

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: Certified TAB Report
Function: Test, Adjust, & Balance
Date: 01/03/2025
Completed By: National TAB

PROJECT
Starbucks (Santa Rosa, CA)

358 Coddington Center

Santa Rosa, CA 95401

Client

B&M Builders, Inc.
11330 Sunrise Park Drive
Suite C
Rancho Cordova, CA 95742

National TAB

Project: Starbucks (Santa Rosa, CA)

Table Of Contents

Section	Page #
Certification Page	3
Summary	4
Remarks	5
AHU/RTU	7
FAN - Exhaust	13
Calibration Equipment List	14
Abbreviations	15
GRD Layout	16

National TAB

Project: Starbucks (Santa Rosa, CA)

- [Open](#) Certificate_page_for_P_S_reports_Will_T_2025.xlsx

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report are further details about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of $-0.02''$ wc to $+0.02''$ wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

Issue List

- BOTH ECONOMIZERS ARE NOT OPERATIONAL.



Starbucks (Santa Rosa, CA)

Project Issue Information

Issue Name : BOTH ECONOMIZERS ARE NOT OPERATIONAL.
Description : Economizers are not operational on both RTU-1 and 2. Both were manually set for testing. Recommend to have economizers serviced.
Created By : National TAB **Assigned To :** National TAB - Zack Eismin
Status : Open
Priority : High **Asset Tag :**
Originated Date : 12/30/2024 - Zack Eismin - National TAB

National TAB

Project: Starbucks (Santa Rosa, CA)
System/Unit: AHU/RTU



Asset: RTU-1

AREA:

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Serial Num	-	1913C82522
Model Num	NA	48TCDA07A25A0A0
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30.5X14
Num PreFilter 1	-	4
PreFilter Size 1	-	16X16X2

Test Data		
	Design	Actual
SF CFM	2400	2253
SF RPM	-	1554
RA CFM	2125	1976
OA CFM	275	277
RL Voltage	-	210/210/210
RL Amperage	-	5.9/5.89/5.87
OA Damper Position	-	1" / ~12%
Brake Horse Power	-	N/A

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HY
Horsepower	-	NL
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	230/460
Rated Amperage	-	8.3/4.2
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.81"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.59"
Total ESP	-	1.40"
Fan Total SP	-	1.64"

Drive Data	
	Actual
Motor Sheave Size	5"
Motor Bore Size	7/8"
Motor Sheave SetPt	1 TURN OPEN
Fan Sheave Size	AK54
Fan Sheave Bore	5/8"
Belt CL Distance	14"
Num of Belts	1
Belt Size	AX41

Completed By: Zack Eismin on 12/30/2024

Unit Data - PHOTO LOG



12/30/2024

National TAB
 Project: Starbucks (Santa Rosa, CA)
AHU/RTU



Diffuser Supply (GRD)

RTU-1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1		D-1	9	255	120	232	91.0
SGRD2		D-1	9	255	159	235	92.2
SGRD3		D-1	9	255	221	230	90.2
SGRD4		D-1	9	255	241	247	96.9
SGRD5		D-1	10	345	124	311	90.1
SGRD6		D-1	10	345	155	317	91.9
SGRD7		D-1	10	345	239	322	93.3
SGRD8		D-1	10	345	403	359	104.1
Total				2400	1662	2253	93.88%

National TAB

Project: Starbucks (Santa Rosa, CA)
System/Unit: AHU/RTU



Asset: RTU-2

AREA:

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Serial Num	-	1913C82512
Model Num	NA	48TCDA07A2A0A0A0
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30.5X14
Num PreFilter 1	-	4
PreFilter Size 1	-	16X16X2

Test Data		
	Design	Actual
SF CFM	2405	2234
SF RPM	-	1349
RA CFM	2130	1953
OA CFM	275	281
RL Voltage	-	210/210/210
RL Amperage	-	5.1/5.1/5.12
OA Damper Position	-	1"~12%
Brake Horse Power	-	N/A

