

REVISED

4:07 pm, Oct 06, 2023



LEEKA Architecture and Planning
Creating Positive Impressions in the Built Environment
503.644.4222 tel
503.644.4222 fax
sean@leeka.com e-mail
www.leeka.com web
1001 SE Water Avenue, Suite 175
Portland, Oregon 97214

Tenant Improvement
ESD112
Mental Health Facility Phase II
2400 NE 65th Ave. Vancouver WA.

Revised:	DATE: AUG. 10, 2023	DATE: AUG. 17, 2023	DATE: SEPT. 22, 2023	DATE: OCT. 03, 2023
PKR-01	APPLICANT EDITS	APPLICANT EDITS	APPLICANT EDITS	APPLICANT EDITS

Job No: 2246

Date: February 18, 2023

File Size: 24x36

Progress set

DRAWN:

CHECKED:

Sheet Title
MECHANICAL
SCHEDULES

Sheet Number

M0.10



VENTILATION SCHEDULE

NAME	OCCUPANCY CATEGORY	AREA SQ. FT.	ZONE POP	PEOPLE OUTDOOR AIR RATE	AREA OUTDOOR AIR RATE	OCCUPANT DENSITY #/1000	BREATHING ZONE OSA FLOW RATE	ZONE AIR DISTR EFFECTIVENESS	ZONE OUTDOOR AIR	PRIMARY OSA FRACTION	TABLE 6-3 SYSTEM VENT	MINIMUM OUTDOOR AIR INTAKE FLOW	ZONE PRIMARY AIRFLOW	SYSTEM OSA CFM SUPPLIED	EXHAUST RATE CFM	EXHAUST RATE CFM	VENTILATION & EXHAUST MEETS
				CFM/PERSON	CFM/SQ. FT.	SQFT	(Pz*Ra)+(Az*Ra)		Vbz (CFM)		EFFICIENCY	(CFM)			REQUIRED	PROVIDED	UMC
		(Az)	(Pz)	(Rp)	(Ra)	-	Vbz (CFM)	(Ez)	Vbz/Ez	Zp*Vbz/Zp	Ev	Vot* Vbz/Ez	Vpz/(CFM)				
MEETING ROOM 102	CLASSROOM	145	4	5	0.06	25	29	1.0	29	0.96	1.0	29	30	30	0	0	YES
DIRECTORS OFFICE 103	OFFICE	144	1	5	0.06	5	14	1.0	14	0.91	1.0	14	15	15	0	0	YES
VESTIBULE ROOM 100	CORRIDOR	192	0	5	0.06	0	12	1.0	12	0.77	1.0	12	15	15	0	0	YES
RECEPTION ROOM 101	CLASSROOM	130	4	5	0.06	25	28	1.0	28	0.93	1.0	28	30	30	0	0	YES
HALL 127	CORRIDOR	67	0	5	0.06	0	4	1.0	4	0.80	1.0	4	5	5	0	0	YES
THERAPIST OFFICE 104	OFFICE	345	2	5	0.06	5	31	1.0	31	0.88	1.0	31	35	35	0	0	YES
THERAPIST OFFICE 105	OFFICE	169	1	5	0.06	5	15	1.0	15	1.01	1.0	15	15	15	0	0	YES
THERAPIST OFFICE 106	OFFICE	170	1	5	0.06	5	15	1.0	15	1.01	1.0	15	15	15	0	0	YES
HALL 107	CORRIDOR	136	0	5	0.06	0	8	1.0	8	0.82	1.0	8	10	10	0	0	YES
THERAPIST OFFICE 108	OFFICE	104	1	5	0.06	5	11	1.0	11	0.75	1.0	11	15	15	0	0	YES
THERAPIST OFFICE 109	OFFICE	73	1	5	0.06	5	9	1.0	9	0.94	1.0	9	10	10	0	0	YES
CORRIDOR 128	CORRIDOR	452	0	5	0.06	0	27	1.0	27	0.90	1.0	27	30	30	0	0	YES
PANTRY 110	STORAGE	172	1	5	0.06	2	15	1.0	15	1.02	1.0	15	15	15	0	0	YES
STORAGE ROOM 112	STORAGE	119	1	5	0.06	2	12	1.0	12	0.81	1.0	12	15	15	0	0	YES
CORRIDOR 129	CORRIDOR	544	0	5	0.06	0	33	1.0	33	0.93	1.0	33	35	35	0	0	YES
VOCATIONAL ROOM 125	CLASSROOM	908	23	5	0.06	25	169	1.0	169	1.00	1.0	169	170	170	0	0	YES
VOCATIONAL ROOM 124	CLASSROOM	908	23	5	0.06	25	169	1.0	169	1.00	1.0	169	170	170	0	0	YES
VOCATIONAL ROOM 122	CLASSROOM	867	22	5	0.06	25	162	1.0	162	0.98	1.0	162	165	165	0	0	YES
VOCATIONAL ROOM 123	CLASSROOM	926	24	5	0.06	25	176	1.0	176	0.98	1.0	176	180	180	0	0	YES
STORAGE ROOM 121	STORAGE	75	1	5	0.06	2	10	1.0	10	0.95	1.0	10	10	10	0	0	YES
STORAGE ROOM 120	STORAGE	75	1	5	0.06	2	10	1.0	10	0.95	1.0	10	10	10	0	0	YES
CORRIDOR 130	CORRIDOR	423	0	5	0.06	0	25	1.0	25	1.02	1.0	25	25	25	0	0	YES
UTILITY ROOM 119	STORAGE	66	1	5	0.06	2	9	1.0	9	0.90	1.0	9	10	10	0	0	YES
VOCATIONAL ROOM 118	CLASSROOM	774	20	5	0.06	25	146	1.0	146	0.98	1.0	146	150	150	0	0	YES
STORAGE ROOM 117	STORAGE	177	1	5	0.06	2	16	1.0	16	0.78	1.0	16	20	20	0	0	YES
CORRIDOR 131	CORRIDOR	88	0	5	0.06	0	5	1.0	5	1.06	1.0	5	5	5	0	0	YES
VOCATIONAL ROOM 114	CLASSROOM	115	3	5	0.06	25	22	1.0	22	0.88	1.0	22	25	25	0	0	YES
VOCATIONAL ROOM 115	CLASSROOM	136	4	5	0.06	25	28	1.0	28	0.94	1.0	28	30	30	0	0	YES
VOCATIONAL ROOM 116	CLASSROOM	123	4	5	0.06	25	27	1.0	27	0.91	1.0	27	30	30	0	0	YES
MENS RESTROOM 113	RESTROOM	270	0	0	0	0	0	0.0	0	0.00	0.0	0	0	0	200	200	YES
WOMENS RESTROOM 113	RESTROOM	270	0	0	0	0	0	0.0	0	0.00	0.0	0	0	0	200	200	YES

