MOCP	Manufacuture & Model	Weight (lbs)
	R.A.	S.A.	ESP (in. w.c.)	Motor HP	Motor RPM	ESP in. w.c.	Motor HP	Motor RPM			O.A. (ºF) DB/WB	R.A. (ºF) DB/WB	E.A. (ºF) DB/WB	S.A. (ºF) DB/WB	Tot Eff. (%)	En. Rec. (MBH)	O.A. (ºF) DB/WB	R.A. (ºF) DB/WB	E.A. (ºF) DB/WB	S.A. (ºF) DB/WB	Tot Eff. (%)	En Rec. (MBH)					
ERV-1	3470	3470	1	2	1725	1	3	1725	Alumnium	5.00	92.0/74.0	75.0/62.5	87.0/70.9	80.0/66.2	0.71	57.4	12.0/10.4	70/58.5	28.9/28.2	53.1/47.8	0.71	131.0	460/3	11.2	14.1	15	Semco FV-4000	1150
ERV-2	5725	5725	1	5	1725	1	5	1725	Alumnium	9.10	92.0/74.0	75.0/62.5	87.2/71.0	79.8/66.1	0.72	103.4	12.0/10.4	70/58.5	28.4/27.7	53.6/48.2	0.72	240.4	460/3	19.8	24.8	30	Semco FV-7500	1800
ERV-3	5475	5475	1	5	1725	1	5	1725	Alumnium	9.10	92.0/74.0	75.0/62.5	87.3/71.1	79.7/66.0	0.72	103.1	12.0/10.4	70/58.5	28.0/27.2	54.0/48.5	0.72	235.7	460/3	19.8	24.8	30	Semco FV-7501	1800
ERV-4	7100	7100	1	7.5	1725	1	7.5	1725	Alumnium	9.10	92.0/74.0	75.0/62.5	87.0/70.9	80.0/66.2	0.70	106.0	12.0/10.4	70/58.5	29.2/28.4	52.8/47.6	0.70	245.5	460/3	29.0	36.3	45	Semco FV-7502	1800

Expansion Tank Schedule

Unit No.	System and/or Service	Type	Approx. System Volume (Gal)	System Temperature Range		Initial Pressure in Tank (PSI)	Max Operating Pressure (PSI)	Fill Pressure at Tank		Min. Volume Tank (Gal)	Min. Bladder Volume (Gal)	Make-Up Water Fill Size (in.)	Manufacturer & Model	Remarks
				Min. (ºF)	Max. (ºF)			Relief Valve (PSI)	At Tank (PSI)					
ET-1	Chilled Water	Bladder	825	45	100	12	30	75	23	10	4.76	1	Bell & Gossett B-35LA	----
ET-2	Hot Water	Bladder	365	60	160	12	30	75	23	34	14.25	1	Bell & Gossett B-130LA	----

Packaged Terminal AC Unit Schedule

Unit No.	Typical Room Type	CFM		Cooling (MBH)		Cooling Air Data		Heating		Heating Air Data		Refrig.	Electrical Data				Weight (lbs)	EER	Manufacturer & Model	Remarks
		Total	Min. O.A.	Total	Sensible	EAT (ºF) DB/WB	LAT (ºF) DB/WB	Medium	Output (MBH)	(GPM)	EAT (ºF)	LAT (ºF)		Volt/PH	MCA	MOCP	Receptacle				
PTAC-1	Room 1 Room 3 Room 5 Room 7	310	25	7.0	6.0	95/75	64/61	Hot Water	14.8	0.6	70	90	R-410a	277/1	3.7	15	#7-20P	145	11.5	Applied Comfort NAWCO07L00E2	----
PTAC-2	Room 2 Room 4 Room 6	360	25	9.6	7.5	95/75	61/58	Hot Water	15.5	0.5	70	92	R-410a	277/1	5.7	15	#7-20P	145	11.3	Applied Comfort NAWCO09L00E2	----

Air Separator Schedule

Unit No.	System and/or Service	Type	Size (in.)	Max Flow (GPM)	Pressure Drop (Feet)	Manufacturer & Model	Remarks
AS-1	Chilled Water	Coalescing	5	383	0.43	Bell & Gossett CRSN-5F	----
AS-2	Hot Water	Coalescing	4	245	0.60	Bell & Gossett CRSN-4F	----

Chemical Pot Filter System

Unit No.	System and/or Service	Capacity (Gal)	Manufacturer & Model	Remarks
PF-1	Chilled Water	5.79	J.L. Wingert F-5HD	----
PF-2	Hot Water	5.79	J.L. Wingert F-5HD	----

