



**REQUEST FOR QUALIFICATIONS/REQUEST FOR PROPOSAL (RFP) #2122-323**

**HVAC PREVENTATIVE MAINTENANCE SERVICES**

**AT THE**

**DISTRICT OPERATIONS CENTER**

**Addendum #1**  
**Issued: June 3, 2022**

The following changes, additions, deletions, or corrections shall become part of the above-mentioned RFQ/RFP:

**AD 1-1** The following is a revision to the Scope of Work which is to be included in pricing for Year One:

The VAV boxes do not have access panels to access reheat coils. In order to conduct the reheat coils maintenance tasks, the Contractor shall cut-in the access panels and install hinged 18" x18" sheet metal access panels to create access to clean the reheat coils in all VAV Boxes. There is a total of 60 VAV boxes with reheat coils as described in Exhibit A "Scope of Work" and the locations are denoted on the plans attached floor plans (Attachment AD 1-1). This floor plan was not included in the RFQ/RFP document.

**AD 1-2** The following is a revision to the Scope of Work regarding Air Filter Change Requirements:

Refer to Exhibit A "Scope of Work": 20. Air Filter Change Requirements. This has been revised to include additional Air Handler Filter and Outside Air Vent Filters. Exhibit A, Revised June 3, 2022 is attached (Attachment AD 1-2).

**AD 1-3** The following reference documentation has been provided, District Employee Calendar 2022-2023.

For reference, the District has provided the Rancho Santiago Community College District Employee Calendar 2022-2023 (Attachment AD 1-3).

**AD 1-4** The following are responses to questions received:

1. **Question:** Is the district defining the schedule or will the contractor and district work together to schedule the maintenance?

**Response:** *The District has defined the frequency and activities. The exact schedule will be coordinated between the District and the Contractor. For your information, please refer to the RSCCD Employee Calendar for the list of employee holidays denoting when the building is closed. Most of the PM tasks can be done during normal working hours except the indoor VAV work. The indoor tasks shall be done during the holiday breaks.*

2. **Question:** Is the liquidated damages enforced for missing a date of completion or start of completion? Ex. If the contractor starts maintenance that is scheduled for 5 days and we complete it in 4 days will the contractor be liable to the district?

**Response:** *No.*

3. **Question:** During the job walk we were told that there were 5 "various exhaust fans". The task list has 7 plus 1 make-up air fan. Can you confirm the correct total of fans?

**Response:** Please refer to the RFQ/RFP Exhibit A "Scope of Work" for the exact quantities. The task list is correct, 7 plus the makeup air unit.

4. **Question:** The electrical room and CRAC unit task list shows changing filters. The Filter Requirements does not list these filters. What is the filter count?

**Response:** *There are (2) 28 x32 x2 filters per unit*

5. **Question:** The VAV box list appears to show 91 VAV boxes. The task list calls out 95 (35 without reheat coils and 60 with reheat coils). During the job walk, it sounded like there were 35 VAV boxes and 60 reheat coils (just the coils). Can you confirm the count?

**Response:** *Please refer to the RFQ/RFP Exhibit A "Scope of Work" for the accurate quantities. Confirming the 60 count for reheat coils and 35 count for non-reheat VAV boxes. There is a total of 95 VAV boxes.*

6. **Question:** Are any of the VAV boxes fan powered (booster fan)? If so, how many?

**Response:** *No*

7. **Question:** What software does the DDC system run on? Is the installer one of the bidders for the maintenance?

**Response:** *The DDC system is Automated Logic running on the WebCTRL Building Automation System. The system is integrated through Vycon branded JACE devices into a central Niagara N4 Tridium.*

8. **Question:** Is the building is occupied year round?

**Response:** *Yes. Please refer to the Employee Calendar for the list of employee holidays denoting when the building is closed.*

9. **Question:** It's on normal working hours, is that going to be a problem for the indoor VAVs?

**Response:** *Please refer to the Employee Calendar for the list of employee holidays denoting when the building is closed. The indoor VAV work shall be done when the building is closed.*

10. **Question:** Please confirm all VAV boxes are accessible via T-bar or access doors.

**Response:** *The VAV box is accessible from the T-bar ceiling. However, the interior of the VAV box is not accessible and requires a new access panel. Please refer to AD 1-1 (above) for more information.*

11. **Question:** Are there any special access requirements for any locations or equipment? i.e. special offices, IT CRAC units, etc.?

**Response:** *There are no special access requirements including the ITS room. The District will coordinate access to the work areas with the Contractor.*

12. **Question:** Do the VAV boxes have drain pans under the reheat coils? Their might not be, if that is the case, rinse less coil cleaner would not be recommended. We also believe blowing out the coils will spread contaminants into the ductwork. We recommend vacuuming the coils and rinsing with a disinfecting solution.

**Response:** *There are no drain pans underneath the reheat coils. The Contractor shall use a spray cleaner, wire brush the coils, and vacuum the coils dry.*

- 13 Question:** Regarding the fire dampers, can you clarify if this work needs to be "stamped" by a certified fire life safety contractor? Typically it will, considering this equipment is part of the fire life safety system. Our intent would be to subcontract the current fire life safety contractor used by RSCCD. Will that information be provided?

**Response:** *The purpose of this scope of work is to provide preventative maintenance tasks on the dampers to ensure they function properly. These maintenance task do not need to be "stamped" by a certified life safety contractor and are not part of the District's life safety contractor's testing, inspection, and maintenance program.*

*End of Addendum 1*





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ABBREVIATIONS table with columns for ABBREV and DESCRIPTION. Includes categories like AIR CONDITIONING, ELECTRICAL CONTRACTOR, PRESSURE INDICATOR, etc.

MECHANICAL DRAWING INDEX table with columns for SHT. NO, SHEET TITLE, and SCALE. Lists sheets M-1, M-2, and M-3.

- GENERAL NOTES
1. BUILDING CODES
A. 2010 CALIFORNIA BUILDING CODE (CBC)
B. 2010 CALIFORNIA ELECTRICAL CODE (CEC)
C. 2010 CALIFORNIA MECHANICAL CODE (CMC)
D. 2010 CALIFORNIA FIRE CODE (CFC)
2. ALL PADS, OPENINGS, CURBS AND SUPPORTS FOR MECHANICAL EQUIPMENT ARE TO BE COORDINATED WITH APPROVED EQUIPMENT SUBMITTALS PRIOR TO CONSTRUCTION.

STATE OF CALIFORNIA ENVELOPE COMPONENT APPROACH FIELD INSPECTION ENERGY CHECKLIST (Part 5 of 5) MECI-IC. Includes project name, date, and compliance checkboxes.



LEGEND table with columns for SYMBOL, ABBREV, and DESCRIPTION. Lists various piping symbols and their corresponding abbreviations and descriptions.

Table with columns for NO., REVISION, and DESCRIPTION. Includes a revision history table.

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DRAWN BY SK DATE 05/06/2014
DESIGNED BY DH SCALE 1/2"=1'0"
CHECKED BY DATE JOB NO. 5521088

KEYPLAN
DRAWING TITLE: RANCHO SANTIAGO SPRINGS DISTRICT OFFICE UPGRADE

DRAWING TITLE: DRAWING LIST, GENERAL NOTES, ABBREVIATIONS AND SYMBOLS

DRAWING NO. M-1





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**CHILLER SCHEDULE**

SYMBOL	MANUFACTURER MODEL	TYPE	LOCATION	SERVICE	NOMINAL CAPACITY (TONS)	KW/TON AT DESIGN	REFRIG TYPE	REFRIG QUANTITY (LBS)	NPLV (KW/TON)	EVAPORATOR						CONDENSER						ELECTRICAL DATA					VIBRATION ISOLATION	OPER WEIGHT (LBS)	REMARKS				
										FLUID TYPE	FLOW (GPM)	EWT (°F)	LWT (°F)	ΔP (FT WC)	NUMBER PASSES	FOULING FACTOR	FLUID TYPE	FLOW (GPM)	EWT (°F)	LWT (°F)	ΔP (FT WC)	NUMBER PASSES	FOULING FACTOR	UNIT						COMPRESSOR (DESIGN)			
																								VOLTAGE	MCA	MOP				KW	RLA	LRA	
CH 1	MULTISTACK (3)MS5BTCH2W2A-134A	TURBOCOR	CHILLER ROOM	CHILLED WATER	225	0.633	134-A	135	0.416	WATER	450	57.0	45.0	6.9		0.00010	WATER	640	82.0	92.0	15.1			0.00025	460-3-60	312	450	142.5	96		NONE	8,100	

**COOLING TOWER SCHEDULE**

SYMBOL	MANUFACTURER MODEL	TYPE	LOCATION	SERVICE	TOTAL TOWER CAPACITY (MBH)	DESIGN AMBIENT WB (°F)	NUMBER OF CELLS	CAPACITY PER CELL (MBH)	FLUID FLOW PER CELL (GPM)	EWT (°F)	LWT (°F)	ΔP (PSI)	AIR FLOW PER CELL (CFM)	CONNECTIONS PER CELL			ELECTRICAL DATA					VARIABLE FREQUENCY DRIVE	VIBRATION ISOLATION	PER CELL OPER WEIGHT (LBS)	TOTAL TOWER OPER WEIGHT (LBS)	REMARKS
														INLET (IN)	OUTLET (IN)	EQUALIZER (IN)	FAN MOTOR									
																	QTY	HP	VOLTAGE	MIN EFF	TYPE					
CT 1	EVAPCO LPT-6612	FORCED DRAFT	CHILLER ROOM	CHILLER CONDENSER WATER	3,200	72.0	1	3,200	640	92	82	4.60	40,110	12"	12"	12"	2	30	460-3-60	92.4%	TEAO	YES	NONE	7,520	7,520	STAINLESS STEEL BASIN, VIBRATION ISOLATION MASON SURSEB.

