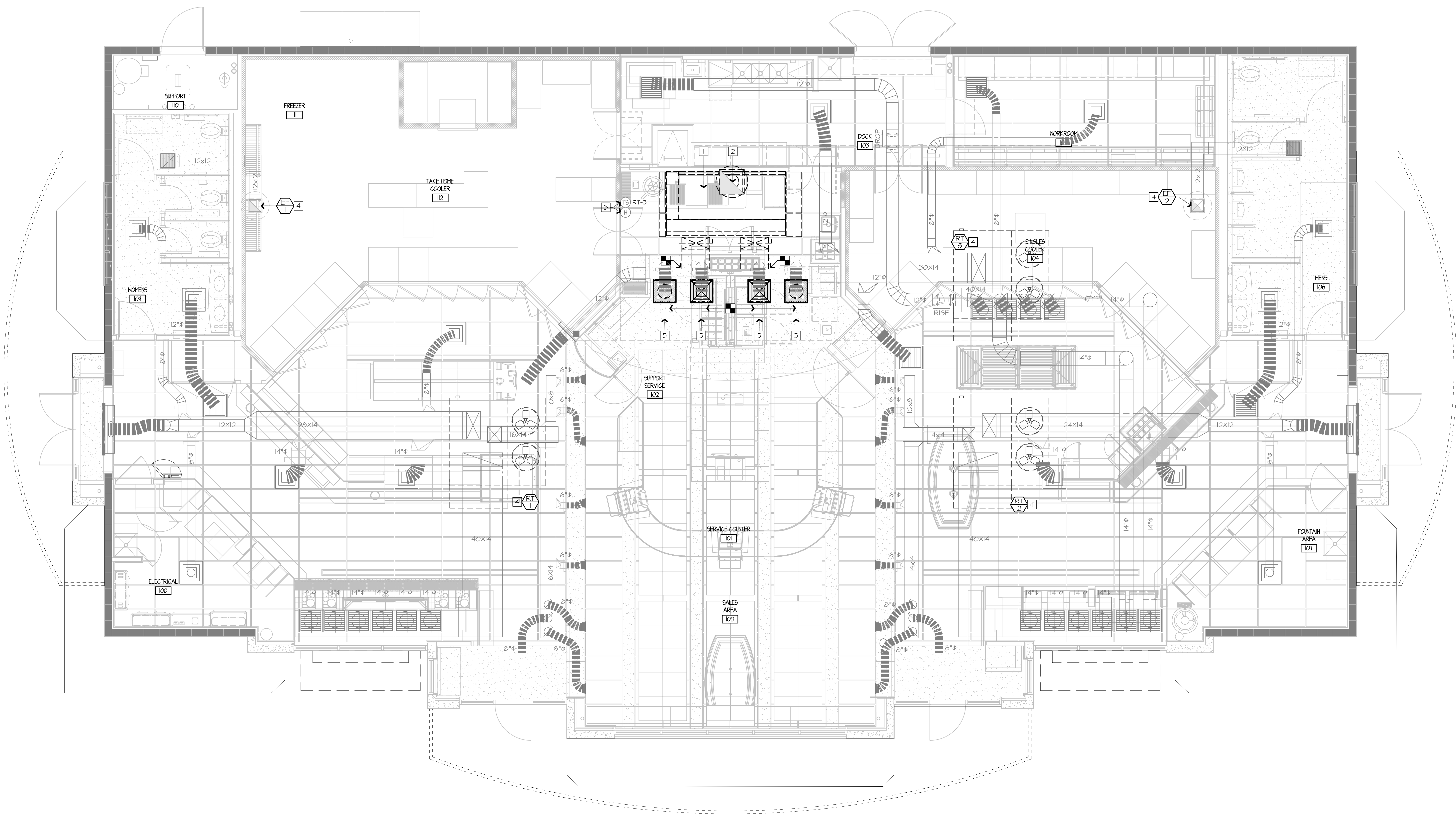


City of Phoenix Plan #: 2505245-LPRR Date: 10/06/25



Bowie Tiglas Engineering Inc.
 Consulting Engineers
 Justin@BowieTiglas.com
 BTE # 25231

Phone: 602.992.9900
 Fax: 602.992.1541
 24820 Phoenix, AZ 85085

KDF JOB #: 24010

QuikTrip No. 432
 4075 SOUTH 32ND STREET
 PHOENIX, ARIZONA

PROTOTYPE: FRYER ADDITION
 DIVISION: PHOENIX
 VERSION: G3
 DATE: 06/25/25

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 06/18/25

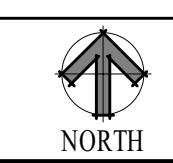
SHEET TITLE:
 MECHANICAL DUCTWORK
 CEILING PLAN - DEMO

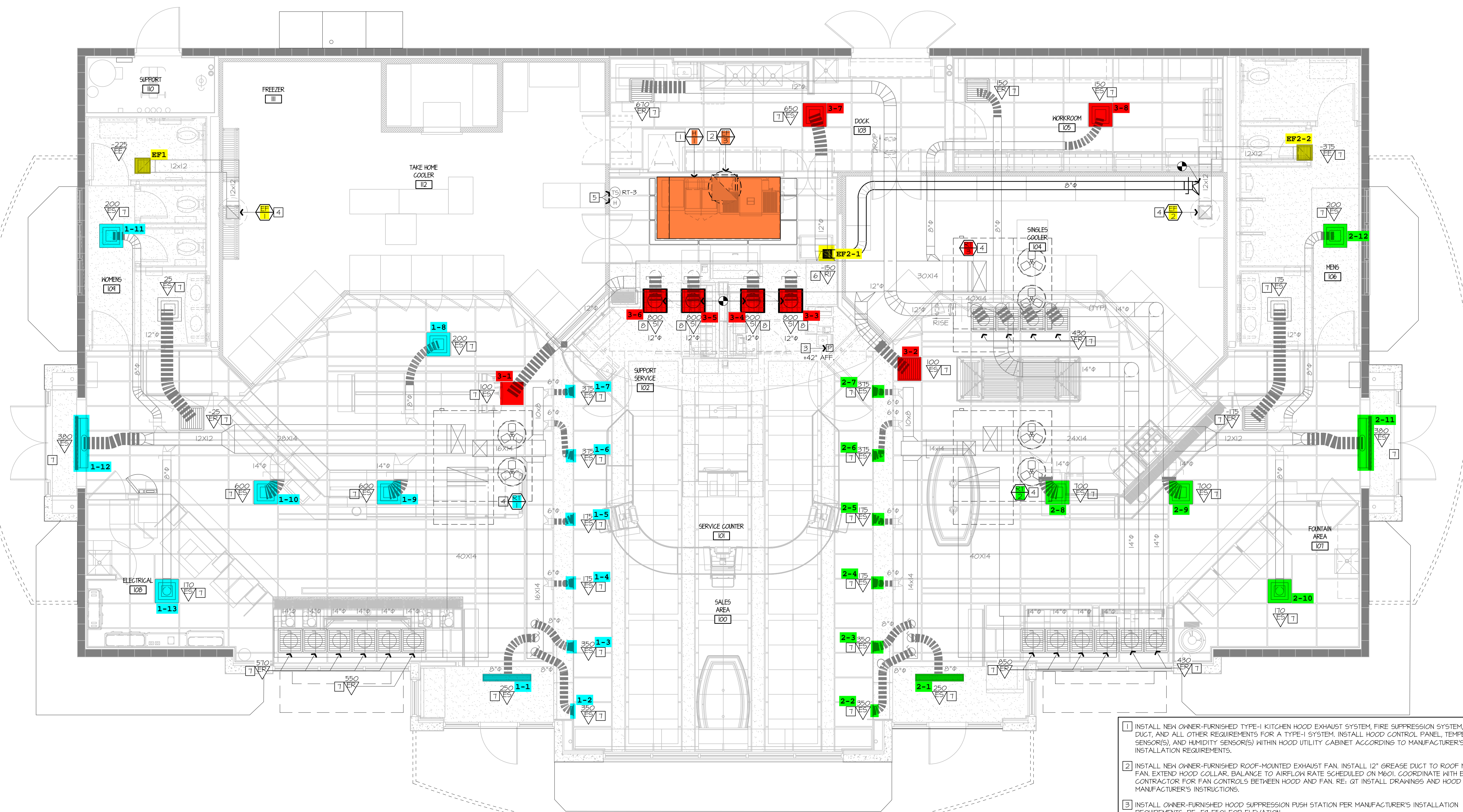
SHEET NUMBER:
M101

- 1 REMOVE KITCHEN HOOD SYSTEM AND ALL ASSOCIATED GREASE DUCT BETWEEN HOOD AND EXHAUST FAN ON ROOF. REMOVE HOOD SUPPLY PLENUM DUCT BACK TO RTU SUPPLY MAIN AND CAP AND PATCH AS REQUIRED. RE: M102.
- 2 REMOVE ROOF MOUNTED EXHAUST FAN AND ALL ASSOCIATED DUCT WORK.
- 3 EXISTING TEMPERATURE SENSOR AND HUMIDITY SENSOR SERVING KITCHEN RTU TO REMAIN, SHOWN FOR REFERENCE.
- 4 EXISTING ROOF EQUIPMENT TO REMAIN, SHOWN FOR REFERENCE.
- 5 REMOVE DIFFUSER/GRILLE AND MAINTAIN EXISTING DUCT WORK FOR NEW WORK.

A1 MECHANICAL DUCTWORK CEILING PLAN - DEMO

A13 PLAN NOTES





- 1 INSTALL NEW OWNER-FURNISHED TYPE-I KITCHEN HOOD EXHAUST SYSTEM, FIRE SUPPRESSION SYSTEM, GREASE DUCT, AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM. INSTALL HOOD CONTROL PANEL, TEMPERATURE SENSOR(S), AND HUMIDITY SENSOR(S) WITHIN HOOD UTILITY CABINET ACCORDING TO MANUFACTURER'S INSTALLATION REQUIREMENTS.
- 2 INSTALL NEW OWNER-FURNISHED ROOF-MOUNTED EXHAUST FAN. INSTALL 12" GREASE DUCT TO ROOF MOUNTED FAN. EXTEND HOOD COLLAR. BALANCE TO AIRFLOW RATE SCHEDULED ON M601. COORDINATE WITH ELECTRICAL CONTRACTOR FOR FAN CONTROLS BETWEEN HOOD AND FAN. RE: QT INSTALL DRAWINGS AND HOOD MANUFACTURER'S INSTRUCTIONS.
- 3 INSTALL OWNER-FURNISHED HOOD SUPPRESSION PUSH STATION PER MANUFACTURER'S INSTALLATION REQUIREMENTS. RE: F4-ES01 FOR ELEVATION.
- 4 EXISTING ROOF EQUIPMENT TO REMAIN, SHOWN FOR REFERENCE. RE: 6I-M601 TO RE-BALANCE AIRFLOWS AS REQUIRED.
- 5 EXISTING TEMPERATURE SENSOR AND HUMIDITY SENSOR SERVING KITCHEN RTU TO REMAIN, SHOWN FOR REFERENCE.
- 6 PROVIDE EXHAUST GRILLE ABOVE COMBI OVENS AND PROVIDE DUCT AS SHOWN TO TAP INTO EXISTING RESTROOM EXHAUST DUCT. RE: 6I-M601 FOR MORE INFORMATION.
- 7 RE-BALANCE EXISTING DIFFUSER/GRILLE TO AIRFLOW SHOWN ON PLAN. RE: M601.
- 8 PROVIDE DIFFUSER/GRILLE AS SCHEDULED AND RECONNECT TO EXISTING DUCT MAINTAINED DURING DEMOLITION. RE-BALANCE TO AIRFLOW SHOWN ON PLAN. RE: M601.

A1 MECHANICAL DUCTWORK CEILING PLAN - NEW

A13 PLAN NOTES

Bowie Tiglas Engineering Inc.
 Consulting Engineers
 Justin@BowieTiglas.com
 BT# # 25231

