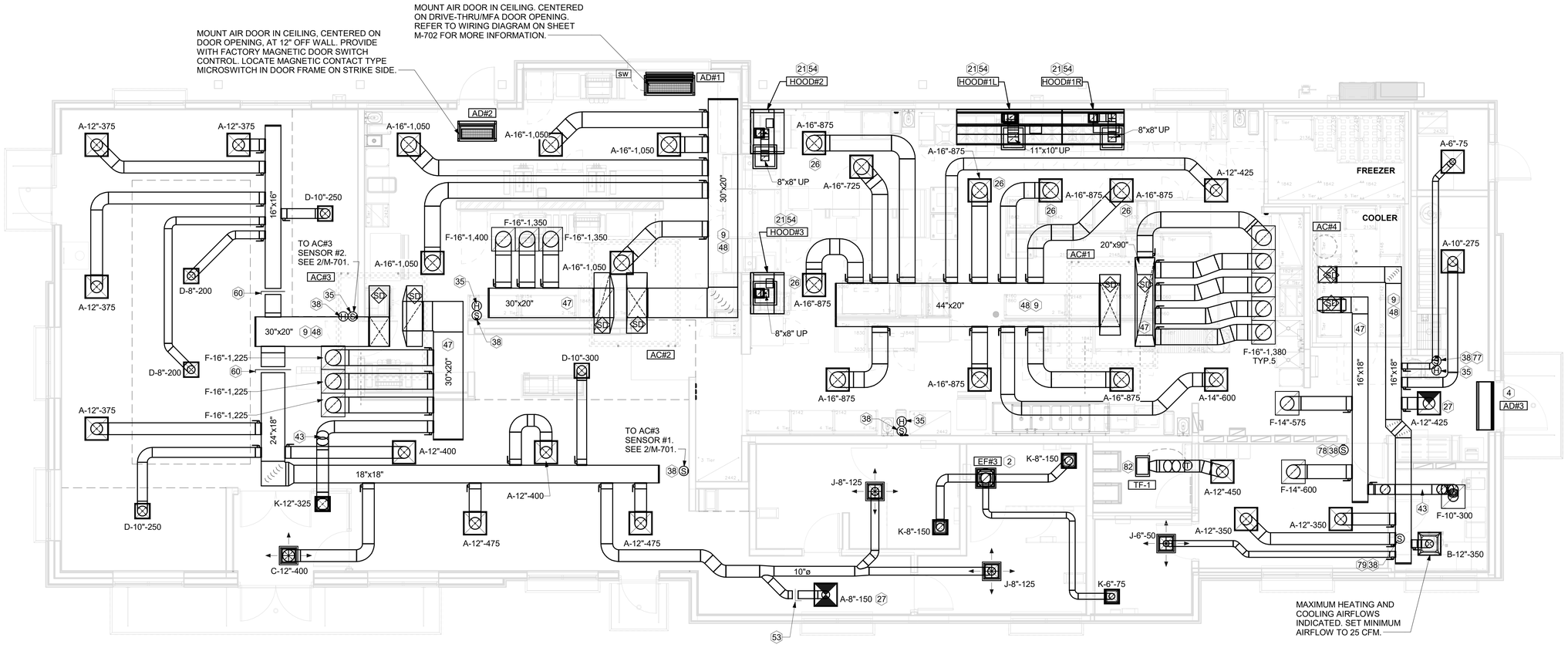
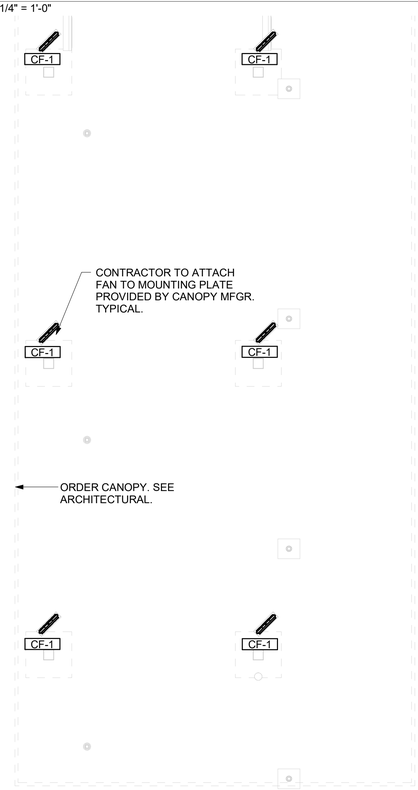


1 EQUIPMENT AND DUCTWORK PLAN

1/4" = 1'-0"



2 MECHANICAL FLOOR PLAN - ORDER CANOPY

1/4" = 1'-0"

AIR BALANCE SCHEDULE

Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1	8,750	6,900	1,850	0	
AC#2	5,250	4,100	1,150	0	
AC#3	5,250	4,000	1,250	0	
AC#4	1,875	1,475	400	0	
EF#1	0	0	0	1,913	
EF#2	0	0	0	1,402	
EF#3	0	0	0	375	
	21,125	16,475	4,650	3,690	960

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-702 FOR MORE INFORMATION.

KEY NOTES

2	10X10 UP THRU ROOF.
4	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.
9	BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
21	HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-201 FOR LOCATION.
26	MECHANICAL CONTRACTOR TO ADJUST PATTERN DEFLECTORS TO THROW STRAIGHT DOWN.
27	MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
35	MOUNT REMOTE HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
38	MOUNT REMOTE SENSOR ON WALL AT 5-0" AFF U.N.O. AND ROUTE WIRING BACK TO SUNCOAST TEMP CONTROL PANEL. FOR SENSOR SERVING AC#1, COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT.
43	ROUTE DUCT WITHIN STRUCTURE.
47	TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. SEE DETAIL 6/M-501 FOR REQUIRED TRANSITION GEOMETRY. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITHOUT TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP 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).
48	TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITH TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP 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).
53	RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
54	SEE ELEVATIONS ON M-201 FOR CJ FAN DUCTING REQUIREMENT.
60	PROVIDE RUSKIN CD35 MANUAL BALANCING DAMPER WITH 6" MAXIMUM BLADE. OPPOSED BLADE ACTION, LOCKING QUADRANT HANDLE WITH 2" STANDOFF AND 16 GA GALVANIZED BLADE AND FRAME CONSTRUCTION.
77	TO AC#4, SENSOR #1. SEE 2/M-701.
78	TO AC#4, SENSOR #2. SEE 2/M-701.
79	TO AC#4, SENSOR #3. SEE 2/M-701.
82	CEILING MOUNTED RECIRCULATING FAN. ROUTE 12" DUCT AND DISCHARGE AT TYPE 'A' DIFFUSER IN TEAM ROOM AS SHOWN.

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FLORIDA LICENSE # 53568
MARK T. KURZYNSKE LICENSE NO. 53568 STATE OF FLORIDA PROFESSIONAL ENGINEER
12/08/23

CHICK-FIL-A WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.05
PRINTED FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23081.CC.S
DATE 10/02/2023
DRAWN BY BLM

SHEET
EQUIPMENT AND DUCTWORK PLAN

SHEET NUMBER
M-101

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12/5/2023 9:23:28 AM
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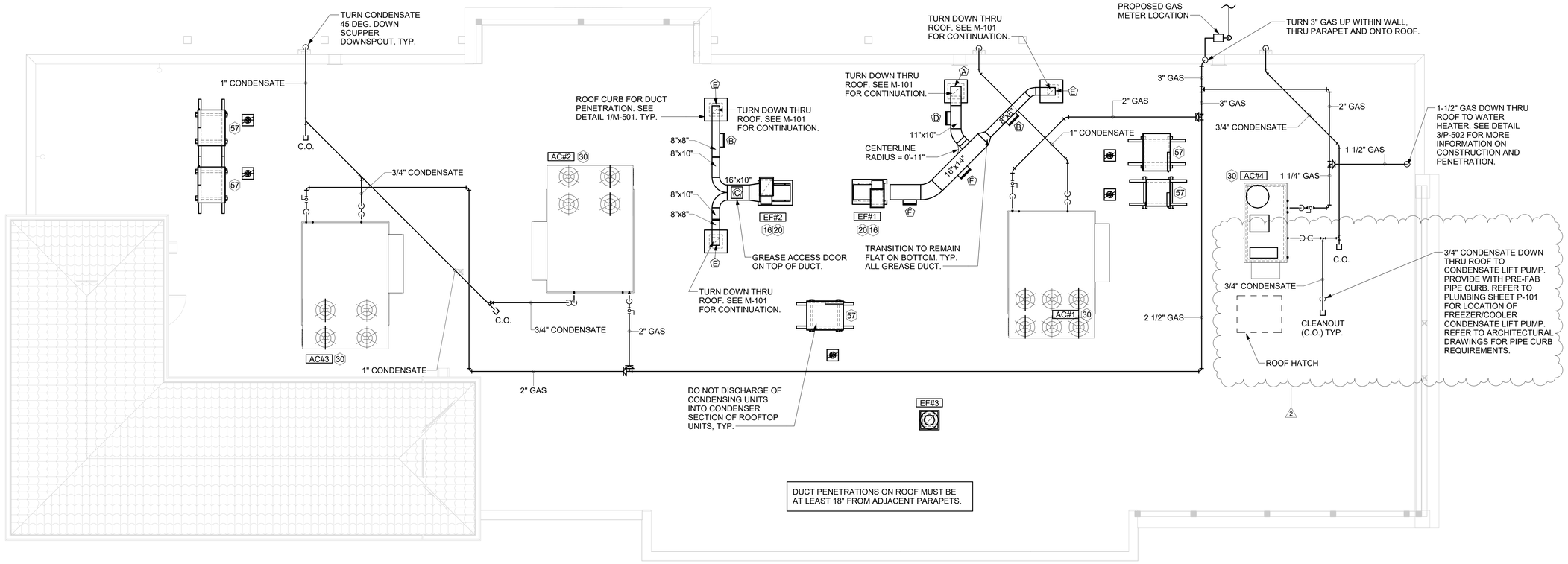


1 EQUIPMENT ROOF PLAN

1/4" = 1'-0"

KEY NOTES

16 FABRICATE DISCHARGE AIR NOZZLE. VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. SEE DETAIL 1/M-501.

20 GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE 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 OR 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 RADIUSED ELBOW LOCATED AT THE DUCT CURB AS NEEDED IN ORDER TO CENTER THE DUCT ON THE FAN INLET.

30 MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.

57 GC SHALL PROVIDE EQUIPMENT STANDS AS MANUFACTURERED BY AVCOA OR EQUAL. STANDS SHALL BE INSTALLED PRIOR TO ROOF INSULATION SO THAT THE INSULATION IS CONTINUOUS UP TO THE PIPE POSTS. POSTS SHALL BE FLASHED IN ACCORDANCE WITH ROOFING MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE BLOCKING BELOW THE ROOF DECK AS REQUIRED.

3. GAS LOAD SCHEDULE

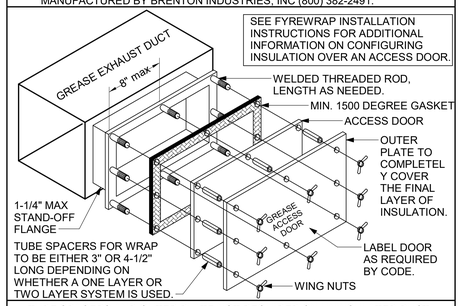
EQUIPMENT	GAS LOAD
AC#1	260,000 BTUS
AC#2	260,000 BTUS
AC#3	260,000 BTUS
AC#4	108,000 BTUS
WATER HEATER	398,000 BTUS
TOTAL CONNECTED LOAD	1,286,000 BTUS
REMARKS:	1) EQUIVALENT TO 1,286.0 CFH 2) 7" W.C. DELIVERY PRESSURE 3) DEVELOPED LENGTH: 185 FT. (METER TO AC#3.) 4) SIZED PER TABLE 402.4(2) OF FLORIDA FUEL GAS CODE.

2

GREASE ACCESS DOOR SCHEDULE

MARK	OPENING SIZE	DOOR SIZE	REMARKS
A	9H X 14W	11H X 16W	1
B	5.5H X 14W	7.5H X 16W	1
C	12H X 12W	14H X 14W	1
D	7.5H X 14W	9.5H X 16W	1
E	6H X 14W	8H X 16W	1
F	11.5H X 14W	13.5H 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.



TUBE SPACERS AND OUTER PLATE NOT REQUIRED ON UNINSULATED DUCT.

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12/08/23

CHICK-FIL-A WEST SANFORD

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FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.05
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
2	11/17/2023	AHJ Review

CONSULTANT PROJECT # 23081.CC.S
DATE 10/02/2023
DRAWN BY BLM

SHEET
EQUIPMENT ROOF PLAN

SHEET NUMBER
M-102

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12/5/2023 9:23:31 AM
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ROOFTOP UNIT SCHEDULE

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	SUPPLY	OA	HP	# OF FANS	ESP	EER	IEER/ SEER	VOLTAGE	PHASE	MCA	MOCP	MODEL	MANUFACTURER	REMARKS
AC#1	287.5	212.8	260	211	8,750 CFM	1,850 CFM	7.5 hp	1	0.8 in-wg	10.3	14.5	208 V	3	137 A	150 A	LGT300S4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15
AC#2	177.4	128.6	260	211	5,250 CFM	1,150 CFM	5 hp	1	0.8 in-wg	12	15	208 V	3	79 A	90 A	LGT180H4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15
AC#3	177.4	128.6	260	211	5,250 CFM	1,250 CFM	5 hp	1	0.8 in-wg	12	15	208 V	3	79 A	90 A	LGT180H4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15
AC#4	61.6	44.4	108	87	1,875 CFM	400 CFM	1 hp	1	0.8 in-wg	12.7	17.1	208 V	3	28 A	40 A	LGT060H4E	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15

NOTES
- MECHANICAL CONTRACTOR TO VERIFY TRANE SUBMITTAL WITH CONSTRUCTION DOCUMENTS. NATIONAL ACCOUNTS - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.

REMARKS
1. DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST.
2. DIFFERENTIAL ENTHALPY ECONOMIZER WITH BAROMETRIC EXHAUST.
3. 14" HIGH ROOF CURB. PROVIDE WITH FACTORY RTU RESTRAINT CLIP KIT FOR PROJECT WINDSPEED. WINDSPEED = 135MPH.
4. SEE DETAIL 2/M-702 FOR SETTING OF CONTROL PARAMETERS BY MC.
5. FACTORY INSTALLED 115V GFI SERVICE OUTLET. SEPERATE 115V CIRCUIT PROVIDED BY ELECTRICAL CONTRACTOR.
6. FACTORY INSTALLED SUPPLY & RETURN AIR SMOKE DETECTORS.
7. FACTORY INSTALLED NON-FUSED DISCONNECT.
8. 2" MERV 8 THROW AWAY FILTERS.
9. HINGED PANELS FOR ACCESS TO FILTER(S), FAN BLOWER & MOTOR, COMPRESSOR(S) ACCESS AND CONTROLS.
10. FACTORY INSTALLED COIL HAIL GUARD.
11. HOT GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
12. FACTORY PROVIDED, FIELD INSTALLED BELT TENSIONER.
13. FACTORY CONFIGURED PHASE LOSS PROTECTION.
14. FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
15. FACTORY HIGH FAULT SCCR (100K).

HOOD SCHEDULE

MARK	EXHAUST CFM	SP @ TAB PORT	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L	1,204 CFM	0.13 in-wg	80 @ 0.30"	BACKSHELF	14"X8"	107"	36"	38"	HALTON	KVL-2 IC	1
HOOD#1R	709 CFM	0.13 in-wg	47 @ 0.30"	BACKSHELF	8"X8"	63"	36"	38"	HALTON	KVL-2 IC	1
HOOD#2	701 CFM	0.3 in-wg	30 @ 0.29"	BACKSHELF	8"X8"	45"	34"	38"	HALTON	KVL-C IC	1
HOOD#3	701 CFM	0.3 in-wg	30 @ 0.29"	BACKSHELF	8"X8"	42"	34"	38"	HALTON	KVL-C IC	1

NOTES
- DIMENSIONS OF HOODS INCLUDE BACK AND SIDE SPACERS (HEIGHT DOES NOT INCLUDE CLOSURE PANELS). NATIONAL ACCOUNTS - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.

REMARKS
1. REFER TO HOOD SHOP DRAWINGS FOR HOOD OPTIONS AND CONSTRUCTION. HOOD SHOP DRAWINGS ARE INCLUDED FOR REFERENCE ON SHEET MH-1.1 AND MH-1.2.

FAN SCHEDULE

MARK	FAN CFM	ESP	MOTOR RPM	HP	AREA SERVED	VOLTAGE	PHASE	FLA	MOCP	MODEL	MANUFACTURER	REMARKS
CF-1	1,900	0.01 in-wg	1,625 RPM	0.1 hp	OUTDOOR CANOPY	120 V	1	1.1 A	20 A	U-18-TE-HD	TPI	
EF#1	1,913	0.75 in-wg	1,331 RPM	0.75 hp	HOOD#1	120 V	1	13.8 A	25 A	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11
EF#2	1,402	0.95 in-wg	1,199 RPM	0.75 hp	HOOD#2 & HOOD#3	120 V	1	13.8 A	25 A	150 CPS	LOREN COOK	1,2,3,4,5,6,7,8,9,10,11
EF#3	375	0.375 in-wg	1,550 RPM	0.125 hp	RESTROOMS	120 V	1	9.5 A	20 A	ACED-90C15DH	LOREN COOK	3,11,12,13,14,15,16
TF-1	450	0.3 in-wg	1,144 RPM	0.33 hp	TECH CLOSET	120 V	1	4.4 A	20 A	GCVF-700	LOREN COOK	17, 18, 19

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.
- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED.

REMARKS
1. UPBLAST, ARRANGEMENT 10, CCW ROTATION. SEE PLANS TO CONFIRM CONFIGURATION.
2. FACTORY ALUMINUM FAN WHEEL.
3. FACTORY INSTALLED PREWIRED NON-FUSED DISCONNECT.
4. FACTORY STEEL INLET FLANGE AND INLET COMPANION FLANGE.
5. INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.
6. FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.
7. FACTORY DRAIN CONNECTION.
8. FACTORY BOLTED ACCESS DOOR ON SCROLL.
9. FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE AND SPARE BELT..
10. FACTORY STEEL OUTLET COMPANION FLANGE.
11. INTEGRAL THERMAL OVERLOAD WITH AUTOMATIC RESET.
12. BIRDSCREEN.
13. BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 5/M-501.
14. STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
15. 12" HIGH CURB.
16. FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
17. PROVIDE NEMA 1 PREWIRED DISCONNECT.
18. INTEGRAL POTENTIOMETER ON FAN MOTOR. SET TO FULL SPEED.
19. PROVIDE THERMOSTAT / TEMPERATURE CONTROLLER. SET TO 76°F.
20. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
21. PROVIDE WITH ON/OFF SWITCH.

AIR DEVICE SCHEDULE - LARGE BLDG

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
B	VARITHERM PLAQUE DIFFUSER	OFFICE	12"	24"x24"	LAY-IN	1,7,8
C	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	ENTRY	14"x14"	16"x16"	BEVELLED	1,3,5,6
D	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING	VARIES	16"x16"	SURFACE	1,3,5,6
F	PRICE MODEL 80 EGGCRATE 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 APDDR ALUMINUM PERFORATED FACE RETURN AIR GRILLE.	RESTROOMS/ ENTRY	14"x14"	16"x16"	SURFACE	1,4,5,6

NOTES
- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004

REMARKS
1. STANDARD OFF WHITE FINISH.
2. PROVIDE MODEL VCS3 NECK DAMPER.
3. SEE DRAWING M-101 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 3/M-501.
7. FACTORY INSULATED R-6 BACKPAN.
8. PROVIDE RELIEF COLLAR ACCESSORY FOR VAV DIFFUSER.

AIR DOOR SCHEDULE

MARK	CFM	VELOCITY (FPM)	HEATING (KW)	MOTOR HP	MCA	MOCP	VOLT	PH	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1,543	2,338	10 kW	0.75 hp	31.4 A	40 A	208	3	DRIVE THRU	CHA-1-48E	POWERED AIRE	1,2,3,5
AD#2	1,268	2,757	0 kW	0.75 hp	8 A	20 A	120	1	SERVING	CHA-1-36	POWERED AIRE	2,4
AD#3	3,867	4,218	0 kW	0.75 hp	8 A	20 A	120	1	REAR DOOR	RBT-1-48	POWERED AIRE	4

NOTES
- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004

REMARKS
1. FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER 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. FACTORY PROVIDED MAGNETIC DOOR CONTACT WITH FACTORY INSTALLED LOW VOLTAGE CONTROLS LOCATED IN AIR DOOR CABINET.
5. PROVIDE WITH A DIVERTER BOX. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.

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12/08/23

CHICK-FIL-A WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

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NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23081.CC.S
DATE 10/02/2023
DRAWN BY BLM

SHEET
EQUIPMENT SCHEDULES

SHEET NUMBER
M-601

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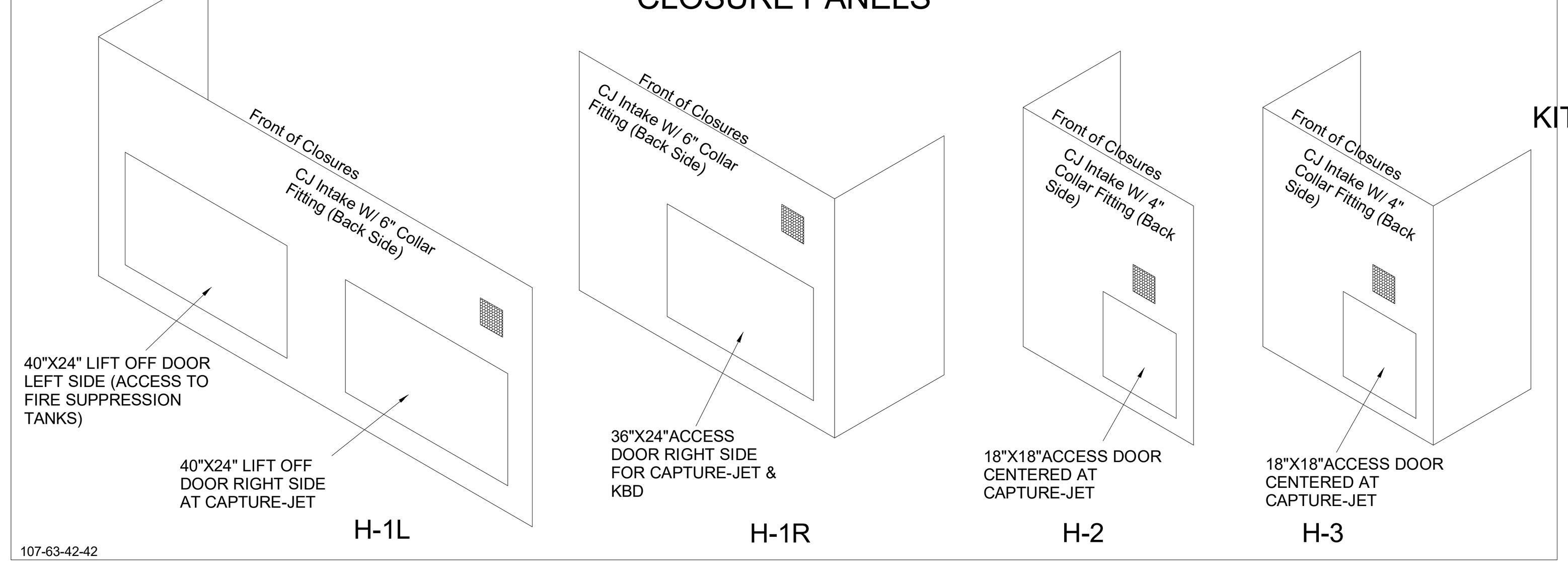
30-LS-05401-M-601-EQUIPMENT SCHEDULES

		EXHAUST COLLAR			EXHAUST AIR INFORMATION			CAPTURE AIR INFORMATION		S.S. KSA FILTERS			CEILING CLOSURES						
HOOD MODEL	HOOD NUMBER	QTY	LENGTH	WIDTH	CFM	TAB	SP	CFM	SP	FULL	HALF	LED LIGHTS	QTY	CLOSURE HEIGHT	CEILING HEIGHT	HOOD WEIGHT	KBD DAMPER	K FACTOR (CFM = K FACTOR * √DP)	MATERIAL
KVL-2-IC	H-1L	1	14"	8"	1204	0.13"	0.22"	80	0.30"	5	-	3	2	51"	122"	669 LBS	*	3365	EXPOSED SURFACES 18 GA. S.S.
KVL-2-IC	H-1R	1	8"	8"	709	0.13"	0.23"	47	0.30"	3	-	2	2			394 LBS	*	1959	
KVL-C-IC	H-2	1	8"	8"	701	0.30"	0.39"	30	0.29"	2	-	1	2			245 LBS	*	1291	
KVL-C-IC	H-3	1	8"	8"	701	0.30"	0.39"	30	0.29"	2	-	1	3			245 LBS	*	1291	

