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DUCTLESS SPLIT SCHEDULE

INDOOR FAN COIL UNIT												DESIGN STANDARD (MANUFACTURER & MODEL)			
MARK	SERVICE	SYSTEM TYPE	NOMINAL TONS	RATED COOLING CAPACITY (BTU/HR)	OUTDOOR RATED CLG. CONDITIONS (DB/MB DEG. F)	RATED HEATING CAPACITY (BTU/HR)	OUTDOOR RATED HTG. CONDITIONS (DB/MB DEG. F)	TYPE	CFM	POWER (V/PH/HZ)	MCA				
AC-1/ACCU-1	OFFICE	HEAT PUMP	0.75	9,000	95/75	11,000	47/43	WALL CASSETTE	318	208-230/1/60	9	SMARTFLEX DHX09NB21S & DHX09CSB21S			

PUMP SCHEDULE

TAG	SERVICE	TYPE	FLUID	GPM	HEAD	RPM	IMPELLER SIZE	MINIMUM PUMP EFFICIENCY	ELECTRICAL		MOTOR CONTROLLER		
									HP	VOLTS/PH/HZ	TYPE	FURNISHED BY	INSTALLED BY
P-1	HOT WATER	VERTICAL SPLIT CASE	WATER	375	70	1160	8.4	70	10	208/3/60	VFD	MECHANICAL	ELECTRICAL
P-2	HOT WATER	VERTICAL SPLIT CASE	WATER	375	70	1160	8.4	70	10	208/3/60	VFD	MECHANICAL	ELECTRICAL

HOT WATER COIL SCHEDULE

MARK	SERVICE	TYPE	MBH	CFM	APD	EAT DB/MB (°F)	LAT DB (°F)	FLUID SIDE					REMARKS	
								FLUID	GPM	EWI (°F)	LWT (°F)	WPD (FT.)		
HC-1	KITCHEN	DUCT MOUNTED	670	7000	.25	40	125	HOT WATER	32	180	140	5	1, 3	
HC-2	CAFETERIA	DUCT MOUNTED	350	3700	.25	40	125	HOT WATER	16	180	140	5		
HC-3	PTAC	IN UNIT	1	290	0.2	55	95	HOT WATER	10	180	160	5	3, 4	
HC-4	ERV-1	DUCT MOUNTED	195	3600	.25	61	90	HOT WATER	10	180	140	5	2	

1. CONTRACTOR TO FIELD VERIFY REQUIRED DIMENSIONS

2. PROVIDE NECESSARY ADAPTORS TO FIT WITH ERV DISCHARGE

3. FIELD VERIFY UNIT DIMENSIONS AND CFM

4. SEVEN REQUIRED

UNIT VENTILATOR SCHEDULE

MARK	SERVICE	CONFIGURATION	OA CFM	CFM	HEATING					FAN MOTOR		REMARKS		
					AIR		WATER			HP	V/PH/HZ			
					EAT	LAT	EWI	LWT	PD (FT)	GPM	MBH			
UV-1	CLASSROOM	VERTICAL	330	1000	42	120	180	140	4	4.0	78	1/3	120/1/60	
UV-2	CLASSROOM	VERTICAL	420	1250	42	120	180	140	4	5.0	97	1/3	120/1/60	
UV-3	CLASSROOM	VERTICAL	250	750	42	120	180	140	4	3.0	58	1/3	120/1/60	
UV-4	CAFETERIA	VERTICAL	625	1500	35	120	180	140	6	7.1	138	1/3	120/1/60	FACE AND BYPASS DAMPER

EXPANSION TANK SCHEDULE

MARK	SERVICE	TYPE	MEDIUM	FILL PRESS. (PSIG)	MAX. PRESS. (PSIG)	TANK VOLUME (GALLONS)	ACCEPT. VOLUME (GALLONS)	SIZE LENGTH (IN)	SIZE DIAM. (IN)	REMARKS
EX-1	HEATING	BLADDER (ASME)	WATER	27	45	475	475	84	40	TACO CA1800-125

BOILER FEED UNIT SCHEDULE

MARK	BOILER CAPACITY BHP	PUMP GPM	PUMP DISCHARGE PRESSURE (PSIG)	DISCHARGE SIZE (IN)	RECEIVER CAPACITY (GAL)	INLET SIZE (IN)	TANK (GAL)	ELECTRICAL MOTOR HP V/PH/HZ		REMARKS
BFU-1	150	21	50	1-1/2	125	4	260	2	208/3/60	SHIPCO 21 PMC-50

CONVECTOR SCHEDULE

MARK	CONFIGURATION	HEATING				REMARKS
		EWI	LWT	GPM	MBH	
C-1	SLOPE TOP	180	140	.4	7.5	36" L x 32"H
C-2	SLOPE TOP	180	140	.6	11.5	52" L x 32"H
C-3	SLOPE TOP	180	140	.8	14.5	64" L x 32"H

