

Report By:

**National TAB
1126 SWIFT STREET
KANSAS CITY, MO 64116**



**Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 09/08/2025
Completed By: National TAB**

PROJECT
Charles Schwab (Cupertino, CA)

19499 STEVENS CREEK BLVD

Cupertino, CA 95014

Client

Buffalo Mechanical
501 South Parallel Ave
Ripon, CA 95366

National TAB

Project: Charles Schwab (Cupertino, CA)

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CERTIFICATION

PROJECT: Charles Schwab (Cupertino, CA)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems*. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast

REGISTRATION NO: 3755

CERTIFIED BY: J. Scott Springer 23312

DATE: 9/9/2025

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast

REGISTRATION NO: 3755

CERTIFIED BY: J. Scott Springer 23312

DATE: _____

Submitted and Certified by:

NEBB TAB FIRM: National TAB-Southeast

TAB PROFESSIONAL: J. Scott Springer

SIGNATURE: 

REGISTRATION NO: 3755 (NTAB) / 23312

CERTIFICATION EXP: 12/31/2025





National TAB

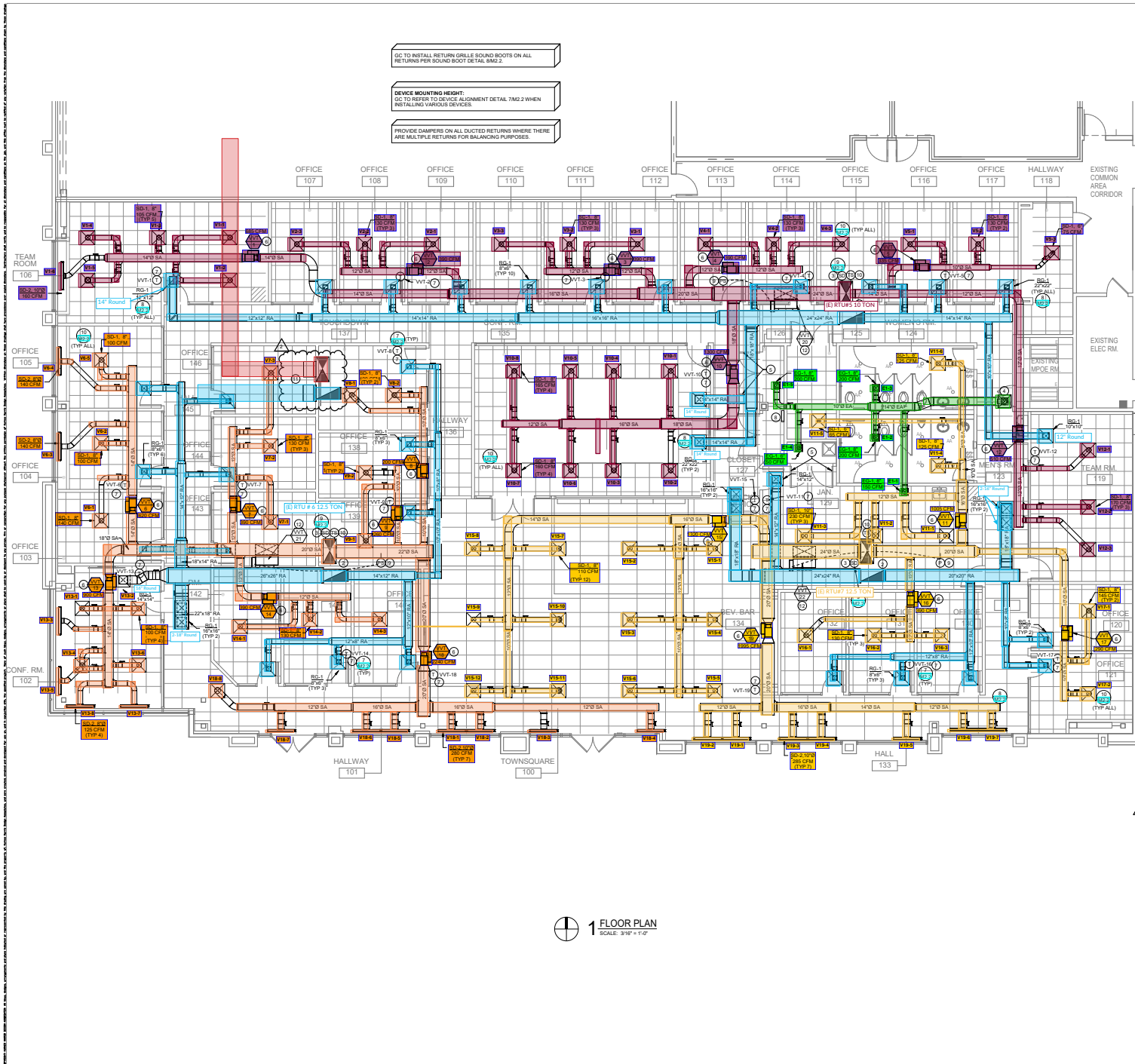
Testing, Adjusting, and Balancing Equipment



Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/15/2024	10/15/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/15/2024	10/15/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/15/2024	10/15/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/15/2024	10/15/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/15/2024	10/15/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/15/2024	10/15/2025
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
DALT	DUCT LEAKAGE	-10" - +10" wc	±1% of reading +/- 0.004" wc	Kanomax DALT 6900 S/N: 080439	3/7/2025	3/7/2026

Abbreviation List

A = Area (ft ²)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A _k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T _{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T _{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T _{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO ₂ = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C _v = Flow Constant	K _v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T _{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% _{ra} = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio



GO TO INSTALL RETURN GRILLE SOUND BOOTS ON ALL RETURNS PER SOUND BOOT DETAIL 8M2.

DEVICE MOUNTING HEIGHT:
GO TO REFER TO DEVICE ALIGNMENT DETAIL 7M2.2 WHEN INSTALLING VARIOUS DEVICES.

PROVIDE DAMPERS ON ALL DUCTED RETURNS WHERE THERE ARE MULTIPLE RETURNS FOR BALANCING PURPOSES.

- HVAC GENERAL NOTES:**
- GENERAL NOTES:
- EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.
 - CONDITIONS PRIOR TO SUBMITTING HIS BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRA WORK TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.
 - ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS.
 - ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE GOVERNMENT AND LOCAL CODES.
 - MECHANICAL CONTRACTOR SHALL FIELD COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.
 - ALL CONTRACTORS SHALL REVIEW A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND COORDINATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND BE PROPERLY COORDINATED.
 - THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE INTENT OF THE INSTALLATION WHILE THE SPECIFICATIONS AND EQUIPMENT LIST DENOTE THE TYPE AND QUALITY OF MATERIAL AND WORKMANSHIP TO BE USED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER AND MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DESIGN SHALL BE FINAL. NO ALLOWANCES WILL BE MADE SUBSEQUENTLY IN THIS REGARD ON BEHALF OF THE CONTRACTOR AFTER AWARD OF THE CONTRACT.
 - COORDINATE DUCT ROUTING AND HEIGHTS WITH GENERAL CONTRACTOR. VERIFY ALL CLEARANCES BEFORE STARTING WORK.
 - THE CONTRACTOR SHALL INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT AS REQUIRED TO CONFORM TO THE STRUCTURE. AVOID OBSTRUCTIONS. PRESERVE CEILING HEIGHTS AND HEADROOMS AND MAKE ALL EQUIPMENT REQUIRING MAINTENANCE OR REPAIR ACCESSIBLE.
 - ALL DUCT CONNECTIONS TO HVAC EQUIPMENT MUST BE MADE WITH FLEXIBLE CONNECTORS.
 - DO NOT ATTACH ANYTHING TO DECK ABOVE. ATTACH TO STRUCTURE (i.e. BEAMS, JOISTS) ONLY. DUCT HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODE. ALL CONNECTIONS TO JOISTS SHALL BE MADE AT THE TOP CORNER.