**PUMP SCHEDULE**

SYMBOL	MANUFACTURER MODEL	TYPE	LOCATION	SERVICE	FLUID TYPE	FLOW (GPM)	TDH (FT WC)	NPSH REQUIRED (FT WC)	IMPELLER DIAMETER (IN)	PUMP EFFICIENCY (%)	SUCTION CONNECTION (IN)	DISCHARGE CONNECTION (IN)	RPM	ELECTRICAL DATA					VARIABLE FREQUENCY DRIVE	OPER WEIGHT (LBS)	REMARKS
														PUMP MOTOR							
														BHP	HP	VOLTAGE	TYPE	MIN EFF			
CHWP 1	B & G 1510 4BC	END SUCTION CENTRIFUGAL	CHILLER ROOM	CHILLED WATER	WATER	450	65		8.625	78.45%	5	4	1800	9.60	15	460-3-60	COP		NO	600	
CWP 1	B & G 1510 4BC	END SUCTION CENTRIFUGAL	CHILLER ROOM	CONDENSER WATER	WATER	640	70		9.250	83.32%	5	4	1800	14.57	20	460-3-60	COP		NO	650	

**TANK SCHEDULE**

SYMBOL	MANUFACTURER MODEL	TYPE	LOCATION	SERVICE	TANK DIMENSIONS (IN)	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	OPER WEIGHT (LBS)	REMARKS
BT 1	HANSON ASBE	BUFFER TANK	ROOF	CHILLED WATER LOOP	36" DIA X 146" OA	600.0	NA	6,200	(2) 6" 150 # FLANGES



NO.	REVISION DESCRIPTION	DATE

DRAWN BY	SK	DATE	05/06/2014
DESIGNED BY	DH	SCALE	1/2"=1'-0"
CHECKED BY		JOB NO.	5521088

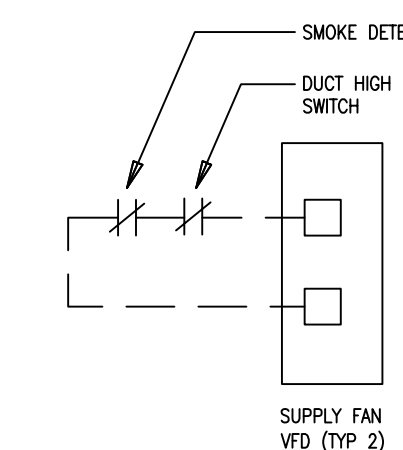
KEYPLAN:

JOB TITLE:  
**RANCHO SANTIAGO SPRINGS DISTRICT OFFICE UPGRADE**

DRAWING TITLE:  
**MECHANICAL EQUIPMENT SCHEDULES**

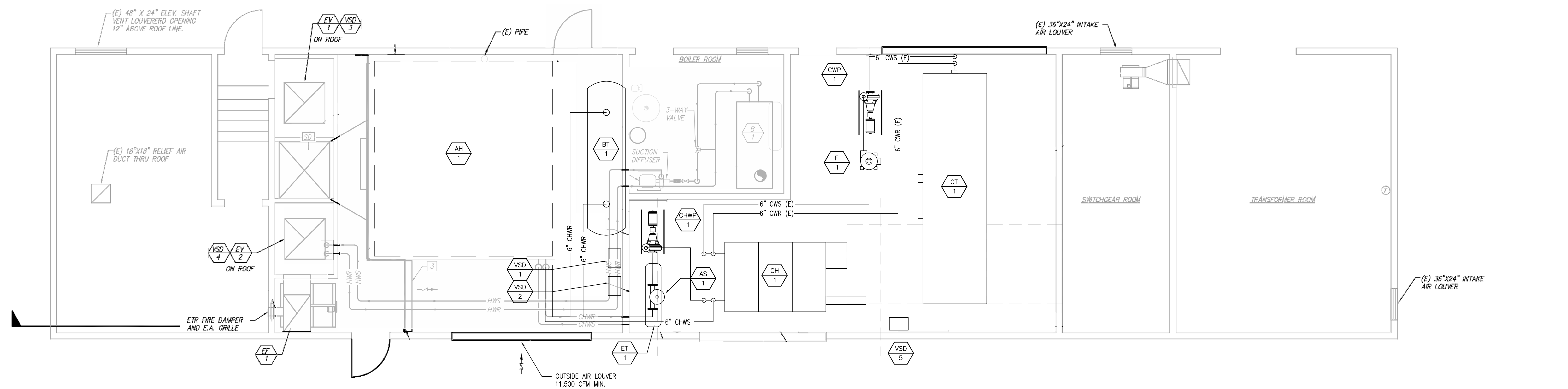
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**M-2**

AS-BUILT 11/06/2014

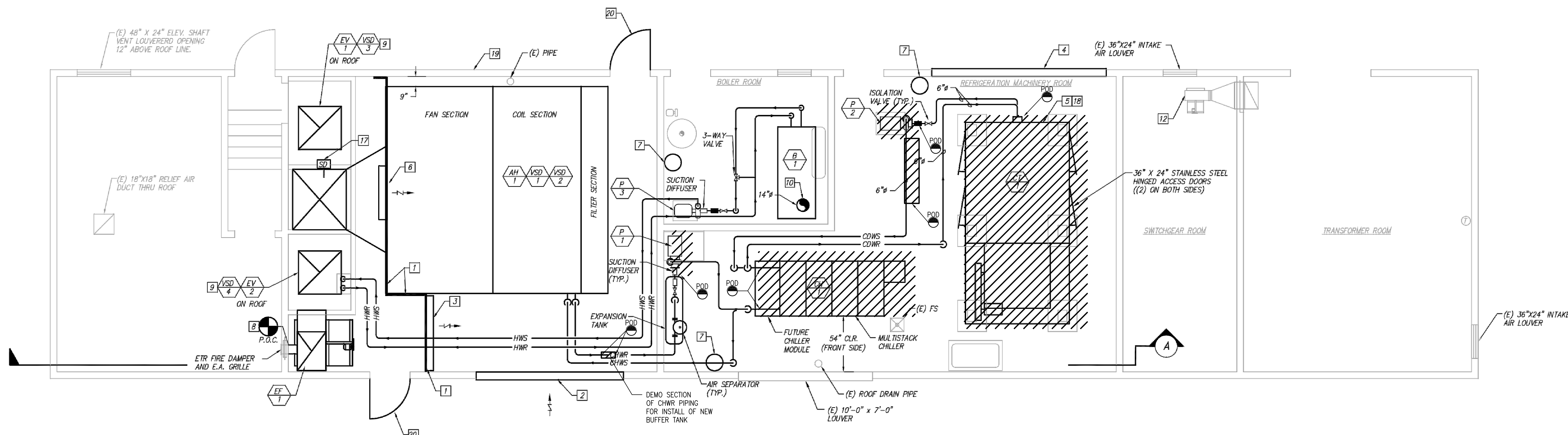


**3 AIR HANDLER SHUT DOWN WIRING**

M-3 REF: SCALE: NONE



**1 PENTHOUSE MECHANICAL PLAN**  
M-3 REF: SCALE: 1/4" = 1'-0" PLAN NORTH



**1 PENTHOUSE MECHANICAL DEMO PLAN**  
M-3 REF: SCALE: 1/4" = 1'-0" PLAN NORTH

NO.	REVISION DESCRIPTION	DATE

DRAWN BY: SK DATE: 05/06/2014  
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 CHECKED BY: JOB NO: 5521088

JOB TITLE:  
**RANCHO SANTIAGO SPRINGS DISTRICT OFFICE UPGRADE**

DRAWING TITLE:  
**PENTHOUSE MECHANICAL PLAN**

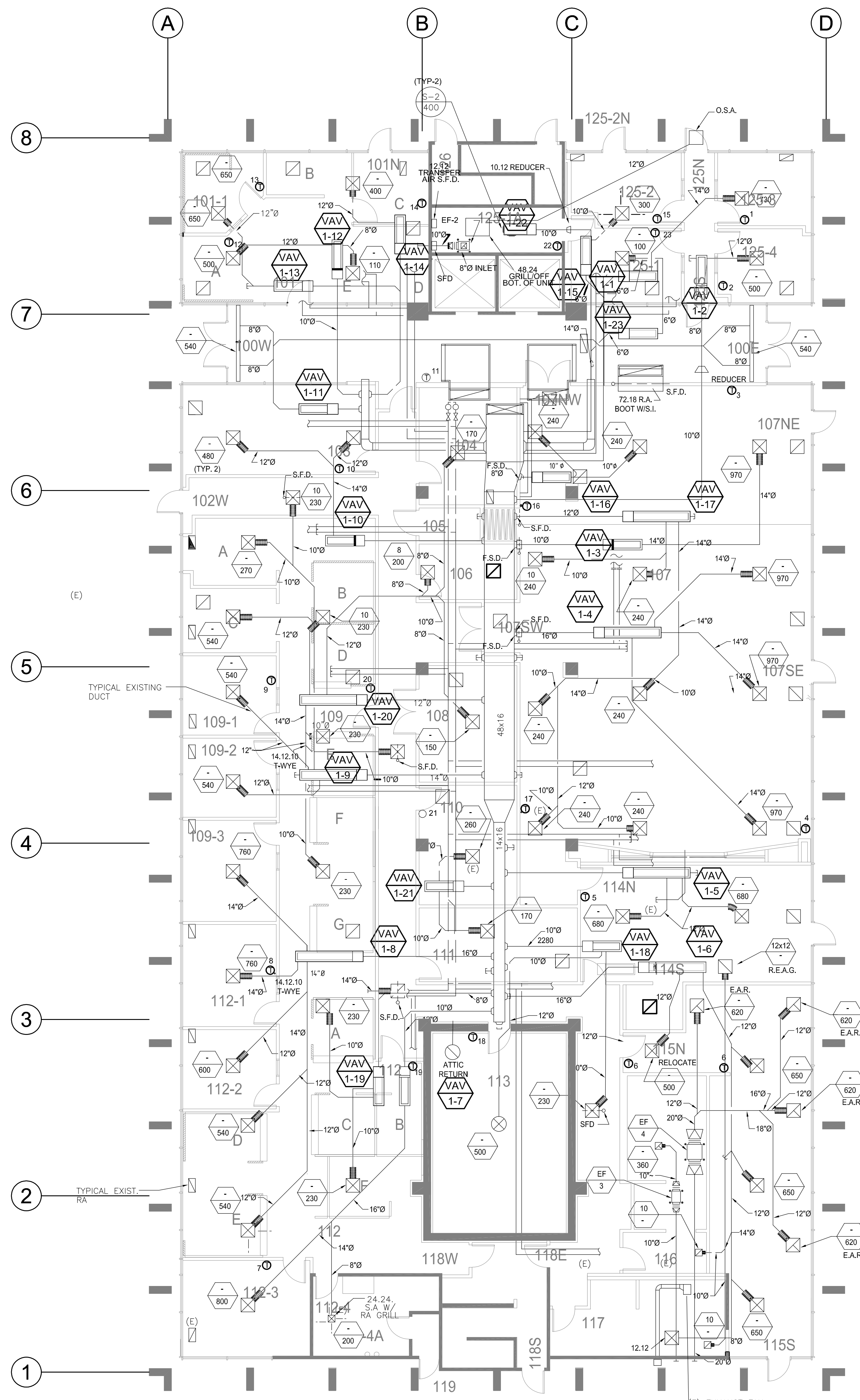
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**M-3**