FOR REFERENCE ONLY

CLOSURE PANELS

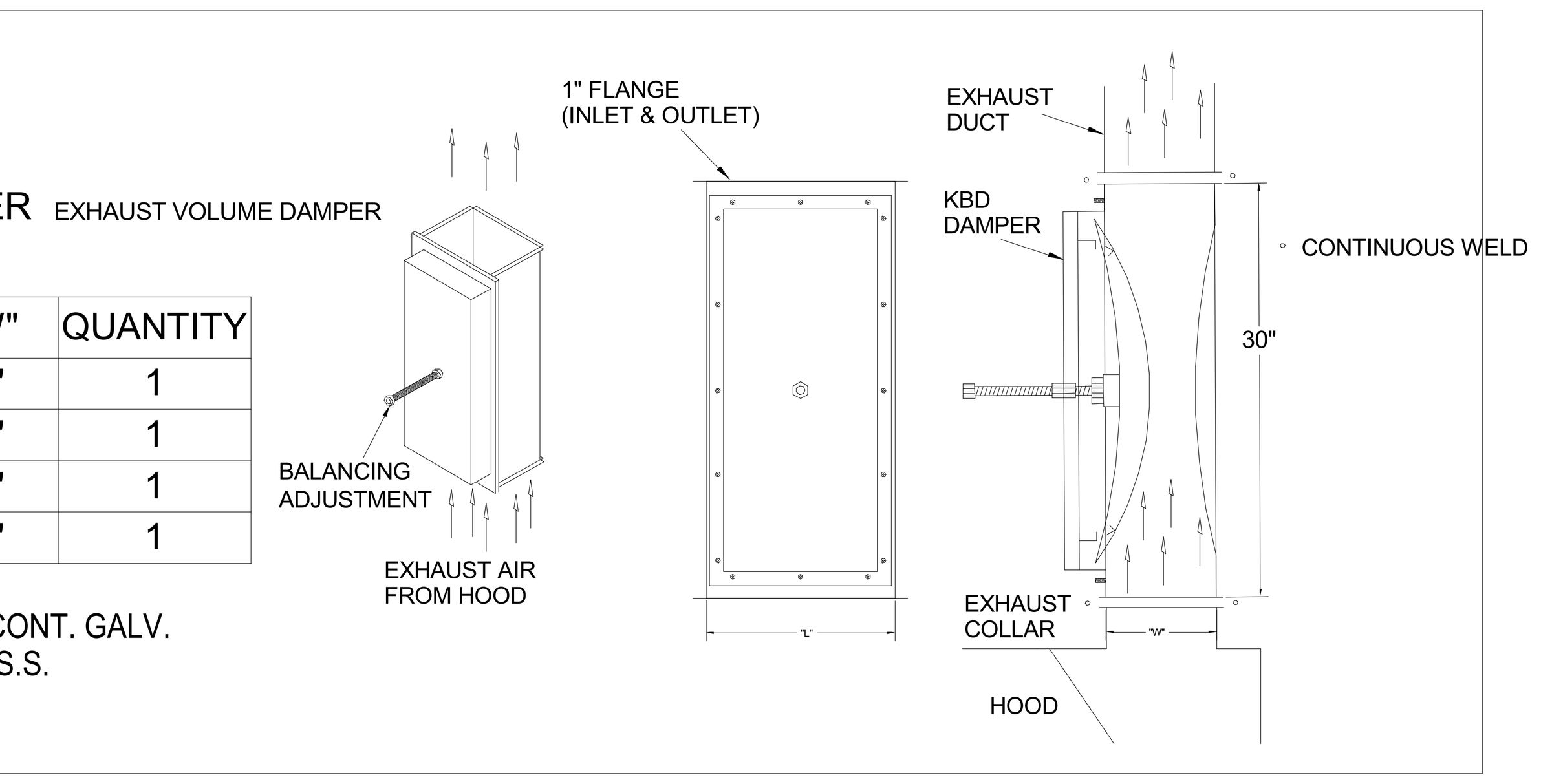


MODEL:KBD CALIBRATED

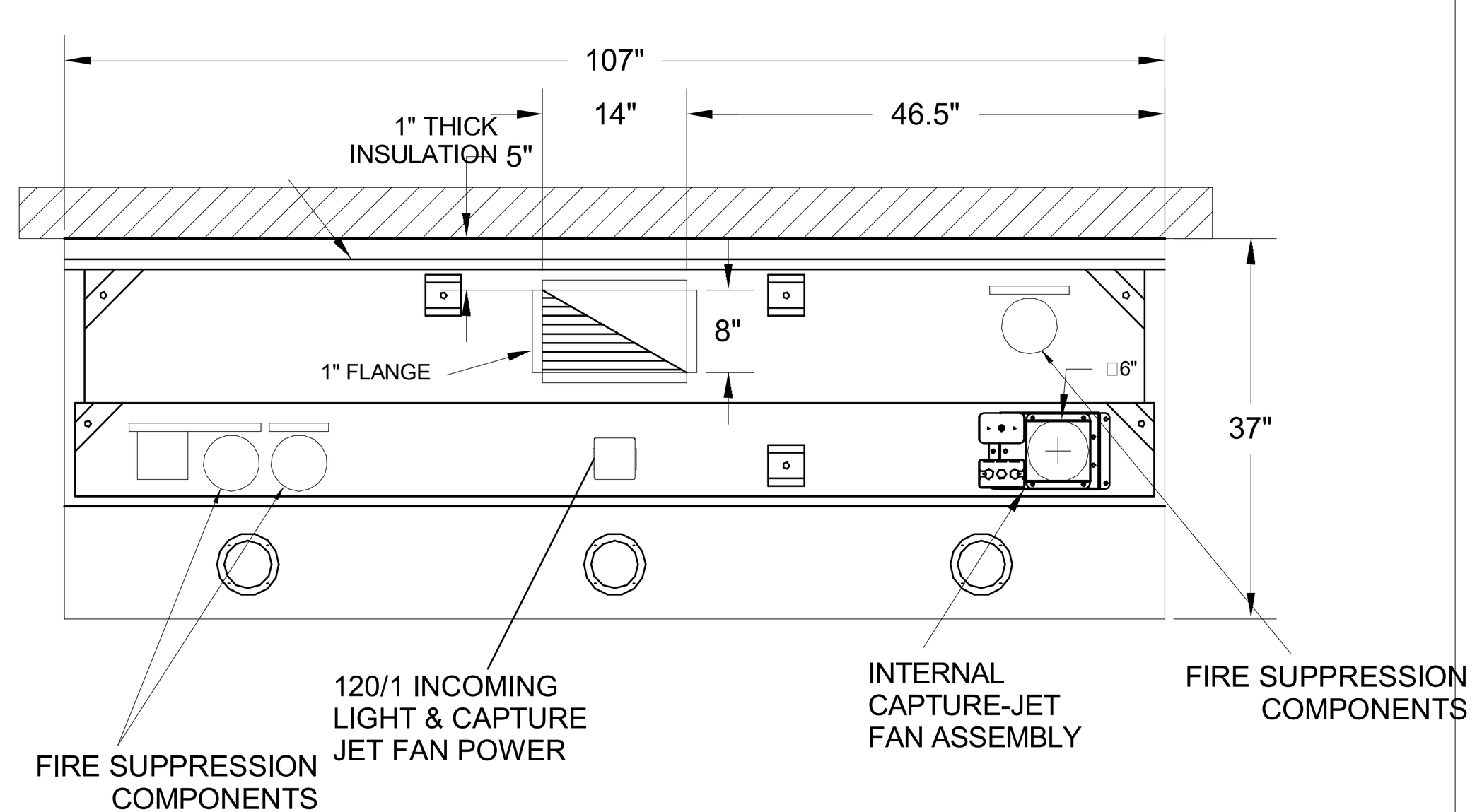
KITCHEN BALANCING DAMPER

TAG	"L"	"W"	QUANTITY
H-1L	14"	8"	1
H-1R	8"	8"	1
H-2	8"	8"	1
H-3	8"	8"	1

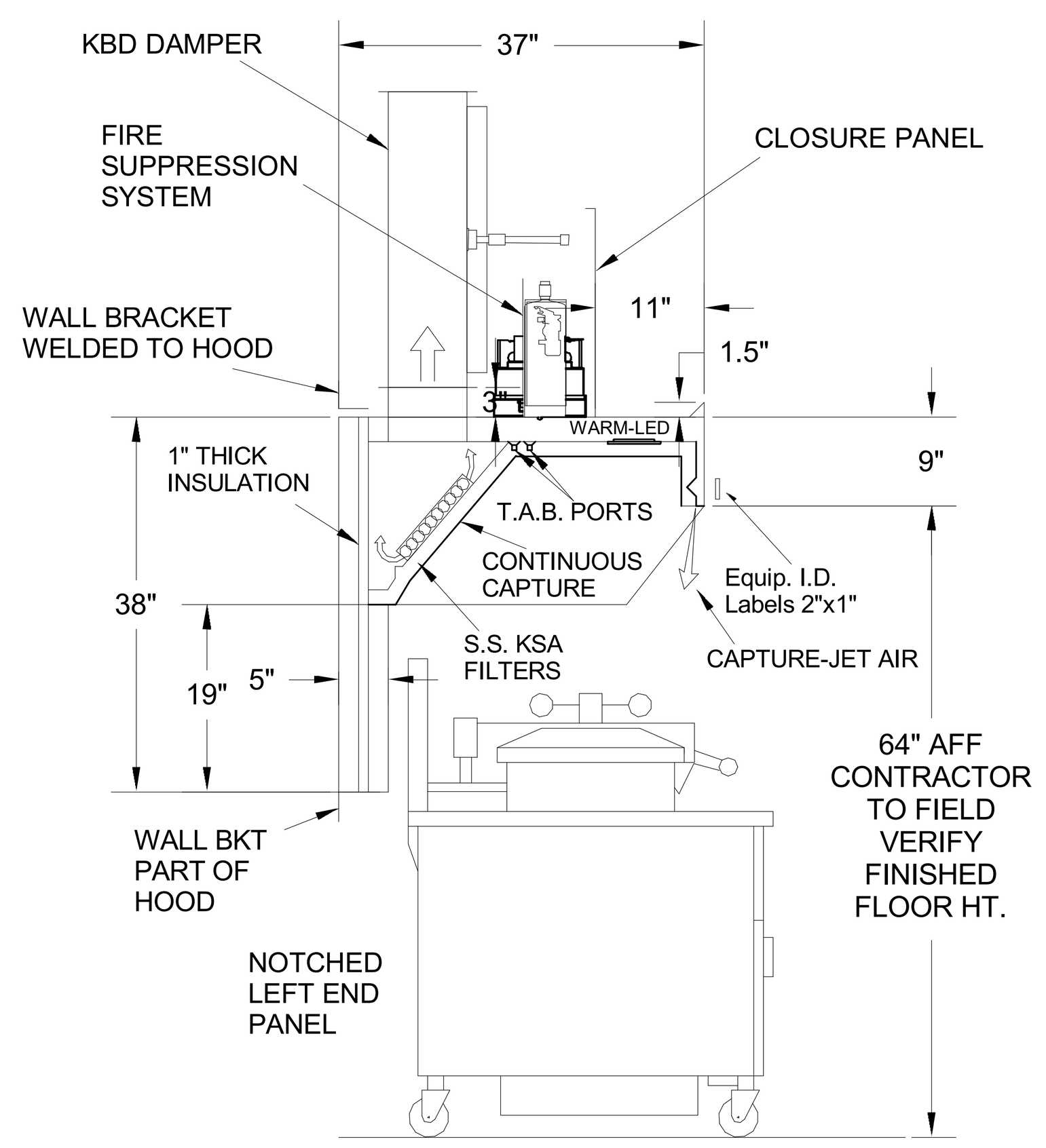
MATERIAL: FRAME - 16GA CONT. GALV.
ADJUSTABLE PANEL 18GA S.S.



H-1L



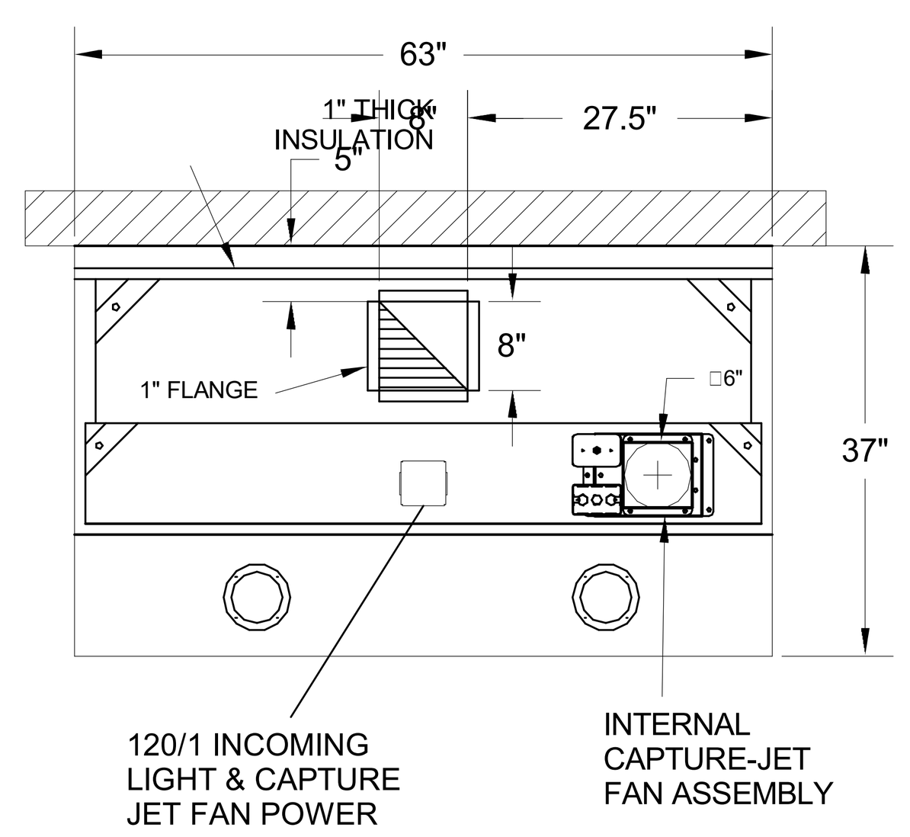
PLAN VIEW



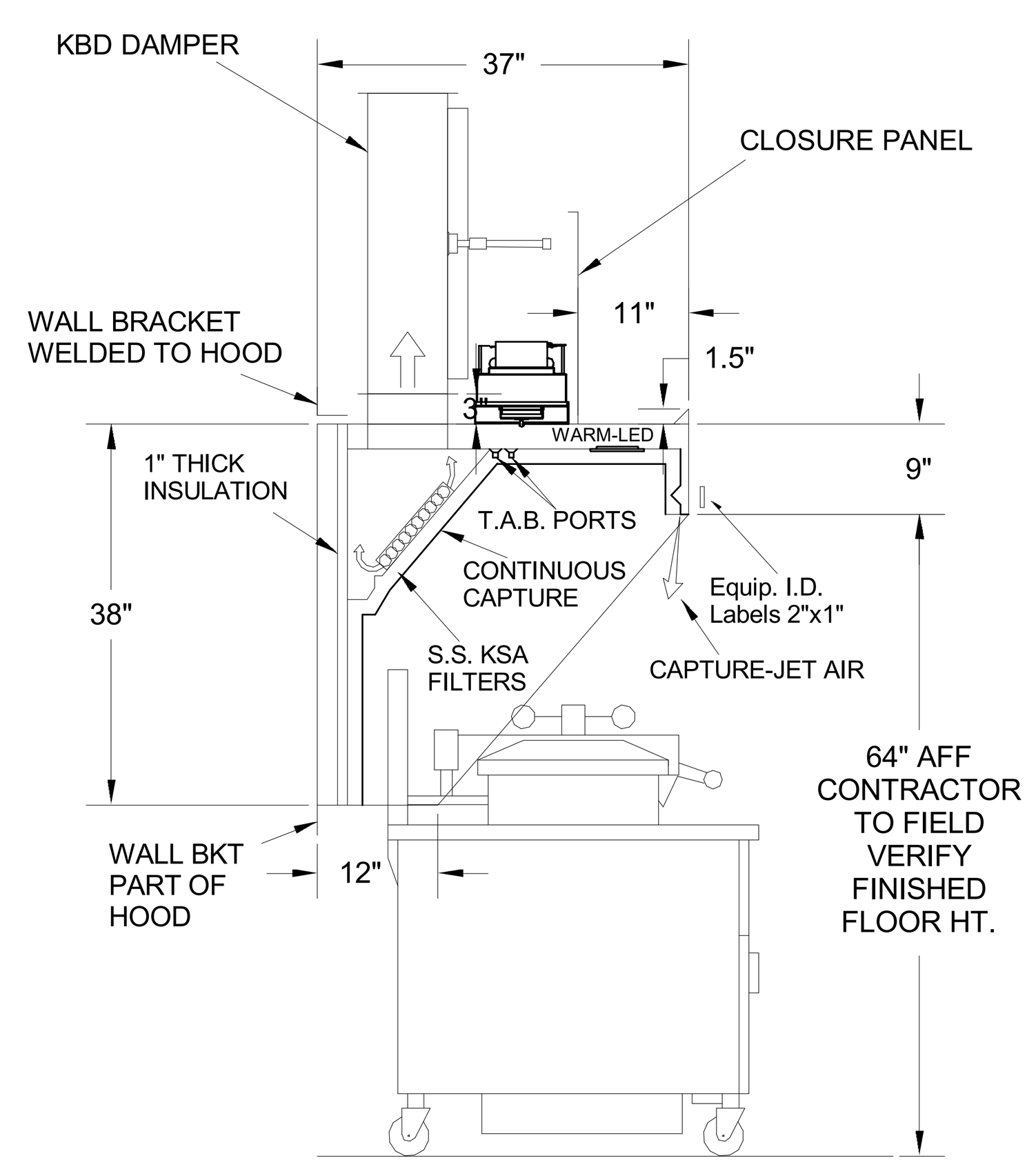
H-1L SECTION VIEW

- CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF
  - FRONT CLOSURE PANEL WITH 40"X24" LIFT OUT DOOR LEFT SIDE (ACCESS TO FIRE SUPPRESSION
  - 40"X24" LIFT DOOR RIGHT SIDE AT CAPTURE-JET WITH FRONT CJ INTAKE
  - CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT
  - 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
  - NOTCHED LEFT END PANEL
  - EQUIPMENT COVERED:
(4) PRESSURE FRYERS
(2) GRILLS
- ANSUL WEIGHT = 286 LBS
- AMEREX WEIGHT = 264 LBS

H-1R



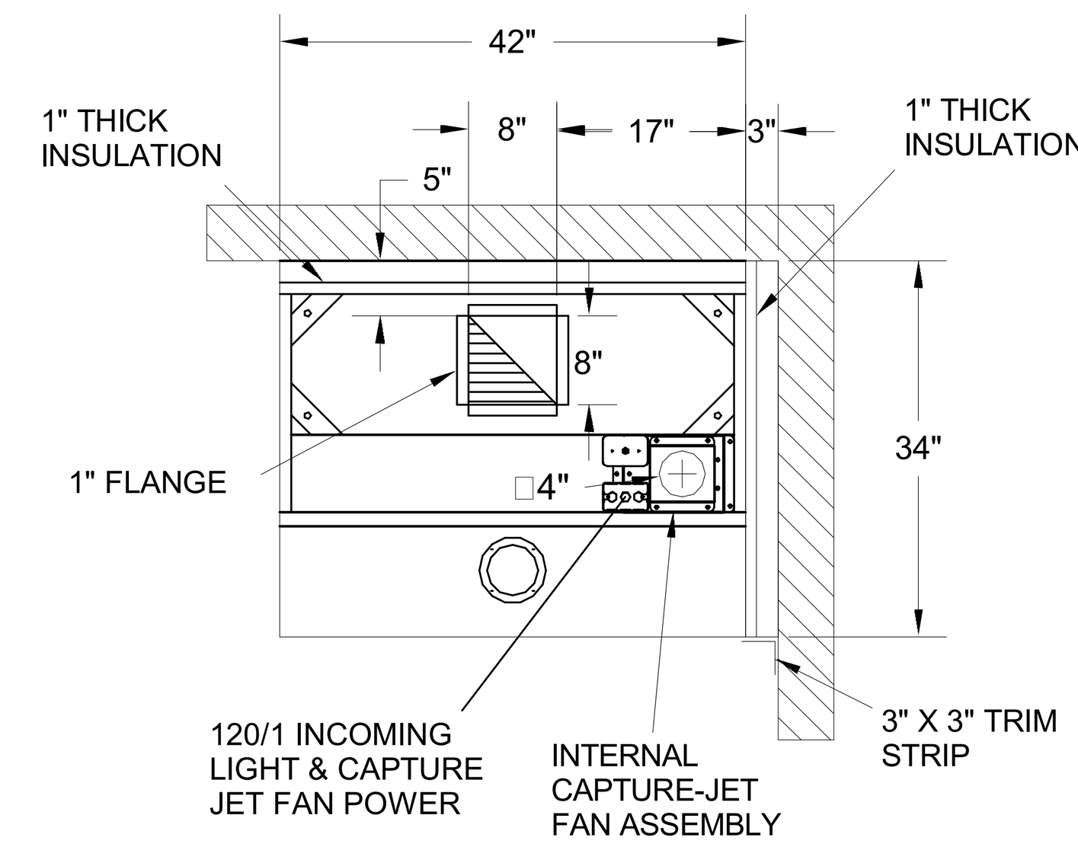
PLAN VIEW



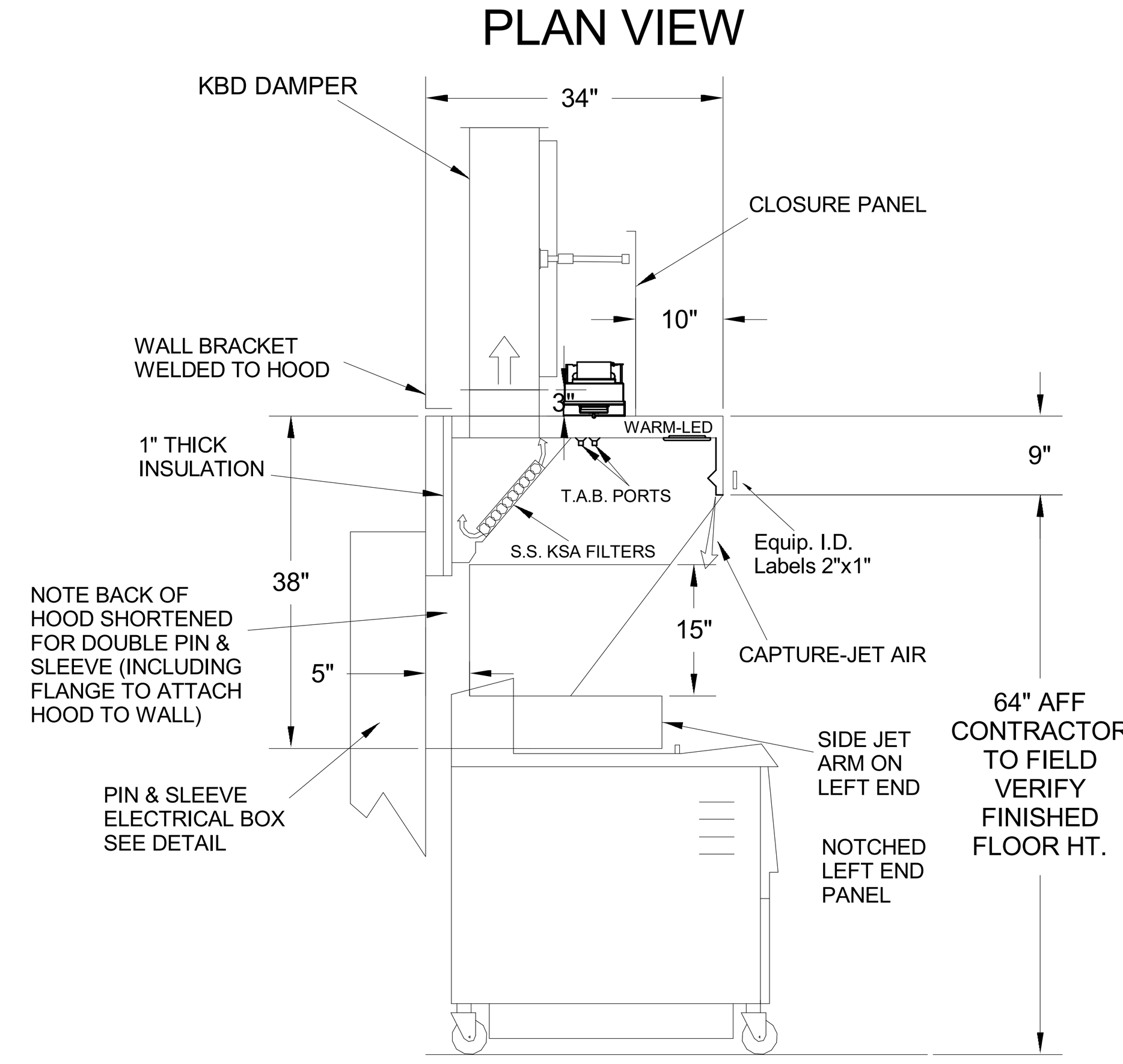
H-1R SECTION VIEW

- CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF
- 36"X24" ACCESS DOOR RIGHT SIDE FOR ACCESS TO CAPTURE-JET WITH FRONT CJ INTAKE & KBD
- CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT
- 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
- EQUIPMENT COVERED:
(3) PRESSURE FRYERS