 - ALL DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTICAL LINER OR HANGERS WITH 1/2" RIGID FOAM INSULATION FIBERGLASS WITH A REINFORCED ALUMINUM FOIL JACKET AND SHALL BE APPROVED FOR USE BY WOODMAN AND MARSH. RETURN AIR TRANSFER DUCTS AND RETURN EXTRACT DUCT LINER SHALL BE THE UNIT FAN SHROUD.
 - THE SEALER OF CONNECTIONS TO THE MECHANICAL CONTRACTOR SHALL INSPECT AND RUN TEST ALL EXISTING HVAC UNITS DESIGNATED FOR REUSE. CONTRACTOR SHALL PROVIDE REMOTE LEAK CHECK CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITS EQUIPPED WITH DAMPERS LOCATED ABOVE ACCESSIBLE CEILING. LOCATE UNITS AND IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK OR ARISING FROM THE PREMISES.
 - THIS PROJECT UTILIZES A PLENUM RETURN AIR CEILING DESIGN. ALL EQUIPMENT AND MATERIALS INSTALLED IN THE PLENUM RETURN CEILING MUST MEET THE FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 2500 AND BE APPROVED FOR USE IN PLENUM RETURN CEILING.
 - TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BEGINS. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF DAMAGES TO REPAIR OR REPLACE UTILITY RUNS AND OTHER IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK OR ARISING FROM THE PREMISES.
 - ALL DUCTING WORK SHALL BE PERFORMED BY UNLICENSED APPROVED COPING CONTRACTOR AT TENANT'S EXPENSE. IF REQUIRED IN LEASE OR TENANT CRITERIA MANUAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BEGINS. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF DAMAGES TO REPAIR OR REPLACE UTILITY RUNS AND OTHER IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK OR ARISING FROM THE PREMISES.
 - ROOF MOUNTED EQUIPMENT SHALL BE LABELED WITH THE TENANT NAME AND SPACE NUMBER WITH 1" HIGH WEATHER PROOF LETTERS.
 - MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR WARRANTY AND MAINTENANCE WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND/OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) MONTHS OF PARTS INCLUDING FILTER CHANGES DURING A ONE (1) YEAR PERIOD AT THE COMPLETION OF CONSTRUCTION AN NEAR ABO OR TABS CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE OWNER AND LANDLORD. THE BALANCING MUST BE COMPLETED BY AN INDEPENDENT, THIRD PARTY CONTRACTOR WITH NO INTEREST TO THE INSTALLING CONTRACTOR.
 - GO TO PROTECT IN PLACE ALL EXISTING MECHANICAL EQUIPMENT PLATED FOR REUSE TO THE INTENT OF THE CONTRACTOR.
 - FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND/OR MISCELLANEOUS ITEMS NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION INCLUDING THE OWNER AND LANDLORD. TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS ALL SYSTEMS SHALL BE TESTED FOR LEAKS AND OPERATIONAL PERFORMANCE.
 - CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF ALL TITLE AND MECHANICAL INSTALLATION CERTIFICATE DOCUMENTS AS REQUIRED BY THE AIA.
 - CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF ALL TITLE AND MECHANICAL ACCEPTANCE TESTS AS REQUIRED BY THE AIA.
 - PROVIDE DUCT LINING ON FIRST 10' OF SUPPLY AND RETURN OF EACH RTU.
- BUILDING COORDINATION:**
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE LANDLORD'S TENANT CRITERIA MANUAL. TENANT CRITERIA MANUAL IS AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND NO ADDITIONAL COST TO THE TENANT.
 - PARTS OF THE SYSTEMS THAT FALL INTO LEASE LINE SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
 - PROTECT OR REPAIR WIRING, SENSORS, DETECTORS, COMPONENTS, ETC.

