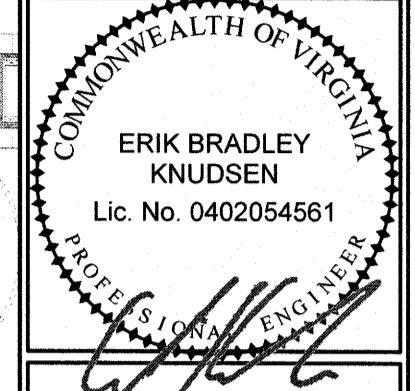




4/28/2017



FREDDY'S FROZEN CUSTARD
1611 JEFFERSON DAVIS HIGHWAY
FREDERICKSBURG, VIRGINIA 22401

WINTER ARCHITECTS

1024 EAST FIRST STREET
WICHITA, KS. 67214
PH. 316-267-7142

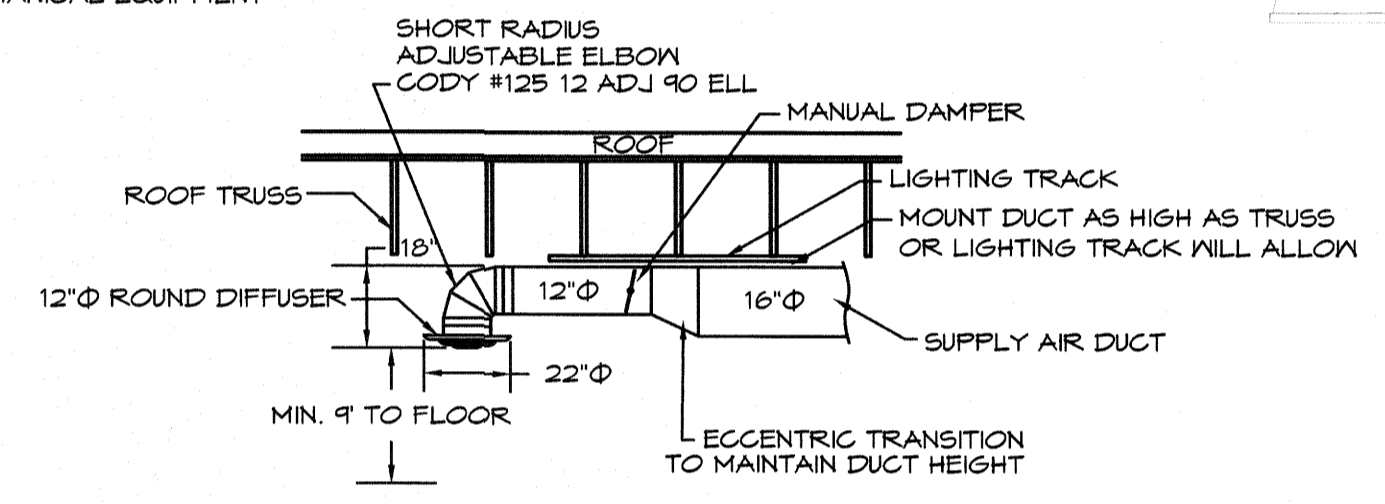
DATE
04/17/2017

DRAWN BY:
TH/DW
CHECKED BY:
BQ/DS

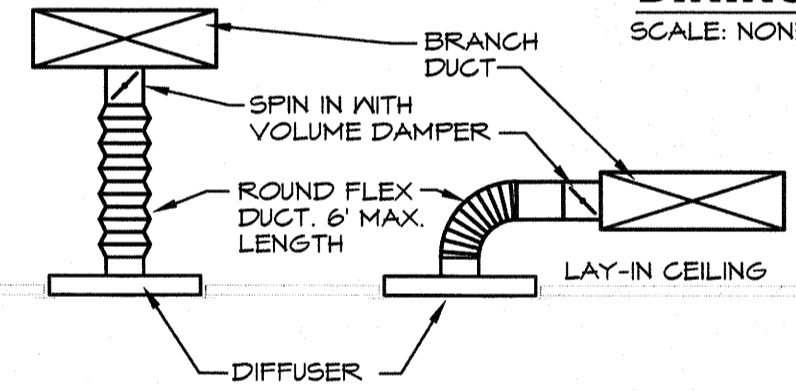
SHEET NO.
M1

MECHANICAL SYMBOLS

- (SD) NEW SUPPLY DIFFUSER
- (RG) NEW RETURN AIR GRILLE
- EXHAUST GRILLE/FAN
- REMOTE TEMPERATURE SENSOR
- THERMOSTAT, MOUNTED AT 48" AFF.
- DUCT-MOUNTED SMOKE DETECTOR
- NEW DUCTWORK
- 32"x14" SIZE OF RECTANGULAR DUCT
- 6"φ SIZE OF ROUND DUCT
- FLEXIBLE DUCTWORK
- FLOOR PLAN NOTE DESIGNATION
- S.A. SUPPLY AIR
- R.A. RETURN AIR
- EXH. EXHAUST AIR
- TRANSITION IN DUCT SIZE
- ELBOW WITH TURNING VANES
- MANUAL VOLUME DAMPER
- SUPPLY AIR DUCT UP/DOWN
- RETURN AIR DUCT UP/DOWN
- EXHAUST AIR DUCT UP/DOWN
- CHANGE IN ELEVATION UP (UP) DOWN (DN) IN DIRECTION OF FLOW
- RTU-1 SCHEDULED MECHANICAL EQUIPMENT



