LENNOX

PACKAGED COOLING AND GAS HEATING ROOF TOP UNIT SCHEDULE

MARK	LENNOX MODEL NO.	DATE	CFM	EXT. SP. (IN W.C.)	TOT. SP. (IN W.C.)	FAN RPM	MOTOR HP	COOLING LOAD (MBH) TOTAL	COOLING LOAD (MBH) SENSIBLE	MIXED AIR COND. DB (°F)	MIXED AIR COND. WB (°F)	HEATING CAP.(MBH) INPUT	HEATING CAP.(MBH) OUTPUT	NOMINAL CAP. COOLING (TONS)	EER (SEER)	FLA	MCA	MOPD	VOLTAGE	OPER. WEIGHT (LBS)
EX. RTU-1	LGA102HH3Y	2002	2,720	-	-	-	2	81.4	57.6	82.2	68.7	235.0	188.0	8.5	-	41.7	46.0	60	208/3	1326
EX. RTU-2	LGH150S4BH4Y	2015	3,800	-	-	-	5	111.9	87.8	81.6	68.4	240.0	192.0	12.5	-	61.9	67.0	80	208/3	1668
N. RTU-3	LGT072H4E	NEW	1,920	-	-	-	2	66.1	47.8	82.8	69.0	108.0	87.0	6.0	12.2	24.8	30.0	45	208/3	866
EX. RTU-4	LGA90HH2Y	2002	2,400	-	-	-	2	56.2	41.0	79.6	67.3	235.0	188.0	7.5	-	37.1	41.0	50	208/3	1326
EX. RTU-5	LGA060HH2Y	2002	1,750	-	-	-	1.5	37.4	27.4	79.1	67.1	125.0	98.8	5.0	-	25.4	30.0	45	208/3	924

NOTES:
1. PROVIDE DISCONNEC SWITCH FOR NEW RTUS AND AN UNPOWERED GFIC RECEPTACLE.
2. PROVIDE N. RTU-3 WITH A CURB ADAPTER. PREVIOUS RTU-3 WAS A LENNOX LGA102 DATED 2002.
3. N. RTU-3 SHALL BE PROVIDED WITH REHEAT CAPABILITY.
4. PROVIDE N. RTU-3 WITH DIAL ENTHALPY ECNOMIZER WITH BAROMETRIC RELIEF.
5. PROVIDE ALL NEW AND EXISTING RTUS WITH A NEW 8-WIRE, 24VAC, AUTOMATIC CHANGEOVER, 2-STAGE HEAT/COOL, REMOTELY PROGRAMMABLE THERMOSTAT.
6. PROVIDE NEW REMOTE TEMPERATURE AND HUMIDITY (IF APPLICABLE) SENSORS FOR ALL RTUS.
7. PROVIDE N. RTU-3 WITH LOW AMBIENT COOLING CAPABILITY DOWN TO 0 DEGREES F.
8. PROVIDE NEW RTU-3 WITH FACTORY OPTION CONDENSATE DRAIN PAN OVERFLOW SWITCH.
9. PROVIDE 2 SETS OF MERV 13 FILTERS. INSTALL ONE DURING CONSTRUCTION AND ANOTHER SET AT THE END OF THE PROJECT (FOR ALL NEW AND EXISTING RTUS).
11. PROVIDE AND INSTALL RETURN AIR SMOKE DETECTOR - UNIT MOUNTED FOR N. RTU-3.

FAN SCHEDULE

UNIT ID	MANUFACTURER	HOOD LENGTH	MODEL	CFM	S.P. (IN. W.G.)	MOTOR H.P.	MOTOR FLA	MOTOR VOLTS	MOTOR PHASE	WEIGHT (LBS)	SERVICE	INTERLOCKED WITH	NOTES/ACCESSORIES
N. EF-1	CAPTIVE AIRE	12'-0"	DU180HFA	2100	1.75	2	8.3	208	3	217	MAIN HOOD	HOODS	SEE HOOD SHEETS
N. EF-2	CAPTIVE AIRE	5'-0"	DU50HFA	875	1.1	1/2	6.3	115	1	119	OVEN HOOD	HOODS	SEE HOOD SHEETS
EX. EF-3		8'-9"	-	1531	-	-	-	115	1	-	STEAMER HOOD	HOODS	FIELD VERIFY
EX. EF-4	LOREN COOK	N/A	100ACEH100C15DH	300	-	1/8	-	115	1	-	RESTROOMS	RESTROOMS	FIELD VERIFY
N. SF-1	CAPTIVE AIRE	12'-0"	SP-B90	1890	0.5	2	6.10	208	3	1,303	MAIN HOOD	HOODS	SEE HOOD SHEETS

GRILLE AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	MODEL#	MODULE	NECK	TYPE	STYLE	FRAME TYPE	MATERIAL	OB DAMPER	FINISH	REMARK
A	METALAIRE	5700	24"x24"	PER PLAN	SUPPLY	SQUARE FACE	LAY-IN/SURFACE	ALUM.	NOTE 2	WHITE	SEE NOTE 1

NOTES:
1) CONTRACTOR SHALL PROVIDE DIFFUSERS WITH APPROPRIATE AIR PATTERN AS INDICATED ON SHEET M2.
2) PROVIDE OB DAMPER IF BRANCH DUCT IS NOT EQUIPPED WITH BALANCING DAMPER. SEE MECHANICAL PLAN.

AIR BALANCE SCHEDULE

UNIT	SUPPLY	RETURN	OUTSIDE (SEE NOTE 5)	MUA	EXHAUST	SERVING	
EX. RTU-1	2,720	1,720	1,000			DINING / RR	
EX. RTU-2	3,800	3,050	750			KITCHEN & SERVING	
N. RTU-3	1,920	1,170	750			DINING	
EX. RTU-4	2,400	1,800	600			DINING	
EX. RTU-5	1,750	1,350	400			DINING	
N. SF-1				1,890		N. HOOD 1	MAIN HOOD
N. EF-1					2,100	N. HOOD 1	MAIN HOOD
N. EF-2					875	N. HOOD 2	OVEN HOOD
EX. EF-3					1,531	EX. HOOD 3	STEAMER HOOD
EX. EF-4					300		RESTROOMS
TOTAL	12,590	9,090	3,500	1,890			
	TOTAL OUTSIDE AIR		5,390		4,806	TOTAL EXHAUST	
					584	*TOTAL BLDG AIR FLOW	

VENTILATION SCHEDULE

SYSTEMS	AREA	VENT./EXHAUST REQ'D.	MIN. REQUIRED VENT. (CFM)	TOTAL MIN. REQUIRED VENT. (CFM)	PROVIDED VENT. (CFM)	MIN. REQUIRED EXHAUST (CFM)	PROVIDED EXHAUST (CFM)
EX. RTU-1, N. RTU-3, EX. RTU-4, EX. RTU-5	DINING	SEE 2018 NCMC CALCS	1,498	1,596	2,750	-	-
	CORRIDOR	SEE 2018 NCMC CALCS	10			-	-
	RESTROOMS	SEE 2018 NCMC CALCS	-			300	300
	SERVING	SEE 2018 NCMC CALCS	87			-	-
EX. RTU-2	KITCHEN	SEE 2018 NCMC CALCS	-	12	750	606	4,506
	OFFICE	SEE 2018 NCMC CALCS	12			-	-
	TOTALS		1,608	1,608	3,500	906	4,806

NOTES
1. EXISTING RESTROOM WATER CLOSETS / COUNT IS EXISTING TO REMAIN. EXISTING RESTROOM EXHAUST FAN SIZED FOR 300 CFM - EXISTING TO REMAIN.

SEE HOOD SHEETS, PROVIDED BY OTHERS, FOR KITCHEN/RESTROOM FAN SCHEDULES. HOOD CONTRACTOR IS RESPONSIBLE FOR CALCULATING SYSTEM STATIC PRESSURES, DUCTWORK DESIGN, FAN SELECTION, AND SYSTEM CERTIFICATION IN ACCORDANCE WITH CODE REQUIREMENTS.

2018 NCMC VENTILATION CALCULATIONS

DINING

* SECTION 403.3.1.1 - EQUATION 4-1 — Vbz=RpPz+RaAz

Rp=	7.5	CFM/PERSON (TABLE 403.3)
Pz=	109	PEOPLE (SEATS)
Ra=	0.18	CFM/FT² (TABLE 403.3)
Az=	2118	FT²
Vbz=	1199	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE

* SECTION 403.3.1.3 - EQUATION 4-2 — Voz=Vbz/Ez

Vbz=	1199	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE
Ez=	0.80	ZONE AIR DISTRIBUTION EFFECTIVENESS (TABLE 403.3.1.2)
Voz=	1498	CFM MIN. ZONE OUTDOOR AIRFLOW

CORRIDOR

* SECTION 403.3.1.1 - EQUATION 4-1 — Vbz=RpPz+RaAz

Rp=	0	CFM/PERSON (TABLE 403.3)
Pz=	0	PEOPLE
Ra=	0.06	CFM/FT² (TABLE 403.3)
Az=	136	FT²
Vbz=	8	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE

* SECTION 403.3.1.3 - EQUATION 4-2 — Voz=Vbz/Ez

Vbz=	8	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE
Ez=	0.80	ZONE AIR DISTRIBUTION EFFECTIVENESS (TABLE 403.3.1.2)
Voz=	10	CFM MIN. ZONE OUTDOOR AIRFLOW

SERVING

* SECTION 403.3.1.1 - EQUATION 4-1 — Vbz=RpPz+RaAz

Rp=	7.5	CFM/PERSON (TABLE 403.3)
Pz=	5	PEOPLE (BASED ON 15 OCCUPANTS PER 1000 SF)
Ra=	0.12	CFM/FT² (TABLE 403.3)
Az=	270	FT²
Vbz=	70	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE

* SECTION 403.3.1.3 - EQUATION 4-2 — Voz=Vbz/Ez

Vbz=	70	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE
Ez=	0.80	ZONE AIR DISTRIBUTION EFFECTIVENESS (TABLE 403.3.1.2)
Voz=	87	CFM MIN. ZONE OUTDOOR AIRFLOW

OFFICE

* SECTION 403.3.1.1 - EQUATION 4-1 — Vbz=RpPz+RaAz

Rp=	5	CFM/PERSON (TABLE 403.3)
Pz=	1	PEOPLE (BASED ON 5 OCCUPANTS PER 1000 SF)
Ra=	0.06	CFM/FT² (TABLE 403.3)
Az=	73	FT²
Vbz=	9	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE

* SECTION 403.3.1.3 - EQUATION 4-2 — Voz=Vbz/Ez

Vbz=	9	CFM MIN. OUTDOOR AIRFLOW AT THE BREATHING ZONE
Ez=	0.80	ZONE AIR DISTRIBUTION EFFECTIVENESS (TABLE 403.3.1.2)
Voz=	12	CFM MIN. ZONE OUTDOOR AIRFLOW

2018 NCMC EXHAUST CALCULATIONS

KITCHEN

	0.7	CFM/FT² (TABLE 403.3)
	865	FT²
EXHAUST RATE=	606	CFM MIN. REQUIRED EXHAUST RATE

RESTROOMS

	50	CFM/UNIT (TABLE 403.3)
	6	UNITS
EXHAUST RATE=	300	CFM MIN. REQUIRED EXHAUST RATE

GENERAL NOTES:

1. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NEW ROOF OPENINGS. HE SHALL VERIFY SIZES AND LOCATIONS IN THE FIELD BEFORE ROOFING IS INSTALLED.
2. THE NEW ROOF TOP UNIT(S) AND ACCESSORIES, RTU FILTERS, SUPPLY DIFFUSERS, REGISTERS, RETURN GRILLES, ARE ALL PACKAGED TOGETHER BY LENNOX FOR CORPORATE STORES BY OWNER, AND FOR FRANCHISEE STORES BY THE MECHANICAL CONTRACTOR. (VERIFY W/FRANCHISEE). INSTALLATION SHALL BE BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED ON PLANS. MC SHALL COORDINATE WITH GENERAL CONTRACTOR AS REQUIRED PER PLAN INSTRUCTIONS.
3. THE FOLLOWING ITEMS ARE DESIGNED, SELECTED, AND FURNISHED BY HOOD CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR.
   – KITCHEN GREASE EXHAUST SYSTEMS, NEW HOODS #1, #2
   SYSTEM INCLUDES:
   - PREWIRED U.L. LISTED HOODS
   - EXHAUST FANS/DUCTS
   - MUA FANS
   - CURBS/CURB ADAPTERS
   - FIRE SUPPRESSION SYSTEM (NEW HOODS #1, #2)