Phone: 602.992.9900
 Fax: 602.992.1501
 24820 Phoenix, AZ 85085

KDF JOB #: 24010

QuikTrip No. 432

4075 SOUTH 32ND STREET
 PHOENIX, ARIZONA

City of Phoenix Plan #: 2505245-LPRR Date: 10/06/25

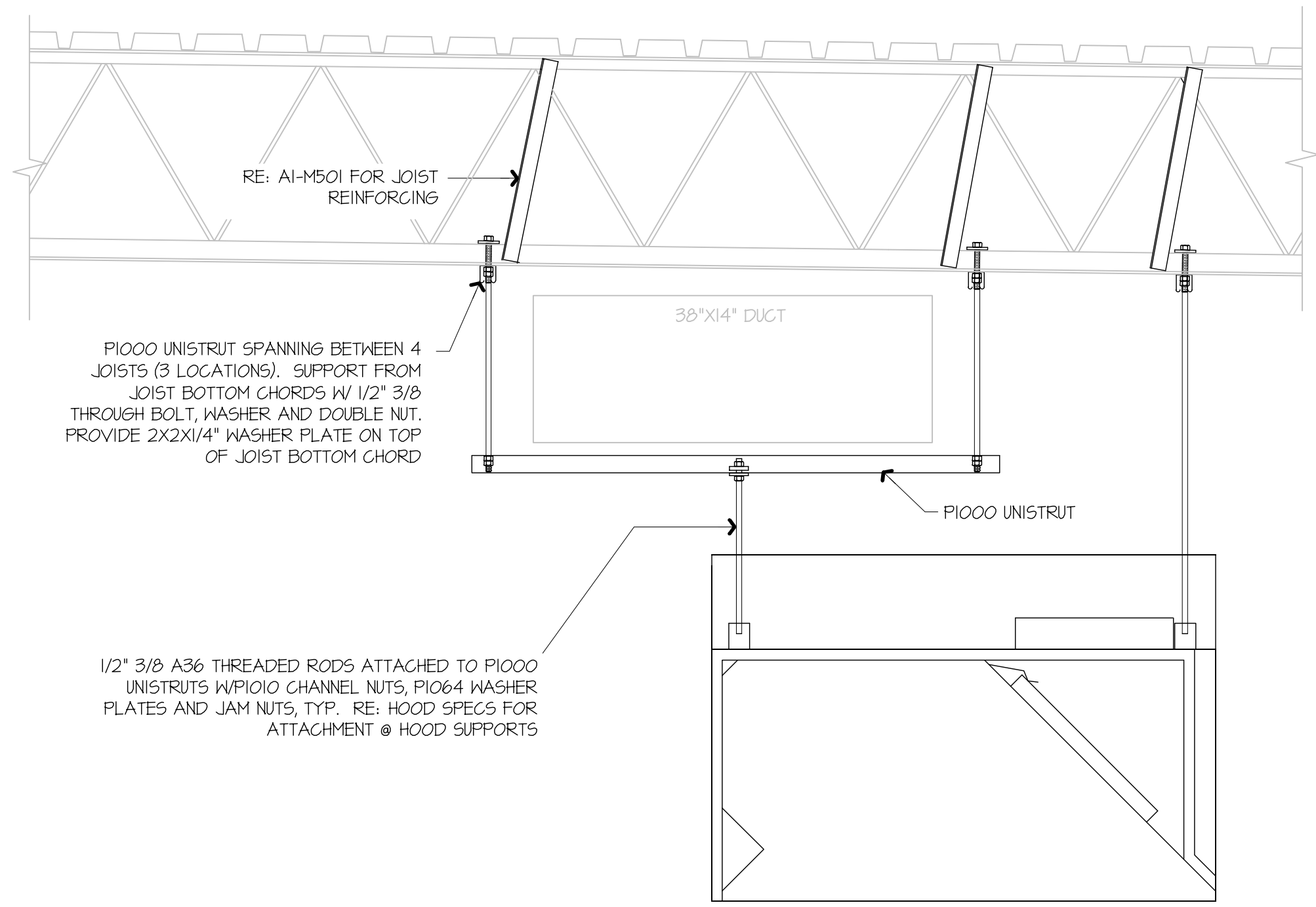
PROTOTYPE	FRYER ADDITION
DIVISION	PHOENIX
VERSION	03
DATE	06/25/25

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 06/18/25

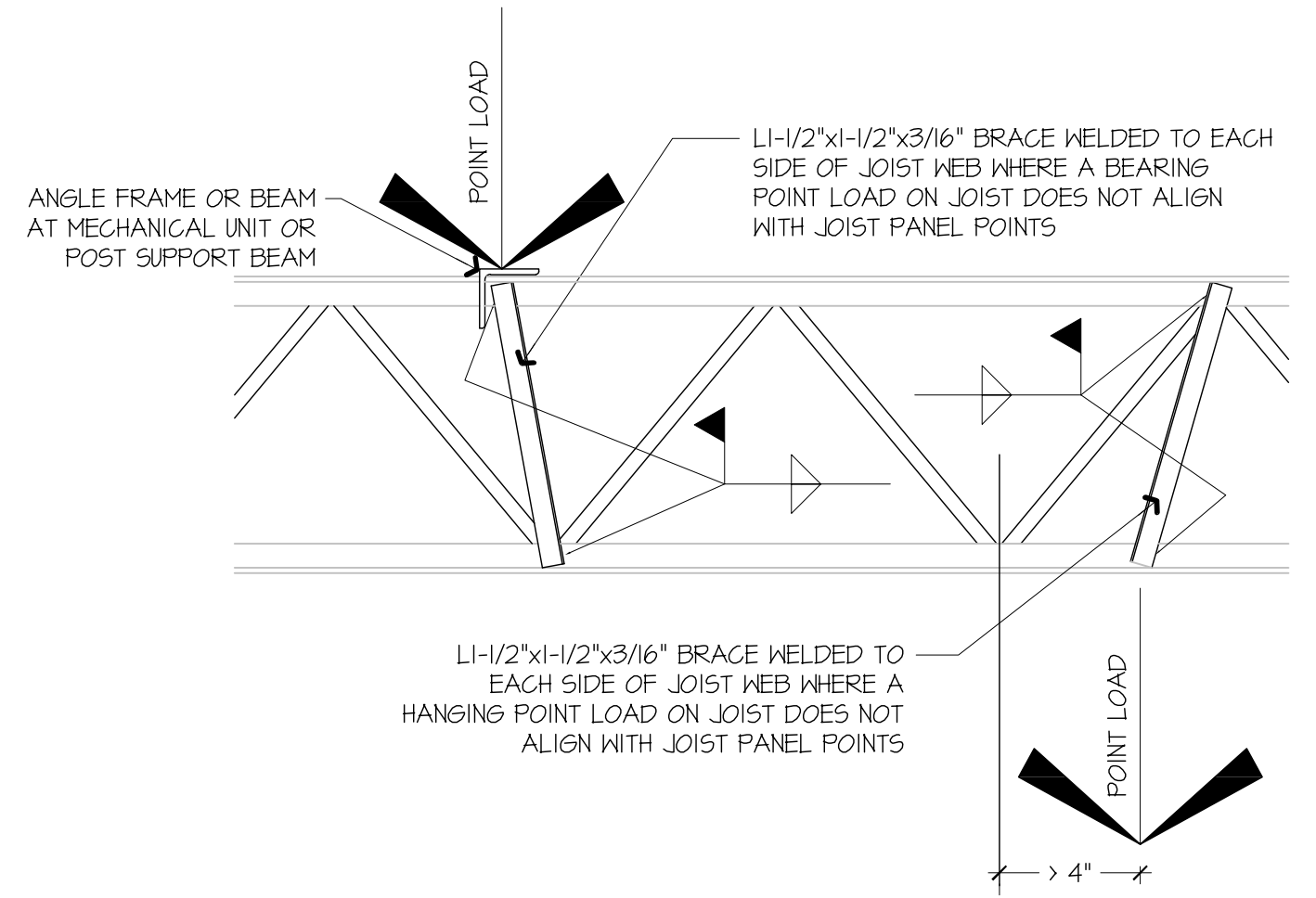
SHEET TITLE:
 MECHANICAL DUCTWORK CEILING PLAN - NEW

SHEET NUMBER:
M102



F1 KITCHEN EXHAUST HOOD SUPPORT DETAIL

NOT TO SCALE



A1 JOIST REINFORCING DETAIL

NOT TO SCALE

GENERAL NOTES:
 KITCHEN EXHAUST HOOD SHALL BE TYPE-I RATED FOR MEDIUM DUTY COOKING APPLIANCES THAT PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS. HOOD SHALL BE PROVIDED WITH AUTOMATIC FIRE SUPPRESSION SYSTEM INTERLOCKED WITH EQUIPMENT SHUTDOWN CONTROLS. HOOD SHALL BE PROVIDED WITH UL1046 GREASE FILTERS. HOOD SHALL BE LISTED IN ACCORDANCE WITH UL1010. HOOD SHALL BE LISTED AND LABELED FOR 0" CLEARANCE REQUIREMENTS TO COMBUSTIBLES.

HEAT AND MOISTURE LOADS FOR APPLIANCES THAT DO NOT PRODUCE GREASE OR SMOKE AS A RESULT OF THE COOKING PROCESS AND ARE NOT LOCATED UNDER THE HOOD, HAVE BEEN INCORPORATED INTO THE HVAC SYSTEM CAPACITY SERVING THE KITCHEN.

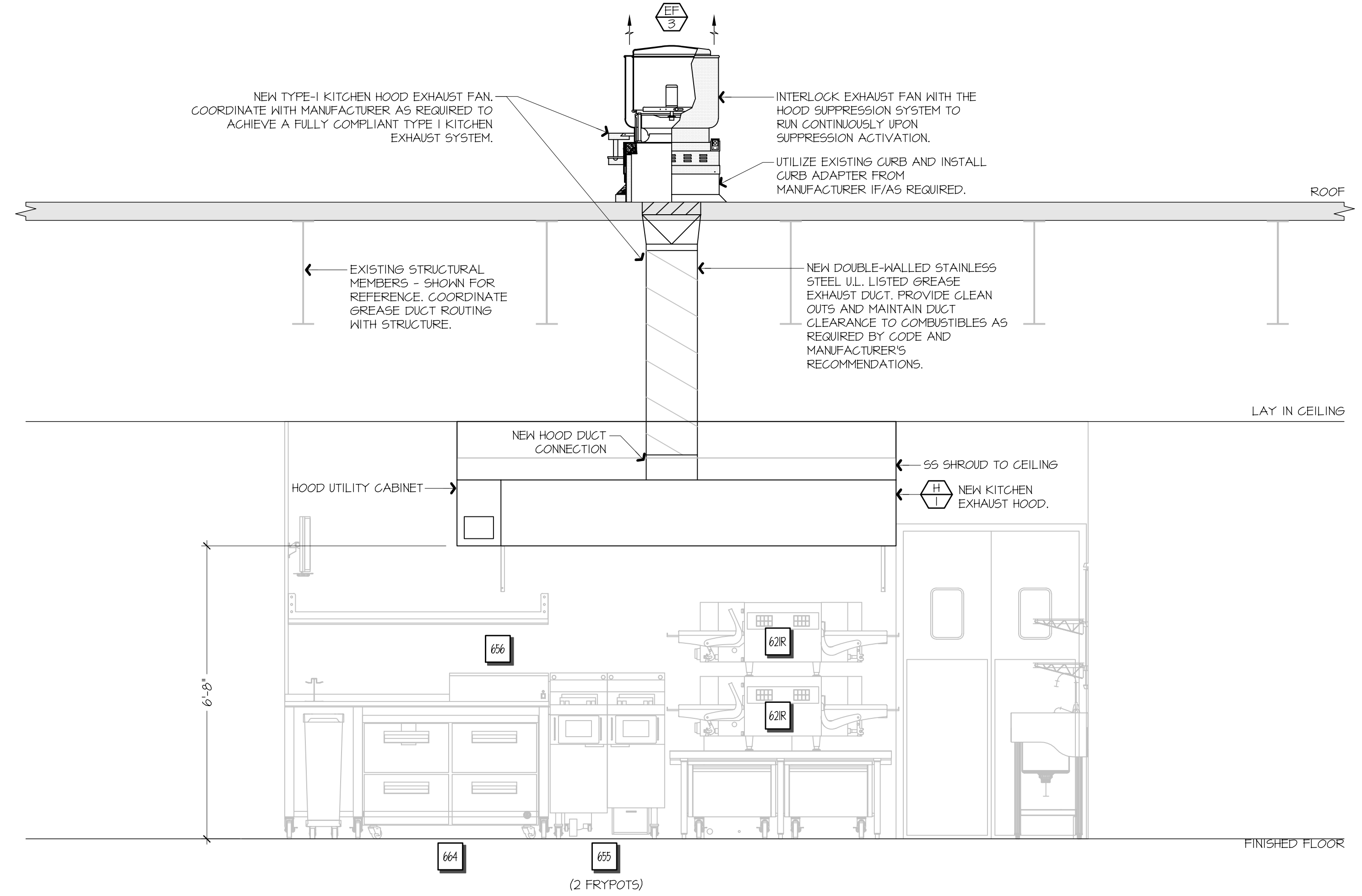
ALL OVENS NOT LOCATED UNDERNEATH A HOOD ARE UL1010 LISTED FOR VENTLESS OPERATION.

SEQUENCE OF OPERATION:
 THE FOLLOWING KITCHEN EQUIPMENT SHALL BE INTERLOCKED WITH CURRENT TRANSFORMERS THAT AUTOMATICALLY ACTIVATE THE HOOD EXHAUST FAN UPON THE KITCHEN EQUIPMENT BEING ENERGIZED: [621] PIZZA OVENS, [648] COMBI OVENS, [641] STEAM DRAWER, [655] FRYER, [656] FRY HOLDING STATION.

AS HOOD EXHAUST FAN ENERGIZES, RTU'S SHALL MODULATE OUTSIDE AIR TO MAINTAIN BUILDING PRESSURIZATION. RE: M601.

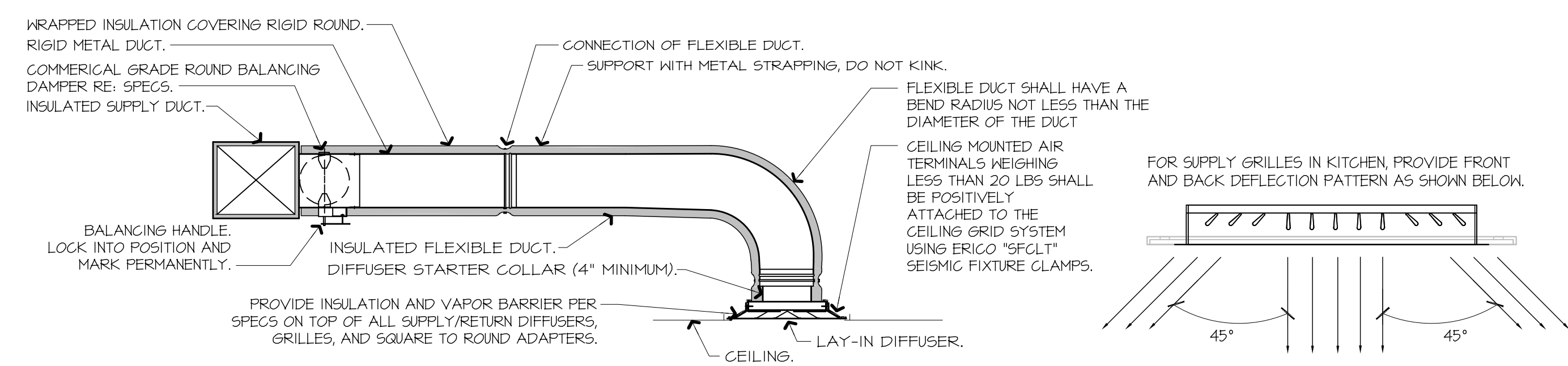
HEAT SENSORS SHALL BE PROVIDED WITHIN HOOD CANOPY FOR TEMPERATURE AND HUMIDITY MONITORING. RE: MANUFACTURER DRAWINGS.

UPON ACTIVATION OF THE FIRE SUPPRESSION SYSTEM, ALL EQUIPMENT LOCATED UNDER THE HOOD SHALL BE SHUTDOWN VIA CONTACTORS LOCATED WITHIN THE HOOD UTILITY CABINET, AND RTU SERVING KITCHEN SPACE SHALL BE AUTOMATICALLY SHUTDOWN. RE: A13-E601.



