GENERAL MECHANICAL NOTES

- WORK SHALL CONFORM WITH TO ALL CURRENT CODES AND AUTHORITY HAVING JURISDICTION.
- PROVIDE A WRITTEN GUARANTEE THAT SHALL WARRANT ALL WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY THE OWNER ANY BREAKDOWN OCCURRING IN THE FIRST YEAR SHALL BE AT NO EXPENSE TO THE OWNER ALL REFRIGERATION COMPRESSORS SHALL HAVE A 5 YEAR (PARTS ONLY) WARRANTY, AND ALL NATURAL GAS HEAT EXCHANGERS SHALL HAVE A 10 YEAR (PARTS ONLY) WARRANTY.
- 3. DRAWINGS ARE SCHEMATIC, NOT ALL RISES AND DROPS ARE SHOWN TRADES ARE TO COORDINATE THEIR WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS GENERALLY, DUCTWORK SHALL BE KEPT AS HIGH AS POSSIBLE
- COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR VOLTAGES SHOWN THEREIN.
- COORDINATE THE INSTALLATION OF MECHANICAL EQUIPMENT, DUCTWORK, ETC TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER OF RECORD.
- 6. KEEP A SET OF MARKED UP PRINTS WITH ANY FIELD CHANGES MADE DURING CONSTRUCTION TO CREATE AN "AS-BUILT" SET OF PRINTS TO BE TURNED OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT
- PROVIDE ACCESS PANELS IN CEILINGS AND WALLS TO ALLOW ACCESS TO VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC MINIMUM ACCESS SIZE SHALL BE 12"X12", UNLESS LIMITED BY PHYSICAL CONSTRAINTS
- 8 MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
- 9 ROOFTOP UNITS SHALL BE FACTORY INSTALLED WITH SMOKE DETECTORS LOCATED IN THE RETURN SECTIONS FOR ALL UNITS SMOKE DETECTORS SHALL BE WIRED TO THE ALARM PANEL IF APPLICABLE UNITS SHALL SHUT DOWN UPON ACTIVATION
- 10 OUTSIDE AIR INTAKES FOR AIR CONDITIONING UNITS SHALL BE A MINIMUM OF 10 FEET FROM EXHAUST FANS, EXHAUST OPENINGS AND PLUMBING VENTS
- 11 ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS
- 12 ALL SUPPLY AND RETURN DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS DUCTWORK SHALL BE FABRICATED OF GALVANIZED STEEL FOR A PRESSURE RATING OF (-) 2" WG FOR RETURN AND (+) 2" WG FOR SUPPLY DUCTWORK ALL EXHAUST DUCTWORK SHALL CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST SMACNA AND ASHRAE STANDARDS EXHAUST DUCTWORK SHALL BE FABRICATED OF GALVANIZED STEEL FOR A PRESSURE RATING OF 1" WG IN EXCESS OF THE SYSTEM FAN TOTAL STATIC PRESSURE RATING AT DESIGN FLOW RATE, UNLESS NOTED OTHERWISE.
- 13 SUPPORT DUCTWORK FROM BUILDING STRUCTURE IN ACCORDANCE WITH SMACNA STANDARDS.
- 14 ANY ADDITIONAL/SUPPLEMENTAL STEEL MEMBERS REQUIRED TO SUPPORT DUCTWORK OR EQUIPMENT FROM MAIN STRUCTURE SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
- 15 DUCTWORK ELBOWS SHALL BE RADIUSED ELBOWS WHERE PRACTICAL RADIUSED DUCTWORK ELBOWS SHALL HAVE A CENTERLINE RADIUS OF 1 5 TIMES THE DUCT WIDTH (OR DIAMETER) UNLESS NOTED OTHERWISE
- 16 ALL MITERED ELBOWS (RECTANGULAR AND ROUND) SHALL HAVE SINGLE THICKNESS TURNING VANES INSTALLED UNLESS NOTED OTHERWISE ON DRAWINGS
- 17 SECURELY SEAL ALL JOINTS LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK USING WELDMENTS, MECHANICAL FASTENERS WITH SEALS OR GASKETS OR MASTICS, MESH AND MASTIC SEALING SYSTEMS OR TAPES TAPES AND MASTICS MUST BE LISTED AND LABELED IN ACCORDANCE WITH UL181A OR UL181B
- 18 DUCT CONNECTIONS TO FANS AND OTHER AIR DISTRIBUTION EQUIPMENT SHALL BE MADE USING MECHANICAL FASTENERS WITH SEALS, MASTICS OR GASKETS
- 19 SUPPLY AIR AND OUTSIDE AIR DUCTWORK INSIDE THE BUILDING ENVELOPE SHALL BE INSULATED WITH A MINIMUM 1" THICK (INSTALLED), 3/4 LB PER CUBIC FOOT, FIBERGLASS DUCTWRAP, WITH FOIL FACED VAPOR BARRIER AND AN INSTALLED THERMAL RESISTANCE OF R4 2 EXHAUST DUCTWORK WITHIN 10 FEET OF THE OUTSIDE OPENING OR UP TO THE BACKDRAFT DAMPER SHALL HAVE SIMILAR INSULATION ALTERNATE INSULATION FOR RECTANGULAR SUPPLY AND RETURN DUCT SHALL BE AN INTERIOR DUCT LINING WITH A MINIMUM OF R4 2 AND 1" THICK DUCT LINER SHALL BE COATED AND CONTAIN AN ANTI-MICROBIAL AGENT WITHIN THE DUCT LINING ITSELF INCREASE DUCT SHEET METAL SIZE AS REQUIRED TO MEET INSIDE CLEAR DIMENSIONS GIVEN ON DRAWINGS INSULATION FOR DUCTS IN UNCONDITIONED ATTICS OR OTHER LOCATIONS OUTSIDE OF THE BUILDING ENVELOPE SHALL EXCEED ENERGY CODE REQUIREMENTS
- 20. ALL DUCT INSULATION SHALL MEET THE MINIMUM REQUIREMENTS OF UL. 181 FOR FLAME SPREAD AND SMOKE DEVELOPMENT, AND SHALL BE U L. LISTED
- 21. TRANSFER DUCTS SHALL BE INTERNALLY LINED TO AID IN CANCELING NOISE TRANSFER
- 22 EXHAUST DUCTWORK SHALL BE INSULATED UNLESS NOTED OTHERWISE
- 23 COORDINATE LOCATIONS OF GRILLES, REGISTERS AND DIFFUSERS WITH ARCHITECTURAL REFLECTED CEILING PLAN LOCATIONS SHOWN ARE APPROXIMATE, ADJUST LOCATIONS IN THE FIELD AS REQUIRED BY CONSTRUCTION CONSTRAINTS
- 24 PROVIDE EACH SUPPLY AIR OUTLET OR DIFFUSER WITH ITS OWN BALANCING DEVICE DEVICES CAN BE LOCATED IN DUCTWORK OR SUPPLY AIR DEVICE ITSELF.
- 25 ALL MANUAL BALANCING DAMPERS SHALL HAVE FRAME AND BEARINGS, A CONTINUOUS SHAFT, AND A LOCKING QUADRANT WITH
- 26 PROVIDE FIRE DAMPERS WHERE DUCTS PENETRATE FIRE BARRIERS OR OTHER RATED ASSEMBLIES AS REQUIRED BY THE BUILDING CODE PROVIDE SMOKE DAMPER OR FIRE/SMOKE DAMPER WHERE DUCTS PENETRATE SMOKE BARRIERS AS REQUIRED BY THE BUILDING CODE CONTRACTOR IS RESPONSIBLE FOR FIRE DAMPER OR FIRE/SMOKE DAMPER AT RATED ASSEMBLIES NOTED ON ARCHITECTURAL OR LIFE SAFETY DRAWING, EVEN IF NOT NOTED ON MECHANICAL PLANS
- 27 PROVIDE FIRE STOPPING AS REQUIRED BY THE BUILDING CODE AROUND PIPES THAT PENETRATE RATED ASSEMBLIES AND AROUND DUCTS THAT ARE NOT PROTECTED WITH FIRE DAMPERS.
- 28 ALL CONDENSATE DRAIN PIPING SHALL BE TYPE L HARD DRAWN COPPER, ASTM B-88, WITH TYPE DWV FITTINGS, ASME B16 23, OR SCHEDULE 40 PVC, ASTM D1785, WITH TYPE DWV FITTINGS, ASTM D2672. COPPER DRAIN PIPE AND FITTINGS SHALL BE JOINED USING 95-5 SILVER SOLDER, AND PVC PIPE AND FITTINGS SHALL BE JOINED USING SOLVENT CEMENT PROVIDE TRAP WITH CLEANOUT AND UNIONS SLOPE CONDENSATE DRAIN LINES A MINIMUM OF 1/8" PER FOOT AWAY FROM THE MECHANICAL EQUIPMENT.
- 29 FLEXIBLE DUCTWORK SHALL BE CLASSIFIED UNDER UL 181. PROVIDE A MINIMUM OF 3 FEET IN LENGTH AND A MAXIMUM OF 10 FEET IN LENGTH, SUPPORTED WITH 3" GALVANIZED SHEET METAL STRAPS AT 4 FEET CENTERS (MAX) FLEXIBLE DUCT RUNOUTS SHALL BE ROUND DUCTWORK REINFORCED WITH A WIRE HELIX AND INSULATED WITH 1-1/2" THICK FIBERGLASS (WITH A 6 0 R-VALUE MINIMUM) COVERED WITH FLAMEPROOF VAPOR BARRIER OF ALUMINUM METALIZED POLYESTER FILM LAMINATED TO GLASS MESH DUCT SHALL BE ATCO'S UPC #036 VALUFLEX CLASS 1 AIR DUCT OR EQUAL CONNECTIONS TO DUCT MAINS SHALL BE MADE WITH FITTINGS PROVIDED WITH TWIST RINGS, BUTTERFLY DAMPERS, LOCKING HAND QUADRANTS, AND INSULATION GUARDS
- 30 MECHANICAL CONTRACTOR SHALL FURNISH, ROUTE, AND INSTALL CONTROL WIRING FOR ALL MECHANICAL SYSTEMS CONTROLS AND CONTROL WIRING TERMINATION FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR THE MECHANICAL CONTRACTOR SHALL PROVIDE THERMOSTATS AND CONTROLS WIRING FOR SPECIFIED EQUIPMENT. THERMOSTAT SHALL BE EQUAL TO HONEYWELL
- 31. INSTALL TOP OF THERMOSTATS AT 4'-0" ABOVE FINISHED FLOOR (AFF) UNLESS NOTED OTHERWISE THERMOSTAT LOCATIONS SHALL BE COORDINATED WITH FINAL LOCATIONS OF WALL-MOUNTED ARCHITECTURAL AND ELECTRICAL EQUIPMENT FINAL LOCATIONS MUST BE APPROVED BY THE ARCHITECT AND OWNER THERMOSTATS SHALL NOT BE INSTALLED ON EXTERIOR WALLS IF INTERIOR WALLS ARE AVAILABLE WITHIN SPACE SERVED BY THERMOSTAT SHOULD THE THERMOSTAT REQUIRE INSTALLATION ON AN EXTERIOR WALL AN INSULATED BACKING PLATE MUST BE PROVIDED TO PREVENT FALSE READINGS BY THE THERMOSTAT
- 32 SEQUENCE OF OPERATION UNLESS NOTED OTHERWISE, THERMOSTAT AND UNITS SHALL BE SET UP FOR AN OCCUPIED MODE AND AN UNOCCUPIED MODE IN OCCUPIED MODE. THE COMPRESSOR OR HEAT SHALL OPERATE WHEN NEEDED TO REACH THE THERMOSTAT SET POINT, THE SUPPLY SHALL OPERATE CONTINUOUSLY, AND AND THE OUTSIDE AIR DAMPER SHALL BE OPEN. IT IS A MECHANICAL CODE REQUIREMENT THAT THE FAN RUN CONTINUOUSLY TO BRING IN OUTSIDE AIR WHEN THE ZONE IS OCCUPIED. IN UNOCCUPIED MODE, THE COMPRESSOR OR HEAT SHALL OPERATE WHEN NEEDED TO REACH THE THERMOSTAT SET POINT, THE FAN SHALL OPERATE WHEN THE COMPRESSOR OR HEAT OPERATE AND THE OUTSIDE AIR DAMPER SHALL BE CLOSED
- 33 MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE TEST AND BALANCE REPORT OF THE HVAC SYSTEMS TO INCLUDE OUTDOOR AIR TEMPERATURE AT TIME OF TESTING, ENTERING AIR TEMPERATURE AND LEAVING AIR TEMPERATURE AT THE COIL(S), AIR TEMPERATURE AT ONE SUPPLY AIR DIFFUSER AND RETURN AIR GRILLE IN EACH ZONE, AND SPACE TEMPERATURE FOR EACH SYSTEM A COPY OF THE TEST AND BALANCE REPORT SHALL BE TRANSMITTED TO THE OWNER AND ENGINEER AND TO THE LOCAL CODE OFFICIALS AS REQUIRED
- 34. THE MECHANICAL CONTRACTOR SHALL COORDINATE ALL DETAILS OF THE GAS PIPING SYSTEM WITH THE LOCAL GAS COMPANY. THIS INCLUDES, BUT IS NOT LIMITED TO, THE LOCATION OF THE GAS METER, AND THE GAS PRESSURE REQUIREMENTS. THE MECHANICAL CONTRACTOR SHALL PAY ALL COSTS REQUIRED BY THE GAS COMPANY CONTACT THE LOCAL GAS COMPANY FOR SIZE AND TYPE OF PIPING AND VALVES REQUIRED FOR CONNECTION TO THE METER GAS METER AND PRESSURE REGULATOR SHALL BE PROVIDED BY THE GAS COMPANY THE GAS DEMAND INDICATED ON THE DRAWINGS IS BASED ON A HEATING VALUE OF 1,000 BTU (1 MBH) PER CUBIC FOOT, A SPECIFIC GRAVITY OF 0 6, AND ON THE PRIMARY EQUIPMENT SPECIFICATIONS IN THE SCHEDULES GAS PIPING SIZES SHALL BE AS NOTED ON THE PLANS
- 35 GAS PIPING SHALL BE BLACK STEEL PIPE, SCHEDULE 40, ASTM A-53 FITTING SHALL BE STANDARD WEIGHT MALLEABLE IRON WITH THREADED CONNECTIONS THREADED CONNECTIONS SHALL BE SEALED WITH AN APPROVED THREAD COMPOUND. GAS PIPING. SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 54 (LATEST EDITION)
- 36 ALL CONCEALED GAS PIPING SHALL BE PAINTED WITH ONE COAT OF ALKYD PRIMER AND ONE COAT OF ALKYD EXTERIOR PAINT COLOR SHALL BE YELLOW

