

MECHANICAL LEGEND

	SUPPLY AIR DIFFUSER	AFF	ABOVE FINISH FLOOR
	RETURN AIR GRILLE	AHU	AIR HANDLING UNIT
	EXHAUST AIR GRILLE	B.D.	BOTTOM OF DUCT
	PERFORATED RETURN AIR PANEL	BHP	BRAKE HORSEPOWER
	DIRECTIONAL AIR FLOW	BTU	BRITISH THERMAL UNITS
	MANUAL VOLUME DAMPER	CFM	CUBIC FEET PER MINUTE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	CONN.	CONNECTION
	RETURN AIR DUCT UP & DOWN	CONT.	CONTINUATION
	EXHAUST AIR DUCT UP & DOWN	CW	DOMESTIC COLD WATER
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	DB	DRY BULB
	RETURN AIR DUCT UP & DOWN	DIA.	DIAMETER
	EXHAUST AIR DUCT UP & DOWN	EA	EXHAUST AIR
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	EDB	ENTERING DRY BULB TEMPERATURE
	RETURN AIR DUCT UP & DOWN	EWB	ENTERING WET BULB TEMPERATURE
	EXHAUST AIR DUCT UP & DOWN	FF	FINISH FLOOR
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	FF	FIXTURE
	RETURN AIR DUCT UP & DOWN	FPM	FEET PER MINUTE
	EXHAUST AIR DUCT UP & DOWN	FPS	FEET PER SECOND
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	FT.	FEET / FOOT
	RETURN AIR DUCT UP & DOWN	GA.	GAUGE
	EXHAUST AIR DUCT UP & DOWN	GPM	GALLONS PER MINUTE
	VAV TERMINAL UNIT	H	HEIGHT
	WT TERMINAL UNIT	HP	HORSEPOWER
	EXISTING	I.D.	INSIDE DIAMETER
	CONNECT TO EXISTING	IN.	INCHES
	THERMOSTAT OR TEMP. SENSOR	L	LENGTH
	NOTE	LBS.	POUNDS
	EQUIPMENT DESIGNATOR	LDB	LEAVING DRY BULB
	BALL VALVE	LWB	LEAVING WET BULB
	GATE VALVE	LWT	LEAVING WATER TEMPERATURE
	CHECK VALVE	MAX.	MAXIMUM
	BALANCING VALVE	MBH	THOUSANDS OF BTUS PER HOUR
	THERMOMETER	MIN.	MINIMUM
	DIRECTION OF FLOW	NC	NOISE CRITERIA
	PUMP	N.C.	NORMALLY CLOSED
	STRAINER	N.I.M.	NOT IN MECHANICAL
	PRESSURE GAUGE	NO.	NUMBER
	PET'S PLUG	N.O.	NORMALLY OPEN
	DOUBLE CHECK ASSEMBLY	O.A.	OUTSIDE AIR
	PRESSURE REDUCING VALVE	P	PERSON
	UNION	PSI	POUNDS PER SQUARE INCH
	2-WAY CONTROL VALVE	P/T	PRESSURE / TEMPERATURE
	3-WAY CONTROL VALVE	R.A.	RETURN AIR
	CAP	RECT.	RECTANGULAR
	SMOKE DETECTOR	REQ'D	REQUIRED
	MOTORIZED DAMPER	S.A.	SUPPLY AIR
		S.P.	STATIC PRESSURE
		SO.	SQUARE
		TEMP.	TEMPERATURE
		TYP.	TYPICAL
		VAV	VARIABLE AIR VOLUME
		W	WIDTH
		WB	WET BULB
		WPD	WATER PRESSURE DROP
		Ø	DIAMETER
		(E)	EXISTING
		(D)	DEMOLISH
			NEW WORK
		HWS	(HWS) HEATING WATER SUPPLY
		HWR	(HWR) HEATING WATER RETURN
		▲	FIRE DAMPER
		■	FIRE / SMOKE DAMPER
		⊙	SMOKE DAMPER
			SEISMIC BRACING
			LATERAL BRACING
			LONGITUDINAL BRACING
			LONGITUDINAL & LATERAL BRACING