H-2



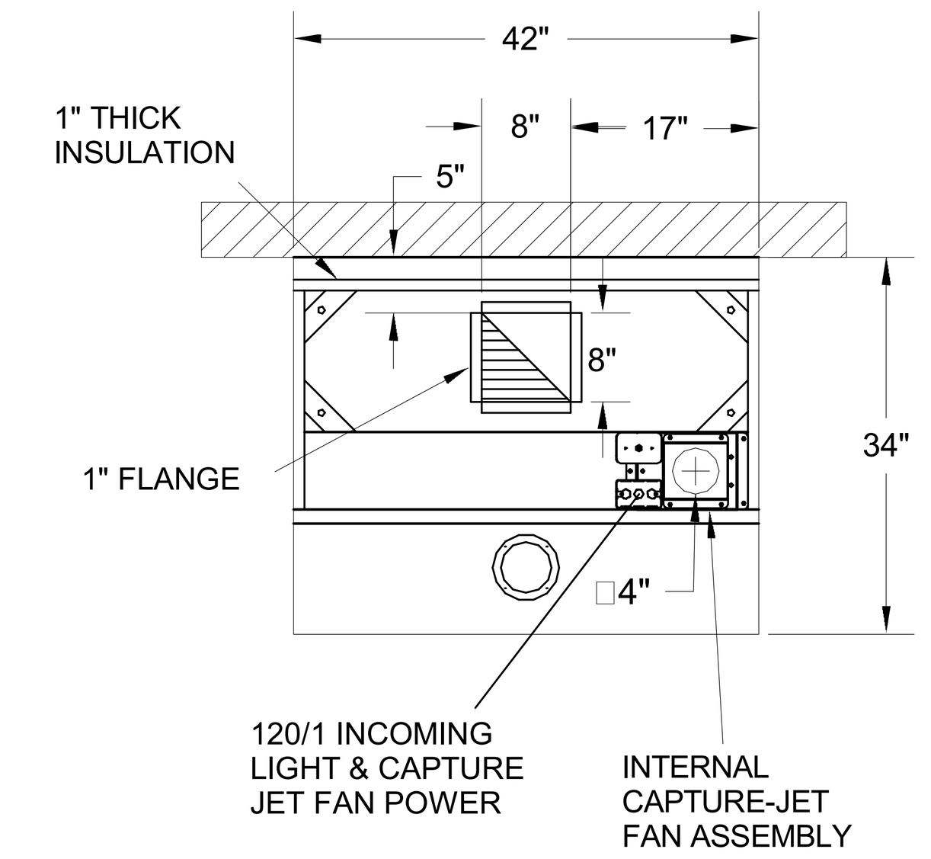
PLAN VIEW



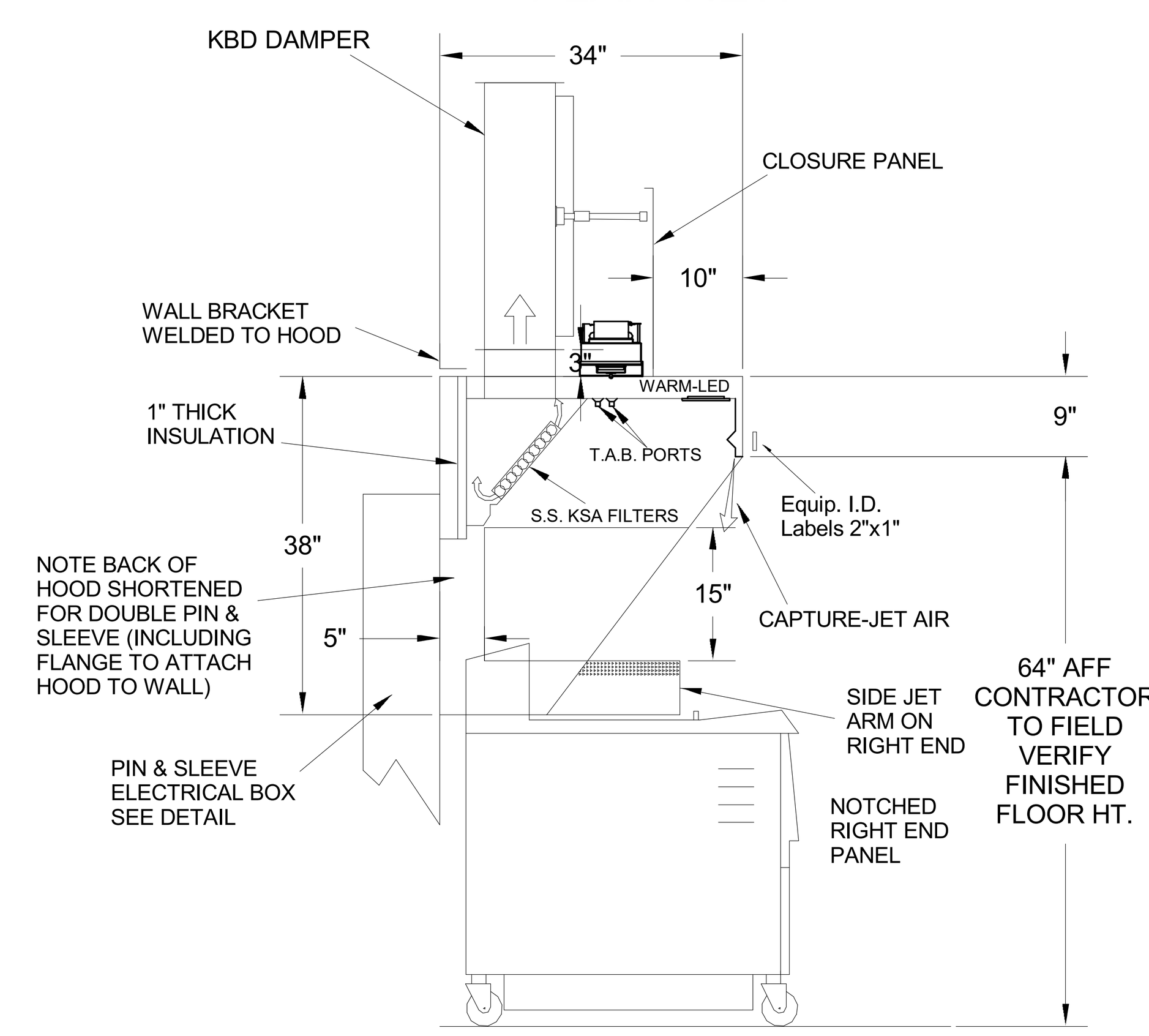
H-2 SECTION VIEW

- CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF
- 18"X18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE
- NOTCHED LEFT END PANEL
- DOUBLE RECEPTACLE PIN & SLEEVE
- 3"X3" TRIM STRIP FOR STANDOFF ON RIGHT END
- 3" SIDE & REAR STAND-OFF TO HAVE 1" THICK INSULATION
- EQUIPMENT COVERED:
(2) FRYERS

H-3



PLAN VIEW



H-3 SECTION VIEW

- CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF
- 18"X18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE
- NOTCHED RIGHT END PANEL
- DOUBLE RECEPTACLE PIN & SLEEVE
- 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
- EQUIPMENT COVERED:
(2) FRYERS

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

HALTON CO. (CANADA)
1021 BREVIK PLACE
MISSISSAUGA, ON L4W 3R7
1-905-624-0301

WEBSITE: WWW.HALTONCOMPANY.COM

SN#: 05401

PROJECT: CHICK-FIL-A
LOCATION: WEST SANFORD
DATE: 02/26/2024
SCALE: NTS

Halton
CARE FOR INDOOR AIR

Sheet MH-1.1

DIVISION 23 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 WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY FOR COORDINATION.

B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.

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

A. FURNISH AND INSTALL R-410A ROOFTOP SINGLE PACKAGE COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS 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 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 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. HEAT EXCHANGERS SHALL HAVE A TEN (10) YEAR WARRANTY. BURNERS SHALL BE IN-SHOT TYPE. THE DRAFT MOTOR SHALL BE MONITORED BY THE CONTROL SYSTEM.

2.02 DUCTWORK (C15735)

A. ACCEPTABLE MANUFACTURERS OF INSULATION SHALL BE: JOHNS 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 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. DUCT DROPS 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.

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. FLEX DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.

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 ALL 90 DEGREE ELBOWS WHERE THE CENTERLINE RADIUS (R) IS LESS THAN THE WIDTH OF THE DUCT AND ANY ONE DIMENSION IS GREATER THAN 12".

Q. 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

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 WHERE PERMITTED BY AHJ.

B. THE SMOKE DETECTORS SHALL BE FACTORY INSTALLED AND WIRED BY THE ROOFTOP UNIT MANUFACTURER.

C. A FACTORY INSTALLED SMOKE DETECTOR IN THE SUPPLY & 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. ANNUCIATOR 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. THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENT CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. REMOTE TEMPERATURE SENSOR(S) FOR EACH THERMOSTAT IS ALSO PROVIDED. MECHANICAL CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN THE THERMOSTAT, THE REMOTE SENSOR(S) 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.

2.04 PIPING

A. ALL ABOVE GRADE NATURAL GAS PIPING SHALL BE SCHEDULE 40 STEEL MEETING ASTM A53 WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. FOR SCREWED PIPING, PIPING SHALL BE JOINED WITH BLACK 150 POUND MALLEABLE IRON SCREWED FITTINGS AS ALLOWED BY LOCAL AUTHORITY. CONTRACTOR SHALL VERIFY THE NEED FOR WELDED PIPING AS REQUIRED BY THE LOCAL GAS CODE AND/OR APPLICABLE LOCAL ORDINANCES AND AMENDMENTS.

B. ALL BELOW GRADE NATURAL GAS PIPING SHALL BE MEDIUM DENSITY POLYETHYLENE (PE) MEETING ASTM D2513 AS MANUFACTURED BY GASTITE WITH JOINING SYSTEM AS MANUFACTURED BY CON-STAB. TRANSITIONS FROM ABOVE GRADE RIGID PIPING TO PE BELOW GRADE PIPING SHALL BE MADE WITH ANODE-LESS RISER ASSEMBLY AS MANUFACTURED BY CON-STAB.

C. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT. INSTALL PIPING AT AND AROUND EQUIPMENT SO AS TO NO WAY OBSTRUCT EQUIPMENT ACCESS PANELS AND/OR ACCESS DOORS.

D. ALL GAS PIPING ABOVE ROOF SHALL BE CLEANED FREE OF RUST AND PAINTED WITH COAT OF ZINC RUST PRIMER AND ONE COAT OF ALUMINUM BASE PAINT. METER AND GAS RISER SHALL BE PRIMED AND PAINTED TO MATCH BUILDING.

E. NATURAL GAS PIPING SHALL BE LEAK TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

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 DEMONSTRATION 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 THAT 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.

KITCHEN HOOD SYSTEMS NOTES

1. CHICK-FIL-A MAINTAINS A NATIONAL ACCOUNT WITH HALTON CO. FOR THE HOODS. CHICK-FIL-A WILL PURCHASE AND PROVIDE THE HOODS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING THE HOODS. CONTACT HALTON CO. AT 270-237-5600 FOR MORE INFO.
2. THE FIRE SUPPRESSION SYSTEM SHALL CONSIST OF A COMPLETE WET CHEMICAL SYSTEM FURNISHED BY HALTON. THE HOOD SHALL BE FURNISHED PRE-PIPED BY HALTON.
3. THE FIRE SUPPRESSION SYSTEM EXTERNAL TO THE HOODS SHALL BE INSTALLED IN ACCORDANCE WITH HOOD MANUFACTURER'S SHOP DRAWINGS BY AN AUTHORIZED INSTALLER SELECTED AND HIRED BY HALTON. COST FOR INSTALLATION INCLUDED IN PRICE OF HOODS TO CFA.
4. HOOD EXHAUST DUCTWORK SHALL BE 16 GA. BLACK STEEL WITH CONTINUOUS LIQUID TIGHT WELD OF JOINTS & SEAMS.
5. TURNS IN GREASE EXHAUST DUCTWORK SHALL BE LONG RADIUS TYPE, WITH A CENTERLINE RADIUS R=3W/2, UNLESS OTHERWISE NOTED. NO MITERED FITTINGS ALLOWED.
6. ALL STAINLESS STEEL CLOSURE PANELS SHALL BE SUPPLIED BY HOOD MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. SLOPE ALL GREASE EXHAUST DUCT BACK TO HOOD AT 1/4" PER FOOT OF RUN.
8. WRAP NEW GREASE DUCT WITH UNIFRAX FYREWRAP. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWRAP PRODUCT USED SHALL MEET LOCAL CODE REQUIREMENTS.
9. 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.
10. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON M-702 FOR MORE INFORMATION.

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∅ FLEXIBLE∅ DIFFUSER		RETURN/EXHAUST (TYP.)
S	REMOTE TEMPERATURE SENSOR		SUPPLY DIFFUSER, SQ FACE (TYP.)
H	HUMIDITY SENSOR	1	PLAN NOTE REFERENCE
SD	SMOKE DETECTOR		MANUAL VOLUME DAMPER
12x18	DUCT SIZE (reverse for elevation views) 1ST NUMBER - HORIZONTAL DIMENSION 2ND NUMBER - VERTICAL DIMENSION		DIRECTION OF THROW ON DIFFUSER
			CLOSED AIR PATTERN DEFLECTOR
SW	AIR DOOR SWITCH	GIH	GAS INFRARED HEATER (TYP.)
EIH	ELECTRIC INFRARED HEATER	B/G	BELOW GRADE
		T	THERMOSTAT

ABBREVIATIONS

EC	ELECTRICAL CONTRACTOR
GC	GENERAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
PC	PLUMBING CONTRACTOR
O.C.	ON CENTER
IRH	INFRARED HEATER
CF	CIRCULATING FAN
TF	TRANSFER FAN
EF	EXHAUST FAN

GENERAL NOTES

1. DUCT SIZES SERVING DIFFUSERS AND GRILLES ARE SAME SIZE AS DIFFUSER OR GRILLE NECK UNLESS NOTED OTHERWISE.
2. FLEXIBLE DUCT AND INSULATION NOT SHOWN FOR CLARITY.
3. FOR ALL ROOF EQUIPMENT, PROVIDE A PLASTIC ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. WITH A SELF ADHESIVE BACKING.
4. UNLESS NOTED OTHERWISE, MC TO ADJUST ALL DIFFUSER AIR PATTERN DEFLECTORS TO THROW HORIZONTALLY ALONG THE CEILING.
5. ALL EXHAUST DUCTWORK AND UNFINISHED METAL ON ROOF EXCEPT STAINLESS SHALL BE PREPARED WITH TWO COATS OF SHERWIN WILLAIMS PRO INDUSTRIAL DTM ACRYLIC COATING, SEMI-GLOSS, WHITE. DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLAIMS PRO INDUSTRIAL PRO-CRYLACRYLIC UNIVERSAL PRIMER, WHITE, PRIOR TO PAINTING.
6. MAINTAIN 18" CLEARANCE FROM GREASE EXHAUST DUCTWORK ABOVE ROOF TO ANY COMBUSTIBLE CONSTRUCTION INCLUDING PARAPET WALLS.

VENTILATION CALCULATIONS

ZONE	PEOPLE OUTDOOR AIR RATE (Rp)	ZONE POPULATION (Pz)	AREA OUTDOOR AIR RATE (Ra)	ZONE FLOOR AREA (Az)	OUTDOOR AIRFLOW RATE REQ'D (Vbz)
CORRIDOR (ENTRYWAYS)	--	--	0.06	178	11
SALES (SERVING AREA)	7.5	8	0.12	543	125
SALES (DINING AREA)	7.5	10	0.12	680	157
DINING (CAFETERIA, FAST FOOD)	7.5	89	0.18	886	827
OFFICE	5	1	0.06	66	9
STORAGE	--	--	0.12	210	25
TEAM MEMBER (RECEPTION)	5	7	0.06	237	49
KITCHEN	7.5	25	0.12	1256	338

ZONE 1 - KITCHEN = 338 CFM.
338 CFM (Vbz) / 0.8 = 423 CFM (Voz)
AC#1 PROVIDES 1,750 CFM OUTSIDE AIR TO ZONE 1.

ZONE 2 - SALES (SERVING AREA) = 125 CFM.
125 CFM (Vbz) / 0.8 = 156 CFM (Voz)
AC#2 PROVIDES 1,075 CFM OUTSIDE AIR TO ZONE 2.

ZONE 3 - DINING + CORRIDORS + SALES (DINING AREA) = 995 CFM.
995 CFM (Vbz) / 0.8 = 1,244 CFM (Voz)
AC#3 PROVIDES 1,275 CFM OUTSIDE AIR TO ZONE 3.

ZONE 4 - TEAM MEMBER (RECEPTION) + STORAGE + OFFICE = 83 CFM.
83 CFM (Vbz) / 0.8 = 104 CFM (Voz)
AC#4 PROVIDES 425 CFM OUTSIDE AIR TO ZONE 4.

KITCHEN IS 1,256 SQUARE FEET. AT 0.70 CFM EXHAUST REQUIRED PER SQ. FT. KITCHEN IS REQUIRED TO EXHAUST 879 CFM.
KITCHEN EXHAUSTS 3,315 CFM.

CALCULATIONS ARE BASED ON TABLE 403.3.3.1, 2020 FLORIDA BUILDING CODE - MECHANICAL.
(FOR OA RATE: Vbz = RpPz + RaAz || FOR ZONE OA RATE: Voz = Vbz/0.8)

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MARK T. KURZYNSKE
FLORIDA LICENSE # 53568

02/26/24

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.11
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
2	11/17/2023	AHJ Review
5	02/26/2024	OPERATOR REVS

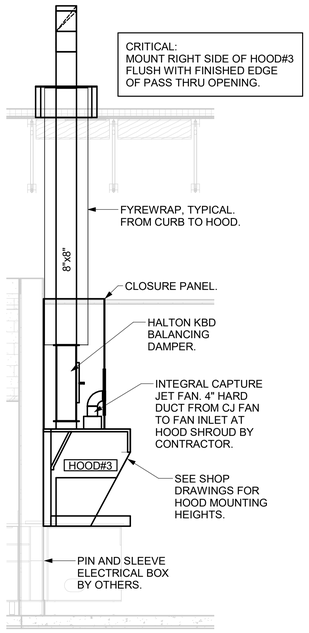
CONSULTANT PROJECT # 23081.CC.S
DATE 02/26/2024
DRAWN BY BLM

SHEET
GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS
SHEET NUMBER

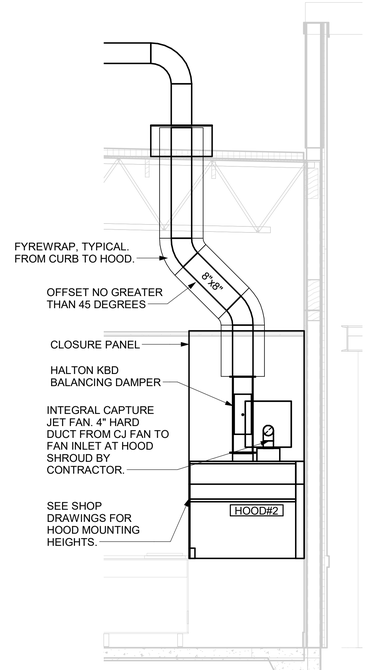
M-001

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.

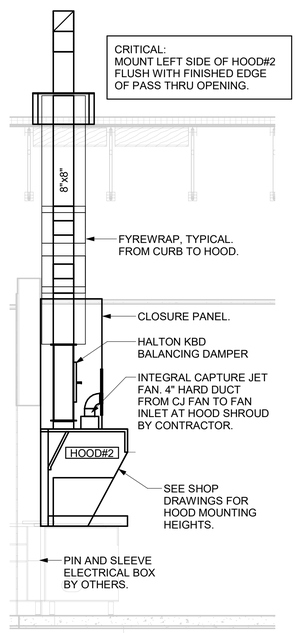
CLEANOUT DOOR NOTE:
DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS, NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.



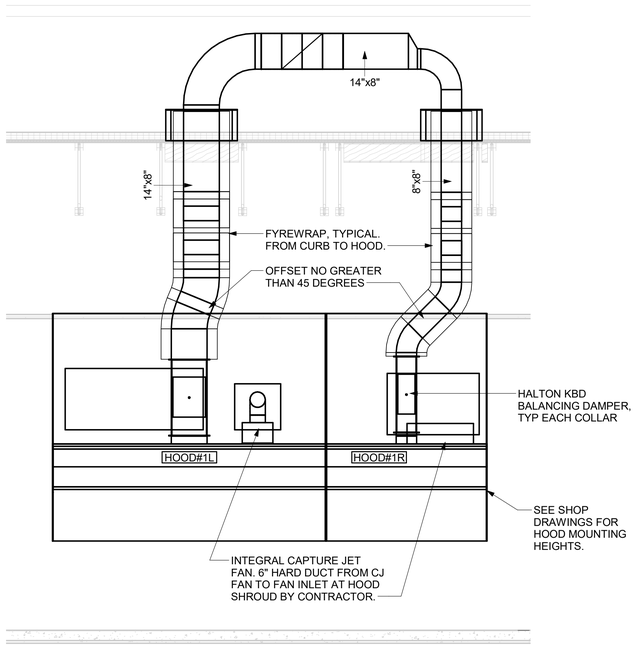
6 HOOD ELEVATION - HOOD#3
NOT TO SCALE



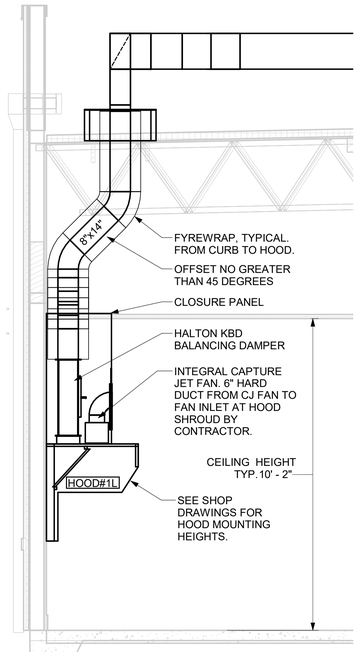
5 HOOD ELEVATION - HOOD#2 - FRONT
NOT TO SCALE



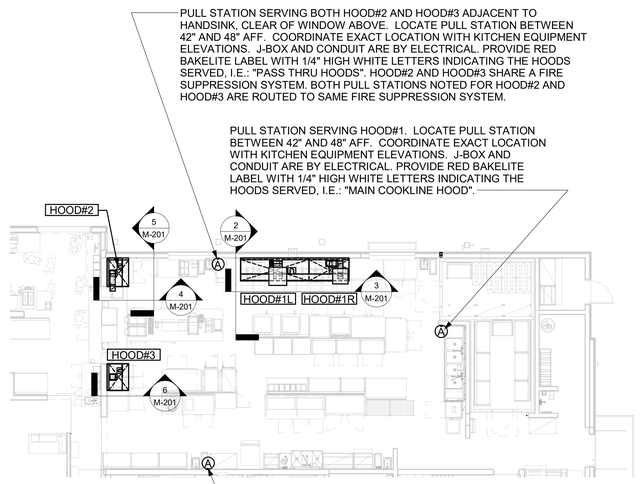
4 HOOD ELEVATION - HOOD#2 - SIDE
NOT TO SCALE



3 HOOD ELEVATION - HOOD#1 - FRONT
NOT TO SCALE



2 HOOD ELEVATION - HOOD#1 - SIDE
NOT TO SCALE



1 HOOD LAYOUT
NOT TO SCALE

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02/26/24

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

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CONSULTANT PROJECT #	23081.CC.S
DATE	02/26/2024
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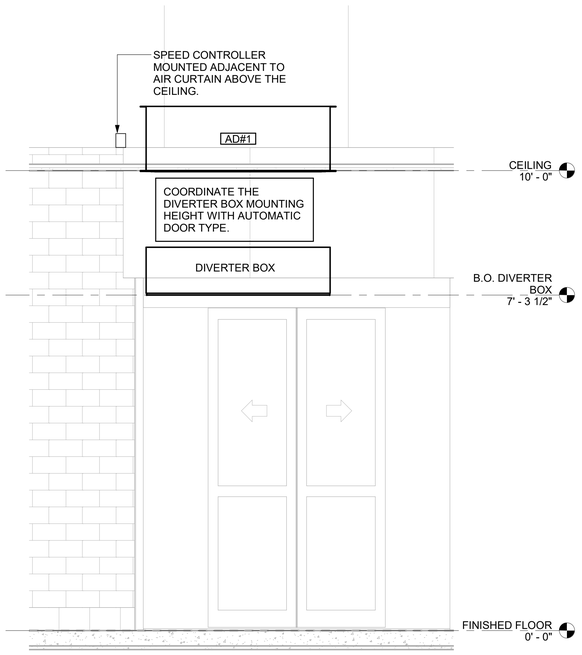
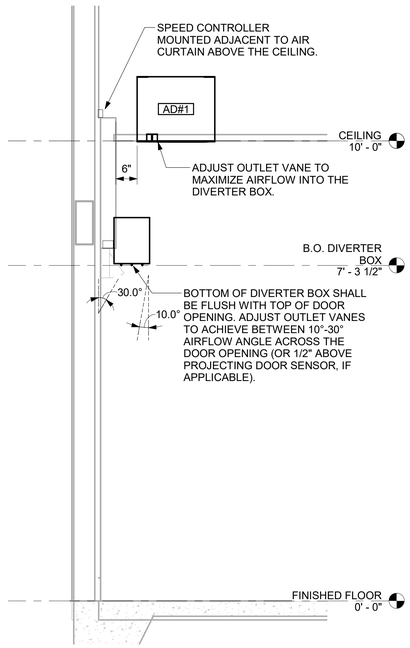
SHEET
EXHAUST HOOD ELEVATIONS