PACKAGED ROOFTOP UNITS WITH GAS HEAT SCHEDULE

	MANUFACTURER MODEL	AREA SERVED	NOMINAL TONS	FAN SELECTION				COOLING CAPACITY			GAS HEAT CAPACITY			ELECTRICAL DATA		MINIMUM	EST		
MARK				SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	ESP IN WG	MOTOR HP	RPM	TOTAL COOLING (BTUH)	SENSIBLE COOLING (BTUH)	MBH INPUT	MBH OUTPUT	STAGES	AFUE	VOLTAGE	PHASE	EER (SEER)	WEIGHT (LBS)	NOTES
RTU-1	TRANE YHJ090	DINING AREA	7 5	3000	600	1 32	3	1283	94,460	73,140	120,000	97,200	1	80			12 1	1011	1 - 19
RTU-2	TRANE YHC120	DINING AREA	10	4000	900	1 56	3	1535	124,490	96,300	150,000	121,500	1	80			11 4	1052	1 - 19
RTU-3	TRANE YHJ120	KITCHEN	12 5	5000	300	1.89	4 6	1737	154,530	119,640	150,000	121,500	1	80			10 8	1331	1 - 19

ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE CARRIER, DAIKIN APPLIED, AND YORK

COOLING CAPACITIES BASED ON 80°F DB / 67°F WB ENTERING COIL, 95°F DB ENTERING CONDENSER

HEATING CAPACITY BASED ON NATURAL GAS AT 1000 BTU PER CUBIC FOOT AND 0 6 SPECIFIC GRAVITY 4 PROVIDE FACTORY FURNISHED 14" HIGH INSULATED ROOF CURB

PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT WITH AUTO HEAT/COOL CHANGEOVER REFER TO PLAN FOR THERMOSTAT LOCATIONS 6 PROVIDE FACTORY INSTALLED DIRTY FILTER SWITCH AND BLOWER PROVING SWITCH.

PROVIDE 1 YEAR PARTS AND LABOR WARRANTY 8 PROVIDE 5 YEAR PARTS WARRANTY ON COMPRESSORS

9 PROVIDE 10 YEAR HEAT EXCHANGER WARRANTY

10 PROVIDE FACTORY INSTALLED SMOKE DETECTORS ON THE RETURN DUCT 11 PROVIDE FACTORY INSTALLED ENTHALPY ECONOMIZER AND BAROMETRIC RELIEF

12 PROVIDE MOTORIZED OUTSIDE AIR DAMPER

13 MECHANICAL CONTRACTOR SHALL PROVIDE A SECOND SET OF FILTERS TO BE INSTALLED PRIOR TO OPENING

14 UNIT SHALL USE R-410A REFRIGERANT 15 PROVIDE PRESSURE REGULATOR TO REDUCE PRESSURE FROM 2 PSIG TO 7" W.C. (IF REQUIRED)

16 MECHANICAL CONTRACTOR SHALL CONFIRM ALL UNITS HAVE BEEN PROPERLY STARTED AND CONFIRMED RUNNING PROPERLY 17 LABEL UNITS WITH TAG NUMBER OR STENCIL TAG NUMBER ON SIDE OF UNIT WITH BLACK EXTERIOR PAINT.

18 PROVIDE FACTORY-MOUNTED DISCONNECT

19 PROVIDE HOT-GAS REHEAT

					FAN	N SCHED	ULE							
ARK	MANUFACTURER	AREA SERVED	SERVICE	TYPE	CFM	STATIC PRESSURE	NOMINAL	DRIVE	ELECTRIC	CAL DATA	MOTOR HP	CONTROL	WEIGHT	NOTES
ARN	MODEL	AREA SERVED	SERVICE	1175	CFIVI	(IN WG)	RPM	TYPE	VOLTAGE	PHASE	(WATTS)	CONTROL	WEIGITI	
F-1	ACCUREX XCUE-160-VG	HOOD 1	EXHAUST	HOOD	3810	0 6	1599	CENT		 -	1 55	WITH HOOD	122	12
F-2	ACCUREX XCUE-099-VG	HOOD 2	EXHAUST	HOOD	625	0 6	1378	CENT			0 25	WITH HOOD	42	12
F-3	GREENHECK SP-A90	RESTROOM	EXHAUST	CEILING	75	0 25	900	DIRECT			(14)	WITH TIME CLOCK	12	1 - 11
F-4	GREENHECK SP-A90	RESTROOM	EXHAUST	CEILING	75	0 25	900	DIRECT		-	(14)	WITH TIME CLOCK	12	1 - 11

MANDIZ	MANUFACTURER	4 DE 4 OED) (ED	OFD) //OF	TV0-	OFN	PRESSURE	NOMINAL	DRIVE			INDIOR HP	CONTROL	WEIGHT	NOTES
MARK	MODEL	AREA SERVED	SERVICE	TYPE	CFM	(IN WG)	RPM	TYPE	VOLTAGE	PHASE	(WATTS)	CONTROL	WEIGHT	NOTES
EF-1	ACCUREX XCUE-160-VG	HOOD 1	EXHAUST	HOOD	3810	0 6	1599	CENT		***	1 55	WITH HOOD	122	12
EF-2	ACCUREX XCUE-099-VG	HOOD 2	EXHAUST	HOOD	625	0 6	1378	CENT			0 25	WITH HOOD	42	12
EF-3	GREENHECK SP-A90	RESTROOM	EXHAUST	CEILING	75	0 25	900	DIRECT			(14)	WITH TIME CLOCK	12	1 - 11
EF-4	GREENHECK SP-A90	RESTROOM	EXHAUST	CEILING	75	0 25	900	DIRECT			(14)	WITH TIME CLOCK	12	1 - 11
EF-5	GREENHECK SP-A90	RESTROOM	EXHAUST	CEILING	75	0 25	900	DIRECT			(14)	WITH TIME CLOCK	12	1 - 11
EF-6	GREENHECK SP-A90	RESTROOM	EXHAUST	CEILING	75	0 25	900	DIRECT			(14)	WITH TIME CLOCK	12	1 - 11
MAU-1	ACCUREX XKID-15-M2-VG	HOODS	EXHAUST	HOOD	3425	0 5	1712	DIRECT			1	WITH HOOD	186	12
NOTES	5 .													