   MC SHALL INSTALL (PROVIDED BY HOOD CONTRACTOR) STAINLESS STEEL, ETL LISTED SINGLE WALL, GREASE EXHAUST DUCT WITH 2 LAYERS OF FIRE WRAP (PROVIDED BY HOOD CONTRACTOR) FOR 0" CLEARANCE TO COMBUSTIBLE MATERIALS, FOR NEW HOODS #1, #2. MC SHALL VERIFY WITH LOCAL AUTHORITIES AND PROVIDE RIGID DUCT IF REQUIRED ON HOOD SUPPLY RISERS. SEE DETAIL 7/M501 AND HOOD SHEETS.
4. THE FOLLOWING ITEMS ARE PROVIDED BY KITCHEN EQUIPMENT CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR AND ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED:
   - DOOR AIR CURTAINS (IF APPLICABLE)
   - ALL NEW REMOTE CONDENSERS SERVING KITCHEN EQUIPMENT LOCATED ON THE ROOF
5. EC SHALL PROVIDE ALL REQUIRED (POWER) FIELD WIRING FOR PROPER OPERATION OF ALL MECHANICAL SYSTEMS. SEE SHEET M21 AND M502.
6. MC SHALL NOT SCALE THE DRAWINGS FOR RTU AND FAN SIZES. MC SHALL OBTAIN THE LATEST SHOP DRAWINGS FROM THE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AND USE IT FOR ACTUAL DIMENSIONS.
7. DUCTWORK LAYOUTS ARE ACTUAL. ALL RISES, DROPS, AND OFFSETS REQUIRED (EVEN IF NOT SHOWN) SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER. DUCTWORK DIMENSIONS ARE INSIDE "CLEAR" DIMENSIONS AND DO NOT INCLUDE INSULATION. WHERE STRUCTURAL OBSTRUCTIONS ARE ENCOUNTERED, DUCT DIMENSIONS MAY BE CHANGED TO PROVIDE DUCTS OF EQUAL AREAS WITH ASPECT RATIOS NO GREATER THAN 4 TO 1. IF THE ABOVE CRITERIA CAN NOT BE MET, THE CONTRACTOR OR OWNER'S REPRESENTATIVE SHOULD CONTACT THE ENGINEER TO WORK OUT AN ACCEPTABLE SOLUTION.
8. DUCTWORK SHALL HAVE RIGHT-OF-WAY OVER ALL PLUMBING, SPRINKLER PIPES, ELECTRICAL CONDUIT, ETC. DO NOT RELOCATE DUCTWORK BY BUILDING OFFSETS UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE AND NRD. MECHANICAL CONTRACTOR SHALL FIELD MEASURE ALL CONDITIONS AND BE RESPONSIBLE FOR COORDINATION AND FIT. DO NOT SCALE DUCTWORK SIZES ON DRAWINGS.
9. MC SHALL ADJUST AIR CFM AND FLOW PATTERNS AS INDICATED ON PLANS, SCHEDULES AND NOTES. HVAC SYSTEM TEST AND BALANCE SHALL BE PERFORMED BY A N.E.B.B. CERTIFIED BALANCING AGENCY PROVIDED INDEPENDENTLY BY GCD FOR COMPANY STORES AND BY OWNER THROUGH COASTAL PACKAGE FOR FRANCHISEE STORES VIA F.E.C.. BALANCING CONTRACTOR (BC) SHALL BE RESPONSIBLE FOR FINAL ADJUSTMENTS AND ENSURING AN OVERALL POSITIVE BUILDING PRESSURE AS STATED IN THE AIR BALANCE SCHEDULE (MINIMUM) WITH ALL EXHAUST, MAKE-UP AIR FANS AND RTU EVAPORATOR FANS OPERATING AS SHOWN. THE POSITIVE BUILDING AIR FLOW REQUIREMENT MUST NOT BE REDUCED.
10. MC SHALL PROVIDE RTU'S DUCTWORK SYSTEM MADE OF GALVANIZED SHEET METAL (RECTANGULAR AND/ OR ROUND). ALL SHEET METAL DUCTWORK SHALL BE PER "SMACNA" STANDARDS. ALL FLEX DUCT SHALL BE INSULATED AND UL 181 LISTED CLASS I. SHEET METAL GAUGES, FITTINGS AND INSTALLATION SHALL BE PER SMACNA LATEST EDITION OF "HVAC METAL DUCT STANDARDS". KEEP A COPY OF THE "SMACNA" STANDARDS ON THE JOBSITE. ESPECIALLY REFER TO THE "SMACNA" STANDARDS FOR ELBOWS AND FITTINGS. SUPPORT DUCTS FROM THE STRUCTURE WITH STRAPS AT EACH JOINT PER "SMACNA" STANDARDS. ALSO REFER TO DETAILS AND SECTIONS IN THIS SET OF DRAWINGS WHICH TAKE PRECEDENCE.
11. INSTALL TURNING VANES IN SUPPLY DUCTWORK AT ALL SQUARE ELBOWS. PROVIDE BALANCING DAMPERS IN ALL DUCTS WHERE REQUIRED FOR SYSTEM BALANCING AND AT EACH AIR OUTLET OR DIFFUSER AS SPECIFIED. DIFFUSERS SHALL BE INSTALLED WITH A CONTRACTOR SUPPLIED SQUARE TO ROUND TRANSITION WHERE REQUIRED.
12. ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR. CONTRACTOR SHALL INSTALL SYSTEMS, EQUIPMENT AND COMPONENTS IN ACCORDANCE WITH MINIMUM REQUIREMENTS SHOWN IN THESE PLANS. ANY DEVIATION FROM THE DESIGN PLANS SHALL ONLY BE PERFORMED IF APPROVED BY THE OWNER REPRESENTATIVE OR DESIGN ENGINEER. ALL WORK SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF ALL APPLICABLE CODES AND STANDARDS. HOWEVER, ANY DEVIATION FROM THE DESIGN PLANS IMPLIED BY LOCAL CODES THAT SUGGESTS INSTALLATION OF LESS THAN THE REQUIREMENTS SPECIFIED IN THESE DESIGN PLANS SHALL NOT BE ALLOWED WITHOUT APPROVAL BY THE OWNER REPRESENTATIVE OR THE DESIGN ENGINEER.
13. ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY SEALED USING WELDMENTS, MECHANICAL FASTENERS WITH SEALS, GASKETS OR MASTICS OR PRESSURE SENSITIVE TAPES. DUCTS SHALL BE CONNECTED TO FANS AND AIR DEVICES USING MECHANICAL FASTENERS WITH SEALS, MASTICS OR GASKETS. TAPES AND MASTICS MUST BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. MC SHALL HAVE THE OPTION TO USE TDC CONNECTIONS.
14. ALL RTU'S METAL SUPPLY, MAKE-UP AIR, AND RETURN AIR DUCTS ABOVE CEILING SHALL BE THERMALLY INSULATED WITH R-6.0 (MIN.) EXTERNAL DUCTWRAP WITH VAPOR BARRIER. ROOF CURB SHALL HAVE 1 1/2" RIGID INSULATION. NO THERMAL INSULATION IS REQUIRED ON EXHAUST DUCTS. RETURN AIR DUCTWORK EXPOSED IN DINING AREAS DO NOT REQUIRE INSULATION.
15. ALL DIFFUSERS SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH VAPOR BARRIER PERMANENTLY ATTACHED TO THE DIFFUSER. DIFFUSERS SHALL BE INSTALLED WITH CONTRACTOR SUPPLIED SQUARE TO ROUND TRANSITIONS WHERE REQUIRED.
16. APPLY INSULATION ON RIGID METAL DUCTWORK PER MANUFACTURER SPECIFICATIONS WITH 2" (MIN.) OVERLAPPING FASTENED 6" o.c. WITH 1/2" (MIN.) STAPLES. SEAL ALL JOINTS WITH PRESSURE SENSITIVE FOIL TAPE. INSULATION ON DUCTS OVER 24" WIDE, SHALL BE SECURED TO THE BOTTOM OF DUCT TO PREVENT SAGGING.
17. REFER TO DRAWING M502 FOR SCOPE OF WORK ON HVAC CONTROLS, AUTOMATION AND SEQUENCE OF NORMAL AND EMERGENCY HVAC OPERATION. MC SHALL FIELD MODIFY RTU CONTROLS TO ACCOMMODATE FRESH AIR TEMPERING KIT AS PROVIDED/REQUIRED BY RTU MANUFACTURER.
18. THE MECHANICAL CONTRACTOR SHALL PROVIDE AN OPERATION AND MAINTENANCE MANUAL TO THE BUILDING OWNER UPON COMPLETION OF THE JOB. THE MANUAL SHALL INCLUDE BASIC DATA RELATING TO THE OPERATION AND MAINTENANCE OF HVAC SYSTEMS AND EQUIPMENT AS WELL AS NAMES AND ADDRESSES OF QUALIFIED SERVICE AGENCIES. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. HVAC CONTROL DIAGRAMS, SCHEMATICS, CONTROL SEQUENCE DESCRIPTIONS, AND CALIBRATION INFORMATION SHALL BE INCLUDED. DESIRED OR FIELD DETERMINED SET POINTS MUST BE PERMANENTLY RECORDED ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS. THE MANUAL SHALL INCLUDE A COPY OF THE CONTROL SYSTEMS TESTING REPORT AND A COPY OF THE AIR BALANCE REPORT.
19. MC SHALL INSTALL EQUIPMENT AND ALL ACCESSORIES IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS FURNISHED WITH THE EQUIPMENT, INCLUDING BUT NOT LIMITED TO:
    - ALL EXTERNAL DUCT WORK.
    - REMOVE ALL SHIPPING TIE-DOWN AND SHIPPING BLOCKS.
    - INSTALL ALL BLOWER BELTS AND ACCESSORIES.
    - INSTALL ALL EXTERNAL-CONTROLLING DEVICES, SUCH AS THERMOSTATS AND DUCT SENSORS.
    - POWER, CONTROL WIRING AND FUEL PIPING TO BE PERMANENTLY INSTALLED AND CONNECTED TO THE EQUIPMENT.
    - ALL SPLIT SYSTEMS MUST BE PIPED AND CHARGED COMPLETELY (WHERE APPLICABLE).
    - ALL COMPRESSORS WHICH UTILIZE CRANKCASE HEATERS MUST HAVE HEATER ENERGIZED FOR 24 HOURS BEFORE STARTING EQUIPMENT.
    - COMPLETE START-UP, TEST AND RUN OF ALL UNITS.
    - ALL FILTERS MUST BE INSTALLED AND CLEAN
    - CHECK THAT ALL ROOFTOP UNITS HAVE BEEN NUMBERED IN THE FIELD. (i.e. RTU#1, RTU#2 etc.)
20. MC SHALL INSTRUCT BUILDING OWNER TO USE RTU FILTERS WITH A MINIMUM MERV RATING OF 13.

