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

Q. EXTERNAL INSULATION ON BOTTOM OF DUCTS 24" OR WIDER SHALL BE SUPPORTED WITH STICK PINS ON 18" CENTERS. STICK PIN WASHERS SHALL BE COVERED WITH DUCT TAPE OR MASTIC.

2.03 CONTROLS

A. SYSTEMS SHALL BE COMPLETE WITH CONNECTIONS TO CFA-500 TEMPERATURE CONTROL PANEL AS MANUFACTURED BY SUNCOAST ENVIRONMENTAL CONTROLS (S.E.C.) (PH: 877-544-6679). THE PANEL IS PROVIDED AND MOUNTED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING TERMINATIONS ARE BY THE MECHANICAL CONTRACTOR WHERE PERMITTED BY AHJ.

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

C. A FACTORY INSTALLED SMOKE DETECTOR IN THE RETURN AIR SECTION OF EACH AIR CONDITIONING UNIT SHALL STOP THE INDOOR FAN AND CLOSE THE OUTSIDE AIR DAMPER IN THE EVENT OF EXCESSIVE TEMPERATURE OR SMOKE. SMOKE DETECTOR SHALL BE LOCATED PRIOR TO ANY EXHAUST FROM THE BUILDING OR MIXING WITH FRESH AIR MAKE-UP. UPON DETECTION, THE SYSTEM SHALL NOT RESTART UNTIL THE DEVICE IS MANUALLY RESET. DEVICES SHALL BE LOCATED WHERE THEY CAN BE EASILY ACCESSED AND WHERE CLEAR OF FILTERS.

D. CHICK-FIL-A HAS A NATIONAL ACCOUNT WITH SUNCOAST ENVIRONMENTAL CONTROLS FOR THE SMOKE DETECTOR TEST/RESET ANNUNCIATOR STATIONS. THE TEST/RESET STATIONS WILL BE PURCHASED BY THE ELECTRICAL CONTRACTOR AS A PART OF A NATIONAL ACCOUNT PACKAGE AND TURNED OVER TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.

E. THE REMOTE TEST/RESET ANNUNCIATORS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. INSTALLATION BY MECHANICAL SHALL INCLUDE MOUNTING OF THE ANNUNCIATORS AND ALL WIRING FROM EACH DEVICE TO THE RTU. ELECTRICAL WILL PROVIDE A JUNCTION BOX IN THE WALL WITH 1/2" CONDUIT STUBBED UP ABOVE THE CEILING FOR EACH REMOTE TEST STATION AS SHOWN ON THE ELECTRICAL PLANS. ANNUCIATOR SHALL BE SUNCOAST CONTROLS REMOTE TEST/RESET STATION WITH POWER LED, TROUBLE LED, ALARM LED, 90DB HORN AND TEST/RESET BUTTON.

F. THE RESTROOM FAN SHALL BE INTERLOCKED TO THE LIGHTS SERVING THE MEN AND WOMEN'S RESTROOMS. THE HOOD FANS SHALL BE CONTROLLED VIA THE SUNCOAST CFA-500 CONTROL PANEL. WIRING, RELAYS AND SWITCHES FOR CONTROL OF ALL FANS ARE BY ELECTRICAL CONTRACTOR.

G. THERMOSTATS ARE PROVIDED AND INTEGRATED INTO THE TEMPERATURE CONTROL PANEL BY SUNCOAST ENVIRONMENT CONTROLS. SUNCOAST WILL PROVIDE A NETWORK THERMOSTAT US32-CFA THERMOSTAT PRE-WIRED IN THE TEMPERATURE CONTROL PANEL. REMOTE TEMPERATURE SENSOR(S) FOR EACH THERMOSTAT IS ALSO PROVIDED. MECHANICAL CONTRACTOR SHALL INSTALL ALL WIRING BETWEEN THE THERMOSTAT, THE REMOTE SENSOR(S) AND THE ROOFTOP UNIT.

H. MECHANICAL CONTRACTOR SHALL INSTALL CONTROL WIRING IN 1/2" CONDUIT WHERE REQUIRED BY CODE. WHERE NOT REQUIRED TO BE IN CONDUIT, ALL WIRING SHALL BE RUN PARALLEL TO STRUCTURAL MEMBERS OR PERPENDICULAR WITH NO DIAGONAL ROUTING. ALL WIRING SHALL BE SECURED TO THE FRAMING TO PREVENT SAGGING IN RUNS. WIRING TO ROOFTOP UNITS SHALL BE ROUTED THROUGH THE FACTORY THRU-BASE FITTING IN THE UNIT BASE. NO SPLICING OF WIRING WILL BE ACCEPTED. ALL WIRING ABOVE THE ROOF SHALL BE INSTALLED IN EXTERIOR GRADE FLEXIBLE CONDUIT. ALL CONTROL WIRING AND CONTROL WIRING CONDUIT SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. WIRING SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF NEC. ALL LOW VOLTAGE CONTROL WIRING SHALL BE NO LESS THAN 18 AWG MIN. CONTROL WIRING CONDUCTORS SHALL BE SIZED TO ACCOUNT FOR LOAD AND LENGTH OF RUN TO ALLOW SUFFICIENT VOLTAGE AVAILABLE AT CONTROLLED DEVICE TO OPERATE THE SYSTEM RELIABLY.

2.04 PIPING

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

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

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

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

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

PART III - EXECUTION

3.01 SCOPE

A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.

B. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH DEMONSTRATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.

C. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.

D. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER AND/OR MANUFACTURER. THIS SHALL INCLUDE RE-TORQUE OF ALL FIELD AND FACTORY HIGH VOLTAGE CONNECTIONS.

3.02 LEED PROJECTS

A. CONTRACTOR SHALL COMPLETE RECEIPT INSPECTION CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN WITHIN 5 DAYS OF RECEIVING EQUIPMENT ON SITE.

B. CONTRACTOR SHALL COMPLETE PRE-FUNCTIONAL CHECKLISTS PROVIDED IN THE COMMISSIONING PLAN. CHECKLISTS SHALL BE RETURNED AT LEAST 5 DAYS PRIOR TO SCHEDULING FUNCTIONAL PERFORMANCE TESTING.

C. CONTRACTOR SHALL PROVIDE A TECHNICIAN TO ASSIST THE THIRD PARTY COMMISSIONING AUTHORITY WITH FUNCTIONAL TESTING. FUNCTIONAL TESTING SHALL OCCUR AFTER ALL CONTROLS HAVE BEEN INSTALLED AND VERIFIED AND AFTER TEST AND BALANCE IS COMPLETE. THE FUNCTIONAL PERFORMANCE TEST PROCEDURES CAN BE FOUND IN THE COMMISSIONING PLAN.

D. IF THE TOTAL TIME REQUIRED TO CORRECT PROBLEMS DURING TESTING IS GREATER THAT FORTY-FIVE (45) MINUTES (UNLESS EXTENUATING CIRCUMSTANCES EXIST), THE TEST SHALL BE CONSIDERED FAILED AND MUST BE REPEATED IN ITS ENTIRETY.

E. RE-TESTING: DURING THE COURSE OF THE RETEST, IF AT ANY POINT A MAJOR DEFICIENCY IS DISCOVERED, THE TEST WILL BE STOPPED. REPEAT TESTS UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. IF MORE THAN TWO FUNCTIONAL PERFORMANCE TESTS (ONE INITIAL TEST AND ONE RETEST) FOR ANY TYPE OF EQUIPMENT DUE TO ISSUES THAT THE CONTRACTOR HAD DIRECT OR INDIRECT CONTROL OVER ARE REQUIRED, THE COSTS FOR THE CXA TO WITNESS RETESTING OF SIMILAR TYPES OF EQUIPMENT UNTIL SATISFACTORY RESULTS ARE OBTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3.03 TEST & BALANCE

A. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NEBB, NBC OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.

B. ALL EQUIPMENT TO BE BALANCED MUST HAVE GONE THRU SUCCESSFUL START-UP PROCEDURE BY THE MECHANICAL CONTRACTOR (MC) PRIOR TO TAB VISIT.

C. THE FLOOR OF THE RESTAURANT SHALL BE CLEARED OF DEBRIS, STAGED CONSTRUCTION MATERIALS, EQUIPMENT, ETC. WHICH MAY, IN THE OPINION OF THE TAB TECHNICIAN, OBSTRUCT ACCESS TO AIR DISTRIBUTION COMPONENTS IN AND ABOVE THE CEILING.

D. EQUIPMENT ACCESS PANELS, DUCT AIR DEVICES SUCH AS BALANCING DAMPERS AND ACTUATORS SHALL BE ACCESSIBLE AND CLEAR OF PIPING, CONDUIT, FRAMING, SUPPORTS ETC..

E. PROVIDE AN 8 FT PORTABLE A-FRAME STYLE LADDER DEDICATED FOR THE TAB TECHNICIAN'S USE DURING THE ENTIRE TAB EFFORT DURATION.

KITCHEN HOOD SYSTEMS NOTES

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

LEGEND

A-12-400	TYPE - NECK SIZE - CFM	EF#1	EXHAUST FAN #1 (TYP.)
	SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP	AC#1	AIR CONDITIONING UNIT #1 (TYP.)
	SPIN-IN HARD⌀ FLEXIBLE⌀ DIFFUSER		RETURN/EXHAUST (TYP.)
S	REMOTE TEMPERATURE SENSOR		SUPPLY DIFFUSER, SQ FACE (TYP.)
H	HUMIDITY SENSOR	1	PLAN NOTE REFERENCE
SD	SMOKE DETECTOR		MANUAL VOLUME DAMPER
12x18	DUCT SIZE (reverse for elevation views) 1ST NUMBER - HORIZONTAL DIMENSION 2ND NUMBER - VERTICAL DIMENSION		DIRECTION OF THROW ON DIFFUSER
			CLOSED AIR PATTERN DEFLECTOR
SW	AIR DOOR SWITCH	GIH	GAS INFRARED HEATER (TYP.)
EIH	ELECTRIC INFRARED HEATER	B/G	BELOW GRADE
P	PULL STATION	T	THERMOSTAT

ABBREVIATIONS

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

GENERAL NOTES

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

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.).

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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

SHEET
GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS

SHEET NUMBER
M-001

HVAC COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

B. OPR, BoD, and BoD-HVAC documentation prepared by Owner and Architect contains requirements that apply to this Section.

1.2 SUMMARY

A. This Section includes requirements for commissioning the HVAC system and its subsystems and equipment. This Section supplements the general requirements specified in Division 1 Section "General Commissioning Requirements."

B. Related Sections include the following:

1. Division 1 Section "General Commissioning Requirements" for general requirements for commissioning processes that apply to this Section.

1.3 DEFINITIONS

A. Architect: Includes Architect identified in the Contract for Construction between Owner and Contractor, plus consultant/design professionals responsible for design of HVAC, electrical, communications, controls for HVAC systems, and other related systems.

B. BoD: Basis of Design.

C. BoD-HVAC: HVAC systems basis of design.

D. CxA: Commissioning Authority.

E. OPR: Owner's Project Requirements.

F. Systems, Subsystems, and Equipment: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, and equipment.

G. TAB: Testing, Adjusting, and Balancing.

1.4 CONTRACTOR'S RESPONSIBILITIES

A. The following responsibilities are in addition to those specified in Division 1 Section "General Commissioning Requirements."

B. Mechanical, General Contractor and CxA:

1. Attend procedures meeting for TAB Work.
2. Certify that TAB Work is complete.

C. CxA:

1. Attend TAB verification testing.
2. Provide measuring instruments and logging devices to record test data, and data acquisition equipment to record data for the complete range of testing for the required test period.

D. Mechanical Contractor: With the CxA, review control designs for compliance with the OPR and BoD, controllability with respect to actual equipment to be installed, and recommend adjustments to control designs and sequence of operation descriptions.

E. TAB Agency:

1. Contract Documents Review: With the CxA, review the Contract Documents before developing TAB procedures.
   a. Verify the following:
      1) Accessibility of equipment and components required for TAB Work.
      2) Adequate number and placement of duct balancing dampers to allow proper balancing while minimizing sound levels in occupied spaces.
      3) Adequate number and placement of balancing valves to allow proper balancing and recording of water flow.
      4) Adequate number and placement of test ports and test instrumentation to allow reading and compilation of system and equipment performance data needed to conduct both TAB and commissioning testing.
      5) Air and water flow rates have been specified and compared to central equipment output capacities.
   b. Identify discontinuities and omissions in the Contract Documents.

1.5 COMMISSIONING DOCUMENTATION

A. BoD HVAC: Owner will provide BoD-HVAC documents, prepared by Architect and approved by Owner, to the CxA and Contractor for use in developing the commissioning plan, systems manual, and operation and maintenance training plan.

B. Test Checklists: CxA shall develop test checklists for HVAC systems, subsystems, and equipment, including interfaces and interlocks with other systems. CxA shall prepare separate checklists for each mode of operation and provide space to indicate whether the mode under test responded as required. Checklists shall include, but not be limited to, the following:

1. Calibration of sensors and sensor function.
2. Testing conditions under which test was conducted, including (as applicable) ambient conditions, set points, override conditions, and status and operating conditions that impact the results of test.
3. Control sequences for HVAC systems.
4. Strength of control signal for each set point at specified conditions.
5. Responses to control signals at specified conditions.
6. Sequence of response(s) to control signals at specified conditions.
7. Electrical demand or power input at specified conditions.
8. Power quality and related measurements.
9. Expected performance of systems, subsystems, and equipment at each step of test.
10. Narrative description of observed performance of systems, subsystems, and equipment. Notation to indicate whether the observed performance at each step meets the expected results.
11. Interaction of auxiliary equipment.
12. Issues log.

1.6 SUBMITTALS

A. The following submittals shall be submitted to the Owner's Agent.

B. Testing Procedures: CxA shall submit detailed testing plan, procedures, and checklists for each series of tests. Submittals shall include samples of data reporting sheets that will be part of the reports.

C. Certificate of Readiness: CxA shall compile certificates of readiness from Contractor certifying that systems, subsystems, equipment, and associated controls are ready for testing.

D. Certificate of Completion of Installation, Prestart, and Startup: CxA shall certify that installation, prestart, and startup activities have been completed. Certification shall include completed checklists provided by TAB as result of TAB activities.

E. Test and Inspection Reports: CxA shall compile and submit preliminary report, test and inspection reports and certificates, and shall include them in systems manual and final commissioning report.

F. Corrective Action Documents: CxA shall submit corrective action documents.

G. Certified TAB Reports: CxA shall submit verified, certified TAB reports.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TESTING PREPARATION

A. Prerequisites for Testing:

1. Certify that HVAC systems, subsystems, and equipment have been completed, calibrated, and started; are operating according to the OPR, BoD, and Contract Documents; and that Certificates of Readiness are signed and submitted.
2. Certify that HVAC instrumentation and control systems have been completed and calibrated; are operating according to the OPR, BoD, and Contract Documents; and that pretest set points have been recorded.
3. Certify that TAB procedures have been completed, and that TAB reports have been submitted, discrepancies corrected, and corrective work approved.
4. Test systems and intersystem performance after approval of test checklists for systems, subsystems, and equipment.
5. Set systems, subsystems, and equipment into operating mode to be tested (e.g., normal shut down, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).
6. Verify each operating cycle after it has been running for a specified period and is operating in a steady-state condition.
7. Inspect and verify the position of each device and interlock identified on checklists. Sign off each item as acceptable, or failed. Repeat this test for each operating cycle that applies to system being tested.
8. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.
9. Annotate checklist or data sheet when a deficiency is observed.
10. Verify equipment interface with monitoring and control system and TAB criteria; include the following:
    a. Supply and return flow rates for systems in each operational mode.
    b. Minimum outdoor-air intake in each operational mode and at minimum and maximum airflows.
    c. Building pressurization.
    d. Total exhaust airflow and total outdoor-air intake.
11. Verify proper responses of monitoring and control system controllers and sensors to include the following:
    a. For each controller or sensor, record the indicated monitoring and control system reading and the test instrument reading. If initial test indicates that the test reading is outside of the control range of the installed device, check calibration of the installed device and adjust as required. Retest malfunctioning devices and record results on checklist or data sheet.
    b. Report deficiencies and prepare an issues log entry.

