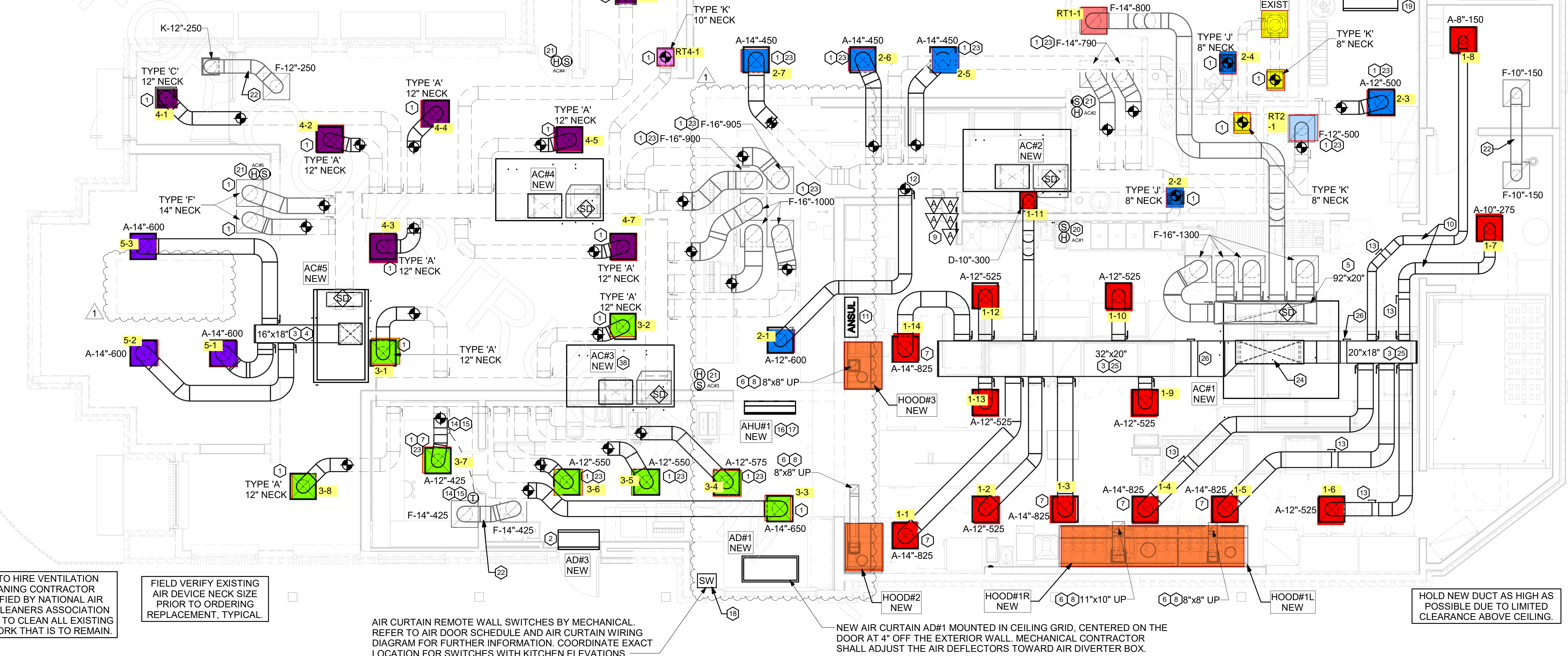


**KITCHEN RECIRCULATION NOTE**  
 PER OHIO MECHANICAL CODE 2017, SECTION 403.2.1, EXCEPTION #3, THE RECIRCULATION OF AIR THAT IS CONTAINED COMPLETELY WITHIN A KITCHEN ZONE SHALL NOT BE PROHIBITED. THE KITCHEN ONLY RECIRCULATES AIR WITHIN ITS ZONE. ALL AREAS OTHER THAN THE KITCHEN AREA ARE FREELY OPEN TO THE KITCHEN AND THE OFFICE OPENS DIRECTLY INTO THE KITCHEN.



G.C. TO HIRE VENTILATION CLEANING CONTRACTOR CERTIFIED BY NATIONAL AIR DUCT CLEANERS ASSOCIATION (NADCA) TO CLEAN ALL EXISTING DUCTWORK THAT IS TO REMAIN.

FIELD VERIFY EXISTING AIR DEVICE NECK SIZE PRIOR TO ORDERING REPLACEMENT, TYPICAL.

AIR CURTAIN REMOTE WALL SWITCHES BY MECHANICAL. REFER TO AIR DOOR SCHEDULE AND AIR CURTAIN WIRING DIAGRAM FOR FURTHER INFORMATION. COORDINATE EXACT LOCATION FOR SWITCHES WITH KITCHEN ELEVATIONS.

NEW AIR CURTAIN AD#1 MOUNTED IN CEILING GRID, CENTERED ON THE DOOR AT 4\"/>

HOLD NEW DUCT AS HIGH AS POSSIBLE DUE TO LIMITED CLEARANCE ABOVE CEILING.

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

LEGEND			
A-12-400	TYPE - NECK SIZE - CFM	EF#1	EXHAUST FAN #1 (TYP.)
	SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP	AC#1	AIR CONDITIONING UNIT #1 (TYP.)
	SPIN-IN HARD $\varnothing$ FLEXIBLE $\varnothing$ DIFFUSER		RETURN/EXHAUST (TYP.)
	REMOTE TEMPERATURE SENSOR		SUPPLY DIFFUSER, SQ FACE (TYP.)
	HUMIDITY SENSOR		PLAN NOTE REFERENCE
	SMOKE DETECTOR		MANUAL VOLUME DAMPER
	DUCT SIZE (reverse for elevation views) 1ST NUMBER - HORIZONTAL DIMENSION 2ND NUMBER - VERTICAL DIMENSION		DIRECTION OF THROW ON DIFFUSER
	CLOSED AIR PATTERN DEFLECTOR		GAS INFRARED HEATER (TYP.)
	AIR DOOR SWITCH		BELOW GRADE
	ELECTRICAL CONTRACTOR		THERMOSTAT
	POINT OF CONNECTION TO EXISTING		SMOKE DETECTOR ANNUNCIATOR

**H.E.S. SYSTEM**  
 MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON M-501 FOR MORE INFORMATION.

EXISTING CONDITIONS SHOWN ARE FROM PREVIOUS DRAWINGS. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS OF ALL DUCT AND DIFFUSERS. IF MAJOR DIFFERENCES OCCUR IN FIELD, CONTACT CHICK-FIL-A CONSTRUCTION MANAGER.

**KEY NOTES**

- CONNECT NEW AIR DEVICE TO EXISTING TAKE-OFF. IF NECESSARY, MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL NEW DUCT IN ORDER TO MAKE CONNECTION TO AIR DEVICE IN NEW LOCATION. ANY FLEX DUCT USED SHALL NOT BE LONGER THAN 4'-0". SEE DETAIL 1/M-401. COORDINATE AIR DEVICE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- AIR CURTAIN MOUNTED OVER DOOR HEADER AT 7'-2" AFF TO BOTTOM OF UNIT. PROVIDE BLOCKING IN WALL BEHIND AIR CURTAIN. USE FACTORY PRE-PUNCHED MOUNTING HOLES ON BACK SIDE OF AIR CURTAIN ONLY. ATTACH AIR CURTAIN TO WALL USING 3/8" LAG BOLTS, LENGTH AS REQUIRED TO FULLY PENETRATE BLOCKING. LOCATE MAGNETIC CONTACT TYPE MICROSWITCH IN DOOR FRAME ON STRIKE SIDE.
- BRANCH TAKE-OFFS SHALL NOT BE LOCATED CLOSER THAN 3'-0" FROM ANY ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
- TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. PROVIDE TURNING VANES IN ELBOWS, INCLUDING THE SUPPLY AIR DROP FROM UNIT. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED ABOVE A LIGHT).
- TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. SEE DETAIL ON SHEET M-401 FOR REQUIRED TRANSITION GEOMETRY. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. NO TURNING VANES IN ELBOW. TERMINATE A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
- HALTON MBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. REFER TO SHEET M-301 AND HOOD SHOP DRAWINGS FOR FURTHER INFORMATION.
- MECHANICAL CONTRACTOR TO ADJUST AIR PATTERN DEFLECTORS TO THROW STRAIGHT DOWN.
- GREASE DUCT UP THRU ROOF FROM FULL SIZE OF MBD COLLAR. OFFSETS THRU ROOF NOT TO BE GREATER THAN 45 DEGREES. SEE SHEET M-250 FOR CONTINUATION.
- MOUNT NEW SMOKE DETECTOR TEST/RESET STATIONS FOR ALL AC UNITS ON WALL. COORDINATE EXACT LOCATION WITH KITCHEN ELEVATIONS AND ELECTRICAL. CONTACT SUNCOAST ENVIRONMENTAL CONTROLS AT 1-877-544-6679 TO PURCHASE A NEW SMOKE DETECTOR TEST/RESET STATION FOR EACH RTU.
- ROUTE DUCT BETWEEN WALL STUDS ABOVE CEILING. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL FOR EXACT LOCATION. USE 1" WRAP INSULATION AT WALL PENETRATION.
- ANSUL UTILITY CABINET. LOCATE TOP OF CABINET 0'-2" BELOW CEILING. COORDINATE FINAL MOUNTING LOCATION WITH KITCHEN EQUIPMENT.
- PROVIDE AND INSTALL NEW SPIN-IN COLLAR AND ROUTE NEW DUCT AS SHOWN.
- RUSKIN MODEL MDRS25 OR EQUIVALENT MANUAL VOLUME DAMPER WITH LOCKING QUADRANT HANDLE.
- YOUNG REGULATOR 12" MODEL 2010 ROUND ZONE DAMPER WITH MODEL T-312CE AUTOMATIC CHANGE-OVER THERMOSTAT. MOUNT T'STAT AT 4'-0" AFF. POWER OPEN/SPRING CLOSE. ADJUST MECHANICAL LIMIT FOR 50 CFM MINIMUM AIRFLOW. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARRROW COMPANY FOR THE ZONE DAMPER. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE ZONE DAMPER DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. ZONE DAMPERS NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- PROVIDE 120V/24V 50VA TRANSFORMER TO SERVE YOUNG REGULATOR ZONE DAMPER ACTUATOR AND THERMOSTAT. POWER TRANSFORMER FROM 120V POWER CIRCUIT THAT REMAINS LIVE 24V. PROVIDE ALL NECESSARY WIRING AND COMPONENTS TO MAKE CONTROL AND POWER CONNECTIONS TO TRANSFORMER, ZONE DAMPER, AND THERMOSTAT PER MANUFACTURER'S IOM. SEE DETAIL ON SHEET M-501 FOR MORE INFORMATION.
- MOUNT AIR HANDLER ON OVERHEAD WALL ABOVE CASED OPENING. MOUNT UNIT AT 12" ABOVE CASED OPENING. ROUTE REFRIGERANT PIPING ABOVE CEILING AND UP THRU ROOF TO CONDENSING UNIT, CU#1. SEE SHEET M-250 FOR CONDENSING UNIT LOCATION. REFRIGERANT PIPING BELOW ROOF SHALL BE HIDDEN WITHIN WALLS AND CEILINGS.
- ROUTE CONDENSATE ABOVE CEILING FROM AHU#1 AND DOWN IN WALL CAVITY TO AN EXIT POINT 12" ABOVE FLOOR DRAIN TO TERMINATE INTO FLOOR DRAIN LOCATED BEHIND ICE MAKER IN DRIVE-THRU WITH CODE APPROVED AIR GAP. COORDINATE EXACT LOCATION OF DRAIN WITH PLUMBING PLANS. CONDENSATE PIPING SHALL BE TYPE 'K' COPPER WITH 1/2" ARMAFLEX INSULATION. CONDENSATE MUST SLOPE MIN 1/8" PER FOOT TO TERMINATION POINT. CONTRACTOR SHALL INSTALL A CONDENSATE LIFT PUMP IN ORDER TO ROUTE CONDENSATE ABOVE CEILING.
- MOUNT AHU#1 THERMOSTAT ON WALL NEXT TO AD#1 REMOTE WALL SWITCHES. SEE SCHEDULE ON SHEET M-401 FOR INTERLOCK WITH T500 PANEL.
- ELECTRICAL CONTRACTOR TO PURCHASE AND INSTALL NEW CFA T500 TEMP CONTROL PANEL WITH AUTOMATIC TIMER FOR LIGHTING CONTROLS AND 6-THERMOSTAT TEMP CONTROL CABINET. COORDINATE WITH ELECTRICAL CONTRACTOR FOR NEW LOCATION OF TEMP CONTROL CABINET. CONTROL WIRING TERMINATIONS BETWEEN NEW THERMOSTATS, NEW SENSORS, AND NEW/EXISTING RTUS BY MECHANICAL CONTRACTOR. REFER TO WIRING DIAGRAM ON SHEET M-501.
- MOUNT NEW REMOTE TEMP SENSOR FOR KITCHEN RTU ON WALL AT 5'-8" AFF AND ROUTE NEW WIRING TO NEW T'STAT IN CFA T500 PANEL. COORDINATE FINAL MOUNTING LOCATION IN FIELD WITH KITCHEN EQUIPMENT, SHELVING, AND ELECTRICAL. MOUNT NEW HUMIDITY SENSOR DIRECTLY ABOVE REMOTE TEMP SENSOR AND ROUTE NEW WIRING TO UNIT ON ROOF. REFER TO WIRING DIAGRAM ON SHEET M-501.
- MOUNT NEW REMOTE TEMP SENSOR FOR RTU ON WALL AT 5'-0" AFF (OR ABOVE WAINSCOTING IF APPLICABLE) AND ROUTE NEW WIRING TO NEW T'STAT IN CFA T500 PANEL. MOUNT NEW HUMIDITY SENSOR DIRECTLY ABOVE REMOTE TEMP SENSOR AND ROUTE NEW WIRING TO UNIT ON ROOF. REFER TO WIRING DIAGRAM ON SHEET M-501.
- TRANSFER AIR DUCT, NO BALANCING DAMPERS AT GRILLES.
- RE-BALANCE AIR DEVICE TO CFM SHOWN.
- TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO 52"x20". TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. VERTICAL DROP TO BULLHEAD TEE WITH TURNING VANES. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED ABOVE A LIGHT).
- SUPPLY MAIN TO BE LOCATED ENTIRELY BELOW JOISTS. HOLD SUPPLY MAIN AS HIGH AS POSSIBLE DUE TO LIMITED CLEARANCE.
- PROVIDE RUSKIN C035 MANUAL BALANCING DAMPER WITH 6" MAXIMUM BLADE WIDTH, OPPOSED BLADE ACTION, LOCKING QUADRANT HANDLE WITH 2" STANDOFF AND 16 GA GALVANIZED BLADE AND FRAME CONSTRUCTION.

**SHEET NOTES**

- DUCT SIZES SERVING DIFFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE NECK UNLESS NOTED OTHERWISE.
- HARDPIPE SHALL BE USED FOR ALL TAKE-OFFS EXCEPT WHERE ALLOWED BY DETAIL 1/M-401. USE OF FLEXIBLE DUCT SHALL BE LIMITED TO THOSE SITUATIONS WHERE NO OTHER MEANS TO ACCOMPLISH ROUTING IS POSSIBLE.
- COORDINATE NEW WORK WITH EXISTING CONDUITS, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR TO NOTIFY DESIGN TEAM WITHOUT DELAY IF ACTUAL LOCATION OF EXISTING MECHANICAL EQUIPMENT DOES NOT MATCH FLOOR PLAN.
- MECHANICAL CONTRACTOR SHALL BALANCE HVAC SYSTEM AS SHOWN ON THIS PLAN AND IN SCHEDULES ON SHEET M-401. IF AIRFLOWS DIFFER BY MORE THAN 5%, CONTACT CFA CONSTRUCTION MANAGER. TEST AND BALANCE REPORT SHALL BE DONE PRIOR TO STORE TURNOVER AND SUBMITTED TO CFA'S CONSTRUCTION MANAGER.
- AT EACH PIECE OF ROOF EQUIPMENT, PROVIDE A PLASTIC ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. THE LABEL IS TO HAVE A SELF ADHESIVE BACKING.

AIR BALANCE SCHEDULE					
Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1 NEW	8000	6000	2000		
AC#2 NEW	2830	2080	750		
AC#3 NEW	4000	3000	1000		
AC#4 NEW	2765	2165	600		
AC#5 NEW	1800	1500	300		
EF#1 NEW				1913	
EF#2 NEW				1402	
EF#3 EXIST				400	
	19395	14745	4650	3715	935

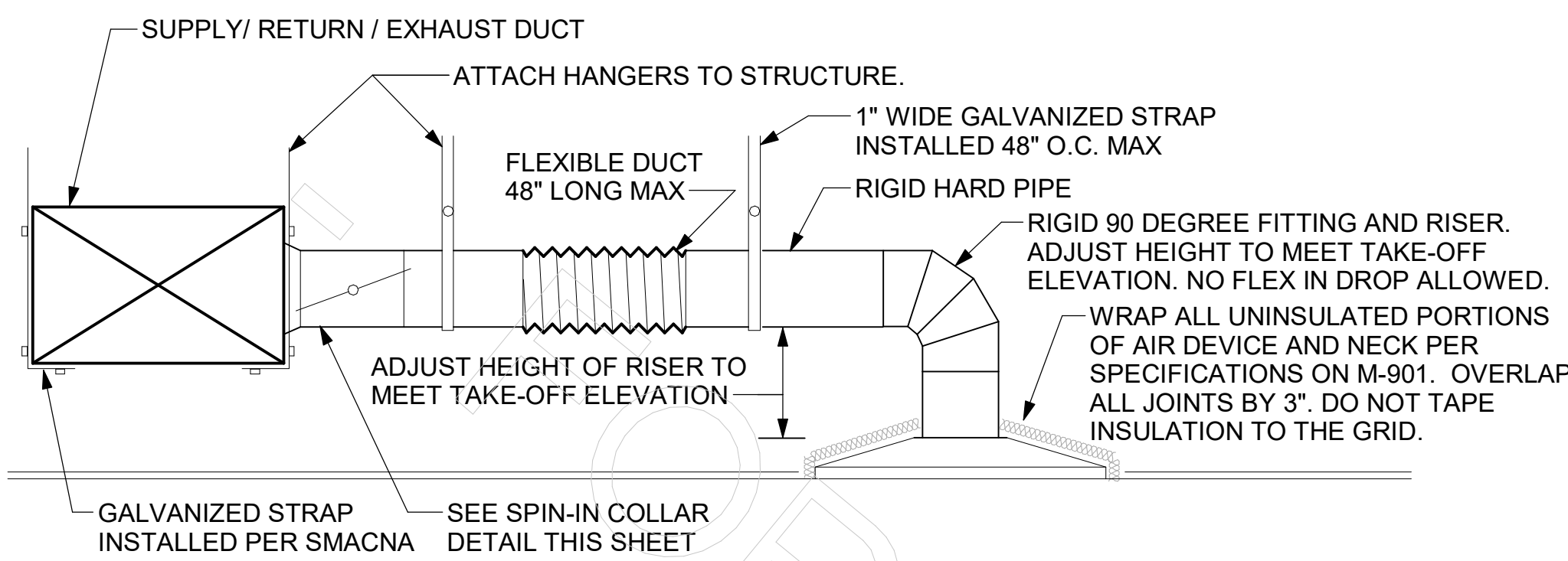


**CHICK-FIL-A**  
 ST JOSEPH FSU  
 5303 N BELT HWY  
 SAINT JOSEPH, MO 64506

**FSR#02309**  
 BUILDING TYPE / SIZE: S08C-R  
 RELEASE: v2.20.08  
 PRINTED FOR:  
**ISSUE FOR CONSTRUCTION**

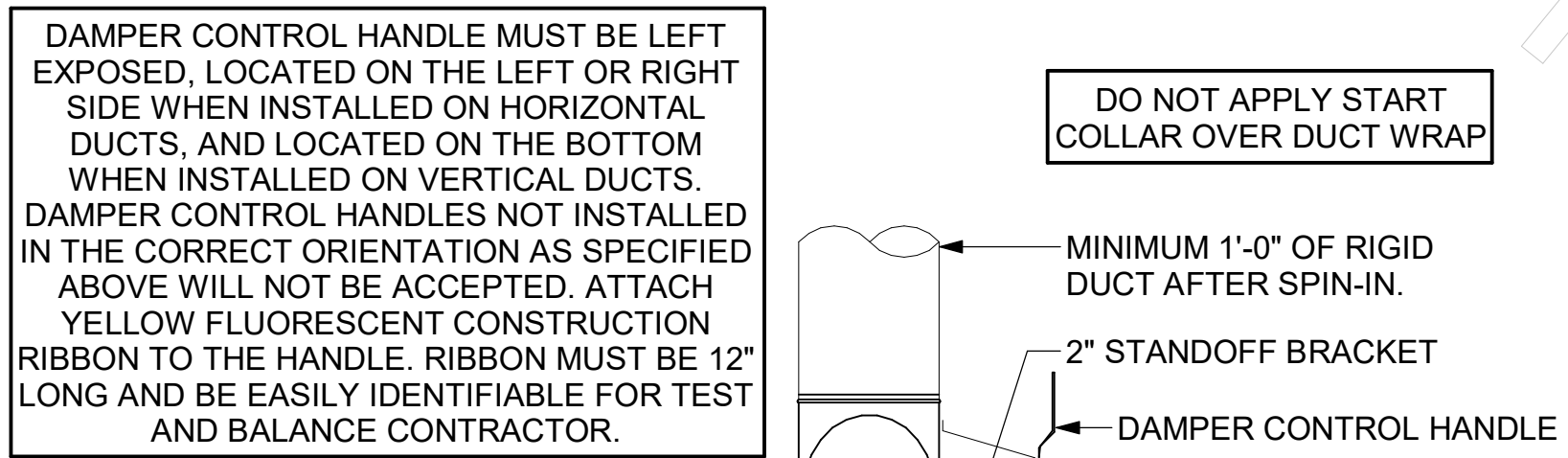
REVISION	SCHEDULE	NO.	DATE	DESCRIPTION
1	05/10/2023	City Comments		

CONSULTANT PROJECT # 22172.CD.R  
 DATE 12/01/2022  
 DRAWN BY: DSF  
 INFORMATION CONTAINED ON THIS DRAWING AND ALL DIGITAL FILES PRODUCED FOR ABOVE NAMED PROJECT MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF CHICK-FIL-A.  
**MECHANICAL FLOOR PLAN**  
 SHEET NUMBER  
**M-201**



**1 SAG/RAG/GRILLE TAKE-OFF**  
NOT TO SCALE

CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE ROYAL METAL PRODUCTS START COLLARS FOR BOTH WITH AND WITHOUT A MANUAL BALANCING DAMPER. THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE ROYAL METAL PRODUCTS START COLLARS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. ROYAL METAL PRODUCTS START COLLARS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

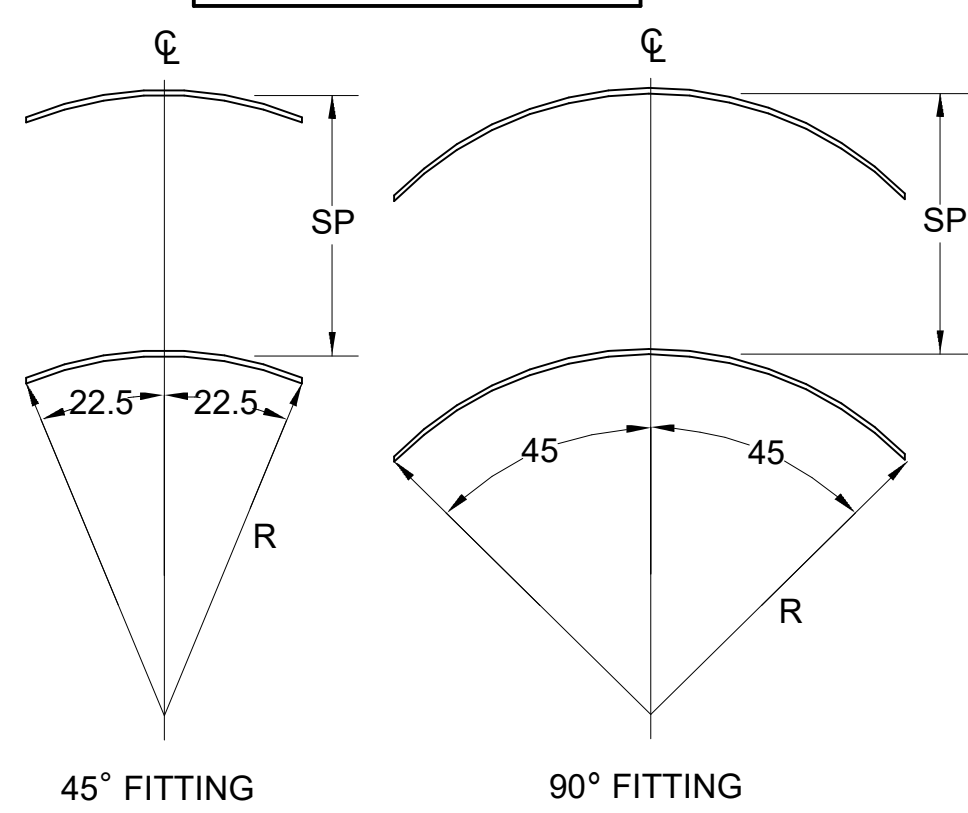


**2 START COLLAR**  
NOT TO SCALE

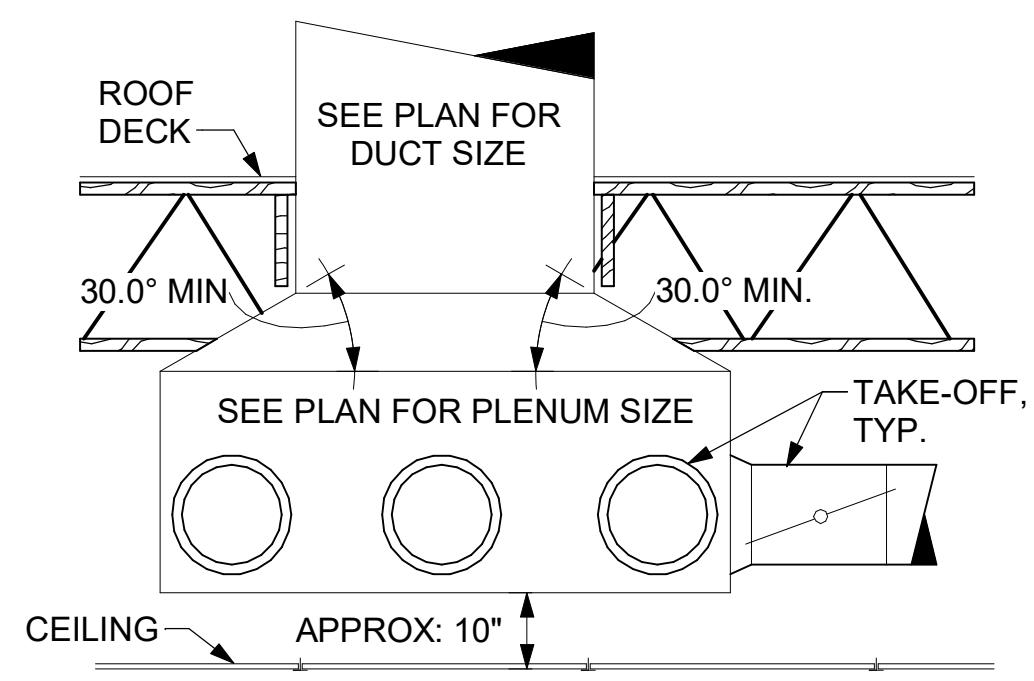
**TURNING VANE SCHEDULE**

R	SP	GA
2"	1.5"	24

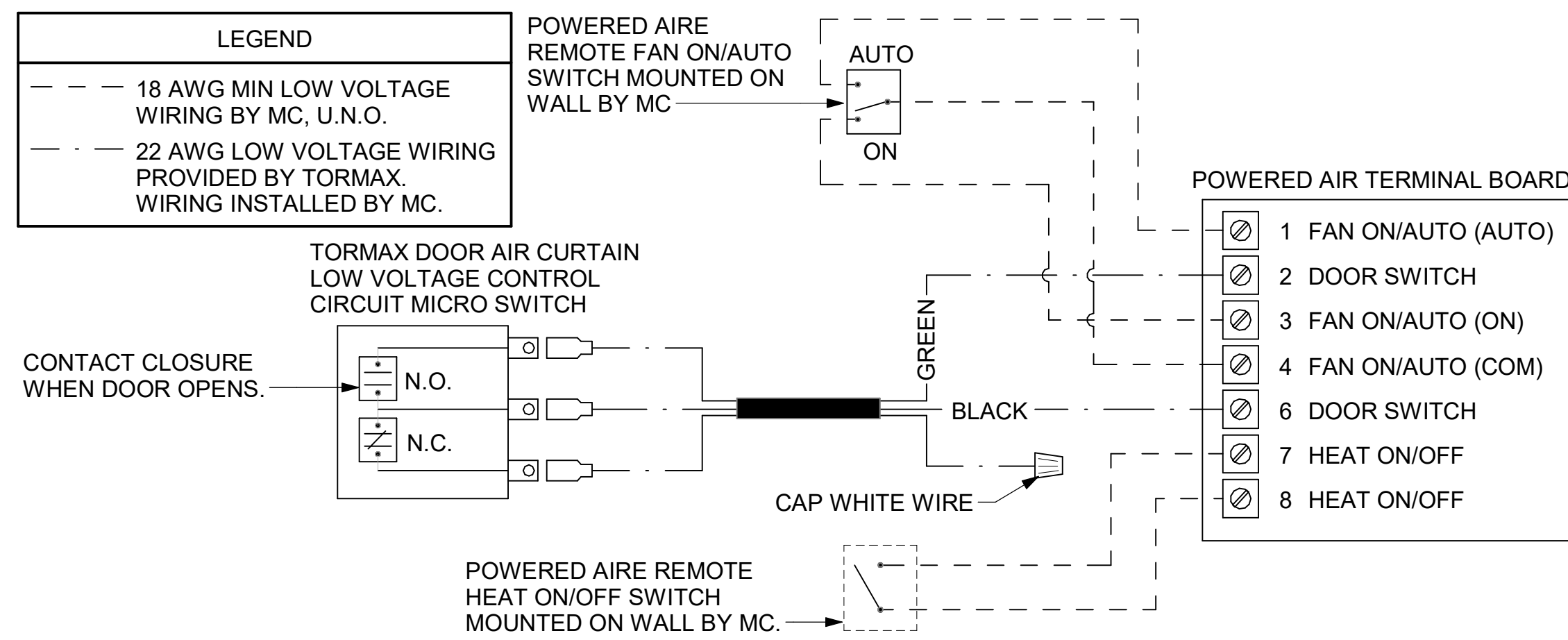
1. NO TRAILING EDGE.  
2. SINGLE THICKNESS CONSTRUCTION.