LMHT Project No. 23025

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PROJECT: *HOMEWARD KITCHEN* CONVERSION
10735 SOUTH U.S. HWY 15/501
SOUTHERN PINES, NORTH CAROLINA 28387

DRAWING: MECHANICAL GENERAL NOTES AND SCHEDULES

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040369 JOSEPH M. MOSS 6/9/23

NC ENGINEERING LICENSE # C-1369

HOMEWARD KITCHEN

Revisions

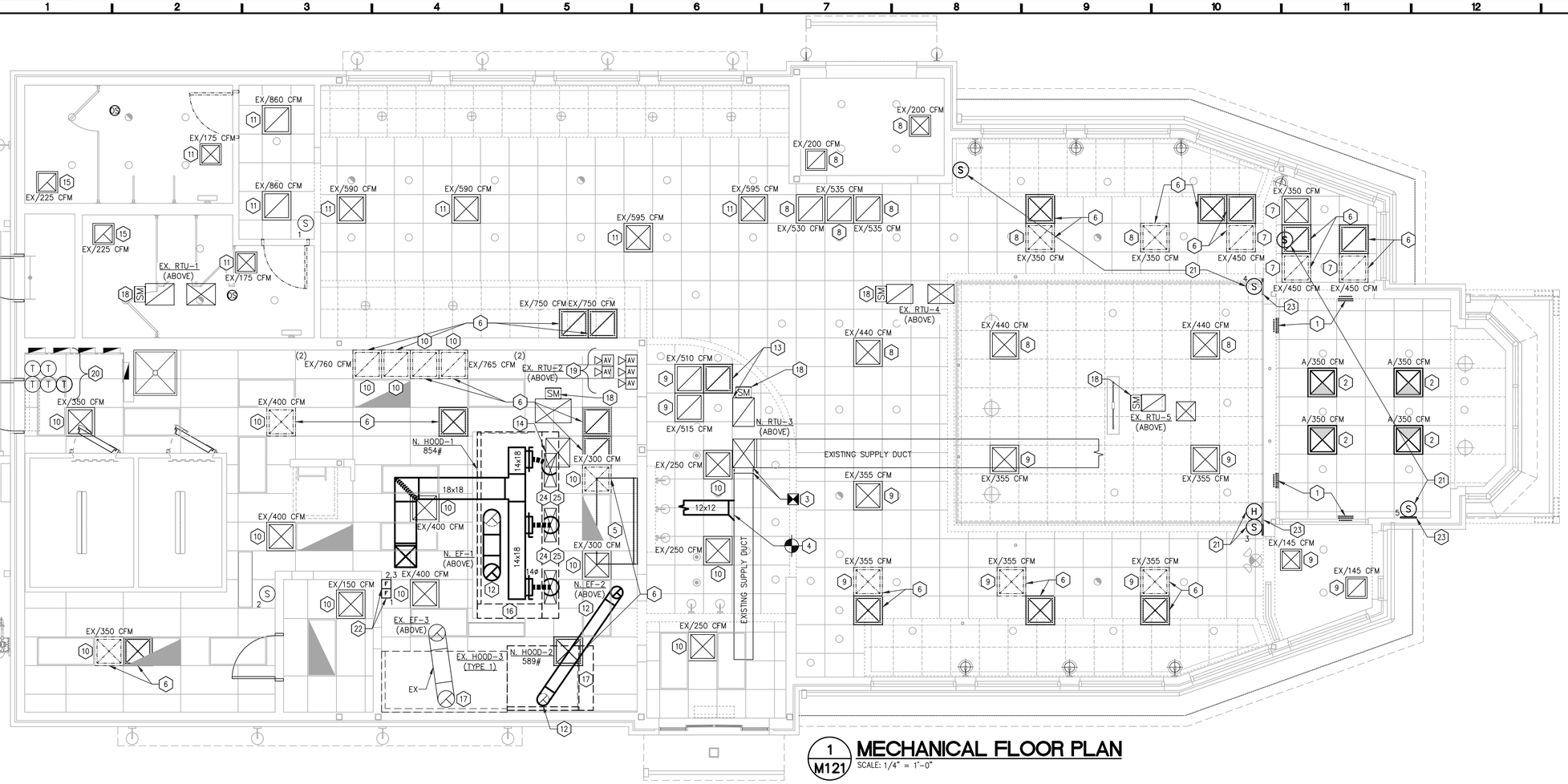
PROJECT DATE 06/09/2023

Drawn By RJB

Checked By MJM

Sheet No. **M601**

Drawing File: Z:\2023\23025-GC Homeward Kitchen Conversion\CAD\M601.dwg
Plotted by: rbrown
Plotted Date: Jun 09, 2023 - 4:58pm



1 M121 **MECHANICAL FLOOR PLAN**
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE SHEET M601 FOR OTHER GENERAL NOTES.
2. REMOVE ALL EXISTING DIFFUSERS AND GRILLES TO BE RE-USED. CLEAN, PAINT, AND RE-INSTALL DIFFUSERS AND GRILLES. RE-CONNECT BRANCH DUCT TO EXISTING DIFFUSER OR GRILLE.
3. THERE ARE FIVE (5) EXISTING SUPPLY AND RETURN DUCT SYSTEMS. EXISTING DUCT RISERS SHOWN (ONLY) UNLESS NOTED OTHERWISE. ALL NEW DUCTWORK SHOWN ON PLAN. FIELD VERIFY ALL EXISTING DIFFUSER AND GRILLE DUCT CONNECTIONS AND COMPARE TO THE EXISTING, ASSOCIATED RTU DUCT SYSTEM INDICATED ON PLAN. IF REQUIRED, MODIFY EXISTING DUCT CONNECTIONS TO MATCH PLAN.
4. FIELD VERIFY THAT EXISTING DUCT SYSTEMS CONTAIN BALANCING DAMPERS REQUIRED FOR SYSTEM BALANCING PER AIR BALANCE SCHEDULE ON SHEET M601. IF MEANS OF BALANCING IS ABSENT, MC SHALL PROVIDE BALANCING DAMPERS AS REQUIRED EITHER AT THE DUCT TAPS (IF ACCESSIBLE) OR BY PROVIDING AND INSTALLING A NEW DIFFUSER OR GRILLE EQUIPPED WITH AN OPPOSED BLADE DAMPER. ALL NEW DAMPERS SHALL BE IDENTIFIED WITH PERMANENT I.D. TAG.
5. MC SHALL VERIFY AND COORDINATE EXACT TYPE I HOOD EXHAUST DUCT CONFIGURATION AND SIZE WITH HOOD MANUFACTURER, SEE DETAIL 7/M501.
6. MC SHALL INSTALL TURNING VANES ON ALL NEW DUCT ELBOWS IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.
7. MC SHALL PROVIDE ALL TRANSITIONS FROM BRANCH DUCT TO SIZE AND SHAPE OF HOOD SUPPLY PLENUMS (PSP) AS REQUIRED.
8. MECHANICAL CONTRACTOR SHALL REFER TO EQUIPMENT SHEETS FOR INFORMATION PERTAINING TO REQUIREMENTS FOR RESTAURANT EQUIPMENT.
9. MAKE UP AIR MAINS AND BRANCHES SHALL BE ROUTED AS HIGH AS POSSIBLE AND ABOVE SUPPLY DUCTS. MAKE UP AIR DUCT MATERIAL SHALL BE AS REQUIRED BY LOCAL CODE.
10. ROOF TOP EQUIPMENT SHOWN IS FOR LENNOX EQUIPMENT. IF ALTERNATE EQUIPMENT IS SELECTED, CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL UTILITY, DUCT AND STRUCTURAL REQUIREMENTS AS REQUIRED. MC SHALL TRANSITION ALL SUPPLY AND RETURN AIR RISER/DUCTWORK TO CURB OPENINGS ASSOCIATED WITH RTU'S. BLANKING OFF ANY PART OF CURB OPENING IS NOT PERMITTED WITH TRANE RTU'S IF SELECTED. WHERE PROVIDED, ALL TRANSITIONS SHALL MEET SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
11. ALL MU AIR UNITS SHALL HAVE A MOTORIZED BACKDRAFT DAMPER PROVIDED AND INSTALLED BY CAPTIVE AIRE.
12. REFER TO HOOD SHEET H101 FOR CAPTIVE AIRE ROOM TEMPERATURE SENSOR PLACEMENT.

CONSTRUCTION NOTES:

1. REMOVE EXISTING SIDEWALL SUPPLY REGISTERS SERVED BY EX. RTU-5.
2. MODIFY/EXTEND EXISTING SUPPLY BRANCHES FROM EX. RTU-5 AND CONNECT TO NEW SUPPLY DIFFUSERS.
3. DISCONNECT EXISTING SUPPLY DUCT FROM RTU-3 DUCT SYSTEM. CAP AND SEAL AIRTIGHT.
4. CONNECT EXISTING SUPPLY DUCT SUPPLYING THE SERVING AREA TO THE KITCHEN (EX. RTU-2) SUPPLY DUCT SYSTEM. CONNECT AS CLOSE TO THE EXISTING RTU-2 SUPPLY RISER AS POSSIBLE.
5. REMOVE EXISTING HOOD AND ASSOCIATED EXHAUST DUCT UP TO THE EXHAUST FAN ON THE ROOF. SEE ROOF PLAN ON SHEET M161. REMOVE ASSOCIATED CONTROLS, WIRING, AND FIRE SYSTEMS.
6. RELOCATE EXISTING DIFFUSER OR GRILLE. MODIFY/EXTEND BRANCH DUCT AND CONNECT TO NEW LOCATION.
7. FIELD VERIFY THE DIFFUSER OR GRILLE SHOWN IS CONNECTED TO THE EX. RTU-5 DUCT SYSTEM.
8. FIELD VERIFY THE DIFFUSER OR GRILLE SHOWN IS CONNECTED TO THE EX. RTU-4 DUCT SYSTEM.
9. FIELD VERIFY THE DIFFUSER OR GRILLE SHOWN IS CONNECTED TO THE N. RTU-3 DUCT SYSTEM.
10. FIELD VERIFY THE DIFFUSER OR GRILLE SHOWN IS CONNECTED TO THE EX. RTU-2 DUCT SYSTEM.
11. FIELD VERIFY THE DIFFUSER OR GRILLE SHOWN IS CONNECTED TO THE EX. RTU-1 DUCT SYSTEM.
12. MC SHALL INSTALL KITCHEN EXHAUST FANS IN LOCATION SHOWN. MC SHALL MEET ALL LOCAL AND STATE CODE REQUIREMENTS. GREASE DUCTWORK SHALL BE DESIGNED AND PROVIDED BY HOOD CONTRACTOR, INSTALLED BY MC, TO MEET ALL LOCAL AND STATE CODE REQUIREMENTS, SEE DETAIL 7/M501 AND HOOD SHEETS PROVIDED BY OTHERS, COORDINATE WITH GENERAL CONTRACTOR (GC).
13. MC SHALL CAP AND SEAL UN-USED RETURN BRANCH DUCT.
14. MC SHALL FIELD VERIFY THERE IS EXISTING SPACE BELOW/NEXT TO THE RISER TO CONNECT TO THE NEW HOOD PSP.
15. EXISTING RESTROOM EXHAUST GRILLES, DUCT, AND ROOF MOUNTED FAN TO REMAIN.
16. UTILITY CABINET FOR FIRE PROTECTION TANKS/SYSTEM.
17. NEW HOOD CONTROL PANEL LOCATED IN NEW UTILITY CABINET, SEE HOOD SHEETS. EC TO REWIRE EXISTING FANS AND NEW FANS FOR PANEL. MC TO PROVIDE AND INSTALL LOW VOLTAGE WIRING FOR NEW AND EXISTING HOOD SENSORS. MC TO INSTALL SENSORS (PROVIDED BY CAPTIVE AIRE) IN EXISTING HOOD-3, SEE DETAIL ON HOOD SHEETS. CONTACT CAPTIVE AIRE TECHNICAL SERVICE 1-866-784-6900 FOR ASSISTANCE AS NEEDED FOR HOOD SENSOR INSTALLATION LOCATION, NEW HOODS-1 AND 2 HAVE MANUFACTURER PRE-INSTALLED FOR HOOD SENSOR. EXISTING HOOD CONTROLS SHALL BE REMOVED.

CONSTRUCTION NOTES (CONT'D):

18. SMOKE DETECTOR IS RETURN AIR DUCT OF N. RTU-3. MC SHALL INTERLOCK SMOKE DETECTOR TO SHUTDOWN N. RTU-3 UPON DETECTION OF SMOKE. ACCESS SHALL BE PROVIDED FOR INSPECTION AND MAINTENANCE. MC SHALL VERIFY CODE REQUIREMENTS OF NFPA 90A FOR SMOKE DETECTORS IN THE APPLICABLE CONFIGURATION AND INSTALL ACCORDINGLY. MC SHALL INSPECT AND FIELD VERIFY OPERATION FOR EXISTING SMOKE DETECTORS ON EXISTING RTUS.
19. PROVIDE KEYED AUDIBLE/VISUAL ALARM DEVICES FOR EACH RTU SYSTEM IN APPROVED LOCATION TO SIGNAL DUCT DETECTOR ACTIVATION. MOUNT AT 6'-6" AFF. MC AND EC SHALL TEST AND VERIFY THE SMOKE DETECTION SYSTEM WORKS PROPERLY AND MEETS ALL LOCAL AND STATE CODE REQUIREMENTS.
20. MC SHALL REPLACE THERMOSTAT FOR NEW RTU-3 WITH NEW. ALL EXISTING RTUS THERMOSTATS SHALL REMAIN IN PLACE. LABEL EACH THERMOSTAT FOR EASY IDENTIFICATION. MC SHALL PROVIDE ALL REQUIRED CONTROL WIRING, J-BOX, AND TERMINATIONS.
21. MC SHALL RELOCATE EXISTING REMOTE TEMPERATURE AND HUMIDITY (IF APPLICABLE) SENSORS AT 60" AFF. IF SHOWN. MC SHALL PROVIDE NEW SENSORS FOR NEW RTU-3. MC SHALL PROVIDE ALL REQUIRED CONTROL WIRING, J-BOX, AND TERMINATIONS AS REQUIRED BACK TO THE THERMOSTATS IN THE OFFICE.
22. MC SHALL INSTALL MANUAL SUPPRESSION FIRE PULL, PROVIDED BY HOOD SUPPLIER, AT LOCATION SHOWN. MOUNT FIRE PULL AT 48" AFF BETWEEN 10 AND 20 FEET FROM THE COOKING EQUIPMENT SERVED.
23. REMOTE SENSOR INSULATED BACKING BLOCK. SEE DETAIL 9/M501.
24. MC SHALL PROVIDE AND INSTALL MAKE-UP AIR RISER (TURN UP AND TRANSITION RISER SIZE TO FIT WITHIN CURB WITH VIBRATION DAMPER) FROM SUPPLY FAN. ROUTE MAKE-UP AIR DUCTWORK AS SHOWN AND PROVIDE BALANCING DAMPER AND ALL SQUARE TO ROUND TRANSITIONS TO HOOD SUPPLY PLENUMS AS REQUIRED. SEE HOOD SHEETS FOR PSP CONNECTION SIZES AND SUPPLY CFMS REQUIRED. MAINTAIN 18" CLEAR BETWEEN HOOD AND COMBUSTIBLE MATERIALS. PROVIDE RIGID COLLAR AND EXTENSION AS REQUIRED. SEE GEN. NOTE 13.
25. MC SHALL CONTACT THE LOCAL AUTHORITIES ABOUT MAKE-UP AIR DUCT MATERIAL REQUIRED. SUBSTITUTE THE FLEX DUCT WITH RIGID IF REQUIRED BY THE LOCAL CODE.

