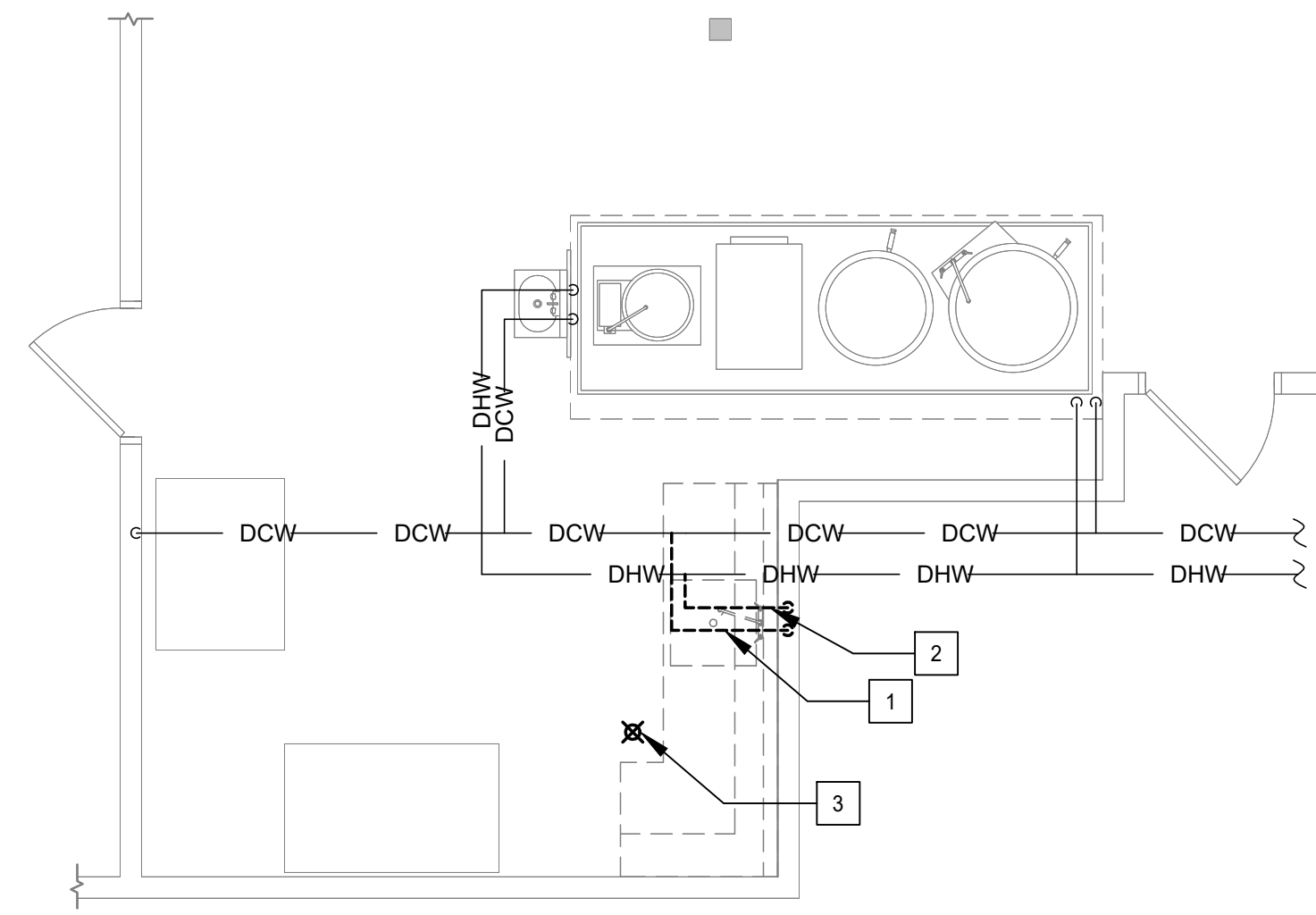
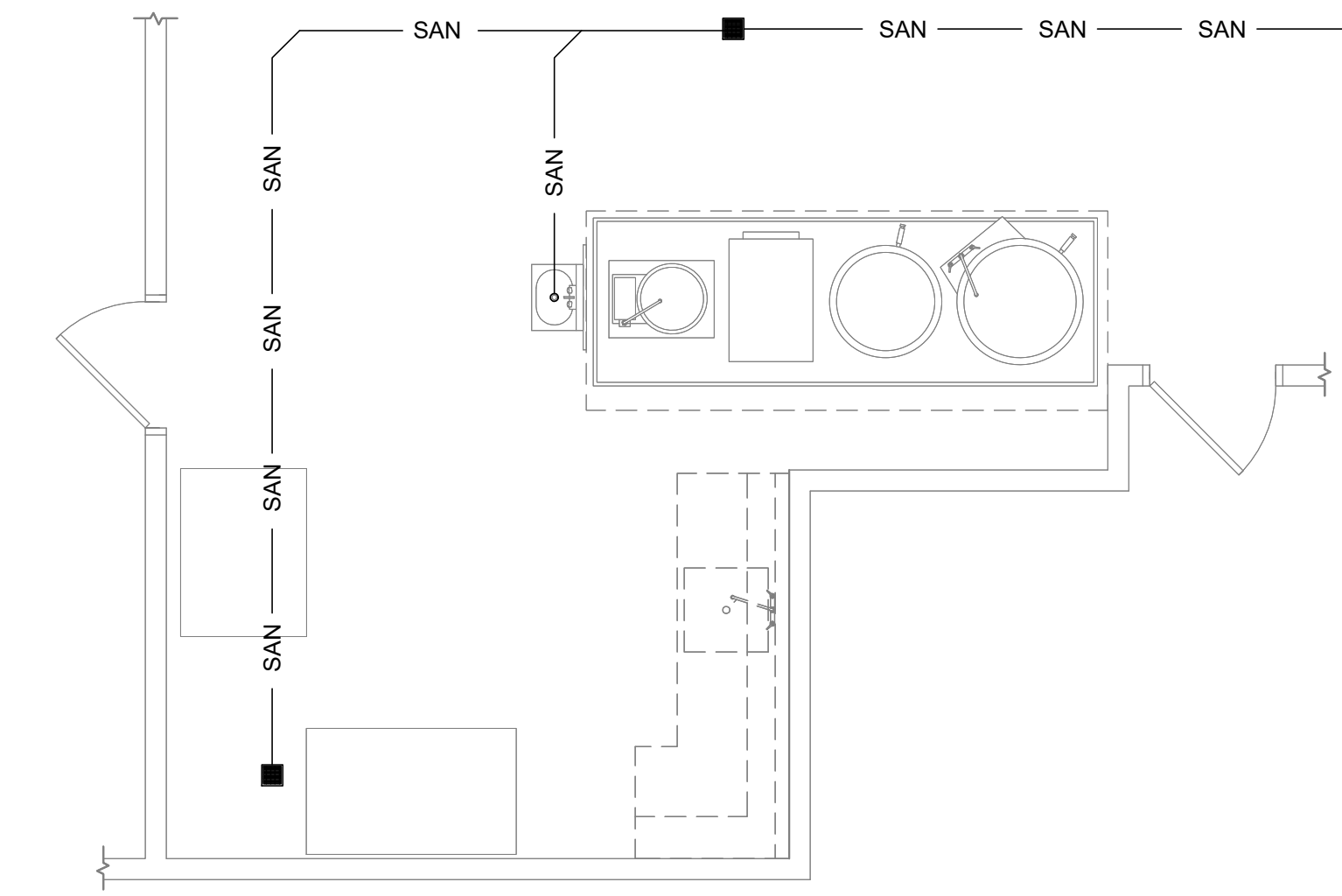


**DEMOLITION NOTES**  
(APPLIES TO THIS DRAWING)

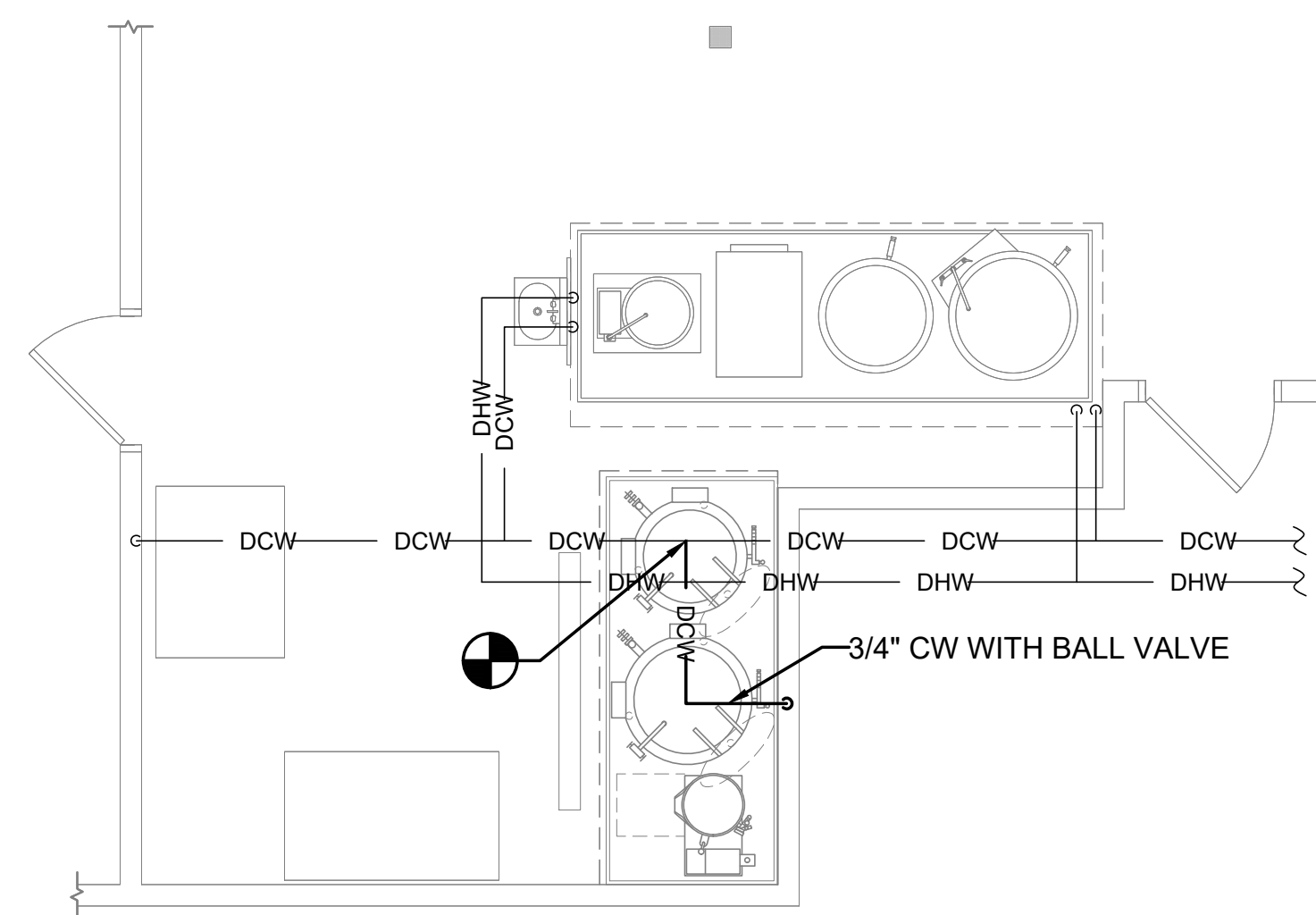
- 1 REMOVE EXISTING DOMESTIC COLD WATER PIPING & CAP.
- 2 REMOVE EXISTING DOMESTIC HOT WATER PIPING & CAP.
- 3 REMOVE EXISTING SPRINKLER HEAD. TO BE RELOCATED.



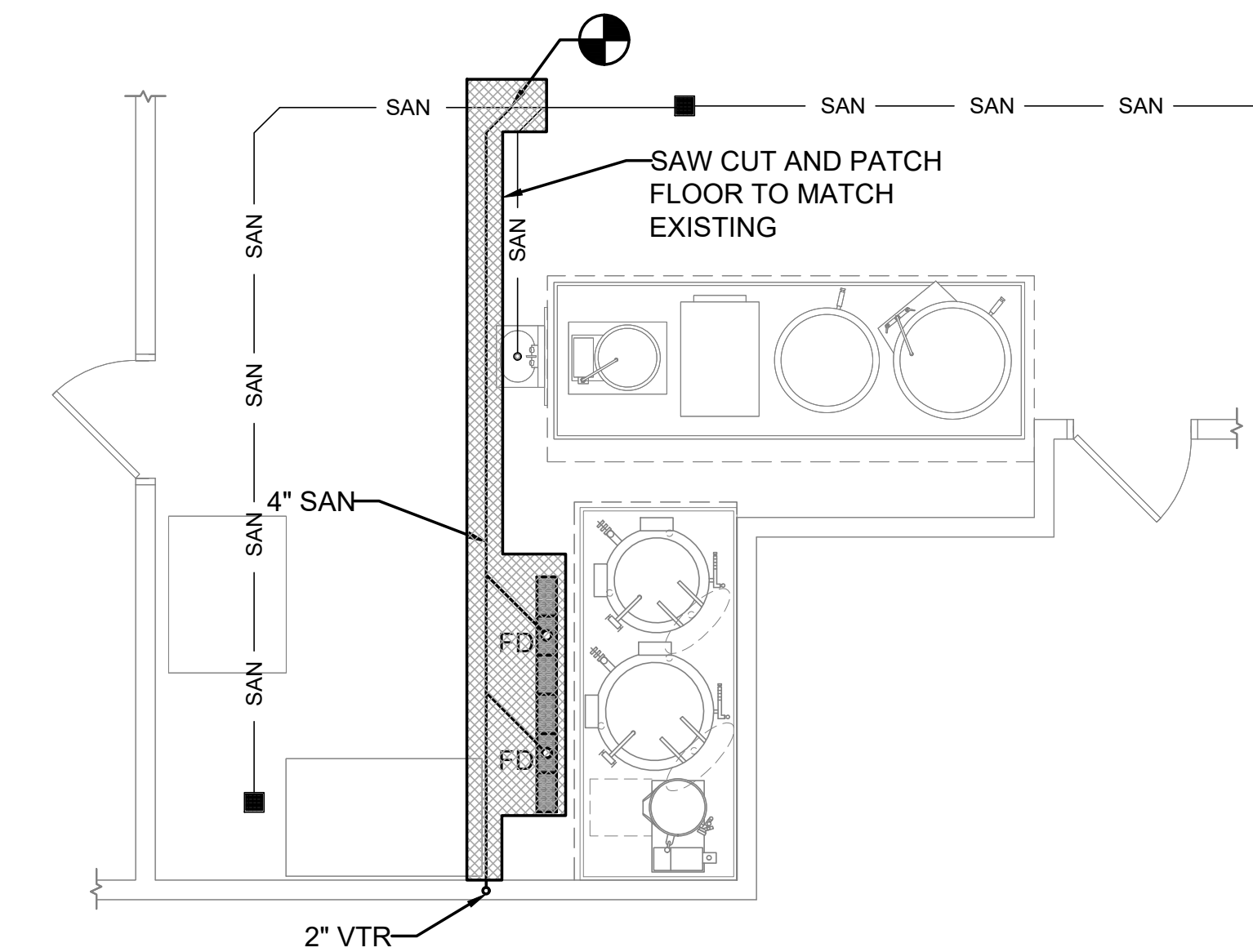
**1 PLUMBING - DOMESTIC DEMOLITION PLAN**  
P-1 SCALE: 1/4"=1'-0"



**2 PLUMBING - SANITARY DEMOLITION PLAN**  
P-1 SCALE: 1/4"=1'-0"



**3 PLUMBING - DOMESTIC NEW WORK PLAN**  
P-1 SCALE: 1/4"=1'-0"



**4 PLUMBING - SANITARY NEW WORK PLAN**  
P-1 SCALE: 1/4"=1'-0"

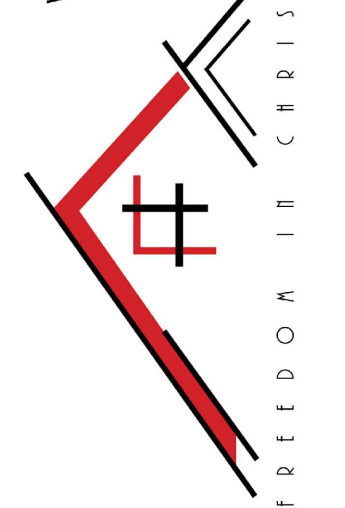


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**RENOVATIONS FOR  
MMC KITCHEN**  
1121 FORREST AVE  
DOVER, DE 19904

**PLUMBING -  
DEMOLITION &  
NEW WORK  
PLAN**

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CHECKED EAU
DATE 14 JUNE 2024
SCALE NOTED
REV. NO. C1655-0124
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**P-1**

# GENERAL PLUMBING NOTES

## GENERAL

1. CODES: ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL CODES AND REGULATIONS, AND IS SUBJECT TO INSPECTION.
2. MATERIALS AND EQUIPMENT SUBSTITUTIONS: THE BID PRICE SHALL BE BASED ON DRAWINGS.
3. CUTTING AND PATCHING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, CHANNELING, CHASING OR DRILLING AT FLOORS AS NECESSARY FOR PROPER INSTALLATION OR SUPPORT OF DUCTS, PIPING, OR OTHER MECHANICAL OR PLUMBING EQUIPMENT. WORK SHOULD BE COORDINATED WITH ARCHITECT. ANY DAMAGE TO BUILDING, PIPING, EQUIPMENT, PLASTER, WOODWORK OR METAL WORK SHALL BE REPLACED BY SKILLED MECHANICS OF TRADES INVOLVED AT NO EXTRA COST TO THE OWNER.
4. CONTRACTOR SHALL CHECK EXISTING CONDITIONS FOR COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.