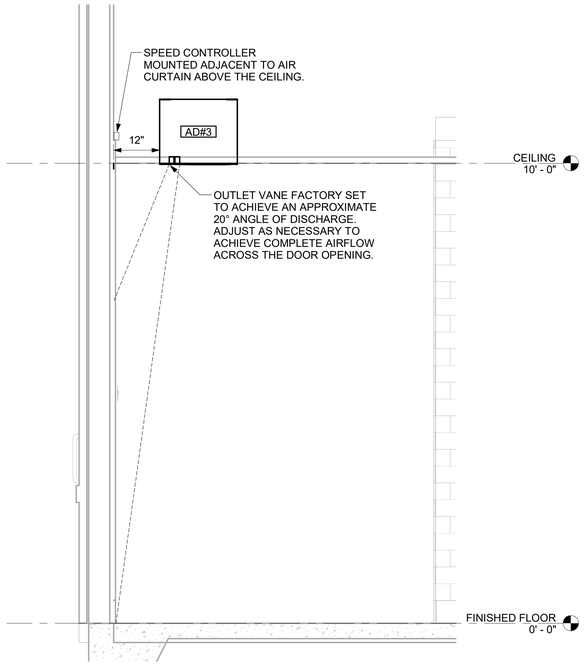
SHEET NUMBER
M-201



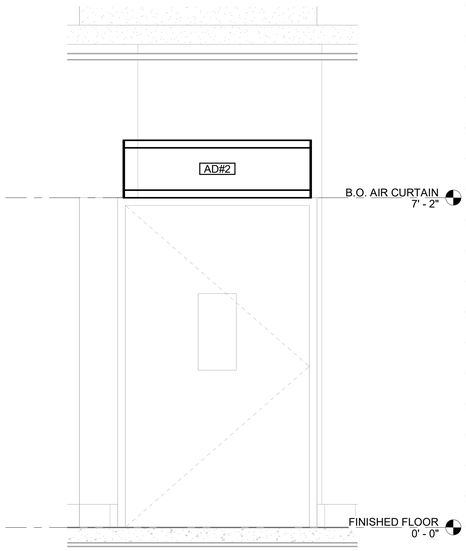
2 AD#1 FRONT VIEW
3/4" = 1'-0"



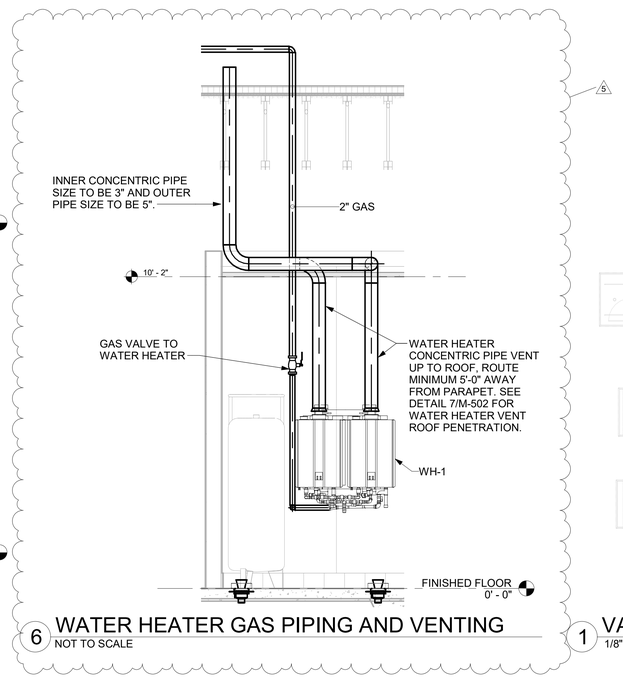
3 AD#1 SIDE VIEW
3/4" = 1'-0"



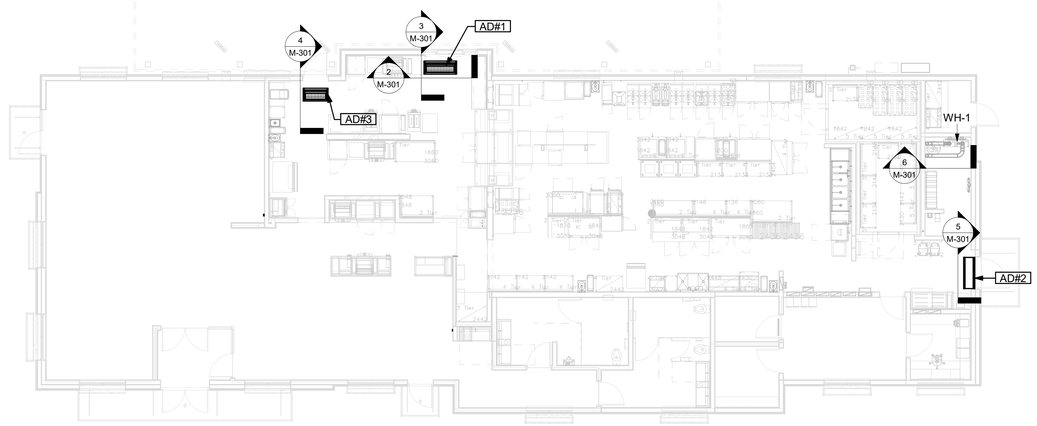
4 AD#3 SIDE VIEW
3/4" = 1'-0"



5 AD#4 FRONT VIEW
3/4" = 1'-0"



6 WATER HEATER GAS PIPING AND VENTING
NOT TO SCALE



1 VARIOUS SECTIONS
1/8" = 1'-0"

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02/26/24

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

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CONSULTANT PROJECT #	23081.CC.S
DATE	02/26/2024
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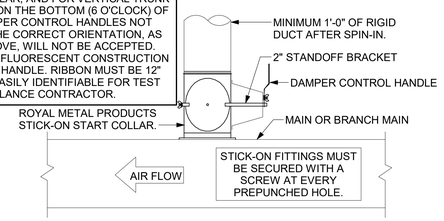
SHEET
SECTIONS

SHEET NUMBER
M-301

Autodesk Docs://FL_05401_West Sanford FSU_2024-2_FSR/05401_West Sanford FSU_MEC.rvt
2/26/2024 9:48:23 AM
30-LS-05401-M-301-SECTIONS

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.

DAMPER CONTROL HANDLE MUST BE EXPOSED, AND DAMPER SHAFT MUST ALWAYS BE PARALLEL TO AIRFLOW IN DUCT MAIN. AS AN EXAMPLE, FOR HORIZONTAL TRUNK DUCT, HANDLE MUST BE LOCATED ON THE LEFT OR RIGHT (9 OR 3 O'CLOCK) OF COLLAR, AND FOR VERTICAL TRUNK DUCT, LOCATED ON THE BOTTOM (6 O'CLOCK) OF COLLAR. DAMPER CONTROL HANDLES NOT INSTALLED IN THE CORRECT ORIENTATION, AS SPECIFIED ABOVE, WILL NOT BE ACCEPTED. ATTACH YELLOW FLUORESCENT CONSTRUCTION RIBBON TO THE HANDLE. RIBBON MUST BE 12" LONG AND BE EASILY IDENTIFIABLE FOR TEST AND BALANCE CONTRACTOR.



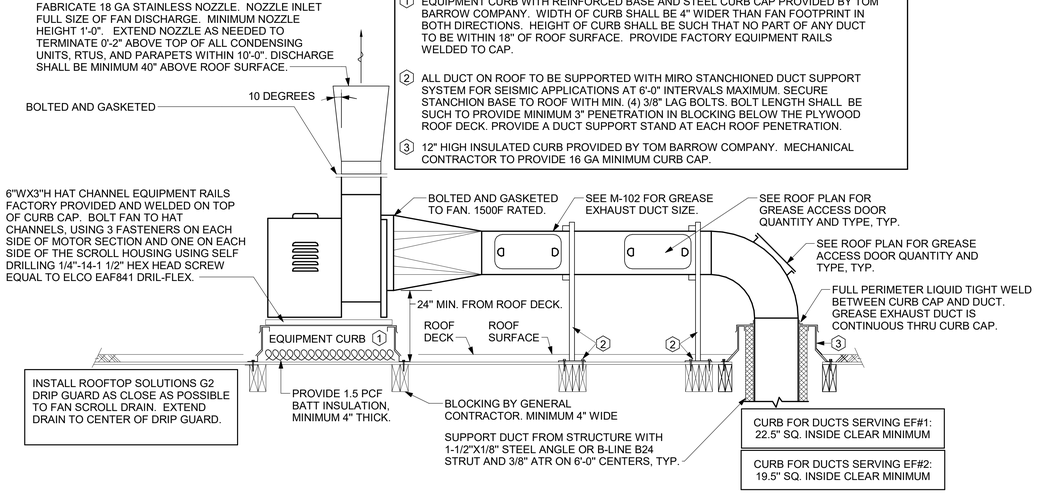
2 START COLLAR
NOT TO SCALE

REFER TO SHEET S-610 FOR ANCHORAGE OF EXHAUST FAN/CURB.

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.

KEYED NOTES:

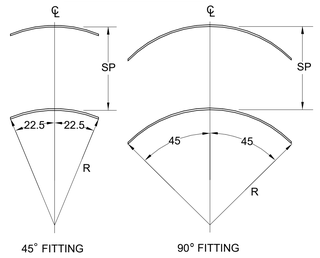
1. EQUIPMENT CURB WITH REINFORCED BASE AND STEEL CURB CAP PROVIDED BY TOM BARROW COMPANY. WIDTH OF CURB SHALL BE 4" WIDER THAN FAN FOOTPRINT IN BOTH DIRECTIONS. HEIGHT OF CURB SHALL BE SUCH THAT NO PART OF ANY DUCT TO BE WITHIN 18" OF ROOF SURFACE. PROVIDE FACTORY EQUIPMENT RAILS WELDED TO CAP.
2. ALL DUCT ON ROOF TO BE SUPPORTED WITH MIRO STANCHIONED DUCT SUPPORT SYSTEM FOR SEISMIC APPLICATIONS AT 6'-0" INTERVALS MAXIMUM. SECURE STANCHION BASE TO ROOF WITH MIN. (4) 3/8" LAG BOLTS. BOLT LENGTH SHALL BE SUCH TO PROVIDE MINIMUM 3" PENETRATION IN BLOCKING BELOW THE PLYWOOD ROOF DECK. 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.



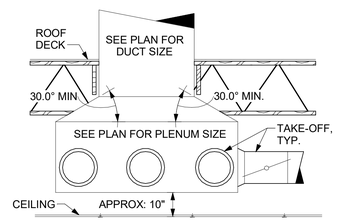
1 KITCHEN HOOD EXHAUST FANS
NOT TO SCALE

TURNING VANE SCHEDULE		
R	SP	GA
2"	1.5"	24

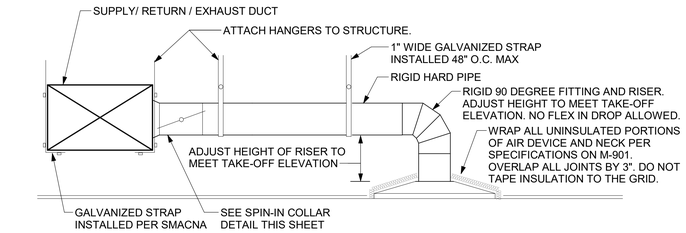
1. NO TRAILING EDGE.
2. SINGLE THICKNESS CONSTRUCTION.



4 TURNING VANES
NOT TO SCALE



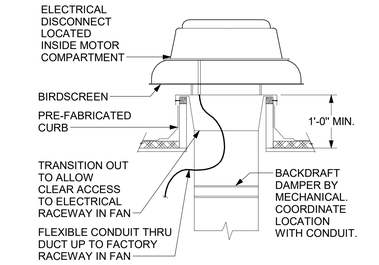
6 RETURN DROP GEOMETRY
NOT TO SCALE



3 SAG/RAG/GRILLE TAKE-OFF - LARGE
NOT TO SCALE

SECURE FAN TO CURB WITH HEX WASHER HEAD SELF-DRILLING SCREW (#12 x 2"). THE FASTENERS SHALL BE 2" FROM EACH CORNER OF THE FAN BASE AND THE DISTANCE BETWEEN FASTENERS SHALL BE 4" OR LESS. MINIMUM 5 FASTENERS PER SIDE OF CURB. ALL FASTENERS ARE TO BE HIGH QUALITY CORROSION RESISTANT STEEL OR STAINLESS STEEL.

REFER TO SHEET S-610 FOR ANCHORAGE OF FAN/CURB TO STRUCTURE.



5 RESTROOM EXHAUST FAN
NOT TO SCALE

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MARK T. KURZYNSKE
FLORIDA LICENSE # 53568

This item has been electronically signed and sealed by Mark T. Kurzynske, PE on the date shown using a Digital Signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.11
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION
5	02/26/2024	OPERATOR REVS
6	03/26/2024	HOOD FANS

CONSULTANT PROJECT # 23081.CC.S
DATE 02/26/2024
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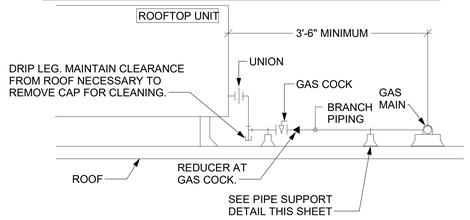
SHEET
DETAILS

SHEET NUMBER
M-501

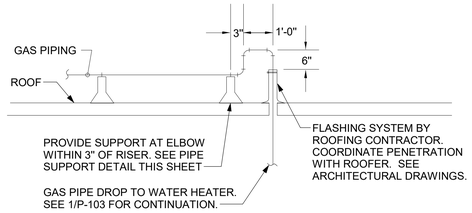
Autodesk Docs://FL_05401_West Sanford FSU_2024 2_FSR/05401_West Sanford FSU_MEC.rvt
4/11/2024 3:26:25 PM
30-LS-05401-M-501-DETAILS

NOTES:
1. INSTALL GAS PIPING SUCH THAT HVAC EQUIPMENT ACCESS PANELS AND/OR DOORS ARE IN NO WAY OBSTRUCTED BY PIPING, VALVES, OR SUPPORTS.
2. TO AVOID CONFLICT WITH AC UNIT ACCESS DOORS, INSTALL GAS PIPING NO CLOSER THAN 3'-6" FROM AC UNIT. (EXCEPT FOR BRANCH LINE CONNECTED TO AC UNIT.)
3. ROUTE BRANCH TAKE-OFF DIRECTLY FROM MAIN TO ROOFTOP UNIT AS SHOWN ON PLAN AND DETAILS WITHOUT LATERAL OFFSETS WHICH MAY OBSTRUCT UNIT ACCESS DOORS.



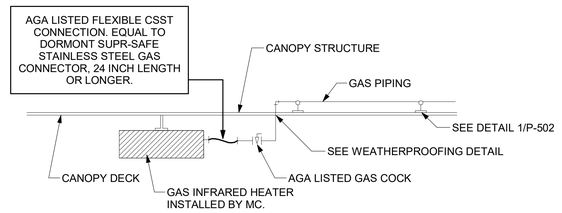
3 GAS PIPING AT RTU
NOT TO SCALE

OFFSET PIPING A MINIMUM OF 6" ABOVE TOP EDGE OF FLASHING.

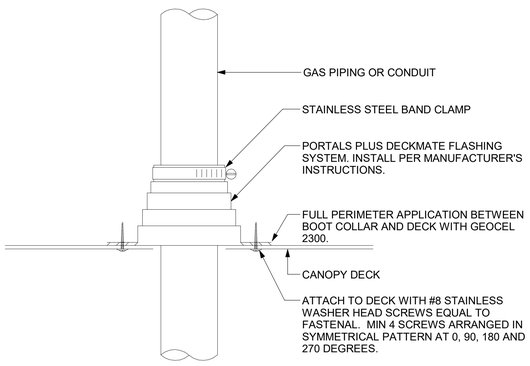


2 GAS PIPE DROP TO WATER HEATER
NOT TO SCALE

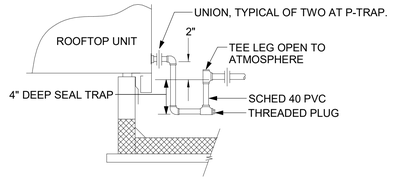
AGA LISTED FLEXIBLE CSST CONNECTION. EQUAL TO DORMONT SUPR-SAFE STAINLESS STEEL GAS CONNECTOR, 24 INCH LENGTH OR LONGER.



1 GAS CONNECTION AT APPLIANCE
NOT TO SCALE



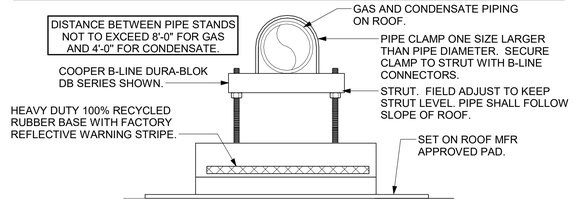
6 WEATHERPROOFING AT CANOPY PENETRATION
NOT TO SCALE



5 CONDENSATE DRAIN PIPING
NOT TO SCALE

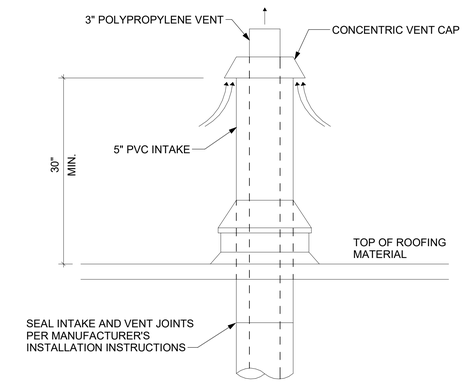
NOTES:
1. NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
3. ENSURE GAS AND CONDENSATE PIPING DO NOT OBSTRUCT ROOFTOP EQUIPMENT ACCESS OPENINGS. RE-PIPING OF SYSTEMS DUE TO CONFLICTS WITH EQUIPMENT ACCESS OPENINGS SHALL BE DONE AT PLUMBING CONTRACTOR'S EXPENSE.

DISTANCE BETWEEN PIPE STANDS NOT TO EXCEED 8'-0" FOR GAS AND 4'-0" FOR CONDENSATE.

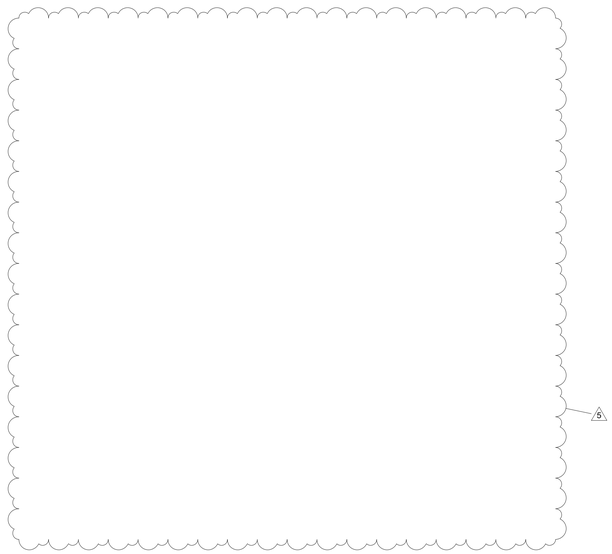


4 PIPING SUPPORT ON ROOF
NOT TO SCALE

VENT MUST BE MIN. 10' FROM OUTSIDE AIR INTAKES



7 WATER HEATER VENT ROOF PENETRATION
NOT TO SCALE



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02/26/24

CHICK-FIL-A WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.11
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION
5	02/26/2024	OPERATOR REVS

CONSULTANT PROJECT # 23081.CC.S
DATE 02/26/2024
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SHEET DETAILS

SHEET NUMBER **M-502**

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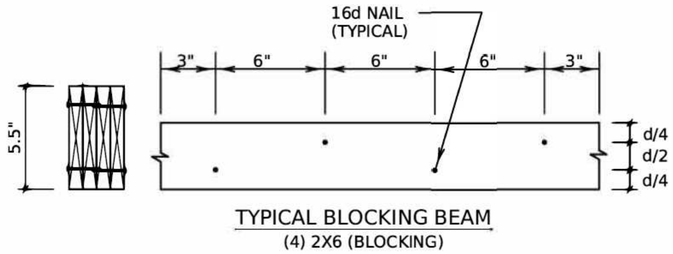
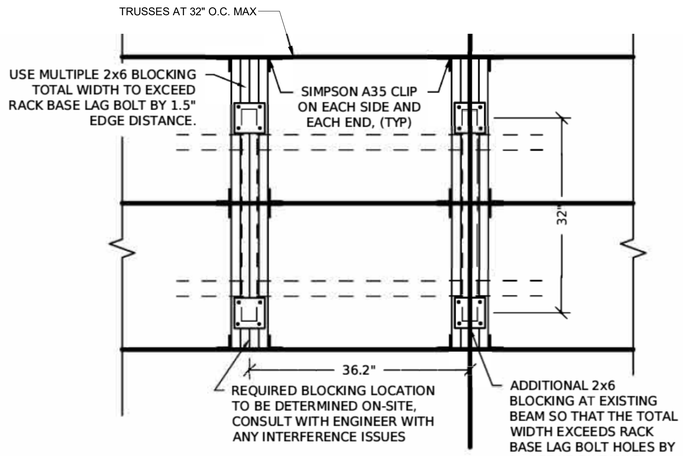
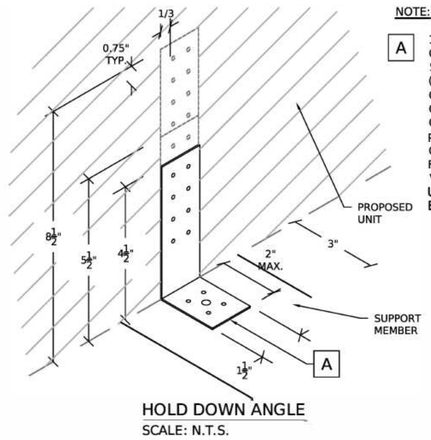
2/26/2024 9:48:25 AM
30-LS-05401-M-502-DETAILS



TYPICAL BLOCKING BEAM
(4) 2X6 (BLOCKING)



PLAN VIEW

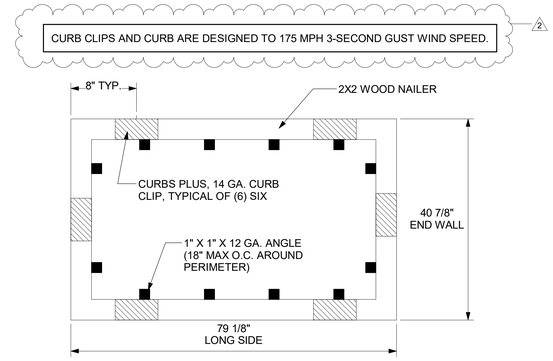


HOLD DOWN ANGLE
SCALE: N.T.S.

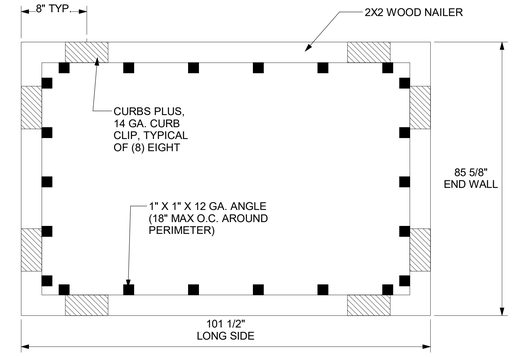
NOTE:

A 1", 1.5" or 2" WIDE x 4.5" , 5.5", 8" or 10" x 14 GA. OR 16 GA. GALVANIZED OR (16 OR 18 GA.) STAINLESS STEEL HOLD DOWN CLIP. USE (4)-#10 SMS INTO A/C UNIT FOR 4.5" AND 5.5" CLIP AND (2)-#10 SMS INTO 8", 8.5" OR 10" CLIP. IT IS RECOMMENDED TO USE 1/4" CARBON STEEL SIMPSON STRONG BOLT, OR POWERS WEDGE BOLT WITH 1 ¾" EMBEDMENT OR EQUAL TAPCON. WITH 2.5" EDGE DISTANCE FROM EDGE OF PAD . BASE PROVIDER TO VERIFY BASE AND CONNECTION.
UNIT SHALL HAVE A MINIMUM OF 20 GA. ENCLOSURE FOR HOLD DOWN ANGLE.