VENTILATION AIR SCHEDULE

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ FT.)	OUTSIDE AIR REQUIRED (CFM)	BATHROOM EXHAUST (CFM)
	Az		Pz	Rp	Ra	Vbz	
Residential Units							
Townhouse 2 BED 1.5 BA			3	15		45	60
							90
Townhouse 3 BED 2 BA			4	15		60	60
							90
2 BED 1 BA			3	15		45	45/60
							EF-3: LOW SPEED CONTINUOUS/ HIGH SPEED WITH MOTION SENSOR
ADA Suite: 3 BED 1.5 BA			3	15		45	60
							90
							EF-1: CONTINUOUS EF-2: ON/OFF WITH MOTION SENSOR

VENTILATION AIR SCHEDULE

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ FT.)	OUTSIDE AIR REQUIRED (CFM)	ZONE OSA (CFM)	SUPPLY AIR (CFM)	PRIMARY OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	AIR SYSTEMS
	Az		Pz	Rp	Ra	Vbz	Ez	Voz	Vpz	Zp		
OFFICE SPACE	460	5	3	5	0.06	43	1.0	43	800	0.05	800	0
COMMUNITY ROOM	1215	50	61	5	0.06	378	1.0	378	1200	0.31	1200	0
CORRIDORS 312	1187	0	0	0	0.06	71	1.0	71	900	0.08	0	0
CORRIDORS 412	760	0	0	0	0.06	46	1.0	46	200	0.23	0	0
LAUNDRY 415	260	20	6	7.5	0.06	61	1.0	400			0	RTU-1
JANITORIAL 413	110	0	0	0	0	0	1.0				75	RTU-1
TRASH/RECYCLING 417	225	0	0	0	0	0	1.0	150			550	RTU-1
ELECT ROOM 414	125	0	0	0	0.12	15	1.0	15	50	0.30	0	0
CORRIDORS 312	760	0	0	0	0.06	46	1.0	46	200	0.23	0	0
LAUNDRY 315	260	20	6	7.5	0.06	61	1.0	400			0	RTU-1
JANITORIAL 313	110	0	0	0	0	0	1.0				75	RTU-1
TRASH/RECYCLING 317	225	0	0	0	0	0	1.0	150			550	RTU-1
ELECT ROOM 314	125	0	0	0	0.12	15	1.0	15	50	0.30	0	0
CORRIDORS 212	760	0	0	0	0.06	46	1.0	46	200	0.23	0	0
LAUNDRY 215	260	20	6	7.5	0.06	61	1.0	400			0	RTU-1
JANITORIAL 213	110	0	0	0	0	0	1.0				75	RTU-1
TRASH/RECYCLING 217	225	0	0	0	0	0	1.0	150			550	RTU-1
ELECT ROOM 214	125	0	0	0	0.12	15	1.0	15	50	0.30	0	0
TOTAL									2400		1875	
CORRIDORS 402	760	0	0	0	0.06	46	1.0	46	300	0.15	0	0
CORRIDORS 302	760	0	0	0	0.06	46	1.0	46	300	0.15	0	0
CORRIDORS 202	760	0	0	0	0.06	46	1.0	46	300	0.15	0	0
LOBBY 401, 301, 201, 101	3823	0	0	0	0.06	229	1.0	229	400	0.57	0	0
TOTAL									1300			

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, SIZED FOR:
 30 CFM ON 1 BEDROOM UNITS
 45 CFM ON 2 BEDROOMS UNITS
 60 CFM ON 3 BEDROOMS UNITS

FRESH AIR INTO UNITS WITH PTACS ARE PROVIDED DIRECTLY THROUGH PTACS.

FRESH AIR INTO UNITS WITH SPLIT SYSTEMS ARE PROVIDED FROM VENTILATION INTAKE INLETS (AMERICAN ALDES AIRLET TL98).