LEGEND:

- 24"x24" NEW SUPPLY DIFFUSER
- 24"x24" NEW SUPPLY DIFFUSER w/BLANK OFF
- 24"x24" EXISTING SUPPLY DIFFUSER
- 24"x24" DEMO SUPPLY DIFFUSER
- 24"x24" RELOCATED SUPPLY DIFFUSER
- 24"x24" DEMO RETURN DIFFUSER
- 24"x24" EXISTING RETURN DIFFUSER
- 24"x24" RELOCATED RETURN DIFFUSER
- 18"x18" EXISTING SUPPLY DIFFUSER
- 18"x18" EXISTING RETURN DIFFUSER
- 18"x18" EXISTING EXHAUST DIFFUSER
- CONNECT TO THIS POINT
- DEMO TO THIS POINT
- T_1 THERMOSTAT w/RTU DESIGNATION
- S_1 REMOTE TEMPERATURE SENSOR w/RTU DESIGNATION
- H_1 REMOTE HUMIDITY SENSOR w/RTU DESIGNATION
- F MANUAL FIRE SUPPRESSION PULL
- SUPPLY AIR DUCT ELBOW/RISER
- RETURN AIR DUCT ELBOW/RISER
- EXHAUST AIR DUCT ELBOW/RISER
- MANUAL SPIN-IN COLLAR w/FLEXDUCT
- DETAIL NUMBER / SHEET NUMBER
- M.C. MECHANICAL CONTRACTOR
- G.C. GENERAL CONTRACTOR
- P.C. PLUMBING CONTRACTOR
- E.C. ELECTRICAL CONTRACTOR
- DIFFUSER SYMBOL SEE SHEET M601 FOR SCHED.
- C/215 CFM — AIRFLOW (CFM)

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NC ENGINEERING LICENSE # C-1369

HOMEWARD KITCHEN

LMHT Project No. 23025

PROJECT: *HOMEWARD KITCHEN* CONVERSION
10735 SOUTH U.S. HWY 15/501
SOUTHERN PINES, NORTH CAROLINA 28387

DRAWING: MECHANICAL FLOOR PLAN

Revisions

PROJECT DATE 06/09/2023
Drawn By RJB
Checked By MJM
Sheet No. **M121**

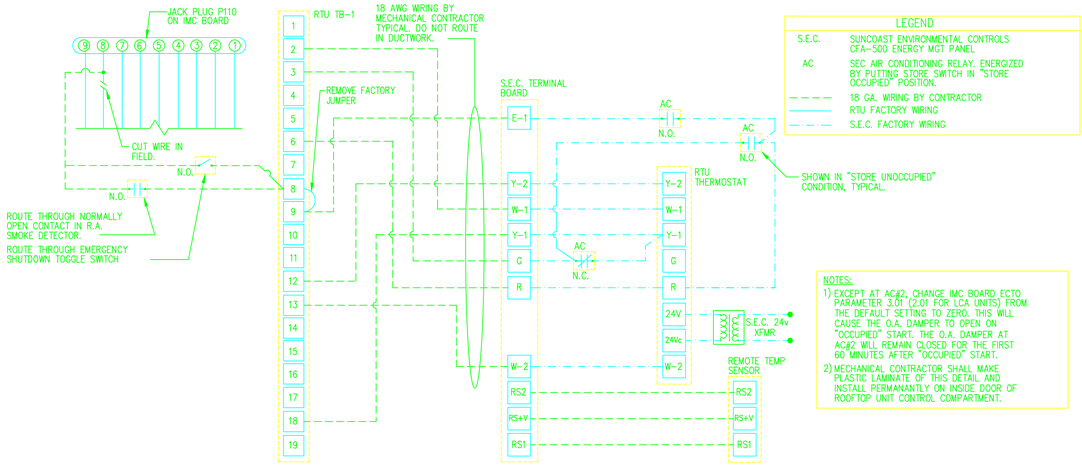
Drawing File: Z:\2023\23025-GC Homeward Kitchen Conversion\CAD\M121.dwg
Plotted by: rbrown
Plotted Date: Jun 09, 2023 - 5:00pm

AIR BALANCE SCHEDULE

AIR TYPE	TOTAL CFM
SUPPLY	16,445
RETURN	12,895
EXHAUST	2,940
OUTSIDE AIR	3,550
BUILDING POSITIVE PRESSURE	610

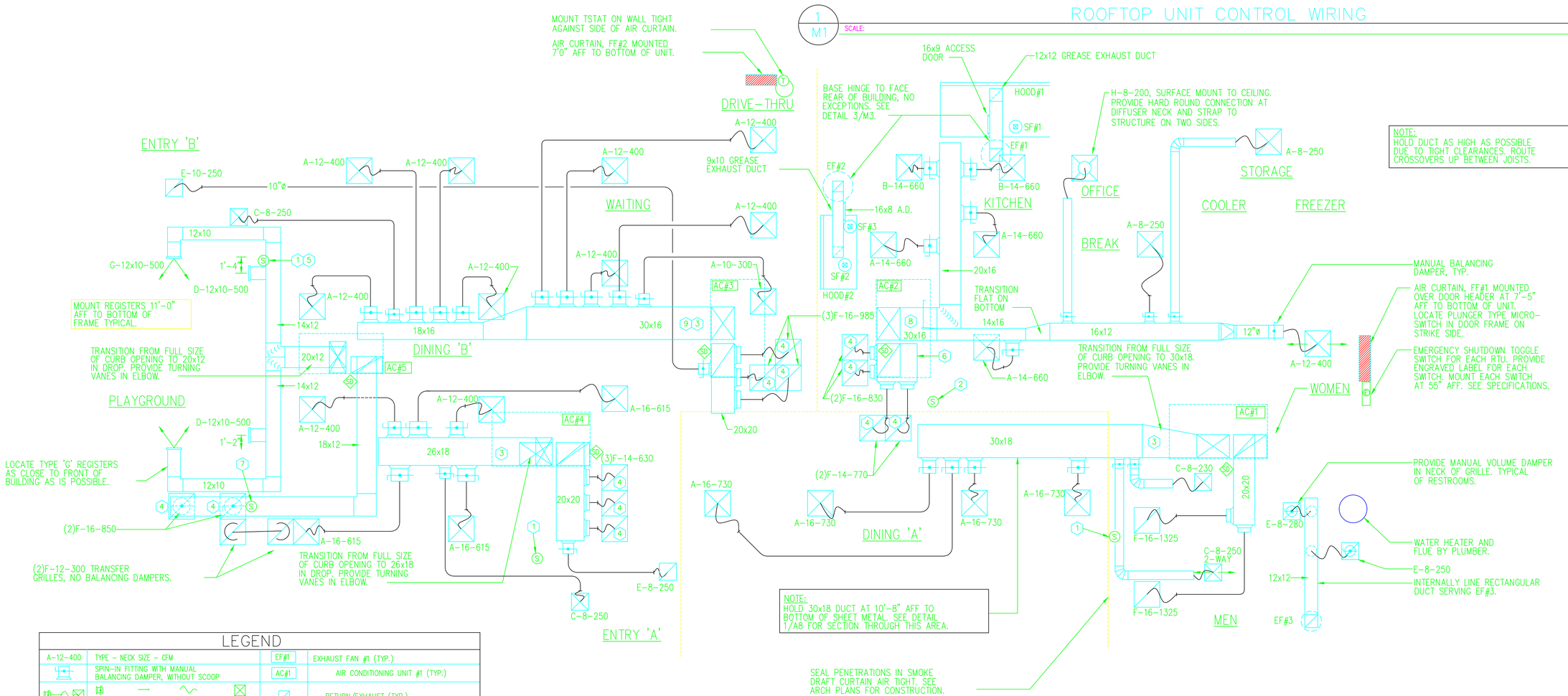
KEY NOTES

1. MOUNT REMOTE SENSOR ON WALL AT 5'-0" AFF AND ROUTE WIRING BACK TO SUNCOAST TEMPERATURE CONTROL PANEL.
2. MOUNT REMOTE SENSOR ON WALL AT 7'-0" AFF BETWEEN THE ICE MAKER AND VEGATABLE SINK, APPROX 8'10" FROM FRONT WALL. ROUTE WIRING TO SUNCOAST TEMPERATURE CONTROL PANEL.
3. BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 4'-0" FROM THE ELBOW AT THE SUPPLY AIR DROP FROM CURB.
4. PROVIDE METALAIRE MODEL BDS NECK DAMPER, WHERE SHOWN AT TYPE "F" RETURN AIR GRILLES IN LIEU OF DAMPER AT SPIN-IN.
5. LOCATE AS FAR AWAY FROM DOOR AS POSSIBLE.
6. HOLD 38"x36"x20" DEEP PLENUM CLOSE TO STRUCTURE. ROUTE FROM FULL SIZE OF CURB OPENING TO TOP OF PLENUM.
7. MOUNT REMOTE SENSOR FOR PLAYGROUND 9'-6" AFF NEAR THE RETURN AIR GRILLE ON THE WALL, AND ROUTE WIRING BACK TO SUNCOAST TEMPERATURE CONTROL PANEL.
8. TRANSITION FROM FULL SIZE OF CURB OPENING TO 30x16 IN DROP. PROVIDE TURNING VANES IN ELBOW.
9. TRANSITION FROM FULL SIZE OF CURB OPENING TO 30x16 IN DROP. PROVIDE TURNING VANES IN ELBOW.