## PLUMBING SYSTEM

1. THE WORK INCLUDES INSTALLATION OF THE PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM. THE WORK ALSO INCLUDES ROUGH-IN AND FINAL CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS. HOOK-UPS, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE PART OF THIS SECTION.
2. THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURES AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURE INSTALLATION REQUIREMENTS. COMPLY WITH ALL APPLICABLE ADA INSTALLATION REQUIREMENTS.
3. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE.
4. PIPING SYSTEMS - GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIALECTIC UNION. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.
5. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.
6. PROVIDE WATER SUPPLIES AND WASTE TRAPS AS NEEDED.
7. SEWER AND WASTE PIPING: WASTE DRAINAGE PIPING SHALL BE STANDARD WEIGHT PVC UNLESS OTHERWISE NOTED. ALL DRAINAGE PIPING 2-1/2" OR LESS SHALL BE UNIFORMLY PITCHED AT 1/4" PER FOOT UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS. ALL DRAINAGE PIPING 3" TO 6" SHALL BE UNIFORMLY PITCHED AT 1/8" PER FOOT UNLESS REQUIRED BY EXISTING CONDITIONS OR INDICATED ON THE DRAWINGS. 8" AND LARGER SHALL BE PITCHED AT 1/16" PER FOOT.
8. VENTS: PROVIDE A COMPLETE VENT RISER SYSTEM OF STANDARD WEIGHT PVC PLASTIC AS APPLICABLE. THE VENT SYSTEM SHALL BE CARRIED THROUGH THE ROOF WITH APPROPRIATE FLASHING.
9. CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE. CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW. ALL FLOOR CLEANOUTS SHALL BE FLUSH WITH FLOOR.
10. WATER DISTRIBUTION PIPING: LAYOUT WATER PIPING SO THAT THE ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE 1/2" MIN. TYPE L COPPER TUBING WITH WROUGHT COPPER FITTINGS AND SWEAT OR PRESSED CONNECTIONS, EXCEPT WHERE SPECIFICALLY STATED OTHERWISE. PROVIDE MIN. 16" HIGH FULL AIR CHAMBER AT EACH FIXTURE STOP. INSTALL CHROME PLATED BRASS ESCUTCHEON PLATES AT ALL PENETRATIONS THROUGH FINISHED SURFACES (INCLUDING CABINET INTERIORS). USE LEAD FREE (EQUAL TO OR LESS THAN 0.2% LEAD) SOLDER CONFORMING TO ASTM B 32 TIN-ANTIMONY SOLDER, 95/5 FOR ALL SWEAT FITTINGS OF COPPER PIPING SYSTEM.
11. PIPE INSULATION: PROVIDE (FOR HOT & COLD) 1/2" (COLD) 1" (HOT) SELF-ADHESIVE UNICELLULAR FOAM PIPE INSULATION WITH PRE-FORMED PVC FITTING COVERS - EQUAL TO SELF-ADHESIVE ARMSTRONG 2000 WITH K FACTOR OF 0.27 AT 100 DEGREES MEAN TEMPERATURE.
12. SHUTOFF VALVES, SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE OR OTHER EQUIPMENT ITEM, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. VALVES SHALL BE BALL TYPE, CHROME-FINISHED BRONZE, TEFLON SEATS AND PACKING, 400 LB. W.O.G.,
13. ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE. COORDINATE LOCATION WITH OWNER.
14. SUPPLIES AND TRAPS: PROVIDE BARRIER-TYPE TRAP SEALS UNLESS OTHERWISE SPECIFIED AND/OR SUPPLIES INSTALLED AS CLOSE AS POSSIBLE TO ALL PLUMBING FIXTURES, DRAINS AND EQUIPMENT FURNISHED BY OTHERS, HAVING A WASTE CONNECTION, OR REQUIRING WATER SERVICE. EXPOSED TRAPS AND SUPPLIES IN EXPOSED AREAS (INCLUDING CABINET INTERIORS) SHALL BE CHROMIUM PLATED BRASS, WITH CHROME PLATED ESCUTCHEON PLATES. REMOVE ALL MARKING FROM ALL PIPING WHEN INSTALLATION IS COMPLETE.
15. INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT, AND OMIT ESCUTCHEON.
16. TEST WATER SYSTEM UNDER 150 PSIG HYDROSTATIC PRESSURE. FOR FOUR (4) HOURS MINIMUM, OR AS REQUIRED BY CODE. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.

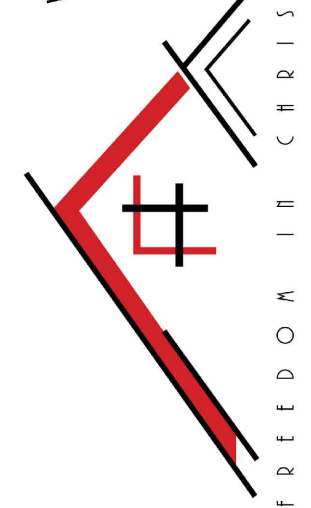
PLUMBING FIXTURE SCHEDULE						
ITEM	DESCRIPTION	CW	HW	SOIL WASTE	TRAP	SPECIFICATIONS/REMARKS
FD	3'X6" FLOOR DRAIN	---	---	3"	---	JAY R SMITH 6" WIDE REVEAL TRENCH DRAIN WITH SQUARE HOLE GRATES. MODEL# 2810 SERIES

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**PLUMBING -  
SCHEDULES &  
NOTES**

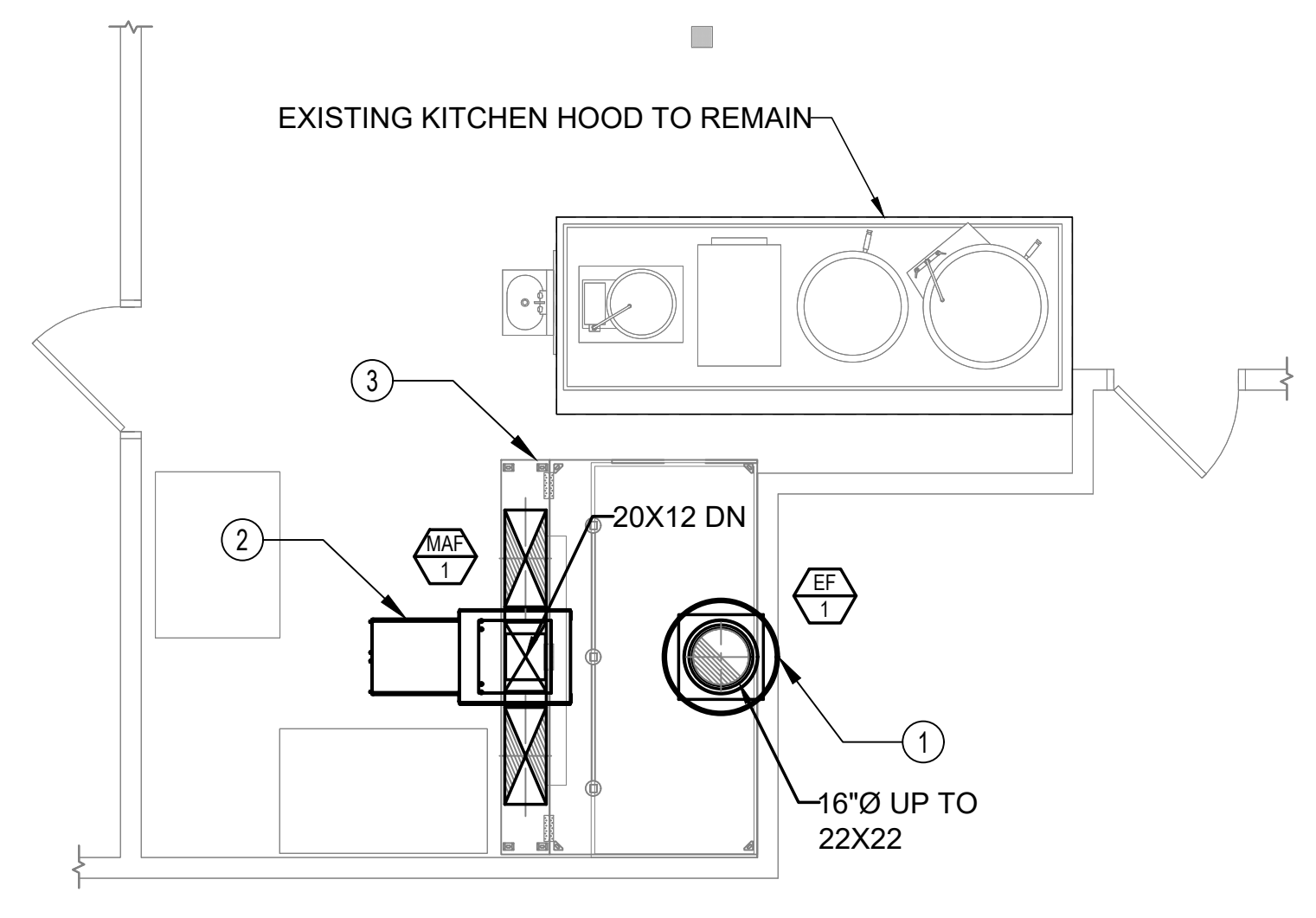


Mechanical | Electrical | Systems Engineering  
P.O. Box 498, Smyrna, DE 19977 302-698-9000

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DATE 14 JUNE 2024
SCALE NOTED
DE NO. C1655-0124
SHEET <b>P-2</b>
OF SHEETS

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- DRAWING NOTES**  
(APPLIES TO THIS DRAWING)
- ① MOUNT EF-1 ON ROOF WITH 4X4 ANGLE WELDED TO THE PERLINS FOR SUPPORT.
  - ② MOUNT MAF-1 ON ROOF WITH 4X4 ANGLE WELDED TO THE PERLINS FOR SUPPORT.
  - ③ INSTALL NEW KITCHEN HOOD.