VRV SYSTEM SCHEDULE

EQUIPMENT TAG	COOLING					HEATING		AIRFLOW		ESP	BASIS OF DESIGN			ELECTRICAL			PHYSICAL		WEIGHT (LBS.)	NOTES
	BTU/HR	IEER	EER	COP (47F / 17F)	NOMINAL TONS	BTU/HR		CFM			MAKE	MODEL		VOLT/PHASE	MCA (A)	MOCP (A)	DIMENSIONS - LxWxH (INCHES)			
HP-1 (ROOF)	144,145	22.5	12.0	3.35 / 2.1	12.0	135,642	NA	NA	NA	DAIKIN	REYQ144AAYDA	460V/3PH	21.7	25			48.8 x 65.4 x 30.1		800.3	1.2,4
BS-1	NA	NA	NA	NA	4.5	60,000	NA	NA	NA	DAIKIN	BSF10Q54TAVJ	208/1PH	1.0	15			32.3 X 18.9 X 11.7		101.4	5
FC-1	13,080	NA	NA	NA	1.0	10,000	NA	500	0.5	DAIKIN	FXSQ12TAVJU	208/1PH	1.8	15			27.6 X 31.5 X 9.6		60.0	3.6,7
FC-2	11,458	NA	NA	NA	1.0	13,990	NA	335	0.5	DAIKIN	FXSQ12TAVJU	208/1PH	0.8	15			21.7 X 31.5 X 9.6		55.0	3.6,7
FC-3	18,000	NA	NA	NA	1.5	20,000	NA	742	0.5	DAIKIN	FXZQ18TAVJU	208/1PH	0.6	15			22.5 x 22.5 x 10.25		40.8	3.6,7,8
FC-4	18,000	NA	NA	NA	1.5	20,000	NA	742	0.5	DAIKIN	FXZQ18TAVJU	208/1PH	0.6	15			22.5 x 22.5 x 10.25		40.8	3.6,7,8
FC-5	18,000	NA	NA	NA	1.5	20,000	NA	742	0.5	DAIKIN	FXZQ18TAVJU	208/1PH	0.6	15			22.5 x 22.5 x 10.25		40.8	3.6,7,8
FC-6	18,000	NA	NA	NA	1.5	20,000	NA	742	0.5	DAIKIN	FXZQ18TAVJU	208/1PH	0.6	15			22.5 x 22.5 x 10.25		40.8	3.6,7,8
FC-7	21,000	NA	NA	NA	2.0	12,000	NA	920	0.5	DAIKIN	FXSQ24TAFJU	208/1PH	3.3	15			39.4 X 31.5 X 9.6		82.0	3.6,7
FC-8	26,000	NA	NA	NA	2.5	14,000	NA	1,200	0.5	DAIKIN	FXSQ30TAVJU	208/1PH	3.3	15			39.4 X 31.5 X 9.6		82.0	3.6,7
FC-9	16,000	NA	NA	NA	1.5	14,000	NA	700	0.5	DAIKIN	FXSQ18TAVJU	208/1PH	3.3	15			39.4 X 31.5 X 9.6		77.0	3.6,7