**3 TURNING VANES**  
NOT TO SCALE



**5 RETURN DROP GEOMETRY**  
NOT TO SCALE



**4 AIR CURTAIN WIRING DIAGRAM**  
NOT TO SCALE

**EXHAUST FAN SCHEDULE**

MARK	CFM	ESP	RPM	TIP SPEED	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
EF#1 NEW	1913	0.75	1331	5226	3/4	HOOD#1L & HOOD#1R	150 CPS	LOREN COOK	1-12
EF#2 NEW	1402	0.95	1199	4708	3/4	HOOD#2 & HOOD#3	150 CPS	LOREN COOK	1-12
EF#3 EXIST	400	0.375	--	--	--	RESTROOMS	--	EXISTING	--

NOTES  
• GREASE EXHAUST FAN RPM BASED ON 80 DEGREE F AIR AT 1000 FEET ABOVE SEA LEVEL.  
• GREASE EXHAUST FANS TO BE U.L. 762 LISTED.  
• CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE FAN/CURB PACKAGE. MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS  
1. UPBLAST, ARRANGEMENT 10, CCW ROTATION. SEE PLANS TO CONFIRM CONFIGURATION.  
2. PROVIDE FACTORY STEEL FAN WHEEL.  
3. PROVIDE FACTORY INSTALLED, PRE-WIRED, NEMA 3 NON-FUSED DISCONNECT. COORDINATE WITH ELECTRICAL CONTRACTOR.  
4. PROVIDE FACTORY STEEL INLET FLANGE AND INLET COMPANION FLANGE.  
5. PROVIDE AND INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.  
6. PROVIDE FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.  
7. PROVIDE FACTORY DRAIN CONNECTION.  
8. PROVIDE FACTORY BOLTED ACCESS DOOR ON SCROLL.  
9. PROVIDE FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE AND SPARE BELT.  
10. PROVIDE FACTORY STEEL OUTLET COMPANION FLANGE.  
11. INTEGRAL THERMAL OVERLOAD WITH AUTOMATIC RESET.  
12. UTILITY-SET FAN CURB AND ASSOCIATED EXHAUST DUCT CURB PROVIDED BY TOM BARROW COMPANY.

**AIR DOOR SCHEDULE**

MARK	CFM	VELOCITY	HEATING CAP	HP	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1 NEW	1543	2340 FPM	10 KW	3/4 HP	DRIVE-THRU DOOR	CHA-1-48(E)	POWERED AIRE	1-4
AD#2 NEW	3867	4220 FPM	N/A	3/4 HP	REAR DOOR	RBT-1-48	POWERED AIRE	5
AD#3 NEW	2899	4220 FPM	N/A	3/4 HP	DRIVE-THRU SWING DOOR	RBT-1-36	POWERED AIRE	5

NOTES  
• CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE AIR DOORS. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS  
1. FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER LOCATED ABOVE CEILING.  
2. FACTORY WIRED DISCONNECT.  
3. FACTORY PROVIDED, FIELD INSTALLED BY MC, REMOTE WALL SWITCHES FOR HEATING ON/OFF AND FAN ON/AUTO SWITCH. SEE DETAIL, AIR CURTAIN WIRING DIAGRAM.  
4. PROVIDE WITH DIVERTER BOX FROM TOM BARROW COMPANY. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS. INSTALL PER MANUFACTURER'S MOUNTING INSTRUCTIONS.  
5. FACTORY PROVIDED MAGNETIC DOOR CONTACT WITH FACTORY INSTALLED LOW VOLTAGE CONTROLS LOCATED IN AIR DOOR CABINET.

**AIR DEVICE SCHEDULE**

MARK	DESCRIPTION	LOCATION	NECK SIZE	FACE SIZE	FRAME TYPE	REMARKS
A	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING/ KITCHEN	VARIES	24"x24"	LAY-IN	1,7
C	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	<varies>	<varies>	19"x19"	BEVELLED	1,3,5,6
D	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING/ KITCHEN	VARIES	16"x16"	LAY-IN	1,7
F	PRICE MODEL 80 EGGRATE RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK.	DINING/ KITCHEN	VARIES	24"x24"	LAY-IN	1,7
J	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	RESTROOMS	10"x10"	15"x15"	BEVELLED	1,2,3,5,6
K	PRICE MODEL APDR ALUMINUM PERFORATED FACE RETURN AIR GRILLE.	ENTRY/ RESTROOMS	14"x14"	16"x16"	SURFACE	1,4,5,6

NOTES  
• CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARROW COMPANY FOR THE AIR DEVICES. MECHANICAL CONTRACTOR SHALL PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010, FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

REMARKS  
1. STANDARD OFF WHITE FINISH.  
2. PROVIDE MODEL VC53 NECK DAMPER.  
3. SEE DRAWING M-201 FOR THROW.  
4. PROVIDE MODEL VCR7 NECK DAMPER ON GRILLES IN RESTROOMS SERVING EXHAUST FAN.  
5. PROVIDE BACKPAN. MC TO SEAL JOINTS WITH MASTIC AND INSULATE EXTERNALLY.  
6. FIELD INSULATE BACKPAN AS SHOWN ON DETAIL 1/M-401.  
7. FACTORY INSULATED R-6 BACKPAN.

**GAS FIRED ROOFTOP UNIT SCHEDULE**

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	STAGES	SUPPLY	O.A.	HP	ESP	MODEL R-410A	MANUFACTURER	REMARKS
AC#1 NEW	273.7	195.5	400	324	2	8000	2000	6.2	0.8	YSJ300A3S0H	TRANE	1-14
AC#2 NEW	103.1	73.8	200	162	2	2830	750	3.1	0.8	YSJ102A3S0H	TRANE	1-13,15
AC#3 NEW	124.4	95.9	240	194	2	4000	1000	3.1	0.8	YSJ120A3S0H	TRANE	1-13,16
AC#4 NEW	93.2	69.7	200	162	2	2765	600	3.1	0.8	YSJ090A3S0H	TRANE	1-13,17
AC#5 NEW	58.6	43.6	130	104	1	1800	300	1.0	0.8	YHC067E3RH	TRANE	1,4-12,18-20

NOTES  
• COOLING CAPACITIES ARE GROSS, BASED ON ENTERING: 80FDB/67FWB, OUTDOOR: 95FDB.  
• FOR PROPER BUILDING AIR BALANCE, VERIFY THE AMOUNT OF OUTSIDE AIR PROVIDED BY ALL EXISTING UNITS. ADJUST AS PER SCHEDULE IF NECESSARY.  
• VERIFY MIN. 10' DISTANCE OF O.A. INTAKE OPENINGS OF A/C UNITS FROM ANY EXISTING SOURCE OF AIR POLLUTION (EXHAUST FAN, COMBUSTION FLUE, VENT, ETC.). IF SUCH CONDITIONS EXIST, CONTRACTOR IS REQUIRED TO DUCT OUTSIDE AIR INTAKE ON ROOF AWAY FROM ANY SUCH SOURCE.

REMARKS  
1. PROVIDE DIFFERENTIAL ENTHALPY ECONOMIZER WITH FIELD INSTALLED POWER EXHAUST.  
2. PROVIDE FACTORY INSTALLED CIRCUIT BREAKER.  
3. PROVIDE FACTORY INSTALLED AND UNIT POWERED 115V GFI SERVICE OUTLET.  
4. PROVIDE FACTORY INSTALLED RETURN SIDE SMOKE DETECTOR.  
5. PROVIDE 2" MERV 8 THROW AWAY FILTERS.  
6. PROVIDE HINGED PANELS FOR FILTER ACCESS, FAN MOTOR ACCESS, COMPRESSOR ACCESS AND CONTROL COMPARTMENT ACCESS.  
7. ADJUST GAS MANIFOLD PRESSURE AT LOCATIONS WHERE ELEVATION EXCEEDS 2000' ABOVE SEA LEVEL AS RECOMMENDED BY MANUFACTURER.  
8. PROVIDE FACTORY INSTALLED COIL HAIL GUARD.  
9. PROVIDE HOT GAS REHEAT OPTION AND FACTORY PROVIDED REMOTE HUMIDITY SENSOR (BAYSENS036A).  
10. PROVIDE FACTORY INSTALLED CONDENSATE DRAIN PAN OVERFLOW SWITCH.  
11. PROVIDE FACTORY INSTALLED MULTI-SPEED FAN OPTION.  
12. PROVIDE FACTORY SUPPLY AIR TEMPERING KIT.  
13. PROVIDE HIGH FAULT SCCR (65K).  
14. PROVIDE WITH CURBS PLUS ADAPTER CURB. UNIT BEING REPLACED IS LENNOX MODEL LGH180H. ADAPTER CURB IS PROVIDED BY TRANE AS PART OF THE TOTAL EQUIPMENT PACKAGE.  
15. PROVIDE WITH CURBS PLUS ADAPTER CURB. UNIT BEING REPLACED IS LENNOX MODEL LGH102H. ADAPTER CURB IS PROVIDED BY TRANE AS PART OF THE TOTAL EQUIPMENT PACKAGE.  
16. PROVIDE WITH CURBS PLUS ADAPTER CURB. UNIT BEING REPLACED IS LENNOX MODEL LGH120H. ADAPTER CURB IS PROVIDED BY TRANE AS PART OF THE TOTAL EQUIPMENT PACKAGE.  
17. PROVIDE WITH CURBS PLUS ADAPTER CURB. UNIT BEING REPLACED IS LENNOX MODEL LGH092H. ADAPTER CURB IS PROVIDED BY TRANE AS PART OF THE TOTAL EQUIPMENT PACKAGE.  
18. PROVIDE WITH CURBS PLUS ADAPTER CURB. UNIT BEING REPLACED IS LENNOX MODEL LGH060H. ADAPTER CURB IS PROVIDED BY TRANE AS PART OF THE TOTAL EQUIPMENT PACKAGE.  
19. EQ PROVIDED AND INSTALLED DISCONNECT W/ CURRENT LIMITING FUSE.  
20. PROVIDE FACTORY INSTALLED 115V GFI SERVICE OUTLET.

**SPLIT SYSTEM HEAT PUMP SCHEDULE**

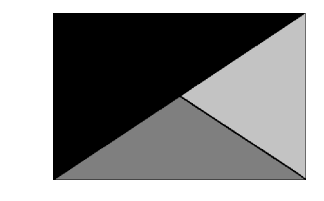
MARK	COOLING CAPACITY (MBH)		HEATING CAPACITY (MBH)		EFFICIENCIES		FAN SECTION (CFM)	ELECTRICAL DATA			R-410A MODEL		MFR
	MIN.	MAX.	MIN.	MAX.	SEER	HSPF		MCA	MOCPT	VOLTAGE	AHU	CU	
AHU#1/CU#1 NEW	18.0	33.5	18.0	40.0	16.2	10.0	635-730-830	28	40	208/1/60	PKA-A36KA7	PUZ-HA36NHA5	MITSUBISHI

NOTES  
• MECHANICAL CONTRACTOR SHALL PURCHASE THE SPLIT SYSTEM HEAT PUMP DIRECTLY FROM TRANE/MITSUBISHI. CONTACT MS. LAURI FRANKOWSKI AT 630-400-4285, FOR PRICING AND AVAILABILITY.

REMARKS  
1. ELECTRICIAN TO PROVIDE NON-FUSED DISCONNECT.  
2. MECHANICAL TO PROVIDE AND INSTALL REFRIGERANT PIPING AS PER MFR RECOMMENDATIONS.  
3. PROVIDE ENGRAVED PLASTIC LABEL AT AHU AND CU WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND RIVETED TO UNIT CABINET.  
4. PROVIDE WITH ADEQUATE REFRIGERANT LINE SET. FIELD VERIFY DISTANCE FROM WHERE CONDENSER IS TO BE SET TO WHERE AIR HANDLER IS TO BE MOUNTED PRIOR TO ORDERING.  
5. PROVIDE WITH WALL MOUNTED THERMOSTAT (TAR-C01MAU-SB). USE TWO-WIRE, STANDARD, NON-POLAR CONTROL WIRE TO CONNECTOR TB15 ON INDOOR UNIT CONTROLLER. PROGRAM THERMOSTAT TO MATCH DRIVE-THRU RTU SETPOINTS.  
6. PROVIDE PAC-SE55RA-E CONNECTOR AT INDOOR UNIT (CONNECTOR CN32), WIRE ORANGE AND RED WIRES TO SPARE POLE ON RELAY R-1 IN SUNCOAST T500 PANEL (TERMINALS 11 AND 7 RESPECTIVELY) AND CAP THE BROWN WIRE.  
7. PROVIDE WITH CONDENSATE PUMP (BLUE DIAMOND MAXI BLUE MODEL# X87-721).



**Chick-fil-A**  
5200 Buffington Road  
Atlanta, Georgia  
30349-2998



**Kurzynske & Associates**  
2705 Lebanon Pike - Suite One  
Nashville, Tennessee 37214  
Telephone: (615) 255-5203



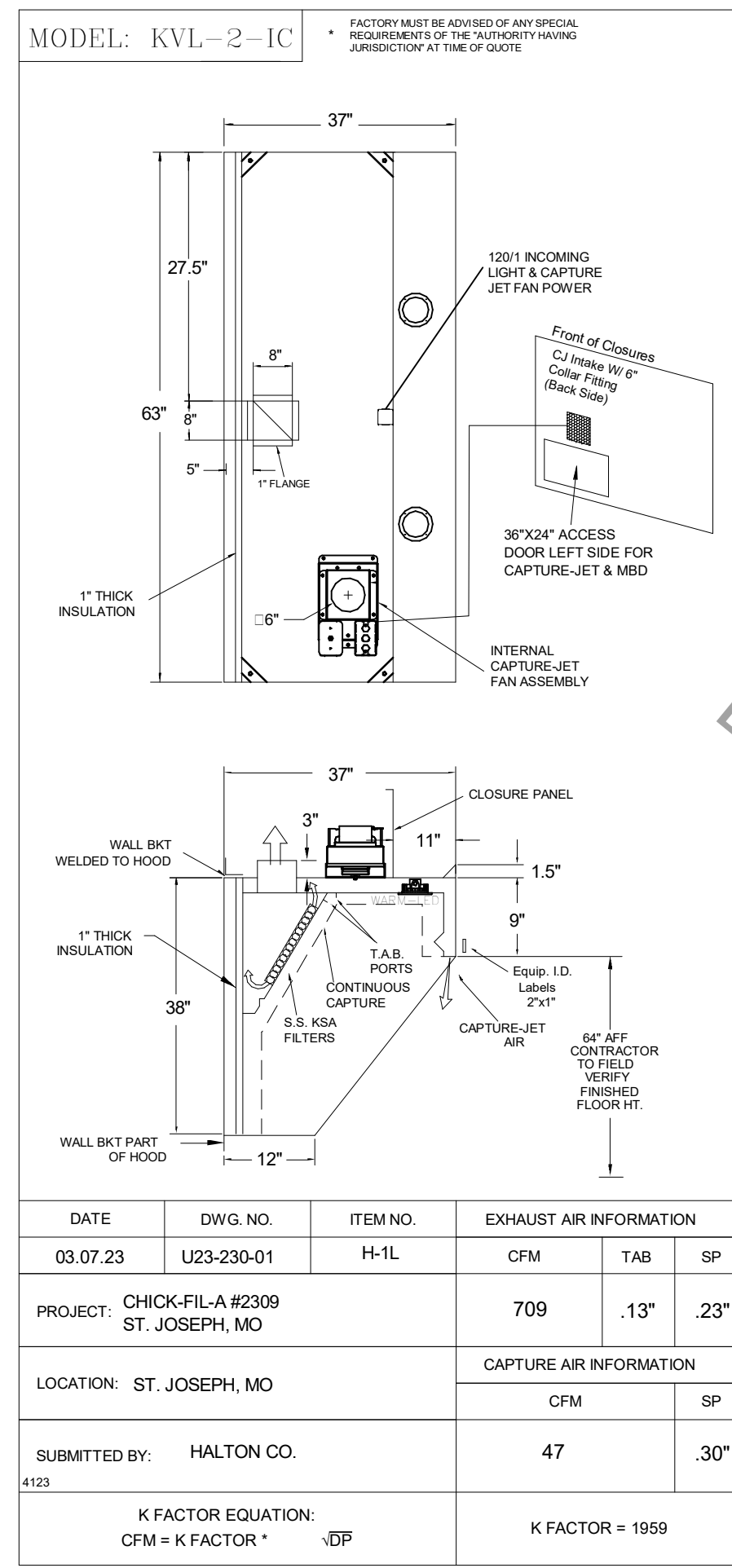
8/1/23

**CHICK-FIL-A**  
ST JOSEPH FSU  
5303 N BELT HWY  
SAINT JOSEPH, MO 64506

**FSR#02309**

BUILDING TYPE / SIZE: S08C-R  
RELEASE: v2.20.08  
PRINTED FOR:  
**ISSUE FOR CONSTRUCTION**  
REVISION SCHEDULE  
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R  
DATE 12/01/2022  
DRAWN BY DISF  
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SHEET  
**HVAC DETAILS AND SCHEDULES**  
SHEET NUMBER  
**M-401**



**MODEL: KVL-2-1C**

STANDARD FEATURES

- S.S. FILTERS (KSA) 3
- 1/2 S.S. FILTERS (KSA) -
- CAPTURE-JET \*
- STAND-OFF \*
- L.E.D. LIGHTS 2

OPTIONS

- REMOTE SWITCH PANEL \*
- FIRE PROTECTION \*
- ETL LISTED \*
- W/O EXHAUST DAMPER \*
- CEILING CLOSURE 2
- STD. BACKSPLASH \*
- INSULATED BACKSPLASH \*
- MBD DAMPER \*

MATERIAL

EXPOSED SURFACES 18 GA. S.S. \*

COMMENTS

CLOSURE HEIGHT = TBD  
CEILING HEIGHT = ADVISE  
CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF

36"x24" ACCESS DOOR LEFT SIDE FOR ACCESS TO CAPTURE-JET WITH FRONT CJ INTAKE & MBD

CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT

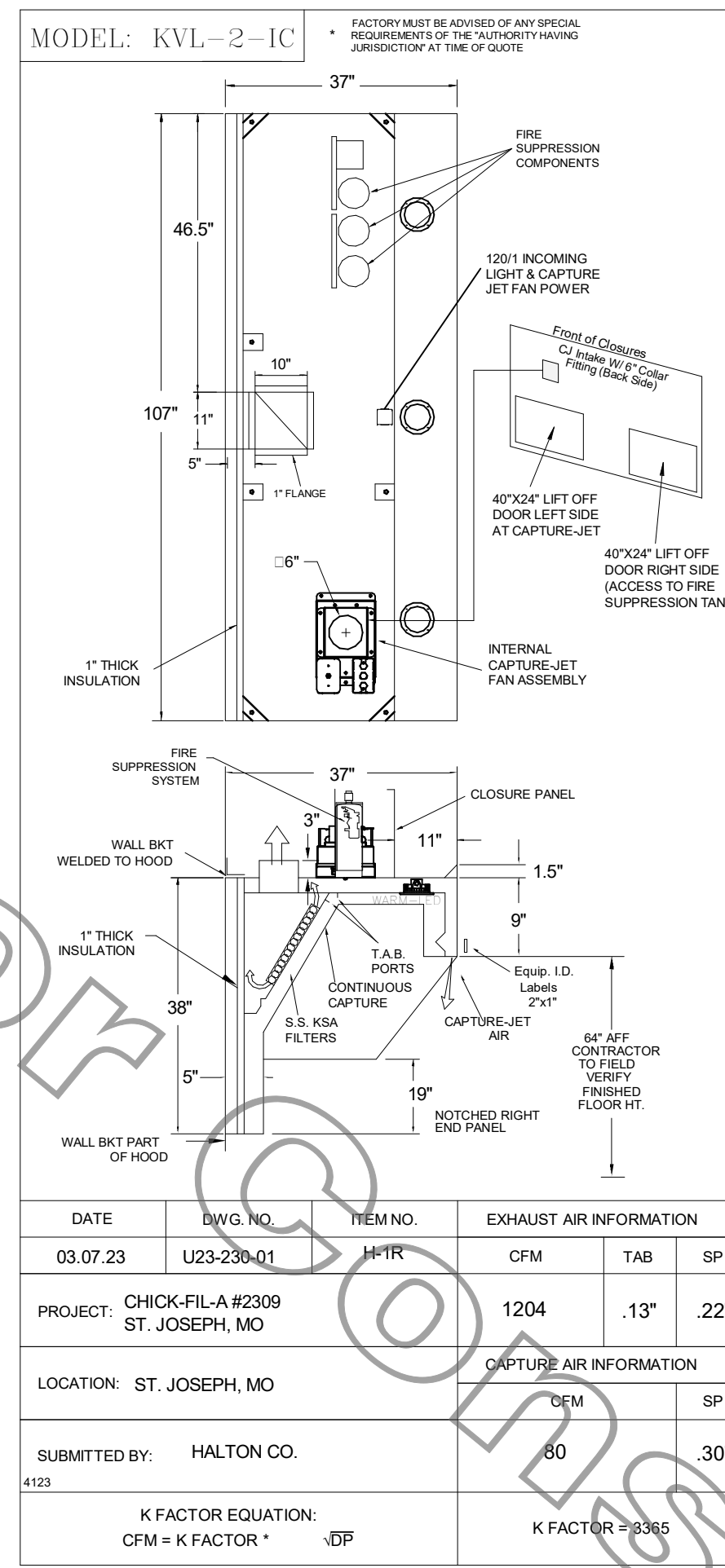
3" REAR STAND-OFF TO HAVE 1" THICK INSULATION

EQUIPMENT COVERED (3) PRESSURE FRYERS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION
03.07.23	U23-230-01	H-1L	CFM TAB SP
PROJECT:	CHICK-FIL-A #2309	ST. JOSEPH, MO	709 13' 23'
LOCATION:	ST. JOSEPH, MO	CAPTURE AIR INFORMATION	CFM SP
SUBMITTED BY:	HALTON CO.		47 30'

K FACTOR EQUATION: CFM = K FACTOR \* ΔP

K FACTOR = 1959



**MODEL: KVL-2-1C**

STANDARD FEATURES

- S.S. FILTERS (KSA) 5
- 1/2 S.S. FILTERS (KSA) -
- CAPTURE-JET \*
- STAND-OFF \*
- L.E.D. LIGHTS 3

OPTIONS

- REMOTE SWITCH PANEL \*
- FIRE PROTECTION \*
- ETL LISTED \*
- W/O EXHAUST DAMPER \*
- CEILING CLOSURE 2
- STD. BACKSPLASH \*
- INSULATED BACKSPLASH \*
- MBD DAMPER \*

MATERIAL

EXPOSED SURFACES 18 GA. S.S. \*

COMMENTS

CLOSURE HEIGHT = TBD  
CEILING HEIGHT = ADVISE  
CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF

FRONT CLOSURE PANEL WITH 40"x24" LIFT OUT DOOR RIGHT SIDE (ACCESS TO FIRE SUPPRESSION)