- HVAC KEYNOTES:**
- EXISTING 10 TON ROOFTOP UNIT TO REMAIN. FIELD VERIFY EXACT LOCATION.
 - EXISTING 12.5 TON ROOFTOP UNIT TO REMAIN. FIELD VERIFY EXACT LOCATION.
 - VERIFY EXISTING CONDITIONS. IF NOT PRESENT, DUCT SMOKE DETECTOR ON SUPPLY SIDE DUCT AND SHUTDOWN RELAY SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. ALL WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
 - PROVIDE NEW EXHAUST FAN AS NOTED ON PLAN AND SCHEDULED ON SHEET 100.1. THE CONTRACTOR SHALL VERIFY THAT THE LOCATION SHOWN IS A MINIMUM OF 12" FROM ANY OUTDOOR AIR INTAKE. EXHAUST FAN RUN SIGNAL, TO BE TIED TO THE SUPPLY FAN OF RTU.
 - CONTRACTOR SHALL UNDERCUT IT CLOSET DOORS.
 - PROVIDE NEW RTU AS NOTED ON PLAN AND SCHEDULED ON SHEET 100.1.
 - PROVIDE NEW RTU AS NOTED ON PLAN AND SCHEDULED ON SHEET 100.1. PROVIDE REMOTE LEAK CHECK CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITS EQUIPPED WITH DAMPERS LOCATED ABOVE ACCESSIBLE CEILING. LOCATE UNITS AND IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK OR ARISING FROM THE PREMISES.
 - UNIVERSAL CONTROLLER, SET POINT ADJUSTMENT AND DIGITAL READOUT DISPLAY. PROVIDE THE SYSTEM SHALL PROVIDE SET POINTS OF HVAC HEATING AND COOLING EQUIPMENT IN A MULTIPLE ZONE APPLICATION.
 - PROVIDE PRESSURE SENSORS INTEGRATED WITH ZONING DAMPERS.
 - SUPPLY DUCT TEMPERATURE SENSOR INTEGRATED INTO SV SYSTEM PILOT VAV.
 - EXISTING RTU LOCATED IN OUR SPACE IS SHOWN FOR REFERENCE AND WILL NOT BE USED. CAP SEAL AND INSULATE DUCT OFF FROM UNIT TO BE SUPPLY DUCT PRESSURE.

REUSE NOTE:
REUSE DESIGN, IF ANY, SHALL BE HANDLED AS A DEFERRED SUBMITTAL BY THE INSTALLING CONTRACTOR.

FINAL DUCT ROUTING AND COORDINATION SHOULD BE PERFORMED BY THE INSTALLING CONTRACTOR PRIOR TO FABRICATION OF ANY DUCTWORK TO ENSURE ADEQUATE CLEARANCES AND CLASH AVOIDANCE WITH OTHER TRADES.

HOURS OF OPERATION THERMOSTAT PROGRAMMING:
TEMPERATURE THROUGH FRIDAY 7:30 AM TO 5:30 PM
OCCUPANCY OVERRIDE FOR 2 HOUR PERIOD
TEMPERATURE SETPOINT: 70 DEGREES F WITH A 5 DEGREE DEADBAND AS REQUIRED BY ENERGY CODE, OR MINIMUM OF 1° DEGREES
UNOCCUPIED:
TEMPERATURE SETPOINT 65 DEGREES F COOLING, 55 DEGREES F HEATING
IF EQUIPMENT ROOM: SETPOINT OF 75 DEGREES F

1 FLOOR PLAN
SCALE: 3/16" = 1'-0"

DESIGNER OF RECORD:

HURKES HARRIS
INTERIOR DESIGN/SCHEME PLANNING
3838 CAMINO DEL REY, STE 252
SAN DIEGO, CA 92108
PHONE: 619-702-9181
FAX: 619-702-0383
WWW.HURKESHARRIS.COM

REGISTERED PROFESSIONAL ENGINEER
NO. 10000
EXPIRES 12/31/2025

REP ENGINEER:
RENO ENGINEERING
11111 VIA VALERIO
DUBLIN, CA 94568
916-835-1111
Project: 2025001

CLIENT:
charles schwab

CHARLES SCHWAB
CUPERTINO
1949 STEVENS CREEK BLVD., SUITE 100
CUPERTINO, CA 95014

ISSUES:
CS 20% REVIEW ISSUE: 09/04/2024
CONSULTANT ISSUE: 09/10/2024
CS 50% REVIEW: 10/10/2024
LANDLORD REVIEW: 12/09/2024
GC BID: 12/09/2024
PERMIT SUBMITTAL: 12/09/2024
FOR CONSTRUCTION: 04/11/2025

