

ABBREVIATIONS

AF	ABOVE FINISHED FLOOR
AHJ	AUTHORITIES HAVING JURISDICTION
APPROX	APPROXIMATE
BLDG	BUILDING
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
CM	STARBUCKS CONSTRUCTION MANAGER
CD	CEILING DIFFUSER
CLG	CEILING
CONST	CONSTRUCTION
CXA	COMMISSIONING AGENT
DEG	DEGREES
DM	STARBUCKS DESIGN MANAGER
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
EA	EACH
EC	ELECTRICAL CONTRACTOR
ECP	EQUIPMENT CONTROL PAC
ELC	ELECTRICAL
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EXIST	EXISTING
EXT	EXTERIOR
FLR	FLOOR
FT	FOOT/FEET
G	GAS PIPING
GC	GENERAL CONTRACTOR
HR	HOOR
HVAC	HEATING, VENTILATION, AIR CONDITIONING
I.D.	INSIDE DIAMETER
IAQ	INDOOR AIR QUALITY
LCP	LIGHTING CONTROL PANEL
LL	LANDLORD
LV	LOW VOLTAGE
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MFG	MANUFACTURER
MIN	MINIMUM
NTS	NOT TO SCALE
O.D.	OUTSIDE DIMENSION
OSA	OUTSIDE AIR
REF	REFERENCE
REQ'D	REQUIRED
REV	REVISION
RT	ROOFTOP
SF	SQUARE FEET
SHEET	SHEET
SPECS	SPECIFICATION(S)
SST	STAINLESS STEEL
TEMP	TEMPORARY
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UC	UNDER COUNTER
WH	WATER HEATER
WSHP	WATER SOURCE HEAT PUMP

GENERAL NOTES

SCOPE THE INTENT OF THE PROJECT MANUAL AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM. THE MECHANICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE MECHANICAL WORK.

SITE EXAMINATION THE MECHANICAL CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT, DUCTWORK, AND PIPING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE MECHANICAL WORK.

PENETRATIONS WHERE PIPES AND DUCTS PENETRATE WALL. SEAL OPENINGS TO PREVENT AIR TRANSFER BETWEEN SPACES. USE FIRE RATED SEALANTS ON ALL FIRE SEPARATION PENETRATIONS, INCLUDING FLOORS. SEAL AROUND ALL PIPES AND DUCTS PENETRATING FIRE SEPARATIONS WITH NON-COMBUSTIBLE PACKING RETAINED BY METAL COLLARS. THE ASSEMBLY SHALL BE APPROVED BY STATE FIRE MARSHALL.

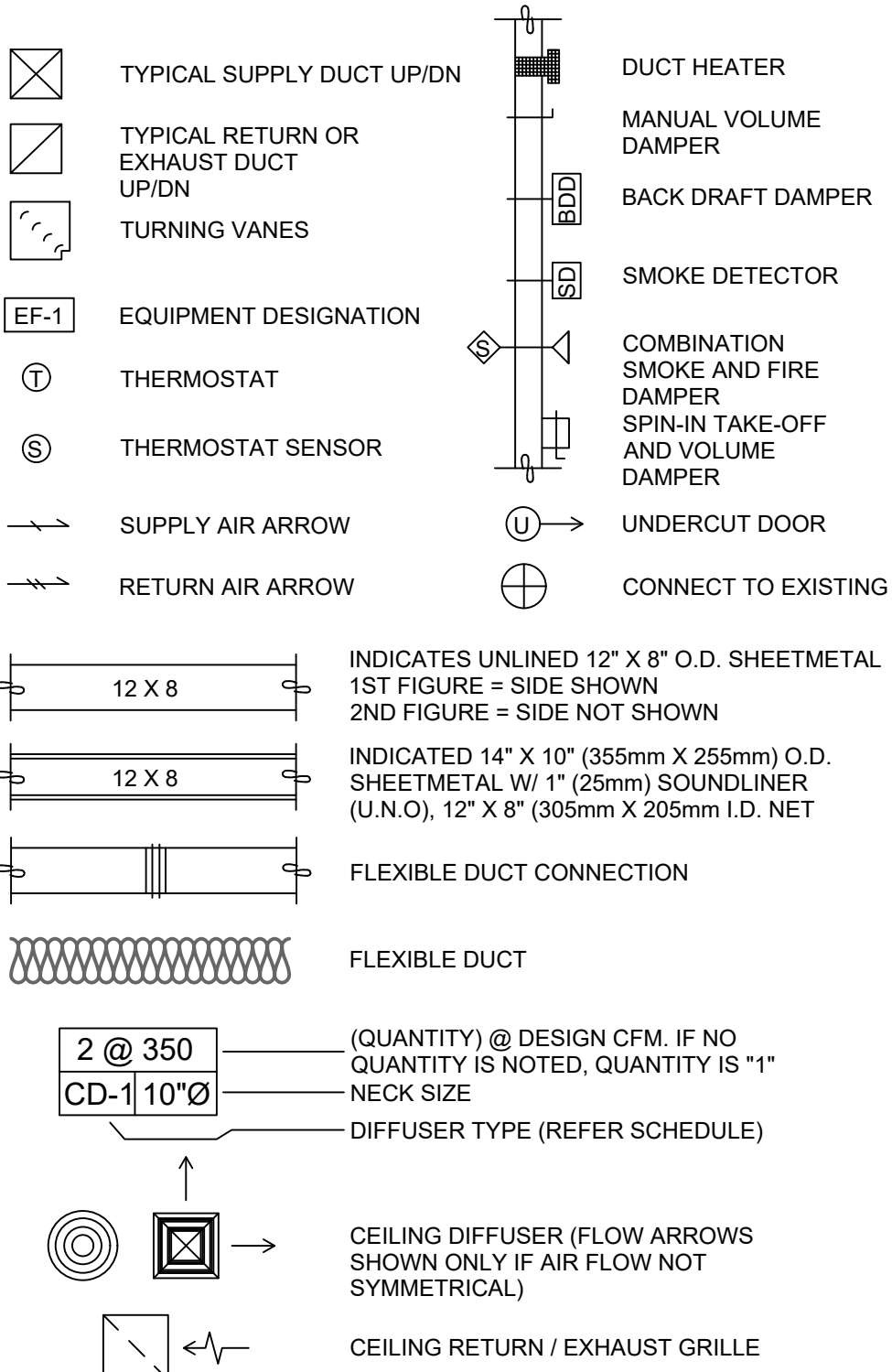
STANDARDS EQUIPMENT AND MATERIALS SHALL CONFORM WITH THE APPROPRIATE PROVISIONS OF CSA, ULC, ARI, ASME, ASTM, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

CODES ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE PROVINCIAL AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS AND PROJECT MANUAL AND THE CODES AND ORDINANCES, USE WHICHEVER IS MORE STRINGENT. THE MECHANICAL CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST TO STARBUCKS.