40"x24" LIFT DOOR LEFT SIDE AT CAPTURE-JET WITH FRONT CJ INTAKE

CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT

3" REAR STAND-OFF TO HAVE 1" THICK INSULATION

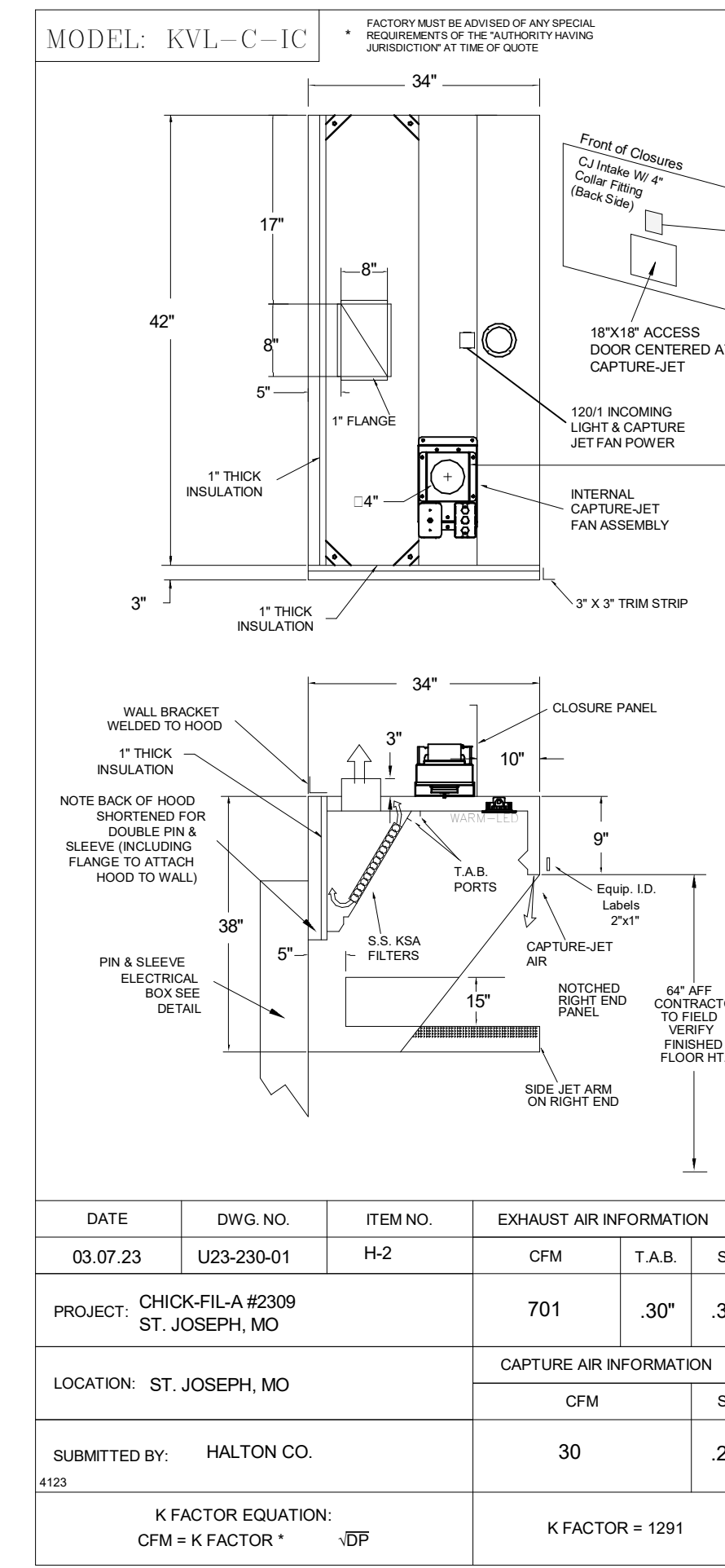
EQUIPMENT COVERED (4) PRESSURE FRYERS (2) GRILLS

ANSUL WEIGHT = 305 LBS  
HOOD WEIGHT = 669 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION
03.07.23	U23-230-01	H-2	CFM TAB SP
PROJECT:	CHICK-FIL-A #2309	ST. JOSEPH, MO	1204 13' 22'
LOCATION:	ST. JOSEPH, MO	CAPTURE AIR INFORMATION	CFM SP
SUBMITTED BY:	HALTON CO.		80 30'

K FACTOR EQUATION: CFM = K FACTOR \* ΔP

K FACTOR = 2165



**MODEL: KVL-C-1C**

STANDARD FEATURES

- S.S. FILTERS (KSA) 2
- CAPTURE-JET \*
- STAND-OFF \*
- L.E.D. LIGHTS 1

OPTIONS

- REMOTE SWITCH PANEL \*
- FIRE PROTECTION \*
- ETL LISTED \*
- W/O EXHAUST DAMPER \*
- CEILING CLOSURE 2
- STD. BACKSPLASH \*
- INSULATED BACKSPLASH \*
- MBD DAMPER \*

MATERIAL

EXPOSED SURFACES 18 GA. S.S. \*

COMMENTS

CLOSURE HEIGHT = TBD  
CEILING HEIGHT = ADVISE  
CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF

18"x18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE

DOUBLE RECEPTACLE PIN & SLEEVE

3" X 3" TRIM STRIP FOR STAND-OFF ON LEFT END

3" SIDE & REAR STAND-OFF TO HAVE 1" THICK INSULATION

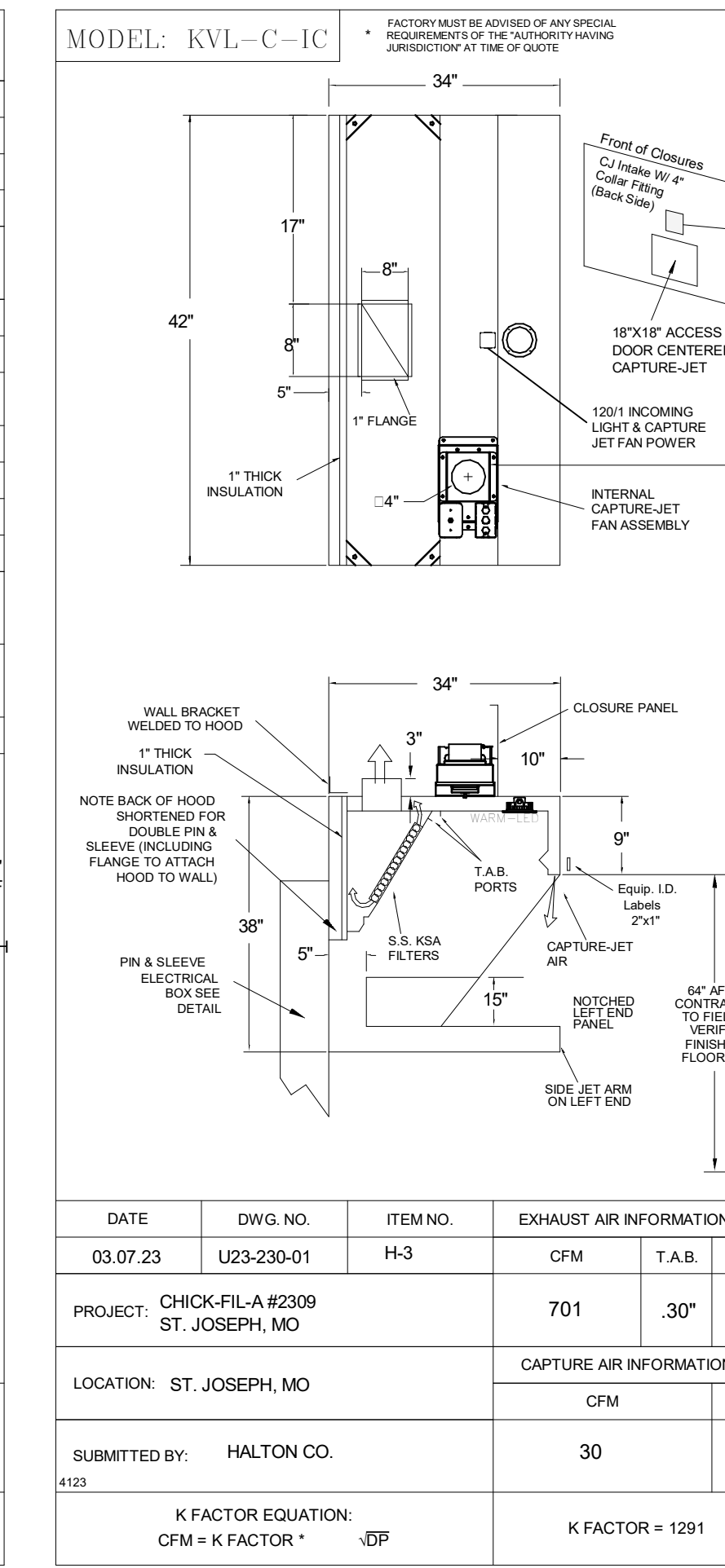
EQUIPMENT COVERED (2) FRYERS

ANSUL WEIGHT = 245 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION
03.07.23	U23-230-01	H-3	CFM T.A.B. SP
PROJECT:	CHICK-FIL-A #2309	ST. JOSEPH, MO	701 30' 39'
LOCATION:	ST. JOSEPH, MO	CAPTURE AIR INFORMATION	CFM SP
SUBMITTED BY:	HALTON CO.		30 29'

K FACTOR EQUATION: CFM = K FACTOR \* ΔP

K FACTOR = 1291



**MODEL: KVL-C-1C**

STANDARD FEATURES

- S.S. FILTERS (KSA) 2
- CAPTURE-JET \*
- STAND-OFF \*
- L.E.D. LIGHTS 1

OPTIONS

- REMOTE SWITCH PANEL \*
- FIRE PROTECTION \*
- ETL LISTED \*
- W/O EXHAUST DAMPER \*
- CEILING CLOSURE 3
- STD. BACKSPLASH \*
- INSULATED BACKSPLASH \*
- MBD DAMPER \*

