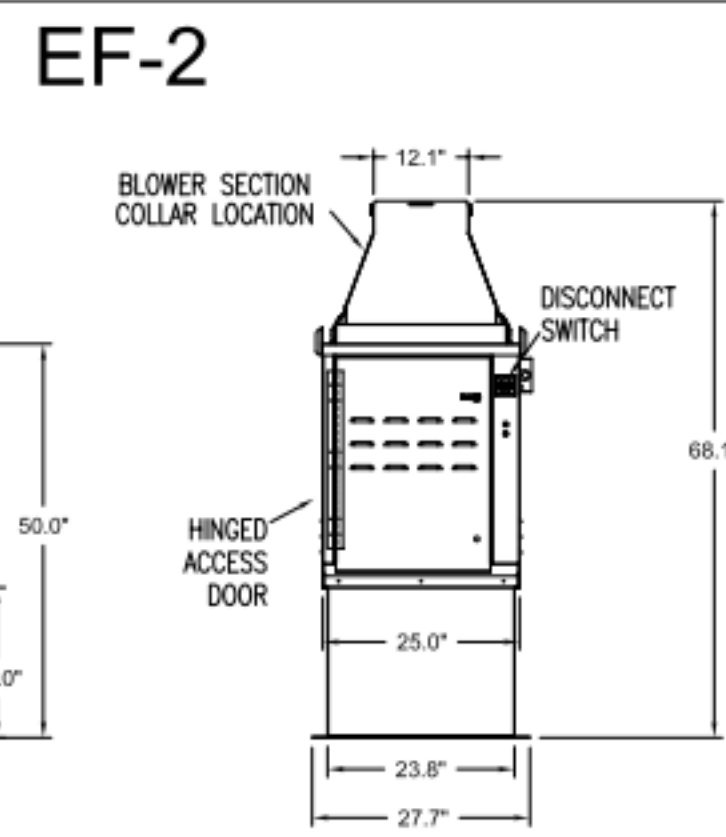
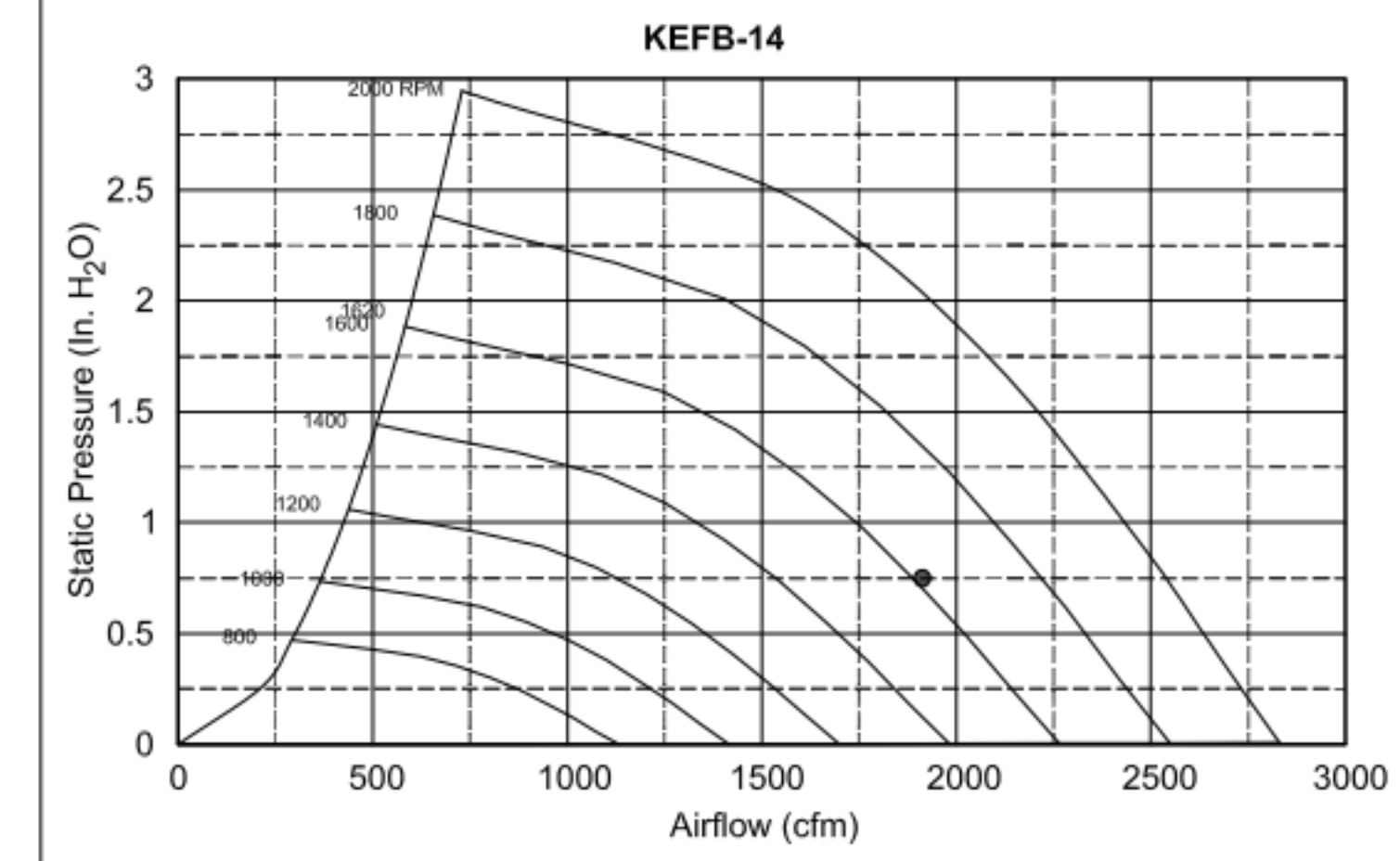


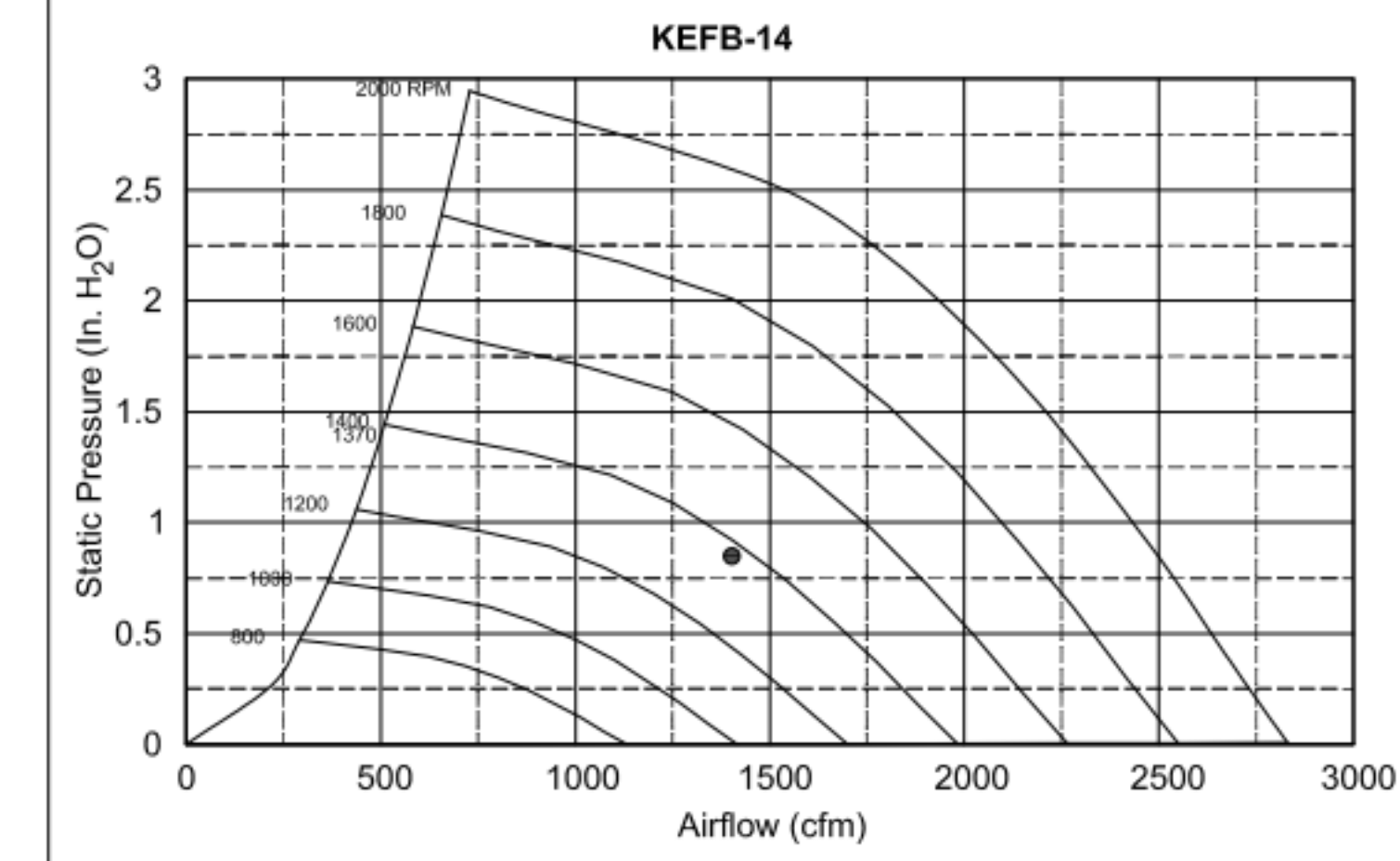
Halton KEFB Exhaust Fan

Job Name	Chick-8/A	Item No	KEFB-14	Fan RPM	1,620	Volts/Ph/Amps	115/160
Location	EF-1	Model	KEFB-14	Fan BHP	0.55	Motor HP	0.75
Date	1/26/2023	Airflow, cfm	1,913	dB	85.3	TAB Port, in WC	4.8
Static Pressure, in WC	0.75						



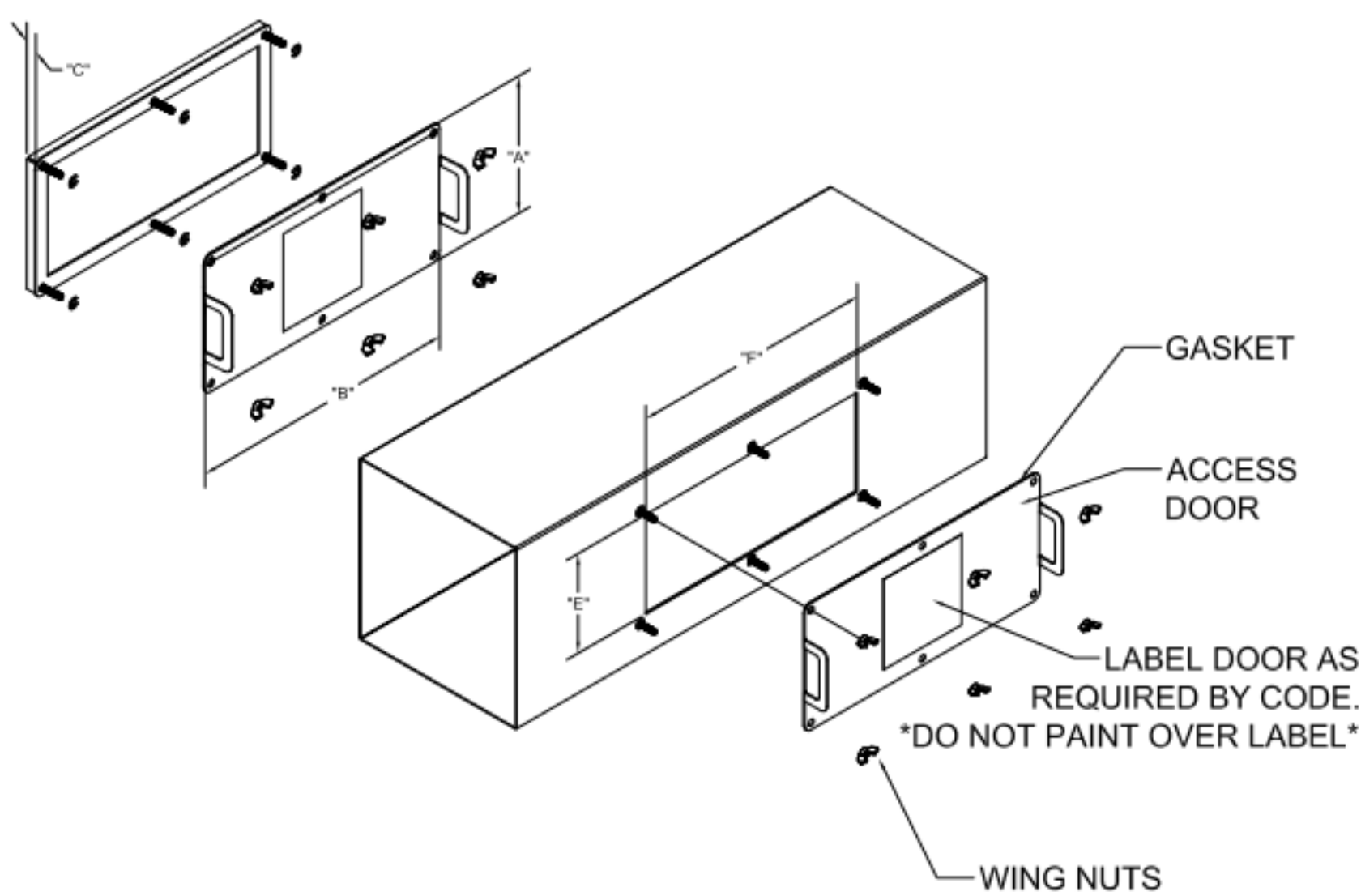
Halton KEFB Exhaust Fan

Job Name	Chick-6/A	Item No	KEFB-14	Fan RPM	1,370	Volts/Ph/Amps	115/160
Location	EF-2	Model	KEFB-14	Fan BHP	0.34	Motor HP	0.75
Date	1/26/2023	Airflow, cfm	1,402	dB	81	TAB Port, in WC	2.6
Static Pressure, in WC	0.95						

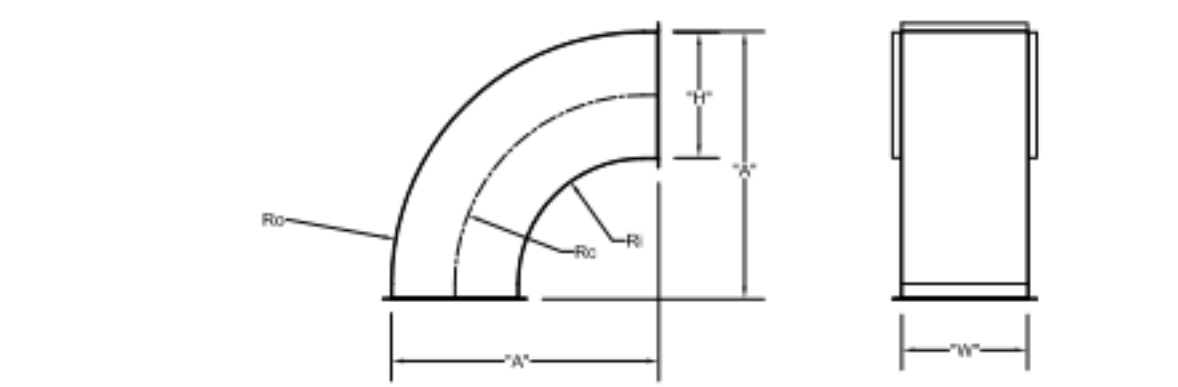


MODEL	DOOR SIZE		OPTIONAL FLANGE	OPENING SIZE	
	"A"	"B"		"E"	"F"
KAP0715	7	15	FLAT	5.5	13.5
KAP1015	10	15	1/2	7	12

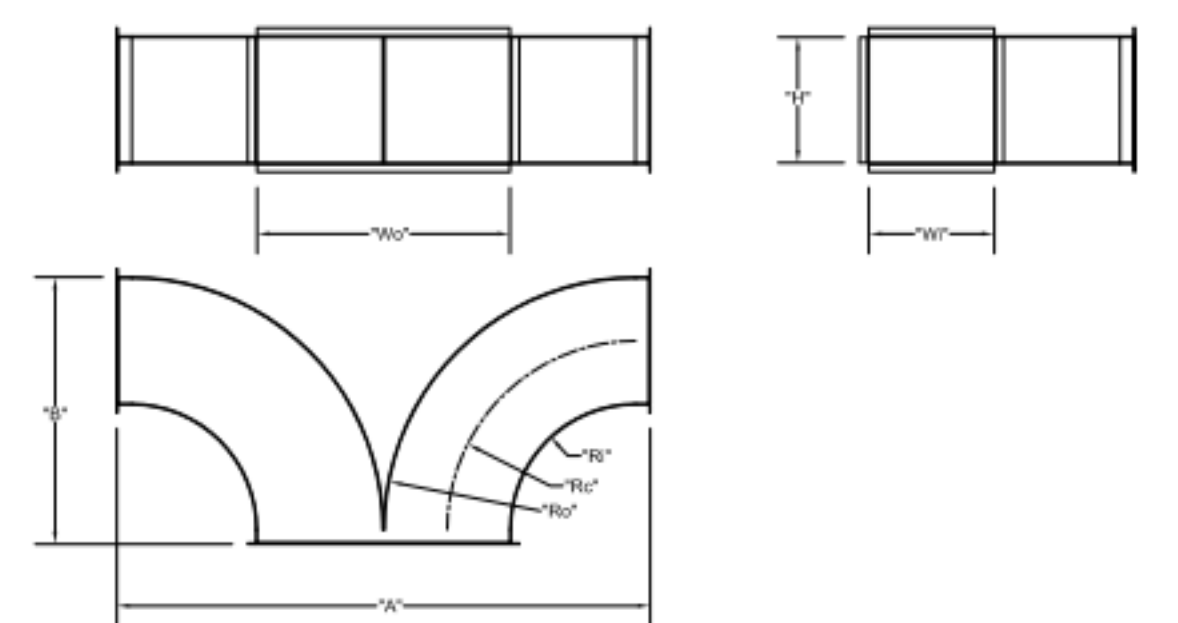
ACCESS DOORS SHALL BE U.L. 1978 LISTED OR FIELD FABRICATED, REQUIRE NO TOOLS FOR REMOVAL AND MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE IMC. ACCESS DOOR SHALL BE SECURED WITH THUMB SCREWS. ACCESS DOORS SHALL BE SEALED WITH A MINIMUM 1500 DEREK GASKET MATERIAL.



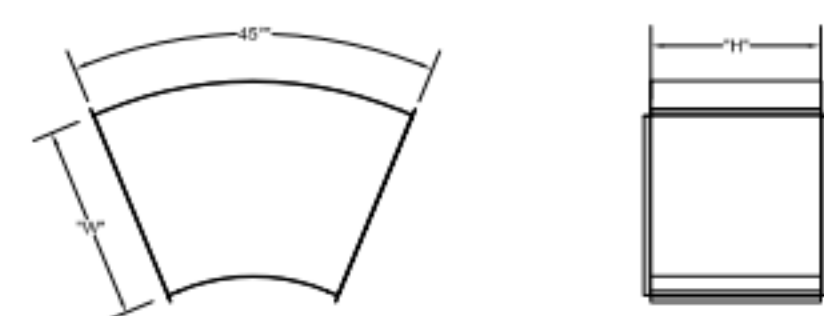
INSTALL PER MANUFACTURER'S INSTRUCTIONS



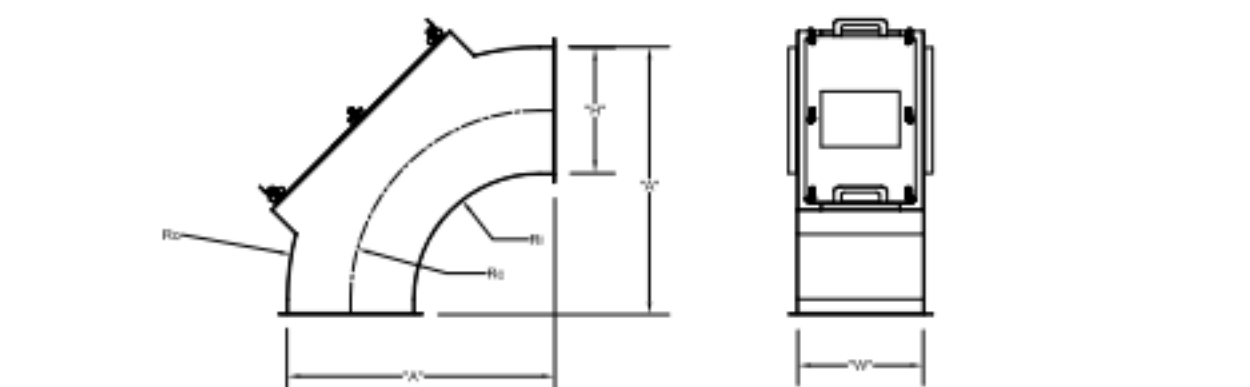
	"H"	"W"	"A"	Ro	Rc	Ri
EF-2	8	8	17	16	12	8
EF-2	8	10	17	16	12	8



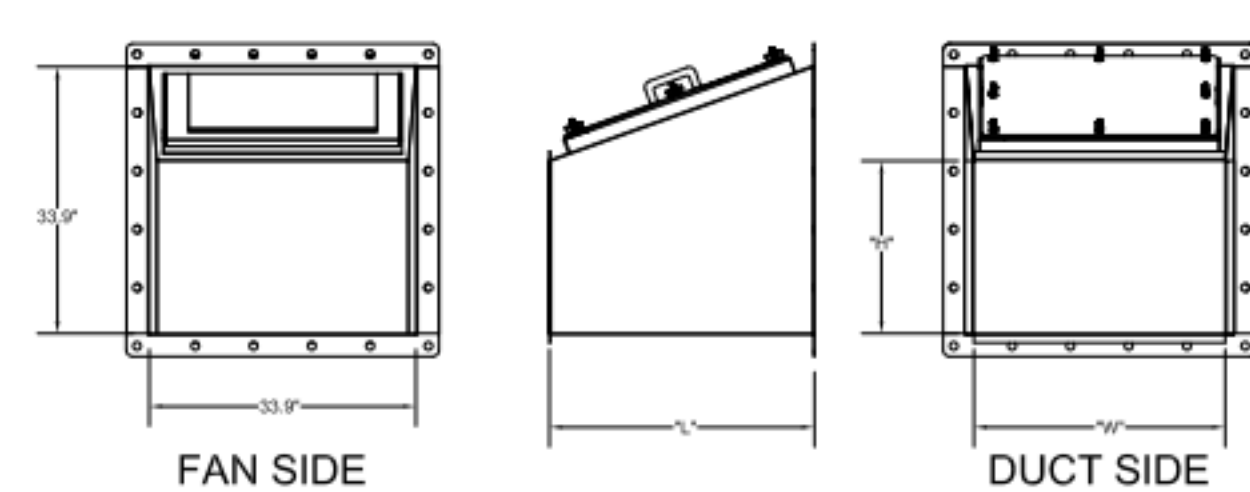
	"W"	"H"	Wo	Ro	Rc	Ri	"A"	"B"
EF-1	8	14	16	16	12	8	34	17
EF-2	8	10	16	16	12	8	34	17



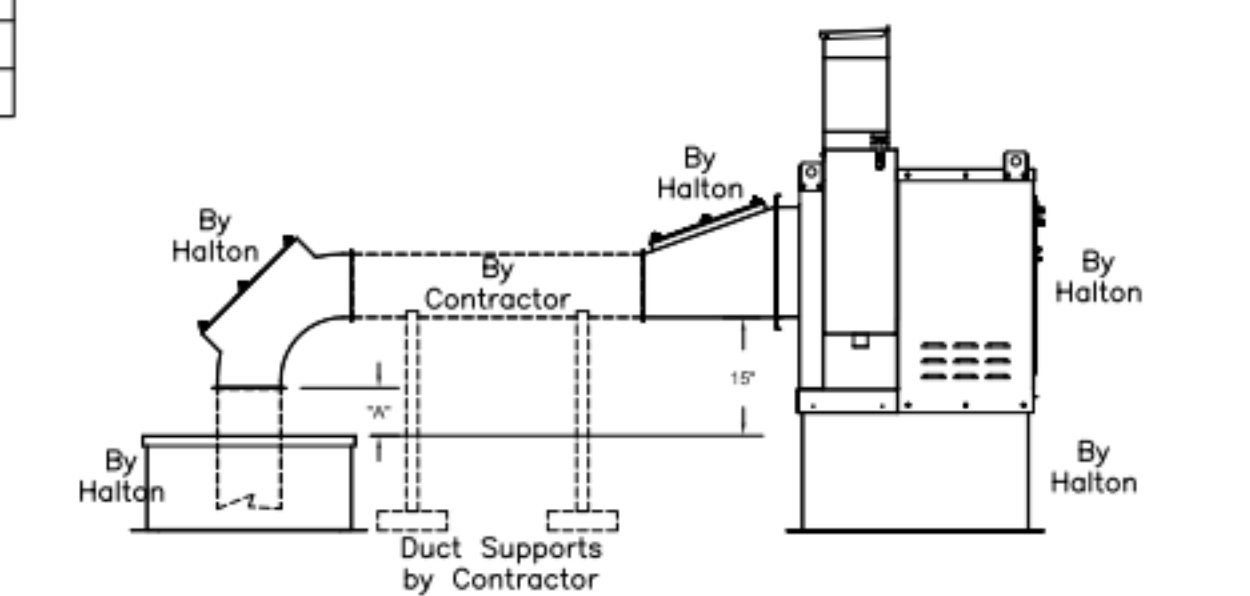
	"W"	"H"
EF-1	16	14



	"H"	"W"	"A"	Ro	Rc	Ri
EF-2	14	8	29	28	21	14
EF-2	8	8	17	16	12	8



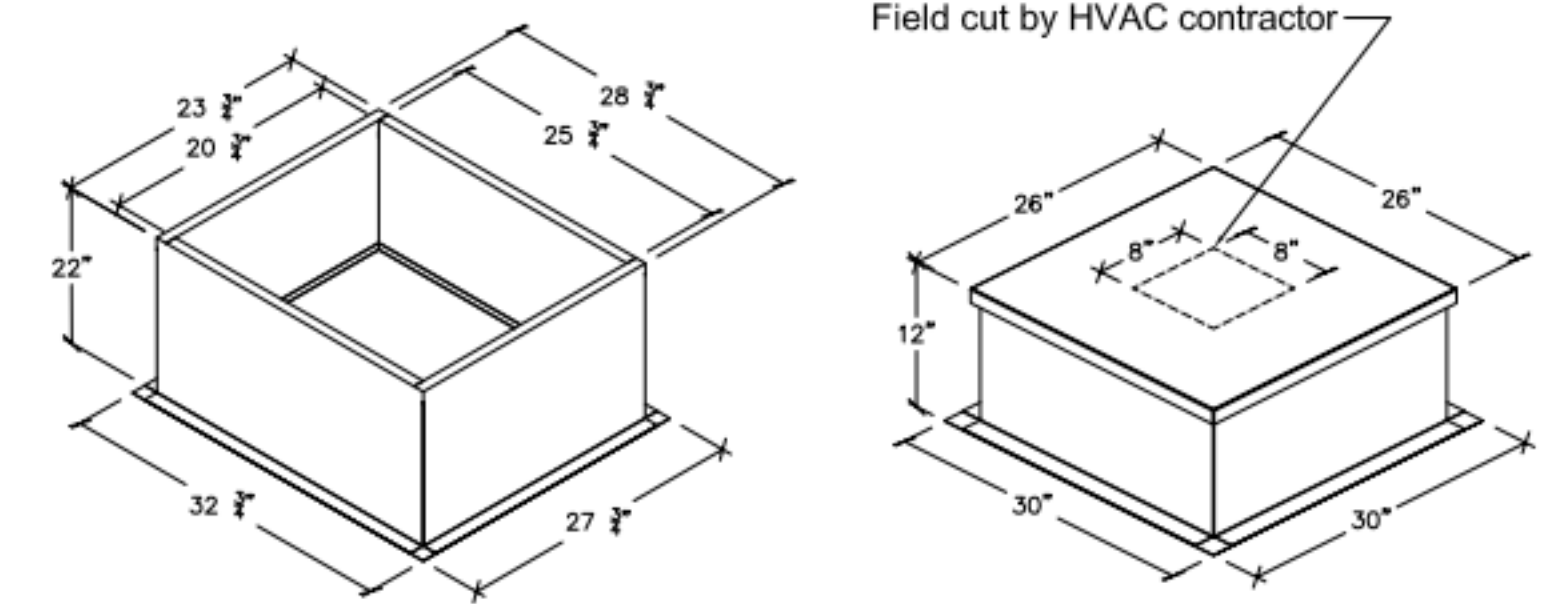
TRANSITION	"H"	"W"	"L"
EF-1 (5)	14	16	25
EF-2 (6)	10	16	17



"A" DISTANCE AVAILABLE FOR DUCT SLOPE

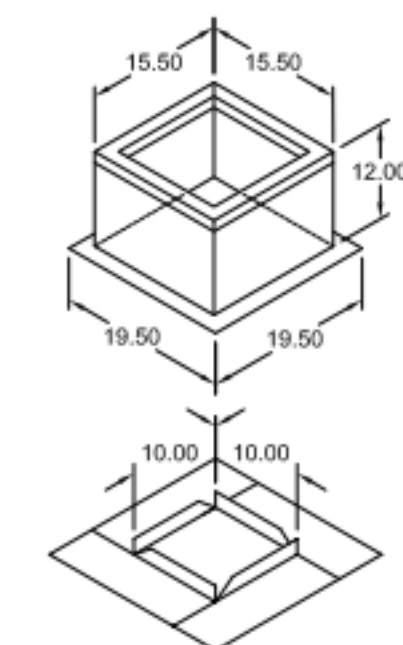
	ELBOW	"A"
EF-1	14X8	8
EF-2	8X8	10

Halton Kitchen Exhaust Fan Curb Insulated Duct Curb



Kitchen Exhaust Fan Roof Curb Standard Construction Features:
 - Roof Curb fits between the building roof and the fan mounted directly to the roof support structure - Constructed of 18 ga aluminum steel - Straight Sided without a cant - 2 in. mounting flange - Height is 22 in.

Insulated Duct Curb Standard Construction Features:
 - Roof Curb fits between the building roof and the fan mounted directly to the roof support structure - Constructed of 18 ga aluminum steel - Straight Sided without a cant - 2 in. mounting flange - Height is 12 in. - 16 ga. cap



Model: GPI
 For Model: XRED-090-G
 Curb & Damper Tray

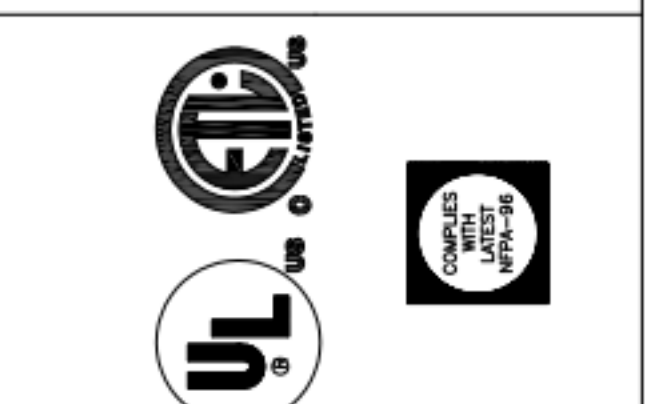
Accessories		Security	Insulation	Insulation
Material	Galvanized	Bars	Liner	(in.) R Value
No	No	No	No	R4.3

General		Sizing	Undersizing	Weight	Shipped	Union Label
Tag	Qty	Method	(in.)	(lb.)	Assembled	No Preference
EF-3	1	Nominal	1.5	14	Yes	Preference

Dimensions		Nominal	Nominal	Actual	Actual	Actual	Actual	Flange	Flange	Hinge	Hinge
Curb	Height	Outside	Outside	Outside	Outside	Inside	Inside	Width	Width	Base	Base
12	17	17	17	15.5	15.5	12	12	19.5	16		

May not be applicable

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING:
 1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
 2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.
 NOTE TO APPROVER: ANY CHANGES IN COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT CHANGES IN COOKING EQUIPMENT WHICH MAY CAUSE EXHAUST AIRFLOW CHANGES OCCUR, A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.
 REVISE AND RESUBMIT
 APPROVED FOR FABRICATION
 WITH NO CHANGES
 WITH CHANGES AS NOTED
 APPROVED BY: _____ DATE: _____



WEBSITE: www.halton.com
 HALTON CO. (USA)
 101 INDUSTRIAL DRIVE
 SCOTTSVILLE, KY 42164
 1-270-237-5600
 DATE: _____ BY: _____
 HALTON CO. (CANADA)
 1021 BREVIK PLACE
 MISSISSAUGA, ON L4W 3R7
 1-905-624-0301
 REVISION DESCRIPTION

PROJECT: CHICK-FIL-A FAN DETAILS
 LOCATION: PROTO SE/LE/LS/LSR (BN & BP)
 DRAWN BY: ACF DATE: 05.10.23
 SCALE: _____
 CONSULTANT: _____
 DRAWING No.: U23-459
 REV. No.: 0 SHEET No.: 1 of 2



DIVISION 15 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: 877-544-6879). 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 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 ANNUCIATOR 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 ANNUCIATORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. INSTALLATION BY MECHANICAL SHALL INCLUDE MOUNTING OF THE ANNUCIATORS 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. THE HOOD FANS WILL BE SWITCHES FOR CONTROL OF ALL FANS ARE BY ELECTRICAL CONTRACTOR.
- G. THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENTAL CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. 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 ABOVE UNIFORMITY 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, MANUFACTURERS 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 THAN FORTY-FIVE (45) MINUTES (UNLESS EXTENUATING CIRCUMSTANCES EXIST), THE TEST SHALL BE CONSIDERED FAILED AND MUST BE REPEATED IN ITS ENTIRETY.
- E. RE-TESTING: DURING THE COURSE OF THE RETEST, IF AT ANY POINT A MAJOR DEFICIENCY IS DISCOVERED, THE TEST WILL BE STOPPED. REPEAT TESTS UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. IF MORE THAN TWO FUNCTIONAL PERFORMANCE TESTS (ONE INITIAL TEST AND ONE RETEST) FOR ANY TYPE OF EQUIPMENT DUE TO ISSUES THAT THE CONTRACTOR HAD DIRECT OR INDIRECT CONTROL OVER ARE REQUIRED, THE COSTS FOR THE CFA 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 FYREWRAPE. INSULATION ON ACCESS DOORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTALLATION RECOMMENDATIONS. UNIFRAX FYREWRAPE 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.