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	NL
Motor Rpm	-	725
Phase	-	3
Rated Voltage	-	230/460
Rated Amperage	-	8.3/4.2
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.59"
Fan Suction SP	-	-0.93"
Fan Discharge SP	-	0.37"
Total ESP	-	0.96"
Fan Total SP	-	1.30"

Drive Data	
	Actual
Motor Sheave Size	5"
Motor Bore Size	7/8"
Motor Sheave SetPt	2 TURNS OPEN
Fan Sheave Size	AK54
Fan Sheave Bore	5/8"
Belt CL Distance	14.5"
Num of Belts	1
Belt Size	AX41

Completed By: Zack Eismin on 12/30/2024

Unit Data - PHOTO LOG



12/30/2024

National TAB

Project: Starbucks (Santa Rosa, CA)

AHU/RTU



Diffuser Supply (GRD)

RTU-2/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1		D-4	10	350	256	317	90.6
SGRD2		D-4	10	350	316	321	91.7
SGRD3		D-4	10	350	382	331	94.6
SGRD4	RESTROOM	D-3	6	50	119	54	108.0
SGRD5		D-1	12	435	171	399	91.7
SGRD6		D-1	12	435	378	395	90.8
SGRD7		D-1	12	435	430	417	95.9
Total				2405	2052	2234	92.89%

National TAB

Project: Starbucks (Santa Rosa, CA)
System/Unit: FAN - Exhaust



Asset: EF-1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	NA	NDAYTON
Model Num	NA	3M547E
Serial Num	-	D13A007542
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	75	78
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.31"

Motor Data		
	Design	Actual
Motor MFG	-	DAYTON
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.8
Service Factor	-	NL

Completed By: Zack Eismin on 12/30/2024

Unit Data - PHOTO LOG



12/30/2024



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	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/18/2024	9/18/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/18/2024	9/18/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Shimpo DT 207Lp S/N D1690029R	9/18/2024	9/18/2025

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



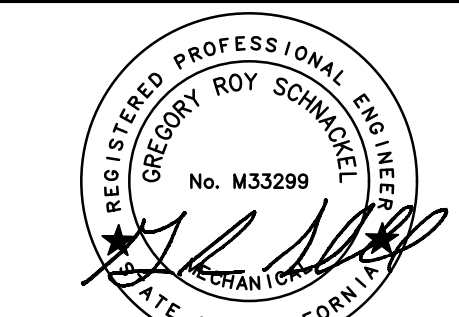
STARBUCKS®
2401 UTAH AVENUE SOUTH
SEATTLE, WASHINGTON 98134
(206) 318-1575

THESE DRAWINGS AND THE PROJECT MANUAL ARE CONFIDENTIAL AND SHALL REMAIN THE SOLE PROPERTY OF STARBUCKS CORPORATION, WHICH IS THE OWNER OF THE COPYRIGHT IN THIS WORK. THEY SHALL NOT BE REPRODUCED (IN WHOLE OR IN PART), SHARED WITH THIRD PARTIES OR USED IN ANY MANNER ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT WITHOUT THE PRIOR WRITTEN CONSENT OF STARBUCKS CORPORATION. THESE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO EXPRESS DESIGN INTENT FOR A PROTOTYPICAL STARBUCKS STORE (WHICH IS SUBJECT TO CHANGE AT ANYTIME) AND DO NOT REFLECT ACTUAL SITE CONDITIONS. NEITHER PARTY SHALL HAVE ANY OBLIGATION NOR LIABILITY TO THE OTHER (EXCEPT STATED ABOVE) UNTIL A WRITTEN AGREEMENT IS FULLY EXECUTED BY BOTH PARTIES.

STARBUCKS TEMPLATE VERSION: I2022.10.23

ARCHITECT OF RECORD

THIS DRAWING IS A DESIGN DEVELOPMENT DOCUMENT. SITE SPECIFIC MODIFICATIONS MADE UNDER THE RESPONSIBLE CHARGE OF THE ARCHITECT AND/OR ENGINEER-OF-RECORD WILL BE REQUIRED PRIOR TO USING THIS DOCUMENT FOR BIDDING, PERMITTING, OR CONSTRUCTION.