B. Testing Instrumentation: Install measuring instruments and logging devices to record test data for the required test period. Instrumentation shall monitor and record full range of operating conditions and shall allow for calculation of total capacity of system for each mode of operation. For individual room cooling tests, provide temporary heaters to impose a cooling load indicated in BoD. Operational modes include the following:

1. Occupied and unoccupied.
2. Warm up and cool down.
3. Economizer cycle.
4. Power loss recovery.
5. Life-safety and safety systems.
6. Fire safety.

3.2 TAB VERIFICATION

A. TAB Agency shall coordinate with CxA for work required during TAB activities and shall copy CxA with required reports, sample forms, checklists, and certificates.

B. Mechanical, General Contractor, and CxA shall witness TAB Work.

C. TAB Preparation:

1. TAB shall provide CxA with data required for Pre-Grid Inspection activities as applicable.
   a. CxA shall use this data to certify that prestart and startup activities have been completed for systems, subsystems, and equipment installation.

D. Verification of Final TAB Report:

1. CxA shall select, at random, 10 percent of report for field verification.
2. CxA shall notify TAB 10 days in advance of the date of field verification; however, notice shall not include data points to be verified. The TAB shall use the same instruments (by model and serial number) that were used when original data were collected.
3. Failure of an item is defined as follows:
   a. For all readings other than sound, a deviation of more than 10 percent.
4. Failure of more than 10 percent of selected items shall result in rejection of final TAB report.

E. If deficiencies are identified during verification testing, CxA shall notify the Mechanical and General Contractor, whom shall take immediate action to remedy the deficiency. Architect shall review final tabulated checklists and data sheets to determine if verification is complete and that system is operating according to the Contract Documents.

F. CxA shall certify that TAB Work has been successfully completed.

3.3 TESTING

A. Test systems and intersystem performance after test checklists for systems, subsystems, and equipment have been approved.

B. Perform tests using design conditions whenever possible.

1. Simulate conditions by imposing an artificial load when it is not practical to test under design conditions and when written approval for simulated conditions is received from CxA. Before simulating conditions, calibrate testing instruments. Set and document simulated conditions and methods of simulation. After tests, return settings to normal operating conditions.
2. Alter set points when simulating conditions is not practical and when written approval is received from CxA.
3. Alter sensor values with a signal generator when design or simulating conditions and altering set points are not practical. Do not use sensor to act as signal generator to simulate conditions or override values.

C. Detailed Testing Procedures: CxA, with Mechanical Contractor, shall prepare detailed testing plans, procedures, and checklists for HVAC systems, subsystems, and equipment.

D. HVAC Instrumentation and Control System Testing:

1. The CxA and Mechanical Contractor shall collaborate to prepare testing plans.
2. CxA shall convene a meeting of appropriate entities to review test report of HVAC instrumentation and control systems.

E. Energy Supply System Testing: CxA, with Mechanical Contractor, shall prepare a testing plan to verify performance of natural gas systems and equipment. Plan shall include the following:

1. Sequence of testing and testing procedures for each equipment item and pipe section to be tested, identified by pipe zone or sector identification marker. Markers shall be keyed to Drawings for each pipe sector showing the physical location of each designated pipe test section. Drawings keyed to pipe zones or sectors shall be formatted to allow each section of piping to be physically located and identified when referred to in system testing plan.
2. Tracking checklist for managing and ensuring that all pipe sections have been tested.

F. Refrigeration System Testing: CxA, with Mechanical Contractor, shall prepare a testing plan to verify performance of chillers, cooling towers, refrigerant compressors and condensers, heat pumps, and other refrigeration systems. Plan shall include the following:

1. Sequence of testing and testing procedures for each item of equipment and section of pipe to be tested, identified by identification marker. Markers shall be keyed to Drawings showing the physical location of each item of equipment and pipe test section. Drawings shall be formatted to allow each item of equipment and section of piping to be physically located and identified when referred to in the system testing plan.
2. Tracking checklist for managing and ensuring that all pipe sections have been tested.

G. HVAC Distribution System Testing: CxA, with Mechanical Contractor, shall prepare a testing plan to verify performance of air; special exhaust; and other distribution systems. Include HVAC terminal equipment and unitary equipment. Plan shall include the following:

1. Sequence of testing and testing procedures for each item of equipment and section of pipe to be tested, identified by identification marker. Markers shall be keyed to Drawings showing the physical location of each item of equipment and pipe test section. Drawings shall be formatted to allow each item of equipment and section of piping to be physically located and identified when referred to in the system testing plan.

H. Deferred Testing:

1. If tests cannot be completed because of a deficiency outside the scope of the HVAC system, the deficiency shall be documented and reported to Owner. Deficiencies shall be resolved and corrected by appropriate parties and test rescheduled.
2. If the testing plan indicates specific seasonal testing, appropriate initial performance tests shall be completed and documented and additional tests scheduled.

I. Testing Reports:

1. Reports shall include measured data, data sheets, and a comprehensive summary describing the operation of systems at the time of testing.
2. Include data sheets for each controller to verify proper operation of the control system, the system it serves, the service it provides, and its location. For each controller, provide space for recording its readout, the reading at the controller's sensor(s), plus comments. Provide space for testing personnel to sign off on each data sheet.
3. Prepare a preliminary test report. Deficiencies will be evaluated by Owner's Agent to determine corrective action. Deficiencies shall be corrected and test repeated. This report shall be submitted to the Owner's Agent within 90 days of issuance of the Certificate of Occupancy.
4. If it is determined that the system is constructed according to the Contract Documents, Owner will decide whether modifications required to bring the performance of the system to the OPR and BoD documents shall be implemented or if tests will be accepted as submitted. If corrective Work is performed, Owner will decide if tests shall be repeated and a revised report submitted.

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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA REGISTERED SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

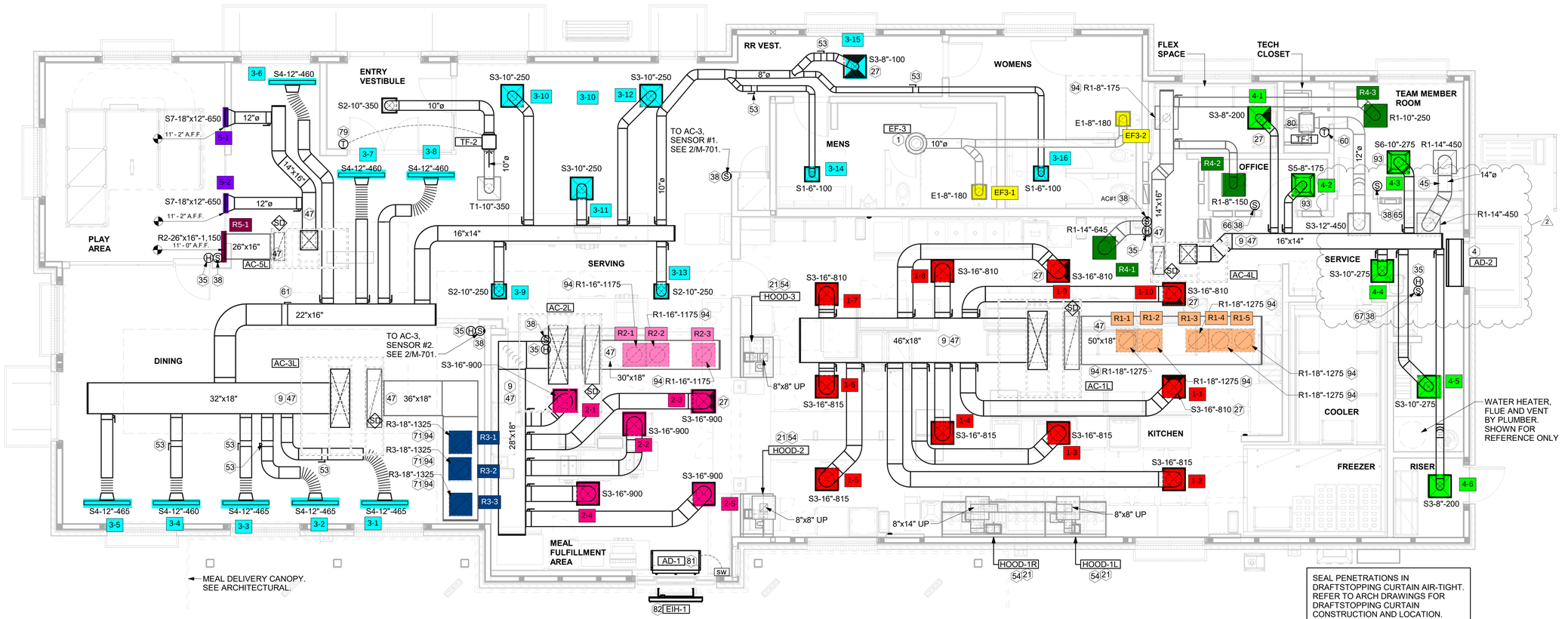
BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

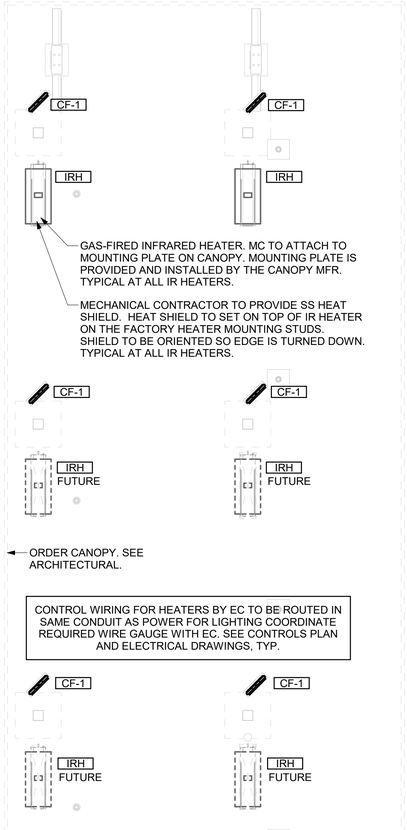
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

SHEET
COMMISSIONING REQUIREMENTS - MECHANICAL
SHEET NUMBER
M-002



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



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

AIR BALANCE SCHEDULE

Mark	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	BUILDING POSITIVE PRESSURE
AC-1L	8,125	6,375	1,750	0	
AC-2L	4,500	3,525	975	0	
AC-3L	5,250	3,975	1,275	0	
AC-4L	1,400	1,220	180	0	
AC-5L	1,300	1,300	150	0	
EF-1	0	0	0	1,913	
EF-2	0	0	0	1,402	
EF-3	0	0	0	360	
	20,575	16,395	4,330	3,675	655

H.E.S. SYSTEM

MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SUNCOAST H.E.S. SYSTEM FOR ALL HOODS. SEE HOOD FAN/EQUIPMENT INTERLOCK WIRING DIAGRAM ON M-702 FOR MORE INFORMATION.

KEY NOTES

1 10" DIA. DUCT UP THRU ROOF.
4 AIR CURTAIN MOUNTED OVER DOOR HEADER AT 7'-2" AFF TO BOTTOM OF UNIT. PROVIDE BLOCKING IN WALL BEHIND AIR CURTAIN. USE FACTORY PRE-PUNCHED MOUNTING HOLES ON BACK SIDE OF AIR CURTAIN ONLY. ATTACH AIR CURTAIN TO WALL USING 3/8" LAG BOLTS, LENGTH AS REQUIRED TO FULLY PENETRATE BLOCKING. LOCATE MAGNETIC CONTACT TYPE MICROSWITCH IN DOOR FRAME ON STRIKE SIDE.
9 BRANCH TAKE-OFFS ARE NOT TO BE LOCATED CLOSER THAN 3'-0" FROM ANY OFFSET OR ELBOW INCLUDING THE SUPPLY AIR DROP FROM CURB.
21 HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-201 FOR LOCATION.
27 MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
35 MOUNT HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
38 MOUNT REMOTE SENSOR ON WALL AT 5-0" AFF U.N.O. AND ROUTE WIRING BACK TO SUNCOAST TEMP CONTROL PANEL. FOR SENSOR SERVING AC#1, COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT.
45 TRANSFER AIR DUCT, NO BALANCING DAMPERS AT GRILLES.
47 TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE SUPPLY DUCT, PROVIDE ELBOWS WITH TURNING VANES. WHERE RETURN DUCT, NO TURNING VANES IN ELBOWS. HORIZONTAL DUCT MINIMUM 10" ABOVE CEILING TO BOTTOM OF DUCT.
53 RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
54 SEE ELEVATIONS ON M-201 FOR CJ FAN DUCTING REQUIREMENT.
60 MOUNT THERMOSTAT FOR TRANSFER FAN AT 4'-0" AFF.
61 PROVIDE RUSKIN CD35 MANUAL BALANCING DAMPER WITH 6" MAXIMUM BLADE WIDTH. OPPOSED BLADE ACTION, LOCKING QUADRANT HANDLE WITH 2" STANDOFF AND 16 GA GALVANIZED BLADE AND FRAME CONSTRUCTION.
65 TO AC#4, SENSOR #1. SEE 2/M-701.
66 TO AC#4, SENSOR #2. SEE 2/M-701.
67 TO AC#4, SENSOR #3. SEE 2/M-701.
71 CONTROL DAMPER SHALL BE INSTALLED FACING THE ACT CEILING FOR ACCESS.
79 PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT, OCCUPIED/UNOCCUPIED TERMINALS. MOUNT THERMOSTAT ON WALL AT 4'-0" AFF. OCCUPIED SETPOINTS: 75 DEG. F COOLING, 69 DEG. F HEATING; UNOCCUPIED SETPOINTS: 85 DEG. F COOLING, 55 DEG. F HEATING.
80 CEILING MOUNTED RECIRCULATING FAN. DUCT AND DISCHARGE TO TYPE 'A' DIFFUSER AS SHOWN.
81 MOUNT AIR DOOR IN CEILING. CENTERED ON DRIVE-THRU/MFA DOOR OPENING. REFER TO WIRING DIAGRAM ON SHEET M-702 FOR MORE INFORMATION.
82 ELECTRIC HEATER. MC TO MOUNT ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
93 MAXIMUM HEATING AND COOLING AIRFLOWS INDICATED. SET MINIMUM AIRFLOW TO 25 CFM.
94 TAKE OFF WITH DAMPER AT THE BOTTOM OF DUCTWORK, TYP.