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 WILLIAMS PRO INDUSTRIAL DTM ACRYLIC COATING, SEMI-GLOSS, WHITE, DEGREASE AND PRIME BARE METAL SURFACE WITH ONE COAT OF SHERWIN WILLIAMS 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.

CANOPY GENERAL NOTES

1. COORDINATE WORK WITH CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE COVERED WITH A RUST INHIBITING PAINT SUCH AS RUST-OLEUM 5200. PAINT COLOR SHALL MATCH STRUCTURE. ROOF MOUNTED GAS PIPING COLOR SHALL BE YELLOW.
4. CONTROL WIRING FOR HEATERS BY EC. COORDINATE REQUIRED WIRE GAUGE WITH EC. SEE CONTROLS PLAN AND ELECTRICAL DRAWINGS. (TYP.).

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.)
	REMOTE TEMPERATURE SENSOR		SUPPLY DIFFUSER, SQ FACE (TYP.)
	HUMIDITY SENSOR		PLAN NOTE REFERENCE
	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
	AIR DOOR SWITCH		GAS INFRARED HEATER (TYP.)
EH	ELECTRIC INFRARED HEATER	B/G	BELOW GRADE
			THERMOSTAT

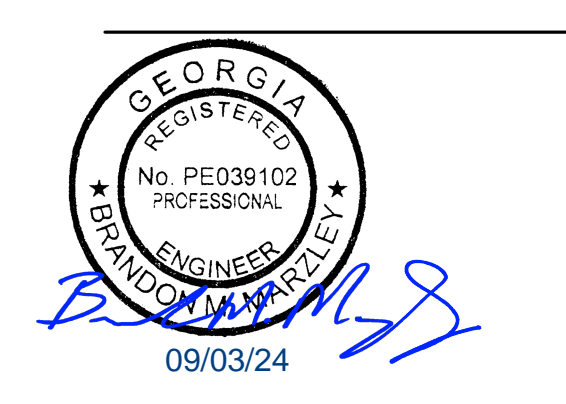
ABBREVIATIONS

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

Autodesk Docs://GA_05542_Harbins Road & 316 FSU_2024.2_FSR05542_Harbins Road & 316 FSU_MEC.rvt
8/29/2024 3:47:13 PM
30-LE-05542-M-001-GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS



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30349-2998



09/03/24

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DACULA, GA 30019

FSR#05542

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 23.11
PRINTED FOR:
ISSUED FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

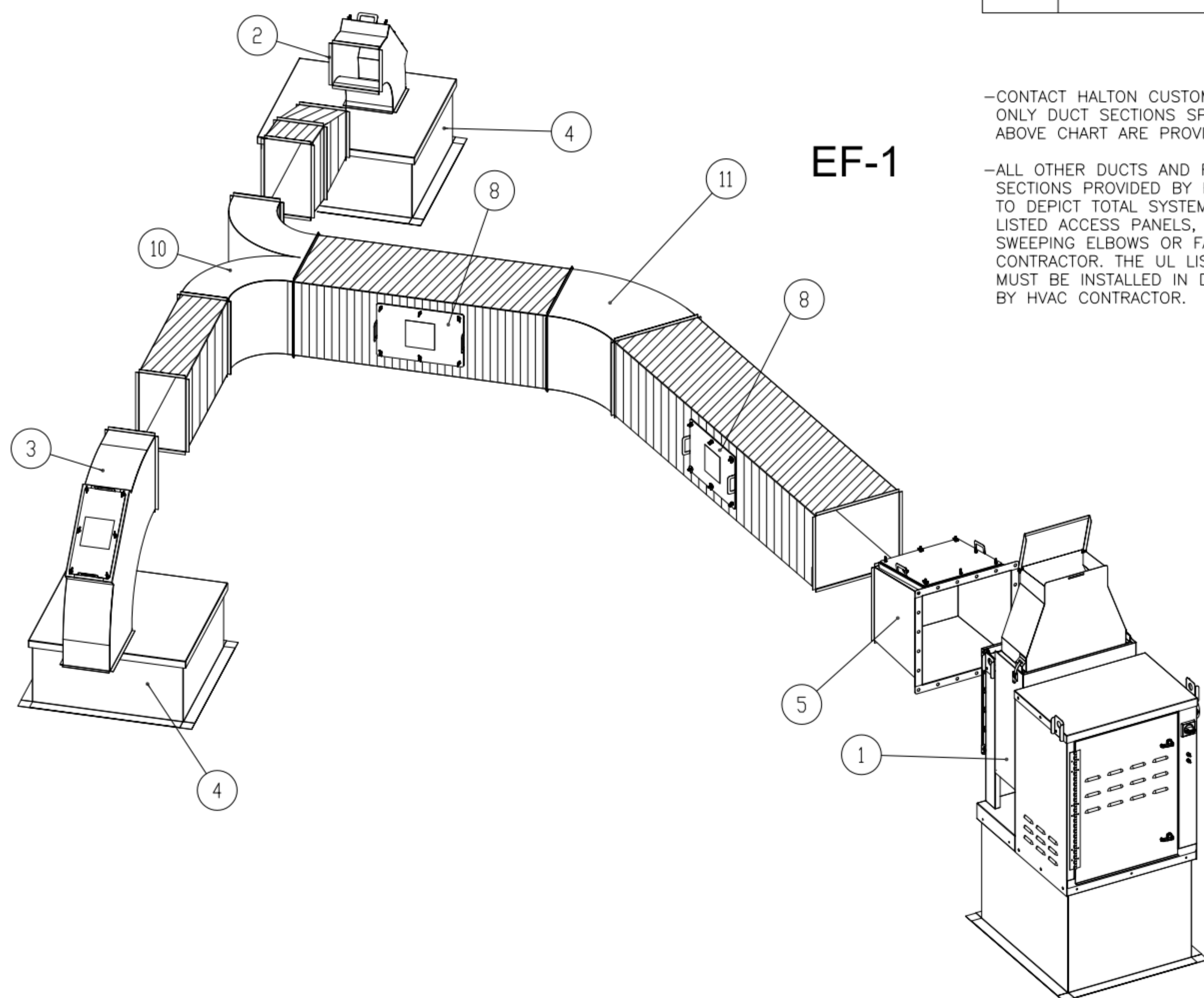
CONSULTANT PROJECT # 2023223.97
DATE 08/14/24
DRAWN BY IHD

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GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS
SHEET NUMBER

M-001

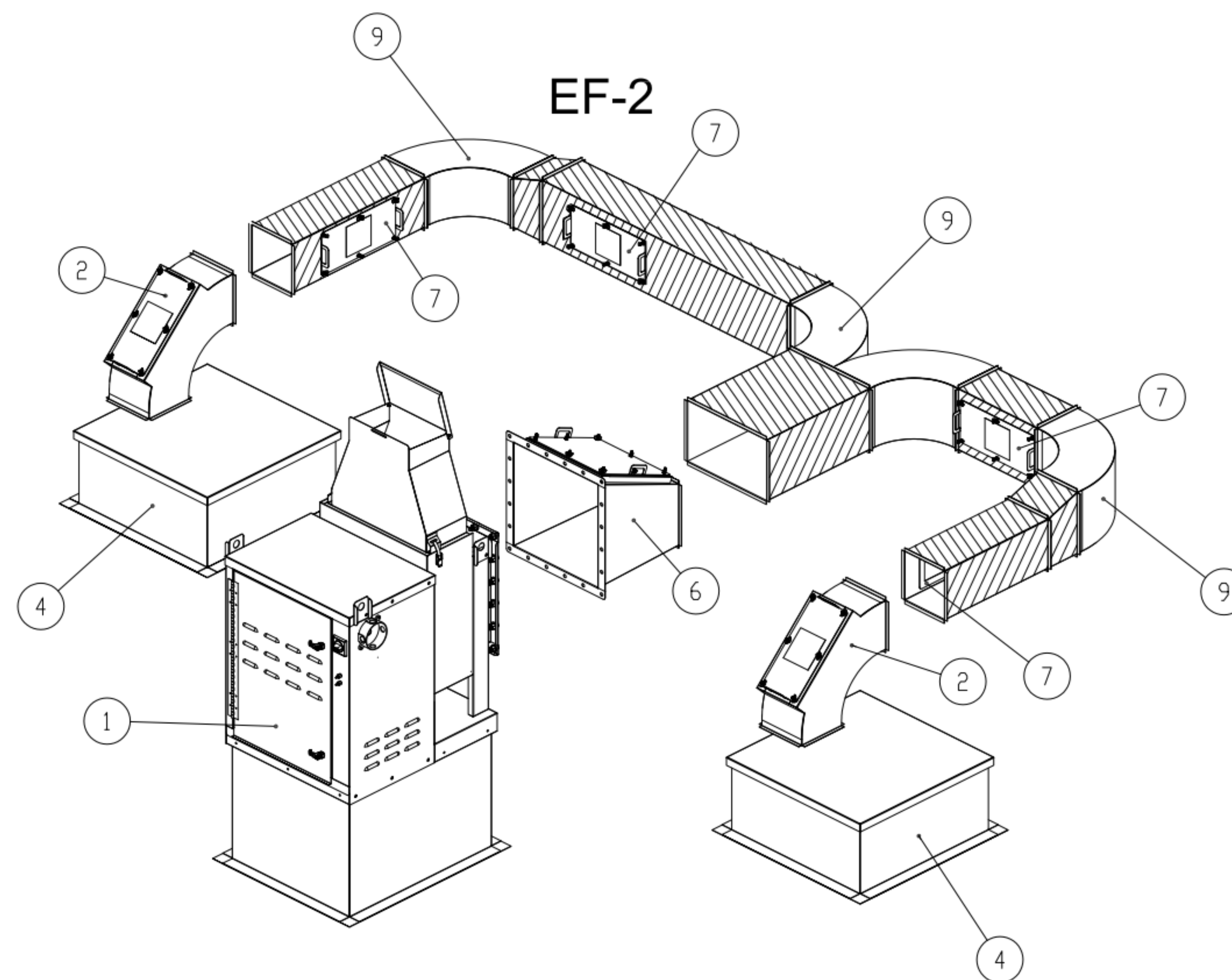
ITEM	DESCRIPTION	QTY
1	KEFB EXHAUST FAN W/ ROOF CURB	2
2	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 8X8	3
3	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 14X8	1
4	DUCT ROOF CURB W/ CAP 26X26X9	4
5	FAN TRANSITION W/ UL LISTED ACCESS PANEL 14X16	1
6	FAN TRANSITION W/ UL LISTED ACCESS PANEL 10X16	1
7	UL LISTED ACCESS PANEL 7X15	4
8	UL LISTED ACCESS PANEL 10X15	2
9	LONG SWEEPING WYE 8X10	1
10	LONG SWEEPING WYE 14X8	1
11	45° 14X16	1



EF-1

-CONTACT HALTON CUSTOMER SERVICE FOR HALTON PROVIDED ITEMS ONLY DUCT SECTIONS SPECIFIED BY NUMBERS AND SHOWN IN THE ABOVE CHART ARE PROVIDED BY HALTON

-ALL OTHER DUCTS AND FITTINGS BY HVAC CONTRACTOR. DUCT SECTIONS PROVIDED BY HVAC CONTRACTOR ARE SHOWN IN ORDER TO DEPICT TOTAL SYSTEM DESIGN. DUCT SECTIONS SHOWN WITH UL LISTED ACCESS PANELS, THAT ARE NOT HALTON PROVIDED LONG SWEEPING ELBOWS OR FAN TRANSITIONS, ARE PROVIDED BY HVAC CONTRACTOR. THE UL LISTED ACCESS PANELS PROVIDED BY HALTON MUST BE INSTALLED IN DUCT SECTIONS NOT PROVIDED BY HALTON BY HVAC CONTRACTOR.



EF-2

-ALL DUCTS AND FITTINGS DEPICTED BY HATCH AREAS ARE BY HVAC CONTRACTOR.

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING:

1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.

NOTICE: APPROVED COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT POSITION MAY AFFECT EXHAUST AIRFLOW. HALTON MUST BE NOTIFIED IF ANY OF THESE CHANGES OCCUR, A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.

REVISE AND RESUBMIT

APPROVED FOR FABRICATION

WITH NO CHANGES WITH CHANGES AS NOTED

APPROVED BY: _____ DATE: _____

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW: WEBSITE: www.halton.com

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

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

REV. BY DATE

REVISION DESCRIPTION

PROJECT: CHICK-FIL-A FAN DETAILS

LOCATION: PROTO SE/LE/LS/LSR (BN & BP)

DRAWN BY: ACF DATE: 05.10.23

SCALE: _____

CONSULTANT: _____

DRAWING TITLE:

CFA FAN DETAILS

DRAWING No.:

U23-459

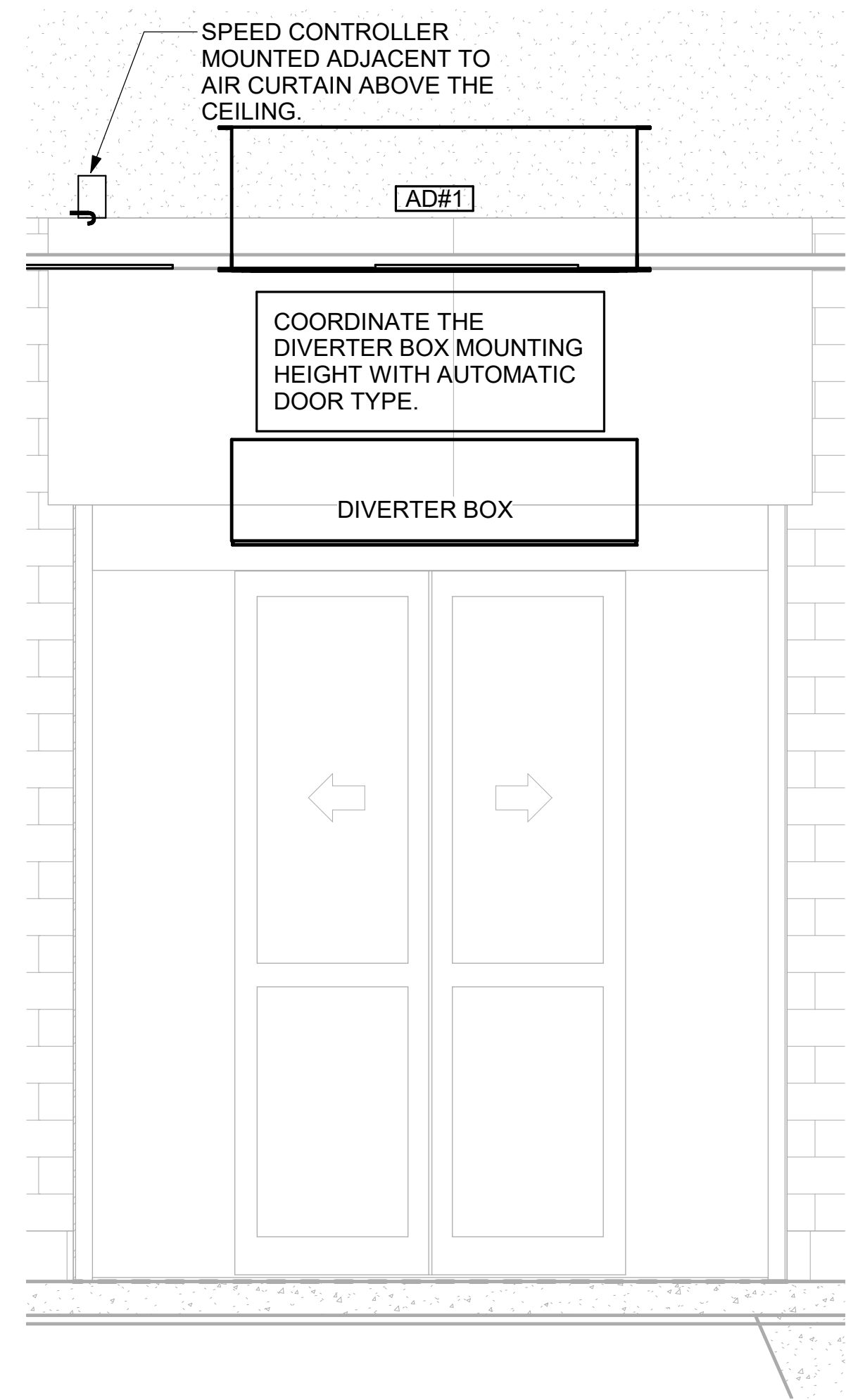
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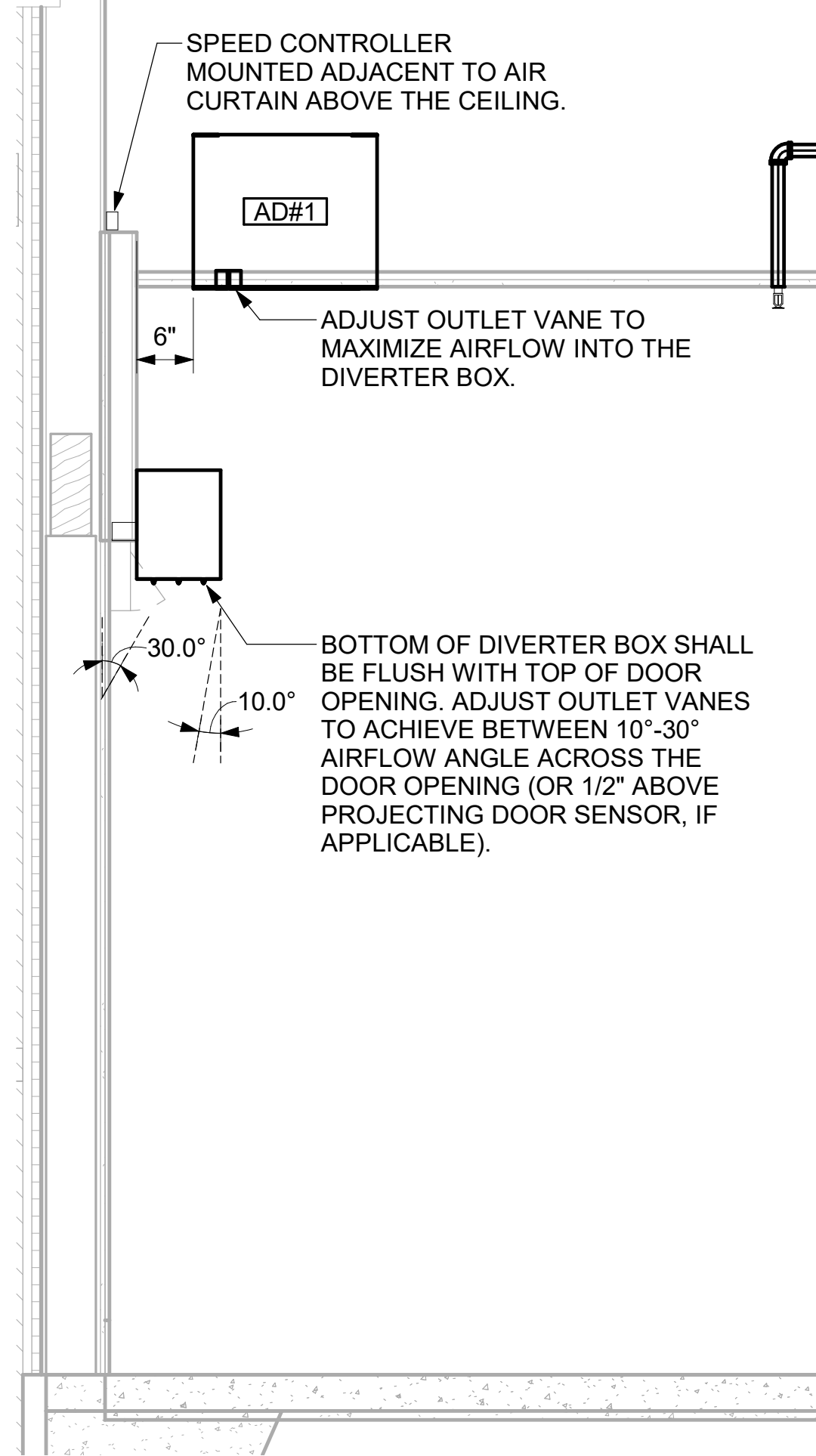
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2 of 2

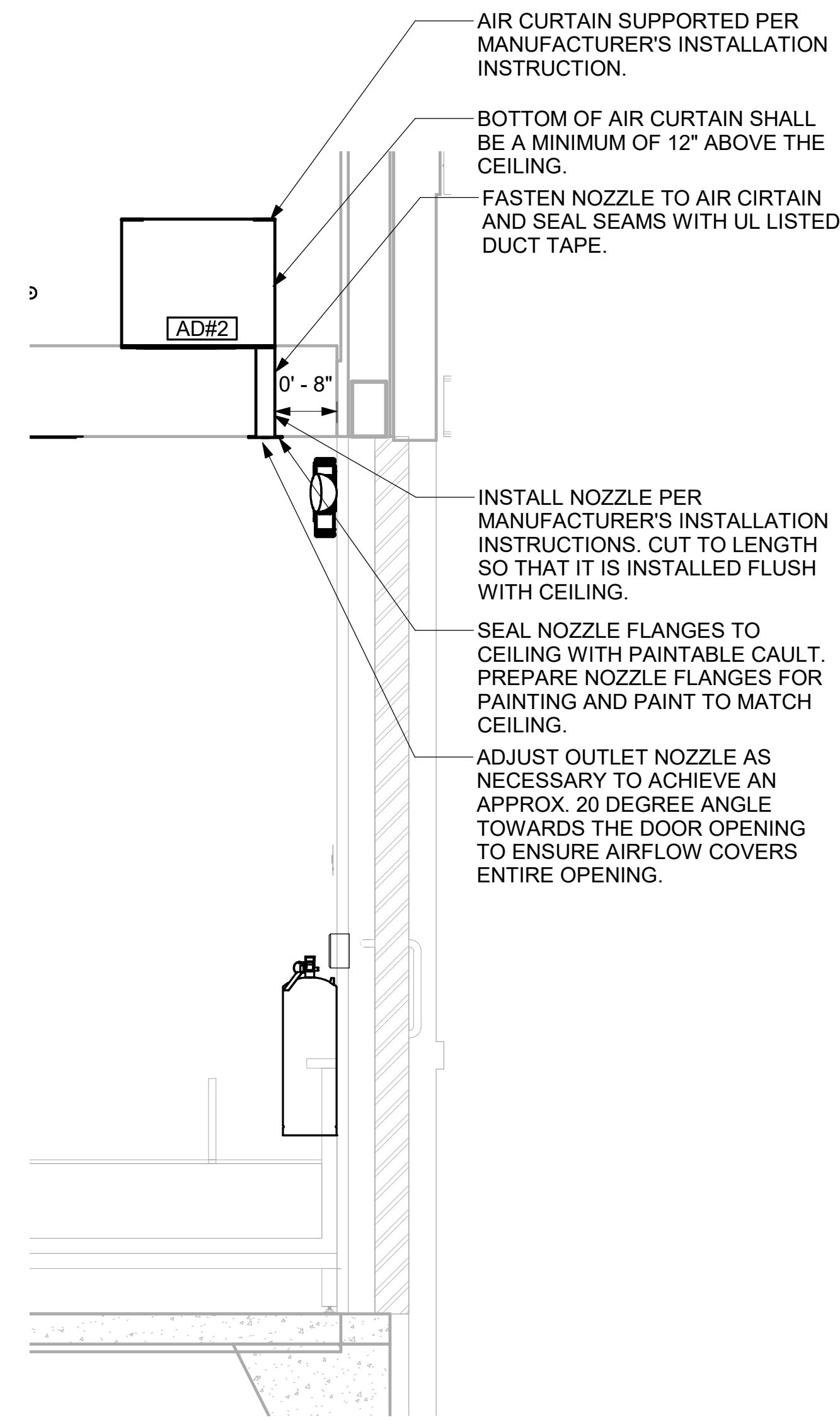
Halton



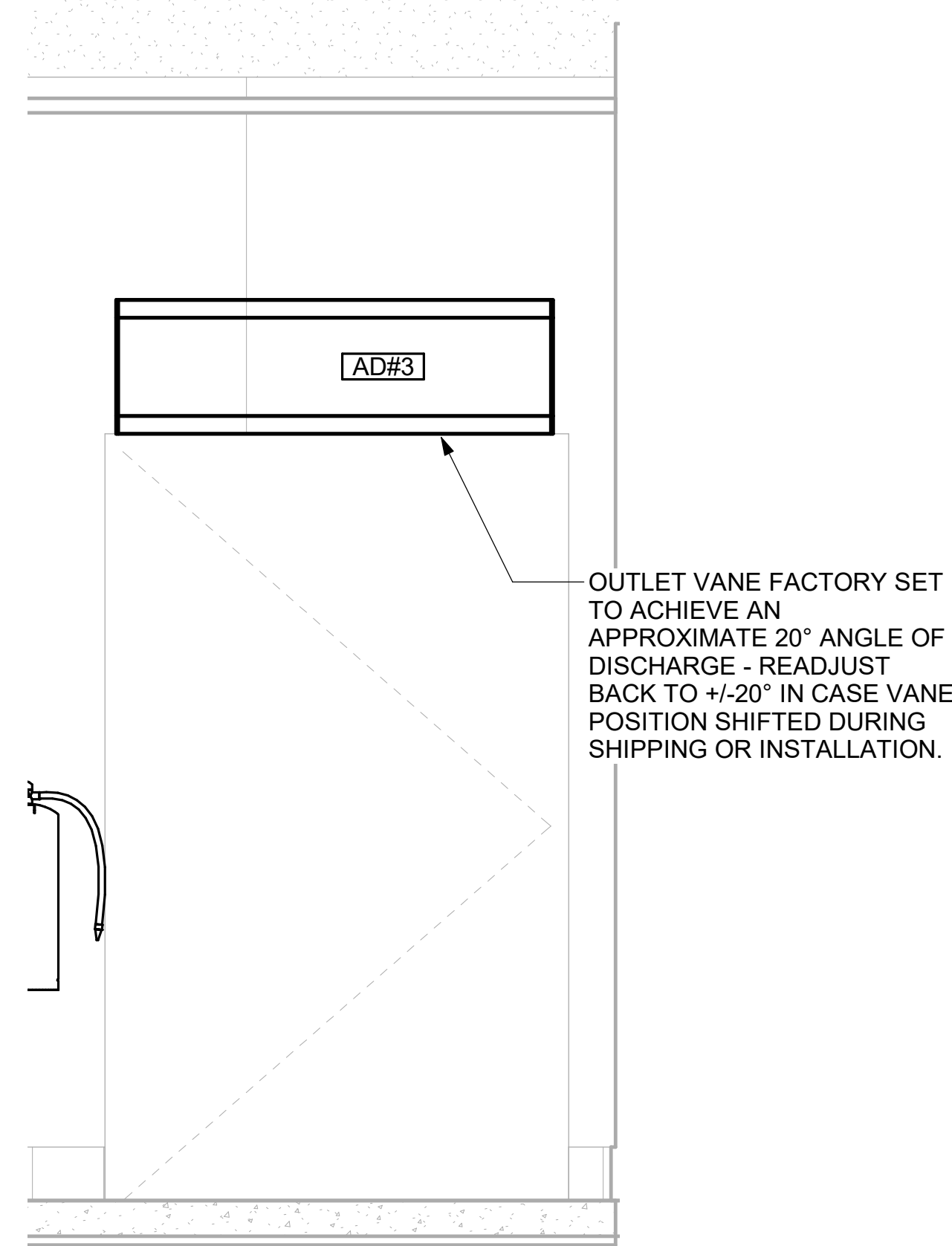
1 AD#1 FRONT VIEW
3/4" = 1'-0"



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



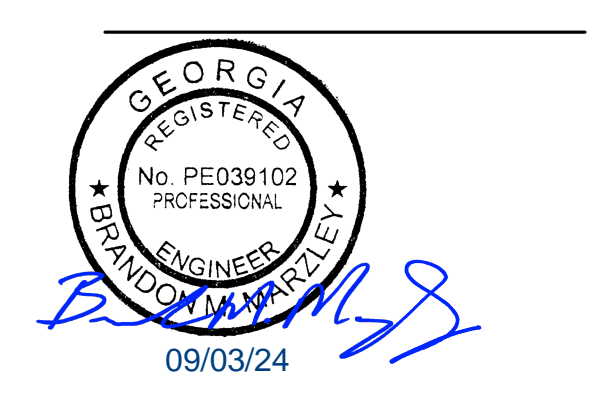
3 AD#2 SIDE VIEW
3/4" = 1'-0"



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



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BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 23.11
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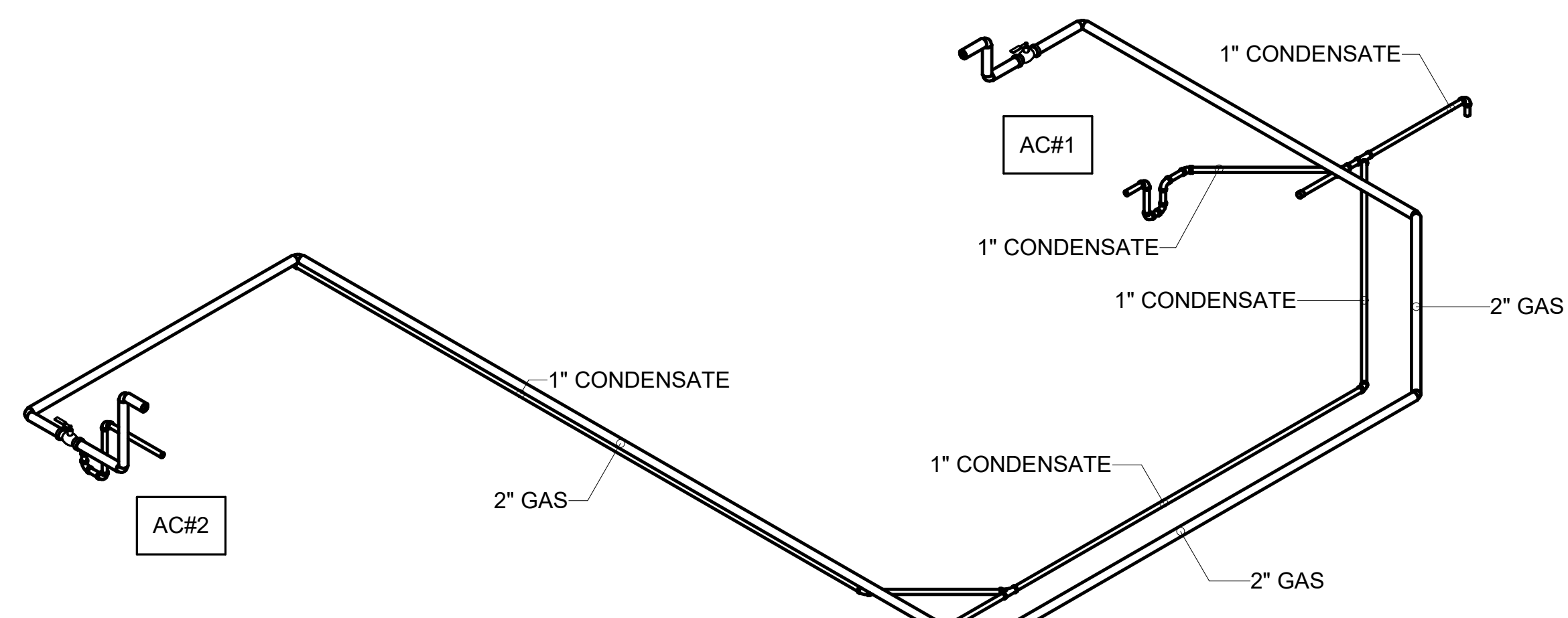
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DETAILS