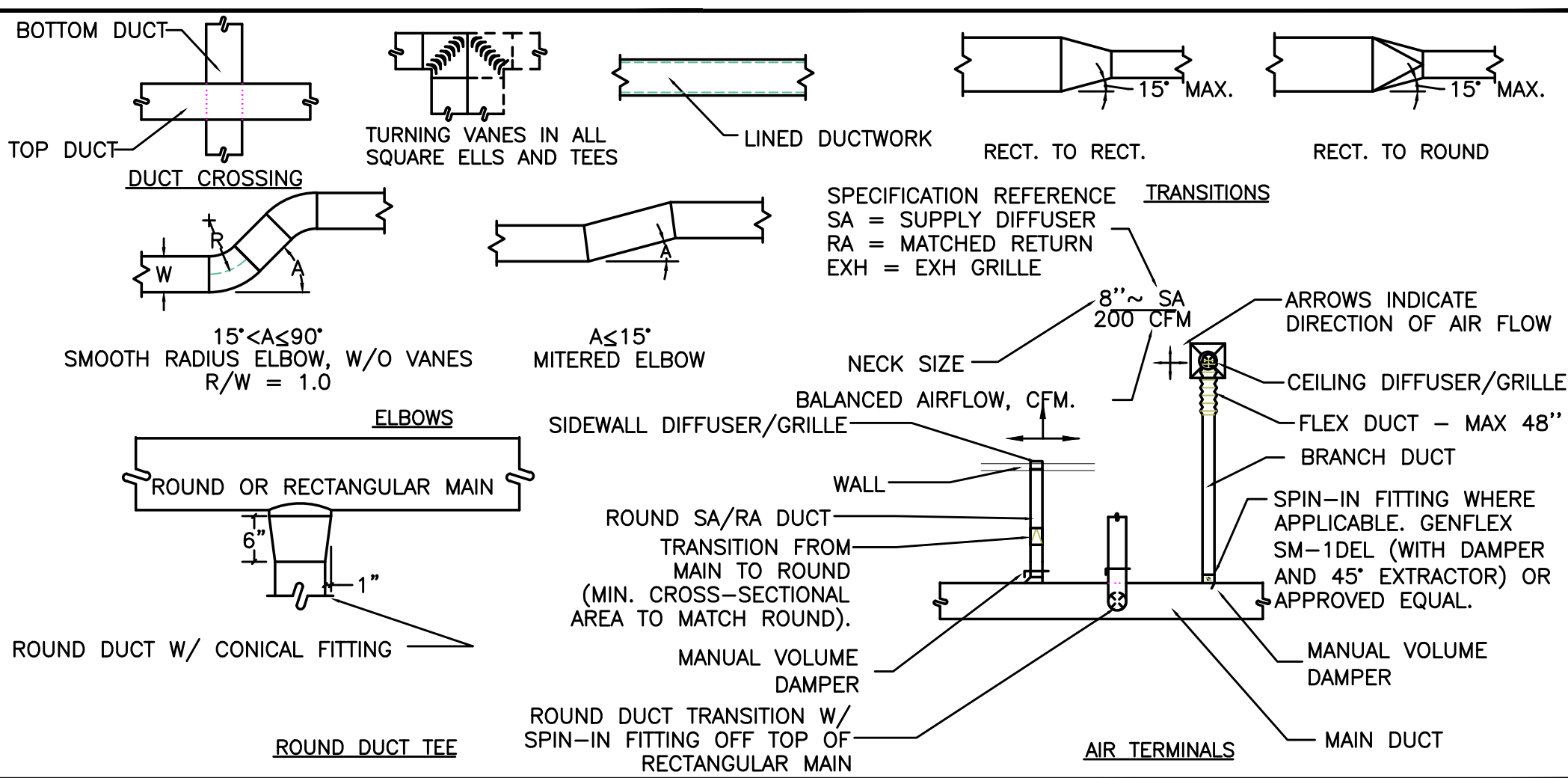
COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS PROVIDING 100% OUTSIDE AIR THAT FAR EXCEEDS THE MINIMUM 0.06 SQFT REQUIREMENT.

SEE VENTILATION SCHEDULES FOR ALL OTHER COMMON SPACES WITH DEDICATED HVAC/VENTILATION SYSTEMS.