F9 FSC REAR WALL ELEVATION - NEW

1/2" = 1'-0"



A9 DIFFUSER CONNECTION DETAIL

NOT TO SCALE

- NOTES:**
- PROVIDE AT FLEXIBLE DUCT CONNECTION METAL OR "PANUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX. SECURE THE INSULATION OVER THE DRAWBAND WITH AN ADDITIONAL DRAWBAND.
 - PROVIDE BEADING ON ROUND METAL DUCT 12" OR LARGER IN DIAMETER.
 - PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEX DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
 - BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE FIBER REINFORCED FOIL BACKED TAPE FOR INSULATION OVERLAP.

Bowie Tiglas Engineering Inc.
 Consulting Engineers
 Justin@BowieTiglas.com
 BTE # 25231

Phone: 602.982.9900
 Fax: 602.982.1541
 24820 W. BILBAO RD
 PHOENIX, AZ 85085

KDF JOB #: 24010

QuikTrip No. 432

4075 SOUTH 32ND STREET
 PHOENIX, ARIZONA

PROTOTYPE: FRYER ADDITION
 DIVISION: PHOENIX
 VERSION: G3
 DATE: 06/25/25

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 06/18/25

SHEET TITLE:
 MECHANICAL SECTIONS & DETAILS

SHEET NUMBER:
M501

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

HOOD INFORMATION - JOB#7284466

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM
1		6030 ND-2	CAPTIVEAIRE	9' 0"	450 DEG	I	MEDIUM	150	1350

FIRE SYSTEM INFORMATION - JOB#7284466

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION
1		TANK FS	4.0	20	20	FIRE CABINET LEFT LEFT, HOOD I

HOOD INFORMATION

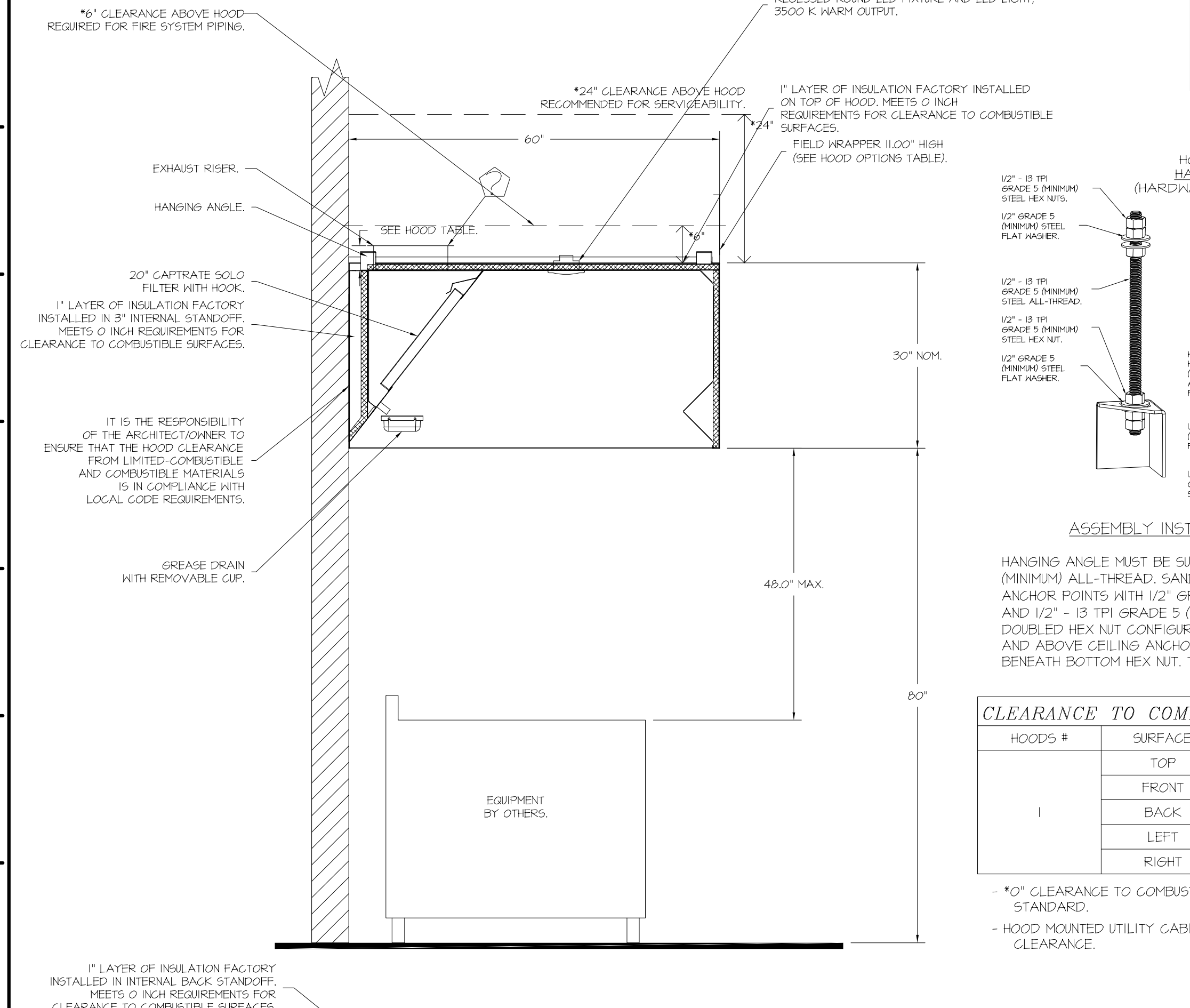
HOOD TAG	TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	AVERAGE FOOT CANDLES @ 36" AFF	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL MODEL #	QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING HEIGHT
1	CAPTIVE SOLO FILTER	6	20"	16"	85% SEE FILTER SPEC	6	RECESSED ROUND	NO	66	LEFT	12"x60"x30"	TANK FS	4.0	DCV-1011	1 LIGHT 1 FAN	YES	88" LBS

HOOD OPTIONS

HOOD TAG	OPTION
1	FIELD WRAPPER 11.00" HIGH FRONT, LEFT, RIGHT, RIGHT END STANDOFF (FINISHED) 1" WIDE 60" LONG INSULATED. INSULATION FOR TOP OF HOOD. INSULATION FOR BACK OF HOOD. SENSOR-CV.

FIRE SYSTEM PARTS LIST KEY

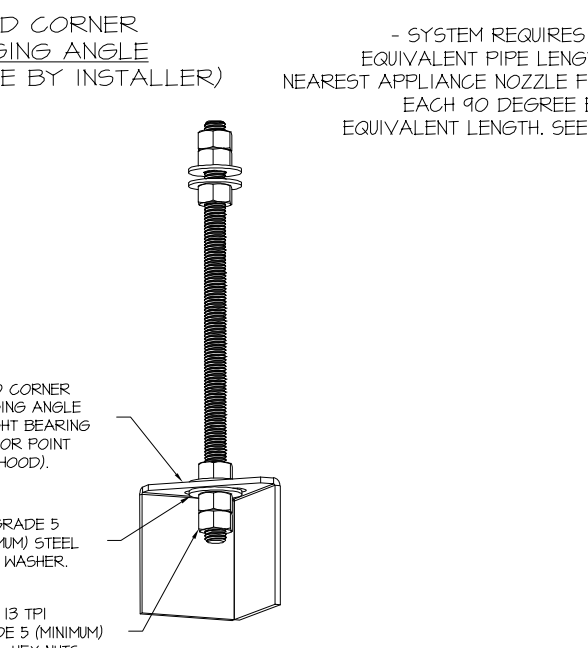
FIRE SYSTEM TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
0 - 0	TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
0 - 0	TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
0 - 0	12-28201-3244-01-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO. CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
0 - 0	32-00002 QUIK SEAL - 1/2" (UL).	1	0
0 - 0	442R1B3 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW BRASS.	1	0
0 - 0	442R1B3 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
0 - 0	19525 1/2" 40 PRO-PRESS ELBOW WITH 1/2" ANPT FEMALE CONNECTION, VIEGA.	1	0
0 - 0	19580 1/2" X 1/2" PRO-PRESS TEE X 1/2" ANPT FEMALE CONNECTION, VIEGA.	1	0
0 - 0	81-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	1	0
0 - 0	81-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY. ONE NEEDED PER FIRE SYSTEM SUPERVISED. TANK FIRE SUPPRESSION.	1	0
0 - 0	81-300033-001 DIN CONNECTOR, GANFIELD PART #5,560-201-EUQA, TANK FIRE SUPPRESSION, SUBMINATURE SOLENOID CONNECTION (CED VENDOR 303TI).	1	0
0 - 0	81-300052-001 HARDWARE, SVA BOLT, TANK FIRE SUPPRESSION.	4	0
0 - 0	40254591C PRO PRESS 1/2 PRESS X PRESS 40 ELBOW LD.	4	0
0 - 0	40412007C PRO PRESS PG611 1/2 PRESS TEE LD.	4	0
0 - 0	48644A15 HARDWARE, DATANLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	2	0
0 - 0	40034333 JUNCTION BOX FOR MANUAL PULL STATION, 1.5" DEEP BACK BOX, RED COLOR.	1	0
0 - 0	A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES, 1/4" FLARE X 1/4" NPT HALF UNION, USED ON TANK SERVICE PORT.	1	0
0 - 0	BH49 3/8" BLACK IRON 40 ELL.	2	0
0 - 0	DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
0 - 0	TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	3	0
0 - 0	TP5-10TANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	1	0
0 - 0	HK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	1	0
16 - 16	74210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	5	0
16 - 16	OL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL ELBOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	5	0
26 - 26	QSA-3/8 QUIK SEAL - 3/8" (UL).	5	0
34 - 34	A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR.	1	0



CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

NSF #96 NSF

E.T.L. LISTED 3054804-001 TO UL 710 & UL 710 STANDARDS



ASSEMBLY INSTRUCTIONS

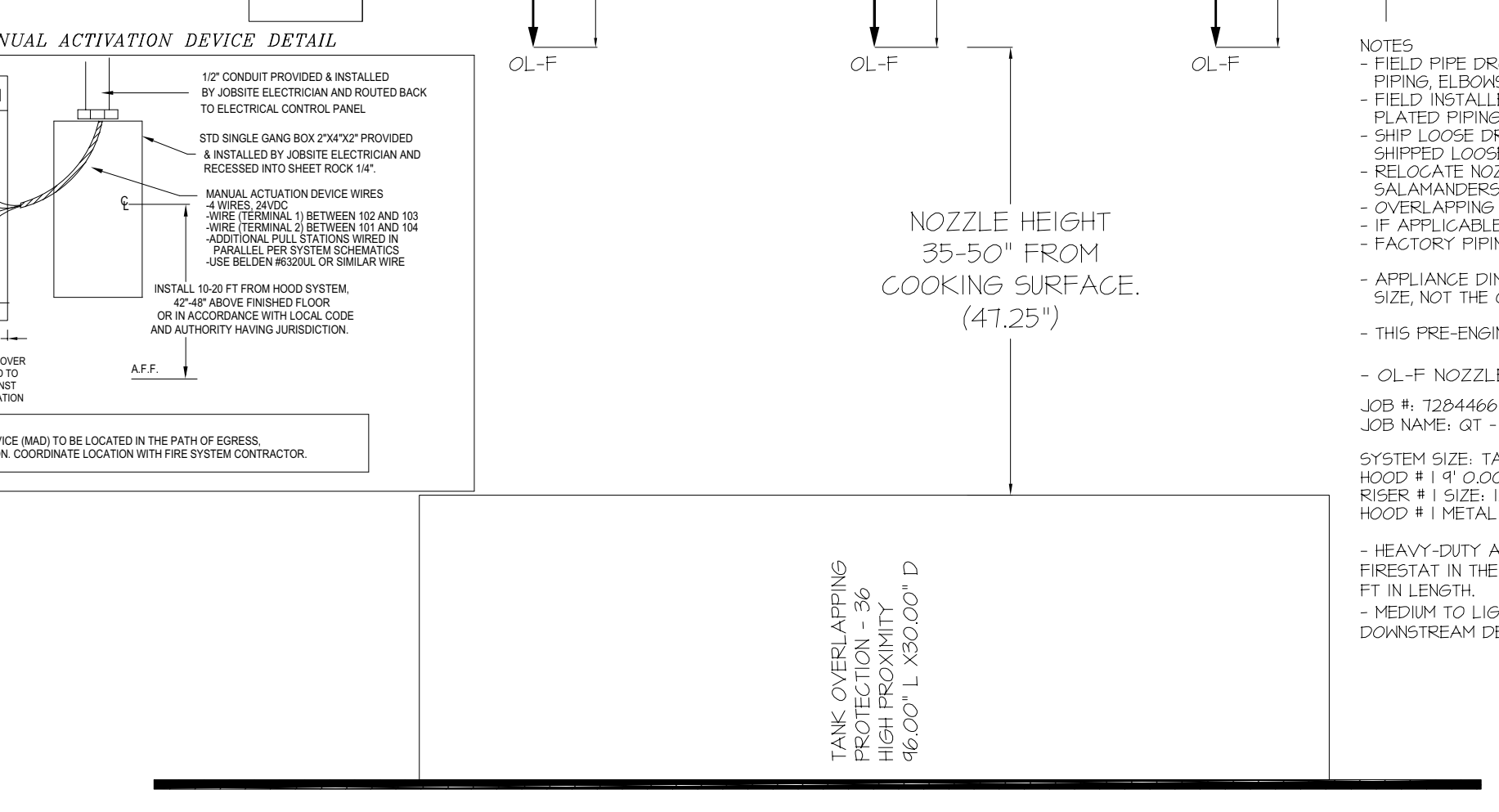
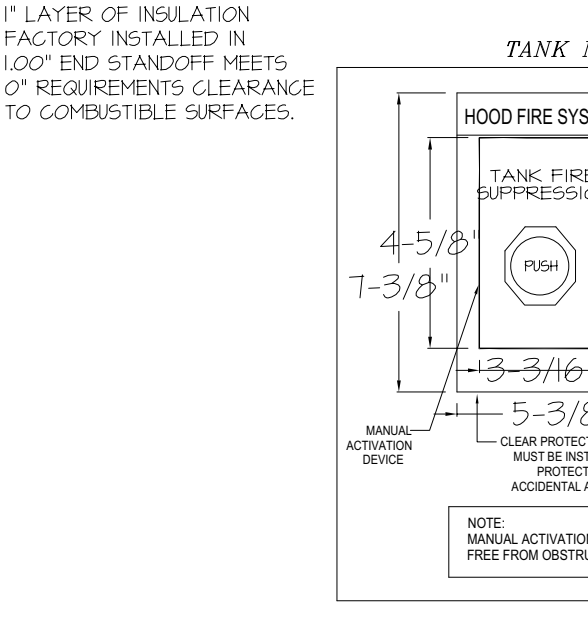
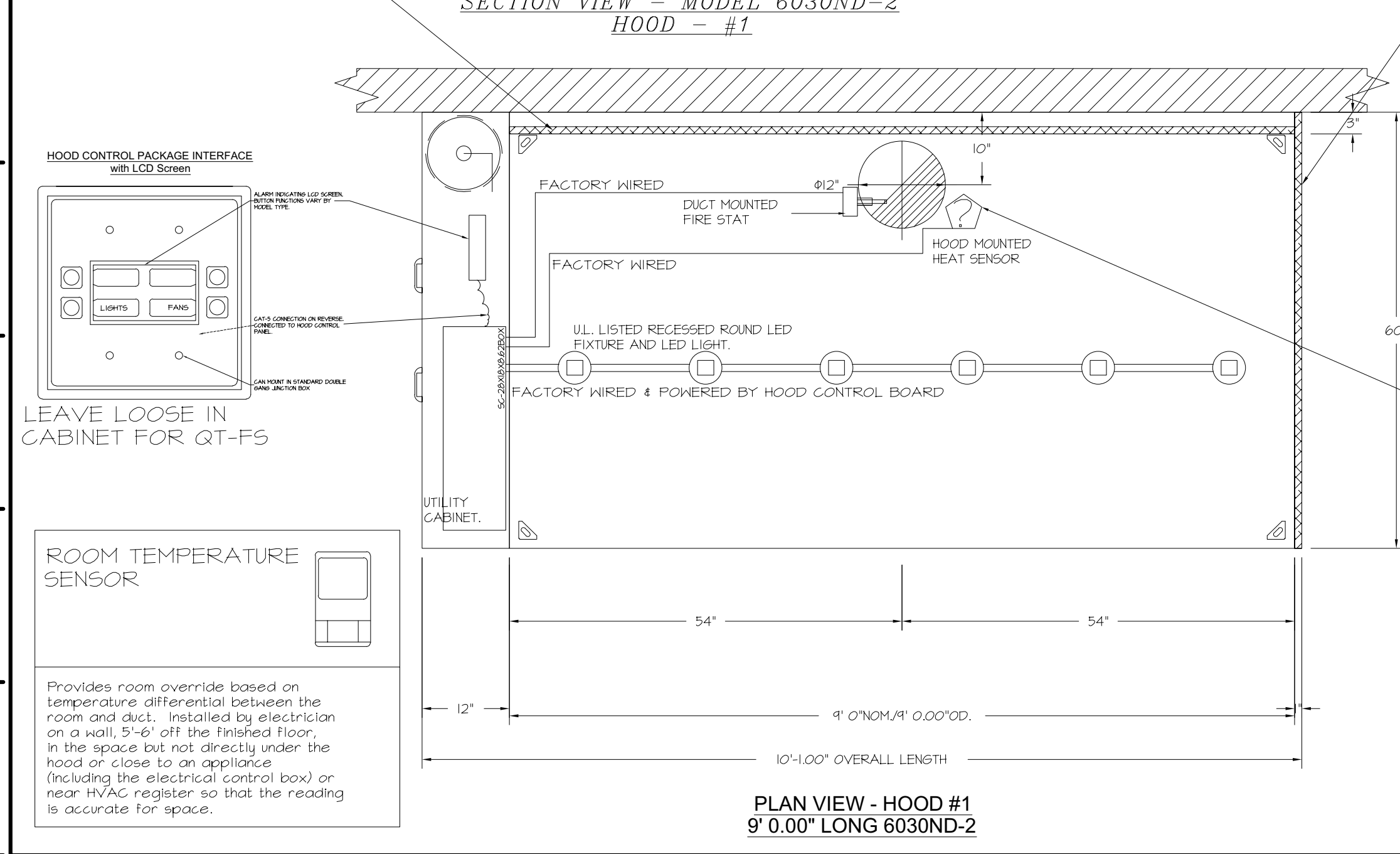
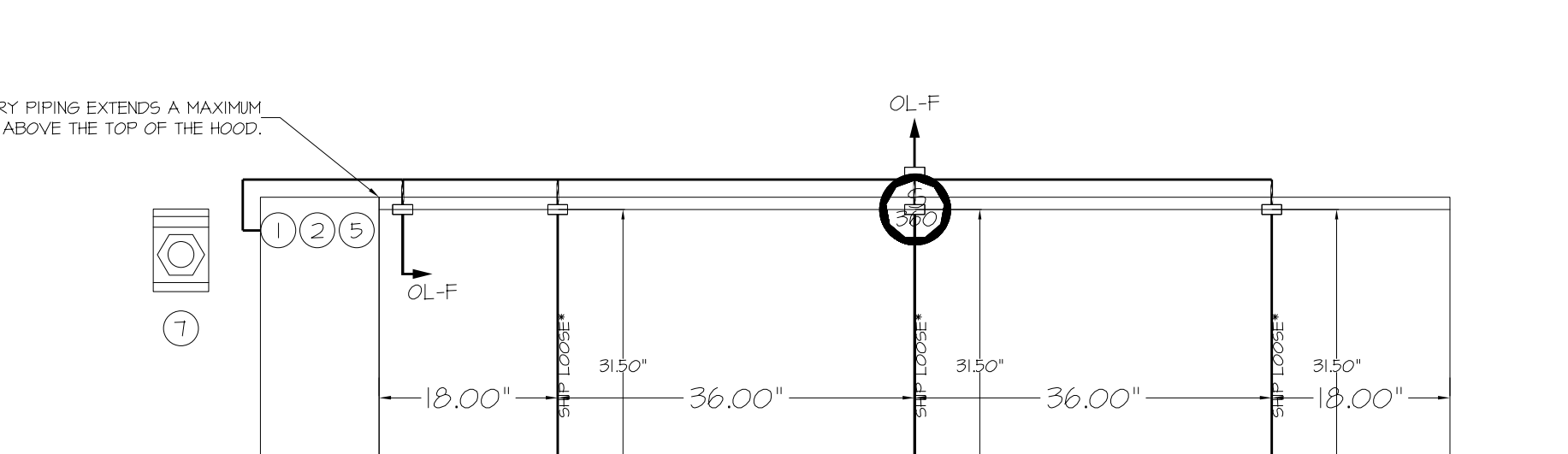
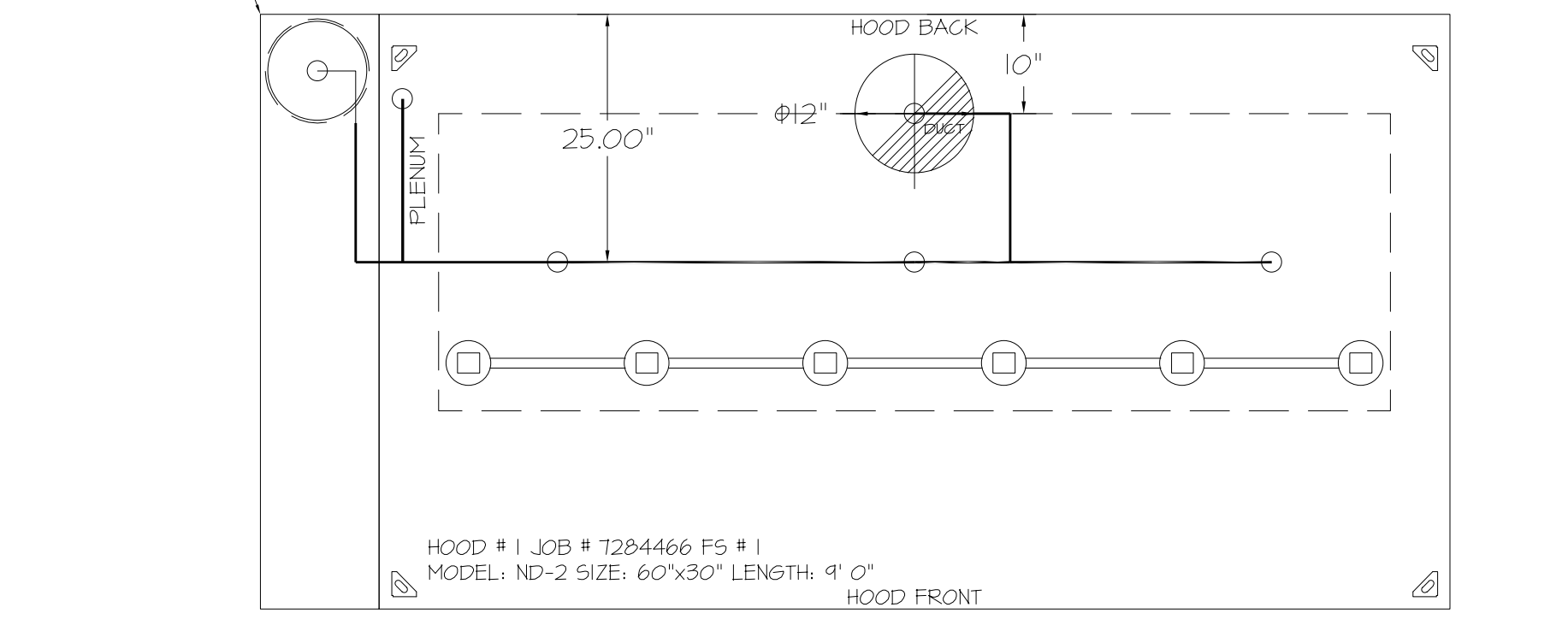
HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS, MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 51 FT-LBS.

CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1	TOP	0"
1	FRONT	0"
1	BACK	0"
1	LEFT	0"
1	RIGHT	0"

*0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL10 STANDARD.

HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.



NOTES

FIELD PIPE DROPS AS SHOWN.

PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS.

FIELD INSTALLED DROP. FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.

SHIP LOOSE DROP. FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.

RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.

OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION IF APPLICABLE. EXTENDED FIRE-PIPED DROPS ARE SHIPPED LOOSE.

FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

THIS FIRE-ENGINEERED FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.

OL-F NOZZLE PART NUMBER REPLACES 3010-3/8H-10-55

JOB #: 7284466

JOB NAME: QT - 63 NEW STORE PKG GOING FORWARD (DW) (450F).

SYSTEM SIZE: TANK-SP-I DESIGN FP: 20, MAXIMUM FP: 20.

HOOD #1 9' 0.00" LONG X 60" WIDE X 30" HIGH.

RISER #1 SIZE: 12" DIA.

HOOD #1 METAL BLOW-OFF CAPS INCLUDED.

HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.

MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVEAIRE

Tulsa Office

12101 East 51st Street, Suite 101A, Tulsa, OK 74146 PHONE: (918) 258 - 0291 FAX: 9182275947 EMAIL: reg@captivaire.com

www.captivaire.com

Bowie Tiglas Engineering Inc.

Consulting Engineers

Phone: 602.882.9300 Fax: 602.882.1541 24820 N 16TH AVE STE 170 PHOENIX, AZ 85065

BIT# 28312

KDF JOB #: 24010

QuikTrip No. 432

4075 SOUTH 32ND STREET PHOENIX, ARIZONA

QT

QT - 63 New Store Pkg Going Forward (DW) (450F)

Various Locations, Tulsa, OK, 74136

PROTOTYPE	REVISION
PHOENIX	PHOENIX
VERSION 63	VERSION 63
DATE 06/25/25	DATE 06/25/25

REV	DATE	DESCRIPTION
BI	4/25/25	CITY COMMENTS

DATE: 4/29/2025

DWG.#: 7284466

DRAWN BY: R.H.80

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

MASTER DRAWING

SHEET TITLE: MECHANICAL HOOD DETAILS

SHEET NUMBER: M510

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

EXHAUST FAN INFORMATION - JOB#7284466

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	EF-3 (TYPE I)	1	DU50HFA	CAPTIVEAIRE	1350	0.750	1543	TEAO-ECM	0.500	0.370	1	208	3.8	513 FPM	74	16.6
2	EF-1 - RR FAN	1	DR33HFA	CAPTIVEAIRE	600	0.500	1304	TEAO-ECM	0.333	0.150	1	115	4.3	297 FPM	58	8.8
3	TF-1 - TRANS FAN	1	CFA 500CA	CAPTIVEAIRE	350	0.500	725	GENERALPURPOSE	0.310	0.2220	1	115	2.2		35	N/A
4	VF-1 - CO2 FAN	1	DFA-300-CA	CAPTIVEAIRE	600	0.100	1846	GENERALPURPOSE	0.333	0.1480	1	115	2.6		12	12.9

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF-3 (TYPE I)	YES						
2	EF-1 - RR FAN		YES					
3	TF-1 - TRANS FAN							
4	VF-1 - CO2 FAN							

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-3 (TYPE I)	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR50HFA - SHIP LOOSE - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -M5G- (TELCO), CGW ROTATION
		1	2 YEAR PARTS WARRANTY
2	EF-1 - RR FAN	1	15-BDD DAMPER
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CGW ROTATION
		1	2 YEAR PARTS WARRANTY
		1	FAN CONTROL - 3 AMP FAN MOUNTED SPEED CONTROL FOR CFA CEILING FANS
3	TF-1 - TRANS FAN	1	2 YEAR PARTS WARRANTY
		1	FAN CONTROL - 3 AMP WHITE SPEED CONTROL FOR CFA CEILING FAN
4	VF-1 - CO2 FAN	1	2 YEAR PARTS WARRANTY