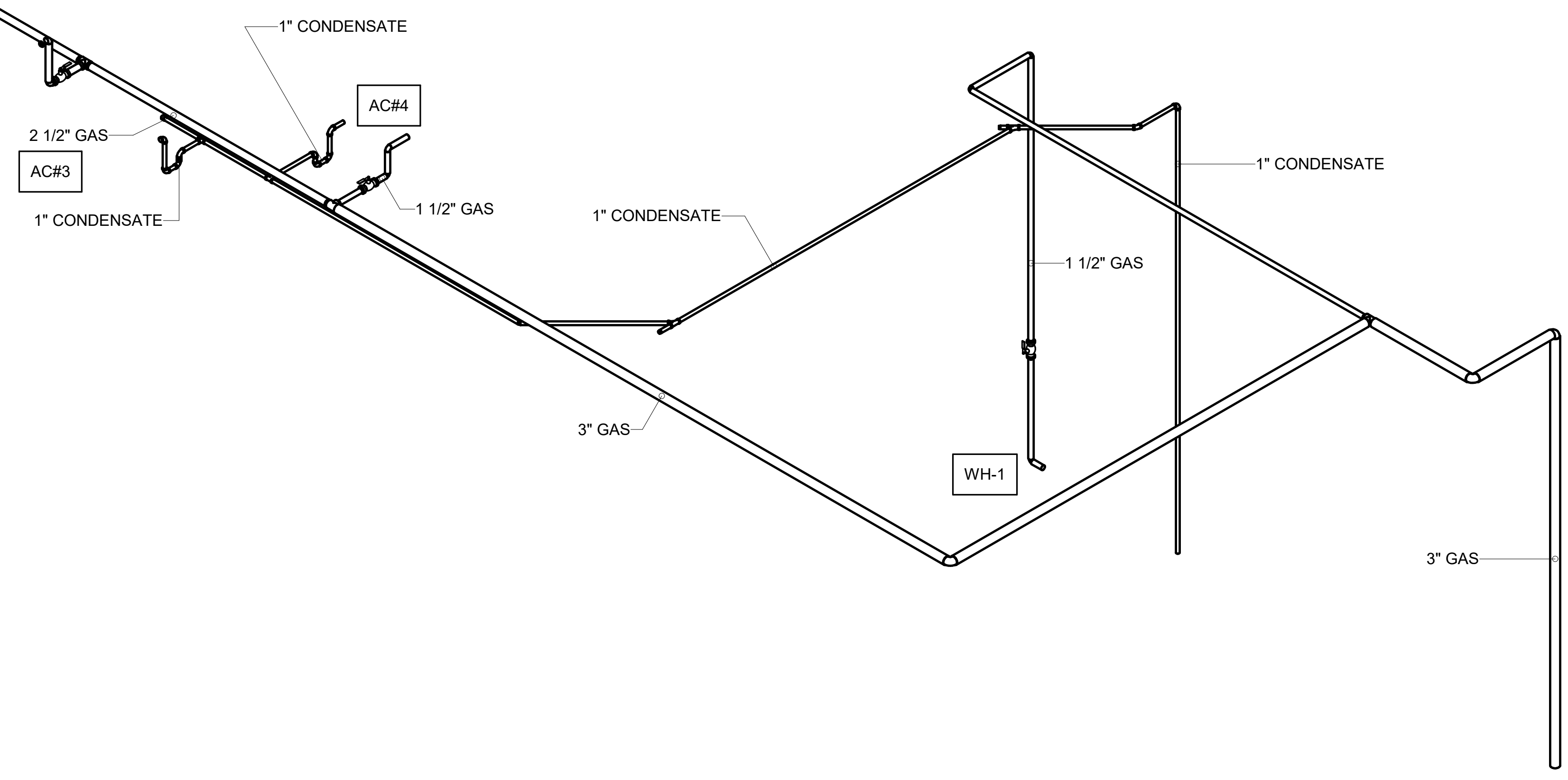
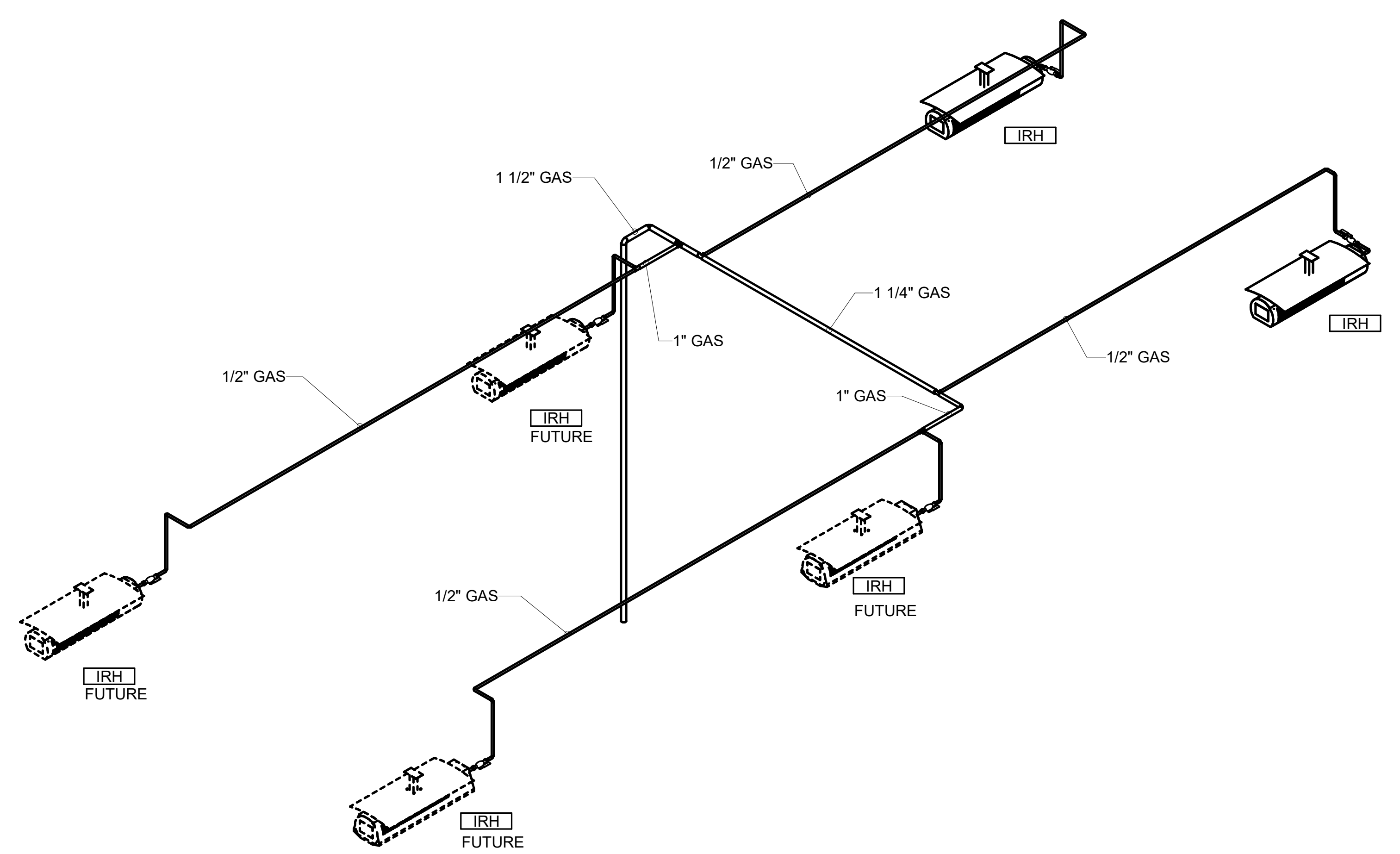
SHEET NUMBER
M-502

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30-LE-05542-M-502-DETAILS

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 30-LE-05542-M-901L-GAS AND CONDENSATE ISOMETRIC - LENNOX



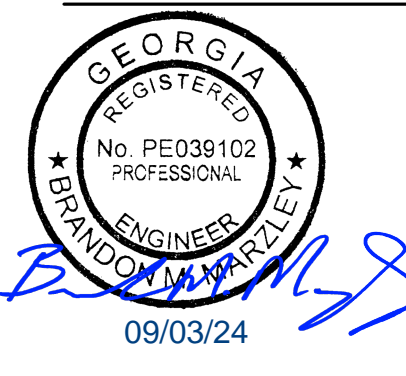
2 ORDER CANOPY GAS PIPING ISOMETRIC



1 GAS AND CONDENSATE ISOMETRIC - LENNOX



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FSR#05542
 BUILDING TYPE / SIZE: P14 LE BS
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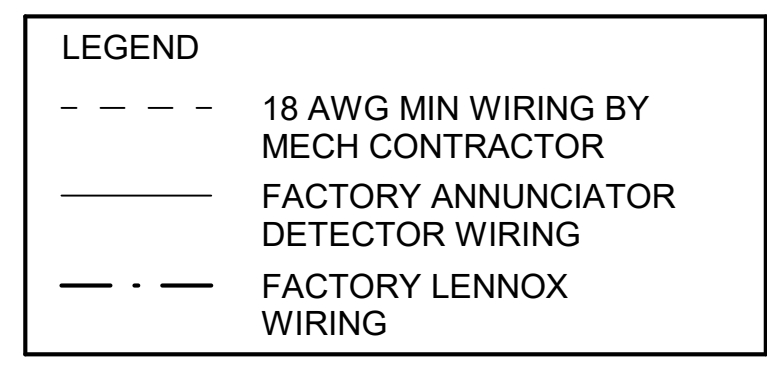
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SHEET
 GAS AND CONDENSATE ISOMETRIC - LENNOX

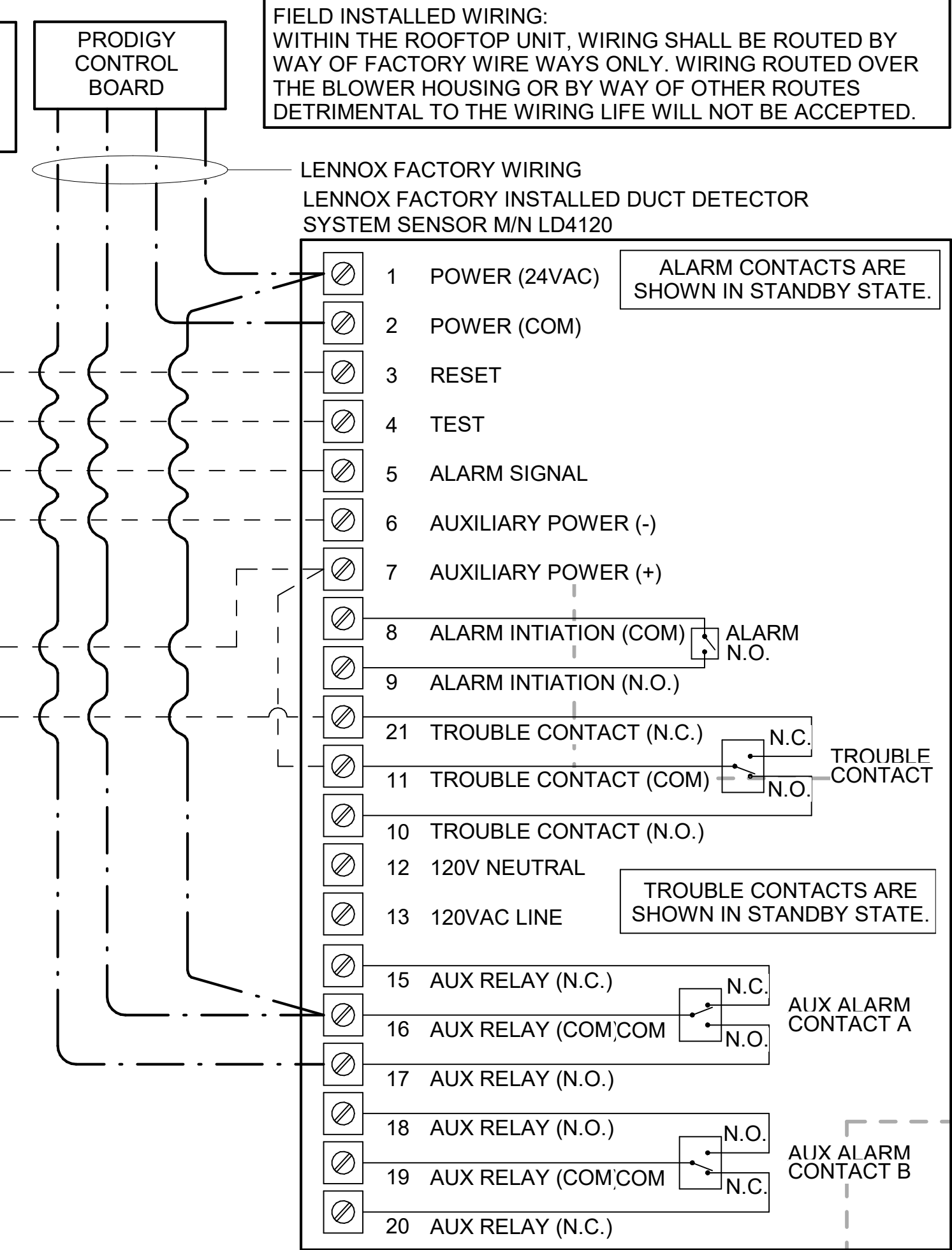
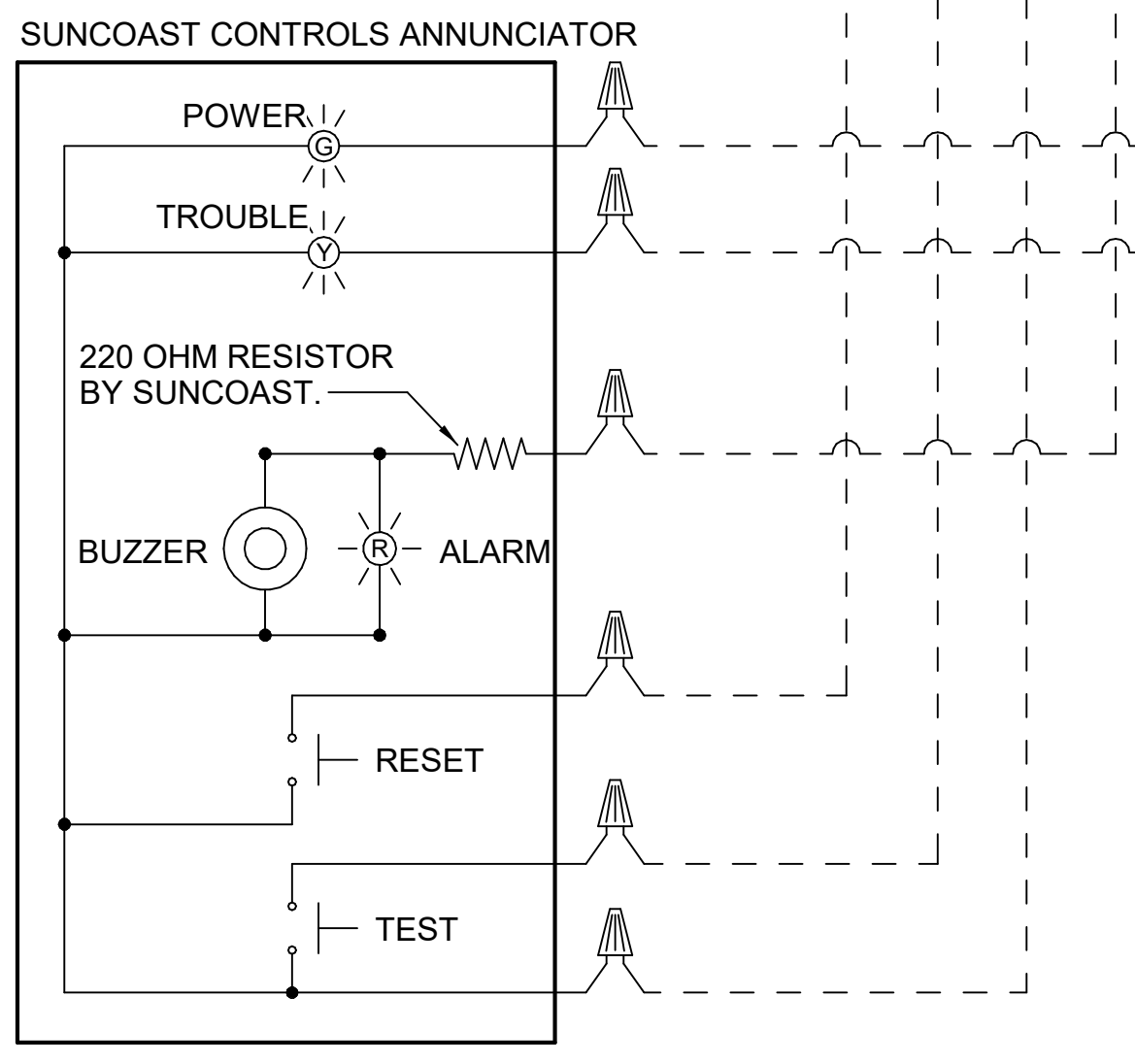
SHEET NUMBER
M-901L

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

SUPPLY SIDE DETECTORS:
IF SUPPLY SIDE SMOKE DETECTORS ARE SHOWN ON DWG M-101, AND CALLED FOR ON RTU SCHEDULE, THE CONTRACTOR IS TO RELOCATE FACTORY INSTALLED SUPPLY SMOKE DETECTOR FROM BLOWER SECTION TO DUCTWORK. SEE NOTES ON DWG M-101.



LABELING:
PROVIDE ENGRAVED LABEL WITH 1" HIGH WHITE LETTERS ON BLACK BACKGROUND IDENTIFYING UNIT SERVED.

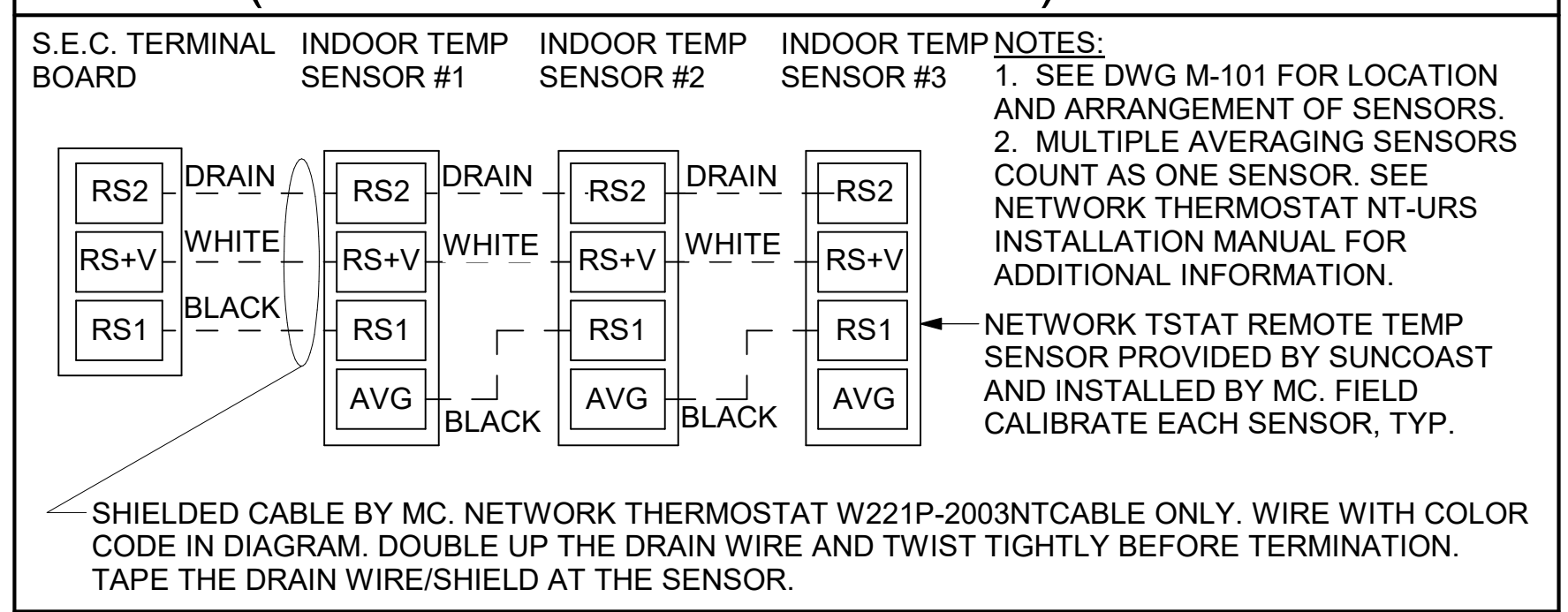


FIELD INSTALLED WIRING:
WITHIN THE ROOFTOP UNIT, WIRING SHALL BE ROUTED BY WAY OF FACTORY WIREWAYS ONLY. WIRING ROUTED OVER THE BLOWER HOUSING OR BY WAY OF OTHER ROUTES DETRIMENTAL TO THE WIRING LIFE WILL NOT BE ACCEPTED.

LENNOX FACTORY WIRING
LENNOX FACTORY INSTALLED DUCT DETECTOR SYSTEM SENSOR M/N LD4120

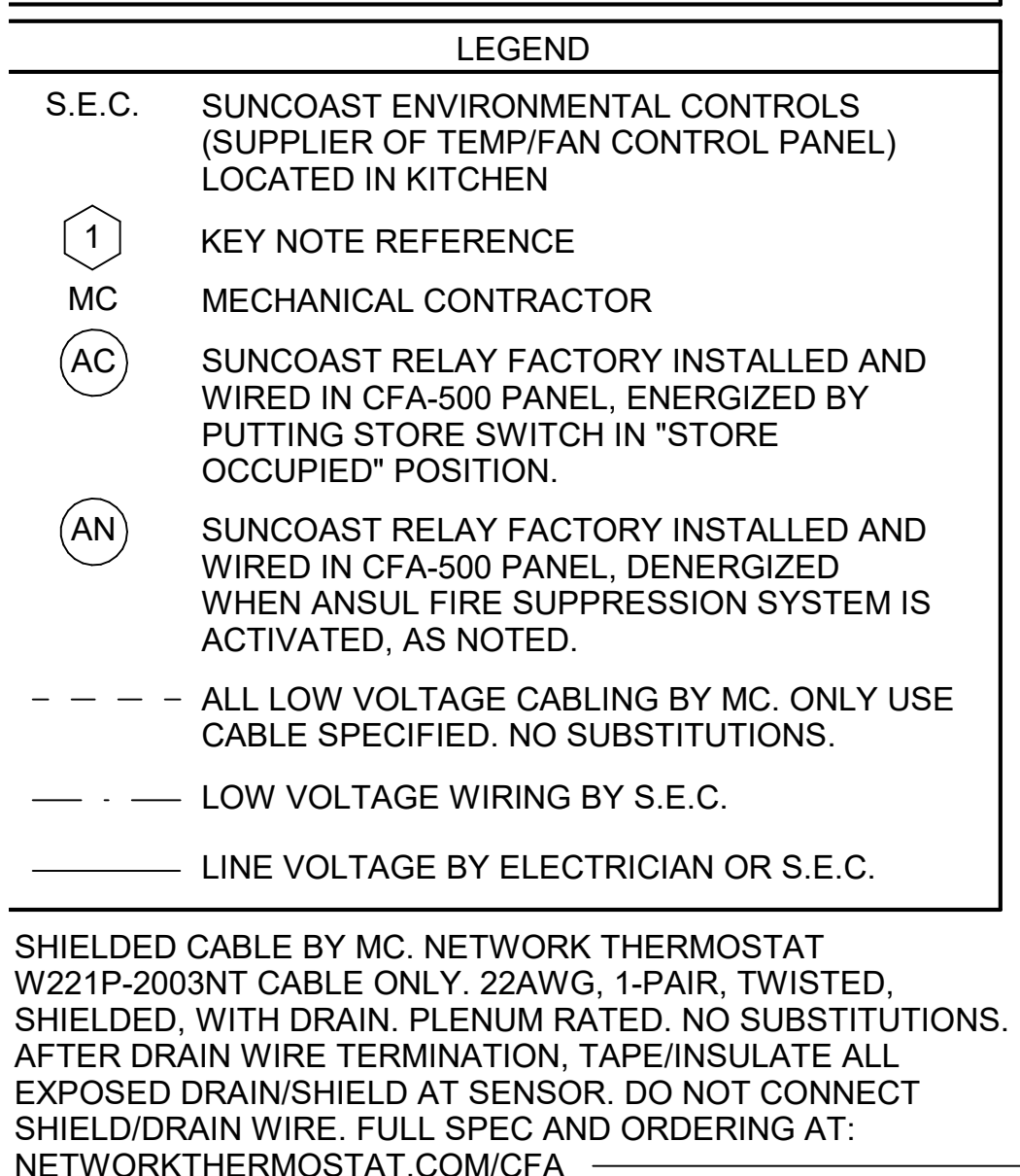
1 SMOKE DETECTOR AND ANNUNCIATOR WIRING DIAGRAM - LENNOX
NOT TO SCALE

AVERAGING SENSORS
(WHERE SHOWN ON PLANS)

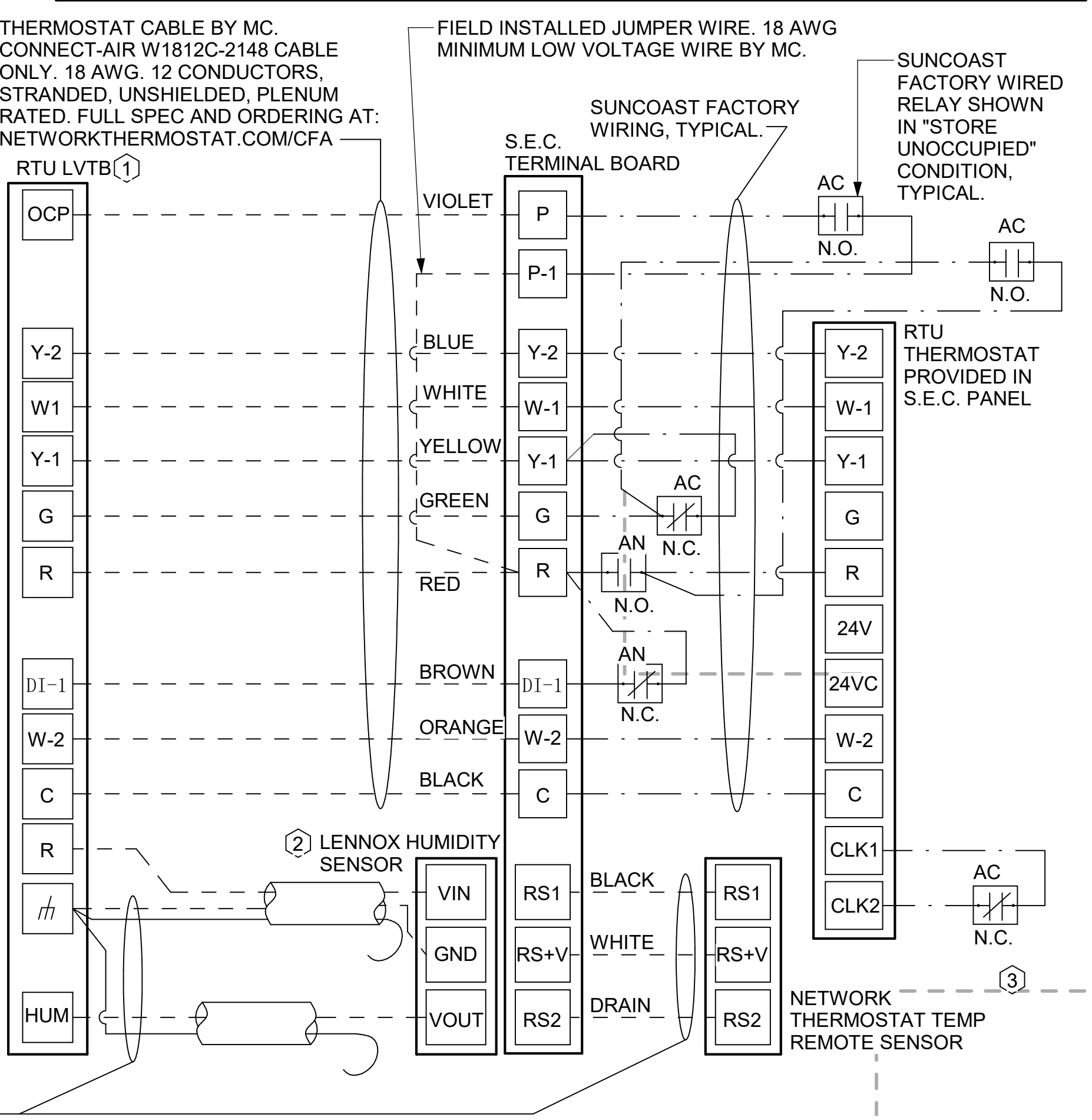


- NOTES:
- MECHANICAL CONTRACTOR SHALL MAKE PLASTIC LAMINATE OF THIS DETAIL AND INSTALL PERMANENTLY ON INSIDE DOOR OF ROOFTOP UNIT CONTROL COMPARTMENT.
 - SEE DETAILS THIS SHEET FOR SMOKE DETECTOR AND ANNUNCIATOR WIRING.
 - SET ALL THERMOSTATS FOR AUTO CHANGEOVER.
 - PROVIDE PLASTIC ENGRAVED LABEL AT 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:
- LOW VOLTAGE WIRING TO RTU TO BE ROUTED TO UNIT THRU FACTORY WIREWAY.
 - 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.
 - 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.