**2 MECHANICAL - NEW WORK PLAN**  
M-1 SCALE: 1/4"=1'-0"

**GENERAL MECHANICAL NOTES**

- |  |  |  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. GENERAL NOTES: THESE GENERAL NOTES APPLY TO ALL MECHANICAL DRAWINGS.</li> <li>2. CODES: ALL WORK SHALL CONFORM WITH THE 2015 INTERNATIONAL MECHANICAL CODE, 2015 INTERNATIONAL ENERGY CONSERVATION CODE, 2015 INTERNATIONAL FUEL GAS CODE, NFPA, NEC, NEW CASTLE COUNTY DELAWARE AND STATE OF DELAWARE CODES, ORDINANCES AND REGULATIONS AND SHALL MEET OR EXCEED THE LATEST VERSIONS OF ASHRAE &amp; SMACNA RECOMMENDATIONS.</li> <li>3. SYMBOLS: NOT ALL SYMBOLS, ABBREVIATIONS AND NOTES MAY BE USED FOR THIS PROJECT.</li> <li>4. COORDINATION: WORK SHALL BE COORDINATED WITH ALL OTHER TRADES. ROUTING OF DUCTWORK AND PIPING ARE INDICATED TO SHOW GENERAL INTENT. CLEARANCES BETWEEN CEILING AND STRUCTURE ARE MINIMAL IN SEVERAL LOCATIONS. COORDINATE WITH OTHER TRADES PRIOR TO FABRICATION OF WORK.</li> <li>5. INTERFERENCE: PROVIDE OFFSETS AND TRANSITIONS IN DUCTWORK AND PIPING AS REQUIRED TO AVOID INTERFERENCE AT NO ADDITIONAL COST TO THE OWNER.</li> <li>6. FINAL CONNECTIONS: VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. PROVIDE TRANSITIONS TO FINAL TO EQUIPMENT. MAKE FINAL CONNECTION TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF WORK.</li> <li>7. SUPPLY AND RETURN LOCATIONS: EXACT LOCATION OF DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH THE REFLECTED CEILING PLANS BEFORE INSTALLATION. PROVIDE SYMMETRY WITH THE ROOM LIGHTING SYSTEMS. IN CASE OF ANY CONFLICT CONTACT THE DESIGN TEAM.</li> <li>8. SUPPLY AND RETURN FRAMES: VERIFY DIFFUSER, GRILLE AND REGISTER MOUNTING FRAME TYPES WITH THE CEILING TYPES. MATCH FRAME TYPE WITH CEILING CONFIGURATION.</li> <li>9. ACCESS PANELS: PROVIDE ACCESS DOORS OR PANELS FOR DUCT-MOUNTED FIRE OR FIRE &amp; SMOKE DAMPERS, SMOKE DETECTORS, VALVES AND OTHER CONCEALED EQUIPMENT.</li> </ol> | <ol style="list-style-type: none"> <li>10. DUCTWORK: DUCT FITTINGS ARE INDICATED SYMBOLICALLY. REFER TO DETAILS FOR CONFIGURATION OF FITTINGS, TAPS AND CONNECTIONS. DUCT CONSTRUCTION SHALL COMPLY WITH SMACNA CONSTRUCTION STANDARDS (LATEST EDITION).</li> <li>11. FLEXIBLE DUCTWORK: FLEXIBLE DUCTWORK SHALL NOT EXCEED FIVE (5) FEET IN LENGTH. FLEXIBLE DUCTWORK SHALL BE PREFABRICATED INSULATED TYPE WITH VAPOR BARRIER. TOTAL LENGTH SHALL NOT EXCEED 8'-0".</li> <li>12. DUCT DIMENSIONS: ALL DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.</li> <li>13. WEIGHT LOADS: CONCENTRATE LOADS AT JOIST/BEAM LOCATIONS. PROVIDE ANGLE BRACES WHERE CONCENTRATED LOADS OCCUR AT OTHER LOCATIONS.</li> <li>14. DUCT TURNS: USE RADIUS DUCTWORK ELBOWS WHERE POSSIBLE. PROVIDE TURNING VANES FOR SQUARE ELBOWS IN SUPPLY AIR DUCTWORK AND AS INDICATED.</li> <li>15. FIRE PROTECTION: FIRE-SAFE PIPE AND DUCTWORK PENETRATIONS OF ALL FIRE RATED AND SMOKE RESISTIVE CONSTRUCTION IN ACCORDANCE WITH NFPA 90A.</li> <li>16. LIFE SAFETY: COORDINATE WITH LIFE-SAFETY PLANS.</li> <li>17. CONTROLS: MOUNT AND WIRE SENSORS AND THERMOSTATS TO CONTROL HEATING AND COOLING SYSTEMS AT 48" AFF (ADA).</li> <li>18. EQUIPMENT INSTALLATION: INSTALL ALL EQUIPMENT LEVEL AND PLUMB. PROVIDE BLOCKING AND MOUNTING HARDWARE AS REQUIRED.</li> <li>19. ROOF EQUIPMENT INSTALLATION: INSTALL ALL EQUIPMENT REQUIRING PERIODIC SERVICE NOT LESS THAN 10 FEET FROM ROOF EDGE OR OPENING WITHOUT PROTECTIVE RAILING OR PARAPET OF 42-INCHES AFF. COORDINATE WITH OTHER TRADES.</li> <li>20. DUCT INSULATION: ALL DUCTS SHALL BE EXTERNALLY INSULATED WITH R-6</li> </ol> | <p>INSULATION AND R-8 INSULATION WHERE LOCATED OUTSIDE THE BUILDING ENVELOPE.</p> <ol style="list-style-type: none"> <li>21. HARDWARE: PROVIDE ALL REQUIRED HARDWARE, EQUIPMENT RAILS AND ROOF CURBS TO SECURELY MOUNT ALL OUTDOOR EQUIPMENT.</li> <li>22. COMMISSIONING: THE CONTRACTOR SHALL COMMISSION THE HVAC SYSTEMS BASED ON MANUFACTURER'S RECOMMENDATIONS AND A PLAN DEVELOPED BY THE CONTRACTOR AND APPROVED BY THE OWNER WHICH WILL INCLUDE BALANCING OF THE AIR SYSTEMS, TESTING ALL CONTROLS AND EQUIPMENT.</li> <li>23. DUCT SEALING: ALL INTERIOR DUCTWORK SHALL BE SEALED WITH MASTIC AND INSULATED WITH A MINIMUM R-6 INSULATION. CONCEALED INSULATION SHALL BE FIBERGLASS DUCT WRAP WITH FOIL FACE.</li> <li>24. FLASHING: PROVIDE WATER TIGHT FLASHING AT ALL EXTERIOR DUCT AND INTAKE/EXHAUST PENETRATIONS. MATCH COLOR WITH BUILDING.</li> <li>25. SCREENS: PROVIDE PROPERLY SIZED PERMANENTLY ATTACHED CORROSION RESISTANT BIRD SCREENS FOR ALL HVAC EQUIPMENT EXTERIOR WALL OR ROOF PENETRATIONS.</li> <li>26. SITE VISIT: THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE TO REVIEW AND EVALUATE THE EXISTING MECHANICAL SYSTEMS PRIOR TO BIDDING. OBSERVATIONS AND DETERMINATIONS SHALL BE MADE AS TO THE EXTENT OF EXISTING AND PROPOSED DEMOLITION AND CONSTRUCTION. ANY COSTS OF MODIFICATIONS OR UPGRADES DETERMINED TO BE NECESSARY SHALL BE INCLUDED IN THE MECHANICAL CONTRACTORS BID. FAILURE TO ADEQUATELY INVESTIGATE THE SITE CONDITIONS PRIOR TO BIDDING SHALL NOT BE GROUNDS FOR AN EXTRA.</li> <li>27. MANUALS: PROVIDE (2) SETS OF OPERATION AND MAINTENANCE MANUALS TO OWNER.</li> </ol> |
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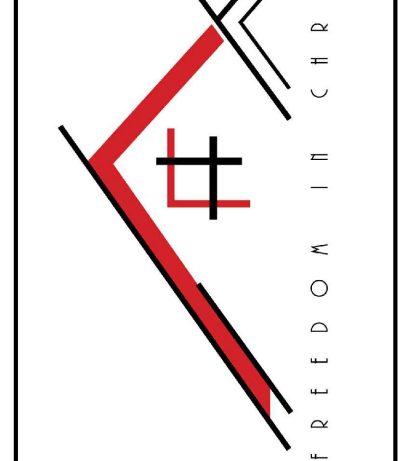
**KITCHEN SPECIFIC MECHANICAL NOTES**

- |   |  |   |
|---|--|---|
| <ol style="list-style-type: none"> <li>1. <u>KITCHEN HOOD EXHAUST DUCTWORK:</u><br/>KITCHEN HOOD DUCTWORK SHALL BE CONSTRUCTED OF STEEL HAVING A MINIMUM THICKNESS OF 0.0575 INCH (NO. 16 OR STAINLESS STEEL NOT LESS THAN 0.0450 INCH (NO. 18 GAGE) IN THICKNESS OR SHALL BE FACTORY-BUILT COMMERCIAL KITCHEN GREASE DUCTS LISTED AND LABELED IN ACCORDANCE WITH UL 1978.</li> <li>2. DUCTS EXPOSED TO THE OUTSIDE ATMOSPHERE OR SUBJECT TO A CORROSIVE ENVIRONMENT SHALL BE PROTECTED AGAINST CORROSION IN AN APPROVED MANNER.</li> <li>3. GREASE DUCT MATERIALS: GREASE DUCTS SERVING TYPE I HOODS SHALL BE CONSTRUCTED OF STEEL HAVING A MINIMUM THICKNESS OF 0.0575 INCH (1.463 MM) (NO. 16 OR STAINLESS STEEL NOT LESS THAN 0.0450 INCH (1.14 MM) (NO. 18 GAGE) IN THICKNESS.</li> <li>4. DUCT INSULATION INSTALLED WITHIN 18 INCHES OF A TYPE I HOOD SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED FOR THE APPLICATION.</li> <li>5. DUCT-TO-HOOD JOINTS SHALL BE MADE WITH CONTINUOUS INTERNAL OR EXTERNAL LIQUID-TIGHT WELDED OR BRAZED JOINTS. SUCH JOINTS SHALL BE SMOOTH, ACCESSIBLE FOR INSPECTION, AND WITHOUT GREASE TRAPS.</li> <li>6. DUCT-TO-EXHAUST FAN CONNECTIONS: DUCT-TO-EXHAUST FAN CONNECTIONS SHALL BE FLANGED AND GASKETED AT THE BASE OF THE FAN FOR VERTICAL DISCHARGE FANS; SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET OF THE FAN FOR SIDE-INLET UTILITY FANS; AND</li> </ol> | <p>SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET AND OUTLET OF THE FAN FOR IN-LINE GASKET AND SEALING MATERIALS SHALL BE RATED FOR CONTINUOUS DUTY AT A TEMPERATURE OF NOT LESS THAN 1500°F.</p> <ol style="list-style-type: none"> <li>7. VIBRATION ISOLATION: A VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL CONSIST OF NONCOMBUSTIBLE PACKING IN A METAL SLEEVE JOINT OF APPROVED DESIGN OR SHALL BE A COATED-FABRIC FLEXIBLE DUCT CONNECTOR LISTED AND LABELED FOR THE APPLICATION. VIBRATION ISOLATION CONNECTORS SHALL BE INSTALLED ONLY AT THE CONNECTION OF A DUCT TO A FAN INLET OR OUTLET.</li> <li>8. GREASE DUCT TEST: PRIOR TO THE USE OR CONCEALMENT OF ANY PORTION OF A GREASE DUCT SYSTEM, A LEAKAGE TEST SHALL BE PERFORMED. DUCTS SHALL BE CONSIDERED TO BE CONGEALED WHERE INSTALLED IN SHAFTS OR COVERED BY COATINGS OR WRAPS THAT PREVENT THE DUCTWORK FROM BEING VISUALLY INSPECTED ON ALL SIDES. THE PERMIT HOLDER SHALL BE RESPONSIBLE TO PROVIDE THE NECESSARY EQUIPMENT AND PERFORM THE GREASE DUCT LEAKAGE TEST. A LIGHT TEST SHALL BE PERFORMED TO DETERMINE THAT ALL WELDED AND BRAZED JOINTS ARE LIQUID TIGHT. A LIGHT TEST SHALL BE PERFORMED BY PASSING A LAMP HAVING A POWER RATING OF NOT LESS THAN 100 WATTS THROUGH THE ENTIRE SECTION OF DUCTWORK TO BE TESTED. THE LAMP SHALL BE OPEN SO AS TO EMIT LIGHT EQUALLY IN ALL DIRECTIONS PERPENDICULAR TO THE DUCT WALLS. A TEST SHALL BE PERFORMED FOR THE ENTIRE DUCT SYSTEM, INCLUDING THE HOOD-TO-DUCT CONNECTION. THE DUCT WORK SHALL BE PERMITTED TO BE TESTED IN SECTIONS, PROVIDED THAT EVERY JOINT IS TESTED. FOR LISTED FACTORY-BUILT</li> </ol> | <p>GREASE DUCTS, THIS TEST SHALL BE LIMITED TO DUCT JOINTS ASSEMBLED IN THE FIELD AND SHALL EXCLUDE FACTORY WELDS.</p> <ol style="list-style-type: none"> <li>9. GREASE DUCT SUPPORTS: GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NONCOMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LOADS WITHIN THE STRESS LIMITATIONS OF THE INTERNATIONAL BUILDING CODE. BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.</li> <li>10. WHERE ENCLOSURES ARE NOT REQUIRED, GREASE DUCT SYSTEMS AND EXHAUST EQUIPMENT SERVING A TYPE I HOOD SHALL HAVE A CLEARANCE TO COMBUSTIBLE CONSTRUCTION OF NOT LESS THAN 18 INCHES, AND SHALL HAVE A CLEARANCE TO NONCOMBUSTIBLE CONSTRUCTION AND GYPSUM WALLBOARD ATTACHED TO NONCOMBUSTIBLE STRUCTURES OF NOT LESS THAN 3 INCHES.</li> <li>11. WHERE CLEANOUT OPENINGS ARE LOCATED IN DUCTS WITHIN A FIRE-RESISTANCE-RATED ENCLOSURE, ACCESS OPENINGS SHALL BE PROVIDED IN THE ENCLOSURE AT EACH CLEANOUT POINT. ACCESS OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING SLIDING ORHINGED DOORS THAT ARE EQUAL IN FIRE-RESISTIVE PROTECTION TO THAT OF THE SHAFT OR ENCLOSURE. AN APPROVED SIGN SHALL BE PLACED ON ACCESS OPENING PANELS WITH WORDING AS FOLLOWS: "ACCESS PANEL. DO NOT OBSTRUCT."</li> <li>12. EXHAUST EQUIPMENT SERVING A TYPE I HOOD SHALL HAVE A CLEARANCE TO COMBUSTIBLE CONSTRUCTION OF NOT LESS THAN 18 INCHES.</li> <li>13. DUCTWORK CONNECTED TO THE DISHWASHER SHALL BE CONSTRUCTED OF ALUMINUM.</li> </ol> |
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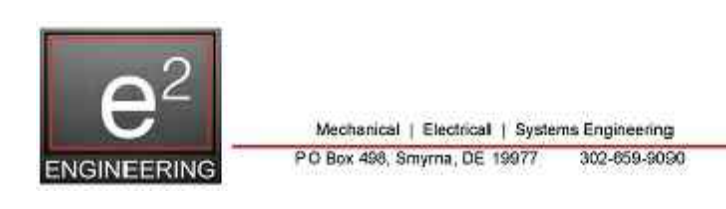


**RENOVATIONS FOR  
MMC KITCHEN  
1121 FORREST AVE  
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**MECHANICAL  
= DEMOLITION &  
NEW WORK  
PLAN**

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**EAO**  
DATE  
**14 JUNE 2024**  
SCALE  
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JOB NO.  
**C1655-0124**  
SHEET

**M-1**  
OF SHEETS



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FREEDOM ARCHITECT

RENOVATIONS FOR  
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MECHANICAL  
= KITCHEN  
HOOD DETAILS

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560 Stokes Road, Unit 13A6, Medford, NJ 08055 PHONE: (609) 654-8888 FAX: 9197475604 EMAIL: reg@econair.com

Modern Maturity Center - Dover, DE  
DOVER, DE, 19904

DATE: 5/20/2024  
DWG.#: 6807878  
DRAWN BY: JRE  
SCALE: 3/4" = 1'-0"  
AWING  
NO.



FOR QUESTIONS, CALL THE  
Delaware / South NJ Mechanical  
REGION 19  
PHONE: (609) 654-8368  
EMAIL: reg19@econair.com

PATENT NUMBERS  
AC-PSP (UNITED STATES) - US PATENT 7963830 B2.  
AC-PSP WALL (CANADA) - CA PATENT 2820509.  
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

**HOOD INFORMATION - JOB#6807878**

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)					TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA	CFM			VEL	SP	END TO END	ROW
1		6024 ES-VHB-G-ND-REM1-PSP-F	ECON-AIR	9' 6"	700 DEG	II	N/A	200	1900			4"	16"	1900	1361	-0.208"	1520	430 SS 100%	ALONE	ALONE