CURB ASSEMBLIES

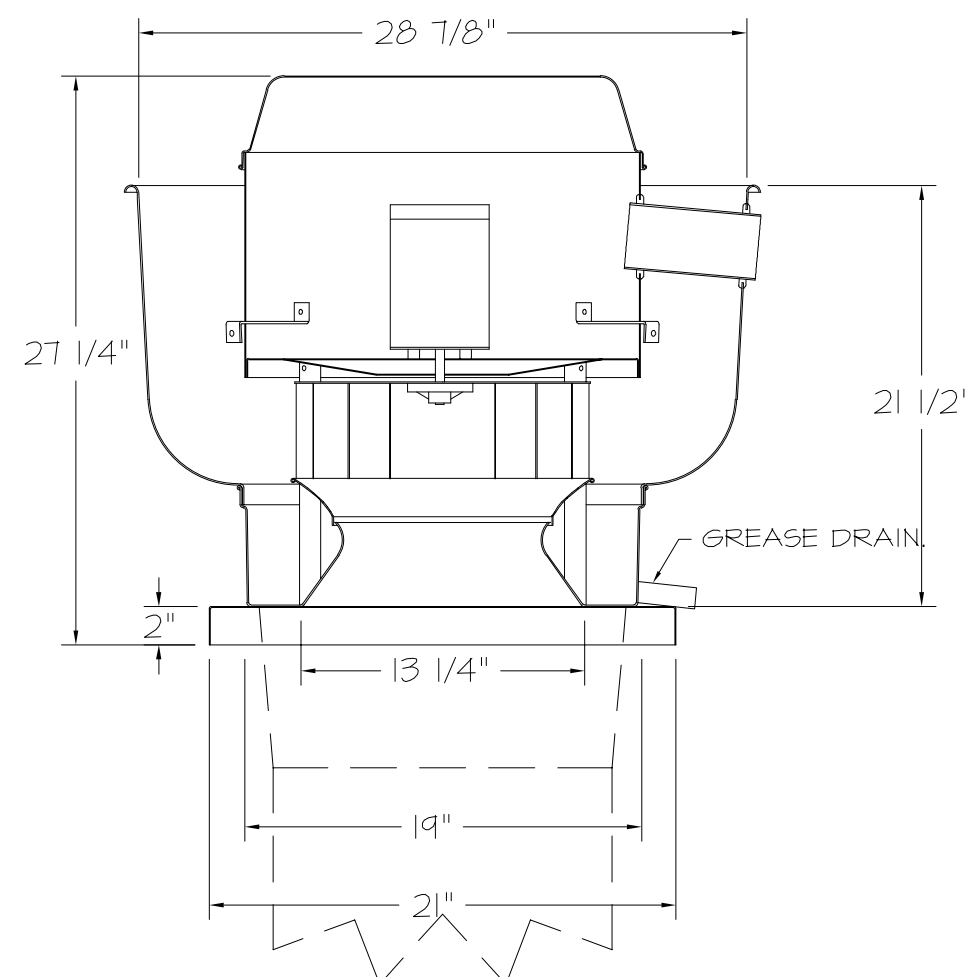
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	#1	EF-3 (TYPE I)	34 LBS	CURB	14.500"W X 14.500"L X 24.000"H VENTED HINGED.
2	#2	EF-1 - RR FAN	31 LBS	CURB	14.500"W X 14.500"L X 20.000"H HINGED.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA				OCTAVE BAND SOUND DATA							
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1	EF-3 (TYPE I)	EXHAUST	80	16.59126568875544	68.5	5	76.6	78	85	76.5	71.9	69.8	66	57
2	EF-1 - RR FAN	EXHAUST	70.9	8.826390394279191	59.4	5	68.3	75.1	73.9	67.5	64.2	62.8	55.9	44.9
4	VF-1 - CO2 FAN	EXHAUST	76.4	12.9254533071315571	64.9	5	65.8	74	74	72.2	69.8	68.5	68	68.2

FAN #3 CFA 500CA - EXHAUST FAN (TF-1 - TRANS FAN)

FAN #1 DU50HFA - EXHAUST FAN (EF-3 (TYPE I))



FEATURES:

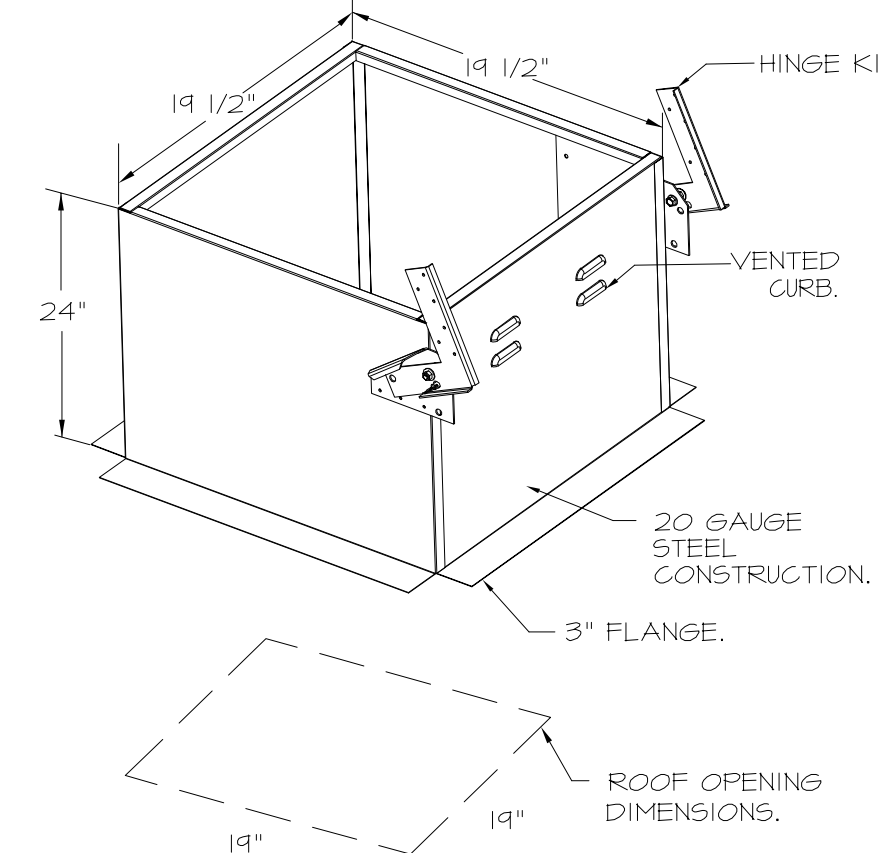
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL792 AND UL6-9645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT 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.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR50HFA
- SHIP LOOSE - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -M5G- (TELCO), CGW ROTATION
- 2 YEAR PARTS WARRANTY.



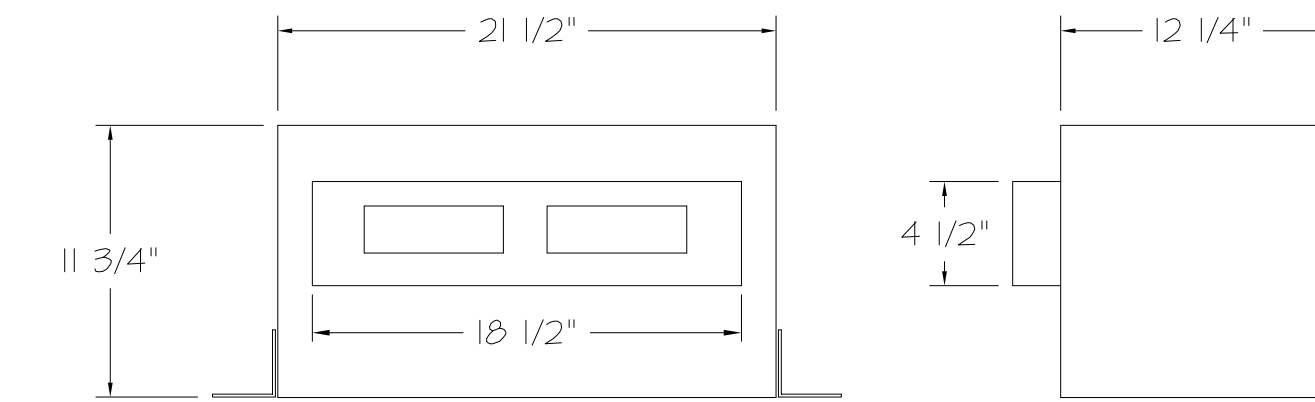
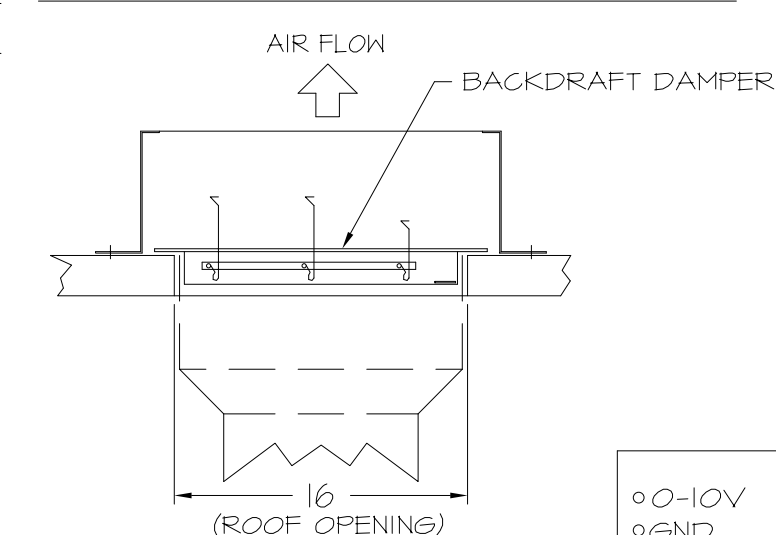
FAN #2 DR33HFA - EXHAUST FAN (EF-1 - RR FAN)

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

- 15-BDD DAMPER.
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CGW ROTATION.
- 2 YEAR PARTS WARRANTY.

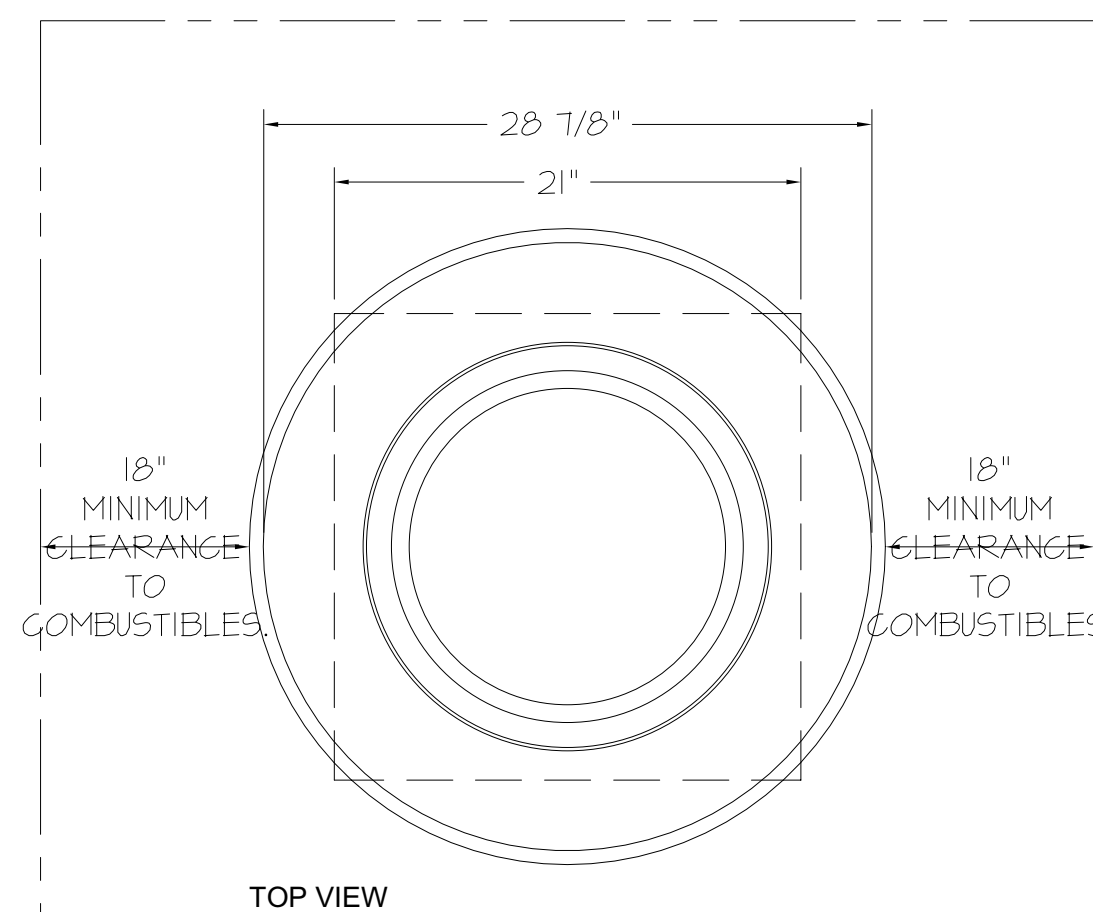
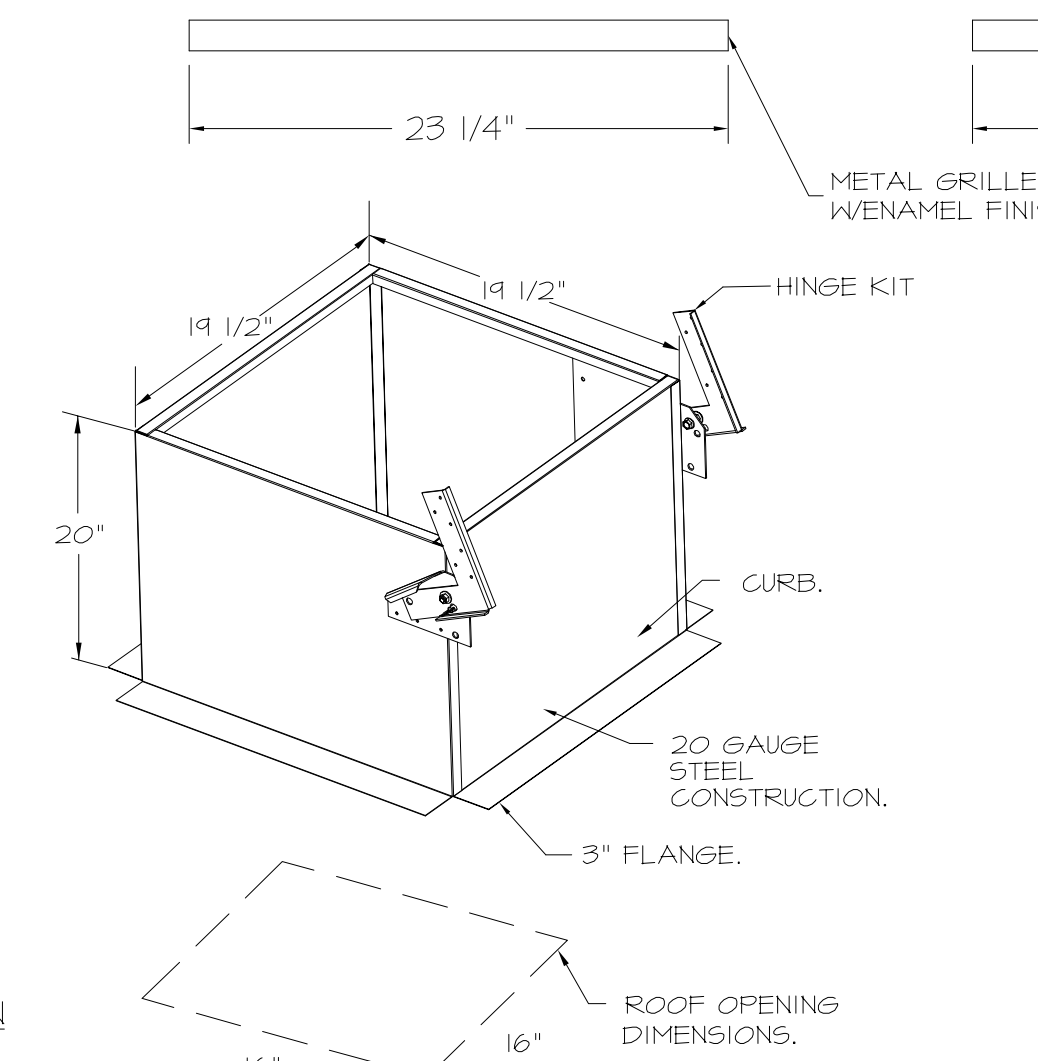
BACKDRAFT DAMPER INSTALLATION