ROOFTOP HVAC UNITS

MARK NUMBER	RTU 1	RTU 2	RTU 3
SYSTEM	WEST HALLWAYS	NORTH HALLWAYS	EAST HALLWAYS
TYPE	C.V.	C.V.	C.V.
DISCHARGE	VERTICAL	VERTICAL	VERTICAL
TOTAL CFM	2400	1300	900
ECONOMIZER	NONE-100% OSA	NONE-100% OSA	NONE-100% OSA
MIN. OSA	-	-	-
MAX OSA (FULL OCCUPANCY)	NA	NA	NA
CO2 CONTROL	NA	NA	NA
EXTERNAL SP. ("H2O)	1.20"	1.0"	0.75
TOTAL SP. ("H2O)	---	---	---
RPM	1007	1007	1007
WHEEL TYPE/ SIZE	F.C. 10X10(DIRECT)	F.C. 1X010 (DIRECT)	F.C. 10X10 (DIRECT)
MOTOR HP.	2.5, NOTE 1	1.0, NOTE 1	0.50" NOTE 1
POWER EXH FAN/ACCESSORY	NONE	NONE	NONE
FILTER TYPE	2"- 30%	2"- 30%	2"- 30%
GAS INPUT/OUTPUT (MBH)	150 / 120	130	90
EFF. (AFUE)	80.0%	82%	82%
STAGES/TYPE	2-S.S. HIGH HEAT	1-S.S. HIGH HEAT	2-S.S. HIGH HEAT
TOTAL CLG. (TONS)	6.0	4.0	3
SENSIBLE CLG. (MBH)	70	34.58	28
ENT. EVAP AIR TEMP (DB/WB.)	90/67	90/67	90/67
LVG. EVAP AIR TEMP (DB/WB.)	55/54	55/54	55/54
AMBIENT AIR (°F)	95	95	95
EER/SEER	11 SEER	14.0 SEER	14.0 SEER
REFRIGERANT	410A	410A	410A
DESIGN WEIGHT (LBS.)	750	650	600
SMOKE DETECTOR (RETURN DUCT)	NO	NO	NO
SPRING ISOLATION ROOF CURB	YES	YES	YES
CONVENIENCE OUTLET - ALWAYS POWERED	YES	YES	YES
VOLTAGE/PHASE	208/3	208/1	208/1
BASIS OF DESIGN - CARRIER MODEL	48TCTA07	48KCTA05	48KCTA04

AIR DISTRIBUTION DETAILS



PACKAGED TERMINAL HEAT PUMP

MARK NUMBER	PTHP 1	PTHP 2
TYPE	THRU-THE-WALL HEAT PUMP	THRU-THE-WALL HEAT PUMP
SYSTEM	UNITS	UNITS
NOMINAL COOLING CAPACITY (BTUH)	12,000	14,400
HEATING CAPACITY (BTUH)	11,500	13,800
④ 47°F OUTDOOR AIR TEMP		
ELECTRIC HEATING CAPACITY (KW)	3.2	3.2
CFM (HI/LOW) (WET COIL)	340/245	390/340
MIN OSA (CFM)	60	60
LVG. AIR TEMP (°F)	55°F	55°F
REMOTE THERMOSTAT	YES	YES
EFFICIENCY (EER)	11.9	11.2
EFFICIENCY (COP)	3.5	3.1
ARCHITECTURAL GRILLE	YES	YES
DESIGN WT. (LBS)	135	145
ELECT (VOLTS/PHASE/HTZ)	208/1/60	208/1/60
TOTAL AMPS (HEAT)	15.5	15.5
MCA/MOP	19.8/20	19.8/20
CONDENSATE DRAIN KIT	YES	YES
BASIS OF DESIGN: AMMANA	PTHP123	PTHP153

PRELIMINARY
NOT FOR
CONSTRUCTION

KING+PARKS MULTI-FAMILY RESIDENCES

PROJECT SITE: NE Martin Luther King Jr. Boulevard & N Rosa Parks Way
 OWNER: Portland Community Reinvestment Initiatives Inc. (PCRI)
 6329 NE Martin Luther King Jr. Blvd. Portland, Oregon 97211

PROJECT NO. 16-0602
 ISSUE DATE 06.23.2017

MECHANICAL LEGENDS AND SCHEDULES
M6.0
 NOT FOR CONSTRUCTION
 PRICING SET

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