**HOOD INFORMATION**

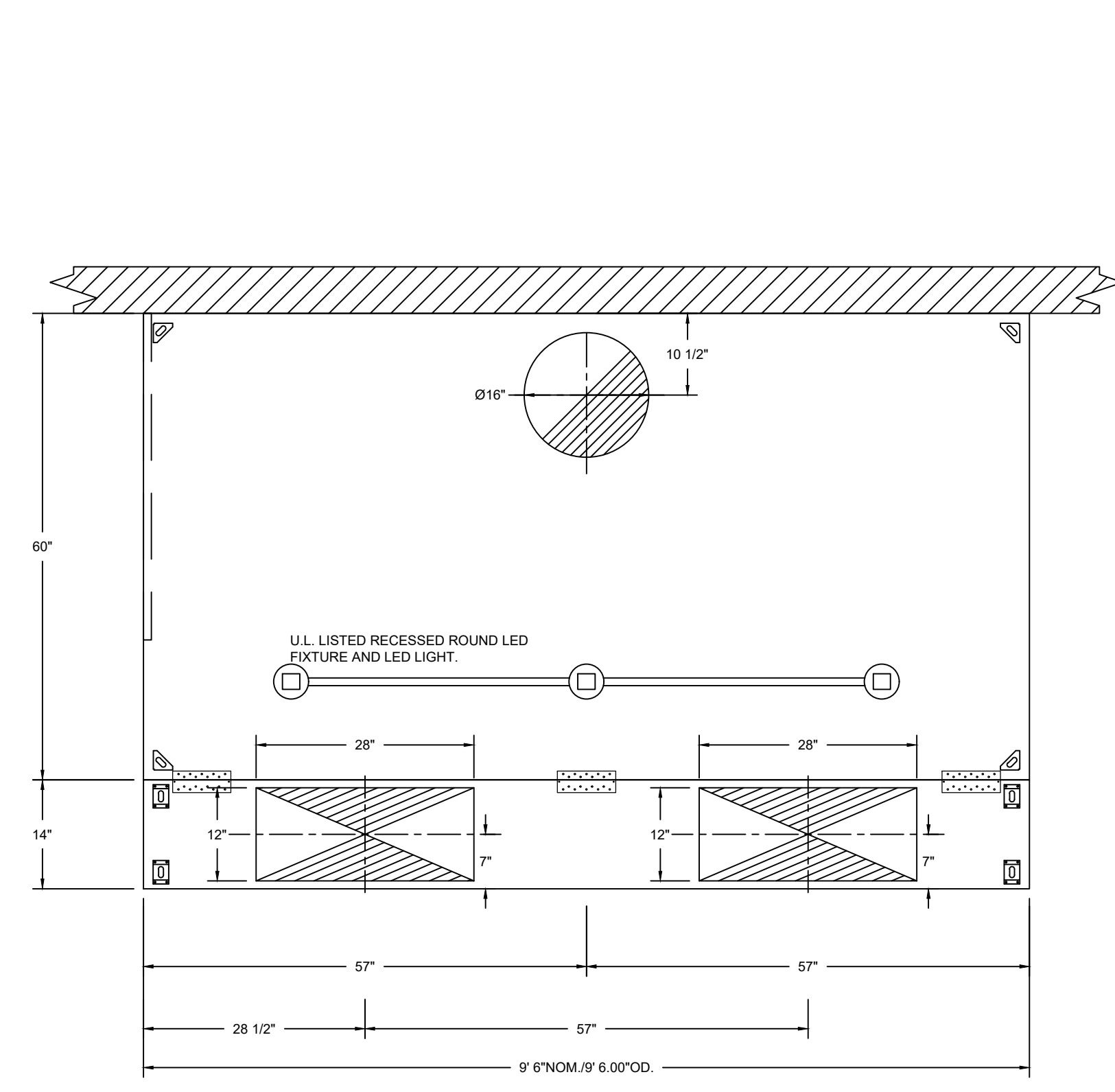
HOOD NO	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT					
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE			MODEL #	QUANTITY			
1							3	RECESSED ROUND	NO											574 LBS

**HOOD OPTIONS**

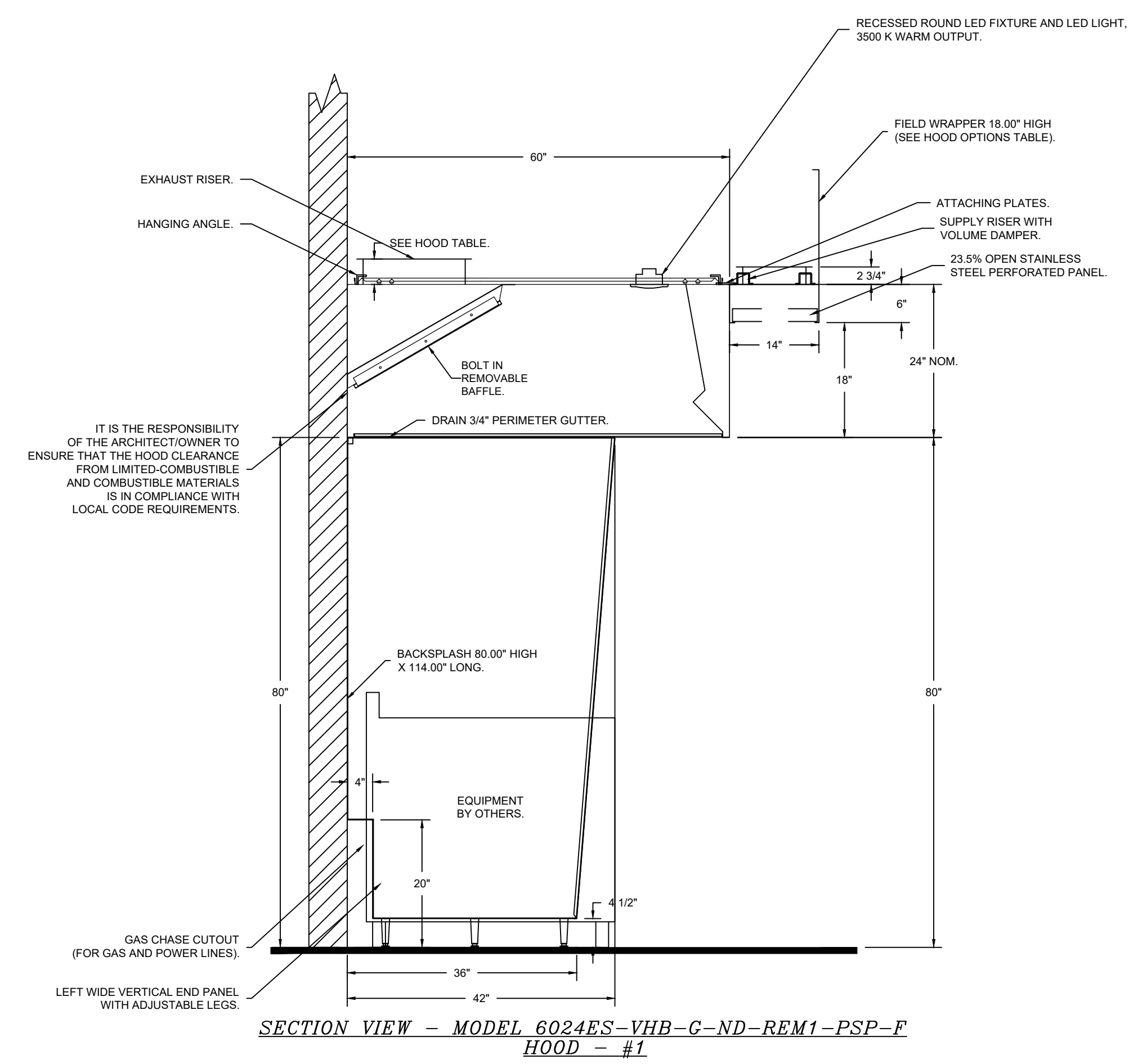
HOOD NO	TAG	OPTION
1		FIELD WRAPPER 18.00" HIGH FRONT, LEFT. BACKSPLASH 80.00" HIGH X 114.00" LONG 430 SS VERTICAL. RIGHT SIDESPLASH 80.00" HIGH X 60.00" LONG 430 SS VERTICAL. BACKSPLASH - INSIDE CORNER 80.00" HIGH X 2.00" LEG LENGTH 430 SS VERTICAL. LEFT WIDE VERTICAL END PANEL 42" TOP WIDTH, 36" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.

**PERFORATED SUPPLY PLENUM(S)**

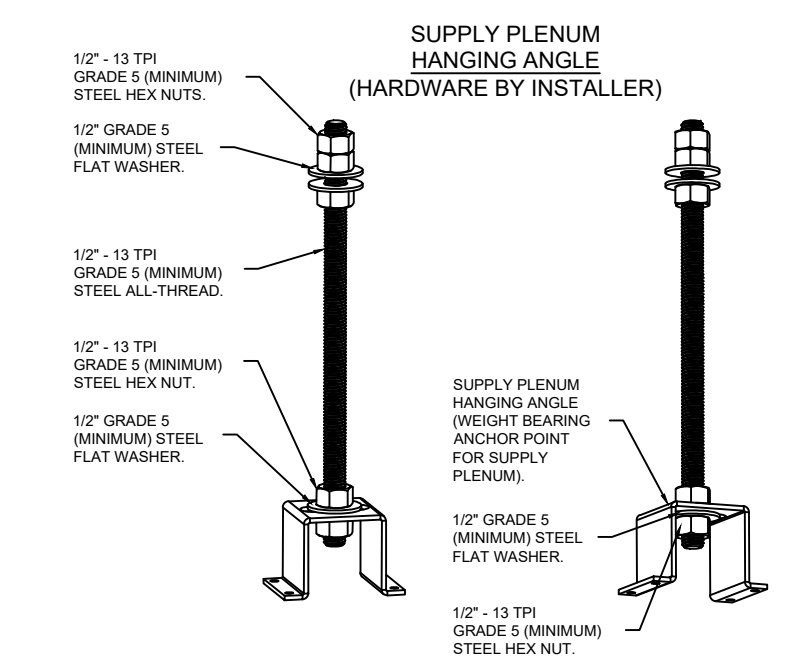
HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	RISER(S)					
						TYPE	WIDTH	LENG	DIA	CFM	SP
1		Front	114"	14"	6"	MUA	12"	28"		759	0.186"
						MUA	12"	28"		759	0.186"



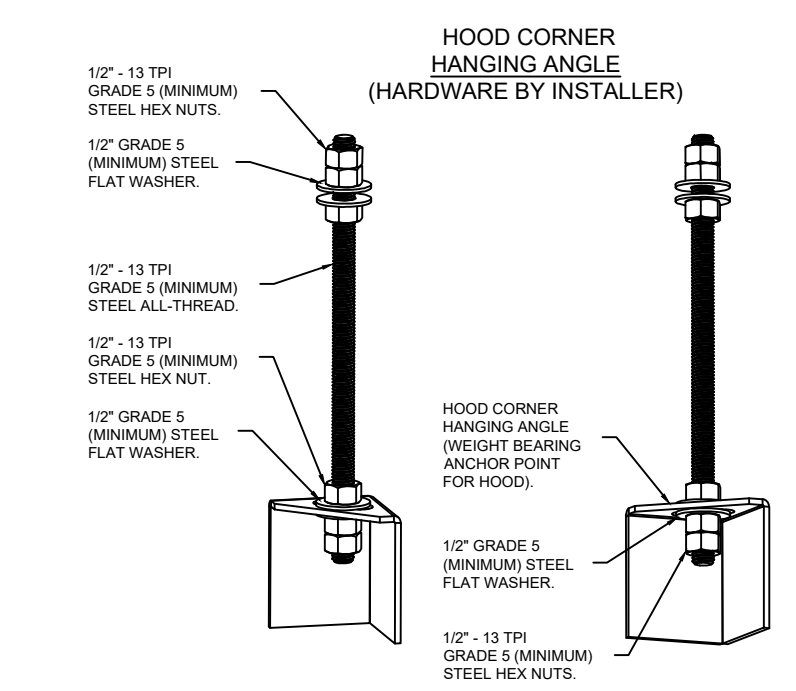
PLAN VIEW - HOOD #1  
9' 6.00" LONG 6024ES-VHB-G-ND-REM1-PSP-F



SECTION VIEW - MODEL 6024ES-VHB-G-ND-REM1-PSP-F  
HOOD - #1



**ASSEMBLY INSTRUCTIONS**  
HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



**ASSEMBLY INSTRUCTIONS**  
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**HVAC DISTRIBUTION NOTE**  
HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

**VERIFY CEILING HEIGHT**  
Height required to verify that the hood will fit and to size the enclosure panels



Mechanical | Electrical | Systems Engineering  
P.O. Box 498, Smyrna, DE 19977 302-698-9000

**EXHAUST FAN INFORMATION - JOB#6807878**

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	EADU85H	ECON-AIR	1900	0.500	1190	TEAO-ECM	0.750	0.3040	1	115	8.9	601 FPM	83	10.1

**MUA FAN INFORMATION - JOB#6807878**

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
2		1	EA-A1-15D	15MF-1-MOD	A1	-	1520	0.500	1561	TEAO-ECM	1.000	0.5980	1	115	11.6	15.6A	25A	250	17.7

**FAN OPTIONS**

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2		1	SIZE 1 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	GRAVITY BACKDRAFT DAMPER FOR SIZE 1 HOUSING
		1	ECM WIRING PACKAGE - DD SUPPLY - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR)
	1	2 YEAR PARTS WARRANTY	

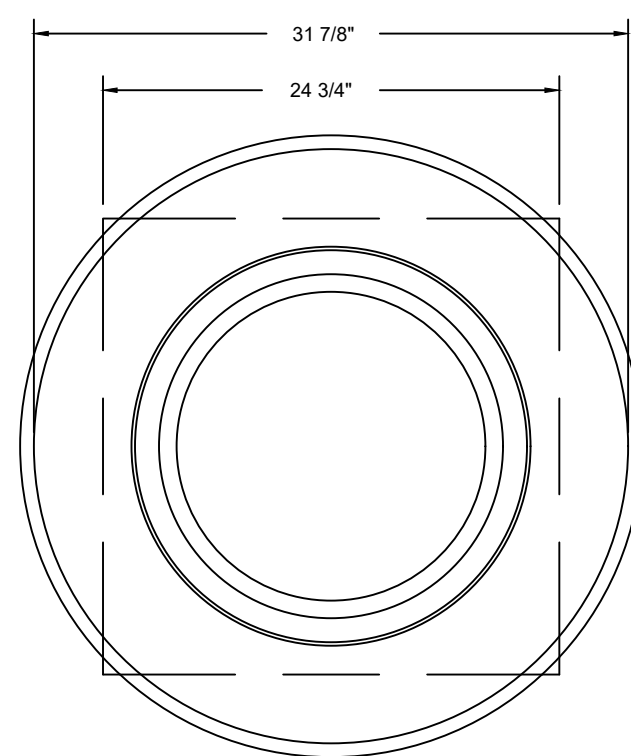
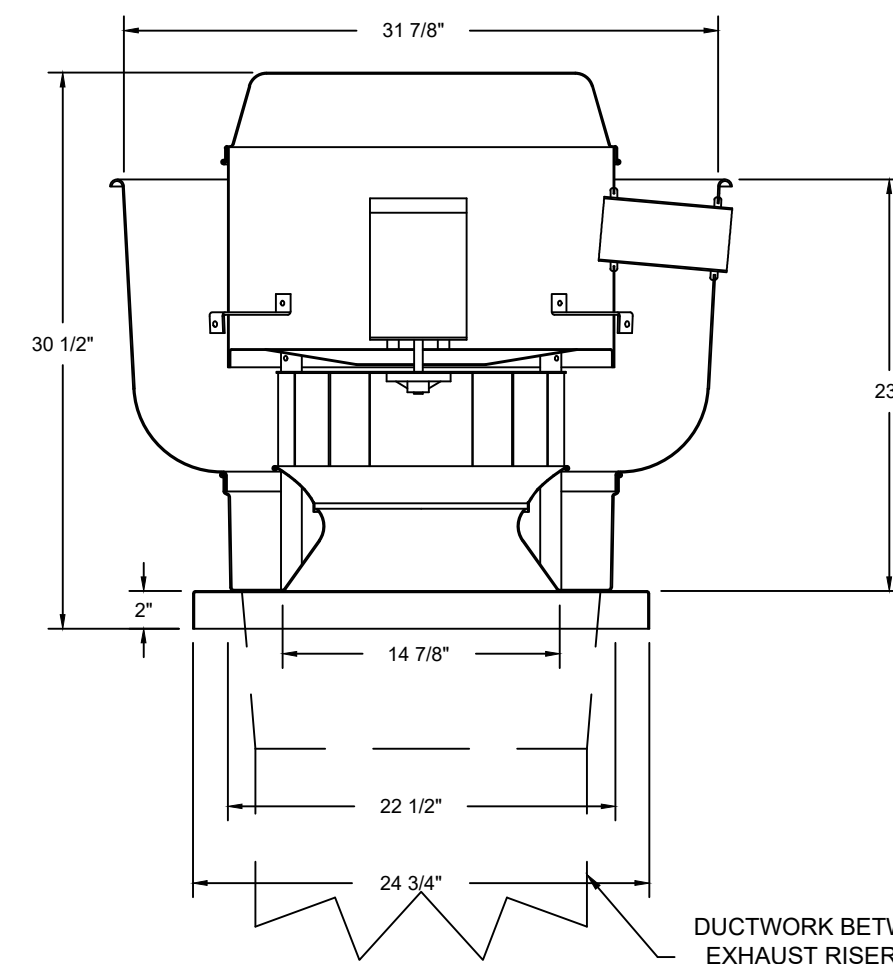
**FAN ACCESSORIES**

FAN UNIT NO	TAG	EXHAUST				SUPPLY		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
2						YES		

**CURB ASSEMBLIES**

NO	ON FAN	WEIGHT	ITEM	SIZE
1	#1	33 LBS	CURB	23.000"W X 23.000"L X 18.000"H HINGED.
2	#2	29 LBS	CURB	21.000"W X 21.000"L X 20.000"H.