FILE NUMBER: 25237
DATE: 11/09/2024
SCALE: AS NOTED
DRAWN BY: HVAC FLOOR PLAN

M1.1

FacilBuild
Proudly AI enabled

National TAB

Project: Charles Schwab (Cupertino, CA)
System/Unit: AHU/RTU



Asset: RTU-5

AREA:

Unit Data		
	Design	Actual
MFG	NA	ICP
Serial Num	-	P161995581
Model Num	NA	RGH120LDHW7LABA
Configuration	EXISTING	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	35X19
Num PreFilter 1	-	4
PreFilter Size 1	-	20X20X2

Test Data		
	Design	Actual
SF CFM	4000	3839
SF RPM	EXISTING	1223
RA CFM	3070	2921
OA CFM	930	918
RL Voltage	EXISTING	487/487/487
RL Amperage	EXISTING	4.76/4.76/4.76
OA Damper Position	-	31%
Brake Horse Power	EXISTING	N/A

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	145TZ
Horsepower	EXISTING	NL
Motor Rpm	-	1725
Phase	EXISTING	3
Rated Voltage	EXISTING	460
Rated Amperage	EXISTING	6.4
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	EXISTING	-0.71"
Fan Suction SP	EXISTING	-0.99"
Fan Discharge SP	EXISTING	0.77"
Total ESP	EXISTING	1.48"
Fan Total SP	EXISTING	1.76"

Drive Data	
	Actual
Motor Sheave Size	VP65
Motor Bore Size	7/8"
Motor Sheave SetPt	4 TURNS OPEN
Fan Sheave Size	AFD84
Fan Sheave Bore	1"
Belt CL Distance	17.5"
Num of Belts	1
Belt Size	AX54

Completed By: Zack Eismin on 09/08/2025

Unit Data - PHOTO LOG



09/03/2025

National TAB

Project: Charles Schwab (Cupertino, CA)

AHU/RTU



VAV - Single Duct

RTU-5/

Asset											
Asset Name	MFG	Model Num	Type	Inlet Size	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
VVT-1	CARRIER	35EV	VVT	7"	685	661	130	131	NL	N/A	N/A
VVT-2	CARRIER	35EV	VVT	7"	390	371	100	99	NL	N/A	N/A
VVT-3	CARRIER	35EV	VVT	7"	390	381	100	97	NL	N/A	N/A
VVT-4	CARRIER	35EV	VVT	7"	390	399	100	103	NL	N/A	N/A
VVT-5	CARRIER	35EV	VVT	7"	335	307	75	77	NL	N/A	N/A
VVT-10	CARRIER	35EV	VVT	12"	1300	1209	300	311	NL	N/A	N/A
VVT-12	CARRIER	35EV	VVT	8"	510	511	175	181	NL	N/A	N/A

Diffuser Supply (GRD)

VVT-1/TEAM ROOM 106

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V1-1	TEAM ROOM 106	SD-1	8	105	89	99	94.3
V1-2	TEAM ROOM 106	SD-1	8	105	88	107	101.9
V1-3	TEAM ROOM 106	SD-1	8	105	93	104	99.0
V1-4	TEAM ROOM 106	SD-1	8	105	91	97	92.4
V1-5	TEAM ROOM 106	SD-1	8	105	85	99	94.3
V1-6	TEAM ROOM 106	SD-2	10	160	144	155	96.9
Total				685	590	661	96.5%

VVT-2/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V2-1	109	SD-1	8	130	101	125	96.2
V2-2	108	SD-1	8	130	107	125	96.2
V2-3	107	SD-1	8	130	103	121	93.1
Total				390	311	371	95.13%

VVT-3/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V3-1	112	SD-1	8	130	101	122	93.8
V3-2	111	SD-1	8	130	110	131	100.8
V3-3	110	SD-1	8	130	107	128	98.5
Total				390	318	381	97.69%

VVT-4/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V4-1	115	SD-1	8	130	101	135	103.8
V4-2	114	SD-1	8	130	97	127	97.7
V4-3	113	SD-1	8	130	91	137	105.4
Total				390	289	399	102.31%