PERMITS AND FEES THE MECHANICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS NECESSARY TO COMPLETE THE MECHANICAL WORK.

WARRANTY THE MECHANICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY STARBUCKS AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.

MECHANICAL SYMBOL LEGEND



CONTROLS AND OPERATION NOTES

THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL THE FOLLOWING COMPONENTS:

CONTROL WIRING
THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING IN CONDUIT NECESSARY FOR THE COMPLETE AND PROPER OPERATING TEMPERATURE CONTROL SYSTEM INCLUDING ALL MODES OF OPERATION AND INTERLOCK.

EXHAUST FANS
RESTROOM EXHAUST FAN(S) TO BE OPERATED IN CONJUNCTION WITH STORE HOURS UNLESS OTHERWISE NOTED OR APPROVED OR AS REQUIRED BY JURISDICTION (COORDINATE WITH ELECTRICAL).

THERMOSTAT
PERMANENT THERMOSTAT(S) AND REMOTE SENSOR(S) SHALL BE FURNISHED AND INSTALLED. ONE THERMOSTAT AND SENSOR IS PROVIDED FOR EACH AIR HANDLING UNIT. MOUNT THERMOSTAT(S) AND SENSOR(S) IN LOCATION & HEIGHT AS INCUBATED ON DRAWINGS. MECHANICAL CONTRACTOR TO PROVIDE THERMOSTAT IDENTIFICATION LABELS PER SPECIFICATION REQUIREMENTS. REFER TO THERMOSTAT SETUP INSTRUCTIONS BELOW FOR ADDITIONAL REQUIREMENTS.

THERMOSTAT SETUP INSTRUCTIONS
PROVIDE THE FOLLOWING SETUP AND PROGRAMMING:

- CONFIGURE AS FOLLOWS:
 - DEGREES "F" DISPLAY
 - 12 HOUR CLOCK
 - CONTINUOUS FAN OPERATION IN OCCUPIED MODE
 - DISABLE KEYBOARD PROGRAMMING
- SET TIME AND DATE.
- SET TO DISPLAY CURRENT TEMPERATURE.
- SET OCCUPIED START TIME AT 30 MIN. BEFORE OPENING. SET UNOCCUPIED START TIME AT 30 MIN. AFTER CLOSING. VERIFY HOURS WITH STORE MANAGER OR CONSTRUCTION MANAGER.
- SET POINTS SHALL BE AS FOLLOWS OR AS APPROPRIATE FOR CLIMATE:
 - OCCUPIED (5° F DEADBAND) (3° C DEADBAND)
 - HEATING: 70° F (21° C)
 - COOLING: 75° F (24° C)
 - UNOCCUPIED
 - HEATING: 60° F (15° C)
 - COOLING: 78° F (25° C)
- SET TWO (2) HOUR OCCUPIED OVERRIDE FUNCTION TO PROVIDE THE FOLLOWING SET POINT OVERRIDES:
 - HEATING: +2° F (1° C)
 - COOLING: -2° F (1° C)

ENERGY MANAGEMENT SYSTEM (EMS)

THE GENERAL CONTRACTOR SHALL INSTALL (OR DEMO AND REINSTALL FOR RENOVATIONS) THE VENSTAR SURVEYOR EMS SYSTEMS PRIOR TO THE LAST WEEK OF CONSTRUCTION. GENERAL CONTRACTOR TO PROVIDE ONE PERMANENT THERMOSTAT AND REMOTE SENSOR PER HVAC UNIT. LOCATE AND MOUNT THERMOSTAT(S) AND SENSOR(S) PER THE DRAWINGS. PROVIDE THERMOSTAT IDENTIFICATION LABELS PER SPECIFICATION REQUIREMENTS.

GENERAL CONTRACTOR TO PROGRAM, START-UP AND COMMISSION THE CONTROL SYSTEM. GENERAL CONTRACTOR IS TO COMPLETE FINAL CONNECTION AFTER DATA RACK AND NETWORK INSTALLATIONS. GENERAL CONTRACTOR VENDOR TO VERIFY SYSTEM OPERATION AND TROUBLESHOOT IF REQUIRED. GENERAL CONTRACTOR TO COMPLETE SURVEYOR'S STARBUCKS INSTALLATION SURVEY FORM AND PROVIDE TWO (2) COMPLETED COPIES OF THIS DOCUMENT TO THE CONSTRUCTION MANAGER AND COMMISSIONING AGENT PRIOR TO FINAL PAYMENT.

DUCTWORK AND ACCESSORIES

SHEET METAL DUCTWORK SEE SPECIFICATIONS FOR SHEET METAL DUCT REQUIREMENTS. ALL EXPOSED DUCTWORK TO BE SPIRAL ROUND, OR RECTANGULAR LOCK-SEAM TYPE, AS SHOWN ON HVAC PLAN SHEET. ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICE FOR ACHIEVING AIR TIGHT (5% LEAKAGE) AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE. FURNISH AND INSTALL ALL REQUIRED DAMPERS, TRANSITIONS, CONNECTIONS TO AIR TERMINALS, AND OTHER ACCESSORIES NECESSARY FOR COMPLETE OPERATING SYSTEM. NO VARIATION OF DUCT CONFIGURATION OR SIZES WILL BE PERMITTED EXCEPT BY PERMISSION FROM THE ENGINEER.

DUCT SEALANT SEAL ALL LONGITUDINAL AND TRANSVERSE JOINTS PER SPECIFICATIONS. COVER ALL FIELD JOINTS. JOINTS AROUND SPIN-IN FITTINGS, AND FASTENING SCREWS WITH MASTIC.

SUPPORTS PROVIDE FASTENERS, ANCHORS, RODS, STRAPS, TRIM, AND ANGLES FOR SUPPORT OF DUCTWORK. SUPPORTS MUST COMPLY WITH LOCAL REGULATIONS AND CODE .