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KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

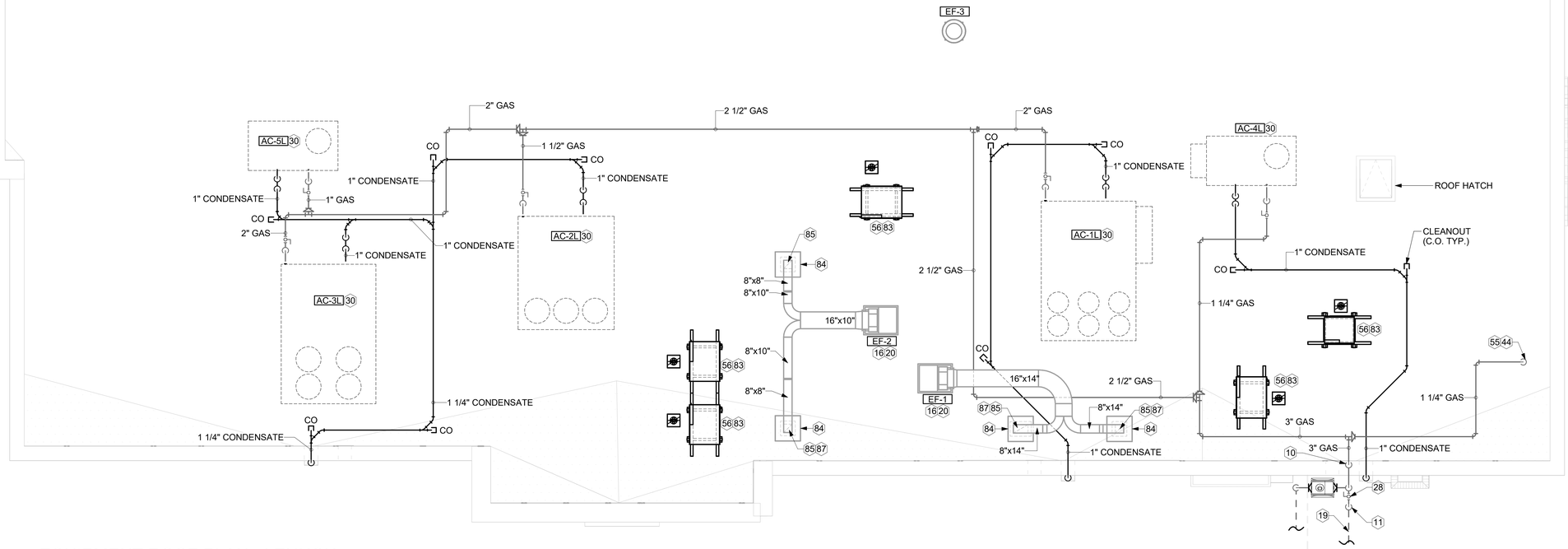
BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
2	06/16/2025	DESIGNOTES

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

SHEET
EQUIPMENT AND DUCTWORK PLAN - LENNOX
SHEET NUMBER
M-101L



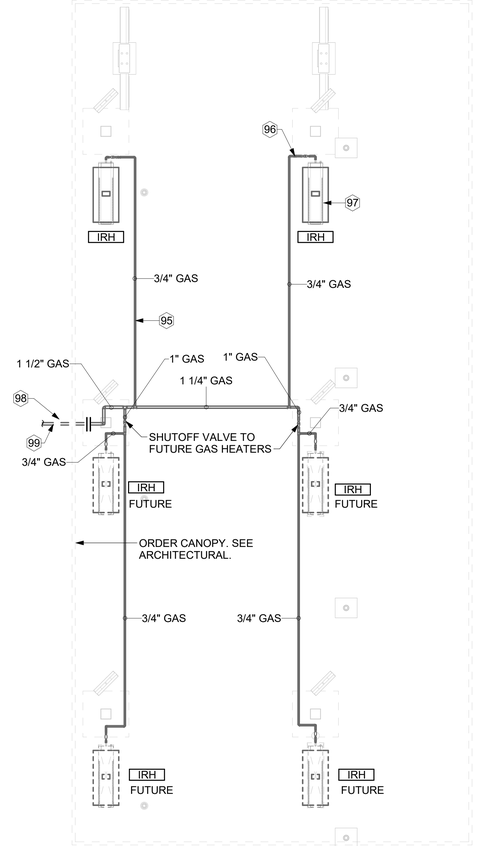
1 EQUIPMENT ROOF PLAN - LENNOX
1/4" = 1'-0"

KEY NOTES

10	TURN 3" GAS UP WITHIN WALL, THRU PARAPET AND ONTO ROOF.
11	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.
16	VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. MINIMUM TERMINATION 40" ABOVE ROOF SURFACE. REFER TO MH-1.4 AND MH-1.5 FOR DETAILS.
19	1-1/2" GAS BELOW GRADE TO ORDER CANOPY, SEE DETAIL 2 SHEET M-102.
20	GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE 1/4" PER FOOT TOWARDS THE HOOD, THE FAN, OR A COMBINATION OF THE TWO SUCH THAT NO PORTION OF THE RADIUS ELBOW AT THE CURB IS BELOW THE CURB CAP AND SUCH THAT THE FAN BASE SETS DIRECTLY ON THE CURB RAILS. THE BOTTOM OF THE RADIUS ELBOW MAY BE EVEN OR FLUSH WITH THE CURB CAP, BUT NOT BELOW THE CAP. THE DUCT AT THE FAN MUST BE CENTERED ON THE FAN INLET.
28	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."
30	MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.
44	1-1/4" GAS DOWN THRU ROOF TO WATER HEATER. SEE DETAIL 2/M-502 FOR MORE INFORMATION ON CONSTRUCTION AND PENETRATION.
55	SEE ARCHITECTURAL DETAILS FOR ROOFTOP PIPE PENETRATIONS.
56	GC SHALL PROVIDE EQUIPMENT STANDS AS MANUFACTURERED BY AVCOA OR EQUAL. STANDS SHALL BE INSTALLED PRIOR TO ROOF INSULATION SO THAT THE INSULATION IS CONTINUOUS UP TO THE PIPE POSTS. POSTS SHALL BE FLASHED IN ACCORDANCE WITH ROOFING MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE BLOCKING BELOW THE ROOF DECK AS REQUIRED.
83	DO NOT DISCHARGE OF CONDENSING UNITS INTO CONDENSER SECTION OF ROOFTOP UNITS, TYP.
84	ROOF CURB FOR DUCT PENETRATION. REFER TO MH-1.4 AND MH-1.5 FOR DETAILS.
85	TURN DOWN THRU ROOF. SEE M-101 FOR CONTINUATION.
87	DUCT PENETRATIONS ON ROOF MUST BE AT LEAST 18" FROM ADJACENT PARAPETS.
95	GAS PIPING TO BE ROUTED ABOVE CANOPY, ON TOP OF STRUCTURAL MEMBERS, EXCEPT WHERE ROUTED DOWN THROUGH PENETRATIONS AS INDICATED.
96	GAS PIPING DOWN THROUGH DECK. WEATHERPROOF DECK PENETRATION PER DETAIL 6/M-502, TYPICAL.
97	SEE DETAIL 1/M-502 FOR PIPING AT IRH, TYPICAL.
98	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.
99	1-1/2" GAS B/G TO METER SEE 1/M-102.

3. GAS LOAD SCHEDULE

EQUIPMENT	GAS LOAD
AC-1L	480,000 BTUS
AC-2L	260,000 BTUS
AC-3L	360,000 BTUS
AC-4L	108,000 BTUS
AC-5L	65,000 BTUS
IRH (2 @ 50,000 BTU EA.)	100,000 BTUS
IRH (FUTURE 4 @ 50,000 BTU EA.)	200,000 BTUS
WATER HEATER	150,000 BTUS
TOTAL FUTURE CONNECTED LOAD	1,723,000 BTUS
REMARKS:	1. EQUIVALENT TO 1,723.0 CFH 2. 7" W.C. DELIVERY PRESSURE 3. DEVELOPED LENGTH: 200 FT, (METER TO AC-3L) 4. GAS PIPING SIZED FOR FUTURE LOAD 5. SIZED PER NCFGC TABLE 402.4(2).



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

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REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	24166.EH.S
DATE	05/29/2025
DRAWN BY	BLM

SHEET
EQUIPMENT ROOF PLAN - LENNOX

SHEET NUMBER
M-102L

ROOFTOP UNIT SCHEDULE - LENNOX

MARK	MANUFACTURER	MODEL	EER/IEER	SEER	TOTAL WEIGHT	SUPPLY (CFM)	OA (CFM)	HP	ESP (in-wg)	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING INPUT MBH	HEATING OUTPUT MBH	VOLTAGE (V)	PHASE	MCA (A)	MOCP (A)	REMARKS
AC-1L	LENNOX	LGT300H5M	10.6/14.3		3205.00 lb	8,125	1,750	7.5	0.8	276	197.3	480	389	208	3	138	150	1,3-14
AC-2L	LENNOX	LGT156H5M	12/15.4		2568.00 lb	4,500	975	3	0.8	146.9	107.9	260	211	208	3	71	90	1,3-14
AC-3L	LENNOX	LGT180H5M	12/15.4		2682.00 lb	5,250	1,275	5	0.8	177.2	127.9	360	292	208	3	76	90	1,3-14
AC-4L	LENNOX	LGT048H5E		17.3	1038.00 lb	1,400	180	1	0.8	46.7	32	108	87	208	3	23	30	2-14
AC-5L	LENNOX	LGT048H5E		17.3	1038.00 lb	1,300	150	1	0.8	46.7	32	65	52	208	3	26	35	1,3-14

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

REMARKS
1. DIFFERENTIAL ENTHALPY ECONOMIZER WITH POWER EXHAUST.
2. DIFFERENTIAL ENTHALPY ECONOMIZER WITH BAROMETRIC EXHAUST.
3. 14" HIGH ROOF CURB.
4. SEE DETAIL 2/M-701L FOR SETTING OF CONTROL PARAMETERS BY MC.
5. FACTORY INSTALLED 115V GFI SERVICE OUTLET. SEPERATE 115V CIRCUIT PROVIDED BY ELECTRICAL CONTRACTOR.
6. FACTORY INSTALLED RETURN AIR SMOKE DETECTOR.
7. FACTORY INSTALLED NON-FUSED DISCONNECT.
8. 2" MERV 8 THROW AWAY FILTERS.
9. HINGED PANELS FOR ACCESS TO FILTER(S), FAN BLOWER & MOTOR, COMPRESSOR(S) ACCESS AND CONTROLS.
10. FACTORY INSTALLED COIL HAIL GUARD.
11. FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
12. HOT GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
13. FACTORY CONFIGURED PHASE LOSS PROTECTION.
14. FACTORY HIGH FAULT (100K) SCCR RATING.

HOOD SCHEDULE

MARK	MANUFACTURER	MODEL	EXHAUST CFM	SP @ TAB PORT (in-wg)	CAPTURE JET CFM & S.P.	TYPE	COLLAR SIZE	WIDTH	DEPTH	HEIGHT	REMARKS
HOOD-1L	HALTON	KVL-2 IC	709	0.13	47 @ 0.30"	BACKSHELF	8"X8"	63"	37"	40"	1
HOOD-1R	HALTON	KVL-2 IC	1,204	0.13	80 @ 0.30"	BACKSHELF	14"X8"	107"	37"	40"	1
HOOD-2	HALTON	KVL-C-IC	701	0.3	30 @ 0.29"	BACKSHELF	8"X8"	45"	34"	38"	1
HOOD-3	HALTON	KVL-C-IC	701	0.3	30 @ 0.29"	BACKSHELF	8"X8"	42"	34"	38"	1

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

REMARKS
1. REFER TO HOOD SHOP DRAWINGS FOR HOOD OPTIONS AND CONSTRUCTIONS. HOOD SHOP DRAWINGS ARE INCLUDED FOR REFERENCE ON SHEETS MH-1.1, MH-1.2, AND MH-1.3.

ELECTRIC HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	HEATIING INPUT ELECTRIC (kW)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	VOLTAGE (V)	PHASE	FLA (A)	MOCP (A)	REMARKS
EIH-1	BROMIC	BH0420035	6.00	56"	8.5"	3.5"	WALL BRACKET	208	1	28.9	40	1,2,3,4

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

REMARKS
1. STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.
2. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND.
3. PROVIDE BLACK HEATER WITH HIGH TEMPERATURE COATING, AND MANUFACTURER MOUNTING BRACKETS.
4. PROVIDE BROMIC WALL MOUNTED ELECTRIC HEATER MODEL: BH0420033 FOR 220-240V SITES.

GAS HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	HEATIING INPUT GAS (MBH)	FRAME LENGTH	FRAME WIDTH	FRAME DEPTH	MOUNTING TYPE	REMARKS
IRH	SPACE-RAY	WB50	50.0	48"	13.4"	13.4"	BRACKET	1,2,3,4,5

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

REMARKS
1. STAINLESS STEEL LENS WITH BLACK EMISSIVE COATING.
2. STEEL BURNER WITH CERAMIC BURNER TILES.
3. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BACKGROUND. MOUNT TO CANOPY DECK, FACING FORWARD, 12" LATERALLY FROM THE LONG SIDE OF THE HEATER.
4. STAINLESS STEEL HEAT SHIELDS.
5. REFER TO ELECTRICAL DRAWINGS FOR DISCONNECTING MEANS, CONDUIT, CONDUCTOR, AND CONNECTION REQUIREMENTS.

FAN SCHEDULE

MARK	AREA SERVED	MANUFACTURER	MODEL	FAN CFM	ESP (in-wg)	HP	MOTOR RPM	VOLTAGE (V)	PHASE	FLA (A)	MOCP (A)	REMARKS
CF-1	OUTDOOR CANOPY	TPI	U-18-TE-HD	1,900	0.01	0.1	1,625	120	1	1.1	20	20,21,22
EF-1	HOOD#1	HALTON	KEFB-14-CFA	1,913	0.75	0.75	1,331	120	1	13.8	25	1,2,3,4,5,6,7,8,9,10,11
EF-2	HOOD#2 & HOOD#3	HALTON	KEFB-14-CFA	1,402	0.95	0.75	1,199	120	1	13.8	25	1,2,3,4,5,6,7,8,9,10,11
EF-3	RESTROOMS	ACCUREX	XRED-095-VG	360	0.375	0.167	1,201	115	1	2.2	20	1,3,11,12,13,14,15,16
TF-1	TECH CLOSET	GREENHECK	SP-A510-VG	450	0.3	0.127	1,144	120	1	2.5	20	1, 17, 18, 19
TF-2	VESTIBULE	ACCUREX	XID-7-VG	350	0.3	0.067	1,725	115	1	1.3	20	1,17,20

NOTES
- GREASE EXHAUST FAN RPM BASED ON 80 DEGREE F AIR AT 1000 FEET ABOVE SEA LEVEL.

REMARKS
1. FANS SUPPLIED BY HALTON. PURCHASED BY OWNER. WIRING DIAGRAMS PROVIDED BY HALTON.
2. U.L. 705 LISTED AND LABELED FOR RESTUARANT APPLICATIONS.
3. FACTORY INSTALLED PREWIRED DISCONNECT SWITCH.
4. 22" HIGH ROOF CURB.
5. INSTALL ROOFTOP SOLUTIONS G2 DRIP GUARD. MECHANICAL CONTRACTOR TO CONTACT ROOFTOP SOLUTIONS AT 800-913-7034.
6. FACTORY WEATHER HOUSING W/ HINGED ACCESS DOOR.
7. FACTORY DRAIN CONNECTION.
8. FACTORY BOLTED ACCESS DOOR ON SCROLL.
9. FACTORY INSTALLED BELT DRIVE WITH ADJUSTABLE MOTOR SHEAVE, SPARE BELT, AND BELT TENSIONER.
10. FACTORY INSTALLED OUTLET WITH QUICK RELEASE, HINGED ACCESS, AND GRAVITY BACKDRAFT DAMPER.
11. INTEGRAL THERMAL OVERLOAD.
12. BIRDSCREEN.
13. BACKDRAFT DAMPER IN DUCT BY MECHANICAL CONTRACTOR AS SHOWN ON 3/M-501.
14. STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
15. 12" HIGH CURB.
16. FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
17. PROVIDE NEMA 1 PREWIRED DISCONNECT.
18. INTEGRAL POTENTIOMETER ON FAN MOTOR. SET TO FULL SPEED.
19. PROVIDE THERMOSTAT / TEMPERATURE CONTROLLER, SET TO 76°F.
20. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
21. PROVIDE WITH ON/OFF SWITCH.
22. FAN SUPPLIED BY TOM BARROW OR POWERS OF ARKANSAS FOR THE SOUTHWEST REGION.