DINING ROOM DIFFUSER DETAIL
SCALE: NONE



DIFFUSER DETAIL
SCALE: NONE

THE BUILDING HVAC SYSTEM SHALL BE BALANCED BY AN INDEPENDENT NEBB CERTIFIED BALANCING CONTRACTOR HIRED BY THE OWNER. CONTACT Jason Neises - National TAB at: 855-682-6822 x 103

OUTDOOR AIR CALCULATIONS

UNIT	Area (sqft)	OCCUPANCY CLASSIFICATION	Occupant Density #/1000 sqft	People outdoor airflow rate in breathing zone, (Rp) cfm/person	Area outdoor airflow rate in breathing zone, (Ra) cfm/sqft	Exhaust airflow rate cfm/sqft	Breathing zone outdoor airflow (Vbz)	Zone air distribution effectiveness (Ez)	Zone outdoor airflow (cfm)	
RTU-1	657	Dining rooms	70	7.5	0.18	463	0.8	0.8	579	
	173	Corridors	0	0	0.06	10	0.8	0.8	13	
									Total	592
RTU-2	657	Dining rooms	70	7.5	0.18	463	0.8	0.8	579	
	173	Corridors	0	0	0.06	10	0.8	0.8	13	
									Total	592
RTU-3	895	Kitchens (cooking)	0	0	0	0.7	0	0.8	0	
	50	Office spaces	5	5	0.06	4	0.8	0.8	5	
	142	Corridors	0	0	0.06	9	0.8	0.8	11	
									Total	16

MECHANICAL PLAN NOTES:

- 1 LOCATION OF DUCT MOUNTED SMOKE DETECTOR. PROVIDE REMOTE ENUNCIATOR AUDIO/VISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET ME101 FOR ADDITIONAL INFORMATION.
- 2 LOCATION OF MANUAL PULL STATION. INSTALL PER THE MANUFACTURERS REQUIREMENTS.
- 3 LOCATION OF RTU THERMOSTATS. GC TO LABEL EACH THERMOSTAT.
- 4 LOCATION OF RTU TEMPERATURE SENSORS MOUNTED 7'-0" AFF.
- 5 MAINTAIN A MIN. OF 10'-0" CLEARANCE BETWEEN ALL OUTDOOR AIR INTAKES & EXH./ FLUE OUTLETS.
- 6 EXHAUST HOOD PROVIDED BY OTHERS. INSTALLED BY THIS CONTRACTOR PER THE MANUFACTURERS INSTRUCTIONS.
- 7 TRANSITION AND CONNECT 8"x4" GREASE DUCT TO EXHAUST HOOD WITH AS SHOWN. ROUTE DUCT UP AND CONNECT TO EXHAUST FAN. OFFSET AS NECESSARY TO MISS ROOF STRUCTURE, AND TO MAINTAIN 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES, AND 5'-0" FROM PARAPET WALLS. REFER TO DETAIL ON SHEET M2. ALL GREASE DUCT IS TO BE INSTALLED WITH DUCT WRAP AS DETAILED AND PER THE MANUFACTURERS REQUIREMENTS.
- 8 TRANSITION AND CONNECT 15"x15" GREASE DUCT TO 12"x10" COLLARS ON EXHAUST HOODS. ROUTE DUCT UP AND CONNECT TO EXHAUST FAN. OFFSET AS NECESSARY TO MISS ROOF STRUCTURE, AND TO MAINTAIN 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES, AND 5'-0" FROM PARAPET WALLS. REFER TO DETAIL ON SHEET M2. ALL GREASE DUCT IS TO BE INSTALLED WITH DUCT WRAP AND ACCESS DOORS AS DETAILED AND PER THE MANUFACTURERS REQUIREMENTS.
- 9 TRANSITION AND CONNECT MAKE-UP AIR DUCT TO EXHAUST HOOD SUPPLY PLENUM PER THE MANUFACTURERS REQUIREMENTS. SEE SHEET M3 FOR CONNECTION SIZE AND SUPPLY CFM.
- 10 ROUTE 14"x12" MAKE UP AIR SUPPLY DUCT DOWN FROM MAU-1. TRANSITION AND CONNECT TO 18"x14" SUPPLY DUCT. VERIFY THE EXACT SIZE AND LOCATION OF STRUCTURE BEFORE INSTALLING DUCTWORK.
- 11 RETURN AIR DUCT LOCATED BETWEEN ROOF TRUSSES. OPEN END OF DUCTWORK TURNED UP TOWARD STRUCTURE WITH A MINIMUM 14" CLEARANCE TO DECK.
- 12 SUPPORT EXHAUST FAN FROM STRUCTURE AS REQUIRED BY THE MANUFACTURER.
- 13 ROUTE RETURN AIR DUCT THROUGH OR BETWEEN ROOF TRUSSES.
- 14 MOUNT CONDENSING UNIT ON ROOF AS DETAILED AND AS REQUIRED BY THE MANUFACTURER. CONNECT REFRIGERANT PIPING AS REQUIRED BY THE MANUFACTURER. SEE ARCHITECTURAL PLANS FOR MOUNTING DETAIL.
- 15 PROVIDE LOCKING QUADRANT DAMPER AND ROUND TO SQUARE TRANSITION FOR RETURN GRILL CONNECTION.
- 16 ROUTE 10"φ EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP. MAINTAIN 10'-0" CLEARANCE TO ALL OUTDOOR AIR INTAKES.
- 17 TRANSITION AND CONNECT AIR CONDITIONING DUCT TO EXHAUST HOOD A/C SUPPLY PLENUM PER THE MANUFACTURERS REQUIREMENTS. SEE SHEET M3 FOR CONNECTION SIZE AND SUPPLY CFM.
- 18 INSTALL CAPTIVE AIR WBE WINDBAND EXTENSION FOR KEF-1 AND KEF-2 PROVIDED BY KITCHEN EQUIPMENT SUPPLIER.
- 19 COORDINATE DUCT DROP BETWEEN STRUCTURAL TRUSSES WITH SIZES SHOWN.
- 20 ROUTE DUCT AS HIGH AS POSSIBLE TO ALLOW ROUTING OF CABLES FOR OFFICE EQUIPMENT.



MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"

MECHANICAL GENERAL NOTES:

1. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACES AVAILABLE, AND WITHOUT INTERFERENCES.
2. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE MECHANICAL SYSTEMS.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF DIFFUSERS.
4. INSTALL ALL DUCT, PIPE, ETC. AS HIGH AS POSSIBLE.
5. DUCT SIZES SHOWN ARE ACTUAL SHEET METAL SIZES AND INCLUDE A 1/2 INCH ALLOWANCE FOR DUCT LINER, WHERE APPLICABLE.
6. PROVIDE FLEXIBLE CONNECTION BETWEEN DUCTWORK AND ROOFTOP UNITS, EXHAUST FANS, AND OTHER MOTORIZED EQUIPMENT.
7. NO DUCT SHALL BE ROUTED OVER THE TOP OF ELECTRICAL PANELS.
8. ALL EXPOSED DUCT WORK SHALL BE PAINTED. REFER TO ARCHITECTURAL PLANS FOR DETAILS.

VIRGINIA PE COA #0407006723
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