Date: 03/06/24

PROJECT NAME:
CODDINGTOWN MALL

PROJECT ADDRESS:
**358 CODDINGTOWN CENTER
SANTA ROSA, CA 95401**

STORE #: 19815
PROJECT #: 58916-056
ISSUE DATE: 08/16/23
DESIGN MANAGER: L. PARADISE
PRODUCTION DESIGNER: K. PARK
CHECKED BY: GRS

Revision Schedule			
Rev	Date	By	Description
2	03-06-24		HEALTH COMMENTS

SHEET TITLE:
MECHANICAL PLAN

SCALE: AS SHOWN

SHEET NUMBER:
M101

DESIGN DEVELOPMENT ONLY - NOT INTENDED FOR CONSTRUCTION USE



MECHANICAL GENERAL NOTES

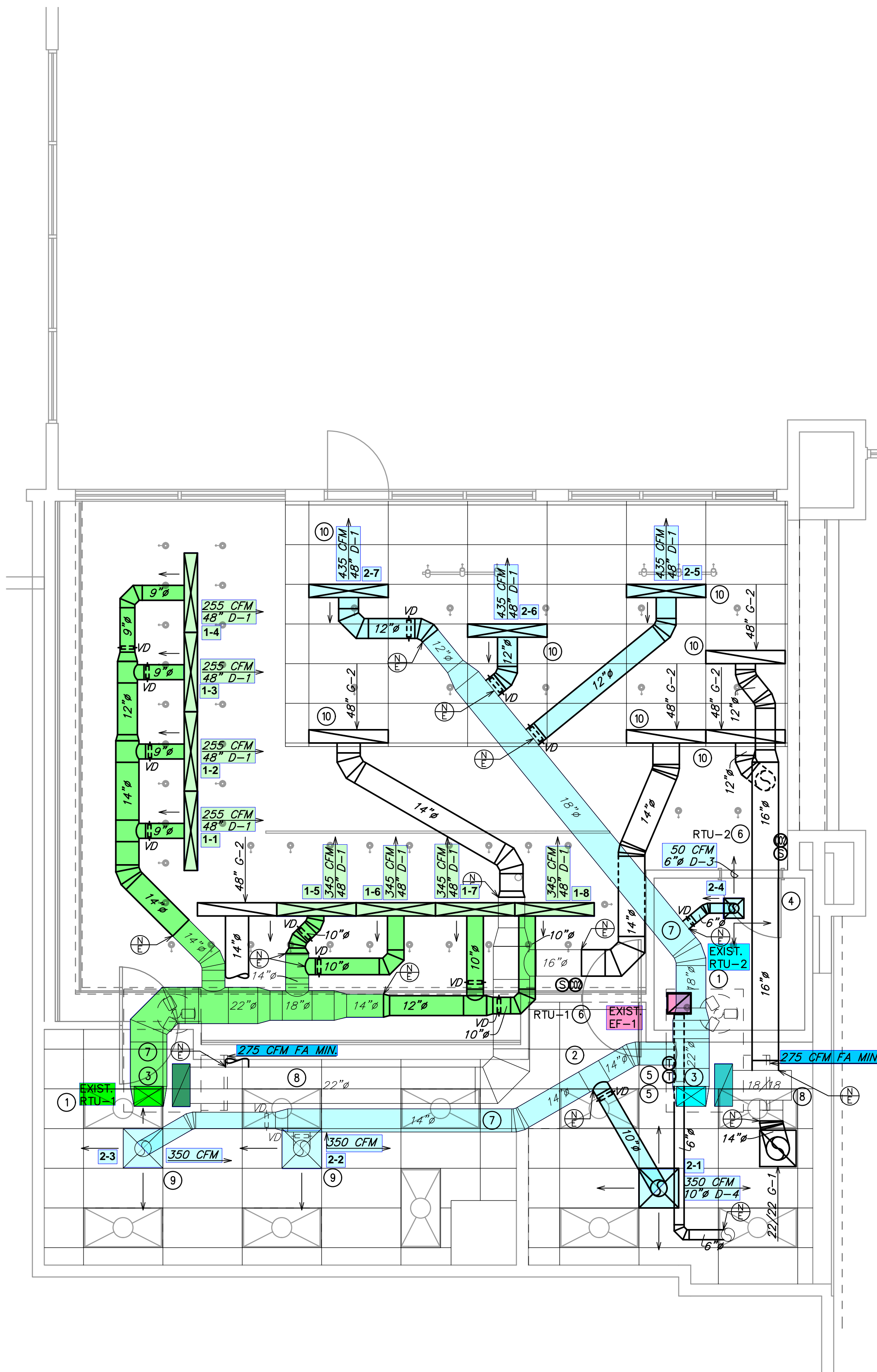
- EXISTING CONDITIONS ARE BASED ON RECORD DRAWINGS PROVIDED BY THE OWNER AND LIMITED FIELD VERIFICATION BY OTHERS. CONTRACTOR SHALL ADJUST TO ACTUAL FIELD CONDITIONS AT NO ADDITIONAL EXPENSE TO THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE BID. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY EXTRAS DUE TO THE CONTRACTOR'S FAILURE TO VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER FOR RESOLUTION.
- CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH DEMOLITION WORK PRIOR TO BIDDING AND START OF WORK. CONTRACTOR IS RESPONSIBLE TO DEMOLISH ALL EXISTING AS REQUIRED FOR INSTALLATION/CONSTRUCTION OF NEW WORK.
- 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 COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF ALL EQUIPMENT MAY BE PROPERLY COORDINATED.
- ALL EQUIPMENT FURNISHED SHALL FIT THE SPACE AVAILABLE WITH CONNECTIONS IN THE REQUIRED LOCATIONS AND WITH ADEQUATE SPACE FOR OPERATING AND SERVICING. 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/OR MORE COSTLY STANDARD WILL APPLY. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER WHOSE DECISION SHALL BE FINAL. NO ALLOWANCE 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 HEADROOM 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 CORD.