AIR DEVICE SCHEDULE

Mark	LOCATION	DESCRIPTION	NECK SIZE	FACE SIZE	FRAME TYPE	REMARKS
E1	RESTROOMS	PRICE MODEL APDDR ALUMINUM PERFORATED FACE EXHAUST AIR GRILLE.	14"x14"	16"x16"	LAY-IN	1,3,4,9
R1	KITCHEN/MFA/BOH	PRICE MODEL 80 EGGCRATE RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK	VARIES	24"x24"	LAY-IN	1,5,6
R2	PLAY	PRICE MODEL 21 ALUMINUM SIDEWALL RETURN GRILLE, FRONT BLADE PARALLEL TO LONG SIDE	24"x14"	26"x16"	SURFACE	1,9
R3	DINING	PRICE MODEL 80 EGGCRATE RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK	18"	24"x24"	LAY-IN	1,5,6,10
S1	RESTROOMS	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	6"	12"x12"	LAY-IN	1,2,4,6,10
S2	VESTIBULE	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	VARIES	16"x16"	LAY-IN	1,2,4,6,10
S3	DINING / KITCHEN / MFA/BOH/PLAY	PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS.	VARIES	24"x24"	LAY-IN	1,2,6
S4	DINING	PRICE MODEL TBDI2150 T-BAR SUPPLY DIFFUSERS	12"	48"x5"	LAY-IN	1,8
S5	OFFICE	PRICE MODEL VARITHERM PLAQUE DIFFUSER	8"	24"x24"	LAY-IN	1,6,7
S6	TEAM MEMBERS	PRICE MODEL VARITHERM PLAQUE DIFFUSER	10"	24"x24"	LAY-IN	1,6,7
S7	PLAY	PRICE MODEL 20 DOUBLE DEFLECTION ALUMINUM SIDEWALL SUPPLY GRILLE, FRONT BLADE PARALLEL TO LONG SIDE	16"x10"	18"x12"	SURFACE	1,9
T1	VESTIBULE	PRICE MODEL 80 EGGCRATE TRANSFER AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK	10"	24"x24"	LAY-IN	1,5,6

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

REMARKS
1. STANDARD OFF WHITE FINISH.
2. PROVIDE 4-WAY BLOW UNLESS OTHERWISE NOTED. REFER TO M-101L(T) FOR THROW.
3. PROVIDE MODEL VCR7 NECK DAMPER ON GRILLES IN RESTROOMS SERVING EXHAUST FAN.
4. PROVIDE BACKPAN. MC TO SEAL JOINTS WITH MASTIC AND INSULATE EXTERNALLY.
5. PROVIDE SQUARE TO ROUND ADAPTOR.
6. FACTORY INSULATED R-6 BACKPAN.
7. PROVIDE RELIEF COLLAR ACCESSORY FOR VAV DIFFUSER.
8. PROVIDE 2 SLOTS, CENTER NOTCH, AND ONE WAY DISCHARGE.
9. FIELD INSULATE BACKPAN AS SHOWN ON DETAIL 1/M-501.
10. PROVIDE ALUMINUM PLASTER FRAME.

AIR DOOR SCHEDULE

MARK	AREA SERVED	MANUFACTURER	MODEL	CFM	VELOCITY (FPM)	HEATING (KW)	MOTOR HP	MCA (A)	MOCP (A)	VOLTAGE (V)	PHASE	REMARKS
AD-1	DRIVE THRU	POWERED AIRE	CHA-1-48E	1,543	2,338	10	0.75	42	45	208	3	1,2,3,5
AD-2	REAR DOOR	POWERED AIRE	RBT-1-48	3,867	4,218	0	0.75	10	15	120	1	4

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

REMARKS
1. FACTORY PROVIDED, WIRED, AND UNIT MOUNTED SPEED CONTROLLER ABOVE CEILING.
2. FACTORY WIRED DISCONNECT.
3. FACTORY PROVIDED, FIELD INSTALLED BY MC, REMOTE WALL SWITCHES FOR HEATING ON/OFF AND FAN ON/AUTO SWITCH. SEE DETAILS ON M-702.
4. FACTORY PROVIDED MAGNETIC DOOR CONTACT WITH FACTORY INSTALLED LOW VOLTAGE CONTROLS LOCATED IN AIR DOOR CABINET.
5. PROVIDE WITH A DIVERTER BOX. PROVIDE WITH MOUNTING BRACKETS PER MANUFACTURER'S RECOMMENDATIONS.

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

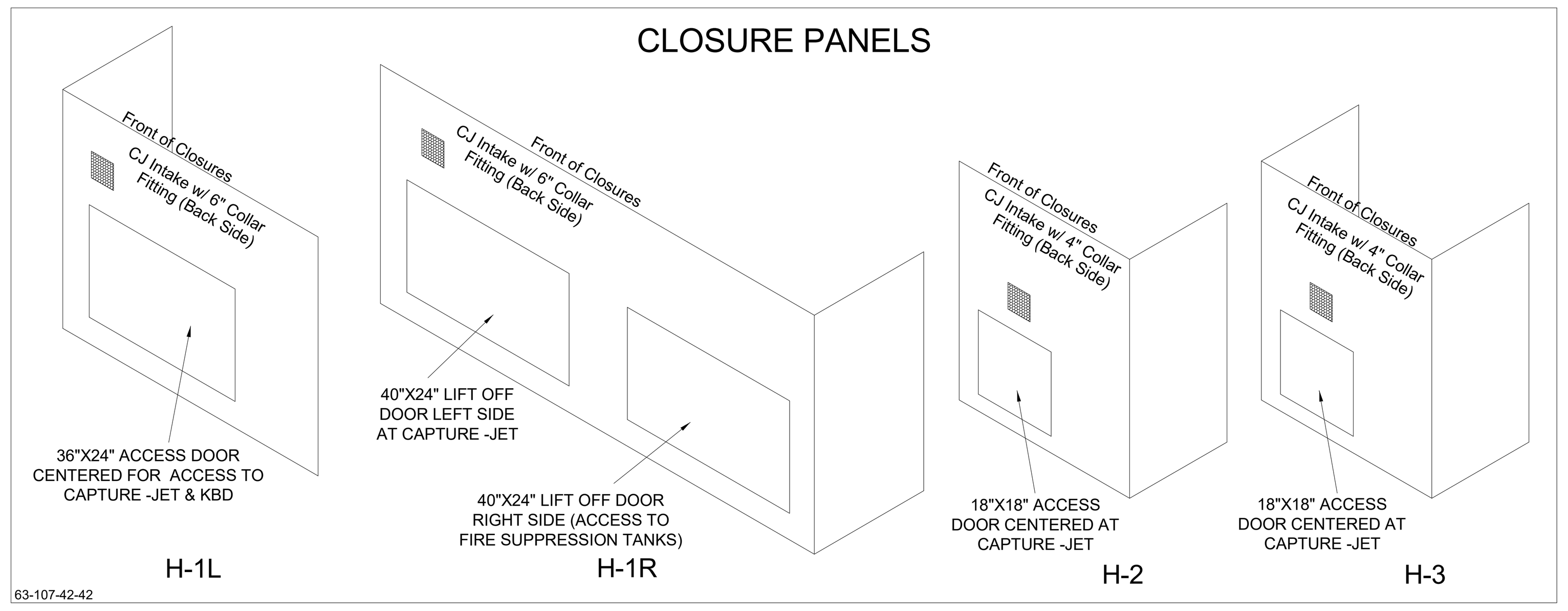
SHEET
HVAC EQUIPMENT SCHEDULES - LENNOX

SHEET NUMBER
M-601L

		EXHAUST COLLAR			EXHAUST AIR INFORMATION			CAPTURE AIR INFORMATION		S.S. KSA FILTERS			CEILING CLOSURES						
HOOD MODEL	HOOD NUMBER	QTY	LENGTH	WIDTH	CFM	TAB	SP	CFM	SP	FULL	HALF	LED LIGHTS	QTY	CLOSURE HEIGHT	CEILING HEIGHT	HOOD WEIGHT	KBD DAMPER	K FACTOR (CFM = K FACTOR * √DP)	MATERIAL
KVL-2-IC	H-1L	1	8"	8"	709	0.13"	0.23"	47	0.30"	3	-	2	2	TBD	ADVISE	394 LBS	*	1971	ALL 18 GA 430 S.S.
KVL-2-IC	H-1R	1	14"	8"	1204	0.13"	0.22"	80	0.30"	5	-	3	2			669 LBS	*	3369	
KVL-C-IC	H-2	1	8"	8"	701	0.30"	0.39"	30	0.29"	2	-	1	2	TBD		245 LBS	*	1291	
KVL-C-IC	H-3	1	8"	8"	701	0.30"	0.39"	30	0.29"	2	-	1	3			245 LBS	*	1291	