VVT-5/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V5-1	116	SD-1	8	130	111	118	90.8
V5-2	117	SD-1	8	130	117	120	92.3
V5-3	118	SD-1	6	75	66	69	92.0
Total				335	294	307	91.64%

VVT-10/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V10-1	135	SD-1	8	165	133	149	90.3
V10-2	135	SD-1	8	160	127	151	94.4
V10-3	135	SD-1	8	165	130	149	90.3
V10-4	135	SD-1	8	160	125	152	95.0
V10-5	135	SD-1	8	165	121	155	93.9
V10-6	135	SD-1	8	160	123	152	95.0
V10-7	135	SD-1	8	165	125	154	93.3
V10-8	135	SD-1	8	160	135	147	91.9
Total				1300	1019	1209	93%

VVT-12/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V12-1	119	SD-1	8	170	144	172	101.2
V12-2	119	SD-1	8	170	141	171	100.6
V12-3	119	SD-1	8	170	137	168	98.8
Total				510	422	511	100.2%

Completed By: Zack Eismin on 09/08/2025

National TAB

Project: Charles Schwab (Cupertino, CA)
System/Unit: AHU/RTU



Asset: RTU-6

AREA:

Unit Data		
	Design	Actual
MFG	NA	ICP
Serial Num	-	P161905433
Model Num	NA	RGH150LECW7LABA
Configuration	EXISTING	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X25.5
Num PreFilter 1	-	6
PreFilter Size 1	-	18X24X2

Test Data		
	Design	Actual
SF CFM	5000	4862
SF RPM	EXISTING	716
RA CFM	4400	4263
OA CFM	600	599
RL Voltage	EXISTING	487/487/487
RL Amperage	EXISTING	4.1/4.1/4.1
OA Damper Position	-	13%

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	EXISTING	NL
Motor Rpm	-	1725
Phase	EXISTING	3
Rated Voltage	EXISTING	460
Rated Amperage	EXISTING	5.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	EXISTING	-0.63"
Fan Suction SP	EXISTING	-0.91"
Fan Discharge SP	EXISTING	0.69"
Total ESP	EXISTING	1.32"
Fan Total SP	EXISTING	1.60"

Drive Data	
	Actual
Motor Sheave Size	VP50
Motor Bore Size	7/8"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	AK104
Fan Sheave Bore	1-3/16"
Belt CL Distance	20.5"
Num of Belts	1
Belt Size	A61

Completed By: Zack Eismin on 09/08/2025

Unit Data - PHOTO LOG



09/03/2025

National TAB

Project: Charles Schwab (Cupertino, CA)

AHU/RTU



VAV - Single Duct

RTU-6/

Asset											
Asset Name	MFG	Model Num	Type	Inlet Size	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
VVT-6	CARRIER	35EV	VVT	8"	620	601	100	101	NL	N/A	N/A
VVT-7	CARRIER	35EV	VVT	7"	390	387	100	103	NL	N/A	N/A
VVT-8	CARRIER	35EV	VVT	5"	200	217	50	52	NL	N/A	N/A
VVT-9	CARRIER	35EV	VVT	6"	260	283	65	67	NL	N/A	N/A
VVT-13	CARRIER	35EV	VVT	10"	900	888	225	227	NL	N/A	N/A
VVT-14	CARRIER	35EV	VVT	7"	390	379	100	99	NL	N/A	N/A
VVT-18	CARRIER	35EV	VVT	14"	2240	2107	600	597	NL	N/A	N/A

Diffuser Supply (GRD)

VVT-6/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V6-1	OFFICE 103	SD-1	8	140	111	131	93.6
V6-2	OFFICE 104	SD-1	8	100	91	102	102.0
V6-3	OFFICE 104	SD-2	8	140	109	134	95.7
V6-4	OFFICE 105	SD-2	8	140	107	137	97.9
V6-5	OFFICE 105	SD-1	8	100	95	97	97.0
Total				620	513	601	96.94%