DAMPERS PROVIDE VOLUME CONTROL DAMPERS WHERE INDICATED ON DRAWINGS AND AT POINTS ON LOW PRESSURE SUPPLY, RETURN, AND EXHAUST DUCTS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS. PROVIDE UL LISTED FIRE OR FIRE/SMOKE DAMPERS WHERE REQUIRED AND IN ACCORDANCE WITH NFPA AND LOCAL CODES. PROVIDE CONVENIENTLY LOCATED ACCESS DOORS OF AMPLE SIZE AND QUANTITY FOR SERVICING THE DAMPERS. PROVIDE MOTORIZED DAMPERS AT ALL INTAKE & EXHAUST BUILDING OPENINGS. COORDINATE WITH OTHER TRADES FOR ACCESS PANELS, POWER AND FIRE ALARM INTERFACES. SEE PROJECT MANUAL.

GRILLES, REGISTERS, AND DIFFUSERS GRILLES, REGISTERS, AND DIFFUSERS SHALL BE AS SPECIFIED AND SHALL BE MECHANICAL CONTRACTOR SUPPLIED, UNLESS OTHERWISE NOTED. DIFFUSERS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND SCHEDULES. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS ITEMS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPE OF CEILING AND WALLS USED IN THIS PROJECT.

THERMAL INSULATION PROVIDE EXTERNAL THERMAL INSULATION WITH AN INTEGRAL VAPOR BARRIER FACING OF SUFFICIENT THICKNESS TO MEET LOCAL ENERGY CODE REQUIREMENTS OR ASHRAE 90.1-2004, WHICHEVER IS MORE STRINGENT. PROVIDE INSULATION ON OUTSIDE AIR DUCTS, AND ON CONCEALED PORTIONS OF SUPPLY AND RETURN AIR DUCTS. DO NOT EXTERNALLY INSULATE EXPOSED DUCTWORK AND PORTIONS OF DUCTWORK THAT ARE INTERNALLY LINED WITH CODE REQUIRED THICKNESS. INTERNALLY INSULATE EXPOSED SUPPLY DUCTWORK IF POSSIBILITY OF CONDENSATION. INTERNALLY INSULATE EXTERIOR DUCTWORK PER CODE.

ACOUSTICAL DUCT LINER UNLESS OTHERWISE INDICATED ON THE PLANS, PROVIDE 1" (25MM) ACOUSTICAL DUCT LINER IN SUPPLY AND RETURN DUCTWORK WITHIN 10'-0" (305CM) OF THE DISCHARGE AND INTAKE OF AIR HANDLING UNITS. INCREASE DUCT SIZE INDICATED ON PLANS AS NEEDED TO ACCOMMODATE LINER. LINER TO BE PROVIDED AND FASTENED TO DUCT WITH MECHANICAL LINER FASTENERS IN ACCORDANCE WITH SMACNA AND PROJECT MANUAL.

FLEXIBLE DUCTWORK FLEXIBLE DUCT WORK SHALL ONLY BE INSTALLED AS SHOWN IN PLAN AND NOT ABOVE HARD LID CEILINGS. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" (152CM) IN LENGTH AND TWO 45° ELBOWS. IT SHALL BE PULLED TAUT AND APPROPRIATELY FASTENED TO RIGID BRANCH DUCT & DIFFUSER. BENDS SHALL BE MINIMIZED AND WHERE NEEDED BE A FULL RADIUS BEND. SUPPORT BANDS SHALL BE INSTALLED SO AS TO NOT CRIMP FLEX DUCT. FLEXIBLE DUCTWORK SHALL MEET REQUIREMENTS.

HVAC EQUIPMENT AND MATERIALS

AIR HANDLING UNITS AIR HANDLING UNITS SHALL BE AS SPECIFIED IN THE MECHANICAL SCHEDULE AND SHALL BE FURNISHED AND INSTALLED PER THE LEASE AGREEMENT. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING DELIVERY, PROVIDING COMPLETE INSTALLATION INCLUDING CURBS, PIPING, VIBRATION ISOLATION, AND NECESSARY ACCESSORIES, AND PROVIDING WARRANTY.

FILTERS IF OPERATING HVAC DURING CONSTRUCTION, PROVIDE THREE (3) SETS OF 2" (51MM) MERV6 PLEATED DISPOSABLE FILTERS (OR HIGHER RATING IF REQUIRED BY LEED). USE ONE SET UNTIL COMPLETION OF CONSTRUCTION. INSTALL ONE SET AT COMPLETION OF CONSTRUCTION (PRIOR TO TAB) AND DELIVER ONE SET OF MERV13 FILTERS TO STARBUCKS LABELED TO DENOTE THEIR RESPECTIVE AIR HANDLING UNIT.

EXHAUST FANS EXHAUST FANS SHALL BE AS SPECIFIED AND PROVIDED PER THE LEASE AGREEMENT. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING DISCHARGE LOCATION WITH NEW AND EXISTING VENTS AND INTAKES, PROVIDING COMPLETE INSTALLATION INCLUDING CURBS, BACKDRAFT DAMPER, DUCTWORK FROM RESTROOM GRILLE TO UNIT, NECESSARY ACCESSORIES AND PROVIDING WARRANTY.

BRACING AND ANCHORING ALL MECHANICAL EQUIPMENT, FIXED OR FLEXIBLY MOUNTED, SHALL BE BRACED OR ANCHORED TO COMPLY WITH LOCAL CODES.

IAQ MANAGEMENT PLAN

DURING CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH CHAPTER 3 OF SMACNA'S IAQ GUIDELINES FOR OCCUPIED BUILDINGS UNDER CONSTRUCTION. CONTRACTOR SHALL PERFORM AND SUBMIT ALL INFORMATION AS REQUIRED. IF HVAC SYSTEM IS TO BE USED DURING CONSTRUCTION, INSTALL MERV 8 FILTERS AT EACH RETURN AIR GRILL AND COMPLY WITH SMACNA'S GUIDELINES REFERENCED BELOW.