2	TES [.]					
	PROVIDE	UNIT WI	TH GRAV	ITY BAC	KDRAFT	DAMPER

- PROVIDE VIBRATION ISOLATION UNIT SHALL BE UL LISTED AND AMCA CERTIFIED.
- PROVIDE PLUG TYPE DISCONNECT
- 5 PROVIDE ROUND DISCHARGE COLLAR. 6 PROVIDE OFF-WHITE METAL GRILLE
- PROVIDE SPEED CONTROL
- 8 PROVIDE MOTOR WITH THERMAL OVERLOAD PROTECTION 9 PROVIDE INSULATED HOUSING FOR SOUND ATTENUATION
- 10 PROVIDE WITH GREENHECK RCC-7 OR SIMILAR CURB CAP
- 11 ACCEPTABLE EQUALS SHALL BE ACME, BREIDERT, CARNES, COOK, AND PENN
- 12 SEE ACCUREX HOOD DRAWINGS FOR MORE INFORMATION

		VEN	TILATION	COMP	LIANCE	SCHED	ULE		
UNIT MARK	AREA SERVED	AREA (FT²)	PEOPLE PER 1000 FT ²	NUMBER OF PEOPLE	AIRFLOW PER PERSON	AIRFLOW PER FT ²	OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR PROVIDED (CFM)
RTU-1	DINING ROOM	986	70	44*	7 5	0 18	507	507	600
RTU-2	DINING ROOM	1105	70	80*	7.5	0 18	800	800	900
DTILO	KITCHEN	900	20	18	7 5	0 12	243		
RTU-3	STORAGE	155				0 06	10	261	3725
MAU-1	OFFICE	45	5	1	5	0 06	8		
•	Walter and the same of the sam						TOTAL	1580	5225

PEOPLE DENSITY, CFM PER PERSON, AND CFM PER SQUARE FOOT ARE BASED ON THE MECHANICAL CODE DEFAULT VALUES UNLESS NOTED OTHERWISE

2 WHERE NOTED PEOPLE COUNT IS BASED ON SEAT COUNT OR ACTUAL NUMBER OF PEOPLE (*)

OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR REQUIRED (CFM)	TOTAL OUTSIDE AIR PROVIDED (CFM)	MARK	MANUFACTURER MODEL	
507	507	600	EUH-1	QMARK CWH1208	
800	800	900	NOTES		_
243			NOTES 1 UNIT	S SHALL BE U L LISTED)
10	261	3725		VIDE THERMAL OVERLO VIDE REMOTE THERMO	
8			4 PRO	VIDE UNIT WITH INTEGR	RΑ
TOTAL	1580	5225		VIDE 24 VOLT TRANSFO EPTABLE EQUALS SHAL	

١	2.	PROVIDE THERMAL OVERLOAD PROTECTION
١	3	PROVIDE REMOTE THERMOSTAT SET TEMPERATURE AT 60°F
1	4	PROVIDE UNIT WITH INTEGRAL DISCONNECT SWITCH
1	5.	PROVIDE 24 VOLT TRANSFORMER START/STOP RELAY
l	6.	ACCEPTABLE EQUALS SHALL BE QMARK AND REZNOR.

AREA SERVED

MECHANICAL

AIR BALANCE SCHEDULE

600

900

300

3425

5225

KW

MBH

20%

22%

6%

100%

+490 CFM

CFM

- 3810

- 625

-75

-75

-75

-75

4735

ELECTRICAL DATA

VOLTAGE

208

NOTES

1 - 6

UNIT SUPPLY RETURN OUTSIDE PERCENT OUTSIDE

2400

3100

4700

10200

MARK | AIR CFM | AIR CFM | AIR CFM

3000

4000

5000

3425

15425

AIR BALANCE

ELECTRIC UNIT HEATER SCHEDULE

NOMINAL

RPM

FAN

MOTOR

RTU-1

RTU-2

RTU-3

MAU-1

EF-2

EF-3

EF-4

EF-5

EF-6

TOTAL

CFM

65

AIR DISTRIBUTION SC	HEDULE
	DESIGN BASIS

MADK	TYPE	DESCRIPTION	DESIGI	N BASIS	FACE	NECK	MATERIAL	NOTES
MARK	ITPE	DESCRIPTION	MANUF	MODEL	SIZE	SIZE	WATERIAL	NOTES
S-1	SUPPLY	SQUARE CONE, FIXED PATTERN, 3-CONE LAY-IN	PRICE	ASCD	12"x12"	6"Ø	ALUMINUM	1 - 4
S-2	SUPPLY	SQUARE CONE, FIXED PATTERN, 3-CONE LAY-IN	PRICE	ASCD	24"x24"	10"Ø	ALUMINUM	1 - 4
S-3	SUPPLY	SQUARE CONE, FIXED PATTERN, 3-CONE LAY-IN	PRICE	ASCD	24"x24"	12"Ø	ALUMINUM	1 - 4
S-4	SUPPLY	CIRCLE CONE, FIXED PATTERN, 4-CONE LAY-IN	PRICE	RCDA	10"Ø	6"Ø	ALUMINUM	1 - 4
S-5	SUPPLY	LOUVER, DOUBLE DEFL, LONG BLADES IN FRONT, 3/4" SPACING, WALL-MOUNT	PRICE	610	10"x6"		ALUMINUM	1, 2, 4
S-6	SUPPLY	LOUVER, DOUBLE DEFL, LONG BLADES IN FRONT, 3/4" SPACING, WALL-MOUNT	PRICE	610	14"x8"		ALUMINUM	1, 2, 4
S-7	SUPPLY	SPIRAL DUCT LOUVER, DBL DEFL, 3/4" SPACING, CURVED TO FIT DUCT	PRICE	SDGE	10"x4"	Ald will spik	ALUMINUM	2, 4, WITH AIR SCOOP
S-8	SUPPLY	SPIRAL DUCT LOUVER, DBL DEFL, 3/4" SPACING, CURVED TO FIT DUCT	PRICE	SDGE	10"x6"		ALUMINUM	2, 4, WITH AIR SCOOP
S-9	SUPPLY	SPIRAL DUCT LOUVER, DBL DEFL, 3/4" SPACING, CURVED TO FIT DUCT	PRICE	SDGE	14"x8"		ALUMINUM	2, 4, WITH AIR SCOOP
R-1	RETURN	LOUVER FACE, 45° BLADES,1/2" SPACING WITH BACK FOR CEILING MOUNT, LAY-IN	PRICE	635	24"x24"	20"x20"	ALUMINUM	2, 3, 4
T-1	TRANSFER	LOUVER FACE, 45° BLADES,1/2" SPACING WITH BACK FOR CEILING MOUNT, LAY-IN	PRICE	STG	12"x12"	6"x6"	ALUMINUM	2,3,4

PROVIDE OPPOSED BLADE DAMPERS IN NECK OF DIFFUSER OR REGISTER, WITH ACCESS TO DAMPER THROUGH FACE OF DIFFUSER OR REGISTER

FINISH SHALL BE COORDINATED WITH ARCHITECTURAL PLANS REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR MOUNTING TYPE

ACCEPTABLE EQUALS INCLUDE METALAIRE AND TITUS.

	Ēi	ngineering	Great lo
ATLANTA	CHARLOTTE	GREENVILLE RI	CHMOND
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Drawn	By WJS	Checked B	y KFM

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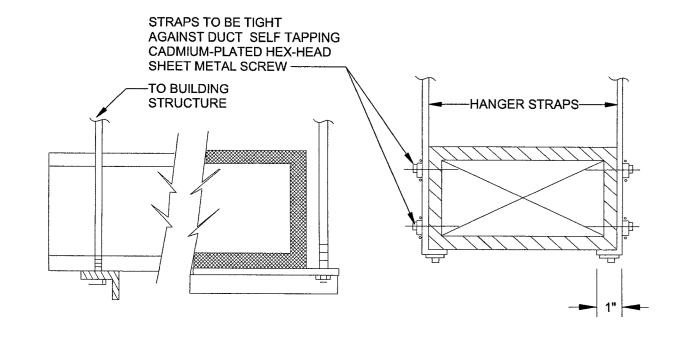
Issue Date

Project Number Drawn By Checked By Date

Revisions

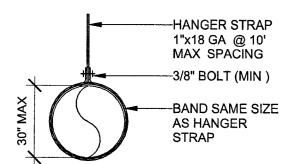
Drawing

MECHANICAL NOTES AND SCHEDULES

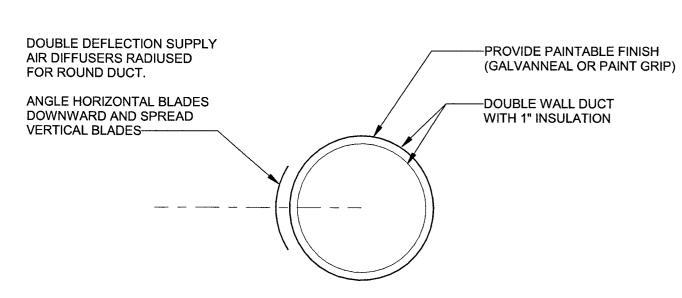


HAN	HANGER SIZES FOR RECTANGULAR DUCTS									
MAX SIDE	HANGER	SUPPORT ANGLE HORIZONTAL	SPACING MAXIMUM							
30"	1"x18" GAUGE STRAP	NONE REQUIRED	10'-0"							
36"	1/4" ROUND ROD	1-1/2" x 1-1/2" x 1/8"	8'-0"							
48"	1/4" ROUND ROD	2" x 2" x 1/8"	8'-0 "							
60"	5/16" ROUND ROD	2" x 2" x 1/8"	8'-0"							
84"	3/8" ROUND ROD	2" x 2" x 1/8"	8'-0"							