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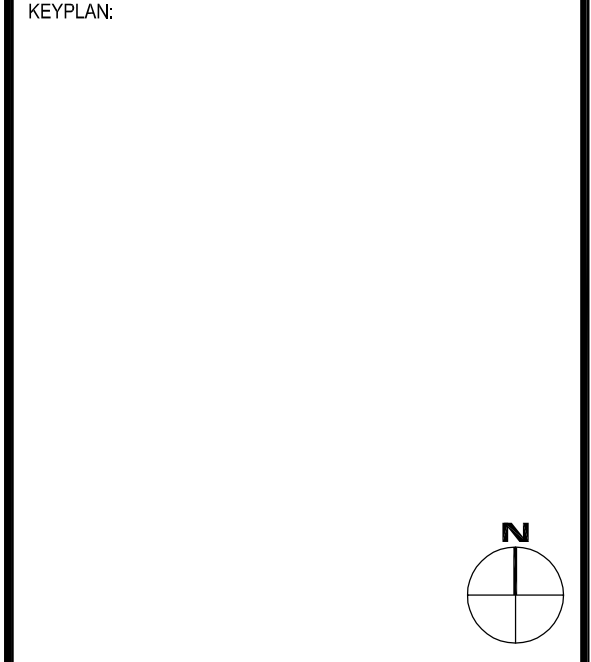
**MECHANICAL PLAN - FIRST FLOOR**  
**RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT**  
**DISTRICT OFFICE - FIRST FLOOR**

**VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE**

UNIT	FLOOR	SYMBOL	SIZE	COOLING DESIGN AIRFLOW (CFM)	HEATING DESIGN AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	REMARKS
VAV-1-1	1	1	10	730	370	120	
VAV-1-2	1	2	8	500	250	30	
VAV-1-3	1	3	10	970	490	50	
VAV-1-4	1	4	16	2910	1460	140	
VAV-1-5	1	5	12	1360	680	90	
VAV-1-6	1	6	16	2650	1330	230	
VAV-1-7	1	7	10	1000	500	70	
VAV-1-8	1	8	16	3200	1600	140	
VAV-1-9	1	9	14	2120	1060	140	
VAV-1-10	1	10	10	960	480	60	
VAV-1-11	1	11	10	1080	540	130	
VAV-1-12	1	12	8	610	310	70	
VAV-1-13	1	13	8	650	330	20	
VAV-1-14	1	14	6	400	200	40	
VAV-1-15	1	15	6	300	150	40	
VAV-1-16	1	16	8	480	N/A	60	
VAV-1-17	1	17	12	1440	N/A	190	
VAV-1-18	1	18	10	730	N/A	170	
VAV-1-19	1	19	8	460	N/A	120	
VAV-1-20	1	20	12	1210	N/A	290	
VAV-1-21	1	21	8	430	N/A	80	
VAV-1-22	1	22	10	800	N/A	20	
VAV-1-23	1	23	6	100	N/A	30	

NO.	REVISION DESCRIPTION	DATE

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**JOB TITLE:**  
 RANCHO SANTIAGO  
 SPRINGS DISTRICT  
 OFFICE UPGRADE

**DRAWING TITLE:**  
 MECHANICAL  
 FIRST FLOOR

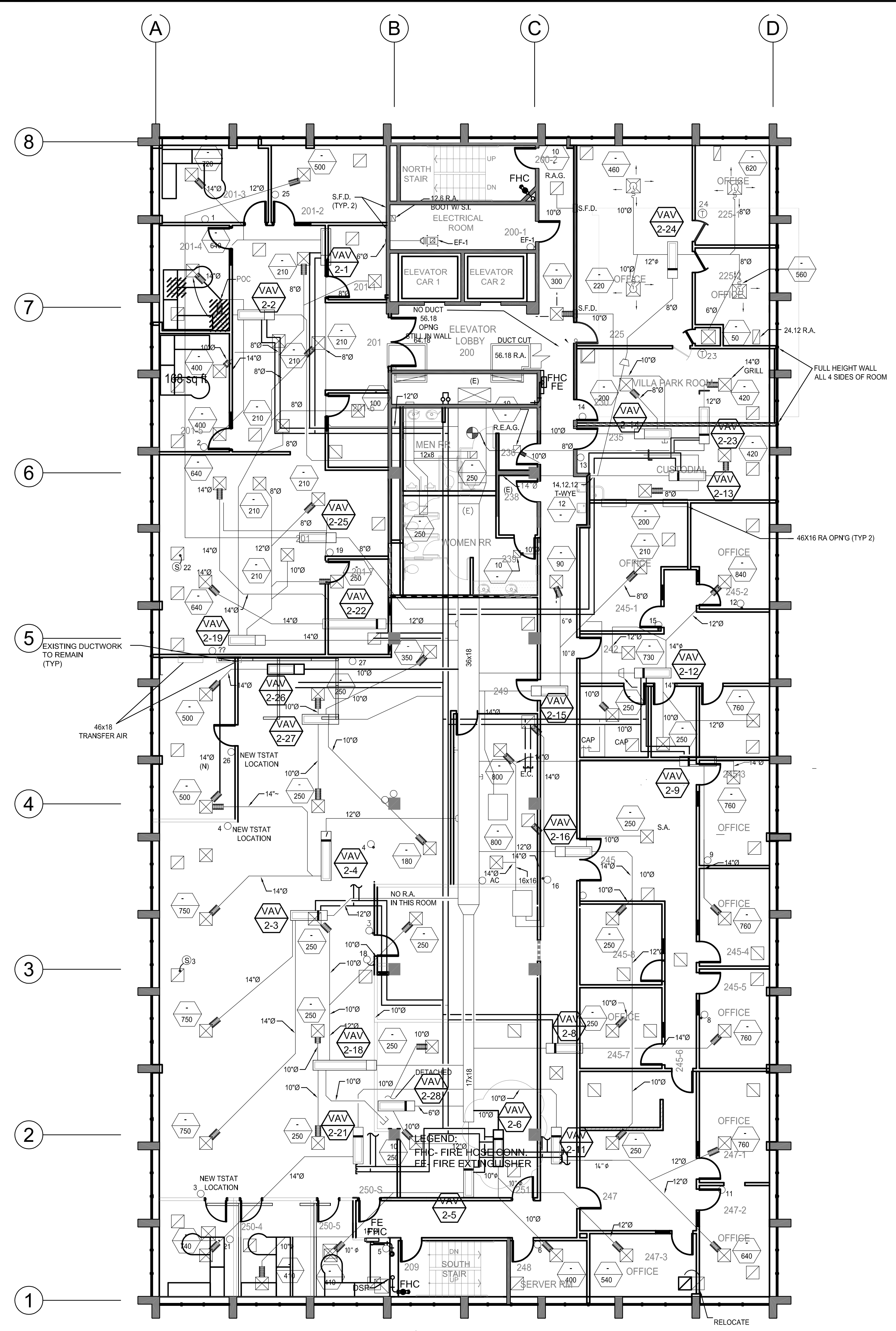
**DRAWING NO:**  
 TM-1

AS-BUILT 12/1/2014



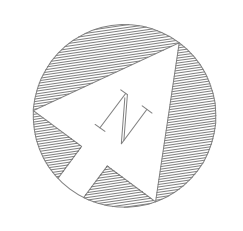


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**MECHANICAL PLAN - SECOND FLOOR**

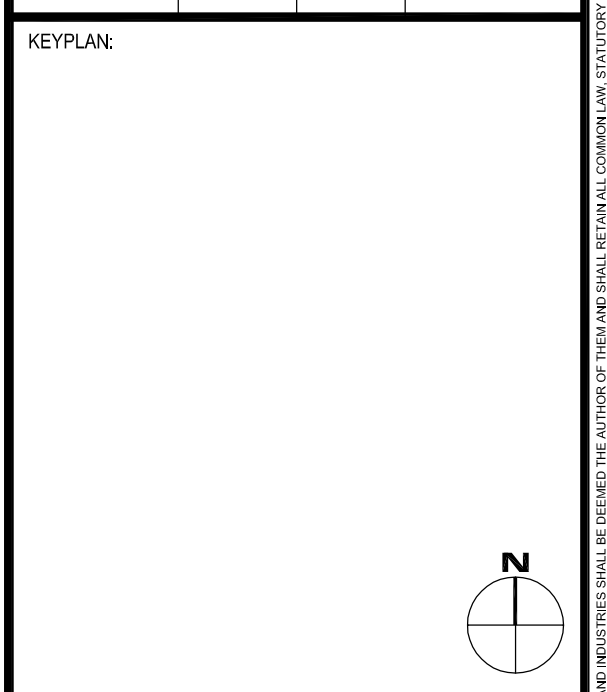
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT  
DISTRICT OFFICE - SECOND FLOOR



VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE							
UNIT	FLOOR	SYMBOL	SIZE	COOLING DESIGN AIRFLOW (CFM)	HEATING DESIGN AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	REMARKS
VAV-2-1	2	1	12	720	360	90	
VAV-2-2	2	2	14	1,440	720	60	
VAV-2-3	2	3	12	1,500	750	90	
VAV-2-4	2	4	12	900	450	70	
VAV-2-5	2	5	12	820	410	50	
VAV-2-6	2	6	6	940	470	50	
VAV-2-7		NOT USED					
VAV-2-8	2	8	12	760	380	30	
VAV-2-9	2	9	14	1,520	760	50	
VAV-2-10		NOT USED					
VAV-2-11	2	11	10	1,400	700	60	
VAV-2-12	2	12	12	1,300	650	110	
VAV-2-13	2	13	12	620	310	50	
VAV-2-14	2	14	10	500	N/A	80	
VAV-2-15	2	15	6	550	N/A	100	
VAV-2-16	2	16	14	1,000	500	280	
VAV-2-17		NOT USED					
VAV-2-18	2	18	12	1,000	500	200	
VAV-2-19	2	19	14	1,920	N/A	250	
VAV-2-20		NOT USED					
VAV-2-21	2	21	10	740	370	30	
VAV-2-22	2	22	12	1,280	640	60	
VAV-2-23	2	23	6	420	210	30	
VAV-2-24	2	24		1,910	960	140	
VAV-2-25	2	25	8	500	250	40	
VAV-2-26	2	26	10	1,000	500	50	
VAV-2-27	2	27	10	1,030	N/A	200	
VAV-2-28	2	28	6	500	N/A	100	

NO.	REVISION DESCRIPTION	DATE

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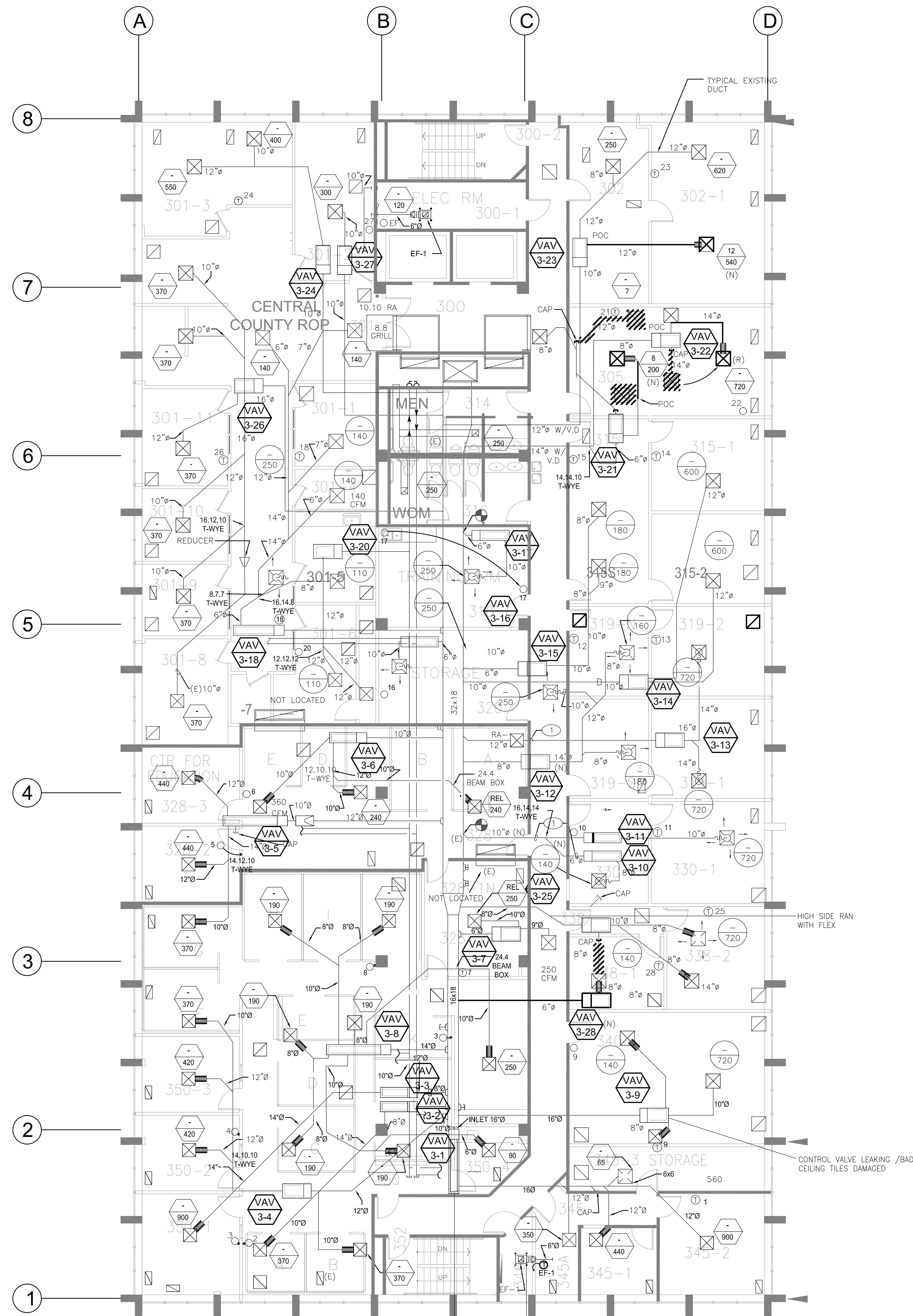
JOB TITLE:  
**RANCHO SANTIAGO SPRINGS DISTRICT OFFICE UPGRADE**

DRAWING TITLE:  
**MECHANICAL SECOND FLOOR**

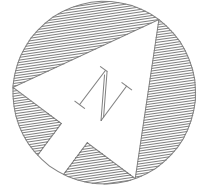
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**TM-2**

AS-BUILT 12/1/2014





**MECHANICAL PLAN - THIRD FLOOR**  
 RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT  
 DISTRICT OFFICE - THIRD FLOOR



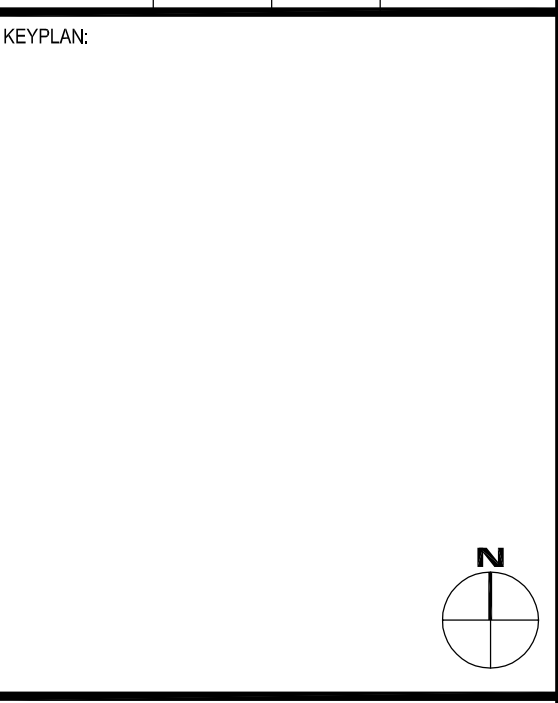
UNIT	FLOOR	SYMBOL	SIZE	VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE		REMARKS
				COOLING DESIGN AIRFLOW (CFM)	HEATING DESIGN AIRFLOW (CFM)	
VAV-3-1	3	1	14	1,755	880	90
VAV-3-2	3	2	10	740	370	50
VAV-3-3	3	3	12	900	450	40
VAV-3-4	3	4	12	1,210	610	80
VAV-3-5	3	5	12	1,250	630	80
VAV-3-6	3	6	10	840	N/A	140
VAV-3-7	3	7	6	500	N/A	110
VAV-3-8	3	8	12	1,480	N/A	270
VAV-3-9	3	9	16	1,000	500	120
VAV-3-10	3	10	4	140	N/A	30
VAV-3-11	3	11	8	720	360	40
VAV-3-12	3	12	8	590	N/A	90
VAV-3-13	3	13	12	1,440	720	80
VAV-3-14	3	14	12	1,200	600	70
VAV-3-15	3	15	6	360	N/A	50
VAV-3-16	3	16	6	250	N/A	50
VAV-3-17	3	17	6	250	N/A	50
VAV-3-18	3	18	6	640	N/A	190
VAV-3-19	NOT USED					
VAV-3-20	3	20	12	710	N/A	40
VAV-3-21	3	21	6	350	N/A	100
VAV-3-22	3	22	12	720	360	50
VAV-3-23	3	23	10	1,410	710	120
VAV-3-24	3	24	10	950	480	50
VAV-3-25	3	25	8	720	360	50
VAV-3-26	3	26	16	2,220	1,110	170
VAV-3-27	3	27	10	300	150	50
VAV-3-28	3	28	6	140	N/A	30



ALL DIMENSIONS SHOWN ON THIS DRAWING ARE THE EXACT DIMENSIONS UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT. THE CONTRACTOR SHALL MAINTAIN THE PROJECT ACCORDING TO ALL APPLICABLE CODES AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SERVICES AT ALL TIMES. ANY CHANGES TO THIS DRAWING SHALL BE APPROVED BY THE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SERVICES AT ALL TIMES. ANY CHANGES TO THIS DRAWING SHALL BE APPROVED BY THE ARCHITECT.