FOR REFERENCE ONLY

CLOSURE PANELS



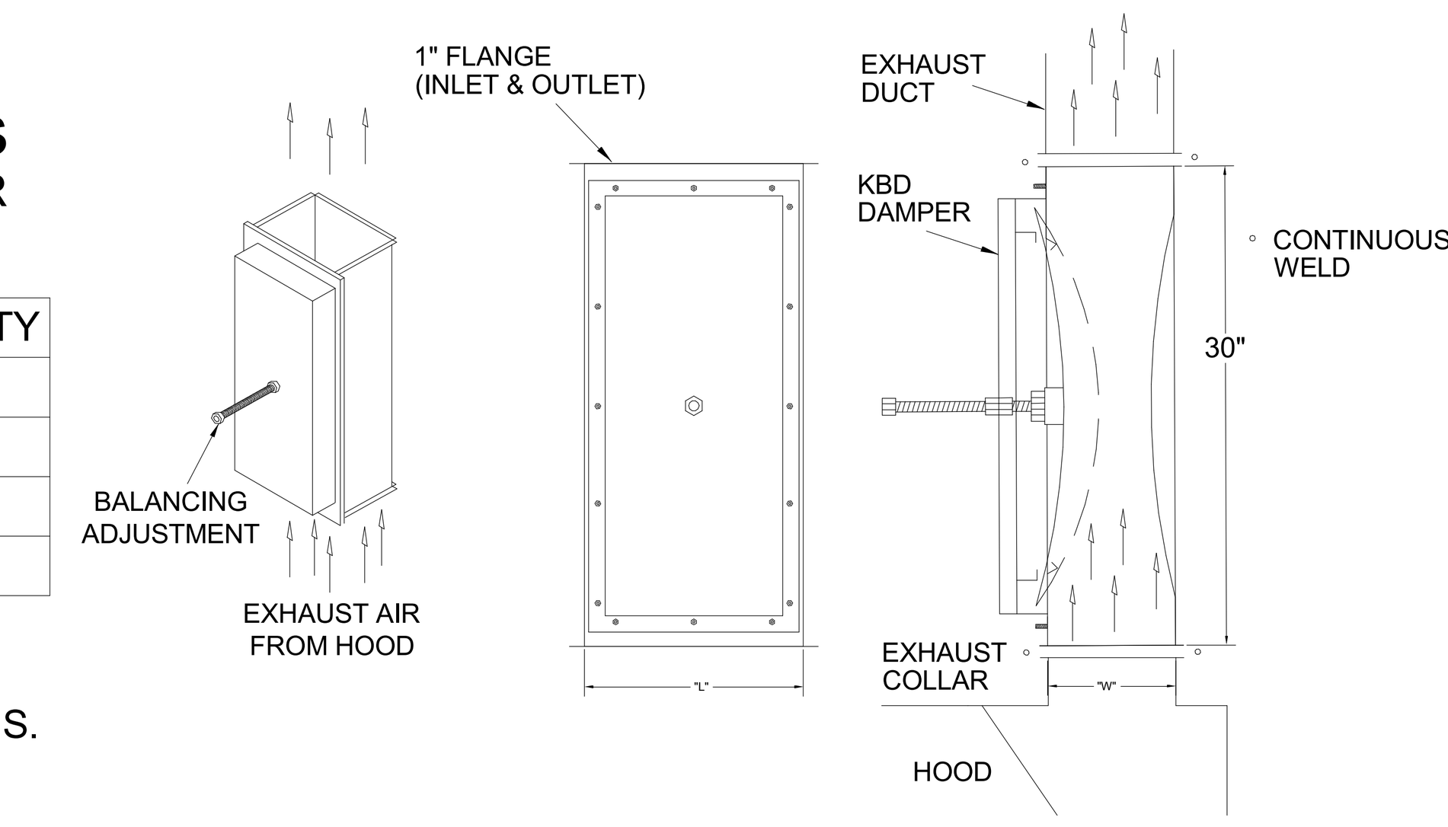
MODEL:KBD
CALIBRATED KBDs

KITCHEN BALANCING DAMPER

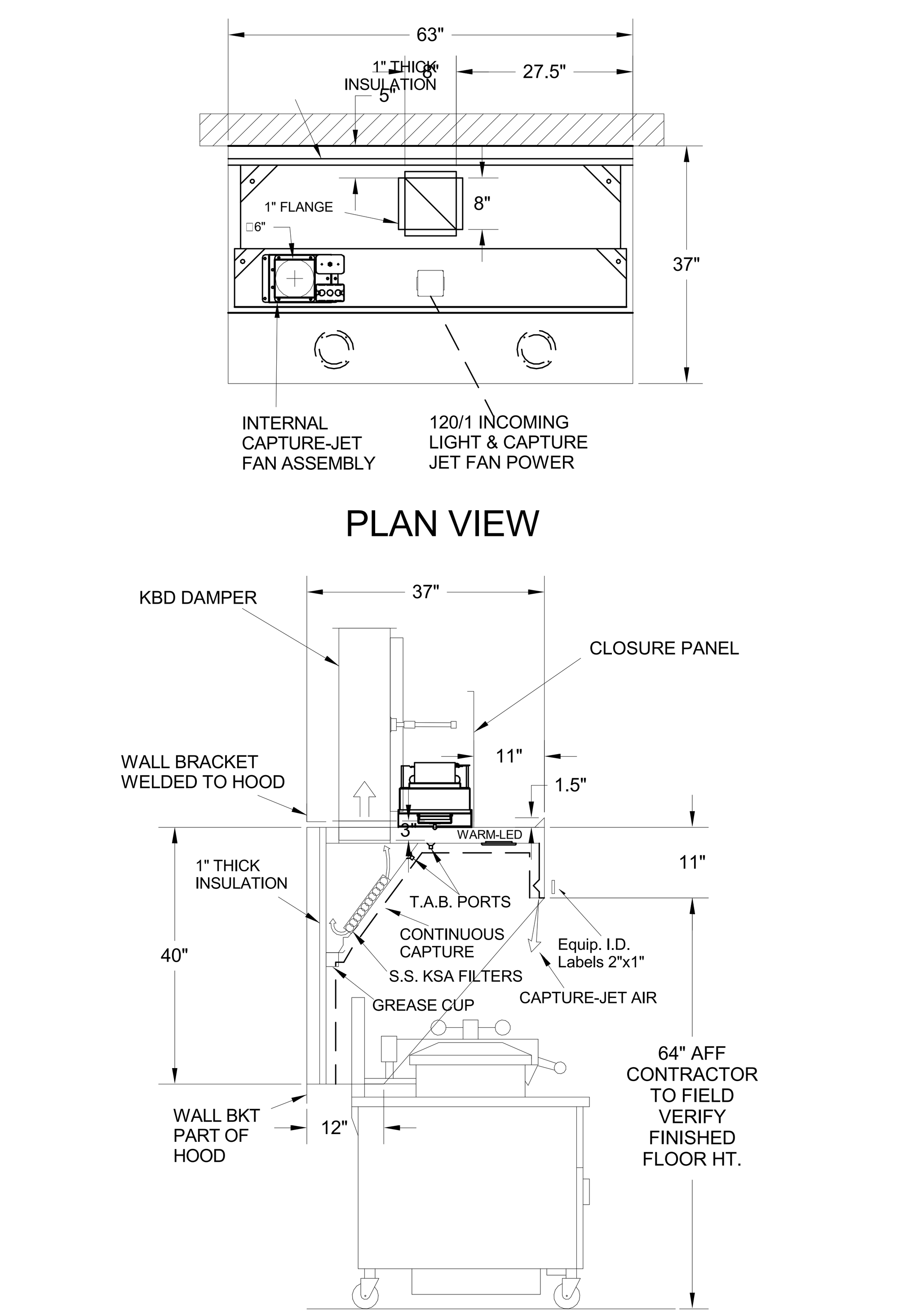
EXHAUST VOLUME DAMPER

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

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

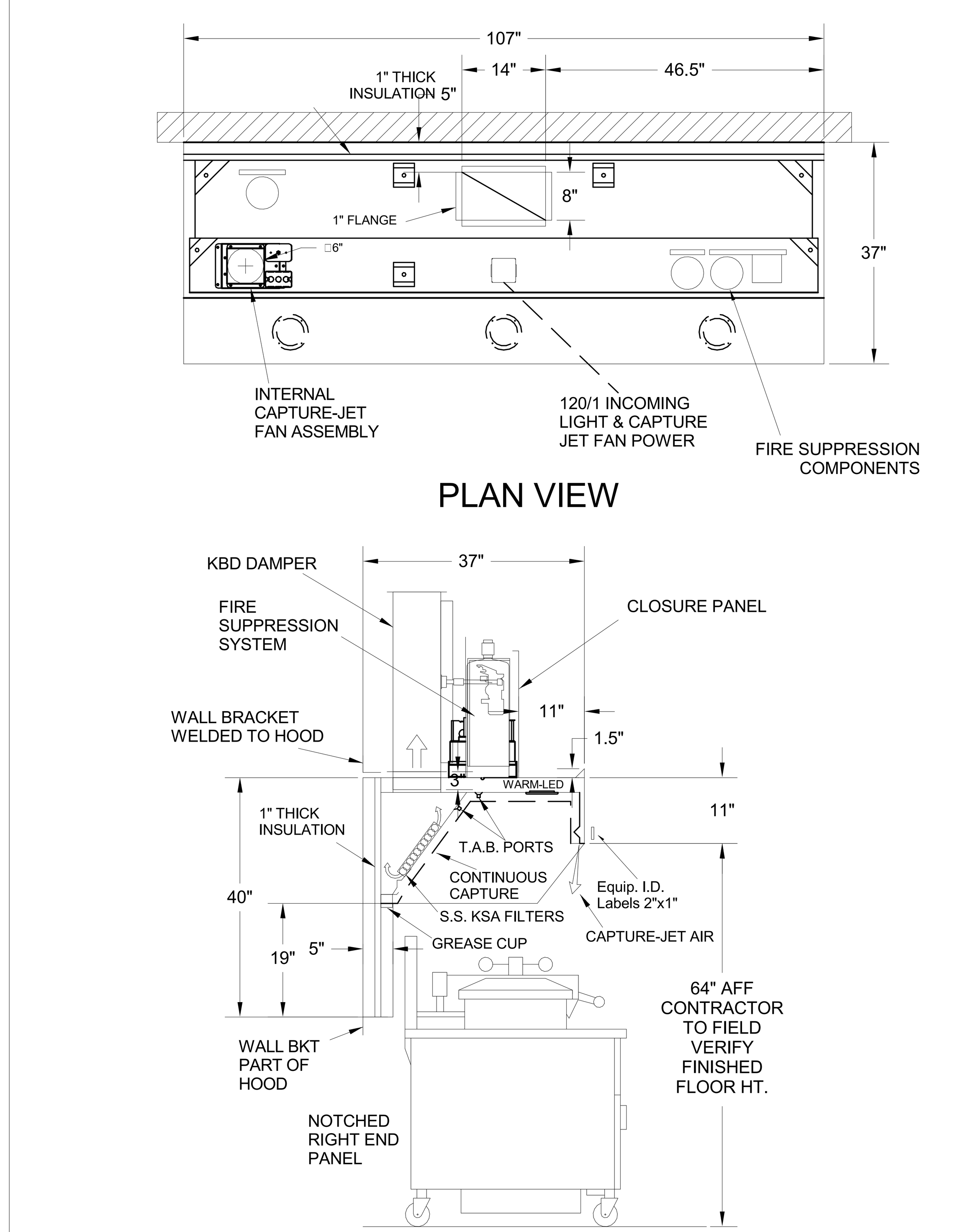


H-1L



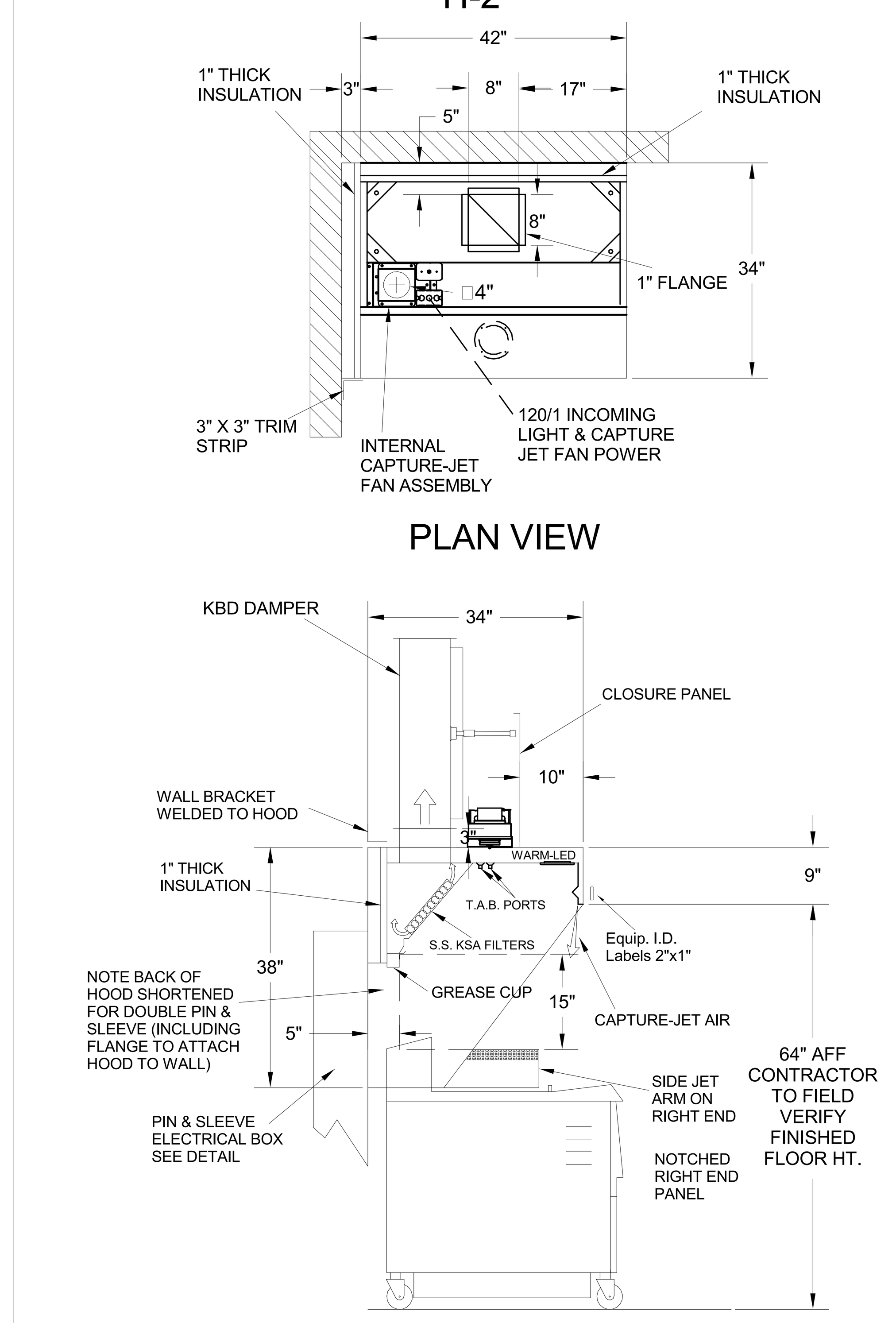
H-1L SECTION VIEW

H-1R



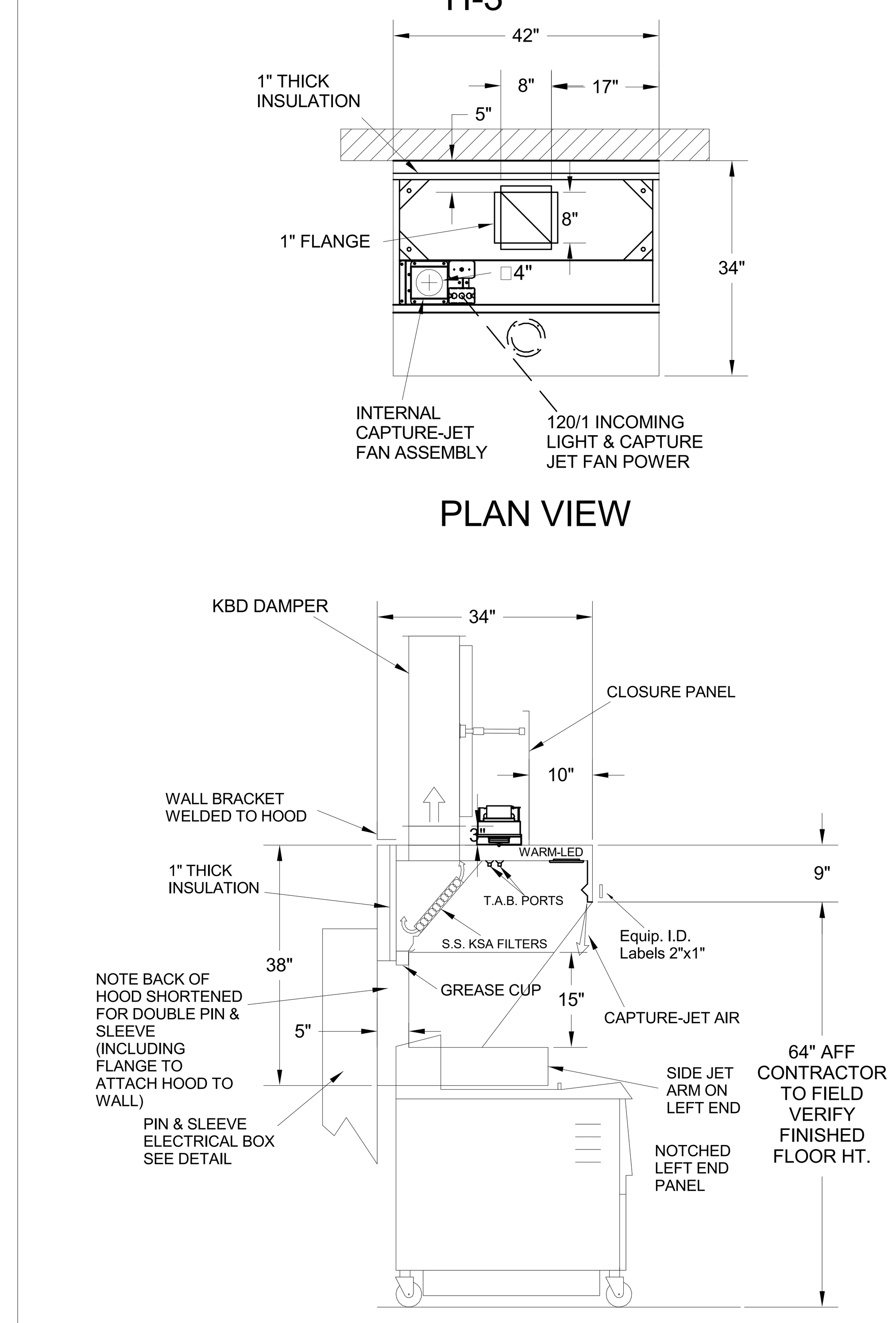
H-1R SECTION VIEW

H-2



H-2 SECTION VIEW

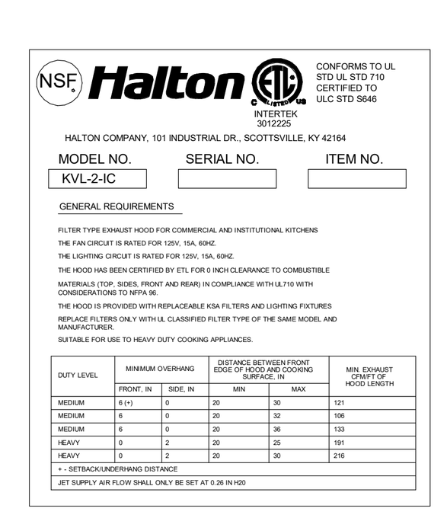
H-3



H-3 SECTION VIEW

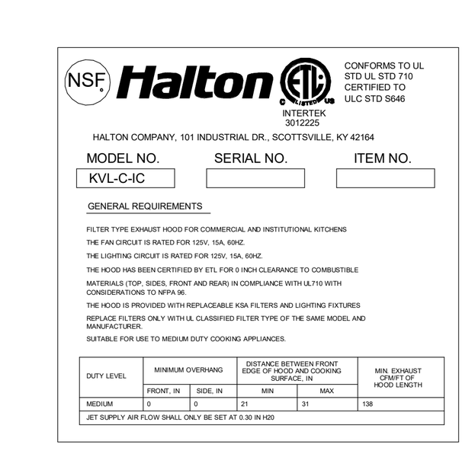
- CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF
- FRONT CLOSURE PANEL WITH 36"X24" ACCESS DOOR FOR ACCESS TO CAPTURE-JET
- CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT
- 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
- GREASE CUP RIGHT END

- CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF
  - FRONT CLOSURE PANEL WITH 40"X24" LIFT OUT DOOR RIGHT SIDE (ACCESS TO FIRE SUPPRESSION
  - 40"X24" LIFT DOOR LEFT SIDE AT CAPTURE-JET WITH FRONT CJ INTAKE
  - CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT
  - 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
  - NOTCHED RIGHT END PANEL
  - GREASE CUP RIGHT END
  - AMEREX WEIGHT = 264 LBS



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

- CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF
- 18"X18" ACCESS DOOR CENTERED AT CAPTURE-JET WITH FRONT CJ INTAKE
- NOTCHED LEFT END PANEL
- DOUBLE RECEPTACLE PIN & SLEEVE
- 3" REAR STAND-OFF TO HAVE 1" THICK INSULATION
- GREASE CUP RIGHT END