FAN #1 EADU85H - EXHAUST FAN



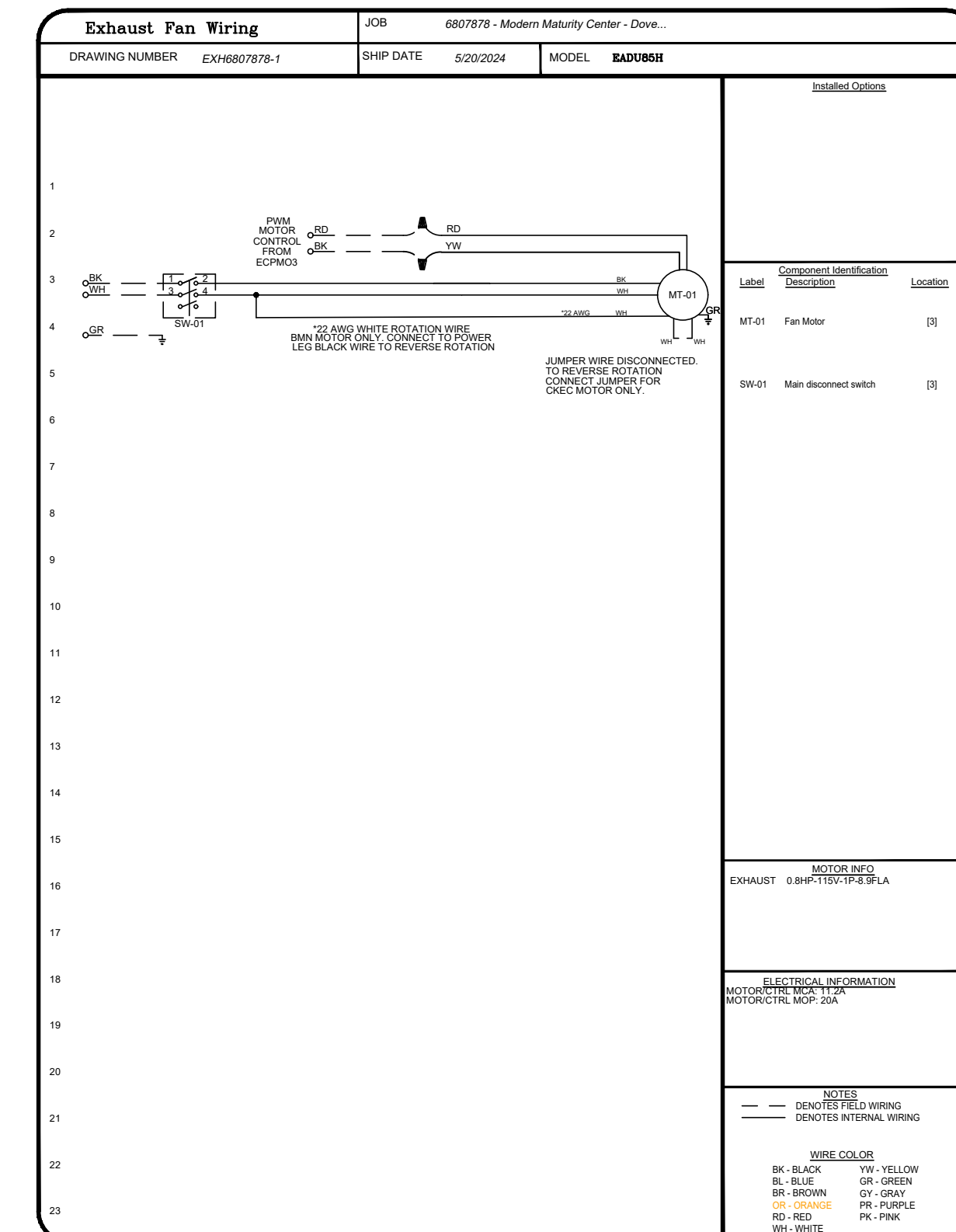
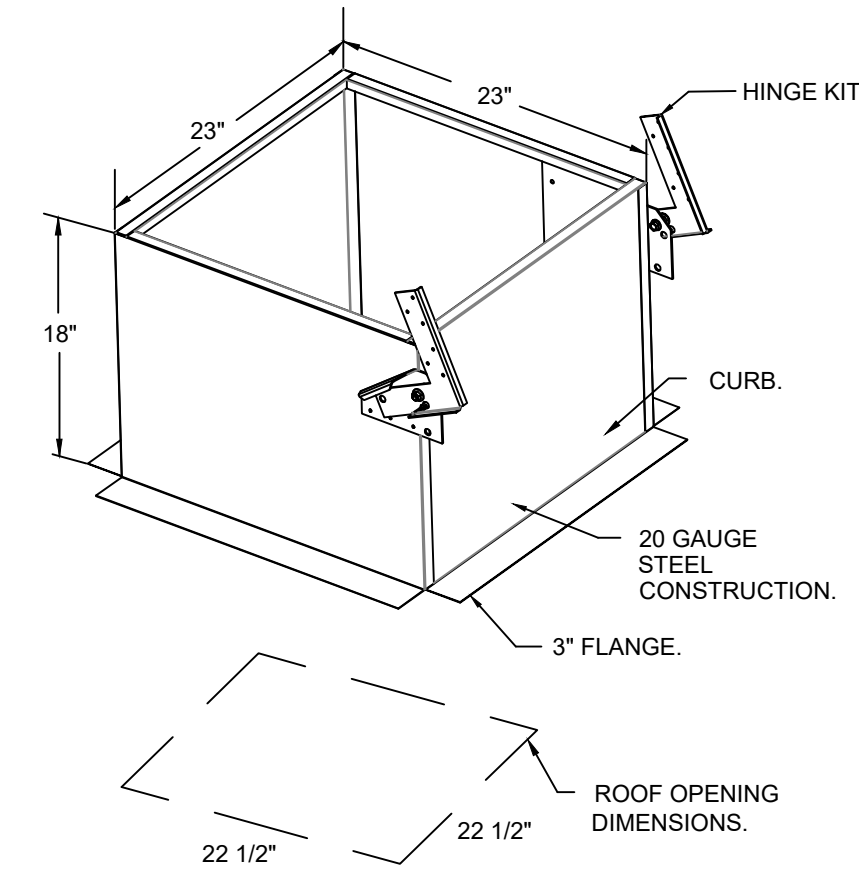
TOP VIEW

**FEATURES:**

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
  - ROOF MOUNTED FAN.
  - RESTAURANT MODEL.
  - UL705
  - VARIABLE SPEED CONTROL.
  - INTERNAL WIRING.
  - THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
  - HIGH HEAT OPERATION 300°F (149°C).
  - NEMA 3R SAFETY DISCONNECT SWITCH.
- NORMAL TEMPERATURE TEST**  
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

**OPTIONS**

- ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



REVISIONS	DESCRIPTION	DATE:

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DOVER, DE, 19904

DATE: 5/20/2024  
DWG.#: 6807878  
DRAWN BY: JRE  
SCALE: 3/4" = 1'-0"

NO. **11854**  
ERIC J. UNTERMEIER  
LICENSED PROFESSIONAL ENGINEER  
DELAWARE

REVISIONS	BY

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PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED UNDER MY SUPERVISION AND APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF DELAWARE, LICENSE NUMBER 5242, EXPIRATION DATE 12-31-2024

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www.wybyliedjrarchitect.com

FREEDOM ARCHITECT

RENOVATIONS FOR  
**MMC KITCHEN**  
1121 FORREST AVE  
DOVER, DE 19904

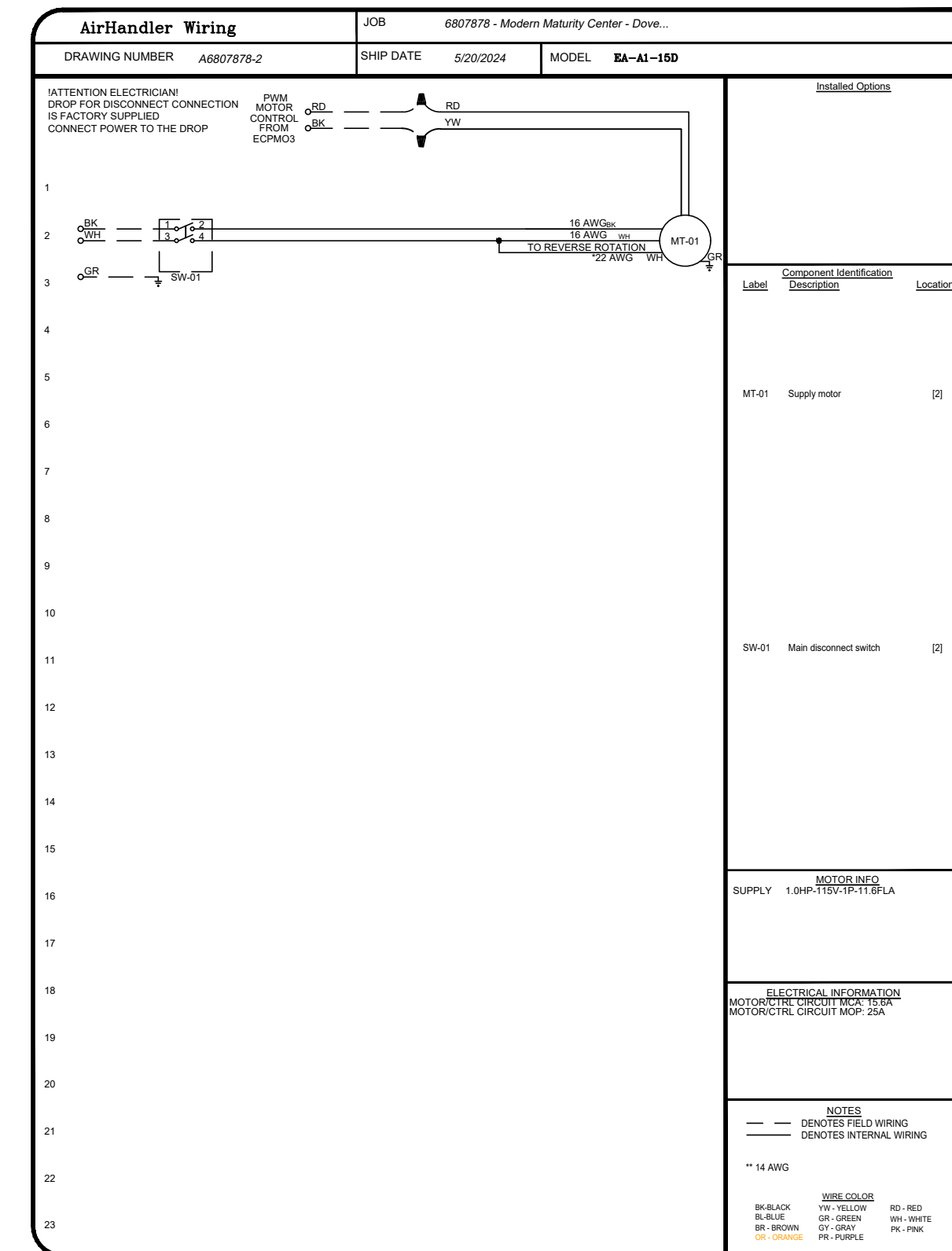
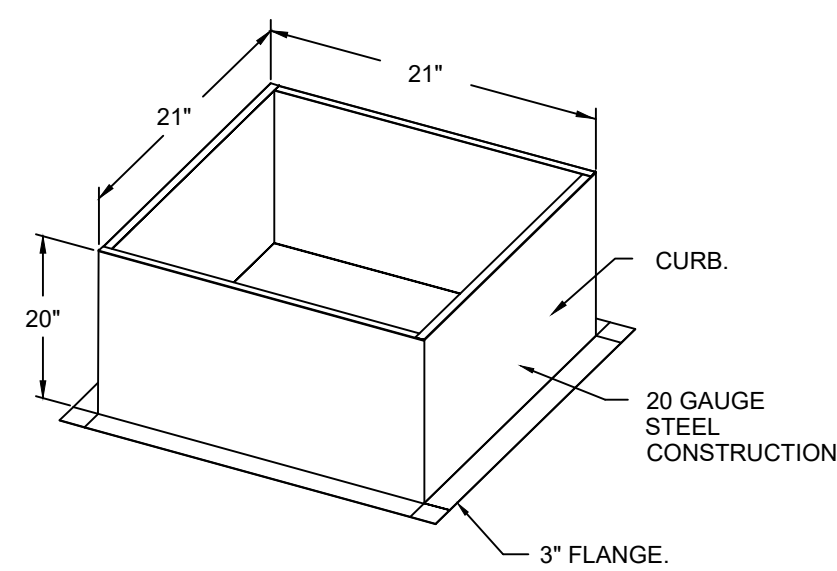
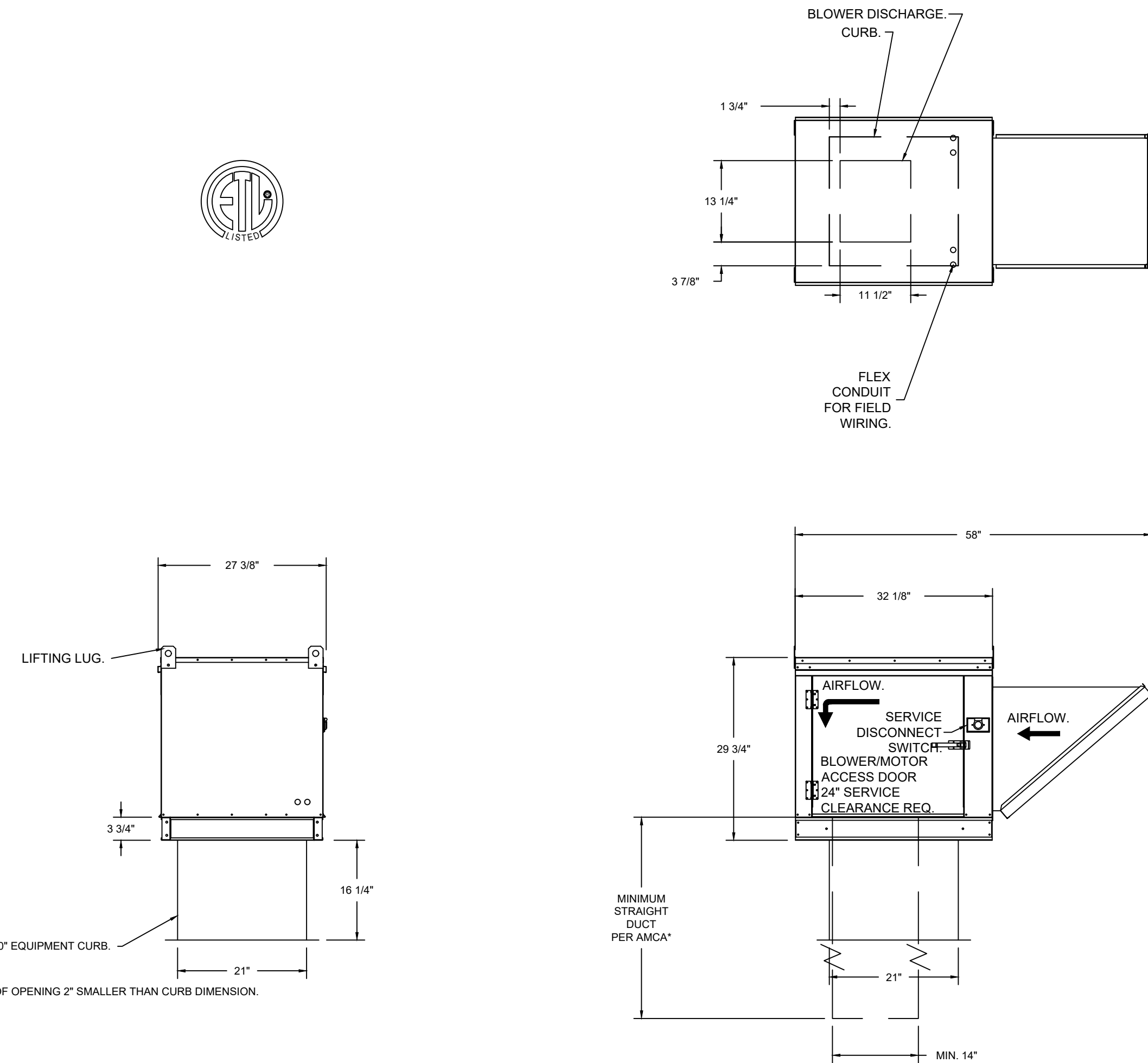
**MECHANICAL**  
KITCHEN HOOD DETAILS