Exhaust Fan Schedule

Unit No.	System and/or Service	Location	Manufacturer & Model	Air Flow (CFM)	Total Static Pressure (in. w.c.)	Drive	Fan RPM	Nominal Power (HP)	Phase	Volt
EF-1	Dwelling Unit Bathroom	Roof	Twin Cities 090BE	600	0.5	Direct	1650	1/6	1	208
EF-2	Dwelling Unit Bathroom	Roof	Twin Cities 100BE	1050	0.75	Direct	1750	1/4	1	208
EF-3	Dwelling Unit Bathroom	Roof	Twin Cities 120BE	1400	0.75	Direct	1750	1/2	1	208
EF-4	Dwelling Unit Bathroom	Roof	Twin Cities 095BE	650	0.75	Direct	1575	1/4	1	208
EF-5	Dwelling Unit Bathroom	Roof	Twin Cities 095BE	700	0.5	Direct	1575	1/4	1	208
EF-6	Dwelling Unit Bathroom	Roof	Twin Cities 120BE	1200	0.5	Direct	1750	1/2	1	208
EF-7	Dwelling Unit Bathroom	Roof	Twin Cities 095BE	750	0.5	Direct	1650	1/4	1	208
EF-8	Dwelling Unit Bathroom	Roof	Twin Cities 085BE	300	0.5	Direct	1425	1/6	1	208
EF-9	Kitchen Hood	Roof	Captive Aire DU300HFA	7200	1.5	Direct	753	7.5	3	208
EF-10	Kitchen Dishwasher	Roof	Captive Aire DU50HFA	900	0.7	Direct	1257	0.5	3	208
EF-11	Dryers	Roof	Twin Cities 130B	2400	0.25	Direct	1750	1/2	1	208
EF-12	Chiller Room	Roof	Twin Cities 130B	2000	0.25	Direct	1750	1/2	1	208

Air Cooled Condensing Unit Schedule

Unit No.	Service	Location	Capacity (MBH)	Comp. Qty.	Ref.	Electrical Data			Weight (lbs)	Manufacturer & Model No.	Remarks
						Volt/Phase	MCA	MOCP (Amps)			
ACC-1	CH-1	Roof	960	2	R-410A	460/3	21.9	30	1990	McQuay ACH080AD	----
ACC-2	CH-2	Roof	960	2	R-410A	460/3	21.9	30	1990	McQuay ACH080AD	----

Make Up Unit Schedule

Unit No.	Location	Manufacturer & Model No.	Fan CFM	Total ESP.	Fan RPM	Fan HP	Fan BHP	Furnace Input (MBH)	Furnace Output (MBH)	Efficiency	FLA	Volt/Phase	Remarks
MAU-1	Roof	Captive Aire A4-IBT	7200	1	917	10	2.803	676	540	80%	25.8	208/3	----

Heat Pump Split-System Schedule

Indoor Unit

Unit No.	Location	Airflow (CFM)		Total Cooling (MBH)	Heating (MBH)	Electrical Data			Weight (lbs)	Manufacturer & Model	Remarks
		Total	Min. O.A.			Volt/PH	MCA	MOCP			
AC-1	Room 1010	320	0	9.1	0.3	208/1	1	15	29	Mitsubishi PKA-A18HA6	----
AC-2	Room 1008	635	0	6.1	0.4	208/1	1	15	46	Mitsubishi PKA-A24HA6	----
AC-3	Room 1061	320	0	5.7	0.2	208/1	1	15	29	Mitsubishi PKA-A18HA6	----
AC-4	Room 1044	320	0	6.0	1.5	208/1	1	15	29	Mitsubishi PKA-A18HA6	----

Outdoor Condensing Unit

Unit No.	Location	Service	Capacity (MBH)	Refrig.	Electrical Data				Weight (lbs)	Manufacturer & Model	Remarks
					Volt/PH	MCA	MOCP	SEER			
ACC-3	Roof	AC-1	18	R-410A	208/1	13	20	15.3	41	Mitsubishi PUZ-A18NHA6	Include Wind Baffle
ACC-4	Roof	AC-2	24	R-410A	208/1	18	30	17	75	Mitsubishi PUZ-A24NHA6	Include Wind Baffle
ACC-5	Roof	AC-3	18	R-410A	208/1	13	20	15.3	41	Mitsubishi PUZ-A18NHA6	Include Wind Baffle
ACC-6	Roof	AC-4	18	R-410A	208/1	13	20	15.3	41	Mitsubishi PUZ-A18NHA6	Include Wind Baffle

Supply Fan Schedule

Unit No.	System and/or Service	Location	Manufacturer & Model	Air Flow (CFM)	Total Static Pressure (in. w.c.)	Drive	Fan RPM	Nominal Power (HP)	Phase	Volt
SF-1	Chiller Room	Room 1014	Twin Cities 142A	2000	0.25	Direct	1700	1/3	1	115

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MARK	DATE	DESCRIPTION
	01/24/20	FINAL BID / PERMIT

ERIC D. FELLENZER, P.E.
NY PROFESSIONAL ENGINEER NO. 073084-1

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PROJECT No: FILB 1501 | DATE: 11/15/19 | SCALE: AS SHOWN

CLIENT
Montebello Realty GP LLC

Braemar at Montebello Assisted Living Residence

Montebello Crossing, 250 Lafayette Avenue (Route 59) Village of Montebello New York

CONTRACT

STATUS
REGULATORY REVIEW

SHEET TITLE
HVAC: SCHEDULES

DRAWING No. **H8.1**

SHEET No. OF

File Name: F:\2015\15-345 NEW ASSISTED LIVING RESIDENCE\H8.1.dwg (Layout: Layout1)
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