GENERAL MECHANICAL NOTES

- MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO PATCH AND REPAIR ALL EXISTING WALLS, FLOORS, CEILINGS OR OTHER SURFACES IDENTIFIED TO REMAIN THAT MAY BECOME DAMAGED DURING THE COURSE OF WORK.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL INTENT OR ARRANGEMENT OF SYSTEM(S). FURNISH & INSTALL ALL COMPONENTS NEEDED WHETHER INDICATED OR NOT TO PROVIDE A COMPLETE AND OPERATING SYSTEM.
- CONTRACTOR TO VERIFY ALL DIMENSIONS, INCLUDING CLEARANCES REQUIRED BY OTHER TRADES, AND NOTIFY STARBUCKS CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK. ALL DIMENSIONS ARE TO THE FACE OF THE FINISHED SURFACE UNLESS NOTED OTHERWISE. ALL DIMENSIONS TO BE TAKEN FROM ACTUAL BUILDING DIMENSIONS.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE HVAC WORK WITH OTHER TRADES. THE ARCHITECTURAL DRAWINGS AND PROJECT MANUAL SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. SEE ARCHITECTURAL DRAWINGS AND PROJECT MANUAL FOR DIMENSIONED DIFFUSER LOCATIONS AND MOUNTING HEIGHTS WHERE EXPOSED.
- NEW DUCTWORK AND EQUIPMENT SHALL NOT BE INSTALLED WHERE IT OBSTRUCTS ANY EXISTING OR NEW AREAS THAT REQUIRE ACCESS.

TESTING, ADJUSTING, BALANCING

INDEPENDENT AIR BALANCE CONTRACTOR OR QUALIFIED MECHANICAL CONTRACTOR SHALL BE QUALIFIED TO TAB WORK BY NEBB OR AABC STANDARDS. BALANCER SHALL ACCURATELY BALANCE THE SUPPLY, RETURN AND OUTSIDE AIR, EXHAUST FAN(S), HYDRONIC (WHERE APPLICABLE) AND EXHAUST FAN(S) SYSTEMS TO PROVIDE AIR AND WATER QUANTITIES WITHIN 10% PLUS MINUS OF THE VALUES INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. OPERATE AUTOMATIC CONTROLS SYSTEMS AND VERIFY SETPOINTS FOR THERMOSTATS, CO2 SENSORS, DCV, EMS AND ECONOMIZER/OUTSIDE AIR DAMPER. SEE CONTROLS AND OPERATION NOTES AND HVAC SCHEDULES AND NOTES FOR DETAILS. IF DEFICIENCIES OR SITE CONDITIONS PREVENT COMPLETE AND PROPER BALANCING, DO NOT COMPLETE WORK AND SUBMIT A REQUEST FOR INFORMATION TO GET COMPLETE INFORMATION PRIOR TO COMPLETING WORK. SUBMIT THREE (3) COPIES OF THE BALANCE REPORT TO THE ENGINEER, CONSTRUCTION MANAGER AND COMMISSIONING AGENT FOR APPROVAL. THE BALANCE REPORT SHALL INCLUDE NEBB OR AABC CREDENTIALS, EQUIPMENT/INSTRUMENT LIST WIT THE MOST RECENT CALIBRATION DATE AND BALANCE REPORTS FOR ALL HVAC AND EXHAUST SYSTEMS. INCLUDE A COPY OF THE BALANCE REPORT AS APPROVED BY THE ENGINEER WITH APPLICATION FOR FINAL CONTRACT PAYMENT.

Project Name: SBUX US 17-92 and Lake Mary FL Prepared by: ChangeUp 02/16/2023 01:48PM			
Air System Sizing Summary for RTU Overall			
Air System Information			
Air System Name	RTU Overall	Number of zones	1
Equipment Class	PKG ROOF	Floor Area	1410.0 ft²
Air System Type	SZCAV	Location	Orlando, Florida
Sizing Calculation Information			
Calculation Months	Jan to Dec	Zone CFM Sizing	Sum of space airflow rates
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads
Central Cooling Coil Sizing Data			
Total coil load	12.9 Tons	Load occurs at	Jun 1700
Total coil load	155.0 MBH	OA DB / WB	91.3 / 75.6 °F
Sensible coil load	109.7 MBH	Entering DB / WB	72.6 / 62.5 °F
Coil CFM at Jun 1700	5000 CFM	Leaving DB / WB	52.2 / 51.3 °F
Max block CFM	5000 CFM	Coil ADP	49.9 °F
Sum of peak zone CFM	5000 CFM	Bypass Factor	0.100
Sensible heat ratio	0.708	Resulting RH	56 %
CFM/Ton	387.0	Design supply temp.	52.1 °F
ft³/Ton	109.1	Zone T-stat Check	1 of 1 OK
BTU/(hr·ft²)	109.9	Max zone temperature deviation	0.0 °F
Water flow @ 10.0 °F rise	N/A		
Central Heating Coil Sizing Data			
No central heating coil loads occurred during this calculation.			
Supply Fan Sizing Data			
Actual max CFM	5000 CFM	Fan motor BHP	5.50 BHP
Standard CFM	4981 CFM	Fan motor kW	4.56 kW
Actual max CFM/ft²	3.55 CFM/ft²		
Outdoor Ventilation Air Data			
Design airflow CFM	21 CFM	CFM/person	2.99 CFM/person
CFM/ft²	0.01 CFM/ft²		

1 HVAC LOAD CALCULATION
N.T.S.


REVIEWED FOR CODE COMPLIANCE
Wayne Thorne - PX3005
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11-09-23
BUI LONG
SANFORD
DEPARTMENT

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WORK DESCRIPTION	RESPONSIBILITY	
	LANDLORD	STARBUCKS / G.C.
HVAC UNITS, CURB AND STRUCTURAL	X	
HVAC UNIT ECONOMIZERS AND RELIEF	X	
SMOKE DETECTORS IN DUCTWORK AND INTERLOCK	X	X
THERMOSTATS AND CONTROLS	X	X
EMS CONTROLS		X
MOTORIZED DAMPERS FOR BACKDRAFT	X	
EXHAUST FAN, CURB AND MOTORIZED DAMPER	X	
AIR DEVICES		X
DUCTWORK 12" OR LARGER		X
DUCTWORK 10" OR SMALLER		X
DAMPERS FOR CONNECTIONS		X
GAS SERVICE AND METER	N/A	N/A
GAS PIPING TO SPACE	N/A	N/A
GAS PIPING TO HOT WATER TANK	N/A	N/A
GAS PIPING TO HVAC UNITS	N/A	N/A
LOUVERS FOR INTAKES, EXHAUST AND PRESSURE RELIEF	N/A	N/A

FOR CONSTRUCTION



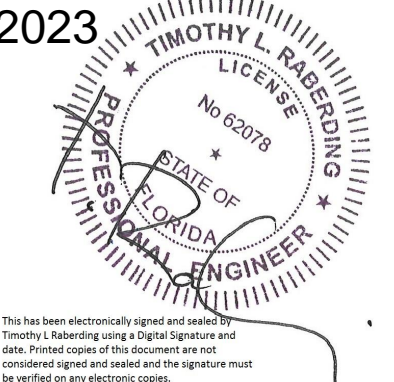
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Timothy L. Rabending, PE
Professional Engineer

11/06/2023


This has been electronically signed by Timothy L. Rabending using a Digital Signature and does not constitute a handwritten signature. The original signature and seal must be verified on any electronic copies.