DRAWN BY: LAU  
CHECKED BY: EAU  
DATE: 14 JUNE 2024  
SCALE: NOTED  
JOB NO.: C1655-0124  
SHEET

**M-3**  
OF SHEETS

- FAN #2 EA-41-150 - SUPPLY FAN
1. UNTEMPERED SUPPLY UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN IN SIZE #1 HOUSING.
  2. INTAKE HOOD WITH EZ FILTERS-LOW CFM.
  3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
  4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 UNTEMPERED DIRECT DRIVE AHUS.
  5. GRAVITY BACK DRAFT DAMPER, 16" WIDE X 18" HIGH, STANDARD GALVANIZED CONSTRUCTION, 1 1/4" REAR FLANGE, FOR SIZE 1 UNTEMPERED FAN HOUSING (S181).
  6. ECM WIRING PACKAGE FOR SUPPLY MOTORS WITH PWM SIGNAL FROM ECPM03 PREWIRE.
  7. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
  8. 2 YEAR PARTS WARRANTY.

\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 14" x 14".



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DESCRIPTION	DATE

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 Delaware / South NJ Mechanical  
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 MASTER DRAWING



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RENOVATIONS FOR  
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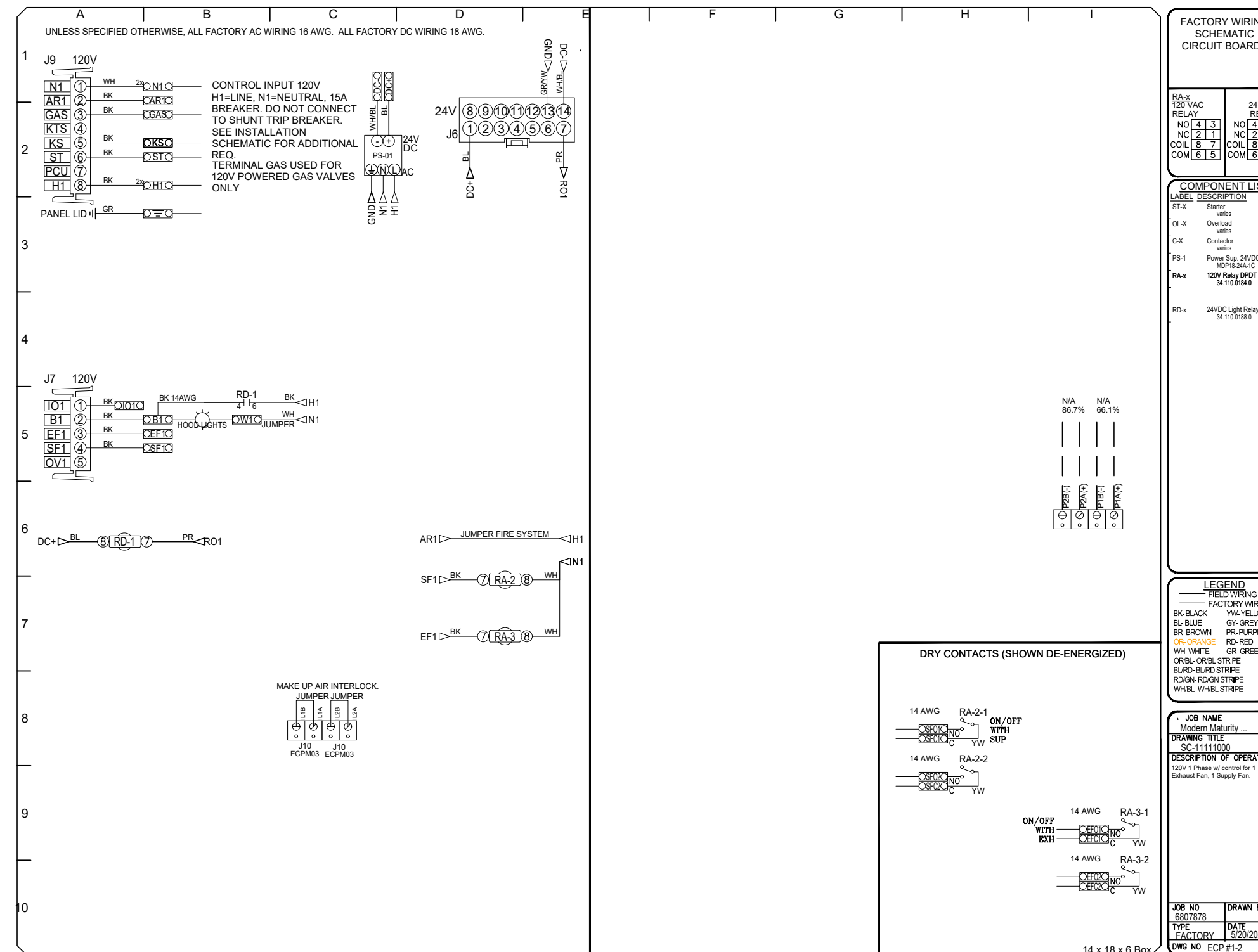
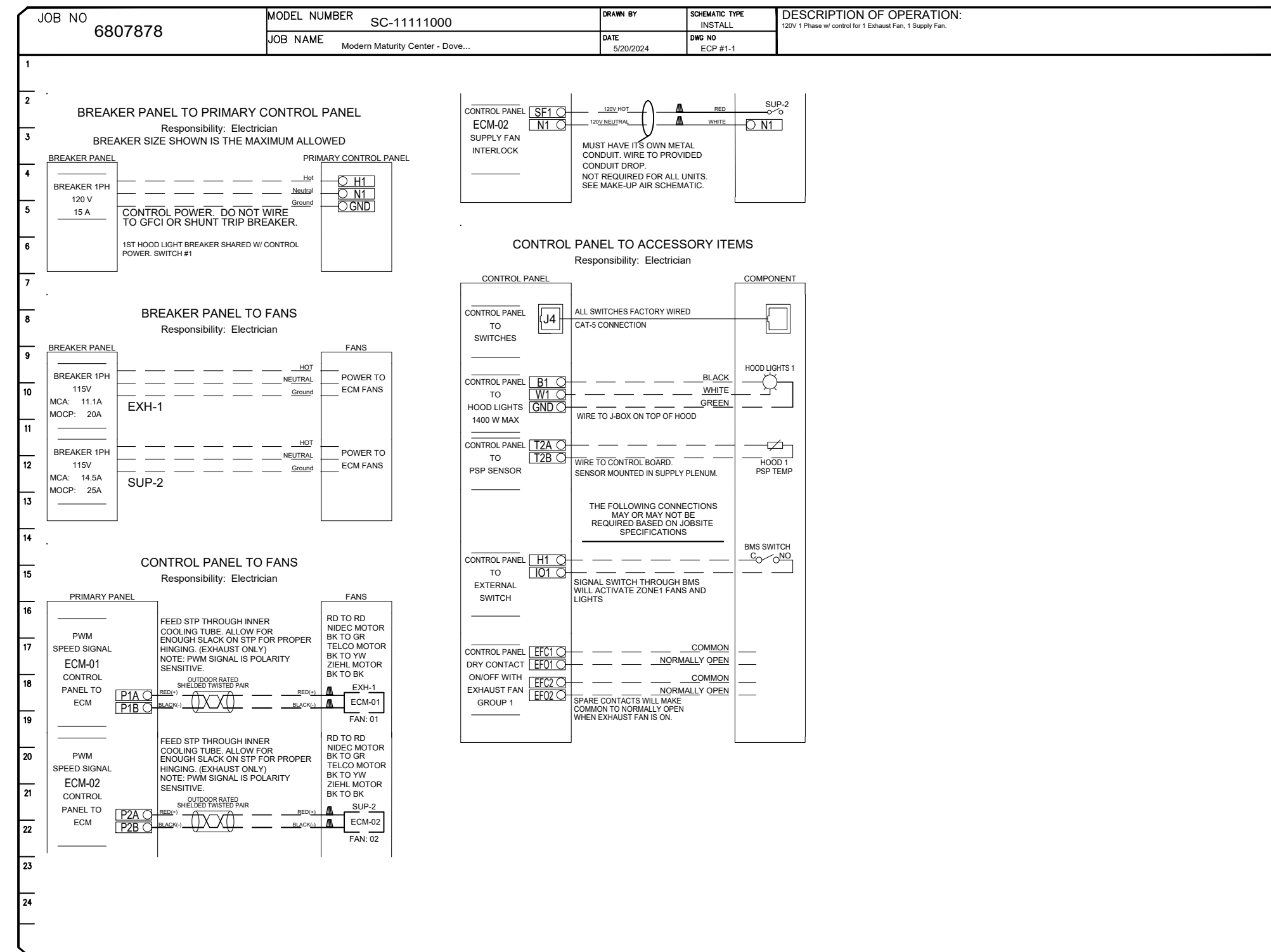
MECHANICAL  
 KITCHEN  
 HOOD DETAILS

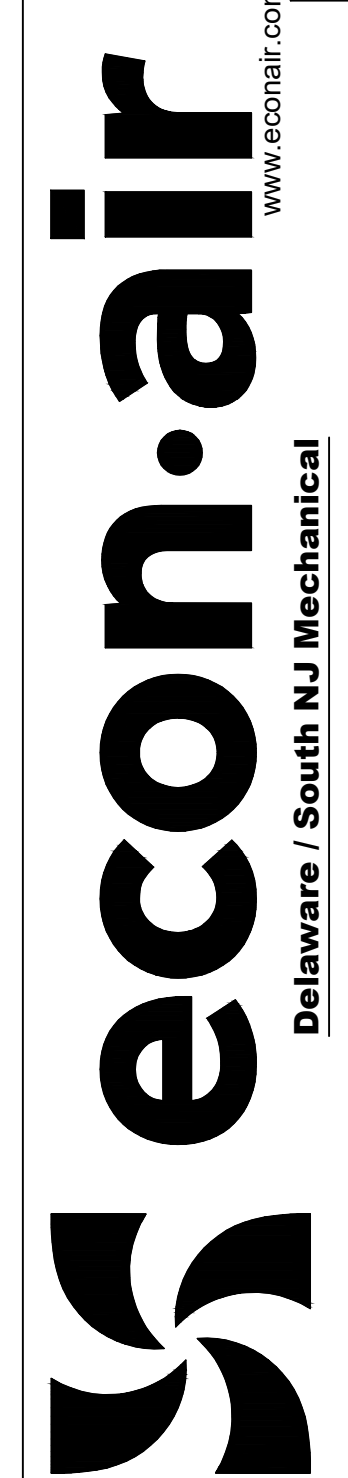
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CHECKED EAU
DATE 14 JUNE 2024
SCALE NOTED
DWG. NO. C1655-0124
SHEET

M-4

**ELECTRICAL PACKAGE - JOB#6807878**

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	HP	VOLT	FLA	
1		SC-11111000	WALL MOUNT IN SS BOX	SS WALL MOUNT BOX	1 LIGHT	SMART CONTROLS BASIC	EXHAUST	1	0.750	115	8.9
							SUPPLY	1	1.000	115	11.6





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**REVISIONS**

NO.	DESCRIPTION	DATE

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**Modern Maturity Center - Dover, DE**  
**DOVER, DE, 19904**

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**SCALE:** 3/4" = 1'-0"  
**IWING**

**NO.**

REVISIONS	BY

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 bill@wbyfieldjr.com  
 www.wbyfieldjr.com

**FREEDORA CHRIST**

**RENOVATIONS FOR MMC KITCHEN**  
 1121 FORREST AVE  
 DOVER, DE 19904

**MECHANICAL - KITCHEN HOOD DETAILS**

**DRAWN LAU**  
**CHECKED EAU**  
 DATE 14 JUNE 2024  
 SCALE NOTED  
 SHEET NO. C1655-0124

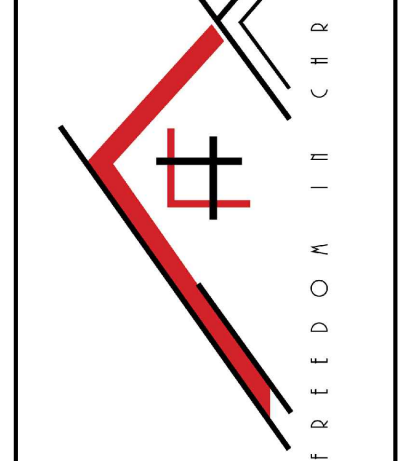
**M-5**

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THE STATE OF DELAWARE, LICENSE  
NUMBER 5242, EXPIRATION DATE 12-31-2024