FINTUBE RADIATION SCHEDULE

TAG	FLUID	OUTPUT BTU/FT	AVE. WATER TEMP.	ACTIVE ELEMENT	TUBE SIZE	FINS/ FT	CABINET HEIGHT	DEPTH	MTG. HEIGHT	MANUFACTURER	MODEL	COMMENTS
FTR-1	WATER	940	160	4-1/4"x3-5/8"	3/4	50	24	5/5/16	18	STERLING	VERSA-LINE JVB	1
FTR-2	WATER	850	160	4-1/4"x3-5/8"	3/4	50	NO ENCLOSURE		18	STERLING	BARE STYLE B	1
FTR-3	WATER	1420	160	4-1/4"x3-5/8"	3/4	50	NO ENCLOSURE		18	STERLING	BARE STYLE B	2

COMMENTS

1. MOUNT HW FIN HIGH IN ENCLOSURE TO ALLOW FUTURE REFRIGERANT PIPING TO RUN BELOW.

2. TWO TIER

SHELL AND TUBE HEAT EXCHANGER SCHEDULE

MARK	SERVICE	LOCATION	TUBE SIDE		SHELL SIDE			NUMBER PASSES	FOULING	REMARKS	
			PRESSURE	LBS CONDENSATE	EWI (°F)	LWT (°F)	GPM				WPD (PS)
HX-1	HW EQUIPMENT	MECH ROOM	7	7642	140	180	380	2.15	2	.003	

CABINET UNIT HEATER SCHEDULE

MARK	CONFIGURATION	CFM	HEATING						FAN MOTOR		REMARKS	
			AIR		WATER				HP	V/PH/HZ		
			EAT	LAT	EWI	LWT	PD (FT)	GPM				MBH
CUH-1	CEILING MOUNTED	335	65	125	180	160	0.8	2.28	22	1/15	120/1/60	
CUH-2	CEILING MOUNTED	630	65	125	180	160	1.2	4.8	48	1/12	120/1/60	

AIR SEPARATOR SCHEDULE

MARK	SERVICE	TYPE	MEDIUM	GPM	LINE SIZE	REMARKS
AS-1	HOT WATER	INLINE	HOT WATER	380	6	TACO ACC06-125

CEILING DIFFUSER SCHEDULE

MARK	USE	TYPE	PERFORMANCE		MOUNTING	MATERIAL	FINISH	ACCESSORIES	MAKE/MODEL
			CFM	MAX. NC					PRICE
R-1	EXHAUST	AIRFOIL RETURN GRILLE	1000	35	30/16	STEEL	WHITE		MODEL 60
R-2	EXHAUST	AIRFOIL RETURN GRILLE	1250	35	36/16	STEEL	WHITE		MODEL 60
R-3	EXHAUST	AIRFOIL RETURN GRILLE	750	35	24/16	STEEL	WHITE		MODEL 60
R-4	EXHAUST	SQUARE DIFFUSER	100	35	24/24	STEEL	WHITE	PROVIDE WITH MANUAL DAMPER	MODEL PDR
S-4	SUPPLY	SQUARE DIFFUSER	100	35	24/24	STEEL	WHITE	PROVIDE WITH MANUAL DAMPER	MODEL SPD

LOUVER SCHEDULE

MARK	LOCATION	FUNCTION	BLADE STYLE	WIDTH/HEIGHT (N.)	FRAME DEPTH (N.)	CFM	FREE AREA (SQFT)	PRESS. DROP (N. WC)	MATERIAL	FINISH	ACCESSORIES
L-1	CLASSROOM	EXHASUT	LOUVER DAMPER	22/22	4	1000	1.4	.1	ALUMINUM	BRUSHED	BIRDSCREEN, ACTUATOR
L-2	CLASSROOM	EXHAUST	LOUVER DAMPER	26/22	4	1250	1.4	.1	ALUMINUM	BRUSHED	BIRDSCREEN, ACTUATOR
L-3	CLASSROOM	EXHAUST	LOUVER DAMPER	18/22	4	750	1.4	.1	ALUMINUM	BRUSHED	BIRDSCREEN, ACTUATOR
L-4	OFFICES	OUTDOOR AIR	LOUVER DAMPER	6/24	4	100	.6	.1	ALUMINUM	BRUSHED	BIRDSCREEN, ACTUATOR
L-5	OFFICES	EXHAUST	LOUVER DAMPER	6/24	4	100	.6	.1	ALUMINUM	BRUSHED	BIRDSCREEN, ACTUATOR

ENERGY RECOVERY VENTILATOR SCHEDULE

MARK	SERVICE	TYPE	AIR FLOW RANGE (CFM)	STATIC PRESSURE	ELECTRICAL DATA				BASIS OF DESIGN/MODEL
					V/PH/HZ	HP	MCA	MOCF	
ERV-1	OFFICES	BOX	100	0.5	120/1/60	.6	9	15	RENEUAIRE EV130