1/M1 ROOFTOP UNIT CONTROL WIRING

SCALE: NONE



LEGEND

A-12-400	TYPE - NECK SIZE - CFM	EF#1	EXHAUST FAN #1 (TYP.)
	SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP	AC#1	AIR CONDITIONING UNIT #1 (TYP.)
	SPIN-IN / HARDø / FLEXIBLEø / DIFFUSER		RETURN/EXHAUST (TYP.)
S	REMOTE TEMPERATURE SENSOR.		SUPPLY DIFFUSER, SQ FACE (TYP.)
1	PLAN NOTE REFERENCE		SPLITTER DAMPER
SD	SMOKE DETECTOR		MANUAL VOLUME DAMPER
12x18	DUCT SIZE 1ST NUMBER - HORIZONTAL DIMENSION 2ND NUMBER - VERTICAL DIMENSION		DIRECTION OF THROW ON DIFFUSER

MECHANICAL FLOOR PLAN

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

SHEET NOTES

1. DUCT SIZES SERVING DIFFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE NECK UNLESS NOTED OTHERWISE.

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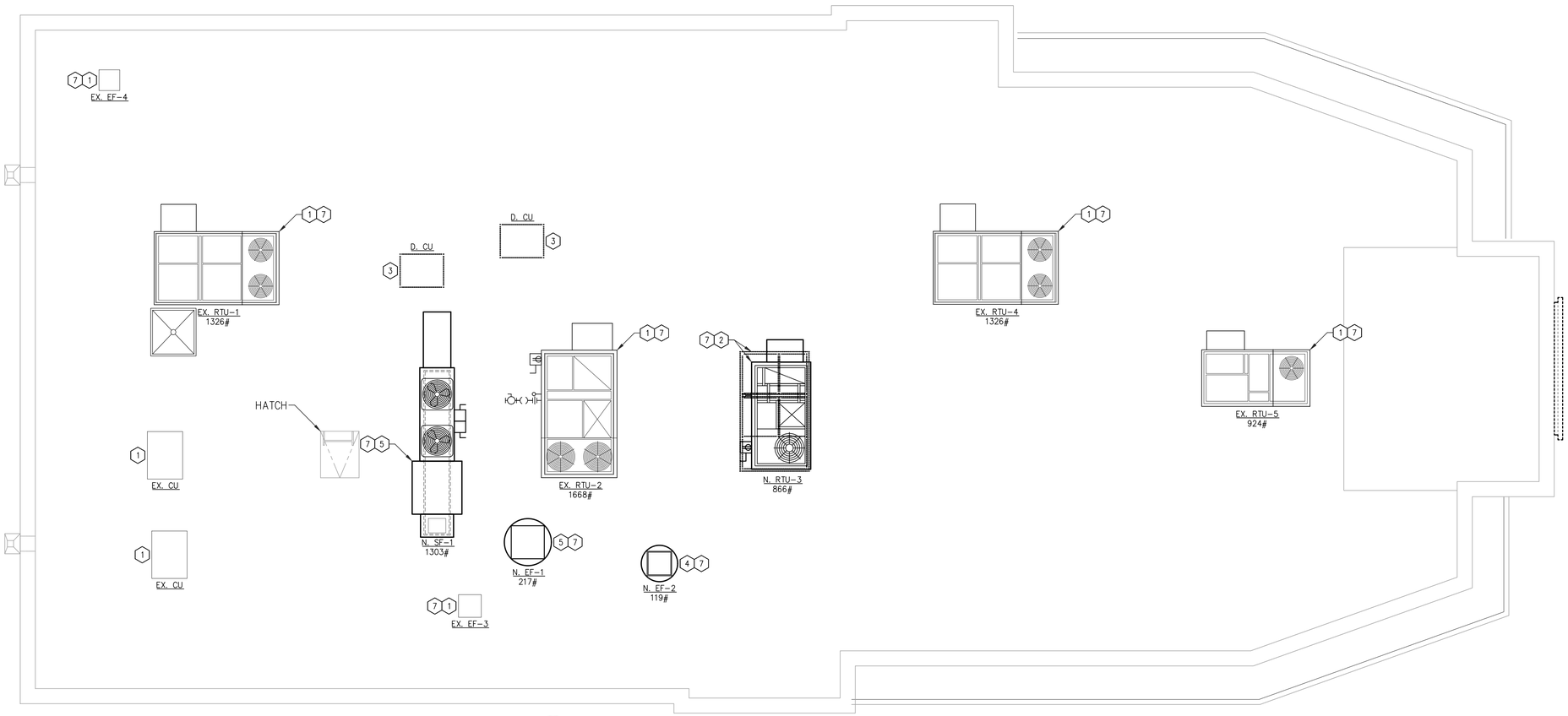
MECHANICAL FLOOR PLAN

M1



1 M161 **MECHANICAL ROOF PLAN**
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. SEE SHEET M601 FOR OTHER GENERAL NOTES.
2. MC SHALL COORDINATE WITH GC FOR ALL NEW ROOF OPENINGS.
3. ALL MECHANICAL EXHAUST OUTLETS SHALL BE INSTALLED 10' (MIN.) FROM OR 3' (MIN.) ABOVE ANY BUILDING FRESH AIR INTAKE AS SHOWN.
4. ALL NEW ROOF TOP UNITS SHALL BE LEVEL AFTER INSTALLATION. MC SHALL VERIFY ALL RTU'S DRAIN PANS FOR PROPER DRAINAGE.
5. MC SHALL PLACE HINGES FOR NEW EXHAUST FANS ON ELECTRICAL DISCONNECT SIDE, COORDINATE FINAL LOCATIONS WITH EC.
6. ALL NEW GAS PIPING AND ELECT. CONDUITS PENETRATING ROOF SHALL GO THROUGH ROOF CONDUIT CURB (SEE PLUMBING AND ELECTRICAL PLANS) INSTALLED BY GC & ROOFING CONTRACTOR; EC AND PC SHALL COORDINATE. INSTALL PER ROOFING MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
7. MC SHALL FIELD VERIFY EXISTING STRUCTURAL CONFIGURATION, ADJUST NEW FAN CURB LOCATIONS AS REQUIRED TO AVOID ROOF STRUCTURE
8. MC SHALL PLACE EQUIPMENT ON ROOF AS SHOWN ON PLAN.

CONSTRUCTION NOTES:

1. EXISTING HVAC ROOFTOP EQUIPMENT TO REMAIN. MC SHALL INSPECT EXISTING HVAC ROOFTOP EQUIPMENT OPERATION AND REPAIR AS REQUIRED FOR NORMAL OPERATION.
2. MC SHALL REMOVE EXISTING RTU-3. PROVIDE AND INSTALL NEW CURB ADAPTER AND NEW ROOFTOP UNIT, RTU-3, IN ITS PLACE.
3. MC SHALL REMOVE EXISTING CONDENSERS AND ASSOCIATED LINE SETS AND SUPPORTS. COORDINATE WITH GC TO SEAL ANY POTENTIAL ROOF OPENINGS.
4. MC SHALL REMOVE EXISTING ROOFTOP EXHAUST FAN. EXISTING CURB TO REMAIN. PROVIDE AND INSTALL NEW CURB ADAPTER AND EXHAUST FAN. SEE HOOD SHEETS.
5. MC SHALL FIELD VERIFY EXACT LOCATIONS FOR N. EF-1 AND N. SF-1. COORDINATE WITH STRUCTURE. ENSURE ROOFTOP EQUIPMENT CLEARANCES ARE MAINTAINED. ENSURE EXHAUST DISCHARGE IS A MINIMUM OF 10' FROM OUTSIDE AIR INTAKE OR AT LEAST 3' ABOVE OUTSIDE AIR INTAKES.
6. NOT USED
7. MC SHALL LABEL NEW AND EXISTING RTU'S, EF'S AND SF'S WITH RTU/EF/SF # (3" HIGH BLACK LETTERS) AS APPLICABLE, I.E. "RTU #1". ADD "MERV 13 FILTERS ONLY" UNDER THE RTU # LABEL.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL JOSEPH M. JOHNSON 6/9/23

NC ENGINEERING LICENSE # C-1369

HOMEWARD KITCHEN

PROJECT: *HOMEWARD KITCHEN* CONVERSION
10735 SOUTH U.S. HWY 15/501
SOUTHERN PINES, NORTH CAROLINA 28387

DRAWING: MECHANICAL ROOF PLAN

Revisions

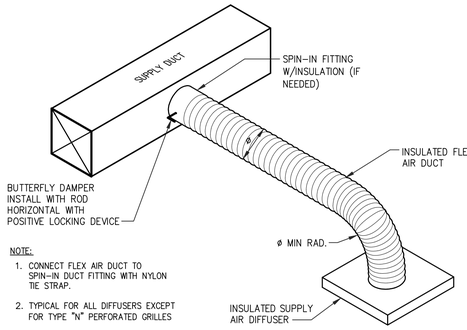
PROJECT DATE
06/09/2023

Drawn By
RJB

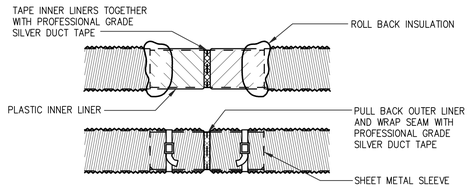
Checked By
MJM

Sheet No.
M161

Drawing File: Z:\2023\23025-GC Homeward Kitchen Conversion\CAD\M161.dwg
Plotted by: tbrown
Plotted Date: Jun 09, 2023 - 4:59pm

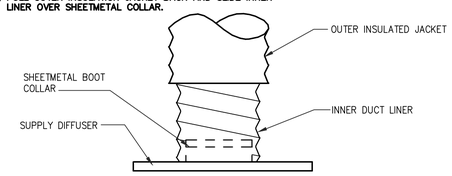


1 M501 TYPICAL DUCT CONNECTION
N.T.S.

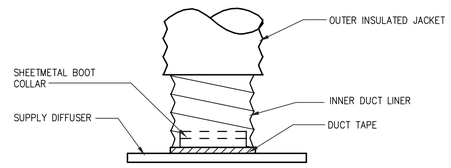


2 M501 FLEXIBLE DUCT SPLICING DETAIL
N.T.S.

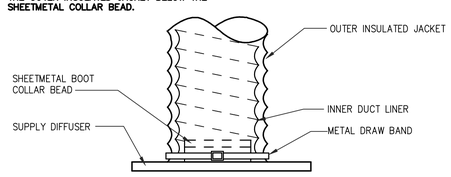
1. PULL OUTER INSULATION JACKET BACK AND SLIDE INNER LINER OVER SHEETMETAL COLLAR.



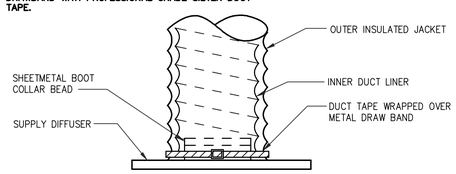
2. TAPE INNER LINER TO SHEETMETAL COLLAR WITH PROFESSIONAL GRADE SILVER DUCT TAPE.



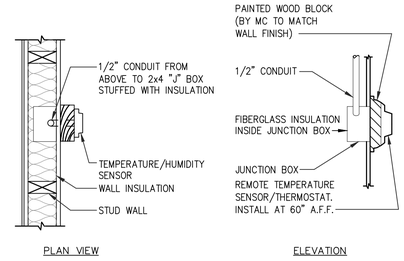
3. PULL OUTER INSULATED JACKET OVER SHEETMETAL COLLAR AND PLACE A METAL DRAW BAND OVER THE OUTER INSULATED JACKET BELOW THE SHEETMETAL COLLAR BEAD.



4. CUT EXCESS METAL DRAWBAND OFF AND WRAP METAL DRAWBAND WITH PROFESSIONAL GRADE SILVER DUCT TAPE.

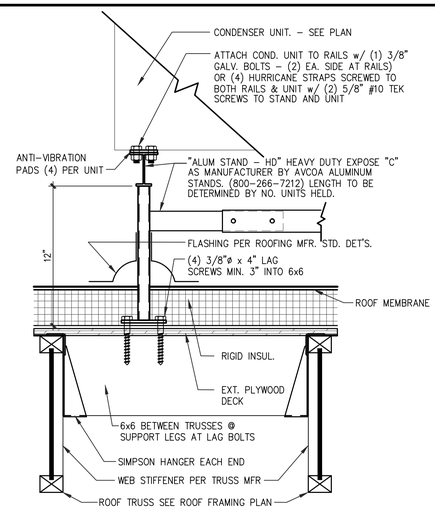


5 M501 FLEX DUCT CONNECTION TO DIFFUSERS AND SHEETMETAL DUCTWORK COLLARS
SCALE: NONE

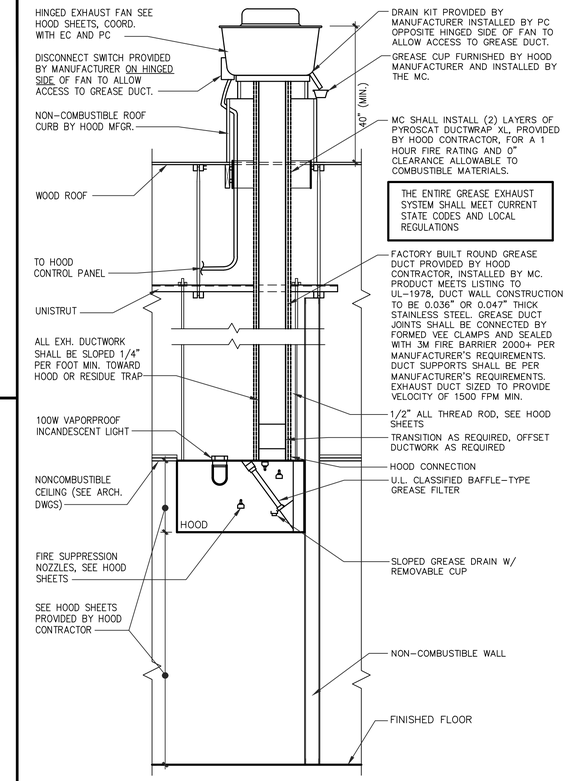


9 M501 REMOTE SENSOR/THERMOSTAT STANDOFF BLOCK INSTALLATION
SCALE: NONE

NOTE:
MOUNT WOOD BLOCK BEHIND REMOTE SENSOR TO INSULATE IT FROM WALL.
PACK FIBERGLASS INSULATION INTO JUNCTION BOX.