- ALL DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS. ALL SUPPLY AND UNTEMPERED OUTDOOR AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER OR WRAPPED WITH 1-1/2" THICK FIBER RETARDANT FIBERGLASS WITH A REINFORCED ALUMINUM FOIL JACKET AND SHALL BE APPROVED FOR USE BY SMACNA AND NAIMA. RETURN AIR TRANSFER DUCTS AND RETURN DUCTWORK WITHIN 10 FEET OF THE UNIT FAN SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER.
- AT THE START OF CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL INSPECT AND RUN TEST ALL EXISTING HVAC UNITS DESIGNATED FOR REUSE. CONTRACTOR SHALL INFORM THE ENGINEER OF ANY NECESSARY REPAIRS FOR APPROVAL IN A TIMELY MANNER, AS TO NOT DELAY THE PROJECT OPENING DATE.
- PROVIDE REMOTE VOLUME DAMPER CONTROL MANUFACTURED BY YOUNG REGULATOR OR UNITED ENERTECH FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS. LOCATE CONTROLLER ABOVE ACCESSIBLE CEILING LOCATION.
- REFRIGERANT PIPING SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL ACCESSORIES AS REQUIRED BY MANUFACTURER FOR COMPLETE WORKING SYSTEM, INCLUDING ANY ACCESSORIES ASSOCIATED WITH LONG LENGTH APPLICATIONS WHERE APPLICABLE.
- TENANT'S CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD VERIFICATION OF ALL UTILITY RUNS AND/OR OTHER IMPROVEMENTS LOCATED ON THE PREMISES PRIOR TO BIDDING. TENANT'S CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ALL COSTS RELATING TO THE RELOCATION OF, DAMAGE TO, REPAIR OF ANY EXISTING UTILITY RUNS AND/OR IMPROVEMENTS WHICH ARE DAMAGED AS A RESULT OF TENANT'S WORK IN OR AROUND THE PREMISES.
- MECHANICAL CONTRACTOR SHALL PROVIDE TENANT WITH A WRITTEN ONE (1) YEAR MANUFACTURER'S WARRANTY ON ALL HVAC EQUIPMENT PROVIDED AND / OR INSTALLED. THE WARRANTY SHALL INCLUDE ALL LABOR, MATERIALS AND THREE (3) ROUTINE SERVICES INCLUDING FILTER CHANGES DURING A ONE (1) YEAR PERIOD.
- AT THE COMPLETION OF CONSTRUCTION AN NEBB, AABC OR TABB CERTIFIED AIR BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND LANDLORD. THE BALANCING MUST BE COMPLETED BY AN INDEPENDENT, THIRD PARTY CONTRACTOR WITH NO TIES TO THE INSTALLING CONTRACTORS.