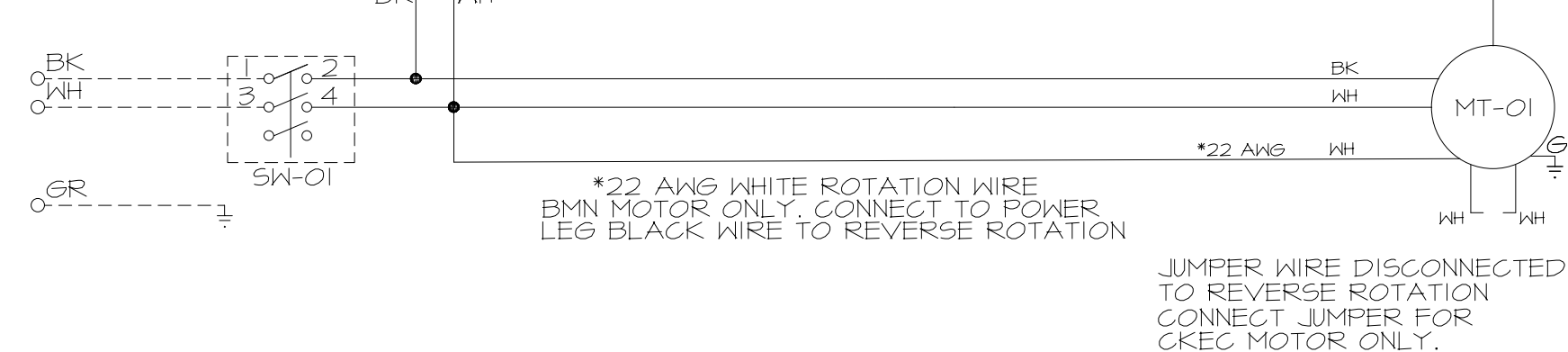
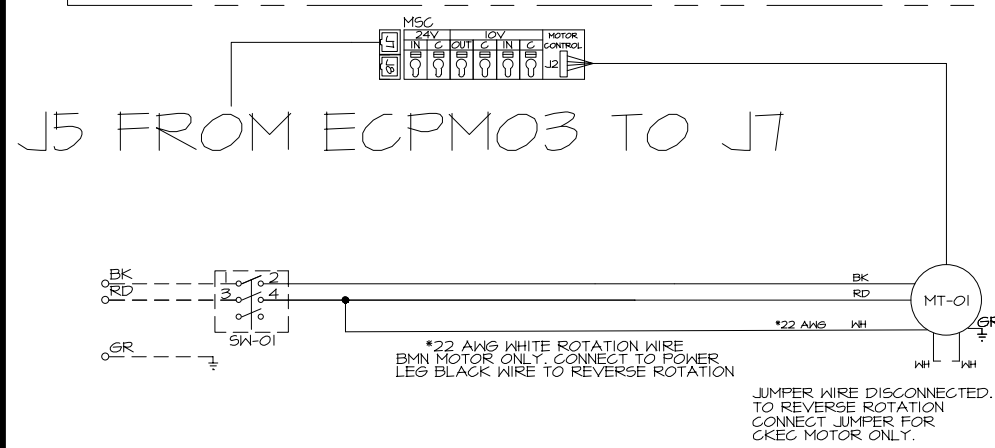
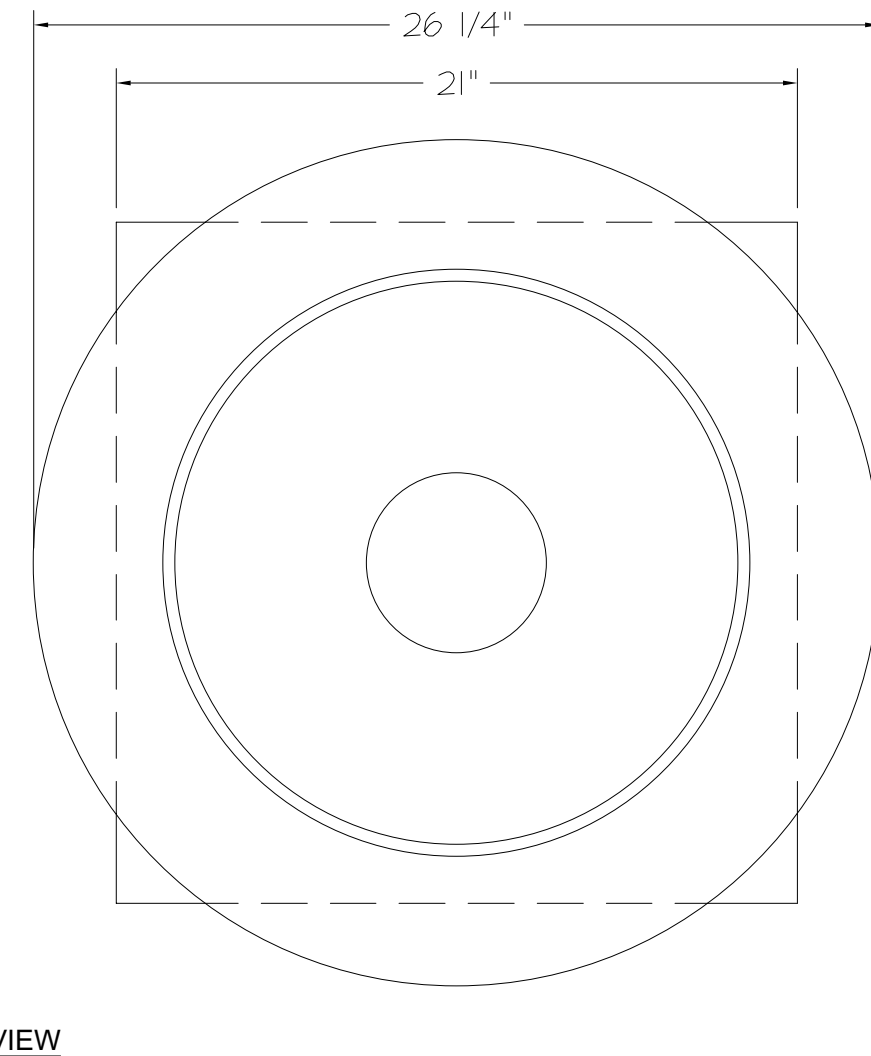
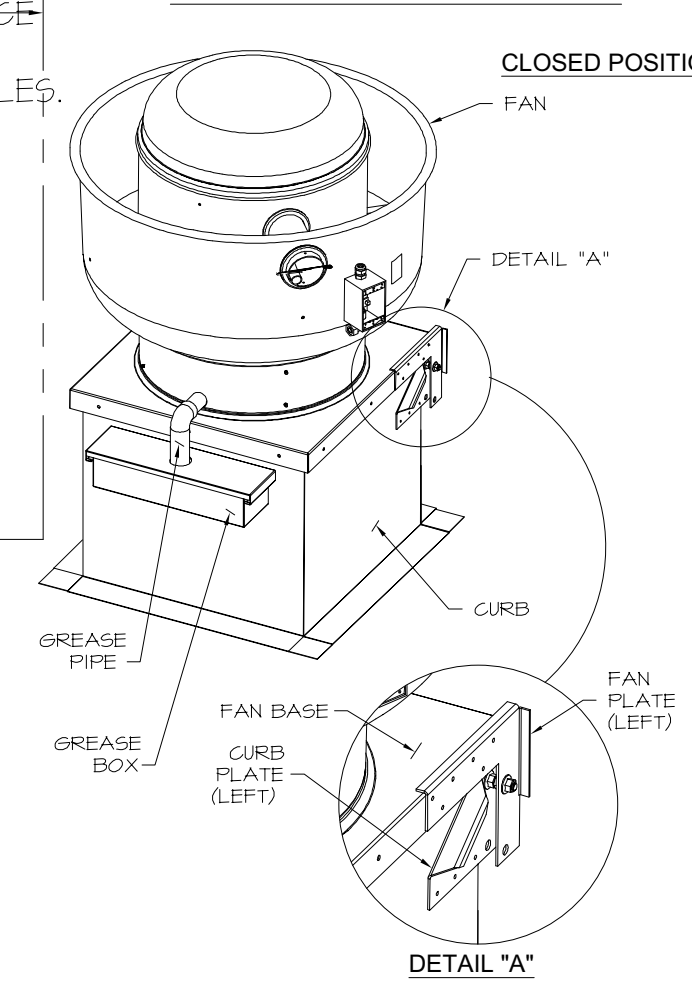
- FEATURES:**
- 1/2\"
 - 20 GA. GALVANIZED STEEL HOUSING.
 - PLUG TYPE DISCONNECT.
 - BUILT IN AUTOMATIC BACKDRAFT DAMPER.
 - AMCA SOUND 8 AIR CERTIFIED.
 - UL LISTED.
 - CAN BE INSTALLED IN CEILING OR WALL.
 - 8 POSITION MOUNTING BRACKETS.

OPTIONS

- FAN CONTROL - 3 AMP FAN MOUNTED SPEED CONTROL FOR CFA CEILING FANS.
- 2 YEAR PARTS WARRANTY.



HINGE KIT INSTALLATION

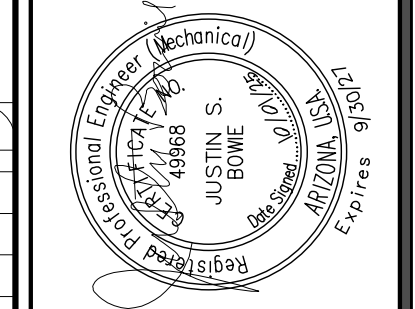


BI SHEET ADDED

REVISIONS

NO	DESCRIPTION	DATE

CAPTIVEAIRE
Tulsa Office
12101 East 51st Street, Suite 101A, Tulsa, OK 74146 PHONE: (918) 258-0291 FAX: 9182275947 EMAIL: reg@captivaire.com www.captivaire.com



Bowie Tiglas Engineering Inc.
Consulting Engineers
Phone: 602.882.9300
Fax: 602.882.1541
4075 SOUTH 32ND STREET
PHOENIX, ARIZONA
817# 28312

KDF JOB #: 24010

QuikTrip No. 432
4075 SOUTH 32ND STREET
PHOENIX, ARIZONA



QT - 63 New Store Pkg Going Forward (DW) (450F)
Various Locations,
Tulsa, OK, 74136