PROJECT NAME:
US 17-92 & LAKE MARY BLVD

PROJECT ADDRESS:
**3764 ORLANDO DRIVE
SANFORD, FL 32773**

STORE #: 81065
PROJECT #: 98504-001
ISSUE DATE: 08-03-2023
DESIGN MANAGER: PAULINA LOPEZ
PRODUCTION DESIGNER: ANDY MCLOUD
CHECKED BY: DONALD RETHMAN

Revision Schedule		
Rev	Date	Description

SHEET TITLE:
MECHANICAL NOTES

SCALE: AS INDICATED

SHEET NUMBER:
M001

KEYED NOTES

1. EXISTING ROOFTOP UNIT (RTU-1) ON ROOF BY LANDLORD UNDER SEPARATE PERMIT.

2. FULL SIZE SUPPLY AIR DISCHARGE DUCT WITH 1-1/2" DUCT LINER. SEE EXPOSED DUCTWORK SECTION OF SPECIFICATION FOR OPTIONAL COMBINATION THERMAL/ACOUSTICAL INSULATION WITHIN DOUBLE WALL DUCT AS AN ALTERNATIVE TO DUCT LINER.

3. FULL SIZE RETURN AIR DUCT WITH 1-1/2" DUCT LINER. SEE EXPOSED DUCTWORK SECTION OF SPECIFICATION FOR OPTIONAL COMBINATION THERMAL/ACOUSTICAL INSULATION WITHIN DOUBLE WALL DUCT AS AN ALTERNATIVE TO DUCT LINER.

4. WALL MOUNTED THERMOSTATS FOR ROOFTOP AC UNITS. MULTIPLE THERMOSTATS SHALL BE STACKED IN VERTICAL CONFIGURATION WITH A MINIMUM 8" CLEARANCE BELOW EACH THERMOSTAT. CONFIRM EXACT LOCATION WITH OWNER. THERMOSTAT FURNISHED BY LANDLORD WITH RTU.

5. INSTALL REMOTE TEMPERATURE SENSOR (FURNISHED BY LANDLORD WITH RTU.)

6. EXISTING 12" DIAMETER EXHAUST DUCT UP TO EXISTING EXHAUST FAN EF-1. 10' CLEARANCE RADIUS BETWEEN EXHAUST DISCHARGE AND OUTDOOR INTAKE IS SHOWN WITH DASHED CIRCLE. EXHAUST DUCT TO RUN IN BETWEEN JOIST SPACE.
7. MANUAL BALANCE DAMPER (TYPICAL).

8. EXISTING SMOKE DETECTOR IN SUPPLY AIR STREAM TO SHUT DOWN UNIT UPON DETECTION, PROVIDED BY LANDLORD UNDER SEPARATE PERMIT.

9. PROVIDE WALL MOUNTED CO2 SENSOR COMPATIBLE WITH ROOFTOP UNIT AT 60" AFF. FIELD VERIFY ALL REQUIREMENTS. CO2 SET POINTS:
100% DESIGN OA RATE = 1000 PPM
FOR EQC2 CREDIT SET POINT = 800 PPM.

10. AIR COOLED CONDENSER UNIT ON ROOF FOR ICE MACHINE BELOW. SET UNIT ON APPROVED ROOFCURB PROVIDED BY THE LANDLORD. EXTEND REFRIGERANT PIPING TO ICE MACHINE. FIELD VERIFY ALL REQUIREMENTS AND INCLUDE ALL COST IN BIDS FOR A COMPLETE SYSTEM.

11. PAINT DIFFUSER TO MATCH COLOR OF CEILING. COORDINATE WITH OWNER. FIELD VERIFY ALL REQUIREMENTS.

GENERAL NOTES

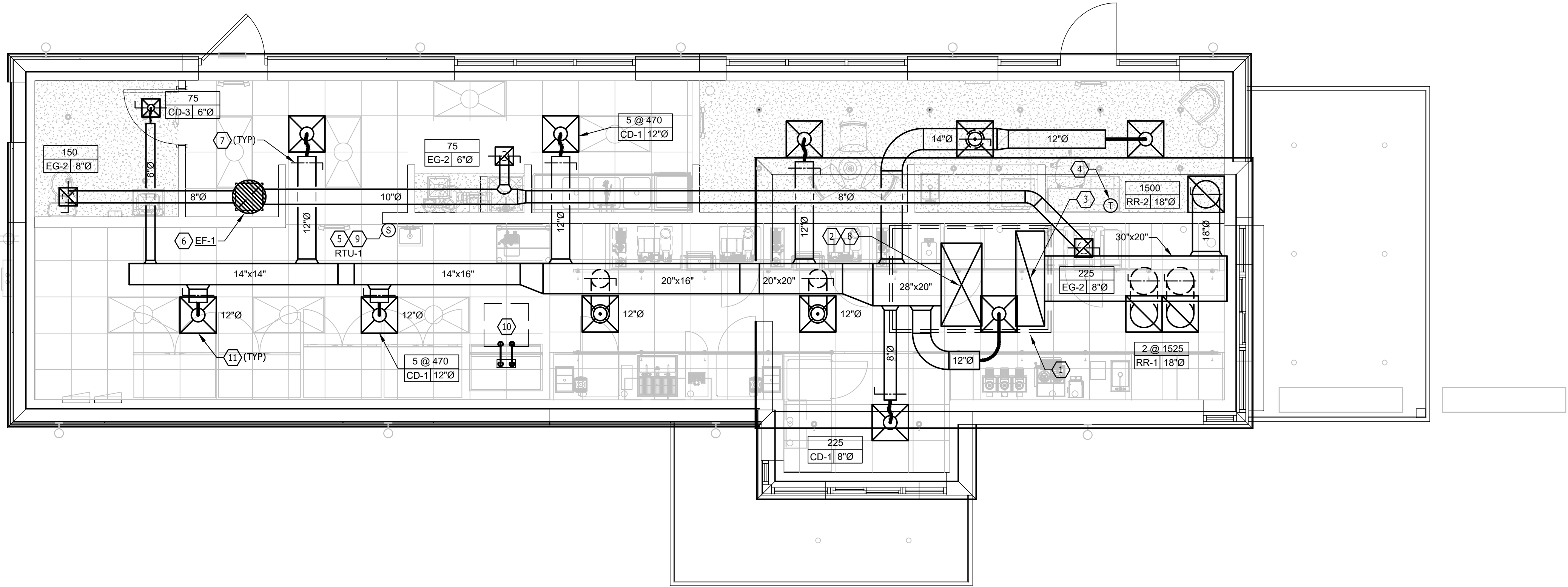
- A. SEE SHEET M-601 FOR EQUIPMENT & AIR DEVICE SCHEDULES.
- B. MECHANICAL CONTRACTOR RESPONSIBLE FOR SITE INVESTIGATION PRIOR TO START OF WORK TO REVEAL FULL SCOPE OF PROJECT.
- C. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTIONS TO ALL MECHANICAL EQUIPMENT.
- D. DUCTWORK ABOVE CEILINGS SHALL BE ROUTED AS HIGH AS POSSIBLE. REFER TO CEILING PLANS AND SECTIONS FOR HEIGHT OF EXPOSED DUCTWORK.
- E. CONTRACTOR SHALL INSTALL REFRIGERANT PIPING TO/FROM REMOTE CONDENSER FOR ICE MACHINE AND/OR WALK IN COOLERS.
- F. SEE ARCHITECTURAL SHEETS FOR PAINTING AND COLORS OF ALL EXPOSED DUCTWORK, DIFFUSERS AND GRILLES.
- G. SEE ARCHITECTURAL SHEETS FOR DIMENSIONED DIFFUSER & EXPOSED DUCT LOCATIONS.