5 CONDENSER STAND DETAILS
NOT TO SCALE

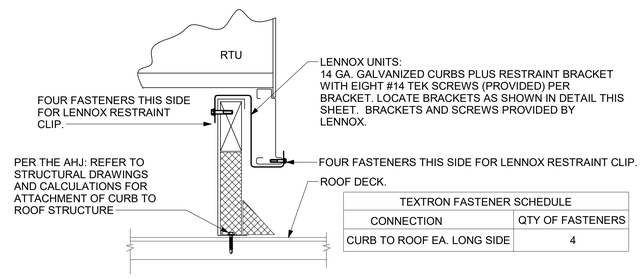


LENNOX LGT MODELS 024 THRU 072



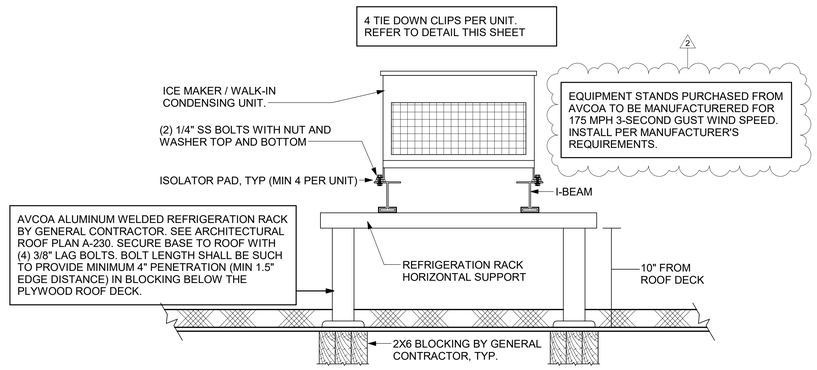
LENNOX LGT MODELS 156 THRU 300

4 RTU CURB CLIP INSTALLATION
NOT TO SCALE



TEXTRON FASTENER SCHEDULE	
CONNECTION	QTY OF FASTENERS
CURB TO ROOF EA. LONG SIDE	4

3 RTU CURB BRACKET
NTS



1 CONDENSING UNIT TIE DOWN DETAIL
NTS

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02/26/24

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION
2	11/17/2023	AHJ Review

CONSULTANT PROJECT #	23081.CC.S
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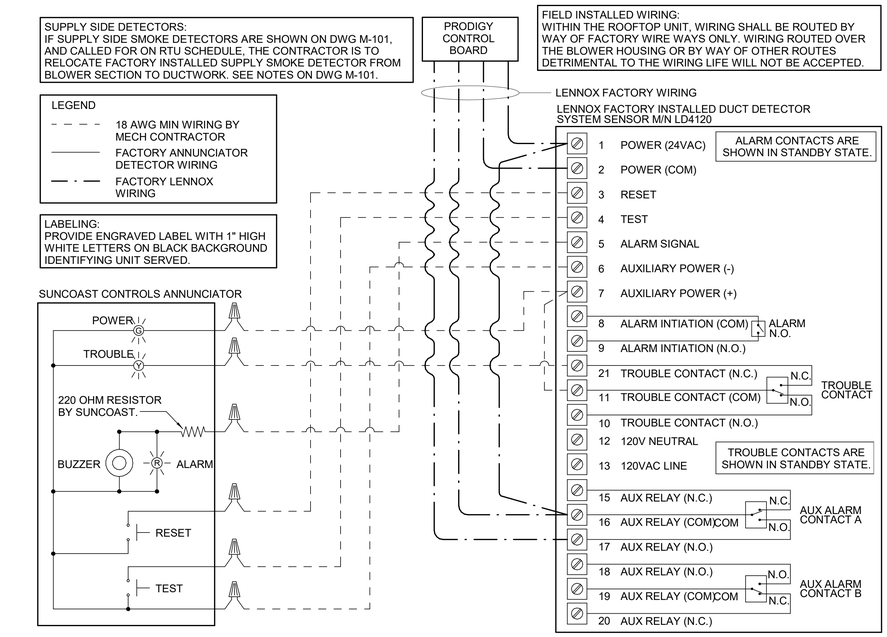
SHEET
SEISMIC DETAILS

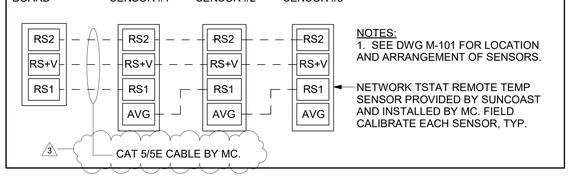
SHEET NUMBER
M-503



1 SMOKE DETECTOR AND ANNUNCIATOR WIRING DIAGRAM - LENNOX
NOT TO SCALE

PROVIDE A PROFESSIONALLY LAMINATED COPY OF THESE DETAILS TO BE INSTALLED INSIDE THE ROOFTOP UNIT CONTROL CABINENT. 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.

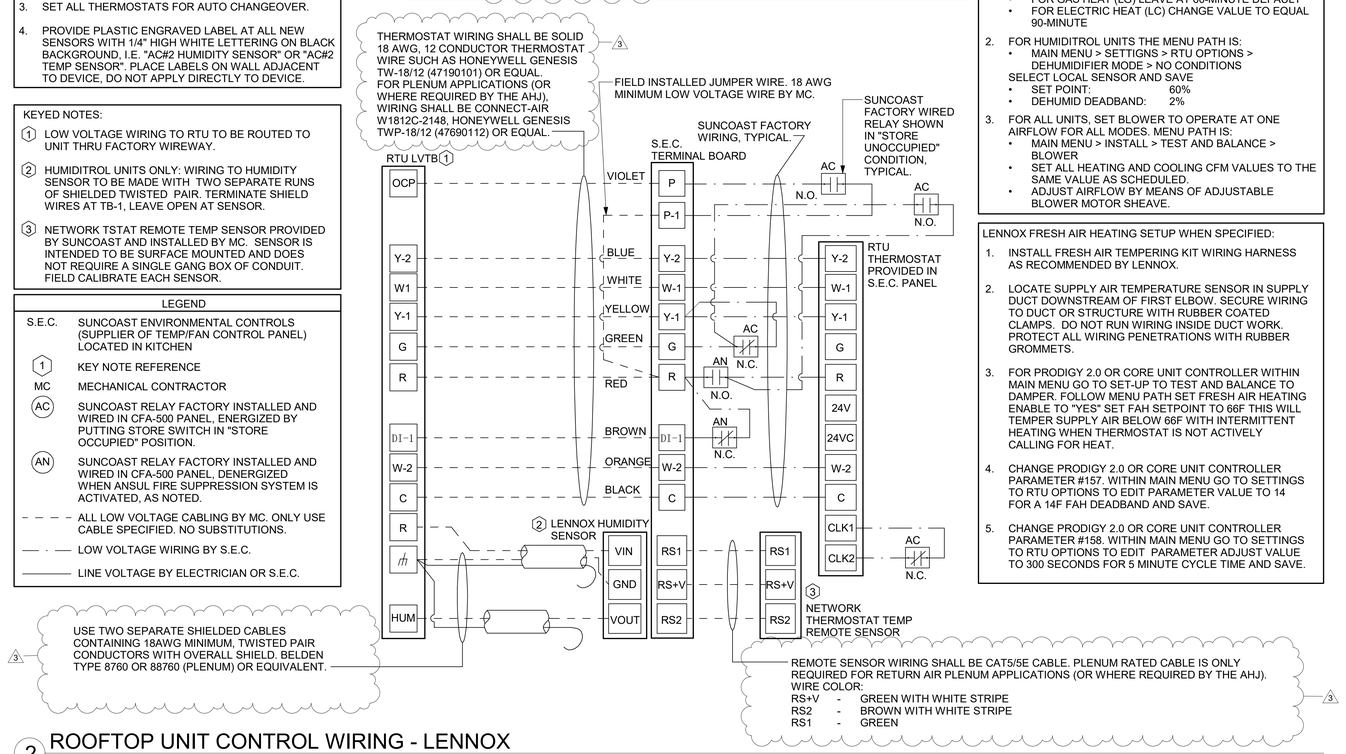
AVERAGING SENSORS (WHERE SHOWN ON PLANS)



NOTES:
1. MECHANICAL CONTRACTOR SHALL MAKE PLASTIC LAMINATE OF THIS DETAIL AND INSTALL PERMANENTLY ON INSIDE DOOR OF ROOFTOP UNIT CONTROL COMPARTMENT.
2. SEE DETAILS THIS SHEET FOR SMOKE DETECTOR AND ANNUNICIATOR WIRING.
3. SET ALL THERMOSTATS FOR AUTO CHANGEOVER.
4. PROVIDE PLASTIC ENGRAVED LABEL AT ALL NEW SENSORS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKGROUND, I.E. "AC#2 HUMIDITY SENSOR" OR "AC#2 TEMP SENSOR". PLACE LABELS ON WALL ADJACENT TO DEVICE, DO NOT APPLY DIRECTLY TO DEVICE.

KEYED NOTES:
1. LOW VOLTAGE WIRING TO RTU TO BE ROUTED TO UNIT THRU FACTORY WIREWAY.
2. HUMIDITROL UNITS ONLY: WIRING TO HUMIDITY SENSOR TO BE MADE WITH TWO SEPARATE RUNS OF SHIELDED TWISTED PAIR. TERMINATE SHIELD WIRES AT TB-1, LEAVE OPEN AT SENSOR.
3. NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. SENSOR IS INTENDED TO BE SURFACE MOUNTED AND DOES NOT REQUIRE A SINGLE GANG BOX OF CONDUIT. FIELD CALIBRATE EACH SENSOR.

LEGEND
S.E.C. SUNCOAST ENVIRONMENTAL CONTROLS (SUPPLIER OF TEMP/FAN CONTROL PANEL) LOCATED IN KITCHEN
(1) KEY NOTE REFERENCE
MC MECHANICAL CONTRACTOR
(AC) SUNCOAST RELAY FACTORY INSTALLED AND WIRED IN CFA-500 PANEL, ENERGIZED BY PUTTING STORE SWITCH IN "STORE OCCUPIED" POSITION.
(AN) SUNCOAST RELAY FACTORY INSTALLED AND WIRED IN CFA-500 PANEL, DENERGIZED WHEN ANSUL FIRE SUPPRESSION SYSTEM IS ACTIVATED, AS NOTED.
ALL LOW VOLTAGE CABLING BY MC. ONLY USE CABLE SPECIFIED. NO SUBSTITUTIONS.
LOW VOLTAGE WIRING BY S.E.C.
LINE VOLTAGE BY ELECTRICIAN OR S.E.C.



2 ROOFTOP UNIT CONTROL WIRING - LENNOX
NOT TO SCALE

LENNOX PRODIGY 2.0 OR CORE UNIT CONTROLLER SETTINGS:
1. FOR ALL RTU'S EXCEPT AC#1, ELIMINATE THE MORNING WARMUP/OSA DAMPER DELAY. THE MENU PATH IS:
   - MAIN MENU > SETTIGNS > RTU OPTIONS > EDIT PARAMETERS

   FOR GAS HEAT UNITS (LGT):
   - CHANGE PARAMETER #65 SETTING TO 1

   FOR ELECTRIC HEAT UNITS (LCT):
   - CHANGE PARAMETER #58 TO 1

   ON UNIT AC#1
   - FOR GAS HEAT (LG) LEAVE AT 60-MINUTE DEFAULT
   - FOR ELECTRIC HEAT (LC) CHANGE VALUE TO EQUAL 90-MINUTE
2. FOR HUMIDITROL UNITS THE MENU PATH IS:
   - MAIN MENU > SETTIGNS > RTU OPTIONS > DEHUMIDIFIER MODE > NO CONDITIONS

   SELECT LOCAL SENSOR AND SAVE
   - SET POINT: 60%
   - DEHUMID DEADBAND: 2%
3. FOR ALL UNITS, SET BLOWER TO OPERATE AT ONE AIRFLOW FOR ALL MODES. MENU PATH IS:
   - MAIN MENU > INSTALL > TEST AND BALANCE > BLOWER
   - SET ALL HEATING AND COOLING CFM VALUES TO THE SAME VALUE AS SCHEDULED.
   - ADJUST AIRFLOW BY MEANS OF ADJUSTABLE BLOWER MOTOR SHEAVE.

LENNOX FRESH AIR HEATING SETUP WHEN SPECIFIED:
1. INSTALL FRESH AIR TEMPERING KIT WIRING HARNESS AS RECOMMENDED BY LENNOX.
2. LOCATE SUPPLY AIR TEMPERATURE SENSOR IN SUPPLY DUCT DOWNSTREAM OF FIRST ELBOW. SECURE WIRING TO DUCT OR STRUCTURE WITH RUBBER COATED CLAMPS. DO NOT RUN WIRING INSIDE DUCT WORK. PROTECT ALL WIRING PENETRATIONS WITH RUBBER GROMMETS.
3. FOR PRODIGY 2.0 OR CORE UNIT CONTROLLER WITHIN MAIN MENU GO TO SET-UP TO TEST AND BALANCE TO DAMPER. FOLLOW MENU PATH SET FRESH AIR HEATING ENABLE TO "YES" SET FAH SETPOINT TO 66F THIS WILL TEMPER SUPPLY AIR BELOW 66F WITH INTERMITTENT HEATING WHEN THERMOSTAT IS NOT ACTIVELY CALLING FOR HEAT.
4. CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER #157. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER VALUE TO 14 FOR A 14F FAH DEADBAND AND SAVE.
5. CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER #158. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER ADJUST VALUE TO 300 SECONDS FOR 5 MINUTE CYCLE TIME AND SAVE.

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12/08/23

CHICK-FIL-A
WEST SANFORD
267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.05
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION
3	11/30/2023	IFC Set

CONSULTANT PROJECT # 23081.CC.S
DATE 10/02/2023
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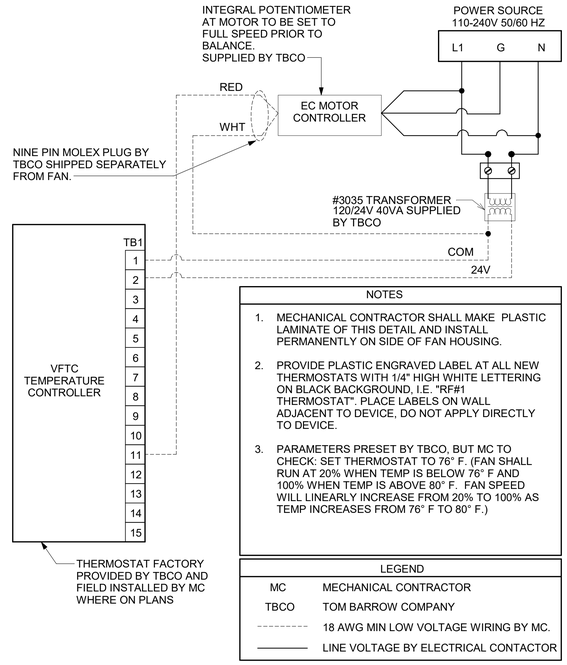
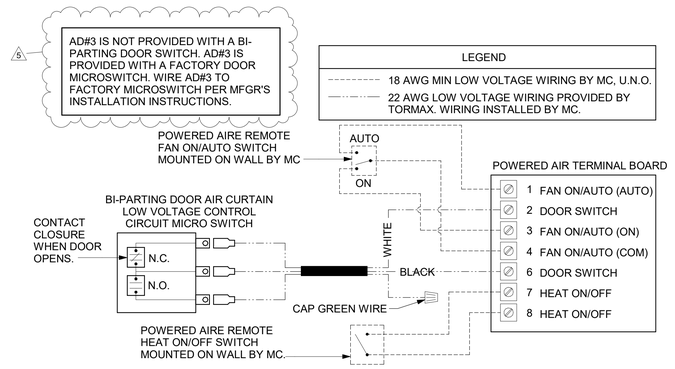
SHEET
CONTROL WIRING DIAGRAMS

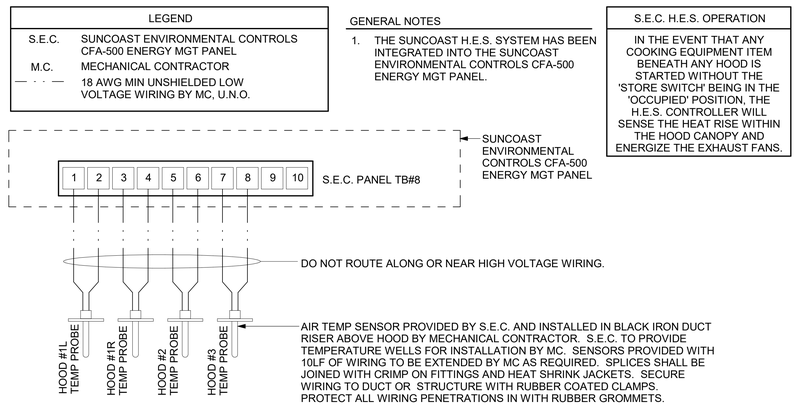
SHEET NUMBER
M-701



1 TECH CLOSET CONTROL DIAGRAM
NOT TO SCALE



2 AIR CURTAIN WIRING DIAGRAM
NOT TO SCALE



3 HOOD FAN/EQUIPMENT INTERLOCK - 3 Hood (4 Collars) - CFA500 Integrated
1/4" = 1'-0"

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MARK T. KURZYNSKE LICENSE # 53568 STATE OF FLORIDA PROFESSIONAL ENGINEER
02/26/24

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.11
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION
5	02/26/2024	OPERATOR REVS

CONSULTANT PROJECT # 23081.CC.S
DATE 02/26/2024
DRAWN BY BLM

SHEET
CONTROL WIRING DIAGRAMS

SHEET NUMBER
M-702

Autodesk Docs://FL_05401_West Sanford FSU_2024.2_FSR/05401_West Sanford FSU_MEC.rvt
2/26/2024 9:48:31 AM
30-LS-05401-M-702-CONTROL WIRING DIAGRAMS

IF THIS PANEL HAS AN OCCUPANCY OVERRIDE FEATURE, AFTER PRESSING THE OVERRIDE BUTTON THE STORE WILL GO INTO OCCUPIED FOR A PERIOD OF TWO (2) HOURS.
(BOTH THE "SYSTEM ON" AND "NIGHT SETBACK" INDICATORS WILL BOTH BE ON) PRESS AND HOLD OVERRIDE BUTTON FOR FIVE (5) SECONDS TO CANCEL OCCUPANCY OVERRIDE.
SET INTERNAL CLOCK (THEBEN TR-610) TO STORE HOURS FOR AUTOMATIC STORE OCCUPANCY CONTROL.

T500 PANEL SEQUENCE OF OPERATION

MORNING OPENING SEQUENCE OF OPERATION

1. **WHEN THE STORE OCCUPANCY SWITCH (SW-1) IS PLACED IN THE OCCUPIED POSITION:**
   - A. THE AIR CONDITIONING STATUS "SYSTEM ON" LIGHT WILL COME ON INDICATING THE STORE HAS BEEN PLACED IN THE OCCUPIED MODE.
   - B. THE THERMOSTATS WILL CHANGE TO THE PRESET "OCCUPIED" TEMPERATURE SETPOINTS.
   - C. THE EVAPORATOR FANS FOR ALL A/C UNITS EXCEPT THE PLAYROOM UNIT SHALL RUN CONTINUOUS ON OCCUPIED MODE (THE PLAYROOMS EVAPORATOR FAN WILL ONLY RUN WHEN THE THERMOSTAT CALLS FOR HEAT OR COOL).
   - D. THE A/C UNITS DAMPERS WILL OPEN TO THE PRE-SET POSITIONS.
   - E. THE COOKING EXHAUST HOODS WILL ENERGIZE.
   - F. ALL INTERIOR LIGHTS THAT ARE CONTROLLED BY THIS PANEL WILL COME ON.

2. **SIGNAGE AND BUILDING LIGHT OPERATION:**
   - A. PLACE THE SIGNAGE AND BUILDING LIGHTS SWITCH (SW-2) IN AUTO MODE AT OPENING. THIS ALLOWS THE PHOTOCELL CONTROLLER TO TURN ON THE LIGHTS WHEN IT IS DARK OUTSIDE BUT ONLY WHILE THE STORE OCCUPANCY (SW-1) SWITCH IS IN THE OCCUPIED MODE.
   - B. PLACING THE BUILDING LIGHTS SWITCH (SW-2) IN THE OVERRIDE (ON) OR (OFF) POSITION WILL OVERRIDE THE EXTERIOR SIGNAGE AND BUILDING LIGHTS ON OR OFF.

3. **PARKING LOT LIGHT SWITCH OPERATION:**
   - A. LEAVING THE PARKING LOT LIGHT SWITCH (SW-3) IN AUTO MODE ALLOWS THE PHOTOCELL CONTROLLER TO TURN ON THE LIGHTS WHEN IT IS DARK OUTSIDE IF THE STORE IS IN THE "SYSTEM ON" MODE. LOT LIGHTS WILL ENERGIZE APPROXIMATELY 2 MINUTES AFTER THE BUILDING LIGHTS.
   - B. FOR EMPLOYEE SAFETY THE FACTORY PROGRAMMED MILLENIUM PLC CONTROLLER SHALL OVERRIDE THE PARKING LOT LIGHTS ON FROM 5AM UNTIL SUNRISE MONDAY THROUGH SATURDAY.
   - C. PLACING THE PARKING LOT SWITCH (SW-3) IN THE OVERRIDE (ON) POSITION WILL OVERRIDE THE PARKING LOT LIGHTS. THIS SHOULD ONLY BE NECESSARY DURING MAINTENANCE (CHECKING BULBS).

EVENING CLOSING SEQUENCE OF OPERATION

1. **SIGNAGE AND BUILDING LIGHT OPERATION:**
   - A. AT CLOSE OF BUSINESS, PLACE THE SIGNAGE AND BUILDING LIGHTS SWITCH (SW-2) INTO THE OFF POSITION. THIS TURNS OFF THE BUILDING AND SIGN LIGHTS INDICATING TO CUSTOMERS THAT THE STORE IS NOW CLOSED.

2. **WHEN THE STORE OCCUPANCY SWITCH (SW-1) IS PLACED IN THE UN-OCCUPIED POSITION:**
   - A. THE AIR CONDITIONING STATUS "NIGHT SETBACK" LIGHT SHALL COME ON INDICATING THE STORE HAS BEEN PLACED INTO THE UN-OCCUPIED MODE.
   - B. THE THERMOSTATS SHALL CHANGE TO THE PRESET "NIGHT SETBACK" SETPOINTS.
   - C. THE EVAPORATOR FANS FOR ALL THE A/C UNITS WILL RUN ONLY WHEN CALLED FOR IN HEAT OR COOL.
   - D. THE A/C UNITS DAMPERS WILL MOVE TO THE CLOSED POSITION.
   - E. THE COOKING EXHAUST HOODS SHALL BECOME DE-ENERGIZED.
   - F. ALL INTERIOR LIGHTS THAT ARE CONTROLLED BY THIS PANEL WILL TURN OFF.
   - G. THE PARKING LOT LIGHTS WILL REMAIN ON FOR 15 MINUTES BEFORE SHUTTING OFF ALLOWING THE EMPLOYEES TO SAFELY EXIT THE BUILDING AND LEAVE THE PREMISES.

EVENING CLOSING SEQUENCE OF OPERATION

1. **SIGNAGE AND BUILDING LIGHT OPERATION:**
   - A. AT CLOSE OF BUSINESS, PLACE THE SIGNAGE AND BUILDING LIGHTS SWITCH (SW-2) INTO THE OFF POSITION. THIS TURNS OFF THE BUILDING AND SIGN LIGHTS INDICATING TO CUSTOMERS THAT THE STORE IS NOW CLOSED.

2. **WHEN THE STORE OCCUPANCY SWITCH (SW-1) IS PLACED IN THE UN-OCCUPIED POSITION:**
   - A. THE AIR CONDITIONING STATUS "NIGHT SETBACK" LIGHT SHALL COME ON INDICATING THE STORE HAS BEEN PLACED INTO THE UN-OCCUPIED MODE.
   - B. THE THERMOSTATS SHALL CHANGE TO THE PRESET "NIGHT SETBACK" SETPOINTS.
   - C. THE EVAPORATOR FANS FOR ALL THE A/C UNITS WILL RUN ONLY WHEN CALLED FOR IN HEAT OR COOL.
   - D. THE A/C UNITS DAMPERS WILL MOVE TO THE CLOSED POSITION.
   - E. THE COOKING EXHAUST HOODS SHALL BECOME DE-ENERGIZED.
   - F. ALL INTERIOR LIGHTS THAT ARE CONTROLLED BY THIS PANEL WILL TURN OFF.
   - G. THE PARKING LOT LIGHTS WILL REMAIN ON FOR 15 MINUTES BEFORE SHUTTING OFF ALLOWING THE EMPLOYEES TO SAFELY EXIT THE BUILDING AND LEAVE THE PREMISES.

FIRE INTERLOCK FUNCTION

1. **IN THE EVENT OF FIRE UNDER THE COOKING HOOD:**
   - **A. EXHAUST FANS WILL RUN TO DRAW SMOKE OUT OF THE BUILDING.**
   - **B. THE INTERIOR LIGHTS THAT ARE CONTROLLED BY THIS PANEL WILL TURN ON.**
   - **C. ALL INCOMING AIR WILL SHUT OFF INCLUDING ROOFTOP A/C UNIT FANS AND MAKE UP AIR.**
   - **D. ALL EQUIPMENT UNDER THE COOKING EXHAUST HOOD WILL SHUT DOWN WITH A SHUNT TRIP BREAKER.**

ORDER CANOPY SEQUENCE OF OPERATION

1. **T500 OCCUPANCY SWITCH IN "STORE OCCUPIED" POSITION & MASTER CANOPY AUTO / OFF SWITCH IN "AUTO" POSITION :**
   - A. INFRARED HEATER SWITCH @ CANOPY COLUMN BECOMES ENABLED.
   - B. FAN SWITCH @ CANOPY COLUMN BECOMES ENABLED.
   - C. BROMIC HEATER ROTARY TIMER ON WALL INSIDE OF DRIVE-THRU BECOMES ENABLED.
   - D. CANOPY LIGHTS OVERRIDE SWITCH @ CANOPY COLUMN BECOMES ENABLED, OTHERWISE, LIGHTS WILL AUTOMATICALLY TURN ON @ DUSK BY WAY OF PHOTOCELL.

2. **T500 OCCUPANCY SWITCH IN "STORE UNOCCUPIED" POSITION OR MASTER CANOPY "AUTO / OFF" SWITCH IN "OFF" POSITION :**
   - A. INFRARED HEATERS ARE DISABLED.
   - B. COOLING FANS ARE DISABLED.
   - C. BROMIC HEATER @ MEAL DELIVERY CANOPY IS DISABLED.
   - D. CANOPY LIGHTS ARE OFF.