NO.	REVISION DESCRIPTION	DATE

DRAWN BY SK DATE 05/06/2014  
 DESIGNED BY DH SCALE 1/4"=1'-0"  
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JOB TITLE:  
**RANCHO SANTIAGO SPRINGS DISTRICT OFFICE UPGRADE**

DRAWING TITLE:  
**MECHANICAL THIRD FLOOR**

DRAWING NO:  
**TM-3**

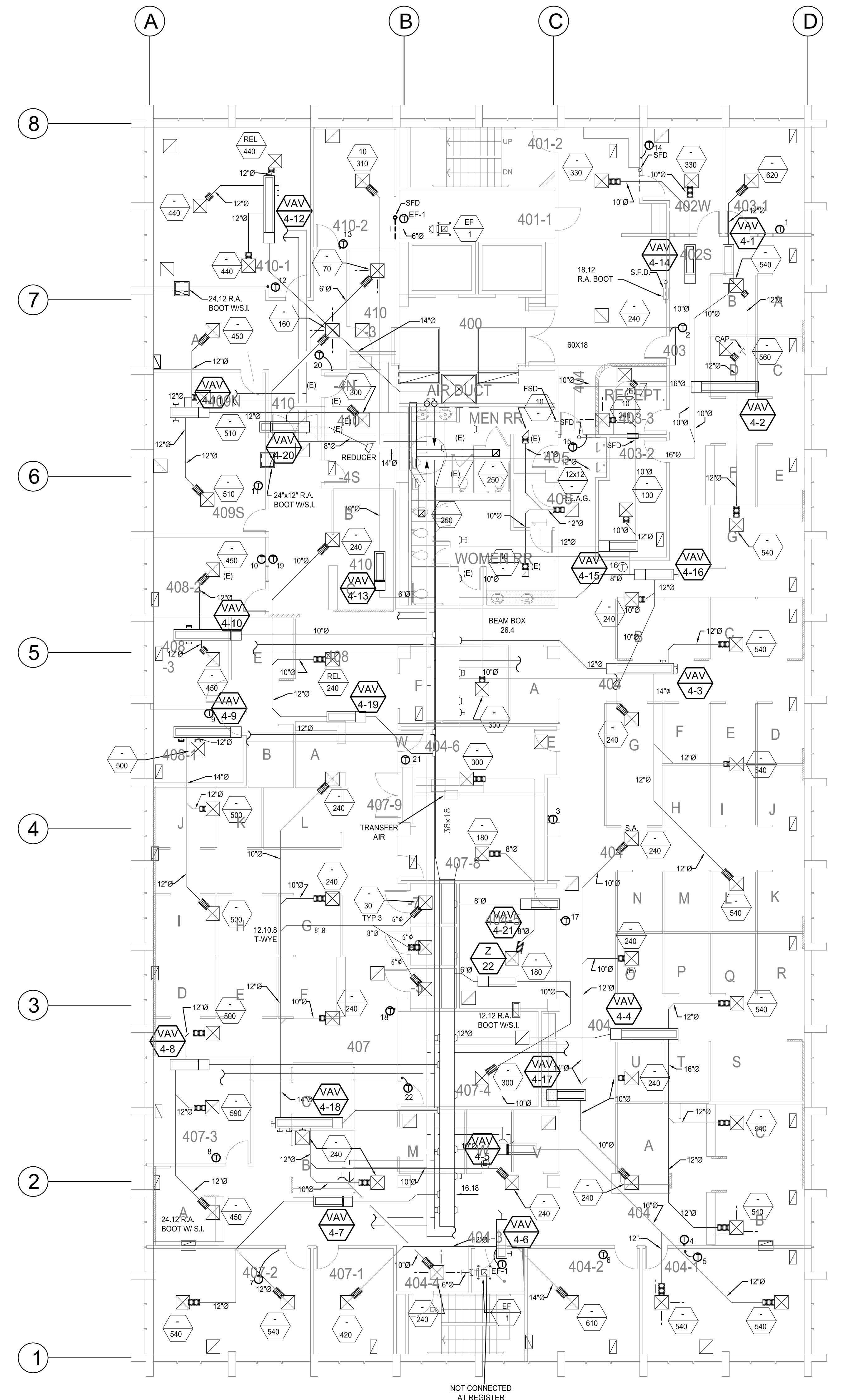
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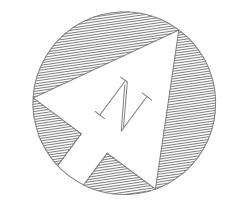
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**MECHANICAL PLAN - FOURTH FLOOR**  
**RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT**  
**DISTRICT OFFICE - FOURTH FLOOR**



VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE							
UNIT	FLOOR	SYMBOL	SIZE	COOLING DESIGN AIRFLOW (CFM)	HEATING DESIGN AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	REMARKS
VAV-4-1	4	1	8	620	310	30	
VAV-4-2	4	2	12	1,640	820	150	
VAV-4-3	4	3	12	1,620	810	160	
VAV-4-4	4	4	12	1,620	810	130	
VAV-4-5	4	5	10	1,080	540	60	
VAV-4-6	4	6	10	1,030	520	70	
VAV-4-7	4	7	10	1,060	540	60	
VAV-4-8	4	8	12	1,540	770	120	
VAV-4-9	4	9	12	1,500	750	90	
VAV-4-10	4	10	10	900	450	50	
VAV-4-11	4	11	12	1,470	740	90	
VAV-4-12	4	12	12	1,320	660	80	
VAV-4-13	4	13	6	310	160	30	
VAV-4-14	4	14	8	660	330	70	
VAV-4-15	4	15	10	880	N/A	170	
VAV-4-16	4	16	8	480	N/A	70	
VAV-4-17	4	17	10	960	480	150	
VAV-4-18	4	18	12	1,770	N/A	290	
VAV-4-19	4	19	8	480	N/A	120	
VAV-4-20	4	20	8	530	N/A	80	
VAV-4-21	4	21	8	660	N/A	110	
VAV-4-22	4	22	6	300	150	40	

NO.	REVISION DESCRIPTION	DATE

DRAWN BY	SK	DATE	05/08/2014
DESIGNED BY	DH	SCALE	1/2"=1'-0"
CHECKED BY		JOB NO.	5521088

KEYPLAN

JOB TITLE:  
**RANCHO SANTIAGO SPRINGS DISTRICT OFFICE UPGRADE**

DRAWING TITLE:  
**MECHANICAL FOURTH FLOOR**

AS-BUILT 12/1/2014

DRAWING NO.  
TM-4



**Exhibit A: Scope of Work** Revised, June 3, 2022

## RFQ/RFP #2122-323 HVAC Preventative Maintenance Services at the District Operations Center

**General Scope of Services**

This scope of work provides the equipment list and schedule for the Rancho Santiago Community College District's HVAC system at the District Operations Center. The selected Contractor is to provide comprehensive preventative maintenance and repair services for all equipment listed in this scope of work. The selected contractor will notify the District of any and all repairs needed or recommended. The repairs will be performed per proposed hourly rate submitted by the contractor in the RFQ/RFP response. The District will authorize repairs and allowance expense after proper notification by the contractor.

**Task Checklist and Outline**

All preventative maintenance tasks are to be documented in the RSCCD's Onuma Preventative Maintenance program. The selected contractor will provide a task list for all equipment listed in work scope that documents the completion of the task per the provided schedule. Forms shall include inspection procedures required to maintain the systems at maximum performance and meet manufacture's maintenance requirements.

It is the successful contractor's responsibility to develop a preventative maintenance program based on the requirements below along with the equipment manufacturer's recommended maintenance procedures.

<b>District Operations Center HVAC Equipment List Summary (Refer to detailed list for additional information)</b>						
<b>Quantity</b>	<b>Unit Description</b>	<b>Manufacture</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Room</b>	<b>PM Schedule</b>
1	Boiler	RayPak	H9-1532B	1604420683	503	(2) times a year
1	Hot Water Pump	Bell & Gossett	1 1/48C	TBD	503	(4) times a year
1	Condenser Water Pump	Bell & Gossett	1510	1B086LFF41	504	(2) times a year
1	Chilled Water Pump	Bell & Gossett	1510	1BF087LF	504	(2) times a year
1	Water Cooled Chiller	Multistack	MS80T1H2W-V	JD-06-25	504	(12) times a year
1	Air Handler w/ 2 Supply Fans and Motors	Temtrol	WF-DH137PL	77982	502	(4) times a year
2	Economizer	Custom	N/A	N/A	505	(4) times a year
1	Cooling Tower	Evapco	LPT5612	14691556	504	(12) times A year
2	CRAC Air Handler	Liebert	PX018UA1CPS155		250	(2) times a year
2	CRAC Condenser Unit	Liebert	MSM040E1YD0W225		250	(2) times a year
As noted below	Various Exhaust Fans + Makeup Air Fan	Various	Various	Unknown	Various	(1) time a year
1	DX Split AC Unit	Liebert PDX	MM018A-P000	209N60571	1st Fl	(2) times per year
1	Tankless Water Heater	Noritz	NRC 111		503	(1) time per year

1	Domestic Water Pump	Syncroflo	22DL03XX-3V-SWF-	340547	1st Fl	(2) times a year
As noted below	Filters	Various	N/A	N/A	Various	As noted below
6	VFD	ABB	Various	Various	Various	(1) time per year
49	Fire/Smoke Dampers	Various	Various	Various	Various	(1) time per year
35	VAV Boxes	Various	Various	Various	Various	(1) time per year
60	VAV Reheat & Valves	Various	Various	Various	Various	(1) time per year

**Detailed List of Equipment**

**1. Boiler**

A. Manufacturer: Ray Pak, Model: H9-1532B, Serial No.: 1604420683, Quantity: 1

- B. Preventative Maintenance: **2** times per year (semiannual) Check boiler and system for leaks.
- 1) Check flame signal strength for both pilot and main flame. Check igniter and burner operation.
  - 2) Check main burner fuel safety shutoff valves for leakage. Check high pressure/temperature interlocks.
  - 3) Manually lift safety valve by hand.
  - 4) Check pressure reducer valve (PRV).
  - 5) Inspect burner components.
  - 6) Check flame failure system components.
  - 7) Check piping and wiring of all interlocks and shutoff valves. Recalibrate all instruments, indicating and recording gauges. Perform a slow drain test for low water cut-off.
  - 8) Check combustion control system.
  - 9) Test boiler safety valves according to ASME.

**2. Hot Water Inline Pump**

A. Manufacturer: Bell & Gossett, Model: #1 1/48C, Serial No.: TBD, Quantity: 1

- B. Preventative Maintenance: **4** times per year (1x per quarter)
- 1) Lubricate drive motors utilizing means and methods prescribed by the equipment manufacturer.
  - 2) Check all electrical connections and service as needed.
  - 3) Check variable frequency drives and service per manufacturer's recommendations (if applicable).
  - 4) Check motor starters, contactors and overloads for proper operation and condition, service, repair or replace as needed.
  - 5) Check motor temperatures.
  - 6) Check water seals.
  - 7) Verify operation and accuracy of controls. Interlocks and input and output devices associated with the pump.

**3. Condenser Water Pump**

A. Manufacturer: Bell & Gossett, Model #1510, Serial No.: 1B086LFF41, Quantity: 1

- B. Preventative Maintenance: **2** times per year (semiannual)
- 1) Lubricate drive motors utilizing means and methods prescribed by the equipment manufacturer.
  - 2) Check all electrical connections and service as needed.
  - 3) Check variable frequency drives and service per manufacturer's recommendations (if applicable).
  - 4) Verify operation and accuracy of controls, interlocks and input and output devices associated with the pump.
  - 5) Submit report stating existing conditions and any additional repairs or modifications that may be required.
  - 6) Check motor temperatures.



