WATER TO WATER AIR HANDILING SCHEDULE

Unit						Initial Filter				Hot Water Coil (1) (Preliminary Runaround Loop Data) - 30% PG											Dual Temperature Coil - Cooling Performance (30%PG)												Dual Temperature Coil - Heating Performance (30%PG)											Hot Water Reheat Coil - for Dehumidification										
Tag	Model	Length (in)	Weight (lb)	External Dimensions* Supply Height (in)	External Dimensions* Supply Width (in)	Type	Filter Qty - Sizes	Depth	Mean PD (inH2O)	Total Capacity (Btu/hr)	EAT-DB °F	LAT-DB °F	F.V. (ft/min)	A.P.D. (inH2O)	EWT °F	LWT °F	Flow Rate (GPM)	W.P.D. (ftH2O)	Rows	FPI	Sensible Capacity (Btu/hr)	Total Capacity (Btu/hr)	EAT-DB °F	EAT-WB °F	LAT-DB °F	LAT-WB °F	A.P.D. (inH2O)	EWT °F	LWT °F	Flow Rate (GPM)	W.P.D. (ftH2O)	Rows	FPI	Total Capacity (Btu/hr)	EAT-DB °F	LAT-DB °F	A.P.D. (inH2O)	EWT °F	LWT °F	Flow Rate (GPM)	W.P.D. (ftH2O)	Rows	FPI	Total Capacity (Btu/hr)	EAT-DB °F	LAT-DB °F	A.P.D. (inH2O)	EWT °F	LWT °F	Flow Rate (GPM)	W.P.D. (ftH2O)	Rows	FPI
AHU-1 SPEC Autopsy 2300	CAH009GDGM	174	2549.34	58	38	Pleated (MERV 8)	2 - 24.00 x 24.00	2	0.56		-9		315	0.43			12.5	2.4	6	10	115671	191374	92	73	46	45.8	0.75	42	50.3	48	11.9	10	12	266831	2	108	0.51	110	94.4	35.9	5.7	10	12	56854	48	70.6	0.05	110	101.9	14	0.4	2	7
AHU-2 HP-5 Autopsy 3700	CAH010GDGM	178	2745.27	58	40	Pleated (MERV 8)	2 - 24.00 x 12.00 2 - 24.00 x 24.00	2	0.57		-9		470	0.85			19.5	5.4	6	10	179257	293219	92	73	47.7	47.5	1.41	42	49.6	80	15.5	10	12	388092	2	106	0.86	110	94.6	53.1	5.9	10	12	90600	48	70.4	0.11	110	100.9	20	0.8	2	9

Supply Fan										Combination Filter								
Fan						Motor				Panel Filter				Bag Filter				
Type	Airflow (CFM)	RPM	BHP	E.S.P. (inH2O)	T.S.P. (inH2O)	Voltage	Power (HP)	RPM	Control	Type	Filter Qty - Sizes	Depth	Mean PD (inH2O)	Type	Filter Qty - Sizes	Depth	Efficiency	Mean PD (inH2O)
DDPL15-12BL	2300	3286	3.6	1.5	5.64	200/60/3	5	3500	VFD	Pre Pleat (MERV 13)	2 - 24.00 x 24.00	2	0.58	HEPA	2 - 24.00 x 24.00	12	MERV 17	1.77
DDPL16-9BL	3700	3210	6.62	1.5	7.13	200/60/3	10	3500	VFD	Pre Pleat (MERV 13)	2 - 24.00 x 24.00	2	0.66	HEPA	2 - 24.00 x 24.00	12	MERV 17	2.04

NOTE:
1. ALL FANS TO HAVE VFD'S AND PIEZO RING AIRFLOW INDICATOR.

ENERGY RECOVERY VENTILATOR SCHEDULE

Basis of Design	Model	Location	Tag #	Fan Data: Supply Airflow				Wheel Data: Summer/Cooling															Unit Information: Electrical (includes preheater load)				Electric Preheat (1)	Minimum RER
								Outdoor			Supply					Return				Exhaust								
				Supply CFM	ESP	Motor HP	VFD	Dry Bulb	Wet Bulb	Grains	Dry Bulb	Wet Bulb	Grains	Min Latent Eff %	Max PD (in/w g)	Dry Bulb	RH	Wet Bulb	Grains	Max PD (in/w g)	Dry Bulb	Grains	Voltage/Phase	FLA	MCA	MOCP		Cooling
SEMCO	FV-2000	Outdoor Unit	ERV-1	1,760	1.00	2.00	Yes	92.0	73.0	91.9	78.2	64.4	68.7	0.76	0.54	72.0	50%	60.0	58.3	0.47	87.3	84.0	208V/3Ph	23.5	25.5	35.0	0.0 KW	102.6
				Return Airflow				Winter/Heating															Filters					Heating
								Outdoor			Supply					Return				Exhaust			Outdoor		Return			
				Return CFM	ESP	Motor HP	VFD	Dry Bulb	Wet Bulb	Grains	Dry Bulb	Wet Bulb	Grains	Min Latent Eff %	Max PD (in/w g)	Dry Bulb	RH	Wet Bulb	Grains	Max PD (in/w g)	Dry Bulb	Grains	Type	Depth	Type	Depth	Rating	200.0
				1,590	1.00	2.00	Yes	2.0	1.2	4.6	49.0	39.2	20.0.5	0.76	0.48	70.0	25%	51.4	27.0	0.44	18.0	9.9	Reated	2"	MERV 13	Reated	2"	MERV 8