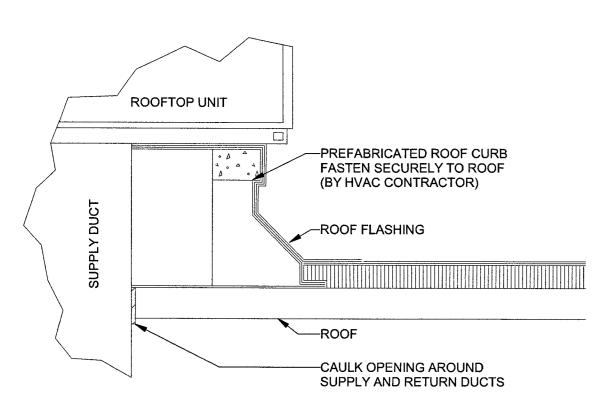
1 DUCT HANGER SIZING FOR RECTANGULAR M0 2 NOT TO SCALE



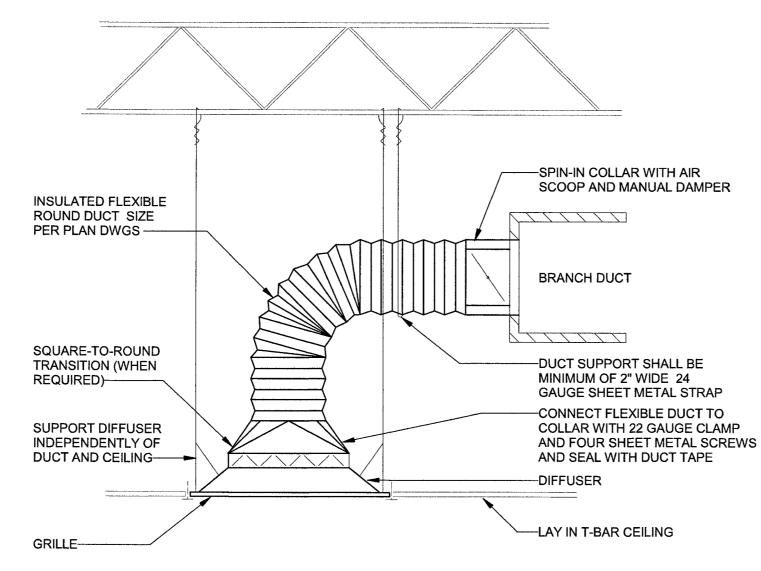
4 DUCT HANGER SIZING FOR ROUND M0 2 NOT TO SCALE



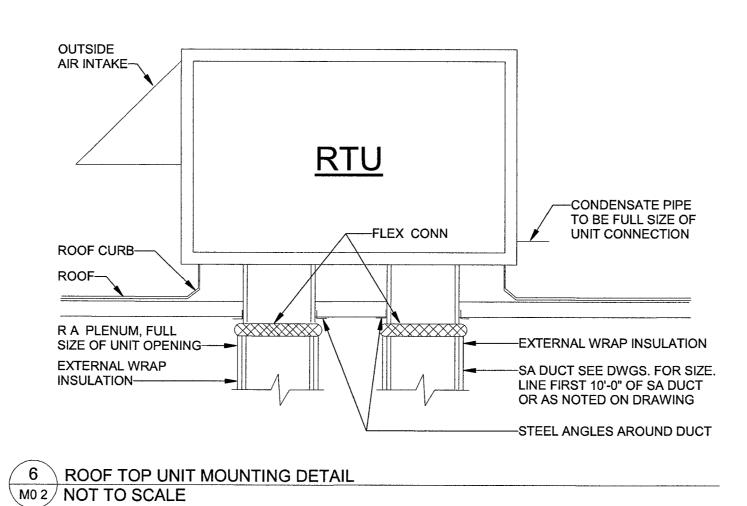
5 ROUND DUCT - DUCT-MOUNTED DIFFUSER NOT TO SCALE