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

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

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

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

PROJECT: **CHICK-FIL-A**

SN#: 06012

LOCATION: WENDELL FALLS FSU

DRAWN BY: | DATE: 05/29/2025

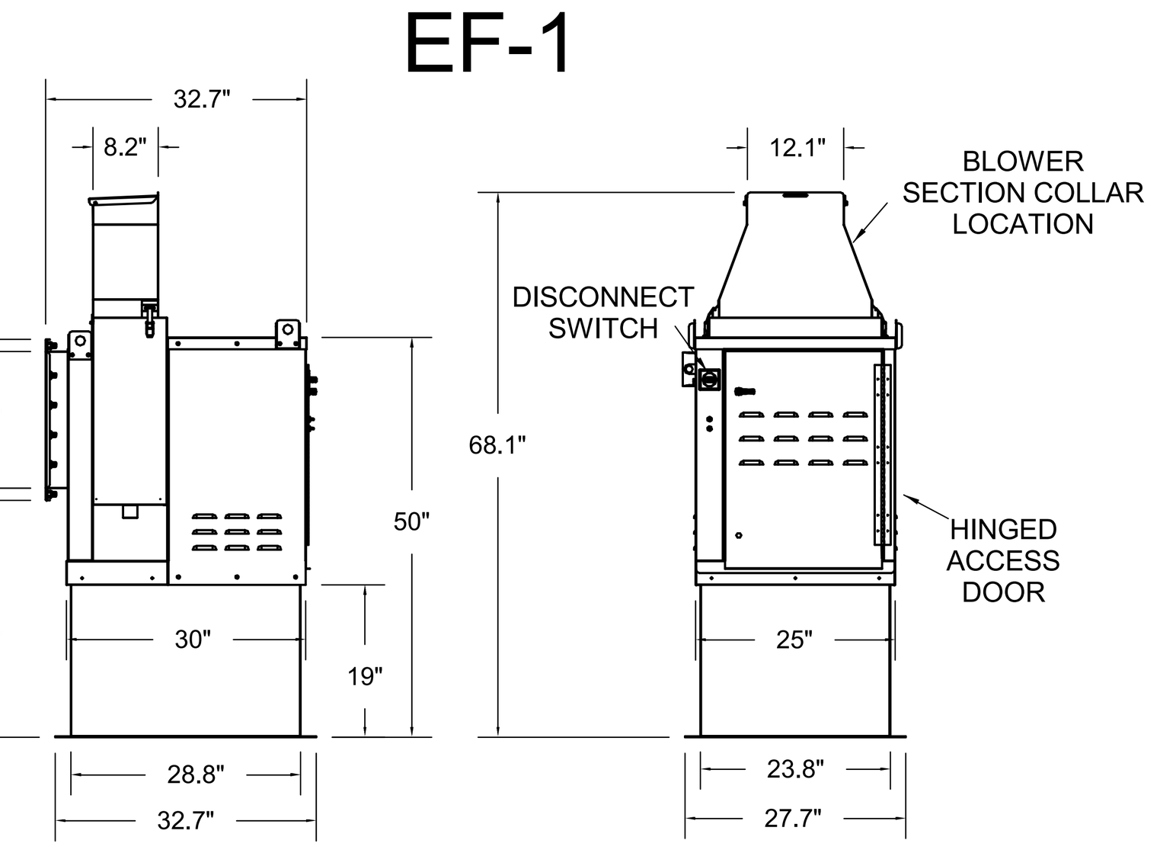
SCALE: NTS

Halton Dwg: U25-408-01

Halton CARE FOR INDOOR AIR

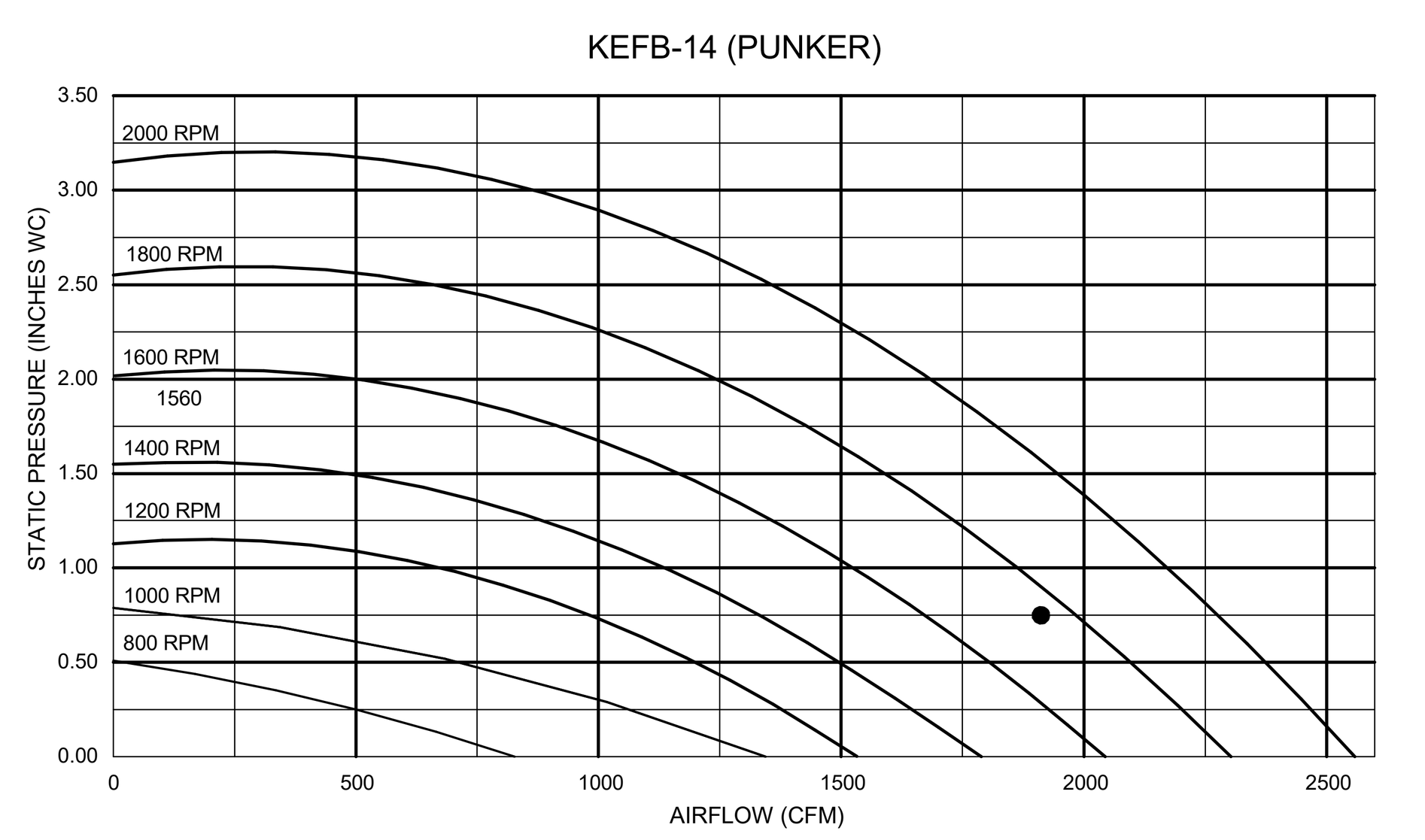
Sheet MH-1.1

EF-1

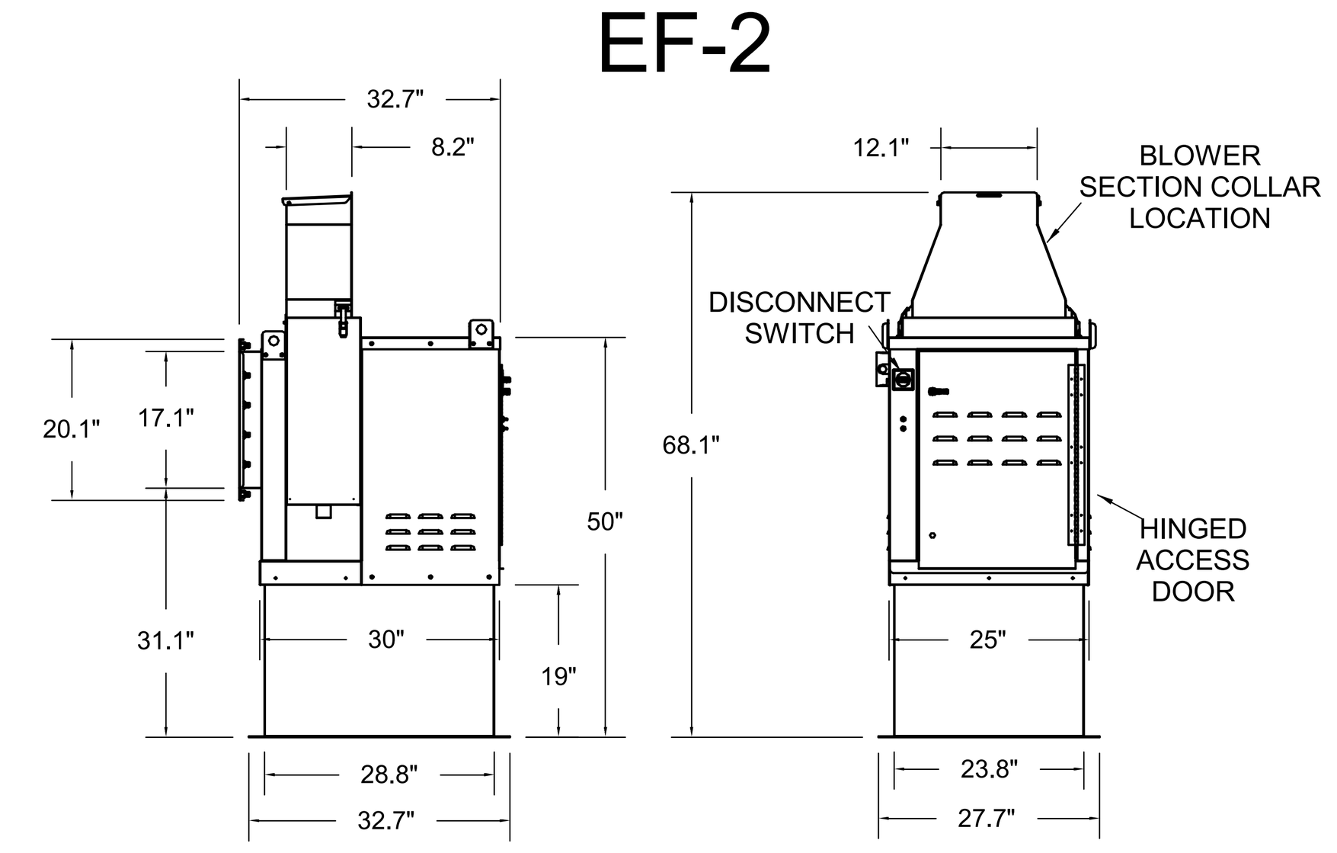


Halton KEFB Exhaust Fan

Job Name	CHICK-FIL-A				
Date	05/06/25	Item No	EF-1	Qty	1
Model	KEFB-14	Fan RPM	1,560	Volts/Ph/Hz:	115/1/60
Airflow, cfm	1,912	Fan BHP	0.55	Motor HP	0.75
Static Pressure, in WC	0.75	dB	85.3	TAB Port, in WC	4.8

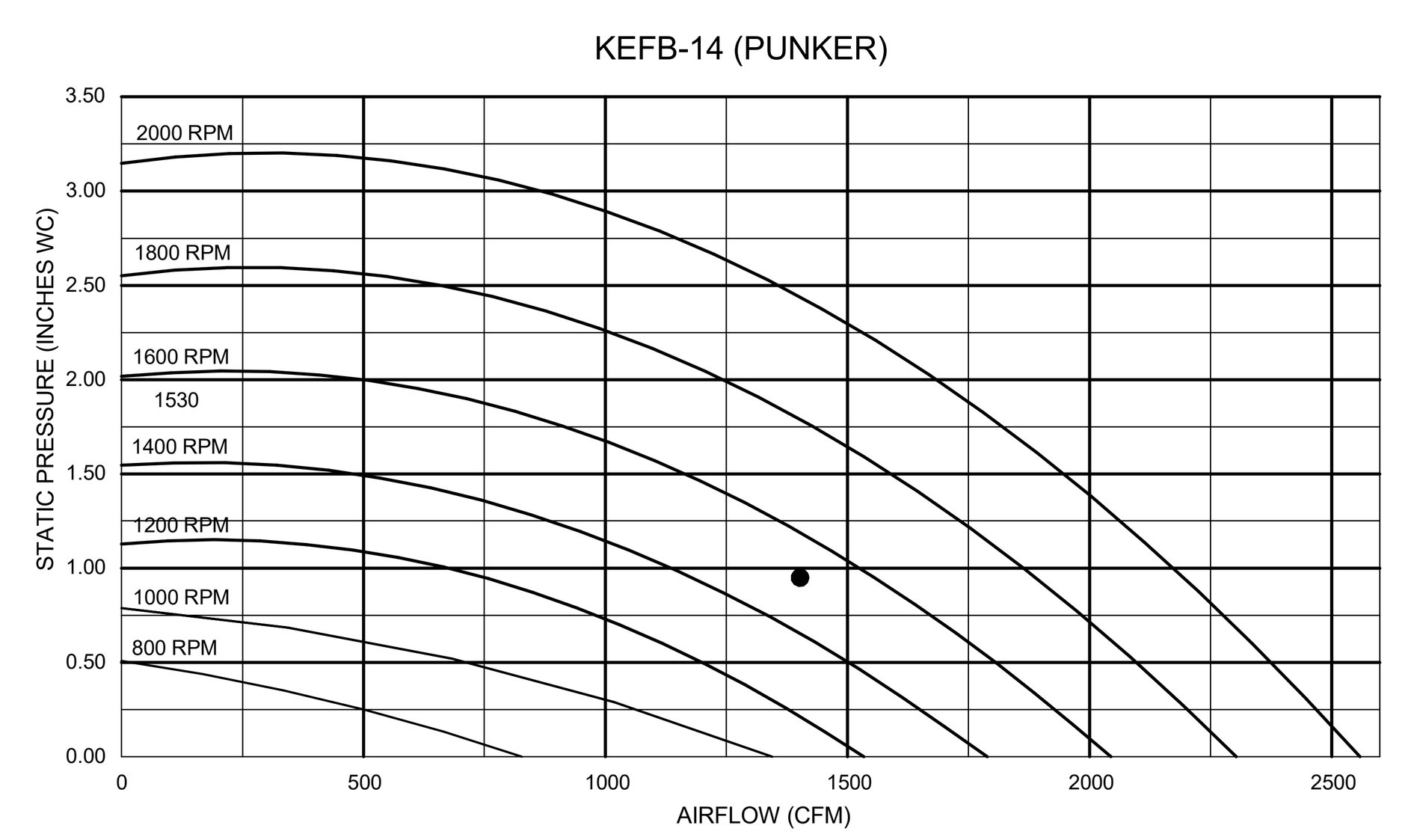


EF-2



Halton KEFB Exhaust Fan

Job Name	CHICK-FIL-A				
Date	05/06/25	Item No	EF-2	Qty	1
Model	KEFB-14	Fan RPM	1,530	Volts/Ph/Hz:	115/1/60
Airflow, cfm	1,402	Fan BHP	0.38	Motor HP	0.75
Static Pressure, in WC	0.95	dB	81.6	TAB Port, in WC	2.1



Model: XRED-095-VG

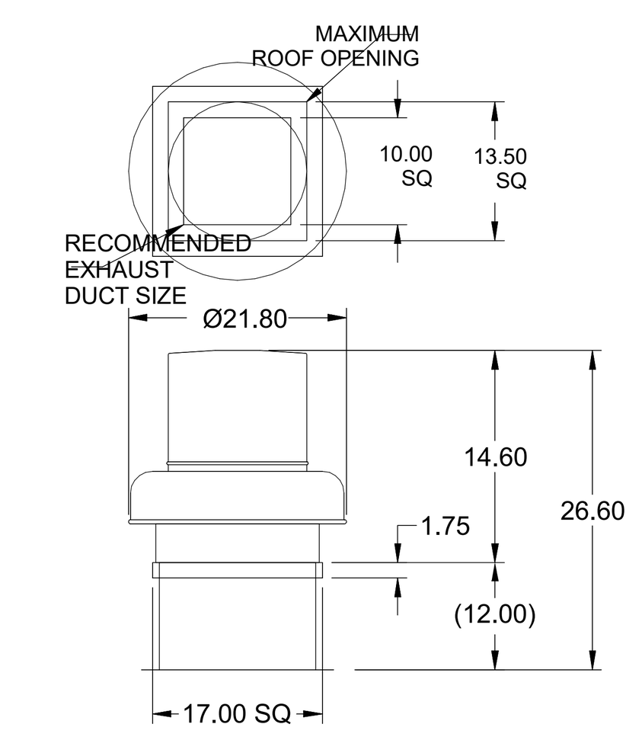
EF-3

Direct Drive Centrifugal Roof Exhaust Fan

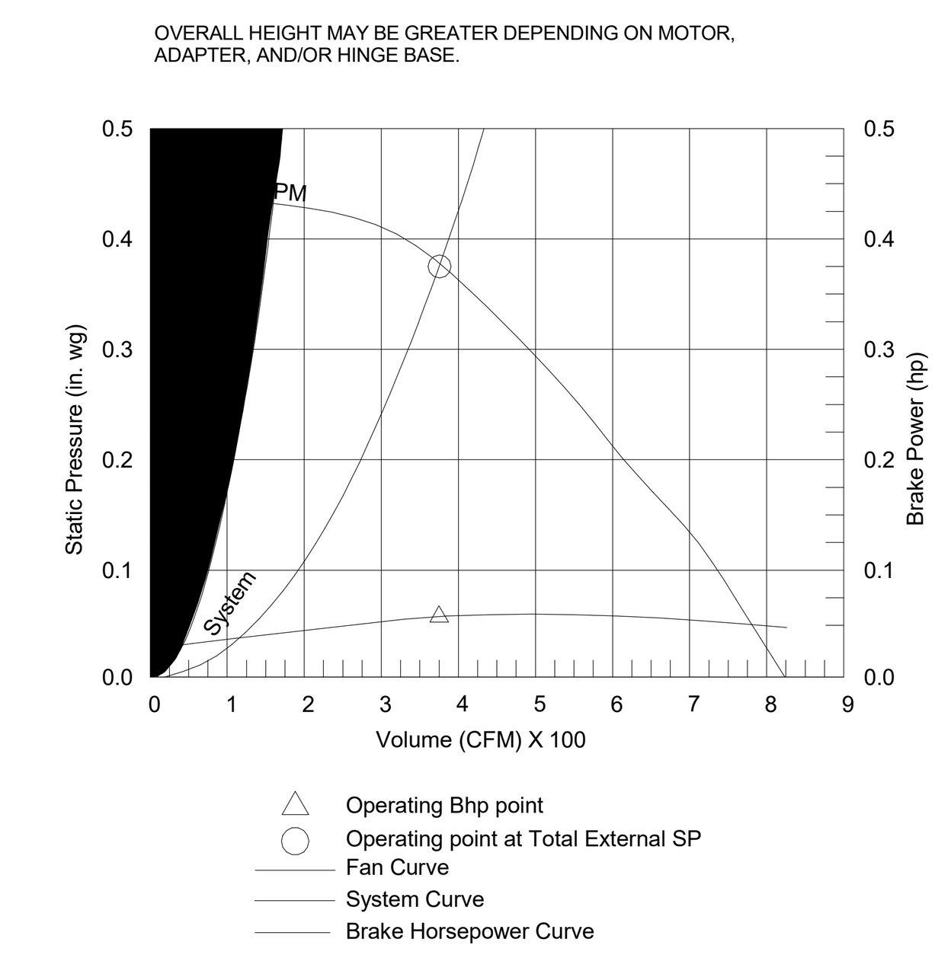
Dimensional	
Quantity	1
Weight w/o Acc's (lb)	28
Weight w/ Acc's (lb)	35
Weight w/ Acc's and Curb (lb)	49
Standard Curb Cap Size (in.)	17 x 17
Optional Damper (in.)	10 x 10
Roof Opening (in.)	13.5 x 13.5