EXHAUST FAN SCHEDULE

MARK	TYPE	CFM	STATIC PRESSURE (N. WC)	FAN RPM	SONES (MAX)	DRIVE	ELECTRICAL		MANUFACTURER/MODEL NUMBER	NOTES
							HP	VOLTS/PH/HZ		
EF-1	INLINE	1000	.125	638	3	DIRECT	3/4	120/1/60	GREENHECK SQ-140-VG	-
EF-2	INLINE	1250	.125	750	4.4	DIRECT	3/4	120/1/60	GREENHECK SQ-140-VG	-
EF-3	INLINE	750	.125	790	3	DIRECT	1/2	120/1/60	GREENHECK SQ-120-VG	-

AIR HANDLING UNIT SCHEDULE

AIR SIDE								WATER SIDE					FAN					BASIS OF DESIGN		COMMENTS			
CUBIC FEET/MINUTE								TEMPERATURE		CAPACITY			WPD	MOTOR			ELECTRICAL						
TAG	SERVICE	TOTAL	O.A.	EAT	LAT	TSP	ESP	FLUID	EWI	LWT	GPM	MBH	FT H2O	TYPE	DRIVE	HP	BHP	VOLT	PH	HZ	MANUFACTURER	MODEL	
AHU-1	GYM	3600	750	53	102.3	1.7	1	WATER	180	146.4	12	196.6	1.76	CENTR	BELT	3	2.17	208	3	60	MAGICAIRE	HBB40	1,2
AHU-2	GYM	3600	750	53	102.3	1.7	1	WATER	180	146.4	12	196.6	1.76	CENTR	BELT	3	2.17	208	3	60	MAGICAIRE	HBB40	1,3

COMMENTS

1. 2" MERV 8 + 4" MERV 13 FILTERS

2. Left Hand Coil Connections

3. Right Hand Coil Connections

VENTILATION REQUIREMENTS

SPACE DESIGNATION	AREA AREA SF	OCCUPANTS		VENTILATION REQUIRED		UNCORRECTED VENTILATION	EFFICIENCY FACTOR	CORRECTED CFM
		/1000 SF	TOTAL	PER OCCUP.	PER SF			
GYMNASIUM	3,744	7	26	20.00	0.18	1,200	80%	1,500
NEW CAFETERIA	1,869	70	131	7.50	0.18	1,320	80%	1,650
OLD CAFETERIA	2,400	70	168	7.50	0.18	1,690	80%	2,110
STANDARD CLSRM	805	25	20	10.00	0.12	300	80%	380
RESOURCE	575	25	14	10.00	0.12	210	80%	260
KINDERGARTEN	1,104	25	28	10.00	0.12	410	80%	510
TOTAL	10,497		387			5,130	80%	6,410

UNIT VENTILATOR SCHEDULE

		HEATING										COOLING																
		CUBIC FEET/MINUTE AIR												ENTERING AIR		LEAVING AIR				MBH				FAN MOTOR		BASIS OF DESIGN		
TAG	SERVICE	CONFIGURATION	NOMINAL	OPERATION	OUTSIDE	EAT	LAT	EWI	LWT	GPM	PD (FT)	MBH	TYPE	DBT	WBT	DBT	WBT	TOTAL	SENSIBLE	APD	TYPE	HP	V/PH/HZ	MANUFACTURER	MODEL	Notes		
UV-1	CLASSROOMS	VERTICAL	1250	1000	380	45	100	180	138	3.30	1.39	67.19	VRF	78.8	66.7	59	57	32.40	20.70		ECM	1/2	120/1/60	MAGIC AIR	MAUVF4	1,3,4,5		
UV-2	CLASSROOMS	VERTICAL	1500	1250	510	43	101	180	140	4.15	2.3	83.00	VRF	79.3	67.0	59	56	42.20	26.70		ECM	1/2	120/1/60	MAGIC AIR	MAUVF5	1,3,4,5		
UV-3	CLASSROOMS	VERTICAL	1000	750	260	47	103	180	145	3.10	4.18	53.00	VRF	78.2	66.4	58	55	28.60	18.00		ECM	1/3	120/1/60	MAGIC AIR	MAUVF3	1,3,4,5		
UV-4	CAFETERIA	VERTICAL	1500	1500	675	40	112	180	137	5.30	4	110.00	VRF	80.1	67.3	59	55	44.00	28.60		ECM	1/2	120/1/60	MAGIC AIR	MAUVF5	2,3,4,5		

COMMENTS

1. 2 ROW HOT WATER COIL

2. 3 ROW HOT WATER COIL

3. 4 ROW R410-A COOLING COIL FOR FUTURE CONNECTION TO VRF ACCU.

4. 2" MERV 10 FILTER

5. PROVIDE 24" EXTENSION/UTILITY CABINET ON THE RIGHT SIDE FOR FUTURE AC CONTROL PANEL AND EXPANSION VALVE.

KEY PLAN

REVISIONS

No.	Description	Date

ISSUED: ISSUE FOR BID

DATE:

MARCH 15, 2021

SCALE:

As indicated

SHEET NAME:

HVAC SCHEDULES

SHEET NUMBER:

MES-M601

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SED CONTROL NUMBERS

MILLER ES #: 50-01-08-03-0-001-022

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HYDRONIC
CONVERSION
2020

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NY 10954