PROTOTYPE	REVISION

REV	DATE	DESCRIPTION
BI	9/25/25	CITY COMMENTS

DATE	DESCRIPTION

SHEET TITLE:
MECHANICAL HOOD DETAILS

SHEET NUMBER:
M511

DATE: 4/29/2025

DWG.#: 7284466

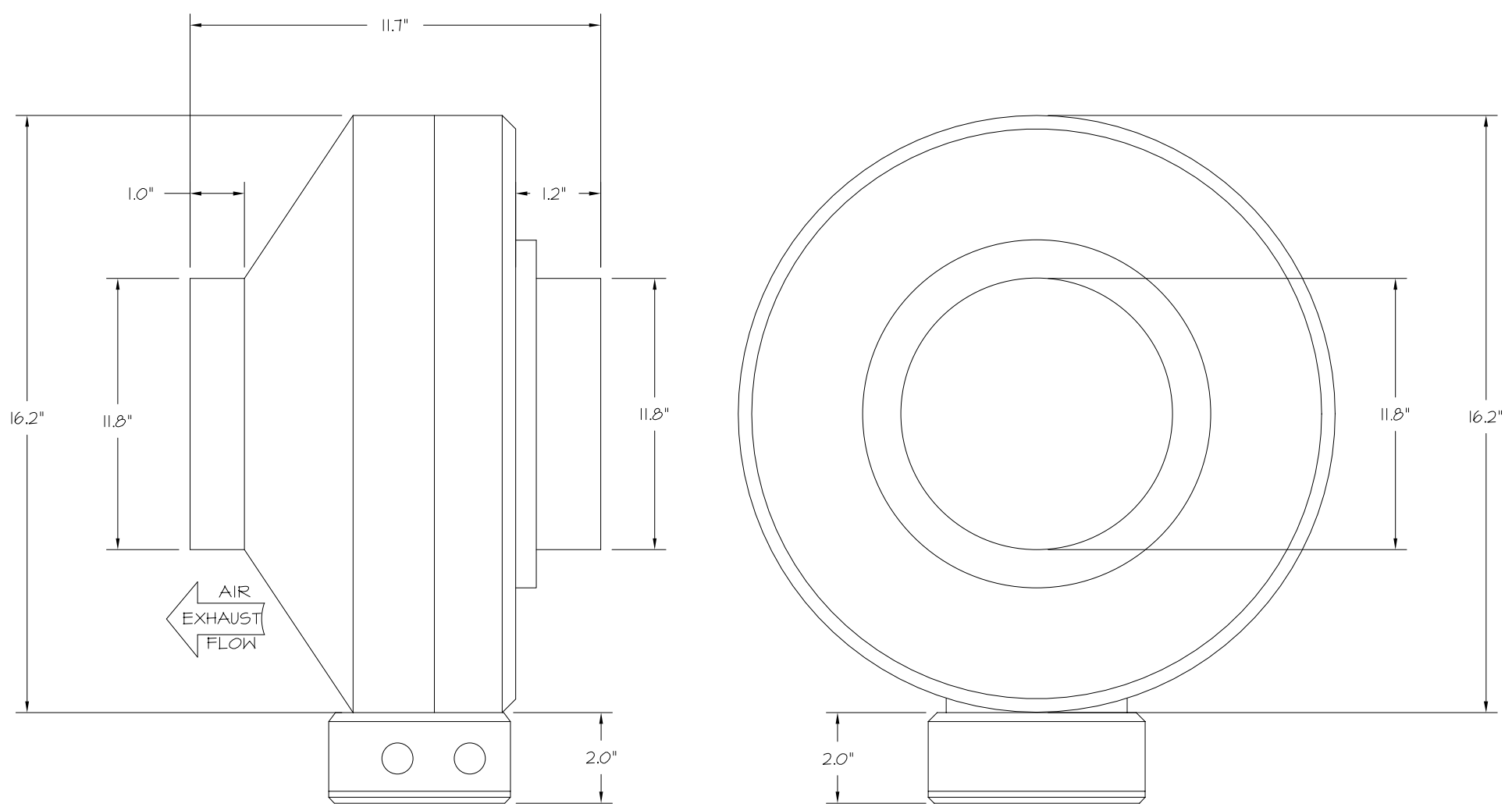
DRAWN BY: RJH-80

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

MASTER DRAWING

SHEET NO. 2

FAN #4 DFA-300-CA - EXHAUST FAN (VF-1 - CO2 FAN)

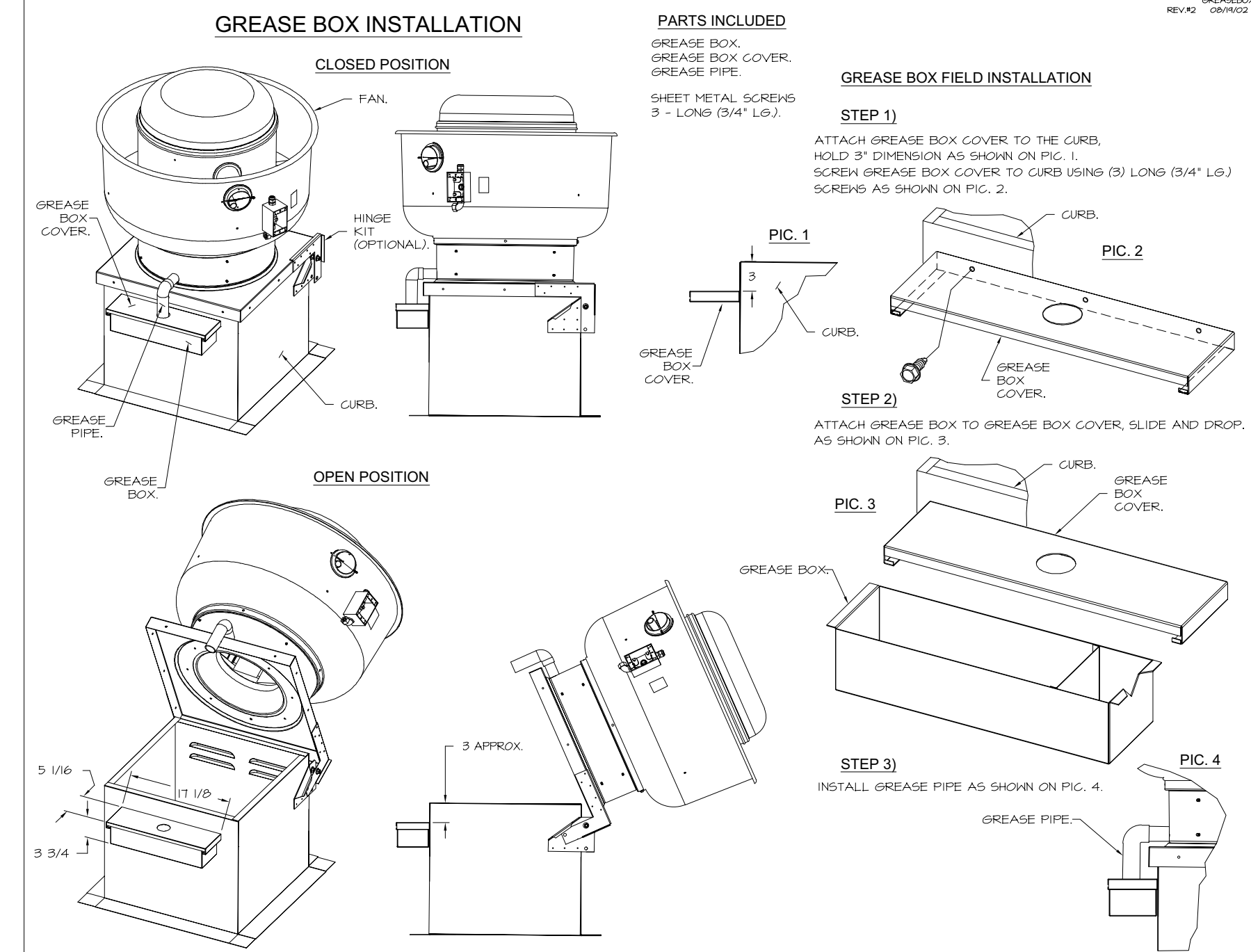
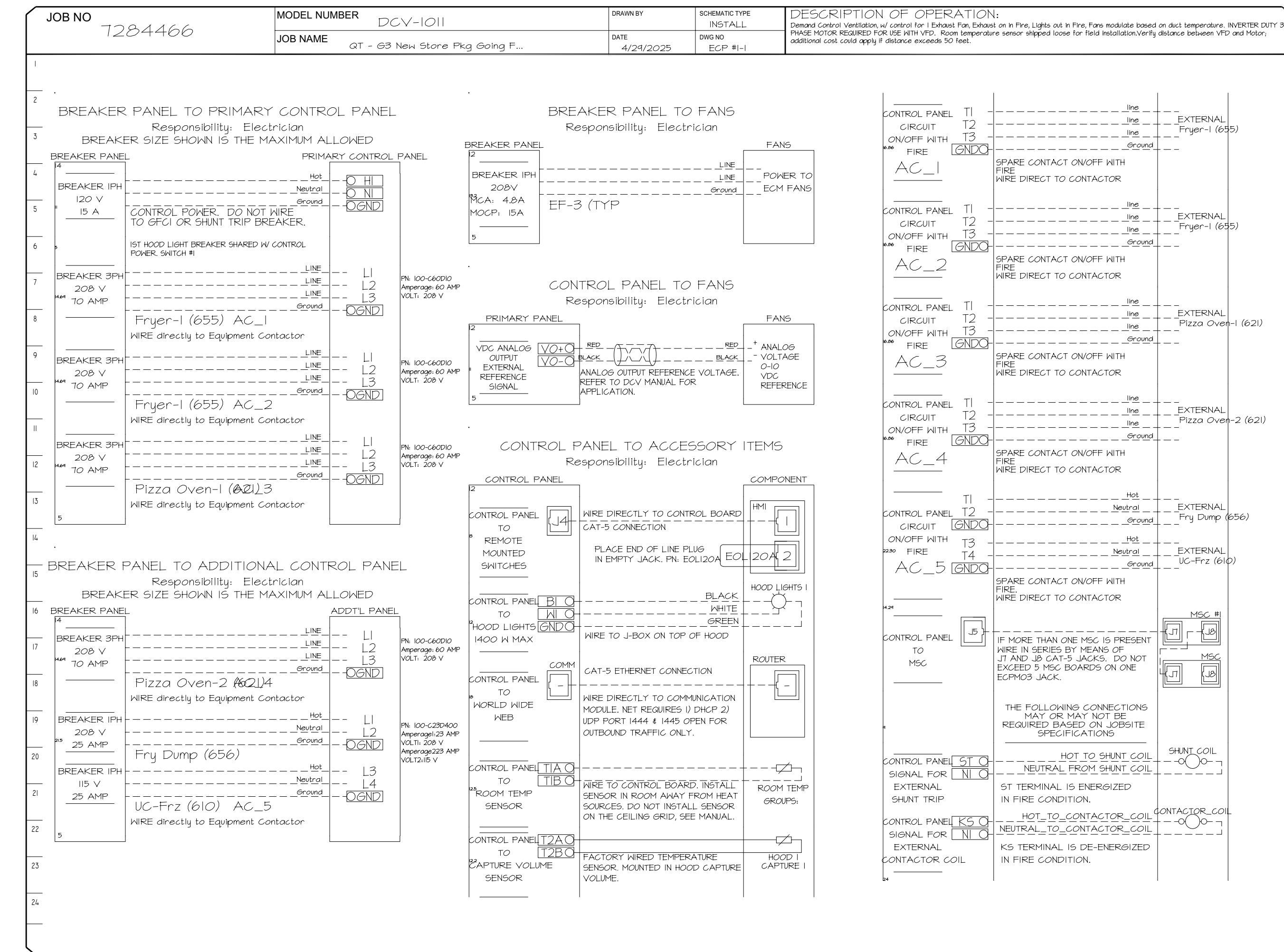


- FEATURES:**
- 20 GA. GALVANIZED STEEL HOUSING.
 - STANDARD 4" - 12" ROUND DUCT CONNECTIONS.
 - EASILY ACCESSIBLE J-BOX.
 - UL507 LISTED.
 - EXTREMELY QUIET OPERATION.

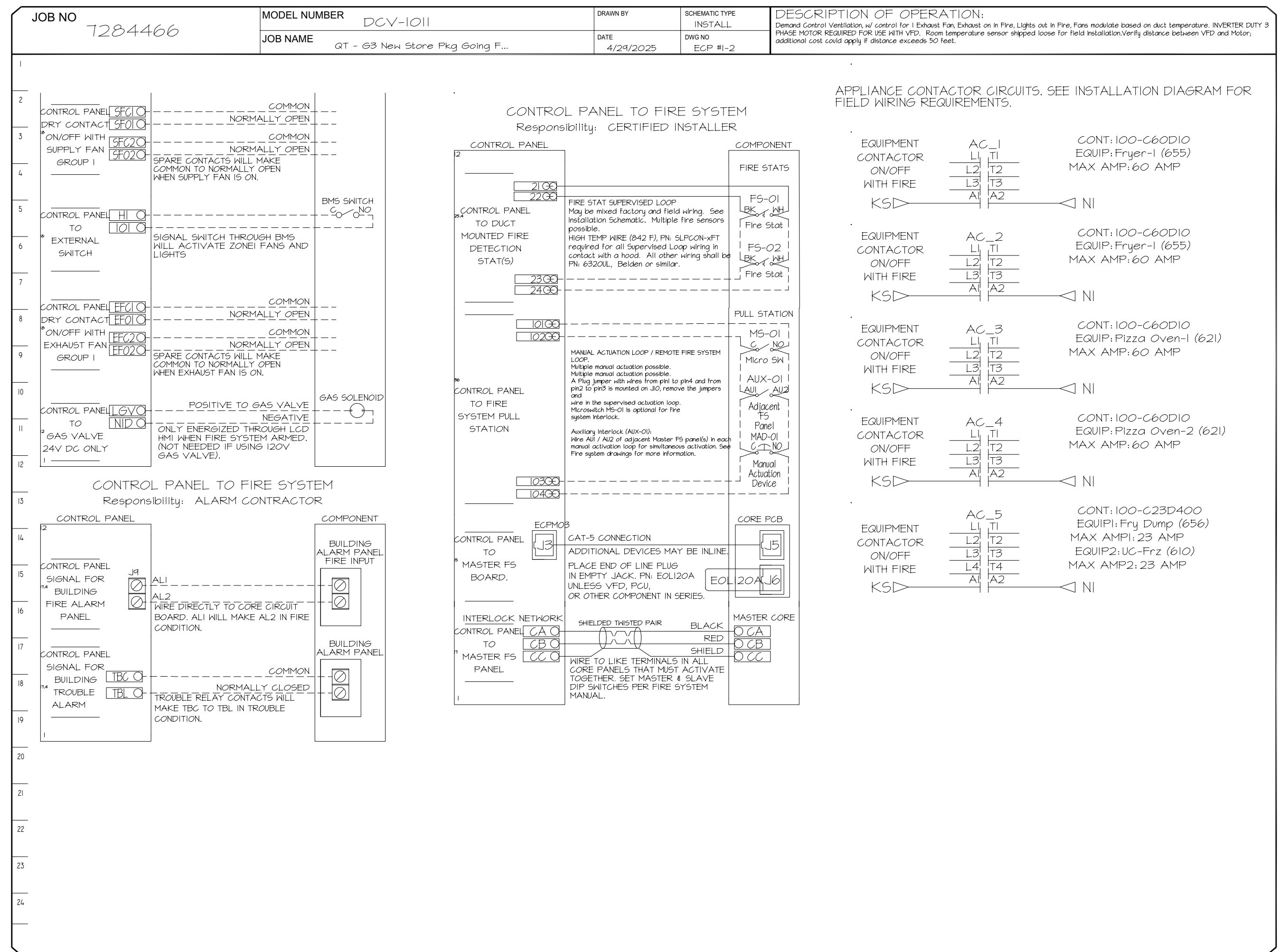
- OPTIONS:**
- FAN CONTROL - 3 AMP WHITE SPEED CONTROL FOR CFA CEILING FAN.
 - 2 YEAR PARTS WARRANTY.