2 ROOFTOP UNIT CONTROL WIRING - LENNOX
NOT TO SCALE

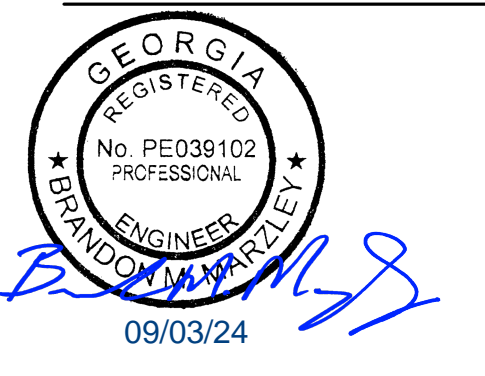


- LENNOX PRODIGY 2.0 OR CORE UNIT CONTROLLER SETTINGS:
- FOR ALL RTU'S EXCEPT AC#1, ELIMINATE THE MORNING WARMUP/OSA DAMPER DELAY. THE MENU PATH IS: MAIN MENU > SETTINGS > RTU OPTIONS > EDIT PARAMETERS
FOR GAS HEAT UNITS (LGT):
• CHANGE PARAMETER #65 SETTING TO 1
FOR ELECTRIC HEAT UNITS (LCT):
• CHANGE 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
 - FOR HUMIDITROL UNITS THE MENU PATH IS:
• MAIN MENU > SETTINGS > RTU OPTIONS > DEHUMIDIFIER MODE > NO CONDITIONS
SELECT LOCAL SENSOR AND SAVE
• SET POINT: 60%
• DEHUMID DEADBAND: 2%
 - 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:
- INSTALL FRESH AIR TEMPERING KIT WIRING HARNESS AS RECOMMENDED BY LENNOX.
 - 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.
 - 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.
 - 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.
 - 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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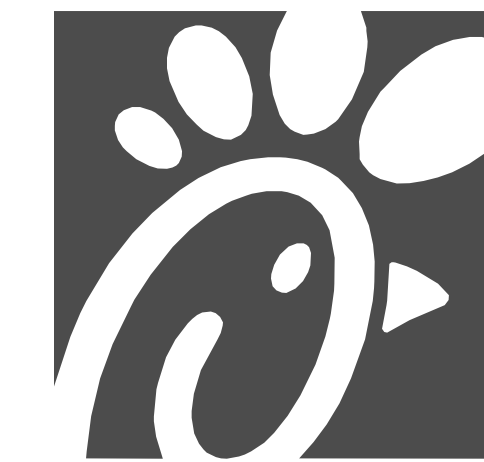
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BUILDING TYPE / SIZE: P14 LE BS
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CONSULTANT PROJECT # 2023223.97
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SHEET CONTROL WIRING DIAGRAMS - LENNOX
SHEET NUMBER

M-701L



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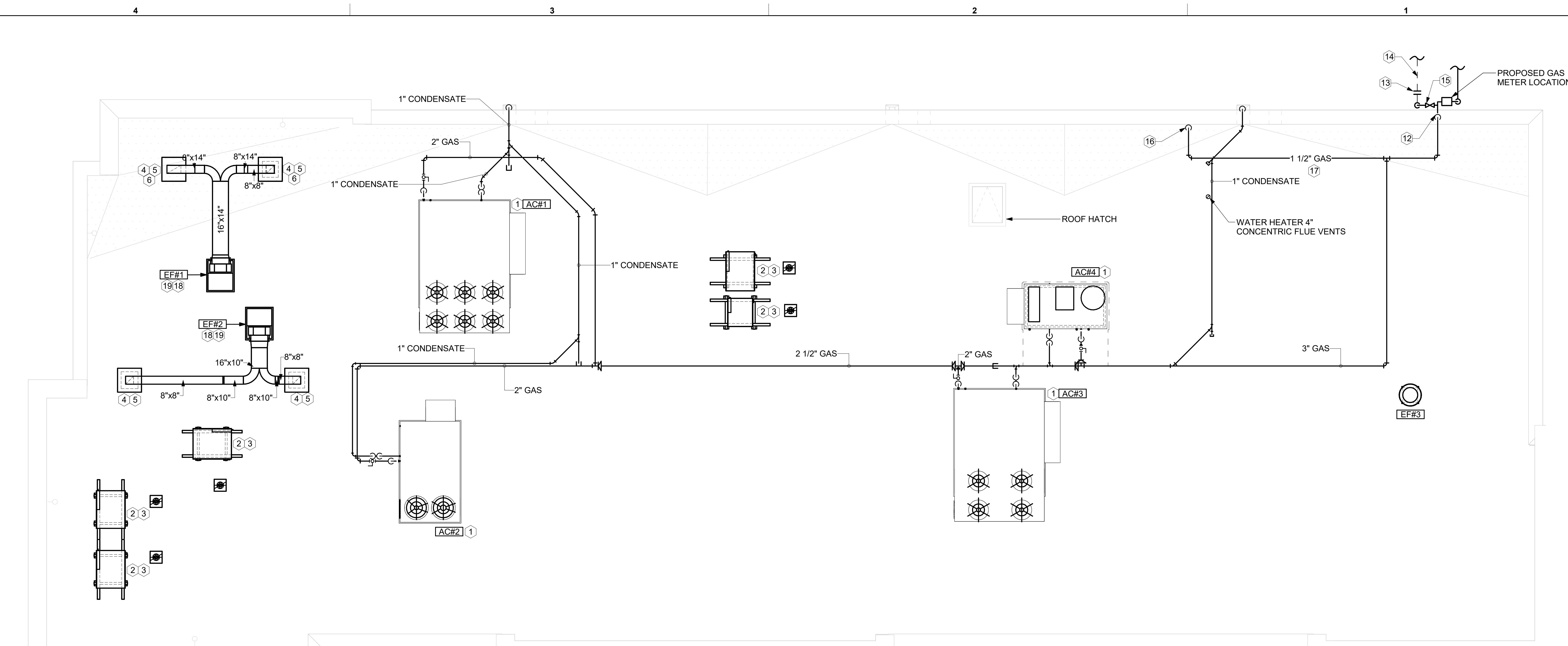
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SHEET
 EQUIPMENT ROOF PLAN - LENNOX
 SHEET NUMBER
M-102L

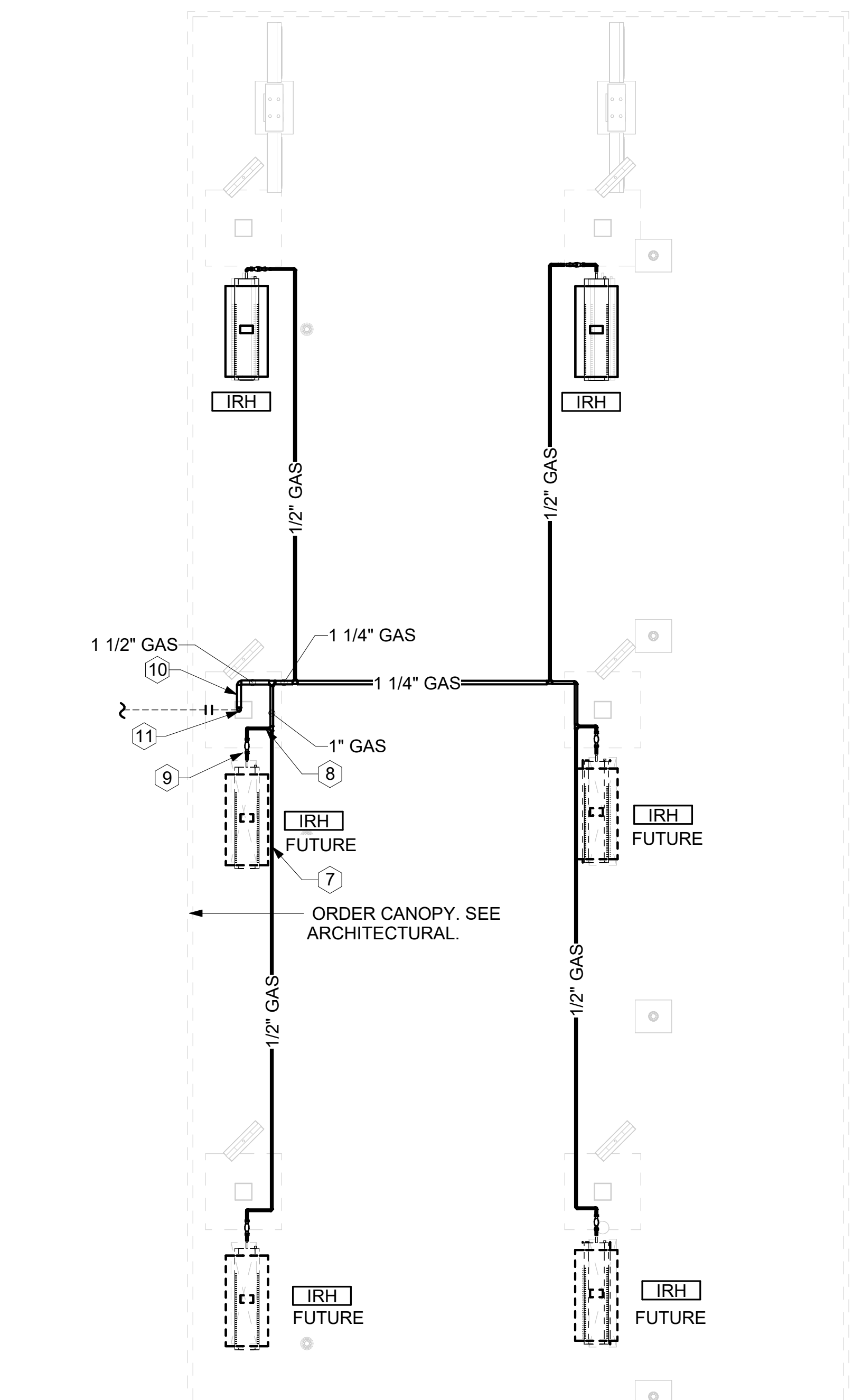


1 EQUIPMENT ROOF PLAN - LENNOX
 1/4" = 1'-0"

KEY NOTES

- MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.
- GC SHALL PROVIDE EQUIPMENT STANDS AS MANUFACTURED 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.
- DO NOT DISCHARGE OF CONDENSING UNITS INTO CONDENSER SECTION OF ROOFTOP UNITS. TYP.
- ROOF CURB FOR DUCT PENETRATION. REFER TO MH-1.3 AND MH-1.4 FOR DETAILS.
- TURN DOWN THRU ROOF. SEE M-101L/M-101T FOR CONTINUATION.
- DUCT PENETRATIONS ON ROOF MUST BE AT LEAST 18" FROM ADJACENT PARAPETS.
- GAS PIPING TO BE ROUTED ABOVE CANOPY, ON TOP OF STRUCTURAL MEMBERS, EXCEPT WHERE ROUTED DOWN THROUGH PENETRATIONS AS INDICATED.
- GAS PIPING DOWN THROUGH DECK. WEATHERPROOF DECK PENETRATION PER DETAIL 6/M-503, TYPICAL.
- SEE DETAIL 1/M-503 FOR PIPING AT IRH, TYPICAL.
- GAS TRANSITION FITTING TO GAS PIPE STUB-OUT. GAS PIPING INSIDE COLUMN AND STUB-OUTS BY CANOPY MFR. JOIN UNDERGROUND POLYETHYLENE GAS PIPING TO TRANSITION FITTING WITH ELSTER PERMASERT COUPLING. CANOPY MFR'S EXPOSED STEEL PIPING BELOW GRADE SHALL BE PROTECTED WITH TWO COATS ASPHALT TUM BASE PAINT AND POLY SLEEVE.
- 1-1/2" GAS B/G TO METER SEE 1/M-102L OR 1/M-102T.
- TURN 3" GAS UP WITHIN WALL, THRU PARAPET AND ONTO ROOF.
- ROUTE POLYETHYLENE GAS BELOW GRADE FROM THE METER. FOR TRANSITION FROM POLYETHYLENE PIPING BELOW GRADE TO STEEL AT THE METER, INSTALL ANODELESS RISER WITH INTEGRAL CONSTAB PE-TO-IPS TRANSITION FITTING BY CONTINENTAL INDUSTRIES OR EQUAL BY ELSTER.
- 1-1/2" GAS BELOW GRADE TO ORDER CANOPY. SEE DETAIL 2 THIS SHEET.
- PROVIDE FULL PORT BALL VALVE EQUAL TO APOLLO 50GB SERIES WITH WINGS HANDLE OPTION ABOVE GRADE AT THE METER. PROVIDE BRASS VALVE TAG WITH JACK CHAIN AT VALVE MARKED "SERVICE SHUTOFF FOR CANOPY HEATERS."
- 1-1/2" GAS DOWN THRU ROOF TO WATER HEATER. SEE DETAIL 3/P-502 FOR MORE INFORMATION ON CONSTRUCTION AND PENETRATION. WHEN CONTRACTOR OPTS TO PROVIDE ALTERNATIVE WATER HEATER, INCREASE PIPE SIZE AS NEEDED PER CODE.
- SEE ARCHITECTURAL DETAILS FOR ROOFTOP PIPE PENETRATIONS.
- 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.
- FABRICATE DISCHARGE AIR NOZZLE. VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. REFER TO MH-1.3 AND MH-1.4 FOR DETAILS.

3. GAS LOAD SCHEDULE	
EQUIPMENT	GAS LOAD
AC#1	480,000 BTUS
AC#2	240,000 BTUS
AC#3	480,000 BTUS
AC#4	150,000 BTUS
IRH (2 @ 50,000 BTU EA.)	100,000 BTUS
IRH (FUTURE 4 @ 50,000 BTU EA.)	200,000 BTUS
WATER HEATER	199,000 BTUS
TOTAL BASIS OF DESIGN LOAD	1,649,000 BTUS
TOTAL FUTURE CONNECTED LOAD	1,849,000 BTUS
REMARKS:	1. EQUIVALENT TO 1,849.0 CFH 2. 7" W.C. DELIVERY PRESSURE 3. DEVELOPED LENGTH: 200 FT. (METER TO AC#2) 4. GAS PIPING SIZED FOR FUTURE LOAD



3 ORDER CANOPY GAS PIPING PLAN
 1/4" = 1'-0"

Autodesk Docs://GA_05542_Harbins Road & 316 FSU_2024.2_FSR05542_Harbins Road & 316 FSU_MECH.rvt
 9/12/2024 9:22:09 AM
 30-LE-05542-M-102L-EQUIPMENT ROOF PLAN - LENNOX

ROOFTOP UNIT SCHEDULE - LENNOX

MARK	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	SUPPLY (CFM)	OA (CFM)	HP	ESP (in-wg)	EER	IEER/SEER	VOLTAGE (V)	PHASE	MCA (A)	MOCP (A)	MODEL	MANUFACTURER	REMARKS
AC#1	288.36	210.04	480	389	8,125	1,750	7.5	0.8	10.3	14.5	208	3	137	150	LGT300S4M	LENNOX	1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17
AC#2	146.68	98.83	240	194	4,375	1,075	3.75	0.8	10.8	14.6	208	3	61	80	LGT150H4E	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17
AC#3	184.8	130.09	480	389	5,250	1,275	3	0.8	12	15	208	3	72	80	LGT180H4M	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17
AC#4	71.15	68.8	150	121	1,750	425	1.5	0.8	12.7	17.1	208	3	25	35	LGT072H4E	LENNOX	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17

NOTES

- MECHANICAL CONTRACTOR TO VERIFY LENNOX SUBMITTAL WITH CONSTRUCTION DOCUMENTS. NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.

REMARKS

- DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST.
- DIFFERENTIAL ENTHALPY ECONOMIZER WITH BAROMETRIC EXHAUST.
- 14" HIGH ROOF CURB.
- SEE DETAIL 2/M-701L FOR SETTING OF CONTROL PARAMETERS BY MC.
- FACTORY INSTALLED 115V GFI SERVICE OUTLET. SEPERATE 115V CIRCUIT PROVIDED BY ELECTRICAL CONTRACTOR.
- FACTORY INSTALLED SUPPLY AIR SMOKE DETECTOR.
- FACTORY INSTALLED NON-FUSED DISCONNECT.
- 2" MERV 8 THROW AWAY FILTERS.
- HINGED PANELS FOR ACCESS TO FILTER(S), FAN BLOWER & MOTOR, COMPRESSOR(S) ACCESS AND CONTROLS.
- FACTORY COIL HAIL GUARD, FIELD INSTALLED.
- NOT USED.
- HOT GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
- FACTORY INSTALLED BELT TENSIONER.
- FACTORY CONFIGURED PHASE LOSS PROTECTION.
- FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
- FACTORY ALUMINIZED STEEL HEAT EXCHANGER.
- 100K SCCR RATING.

FAN SCHEDULE

MARK	FAN CFM	ESP (in-wg)	MOTOR RPM	HP	AREA SERVED	VOLTAGE (V)	PHASE	FLA (A)	MOCP (A)	MODEL	MANUFACTURER	REMARKS
CF#1	1,900	0.010	1,625	0.100	OUTDOOR CANOPY	120	1	1.1	20	U-18-TE-HD	TPI	20,21,24
EF#1	1,913	0.750	1,331	0.750	HOOD#1	120	1	0	25	KEFB-14-CFA	HALTON	1,2,3,4,5,6,7,8,9,10,11
EF#2	1,402	0.950	1,199	0.750	HOOD#2 & HOOD#3	115	1	0	25	KEFB-14-CFA	HALTON	1,2,3,4,5,6,7,8,9,10,11
EF#3	300	0.375	1,550	0.125	RESTROOMS	120	1	2.2	20	XRED-095-VG	ACCUREX	1,3,11,12,13,14,15,16
TF#1	450	0.300	1,144	0.127	TECH CLOSET	120	1	2.5	0	SP-A510-VG	GREENHECK	1,17,18,19

NOTES

- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED.

REMARKS

- FANS SUPPLIED BY HALTON.
- U.L. 705 LISTED AND LABELED FOR RESTAURANT APPLICATIONS.
- FACTORY INSTALLED PREWIRED DISCONNECT SWITCH.
- 19" HIGH ROOF CURB.
- INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.
- FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.
- FACTORY DRAIN CONNECTION.
- FACTORY BOLTED ACCESS DOOR ON SCROLL.
- FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE, SPARE BELT, AND BELT TENSIONER.
- FACTORY INSTALLED OUTLET WITH QUICK RELEASE, HINGED ACCESS, AND GRAVITY BACKDRAFT DAMPER.
- INTEGRAL THERMAL OVERLOAD.
- BIRDSCREEN.
- BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 5/M-501.
- STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
- 12" HIGH CURB.
- FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
- PROVIDE NEMA 1 PREWIRED DISCONNECT.
- INTEGRAL POTENTIOMETER ON FAN MOTOR. SET TO FULL SPEED.
- PROVIDE THERMOSTAT THERMOSTAT / TEMPERATURE CONTROLLER. SET TO 76°F.
- INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE WITH ON/OFF SWITCH.
- FAN SHALL BE CONTROLLED WITH THE ROOM LIGHTING. ALL WIRING IS BY THE ELECTRICAL CONTRACTOR.
- DIRECT DRIVE CEILING FAN. PROVIDE A DISCONNECT SWITCH, INTEGRAL BACKDRAFT DAMPER, AND MANUFACTURER'S FAN SPEED CONTROLLER.
- FAN SUPPLIED BY TOM BARROW OR POWERS OF ARKANSAS FOR SOUTHWEST REGION.

HOOD SCHEDULE

MARK	EXHAUST CFM	SP @ TAB PORT (in-wg)	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	MANUFACTURER	MODEL	REMARKS
HOOD#1L	1,204	0.13	80 @ 0.30"	BACKSHELF	14"x8"	107"	37"	38"	HALTON	KVL-2 IC	1, 2, 3, 4, 5, 7, 8, 9, 12, 16, 21, 23
HOOD#1R	709	0.13	47 @ 0.30"	BACKSHELF	8"x8"	63"	37"	38"	HALTON	KVL-2 IC	1, 2, 3, 5, 7, 8, 9, 12, 20, 21, 22
HOOD#2	701	0.3	30 @ 0.29"	BACKSHELF	8"x8"	42"	34"	38"	HALTON	KVL-C IC	1, 2, 3, 6, 7, 8, 9, 13, 15, 16, 18, 21
HOOD#3	701	0.3	30 @ 0.29"	BACKSHELF	8"x8"	42"	34"	38"	HALTON	KVL-C IC	1, 2, 3, 4, 6, 7, 8, 9, 13, 17, 21

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

- STAINLESS STEEL CONSTRUCTION.
- PROVIDE FULL HEIGHT SS CLOSURE PANEL WITH ACCESS PANEL IN FRONT LARGE ENOUGH TO REMOVE CAPTURE JET FAN, FIRE SUPPRESSION COMPONENTS, AND/OR TO ACCESS KBD EQUALIZER JACK SCREW.
- PRE-PIPED FIRE SUPPRESSION SYSTEM.
- FIRE SUPPRESSION CABINET AND COMPONENTS ABOVE HOOD ON LEFT SIDE.
- 3" ZERO CLEARANCE TO COMBUSTIBLE BACK SPACER.
- 3" ZERO CLEARANCE TO COMBUSTIBLE CUSTOM BACK SPACER TO ACCOMMODATE PIN AND SLEEVE ELECTRICAL BOX.
- EQUIPMENT I.D. LABELS LOCATED ON FRONT LEADING EDGE OF HOOD.
- FACTORY WALL MOUNTING ANGLE AT TOP OF HOOD.
- INTEGRAL CAPTURE JET FAN.
- NOT USED.
- NOT USED.
- NOT USED.
- PIN AND SLEEVE ELECTRICAL BOX (DOUBLE CONNECTION). SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- NOT USED.
- 3" ZERO CLEARANCE TO COMBUSTIBLE RIGHT SIDE SPACER.
- NOTCHED LEFT END SIDE PANEL.
- NOTCHED RIGHT END SIDE PANEL.
- 3"x3" HORIZONTAL AND VERTICAL TRIM ANGLE FOR RIGHT SIDE OF HOOD TO FINISH OFF GAP AT WALL.
- FULL LEFT END SIDE PANEL.
- FULL RIGHT END SIDE PANEL.
- HALTON KBD EQUALIZER.
- CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT.
- CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT.

HEATER SCHEDULE

MARK	HEATING INPUT		FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	VOLTAGE (V)	PHASE	FLA (A)	MOCP (A)	MODEL	MANUFACTURER	REMARKS
	ELECTRIC (KW)	GAS (MBH)											
EIH#1	6.00	0.0	56"	8.5"	3.5"	WALL BRACKET	208	1	28.9	40	BH0420035	BROMIC	1, 2, 3, 4
IRH	0.00	50.0	48"	13.4"	13.4"	BRACKET	120	1	0.4	20	WB50	SPACE-RAY	1, 5, 6, 7

NOTES

- NATIONAL ACCOUNT NO SUBSTITUTIONS PERMITTED - SEE DRAWING G-004.
- CONFIRM HEATER QUANTITY WITH CANOPY SHOP DRAWINGS.

REMARKS

- STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.
- PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND.
- PROVIDE BLACK HEATER WITH HIGH TEMPERATURE COATING, AND MANUFACTURER MOUNTING BRACKETS.
- PROVIDE BROMIC WALL MOUNTED ELECTRIC HEATER MODEL: BH0420033 FOR 220-240V SITES.
- STEEL BURNER WITH CERAMIC BURNER TILES.
- PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING FORWARD, 12" Laterally FROM THE LONG SIDE OF THE HEATER.
- STAINLESS STEEL HEAT SHIELDS.

AIR DOOR SCHEDULE

MARK	CFM	VELOCITY (FFM)	HEATING (KW)	MOTOR HP	MCA (A)	MOCP (A)	VOLTAGE (V)	PHASE	AREA SERVED	MODEL	MANUFACTURER	REMARKS
AD#1	1,543	2,338	10	0.75	31.4	40	208	3	DRIVE THRU	CHA-1-48E	POWERED AIRE	1, 2, 3, 5
AD#2	1,197	2,443	10	0.75	31.4	40	208	3	SERVING	CHA-1-36E	POWERED AIRE	1, 2, 3, 6
AD#3	3,867	4,218	0	0.75	3.6	20	208	1	REAR DOOR	RBT-1-48	POWERED AIRE	4

NOTES

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

REMARKS

- FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER ABOVE CEILING.
- FACTORY WIRED DISCONNECT.
- FACTORY PROVIDED, FIELD INSTALLED BY MC, REMOTE WALL SWITCHES FOR HEATING ON/OFF AND FAN ON/AUTO SWITCH. SEE DETAILS ON M502.
- FACTORY PROVIDED MAGNETIC DOOR CONTACT WITH FACTORY INSTALLED LOW VOLTAGE CONTROLS LOCATED IN AIR DOOR CABINET.
- PROVIDE WITH A DIVERTER BOX. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE WITH NOZZLE EXTENSION. SEE DETAIL 3/M502.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	LOCATION	NECK SIZE	FACE SIZE	FRAME TYPE	REMARKS
A	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING / KITCHEN	VARIES	24"x24"	LAY-IN	1,7
B	VARITHERM PLAQUE DIFFUSER	OFFICE	8"	24"x24"	LAY-IN	1,7,8
C	PRICE#B 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.	SERVING	VARIES	16"x16"	SURFACE	1,3,5,6
E	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	DINING	6"	12"x12"	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 / MFA	24"x24"	24"x24"	LAY-IN	1,7,8
FF	PRICE MODEL 80FF STEEL FILTER RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK.	MFA	24"x24"	24"x24"	LAY-IN	1,7,8
G	PRICE MODEL 22 DOUBLE DEFLECTION ALUMINUM SIDEWALL SUPPLY GRILLE, FRONT BLADE PARALLEL TO LONG SIDE.	PLAY AREA	18"x10"	20"x10"	SURFACE	1
J	PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS.	RESTROOMS	VARIES	10"x10"	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
L	PRICE MODEL 21 DOUBLE DEFLECTION ALUMINUM SIDEWALL RETURN GRILLE, FRONT BLADE PARALLEL TO LONG SIDE.	PLAY AREA	18"x10"	20"x10"	SURFACE	1

NOTES

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

REMARKS

- STANDARD OFF WHITE FINISH.
- PROVIDE MODEL VCS3 NECK DAMPER.
- SEE DRAWING M-101 FOR THROW
- PROVIDE MODEL VCR7 NECK DAMPER ON GRILLES IN RESTROOMS SERVING EXHAUST FAN.
- PROVIDE BACKPAN. MC TO SEAL JOINTS WITH MASTIC AND INSULATE EXTERNALLY.
- FIELD INSULATE BACKPAN AS SHOWN ON DETAIL 3/M-501.
- FACTORY INSULATED R-6 BACKPAN.
- PROVIDE RELIEF COLLAR ACCESSORY FOR VAV DIFFUSER.



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



09/03/24

CHICK-FIL-A
HARBINS RD & 316

881 HARBINS ROAD
DACULA, GA 30019

FSR#05542

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 23.11
PRINTED FOR:
ISSUED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2023223.97
DATE 08/14/24
DRAWN BY IHD

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SHEET
EQUIPMENT SCHEDULES
- LENNOX

SHEET NUMBER

M-601L



Contractor Submittal Sheet
 Contractor: _____
 Project: _____

FyreWrap® Elite® 1.5 Duct Insulation
Two Layer ASTM E2336 Grease Duct System

Introduction

Unifrax's FyreWrap® Elite® 1.5 Duct Insulation is a high temperature insulation blanket specifically designed to provide a flexible enclosure for two-hour rated commercial kitchen grease ducts. FyreWrap Elite 1.5 Duct Insulation is tested per ASTM E2336 and is acceptable as an alternate to a traditional fire-rated shaft. Installed as a two-layer system, FyreWrap Elite 1.5 complies with the International Mechanical Code (IMC) and Uniform Mechanical Code (UMC).

Product Description

Core Material: FyreWrap Elite 1.5 incorporates Insulfrax® Thermal Insulation as its core material. Insulfrax is a high temperature insulation made from a calcia, magnesia, silica chemistry designed to enhance biodegradability. It provides excellent insulation in a noncombustible blanket product form.
Encapsulating Material: The core insulation blanket is completely encapsulated in an aluminum foil fiberglass reinforced scrim covering. This scrim provides additional handling strength as well as protection from grease and moisture absorption and tearing.

Listings and Certifications

TCG Evaluation Services.....	Evaluation Report ESR-2224
Intertek Laboratories (OP) Listed File #4870.....	Duct System: UNIBI 120-02, UNIBI 120-14, UNIWA 120-01
ASTM E2336.....	Passes all tests
ASTM E2336 Internal Grease Duct Test.....	Zero Clearance to Combustibles at all locations
ASTM E119 Full Scale Engagement Test.....	2-hour Fire Resistance Rating
ASTM E119 Vertical Wall Test.....	2-hour Fire Resistance Rating
ASTM E84, UL 723, UL C S102.2 - UL File No. R14514	Unfaced Blanket Encapsulated
Flame Spread/Smoke Developed Rating	Zero/Zero <25<50
ASTM E814 Firestop Test.....	Firestop System: UNIFRD 120-19, UNIBI 120-02, UNIBI 120-14
F-Rating = 2 Hrs, T-Rating = 2 Hrs	Passes
ASTM E136 Non-Combustibility Test.....	Passes; R-Value = 4.8 per inch at 75°F
ASTM C618 Durability Test.....	R-Value of Elite 1.5 (11/2") = 7.2
ASTM C518 Thermal Resistance.....	Resistant to Mold Growth
ASTM D6329-03 Microbial Resistance.....	No: 2440-1478-100
California State Fire Marshal Listing.....	

Complies with: NFPA 96 (all editions), 1997 IBCO Uniform Mechanical Code (UMC), 1997 IBCO Uniform Building Code (UBC), 2015 International Mechanical Code (IMC), 2015 IAPMO UMC (Uniform Mechanical Code).

Typical Product Parameters

Thickness	1.5"
Nominal Density	8 pcf
Standard Product Form	Scrim Encapsulated
Product Availability	24" w x 25' L 48" w x 25' L

Installation Material's Requirements

Item	Type and Specification
Bands	<ul style="list-style-type: none"> Carbon steel or Stainless steel Min. 1/2" wide & nom. 0.015" thick
Crimp clips	<ul style="list-style-type: none"> Carbon steel or Stainless steel Min. 1" long
Pins	<ul style="list-style-type: none"> Steel Weld Pins or Cup Head Min. 1/2" Gauge
Washers	<ul style="list-style-type: none"> Galvanized Steel Min. 2 1/2" square or 1 1/2" round

Green Building Contribution

Contains No VOCs
 Manufacturing plant location: New Carlisle, IN
 Microbial Resistant, per ASTM D 6329-03



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System Installation

To minimize waste, FyreWrap Elite 1.5 should be rolled out fully before measuring and making any material cuts. Install both layers of wrap with transverse (perimeter) and longitudinal butted joints. Between the first and second layers of wrap stagger transverse joints and offset longitudinal joints to different corners. All visually exposed blanket edges are to be sealed with minimum 3" wide aluminum foil tape and the use of filament tape is not required but is permitted to ease installation. The installation materials must comply with the options listed in the material's requirements table.

Note: 3" material overlaps can be substituted for compression butt joints.

Attachment Options

Banding only

Place bands at 12" on both sides of all second layer transverse butt joints and add additional bands as needed to ensure spacing is max. 10 1/2" on center. Tighten banding to firmly hold the wrap system in place but not so tight as to cut or damage the blanket. Secure bands with crimp clips.

Note: No bands are required on the first layer.

Banding and Pins

For ducts greater than 24", in addition to installing bands as described in the Banding Option, weld steel insulation pins in rows to the underside of horizontal runs. Locate pins on both sides of all second layer transverse butt joints 3" apart. Add additional rows as needed to ensure longitudinal spacing is max. 10". Pins in each row are to be max. 6" from each duct edge and max. 12" on center. Impale FyreWrap Elite 1.5 Duct Insulation over the pins and secure with washers (cup head pins also permitted).

Supports

Horizontal duct support systems do not require FyreWrap insulation when constructed using a minimum 1" diameter uninsulated all-thread steel rod and 1 1/2" x 1 1/2" x 16" uninsulated steel angle spaced a maximum 60" on center along the length of the duct. A minimum clearance of 1" is required between the protected duct and the steel rod. To increase hanger spacing to 72" on center, 1/2" all-thread steel rod and 2" x 2" x 1/4" steel angle are required. Vertical duct

support systems do not require FyreWrap insulation when constructed using minimum 1 1/2" x 1 1/2" x 1/4" steel angle brackets located on opposite sides of the duct, on the top and bottom of each floor-ceiling assembly. The supports are attached to the duct with welds. Maximum spacing between vertical supports shall be established by structural calculations in accordance with the applicable code, that are submitted to the building official for approval.

Access Door

Field fabricated access doors are protected with three layers of FyreWrap Elite 1.5 Duct Insulation. A gasket of 0.5" thick unfaced FyreWrap or ceramic fiber blanket is initially installed between the duct and the access door cover. Weld threaded rod to each corner of the access door opening. Cover with hollow steel tubes (optional) for easy removal of blanket. Weld at least four steel insulation pins to the outside of the door cover panel, 1" from each corner. Cut through the two layers of FyreWrap Elite 1.5 Duct Insulation already covering the duct and access door opening. Leave the interior piece in place. Cut back the outer layer to form an opening with perimeter dimensions that extend 1" beyond the inner layer. Cut a piece of FyreWrap Elite 1.5 Duct Insulation that matches the dimensions of the opening and install over pins to fit tightly within the existing material. Cut an additional piece of insulation with perimeter dimensions that extend 1" beyond the layer below. Install over the insulation pins. Throughout the installation process, seal all cut edges with aluminum foil tape. Secure with washers and bend over excess pin lengths to eliminate safety hazards. Place washers on threaded rod and secure with nuts. Do not install banding over this area.

Prefabricated - Ductmate Ultimate and Ductmate F2-HT prefabricated access doors are permitted and must be installed in accordance with Ductmate Industries, Inc. installation instructions and the applicable code. The prefabricated access door is protected with three layers of FyreWrap Elite 1.5 Duct Insulation. The first layer is cut to the size of the door. A successive layer (two additional layers) is sized to create an overlap of 1" beyond the layer immediately below. All edges of insulation blanket must be protected with aluminum foil tape. A No. 18 gauge outer plate the same dimension as the outer layer of insulation blanket is held in place over the insulation using threaded rod and wing nuts. The outer plate is supplied with the Ultimate door and F2-HT doors. Access doors are available from Ductmate Industries, Inc. Contact www.ductmate.com or 1-800-245-3188 for additional information or local distributors. Ask for the Access Door Product Line Manager.