MATERIAL

EXPOSED SURFACES 18 GA. S.S. \*

COMMENTS

CLOSURE HEIGHT = TBD  
CEILING HEIGHT = ADVISE  
CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF

18"x18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE

DOUBLE RECEPTACLE PIN & SLEEVE

3" REAR SIDE STAND-OFF TO HAVE 1" THICK INSULATION

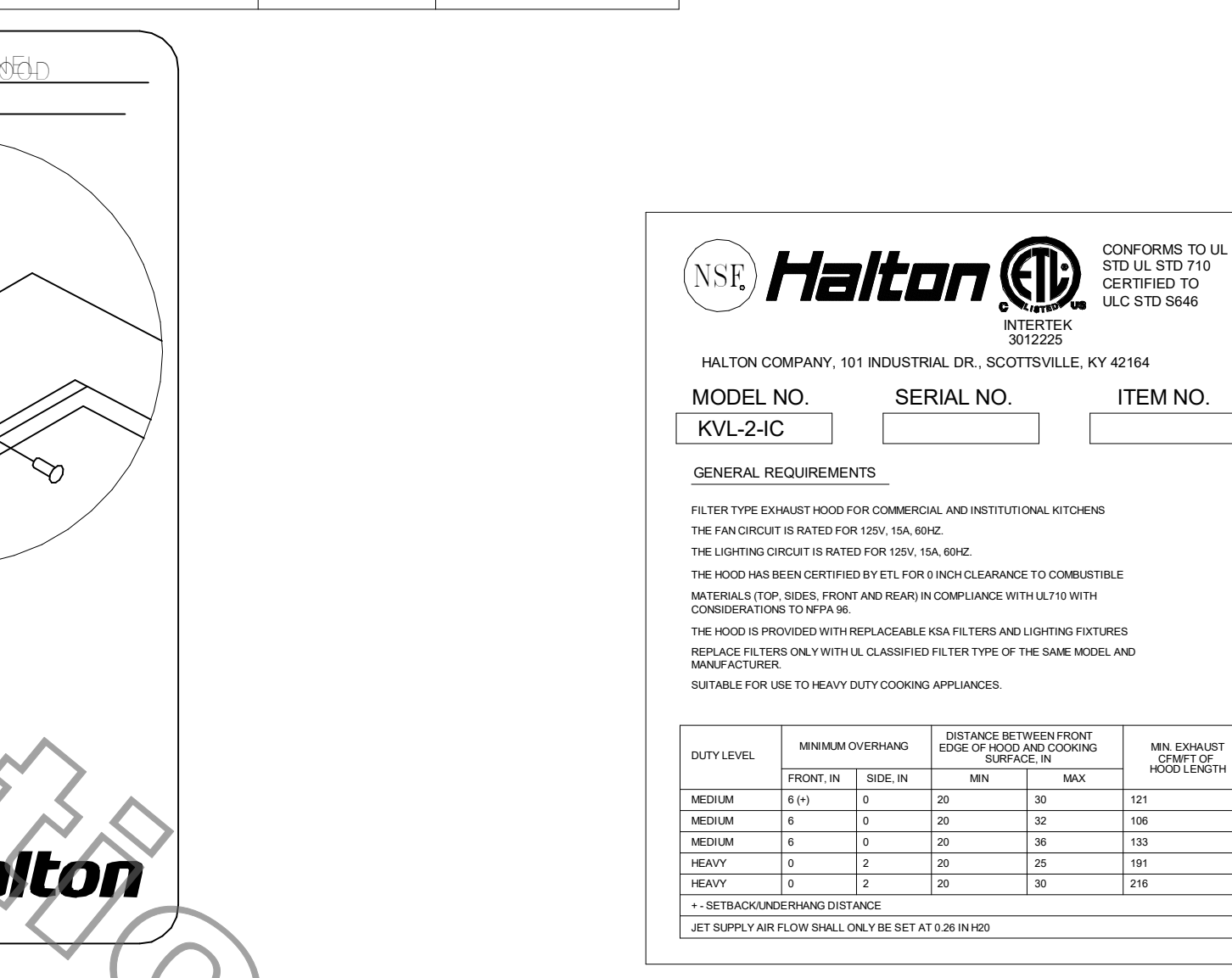
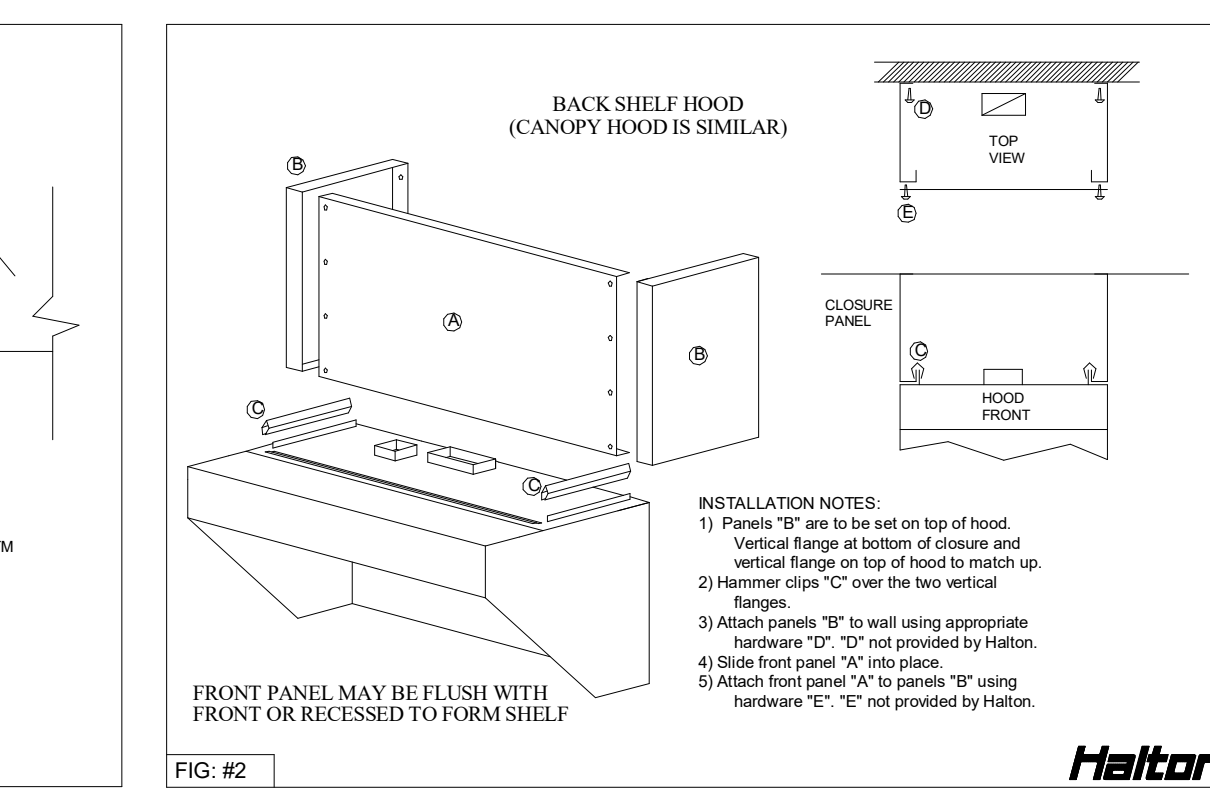
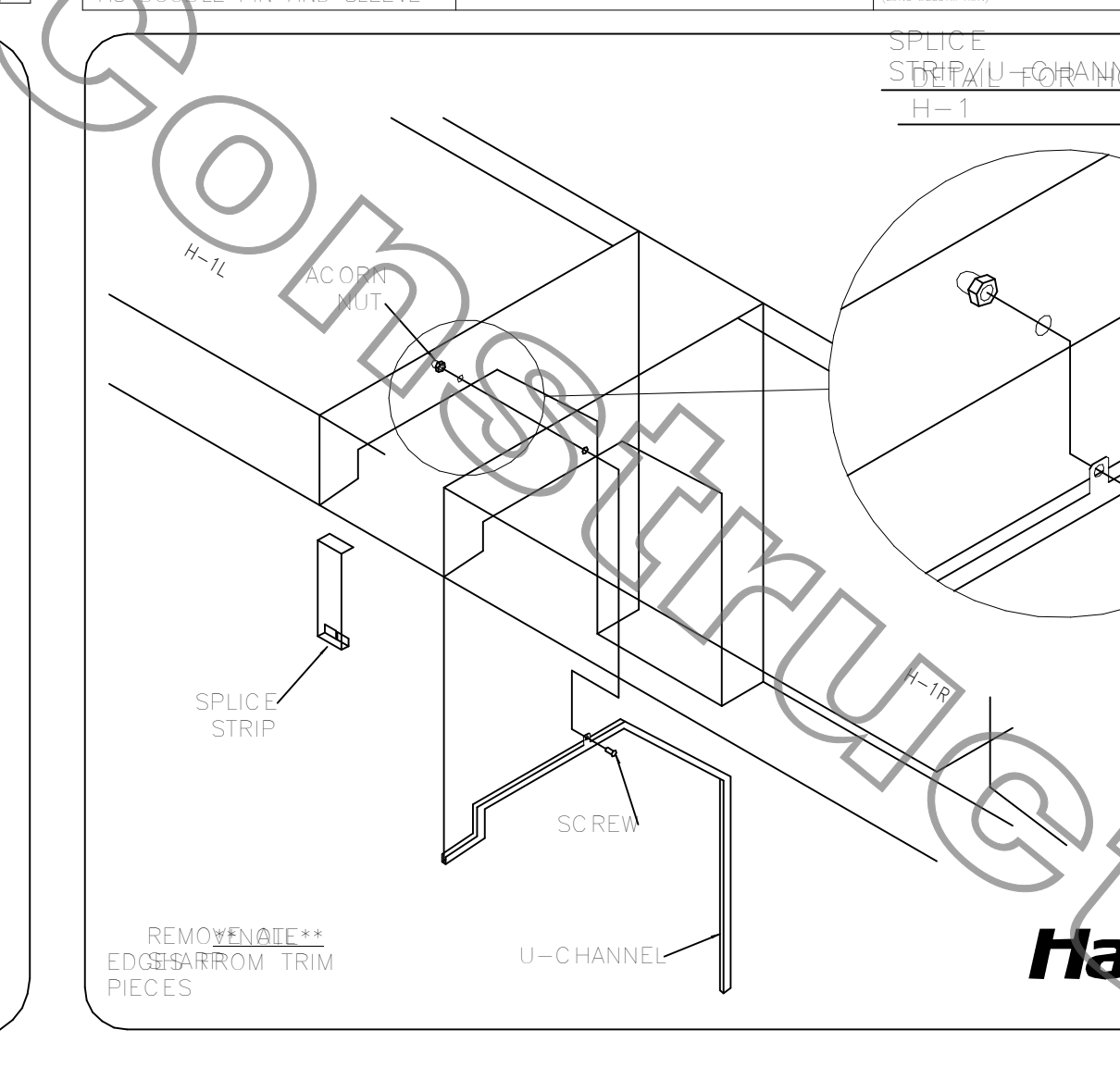
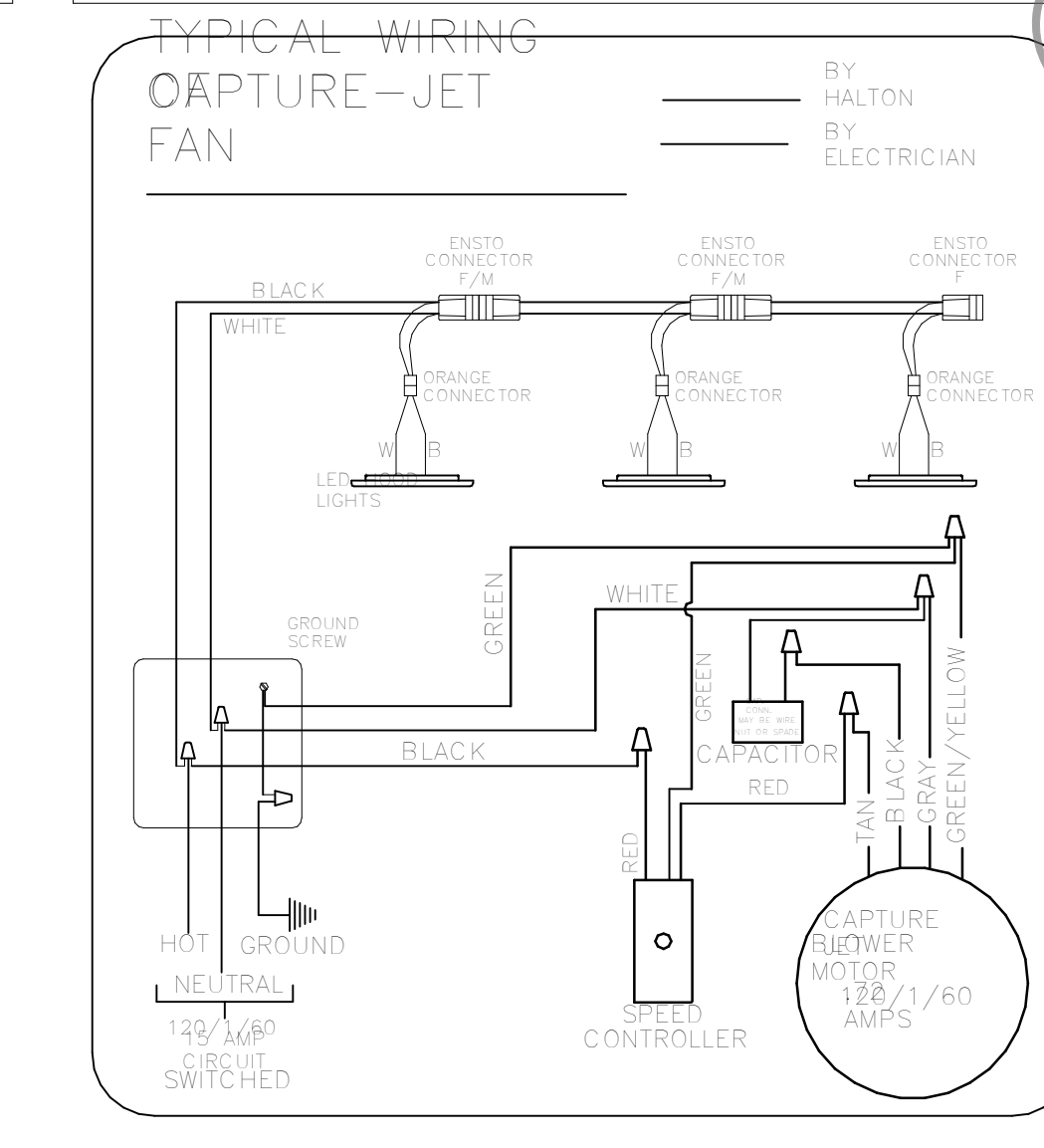
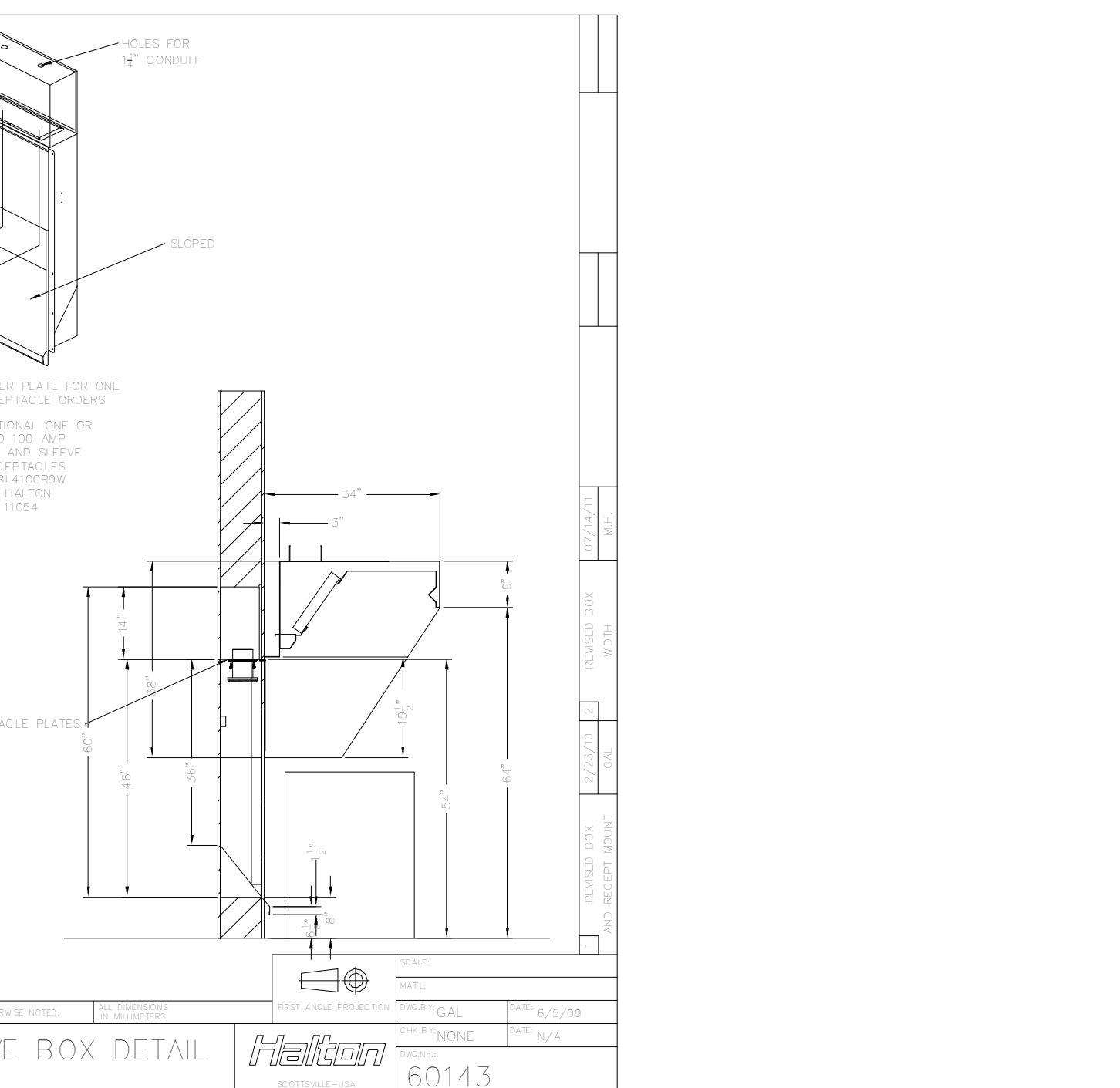
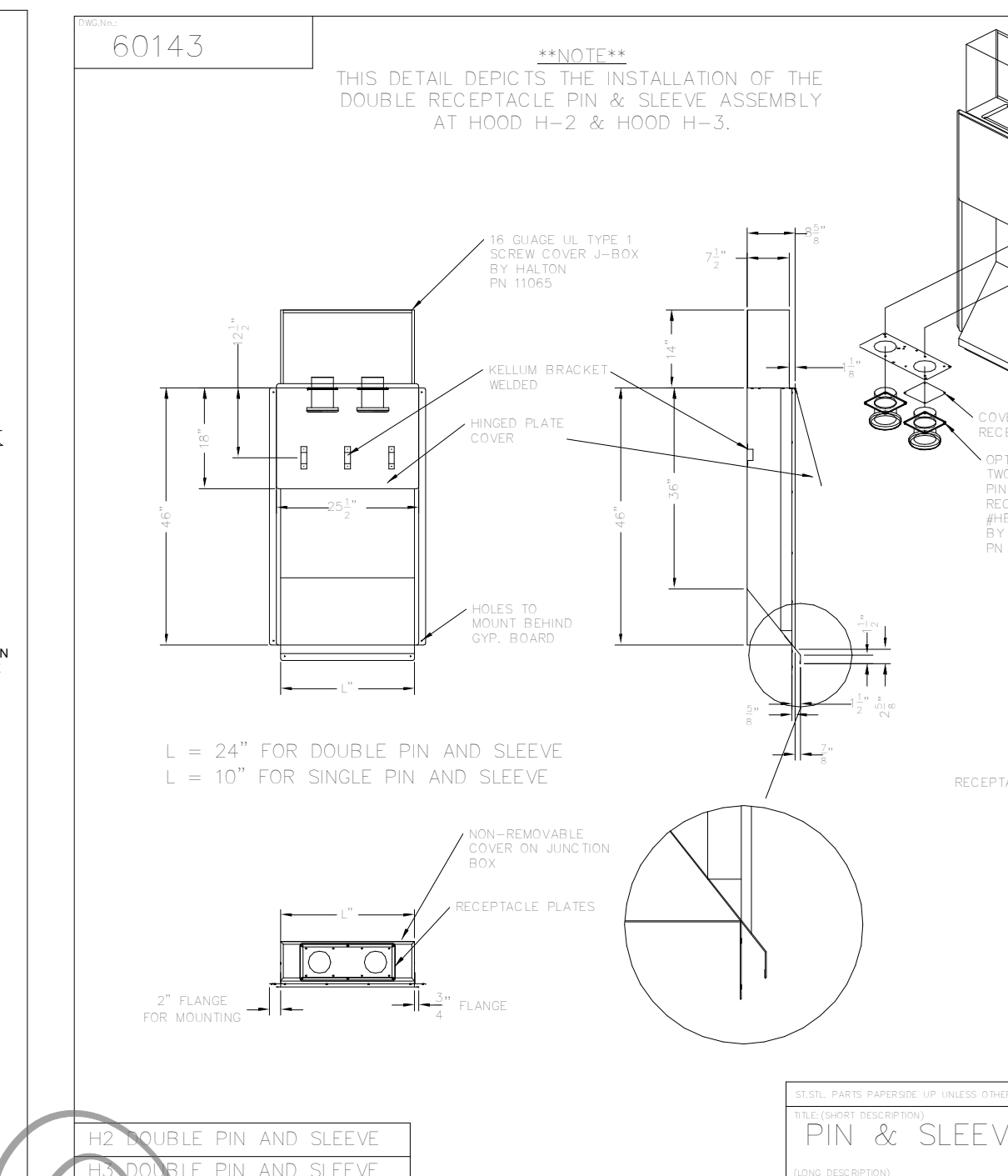
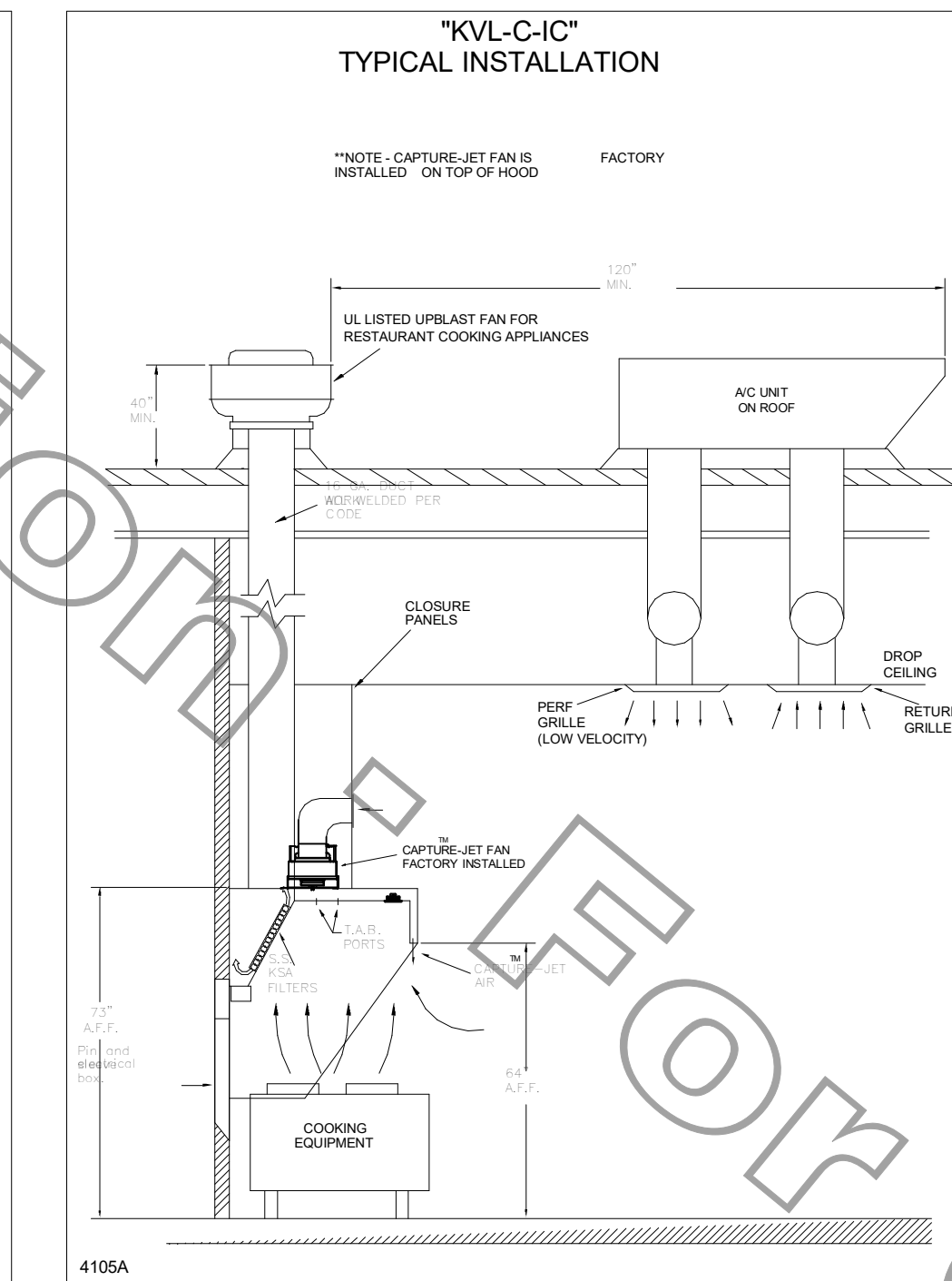
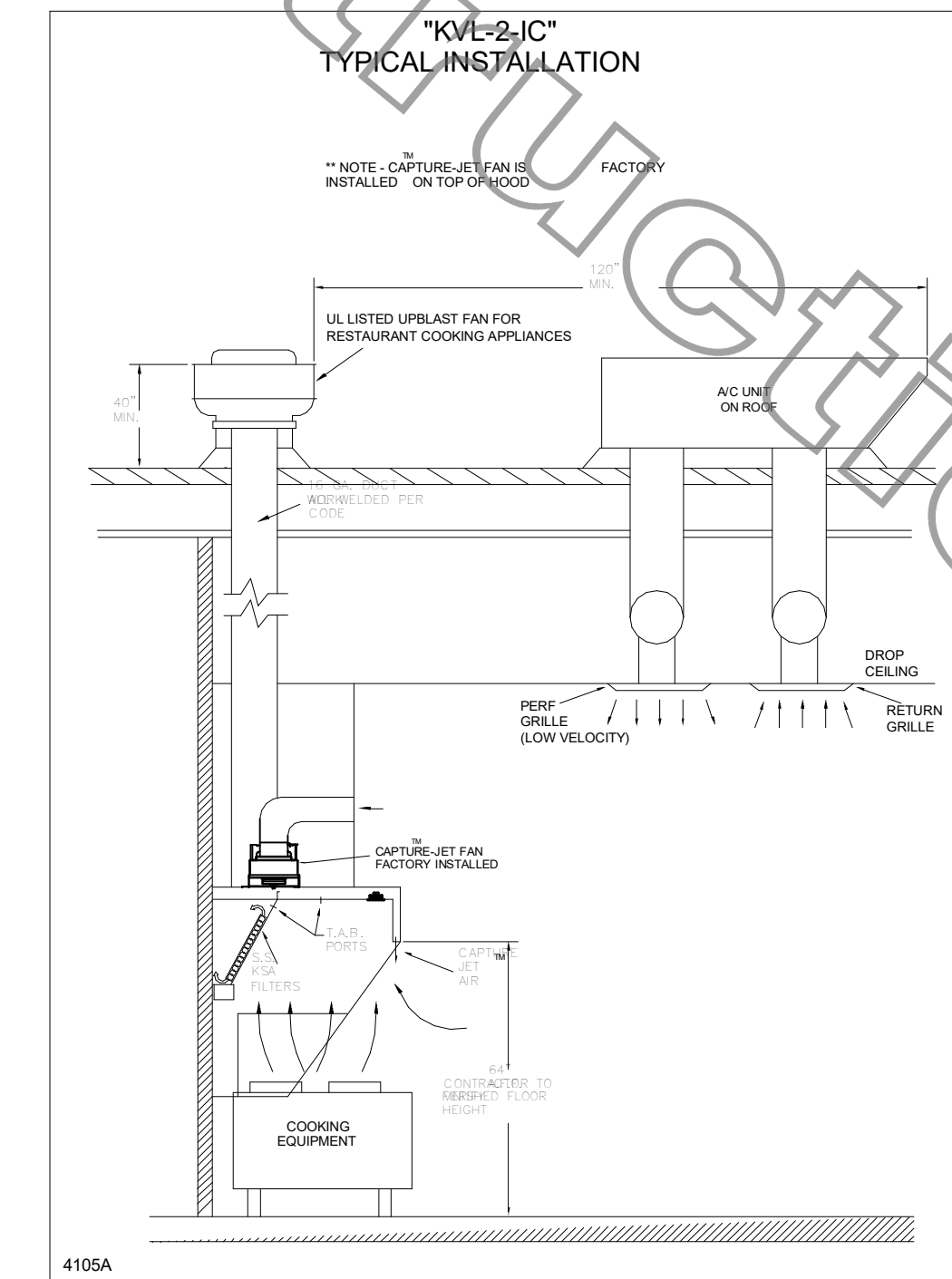
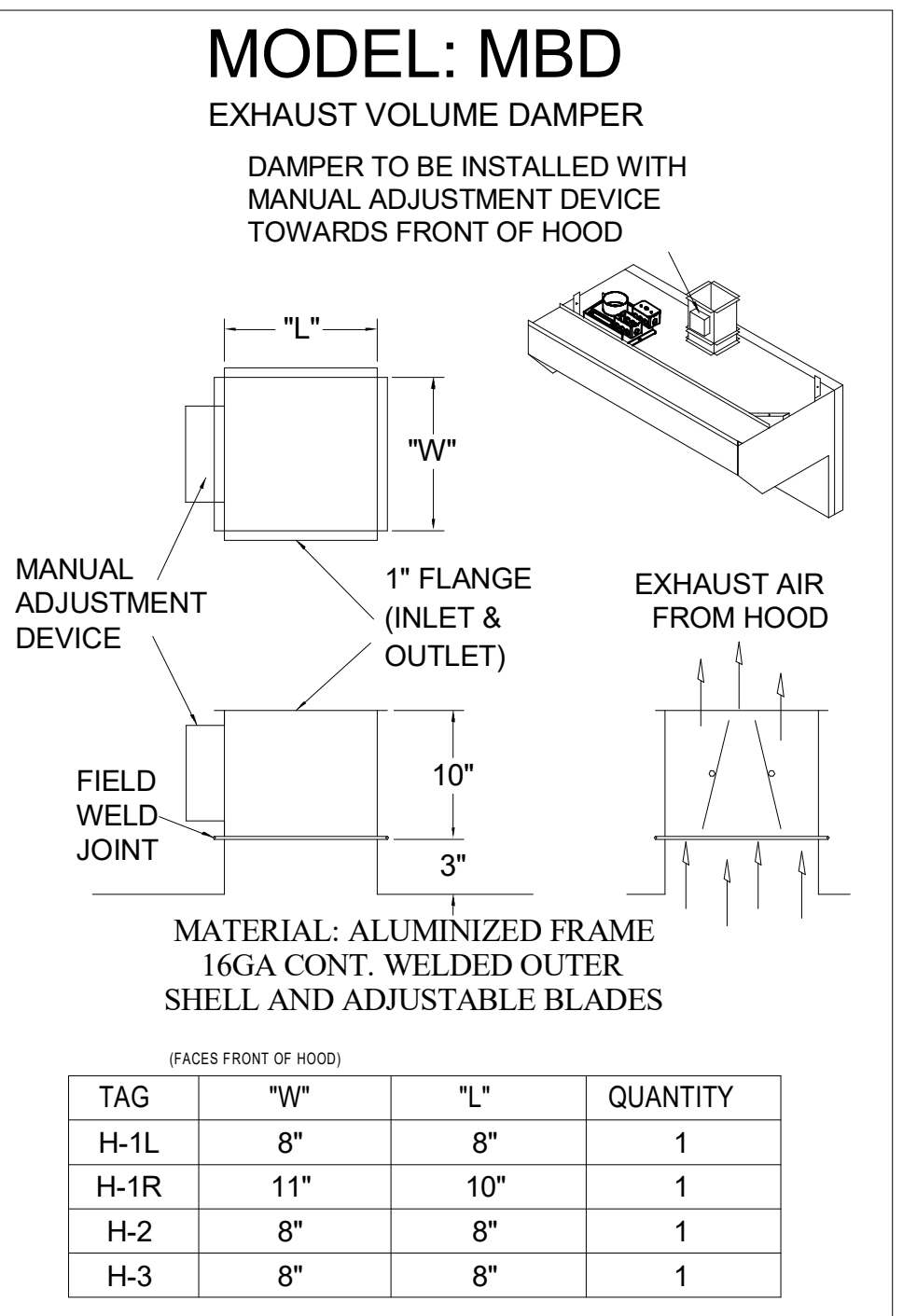
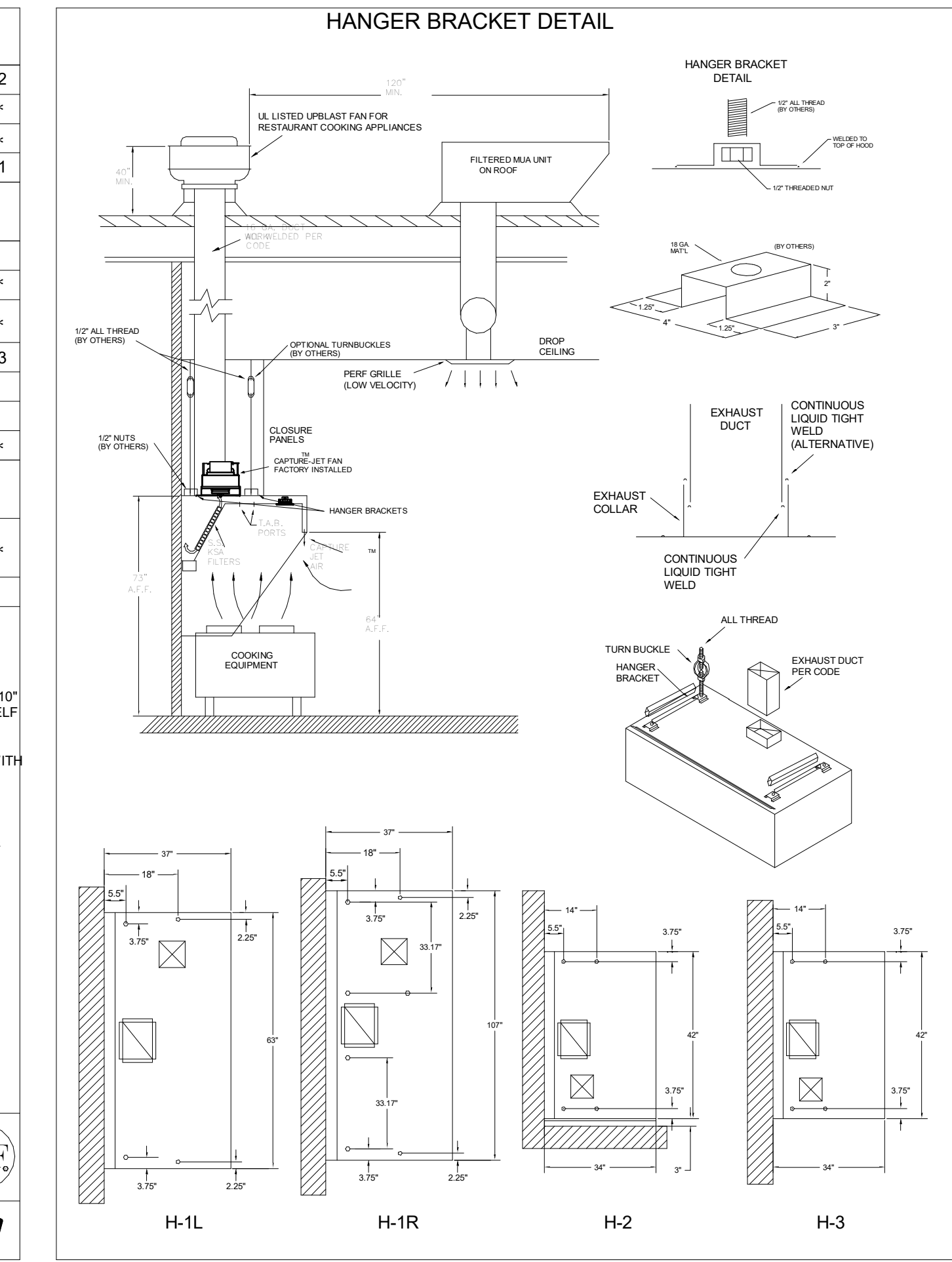
EQUIPMENT COVERED (2) FRYERS

ANSUL WEIGHT = 245 LBS

DATE	DWG. NO.	ITEM NO.	EXHAUST AIR INFORMATION
03.07.23	U23-230-01	H-3	CFM T.A.B. SP
PROJECT:	CHICK-FIL-A #2309	ST. JOSEPH, MO	701 30' 39'
LOCATION:	ST. JOSEPH, MO	CAPTURE AIR INFORMATION	CFM SP
SUBMITTED BY:	HALTON CO.		30 29'

K FACTOR EQUATION: CFM = K FACTOR \* ΔP

K FACTOR = 1291



**HALTON HOODS**

- ETL LISTED PER LATEST 710 STANDARD
- BUILT PER NFPA 96
- NSF LISTED

THE DRAWING MUST BE CORRECTLY SIZED AND PRINTED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING:

- ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
- ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
- ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.

INTELLIGENT APPROVALS: ENGINEERS, ARCHITECTS, ETC. MUST BE OBTAINED PRIOR TO FABRICATION. ANY CHANGES TO THE ORIGINAL DESIGN MUST BE NOTIFIED IN WRITING. APPROVED FOR FABRICATION: \_\_\_\_\_

REVISIONS:

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

PROJECT: CHICK-FIL-A #2309  
LOCATION: ST. JOSEPH, MO  
DATE: 12/01/2022  
SCALE: NTS  
DRAWN BY: NTS  
CHECKED BY: NTS  
APPROVED BY: NTS

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY. BELOW WEBSITE: WWW.HALTONCOMPANY.COM

HALTON CO. (CANADA)  
1021 BREVIK PLACE  
MISSISSAUGA, ON L4W 3R7  
1-800-624-5001

HALTON CO. (USA)  
101 INDUSTRIAL DR.  
SCOTTSDALE, KY 42164  
1-270-237-5600

REVISION DESCRIPTION

DATE

BY

DATE

**CHICK-FIL-A**

PROJECT: CHICK-FIL-A #2309  
LOCATION: ST. JOSEPH, MO  
DATE: 12/01/2022  
SCALE: NTS  
DRAWN BY: NTS  
CHECKED BY: NTS  
APPROVED BY: NTS

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HALTON CO. (USA)  
101 INDUSTRIAL DR.  
SCOTTSDALE, KY 42164  
1-270-237-5600

REVISION DESCRIPTION

DATE

BY

DATE

Sheet **MH-101**

**DEMOLITION NOTES**

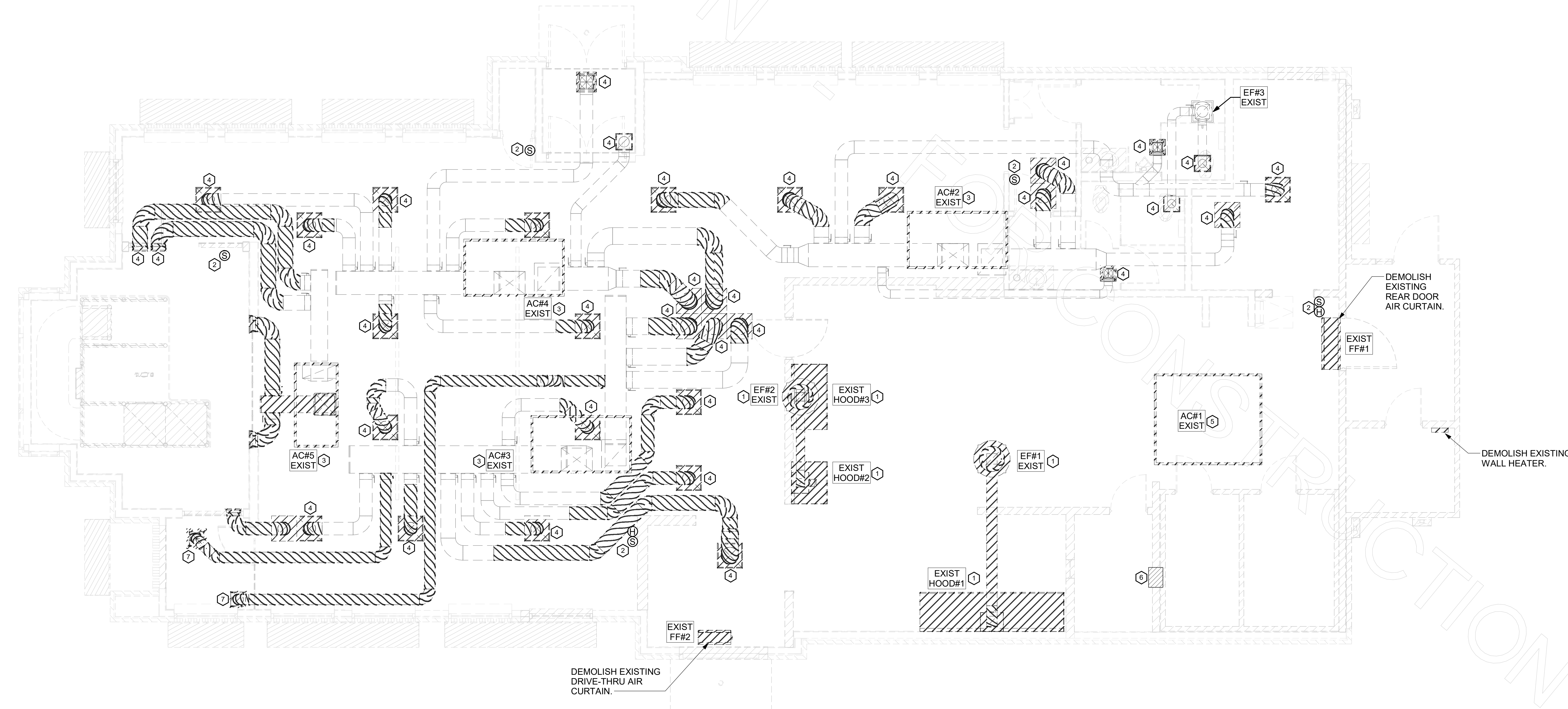
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAYING ALL APPLICABLE FEES.
2. DISPOSAL OF EQUIPMENT AND MATERIALS REQUIRED TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE WORK.
3. DE-ENERGIZE ALL ELECTRICAL CIRCUITS RELATED TO EQUIPMENT THAT WILL BE MOVED OR REMOVED PRIOR TO STARTING WORK. DE-ENERGIZED CIRCUITS SHALL BE PROTECTED WITH LOCKING DEVICES USING APPROPRIATE WARNING LABELS.
4. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ROOF AFTER REMOVAL OF EXISTING MECHANICAL EQUIPMENT. SEE ARCHITECTURAL DRAWINGS FOR ROOF PATCHING REQUIREMENTS.
5. EXCEPT WHERE NOTED, EXISTING REMOTE TEMPERATURE AND/OR HUMIDITY SENSORS TO REMAIN. IF DURING RENOVATION PURPOSES CONTROLS SHALL BE TAKEN DOWN, MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLING AND TO PROVIDE ANY ADDITIONAL WIRING NEEDED. VERIFY EXISTING UNIT CONTROLS ARE IN GOOD WORKING ORDER. IF NOT, CONTACT CHICK-FIL-A CONSTRUCTION MANAGER.
6. MECHANICAL CONTRACTOR SHALL REPLACE FILTERS FOR ALL RTUS AT END OF PROJECT AND PRIOR TO REOPENING. MC TO PROVIDE PROPOSAL TO FACILITIES MANAGER, CONSTRUCTION MANAGER, AND OPERATOR TO CORRECT EXISTING RTU PUNCH ITEMS IDENTIFIED BY HALTON.
7. CONTRACTOR SHALL INDICATE SALVAGE VALUE IN BID FOR ROOFTOP UNITS BEING REPLACED.