Basis of Design	Model	Location	Tag #	Fan Data: Supply Airflow				Wheel Data: Summer/Cooling															Unit Information: Electrical (includes preheater load)				Electric Preheat (1)	Minimum RER
								Outdoor			Supply					Return				Exhaust								
				Supply CFM	ESP	Motor HP	VFD	Dry Bulb	Wet Bulb	Grains	Dry Bulb	Wet Bulb	Grains	Min Latent Eff %	Max PD (in/w g)	Dry Bulb	RH	Wet Bulb	Grains	Max PD (in/w g)	Dry Bulb	Grains	Voltage/Phase	FLA	MCA	MOCP		Cooling
SEMCO	FV-2000	Outdoor Unit	ERV-3	1,710	1.50	2.00	Yes	92.0	73.0	91.9	77.9	64.2	68.3	0.70	0.52	72.0	50%	60.0	58.3	0.51	86.1	82.0	208V/3Ph	20.0	22.0	30.0	0.0 KW	98.3
				Return Airflow				Winter/Heating															Filters					Heating
								Outdoor			Supply					Return				Exhaust			Outdoor		Return			
				Return CFM	ESP	Motor HP	VFD	Dry Bulb	Wet Bulb	Grains	Dry Bulb	Wet Bulb	Grains	Min Latent Eff %	Max PD (in/w g)	Dry Bulb	RH	Wet Bulb	Grains	Max PD (in/w g)	Dry Bulb	Grains	Type	Depth	Type	Depth	Rating	191.5
				1,710	0.57	1.50	Yes	2.0	1.2	4.6	49.8	39.8	20.3.5	0.70	0.46	70.0	25%	51.4	27.0	0.48	22.2	11.3	Reated	2"	MERV 13	Reated	2"	MERV 8

PUMP SCHEDULE

"TACO" AS STANDARD OR APPROVED EQUAL

UNIT NO.	LOCATION	SYSTEM	CIRCULATING FLUID: FLUID	SPEC. GRAVITY	TEMP. (°F)	GPM	HEAD (FT.)	MOTOR HP (WATTS)	MOTOR RPM	MOTOR SPEED	IMPELLER DIAMETER (IN.)	MIN. EFF. (%)	ELECTRICAL DATA VOLT/PH	WEIGHT (LB)	MODEL NO.	REMARKS
P-1	MER 121	LOAD IN CH-1	30% PG	1.026	42-110	42.6	60	2.0	1760	VFD	7.75	49	208/3	–	1919	SEE NOTES
P-2	MER 121	LOAD IN CH-2	30% PG	1.026	42-110	42.6	60	2.0	1760	VFD	7.75	49	208/3	–	1919	SEE NOTES
P-3	MER 121	LOAD IN CH-3	30% PG	1.026	42-110	42.6	60	2.0	1760	VFD	7.75	49	208/3	–	1919	SEE NOTES
P-4	MER 121	LOAD IN CH-4	PLAIN WATER	1.0	32-110	34	40	1.0	1760	VFD	6.55	47	208/3	–	1919	SEE NOTES
P-5	MER 121	AHU-1 PHC/ERF-1	30% PG	1.026	25	12.5	35	0.75	1760	VFD	5.8	40	208/3	–	1915	SEE NOTES
P-6	MER 121	AHU-2 PHC/ERF-2	30% PG	1.026	46	19.5	40	0.75	1750	VFD	6.2	41	208/3	–	1915	SEE NOTES
P-A	MER 121	GEO SYSTEM SOURCE	30% PG	1.026	25	300	180	25	1760	VFD	7.15	77	208/3	–	F13013D	SEE NOTES
P-B	MER 121	GEO SYSTEM SOURCE	30% PG	1.026	25	300	180	25	1760	VFD	7.15	77	208/3	–	F13013D	SEE NOTES

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. M.C. TO FURNISH. E.C. TO INSTALL AND WIRE VFD'S.