VVT-7/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V7-1	OFFICE 143	SD-1	8	130	111	124	95.4
V7-2	OFFICE 144	SD-1	8	130	107	133	102.3
V7-3	OFFICE 146	SD-1	8	130	102	130	100.0
Total				390	320	387	99.23%

VVT-8/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V8-1	TOUCHDOWN 137	SD-1	8	100	81	108	108.0
V8-2	TOUCHDOWN 137	SD-1	8	100	85	109	109.0
Total				200	166	217	108.5%

VVT-9/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V9-1	OFFICE 139	SD-1	8	130	109	141	108.5
V9-2	OFFICE 138	SD-1	8	130	103	142	109.2
Total				260	212	283	108.85%

VVT-13/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V13-1	CONF RM 102	SD-1	8	100	84	101	101.0
V13-2	CONF RM 102	SD-1	8	100	87	98	98.0
V13-3	CONF RM 102	SD-2	8	125	103	122	97.6
V13-4	CONF RM 102	SD-1	8	100	81	94	94.0
V13-5	CONF RM 102	SD-2	8	125	107	130	104.0
V13-6	CONF RM 102	SD-1	8	100	82	99	99.0
V13-7	CONF RM 102	SD-2	8	125	100	123	98.4
V13-8	CONF RM 102	SD-2	8	125	98	121	96.8
Total				900	742	888	98.67%

VVT-14/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V14-1	RM 142	SD-1	8	130	111	126	96.9
V14-2	141	SD-1	8	130	108	125	96.2
V14-3	OFFICE 140	SD-1	8	130	102	128	98.5
Total				390	321	379	97.18%

VVT-18/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V18-1	TOWNSQUARE 100	SD-2	10	280	222	255	91.1
V18-2	TOWNSQUARE 100	SD-2	10	280	227	261	93.2
V18-3	TOWNSQUARE 100	SD-2	10	280	221	269	96.1
V18-4	TOWNSQUARE 100	SD-2	10	280	217	261	93.2
V18-5	HALLWAY 101	SD-2	10	280	231	271	96.8
V18-6	HALLWAY 101	SD-2	10	280	229	269	96.1
V18-7	HALLWAY 101	SD-2	10	280	230	263	93.9
V18-8	HALLWAY 101	SD-2	10	280	225	258	92.1
Total				2240	1802	2107	94.06%

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National TAB

Project: Charles Schwab (Cupertino, CA)

System/Unit: AHU/RTU



Asset: RTU-7

AREA:

Unit Data		
	Design	Actual
MFG	NA	ICP
Serial Num	-	P161905434
Model Num	NA	RGH150LEGW7LABA
Configuration	EXISTING	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X25.5
Num PreFilter 1	-	6
PreFilter Size 1	-	18AX24X2

Test Data		
	Design	Actual
SF CFM	5000	4808
SF RPM	EXISTING	789
RA CFM	4400	4197
OA CFM	600	611
RL Voltage	EXISTING	487/487/487
RL Amperage	EXISTING	5.2/5.2/5.2
OA Damper Position	-	13%
Brake Horse Power	EXISTING	4.26

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	184T
Horsepower	EXISTING	5
Motor Rpm	-	1755
Phase	EXISTING	3
Rated Voltage	EXISTING	460
Rated Amperage	EXISTING	6.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	EXISTING	-0.66"
Fan Suction SP	EXISTING	-0.92"
Fan Discharge SP	EXISTING	0.72"
Total ESP	EXISTING	1.38"
Fan Total SP	EXISTING	1.64"

Drive Data	
	Actual
Motor Sheave Size	VP65
Motor Bore Size	1-1/8"
Motor Sheave SetPt	3 TURNS CLOSED
Fan Sheave Size	BK120
Fan Sheave Bore	1-3/16"
Belt CL Distance	21.5"
Num of Belts	1
Belt Size	BX67

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Unit Data - PHOTO LOG



09/03/2025

National TAB

Project: Charles Schwab (Cupertino, CA)