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1 FIREWYRE SPECS (FOR REFERENCE ONLY)
 12" = 1'-0"



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09/13/24

CHICK-FIL-A
 HARBINS RD & 316

881 HARBINS ROAD
 DACULA, GA 30019

FSR#05542

BUILDING TYPE / SIZE: P14 LE BS
 RELEASE: 23.11
 PRINTED FOR:
 ISSUED FOR CONSTRUCTION
REVISION SCHEDULE

NO.	DATE	DESCRIPTION
	09/13/24	AFU comments

CONSULTANT PROJECT # 2023223.97
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SHEET
 DETAILS

SHEET NUMBER
M-505



Chick-fil-A

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HARBINS RD & 316
881 HARBINS ROAD
DACULA, GA 30019

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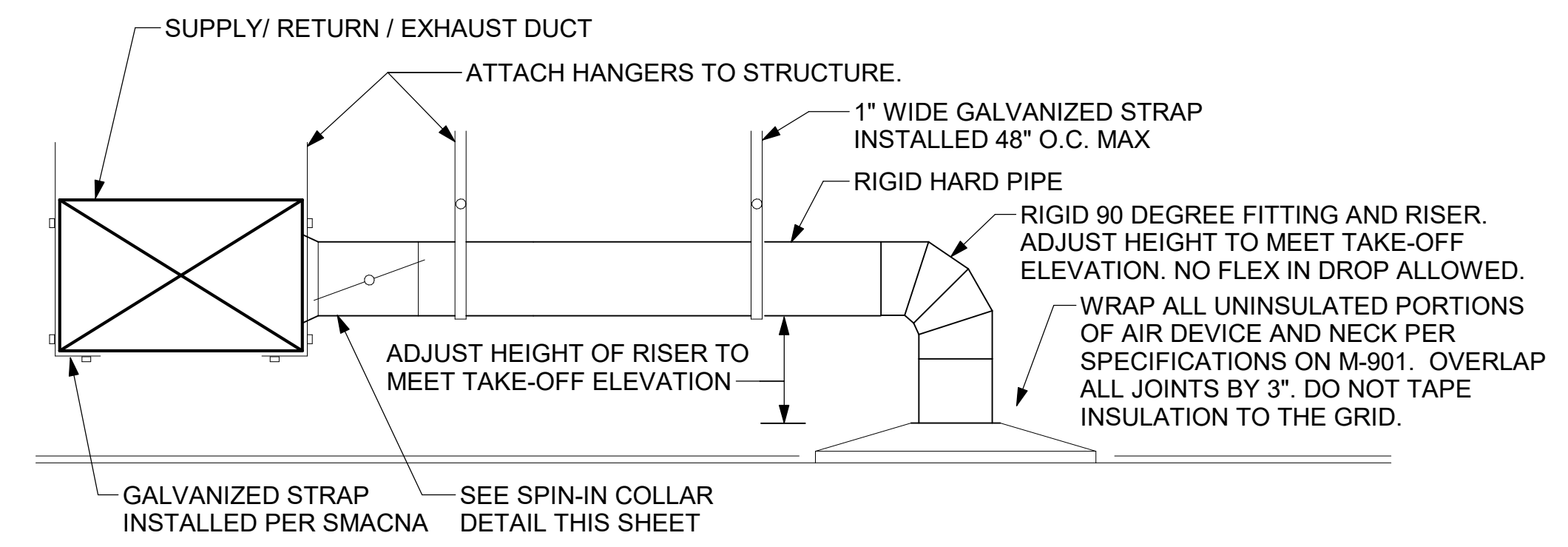
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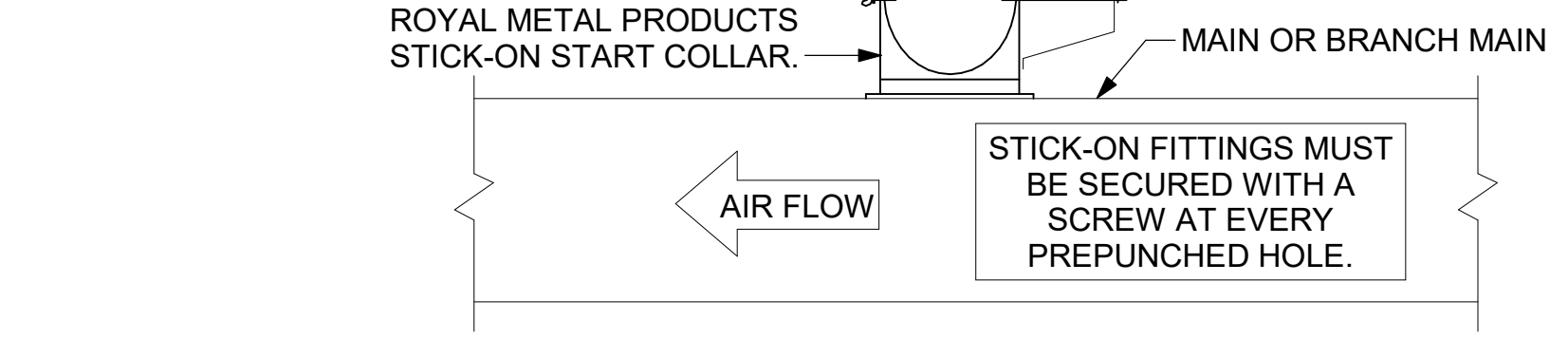
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M-501



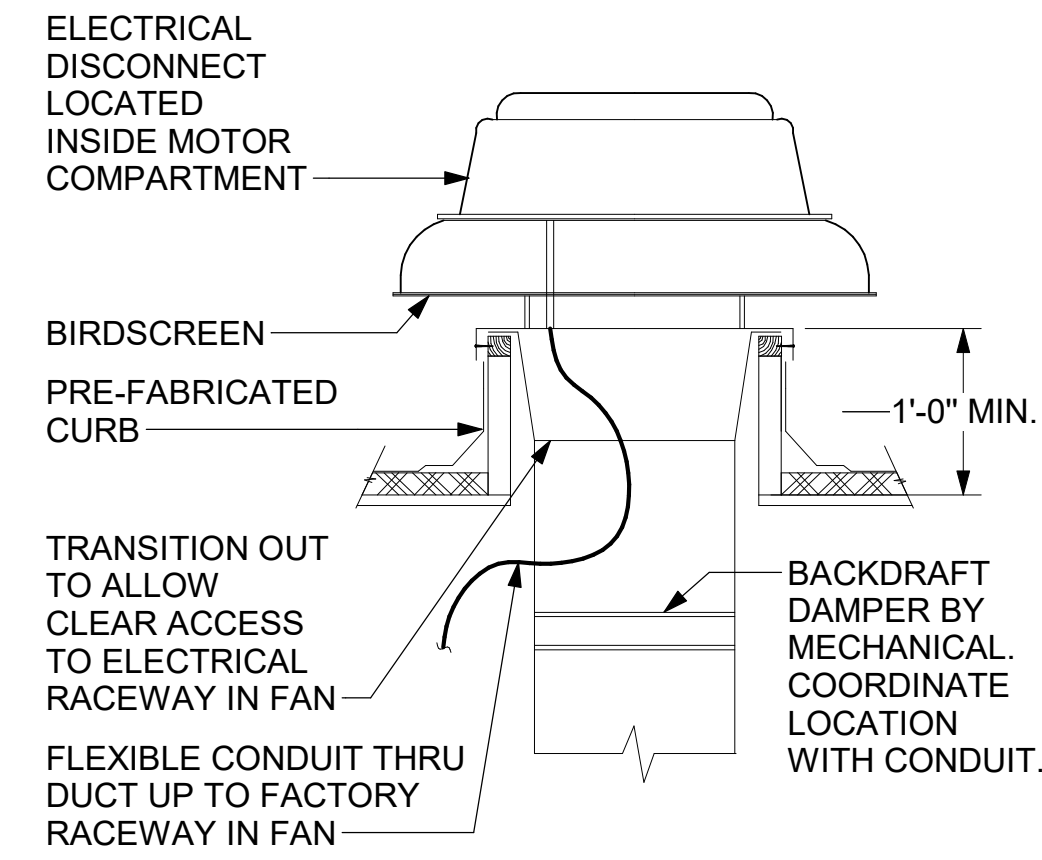
1 SAG/RAG/GRILLE TAKE-OFF
NOT TO SCALE

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

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\"/>

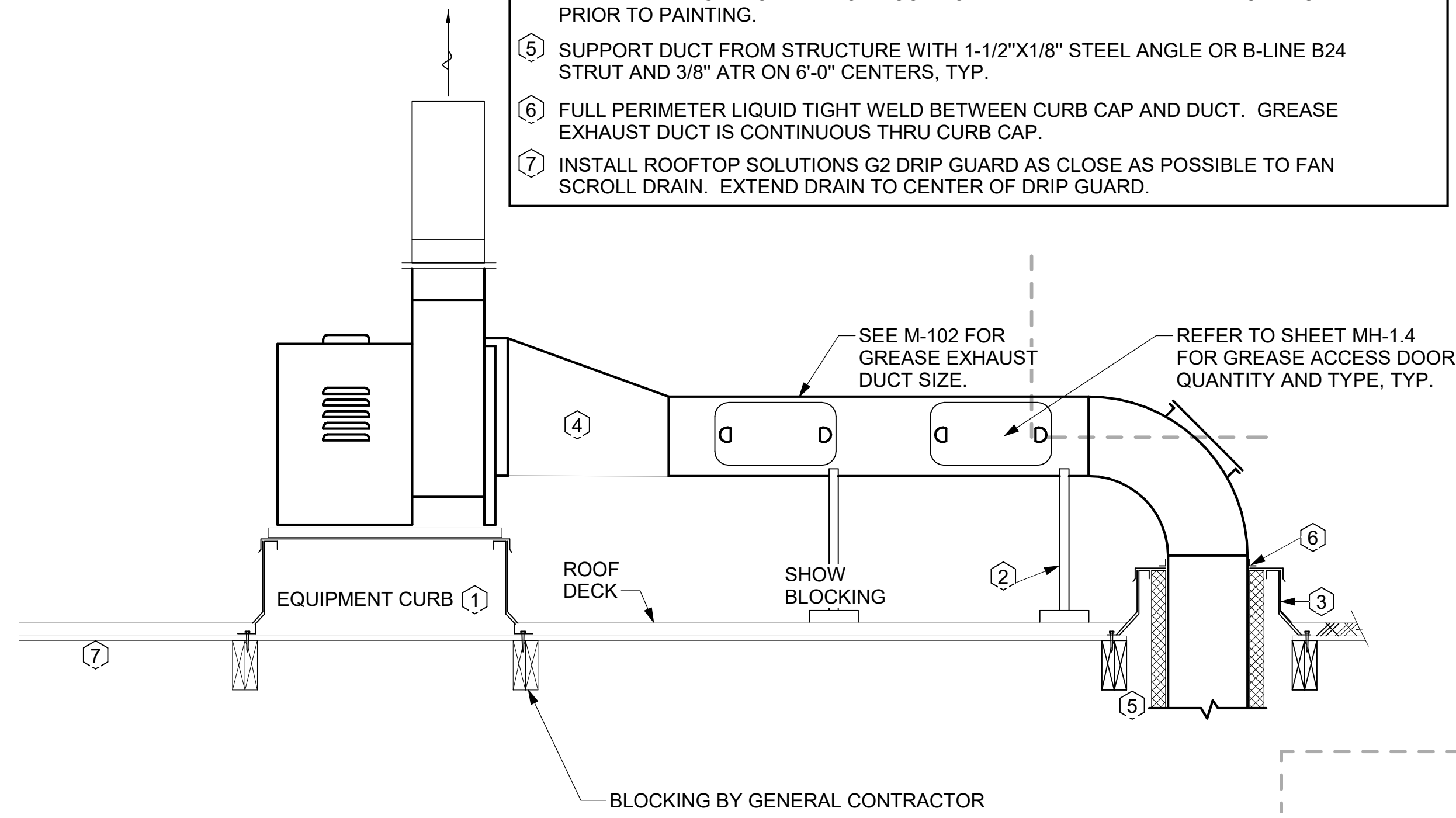


2 START COLLAR
NOT TO SCALE

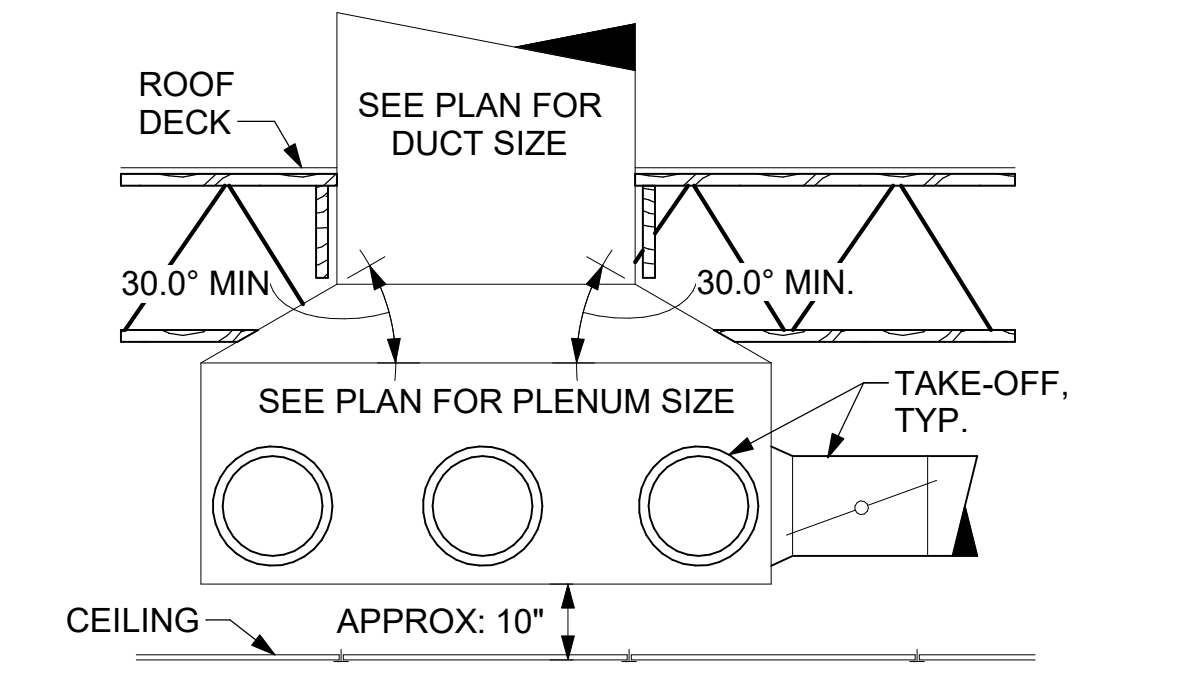


3 RESTROOM EXHAUST FAN
NOT TO SCALE

- KEYED NOTES:
- 22" EQUIPMENT CURB FURNISHED BY HALTON.
 - DUCT SUPPORT SHALL BE PROVIDED EVERY 8', AND WITHIN 12" OF ANY FITTING OR WELD SEAM. SUPPORTS SHALL BE SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY, WIND, AND SEISMIC LOADS PER CODE.
 - 12" HIGH INSULATED CURB FURNISHED BY HALTON. MECHANICAL CONTRACTOR TO PROVIDE MINIMUM 18 GA STAINLESS STEEL CURB CAP AND FLASHING.
 - 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.
 - SUPPORT DUCT FROM STRUCTURE WITH 1-1/2"x1/8" STEEL ANGLE OR B-LINE B24 STRUT AND 3/8" ATR ON 6'-0" CENTERS, TYP.
 - FULL PERIMETER LIQUID TIGHT WELD BETWEEN CURB CAP AND DUCT. GREASE EXHAUST DUCT IS CONTINUOUS THRU CURB CAP.
 - INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD AS CLOSE AS POSSIBLE TO FAN SCROLL DRAIN. EXTEND DRAIN TO CENTER OF DRIP GUARD.



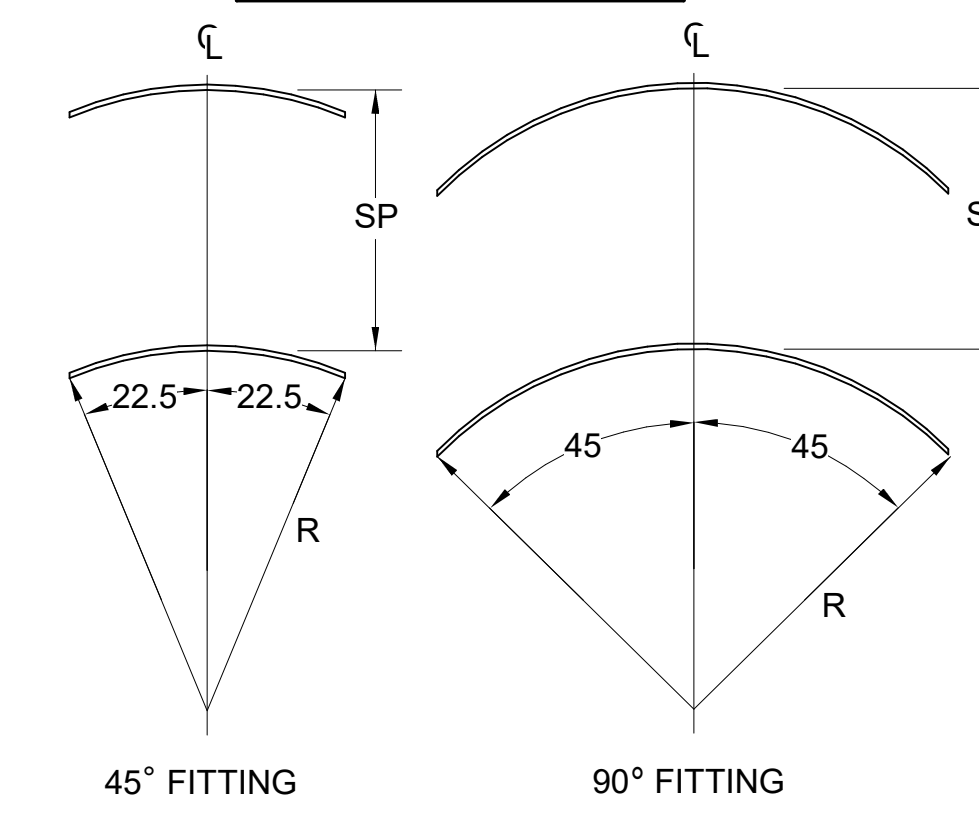
6 KITCHEN HOOD EXHAUST FAN
NOT TO SCALE



5 RETURN DROP GEOMETRY
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

VENTILATION SCHEDULE																						
General			Ventilation											Exhaust								
Room #	Room Name	Area A _s ft ²	People			Area					Primary Zone Air Fraction Z _p	Actual Outdoor Airflow CFM	Area		Exhaust		Toilet		Actual Exhaust CFM	Served by		
			Occupant Density People/1,000 ft ²	Occupants People P _z	Outdoor Airflow Rate CFM/Person R _p	Outdoor Airflow CFM P _z x R _p	Outdoor Airflow Rate CFM/ft ² R _a	Outdoor Airflow CFM A _s x R _a	Breathing Zone Outdoor Airflow CFM V _{bz}	Zone Air Distribution Effectiveness E _z			Zone Outdoor Airflow CFM V _{oz}	Primary Zone Airflow CFM V _{pz}	Required Exhaust Rate CFM/ft ²	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture		Required Fixture Exhaust CFM	Supply	Exhaust
1	Kitchen	880	20	18	7.5	135	0.12	106	241	0.8	301	7.325	0.04	1,578	0.70	616	-	-	-	3,315	AC#1 / ALT AC#1	EF-1 / EF-2
2	Kitchen (Dish Washing)	128	15	2	7.5	15	0.18	23	38	0.8	48	800	0.06	172	-	-	-	-	-	-	AC#1 / ALT AC#1	-
Total Area 1,008						Total V _{bz} 279					Total Supply Airflow 8,125			1,750		Actual Outdoor Airflow						
						Diversity (D) 1.00					Maximum Z _p 0.06											
						Uncorrected Outdoor Air Intake (V _{oo}) 279					System Ventilation Efficiency (E _s) 1.00											
						Required Outdoor Air Intake (CFM) 278																

VENTILATION SCHEDULE																						
General			Ventilation											Exhaust								
Room #	Room Name	Area A _s ft ²	People			Area					Primary Zone Air Fraction Z _p	Actual Outdoor Airflow CFM	Area		Exhaust		Toilet		Actual Exhaust CFM	Served by		
			Occupant Density People/1,000 ft ²	Occupants People P _z	Outdoor Airflow Rate CFM/Person R _p	Outdoor Airflow CFM P _z x R _p	Outdoor Airflow Rate CFM/ft ² R _a	Outdoor Airflow CFM A _s x R _a	Breathing Zone Outdoor Airflow CFM V _{bz}	Zone Air Distribution Effectiveness E _z			Zone Outdoor Airflow CFM V _{oz}	Primary Zone Airflow CFM V _{pz}	Required Exhaust Rate CFM/ft ²	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture		Required Fixture Exhaust CFM	Supply	Exhaust
5	Meal Fulfillment Area	460	15	7	7.5	52.5	0.18	83	135	0.8	170	4,375	0.04	1,075	-	-	-	-	-	-	AC#2 / ALT AC#2	-
Total Area 460						Total V _{bz} 135					Total Supply Airflow 4,375			1,075		Actual Outdoor Airflow						
						Diversity (D) 1.00					Maximum Z _p 0.03											
						Uncorrected Outdoor Air Intake (V _{oo}) 135					System Ventilation Efficiency (E _s) 1.00											
						Required Outdoor Air Intake (CFM) 135																

VENTILATION SCHEDULE																						
General			Ventilation											Exhaust								
Room #	Room Name	Area A _s ft ²	People			Area					Primary Zone Air Fraction Z _p	Actual Outdoor Airflow CFM	Area		Exhaust		Toilet		Actual Exhaust CFM	Served by		
			Occupant Density People/1,000 ft ²	Occupants People P _z	Outdoor Airflow Rate CFM/Person R _p	Outdoor Airflow CFM P _z x R _p	Outdoor Airflow Rate CFM/ft ² R _a	Outdoor Airflow CFM A _s x R _a	Breathing Zone Outdoor Airflow CFM V _{bz}	Zone Air Distribution Effectiveness E _z			Zone Outdoor Airflow CFM V _{oz}	Primary Zone Airflow CFM V _{pz}	Required Exhaust Rate CFM/ft ²	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture		Required Fixture Exhaust CFM	Supply	Exhaust
1	Dining	1,209	70	85	7.5	637.5	0.18	218	855	0.8	1069	4,000	0.287	971	-	-	-	-	-	-	AC#3 / ALT AC#3	-
2	Serving	313	15	5	7.5	38	0.18	56	94	0.8	118	500	0.23	121	-	-	-	-	-	-	AC#3 / ALT AC#3	-
3	Men's RR	206	-	-	-	-	-	-	-	0.8	-	125	-	30	-	-	Continuous	50	100	150	AC#3 / ALT AC#3	EF-3
4	Women's RR	206	-	-	-	-	-	-	-	0.8	-	125	-	30	-	-	Continuous	50	100	150	AC#3 / ALT AC#3	EF-3
5	RR Vestibule	134	-	-	-	-	0.06	8	8	0.8	11	100	0.10	24	-	-	-	-	-	-	AC#3 / ALT AC#3	-
6	Entry Vestibule	73	-	-	-	-	0.06	4	4	0.8	6	400	0.01	97	-	-	-	-	-	-	AC#3 / ALT AC#3	-
Total Area 2,141						Total V _{bz} 961					Total Supply Airflow 5,250			1,275		Actual Outdoor Airflow						
						Diversity (D) 0.82					Maximum Z _p 0.267											
						Uncorrected Outdoor Air Intake (V _{oo}) 910					System Ventilation Efficiency (E _s) 0.80											
						Required Outdoor Air Intake (CFM) 1,138																

VENTILATION SCHEDULE																						
General			Ventilation											Exhaust								
Room #	Room Name	Area A _s ft ²	People			Area					Primary Zone Air Fraction Z _p	Actual Outdoor Airflow CFM	Area		Exhaust		Toilet		Actual Exhaust CFM	Served by		
			Occupant Density People/1,000 ft ²	Occupants People P _z	Outdoor Airflow Rate CFM/Person R _p	Outdoor Airflow CFM P _z x R _p	Outdoor Airflow Rate CFM/ft ² R _a	Outdoor Airflow CFM A _s x R _a	Breathing Zone Outdoor Airflow CFM V _{bz}	Zone Air Distribution Effectiveness E _z			Zone Outdoor Airflow CFM V _{oz}	Primary Zone Airflow CFM V _{pz}	Required Exhaust Rate CFM/ft ²	Total Required Exhaust CFM	Exhaust Control/Operation	Fixture Exhaust Rate CFM/Fixture		Required Fixture Exhaust CFM	Supply	Exhaust
1	Team Member Room	174	50	9	5	45	0.06	10	55	0.8	70	600	0.12	146	-	-	-	-	-	-	AC#4 / ALT AC#4	-
2	Service	376	-	-	-	-	0.12	52	52	0.8	66	185	0.35	45	-	-	-	-	-	-	AC#4 / ALT AC#4	-
3	Beverage	166	-	-	-	-	0.12	20	20	0.8	25	275	0.09	67	-	-	-	-	-	-	AC#4 / ALT AC#4	-
4	Utility	100	-	-	-	-	0.12	12	12	0.8	15	365	0.05	89	-	-	-	-	-	-	AC#4 / ALT AC#4	-
5	Dry Storage	471	-	-	-	-	0.12	57	57	0.8	71	150	0.47	36	-	-	-	-	-	-	AC#4 / ALT AC#4	-
6	Office	79	5	1	5	5	0.06	5	10	0.8	13	100	0.12	24	-	-	-	-	-	-	AC#4 / ALT AC#4	-
7	Flex Room	59	5	1	5	5	0.12	5	16	0.8	16	75	0.21	18	-	-	-	-	-	-	AC#4 / ALT AC#4	-
Total Area 1,425						Total V _{bz} 222					Total Supply Airflow 1,750			425		Actual Outdoor Airflow						
						Diversity (D) 0.90					Maximum Z _p 0.47											
						Uncorrected Outdoor Air Intake (V _{oo}) 195					System Ventilation Efficiency (E _s) 0.60											
						Required Outdoor Air Intake (CFM) 324																



Chick-fil-A

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HARBINS RD & 316
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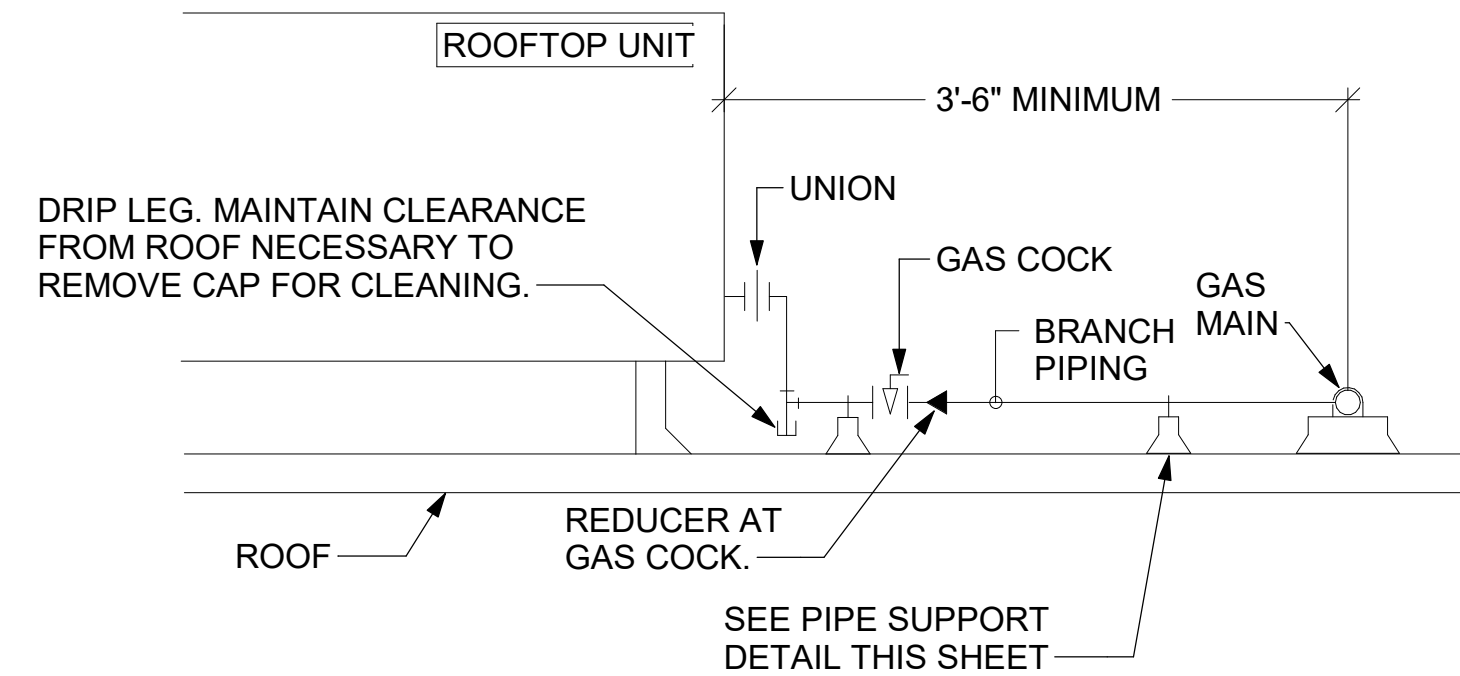
FSR#05542
BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 23.11
PRINTED FOR: ISSUED FOR CONSTRUCTION
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2023223.97
DATE 08/14/24
DRAWN BY JHD
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SHEET VENTILATION SCHEDULES
SHEET NUMBER

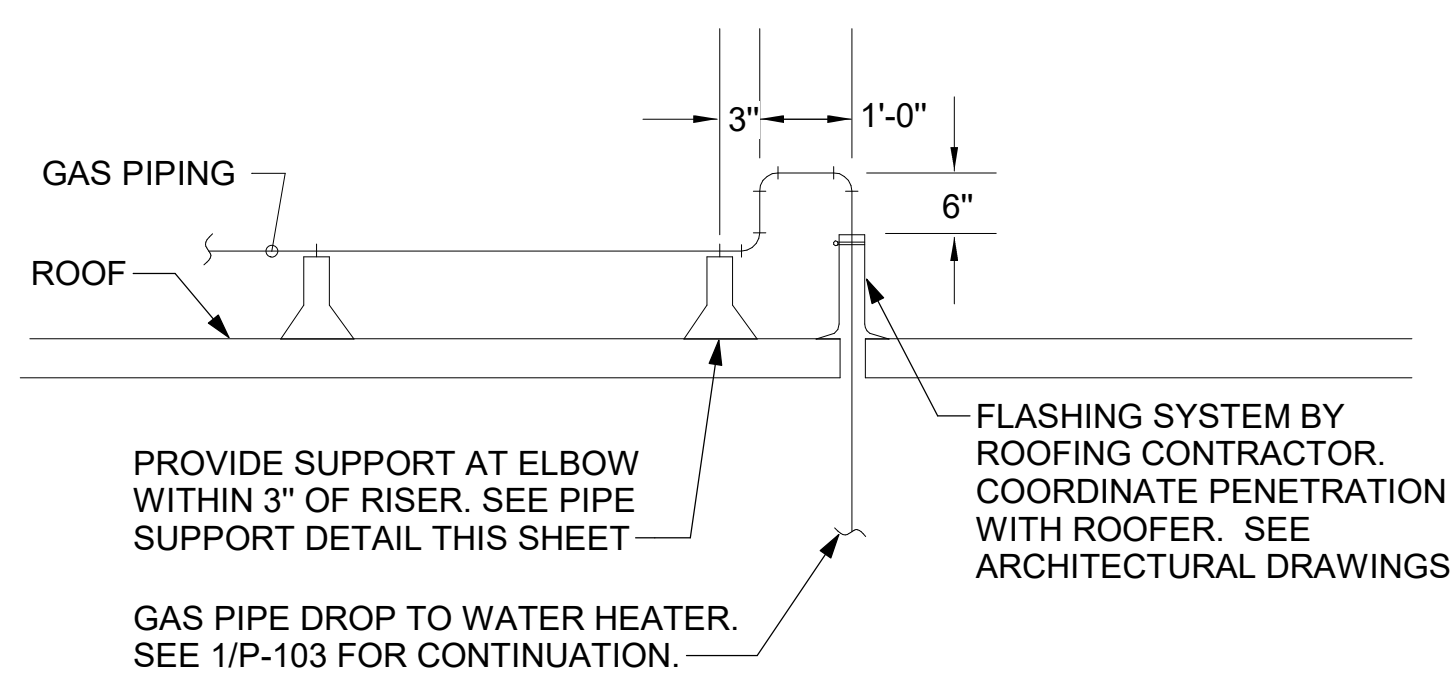
M-602

- 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.

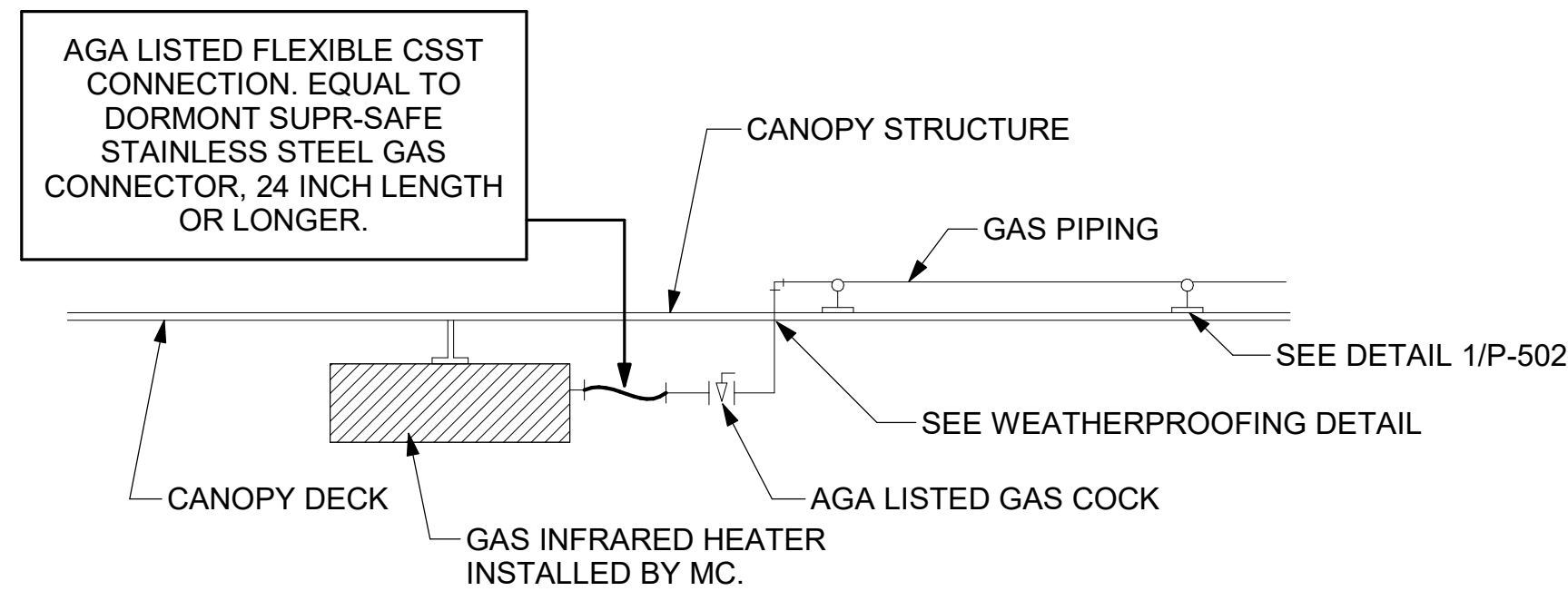


3 GAS PIPING AT RTU
NOT TO SCALE

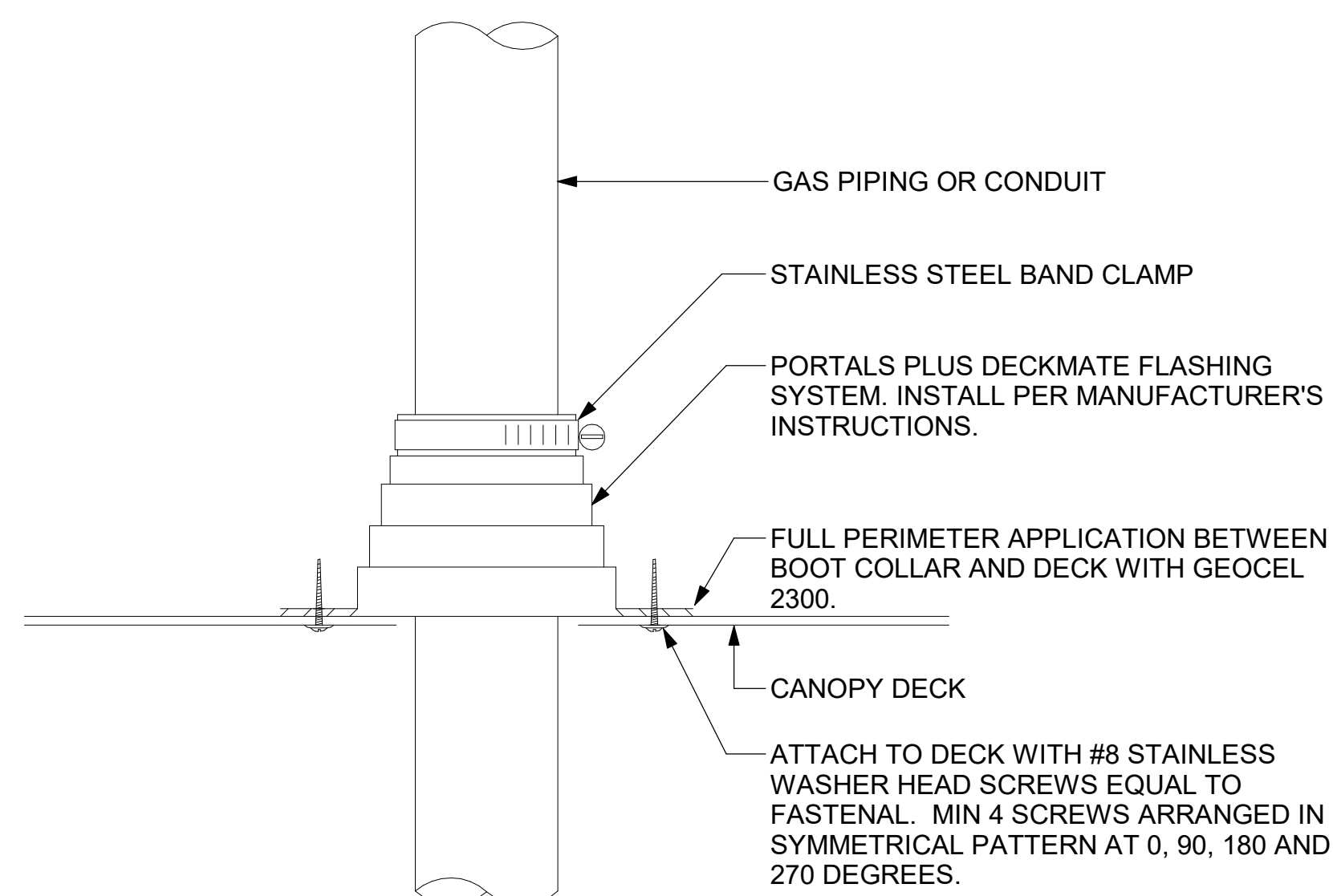
OFFSET PIPING A MINIMUM OF 6" ABOVE TOP EDGE OF FLASHING.