ENERGY RECOVERY VENTILATOR SCHEDULE

Basis of Design	Model	Location	Tag#	Fan Data: Elevation (ft)	Supply Air Airflow: Fresh Air CFM	ESP	Motor HP	VFD	FLA	Exhaust Air Airflow: Exhaust Air CFM	ESP	Motor HP	VFD	FLA	Energy Recovery Data: Summer/Cooling: Outdoor Air Dry Bulb	Outdoor Air Wet Bulb	Outdoor Air Grains/lb	Fresh Air Dry Bulb	Fresh Air Wet Bulb	Fresh Air Grains/lb	Return Air Dry Bulb	Return Air Wet Bulb	Return Air Grains/lb	Winter/Heating: Outdoor Air Dry Bulb	Outdoor Air Wet Bulb	Outdoor Air Grains/lb	Fresh Air Dry Bulb	Fresh Air Wet Bulb	Fresh Air Grains/lb	Return Air Dry Bulb	Return Air Wet Bulb	Return Air Grains/lb	Performance Effectiveness: Sensible (%)	Summer Total (%)	Winter Total (%)	Unit Information: Electrical: Voltage/Phase/HZ	MCA	MOPD	Filters: Outdoor Air Type	Outdoor Air Depth	Outdoor Air Rating	Return Air Type	Return Air Depth	Return Air Rating
RenewAire	HE2X	Indoor Unit	ERV-2	364	1275	1	1.5	YES	4.6-4.8	1175	1	1.5	YES	4.6-4.8	92	73	93.1	78	66.7	81.4	72	60	59.1	2	1.2	4.8	49.5	39.2	19.4	70	51.4	27.4	75.9	55.9	74.7	208-230V / 3 Phase / 60 HZ	11.9	15	Pleated	2"	MERV-13	Pleated	2"	MERV-8

WATER SOURCE HEAT PUMP UNIT SCHEDULE

TAG	Diakin Model	Airflow (CFM)	Outdoor Airflow (CFM)	OA From ERV	External Static Pressure (inH$_2$O)	Fluid Flow (gpm)	Fluid Type	Antifreeze (%)	Cooling: EWT (°F)	LWT (°F)	EAT EDB (°F)	EAT EWB (°F)	LAT LDB (°F)	LAT LWB (°F)	Total (Btu/hr)	Sensible (Btu/hr)	Heat of Rejection (Btu/hr)	EER (Design)	EER (AHRI)	Heating: EWT (°F)	LWT (°F)	EAT EDB (°F)	EAT LDB (°F)	Total (Btu/hr)	Heat of Absorption (Btu/hr)	COP (Design)	COP (AHRI)	Electrical: Voltage	Compressor RLA	Fan Motor FLA	Total Unit FLA	MCA (A)	Max Fuse
WSHP 001	WLVW1072	2200	220	ERV-1	1.28	15.00	Propylene Glycol	30.00	77.0	88.6	72.6	60.8	52.0	49.6	66235	49067	83580	12.6	14.6	32.0	26.6	67.0	90.1	55424	38595	3.2	3.4	208/60/3	13.2	5.0	31.4	34.7	45
WSHP 002	WLVW1096	3210	200	ERV-2	1.22	20.00	Propylene Glycol	30.00	77.0	87.5	72.4	60.6	55.2	51.8	77294	59560	100149	11.2	14.6	32.0	26.9	68.0	88.0	69869	48781	3.2	3.6	208/60/3	13.7	6.4	33.8	37.2	50
WSHP 003	WGTV0321	1000	195	ERV-1	0.7	6.50	Propylene Glycol	30.00	77.0	88.9	73.3	61.6	53.1	50.6	30030	21970	36597	15.6	18.9	32.0	26.5	65.0	86.3	23112	17029	3.8	4.1	208-230/60/3	8.7	5.0	13.7	15.9	20
WSHP 004	WLVW1072	2310	255	ERV-1	1.24	18.00	Propylene Glycol	30.00	77.0	86.8	72.6	60.8	52.4	50.1	66857	50516	84381	12.63	14.6	32.0	27.2	67.0	90.1	58256	41118	3.27	3.4	208/60/3	13.2	5.0	31.4	34.7	45
WSHP 005	WGTV0381	1575	150	ERV-2	14	14.00	Propylene Glycol	30.00	77.0	88.7	76.1	64.7	53.1	50.2	61167	37505	72425	18.6	19.7	32.0	26.6	55.0	84.2	47496	35687	4	3.9	208-230/60/3	16.5	9.4	25.9	30.0	45
WSHP 006	WGTV0721	1710	1710	ERV-3	0.7	18.00	Propylene Glycol	30.00	77.0	86.6	**77.9**	**64.2**	51.3	49.8	68353	49421	82299	16.7	18.1	32.0	27.0	**50.0**	79.7	55222	42701	4.4	3.7	208-230/60/3	17.6	9.4	27.0	31.4	45
WSHP 007	WGTH0491	1600	150	N/A	0.7	12.00	Propylene Glycol	30.00	77.0	86.7	72.6	60.9	52.5	50.5	45353	34808	55063	15.9	19.2	32.0	27.4	62.0	82.4	35506	26418	3.9	4	208-230/60/3	14.0	7.3	21.3	24.8	35
WSHP 008	WGTV0381	1090	1090	ERV-1	0.7	9.00	Propylene Glycol	30.00	77.0	89.0	78.0	66.6	54.8	52.6	43049	26473	51415	17.5	19.8	32.0	26.4	50.0	77.0	30779	23784	4.4	4	208-230/60/3	14.2	7.3	21.5	25.0	35