Performance	
Requested Volume (CFM)	360
Actual Volume (CFM)	375
Total External SP (in. wg)	0.375
Fan RPM	1207
Operating Power (hp)	0.05
Elevation (ft)	23
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Tip Speed (ft/min)	3,437
Static Eff. (%)	41

Misc Fan Data	
Fan Eff. Index (FEI)	-
Outlet Velocity (ft/min)	323



Motor	
Motor Mounted	Yes
Size (hp)	1/8 (or greater)
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1550
Efficiency Rating	Standard
Windings	1



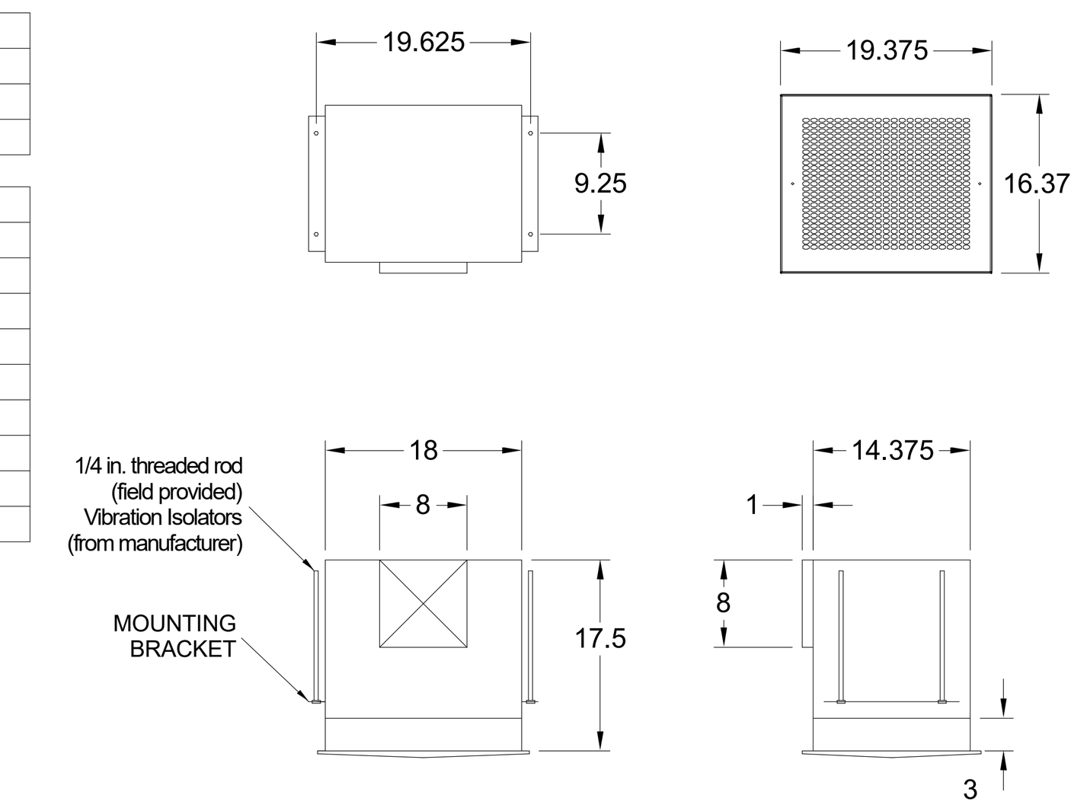
Model: SP-A510-VG

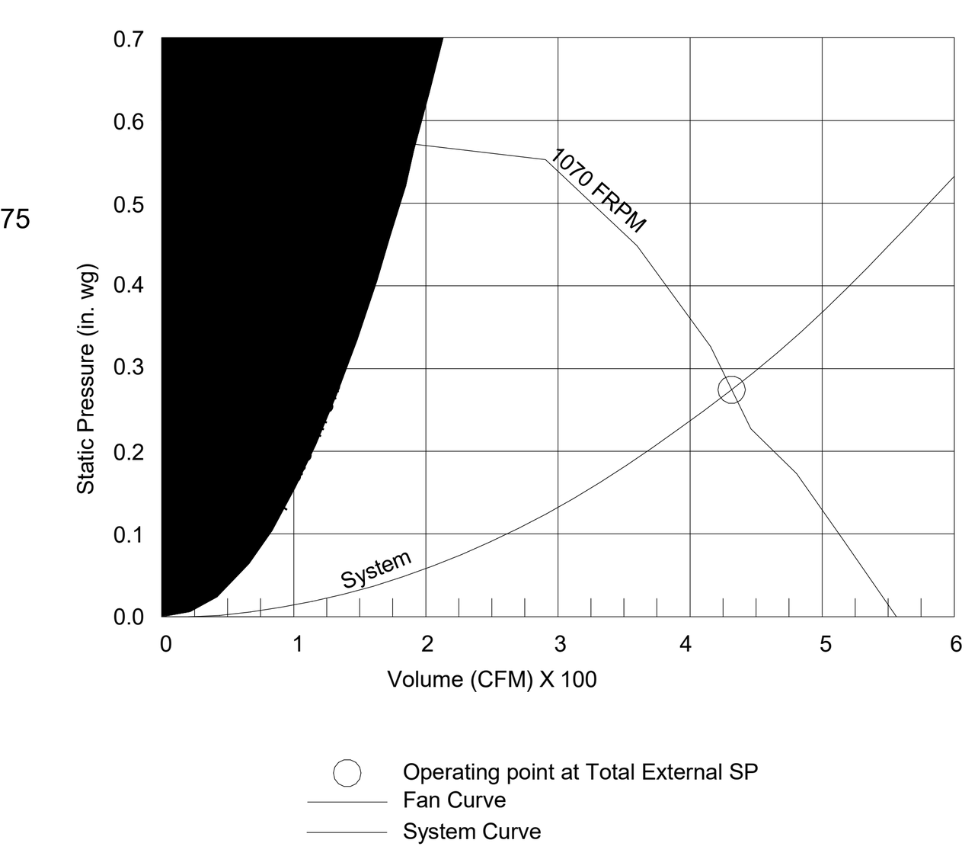
TF-1

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	31
Weight w/ Acc's (lb)	40

Performance	
Requested Volume (CFM)	450
Actual Volume (CFM)	431
Total External SP (in. wg)	0.275
Fan RPM	1070
* FLA (A)	3.3
Elevation (ft)	23
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.075
Sones	4.5

Motor	
Motor Mounted	Yes
** Input Watts (W)	224
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP





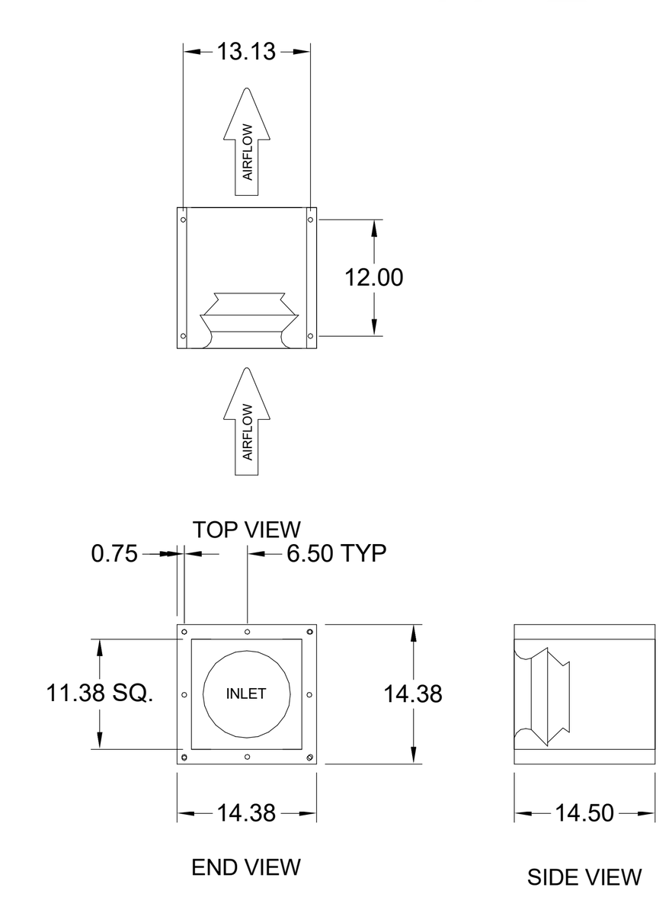
Model: XID-7-VG

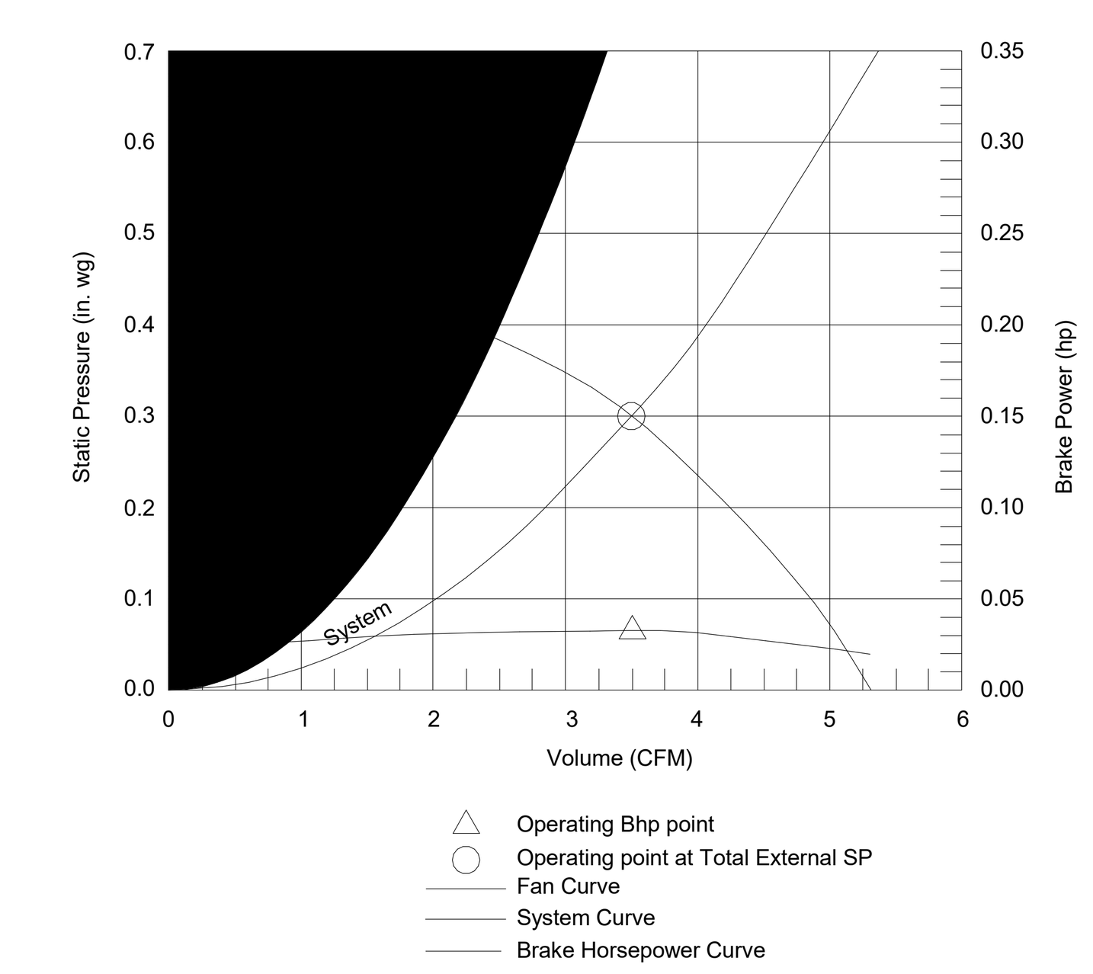
TF-2

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	31
Weight w/ Acc's (lb)	41

Performance	
Requested Volume (CFM)	350
Actual Volume (CFM)	350
Total External SP (in. wg)	0.3
Fan RPM	1603
Operating Power (hp)	0.03
Elevation (ft)	325
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.074

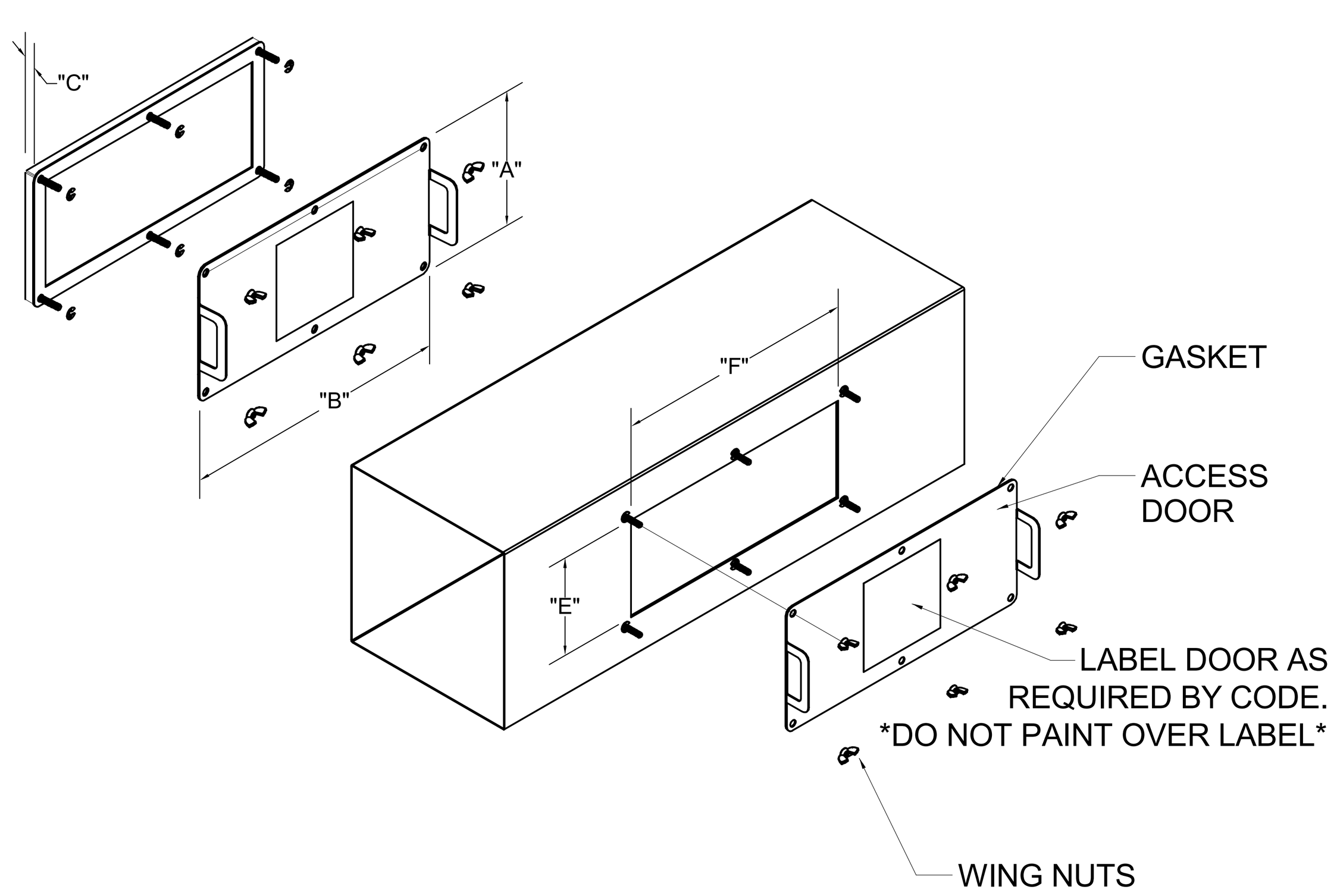
Motor	
Motor Mounted	Yes
Size (hp)	1/15
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV