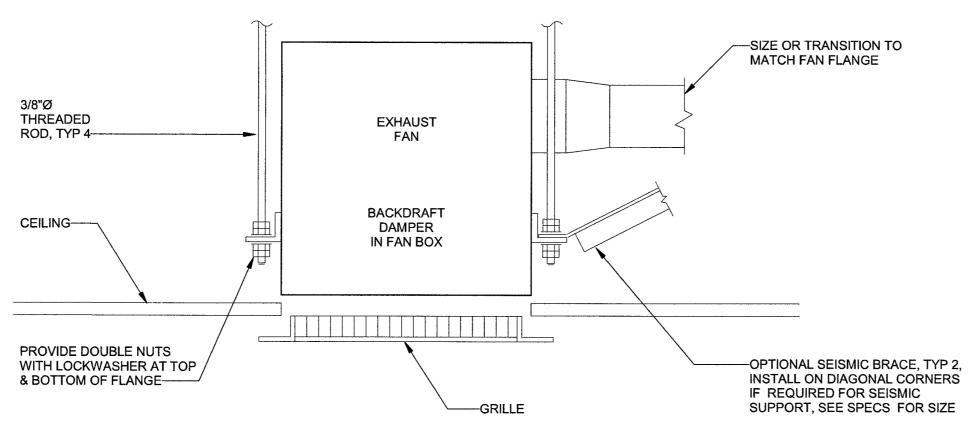


8 ROOF TOP UNIT CURB DETAIL M0 2 NOT TO SCALE

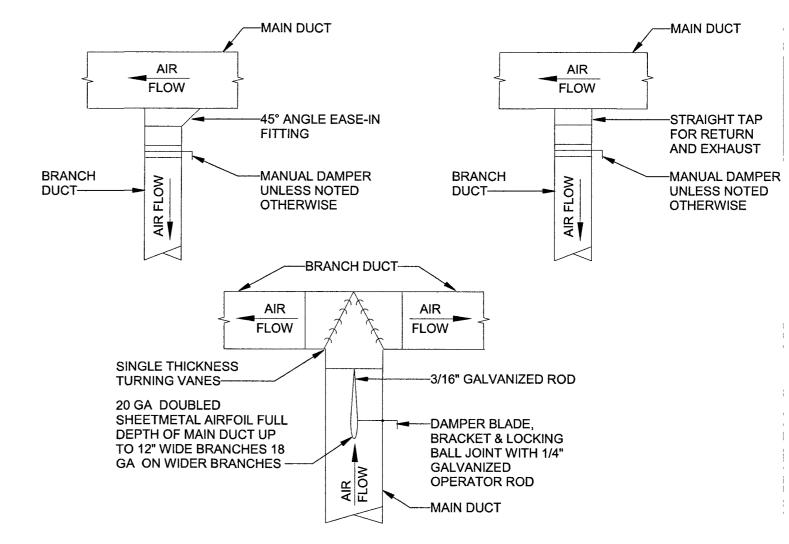


2 SUPPLY DIFFUSER INSTALLATION (FLEX DUCT) M0 2 NOT TO SCALE

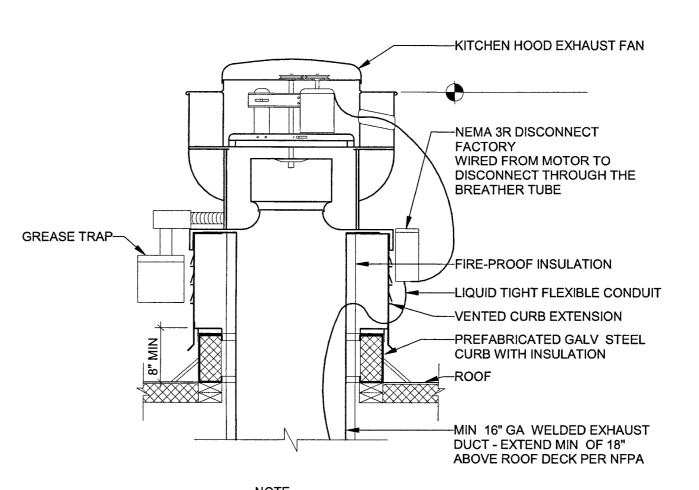






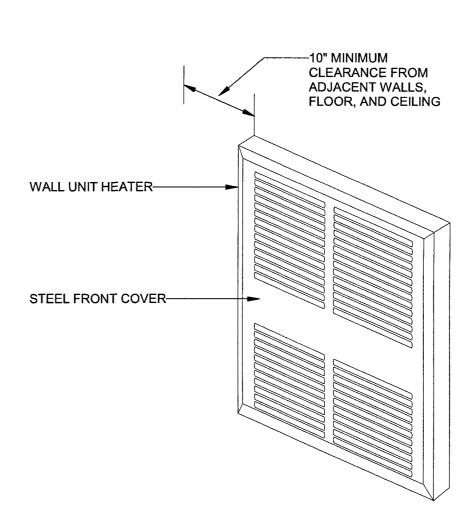


3 TYPICAL RECTANGULAR LOW-PRESSURE BRANCH TAKE-OFFS NOT TO SCALE



NOTE. LOCATE EXHAUST FANS MIN 10'-0" FROM ANY OUTSIDE AIR INTAKE

7 KITCHEN GREASE EXHAUST FAN MOUNTING NOT TO SCALE



10 ELECTRIC UNIT HEATER - WALL-MOUNTED NOT TO SCALE



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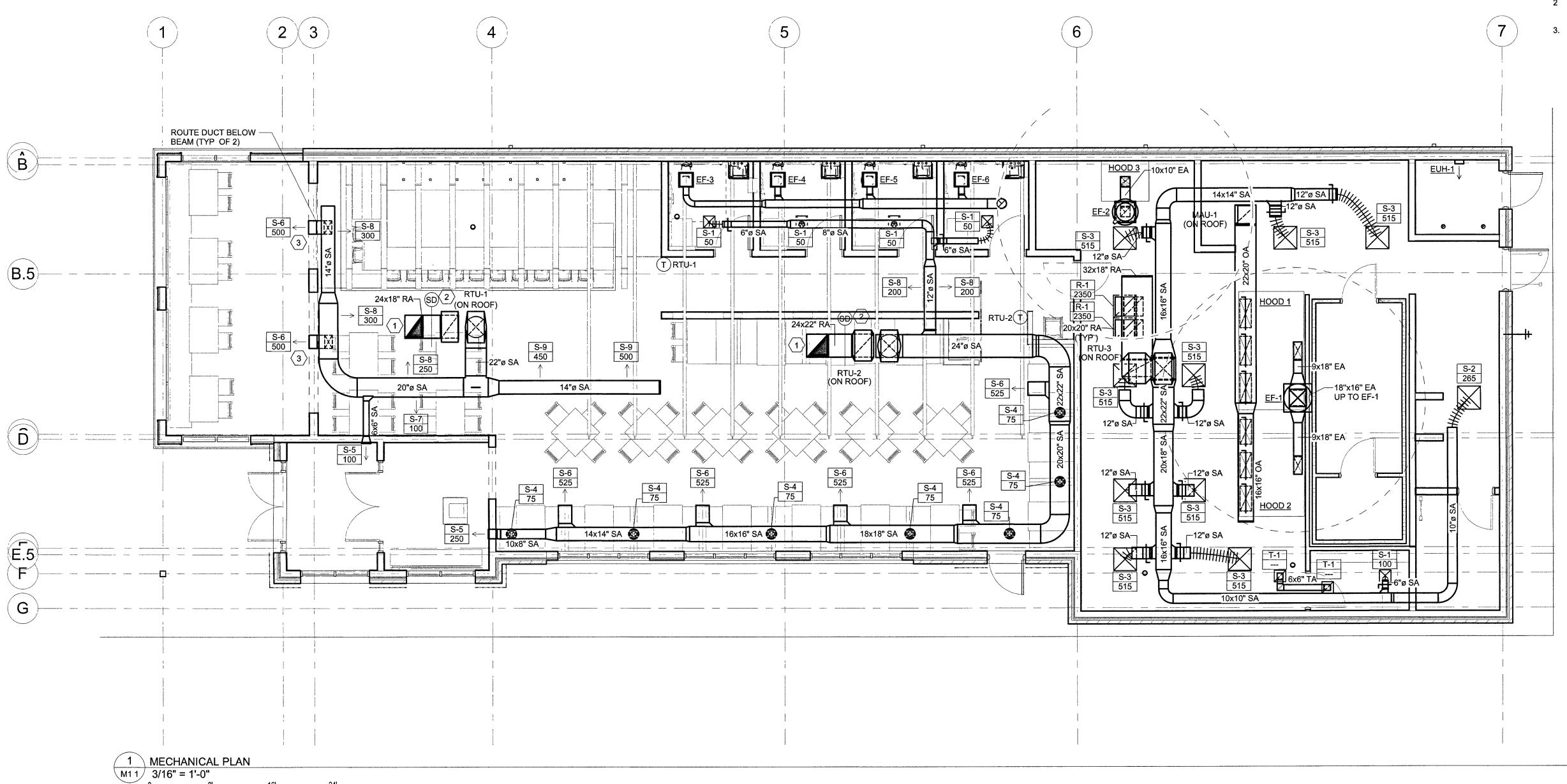
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MECHANICAL DETAILS



GENERAL NOTES:

- 1 ALL EXPOSED S/A DUCT IN DINING AREA TO BE DOUBLE WALL SPIRAL WITH 1" ENTERNAL INSULATION S/A DUCT WORK LOCATED ABOVED CEILING AND HIDDEN FROM VIEW SHALL BE SINGLE WALL DUCT WITH EXTERIOR FSK INSULATION
- 2 R/A DUCT WORK EXPOSED IN DINING AREA TO BE INTERNALLY INSULATED WITH MINIMUM 1" THICK ANTI MICROBIAL DUCT LINER SHEAT METAL SHALL HAVE A PAINT GRIP FINISH.
- 3. MOUNT ALL NEW DUCT WORK TIGHT BELOW STRUCTURE

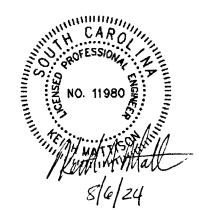
KEYED NOTES: (#)

- TURN DUCT UP AND COVER R/A OPENING WITH WIRE MESH REMOVABLE GRATE
- 2 MOUNT SMOKE DETECTOR IN R/A DUCT WITH AUDIBLE VISUAL ALARM/TEST STATION
- 3. MOUNT S/A DIFFUSER @ 22° BELOW HORIZONTAL CENTER LINE OF DUCT



Seal







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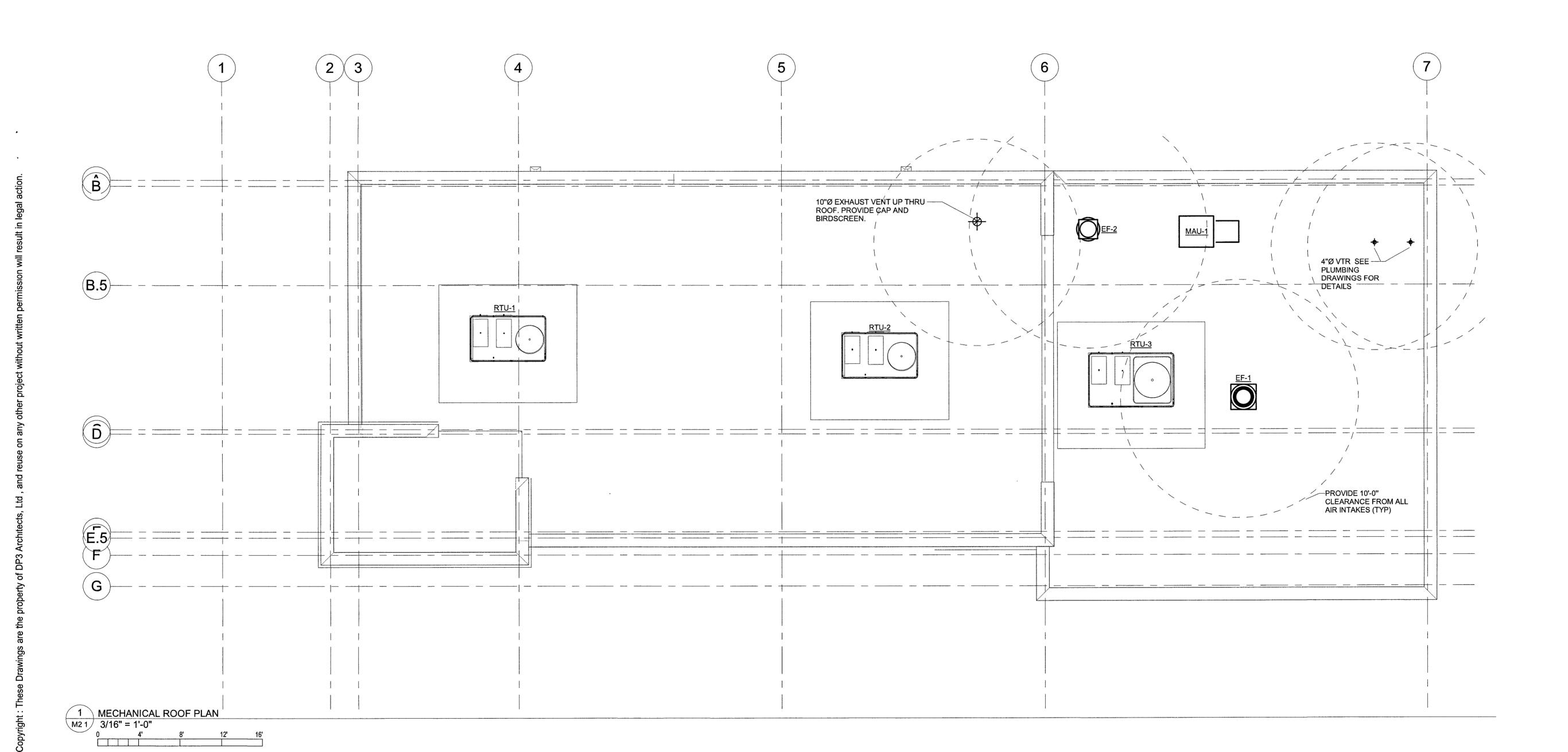
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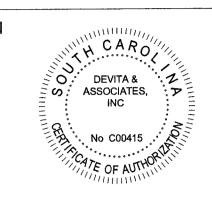
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MECHANICAL PLAN

M1.1











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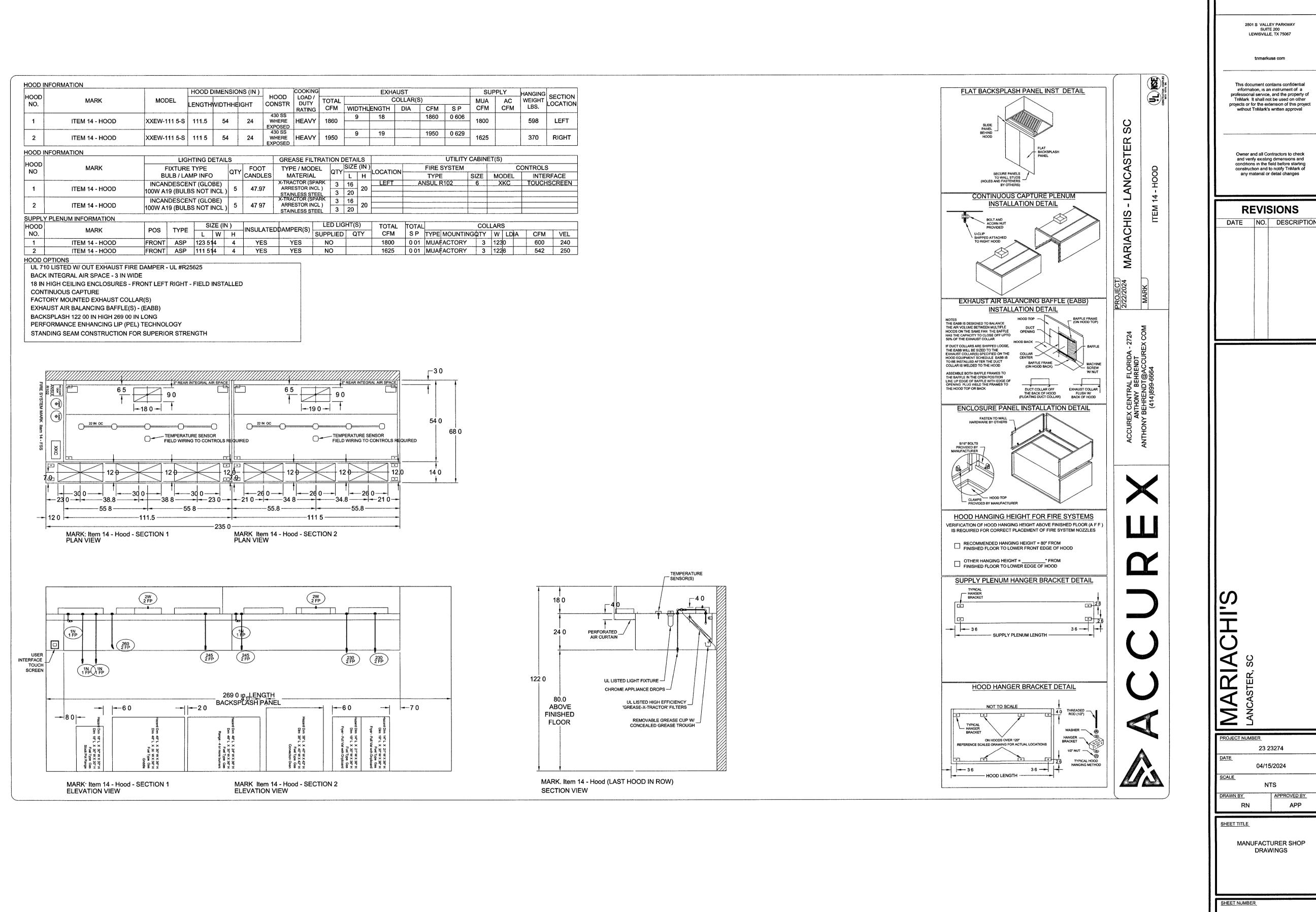
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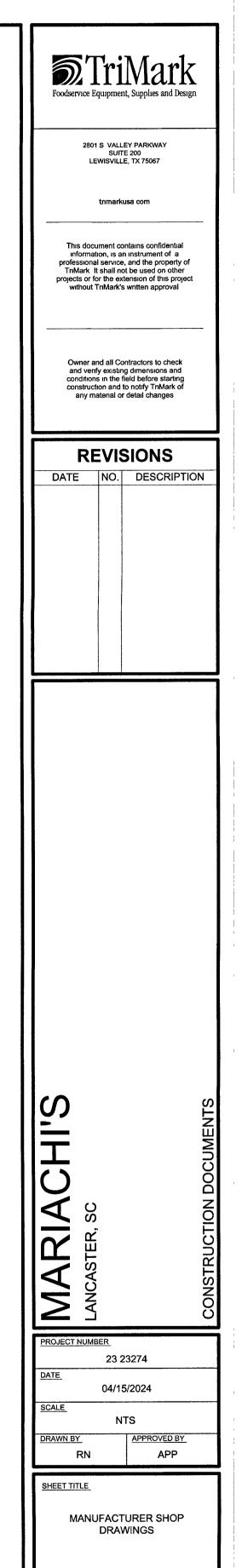
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MECHANICAL ROOF PLAN