DEMOLITION LEGEND	
	EXISTING EQUIPMENT, DUCT, AIR DEVICE, ETC. TO REMAIN INTACT
	EXISTING EQUIPMENT, DUCT, AIR DEVICE, ETC. TO BE DEMOLISHED

EXISTING CONDITIONS SHOWN ARE FROM PREVIOUS DRAWINGS. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS OF ALL DUCT AND DIFFUSERS. IF MAJOR DIFFERENCES OCCUR IN FIELD, CONTACT CHICK-FIL-A CONSTRUCTION MANAGER.

**KEY NOTES**

1. DEMOLISH EXISTING HOOD, ALL ASSOCIATED GREASE DUCT, CAPTURE JET FAN AND DIFFUSER (IF EXISTING), EXHAUST FAN, AND ITS ASSOCIATED ROOF CURB. PATCH AND REPAIR ROOF TO MATCH SURROUNDING CONSTRUCTION.
2. EXISTING REMOTE TEMPERATURE AND/OR REMOTE HUMIDITY SENSORS TO BE REPLACED WITH NEW. DEMOLISH ASSOCIATED CONTROL WIRING. SEE SHEET M-201 FOR FURTHER INFORMATION.
3. EXISTING AC UNIT TO BE REPLACED WITH NEW AS SCHEDULED ON SHEET M-401. UNLESS NOTED OTHERWISE, DEMOLISH ALL EXISTING UNIT CONTROLS (REMOTE TEMP SENSOR, REMOTE HUMIDITY SENSOR, T'STAT, REMOTE SMOKE DETECTOR TEST/RESET STATION, ETC.). EXISTING ROOF CURB AND SUPPLY/RETURN DUCT TO REMAIN. COVER CURB WEATHER-TIGHT FOR RE-USE. GC BID ALTERNATE: MATERIALS AND LABOR TO BE BILLED UNDER SEPARATE CONTRACT AND COORDINATED VIA WORK ORDER WITH FEQ SPECIALIST.
4. DETACH AND DEMOLISH EXISTING AIR DEVICE. SECURE DUCT ABOVE CEILING GRID FOR RE-CONNECTION. SEE SHEET M-201 FOR NEW CONNECTION.
5. DEMOLISH EXISTING KITCHEN AC UNIT, UNIT CONTROLS (REMOTE TEMP SENSOR, REMOTE HUMIDITY SENSOR, T'STAT, REMOTE SMOKE DETECTOR TEST/RESET STATION, ETC.), SUPPLY/RETURN AIR DROPS, AND ALL ASSOCIATED SUPPLY/RETURN DUCT AND AIR DEVICES. COVER EXISTING ROOF CURB WEATHER-TIGHT FOR RE-USE.
6. DEMOLISH EXISTING CFA T500 PANEL AND ALL THERMOSTATS WITHIN.
7. DEMOLISH EXISTING AIR DEVICE AND ASSOCIATED BRANCH DUCT BACK TO PLENUM. SEAL PLENUM AIR-TIGHT.



**1 MECHANICAL DEMO PLAN**  
1/4" = 1'-0"



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Telephone: (615) 255-5203



8/1/23

**CHICK-FIL-A**  
**ST JOSEPH FSU**  
5303 N BELT HWY  
SAINT JOSEPH, MO 64506

**FSR#02309**  
BUILDING TYPE / SIZE: S08C-R  
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CONSULTANT PROJECT # 22172.CD.R  
DATE 12/01/2022  
DRAWN BY DSF  
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**MECHANICAL DEMO PLAN**  
SHEET NUMBER

**M-200**

FABRICATE 18 GA STAINLESS NOZZLE. NOZZLE INLET FULL SIZE OF FAN DISCHARGE. MINIMUM NOZZLE HEIGHT 1'-0". EXTEND NOZZLE AS NEEDED TO TERMINATE 0'-2" ABOVE TOP OF ALL CONDENSING UNITS, RTUS, AND PARAPETS WITHIN 10'-0".

BOLTED AND GASKETED  
10 DEGREES

6"WX3"H HAT CHANNEL EQUIPMENT RAILS FACTORY PROVIDED AND WELDED ON TOP OF CURB CAP. BOLT FAN TO HAT CHANNELS, USING 3 FASTENERS ON EACH SIDE OF MOTOR SECTION AND ONE ON EACH SIDE OF THE SCROLL HOUSING USING SELF DRILLING 1/4"-14-1 1/2" HEX HEAD SCREW EQUAL TO ELCO EAF841 DRIL-FLEX.

1/4"-20-3" HEX WASHER HEAD SHEET METAL SCREW EQUAL TO ELCO EDT442 DRILIT. MINIMUM 1-1/2" EMBEDMENT IN BLOCKING BENEATH CURB. PROVIDE TWO FASTENERS ON EACH SIDE OF CURB.

INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD AS CLOSE AS POSSIBLE TO FAN SCROLL DRAIN. EXTEND DRAIN TO CENTER OF DRIP GUARD.

PROVIDE 1.5 PCF BATT INSULATION, MINIMUM 4" THICK.

SUPPORT DUCT FROM STRUCTURE WITH 1-1/2"X1/8" STEEL ANGLE OR B-LINE B24 STRUT AND 3/8" ATR ON 6'-0" CENTERS, TYP.

BLOCKING BY GENERAL CONTRACTOR

CURB FOR DUCTS SERVING EF#1: 22.5" SQ. INSIDE CLEAR MINIMUM

CURB FOR DUCTS SERVING EF#2: 19.5" SQ. INSIDE CLEAR MINIMUM

ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.

KEY NOTES (THIS DETAIL ONLY):

- 1 EQUIPMENT CURB WITH 4" WIDE T-BAR SUPPORTS 12" ON CENTER AND 20 GAUGE STEEL CURB CAP PROVIDED BY TOM BARROW COMPANY. WIDTH OF CURB SHALL BE 4" WIDER THAN FAN FOOTPRINT IN BOTH DIRECTIONS. HEIGHT OF CURB SHALL BE SUCH THAT NO PART OF ANY DUCT TO BE WITHIN 18" OF ROOF SURFACE BUT NO GREATER THAN 20" ABOVE ROOF SURFACE. PROVIDE FACTORY EQUIPMENT RAILS WELDED TO CAP.
- 2 ALL DUCT ON ROOF TO BE SUPPORTED WITH MIRO 6-DS DUCT SUPPORT SYSTEM AT 6'-0" INTERVALS MAXIMUM. PROVIDE MIRO SUPPORT PADS AT EACH SUPPORT. ATTACH SUPPORT TO DUCT. PROVIDE A DUCT SUPPORT STAND AT EACH ROOF PENETRATION.
- 3 12" HIGH INSULATED CURB PROVIDED BY TOM BARROW COMPANY. MECHANICAL CONTRACTOR TO PROVIDE 16 GA MINIMUM CURB CAP.

BOLTED AND GASKETED TO FAN, 1500F RATED. SEE M-250 FOR GREASE EXHAUST DUCT SIZE. SEE ROOF PLAN FOR GREASE ACCESS DOOR QUANTITY AND TYPE, TYP. SEE ROOF PLAN FOR GREASE ACCESS DOOR QUANTITY AND TYPE, TYP. FULL PERIMETER LIQUID TIGHT WELD BETWEEN CURB CAP AND DUCT. GREASE EXHAUST DUCT IS CONTINUOUS THRU CURB CAP.

24" MIN. FROM ROOF DECK.

EXISTING CONDITIONS SHOWN ARE FROM PREVIOUS DRAWINGS. MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS OF ALL DUCT AND DIFFUSERS. IF MAJOR DIFFERENCES OCCUR IN FIELD, CONTACT CHICK-FIL-A CONSTRUCTION MANAGER.

SHEET NOTES

- 1. ALL DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLIAMS B66-200 SERIES DTM WHITE ACRYLIC SEMI-GLOSS INDUSTRIAL MAINTENANCE COATING. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS DTM ACRYLIC PRIMER PRIOR TO PAINTING.
- 2. AT EACH PIECE OF ROOF EQUIPMENT, PROVIDE A PLASTIC ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. THE LABEL IS TO HAVE A SELF ADHESIVE BACKING.
- 3. MAINTAIN 18" CLEARANCE FROM GREASE EXHAUST DUCTWORK ABOVE ROOF TO ANY COMBUSTIBLE CONSTRUCTION INCLUDING PARAPET WALLS.

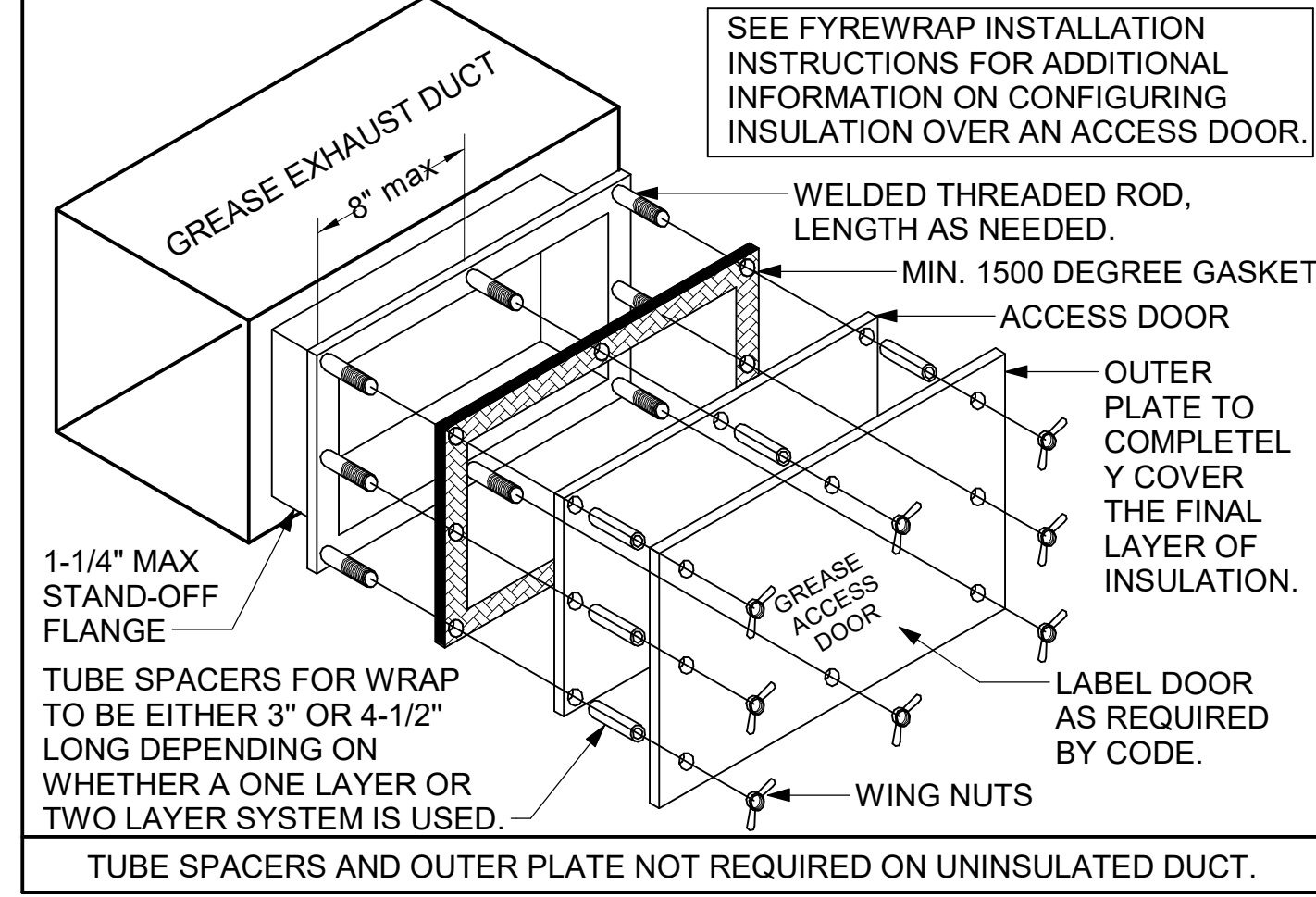
KEY NOTES

- 1 FABRICATE DISCHARGE AIR NOZZLE. LOCATE EXHAUST TERMINATION A MINIMUM 10'-0" FROM OUTSIDE AIR INTAKES. SEE DETAIL 2/M-250.
- 2 GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE 1/4" PER FOOT TOWARDS THE HOOD, THE FAN, OR A COMBINATION OF THE TWO SUCH THAT NO PORTION OF THE RADIUS ELBOW AT THE CURB IS BELOW THE CURB CAP AND SUCH THAT THE FAN BASE SETS DIRECTLY ON THE CURB RAILS. THE BOTTOM OF THE RADIUS ELBOW MAY BE EVEN FLUSH WITH THE CURB CAP, BUT NOT BELOW THE CAP. THE DUCT AT THE FAN MUST BE CENTERED ON THE FAN INLET. THE MC MAY ADD A VERTICAL RISER AT THE RADIUS ELBOW LOCATED AT THE DUCT CURB AS NEEDED IN ORDER TO CENTER THE DUCT ON THE FAN INLET.
- 3 SET CONDENSING UNIT ON ROOF USING TWO CURBS PLUS CPES-1 EQUIPMENT CURBS. SECURE CONDENSING UNIT TO CURBS ARRANGED IN PARALLEL. SET LONG SIDE OF CURB PARALLEL TO ROOF SLOPE. FLASH INTO ROOF BY GC. COORDINATE EXACT LOCATION WITH STRUCTURAL DRAWINGS. ALL MAINTENANCE CLEARANCES OF NEW AND EXISTING EQUIPMENT SHALL BE MAINTAINED.
- 4 GREASE ACCESS DOOR. SEE GREASE ACCESS DOOR SCHEDULE ON THIS SHEET FOR SIZING AND CONSTRUCTION.

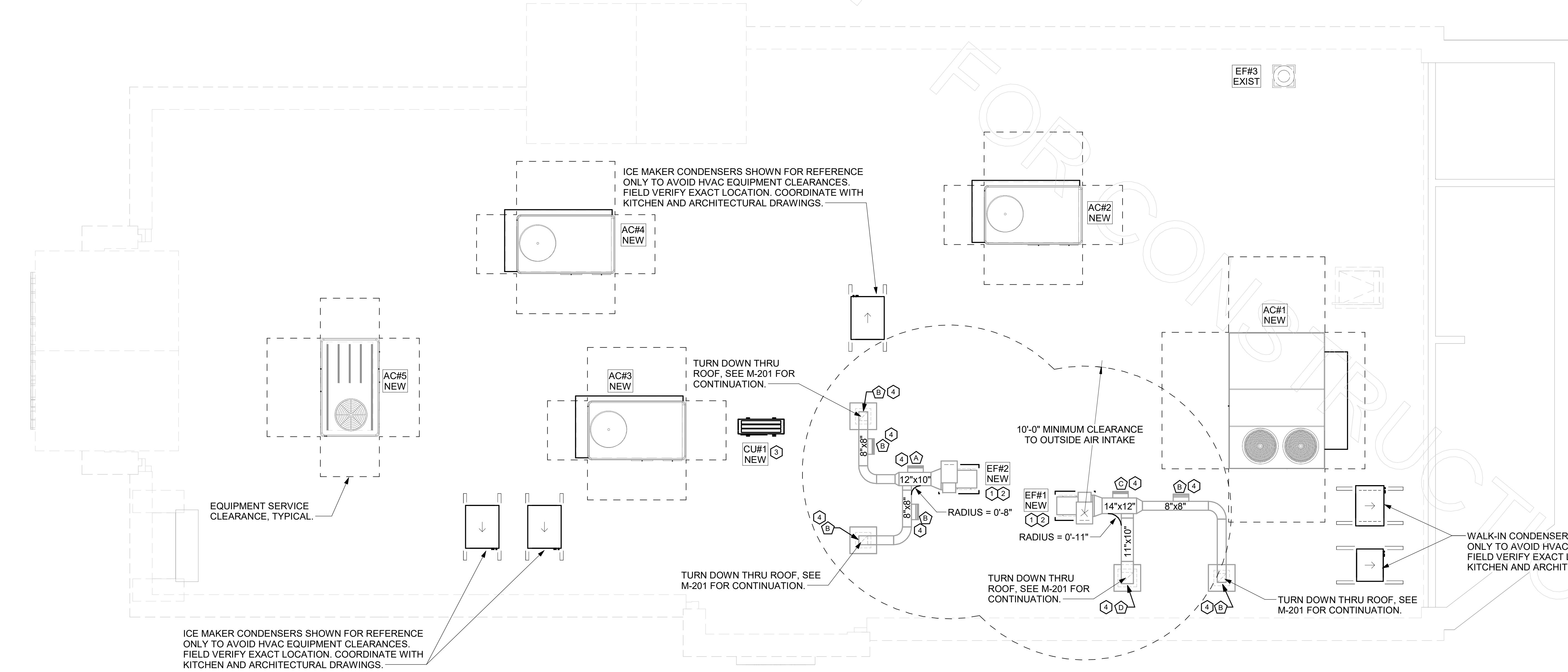
GREASE ACCESS DOOR SCHEDULE

MARK	OPENING SIZE	DOOR SIZE	REMARKS
A	7.5H X 14W	9.5H X 16W	1
B	5.5H X 14W	7.5H X 16W	1
C	9.5H X 14W	11.5H X 16W	1
D	8.5H X 14W	10.5H X 16W	1

1. ACCESS DOORS SHALL BE U.L. 1978 LISTED OR FIELD FABRICATED. REQUIRE NO TOOLS FOR REMOVAL AND MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE IMC. ACCESS DOOR ASSEMBLY SHALL BE WELDED IN PLACE TO THE GREASE EXHAUST DUCT AND THE ACCESS DOOR SHALL BE SECURED WITH THUMB SCREWS. ACCESS DOORS SHALL BE SEALED WITH A MINIMUM 1500 DEGREE GASKET MATERIAL EQUIVALENT TO THAT MANUFACTURED BY BRENTON INDUSTRIES, INC (800) 382-2491.



2 KITCHEN HOOD EXHAUST FAN - UTILITY SET  
NOT TO SCALE

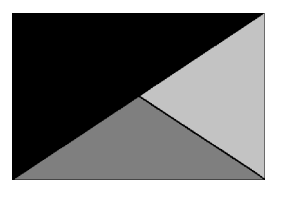


1 MECHANICAL ROOF PLAN  
1/4" = 1'-0"



Chick-fil-A

Chick-fil-A  
5200 Buffington Road  
Atlanta, Georgia  
30349-2998



Kurzynske & Associates  
2705 Lebanon Pike - Suite 010  
Nashville, Tennessee 37214  
Telephone: (615) 255-5203



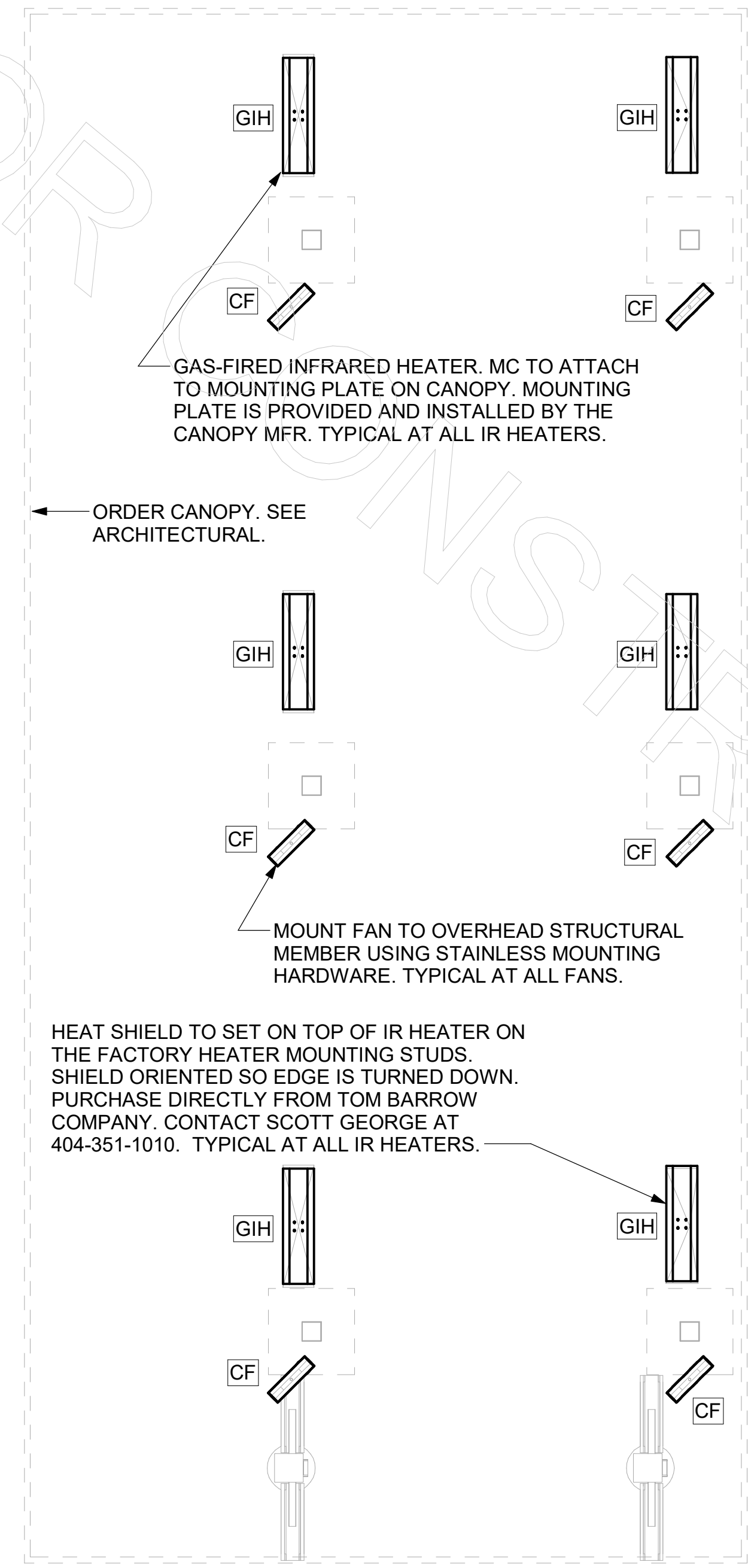
8/1/23

CHICK-FIL-A  
ST JOSEPH FSU  
5303 N BELT HWY  
SAINT JOSEPH, MO 64506

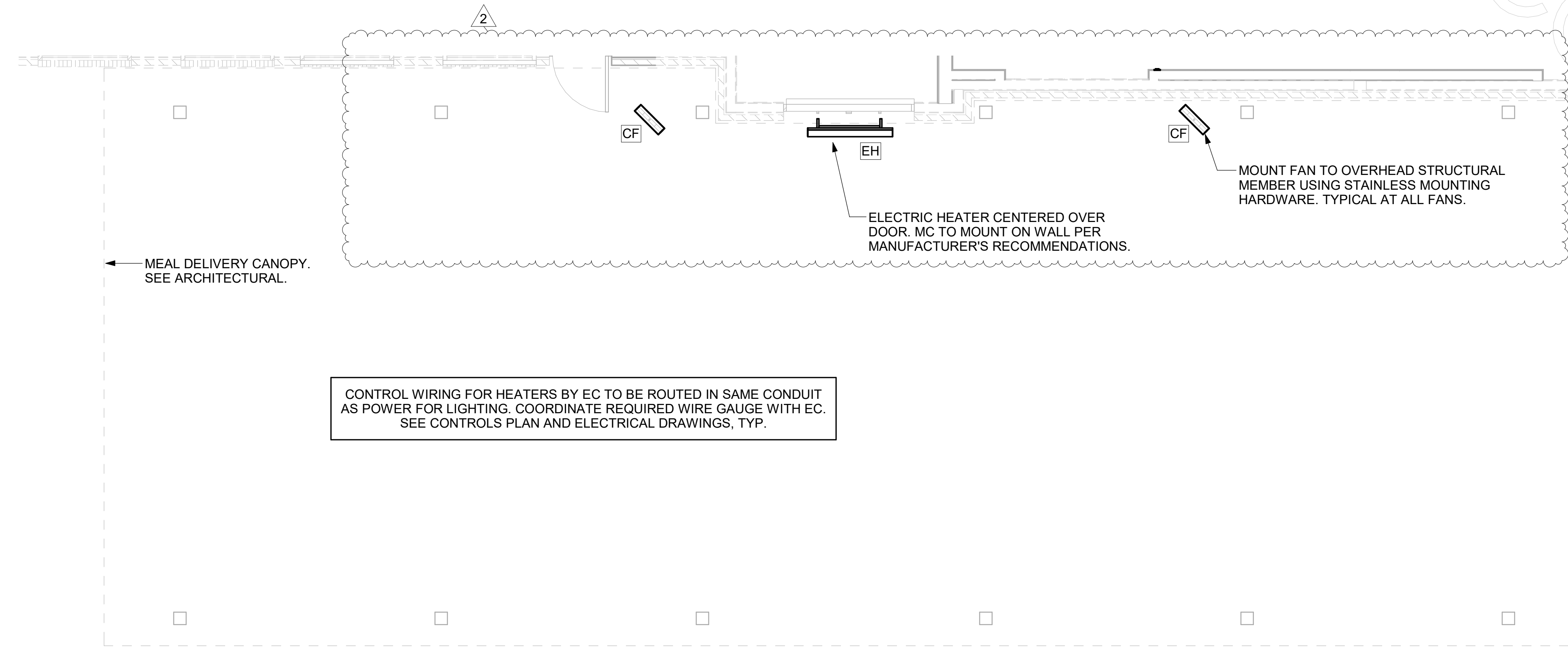
FSR#02309  
BUILDING TYPE / SIZE: S08C-R  
RELEASE: v2.20.08  
PRINTED FOR:  
ISSUE FOR CONSTRUCTION  
REVISION SCHEDULE  
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R  
DATE 12/01/2022  
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SHEET MECHANICAL ROOF PLAN  
SHEET NUMBER

M-250



1 MECHANICAL PLAN - ORDER CANOPY  
1/4" = 1'-0"



2 MECHANICAL PLAN - MEAL DELIVERY CANOPY  
1/4" = 1'-0"

LEGEND			
CF	CIRCULATING FAN	GIH	GAS INFRARED HEATER (TYP.)
EC	ELECTRICAL CONTRACTOR	MC	MECHANICAL CONTRACTOR

CANOPY GENERAL NOTES

- COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
- ACTUAL NUMBER OF GAS INFRARED HEATERS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.
- CONTROL WIRING FOR HEATERS BY EC. COORDINATE REQUIRED WIRE GAUGE WITH EC. SEE CONTROLS PLAN AND ELECTRICAL DRAWINGS, TYP.