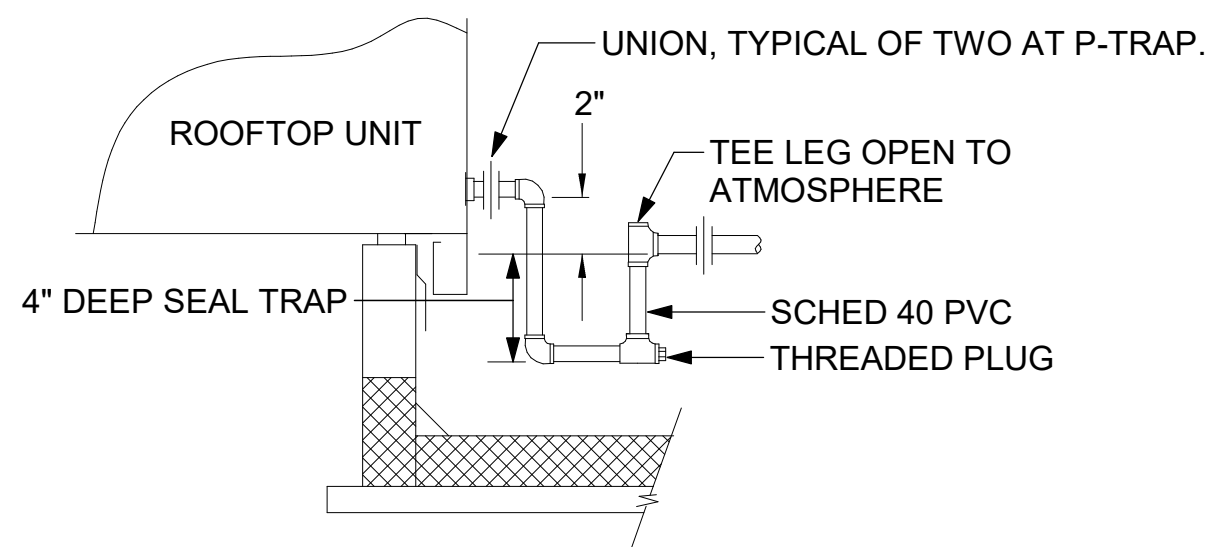
2 GAS PIPE DROP TO WATER HEATER
NOT TO SCALE



1 GAS CONNECTION AT APPLIANCE
NOT TO SCALE

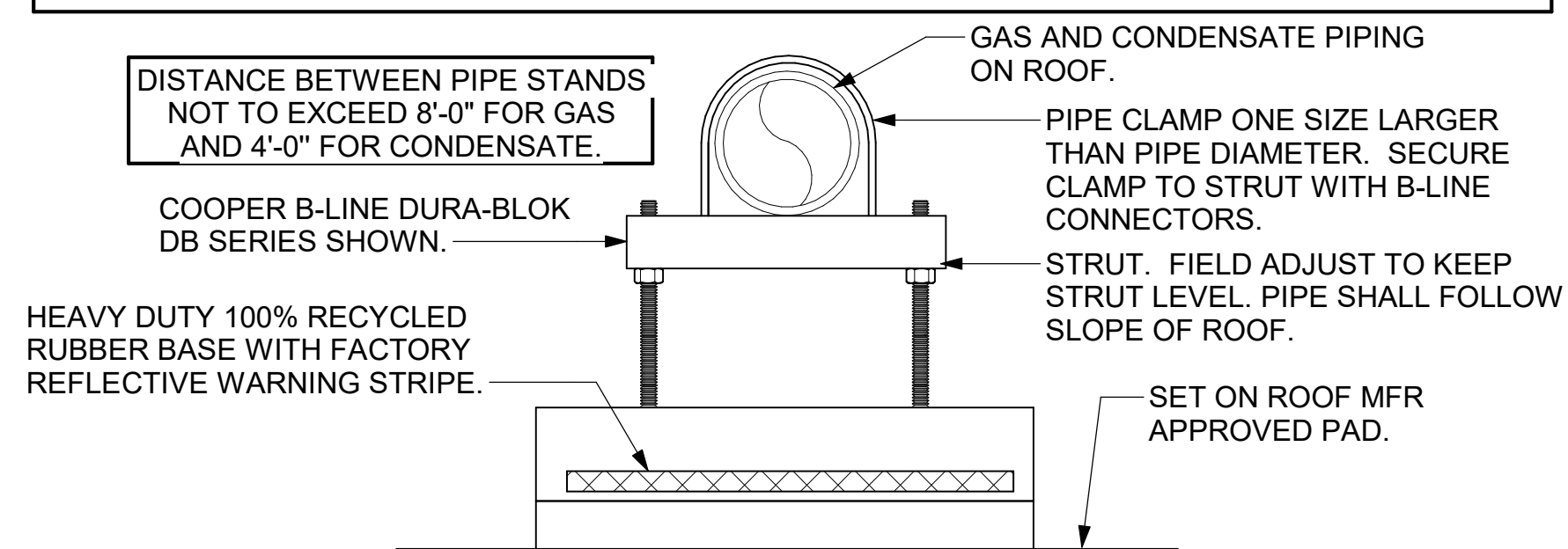


6 WEATHERPROOFING AT CANOPY PENETRATION
NOT TO SCALE

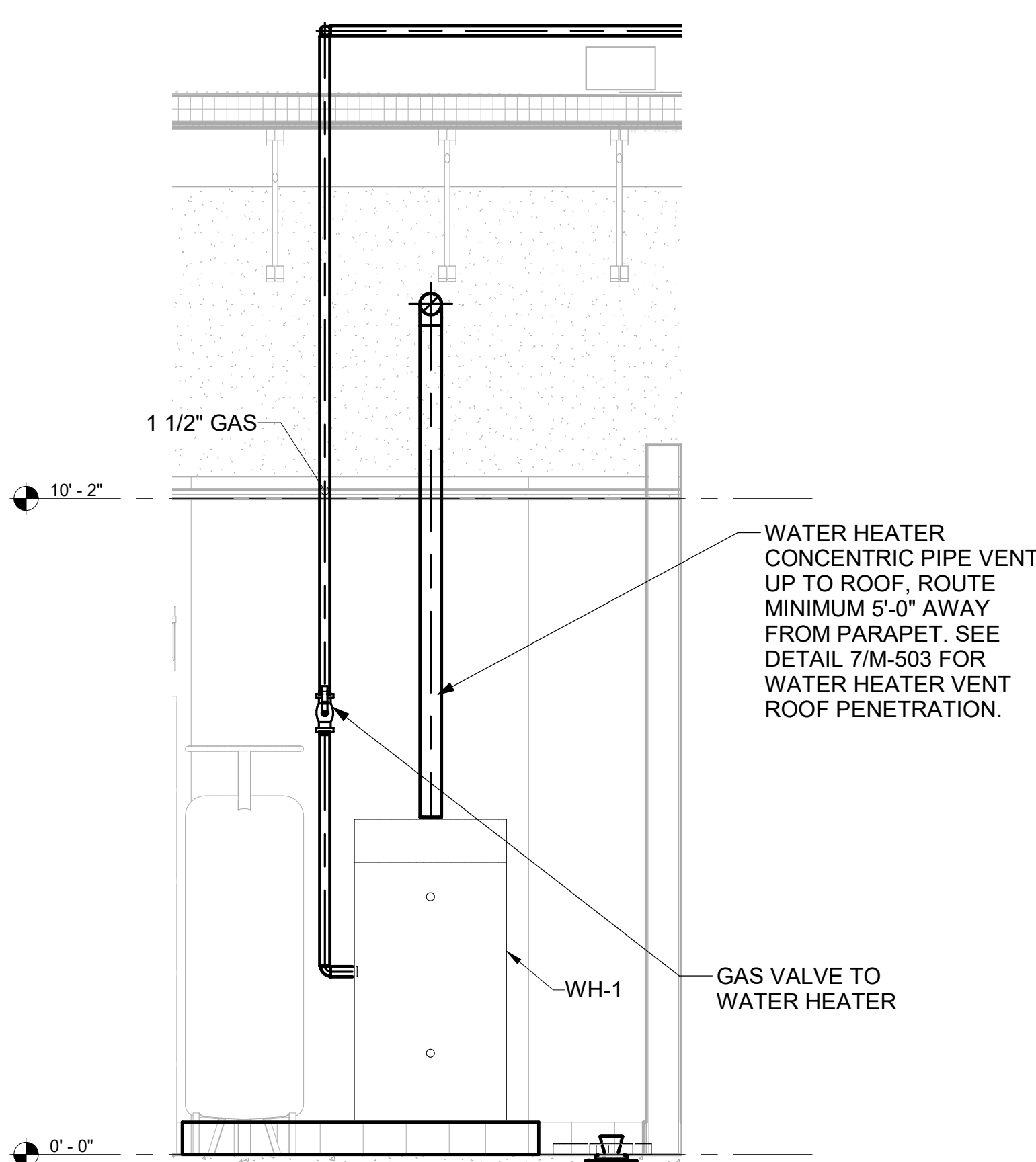


5 CONDENSATE DRAIN PIPING
NOT TO SCALE

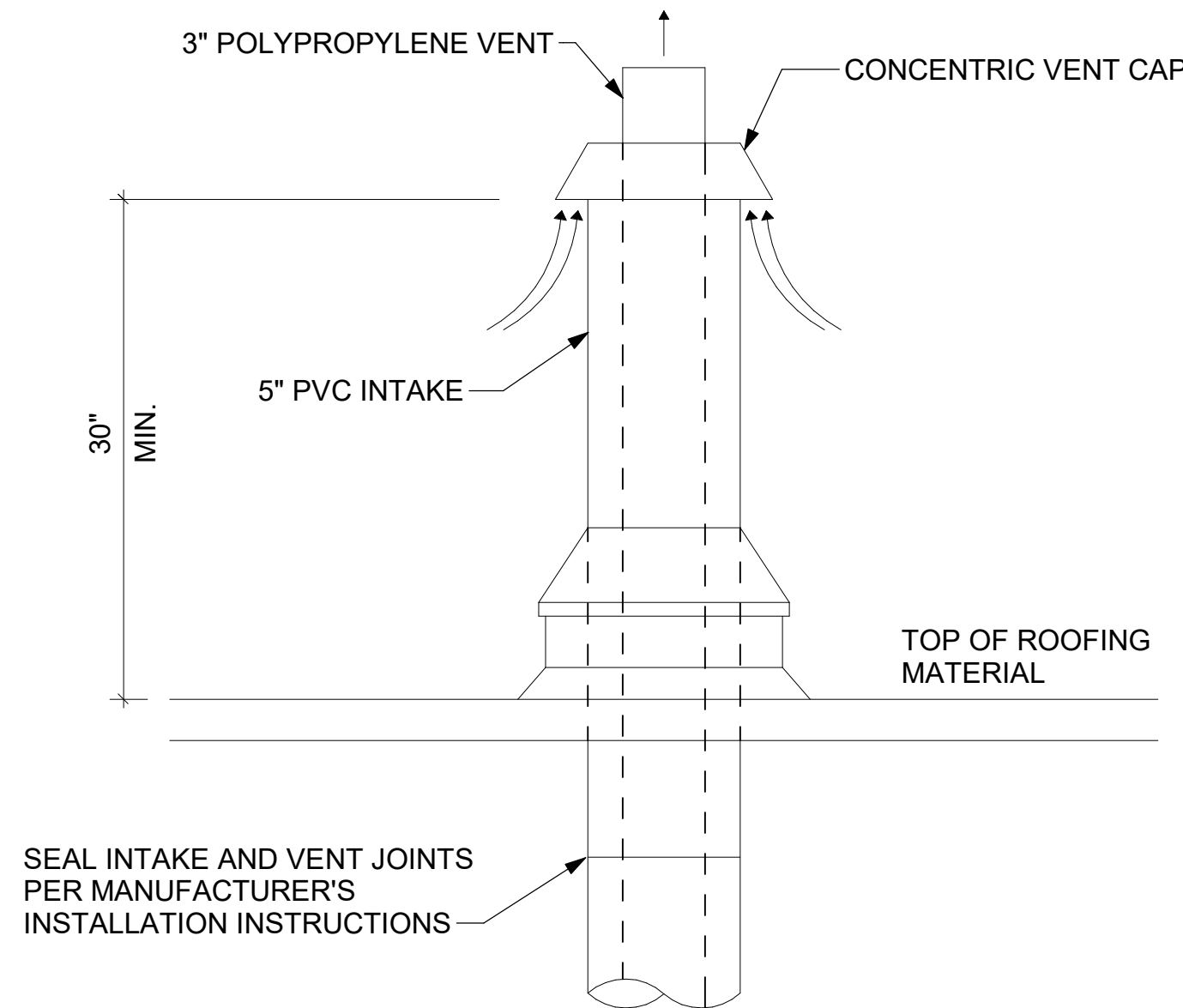
- NOTES:**
1. NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
 2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
 3. ENSURE GAS 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.



4 PIPING SUPPORT ON ROOF
NOT TO SCALE



8 WATER HEATER GAS PIPING AND VENTING
NOT TO SCALE



7 WATER HEATER VENT ROOF PENETRATION
NOT TO SCALE

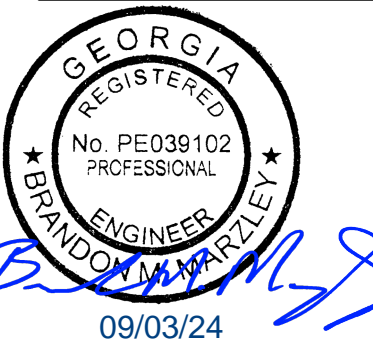


Chick-fil-A

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Professional Corporation
1325 South Main Street, Suite 2011
Atlanta, GA 30311
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CHICK-FIL-A
HARBINS RD & 316
881 HARBINS ROAD
Dacula, GA 30019

FSR#05542

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 23.11
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REVISION SCHEDULE

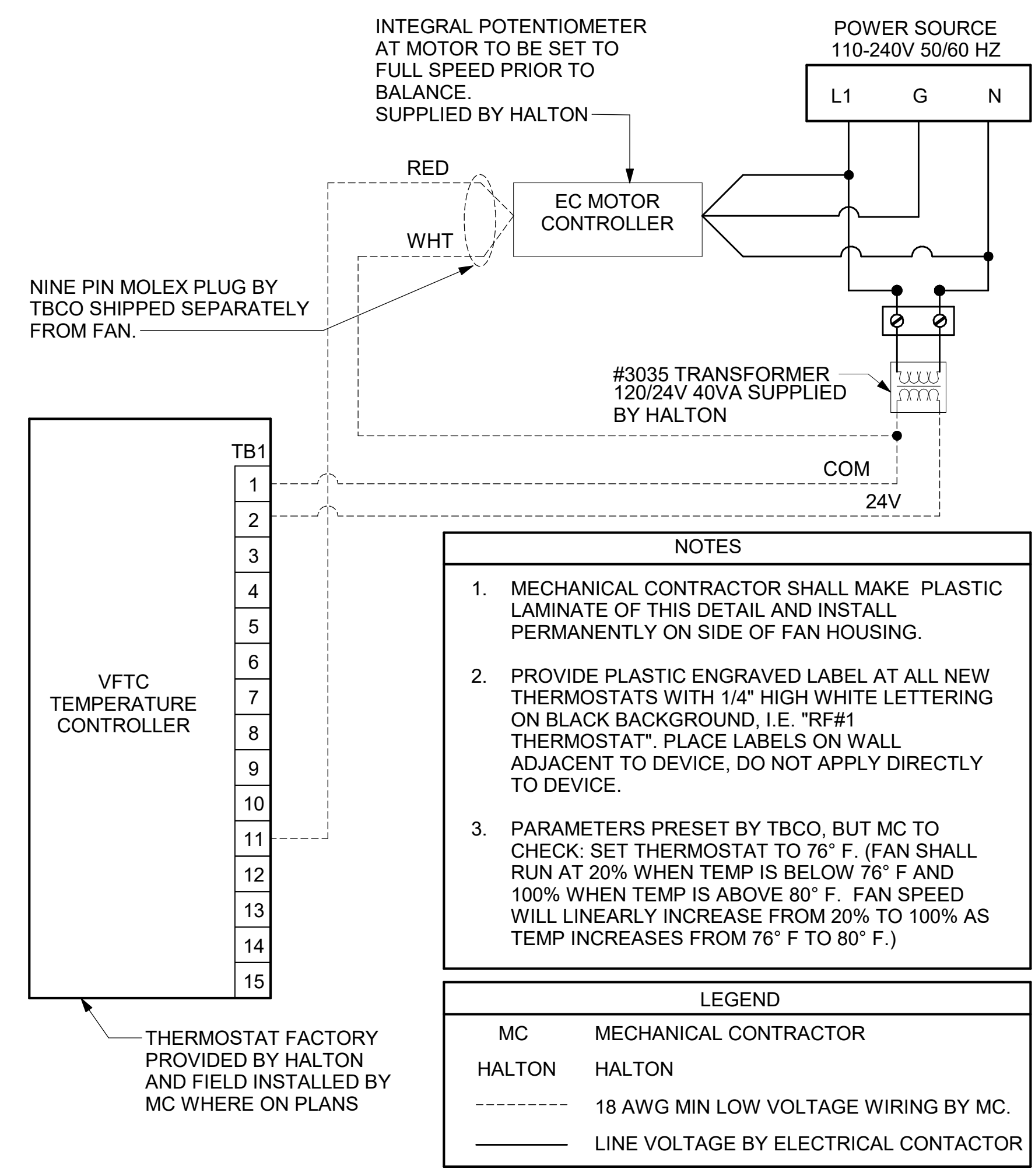
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SHEET
DETAILS

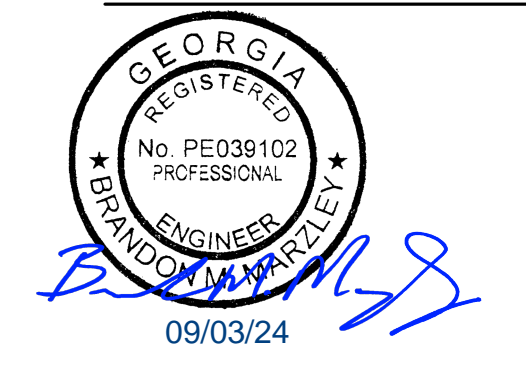
SHEET NUMBER
M-503



1 TECH CLOSET CONTROL DIAGRAM
 NOT TO SCALE



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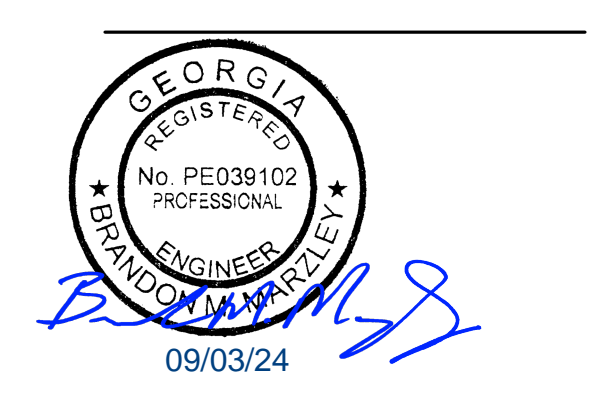
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SHEET CONTROL WIRING DIAGRAMS
 SHEET NUMBER

M-702



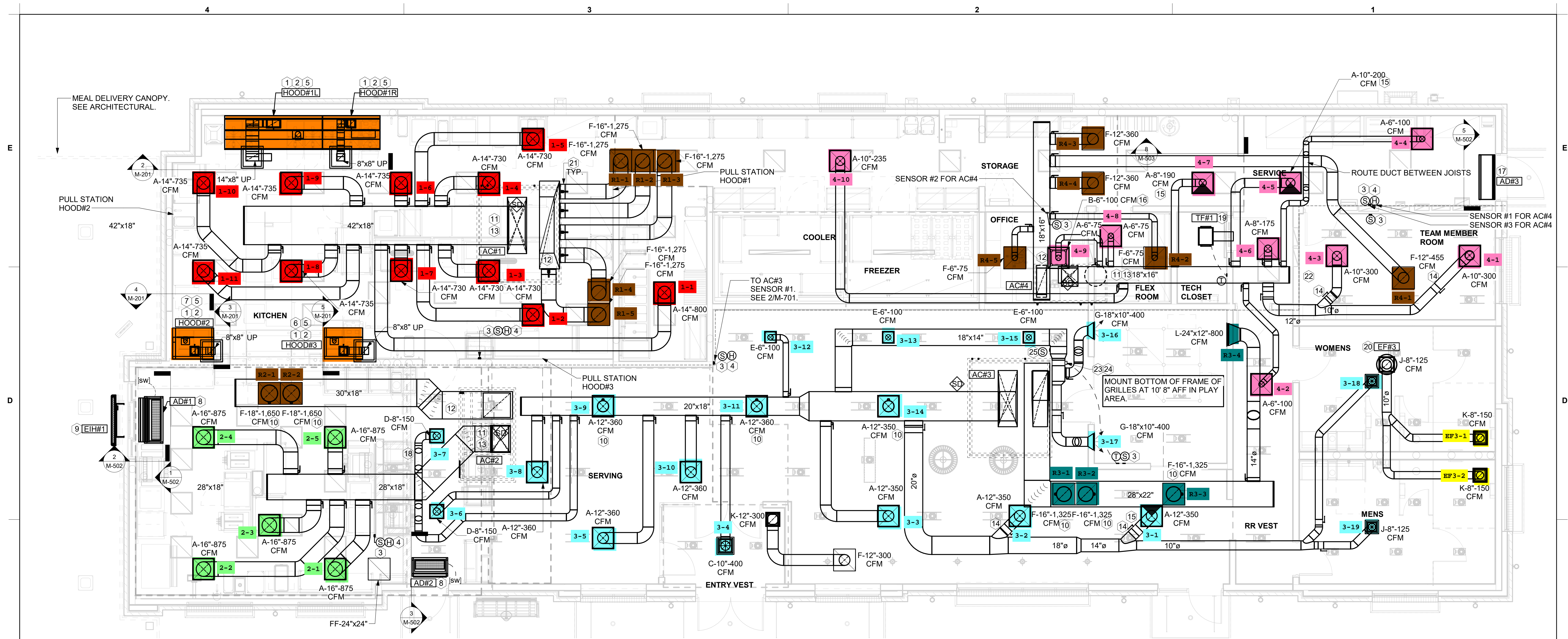
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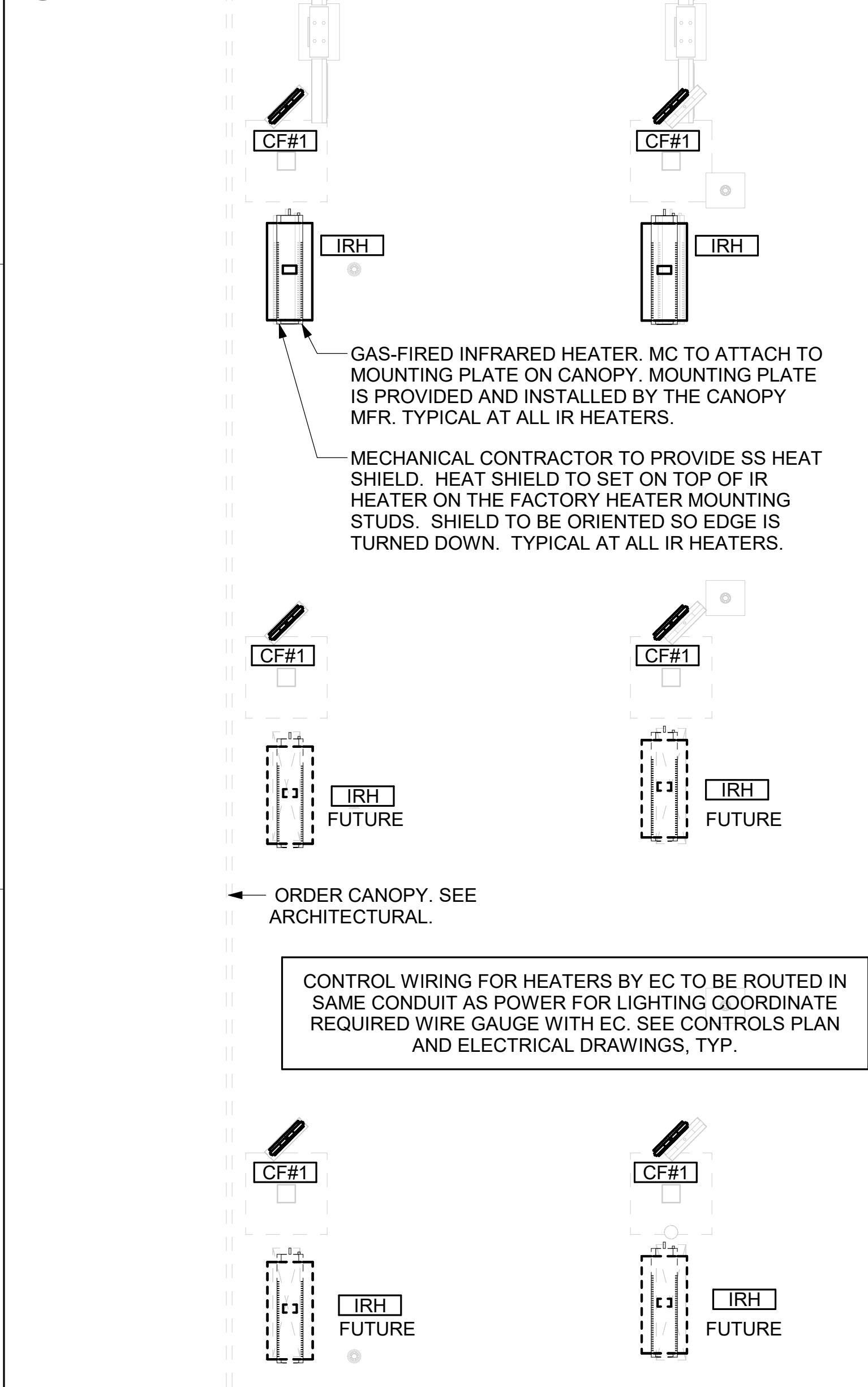
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 DACULA, GA 30019

FSR#05542

CONSULTANT PROJECT # 2023223.97
 DATE 08/14/24
 DRAWN BY JHD
 EQUIPMENT AND DUCTWORK PLAN - LENNOX
 SHEET NUMBER
M-101L



1 EQUIPMENT AND DUCTWORK PLAN
 1/4" = 1'-0"



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

Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC#1	8,125 CFM	6,375 CFM	1,750 CFM	0 CFM	
AC#2	4,375 CFM	3,300 CFM	1,075 CFM	0 CFM	
AC#3	5,250 CFM	3,975 CFM	1,275 CFM	0 CFM	
AC#4	1,750 CFM	1,325 CFM	425 CFM	0 CFM	
EF#1	0 CFM	0 CFM	0 CFM	1,913 CFM	
EF#2	0 CFM	0 CFM	0 CFM	1,402 CFM	
EF#3	0 CFM	0 CFM	0 CFM	300 CFM	
	19,500 CFM	14,975 CFM	4,525 CFM	3,615 CFM	910 CFM