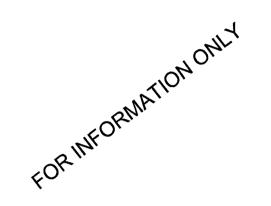
M2.1





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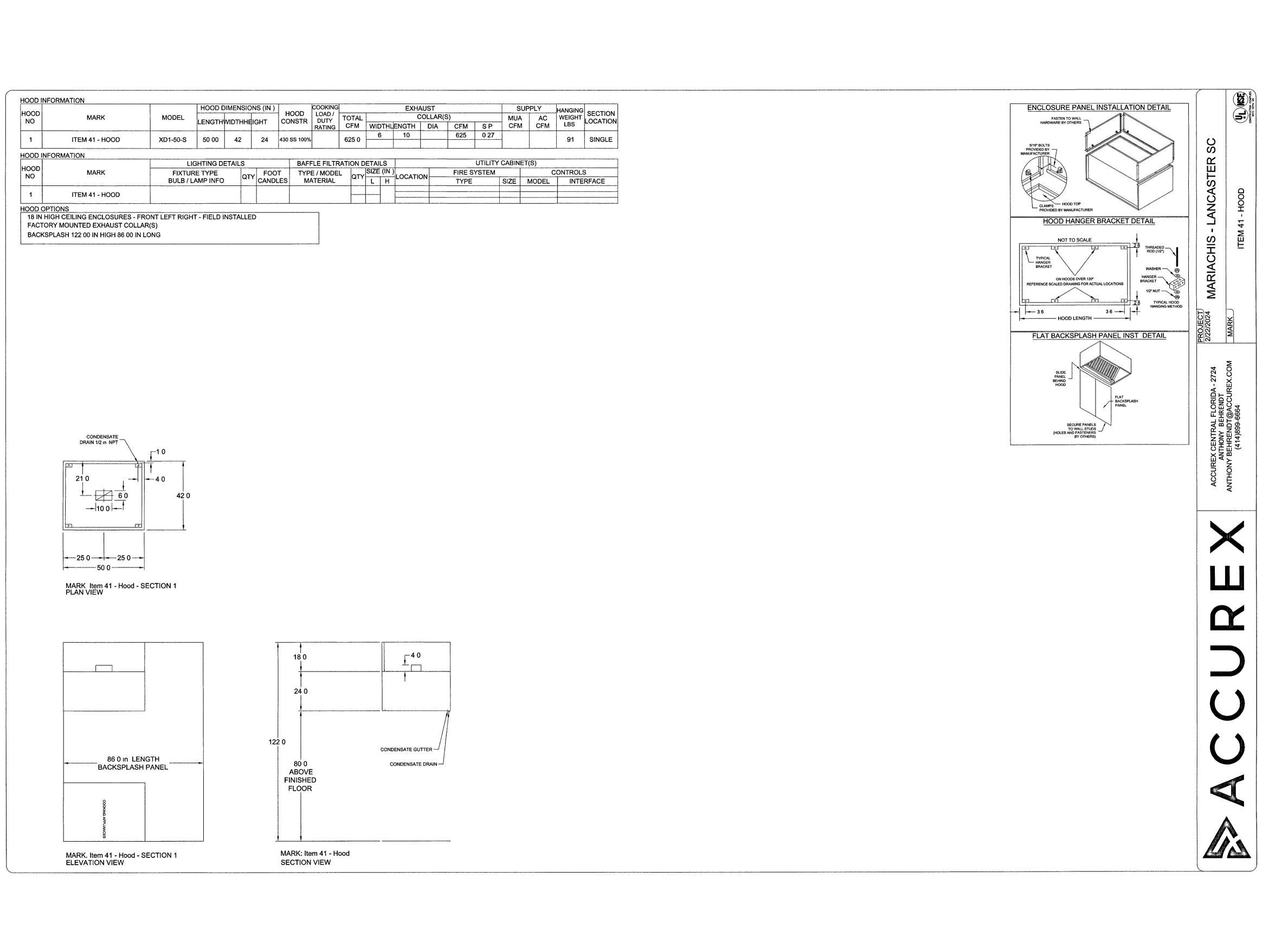
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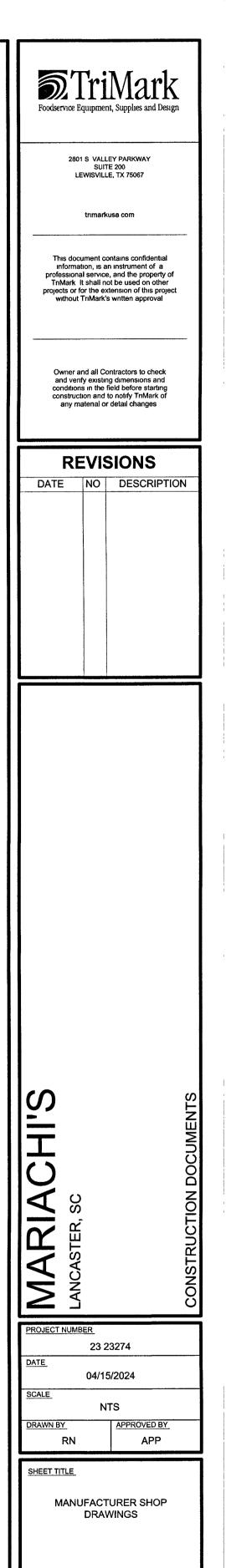
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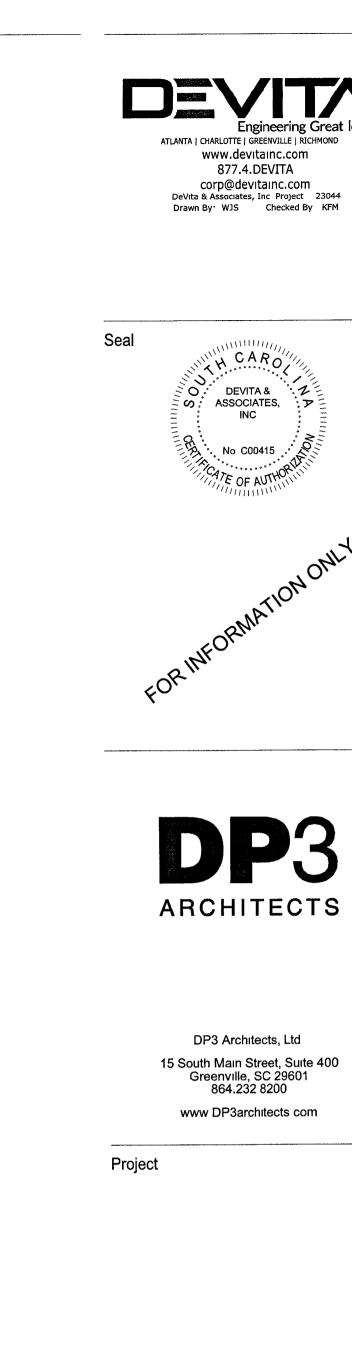
Revisions

Drawing

MECHANICAL HOOD DRAWINGS







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MECHANICAL HOOD DRAWINGS

FIRE SYSTEM INFORMATION ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC FLOW POINTS SUPPLY MARK(S) PROTECTED BY FIRE SYSTEM DETECTION LOCATION MODEL LINE HOODS CONTROL PANEL CABINET - LEFT END OF ITEM 14 - 18 UTILIZED ITEM 14 - HOOD SECTION 1 ANSUL R-102 CONTINUOUS USIBLE LINK WIRING DIAGRAMS ITEM 14 - FSS WET CHEMICAL 22 AVAILABLE ITEM 14 - HOOD SECTION 2 W/DPDT MICRO SWITCH DPDT SWITCHES PROVIDED BY MANUFACTURER MAY BE WIRED PER TYPICAL EXAMPLES SHOWN VERIFY WITH LOCAL CODES AND EQUIPMENT SUPPLIED AS THE CONNECTION NEEDED FOR YOUR INSTALLATION FIRE SYSTEM OPTIONS AND ACCESSORIES FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL) CONNECTION TO BUILDINGS ALARM NO VOLTAGE FREE CONTACTS FOR SULLOWING ALARMIS) CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED METAL BLOW-OFF CAPS - INCLUDED GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200 HOOD SUPPRESSION TANK - INCLUDED - 6 GAL - [(2) 3 0 TANK(S)] CONNECTION TO COOKING POWER TO COOKING COLIPMENT