REVIEWED FOR CODE COMPLIANCE
Wayne Thorne - PX3005 11-09-23
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BC23-000692



HVAC PLAN

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



FOR CONSTRUCTION



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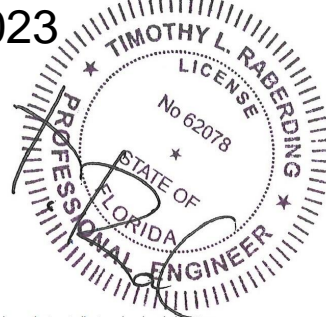
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Professional Engineer

11/06/2023



This has been electronically signed and sealed.
Timothy L. Raberding using a Digital Signature and Seal. Printed copies of this document are void.
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PROJECT NAME:
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BLVD

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3764 ORLANDO DRIVE
SANFORD, FL 32773

STORE #:	81065
PROJECT #:	98504-001
ISSUE DATE:	08-03-2023
DESIGN MANAGER:	PAULINA LOPEZ
PRODUCTION DESIGNER:	ANDY MCLOUD
CHECKED BY:	DONALD RETHMAN

Revision Schedule		
Rev	Date	Description

SHEET TITLE:
MECHANICAL PLAN

SCALE: AS INDICATED

SHEET NUMBER:
M101

ROOFTOP AC UNIT SCHEDULE (EXISTING BY LANDLORD UNDER SEPARATE PERMIT)																		
UNIT NO.	SUPPLY CFM	O.A. CFM	TOTAL COOLING (TONS)	SENSIBLE COOLING (MBTUH)	ELEC HEAT, INPUT (KW)	ELEC HEAT, OUTPUT (MBTUH)	ENTERING AIR CONDITIONS			EXT. S.P., " W.C.	FAN HP	VOLT/PH	MCA	MOCP	E.E.R.	MANUF	MODEL NUMBER	REMARKS
							DB °F	WB °F	AMB									
RTU-1	5,000	205	12.5	113.1	13.5	46.1	77.5	64.1	95	0.8	3.0	208/3	64	90	12.1	TRANE	THD150G3	1,2,3,4,5,6,7,8,9,10

- NOTES:
- UNITS SHALL BE FURNISHED WITH MERV8 REPLACEABLE MEDIA FILTERS.
 - FIELD VERIFY FULL SIZE CONDENSATE DRAIN LINE TO ROOF GUTTER.
 - FIELD VERIFY SMOKE DETECTOR IN SUPPLY AIR DUCT DROP.
 - FIELD VERIFY MANUFACTURER'S STANDARD 14" HIGH FULL UNIT CURB TO MATCH ROOF SLOPE.
 - FIELD VERIFY UNITS SHALL HAVE ECONOMIZER WITH BAROMETRIC BELIE AND DIFFERENTIAL ENTHALPY CONTROLS. ECONOMIZER CONTROLS SHALL HAVE FAULT DETECTION AND DIAGNOSTIC CAPABILITIES MATCHING REQUIREMENTS OF 2020 FBC C403.33.
 - PROVIDE VENSTAR SURVEYOR MODEL CT414 PROGRAMMABLE TWO STAGE THERMOSTAT WITH REMOTE TEMPERATURE SENSOR.
 - FIELD VERIFY INTEGRAL DISCONNECT SWITCH.
 - ROOFTOP UNIT SHALL BE TESTED AND OPERABLE AND HAVE A ONE (1) YEAR COMPLETE UNIT WARRANTY AND A FIVE (5) YEAR COMPRESSOR WARRANTY.
 - FIELD VERIFY HAIL GUARDS PROVIDED OVER CONDENSER COILS.
 - FIELD VERIFY PROVIDED SEA SALT SPRAY PROTECTION ON CONDENSER COILS.

EXHAUST FAN SCHEDULE (EXISTING BY LANDLORD UNDER SEPARATE PERMIT)

UNIT NO.	TYPE	CFM	S.P.	EXT. S.P. W.C.	SONES	HP	VOLTS	PH.	FAN RPM	TIP SPEED	MANUFACTURER	MODEL	CONTROL	REMARKS
EF-1	ROOF	450	0.5	0.5	7.4	1/10	120	1	1550	-	GREENHECK	G-090-VG	-	1,2,3

- NOTES:
- FAN TO BE CONTROLLED BY LIGHTING CONTROLLER PANEL TO RUN CONTINUOUSLY IN OCCUPIED MODE. SEE E-502, DETAIL 6.
 - FAN TO BE PROVIDED WITH SPEED CONTROLLER AND BACKDRAFT DAMPER.
 - EXT. STATIC PRESSURE INCLUDES DUCTWORK , BACKDRAFT DAMPER, AND AIR DEVICES.