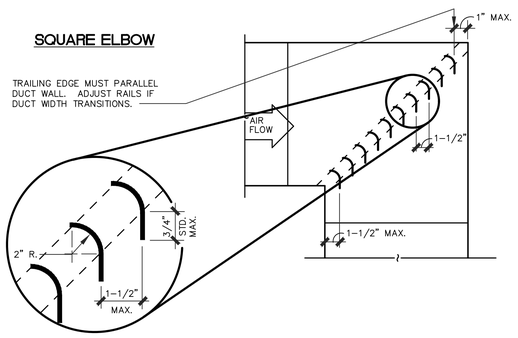


6 M501 CCONDENSER SUPPORT
SCALE: NOT TO SCALE



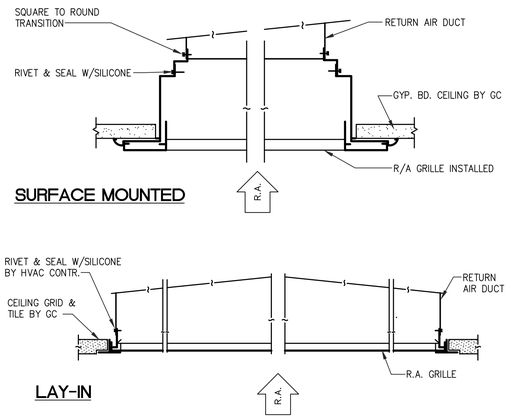
7 M501 TYP. GREASE HOOD AND DUCT DETAIL
SCALE: NONE (TYPE I)

NOTE:
1) REQUIREMENTS SHOWN ARE FOR A TYPE "1" HOOD IN A SINGLE STORY BUILDING WITH NON-RATED ROOF ASSEMBLY.
2) HOOD SHALL BE LISTED BY NATIONAL AGENCY, SEE HOOD SHEETS.
3) FACTORY BUILT CLEAN-OUTS SHALL BE PROVIDED IN GREASE EXHAUST DUCT AT ALL CHANGES IN DIRECTION. THE CLEAN-OUT PANEL SHALL BE MADE OF THE SAME MATERIAL AND THICKNESS AS THE DUCT. THE C.O. PANEL SHALL HAVE A GASKET OR SEALANT THAT IS RATED FOR 1500° MIN. AND SHALL BE GREASE TIGHT.
4) GC SHALL PROVIDE FIRE RATED ACCESS PANEL AT THE DUCT ENCLOSURE TO ACCESS DUCT CLEANOUTS. A SIGN SHALL BE PLACED ON ALL FIRE SHIELDING ACCESS PANELS STATING-"ACCESS PANEL-DO NOT OBSTRUCT".
5) MC SHALL VERIFY WITH LOCAL CODE OFFICES ON ACCEPTABILITY OF PARTICULAR DUCT-WRAP MODEL AND MANUFACTURER. INSTALL ONLY LOCALLY APPROVED MATERIALS.
6) MAINTAIN 18" CLEAR FROM HOOD (INCLUDING TOP) TO COMBUSTIBLE MATERIALS UNLESS APPROVED SHIELDING IS APPLIED TO REDUCE CLEARANCE.

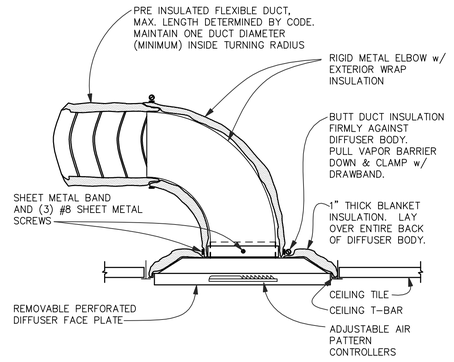


3 M501 TYPICAL DUCT ELBOW
N.T.S.

NOTE:
1. THIS IS AN ASHRAE TYPE 3 VANE AVAILABLE FROM BARBER-COLEMAN OR SHOP FAB. WITH RAILS FROM "EAST COAST METAL DISTRIBUTORS" OR EQUAL.
2. ALL RECTANGULAR 90° ELBOWS AND TEES SHALL HAVE TURNING VANES.



4 M501 GRILLE CONNECTION
N.T.S.



8 M501 LAY-IN DIFFUSER DETAIL
SCALE: NOT TO SCALE

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HOMEWARD KITCHEN

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DRAWING: MECHANICAL DETAILS

Revisions

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Drawn By RJB
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Drawing File: Z:\2023\23025-GC Homeward Kitchen Conversion\CAD\M501.dwg
Plotted by: rbrown
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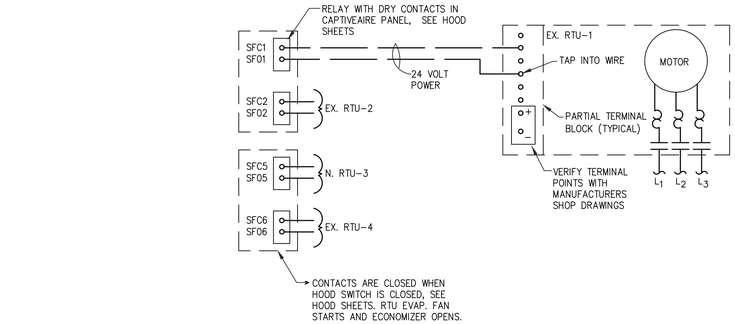
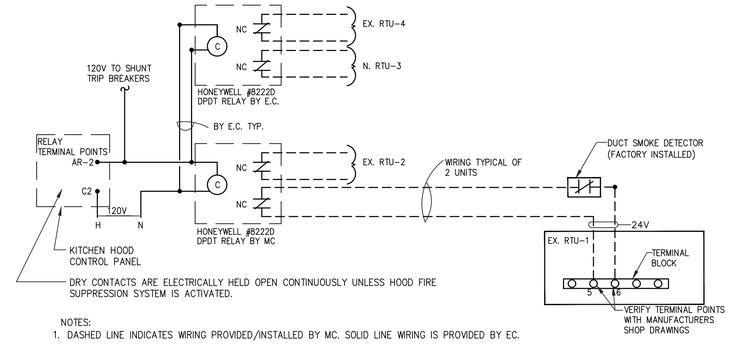


NOTES:
1. MC SHALL WIRE SENSOR TO RTU TERMINAL BLOCK #1 IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. DASHED LINE INDICATES WIRING PROVIDED/INSTALLED BY MC SOLID LINE WIRING IS PROVIDED BY EC.

1 / M502 RTU INTERLOCK WIRING DETAIL

SCALE: NONE



NOTES:
1. DASHED LINE INDICATES WIRING PROVIDED/INSTALLED BY MC. SOLID LINE WIRING IS PROVIDED BY EC.
2. RTU UNITS SHALL SHUT DOWN UPON FIRE DETECTION BY HOOD ANSUL SYSTEM, SEE "HVAC SEQUENCE OF OPERATION" ON SHEET M601. COORDINATE WIRING WITH MANUFACTURERS SHOP DRAWINGS. SEE HOOD SHEETS.
3. THE MECHANICAL CONTRACTOR SHALL INSTALL ADDITIONAL WIRING BETWEEN TERMINAL POINT AND FACTORY MOUNTED SMOKE DETECTOR AS SHOWN. FACTORY MOUNTED SMOKE DETECTOR SHALL REMAIN.

2 / M502 EMERGENCY AC UNIT SHUT DOWN DETAIL

SCALE: NONE

HVAC SEQUENCE OF OPERATION

MC SHALL SET THERMOSTAT 'OCCUPIED' AND 'UNOCCUPIED' MODES TO OWNER'S OPERATION SCHEDULE.

NORMAL OPERATION (OCCUPIED):
N. EF-1, N. EF-2, AND EX. EF-3; EVAPORATOR FAN, AND ECONOMIZER (IF APPLICABLE) ON EX. RTU-1, EX. RTU-2, N. RTU-3, AND EX. RTU-4 SHALL OPERATE CONTINUOUSLY UPON ACTIVATION OF THE "OCCUPIED" SWITCH. NORMALLY OPEN CONTACTS FOR THIS ARE INCLUDED INTERNALLY IN THE HOOD CONTROL PANEL. SEE HOOD SHEETS AND DETAILS ON M502.

THE TEMPERATURE SCHEDULE SET POINTS SHALL BE SPECIFIC FOR EACH RTU AND SHALL BE FIELD ADJUSTABLE.
SPACE TEMPERATURE SET POINTS: RTU-1,3-4: 74°F COOLING, 70°F HEATING
RTU-2: 78°F COOLING, 68°F HEATING

SPACE HUMIDITY SET POINTS: RTU-3: 50% RH

ALL RTU'S COOLING/HEATING SWITCH/OVER SHALL BE AUTOMATIC BASED ON THE SPACE DEMAND. EVAPORATOR FANS SHALL BE SET TO RUN CONTINUOUSLY(ON) DURING "OCCUPIED" PERIODS. OUTSIDE AIR INTAKE ON ECONOMIZERS OR DAMPERS SHALL BE IN MINIMUM OPEN POSITION TO DELIVER CFM'S INDICATED IN AIR BALANCE SCHEDULE ON SHEET M601 OR SHALL FOLLOW THE ECONOMIZER OPERATION DESCRIBED BELOW.

UPON DEACTIVATION OF THE "OCCUPIED" SWITCH THE KITCHEN AND DINING ROOM LIGHTS, ALL EXHAUST FANS, EVAPORATOR FANS AND ECONOMIZERS ON EX. RTU-1, EX. RTU-2, N. RTU-3, AND EX. RTU-4 SHALL START TIME DELAYED OFF (SUBJECT TO HOODSTAT AND/OR ZONESENSOR OVERRIDE).

EX. RTU-5 SHALL BE CONTROLLED BY THERMOSTAT.

THE TEMPERATURE SCHEDULE SET POINTS SHALL BE SPECIFIC FOR EACH RTU AND SHALL BE FIELD ADJUSTABLE.
SPACE TEMPERATURE SET POINTS: RTU-5: 74°F COOLING, 70°F HEATING

SPACE HUMIDITY SET POINTS: NONE

EX. EF-4 CONTROLS TO REMAIN.

ECONOMIZER OPERATION (IF APPLICABLE)
THE RTU'S EQUIPPED WITH ECONOMIZERS (SEE UNITS SCHEDULE ON SHEET M601) SHALL UTILIZE "FREE COOLING" AS THE FIRST STAGE OF COOLING. WHEN OUTDOOR AIR ENTHALPY IS LOWER THAN THE MIXED AIR ENTHALPY, OUTSIDE AIR INTAKE DAMPERS SHALL MODULATE FROM MIN. TO MAX. OPEN POSITION AND SPACE RETURN AIR DAMPERS SHALL MODULATE FROM MAX. TO MIN. RELIEF DAMPERS SHALL BE CONTROLLED RESPECTIVELY VIA INTEGRAL RTU CONTROL. IF THE OUTSIDE AIR ALONE CANNOT SATISFY THE SPACE COOLING DEMAND, THE COMPRESSORS SHALL BE ENERGIZED IN STAGES. WHEN OUTDOOR AIR ENTHALPY IS HIGHER THAN MIXED AIR ENTHALPY, OR WHEN THE LOW LIMIT SENSOR LOCATED IN DISCHARGE AIR REACHES ITS SET POINT (55°F -ADJ.), THEN OUTDOOR AIR AND RETURN AIR DAMPERS SHALL BE SET TO DELIVER MINIMUM O.A. CFM's INDICATED IN THE AIR BALANCE SCHEDULE.

NIGHT SETBACK OPERATION (UNOCCUPIED)
SPACE TEMPERATURE SET POINTS: ALL RTUS: 85°F COOLING, 60°F HEATING.

ALL RTU'S EVAPORATOR FANS, COMPRESSORS AND HEATER SHALL RUN ON DEMAND ONLY.(AUTO) ANY MOTORIZED OUTSIDE AIR DAMPERS SHALL BE IN CLOSED POSITION. MC SHALL VERIFY REQUIREMENT FOR AUTOMATIC SETBACK CONTROL WITH LOCAL AUTHORITIES AND COORDINATE WITH EQUIPMENT SUPPLIER.