KEY NOTES

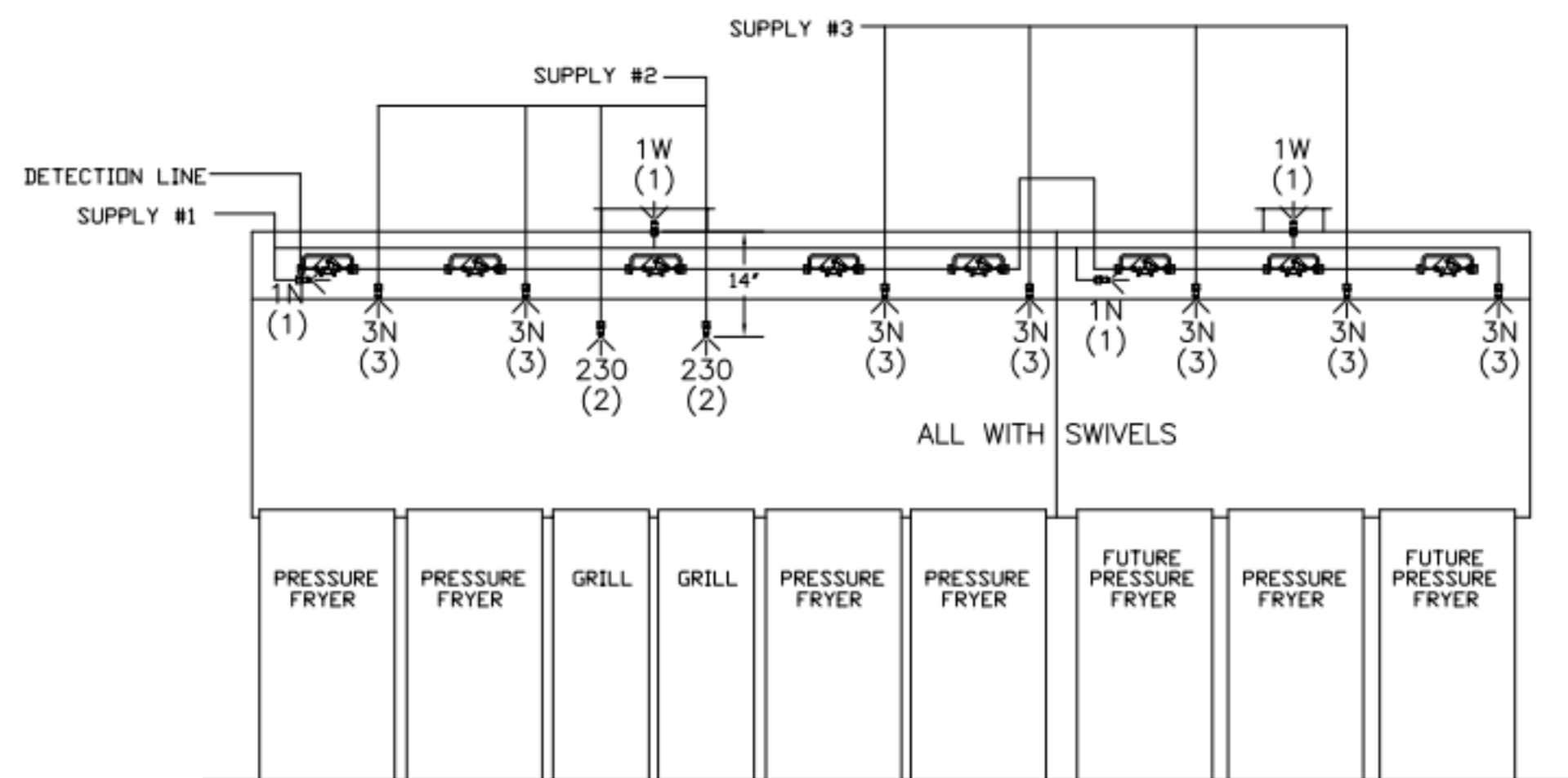
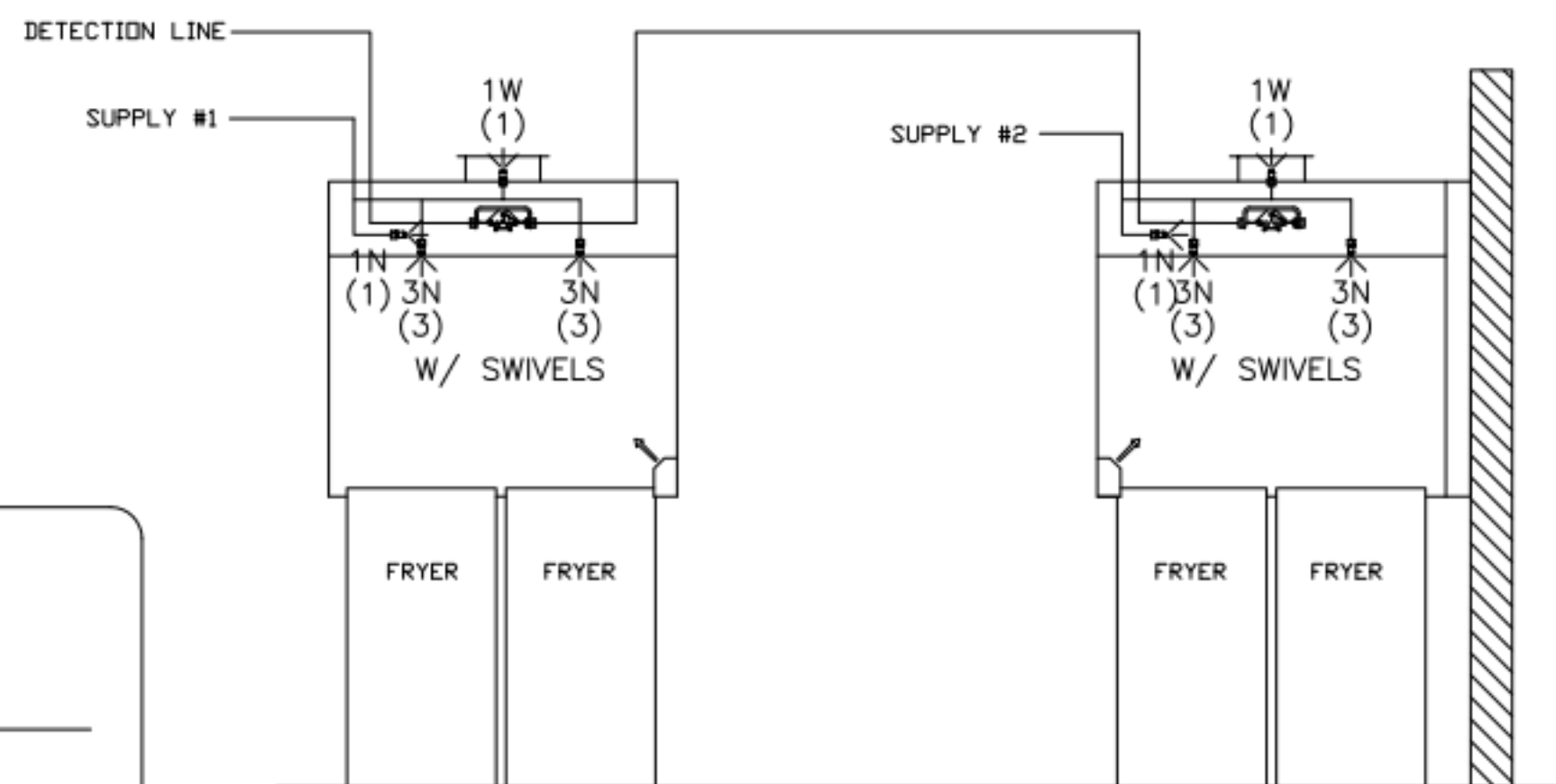
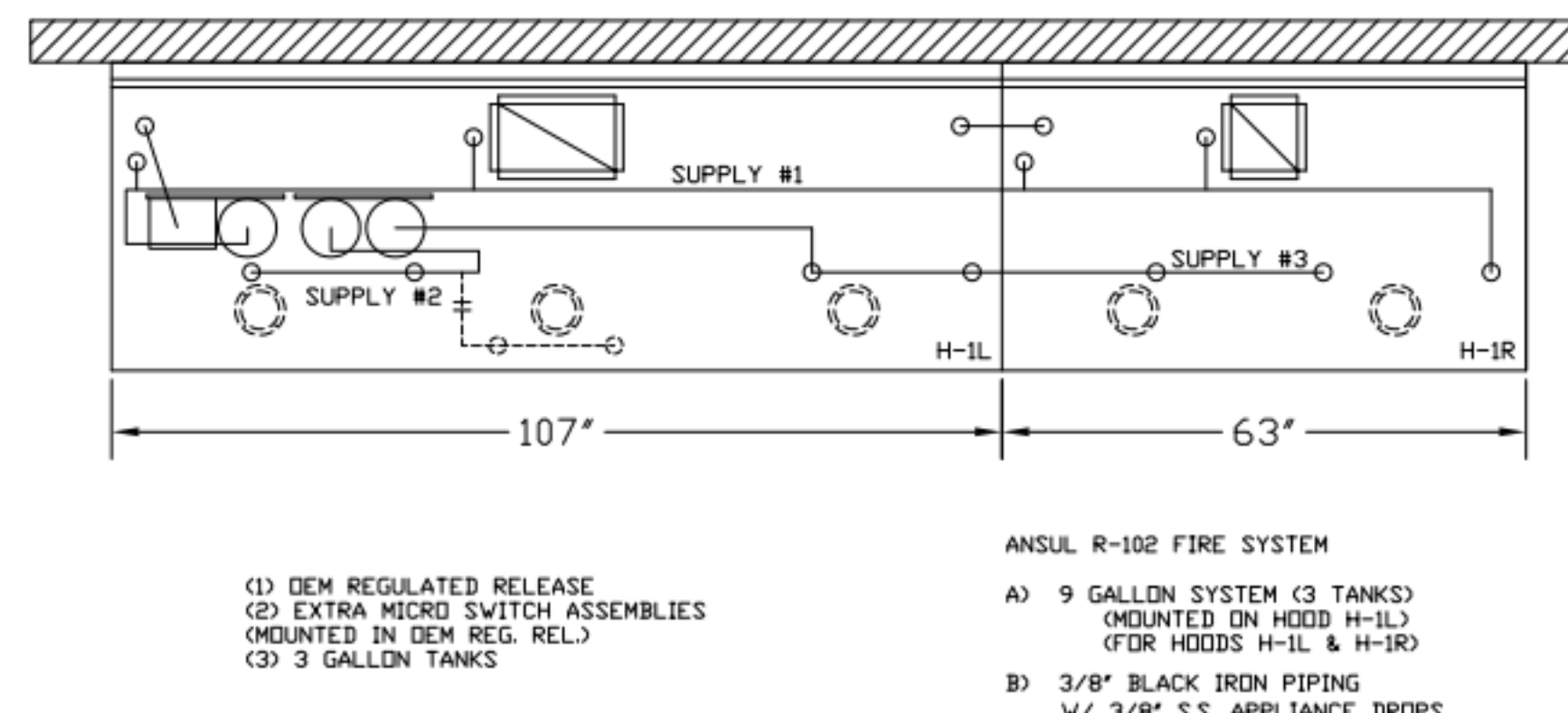
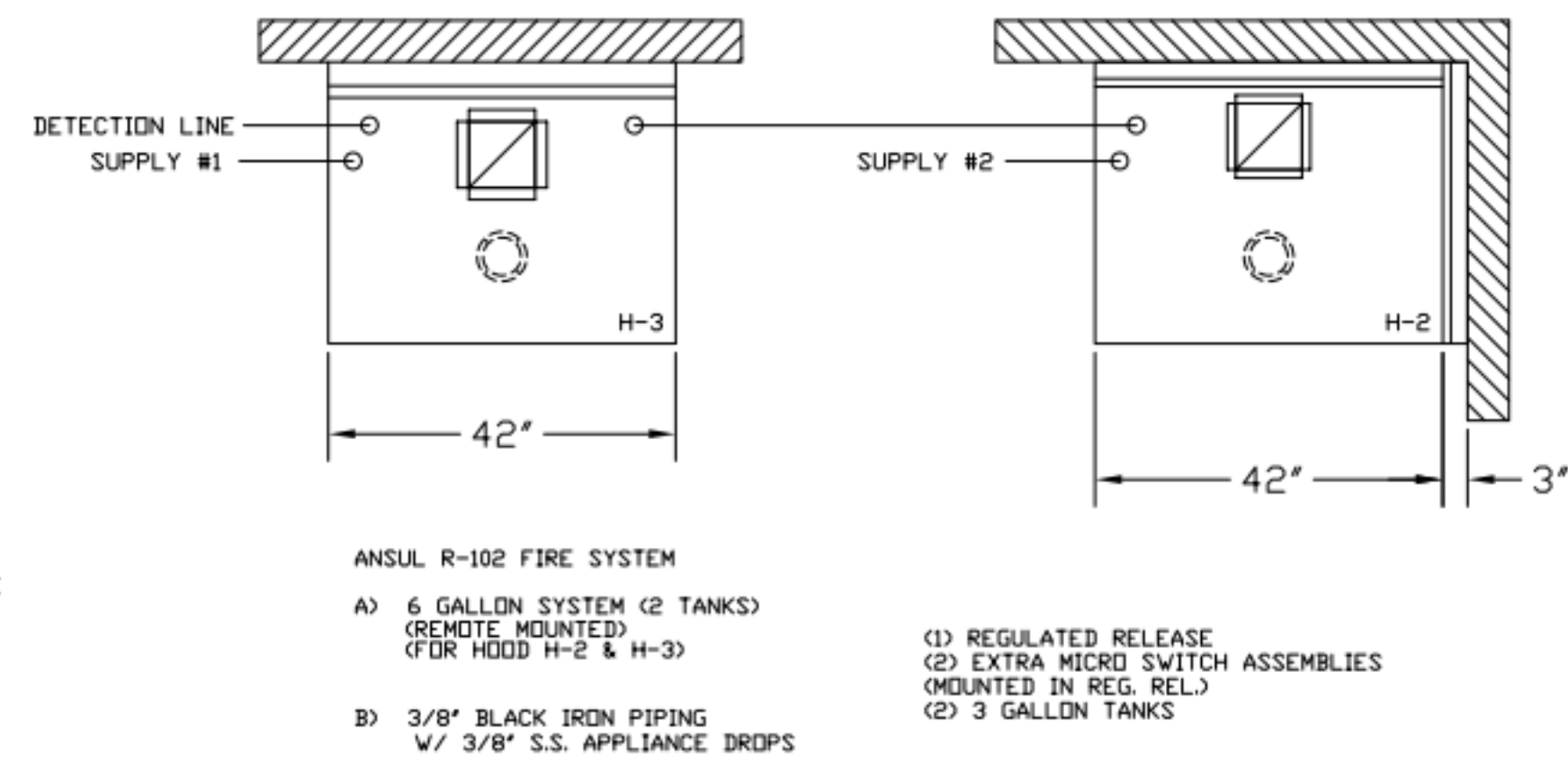
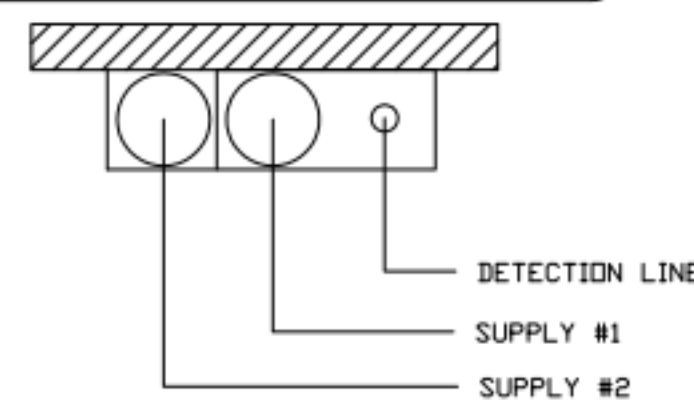
- SEE ELEVATIONS ON M-201 FOR CJ FAN DUCTING REQUIREMENT.
- HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-201 FOR LOCATION.
- MOUNT REMOTE SENSOR ON WALL AT 5'-0" AFF U.N.O. AND ROUTE WIRING BACK TO SUNCOAST TEMP CONTROL PANEL. FOR SENSOR SERVING AC#1, COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT.
- MOUNT HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
- PULL STATION FOR KITCHEN EXHAUST HOOD MOUNTED 42" TO 48" A.F.F. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. JUNCTION BOX AND CONDUIT PROVIDED BY ELECTRICAL CONTRACTOR. PROVIDE PLASTIC ENGRAVED LABEL - RED WITH 1" HIGH WHITE LETTERING. LABELS SHALL BE AS FOLLOWS: HOOD #1 - "MAIN COOKLINE", HOOD #2 - "PASS THRU - RIGHT", HOOD #3 - "PASS THRU - LEFT".
- INSTALL RIGHT SIDE OF HOOD WITH FINISHED EDGE OF PASS-THRU OPENING.
- INSTALL LEFT SIDE OF HOOD FLUSH WITH FINISHED EDGE OF PASS-THRU OPENING.
- MOUNT AIR DOOR IN CEILING, CENTERED ON DRIVE-THRU/MFA DOOR OPENING. REFER TO WIRING DIAGRAM ON SHEET M-702 FOR MORE INFORMATION.
- ELECTRIC HEATER. MC TO MOUNT ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
- TAKE OFF WITH DAMPER AT THE BOTTOM OF DUCTWORK, TYP.
- BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
- 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).
- 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).
- RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
- MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
- MAXIMUM HEATING AND COOLING AIRFLOWS INDICATED. SET MINIMUM AIRFLOW TO 25 CFM.
- 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.
- ROUTE DUCT WITHIN STRUCTURE.
- CEILING MOUNTED RECIRCULATING FAN. DUCT AND DISCHARGE ABOVE CEILING.
- 10" UP THRU ROOF.
- DAMPER HANDLES SHOULD BE INSTALLED SUCH THAT THE DAMPERS ROTATION AXIS IS PERPENDICULAR TO THE FLOOR WITH THE HANDLE FULLY ACCESSIBLE UNDERNEATH THE DUCT IT CONTROLS. (TYPICAL OF ALL DAMPERS AT THE SAME PLENUM.)
- SEAL PENETRATIONS IN SMOKE DRAFT CURTAIN AIR TIGHT. SEE ARCH PLANS FOR CONSTRUCTION.
- PROVIDE 120V/24V 50 VA TRANSFORMER TO SERVE YOUNG REGULATOR ZONE DAMPER ACTUATOR AND THERMOSTAT. POWER TRANSFORMER FROM 120V POWER CIRCUIT THAT REMAIN LIVE 24V. PROVIDE ALL NECESSARY WIRING AND COMPONENTS TO MAKE CONTROL AND POWER CONNECTIONS TRANSFORMER, ZONE DAMPER, AND THERMOSTAT PER MANUFACTURER'S IOM. THERE IS NO INTERLOCKING OR MONITORING BY WAY OF THE S.E.C. CFA-500 PANEL. SEE WIRING DIAGRAMS ON M-701L.
- YOUNG REGULATOR 14" MODEL 4075-LMB24-IF ROUND ZONE DAMPER WITH MODEL T-720A AUTOMATIC CHANGEOVER THERMOSTAT. MOUNT T*STAT AT 4'0" AFF. POWER OPEN/CLOSE/MODULATING. ADJUST MECHANICAL LIMIT FOR 50 CFM MINIMUM AIRFLOW. ADJUST MAXIMUM LIMIT TO FULLY OPEN POSITION. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH TOM BARRROW COMPANY FOR THE ZONE DAMPER. THE MECHANICAL CONTRACTOR SHALL PURCHASE THE ZONE DAMPER DIRECTLY FROM TOM BARRROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010. FOR PRICING AND AVAILABILITY. ZONE DAMPERS NOT PURCHASED THRU TOM BARRROW COMPANY WILL NOT BE ACCEPTED.
- YOUNG REGULATOR FIELD INSTALLED CHANGE OER SENSOR.

Autodesk Docs://GA_05542_Harbins Road & 316 FSU_2024.2_FSR05542_Harbins Road & 316 FSU_MEC.rvt
 8/29/2024 3:47:24 PM
 30-LE-05542-M-101L-EQUIPMENT AND DUCTWORK PLAN - LENNOX

NOTE:

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

****PROTECTS HOODS H-2 & H-3****
 REMOTE MOUNTED:
 (1) REGULATED RELEASE (WITH ONE TANK)
 (1) SINGLE TANK ENCLOSURE (WITH ONE TANK)



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 #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
1W	4	DUCT NOZZLES	4
1N	4	PLENUM NOZZLES	4
230	2	APPLIANCE NOZZLES	4
3N	11	APPLIANCE NOZZLES	33

TOTAL FLOW POINTS - 45

ITEM #	QTY	DESCRIPTION
#200	8	SERIES DETECTORS W/ FUSIBLE LINKS
#201	2	TERMINAL DETECTOR W/ FUSIBLE LINKS
#202	1	DEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#202	1	REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH
#203	5	3 GALLON TANKS
#204	1	SINGLE TANK ENCLOSURE
#205	2	REMOTE PULL STATION

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

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

ANSUL

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFY THE FOLLOWING INFORMATION:
 1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS
 2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.
 NOTE TO APPROVER: ANY CHANGES IN COOKING EQUIPMENT SUCH AS INCREASED ENERGY INPUTS OR EQUIPMENT POSITION MAY AFFECT EXHAUST AIRFLOW. HALTON MUST BE NOTIFIED IF ANY OF THESE CHANGES OCCUR. A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.
 REVISE AND RESUBMIT
 APPROVED FOR FABRICATION
 WITH NO CHANGES
 WITH CHANGES AS NOTED
 DATE

FIRE EXTINGUISHER

ISO VIEW W/BACKET

5 LBS. ABC MODEL B402 QTY: _____

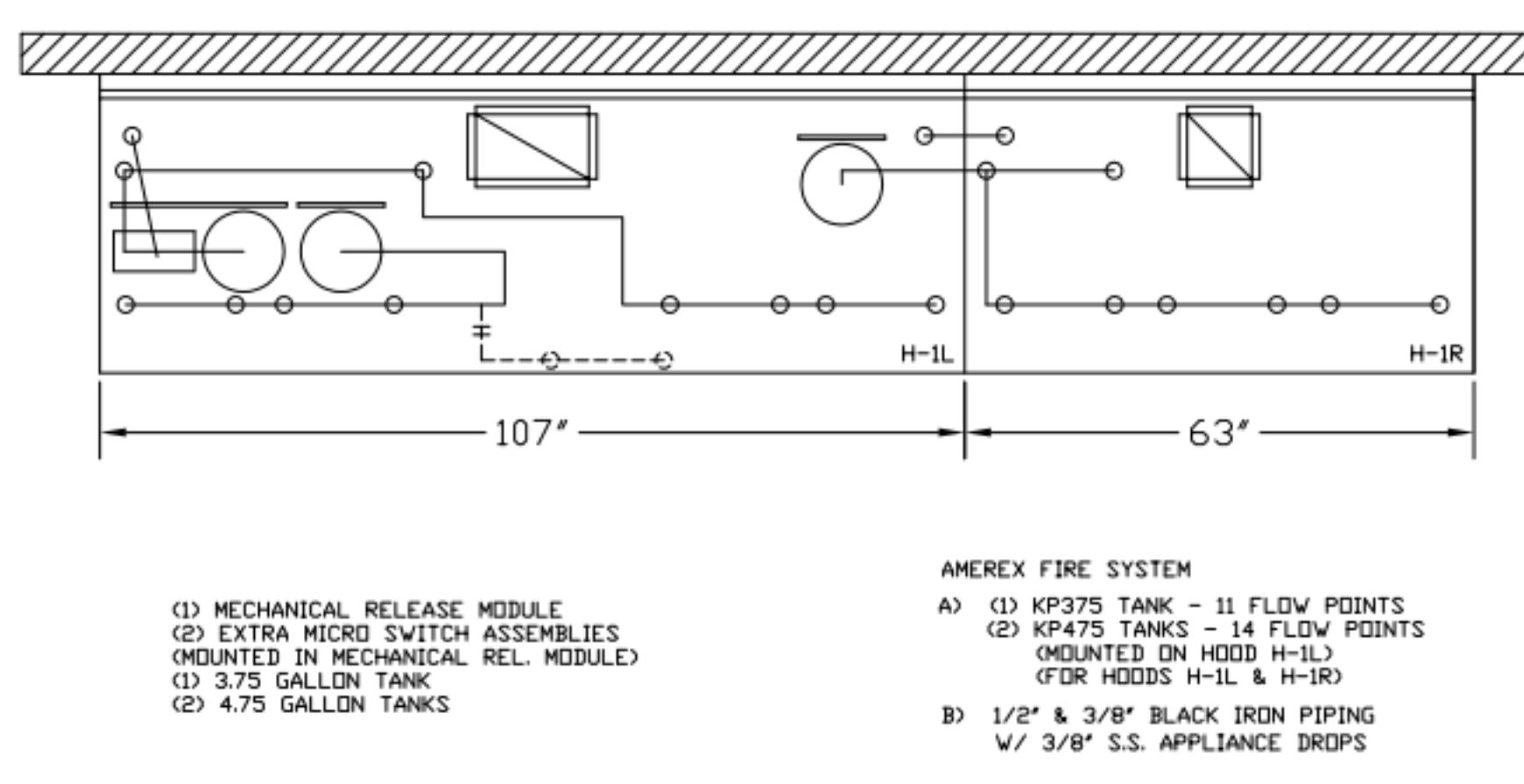
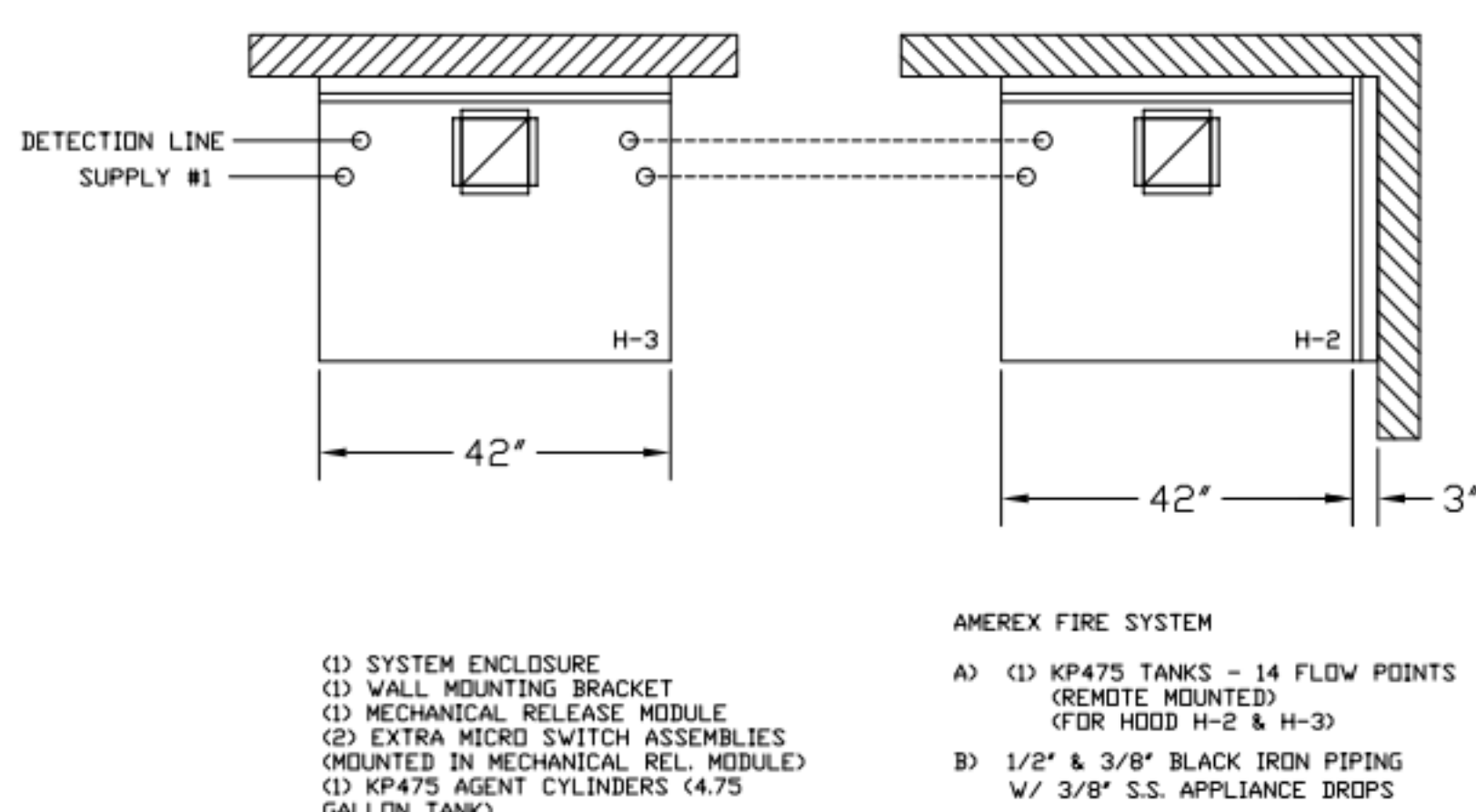
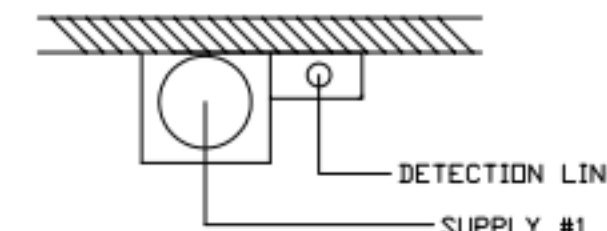
10 LBS. ABC MODEL B456 QTY: _____

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!

****PROTECTS HOODS H-2 & H-3****
 REMOTE MOUNTED:
 (1) SYSTEM ENCLOSURE
 (1) WALL MOUNTING BRACKET
 (1) MECHANICAL RELEASE MODULE
 (1) KP475 AGENT CYLINDER (4.75 GALLON TANK)



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
 KP475 TANK SYSTEM REMOTE MOUNTED
 (1) TANK
 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	DETECTOR BRACKET ASSEMBLY
13334	1	KP375 AGENT CYLINDER
17379	3	KP475 AGENT CYLINDER
18001	1	MECHANICAL RELEASE MODULE W/ DOUBLE POLE MICRO SWITCH
25851	1	SYSTEM ENCLOSURE W/ DOUBLE POLE MICRO SWITCH
16920	1	WALL MOUNTING BRACKET
21481	3	REMOTE MANUAL PULL STATION

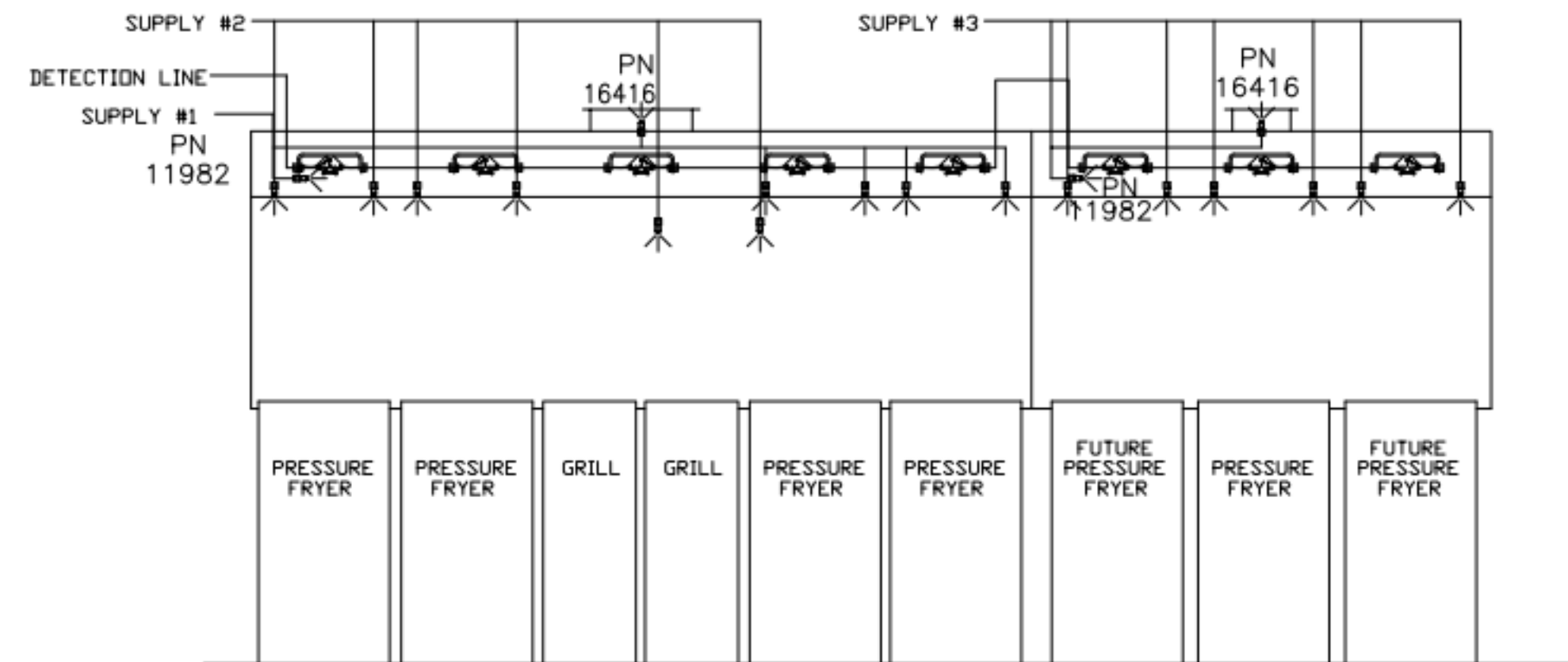
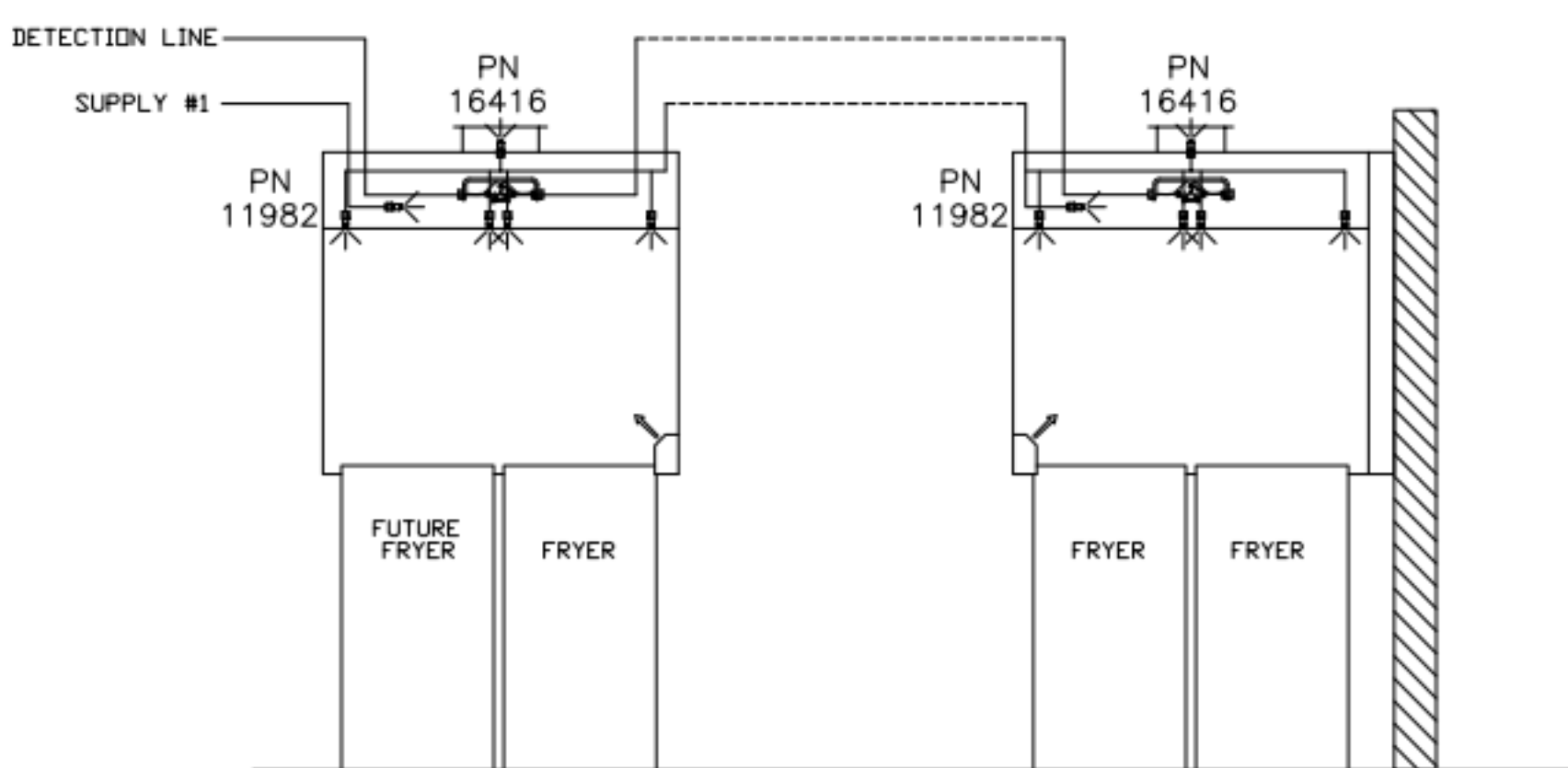
AMEREX FIRE SYSTEM
 TESTED & LISTED BY UNDERWRITERS LABORATORIES, INC. TO UL STANDARD 300.