AHU/RTU



VAV - Single Duct

RTU-7/

Asset											
Asset Name	MFG	Model Num	Type	Inlet Size	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
VVT-11	CARRIER	35EV	VVT	12"	1005	1001	300	301	NL	N/A	N/A
VVT-15	CARRIER	35EV	VVT	12"	1320	1207	350	347	NL	N/A	N/A
VVT-16	CARRIER	35EV	VVT	7"	390	369	100	103	NL	N/A	N/A
VVT-17	CARRIER	35EV	VVT	7"	290	281	100	102	NL	N/A	N/A
VVT-19	CARRIER	35EV	VVT	14"	1995	1941	600	631	NL	N/A	N/A

Diffuser Supply (GRD)

VVT-11/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V11-1	NA	SD-1	10	230	201	232	100.9
V11-2	NA	SD-1	10	230	205	227	98.7
V11-3	NA	SD-1	10	230	209	229	99.6
V11-4	MENS 123	SD-1	8	125	102	127	101.6
V11-5	125	SD-1	6	65	51	63	96.9
V11-6	WOMEN 124	SD-1	8	125	109	123	98.4
Total				1005	877	1001	99.6%

VVT-15/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V15-1	BEV BAR 134	SD-1	8	110	83	99	90.0
V15-2	BEV BAR 134	SD-1	8	110	81	100	90.9
V15-3	BEV BAR 134	SD-1	8	110	77	99	90.0
V15-4	BEV BAR 134	SD-1	8	110	82	102	92.7
V15-5	BEV BAR 134	SD-1	8	110	73	107	97.3
V15-6	BEV BAR 134	SD-1	8	110	72	100	90.9
V15-7	BEV BAR 134	SD-1	8	110	80	101	91.8
V15-8	BEV BAR 134	SD-1	8	110	73	101	91.8
V15-9	BEV BAR 134	SD-1	8	110	75	100	90.9
V15-10	BEV BAR 134	SD-1	8	110	77	101	91.8
V15-11	BEV BAR 134	SD-1	8	110	79	103	93.6
V15-12	BEV BAR 134	SD-1	8	110	76	103	93.6
Total				1320	928	1216	92.12%

VVT-16/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V16-1	OFFICE 132	SD-1	8	130	101	125	96.2
V16-2	OFFICE 131	SD-1	8	130	107	123	94.6
V16-3	OFFICE 130	SD-1	8	130	106	121	93.1
Total				390	314	369	94.62%

VVT-17/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V17-1	OFFICE 120	SD-1	8	145	111	141	97.2
V17-2	OFFICE 121	SD-1	8	145	117	140	96.6
Total				290	228	281	96.9%

VVT-19/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
V19-1	HALL 133	SD-2	10	285	231	271	95.1
V19-2	HALL 133	SD-2	10	285	227	275	96.5
V19-3	HALL 133	SD-2	10	285	225	288	101.1
V19-4	HALL 133	SD-2	10	285	221	269	94.4
V19-5	HALL 133	SD-2	10	285	225	276	96.8
V19-6	HALL 133	SD-2	10	285	234	281	98.6
V19-7	HALL 133	SD-2	10	285	224	281	98.6
Total				1995	1587	1941	97.29%

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National TAB

Project: Charles Schwab (Cupertino, CA)
System/Unit: FAN - Exhaust



Asset: EF-1

AREA:

Unit Data		
	Design	Actual
MFG	NA	FLO AIRE
Model Num	NA	DR30H
Serial Num	-	7384697
Type	-	CRE

Test Data		
	Design	Actual
CFM	800	809
Fan RPM	-	1540
RL Voltage	115	NA
RL Amperage	4.3	NA
Suction ESP	-	-0.59"
Discharge ESP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	-	0.333
Motor Rpm	-	2000
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	4.3
Service Factor	-	NL

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National TAB

Project: Charles Schwab (Cupertino, CA)

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF-1/

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
E1-1	NL	EG-1	8	150	1	121	145	96.7
E1-2	MENS 123	EG-1	8	200	1	135	197	98.5
E1-3	WOMEN 124	EG-1	8	200	1	259	211	105.5
E1-4	JAN 129	EG-1	8	50	1	101	53	106.0
E1-5	126	EG-1	8	200	1	291	203	101.5
Total				800		907	809	101.12%