FIRE PROTECTION GLOBAL SHUTDOWN:
IF LOCAL CODE OFFICIAL REQUIRES GLOBAL SHUTDOWN OF ALL RTU's UPON SMOKE DETECTION IN ANY RTU DUCTWORK, THE MECHANICAL CONTRACTOR SHALL PROVIDE A RELAY IN EACH RTU TIED TO THE STAND ALONE SMOKE ALARM SMOKE DETECTION SYSTEM TO SHUT DOWN ALL RTU's SIMULTANEOUSLY.

HOOD:
THE INTERIOR OVERRIDE SWITCH (HOODS ON) SHOULD BE TURNED ON BY THE MANAGER UPON ARRIVAL. WHEN FINISHED FOR THE DAY, THE MANAGER SHOULD TURN THE INTERIOR OVERRIDE SWITCH OFF AND TIME DELAYED OFF (SUBJECT TO HOODSTAT AND/OR ZONESENSOR OVERRIDE) COMMENCES.

AUTOMATIC BACK-UP OPERATION: WHEN THE HOOD TEMPERATURES ARE GREATER THAN 15 DEGREES ABOVE THE ROOM TEMPERATURE (AS MEASURED BY DUCT STAT IN HOOD RISER AND COMPARED TO BASE ROOM SENSOR TEMPERATURE), ALL FAN LIGHTS WILL BE FORCED ON IF NOT PREVIOUSLY ON BY OTHER MEANS (SWITCH).

FAN/LIGHTS WILL REMAIN ON AS LONG AS EITHER OF THE FOLLOWING CONDITIONS EXIST 1) "OCCUPIED" SWITCH IS IN THE "ON" POSITION, OR 2) AUTOMATIC OPERATION I.E. HOOD TEMPERATURES ARE GREATER THAN 15 DEGREES ABOVE ROOM TEMPERATURE.

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Plotted by: rbrown
Plotted Date: Jun 09, 2023 - 4:58pm

LMHT Project No. 23025

NATIONAL RESTAURANT DESIGNERS
A DIVISION OF LMHT ARCHITECTS
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL JOSEPH HORNE 038161

NC ENGINEERING LICENSE # C-1369

HOMEWARD KITCHEN

PROJECT: HOMEWARD KITCHEN CONVERSION
10735 SOUTH U.S. HWY 15/501
SOUTHERN PINES, NORTH CAROLINA 28387

DRAWING: MECHANICAL CONTROLS

Revisions

PROJECT DATE
06/09/2023

Drawn By
RJB

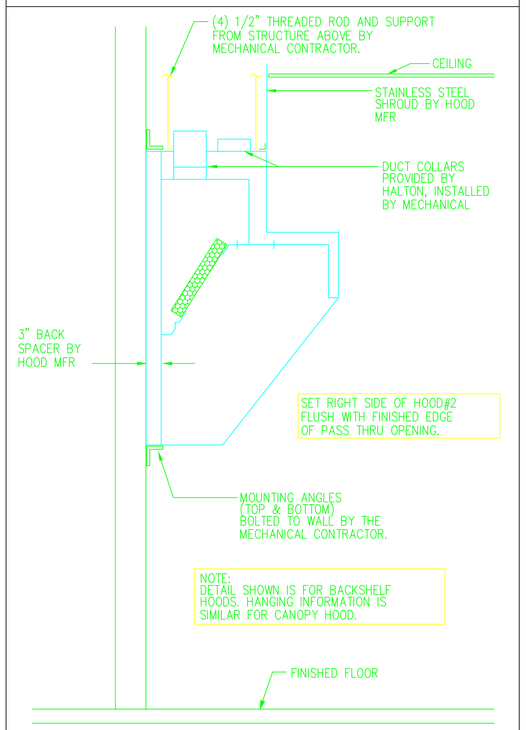
Checked By
MJM

Sheet No.
M502

KITCHEN HOOD SYSTEMS NOTES

1. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT WITH HALTON CO. FOR THE HOODS. CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
2. REFER TO "PART 2 CONTROLS" OF THE MECHANICAL SPECIFICATIONS FOR DIFFERENTIATION BETWEEN CONTROL AND POWER WIRING RESPONSIBILITIES.
3. ANY CONTACTORS OR WIRING REQUIRED FOR SHUT-OFF OF ELECTRIC COOKING EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
4. ALL ROOF CURBS SHALL BE SHIMMED LEVEL.
5. ROOF CURBS FOR EXHAUST SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE "NATIONAL ROOFING CONTRACTORS ASSOCIATION" GUIDELINES, AND THE ROOFING SUPPLIER'S DETAILS AND GUIDELINES FOR THE SPECIFIC ROOFING MATERIALS USED. ALL CURB INSULATION SHALL BE SUPPLIED AND INSTALLED BY ROOFING CONTRACTOR.
6. THE GENERAL CONTRACTOR SHALL PROVIDE ALL ROOFCUT OPENINGS AND OTHER STRUCTURAL REQUIREMENTS FOR THE INSTALLATION OF ALL ROOF EQUIPMENT. REFER TO STRUCTURAL FRAMING PLAN FOR EQUIPMENT LOCATION DIMENSIONS.
7. THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF A COMPLETE WET ANSUL SYSTEM FURNISHED BY HALTON. THE HOOD SHALL BE FURNISHED PRE-PIPED BY HALTON. COMPONENTS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF NFPA-96, NFPA-17A, ALL APPLICABLE STATE AND FEDERAL CODES AND STANDARDS.
8. THE R-102 ANSUL FIRE SUPPRESSION SYSTEM EXTERNAL TO THE HOODS SHALL BE INSTALLED IN ACCORDANCE WITH HOOD MANUFACTURER'S SHOP DRAWINGS BY AN AUTHORIZED ANSUL SYSTEM INSTALLER HIRED BY HALTON.
9. PORTABLE FIRE EXTINGUISHERS IN THE KITCHEN SHALL BE PROVIDED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH NFPA-10 AND LOCAL REQUIREMENTS.
10. OUTLETS OF EXHAUST FANS SHALL BE AT LEAST 40 INCHES ABOVE ROOF LINE.
11. EXHAUST FANS SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ANY FRESH AIR INTAKE. MEASUREMENT SHALL BE MADE USING STRETCHED STRING METHOD.
12. HOOD EXHAUST DUCTWORK SHALL BE 16 GA. BLACK STEEL WITH CONTINUOUS LIQUID TIGHT WELD OF JOINTS & SEAMS.
13. TURNS IN GREASE EXHAUST DUCTWORK SHALL BE LONG RADIUS TYPE, R=3W/2, NO EXCEPTIONS ALLOWED. NO MITERED FITTINGS ALLOWED.
14. HOODS AND ASSOCIATED DUCTWORK SHALL BE INSTALLED PER NFPA 96 AND LOCAL CODES.
15. ALL STAINLESS STEEL SHROUDS SHALL BE SUPPLIED BY HOOD MANUFACTURER AND INSTALLED BY THE GENERAL CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
16. HOODS, FANS AND ACCESS DOORS SHALL BE LISTED BY UNDERWRITERS INC. AND SHALL MEET REQUIREMENTS OF NFPA-96.
17. ACCESS DOORS SHALL BE REMOVABLE WITHOUT USE OF TOOLS AND BE PROVIDED WITH GASKET SEAL.
18. SLOPE ALL GREASE EXHAUST DUCT BACK TO HOOD AT 1/4" PER FOOT OF RUN.
19. IF REQUIRED BY LOCAL AHJ, WRAP NEW GREASE DUCT IN TWO LAYERS OF 3M FIREMASTER OR ONE LAYER OF 3M FASTWRAP. ACCESS DOORS SHALL BE INSTALLED ACCORDING TO 3M FIRE BARRIER PRODUCTS INSTALLATION MANUAL FIGURE 2. DUCT WRAP SHALL BE PRICED AS AN ALTERNATE SEPARATE FROM THE BASE BID.

SIDE VIEW OF HOOD



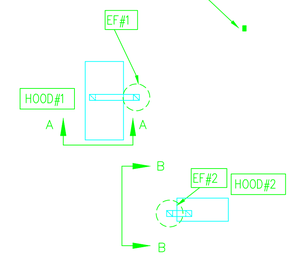
HOOD SCHEDULE

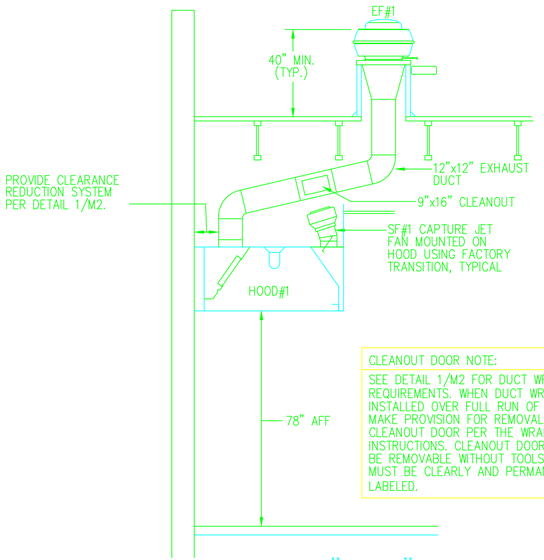
MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	LENGTH	HEIGHT	DEPTH	MANUFACTURER	MODEL	REMARKS
HOOD#1	1,500	.23"	102 @ 0.72"	CANOPY	12"x12"	102"	24"	48"	HALTON	KVE	1,3,4,5,6,7,8
HOOD#2	950	.23"	48 @ 0.30"	BACK SHELF	9"x10"	72"	48"	31"	HALTON	KVL	1,2,4,5,8,9

REMARKS

1) STAINLESS STEEL CONSTRUCTION.
2) PROVIDE FULL HEIGHT SS CLOSURE PANEL WITH ACCESS PANEL IN FRONT LARGE ENOUGH TO REMOVE CAPTURE JET FAN.
3) PROVIDE FULL HEIGHT SS CLOSURE PANEL WITH ACCESS PANEL IN FRONT LARGE ENOUGH TO SERVICE ANSUL COMPONENTS.
4) PROVIDE PRE-PIPED ANSUL R-102 WET FIRE EXTINGUISHING SYSTEM.
5) PROVIDE 3" BACK SPACER.
6) PROVIDE PARTIAL CLOSURE PANEL ON LEFT SIDE.
7) PROVIDE BLANK-OFF PLATE FOR SWITCH COVER.
8) PROVIDE TOP PLENUM CAPTURE JET FAN, SPEED CONTROLLER AND COLLAR.
9) PROVIDE SIDE CAPTURE JET ASSEMBLY, FAN AND SPEED CONTROLLER.

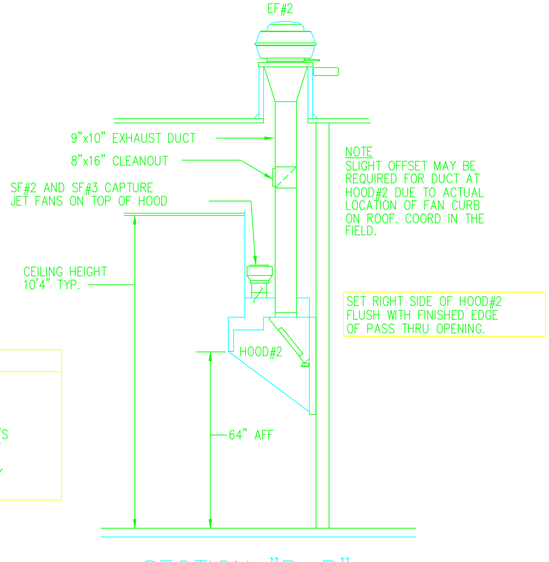
ANSUL REMOTE PULL STATION BETWEEN HANDSINK AND SHELVING. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE RED BAKELITE LABEL WITH 1/2" HIGH LETTERS INDICATING THE HOODS SERVED.





CLEANOUT DOOR NOTE:
SEE DETAIL 1/M2 FOR DUCT WRAP REQUIREMENTS. WHEN DUCT WRAP IS INSTALLED OVER FULL RUN OF DUCT, MAKE PROVISION FOR REMOVAL OF CLEANOUT DOOR PER THE WRAP MFR'S INSTRUCTIONS. CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.

SECTION "A-A"



NOTE
SLIGHT OFFSET MAY BE REQUIRED FOR DUCT AT HOOD#2 DUE TO ACTUAL LOCATION OF FAN CURB ON ROOF. COORD IN THE FIELD.