- 7) Check water seals.
- 8) Check motor starters, contactors and overloads for proper operation and condition service, repair or replace as needed.

**4. Chilled Water Pump**

- A. Manufacturer: Bell & Gossett, Model: 1510, Serial No.: 1BF087LF, Quantity: 1
- B. Preventative Maintenance: **2** times per year (semiannual)
  - 1) Lubricate drive motors utilizing means and methods prescribed by the equipment manufacturer.
  - 2) Check all electrical connections and service as needed.
  - 3) Check motor starters, contactors and overloads for proper operation and condition, service, repair or replace as needed.
  - 4) Check variable frequency drives and service per manufacturer's recommendations (if applicable).
  - 5) Verify operation and accuracy of controls, interlocks and input and output devices associated with the pump.
  - 6) Submit report stating existing conditions and any additional repairs or modification that may be required.
  - 7) Check motor temperatures.
  - 8) Check water seals.

**5. Multistack Chiller System (Water Cooled System) – ONLY FILTER CLEANING**

- A. Manufacturer: MULTSTACK Model: MS80T1H2W-V, Serial No.: JD-06-25, Quantity: 1
- B. Preventative Maintenance: **Monthly** 12 times per year
  - 1) Clean filter cartridges
  - 2) Check auto blow down settings
  - 3) Turn-of chillers and condensers, drain the condenser and header pipe
  - 4) Remove the filters
  - 5) Install backup clean filters and re-fill the system and restart the system
  - 6) Clean filters with hose, power washer, or wire brush
  - 7) Check pressure differential between inlet and outlets of condensers

**6. Air Handler**

- A. Manufacturer: Temtrol, Model: WF-DH137PL, Serial No.: 77982, Quantity: 1
- B. Preventative Maintenance: **4** times per year (1x per quarter)
  - 1) Perform a visual inspection and check for unusual noise or vibration.
  - 2) Check for particulate accumulation on filters.
  - 3) Check associated Variable Speed Drive and service per manufacturer's recommendations. Contractor is to provide a separate task list for annual VFD inspections. Inspections must be conducted by a manufacturer certified technician. **(See inventory table for frequency)**
  - 4) Inspect cooling coils and clean as required.
  - 5) Inspect drain pan, condensate drain line and trap. Clean and renew pan chemical.
  - 6) Check piping serving unit for damage or deterioration, replace or repair as needed, and repair or replace damaged insulation on piping.
  - 7) Check operation of chilled water control valves, check position feedback for accuracy, and calibrate, repair or replace as needed.
  - 8) Inspect fan wheels for damage. Clean at least one per year and as needed.
  - 9) Inspect drive sheaves for wear and damage. Repair or replace as needed.
  - 10) Check belt condition, alignment, and tension. Repair or replace as required.
  - 11) Lubricate motor and blower bearings as required **(twice per year)**.
  - 12) Check bearing and motor mounting. Service as needed.
  - 13) Check motor operating voltage and amperages. Record readings.
  - 14) Check variable frequency drive and service per manufacturer's recommendations.
  - 15) Check electrical connections, motor starters, relay overload and associated electrical equipment for condition and proper operation. Service, repair or replace as needed.

- 16) Check dampers for proper operation and adjust, if necessary or applicable.
- 17) Check equipment interlocks in the ALC controls.
- 18) Replace and properly secure any doors or access panels removed during inspection.
- 19) Maintain service records and record conditions for each piece of equipment. Attach reports with service ticket closeout.
- 20) Submit report stating existing conditions and any additional repairs or modifications that may be required.

**7. Economizer**

- A. Manufacturer: N/A, Quantity: 1
- B. Preventative Maintenance: **4** times per year (1x per quarter)
  - 1) Perform a visual inspection, check all louvers and dampers for unusual noise or vibration.
  - 2) Blades should be checked in a closed position to insure tight closed.
  - 3) Check all blades for freedom of movement. Blades should be disconnected from their operators and manually checked.
  - 4) Check all linkage, pins, bushings, connection bars and operator connectors for proper alignment, fit, wear, corrosion or rust.
  - 5) Check motor dampers through an operation cycle to ensure the HVAC system controls are properly sending and receiving commands.

**8. Cooling Tower**

- A. Manufacturer: Evapco, Model: LPT5612, Serial No.: 14691556, Quantity: 1
- B. Preventative Maintenance: **12** times per year (1x per month).
  - 1) Inspect, clean and service makeup valve and valve control.
  - 2) Lubricate fan drive motor (one (1) time per year).
  - 3) Verify operation and accuracy of controls, interlocks, input and output devices associated with the tower and tower operation.
  - 4) Check associated Variable Speed Drive and service per manufacturer's recommendations. Contractor is to provide a separate task list for annual VFD inspections. Inspections must be conducted by a manufacturer certified technician. (See inventory table for frequency)
  - 5) Check all electrical connections (one (1) time per year).
  - 6) Inspect blown down or drain valve. Clear all debris and ensure proper operation.
  - 7) Submit report stating existing conditions and any additional repairs or modifications that may be required.
  - 8) Drain, flush, and refill monthly.
  - 9) Remove foreign matter and scale.
  - 10) Check fan rotation.
  - 11) Check all motors and belts.

**9. Computer Room Air Conditioning Unit (CRAC) Air Handler Unit**

- A. Manufacturer: Liebert, Model: PX018UA1CPS155, Serial No. N/A, Quantity: 2
- B. Preventative Maintenance: **2** times per year (semiannual)
  - 1) Perform Monthly and Semi Annual per manufacture's recommendations
  - 2) Check oil level and check for oil leaks
  - 3) Check compressor mounts
  - 4) Clean coil and check fans for debris
  - 5) Check/Re-torque wire connections
  - 6) Check all refrigerant lines for leaks and vibration isolation
  - 7) Check blower fan impeller, check sail switch
  - 8) Check motor amp draw and compare with nameplate
  - 9) Charge refrigerant pressures
  - 10) Check operation sequence/set points
  - 11) Perform a visual inspection and check for unusual noise or vibration.
  - 12) Check tension, condition and alignment of blower belts. Adjust or replace as necessary.
  - 13) Check condition of condensate removal system and components. Service or repair as needed.



- 14) Check all operating and safety controls.
- 15) Replace and properly secure any doors or access panels removed during inspection.
- 16) Change filters

**10. Computer Room Air Conditioning Unit (CRAC) Condenser Unit**

- A. Manufacturer: Liebert, Model: MSM040E1DOW225, Serial No. N/A, Quantity: 2
- B. Preventative Maintenance: **2** times per year (semiannual)
  - 1) Perform Monthly and Semi Annual per manufacture's recommendations
  - 2) Check/Replace filters
  - 3) Clean coil and condensate pan, condensate drain
  - 4) Check/Test filter clog switch operation
  - 5) Check blower fan impeller, check sail switch
  - 6) Check motor amp draw and compare with nameplate
  - 7) Check contactors for pitting
  - 8) Check condenser fan motor mounts, motor(s), and blade(s) for damage.
  - 9) Check refrigerant system pressures and temperatures.
  - 10) Check oil level in compressor (where applicable).
  - 11) Check control systems and devised for proper operation.
  - 12) Check fan blades and fan housing. Clean or replace as needed to ensure proper operation.
  - 13) Inspect blower assembly components for wear or damage. Correct or repair as needed.  
Lubricate motor and blower bearings if applicable.
  - 14) Submit report stating existing conditions and any additional repairs or modifications that may be required.

**11. Building Static Exhaust Fans**

- A. Manufacturer: Greenheck, Model: LBP, Serial Nos.: Unknown, Quantity: 2
- B. Preventative Maintenance: **1** time per year
  - 1) Check operation of the units.
  - 2) Check associated Variable Speed Drive and service per the manufacturer's recommendations.
  - 3) Check electrical wiring and electrical components for proper operation.
  - 4) Check operation of the control circuit and the system interlocks.
  - 5) Inspect fan wheel or blades for damage.
  - 6) Inspect shaft and motor bearings.
  - 7) Verify proper pulley alignment.
  - 8) Inspect belts and replace as required.
  - 9) Verify proper fan belt tension.
  - 10) Lube all motors and bearings.
  - 11) Brush clean fan wheel or blades.
  - 12) Check all associated dampers and damper assemblies for proper operation. Clean and lubricate per manufacturer's recommendations. This includes the gravity dampers, intake, and exhaust dampers. On motor driven dampers, exercise the dampers. Check for full range of motion without binding. Check position feedback for accuracy. Service and repair as needed.
  - 13) Measure motor voltage and amperage.
  - 14) Verify integrity of housing and connections.
  - 15) Inspect starter/contractor and associated wiring including electrical connections for tightness. Replace or repair as needed.
  - 16) Check associated Variable Speed Drive and service per manufacturer's recommendations. Contractor is to provide a separate task list for annual VFD inspections. Inspections must be conducted by a manufacturer certified technician. (See inventory table for frequency)
  - 17) Assess field-serviceable bearing. Lubricate as necessary.
  - 18) Visually inspect exposed ductwork and external piping.
  - 19) Maintain service records and record conditions for each piece of equipment.
  - 20) Submit report stating existing conditions and any additional repairs or modifications that may be required.

**12. Electrical Room Exhaust Fans**

- A. Manufacturer: Broan, Model: L300, Serial Nos.: Unknown, Quantity: 4 (one per floor)
- B. Preventative Maintenance: **1** time per year
  - 1) Check operation of the units.
  - 2) Check electrical wiring and electrical components for proper operation.
  - 3) Check operation of the control circuit and the system interlocks.
  - 4) Inspect fan wheel or blades for damage.
  - 5) Inspect shaft and motor bearings.
  - 6) Lube all motors and bearings.
  - 7) Brush clean fan wheel or blades.
  - 8) Measure motor voltage and amperage.
  - 9) Verify integrity of housing and connections.
  - 10) Assess field-serviceable bearings. Lubricate as necessary.
  - 11) Visually inspect exposed ductwork and external piping.
  - 12) Maintain service records and record conditions for each piece of equipment.