AIR DISTRIBUTION DEVICES						
TYPE	DESCRIPTION	VOLUME CONTROL	FINISH	TITUS MODEL NO. OR AS NOTED		QUANTITY
CD-1	CEILING SUPPLY DIFFUSER	YES	WHITE	MODEL TDC, LAY-IN, 24"x24", 4-WAY		8
CD-2	CEILING SUPPLY DIFFUSER	YES	WHITE	MODEL TDC, SURFACE, 24"x24", 4-WAY		3
CD-3	CEILING SUPPLY DIFFUSER	YES	WHITE	MODEL TDC, SURFACE, 12"x12", 4-WAY		1
RR-1	CEILING RETURN GRILLE	YES	WHITE	MODEL 350RL, LAY-IN, 24"x24"		2
RR-2	CEILING RETURN GRILLE	YES	WHITE	MODEL 350RL, SURFACE, 24"x24"		1
EG-1	CEILING EXHAUST GRILLE	YES	WHITE	MODEL 350RL, SURFACE, 10"x10"		2
EG-2	DUCT MOUNTED EXHAUST GRILLE	YES	WHITE	MODEL 350RL, SURFACE, 10"x10"		1

- NOTES:
- COORDINATE MOUNTING TYPES WITH ARCHITECTURAL CEILING AND WALL TYPES, AND SEE NECK SIZES ON PLANS.

VENTILATION SCHEDULE										
ROOM NAME	AREA, SQ. FT.	OCCUPANTS PER 1000 SQ. FT.	OCCUPANT LOAD	O.A. PER PERSON, CFM	OCCUPANT O.A., CFM	O.A., CFM PER SQ. FT.	AREA O.A., CFM	BASE O.A. REQUIRED (CFM)	VENT EFF.	TOTAL O.A. REQUIRED (CFM)
BEV. PREP. (RETAIL SALES)	672	15	3	7.5	23	0.12	81	104	0.8	130
WORKROOM	210	10	2	5	10	0.12	25	35	0.8	44
PARTNER	145	5	1	-	5	0.06	9	14	0.8	18
OFFICE	80	5	1	-	5	0.06	5	10	0.8	13
TOTAL = 50								TOTAL - 163		TOTAL - 205
NOTES: 1. SET OUTSIDE AIR AS CALLED OUT ON THE RTU SCHEDULE. 2. OUTSIDE AIR BASED ON CODE OCCUPANCY LISTED ON SHEET G-0001 AND ON 3 PEOPLE IN BEV. PREP (RETAIL SALES) AREA TO MEET LEED REQUIRMENTS.										

ENERGY MANAGEMENT SYSTEM (EMS) DEVICES

DESCRIPTION	RESPONSIBILITY	COMMENTS
VENSTAR DC400, DATA CONCENTRATOR	SB-GC	LOCATE AT MANAGER'S WORK STATION. LOCATION SHOWN ON SHEET E-501, DETAIL 2.
VENSTAR ECP400, EQUIPMENT CONTROL PACK	SB-GC	LOCATE AT EACH HVAC UNIT. LOCATION OF HVAC UNITS SHOWN ON SHEET M-101.
VENSTAR CT414, COMMUNICATING THERMOSTAT	SB-GC	LOCATE BY MANAGER'S WORK STATION AS SHOWN ON M-101 AND E-103. COORDINATE LOCATION WITH STARBUCKS' EQUIPMENT.
VENSTAR RS410, WALL MOUNT REMOTE TEMPERATURE SENSOR	SB-GC	LOCATE AS SHOWN ON M-101, ONE PER HVAC UNIT. COORDINATE LOCATION WITH STARBUCKS' ART, EQUIP.; PROJECT MANAGER.
VENSTAR RS420, OPTIONAL NARROW DROP DOWN SENSOR	SB-GC	OPTIONAL SENSOR FOR WORKROOM. USE AS LAST RESORT ONLY IF NO SPACE EXISTS FOR WALL MOUNT TEMPERATURE SENSOR.
VENSTAR OTS400, OUTDOOR TEMPERATURE SENSOR	SB-GC	LOCATE IN OUTSIDE AIR DUCT OF AHU-1.
VENSTAR SP400, SENSOR PAC	SB-GC	LOCATE COMPONENTS (AIRFLOW & TEMP SENSORS) PER SP400 SENSOR PAC INSTALLATION INSTRUCTIONS.

- NOTES:
- SURVEYOR EMERGY MANAGEMENT SYSTEM HARDWARE IS SUPPLIED BY STARBUCKS.
 - DRAWING FOR GENERAL INFORMATION, DESIGN INTENT, AND COORDINATION ONLY.

ELECTRICAL / MECHANICAL COORDINATION NOTES:

PROVIDE AND COORDINATE LINE VOLTAGE WIRING, LINE VOLTAGE CONTROL AND INTERLOCK WIRING FOR MECHANICAL SYSTEMS, AND LOW VOLTAGE CONTROL WIRING.

FURNISH WIRING DIAGRAMS TO THE ELECTRICIAN AS REQUIRED FOR PROPER EQUIPMENT HOOKUP. COORDINATE WITH THE ELECTRICIAN THE ACTUAL WIRE SIZING AMPS FOR MECHANICAL EQUIPMENT (FROM THE EQUIPMENT NAMEPLATE) TO ENSURE PROPER INSTALLATION.