SHANT TRIP BREAKER

100 VAC NIPUT

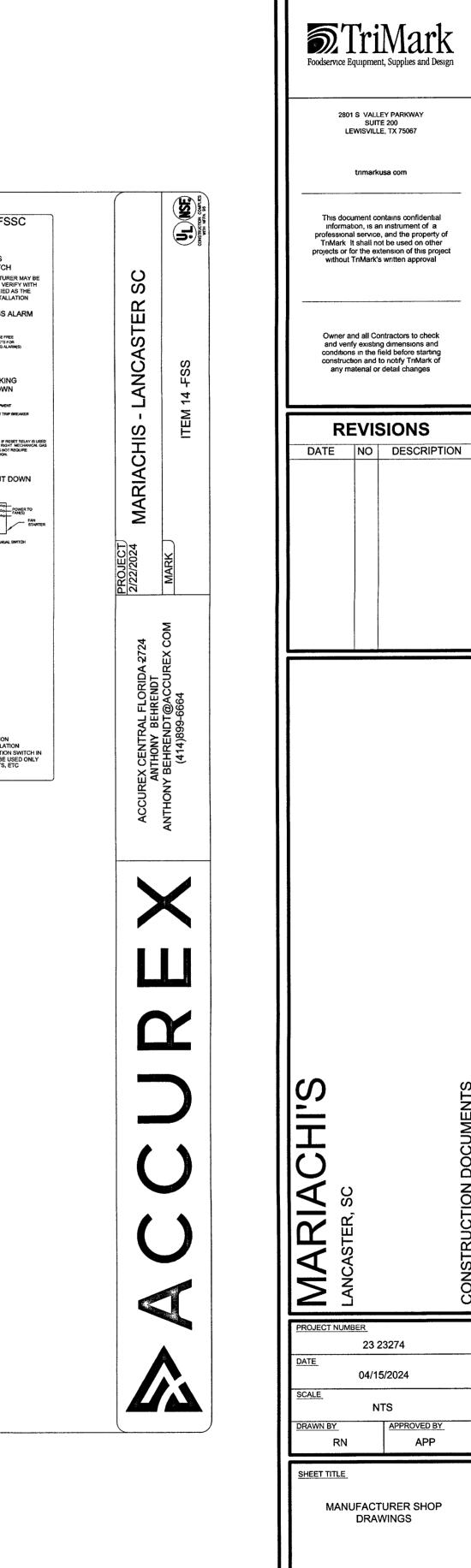
IN INCLECTING CAS VALVE. IF RESET BELAY IS USED DISECTIONAL OR BAT RIGHT MECHANICAL GAS SELECTRICAL CONNECTION. EQUIPMENT SHUT DOWN REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS NOT TO SCALE NOTES: WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS
-VERIFICATION OF ALL COCKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD UNLESS A WALL IS LOCATED ON THE RIGHT END
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 60° OF HOOD CONNECTION TO FAN SHUT DOWN THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING
-GAS SHUT-OFF VALVE, IF REQUIRED TO BE SUPPLIED BY MANUFACTURER (UP
TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER
-MICRO SWITCH TO BE SUPPLIED BY MANUFACTURER FOR CONNECTION TO,
BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS
AND ELECTRICAL POWER SHUT DOWN FIELD WIRING AND CONNECTIONS TO BE
PERFORMED BY A LICENSED ELECTRICIAN DO NOT SHUT DOWN EXHAUST FANS WITH THIS METHOD OF WIRING IF PROHIBITED BY LOCAL CODES. THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING
-FULL DUMP TEST OTHER THAN WHT IS SPECIFIED PER THE INSTALLATION
MANUAL, OR TO SATISFY A STATE OR LOCAL CODE PERMIT AND TESTING FEES
ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR
THE FIRE SYSTEM
-MORE THEN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR
OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS NORMAL TRAVEL
DISTANCE IS FIRST 50 MI (80 5 KM) FROM OFFICE OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS NORMAL TRAVEL
DISTANCE IS FIRST 50 MI (80 5 MM) FROM OFFICE

- SPECIAL CLASSES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY
SENSITIVE AREAS
-INSTALLATION OF GAS SHUT-OFF VALVE
-SPECIAL DRAWINGS REQUIRED TO SATISFY STATE OR LOCAL CODE PLAN
EXAMINATION FEES, PE OR FS APPROVAL STAMP
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR
FINAL FIELD HOOK-UP
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT
DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT
TRIP BREAKER) OR ACTIVATE AN ALARM SYSTEM, ETC
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE
SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE
(FLUSH MOUNTED PULL STATION)
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES
GREATER THAN 20 FT (6 1M)
-PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING
EQUIPMENT CHANGES OR DEVIATION FROM PLANS OR ANY CHARGES FOR
MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE
SUPPRESSION DETAIL NOTES

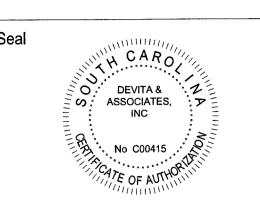
1 — DENOTES FIELD INSTALLATION

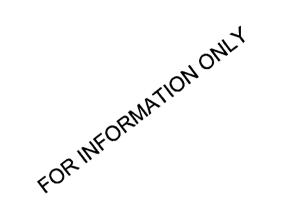
2 — DENOTES FACTORY INSTALLATION

3 DO NOT USE BLACK WIRE ON SNAP-ACTION SWITCH IN
NORMAL INSTALLATION BLACK WIRE TO BE USED ONLY
FOR EXTRANEOUS ALARM LIGHT CIRCUITS, ETC











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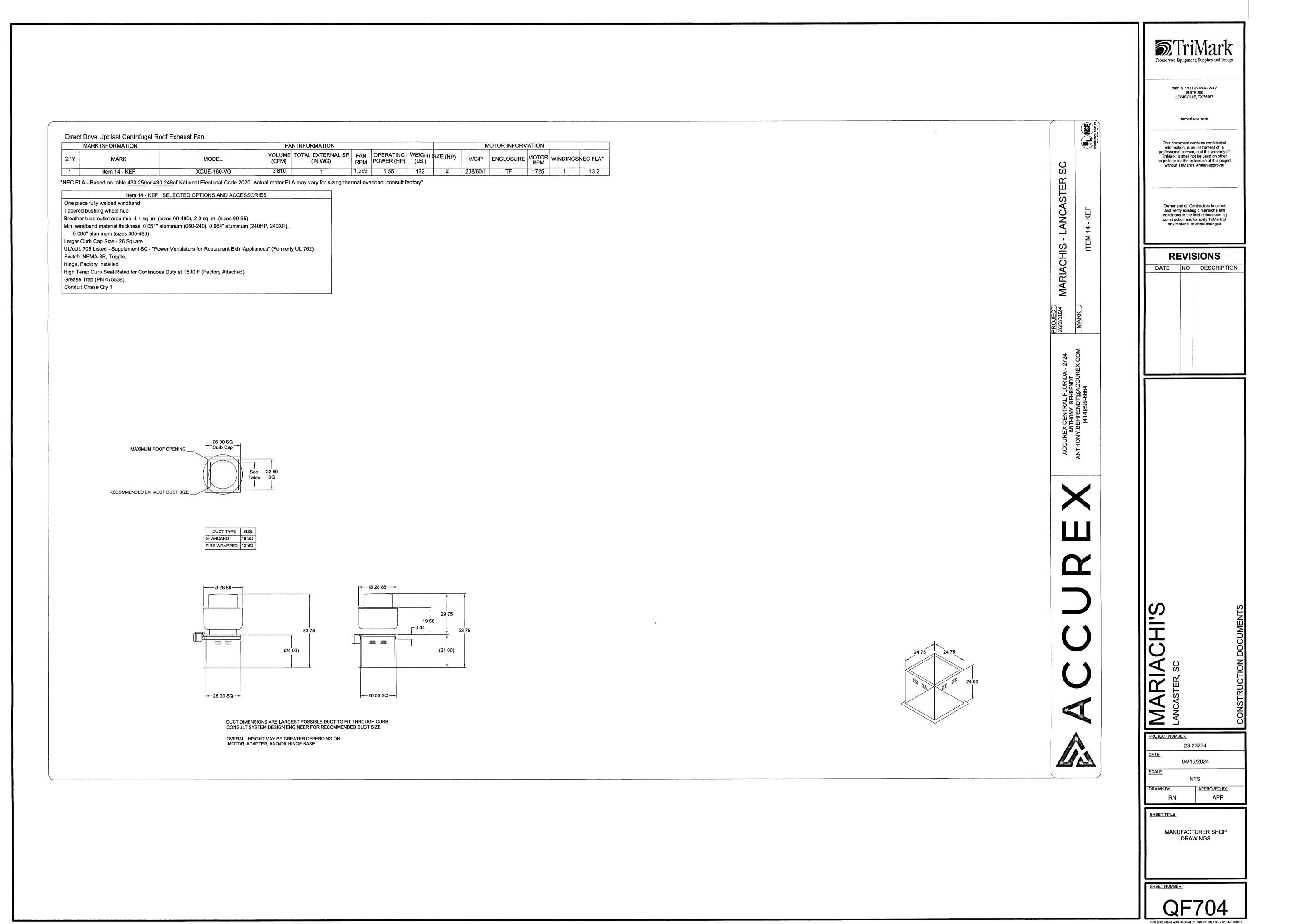
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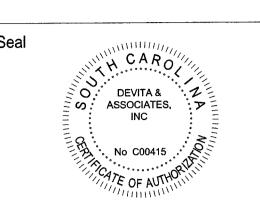
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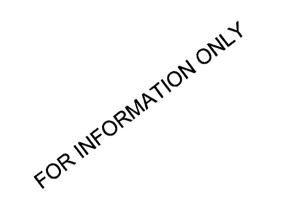
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MECHANICAL HOOD DRAWINGS