**13. Kitchen Exhaust Fan**

- A. Manufacturer: Greenheck, Model: USA-160-IMJK-OD, Serial No.: 98C06213, Quantity: 1
- B. Preventative Maintenance: **1** time per year
  - 1) Check operation of the unit.
  - 2) Check electrical wiring and electrical components for proper operation.
  - 3) Check operation of the control circuit and the system interlocks.
  - 4) Inspect fan wheel or blades for damage.
  - 5) Inspect shaft and motor bearings.
  - 6) Verify proper pulley alignment.
  - 7) Inspect belts and replace as required.
  - 8) Verify proper fan belt tension.
  - 9) Lube all motors and bearings.
  - 10) Brush clean fan wheel or blades.
  - 11) Measure motor voltage and amperage.
  - 12) Verify integrity of housing and connections.
  - 13) Inspect starter/contractor and associated wiring including electrical connections for tightness, replace or repair as needed.
  - 14) Assess field-serviceable bearings. Lubricate as necessary.
  - 15) Visually inspect exposed ductwork and external piping.
  - 16) Maintain service records and record conditions for each piece of equipment.

**14. 1<sup>st</sup> Floor Restroom Exhaust Fan**

- A. Manufacturer: Greenheck, Model: CSP-250, Serial No.: 97K07074, Quantity: 1
- B. Preventative Maintenance: **1** time per year
  - 1) Check operation of the unit.
  - 2) Check electrical wiring and electrical components for proper operation.
  - 3) Check operation of the control circuit and the system interlocks.
  - 4) Inspect fan wheel or blades for damage.
  - 5) Inspect shaft and motor bearings.
  - 6) Verify proper pulley alignment.
  - 7) Inspect belts and replace as required.
  - 8) Verify proper fan belt tension.
  - 9) Lube all motors and bearings.
  - 10) Brush clean fan wheel of blades.
  - 11) Measure motor voltage and amperage.
  - 12) Verify integrity of housing and connections.
  - 13) Inspect starter/contractor and associated wiring including electrical connections for tightness. Replace or repair as needed.
  - 14) Assess field-serviceable bearings. Lubricate as necessary.
  - 15) Visually inspect exposed ductwork and external piping.
  - 16) Maintain service records and record conditions for each piece of equipment.



**15. Main Building Restroom Exhaust Fan**

- A. Manufacturer: Marathon, Model: 6VN182TTDB4D26A, Serial No.: None, Quantity: 1
- B. Preventative Maintenance: **1** time per year
  - 1) Check operation of the unit.
  - 2) Check electrical wiring and electrical components for proper operation.
  - 3) Check operation of the control circuit and the system interlocks.
  - 4) Inspect fan wheel or blades for damage.
  - 5) Inspect shaft and motor bearings.
  - 6) Verify proper pulley alignment.
  - 7) Inspect belts and replace as required.
  - 8) Verify proper fan belt tension.
  - 9) Lube all motors and bearings.
  - 10) Brush clean fan wheel or blades.
  - 11) Measure motor voltage and amperage.
  - 12) Verify integrity of housing and connections.
  - 13) Inspect starter/contractor and associated wiring including electrical connections for tightness, replace, or repair as needed.
  - 14) Assess field-serviceable bearings. Lubricate as necessary.
  - 15) Visually inspect exposed ductwork and external piping.
  - 16) Maintain service records and record conditions for each piece of equipment.

**16. Edison Makeup Air Fan**

- A. Manufacturer: Dayton, Model: CG03, Serial No.: U5P2D, Quantity:1
- B. Preventative Maintenance: **1** time per year
  - 1) Check operation of the unit.
  - 2) Check electrical wiring and electrical components for proper operation.
  - 3) Check operation of the control circuit and the system interlocks.
  - 4) Inspect fan wheel or blades for damage.
  - 5) Inspect shaft and motor bearings.
  - 6) Verify proper pulley alignment.
  - 7) Inspect belts and replace as required.
  - 8) Verify proper fan belt tension.
  - 9) Lube all motors and bearings.
  - 10) Brush clean fan wheel or blades.
  - 11) Measure motor voltage and amperage.
  - 12) Verify integrity of housing and connections.
  - 13) Inspect starter/contractor and associated wiring including electrical connections for tightness.
  - 14) Assess field-serviceable bearings. Lubricate as necessary.
  - 15) Visually inspect exposed ductwork and external piping.
  - 16) Maintain service records and record conditions for each piece of equipment.

**17. Electrical Room 1<sup>st</sup> Floor DX Unit**

- A. Manufacturer: Liebert, Model: MM018A-P0000, Serial No.: 209N60571, Quantity: 1
- B. Preventative Maintenance: **2** times per year
  - 1) Perform a visual inspection, check for unusual noise or vibration.
  - 2) Check condenser coil for fin damage. Straighten bent fins as needed.
  - 3) Check all operating and safety controls.
  - 4) Replace and properly secure any doors or access panels removed during inspection.
  - 5) Maintain service records and record conditions for each piece of equipment.
  - 6) Check refrigerant circuit for leaks.
  - 7) Check refrigerant system pressures and temperatures.
  - 8) Check condenser fan motor mounts, motor(s), and blade(s) for damage. Repair as needed. Lubricate motor bearings if applicable.
  - 9) Check control systems and devices for proper operation.
  - 10) Change filters (20x20x1) (See Filter Requirements Table).

- 11) Check condition of condensate removal system and components. Service or repair as needed.

**18. Tankless Water Heater Model: Noritz NRC111**

- A. Manufacturer: Noritz, Quantity: 1
- B. Preventative Maintenance: 1 time per year
  - 1) Check venting system for any leaks or corrosion.
  - 2) Check burner flame for a proper blue color and consistency.
  - 3) Check and clean gas manifold
  - 4) Check for obstruction in flow of combustion and ventilation air.
  - 5) Operate pressure relief valve once a year.
  - 6) Check and clean water line filters
  - 7) Clean flame rod, sensor and ignition plug annually
  - 8) Inspect and clean fan
  - 9) Descale water tank annually

**19. Domestic Water Pumping System**

- A. Manufacturer: SyncroFlo Quantity: 1
- B. Preventative Maintenance: 2 time per year
  - 1) Check for excessive noise and vibration
  - 2) Visually inspect motor casing and base for abnormalities
  - 3) Visually inspect electrical connections
  - 4) Lubricate motor and pump bearings
  - 5) Check temperatures and operating pressure
  - 6) Check pump bearings for unusual operating temperatures
  - 7) Check pump seal for excessive leakage

**20. Air Filter Change Requirements**

- 1) Filter changing frequency and filter types are listed in the Filter Requirements Chart.

<b>FILTER REQUIREMENTS</b>			
<b>Air Handler Filters</b>			
Quantity	Size	Type	Replacement Frequency
(35)	24x24x2	Standard/Pleated	(4) times per year
(5)	12x24x2	Standard/Pleated	(4) times per year
(35)	24x24x12	MERV 13 Pleated Filter	(1) time per year
(5)	12x24x12	MERV 13 Pleated Filter	(1) time per year
(4)	28x32x2	Standard /Pleated	(2) times per year
<b>Outside Air Vent Filters</b>			
(47)	24x24x2	Standard/Pleated	(2) times per year
(5)	20x24x2	Standard/Pleated	(2) times per year

**21. Variable Speed Drives (VFD) Preventive Maintenance**

- A. Manufacturer: ABB, Quantity: 5
- B. Preventative Maintenance: 1 time per year
  - 1) Variable frequency drives are to be serviced per manufacturer recommendations.
  - 2) VFD's manufacturer, model and serial number and location are listed in VFD chart.

**ABB Preventive Maintenance Minimum Recommendations**

Recommended annual actions by the user	
<b>Connections and environment</b>	
Cabinet door filters IP54	R
Quality of supply voltage	P
<b>Spare parts</b>	
Spare parts	I
DC circuit capacitors reforming, spare modules and spare capacitors	P
<b>Inspections by user</b>	
IP22 and IP42 air inlet and outlet meshes	I
Tightness of terminals	I
Dustiness, corrosion and temperature	I
Heat sink cleaning	I
<b>Other</b>	
ABB-SACE Air circuit breaker maintenance	I

**Legend**

- I **Inspection** (visual inspection and maintenance action if needed)
- P **Performance** of on/off-site work (commissioning, tests, measurements or other work)
- R **Replacement**

Variable Frequency Drive Inventory						
Quantity	Description	Manufacture	Model No.	Serial No.	Located/Area Servicing	PM Schedule
1	VFD #1	ABB	ACH550-VCR-072A-4	Missing	Air Handler	(1) time a year
1	VFD #2	ABB	ACH550-VCR-072A-4	Missing	Air Handler	(1) time a year
1	VFD #3	ABB	ACH5401600532	Missing	Exhaust Ventilator #1	(1) time a year
1	VFD #4	ABB	ACH401600532	1984601219	Exhaust Ventilator #2	(1) time a year
1	VFD #5	ABB	ACH550-VCR-072A-4	Missing	Cooling Tower	(1) time a year

**22. Smoke Duct Fire Dampers and Actuators**

A. Manufacturer: Various, Quantity: (49) (25 – Electric; 24 – Mechanical)

B. Preventive Maintenance: **1** time per year

- 1) Observe damper motors and actuators through an operating cycle to check for defects or binding.
- 2) Linkages from actuators should be adjusted to insure blades fully open and close within the stroke or travel of the actuator
- 3) Blades should be checked in closed position to be sure all close tightly. Adjust as necessary.
- 4) Damaged blades should be replaced. Dirt, soot, lint should be removed
- 5) Check blade edge and side seal. Replace as necessary
- 6) Check pins, bushings for wear, rust and corrosion
- 7) Lubricate all mechanisms and moving parts
- 8) Caulking where used to make damper frames tight to structure should be checked and repaired as needed
- 9) See Fire Damper Chart Below



**Fire Duct Damper Chart**

DAMPER	TYPE	DAMPER	TYPE	DAMPER	TYPE	DAMPER	TYPE
1-001	Electric	2-001	Electric	3-001	Mechanical	4-001	Electric
1-002	Electric	2-002	Electric	3-002	Mechanical	4-002	Electric
1-003	Electric	2-003	Electric	3-003	Electric	4-003	Mechanical
1-004	Mechanical	2-004	Electric	3-004	Electric	4-004	Electric
1-005	Mechanical	2-005	Mechanical	3-005	Mechanical	4-005	Mechanical
1-006	Electric	2-006	Mechanical	3-006	Mechanical	4-006	Mechanical
1-007	Electric	2-007	Mechanical	3-007	Mechanical	4-007	Mechanical
1-008	Electric	2-008	Mechanical	3-008	Mechanical	4-008	Electric
1-009	Mechanical	2-009	Mechanical	3-009	Mechanical	4-009	Electric
		2-010	Mechanical	3-010	Electric	4-010	Electric
		2-011	Mechanical	3-011	Electric	4-011	Electric
		2-012	Mechanical	3-012	Electric		
		2-013	Mechanical	3-013	Electric		
		2-014	Mechanical				
		2-015	Electric				
		2-016	Electric				

**23. HVAC Variable Air Volume (VAV) Boxes, Reheat Coils and Hot Water Valves**

A. Manufacture: Various Quantity: (95) (60)- Reheat (35) - No Reheat

B. Perform annual preventive maintenance tasks per VAV PM Task List Chart below

Note: The District will assist Contractor with building automation control adjustments to complete PM tasks.