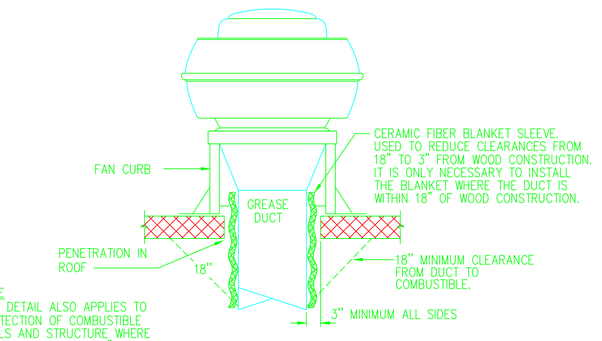
SET RIGHT SIDE OF HOOD#2 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.

SECTION "B-B"

HOOD ELEVATIONS

SCALE: NONE

CLEARANCE TO COMBUSTIBLES:
GREASE DUCT WITHIN 18" OF ANY WOOD CONSTRUCTION SHALL BE WRAPPED WITH U.L. LABLED CERAMIC WOOL BLANKET EQUIVALENT TO 3M FIREMASTER OR 3M FASTWRAP TO SATISFY CLEARANCE REDUCTION REQUIREMENTS TO COMBUSTIBLE CONSTRUCTION IN BUILDING CODE.



NOTE
THIS DETAIL ALSO APPLIES TO PROTECTION OF COMBUSTIBLE WALLS AND STRUCTURE WHERE DUCT IS LESS THAN 18" TO THESE COMBUSTIBLE COMPONENTS.

GREASE EXHAUST DUCT CLEARANCE REDUCTION SLEEVE

1 / M2

SCALE: NONE

NOTE: SEE ARCH. PLANS FOR HOOD LOCATIONS.

HOOD LAYOUT

SCALE: 1/8"=1'-0"

HOOD DETAILS AND SCHEDULES

M2

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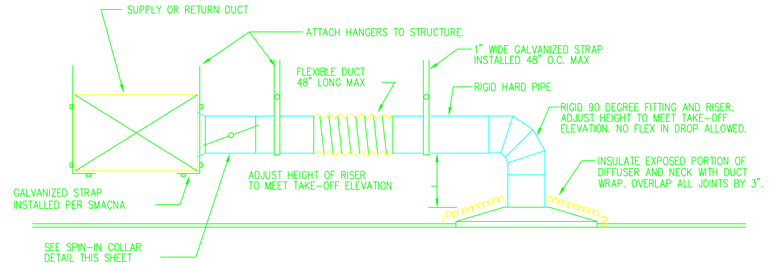
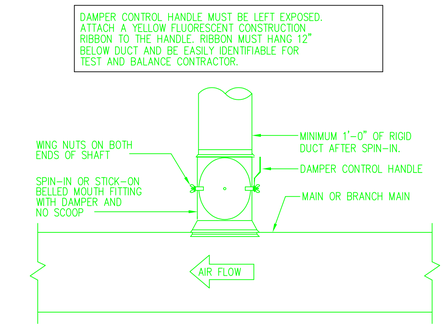


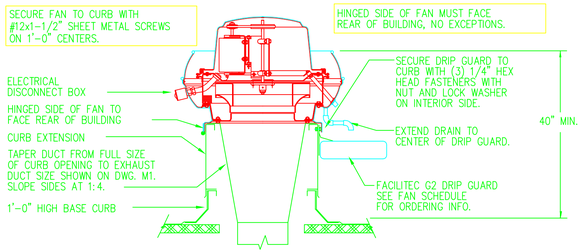
1 M3 SAG/RAG TAKE-OFF

SCALE: NONE



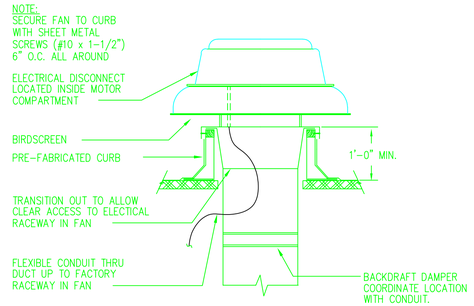
2 M3 SPIN-IN COLLAR

SCALE: NONE



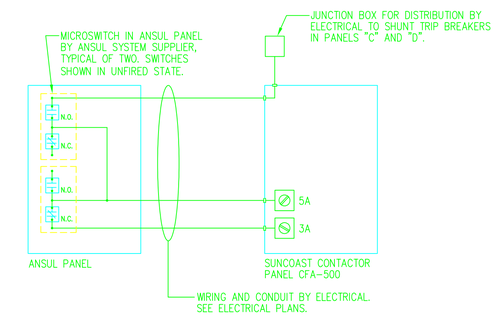
3 M3 KITCHEN HOOD EXHAUST FAN

SCALE: NONE



4 M3 RESTROOM EXHAUST FAN

SCALE: NONE



NOTES:
WORK SHOWN IN THIS DETAIL IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

5 M3 ANSUL WIRING DIAGRAM

SCALE: NONE

GAS FIRED ROOFTOP UNIT SCHEDULE

MARK	COOLING CAPACITY (MBH)		HEATING CAPACITY (MBH)		FAN SECTION (CFM)				MODEL	MANUFACTURER	REMARKS
	TOTAL	SENS	INPUT	OUTPUT	SUPPLY	O.A.	HP	ESP			
AC#1	103.2	69.0	235.0	188.0	3,400	750	2	.65	LGA102HH	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13
AC#2	146.2	102.3	235.0	188.0	4,400	1,200	3	.65	LGC150SH	LENNOX	1,3,4,5,7,8,9,10,11,12,13
AC#3	106.1	79.7	235.0	188.0	3,750	545	2	.65	LGA102HH	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13
AC#4	93.0	66.9	235.0	188.0	2,895	755	2	.65	LGA090HH	LENNOX	2,3,4,5,7,8,9,10,11,12,13
AC#5	63.2	46.1	125.0	98.75	2,000	300	1.5	.65	LGA060HH	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13
NOTES	COOLING CAPACITIES ARE GROSS, BASED ON INDOOR Edb: 80F, INDOOR Ewb: 67F, OUTDOOR Edb: 95F										
REMARKS	1) PROVIDE DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST. 2) PROVIDE DIFFERENTIAL ENTHALPY ECONOMIZER WITH BAROMETRIC EXHAUST. 3) PROVIDE 14" HIGH ROOF CURB. 4) CONTRACTOR SHALL REFER TO ROOF FRAMING PLAN FOR EXACT A/C UNIT LOCATIONS. 5) FRESH AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FLUE, VENT OR EXHAUST FAN. 6) PROVIDE FACTORY INSTALLED 115V GFI SERVICE OUTLET. 7) SEE ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS PRIOR TO ORDERING EQUIPMENT. 8) ROUTE CONTROL AND POWER WIRING THRU FACTORY BASE PAN CONNECTION. 9) PROVIDE FACTORY INSTALLED NON-FUSED DISCONNECT. 10) PROVIDE COIL HAIL GUARD ON FL, TX AND OK PROJECTS. 11) PROVIDE 2" FARR 30/30 THROW AWAY FILTERS. 12) PROVIDE HINGED PANELS FOR FILTER ACCESS, FAN MOTOR ACCESS, COMPRESSOR ACCESS AND CONTROL COMPARTMENT ACCESS. 13) CHANGE HEATING SECTION SPUDS AT LOCATIONS WHERE ELEVATION EXCEEDS 2000' ABOVE SEA LEVEL AS RECOMMENDED BY MANUFACTURER.										

EXHAUST FAN SCHEDULE

MARK	CFM	ESP	RPM	TIP SPEED (FPS)	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
EF#1	1,500	0.65	1200	105	3/4	HOOD#1	NBRTD-140A	JENN	1,2,3,4,6,10
EF#2	950	0.60	950	91	3/4	HOOD#2	NBRTD-140A	JENN	1,2,3,4,6,10
EF#3	490	.375	1083	58	1/4	RESTROOMS	RED1025S	JENN	2,5,7,8,9,10
NOTES	GREASE EXHAUST FAN RPM BASED ON 78 DEGREE F AIR AT SEA LEVEL.								
REMARKS	1) PROVIDE FACTORY 1'-0" BASE CURB AND EXTENSION. 2) PROVIDE FACTORY NON-FUSED DISCONNECT. 3) PROVIDE FACTORY INSTALLED HINGED BASE KIT. 4) PROVIDE AND INSTALL FACILITEC G2 DRIP GUARD. DRIP GUARD SHALL BE ORDERED AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE COST OF THE DRIP GUARD IS BILLED TO OFA DIRECTLY BY FACILITEC. THE MECHANICAL CONTRACTOR IS TO CONTACT FACILITEC AT 800-284-8273 FOR ORDERING AND SHIPPING ARRANGEMENTS. 5) PROVIDE BIRDSCREEN. 6) STARTER BY ELECTRICAL CONTRACTOR. 7) INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR. 8) PROVIDE 12" HIGH CURB. 9) PROVIDE FACTORY INSTALLED SPEED CONTROLLER. 10) CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH JENN. THE FAN/CURB PACKAGE MUST BE PURCHASED BY THE MECHANICAL CONTRACTOR THROUGH SUNLOW ASSOCIATES IN ATLANTA, GA. TELEPHONE 800-678-6569. FANS AND CURBS NOT PURCHASED THROUGH SUNLOW WILL NOT BE ACCEPTED.								

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	LOCATION	SIZE	CEILING TYPE	REMARKS
A	METALAIRE MODEL 7600AL-6 ALUMINUM SUPPLY AIR DIFFUSER WITH AIR PATTERN CONTROLLERS.	DINING AREA KITCHEN	24x24	LAY-IN	1
B	METALAIRE MODEL 7600AL-6 ALUMINUM SUPPLY AIR DIFFUSER WITH AIR PATTERN CONTROLLERS REMOVED.	KITCHEN	24x24	LAY-IN	1
C	METALAIRE MODEL 7000-1 ALUMINUM SUPPLY AIR DIFFUSER WITH AIR PATTERN CONTROLLERS.	VESTIBULES RESTROOMS	16x16	GYPSUM	1,3,5
D	METALAIRE MODEL H4004D DOUBLE DEFLECTION ALUMINUM SIDEWALL SUPPLY REGISTER WITH OBD, FRONT BLADE PARALLEL TO LONG SIDE.	PLAYGROUND	12x10	NA	1
E	METALAIRE MODEL 7000R-1 ALUMINUM RETURN AIR GRILLE.	VESTIBULES RESTROOMS	16x16	GYPSUM	1,4,5
F	METALAIRE MODEL CC5 ALUMINUM EGGCRATE RETURN AIR GRILLE WITH 1/2" x 1/2" CORE.	DINING/KITCHEN PLAYGROUND	24x24	LAY-IN	1,2,5
G	METALAIRE MODEL V4004D DOUBLE DEFLECTION ALUMINUM SIDEWALL SUPPLY REGISTER WITH OBD, FRONT BLADE PARALLEL TO SHORT SIDE.	PLAYGROUND	12x10	NA	1
H	METALAIRE MODEL 900 ROUND, STEP DOWN ALUMINUM SURFACE MOUNT SUPPLY DIFFUSER.	OFFICE	8	LAY-IN	1,6
REMARKS	1) STANDARD OFF WHITE FINISH. 2) PROVIDE MODEL BDS NECK DAMPER. 3) DIFFUSER IN MEN'S RR SHALL BE 2-WAY THROW. 4) PROVIDE MODEL RSD NECK DAMPER ON UNITS IN RESTROOMS. 5) PROVIDE MODEL TR SQUARE TO ROUND NECK TRANSITION. 6) PROVIDE 90OD NECK DAMPER, ADJUSTABLE THRU DIFFUSER FACE.				

AIR DOOR SCHEDULE

MARK	CFM	VELOCITY	HEATING CAP.	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
FF#1	1752	3500	NA	3/4	REAR DOOR	STR-1-42A	BERNER	1,3
FF#2	691	1777	7200 W	1/5	DRIVE THRU	MAX-1-30E	BERNER	2,3
REMARKS	1) PROVIDE PLUNGER TYPE MICRO-SWITCH. 2) PROVIDE LINE VOLTAGE HEAT/ON/AUTO WALL MOUNT THERMOSTAT. MODIFY AIR DOOR WIRING TO ALLOW FAN AND HEAT CONTROL FROM THERMOSTAT. 3) CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH BERNER AIR DOORS. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE FANS DIRECTLY FROM BERNER. CONTACT BERNER AT 800-245-4455, FOR PRICING AND AVAILABILITY.							

MECHANICAL DETAILS & SCHEDULES

M3

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