ELECTRICAL PACKAGE - JOB#7284466

NO	TAG	PACKAGE	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	HP	VOLT	FLA	
1	TYPE I ECP	DCV-1011	UTILITY CABINET LEFT	SHIP LOOSE W/ PREWIRE	1 LIGHT 1 FAN	SMART CONTROLS DCV	EF-3 (TYPE 1)	EXHAUST	1	0.500	208	3.8

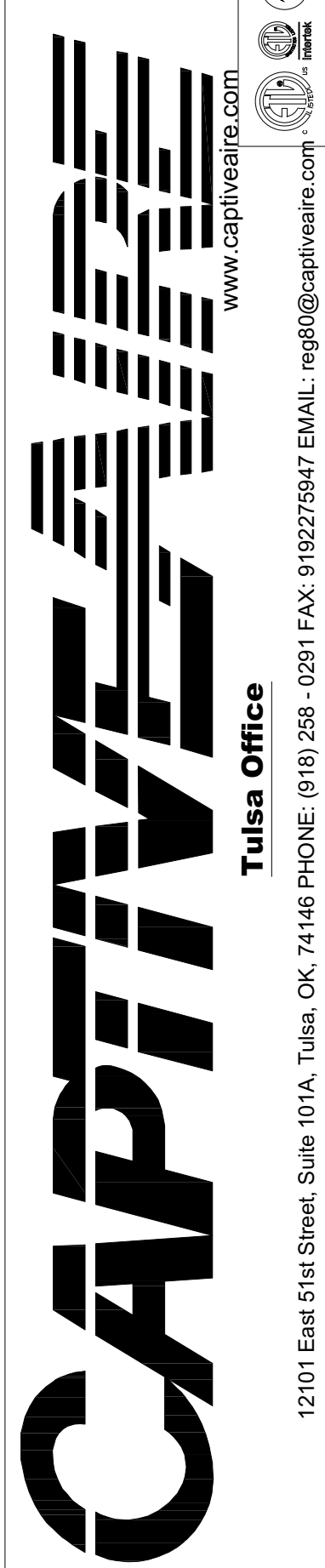


NOTE: UL 705 INSTALL.



REVISIONS

NO.	DESCRIPTION	DATE



QT - 63 New Store Pkg Going Forward (DW) (450F)
Various Locations,
Tulsa, OK, 74136

DATE: 4/29/2025
DWG.#: 7284466
DRAWN BY: R.H.-80
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 3

Bowie Tiglas Engineering Inc.
Consulting Engineers
Phone: 602.892.3900
Fax: 602.892.1541
24820 N 16TH AVE, STE 170
PHOENIX, AZ 85065
BIT# 28312

QuikTrip No. 432
4075 SOUTH 32ND STREET
PHOENIX, ARIZONA

QT

REV	DATE	DESCRIPTION
B	9/25/25	CITY COMMENTS

ORIGINAL ISSUE DATE: 06/18/25

REV	DATE	DESCRIPTION

SHEET TITLE:
MECHANICAL HOOD DETAILS

SHEET NUMBER:
M512

DUCTWORK #1 PARTS - JOB#7284466 DOUBLE WALL OFFSET

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
HI-EI	DW16DWRISER-2R-5	1350				-0.54	7.31	0.00	1	DOUBLE WALL RISER COVER - USED ON 12" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
P1	DW1230DWASY-2R-5	1350				-0.0381	14.16	1718.81	1	DOUBLE WALL DUCT - 12" INNER 30" DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
SYSTEM AT P1						-0.5787	0.00			
P2	DW124TDWALD-2R-5	1350				-0.0128	83.19	1718.81	1	DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
SYSTEM AT P2						-0.5915	0.00			
P3	DW1230DWASY-2R-5	1350				-0.0442	14.16	1718.81	1	DOUBLE WALL DUCT - 12" INNER 30" DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
SYSTEM AT P3						-0.6357	0.00			
P4	DW124TDWALD-2R-5	1350				-0.0169	83.19	1718.81	1	DOUBLE WALL ADJUSTABLE DUCT - 12" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
SYSTEM AT P4						-0.6526	0.00			
P5	DW124DWRNDADP2AGY13-2R-5	1350				-0.0122	21.94	1718.81	1	DOUBLE WALL DUCT - 12" X 14" RND2RND ADAPTER - 13" TALL - 2 LAYERS REDUCED CLEARANCE - 16" X 18" STAINLESS STEEL OUTER SHELL. STANDARD ADAPTER.
SYSTEM AT P5						-0.6648	0.00			
P6	DW2314TP	1350					8.49	1262.85	1	DUCT TO CURB TRANSITION, 23" CURB TO 14" DUCT, 16 GA ALUMINIZED. USED ON BDW5, DW15 & 85.
RC1	DW16DWRISER-2R-5						7.31		1	DOUBLE WALL RISER COVER - USED ON 12" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
TOTAL WEIGHT							241.35			

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACINGS LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5"-16")	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5"-24")	10'	24'	24'
3Z (26" -36")	10'	20'	20'

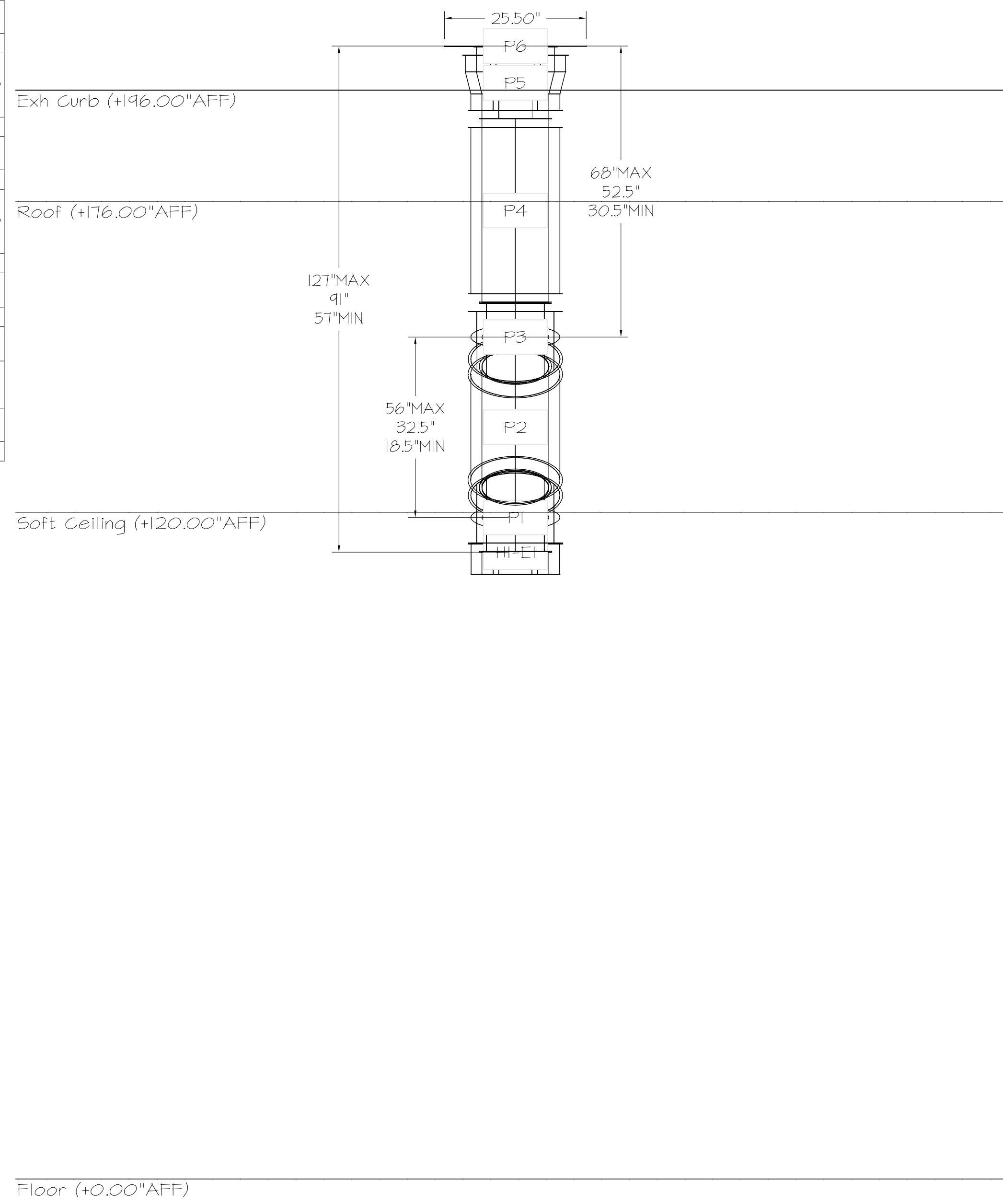
Double Wall Grease Duct Specification

Furnish double wall, factory built grease duct for use with Type I kitchen hoods, which conforms to the requirements of NFPA-96. Products shall be ETL listed to UL-1978 and UL-2221 for venting air and grease vapors from commercial cooking operation. Models DW-2R, 3R and 3Z are used for grease duct applications when installed in accordance with these instructions and National Fire Protection Association "NFPA 96"; Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. Double wall grease ducts are listed for a continuous internal temperature of 500 degrees F and intermittent temperatures of 2000 degrees F. The duct sections shall be constructed of an inner duct wall and an outer wall with insulation in between. The inner duct wall shall be constructed of .036 inch thick, 430 type stainless steel and be available in diameters 8" through 24". The outer wall shall be constructed of stainless steel at a minimum of .024 inch thickness. The duct, based on model number, shall include layers of Super Wool 607 Plus insulation between the inner and outer wall. Grease duct joints shall be held together by means of formed V clamps and sealed with 3M Fire Barrier 2000+. The duct wall assembly shall be tested and listed at 3/4" or zero inch clearance, according to classifications.

Classifications and Clearances

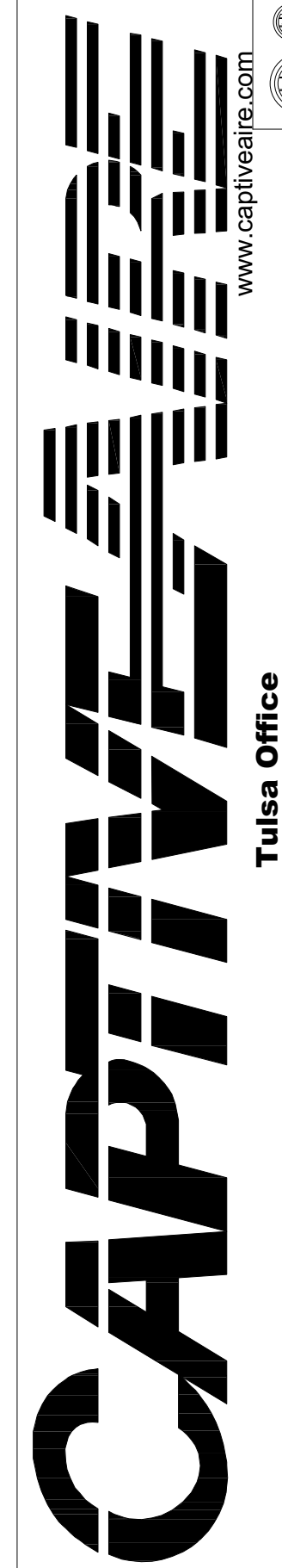
UL 2221: Standard for Fire Resistive Grease Duct Enclosure Assemblies. Chapter 7 of this standard references a test labeled Internal Fire Test. Section 7.1.1 references two installation conditions, Condition A and Condition B. Condition A represents all installation condition except for installation within non-ventilated combustible enclosures. Condition B represents installation within a non-ventilated combustible enclosure. Model DW-2R is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a reduced clearance to combustibles (sizes 8" to 16" diameter). Model 2R is listed in accordance with the requirements for duct enclosure Condition B.

DUCTWORK #1 FRONT VIEW OFFSET



REVISIONS

NO.	DESCRIPTION	DATE



Bowie Tiglas Engineering Inc.
 Consulting Engineers
 Justin S. Bowie
 Phone: 602.892.3900
 Fax: 602.892.1541
 24820 N 167th Ave, Ste 170
 Phoenix, AZ 85085
 Phone: 480.231.2312
 KDF JOB #: 24010

QuikTrip No. 432
 4075 SOUTH 32ND STREET
 PHOENIX, ARIZONA

QT
 PROTOTYPE: FRYER ADDITION
 DIVISION: PHOENIX
 VERSION: 03
 DATE: 06/25/25

REV	DATE	DESCRIPTION
BI	9/25/25	CITY COMMENTS

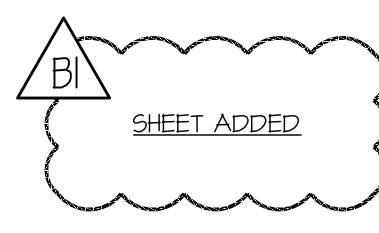
SHEET TITLE:
 MECHANICAL HOOD
 DETAILS

SHEET NUMBER:
M513

QT - 63 New Store Pkg Going Forward (DW) (450F)
 Various Locations,
 Tulsa, OK, 74136

DATE: 4/29/2025
 DWG.#:
 7284466
 DRAWN BY: RJH-80
 SCALE:
 3/4" = 1'-0"
 MASTER DRAWING

SHEET NO.
 4



DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIR FOR PROPER LEAK TESTING METHODS.