2

SHEET ADDED TO SET

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02/26/24

CHICK-FIL-A WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.11
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NO.	DATE	DESCRIPTION
2	11/17/2023	AHJ Review

CONSULTANT PROJECT # 23081.CC.S
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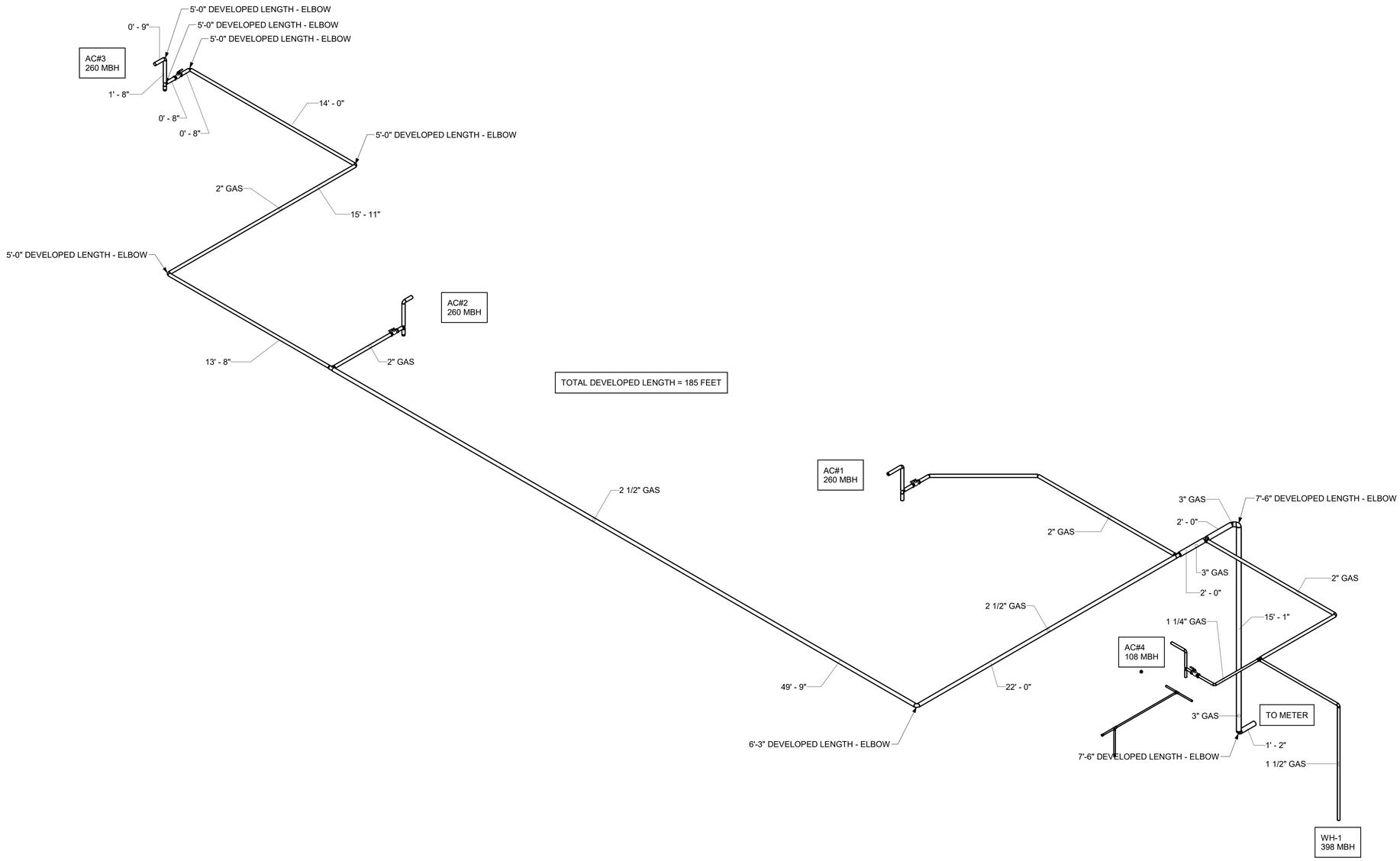
SHEET
SEQUENCE OF OPERATIONS

SHEET NUMBER
M-703



1 GAS PIPING ISOMETRIC

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12/08/23

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
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2	11/17/2023	AHJ Review

CONSULTANT PROJECT # 23081.CC.S
DATE 10/02/2023
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SHEET
GAS PIPING ISOMETRIC

SHEET NUMBER
M-901

Autodesk Docs://FL_05401_West Sanford_2023.4_FSR/05401_West Sanford_K&A_MEC.rvt
12/5/2023 9:23:54 AM
30-LS-05401-M-901-GAS PIPING ISOMETRIC

Air System Sizing Summary for AC#1
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 11/30/2023
Prepared by: Kurzynske & Associates — 8:50 AM

Air System Information

Air System Name	AC#1	Number of zones	1
Equipment Class	PKG ROOF	Floor Area	1310.0 sqft
Air System Type	SZCAV	Location	Orlando Sanford Intl, FL, USA

Sizing Calculation Information

Calculation Months	Jan to Dec	Zone CFM Sizing	Sum of space airflow rates
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load	25.0	Tons	Peak coil load occurs at	July 16:00	
Total coil load	299.7	MBH	OA DB / WB	94.4 / 75.7	F
Sensible coil load	196.7	MBH	Entering DB / WB	79.2 / 64.5	F
Coil CFM at peak load	8551	CFM	Leaving DB / WB	58.2 / 52.6	F
Sum of peak zone CFM	8551	CFM	Resulting RH	44	%
Sensible heat ratio	0.656		Design supply temp.	58.0	F
CFM/Ton	342.4		Zone T-stat Check	1 of 1	OK
sqft/Ton	52.5		Max zone temperature deviation	0.0	F
BTU/(hr sqft)	228.7				
Water flow @ 10.0 F rise	N/A				

Central Heating Coil Sizing Data

Max coil load	60.3	MBH	Load occurs at	Design Heating	
Coil CFM at Design Heating	8551	CFM	BTU/(hr sqft)	46.0	
Max coil CFM	8551	CFM	Ent. DB / Lvg DB	62.8 / 69.3	F
Water flow @ 20.0 F drop	N/A				

Dehumidification Reheat Coil Sizing Data

No dehumidification reheat coil loads occurred during this calculation.

Supply Fan Sizing Data

Design CFM	8551	CFM	Fan motor BHP	4.68	BHP
Design CFM/sqft	6.53	CFM/sqft	Fan motor kW	3.72	kW
			Fan total static	2.00	in wg

Outdoor Ventilation Air Data

Design airflow CFM	1850	CFM	CFM/person	70.61	CFM/person
CFM/sqft	1.41	CFM/sqft			

Air System Heat Balance Summary for AC#1
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 11/30/2023
Prepared by: Kurzynske & Associates — 8:50 AM

Table 1. System Loads

	DESIGN COOLING - JULY 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
COMPONENT LOADS	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Zone Conditioning		154652	30977		6516	0
Plenum Load		0	0		0	0
Return Fan Load	6701 CFM	0	-	6701 CFM	0	-
Ventilation Load	1850 CFM	38357	59322	1850 CFM	66002	0
Supply Fan Load	8551 CFM	12679	-	8551 CFM	-12679	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	205688	90299	-	59840	0
Central Cooling Coil	-	196690	102967	-	0	0
Central Heating Coil	-	0	-	-	60259	-
Dehumidification Reheat Coil	-	0	-	-	0	-
>> Total Conditioning	-	196690	102967	-	60259	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

	DESIGN COOLING - JULY 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
Zone Heat Balance Component	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Exterior Wall Convection	418 sqft	2116	-	418 sqft	605	-
Roof Convection	0 sqft	0	-	0 sqft	0	-
Window Convection	20 sqft	239	-	20 sqft	127	-
Skylight Convection	0 sqft	0	-	0 sqft	0	-
Door Convection	0 sqft	0	-	0 sqft	0	-
Floor Convection	1310 sqft	5282	-	1310 sqft	1912	-
Interior Wall Convection	713 sqft	2315	-	713 sqft	2951	-
Ceiling Convection	1310 sqft	7767	-	1310 sqft	1745	-
Overhead Lighting Convection	964 W	1460	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	0 W	0	-	0 W	0	-
People Convection	26	2201	7074	0	0	0
Infiltration	0 CFM	0	0	0 CFM	0	0
Miscellaneous Equipment	-	134142	33959	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	155523	41033	-	4683	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for AC#2
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 02/22/2024
Prepared by: Kurzynske & Associates — 4:03 PM

Air System Information

Air System Name	AC#2	Number of zones	1
Equipment Class	PKG ROOF	Floor Area	720.1 sqft
Air System Type	SZCAV	Location	Orlando Sanford Intl, FL, USA

Sizing Calculation Information

Calculation Months	Jan to Dec	Zone CFM Sizing	Sum of space airflow rates
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load	12.4	Tons	Peak coil load occurs at	July 16:00	
Total coil load	148.8	MBH	OA DB / WB	94.4 / 75.7	F
Sensible coil load	98.3	MBH	Entering DB / WB	80.1 / 64.7	F
Coil CFM at peak load	4071	CFM	Leaving DB / WB	58.1 / 52.3	F
Sum of peak zone CFM	4071	CFM	Resulting RH	41	%
Sensible heat ratio	0.661		Design supply temp.	58.0	F
CFM/Ton	328.4		Zone T-stat Check	1 of 1	OK
sqft/Ton	58.1		Max zone temperature deviation	0.0	F
BTU/(hr sqft)	206.6				
Water flow @ 10.0 F rise	N/A				

Central Heating Coil Sizing Data

Max coil load	49.4	MBH	Load occurs at	Design Heating	
Coil CFM at Design Heating	4071	CFM	BTU/(hr sqft)	68.6	
Max coil CFM	4071	CFM	Ent. DB / Lvg DB	61.3 / 72.5	F
Water flow @ 20.0 F drop	N/A				

Dehumidification Reheat Coil Sizing Data

No dehumidification reheat coil loads occurred during this calculation.

Supply Fan Sizing Data

Design CFM	4071	CFM	Fan motor BHP	2.23	BHP
Design CFM/sqft	5.65	CFM/sqft	Fan motor kW	1.77	kW
			Fan total static	2.00	in wg

Outdoor Ventilation Air Data

Design airflow CFM	1075	CFM	CFM/person	99.58	CFM/person
CFM/sqft	1.49	CFM/sqft			

Air System Heat Balance Summary for AC#2
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 02/22/2024
Prepared by: Kurzynske & Associates — 4:03 PM

Table 1. System Loads

	DESIGN COOLING - JULY 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
COMPONENT LOADS	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Zone Conditioning		74112	11448		16867	0
Plenum Load		0	0		0	0
Return Fan Load	4071 CFM	0	-	4071 CFM	0	-
Ventilation Load	1075 CFM	22288	36998	1075 CFM	38353	0
Supply Fan Load	4071 CFM	6036	-	4071 CFM	-6036	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	102436	48446	-	49184	0
Central Cooling Coil	-	98276	50482	-	0	0
Central Heating Coil	-	0	-	-	49427	-
Dehumidification Reheat Coil	-	0	-	-	0	-
>> Total Conditioning	-	98276	50482	-	49427	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

	DESIGN COOLING - JULY 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
Zone Heat Balance Component	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Exterior Wall Convection	299 sqft	1436	-	299 sqft	632	-
Roof Convection	0 sqft	0	-	0 sqft	0	-
Window Convection	11 sqft	123	-	11 sqft	80	-
Skylight Convection	0 sqft	0	-	0 sqft	0	-
Door Convection	79 sqft	1279	-	79 sqft	919	-
Floor Convection	720 sqft	2822	-	720 sqft	1757	-
Interior Wall Convection	340 sqft	1124	-	340 sqft	253	-
Ceiling Convection	720 sqft	4197	-	720 sqft	1866	-
Overhead Lighting Convection	510 W	773	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	360 W	921	-	0 W	0	-
People Convection	11	793	2213	0	0	0
Infiltration	256 CFM	5464	8342	291 CFM	10457	0
Miscellaneous Equipment	-	52114	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	5% / 5%	3552	528	5%	798	0
>> Total Zone Loads	-	74599	11083	-	16763	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for AC#3
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 02/22/2024
Prepared by: Kurzynske & Associates — 4:03 PM

Air System Information

Air System Name	AC#3	Number of zones	1
Equipment Class	PKG ROOF	Floor Area	2132.6 sqft
Air System Type	SZCAV	Location	Orlando Sanford Intl, FL, USA

Sizing Calculation Information

Calculation Months	Jan to Dec	Zone CFM Sizing	Sum of space airflow rates
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load	13.2	Tons	Peak coil load occurs at	July 16:00	
Total coil load	158.7	MBH	OA DB / WB	94.4 / 75.7	F
Sensible coil load	94.2	MBH	Entering DB / WB	81.6 / 67.8	F
Coil CFM at peak load	3734	CFM	Leaving DB / WB	58.6 / 54.2	F
Sum of peak zone CFM	3734	CFM	Resulting RH	52	%
Sensible heat ratio	0.594		Design supply temp.	58.0	F
CFM/Ton	282.4		Zone T-stat Check	1 of 1	OK
sqft/Ton	161.3		Max zone temperature deviation	0.0	F
BTU/(hr sqft)	74.4				
Water flow @ 10.0 F rise	N/A				

Central Heating Coil Sizing Data

Max coil load	60.3	MBH	Load occurs at	Design Heating	
Coil CFM at Design Heating	3734	CFM	BTU/(hr sqft)	28.3	
Max coil CFM	3734	CFM	Ent. DB / Lvg DB	58.7 / 73.6	F
Water flow @ 20.0 F drop	N/A				

Dehumidification Reheat Coil Sizing Data

Max coil load	13.0	MBH	Load occurs at	January 6:00	
Coil CFM at January 6:00	3734	CFM	BTU/(hr sqft)	6.1	
Max coil CFM	3734	CFM	Ent. DB / Lvg DB	61.3 / 64.5	F
Water flow @ 20.0 F drop	N/A				

Supply Fan Sizing Data

Design CFM	3734	CFM	Fan motor BHP	2.05	BHP
Design CFM/sqft	1.75	CFM/sqft	Fan motor kW	1.62	kW
			Fan total static	2.00	in wg

Outdoor Ventilation Air Data

Design airflow CFM	1275	CFM	CFM/person	12.12	CFM/person
CFM/sqft	0.60	CFM/sqft			

Air System Heat Balance Summary for AC#3
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 02/22/2024
Prepared by: Kurzynske & Associates — 4:03 PM

Table 1. System Loads

	DESIGN COOLING - JULY 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
COMPONENT LOADS	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Zone Conditioning		66214	27718		20001	0
Plenum Load		0	0		0	0
Return Fan Load	3434 CFM	0	-	3434 CFM	0	-
Ventilation Load	1275 CFM	26442	31694	1275 CFM	45504	0
Supply Fan Load	3734 CFM	5536	-	3734 CFM	-5536	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	98193	59411	-	59968	0
Central Cooling Coil	-	94224	64470	-	0	0
Central Heating Coil	-	0	-	-	60257	-
Dehumidification Reheat Coil	-	0	-	-	0	-
>> Total Conditioning	-	94224	64470	-	60257	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

	DESIGN COOLING - JULY 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
Zone Heat Balance Component	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Exterior Wall Convection	1103 sqft	3471	-	1103 sqft	1946	-
Roof Convection	0 sqft	0	-	0 sqft	0	-
Window Convection	406 sqft	5228	-	406 sqft	2688	-
Skylight Convection	0 sqft	0	-	0 sqft	0	-
Door Convection	66 sqft	1660	-	66 sqft	763	-
Floor Convection	2133 sqft	6449	-	2133 sqft	5225	-
Interior Wall Convection	2213 sqft	4068	-	2213 sqft	1182	-
Ceiling Convection	2133 sqft	10343	-	2133 sqft	4216	-
Overhead Lighting Convection	901 W	1364	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	3810 W	9751	-	0 W	0	-
People Convection	105	8747	27828	0	0	0
Infiltration	70 CFM	1490	1388	79 CFM	2852	0
Miscellaneous Equipment	-	10341	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	5% / 5%	3146	1461	5%	944	0
>> Total Zone Loads	-	66058	30677	-	19816	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for AC#4
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 11/30/2023
Prepared by: Kurzynske & Associates — 8:50 AM

Air System Information

Air System Name	AC#4	Number of zones	1
Equipment Class	PKG ROOF	Floor Area	674.7 sqft
Air System Type	SZCAV	Location	Orlando Sanford Intl, FL, USA

Sizing Calculation Information

Calculation Months	Jan to Dec	Zone CFM Sizing	Sum of space airflow rates
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load	4.9	Tons	Peak coil load occurs at	August 16:00	
Total coil load	59.1	MBH	OA DB / WB	94.4 / 75.7	F
Sensible coil load	41.9	MBH	Entering DB / WB	79.2 / 62.7	F
Coil CFM at peak load	1862	CFM	Leaving DB / WB	58.6 / 51.6	F
Sum of peak zone CFM	1862	CFM	Resulting RH	36	%
Sensible heat ratio	0.709		Design supply temp.	58.0	F
CFM/Ton	378.4		Zone T-stat Check	1 of 1	OK
sqft/Ton	137.1		Max zone temperature deviation	0.0	F
BTU/(hr sqft)	87.5				
Water flow @ 10.0 F rise	N/A				

Central Heating Coil Sizing Data

Max coil load	18.1	MBH	Load occurs at	Design Heating	
Coil CFM at Design Heating	1862	CFM	BTU/(hr sqft)	26.9	
Max coil CFM	1862	CFM	Ent. DB / Lvg DB	62.9 / 71.9	F
Water flow @ 20.0 F drop	N/A				

Dehumidification Reheat Coil Sizing Data

No dehumidification reheat coil loads occurred during this calculation.

Supply Fan Sizing Data

Design CFM	1862	CFM	Fan motor BHP	1.02	BHP
Design CFM/sqft	2.76	CFM/sqft	Fan motor kW	0.81	kW
			Fan total static	2.00	in wg

Outdoor Ventilation Air Data

Design airflow CFM	400	CFM	CFM/person	76.39	CFM/person
CFM/sqft	0.59	CFM/sqft			

Air System Heat Balance Summary for AC#4
(In Alternative: Default Alternative)

Project: sanford, fl hvac load.CSDL — 11/30/2023
Prepared by: Kurzynske & Associates — 8:50 AM

Table 1. System Loads

	DESIGN COOLING - AUGUST 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
COMPONENT LOADS	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Zone Conditioning		32618	748		6513	0
Plenum Load		0	0		0	0
Return Fan Load	1812 CFM	0	-	1812 CFM	0	-
Ventilation Load	400 CFM	8299	15726	400 CFM	14282	0
Supply Fan Load	1862 CFM	2761	-	1862 CFM	-2761	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	43679	16474	-	18033	0
Central Cooling Coil	-	41873	17182	-	0	0
Central Heating Coil	-	0	-	-	18124	-
Dehumidification Reheat Coil	-	0	-	-	0	-
>> Total Conditioning	-	41873	17182	-	18124	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

	DESIGN COOLING - AUGUST 16:00			DESIGN HEATING		
	OA DB / WB 94.4 F / 75.7 F			OA DB / WB 36.9 F / 31.0 F		
Zone Heat Balance Component	Details	Sensible [BTU/hr]	Latent [BTU/hr]	Details	Sensible [BTU/hr]	Latent [BTU/hr]
Exterior Wall Convection	726 sqft	1759	-	726 sqft	1228	-
Roof Convection	0 sqft	0	-	0 sqft	0	-
Window Convection	57 sqft	972	-	57 sqft	367	-
Skylight Convection	0 sqft	0	-	0 sqft	0	-
Door Convection	55 sqft	422	-	55 sqft	216	-
Floor Convection	675 sqft	1885	-	675 sqft	2033	-
Interior Wall Convection	1697 sqft	3547	-	1697 sqft	785	-
Ceiling Convection	675 sqft	3063	-	675 sqft	1292	-
Overhead Lighting Convection	257 W	389	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	1576 W	4032	-	0 W	0	-
People Convection	5	364	681	0	0	0
Infiltration	0 CFM	0	0	0 CFM	0	0
Miscellaneous Equipment	-	13145	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	5% / 5%	1479	34	5%	296	0
>> Total Zone Loads	-	31058	715	-	6216	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

SHEET ADDED TO SET

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

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

MARK T. KURZYNSKE
FLORIDA LICENSE # 53568
MARK T. KURZYNSKE LICENSE NO. 53568 STATE OF FLORIDA PROFESSIONAL ENGINEER
02/26/24

CHICK-FIL-A
WEST SANFORD

267 HIGH WATER LN
SANFORD, FL 32771

FSR#05401

BUILDING TYPE / SIZE: P14 LS BN
RELEASE: 23.11
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

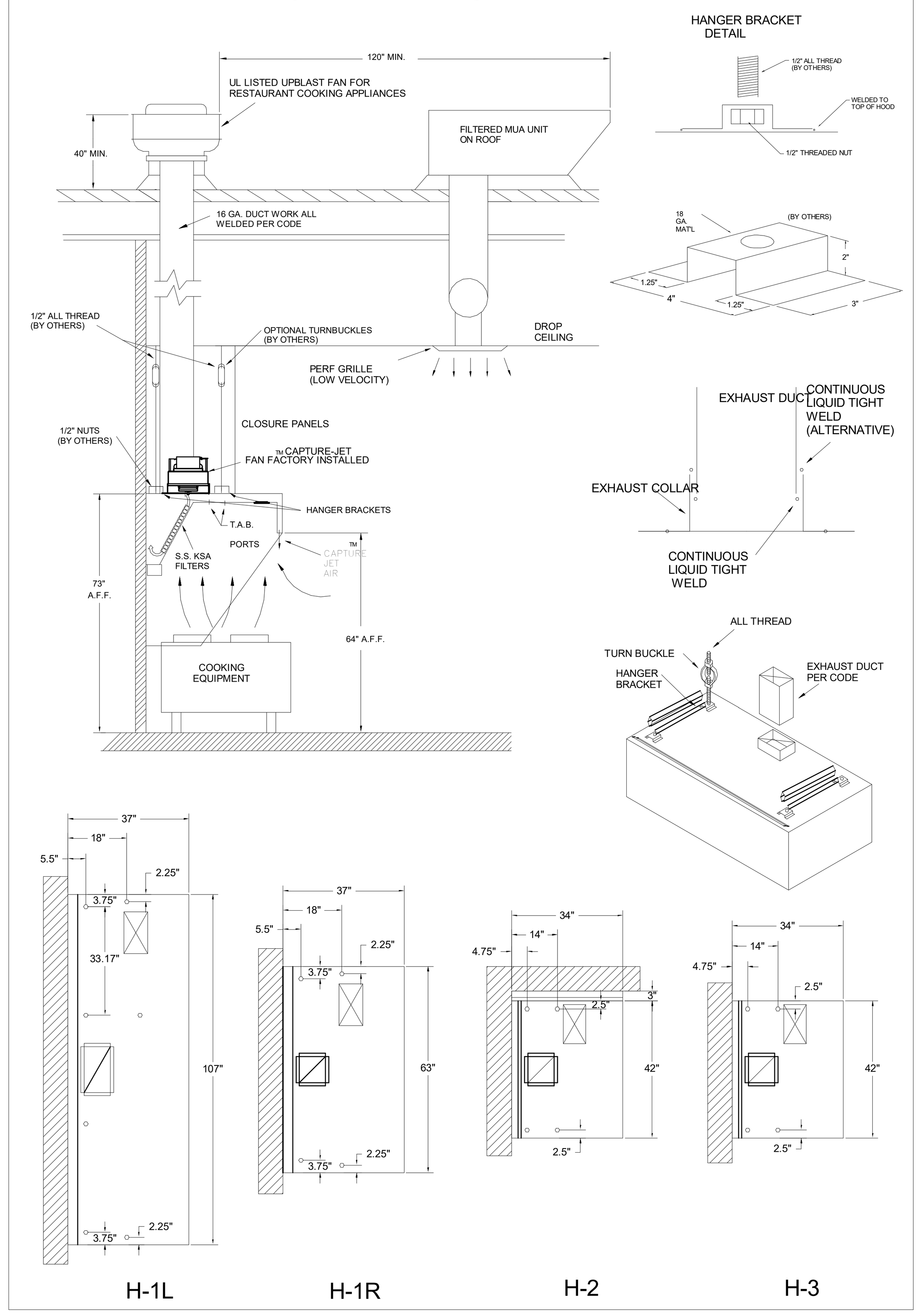
NO.	DATE	DESCRIPTION
2	11/17/2023	AHJ Review
5	02/26/2024	OPERATOR REVS