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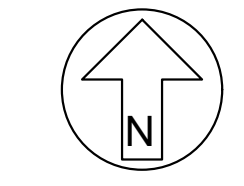
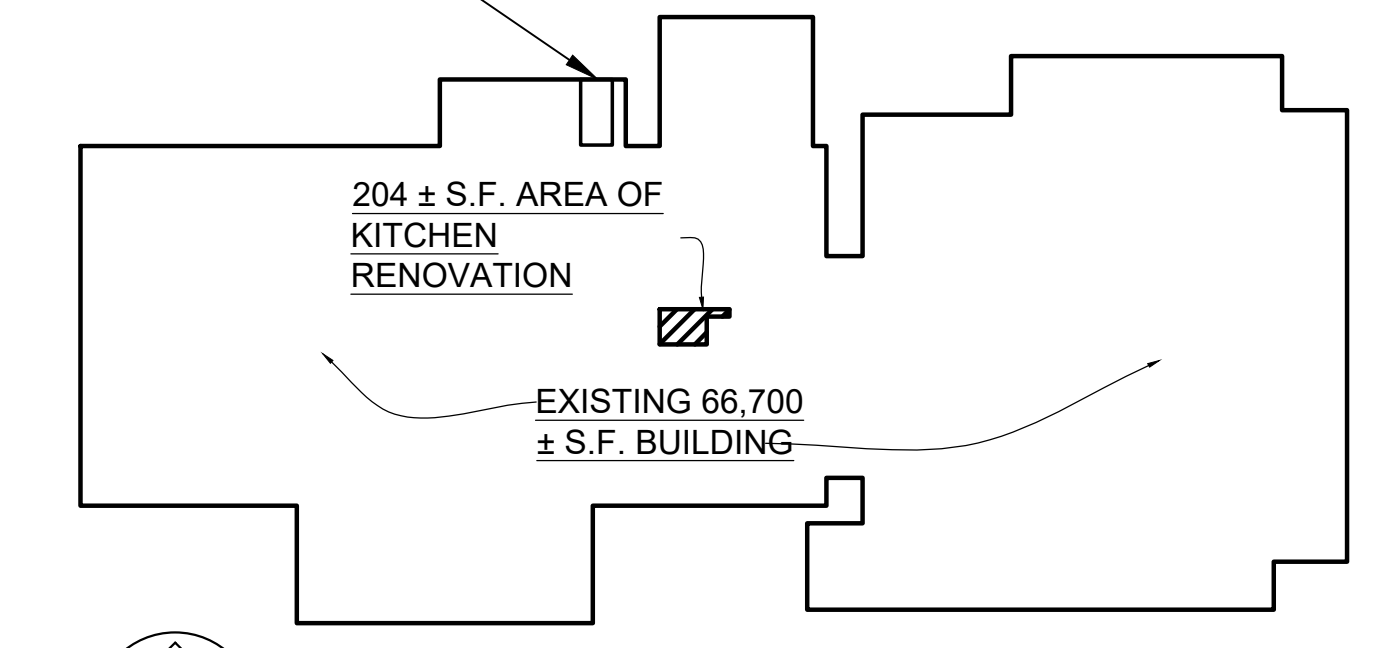
RENOVATIONS FOR  
MMC KITCHEN  
1121 FORREST AVE  
DOVER, DE 19904

ELECTRICAL -  
POWER  
DEMOLITION &  
NEW WORK  
PLAN

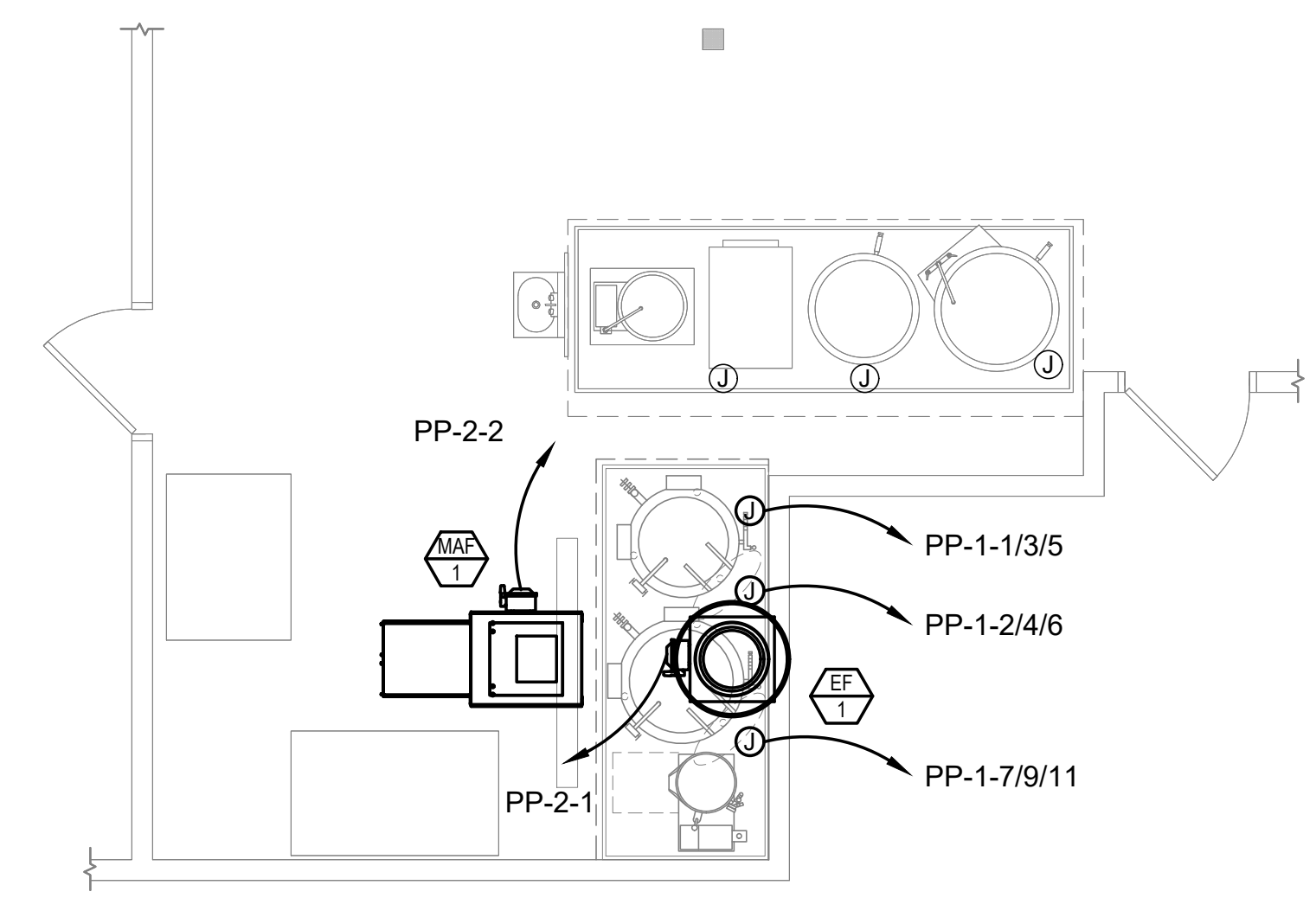
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LAU  
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JOB NO.  
C1655-0124  
SHEET

E-1  
OF SHEETS

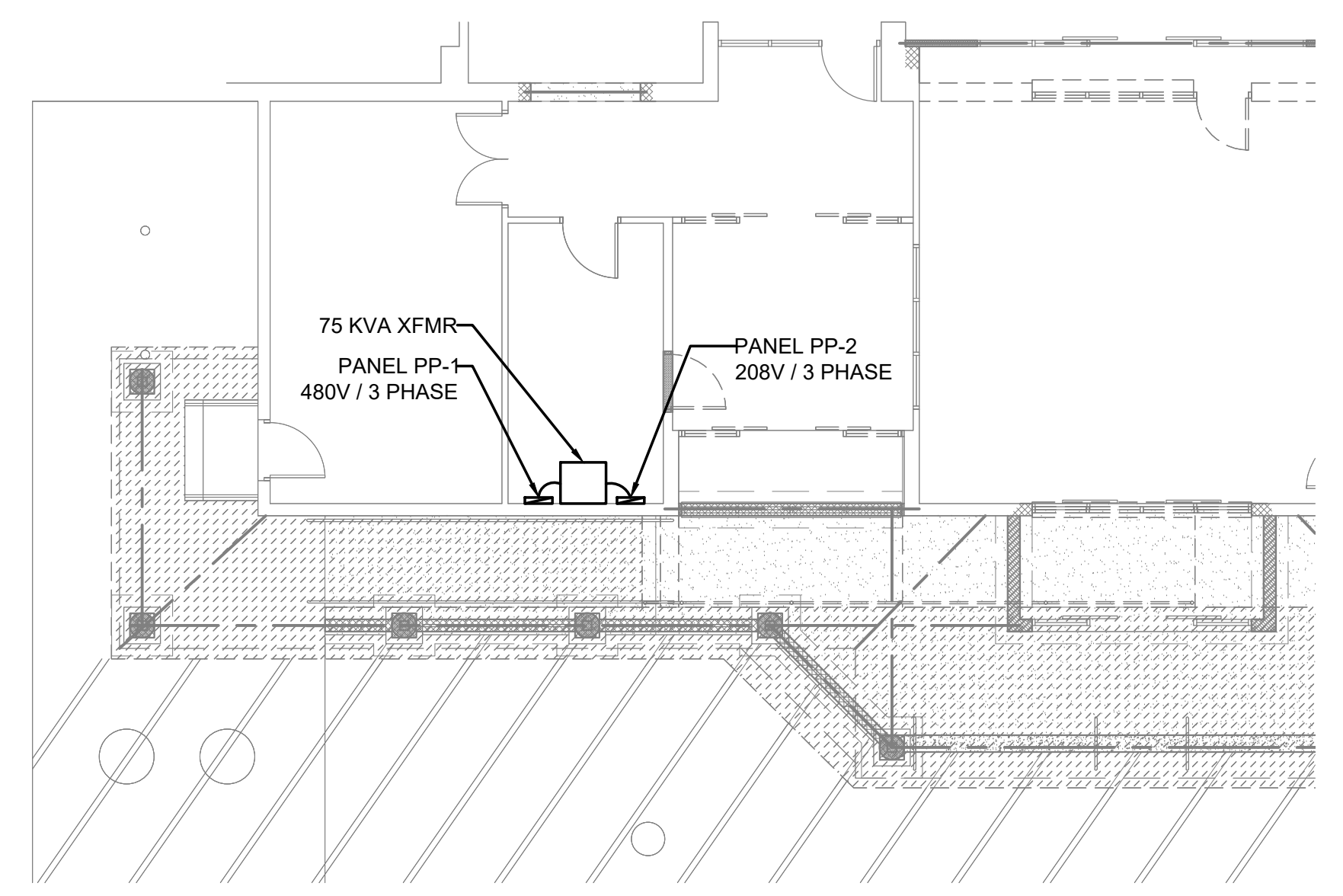
NEW ELECTRICAL PANELS PP-1 & PP-2



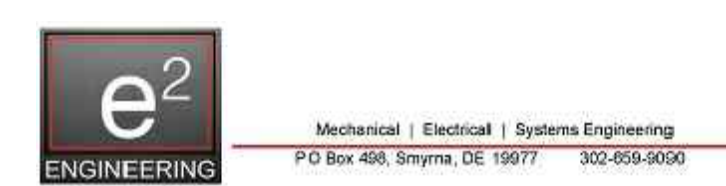
PROJECT NORTH  
KEY PLAN  
N.T.S.