**VAV Preventive Maintenance Task List**

Component	Action	Annually
VAV Box – Duct Connections	Check VAV box duct connections for leakage or movement. Verify that hangers and mountings are secure.	X
VAV Box Zone Temperature Sensor (Thermostat)	Verify function and accuracy (compared to calibrated value). Check signal to controller to verify corresponding control, damper action, and minimum setting.	X
VAV Box – Airflow Sensor	Verify function of flow sensor (compared to calibrated value) and corresponding control of box damper. Clean sensor per manufacturer’s recommendations.	
VAV Box – Controls	Verify function by technology type and per manufacturer’s recommendations: Pneumatic – check for air leaks in hoses and fittings. Electronic – check for proper electrical connections. Direct Digital Control (DDC) – check for proper connections corresponding to damper action.	X
VAV Box – Damper	Check seals and alignment in duct.	X
VAV Box – Damper Linkage and Control	Check linkage for tension and position relative to control point. Lubricate per manufacturer’s recommendation. Verify minimum and maximum positions are correct.	X
VAV Box – Filter (if present)	Check, clean, and/or replace filters on all fan-powered VAV boxes. Change per manufacturer’s recommendations.	X
VAV Box – Hydronic Reheat (if present)	Check and clean reheat coil using spray cleaner, wire brush and air pressure. <b>Check control valve and fittings for water leaks</b> , and check coil for cleanliness and fin condition.	X

Rancho Santiago Community College District

BOX INFORMATION														REHEAT VALVES			
Item#	Floor / Rm #	Zone # (Tag #)	Served By	AAR Address	CM Address	Box Size	Cool Max CFM	Heat Max CFM	Cool/Heat Min CFM	Valve+Actuator #	Valve Size	Config. Type	Proportional /				
1	3rd Floor / 2530	VAV3-1	AHU-1	13	1	14	1690	500	500	B-312+LR24	1/2"	3-Way	Floating				
2	3rd Floor / 2214	VAV3-2	AHU-1	13	2	10	740	190	190	B-210+LR24	1/2"	2-Way	Floating				
3	3rd Floor / 2258	VAV3-3	AHU-1	13	3	12	900	230	230	B-212+LR24	1/2"	2-Way	Floating				
4	3rd Floor / 2147	VAV3-4	AHU-1	13	4	12	1210	320	320	B-212+LR24	1/2"	2-Way	Floating				
5	3rd Floor / 2254	VAV3-5	AHU-1	13	5	10	1250	330	330	B-210+LR24	1/2"	2-Way	Floating				
6	3rd Floor / 2120	VAV3-6	AHU-1	13	6	10	700	-	180								
7	3rd Floor / 2498	VAV3-7	AHU-1	13	7	6	500	-	110								
8	3rd Floor / 2282	VAV3-8	AHU-1	13	8	12	1480	-	370								
9	3rd Floor / 2169	VAV3-9	AHU-1	13	9	16	2000	500	500	B-312+LR24	1/2"	3-Way	Floating				
10	3rd Floor / 2277	VAV3-10	AHU-1	13	10	4	140	-	40								
11	3rd Floor / 2458	VAV3-11	AHU-1	13	11	8	720	180	180	B-210+LR24	1/2"	2-Way	Floating				
12	3rd Floor / 2543	VAV3-12	AHU-1	13	12	8	610	-	180								
13	3rd Floor / 2125	VAV3-13	AHU-1	13	13	12	1440	300	300	B-211+LR24	1/2"	2-Way	Floating				
14	3rd Floor / 2253	VAV3-14	AHU-1	13	14	12	1440	360	360	B-211+LR24	1/2"	2-Way	Floating				
15	3rd Floor / 2154	VAV3-15	AHU-1	13	15	6	360	-	90								
16	3rd Floor / 2256	VAV3-16	AHU-1	13	16	5	250	-	80								
17	3rd Floor / 2313	VAV3-17	AHU-1	13	17	5	250	-	80								
18	3rd Floor / 2213	VAV3-18	AHU-1	13	18	10	600	-	150								
19	-	VAV3-19	NOT USED														
20	3rd Floor / 2449	VAV3-20	AHU-1	13	20	12	830	-	230								
21	3rd Floor / 2168	VAV3-21	AHU-1	13	21	6	450	-	110								
22	3rd Floor / 2160	VAV3-22	AHU-1	13	22	12	1440	370	370	B-212+LR24	1/2"	2-Way	Floating				
23	3rd Floor / 2429	VAV3-23	AHU-1	13	23	10	800	-	400								
24	3rd Floor / 2408	VAV3-24	AHU-1	13	24	12	800	-	400								
25	3rd Floor / 2285	VAV3-25	AHU-1	13	25	6	345	90	90		1/2"	2-Way	Floating				
26	3rd Floor / 2139	VAV3-26	AHU-1	13	26	-	2670	665	665		1/2"	2-Way	Floating				
27	3rd Floor / 2319	VAV3-27	AHU-1	13	27	8	400	-	200								
BOX INFORMATION														REHEAT VALVES			
Item#	Floor / Rm #	Zone #	Served	AAR	CM	Box Size	Cool	Heat	Cool/Heat	Valve+Actuator #	Valve	Config.	Proportional				
1	4th Floor / 2203	VAV4-7	AHU-1	14	7	10	1080	210	210	B-311+LR24	1/2"	2-Way	Floating				
2	4th Floor / 2430	VAV4-8	AHU-1	14	8	12	1540	350	350	B-212+LR24	1/2"	2-Way	Floating				
3	4th Floor / 2279	VAV4-9	AHU-1	14	9	12	1500	360	360	B-212+LR24	1/2"	2-Way	Floating				
4	4th Floor / 2351	VAV4-10	AHU-1	14	10	10	900	240	240	B-210+LR24	1/2"	2-Way	Floating				
5	4th Floor / 2248	VAV4-11	AHU-1	14	11	12	1470	350	350	B-210+LR24	1/2"	2-Way	Floating				
6	4th Floor / 2435	VAV4-12	AHU-1	14	12	12	1320	310	310	B-212+LR24	1/2"	2-Way	Floating				
7	4th Floor / 2423	VAV4-13	AHU-1	14	13	6	310	130	130	B-209+LR24	1/2"	2-Way	Floating				
8	4th Floor / 2464	VAV4-14	AHU-1	14	14	8	620	210	210	B-210+LR24	1/2"	2-Way	Floating				
9	4th Floor / 2365	VAV4-15	AHU-1	14	15	10	880	220	220	B-211+LR24	1/2"	2-Way	Floating				
10	4th Floor / 2377	VAV4-16	AHU-1	14	16	8	480	120	120	B-210+LR24	1/2"	2-Way	Floating				
11	4th Floor / 2339	VAV4-17	AHU-1	14	17	10	960	240	240	B-211+LR24	1/2"	2-Way	Floating				
12	4th Floor / 2334	VAV4-18	AHU-1	14	18	12	1680	420	420	B-212+LR24	1/2"	2-Way	Floating				
13	4th Floor / 2393	VAV4-19	AHU-1	14	19	8	480	120	120	B-210+LR24	1/2"	2-Way	Floating				
14	4th Floor / 2333	VAV4-20	AHU-1	14	20	8	430	140	140	B-210+LR24	1/2"	2-Way	Floating				
15	4th Floor / 2260	VAV4-21	AHU-1	14	21	8	660	-	170								
16	4th Floor / 2385	VAV4-22	AHU-1	14	22	6	300	80	80	B-209+LR24	1/2"	2-Way	Floating				

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT  
EMPLOYEE CALENDAR 2022-2023

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Holidays
						1	2	
<b>JULY</b>	3	4	5	6	7	8	9	Independence Day: July 4
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30	
	31	1	2	3	4	5	6	
<b>AUGUST</b>	7	8	9	10	11	12	13	
	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	
	28	29	30	31	1	2	3	
<b>SEPTEMBER</b>	4	5	6	7	8	9	10	Labor Day: September 5
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	1	
<b>OCTOBER</b>	2	3	4	5	6	7	8	
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	30	31	1	2	3	4	5	
<b>NOVEMBER</b>	6	7	8	9	10	11	12	Veterans Day: November 11
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	Thanksgiving: November 24-25
	27	28	29	30	1	2	3	
<b>DECEMBER</b>	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	Holiday Recess: December 26-30
<b>JANUARY</b>	1	2	3	4	5	6	7	New Year's Day: January 1; January 2 (Observed)
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	Martin Luther King Jr. Day: January 16
	22	23	24	25	26	27	28	
	29	30	31	1	2	3	4	
<b>FEBRUARY</b>	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	Lincoln's Birthday: February 12; February 17 (Observed)
	19	20	21	22	23	24	25	Presidents Day: February 20
	26	27	28	1	2	3	4	
<b>MARCH</b>	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	27	28	29	30	31	1	César Chávez Day: March 31
<b>APRIL</b>	2	3	4	5	6	7	8	Spring Break: April 6-7 (Days for Cont. Ed. will be different)
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
	30	1	2	3	4	5	6	
<b>MAY</b>	7	8	9	10	11	12	13	
	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	
	28	29	30	31	1	2	3	Memorial Day: May 29
<b>JUNE</b>	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	Juneteenth: June 19
	25	26	27	28	29	30		