CONSULTANT PROJECT # 23081.CC.S
DATE 02/26/2024
DRAWN BY BLM

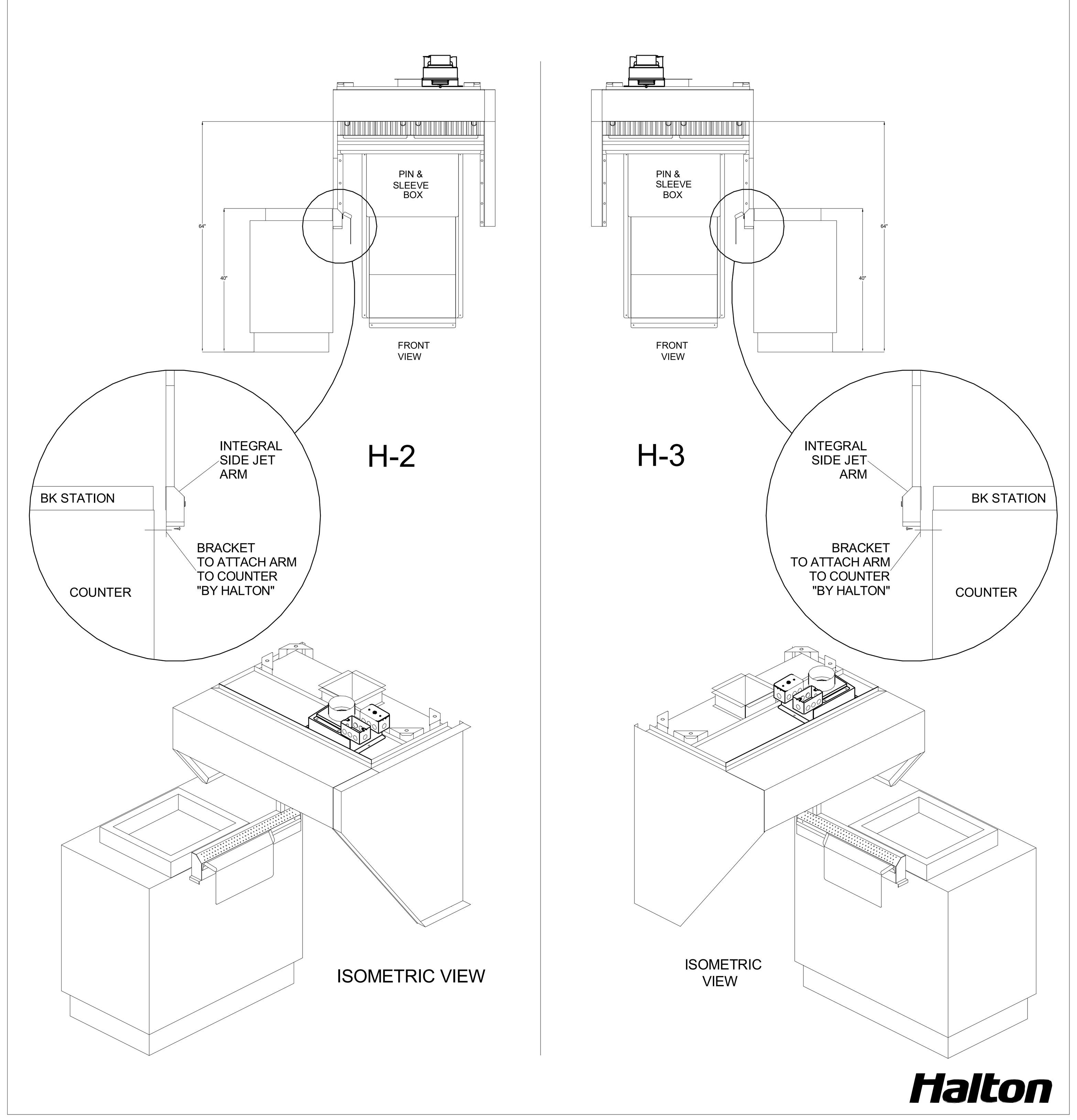
SHEET
HVAC LOADS

SHEET NUMBER
M-902

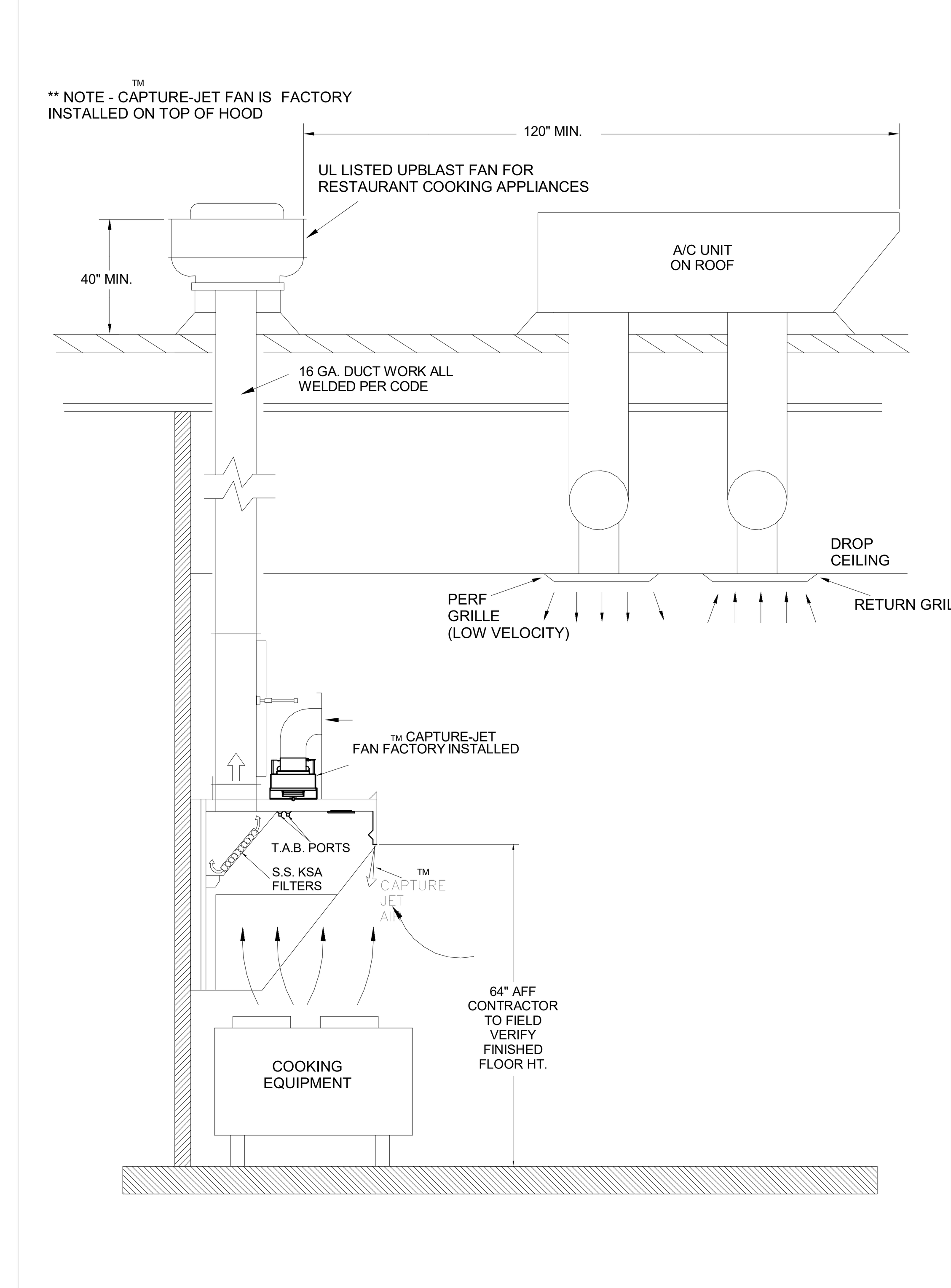
HANGER BRACKET DETAIL



INTEGRAL SIDE JET ARM



TYPICAL INSTALLATION

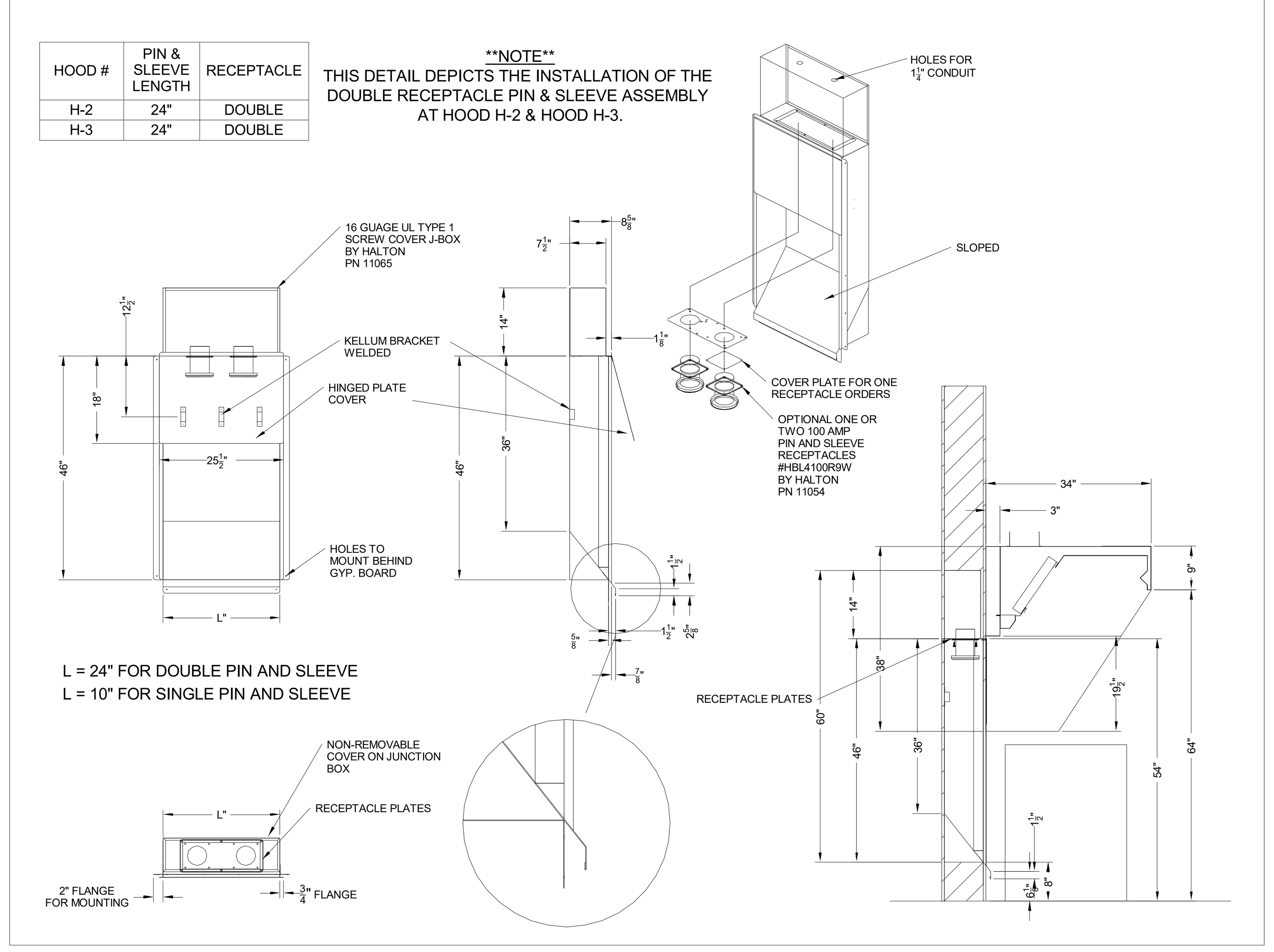


4105A

PIN & SLEEVE BOX DETAIL

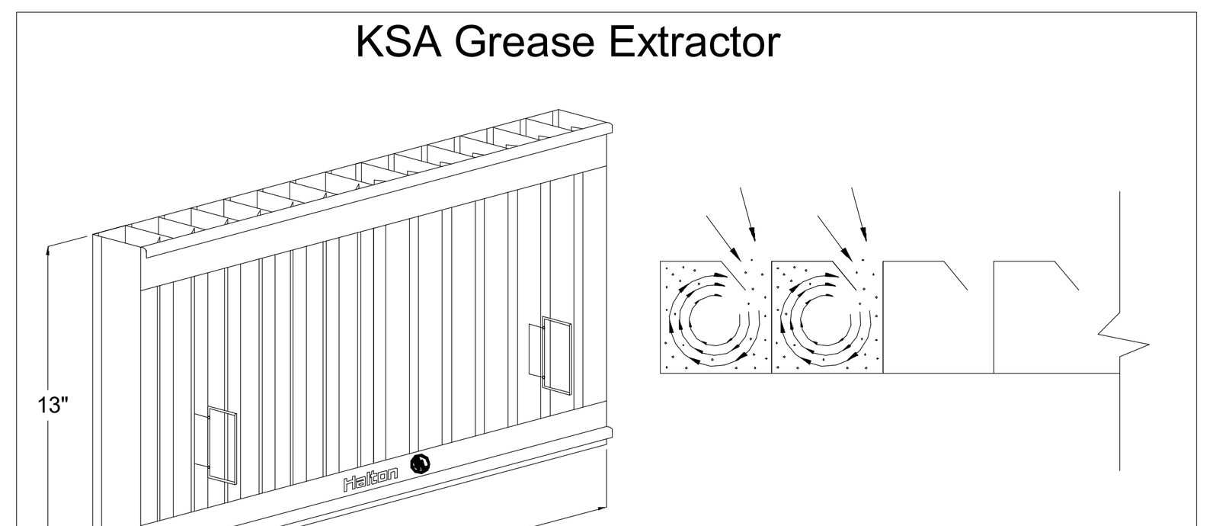
HOOD #	PIN & SLEEVE LENGTH	RECEPTACLE
H-2	24"	DOUBLE
H-3	24"	DOUBLE

NOTE
THIS DETAIL DEPICTS THE INSTALLATION OF THE DOUBLE RECEPTACLE PIN & SLEEVE ASSEMBLY AT HOOD H-2 & HOOD H-3.

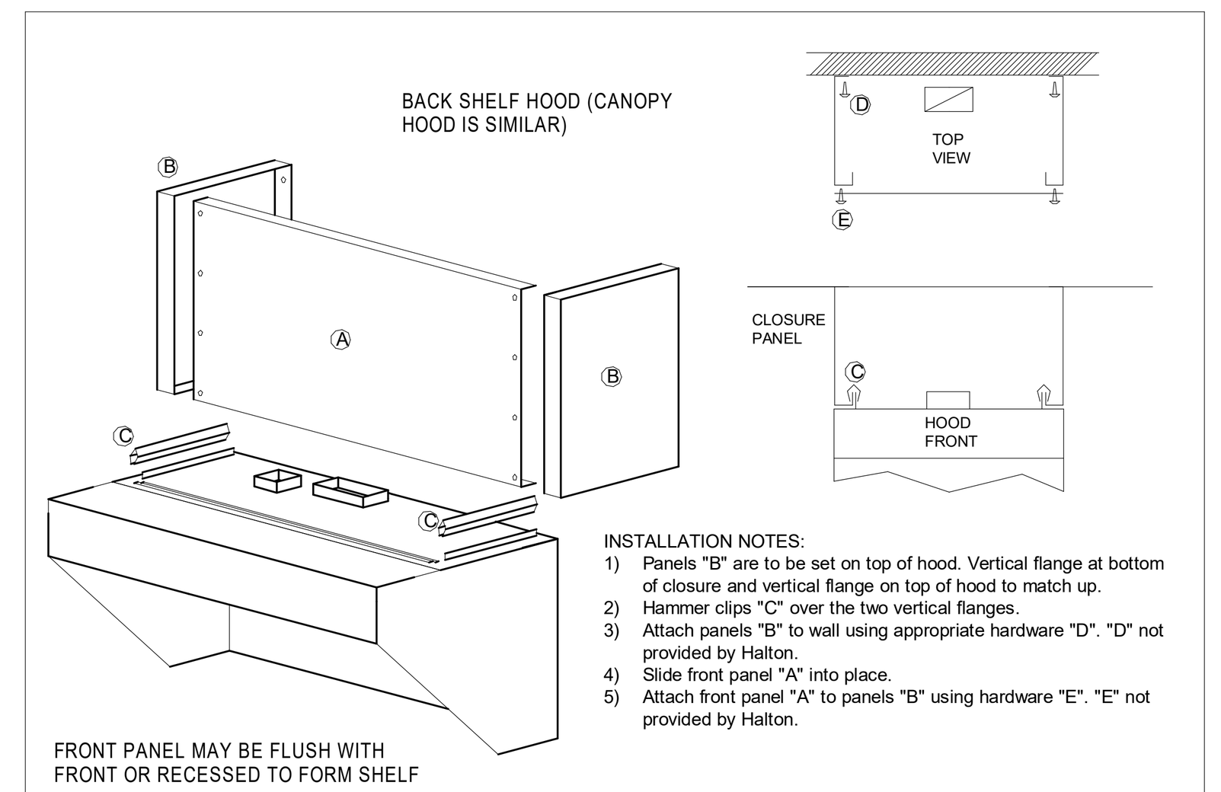


L = 24" FOR DOUBLE PIN AND SLEEVE
L = 10" FOR SINGLE PIN AND SLEEVE

KSA Grease Extractor



Extraction of contaminants from the exhaust air is provided by the KSA Multi-Cyclone™ grease extractors. Efficient grease extraction is achieved by forcing the exhaust air to spiral continuously in the same direction in the multiple chambers of the extractor, thus separating the grease particles from the air flow centrifugally. High extraction efficiency and low pressure loss over the KSA remain practically constant in use.

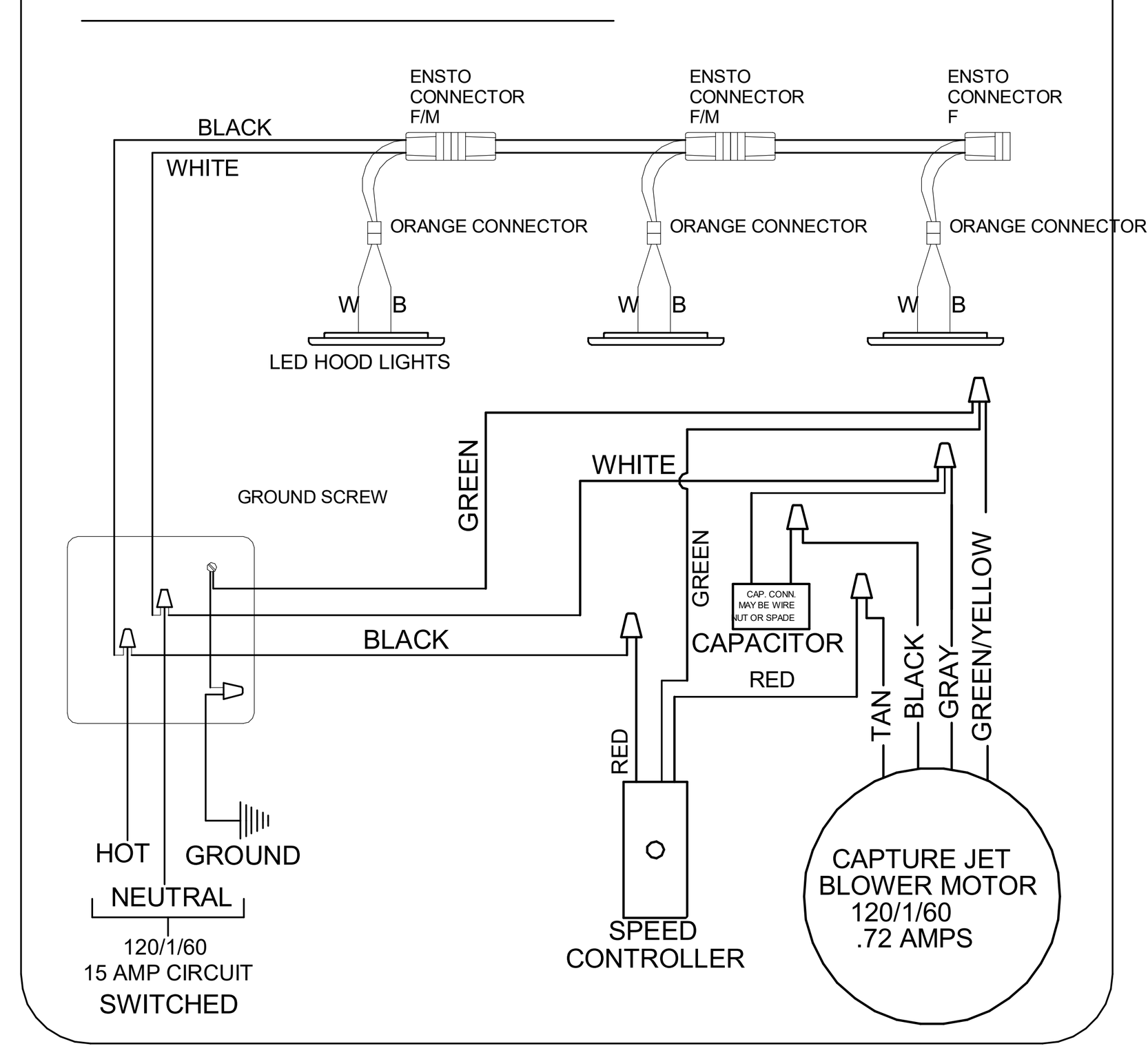


INSTALLATION NOTES:
1) Panels "B" are to be set on top of hood. Vertical flange at bottom of closure and vertical flange on top of hood to match up.
2) Hammer clips "C" over the two vertical flanges.
3) Attach panels "B" to wall using appropriate hardware "D". "D" not provided by Halton.
4) Slide front panel "A" into place.
5) Attach front panel "A" to panels "B" using hardware "E". "E" not provided by Halton.

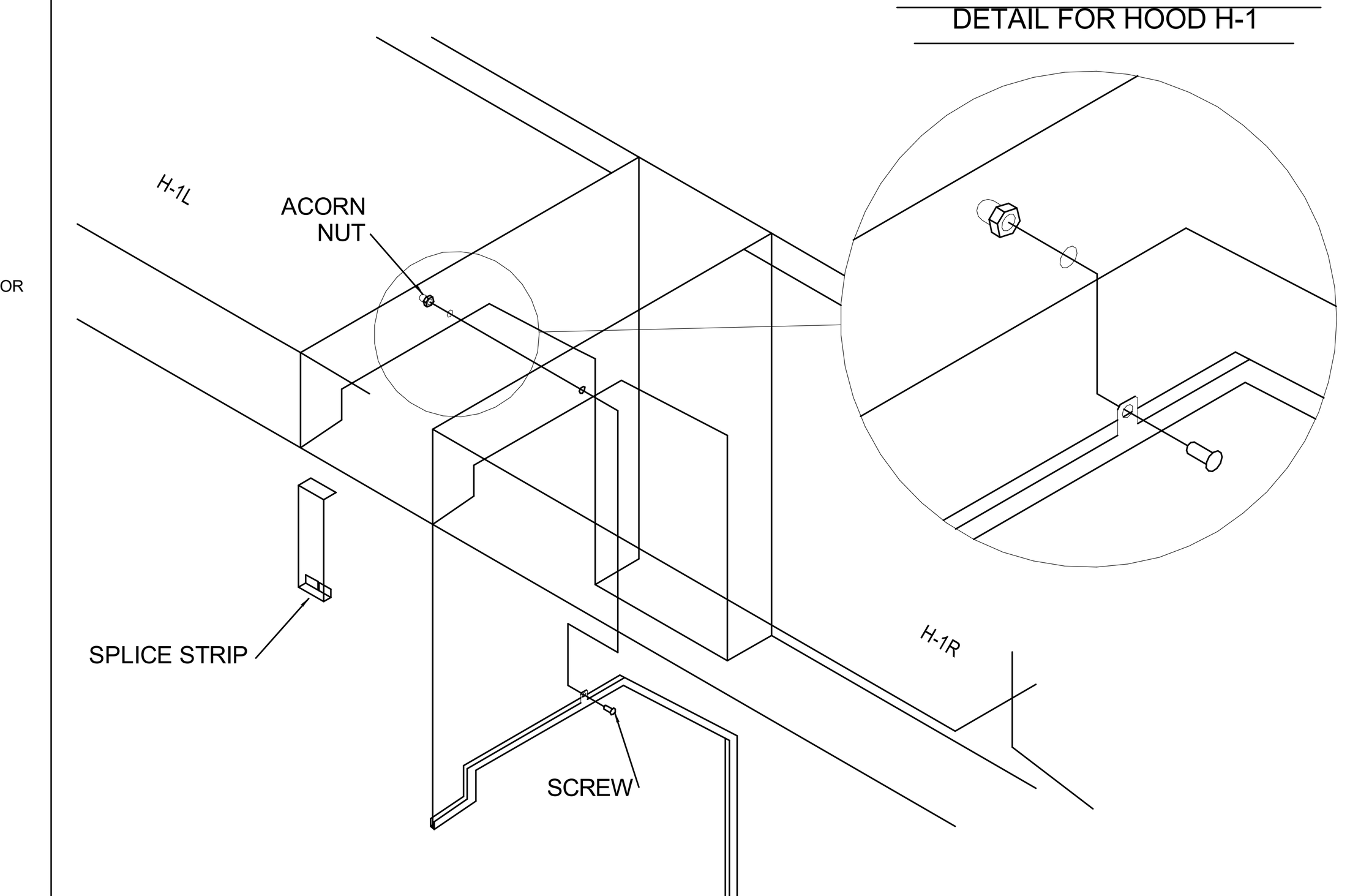
FIG. #2

Halton

TYPICAL WIRING OF CAPTURE-JET FAN



SPLICE STRIP/U-CHANNEL DETAIL FOR HOOD H-1

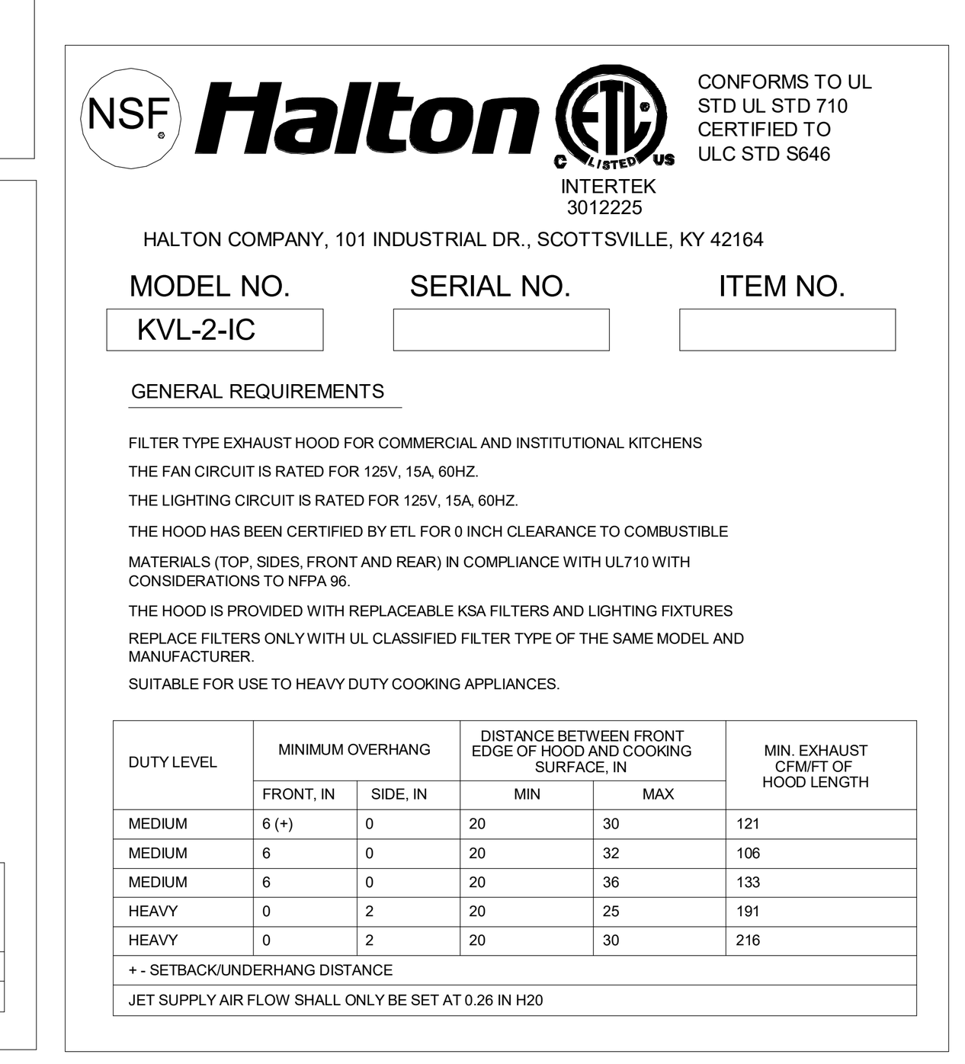


NOTE
REMOVE ALL SHARP EDGES FROM TRIM PIECES

Halton

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

FOR REFERENCE ONLY



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

HALTON CO. (CANADA) 1021 BREVIK PLACE MISSISSAUGA, ON L4W 3R7

HALTON CO. (USA) 101 INDUSTRIAL DRIVE SCOTTSVILLE, KY 42164

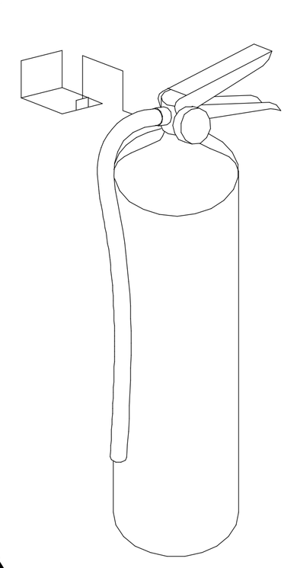
REV.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			
7			