1 ELECTRICAL - POWER NEW WORK PLAN  
E-1 SCALE: 1/4"=1'-0"



2 ELECTRICAL - NEW PANEL LOCATION PLAN  
E-1 SCALE: 1/8"=1'-0"





## GENERAL ELECTRICAL NOTES:

- CODES:** ALL ELECTRICAL WORK SHALL CONFORM TO THE CURRENT NATIONAL ELECTRICAL CODE, UNDERWRITERS LABORATORIES, NATIONAL BOARD OF UNDERWRITERS, NFPA, AND ANY STATE, COUNTY, OR MUNICIPAL LAWS OR REGULATIONS HAVING JURISDICTION. ALL MATERIAL AND EQUIPMENT SHALL BE APPROVED FOR THE INTENDED USE. THIS IS IN ADDITION TO COMPLYING WITH OTHER SPECIFIC DIRECTION PROVIDED IN THESE DOCUMENTS. NO EXTRAS WILL BE APPROVED TO COMPLY WITH THE APPLICABLE CODES.
- INSPECTIONS:** THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR THE COMPLETION OF HIS WORK. THE ELECTRICAL CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS AND TESTS REQUIRED BY THE ABOVE AGENCIES. HE SHALL FURNISH REQUIRED CERTIFICATES OF INSPECTION TO THE OWNER, INCLUDING THE ELECTRICAL CERTIFICATE FROM FIRST STATE INSPECTION AGENCY.
- CONTRACTOR'S RESPONSIBILITY:** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL LABOR, TOOLS, MATERIALS, AND SUPERVISION TO COMPLETE ALL THE ELECTRICAL WORK AS SHOWN AND DESCRIBED ON THE DRAWINGS. ALL INCIDENTAL MATERIALS NORMALLY REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM, ALTHOUGH NOT SPECIFICALLY IDENTIFIED ON THESE DRAWINGS, ARE UNDERSTOOD TO BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL WORK INCLUDING MATERIALS IS SUBJECT TO APPROVAL OF THE OWNER. ANY QUESTIONS PERTAINING TO THESE NOTES OR LOCATIONS OF EQUIPMENT AND DEVICES, OR CONFLICTS IN DOCUMENTS, MUST BE RESOLVED BY THE ENGINEER.
- WORKMANSHIP:** ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER IN CONFORMANCE WITH THE N.E.C. BY SKILLED MECHANICS, USING THE BEST METHODS KNOWN TO THE TRADE, AND SHALL PRESENT A NEAT AND PROFESSIONAL APPEARANCE WHEN COMPLETED. FINAL LOCATIONS OF ALL EXPOSED DEVICES ARE SUBJECT TO THE APPROVAL OF THE OWNER. ALL ELECTRICAL DEVICES MUST BE ACCESSIBLE AND CONFORM TO MOUNTING HEIGHTS AND CLEARANCES REQUIRED BY THE N.E.C. AND ADA. MATERIALS NOT INSTALLED TO THE SATISFACTION OF THE OWNER MUST BE REARRANGED AT NO ADDITIONAL COST TO THE OWNER.
- OWNER'S RIGHTS:** THE OWNER RESERVES THE RIGHT TO CHANGE, WITHOUT ADDITIONAL COST, THE LOCATION OF ANY OUTLET, LIGHT FIXTURE, OR APPARATUS SPECIFIED OR SHOWN ON THE DRAWINGS, PROVIDED SUCH CHANGE DOES NOT ADD MORE THAN 10'-0" TO THE CONDUIT AND/OR CIRCUIT, AND CHANGE IS ORDERED BEFORE THE INSTALLATION FOR SAID WORK HAS COMMENCED.
- GUARANTEE:** THE CONTRACTOR SHALL SUBMIT A GUARANTEE IN WRITING TO THE OWNER THAT WARRANTS THE INSTALLATION IS FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER ALL WORK IS COMPLETED, ACCEPTED BY THE OWNER, AND THE OWNER OCCUPIES THE SPACE.
- COORDINATION:** PROGRESS OF THE ELECTRICAL WORK SHALL BE COORDINATED WITH THE OWNERS REPRESENTATIVE & OTHER TRADES SO THAT ALL WORK WILL BE FULLY COMPLETED ON SCHEDULE. THE CONTRACTOR SHALL WORK IN HARMONY WITH OTHER TRADES. EXECUTION AND COORDINATION OF THE WORK SHALL BE PERFORMED IN AN INTELLIGENT MANNER, INCLUDING ALLOWANCE FOR FUTURE EXPANSION.
- SAFETY:** THE CONTRACTOR SHALL PERFORM HIS WORK IN A CLEAN AND SAFE MANNER. HE SHALL, AT ALL TIMES, TAKE WHATEVER MEASURES ARE NECESSARY TO ASSURE THE SAFETY OF ALL PERSONNEL AND COMPLY WITH ALL OSHA REQUIREMENTS & RECOMMENDATIONS. THE CONTRACTOR SHALL CLEAN UP AFTER EACH WORKING DAY AND SECURE INCOMPLETE WORK IN A SAFE AND ORDERLY CONDITION. ALL DEBRIS SHALL BE REMOVED FROM THE SITE IN A TIMELY MANNER.
- EQUIPMENT TESTING:** THE ELECTRICAL CONTRACTOR SHALL TEST ALL EQUIPMENT AND DEVICES INSTALLED TO THE SATISFACTION OF THE OWNER. RESPONSIBILITY AS TO THE OPERATION OF ALL EQUIPMENT SHALL APPLY ONLY TO THOSE ITEMS FURNISHED BY THE ELECTRICAL CONTRACTOR, BUT THE ELECTRICAL CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ACCURATE WORK. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR AND TEST INSTRUMENTS REQUIRED FOR TESTING THIS ELECTRICAL WORK, INCLUDING INFRARED IMAGES.
- UPON COMPLETION OF THE WORK,** THE ELECTRICAL CONTRACTOR SHALL DEMONSTRATE THAT THE INSTALLATIONS ARE COMPLETE AND IN PERFECT OPERATING ORDER WITH WIRING FREE FROM GROUNDS OR SHORTS AND WITH EQUIPMENT AND RACEWAYS PROPERLY GROUNDED.
- O & M MANUAL:** THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH TWO (2) O & M MANUALS THAT PROVIDES BASIC DATA RELATING TO THE DESIGN AND MAINTENANCE OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM. THE MANUAL SHALL INCLUDE A TABLE OF CONTENTS, TABS, ELECTRONIC AND HARD COPY OF RECORD DOCUMENTS, AND MANUFACTURERS OPERATIONAL AND MAINTENANCE INFORMATION FOR ELECTRICAL EQUIPMENT.
- SITE VISIT:** THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO REVIEW AND EVALUATE THE EXISTING ELECTRICAL SYSTEMS PRIOR TO BIDDING. OBSERVATIONS AND DETERMINATIONS SHALL BE MADE AS THE CAPACITY OF THE EXISTING PROPOSED CONSTRUCTION. ANY COSTS OF MODIFICATIONS OR UPGRADES DETERMINED TO BE NECESSARY SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTORS BID. FAILURE TO ADEQUATELY INVESTIGATE THE SITE CONDITIONS PRIOR TO BIDDING SHALL NOT BE GROUNDS FOR AN EXTRA COST TO THE OWNER.
- QUALITY OF MATERIALS:** ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE U.L. LABEL OR BE U.L. LISTED, WHERE APPLICABLE, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE N.E.C. AND NEMA STANDARDS. THE MATERIALS DESCRIBED ARE INTENDED TO SET A HIGH STANDARD OF COMMERCIAL QUALITY.
- SPECIFIED ITEMS:** WHERE MATERIALS OR EQUIPMENT ARE SPECIFIED BY MANUFACTURER OR BRAND NAME AND CATALOG NUMBER, SUCH DESIGNATION IS TO ESTABLISH STANDARDS OF QUALITY AND STYLE. THE CONTRACTOR ASSUMES THE RISK IF AN ITEM IS SUBSTITUTED FOR BID PURPOSES WITHOUT APPROVAL. MATERIALS SO SPECIFIED, OR APPROVED EQUALS, SHALL BE FURNISHED UNDER THE CONTRACT UNLESS CHANGED BY WRITTEN AGREEMENT. SUBSTITUTIONS MAY BE ACCEPTED ALONG WITH APPROPRIATE DEDUCTS TO THE BID PRICE.
- RECORD DRAWINGS:** THE CONTRACTORS SHALL KEEP AT THE JOB SITE A CLEAN SET OF DRAWINGS FOR HIS USE AND RECORD THEREON ANY AND ALL CHANGES OR DEVIATIONS FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT UP-TO-DATE AND SHALL BE TURNED OVER TO THE ENGINEER AT THE COMPLETION OF THE JOB. THE ENGINEER HAS THE RIGHT TO REVIEW THE SET OF AS-BUILTS AT ANYTIME.
- OUTLET, SWITCH & JUNCTION BOXES:** ALL OUTLET BOXES SHALL BE SQUARE AND PLUMB WITH THE SURFACE AND LABELED ON THE COVER PLATE WITH THE CIRCUIT NUMBER AND PANEL FROM WHICH THE CIRCUIT ORIGINATES. OUTLET BOXES SHALL BE METAL, NON-GANG ABLE KNOCKOUT TYPE. MINIMUM SIZE SHALL BE 4"x2". PROVIDED PLASTER RINGS OF DEPTH REQUIRED TO REACH FINISHED SURFACES.
- WIRE ROUTING:** THE ELECTRICAL SYSTEM AND WIRE ROUTING SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR. ALL ROUTING MUST BE CONFIRMED BY THE CONTRACTOR AFTER VERIFYING ALL DIMENSIONS AND CONDITIONS FOR POSSIBLE INTERFERENCES WITH MECHANICAL EQUIPMENT, PLUMBING, DUCTWORK, STRUCTURAL SUPPORTS, ETC. AND RECEIVING APPROVAL FROM THE PROJECT MANAGER. ALL MODIFICATIONS ARE UNDERSTOOD TO BE AT NO COST TO THE OWNER. THE CONTRACTOR MAY MODIFY ROUTING WITH THE ABOVE LIMITATIONS.
- FIXTURES:** THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL REQUIRED SUPPORTS FOR FIXTURES AND EQUIPMENT. LIGHTING FIXTURES, FANS, ETC., SHALL BE SECURELY MOUNTED TO OUTLET BOXES AND BUILDING CONSTRUCTION. PROVIDE LAMPS FOR ALL FIXTURES.
- PANEL SCHEDULE:** CONTRACTOR SHALL ADHERE TO THE PANEL SCHEDULE(S) AS SPECIFIED AND PROVIDE REVISED CIRCUIT DIRECTORY CARD(S). DIRECTORY CARD(S) SHALL BE NEATLY AND ACCURATELY TYPED, HAVE A TRANSPARENT COVER(S), AND CONTAIN ALL INFORMATION FROM THE DRAWING PANEL SCHEDULE.
- NEUTRALS:** ALL CIRCUITS SHALL HAVE DEDICATED NEUTRALS AND GROUND WIRES. NEUTRALS SHALL NOT BE SHARED BY MORE THAN ONE PHASE CONDUCTOR OR CIRCUIT.
- GROUNDING:** PROVIDE ALL WIRING, GROUNDING CONDUCTORS, AND GROUNDING DEVICES REQUIRED TO COMPLY WITH ARTICLE 250 OF THE N.E.C. EVERY CIRCUIT SHALL HAVE A GROUND WIRE.
- RECEPTACLES:** INSTALL G.F.C.I. RECEPTACLES AS PER N.E.C. MOUNT RECEPTACLES 8" ABOVE COUNTERTOPS OR SINKS WHERE INDICATED. MOUNT SWITCH OUTLETS 50"A.F.F. TO CENTER OF DEVICE A.F.F. AND RECEPTACLES 18" A.F.F. UNLESS OTHERWISE NOTED. MATCH EXISTING AS APPROPRIATE.
- COVER-PLATES:** COVER-PLATES FOR WIRING DEVICES SHALL BE SMOOTH, UNBREAKABLE NYLON, WHITE COLOR. COVER-PLATES FOR WEATHER PROOF DEVICES SHALL BE GASKETED LEXAN, SELF-CLOSING TYPE AND PERMIT THE RECEPTACLE TO BE ACTIVE WHILE MAINTAINING RATING (BUBBLE COVER). HUBBELL STAINLESS STEEL COVERS TO BE USED IN KITCHEN.
- EXPOSED CONDUIT:** NO EXPOSED CONDUIT, FLEX, OR MC CABLE SHALL BE INSTALLED ON THE EXTERIOR SURFACES OF THE BUILDING, OR IN FINISHED AREAS ON THE INTERIOR OF THE BUILDING.
- CONDUIT SUPPORT:** ELECTRICAL CONTRACTOR TO PROVIDE SUPPORT FROM STRUCTURE FOR CONDUITS, RUNNING THROUGH CEILING SPACE. ALL CONDUIT SHALL BE INSTALLED PARALLEL WITH BUILDING LINES.
- CONDUIT DROPS:** THE ELECTRICAL CONTRACTOR SHALL PROVIDE 1" DIAMETER THIN WALL CONDUIT DROPS WITH PLASTER RING TO EACH DATA OR PHONE JACK. CONDUITS SHALL TERMINATE HORIZONTALLY WITH A BUSHING APPROXIMATELY 10" ABOVE THE CEILING OR TOP PLATE OF WALL.
- WIRE AND CABLE:** INSTALL WIRE AND CABLE OF SIZE, TYPE, AND QUALITY INDICATED ON DRAWINGS OR AS REQUIRED BY THE N.E.C. ALLOW SUFFICIENT SLACKS AT BOXES TO PERMIT PROPER TERMINATION AT DEVICE WITHOUT SPLICES. MINIMUM SIZE #12.
- MC:** METALLIC CLAD CABLE, MINIMUM SIZE #12 AWG SHALL BE USED FOR ALL INTERIOR WIRING NOT IN CONDUIT.
- WIRE IDENTIFICATION:** ALL POWER WIRING SHALL BE PROPERLY COLOR CODED IN CONFORMANCE WITH THE N.E.C. APPROVED WIRE MARKERS SHALL BE USED AT EACH JUNCTION BOX AND TERMINATION TO IDENTIFY THE WIRE WITH ITS PANEL AND CIRCUIT NUMBERS.
- INSULATION TAPE:** SHALL BE VINYL PLASTIC ELECTRICAL TAPE, MINIMUM 7 MIL THICK, SCOTCH #33 OR APPROVED EQUAL.
- SPLICES:** SPLICES OF #10 WIRE AND SMALLER SHALL BE MADE WITH APPROVED TYPE PRESSURE CONNECTORS AND INSULATING CAPS (WIRE NUTS). SPLICES IN #8 WIRE AND LARGER SHALL BE MADE WITH APPROVED TYPE SLEEVE CONNECTORS AND INSULATED TO SAME THICKNESS AS THE ORIGINAL INSULATION. WITH AN APPROVED TAPE HAVING HIGH DIELECTRIC STRENGTH. ELIMINATE ALL UNNECESSARY SPLICES. POLARIS TYPE FACTORY INSULATED MECHANICAL CONNECTION LUGS SHALL ALSO BE PERMITTED.
- CONDUCTORS:** ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12
- PVC:** SCHEDULE 40, MINIMUM SIZE 3/4" POLYVINYL CHLORIDE (RIGID NON-METALLIC TUBING) SHALL BE USED FOR ALL EXTERIOR AND BELOW GRADE WIRING. ALL UNDERGROUND CONDUIT SHALL BE BURIED 24" TO 30" BELOW GRADE AND SHALL BE MARKED 8" TO 10" ABOVE CONDUIT WITH 6" WIDE POLYETHYLENE RED MARKING TAPE WITH TRACEABLE FOIL BACKING WHICH READS "CAUTION - ELECTRIC LINE BELOW." (PANDUIT CAT. #HTDU6R-E) STANDARD RADIUS ELLS SHALL BE USED.

DISTRIBUTION PANELBOARD: PP-1														
VOLTS: 480Y/277			MOUNTING: SURFACE			A.I.C. RATING: 35k								
PHASEWIRE: 3 PHASE, 4 WIRE			ENCLOSURE: TYPE 1			MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)								
SERVED BY: UTILITY			EQUIPMENT: EQUIPMENT GRD BAR			MAINS RATING: 400A								
			---			MCB RATING: 400A								
ROOM DESIGNATION: LOCATION:														
CKT NO.	CKT. BKR.	TRIP	CIRCUIT DESCRIPTION			KVA PER PHASE			CIRCUIT DESCRIPTION			CKT. BKR.	TRIP	CKT NO.
1			A	B	C									2
3	3	40A	23.51	36.54		23.51	36.54							4
5						23.51	36.54							6
7			11.63	2.40										8
9	3	15A	11.63	6.40										10
11						11.63	6.30							12
13			2.40											14
15	3	90A		6.40										16
17							6.40							18
19														20
21														22
23														24
25														26
27														28
29														30
TOTAL KVA PER PHASE:			76.5	84.5		84.4								
TOTAL KVA:						245.3								
TOTAL AMPS PER PHASE:			92.0	101.6		101.6								
TOTAL AMPS:						295.1								

NOTES:  
1. BOLD INDICATES WORK INCLUDED WITH THIS PROJECT

DISTRIBUTION PANELBOARD: PP-2														
VOLTS: 208Y/120			MOUNTING: FLUSH			A.I.C. RATING: 10k								
PHASEWIRE: 3 PHASE, 4 WIRE			ENCLOSURE: TYPE 1			MAINS TYPE: MAIN CIRCUIT BREAKER (MCB)								
SERVED BY: PP-1			EQUIPMENT: EQUIPMENT GRD BAR			MAINS RATING: 100A								
			---			MCB RATING: ---								
ROOM DESIGNATION: LOCATION:														
CKT NO.	CKT. BKR.	TRIP	CIRCUIT DESCRIPTION			KVA PER PHASE			CIRCUIT DESCRIPTION			CKT. BKR.	TRIP	CKT NO.
1	1	20A	A	B	C									2
3	1	20A	1.02	1.33		1.08	0.90							4
5	1	20A				0.60	0.60							6
7	1	20A												8
9	1	20A				0.60	3.83							10
11	1	15A					1.58	3.83						12
13	1	20A												14
15	1	20A												16
17	1	20A												18
19	1	20A												20
21	1	20A												22
23	1	20A												24
25	1	20A												26
27	1	20A												28
29	1	20A												30
31	1	20A												32
33	1	20A												34
35	1	20A												36
37	1	20A												38
39	1	20A												40
41	1	20A												42
TOTAL KVA PER PHASE:			2.4	6.4		6.6								
TOTAL KVA:						15.4								
TOTAL AMPS PER PHASE:			6.5	17.8		18.4								
TOTAL AMPS:						42.7								

NOTES:  
1. BOLD INDICATES CIRCUITS USED IN THIS PROJECT

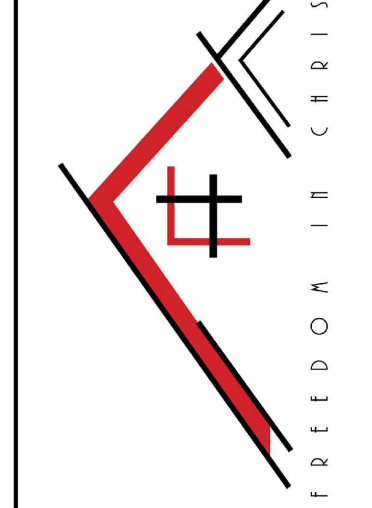
ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
P1-15	HOMERUN TO PANELBOARD/LOAD CENTER - ONE BRANCH-CIRCUIT - TEXT INDICATES PANELBOARD / LOAD CENTER DESIGNATION AND BRANCH-CIRCUIT NUMBER. E.G. [PANELBOARD DESIGNATION] - [BRANCH-CIRCUIT NUMBER]. FEATURES: CONDUCTOR (EGC) USING APPROVED WIRING METHOD, U.O.N. OR SPECIFIED.
	BRANCH-CIRCUIT. BRANCH-CIRCUIT FEATURES: CONDUCTOR IN APPROVED WIRING METHOD
	DUPLEX RECEPTACLE - M.H. 18" AFF UNLESS NOTED OTHERWISE

REVISIONS	BY

PRELIMINARY  
NOT FOR  
CONSTRUCTION

PROFESSIONAL CERTIFICATION:  
I CERTIFY THAT THESE DOCUMENTS WERE  
PREPARED UNDER MY SUPERVISION AND  
APPROVED BY ME, AND THAT I AM A DULY  
LICENSED ARCHITECT UNDER THE LAWS OF  
THE STATE OF DELAWARE, LICENSE  
NUMBER 5242, EXPIRATION DATE 12-31-2024

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RENOVATIONS FOR  
MMC KITCHEN  
1121 FORREST AVE  
DOVER, DE 19904

ELECTRICAL -  
SCHEDULES &  
NOTES

DRAWN  
LAU  
CHECKED  
EAU  
DATE  
14 JUNE 2024  
SCALE  
NOTED  
SHEET NO.  
C1655-0124  
SHEET

E-2  
OF SHEETS