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

AMEREX

ALL APPLIANCE NOZZLES FOR H-2 & H-3 ARE PN 11982 NOZZLES W/ SWIVELS.

ALL APPLIANCE NOZZLES FOR PRESSURE FRYERS ARE PN 13729 NOZZLES W/ SWIVELS. ALL GRILL NOZZLES ARE 14178 NOZZLES W/ SWIVELS.



REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		

WEBSITE: WWW.HALTON.COM
 HALTON CO. (USA)
 101 INDUSTRIAL DRIVE
 SCOTTSDALE, KY 42164
 1-270-237-9600

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:
 HALTON CO. (CANADA)
 1021 BREVIK PLACE 3R7
 MISSISSAUGA, ON L4W 1L9
 1-905-624-0301

PROJECT: CHICK-FIL-A P14
 LS/LE/SE/DTO/DTN BUILDING
 LOCATION: ---
 DRAWN BY: CG DATE: 08.09.22
 SCALE: NTS
 Halton Dwg: U:22-606-02FS

Sheet MH-1.2

Halton
 CARE FOR INDOOR AIR

GREASE EXHAUST DUCT CLEARANCE NOTE:

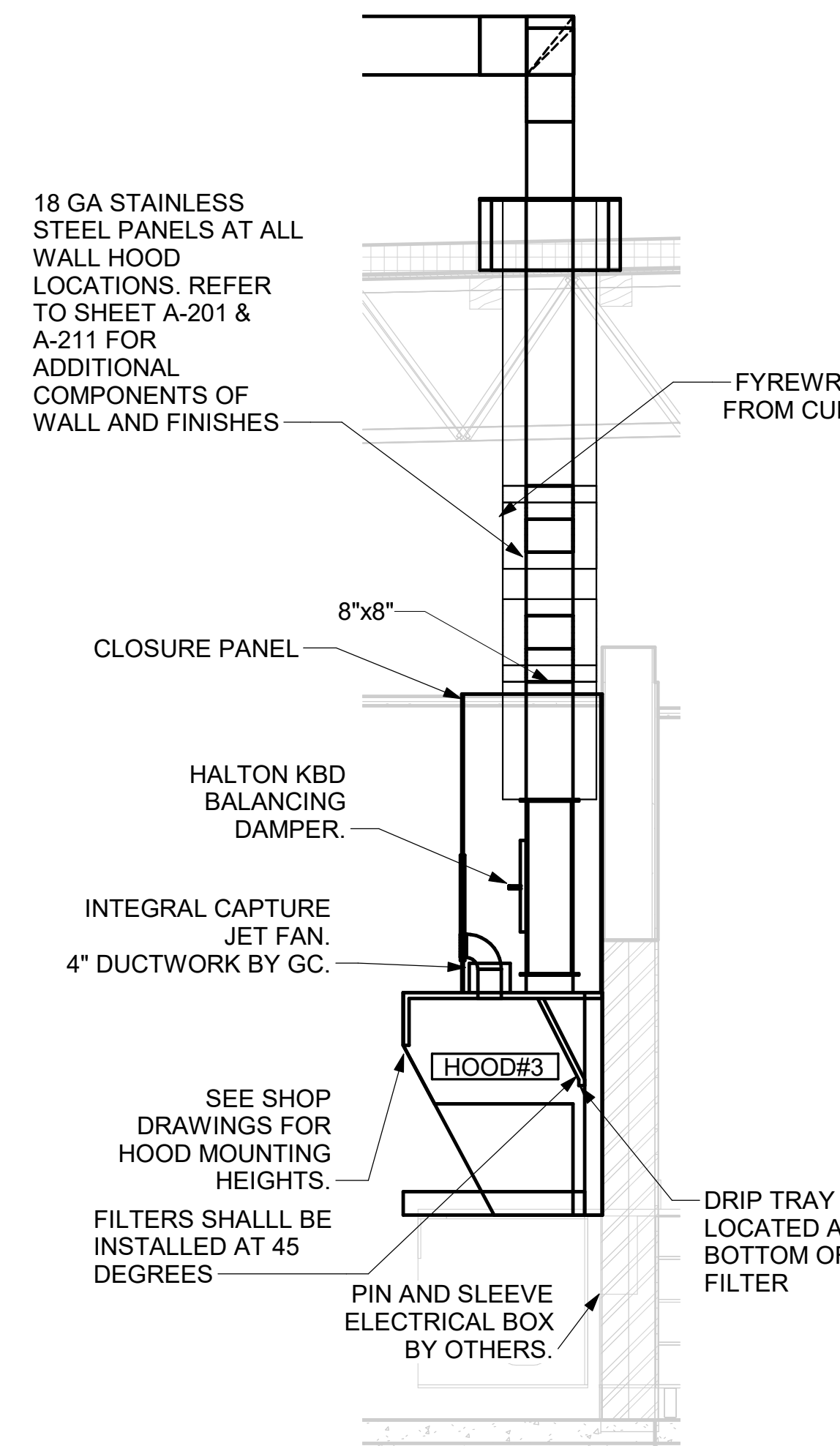
CLEARANCES ABOVE CEILING ARE TIGHT. MECHANICAL CONTRACTOR TO FIELD VERIFY EXACT ROUTING AND CLEARANCES PRIOR TO FABRICATING GREASE EXHAUST DUCT.

CLEANOUT DOOR NOTE:

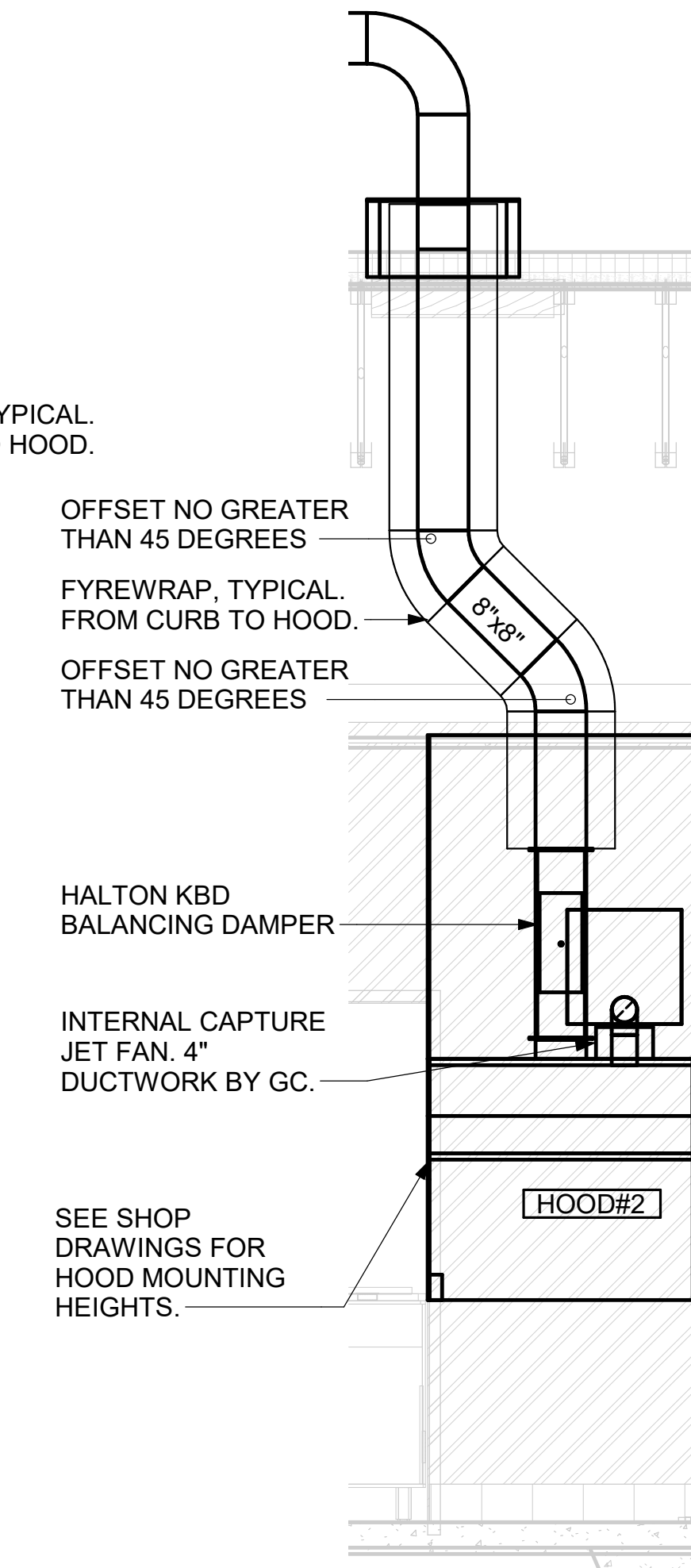
DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS. NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.

HOOD AND DUCT WELDING NOTE:

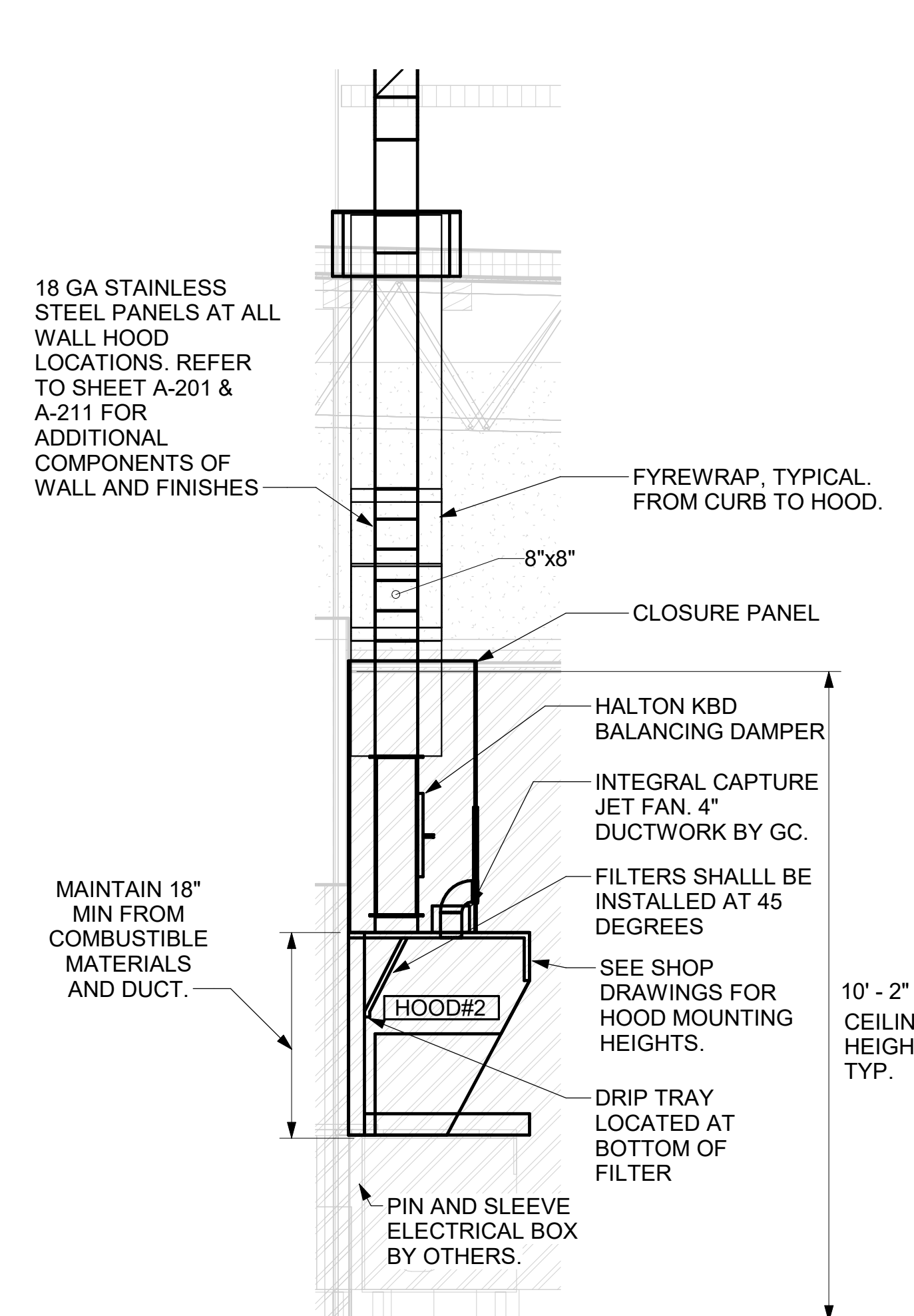
CONTINUOUS EXTERNAL WELD - ALL SEAMS, JOINTS, AND PENETRATIONS OF THE HOOD ENCLOSURE THAT DIRECT AND CAPTURE GREASE-LADEN VAPORS AND EXHAUST GASES SHALL HAVE A LIQUID TIGHT CONTINUOUS EXTERNAL WELD TO THE HOOD'S LOWER OUTERMOST PERIMETER.



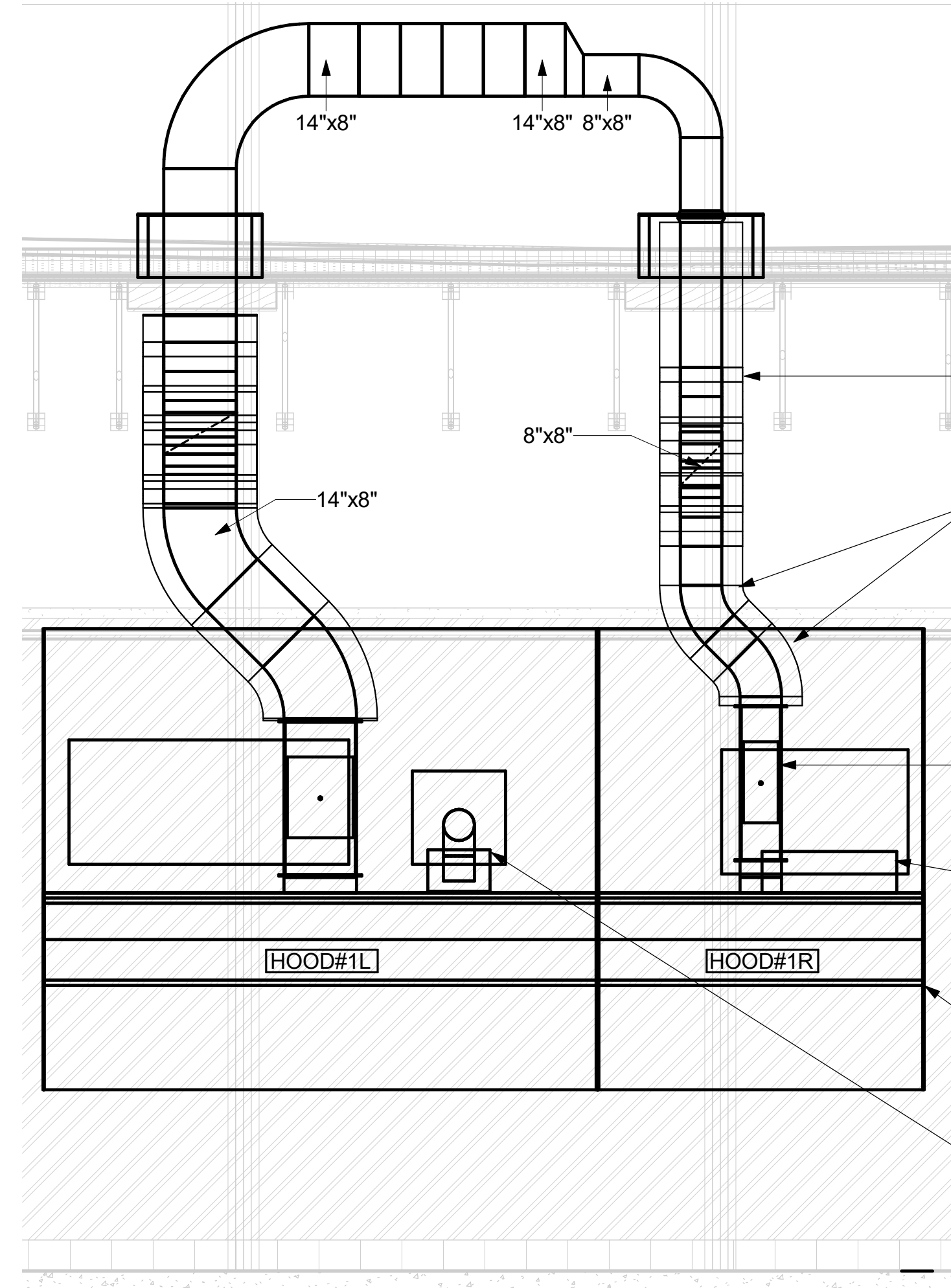
5 HOOD ELEVATION - HOOD#3 NOT TO SCALE



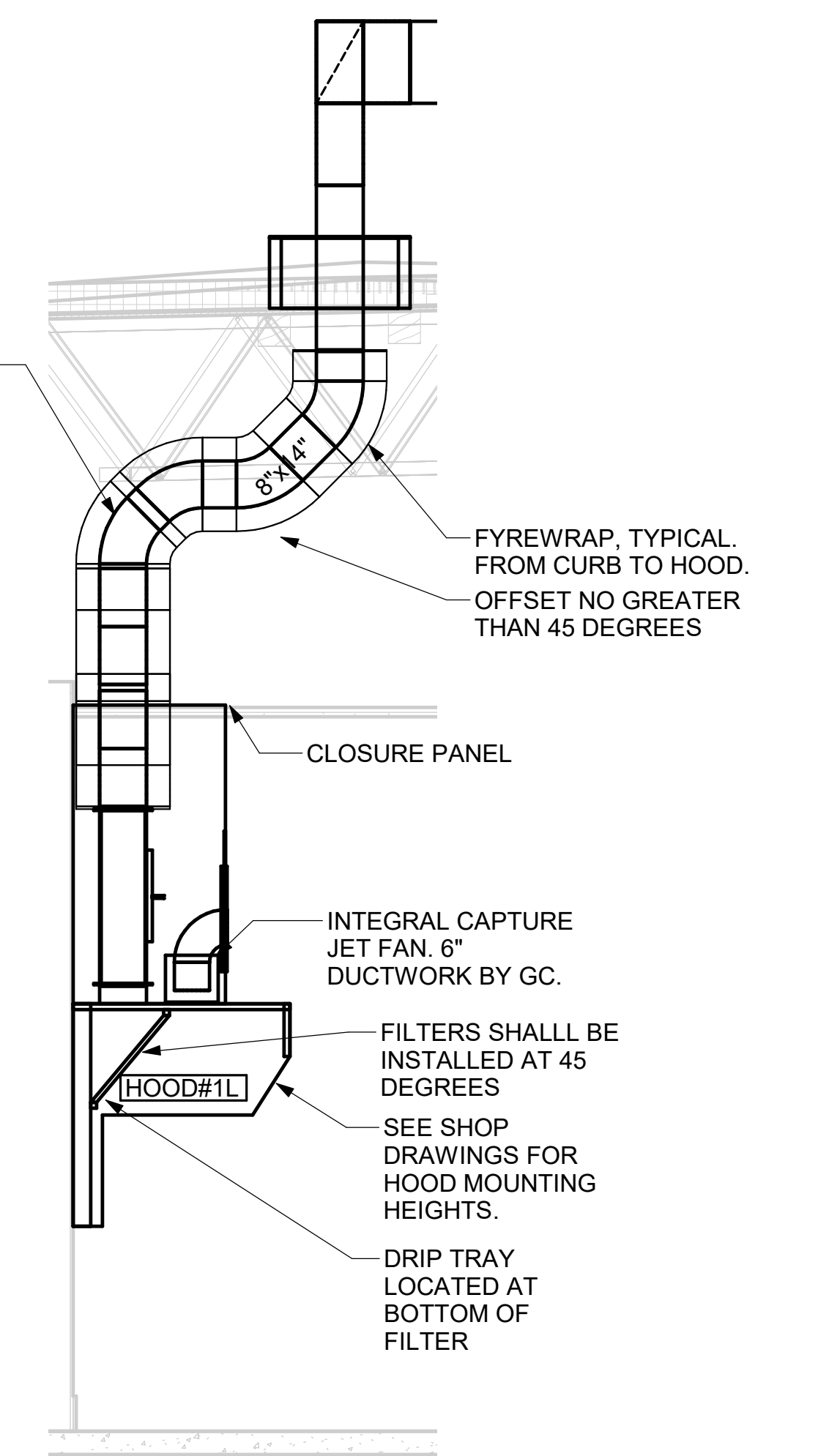
4 HOOD ELEVATION - HOOD#2 - FRONT NOT TO SCALE



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



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



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



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



CHICK-FIL-A
HARBINS RD & 316
881 HARBINS ROAD
DACULA, GA 30019

FSR#05542

BUILDING TYPE / SIZE:	P14 LE BS	
RELEASE:	23.11	
PRINTED FOR:	ISSUED FOR CONSTRUCTION	
REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
1	08/09/24	ATU comments

CONSULTANT PROJECT #	2023223.97
DATE	08/14/24
DRAWN BY	IHD

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SHEET
EXHAUST HOOD
ELEVATIONS

SHEET NUMBER
M-201

Industrial Mounted Workstation Fans



- Features**
- Pull chain switch
 - Head rotates 360° vertical and horizontal direction
 - Coated steel guards
 - SJT type 3 conductor, 10' long cord
 - Steel hub/spider aluminum paddle blades
 - Meets OSHA standards
 - 1 Year limited warranty



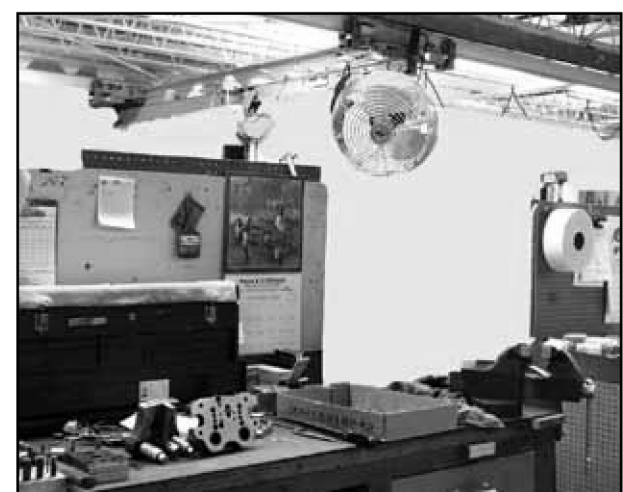
- Motor Specifications**
- Sleeve bearing
 - Totally enclosed, permanently lubricated
 - Frame size: 42
 - 3-Speed
 - 1-Phase, 120V
 - 5/16 Shaft

Standard Models

FAN SIZE	UPCF	MODEL	MOTOR HP	HIGH	WIDE	LOW	DEPT	DEPT	DEPT	MAX AMPS	SHIPPING WT(LBS)	LIST
12"	798600	U-12-TE	1/12	1650	1420	1120	15-1/4"	14-1/2"	9-1/2"	1.1	13	144
18"	797283	U-18-TE	1/8	1660	1550	1370	21-1/2"	20-1/2"	10-1/2"	2.2	20	178
24"	854078	U-24-TE	1/8	5850	5300	4600	27"	26"	10-1/2"	2.4	23	334

NOTE: Mount with one bolt or lag screw to walls, ceilings, work benches, machines or any surface.

Application Photos



Pipe Mount Adaptor

PIPE DIAMETER	UPCF	MODEL	LIST
1"	851244	PM-1	48
1-1/2"	851251	PM-1.5	53
2"	851268	PM-2	59
2-1/2"	851275	PM-2.5	64
3"	851282	PM-3	69

Workstation Oscillating Office Fans



- Features**
- 3-speed oscillating fans with push button controls
 - 3 conductor SPT cord & plug
 - White powder coated wire mesh guards
 - White plastic housing and blade
 - Stand fan extends to 40" height
 - Meets OSHA standards
 - 1 Year limited warranty

Standard Models

SIZE	UPCF	MODEL	FAN TYPE	SPEEDS	CFM	AMPS	SHIPPING WT.(LBS.)	LIST
12"	851305	ODF-12	DESK	3	1200	0.4	5.4	68
16"	851312	ODF-16	DESK	3	2100	0.5	8.3	80
16"	851329	ODF-16	STAND	3	2100	0.5	15.5	101



XRED Specification

Roof Exhaust, Direct Driven Fan

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Provide Accurex Exhaust Fan Model XRED as shown on plans and in accordance with the following specification:

Roof exhaust fans shall be centrifugal direct drive type. The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced. The fan housing and shroud shall be constructed of heavy gauge aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

The fan housing and shroud shall be constructed of heavy gauge aluminum with a rigid internal support structure. The fan shroud shall have a rolled bead for added strength. Motors shall be mounted out of the airstream on vibration isolators. Fresh air for motor cooling shall be drawn into the motor compartment from an area free of discharge contaminants. Motors shall be readily accessible for maintenance. A disconnect switch shall be factory installed and wired from the motor compartment for ease of electrical wiring.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fans shall be Model XRED as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.

Fan Specification ©2019 Accurex, LLC

Page 19 of 29

Engineering simplicity into kitchen ventilation systems.

This detail has not been reviewed by the stamping party. Therefore, the stamping party makes no representation(s) with respect to its contents, and shall not be liable for such. This detail is for reference only. Any reliance on this detail shall be at the relying party(ies)'s own risk and hereby waives any and all claim(s) related to the existence of the stamp or otherwise.



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



09/03/24

1 CF#1 SPECIFICATION (FOR REFERENCE ONLY)
12" = 1'-0"

2 EF#3 SPECIFICATION (FOR REFERENCE ONLY)
12" = 1'-0"



Job Name: SP-A510-VG Cut Sheet
Tag: MK-1
Quantity: 1
Printed Date: August 7, 2024



Job Name: SP-A510-VG Cut Sheet
Tag: MK-1
Quantity: 1
Printed Date: August 7, 2024

Model: SP-A510-VG

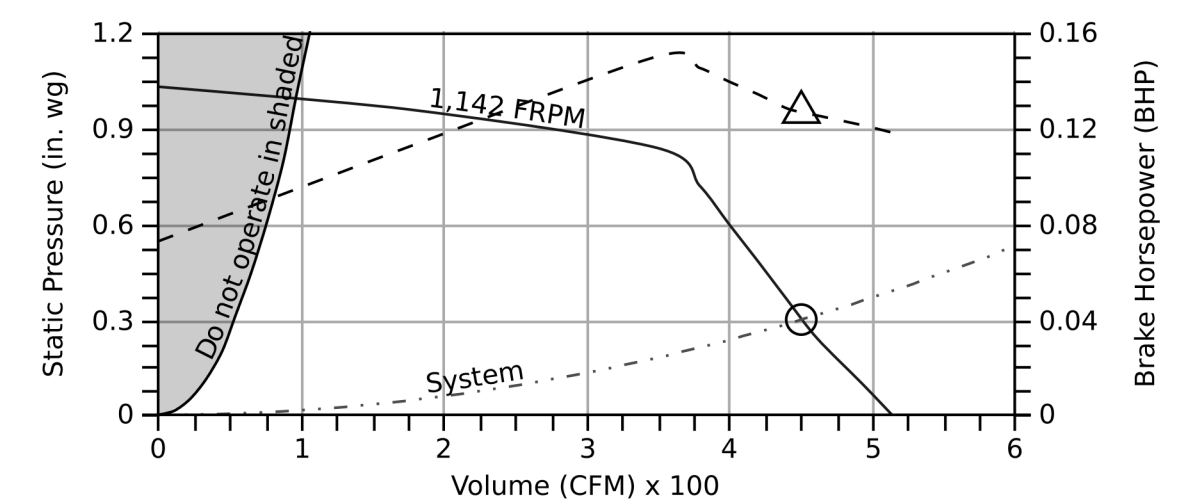
Direct Drive Bathroom Exhaust Fan

Standard Construction Features: Galvanized steel housing and grille. Centrifugal forward curved wheel. Direct driven motor in the air stream.

Dimensions and Weights		
Label	Value	Description
-	31	Weight w/o accessories (lbs)
A	15	Overall Height (in)
B	18	Overall Width (in)
C	14	Overall Length (in)
-	8	Outlet Width (in)
-	8	Outlet Height (in)
-	19.375	Grille Width (in)
-	16.375	Grille Length (in)

Fan Configuration	
Drive type	Direct

Performance	
Requested Volume (CFM)	450
Actual Volume (CFM)	450
Total External SP (in. wg)	0.3
Fan RPM	1,142
Operating Power (bhp)	0.13
Startup Power (bhp)	0.13
FEI	-
Air Stream Temp (F)	70
Start-up Temp (F)	70
Air Density (lbs/ft ³)	0.072
Elevation (ft)	1077
Watts (W)	95
Static Efficiency (%)	17
Outlet Velocity (ft/min)	1,000



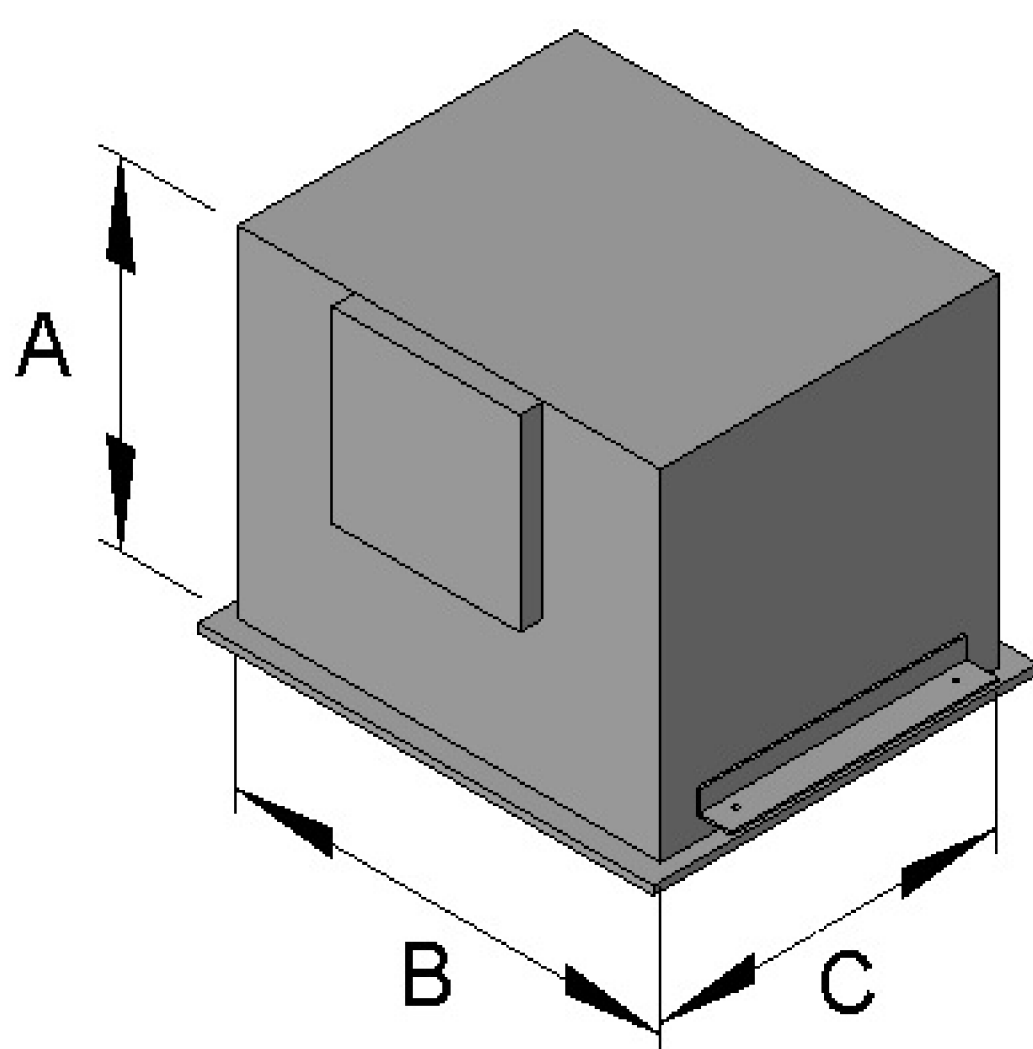
Static Pressure Calculations	
External SP	0.3 in. wg
Direct Drive RPM Adjustment	0 in. wg
Total External SP	0.3 in. wg

Sound

Octave Bands (hz)	62.5	125	250	500	1000	2000	4000	8000	LWA	dBA	Spherical Sones
Inlet	69	64	69	65	63	58	52	46	68	53	6.0



Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA certified ratings seal applies to sound and air performance ratings only. Performance certified is for installation type B: Free inlet, ducted outlet. Power rating does not include transmission losses. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in spherical sones at 3.5 m (15 ft) in a spherical free field calculated per ANSI/AMCA 301. Values shown are for installation type B: free inlet spherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal for Sound applies to sone ratings only.



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*All dimensions are in inches.

3 TF#1 SPECIFICATION (FOR REFERENCE ONLY)
12" = 1'-0"

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8/29/2024 3:47:55 PM
30-LE-05542-M-504-DETAILS

CONSULTANT PROJECT #	2023223.97
DATE	08/14/24
DRAWN BY	IJD

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SHEET

DETAILS

SHEET NUMBER

M-504