CALIFORNIA GREEN BUILDING STANDARDS NOTES

- TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED PER SECTION 5.410.4 FOR NEW BUILDINGS WITH FLOOR AREA LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO SECTION 303.1.
- DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT, THE SYSTEMS LISTED IN SECTION 5.410.4.2.
- PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.
- BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY NATIONAL STANDARDS LISTED IN SECTION 5.410.4.3.1.
- AFTER COMPLETION OF TESTING, ADJUSTING, AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
- PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM PRIOR TO FINAL INSPECTION. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142 AND OTHER RELATED REGULATIONS.
- INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
- HVAC EQUIPMENT USED DURING CONSTRUCTION SHALL USE RETURN AIR FILTERS WITH A MERV 8, BASED UPON ASHRAE 55.2-1999, OR AN AVERAGE EFFICIENCY OF 30 PERCENT BASED UPON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION.
- AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING, AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER OR DEBRIS WHICH MAY ENTER THE SYSTEM.
- IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL.
- INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2.
- INSTALL HVAC AND REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCs.
- INSTALL HVAC AND REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.
- ADHESIVES, SEALANTS, AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF SECTIONS 5.504.4.1 THROUGH 5.504.4.6.

MECHANICAL PLAN NOTES

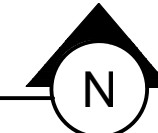
- EXISTING CARRIER 6 TON ROOFTOP UNIT AND DUCTWORK TO REMAIN. CONTRACTOR SHALL BALANCE EXISTING UNIT TO PROVIDE 2400 CFM OF SUPPLY AIR AND OUTDOOR AIR AS SHOWN ON PLANS. FIELD VERIFY EXACT LOCATION.
- EXISTING RESTROOM EXHAUST FAN TO BE RELOCATED/REINSTALLED IN NEW RESTROOM. FIELD VERIFY EXACT LOCATION. PROVIDE NEW EXHAUST DUCT FROM RELOCATED EXHAUST FAN TO EXISTING ROOF TERMINATION. BALANCE FAN TO 100 CFM OF EXHAUST.
- 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.
- UNDERCUT DOOR 1" FOR AIR TRANSFER.
- PROVIDE TEMPORARY CONSTRUCTION THERMOSTAT. MOUNT (2) THERMOSTATS AT 48" ABOVE FINISHED FLOOR. COORDINATE LOCATION WITH CONSTRUCTION MANAGER. FINAL EMS THERMOSTAT PROVIDED NEW BY VENSTAR.
- MOUNT VENSTAR REMOTE TEMPERATURE SENSOR. MOUNT SENSORS AT 60" A.F.F. PROVIDE CO2 SENSOR FOR DEMAND CONTROL VENTILATION. MOUNT SENSOR AT 60" A.F.F.
- EXISTING SUPPLY AND RETURN DUCTWORK TO REMAIN. TYPICAL THROUGHOUT SPACE. FIELD VERIFY EXACT LOCATION.
- EXISTING RETURN DUCTWORK TO REMAIN.
- EXISTING SUPPLY DIFFUSER TO BE REMAIN. CLEAN AND REPAIR DIFFUSER TO LIKE NEW CONDITION. BALANCE TO CFM INDICATED ON PLANS.
- NEW SUPPLY DIFFUSER AND RETURN GRILLE TO BE PAINTED TO MATCH SURROUNDINGS.



MALL
ENTRANCE

1 MECHANICAL PLAN

Scale: 1/4" = 1'-0"



LEGEND

—	EXISTING
—	NEW WORK
⊕	NEW TO EXISTING CONNECTION