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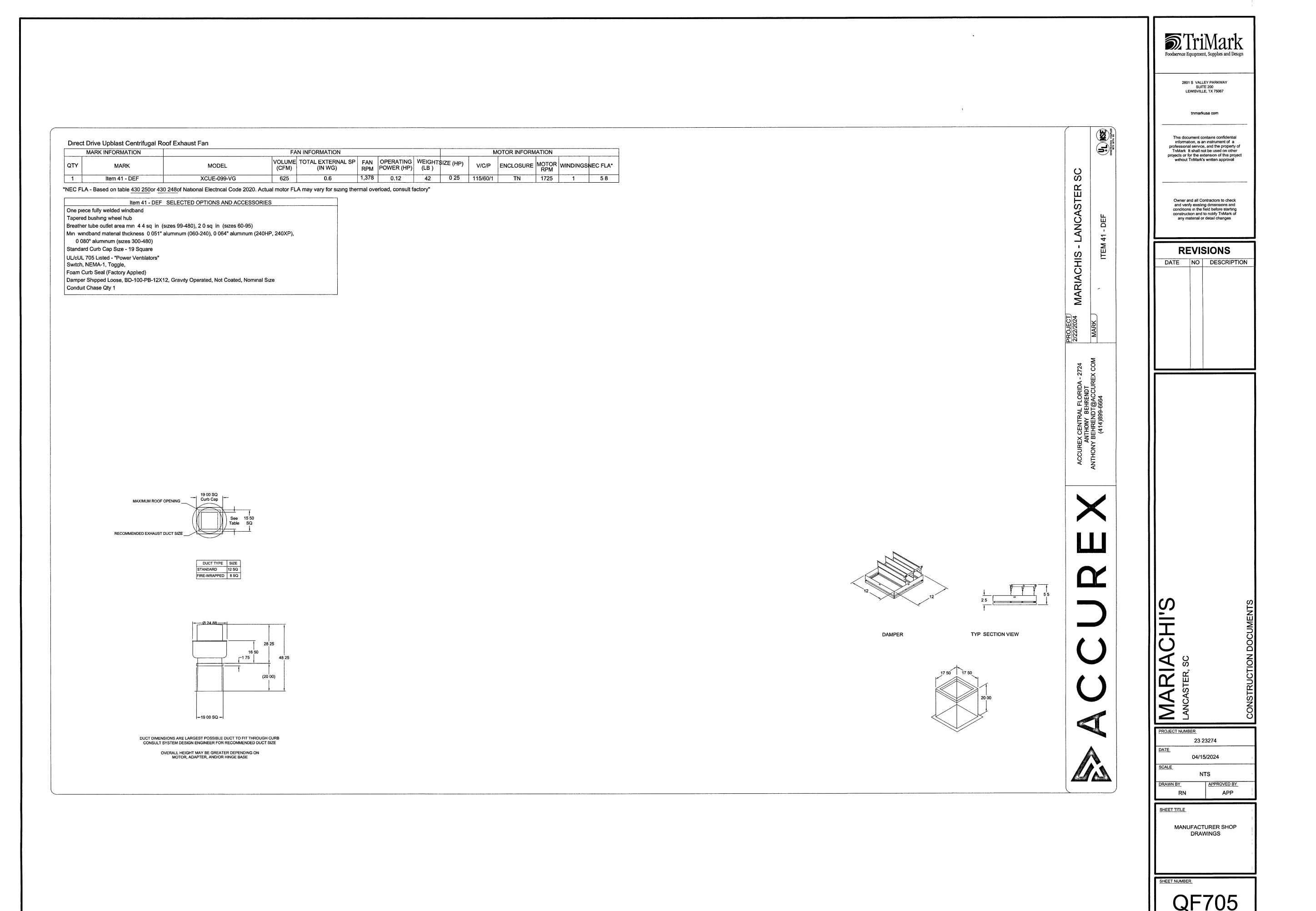
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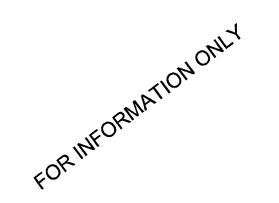
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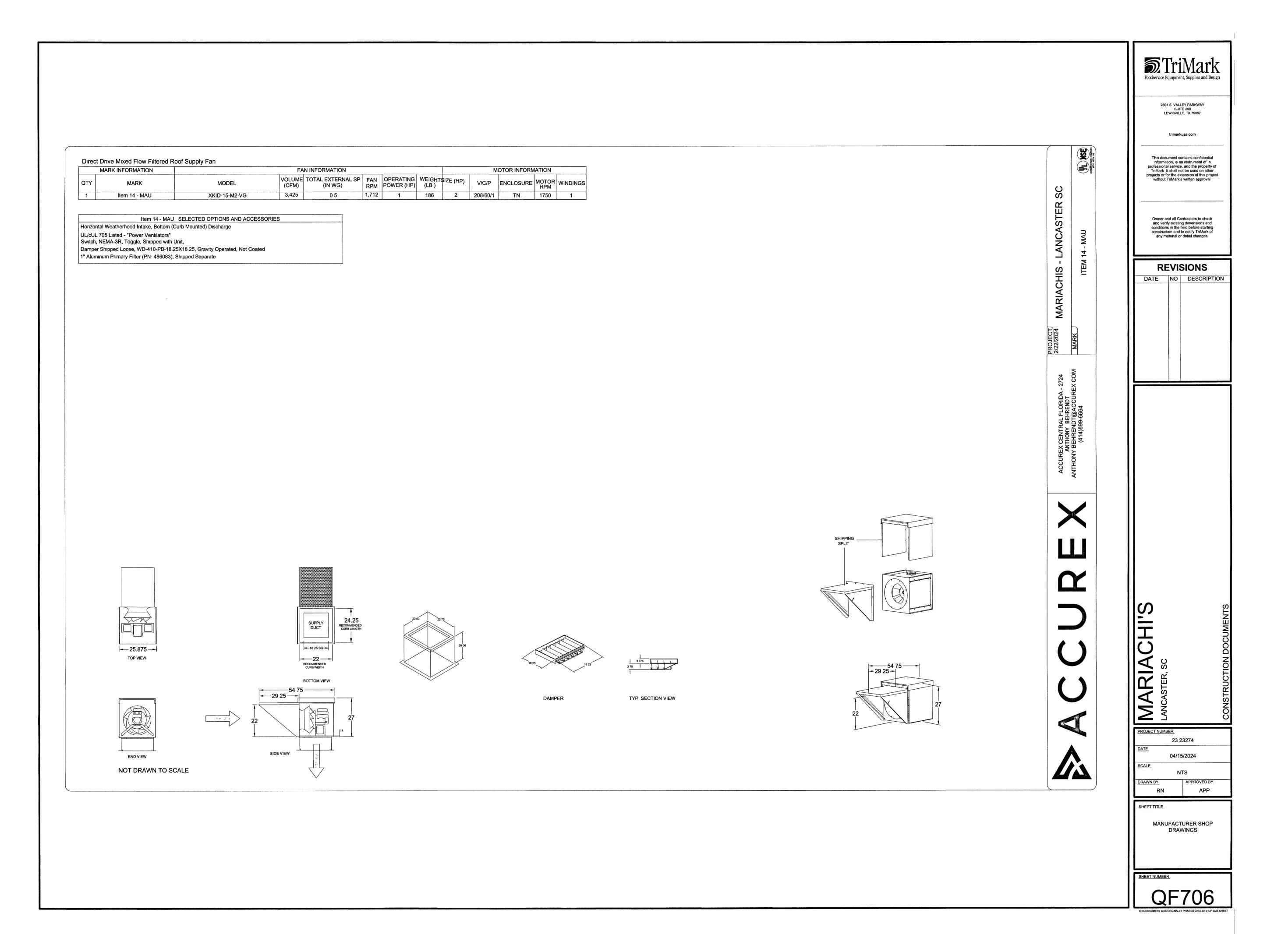
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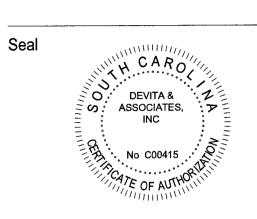
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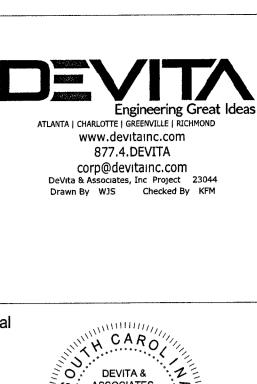
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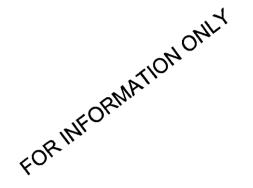
CONTROL INFORMATION MARK ELECTRICAL CONTROL PACKAGE USER INTERFACE FANS CONTROLLED ITEM 14 - CONTROLS LOCATION TYPE LOCATION FAN # TYPE FAN FAN MARK ZONE CFM MOTOR HPMOTOR VOLTCYCLE ITEM 14 - CONTROLS XKC-CV-S-11-2-1-0 LEFT CABINET ON ITEM 14 - FULL COLOR TOUCHSCREEN CABINET - LEFT CABINET ON ITEM 1 EXHAUST E1 ITEM 14 - KEF 1 3810 2 208 60 CONTROL FEATURES HOOD LIGHT CONTROL	0 1 NO NO NO NO O O O O O O O O O O O O O	This document contains confidential information, is an instrument of a professional service, and the property of TriMark It shall not be used on other projects or for the extension of this project without TriMark's written approval
DOC NUMBER	CABINET DETAILS USER INTERFACE DETAILS MOUNTING TYPE FACTORY MOUNTED- UTILITY CABINET - LEFT END OF HOOD USER INTERFACE CONTROL FANS AND LIGHTS INTERFACE CABLE LENGTH 7FT (FACTORY PROVIDED) MOUNTING LOCATION- UTILITY CABINET ON HOOD	Owner and all Contractors to check and verify existing dimensions and conditions in the field before starting construction and to notify TriMark of any material or detail changes REVISIONS DATE NO DESCRIPTION
BRAKER PANEL 110V-130V 1FPF	(INNER CONTROL BOX 12 X 20 X 6) NOTES 1) WHEN CONTROLS ARE MOUNTED IN HOOD-MOUNTED OR WALL CABINET DIMENSIONS SEE HOOD SUBMITTAL 2) MINIMUM OF 36" OF CLEARANCE RECOMMENDED IN FRONT OF CONTROL CABINET	
FIRE SYSTEM DRY CONTACT WIRING EXAMPLES SHANT TIPLE SYSTEM DRY CONTACT WIRING EXAMPLES WIRING EXAMPLE WIRIN	USER INTERFACE SETTINGS (MB) FAR ILLIGHT SUTTONS SHOW BOTH (SEPERATE) USER INTERFACE SETTINGS (HCB) NA GENERAL SETTINGS TIME ZONE CENTRAL DAYLIGHT (DEFAULT) PRISEABLY TESTINGS SUPPLY VIDENIES FIRE OFF BMS SETTINGS NA FAN CONFIGURATION FAN STITINGS PRICE FAN PAN PAN PAN PAN PAN PAN PAN PAN PAN P	PROJECT NUMBER 23 23274 DATE 04/15/2024 SCALE NTS DRAWN BY RN APP SHEET TITLE MANUFACTURER SHOP



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