NOTES:

- HP-1 SHALL COMPLY WITH WSEC TABLE C406.1 CODE SECTION 1. MORE EFFICIENT HVAC PERFORMANCE AND SHALL EXCEED MINIMUM EQUIPMENT EFFICIENCIES LISTED IN TABLE C403.3.2 BY 15%.
- HEATING & COOLING EQUIPMENT SHALL BE HEAT PUMP.
- PROVIDE EACH FAN COIL UNIT A PROGRAMMABLE T-STATS.
- PROVIDE ONE PROGRAMMABLE MASTER SENSOR/CONTROLLER TO CONTROL ALL VRV UNITS.
- PROVIDE 10 PORT MODE SELECTION BOX (MANIFOLD) TO LINK VRV HEAT RECOVERY OUTDOOR UNIT AND INDOOR FAN COIL UNITS.
- PROVIDE MANUFACTURER'S INTEGRAL CONDENSATE LIFT PUMP WITH EACH FCU
- BALANCE TO AIRFLOW INDICATED.
- CEILING CASSETTE SHALL BE 24" X 24" TO MATCH CEILING TILE GRID.

ENERGY RECOVERY VENTILATOR SCHEDULE

SYMBOL	DESCRIPTION	AREA SERVED	CONTROL	ELECTRICAL	NOTES
HRV-1	ENERGY RECOVERY VENTILATOR, OUTDOOR UNIT, ROOF MOUNTED. AIR TO AIR HEAT EXCHANGER WITH OUTSIDE AIR & EXHAUST FANS. 1280 CFM OSA & EXHAUST @ 0.25" ESP. TOTAL SENSIBLE EFFECTIVENESS 81.1% SUMMER, 83.2% WINTER. WEIGHT = 2,992 LBS. UNIT DIMENSIONS: 173.5" L X 56.8" W X 57.8" H. SUPPLY FAN: ECM DIRECT DRIVE PLENUM FAN. 2.5 KW, 4.0 FLA, 0.23 WCFM. EXHAUST FAN: ECM DIRECT DRIVE PLENUM FAN. 2.5 KW, 4.0 FLA, 0.23 WCFM. BASIS OF DESIGN: OXYGEN8, MODEL #V200UH-HRV-8P.	TENANT IMPROVEMENT AREA	INDEPENDENT CONTROL WITH ON / OFF BY HP-1 CONTROLLER.	460V/3PH MCA = 15.4A, FLA = 12.3A, MOCP = 20A SINGLE POINT POWER CONNECTION.	1,2,3,4,5,6,7,8,9,10,11

NOTES:

- EQUIPMENT SHALL COMPLY WITH WSEC TABLE C406.1 EFFICIENCY PACKAGE CREDITS CODE SECTION 7 HIGH PERFORMANCE DEDICATED OUTDOOR AIR SYSTEM IN ACCORDANCE WITH SECTION C406.7. 80% MINIMUM SENSIBLE EFFECTIVENESS AND TOTAL COMBINED FAN POWER LESS THAN 0.5 WCFM.
- PROVIDE ALL CONTROLS NECESSARY FOR A COMPLETE INSTALLATION.
- CONNECT TO HP-1 TO ENABLE ERV ON / OFF SIGNAL FOR OFFICE AREA OCCUPIED / UNOCCUPIED MODES.
- PROVIDE WITH 4" 85% MERV13 FILTER ON OSA AND 4" 30% MERV8 ON RA.
- PROVIDE WITH ECM DIRECT DRIVE FAN MOTORS. MOTOR EFFICIENCY SHALL COMPLY WITH TABLE C405.8.1 OF THE 2018 WASHINGTON STATE ENERGY CODE.
- PROVIDE WITH VAV DUCT STATIC CONTROL.
- PROVIDE WITH CLASS 1 MOTORIZED CONTROL DAMPERS AND BELIMO ELECTRIC ACTUATORS ON SUPPLY AND RETURN.
- DOAS UNIT CONFIGURED TO NOT PROVIDE MORE THAN 150% OF REQUIRED VENTILATION AIR.
- PROVIDE WITH BYPASS ECONOMIZER OPTIONS.
- PROVIDE WITH ELECTRIC PRE-HEATER FOR FREEZE PROTECTION.
- PROVIDE WITH VAV DUCT STATIC CONTROL.

SPLIT SYSTEM EQUIPMENT SCHEDULE

SYSTEM										FAN COIL												OUTDOOR UNIT														NOTES
EQUIPMENT TAG	AREA SERVED	COOLING			HEATING			BASIS OF DESIGN				NOMINAL SIZE	AIRFLOW	ESP	ELECTRICAL			PHYSICAL				EQUIPMENT TAG	BASIS OF DESIGN		REFRIGERANT	NOMINAL SIZE	ELECTRICAL				PHYSICAL					
		CAPACITY	@ OAT	SEER (EER)	CAPACITY	@ OAT	HSPF	MAKE	MODEL	VOLT	PHASE				MOTOR FLA	LENGTH	WIDTH	HEIGHT	WEIGHT	MODEL	PHASE		MCA	MOCP			LENGTH	WIDTH	HEIGHT	WEIGHT						
		BTU/HR	'F		BTU/HR	'F (C)				TONS	CFM				INWC	V	PH	A	INCH	INCH	INCH		LBS	TONS			V	PH	A	A	INCH	INCH	INCH	LBS		
FCU-1	UTILITY ROOM 120	21,200	95	20.0	23,600	47	9.0	DAIKIN	FTX24BXVJU	2	716	0.50	208	1	0.2	39.50	11.30	11.69	31	CU-1	RX24BXVJU	R-410A	2.0	208	1	16.6	20.0	36.6	13.8	27.4	104.0	1—5				
FCU-2	STORAGE ROOM 112	10,900	95	20.0	13,500	47	10.0	DAIKIN	FTX12BXVJU	1	436	0.50	208	1	0.1	30.91	9.84	11.30	21	CU-2	RX12BXVJU	R-410A	1.0	208	1	12.4	15.0	26.5	11.2	21.7	93.0	1—6				
FCU-3	ELECTRICAL ROOM 111	10,900	95	20.0	13,500	47	10.0	DAIKIN	FTX12BXVJU	1	436	0.50	208	1	0.1	30.91	9.84	11.30	21	CU-3	RX12BXVJU	R-410A	1.0	208	1	12.4	15.0	26.5	11.2	21.7	93.0	1—5				
NOTES:																																				
1) MOUNT OUTDOOR CONDENSING UNIT ON ROOF STRUCTURE ABOVE IT.																																				
2) INSTALL DUCTLESS FAN COIL UNIT ON WALL AT ABOUT 6" ABOVE FINISHED FLOOR.																																				
3) PROVIDE WITH WIRED WALL MOUNTED THERMOSTAT																																				
4) FAN COIL IS ELECTRICALLY POWERED THROUGH THE OUTDOOR UNIT.																																				
5) PROVIDE WITH CONDENSATE PUMP AND ROUTE CONDENSATE PIPING TO NEAREST SINK DRAIN, FLOOR DRAIN, OR DIRECTLY TO THE EXTERIOR OF THE BUILDING.																																				

NOTES:

- INSTALL OUTDOOR CONDENSING UNIT ON ROOF STRUCTURE ABOVE IT.
- INSTALL DUCTLESS FAN COIL UNIT ON WALL AT ABOUT 6' ABOVE FINISHED FLOOR.
- PROVIDE WITH WIRED WALL MOUNTED THERMOSTAT.
- FAN COIL IS ELECTRICALLY POWERED THROUGH THE OUTDOOR UNIT.
- PROVIDE WITH CONDENSATE PUMP AND ROUTE CONDENSATE PIPING TO NEAREST SINK DRAIN, FLOOR DRAIN, OR DIRECTLY TO THE EXTERIOR OF THE BUILDING.