NOTE:
1. PROVIDE NEXUS COIL PACK FOR EACH WATER SOURCE HEAT PUMP BASED ON THEIR RESPECTIVE FLOW RATE OF EACH UNIT.

WATER TO WATER HEAT PUMP CHILLERS/BOILERS

Tag	Quantity	Bosch Model Number	Unit Size	Description	General Unit Data	Cooling: Total Capacity	Input Watts	EER	Heat of Rejection	Heating: Total Capacity	Input Watts	COP	Heat of Absorbtion	Cooling Source: Fluid Flow	EWT	PCT Glycol	LWT	WPD	Cooling Load: Fluid Flow	EWT	PCT Glycol	LWT	WPD	Heating Source: Fluid Flow	EWT	PCT Glycol	LWT	Freeze Point	WPD	Heating Load: Fluid Flow	EWT	PCT Glycol	LWT	WPD	Unit MCA	Unit MFS	Unit Voltage
						BtuH	W	BtuH/W	BtuH	BtuH	W	W/W	BtuH	GPM	F	%	F	ft H2O	GPM	F	%	F	ft H2O	GPM	F	%	F		ft H2O	GPM	F	%	F	ft H2O			V
WWHP-1 2 3	3	WW210-3USC-RXXXCA-XDGDEHM	210	WW - Water2Water High Efficiency		158613	11205	14.2	196846	151873	14383	14.2	102798	40	77	30	87.4	15.8	40	50	30	41.7	19.8	40	32	30	26.6	8	22	40	101	30	109	14.1	69.7	125	3 - 208-230/60/3
WWHP-4	1	WW180-3USC-RXXXCA-XDGDEHM	180	WW - Water2Water High Efficiency		126892	8295	15.3	155195	120639	10703	15.3	84121	This WWHP is dedicated to the reheat coils in the 2 Autopsy AHUs. Those coils are for dehumidification during shoulder seasons and the geothermal (source) loop is expected to be warmer than the design condition shown here:										34	32	30	26.8	8	16.4	34	101	0	108.1	8.5	60.1	100	3 - 208-230/60/3

NOTE:
1. PROVIDE NEXUS COIL PACK FOR EACH WATER TO WATER HEAT PUMP CHILLERS BASED ON THEIR RESPECTIVE FLOW OF EACH UNIT.

REVISION SCHEDULE

#	DESCRIPTION	DATE

SEAL
DANIEL STEINBERG, P.E.
NY PROFESSIONAL ENGINEER
FAL STRUCT.

ARCHITECT/STRUCTURAL ENGINEER
HYMAN HAYES ASSOCIATES
800 Troy-Schenectady Road
P.O. Box 351
Latham, NY 12110
(518) 482-3410
www.hyman-hayes.com

COST CONSULTANT: STUART-LYNN COMPANY
FF&E CONSULTANT: CLASSIC CONTRACT INTERIORS, LLC
I.T./SECURITY CONSULTANT: CONVERGENT TECHNOLOGIES
CIVIL CONSULTANT: Fusco Engineering & Land Surveying PC
M&P CONSULTANT: FELLENZER
FORENSIC CONSULTANT: crime lab design
FE PROJECT #: 20-335

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ORANGE COUNTY, NEW YORK

SHEET TITLE
HVAC SCHEDULES

ORANGE COUNTY MEDICAL EXAMINER'S OFFICE
22 WELLS FARM RD.
OSSINING, NY 10562

DATE:	11/18/2022
SCALE:	AS SHOWN
DRAWN BY:	ZR
CHECKED BY:	DSS
APPROVED:	MDF
CLIENT APPROVAL	
HHA PROJ. NO.:	20071
CLIENT PROJ. NO.:	

SHEET NUMBER
H801