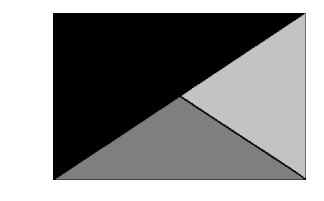
GAS FIRED INFRARED HEATER SCHEDULE							
MARK	INPUT (MBH)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
GIH	50.0	48-1/4"	13"	10"	Bracket	2352-NG	Schwank
REMARKS	<ol style="list-style-type: none"> <li>STEEL BURNER WITH CERAMIC BURNER TILES.</li> <li>STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.</li> <li>PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING FORWARD, 12" LATERALLY FROM THE LONG SIDE OF THE HEATER.</li> <li>MOUNTING BRACKET PROVIDED AND INSTALLED BY CANOPY MFR.</li> <li>PROVIDE HEAT SHIELD ABOVE EACH HEATER AT THE BOTTOM OF THE BRACKET.</li> </ol>						

ELECTRIC INFRARED HEATER SCHEDULE							
MARK	INPUT (KW)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	MODEL	MANUFACTURER
EH	6.0	56"	8.5"	3.5"	BRACKET	BH0420035	BROMIC
REMARKS	<ol style="list-style-type: none"> <li>PROVIDE WITH BLACK HIGH TEMPERATURE COATING.</li> <li>PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND.</li> <li>PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.</li> </ol>						

CIRCULATING FAN SCHEDULE					
MARK	CFM	RPM	HP	MODEL	MANUFACTURER
CF	5750	1,625	1/8	UI18TE-HD	TPI
REMARKS	<ol style="list-style-type: none"> <li>ALUMINUM PADDLE WITH STEEL HUB/SPIDER PROPELLER.</li> <li>360 DEG. ROTATING HEAD HORIZONTALLY AND VERTICALLY.</li> <li>OSHA COMPLIANT DOUBLE LOCKING, COATED STEEL WIRE GUARD.</li> <li>3-SPEED, TOTALLY ENCLOSED, PERMANENTLY LUBRICATED BALL BEARING MOTOR.</li> <li>FACTORY PRE-WIRED POWER CORD.</li> <li>PROVIDE FACTORY WALL MOUNTING BRACKET.</li> <li>PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO UNDERSIDE OF CANOPY OR EXISTING OVERHANG, FACING DOWNWARD, 12" LATERALLY FROM THE FAN LOCATION.</li> <li>REMOVE PULL CHAIN EXTENSION AT ON/OFF SWITCH IN FIELD.</li> <li>FACTORY CERTIFIED FOR OUTDOOR INSTALLATION.</li> </ol>				



**Chick-fil-A**  
**Chick-fil-A**  
 5200 Buffington Road  
 Atlanta, Georgia  
 30349-2998



**Kurzynske & Associates**  
 2705 Lebanon Pike - Suite One  
 Nashville, Tennessee 37214  
 Telephone: (615) 255-5203



8/1/23

**CHICK-FIL-A**  
**ST JOSEPH FSU**  
 5303 N BELT HWY  
 SAINT JOSEPH, MO 64506

**FSR#02309**  
 BUILDING TYPE / SIZE: S08C-R  
 RELEASE: v2.20.08  
 PRINTED FOR  
**ISSUE FOR CONSTRUCTION**

NO.	DATE	DESCRIPTION
2	08/01/2023	Issue for Construction

CONSULTANT PROJECT # 22172.CD.R  
 DATE 12/01/2022

DRAWN BY DSF  
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**HVAC CANOPY PLANS**

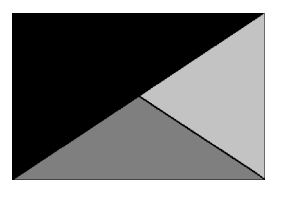
SHEET NUMBER

**M-251**



Chick-Fil-A

Chick-Fil-A  
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8/1/23

### HOOD SCHEDULE

MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L NEW	709	0.13"	47 @ 0.30"	BACKSHELF	8"x8"	63"	37"	38"	HALTON	KVL-2	1
HOOD#1R NEW	1204	0.13"	80 @ 0.30"	BACKSHELF	11"x10"	107"	37"	38"	HALTON	KVL-2	1
HOOD#2 NEW	701	0.30"	30 @ 0.29"	BACKSHELF	8"x8"	45"	34"	38"	HALTON	KVL-C	1
HOOD#3 NEW	701	0.30"	30 @ 0.29"	BACKSHELF	8"x8"	42"	34"	38"	HALTON	KVL-C	1

NOTES: DIMENSIONS OF HOODS INCLUDE BACK AND SIDE SPACERS (HEIGHT DOES NOT INCLUDE CLOSURE PANELS).

REMARKS: 1. HOOD SHOP DRAWINGS ARE INCLUDED FOR REFERENCE ON SHEET MH-101. REFER TO SHOP DRAWINGS FOR HOOD OPTIONS AND CONSTRUCTION.

### KITCHEN HOOD SYSTEMS NOTES

- CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT WITH HALTON CO. FOR THE HOODS. CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
- THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF A COMPLETE WET ANSUL SYSTEM FURNISHED BY HALTON. THE HOOD SHALL BE FURNISHED PRE-PIPED BY HALTON.
- THE R-102 ANSUL FIRE SUPPRESSION SYSTEM EXTERNAL TO THE HOODS SHALL BE INSTALLED IN ACCORDANCE WITH HOOD MANUFACTURER'S SHOP DRAWINGS BY AN AUTHORIZED ANSUL SYSTEM INSTALLER SELECTED AND HIRED BY HALTON. COST FOR ANSUL INSTALLATION INCLUDED IN PRICE OF HOODS TO CFA.
- HOOD EXHAUST DUCTWORK SHALL BE 16 GA. BLACK STEEL WITH CONTINUOUS LIQUID TIGHT WELD OF JOINTS & SEAMS.
- TURNS IN GREASE EXHAUST DUCTWORK SHALL BE LONG RADIUS TYPE, WITH A CENTERLINE RADIUS R=3W/2, UNLESS OTHERWISE NOTED. NO MITERED FITTINGS ALLOWED.
- ALL STAINLESS STEEL CLOSURE PANELS SHALL BE SUPPLIED BY HOOD MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- SLOPE ALL GREASE EXHAUST DUCT BACK TO HOOD AT 1/4" PER FOOT OF RUN.
- WRAP NEW GREASE DUCT WITH UNIFRAX FYREWAP. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWAP PRODUCT USED SHALL MEET LOCAL CODE REQUIREMENTS.
- SUPPORT ALL HOODS WITH THREADED ROD AT EACH FACTORY SUPPORT POINT. EACH SUPPORT POINT MUST SUPPORT THE HOOD WEIGHT EQUALLY. ATTACH TO STRUCTURE AS DETAILED ON STRUCTURAL DRAWINGS. ATTACH HOOD TO WALL AT 16" INTERVALS ALONG FULL LENGTH OF HOOD ON TOP AND BOTTOM. ATTACHMENT TO WALL REQUIRES FIELD DRILLING OF SUPPORT ANGLE AT BACK OF HOODS. EACH WALL ATTACHMENT POINT MUST OCCUR AT A WALL STUD. ATTACHMENT HARDWARE TO BE #12-24 HEX HEAD SHEET METAL SCREW EQUAL TO TEXTRON SDS EDT265. LENGTH AS REQUIRED TO FULLY PENETRATE THE STUD.
- MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON SHEET M-501 FOR MORE INFORMATION.

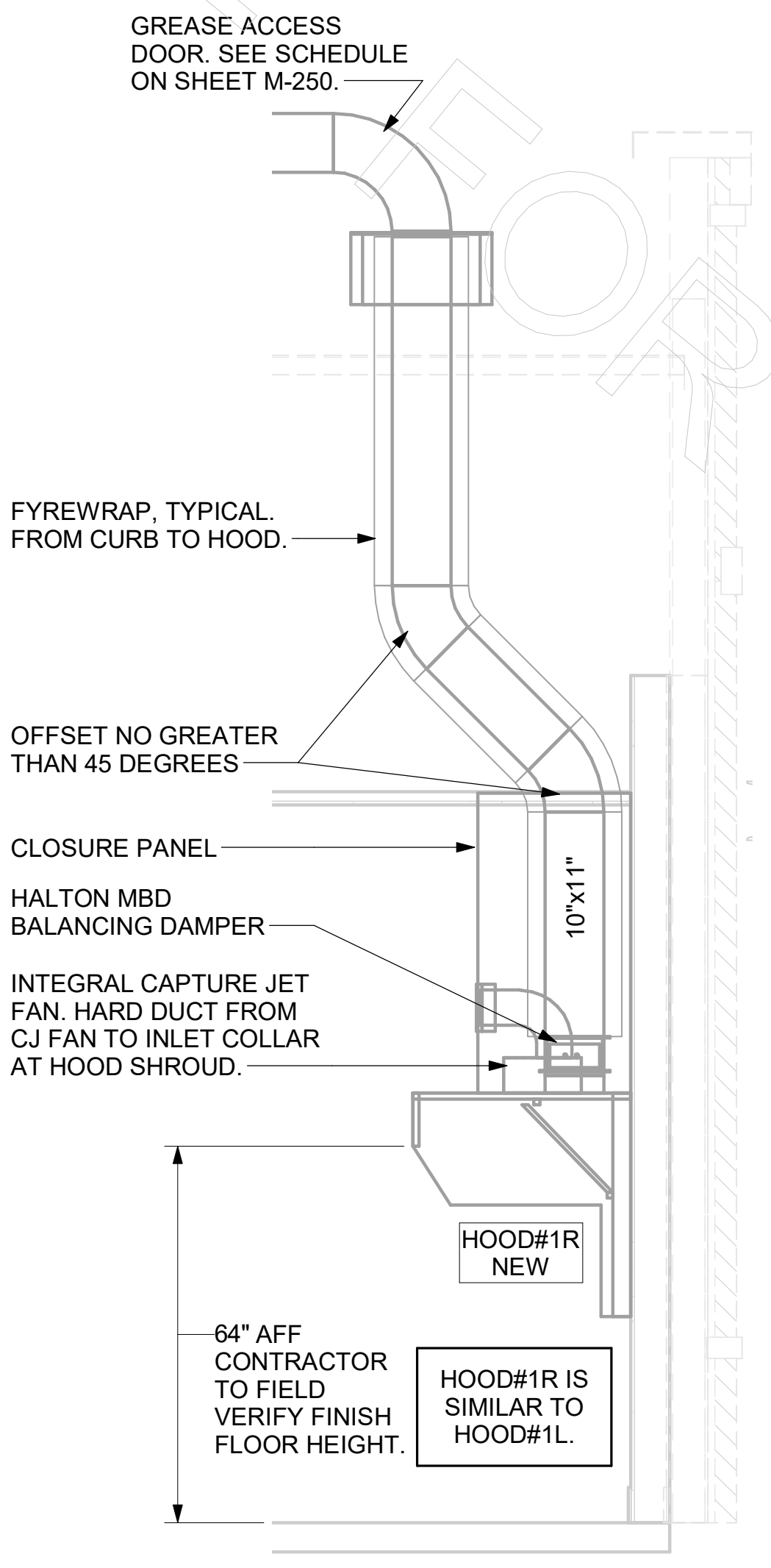
**GREASE EXHAUST DUCT CLEARANCE NOTE:**

CLEARANCES ABOVE CEILING ARE TIGHT. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT ROUTING AND CLEARANCES PRIOR TO FABRICATING GREASE EXHAUST DUCT.

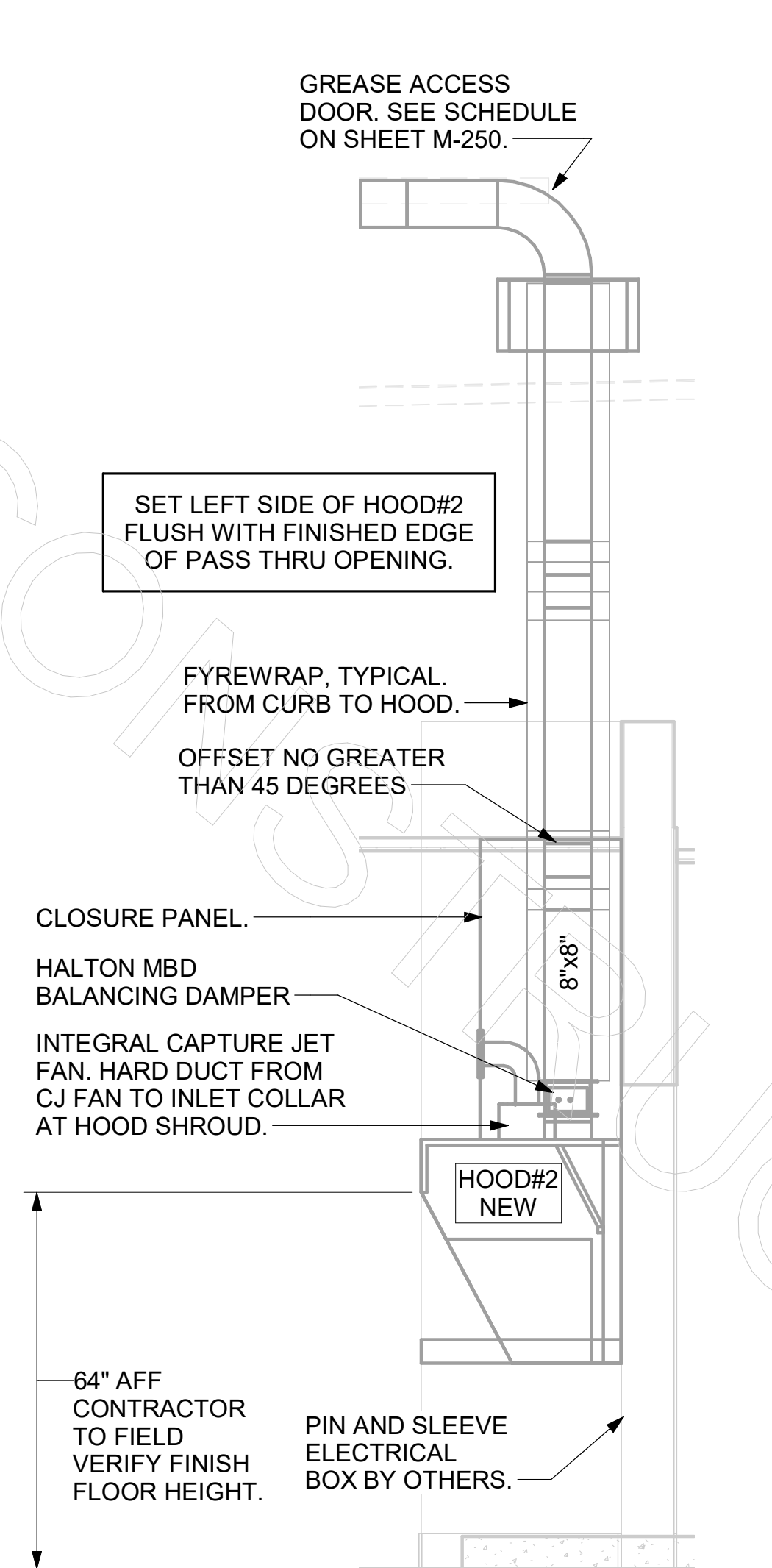
**CLEANOUT DOOR NOTE:**

DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS. NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.

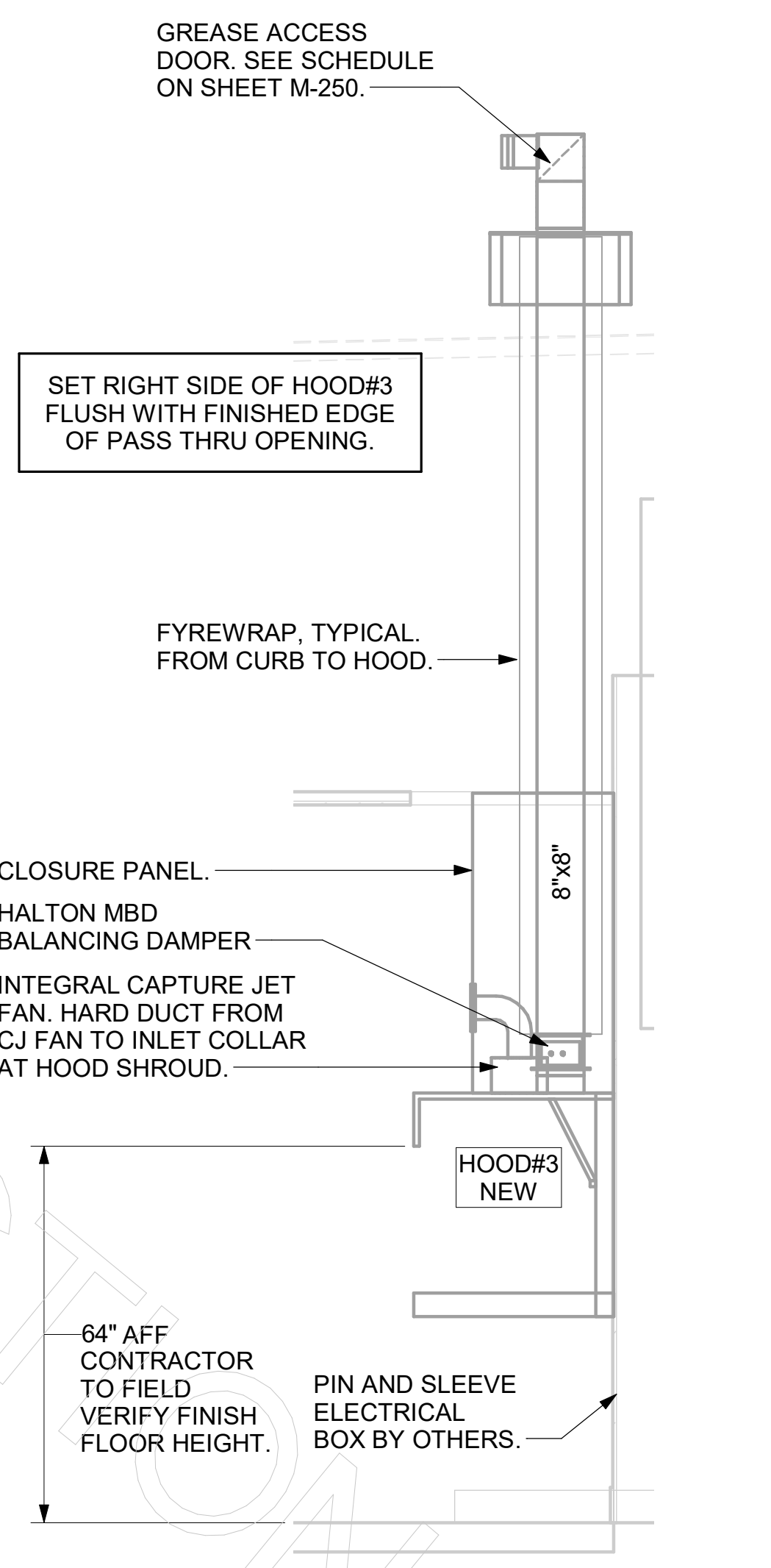
NOTE: SEE ARCHITECTURAL PLANS FOR HOOD LOCATIONS.



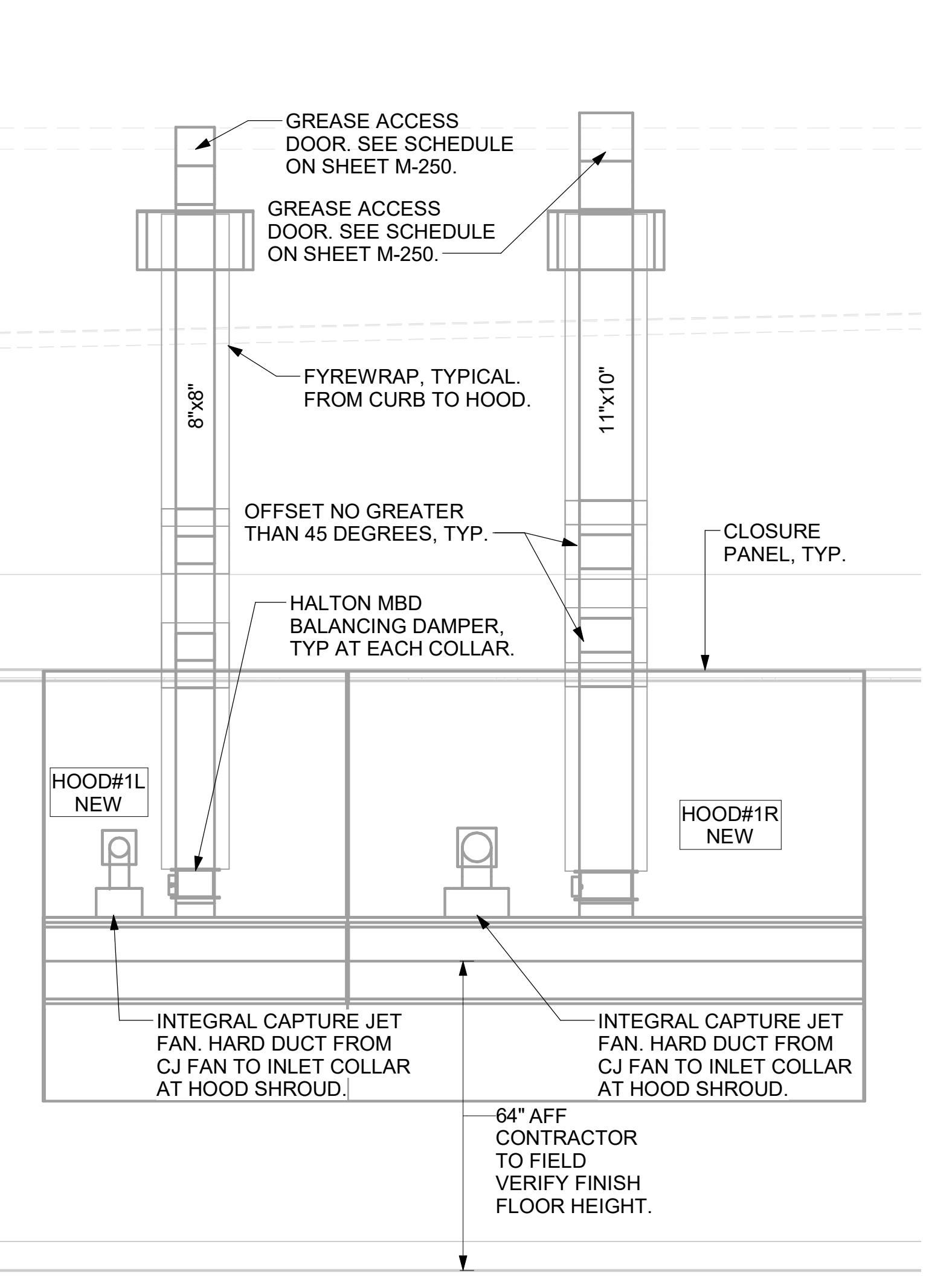
3 HOOD#1 SIDE ELEVATION  
NOT TO SCALE



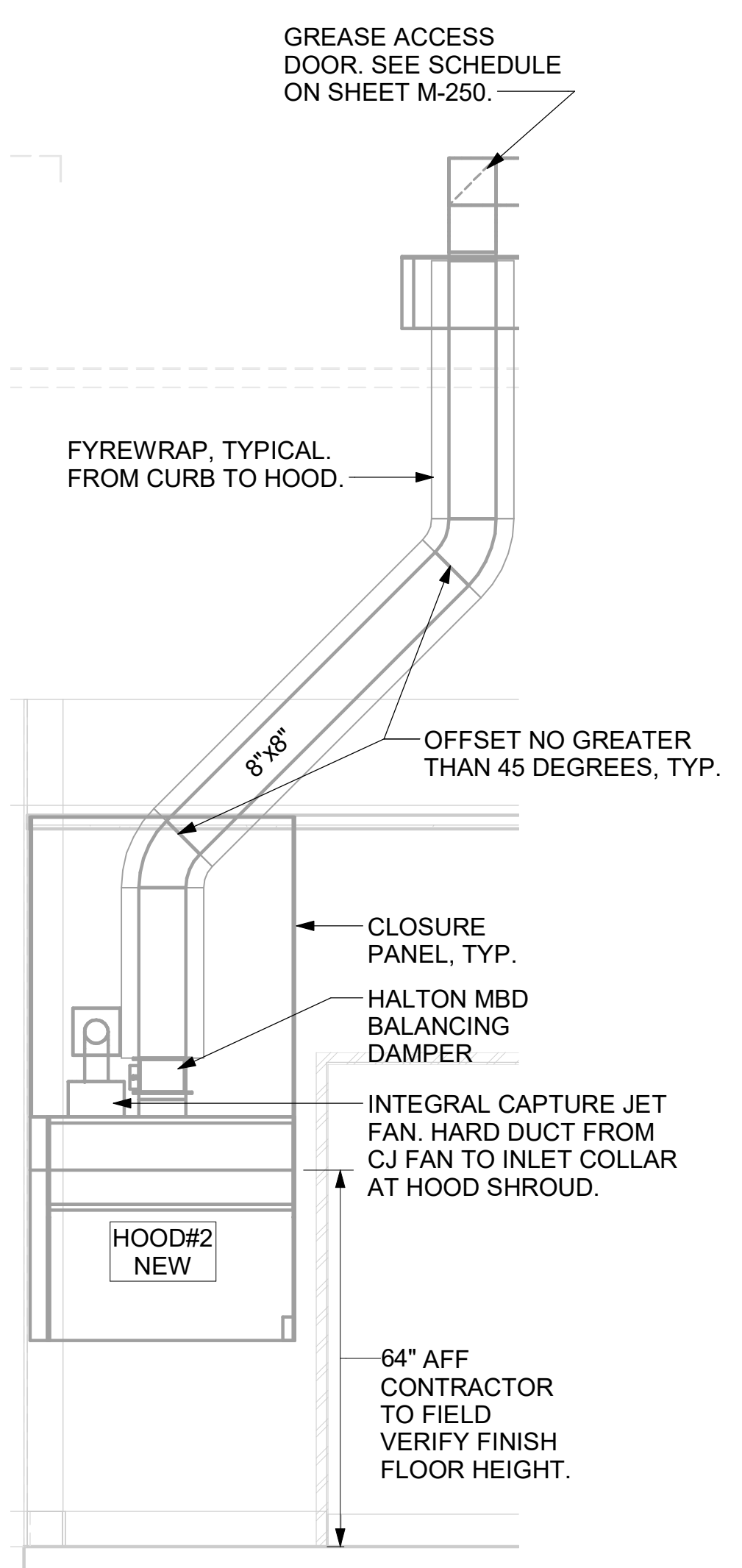
5 HOOD#2 SIDE ELEVATION  
NOT TO SCALE



7 HOOD#3 SIDE ELEVATION  
NOT TO SCALE



4 HOOD#1 FRONT ELEVATION  
NONE



6 HOOD#2 FRONT ELEVATION  
NOT TO SCALE

FyreWrap® Elite 1.5 Duct Insulation  
Commercial Kitchen Grease Duct System  
ASTM E 2336/ICC-ES AC101 System  
1 and 2 Hour Fire-Rated Enclosure, Shaft Alternative  
Zero Clearance to Combustibles  
Intertek Design No. UNI/BI 120-02  
Butt Joint System (Both Layers, Max. 24"x24" Duct)

INSTALLATION METHOD:

Legend:

- FyreWrap Elite 1.5 Duct Insulation, Two Layers (each 1 1/2" total thickness = 3")
- Framed Tape (Compressive Hold)
- 1/2" Carbon or SS Banding Straps (Permanent Hold)
- 2" Minimum Longitudinal Overlap
- 1" Compressive Butt Joint
- 3" Wide Aluminum Foot Tape at 2nd Layer Transverse Butt Joints