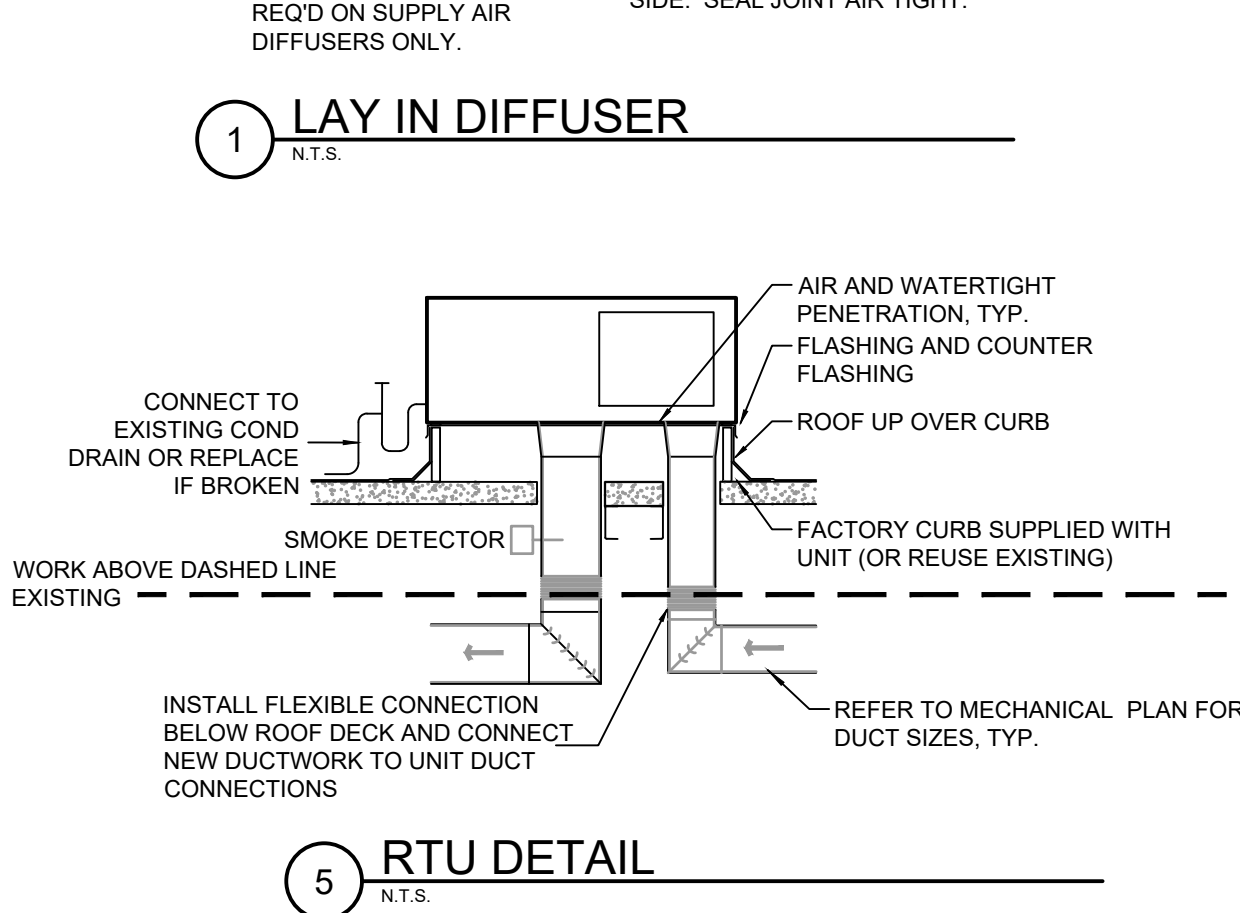
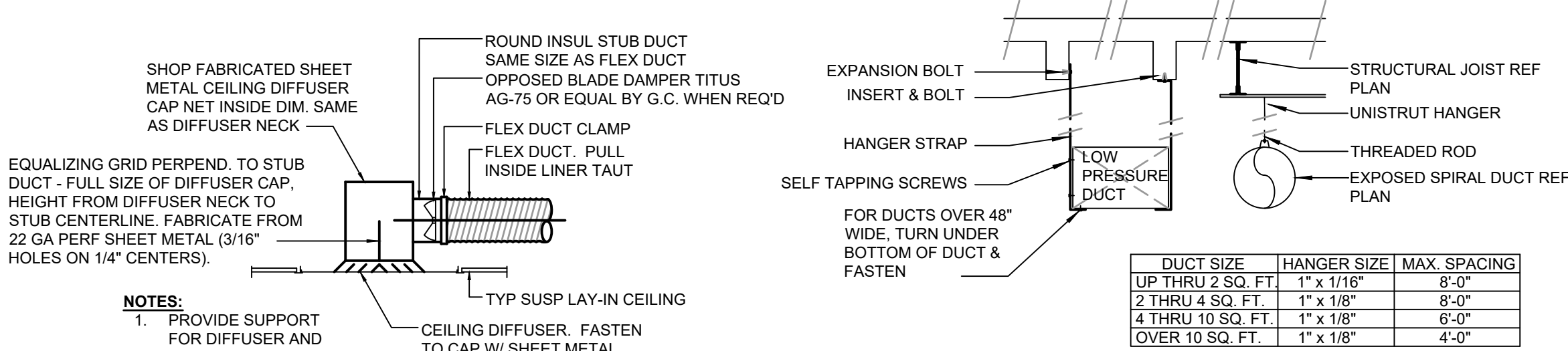
ENSURE THAT THE TEST AND BALANCE REPORT MEETS THE CFM NOTED.

REVIEWED FOR CODE COMPLIANCE
Wayne Thorne - PX3005
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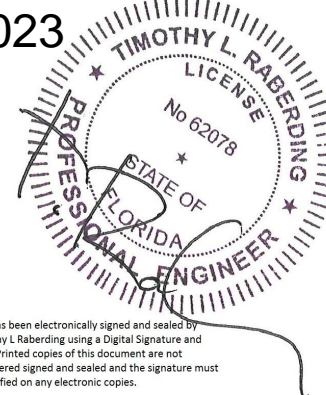
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11/06/2023



PROJECT NAME:
US 17-92 & LAKE MARY BLVD

PROJECT ADDRESS:
3764 ORLANDO DRIVE
SANFORD, FL 32773

STORE #: 81065
PROJECT #: 98504-001
ISSUE DATE: 08-03-2023
DESIGN MANAGER: PAULINA LOPEZ
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Revision Schedule		
Rev	Date	Description
1	9/15/2023	Revision 1

SHEET TITLE:

MECHANICAL SCHEDULES

SCALE: AS INDICATED

SHEET NUMBER:

M601

REFERENCE SHELL PERMIT#BC22-000900 FOR EXISTING WORK BY LANDLORD

ICE MACHINE REMOTE CONDENSER SCHEDULE

DID NO.	REFRIGERANT	DIMENSIONS			VOLT/PH	FLA	MOCP	WEIGHT LBS.	MANUFACTURER	MODEL NUMBER	REMARKS
		WIDTH	DEPTH	HEIGHT							
18846	R-404	30 7/8"	30 7/8"	37 1/8"	208/1	1.3	15	111	ICE-O-MATIC	RCA-2061	1, 2, 3

- NOTES:
- INSTALL ICE-O-MATIC RT-340-404 40' PRECHARGED TUBING KIT. FIELD VERIFY REQUIRED TUBING LENGTH PRIOR TO INSTALLATION.
 - INSTALL ICE-O-MATIC GRILL20 GRILL GUARD KIT.
 - SECURE UNIT TO EXISTING SUPPORTS WITH CODE-APPROVED CABLING OR STRAPS.