

**Building and Mechanical HVAC Zone Information**

Complete the information below. Copy and use additional forms, if needed.

CEDAR VALLEY

Building name: PROFESSIONAL BLDG. Gross square footage (ft<sup>2</sup>) 6,000

Zone 1 name: SOUTH OFFICE Occupant density (people/1000 ft<sup>2</sup>) 2

Type of Control for Zone 1 (electrical, pneumatic, DDC) ELECTRIC T-STAT

Space Type (Use) 1: OFFICE Net Ft<sup>2</sup> 1500 Hrs of Mechanical Operation M-F 7AM-5PM

Space Type (Use) 2: \_\_\_\_\_ Net Ft<sup>2</sup> \_\_\_\_\_ Hrs of Mechanical Operation \_\_\_\_\_

Space Type (Use) 3: \_\_\_\_\_ Net Ft<sup>2</sup> \_\_\_\_\_ Hrs of Mechanical Operation \_\_\_\_\_

Zone 2 name: NORTH OFFICE Occupant density (people/1000 ft<sup>2</sup>) 2

Type of Control for Zone 2 (electrical, pneumatic, DDC) ELECTRIC T-STAT

Space Type (Use) 1: OFFICE Net Ft<sup>2</sup> 1500 Hrs of Mechanical Operation M-F 7AM-5PM

Space Type (Use) 2: \_\_\_\_\_ Net Ft<sup>2</sup> \_\_\_\_\_ Hrs of Mechanical Operation \_\_\_\_\_

Space Type (Use) 3: \_\_\_\_\_ Net Ft<sup>2</sup> \_\_\_\_\_ Hrs of Mechanical Operation \_\_\_\_\_

Zone 3 name: INTERIOR OFFICE Occupant density (people/1000 ft<sup>2</sup>) 2

Type of Control for Zone 3 (electrical, pneumatic, DDC) ELECTRIC T-STAT

Space Type (Use) 1: OFFICE Net Ft<sup>2</sup> 3000 Hrs of Mechanical Operation M-F 7AM-5PM

Space Type (Use) 2: \_\_\_\_\_ Net Ft<sup>2</sup> \_\_\_\_\_ Hrs of Mechanical Operation \_\_\_\_\_

Space Type (Use) 3: \_\_\_\_\_ Net Ft<sup>2</sup> \_\_\_\_\_ Hrs of Mechanical Operation \_\_\_\_\_

**Heating Systems Controls Operation Review**

Heating System Type (e.g., boiler, furnace, packaged unit, gas pack): PACKAGE ROOFTOP UNIT GAS HT.

Zones Served SOUTH OFFICE Ft<sup>2</sup> Served by System 1500 Fuel Type: AC

Complete this section for a boiler or gas furnace. If you do not have a boiler or gas furnace, check the box below and proceed to the next system review worksheet.

No Boiler or Furnace

Date of Review	Item	List the measurement for each item, or provide a comment
7/25/18	Stack or flue temperatures	HA FURNACE IS OFF
NA	Water Temperature or Steam Pressure	
	Outside Air Temperature	
NA	Water Treatment Amounts	
NA	Frequency and Length of Blowdowns	
NA	Water Usage (if metered)	
NA	Firing Temperature or Pressures for On/Off Cycles	SINGLE STAGE
	Firing rate (e.g., On-Off, Staged, or Modulating)	SINGLE STAGE
NA	Boiler Room Temperature and OSA Control	
NA	Percentage of oxygen in the stack	

**Ventilation Control Systems Review**

MECHANICAL

Ventilation System (e.g., mechanical, natural, dedicated outdoor air system): BY RTU

Review Date	Item	List the measurement for each item
7/25/18	% Outside Air (OSA)	10% FROM TAB REPORT
7/25/18	Frequency of Filter Change	QUARTERLY
7/25/18	Coil Cleaning Frequency	ONCE/YEAR

**Cooling Systems Controls and/or Heat Pump Controls Review**

If you do not have a cooling system or heat pump, check the box and proceed to the control systems review worksheet.

Cooling System Type: AIR-COOLED DX Ft<sup>2</sup> Served by System 1500 Fuel Type: ELECTRIC

Zones Served: SOUTH OFFICE

Date of Review	Item	List the measurement for each item
7/25/18	Zone Temperature: Return air temperature (RAT): Supply air temperature (SAT): Outside Air Temp (OAT): Difference between RAT and SAT:	72°F T-STAT 73°F LASER THERMOMETER 57°F LASER THERMOMETER 78°F WEATHER APP 16°F
7/25/18	Temperatures Across Condenser Coils	79°F ENTERING AIR 100°F LEAVING AIR 21°F
7/25/18	Frost on Suction Line During Cooling? (uncommon)	NO
7/25/18	Compressor Temperature (warm @ bottom and cool @ top but no frost)	HOT WHILE RUNNING
7/25/18	Identify Refrigerant	R-22
7/25/18	Compressor Cycle Rate	DID NOT DETERMINE

**Control Systems Review**

In this section, you will compare the programmed control setting to the actual operation of the system. The question we want to answer is "When the control sequence of operation indicates an action, does the system respond as the controller indicates?" Select one system (e.g., heating, or cooling) for review.

System Type reviewed: PACKAGE ROOFTOP Building Name: CEEDAR VALLEY PROFESSIONAL BLDG

Date of review: 7/25/18 Type of Control (electrical, pneumatic, DDC): ELECTRIC

	Reviewed Item
	<p>1. Describe the HVAC operating schedule and setpoints for the occupied mode.</p> <p>Occupied mode (days of week &amp; hours of day): <u>M-F 7AM-5PM</u> <u>OFF SAT &amp; SUN.</u></p> <p>Occupied mode heating/cooling setpoint: <u>70/74</u></p> <p>2. Write the sequence of operation for the occupied mode.</p> <p><u>FAN ON, OUTSIDE AIR DAMPER OPEN TO MIN. POSITION. HEAT &amp; COOLING CYCLE AS REQUIRED TO MAINTAIN SETPOINT TEMP.</u></p> <p>Is there an economizer? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Economizer control type: <u>DRY BULB</u> Changeover temp: <u>60°F</u></p> <p>3. Describe how the programmed sequence of operation above compares to actual operation. (For example, is the heating/cooling temp setpoint occurring when it should?).</p> <p><u>OPERATING AS DESIGNED.</u></p> <hr/> <hr/> <p>4. Describe the steps you took to test the system to verify the actual operation?</p> <p><u>PHYSICAL OBSERVATION, TEMP. MEASUREMENTS</u></p> <hr/> <p>List measurement instruments you used: <u>LASER THERMOMETER</u></p>