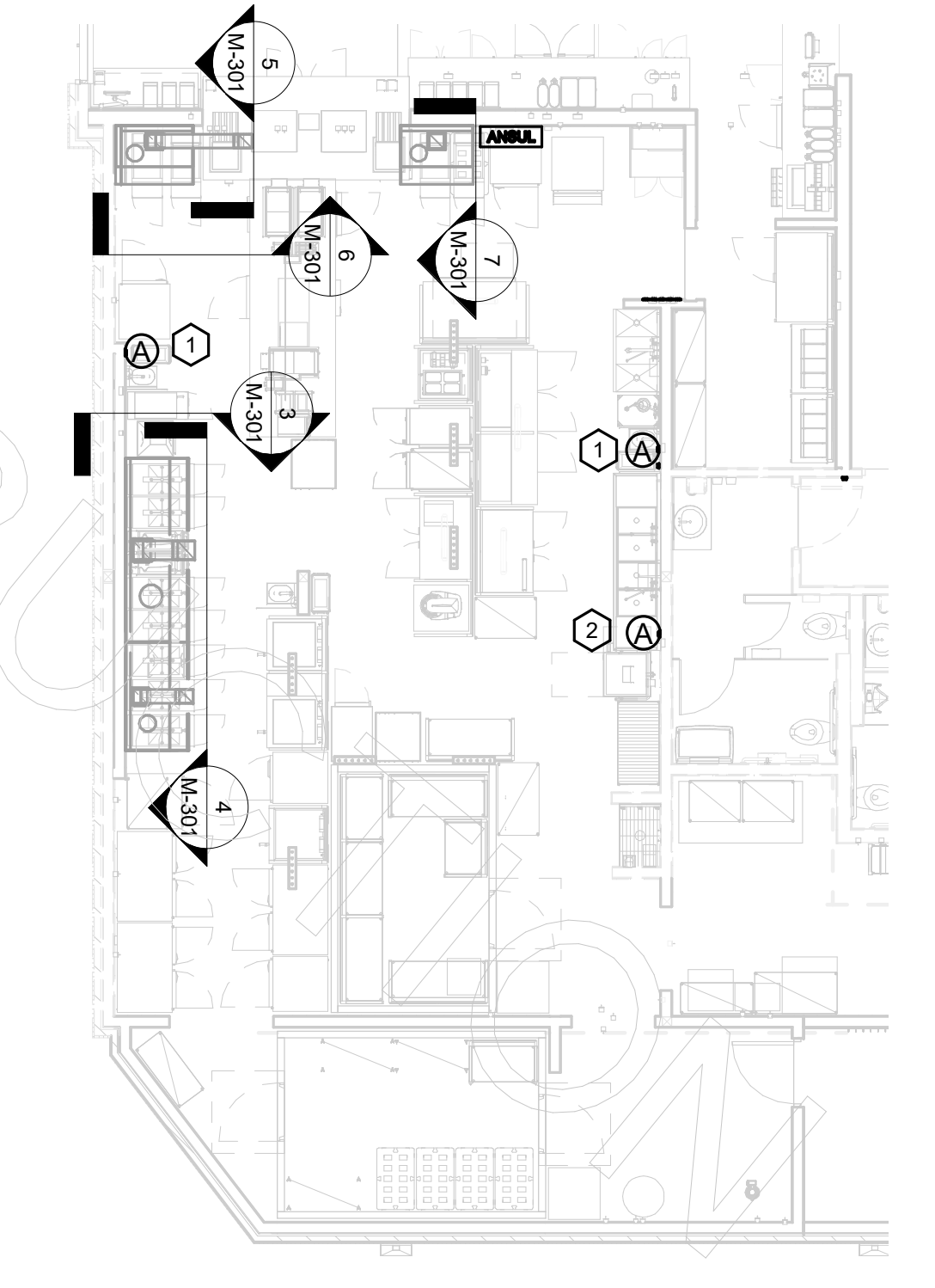
Butt Joint  
Adjacent Blanked Pieces

Legend:

DATE:	04-09-2011	PROJECT NO.:	FP-693
LOCATION:		DATE:	
BY:	S.A. Quality	DATE:	
BY:	N.T.S.	DATE:	

### KEY NOTES

- ANSUL PULL STATIONS SERVING HOOD#2 AND HOOD#3. LOCATE ANSUL PULL STATIONS BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE WHITE BAKELITE LABEL WITH 1/4" HIGH LETTERS INDICATING THE HOODS SERVED, I.E. "PASS-THRU HOODS". BOTH PULL STATIONS SERVE THE SAME REMOTE MOUNTED ANSUL TANKS.
- ANSUL PULL STATION SERVING HOOD#1L AND HOOD#1R. LOCATE ANSUL PULL STATION BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE WHITE BAKELITE LABEL WITH 1/4" HIGH LETTERS INDICATING THE HOODS SERVED, I.E. "MAIN COOKLINE HOODS".



1 HOOD LAYOUT  
1/8" = 1'-0"

**CHICK-FIL-A**  
**ST JOSEPH FSU**  
5303 N BELT HWY  
SAINT JOSEPH, MO 64506

**FSR#02309**

BUILDING TYPE / SIZE: S08C-R  
RELEASE: v2.20.08  
PRINTED FOR:  
**ISSUE FOR CONSTRUCTION**

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R  
DATE 12/01/2022  
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**HOOD DETAILS AND SCHEDULES**  
SHEET NUMBER

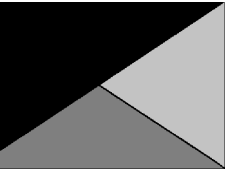
**M-301**

PROVIDE A PROFESSIONALLY LAMINATED COPY OF THESE DETAILS TO BE INSTALLED INSIDE THE ROOFTOP UNIT CONTROL CABINET. USE A SETON CHART FRAME STYLE #68624, TELEPHONE NUMBER 800-243-6624, FOR MOUNTING THE DETAIL. ATTACH THE FRAME TO THE INTERIOR OF THE UNIT IN PLAIN AND EASY VIEW OF THE CONTROLS SECTION. CONTACT ENGINEER OF RECORD FOR A REPRODUCIBLE COPY OF THE DETAIL.



**Chick-fil-A**

**Chick-fil-A**  
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Nashville, Tennessee 37214  
Telephone: (615) 255-5203



8/1/23

**CHICK-FIL-A**  
**ST JOSEPH FSU**

5303 N BELT HWY  
SAINT JOSEPH, MO 64506

**FSR#02309**

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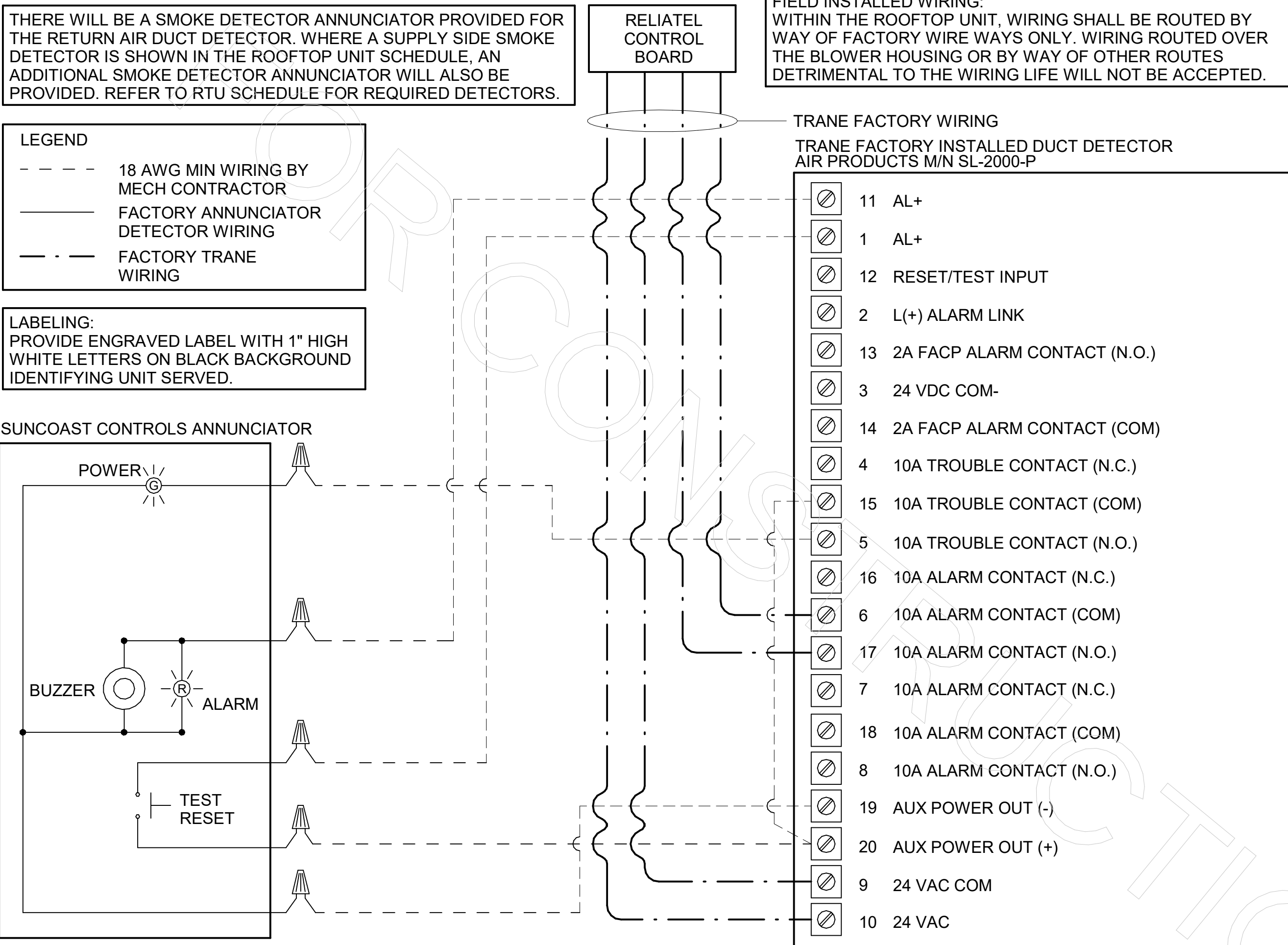
DESCRIPTION

DATE

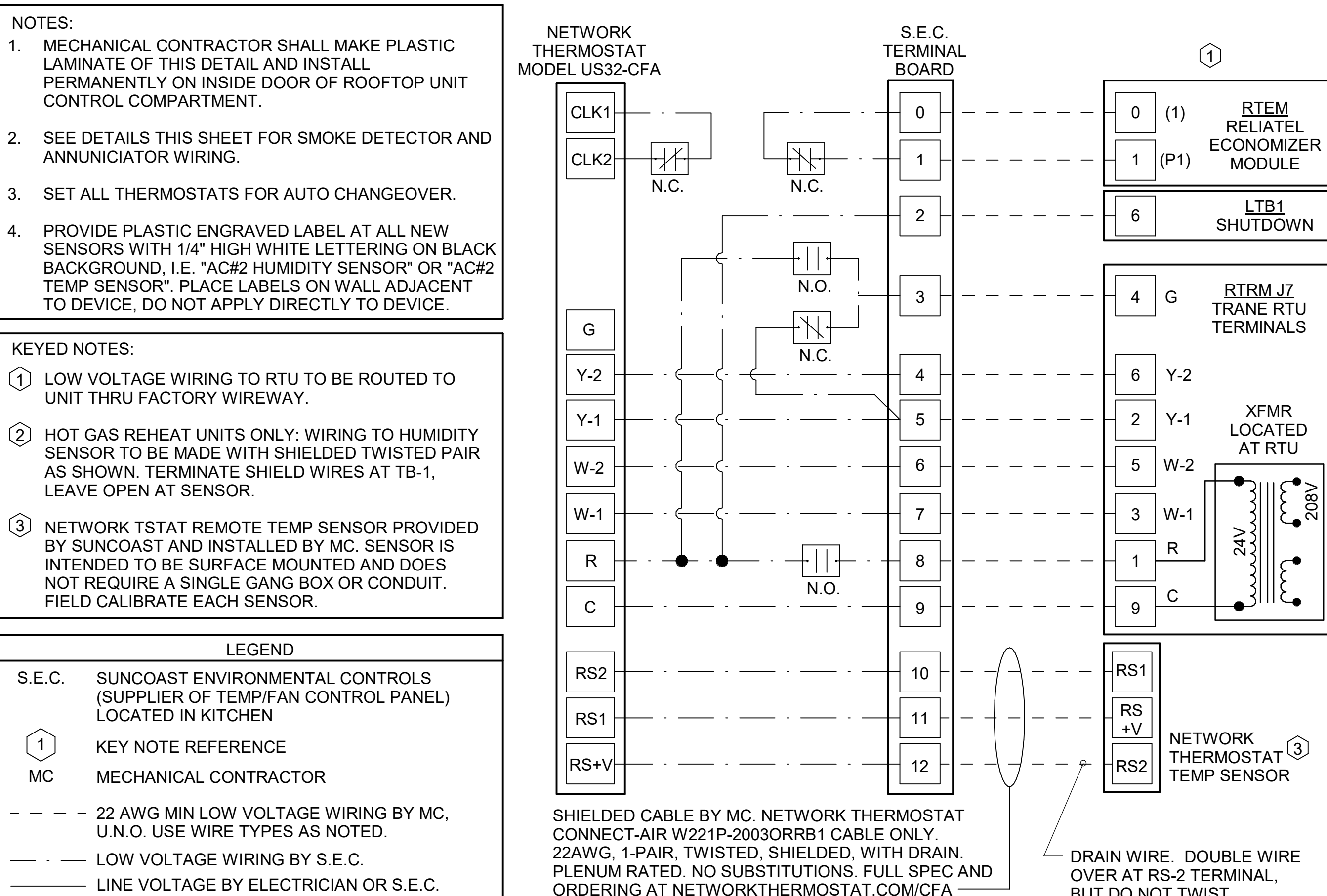
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DATE

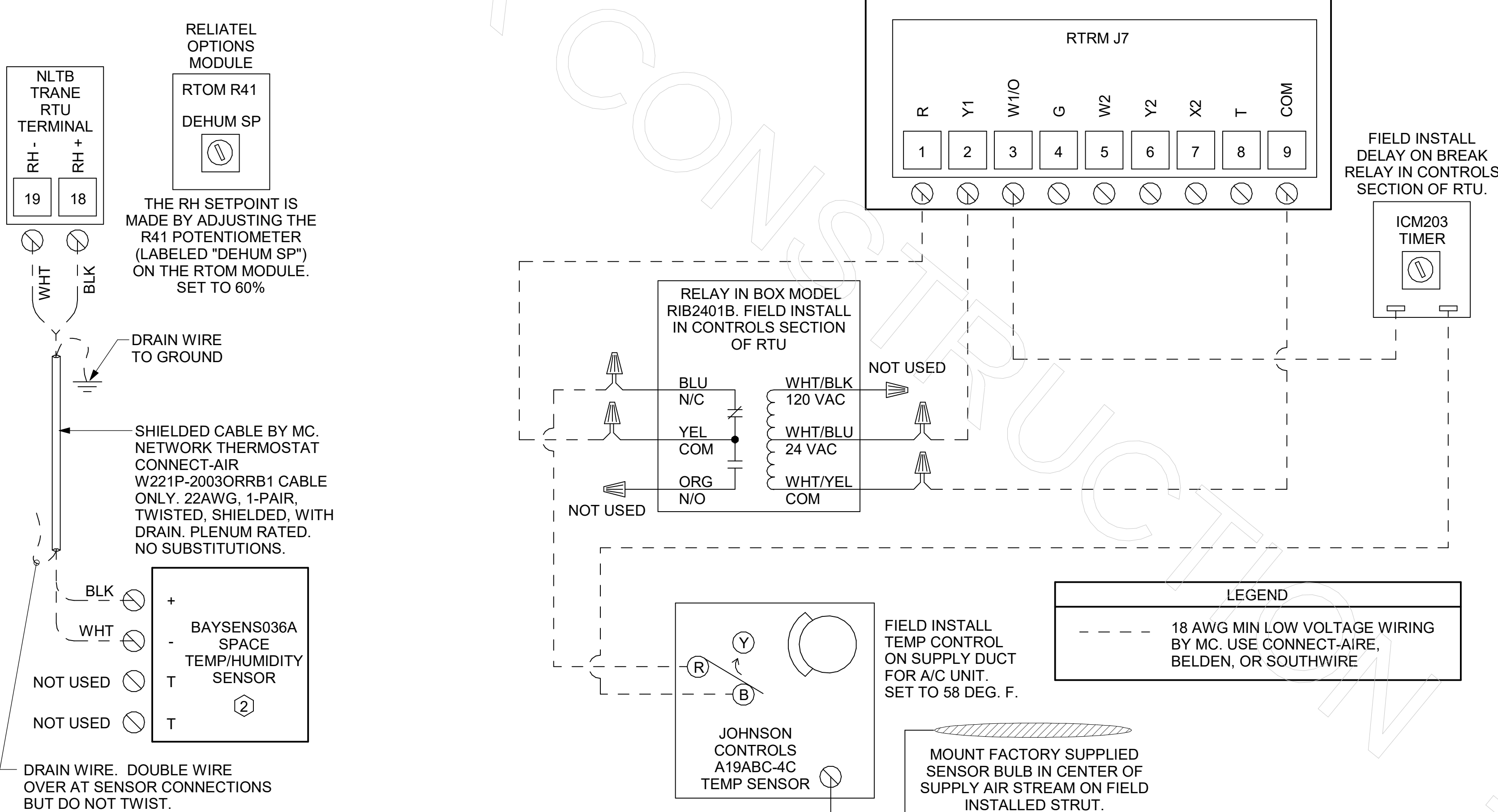
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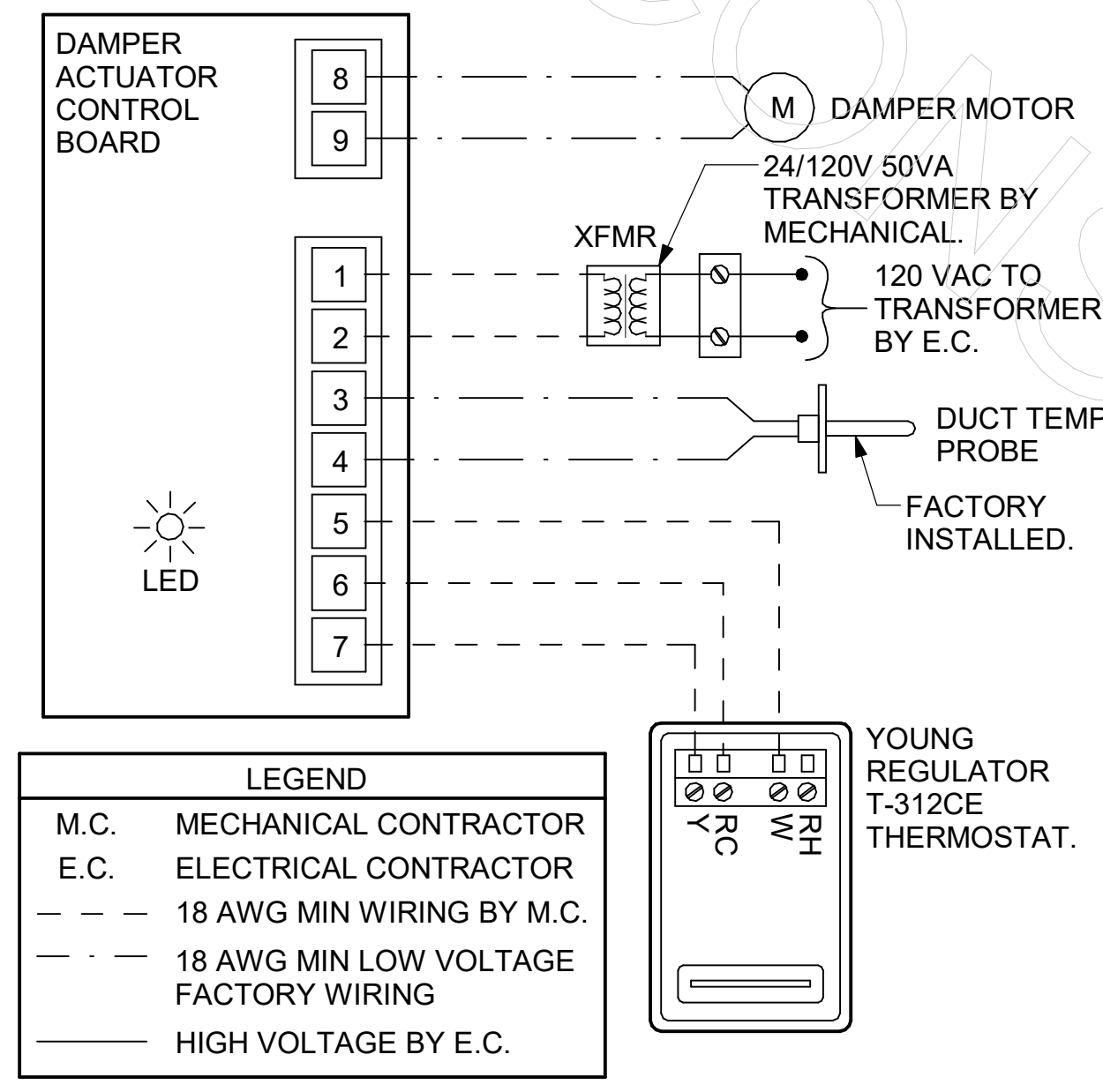
**1 SMOKE DETECTOR AND ANNUNCIATOR WIRING DIAGRAM - TRANE**  
NOT TO SCALE



**2 ROOFTOP UNIT CONTROL WIRING - TRANE**  
NOT TO SCALE



**4 TRANE FRESH AIR TEMPERING DETAIL**  
NOT TO SCALE



**1 VAV DAMPER AND TSTAT - MGRS OFFICE**  
NOT TO SCALE

**NOTES**

- SEE DWG M-201 FOR COMPONENT MODEL NUMBERS AND ORDERING INFORMATION.
- 120V POWER FOR TRANSFORMER TO BE NON-SWITCHED AND LIVE 24 HOURS EACH DAY.
- PROVIDE ALL NECESSARY WIRING AND COMPONENTS TO MAKE CONTROL AND POWER CONNECTIONS TO TRANSFORMER, ZONE DAMPER, AND THERMOSTAT PER MANUFACTURER'S IOM.
- PROVIDE MYLAR LABEL AT ALL NEW THERMOSTATS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKGROUND, I.E. "OFFICE THERMOSTAT". PLACE LABELS ON WALL ADJACENT TO DEVICE. DO NOT APPLY DIRECTLY ON DEVICE.

**SEQUENCE OF OPERATION**

- WHEN THE SUPPLY AIR TEMPERATURE IS LESS THAN 72F THE DAMPER WILL OPEN FULLY ON A RISE IN SPACE TEMPERATURE ABOVE THE SETPOINT.
- WHEN THE SUPPLY AIR TEMPERATURE IS GREATER THAN 71F THE DAMPER WILL OPEN FULLY ON A FALL IN SPACE TEMPERATURE BELOW THE SETPOINT.

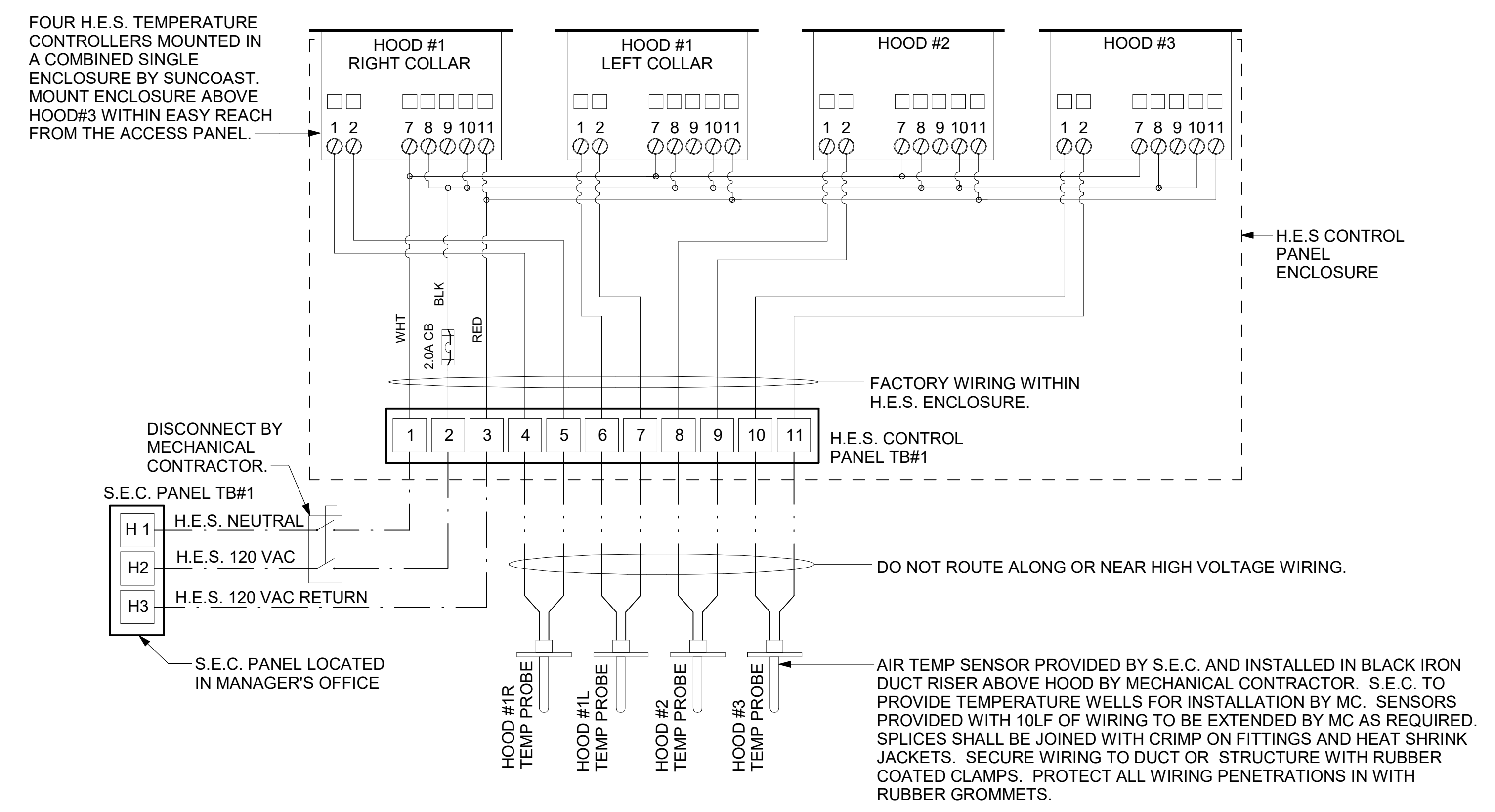
LEGEND	
S.E.C.	SUNCOAST ENVIRONMENTAL CONTROLS CFA-500 ENERGY MGT PANEL
H.E.S.	SUNCOAST ENVIRONMENTAL CONTROLS HOOD EXHAUST SAFETY CONTROLLER
M.C.	MECHANICAL CONTRACTOR
	18 AWG MIN UNSHIELDED LOW VOLTAGE WIRING BY MC, U.N.O.
	120 VAC WIRING BY MECHANICAL CONTRACTOR

**GENERAL NOTES**

- MECHANICAL CONTRACTOR TO PURCHASE THE H.E.S. CONTROL PANEL AND COMPONENTS FROM SUNCOAST ENVIRONMENTAL CONTROLS. TELEPHONE 877-544-6679. CONTROL COMPONENTS TO BE FACTORY MOUNTED IN LABELED NEMA-1 ENCLOSURES.
- MECHANICAL CONTRACTOR TO PROVIDE A PROFESSIONALLY LAMINATED COPY OF THIS DETAIL ATTACHED TO THE ENCLOSURE. CONTACT ENGINEER OF RECORD FOR A REPRODUCIBLE COPY OF THE DETAIL.