PROJECT: CHICK-FIL-A
LOCATION: WEST SANFORD
SN#: 05401
DRAWN BY:
DATE: 02/26/2024
SCALE: NTS
Halton Dwg:

Halton CARE FOR INDOOR AIR

Sheet MH-1.2

FIRE EXTINGUISHER



ANSUL
13051 5 LBS ABC MODEL AA05 QTY____
13052 10 LBS ABC MODEL AA10S QTY____
13053 6 LTR CLASS K-GUARD K01-3 QTY____

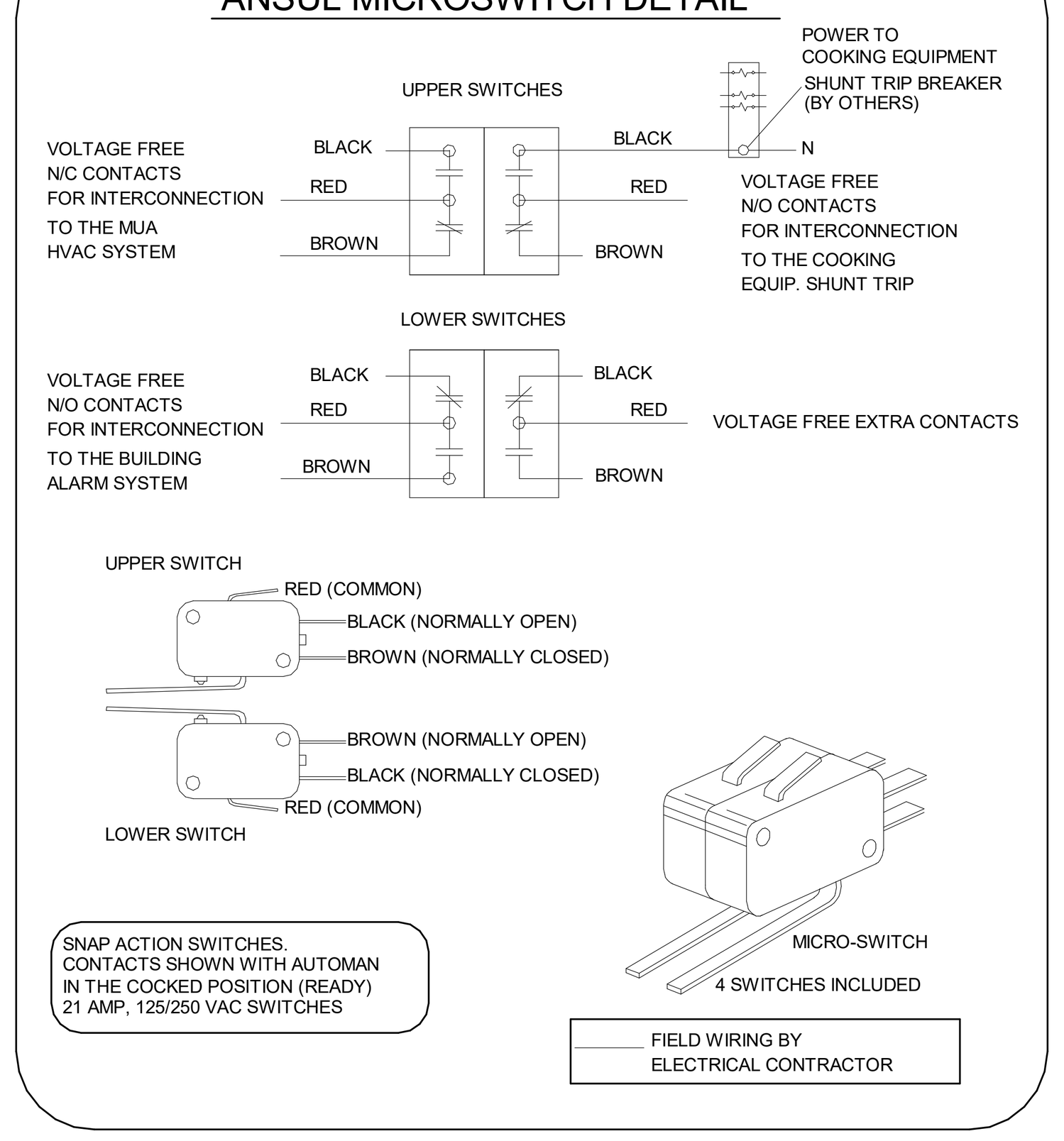
SUPPLIED BY HALTON

NOTE:

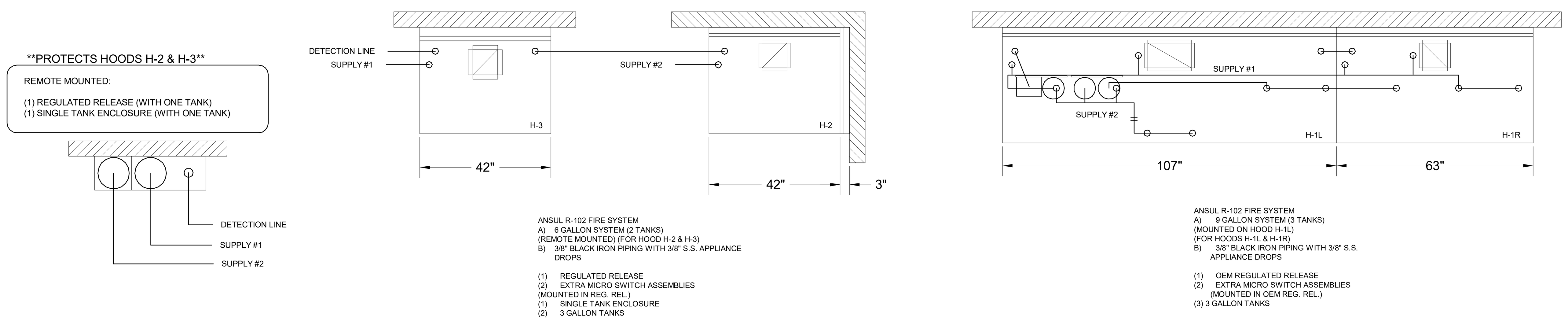
FIRE SYSTEM TYPE TO BE DETERMINED AT TIME OF ORDER RELEASE.

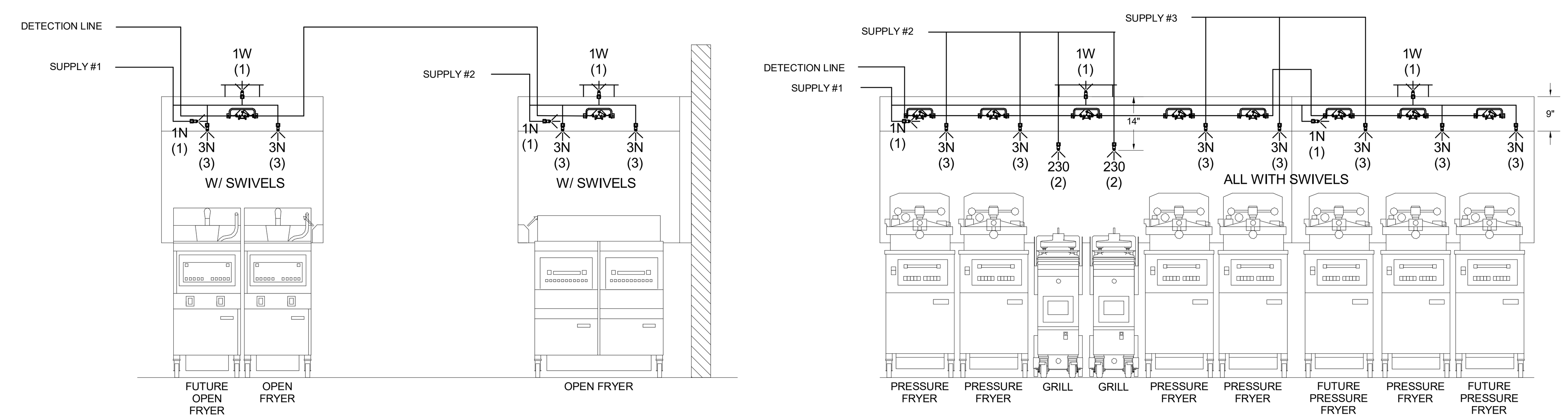
ANSUL

ANSUL MICROSWITCH DETAIL



FOR REFERENCE ONLY





ANSUL R-102 FIRE SYSTEM LAYOUT

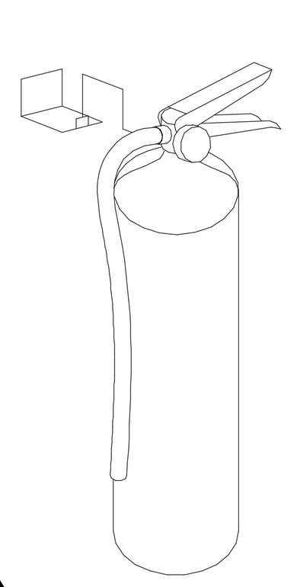
FUSIBLE LINK RATINGS
ITEM TEMP
OPEN FRYERS 450°
2 BURNER / FLAT TOP 450°
PRESSURE FRYERS 450°
GRILL 450°
EXHAUST COLLARS 450°
ANSUL R-102 FIRE SYSTEM NOTES
THREE TANK SYSTEM MOUNTED ON TOP OF (H-1L)
MAXIMUM FLOW POINTS = 33
ANSUL R-102 FIRE SYSTEM NOTES
TWO TANK SYSTEM REMOTE MOUNTED
MAXIMUM FLOW POINTS = 22

ITEM	PART #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
1W	10023	4	DUCT NOZZLES	4
1N	10022	4	PLENUM NOZZLES	4
230	10025	2	APPLIANCE NOZZLES	4
3N	10021	11	APPLIANCE NOZZLES	33
			TOTAL FLOW POINTS	45
ITEM		QTY	DESCRIPTION	
#200	10035	8	SERIES DETECTORS W/ FUSIBLE LINKS	
#201	11973	2	TERMINAL DETECTORS W/ FUSIBLE LINKS	
#202	10046	1	OEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH	
#202	10033	1	REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH	
#203	10333	5	3 GALLON TANKS	
#204	10044	1	SINGLE TANK ENCLOSURE	
#205	10040	2	REMOTE PULL STATION	
#206	10065	4	DOUBLE TANK NITROGEN CARTRIDGE	
#207	11128	5	3 GALLON ANSULEX CONTAINER	

ANSUL R-102 FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

1. FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICABLE CODES
2. ALL ELECTRICAL COMPONENTS FOR EQUIPMENT SHUT DOWN TO BE PROVIDED BY THE ELECTRICIAN. MICRO-SWITCH INSTALLED IN REGULATED RELEASE BY ANSUL INSTALLER
3. REMOTE PULL STATION LOCATED PER MECHANICAL DRAWINGS

FIRE EXTINGUISHER



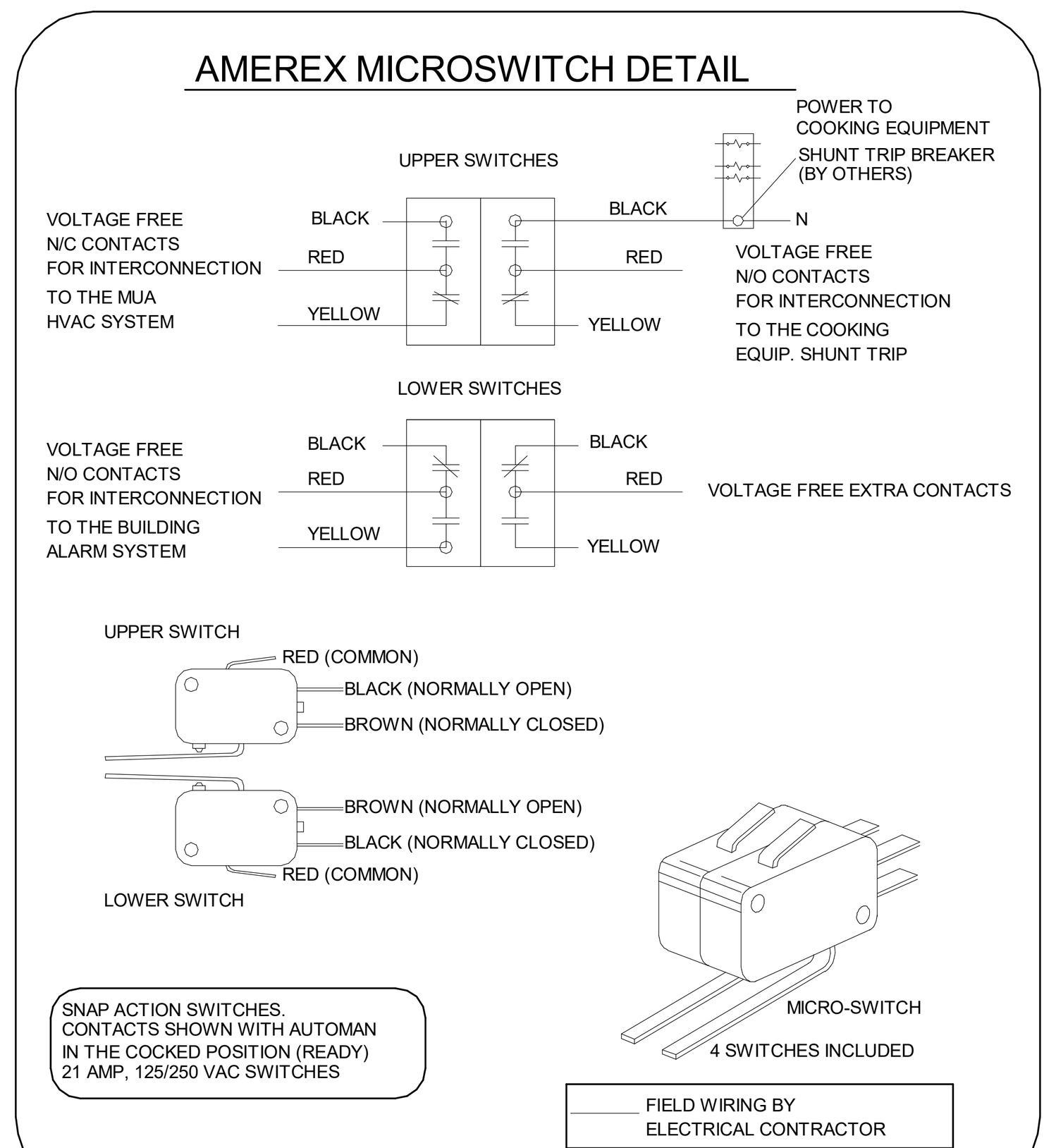
AMEREX
11238 5 LBS ABC MODEL B402 QTY_______
11239 10 LBS ABC MODEL B456 QTY_______
11240 6 LTR CLASS K MODEL C-260 QTY_______

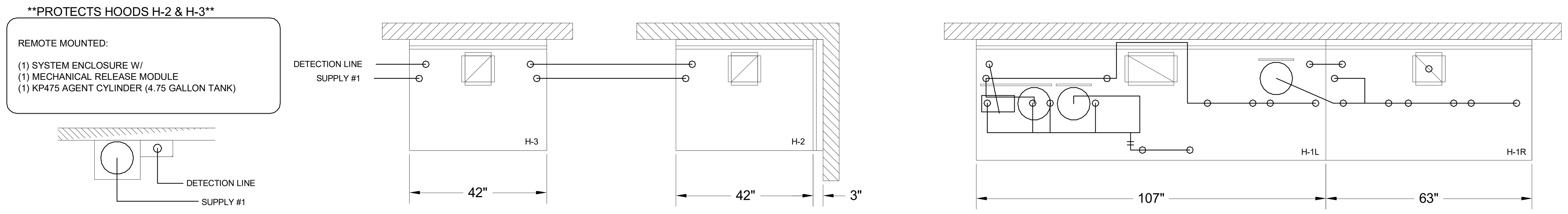
SUPPLIED BY HALTON

1/2" BLACK IRON SUPPLY LINE REQ'D FROM TANK TO FIRST BRANCH LINE FOR 475 TANKS ONLY!

AMEREX

AMEREX MICROSWITCH DETAIL



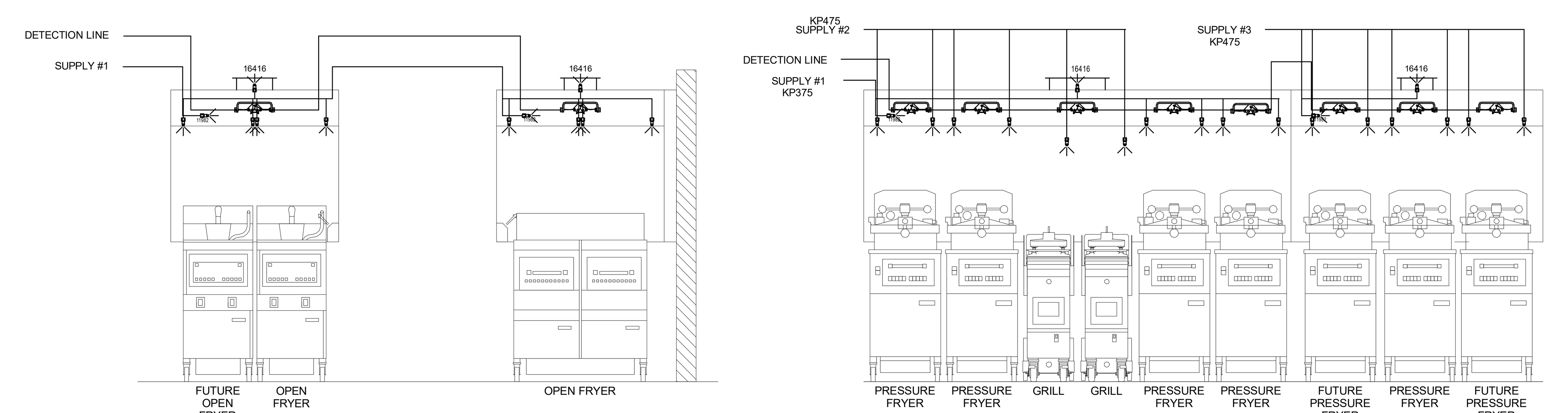


AMEREX FIRE SYSTEM
A) (1) KP475 TANKS - 14 FLOW POINTS (REMOTE MOUNTED) (FOR HOOD H-2 & H-3)
B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS
(1) SYSTEM ENCLOSURE
(1) MECHANICAL RELEASE MODULE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)
(1) KP475 AGENT CYLINDERS (4.75 GALLON TANK)

NOZZLE	QTY	DESCRIPTION
16416	1 EA.	DUCT NOZZLES
11982	1 PER 10'	PLENUM NOZZLES
11982	2 PER FRYER	ALL OPEN FRYERS
13729	2 PER FRYER	ALL PRESSURE FRYERS
14178	1 PER GRILL	ALL GRILLS
ALL APPLIANCE NOZZLES WITH SWIVELS		

* SEE ELEVATION VIEW FOR FIRE SYSTEM DESIGN.

AMEREX FIRE SYSTEM
A) (1) KP375 TANK - 11 FLOW POINTS (2) KP475 TANKS - 14 FLOW POINTS (MOUNTED ON HOOD H-1L) (FOR HOODS H-1L & H-1R)
B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS
(1) MECHANICAL RELEASE MODULE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)
(1) 3.75 GALLON TANK
(2) 4.75 GALLON TANKS



AMEREX FIRE SYSTEM LAYOUT

FUSIBLE LINK RATINGS
ITEM TEMP
OPEN FRYERS 450°
2 BURNER / FLAT TOP 450°
PRESSURE FRYERS 450°
GRILL 450°
EXHAUST COLLARS 450°
AMEREX FIRE SYSTEM NOTES
(1) KP375 & (2) KP475 TANK SYSTEM MOUNTED ON TOP OF (H-1L)
MAXIMUM FLOW POINTS = 39
AMEREX FIRE SYSTEM NOTES
(1) KP475 TANK SYSTEM REMOTE MOUNTED
MAXIMUM FLOW POINTS = 14

ITEM	QTY	DESCRIPTION	FLOW PTS (TOTAL)
16416	4	DUCT NOZZLES	4
11982	4	PLENUM NOZZLES	4
11982	8	APPLIANCE NOZZLES	8
14178	2	APPLIANCE NOZZLES	4
13729	14	APPLIANCE NOZZLES	28
		TOTAL FLOW POINTS	48
ITEM	QTY	DESCRIPTION	
12508-P001	10	DETECTORS BRACKET ASSEMBLY	
13334	1	KP375 AGENT CYLINDER	
17379	3	KP475 AGENT CYLINDER	
18001	1	MECHANICAL RELEASE MODULE WITH ENCLOSURE WITH DOUBLE POLE MICRO SWITCH	
11977	1	MECHANICAL RELEASE MODULE WITHOUT ENCLOSURE WITH DOUBLE POLE MICRO SWITCH	
21481	2	REMOTE MANUAL PULL STATION	

AMEREX FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

1. FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICABLE CODES
2. ALL ELECTRICAL COMPONENTS FOR EQUIPMENT SHUT DOWN TO BE PROVIDED BY THE ELECTRICIAN. MICRO-SWITCH INSTALLED IN REGULATED RELEASE BY AMEREX INSTALLER
3. REMOTE PULL STATION LOCATED PER MECHANICAL DRAWINGS

HALTON CO. (USA) 101 INDUSTRIAL DRIVE SCOTTSVILLE, KY 42164
HALTON CO. (CANADA) 1021 BREVIK PLACE MISSISSAUGA, ON L4W 3R7
WEBSITE: WWW.HALTONCOMPANY.COM

PROJECT: CHICK-FIL-A
LOCATION: WEST SANFORD
SN#: 05401
DRAWN BY:
DATE: 02/26/2024
SCALE: NTS
Halton Dwg:

Halton CARE FOR INDOOR AIR

Sheet MH-1.3