**S.E.C. H.E.S. OPERATION**

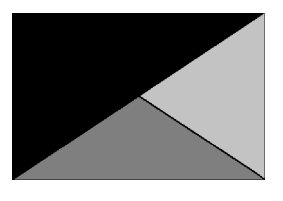
IN THE EVENT THAT ANY COOKING EQUIPMENT ITEM BENEATH ANY HOOD IS STARTED WITHOUT THE 'STORE SWITCH' BEING IN THE 'OCCUPIED' POSITION, THE H.E.S. CONTROLLER WILL SENSE THE HEAT RISE WITHIN THE HOOD CANOPY AND ENERGIZE THE EXHAUST FANS.



**2 HOOD FAN/EQUIPMENT INTERLOCK**  
NOT TO SCALE



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Telephone: (615) 255-5203



8/1/23

**CHICK-FIL-A**  
**ST JOSEPH FSU**  
5303 N BELT HWY  
SAINT JOSEPH, MO 64506

**FSR#02309**  
BUILDING TYPE / SIZE: S08C-R ALL  
RELEASE: v2.20.08  
PRINTED FOR:  
**ISSUE FOR CONSTRUCTION**  
REVISION SCHEDULE  
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R  
DATE 12/01/2022  
DRAWN BY DSF  
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SHEET  
**HVAC CONTROLS**  
SHEET NUMBER

**M-502**

FOR CONSTRUCTION

**COMcheck Software Version 4.1.5.1**  
**Envelope Compliance Certificate**

**Project Information**  
 Energy Code: 2018 IECC  
 Project Title: Chick-fil-A #2309  
 Location: Saint Joseph, Missouri  
 Climate Zone: 5a  
 Project Type: Addition

Construction Site: 5303 N Belt Hwy, Saint Joseph, MO 64506  
 Owner/Agent: Chick-fil-A, 5200 Buffington Road, Atlanta, GA 30349  
 Designer/Contractor: Kurzynske & Associates, 2705 Lebanon Pike - Suite One, Nashville, TN 37214, 615-255-5203

Building Area	Floor Area
1-Storage/Office (Dining, Cafeteria/Fast Food) - Nonresidential	400

**Envelope Assemblies**

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Roof 1: Insulation Entirely Above Deck, High Albedo Roof Required, (Bldg. Use 1 - Storage/Office)	400	---	30.0	0.032	0.032
Floor 1: Slab-On-Grade/Unvented, Vertical 2 ft., (Bldg. Use 1 - Storage/Office) (b)	103	---	10.0	0.540	0.540
<b>NORTH</b> Exterior Wall 1: Wood-Framed, 16" o.c., (Bldg. Use 1 - Storage/Office)	150	20.0	0.0	0.064	0.064
<b>EAST</b> Exterior Wall 2: Wood-Framed, 16" o.c., (Bldg. Use 1 - Storage/Office)	660	20.0	0.0	0.064	0.064
<b>SOUTH</b> Exterior Wall 3: Wood-Framed, 16" o.c., (Bldg. Use 1 - Storage/Office)	150	20.0	0.0	0.064	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.  
 (b) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

**Envelope PASSES: Design 0.0% better than code**

**Envelope Compliance Statement**  
 Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Mark Kurzynske, P.E. *Signature* 4/3/23  
 Name - Title Signature Date

Project Title: Chick-fil-A #2309 Report date: 03/09/23  
 Data filename: Z:\Shared\02 Prototypes\Chick-fil-A\2022\Remodels\22172.CD.R - St. Joseph, MO - 2309\zComCheck\CFA #2309 2018 IECC ComCheck.cck Page 1 of 9

**COMcheck Software Version 4.1.5.1**  
**Mechanical Compliance Certificate**

**Project Information**  
 Energy Code: 2018 IECC  
 Project Title: Chick-fil-A #2309  
 Location: Saint Joseph, Missouri  
 Climate Zone: 5a  
 Project Type: Addition

Construction Site: 5303 N Belt Hwy, Saint Joseph, MO 64506  
 Owner/Agent: Chick-fil-A, 5200 Buffington Road, Atlanta, GA 30349  
 Designer/Contractor: Kurzynske & Associates, 2705 Lebanon Pike - Suite One, Nashville, TN 37214, 615-255-5203

**Mechanical Systems List**

Quantity	System Type & Description
1	ACR1 (25 ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 324 kBtu/h Proposed Efficiency = 81.00% E1, Required Efficiency: 80.00 % E1 Cooling: 1 each - Single Package DX Unit, Capacity = 274 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 9.00 SEER, Required Efficiency: 9.00 EER = 11.4 IEER Fan System: ACR1 (Kitchen - Compliance (Motor nameplate HP method): Passes
1	ACR2 (8.5 ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 162 kBtu/h Proposed Efficiency = 81.00% E1, Required Efficiency: 80.00 % E1 or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 103 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency: 11.00 EER = 12.6 IEER Fan System: ACR2 (Dining - Compliance (Motor nameplate HP method): Passes
1	ACR3 (10 ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 184 kBtu/h Proposed Efficiency = 81.00% E1, Required Efficiency: 80.00 % E1 or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 124 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency: 11.00 EER = 12.6 IEER Fan System: ACR3 (Dining - Compliance (Motor nameplate HP method): Passes
1	ACR4 (7.5 ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 162 kBtu/h Proposed Efficiency = 81.00% E1, Required Efficiency: 80.00 % E1 or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 93 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 11.00 EER, Required Efficiency: 11.00 EER = 12.6 IEER Fan System: ACR4 (Dining - Compliance (Motor nameplate HP method): Passes

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**Quantity System Type & Description**

Fans: Supply Supply, Constant Volume, 2765 CFM, 3.1 motor nameplate hp, 0.0 fan efficiency grade Exhaust Exhaust, Constant Volume, 600 CFM, 0.8 motor nameplate hp, 0.0 fan efficiency grade
1 ACR5 (5 ton) (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 104 kBtu/h Proposed Efficiency = 80.00% E1, Required Efficiency: 80.00 % E1 or 80% AFUE Cooling: 1 each - Single Package DX Unit, Capacity = 99 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 17.20 SEER, Required Efficiency: 14.00 SEER Fan System: ACR5 (Front Dining - Compliance (Motor nameplate HP method): Passes
Fans: Supply Supply, Constant Volume, 1800 CFM, 1.0 motor nameplate hp, 0.0 fan efficiency grade Exhaust Exhaust, Constant Volume, 300 CFM, 0.3 motor nameplate hp, 0.0 fan efficiency grade
1 AHU1/CUR1 (Single Zone): Split System Heat Pump Heating Mode: Capacity = 40 kBtu/h Proposed Efficiency = 10.00 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 34 kBtu/h Proposed Efficiency = 16.20 SEER, Required Efficiency: 14.00 SEER Fan System: None
6 GIH (Infrared Heater) (Single Zone): Heating: 1 each - Radiant Heater, Gas, Capacity = 50 kBtu/h No minimum efficiency requirement applies Fan System: None
1 EH (Infrared Heater) (Single Zone): Heating: 1 each - Radiant Heater, Electric, Capacity = 20 kBtu/h No minimum efficiency requirement applies Fan System: None

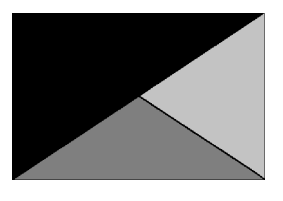
**Mechanical Compliance Statement**  
 Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Mark Kurzynske, P.E. *Signature* 4/3/23  
 Name - Title Signature Date

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 Data filename: Z:\Shared\02 Prototypes\Chick-fil-A\2022\Remodels\22172.CD.R - St. Joseph, MO - 2309\zComCheck\CFA #2309 2018 IECC ComCheck.cck Page 2 of 18



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8/1/23

**CHICK-FIL-A**  
**ST JOSEPH FSU**  
 5303 N BELT HWY  
 SAINT JOSEPH, MO 64506

**FSR#02309**

BUILDING TYPE / SIZE: S08C-R  
 RELEASE: v2.20.08

ISSUE FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R  
 DATE 12/01/2022

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**ENVELOPE & MECHANICAL COMCHECK**  
 SHEET NUMBER

**M-801**

1. SECTION C15000 - MECHANICAL SPECIFICATIONS

PART I - GENERAL

1.01 SCOPE

- A. IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY TO SECURE COORDINATION.
- B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF NFPA-96, NFPA-90A, NFPA-54, SMACNA, ASHRAE 90.1 AND ASHRAE 62.
- C. SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM. TEN FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OUTSIDE AIR INTAKES AND EXHAUST FANS AND PLUMBING VENT TERMINALS.
- D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM.
- E. UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO CONDITION ACCEPTABLE TO THE OWNERS REPRESENTATIVE. ALL EQUIPMENT, COMPONENTS, DUCTWORK, AND AIR DEVICES SHALL BE INSPECTED AND THOROUGHLY CLEANED, CLEARED OF DEBRIS, AND READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.
- F. CONTRACTOR SHALL PROVIDE TWO SETS OF 2" MERV 8 OR HIGHER THROW AWAY TYPE FILTERS. A CLEAN SET SHALL BE PROVIDED PRIOR TO TEST AND BALANCE AND AGAIN PRIOR TO OPENING.

PART II - PRODUCTS

2.01 HEATING AND COOLING EQUIPMENT (C15730)

- A. FURNISH AND INSTALL R-410A ROOFTOP SINGLE PACKAGE COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS BY TRANE AS SHOWN ON DRAWINGS. EQUIPMENT SHALL BE ARI CERTIFIED AND A.G.A. AND U.L. LISTED.
- B. ACCESSORIES SHALL INCLUDE LOW AND HIGH PRESSURE SAFETIES, CRANK CASE HEATER, OVERCURRENT AND OVERTEMPERATURE SAFETY, COMPRESSOR VIBRATION ISOLATORS, FILTER DRIERS, REFRIGERANT SERVICE VALVES, COIL HAIL GUARDS WHERE SCHEDULED, CONVENIENCE OUTLETS FACTORY INSTALLED ON SCHEDULED UNITS, UNIT MOUNTED NON-FUSED DISCONNECTS, LOW AMBIENT OPERATION DOWN TO 30 DEGREES F AND EVAPORATOR FREEZE STAT.
- C. COMPRESSORS SHALL BE FULLY HERMETIC SCROLL TYPE WITH INTERNAL VIBRATION ISOLATORS. COMPRESSORS SHALL BE PROVIDED WITH A MINIMUM FIVE (5) YEAR FULL WARRANTY.
- D. THE UNIT HEAT EXCHANGERS SHALL BE STEEL WITH ALUMINIZED STEEL COATING. HEATING CONTROLS SHALL CONSIST OF REDUNDANT GAS VALVES, INTERMITTENT PILOT WITH ELECTRONIC SPARK OR HOT PLATE IGNITION SYSTEM, COMBUSTION/EXHAUST FAN PROTECTED BY CENTRIFUGAL SWITCHES, HEAT LIMIT SWITCHES, TIME-DELAY RELAY, FLAME, AND PILOT SENSORS. ALL UNITS SHALL BE CAPABLE OF TWO STAGES OF HEAT. HEAT EXCHANGES SHALL HAVE TEN (10) YEAR WARRANTY. BURNERS SHALL BE ALUMINIZED IN-SHOT TYPE. THE DRAFT MOTOR SHALL BE MONITORED BY THE CONTROL SYSTEM.
- E. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT FOR EQUIPMENT WITH TRANE. PRICING FOR THE EQUIPMENT HAS BEEN ESTABLISHED IN ADVANCE. CONTACT TRANE NATIONAL ACCOUNTS AT 630-400-4285 FOR PRICING, ORDERING AND AVAILABILITY.

2.02 DUCTWORK (C15735) (SEE DWG M-301 FOR ADDITIONAL GREASE DUCT SYSTEM REQ.)

- A. ACCEPTABLE MANUFACTURERS OF INSULATION ARE MANVILLE, OWENS CORNING OR KNAUF.
- B. ALL DUCTWORK SHALL BE SHEET METAL, UNLESS NOTED OTHERWISE (U.N.O.).
- C. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS, U.N.O.
- D. CONSTRUCTION OF DUCTWORK SHALL MEET SMACNA 1" W.C. PRESSURE CLASS STANDARD AND RECOMMENDATIONS. SMACNA SHALL BE FOLLOWED WITH RESPECT TO GAGE THICKNESS, JOINTS, REINFORCING, CONSTRUCTION, INSTALLATION AND SUPPORT FOR PRESSURE CLASS STATED. ALL TRANSVERSE JOINTS IN RECTANGULAR AND ROUND DUCT INCLUDING DUCT CONNECTION TO AIR DEVICE COLLAR SHALL BE SEALED PER SMACNA SEAL CLASS C WITH U.L. DUCT MASTIC SEALANT APPROVED FOR INTENDED USE. DUCT TAPE IS NOT AN ACCEPTABLE SUBSTITUTE FOR MASTIC UNLESS EQUAL TO HARDCAST FOIL-GRIP 1402 BUTYL RUBBER ADHESIVE TAPE.
- E. DUCT SHALL BE SUPPORTED AT BASE OF DUCT DROPS. CURB DUCT RAILS ARE NOT INTENDED TO AND SHALL NOT SUPPORT THE WEIGHT OF THE DUCT.
- F. ALL DUCT INSULATION SHALL MEET MINIMUM R-VALUE REQUIRED BY ASHRAE 90.1 LATEST EDITION. ALL DUCT WRAP SHALL BE MINIMUM 2" THICK, 3/4 PCF AND 6 R. VALUE INSTALLED WITH EITHER A VAPOR BARRIER WITH MAXIMUM PERMEANCE 0.05 OR A MINIMUM 2 MIL ALUMINUM REINFORCED FOIL/KRAFT FACING.
- G. ALL DUCT DROPS FROM THE ROOFTOP UNITS SHALL BE EXTERNALLY INSULATED.
- H. SUPPLY AND RETURN AIR DUCTWORK SERVING ALL AREAS SHALL BE EXTERNALLY INSULATED.
- I. ALL AIR CONVEYANCE COMPONENTS SUCH AS, BUT NOT LIMITED TO DUCT, DUCT PLENUMS, GRILLES/DIFFUSERS, BACK PANS, AND BOOTS SHALL BE INSULATED. INSULATION TYPE IS COVERED ELSEWHERE IN THIS SPECIFICATION.
- J. RESTROOM RECTANGULAR EXHAUST AIR DUCTWORK SHALL BE LINED WITH 1" THICK, 1-1/2 PCF INSULATION. RESTROOM ROUND EXHAUST DUCT SHALL BE EXTERNALLY INSULATED PER SECTION 2.02F.
- K. TRUNK DUCTS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND U.L. APPROVED FLEXIBLE CONNECTORS INSTALLED AT THE TOP OF BOTH SUPPLY AND RETURN DROPS.
- L. INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR RUNOUTS TO GRILLES AND DIFFUSERS ONLY IN THE HORIZONTAL POSITION AND IN MAXIMUM LENGTHS OF 4'-0", NO EXCEPTIONS. SEE TAKE-OFF DETAIL ON DRAWING M-401.
- M. CONSTRUCTION OF FLEXIBLE DUCTWORK SHALL INCLUDE SPIRAL METAL HELIX BONDED TO A POLYESTER CORE, FIBERGLASS INSULATION WITH POLYETHYLENE OR MYLAR VAPOR BARRIER. ALL COMPONENTS SHALL HAVE APPROPRIATE U.L. APPROVAL AND SHALL BE EQUIVALENT TO THERMAFLEX MKE.
- N. FLEXIBLE DUCT SHALL BE INSTALLED PER THE "ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS, 4TH ED" USING FOIL TAPE AND DRAWBAND ON THE INNER CORE AND TAPE OR DRAWBAND ON THE OUTER JACKET.
- O. DUCT TAPE SHALL BE EQUAL TO FASSON 181-B FX, 2-1/2" WIDE.
- P. SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT 90 DEGREE TURNS IN SUPPLY DUCTWORK WHERE ANY ONE DIMENSION IS GREATER THAN 12".
- Q. RADIUS ELBOWS MAY BE SUBSTITUTED FOR 90 DEGREE ELBOWS AT THE DISCRETION OF THE CONTRACTOR. CENTERLINE RADIUS EQUAL TO, R=W PER FIGURE NO. 4-2 IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS.
- R. EXTERNAL INSULATION ON BOTTOM OF DUCTS 24" OR WIDER SHALL BE SUPPORTED WITH STICK PINS ON 18" CENTERS. STICK PIN WASHERS SHALL BE COVERED WITH DUCT TAPE OR MASTIC.

2.03 CONTROLS (C15735)

- A. SYSTEMS SHALL BE COMPLETE WITH CONNECTIONS TO CFA-500 TEMPERATURE CONTROL PANEL AS MANUFACTURED BY SUNCOAST ENVIRONMENTAL CONTROLS (S.E.C.) (PH: 877-544-6679). THE PANEL IS PROVIDED AND MOUNTED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING TERMINATIONS ARE BY THE MECHANICAL CONTRACTOR.
- B. THE SMOKE DETECTORS SHALL BE FACTORY INSTALLED AND WIRED BY THE ROOFTOP UNIT MANUFACTURER.
- C. A FACTORY INSTALLED SMOKE DETECTOR IN THE RETURN AIR SECTION OF EACH AIR CONDITIONING UNIT SHALL STOP THE INDOOR FAN AND CLOSE THE OUTSIDE AIR DAMPER IN THE EVENT OF EXCESSIVE TEMPERATURE OR SMOKE. SMOKE DETECTOR SHALL BE LOCATED PRIOR TO ANY EXHAUST FROM THE BUILDING OR MIXING WITH FRESH AIR MAKE-UP. UPON DETECTION, THE SYSTEM SHALL NOT RESTART UNTIL THE DEVICE IS MANUALLY RESET. DEVICES SHALL BE LOCATED WHERE THEY CAN BE EASILY ACCESSED AND WHERE CLEAR OF FILTERS.
- D. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH SUNCOAST ENVIRONMENTAL CONTROLS FOR THE SMOKE DETECTOR TEST/RESET ANNUNCIATOR STATIONS. THE TEST/RESET STATIONS WILL BE PURCHASED BY THE ELECTRICAL CONTRACTOR AS A PART OF A NATIONAL ACCOUNT PACKAGE AND TURNED OVER TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.
- E. THE REMOTE TEST/RESET ANNUNCIATORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. INSTALLATION BY MECHANICAL SHALL INCLUDE MOUNTING OF THE ANNUNCIATORS AND ALL WIRING FROM EACH DEVICE TO THE RTU. ELECTRICAL WILL PROVIDE A JUNCTION BOX IN THE WALL WITH 1/2" CONDUIT STUBBED UP ABOVE THE CEILING FOR EACH REMOTE TEST STATION AS SHOWN ON THE ELECTRICAL PLANS. ANNUNCIATOR SHALL BE SUNCOAST CONTROLS REMOTE TEST/RESET STATION WITH POWER LED, TROUBLE LED, ALARM LED, 90DB HORN AND TEST/RESET BUTTON.
- F. THE RESTROOM FAN SHALL BE INTERLOCKED TO THE LIGHTS SERVING THE MEN AND WOMEN'S RESTROOMS. THE HOOD FANS SHALL BE CONTROLLED VIA THE SUNCOAST CFA-500 CONTROL PANEL. WIRING, RELAYS AND SWITCHES FOR CONTROL OF ALL FANS ARE BY ELECTRICAL CONTRACTOR.
- G. TRANE UNITS - THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENTAL CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. A REMOTE TEMPERATURE SENSOR FOR EACH THERMOSTAT IS ALSO PROVIDED. MECHANICAL CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN THE THERMOSTAT, THE REMOTE SENSOR AND THE ROOFTOP UNIT.
- H. MECHANICAL CONTRACTOR SHALL INSTALL CONTROL WIRING IN 1/2" CONDUIT WHERE REQUIRED BY CODE. WHERE NOT REQUIRED TO BE IN CONDUIT, ALL WIRING SHALL BE RUN PARALLEL TO STRUCTURAL MEMBERS OR PERPENDICULAR WITH NO DIAGONAL ROUTING. ALL WIRING SHALL BE SECURED TO THE FRAMING TO PREVENT SAGGING IN RUNS. WIRING TO ROOFTOP UNITS SHALL BE ROUTED THROUGH THE FACTORY THRU-BASE FITTING IN THE UNIT BASE. NO SPLICING OF WIRING WILL BE ACCEPTED. ALL WIRING ABOVE THE ROOF SHALL BE INSTALLED IN EXTERIOR GRADE FLEXIBLE CONDUIT. ALL CONTROL WIRING AND CONTROL WIRING CONDUIT SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF NEC. ALL LOW VOLTAGE CONTROL WIRING SHALL BE NO LESS THAN 18 AWG MIN. CONTROL WIRING CONDUCTORS SHALL BE SIZED TO ACCOUNT FOR LOAD AND LENGTH OF RUN TO ALLOW SUFFICIENT VOLTAGE AVAILABLE AT CONTROLLED DEVICE TO OPERATE THE SYSTEM RELIABLY.

PART III - EXECUTION

3.01 SCOPE

- A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.
- B. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH FOLLOWING ORIENTATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.
- C. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- D. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER AND/OR MANUFACTURER. THIS SHALL INCLUDE RE-TORQUE OF ALL FIELD AND FACTORY HIGH VOLTAGE CONNECTIONS.

3.02 LEED PROJECTS

- A. CONTRACTOR SHALL COMPLETE RECEIPT INSPECTION CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN WITHIN 5 DAYS OF RECEIVING EQUIPMENT ON SITE.
- B. CONTRACTOR SHALL COMPLETE PRE-FUNCTIONAL CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN. CHECKLISTS SHALL BE RETURNED AT LEAST 5 DAYS PRIOR TO SCHEDULING FUNCTIONAL PERFORMANCE TESTING.
- C. CONTRACTOR SHALL PROVIDE A TECHNICIAN TO ASSIST THE THIRD PARTY COMMISSIONING AUTHORITY WITH FUNCTIONAL TESTING. FUNCTIONAL TESTING SHALL OCCUR AFTER ALL CONTROLS HAVE BEEN INSTALLED AND VERIFIED AND AFTER TEST AND BALANCE IS COMPLETE. THE FUNCTIONAL PERFORMANCE TEST PROCEDURES CAN BE FOUND IN THE COMMISSIONING PLAN.
- D. IF THE TOTAL TIME REQUIRED TO CORRECT PROBLEMS DURING TESTING IS GREATER THAN FORTY-FIVE (45) MINUTES (UNLESS EXTENUATING CIRCUMSTANCES EXIST), THE TEST SHALL BE CONSIDERED FAILED AND MUST BE REPEATED IN ITS ENTIRETY.
- E. RE-TESTING: DURING THE COURSE OF THE RETEST, IF AT ANY POINT A MAJOR DEFICIENCY IS DISCOVERED, THE TEST WILL BE STOPPED. REPEAT TESTS UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. IF MORE THAN TWO FUNCTIONAL PERFORMANCE TESTS (ONE INITIAL TEST AND ONE RETEST) FOR ANY TYPE OF EQUIPMENT DUE TO ISSUES THAT THE CONTRACTOR HAD DIRECT OR INDIRECT CONTROL OVER ARE REQUIRED, THE COSTS FOR THE CxA TO WITNESS RETESTING OF SIMILAR TYPES OF EQUIPMENT UNTIL SATISFACTORY RESULTS ARE OBTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

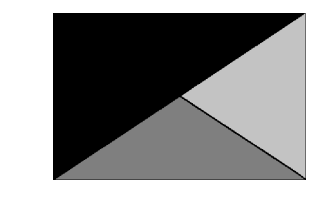
3.03 TEST & BALANCE

- A. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NEBB, NBC OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.
- B. ALL EQUIPMENT TO BE BALANCED MUST HAVE GONE THRU SUCCESSFUL START-UP PROCEDURE BY THE MECHANICAL CONTRACTOR (MC) PRIOR TO TAB VISIT.
- C. THE FLOOR OF THE RESTAURANT SHALL BE CLEARED OF DEBRIS, STAGED CONSTRUCTION MATERIALS, EQUIPMENT, ETC. WHICH MAY, IN THE OPINION OF THE TAB TECHNICIAN, OBSTRUCT ACCESS TO AIR DISTRIBUTION COMPONENTS IN AND ABOVE THE CEILING.
- D. EQUIPMENT ACCESS PANELS, DUCT AIR DEVICES SUCH AS BALANCING DAMPERS AND ACTUATORS SHALL BE ACCESSIBLE AND CLEAR OF PIPING, CONDUIT, FRAMING, SUPPORTS ETC....
- E. PROVIDE AN 8 FT PORTABLE A-FRAME STYLE LADDER DEDICATED FOR THE TAB TECHNICIAN'S USE DURING THE ENTIRE TAB EFFORT DURATION.
- F. THE MC SHALL BE AVAILABLE DURING THE ENTIRE DURATION OF THE TAB EFFORT AND HAVE ON-SITE THE RESOURCES AND TOOLS TO MAKE CORRECTIONS AS NEEDED UNDER THE DIRECTION OF THE TAB TECHNICIAN.

NATIONAL ACCOUNTS	
1.	TRANE EQUIPMENT - CONTACT TRANE NATIONAL ACCOUNTS AT 630-400-4285 FOR PRICING, ORDERING AND AVAILABILITY. TRANE EQUIPMENT NOT PURCHASED THRU TRANE NATIONAL ACCOUNTS WILL NOT BE ACCEPTED.
2.	LOREN COOK FAN AND CURB PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN/CURB PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS AND CURBS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
3.	PRICE AIR DEVICES - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
4.	AIR DOORS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
5.	HALTON HOODS - CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
6.	ROYAL METAL PRODUCTS START COLLARS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE START COLLARS DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. START COLLARS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
7.	SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
8.	CIRCULATING FAN PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
9.	BROMIC ELECTRIC HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER DIRECTLY FROM BROMIC COMPANY. CONTACT BLAKE RUSSIE AT 888-381-4860 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU BROMIC COMPANY WILL NOT BE ACCEPTED.



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8/1/23

**CHICK-FIL-A**  
**ST JOSEPH FSU**  
 5303 N BELT HWY  
 SAINT JOSEPH, MO 64506

**FSR#02309**

BUILDING TYPE / SIZE: S08C-R  
 RELEASE: v2.20.08  
 PRINTED FOR:  
**ISSUE FOR CONSTRUCTION**

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R  
 DATE 12/01/2022  
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**MECHANICAL SPECIFICATIONS**  
 SHEET NUMBER  
**M-901**