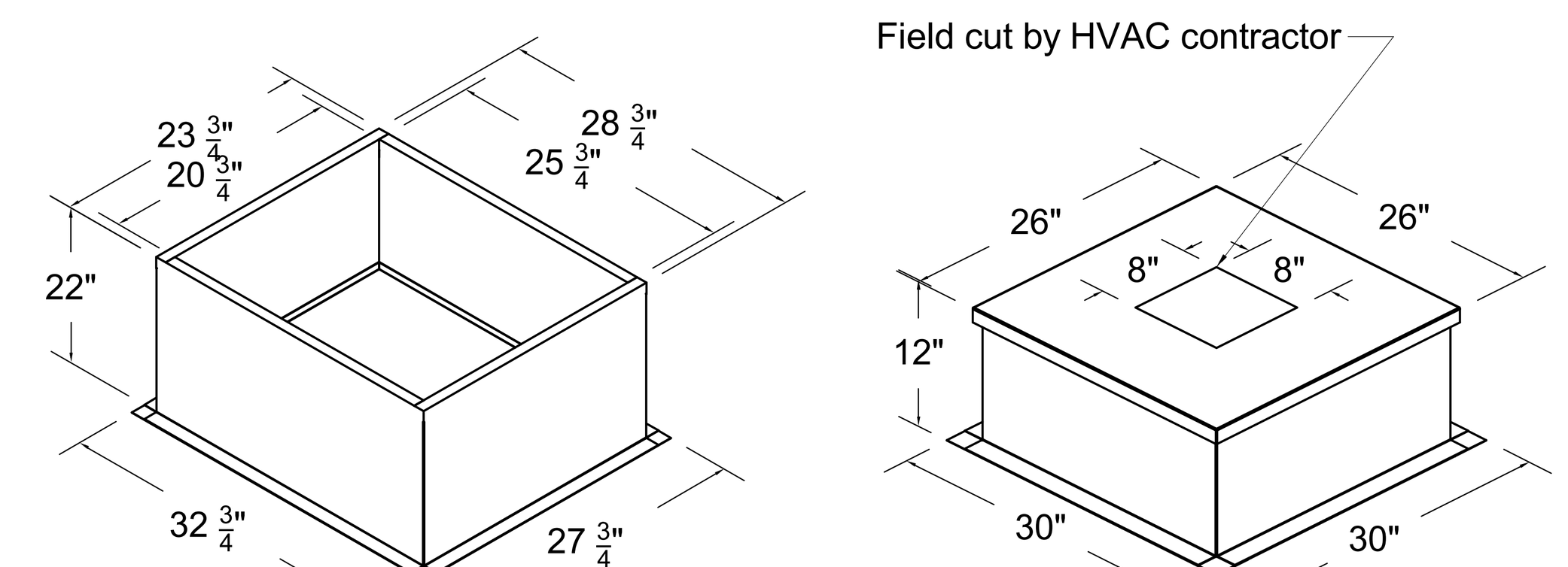
GREASE ACCESS DOOR SCHEDULE					
	DOOR SIZE		OPTIONAL FLANGE	OPENING SIZE	
MODEL	"A"	"B"	"C"	"E"	"F"
KAP0715	7	15	FLAT	5.5	13.5
KAP1015	10	15	1/2	7	12

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 DEGREE GASKET MATERIAL



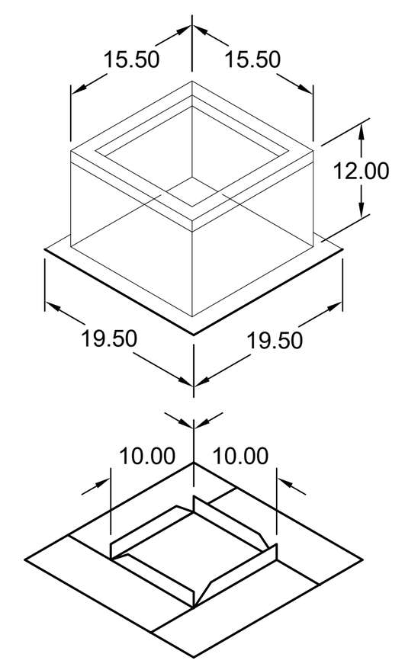
INSTALL PER MANUFACTURER'S INSTRUCTIONS

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 aluminized steel
- Straight Sided without a cant
- 2 in. mounting flange
- Height is 22 in.

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



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

ACCESSORIES				
MATERIAL	SECURITY BARS	LINER	INSULATION (in.)	INSULATION R VALUE
GALVANIZED	NO	NO	1	R4.3

GENERAL							
TAG	QTY	MODEL	SIZING METHOD	UNDERSIZING (in.)	WEIGHT (lb)	SHIPPED ASSEMBLED	UNION LABEL
EF-3	1	GPI-17	NOMINAL	1.5	14	YES	NO PREFERENCE

DIMENSIONS										
CURB HEIGHT (in.)	NOMINAL OUTSIDE WIDTH (in.)	NOMINAL OUTSIDE LENGTH (in.)	ACTUAL OUTSIDE WIDTH (in.)	ACTUAL OUTSIDE LENGTH (in.)	ACTUAL INSIDE WIDTH (in.)	ACTUAL INSIDE LENGTH (in.)	FLANGE WIDTH (in.)	FLANGE LENGTH (in.)	HINGE BASE WIDTH* (in.)	HINGE BASE LENGTH* (in.)
12	17	17	15.5	15.5	12	12		19.5	16	

*MAY NOT BE APPLICABLE

FOR REFERENCE ONLY

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFYING THE FOLLOWING:
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.
NOTE: IF 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.HALTONCOMPANY.COM

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

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

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

PROJECT: **CHICK-FIL-A**
SN#: 06012
LOCATION: WENDELL FALLS FSU
DRAWN BY: DATE: 05/29/2025
SCALE: NTS
Halton Dwg: U25-408-04

Halton
CARE FOR INDOOR AIR

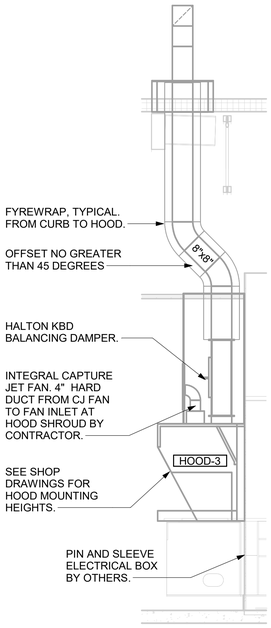
Sheet
MH-1.4

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.

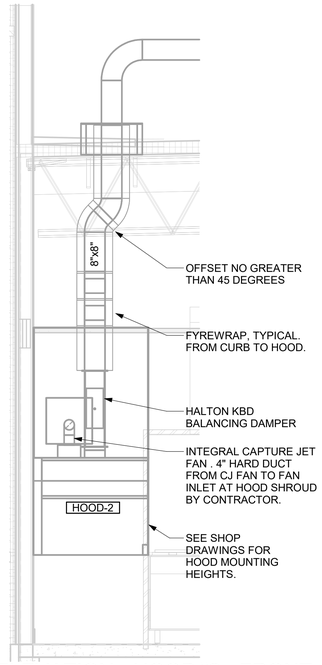
CLEANOUT DOOR NOTE:
DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS. NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED.

CRITICAL:

MOUNT LEFT SIDE OF HOOD#3 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.



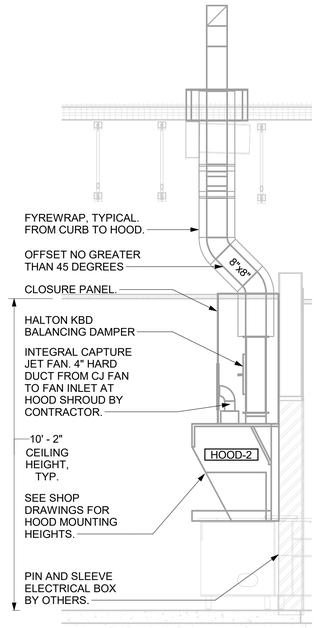
6 HOOD ELEVATION - HOOD#3
NOT TO SCALE



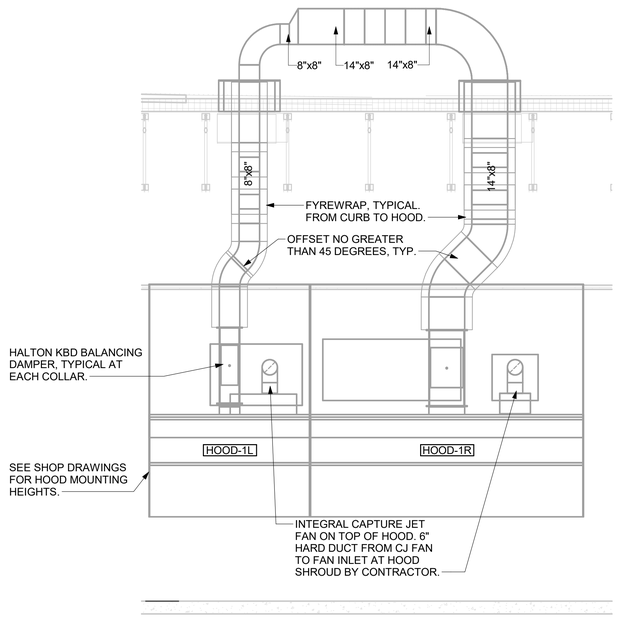
5 HOOD ELEVATION - HOOD#2 - FRONT
NOT TO SCALE

CRITICAL:

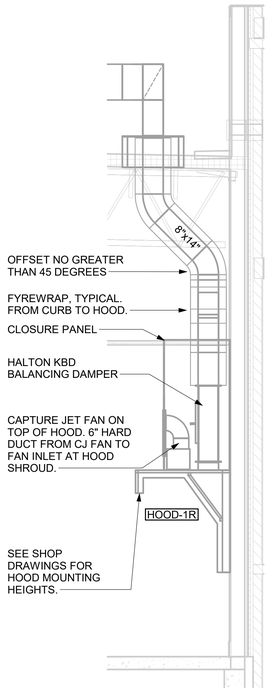
MOUNT RIGHT SIDE OF HOOD#2 FLUSH WITH FINISHED EDGE OF PASS THRU OPENING.



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



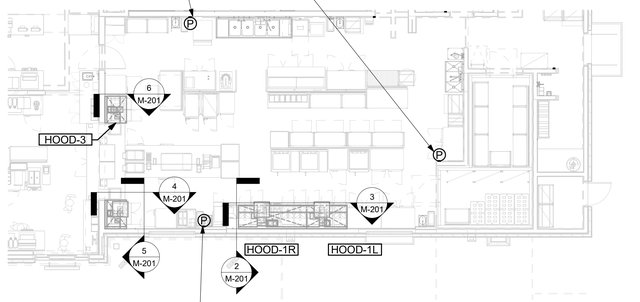
3 HOOD ELEVATION - HOOD#1 - FRONT
NOT TO SCALE



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

PULL STATION SERVING BOTH HOOD#2 AND HOOD#3 ADJACENT TO HANDSINK. LOCATE PULL STATION BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE RED BAKELITE LABEL WITH 1/4" HIGH WHITE LETTERS INDICATING THE HOODS SERVED, I.E.: "PASS THRU HOODS".

PULL STATION SERVING HOOD#1. LOCATE PULL STATION BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE RED BAKELITE LABEL WITH 1/4" HIGH WHITE LETTERS INDICATING THE HOODS SERVED, I.E.: "MAIN COOKLINE HOOD".



PULL STATION SERVING BOTH HOOD#2 AND HOOD#3 ADJACENT TO HANDSINK. LOCATE PULL STATION BETWEEN 42" AND 48" AFF. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. J-BOX AND CONDUIT ARE BY ELECTRICAL. PROVIDE RED BAKELITE LABEL WITH 1/4" HIGH WHITE LETTERS INDICATING THE HOODS SERVED, I.E.: "PASS THRU HOODS".

1 HOOD LAYOUT
NOT TO SCALE

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK L. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR CONSTRUCTION

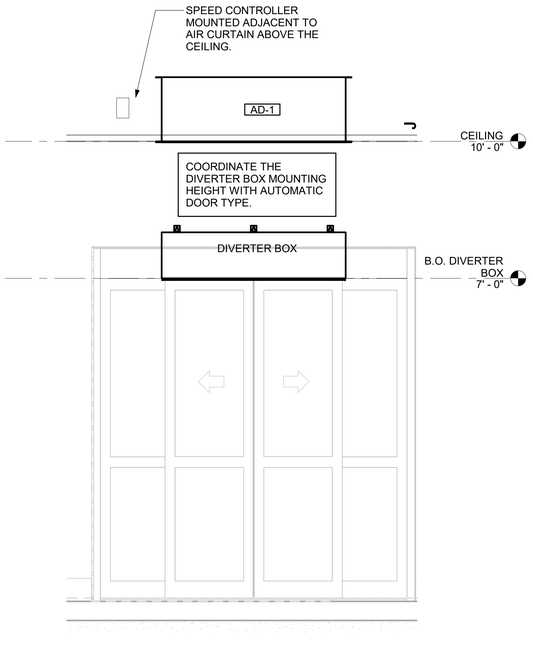
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

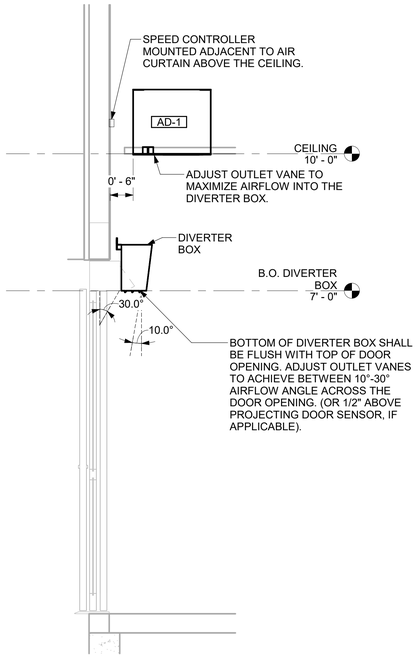
CONSULTANT PROJECT #	24166.EH.S
DATE	05/29/2025
DRAWN BY	BLM

SHEET
EXHAUST HOOD ELEVATIONS

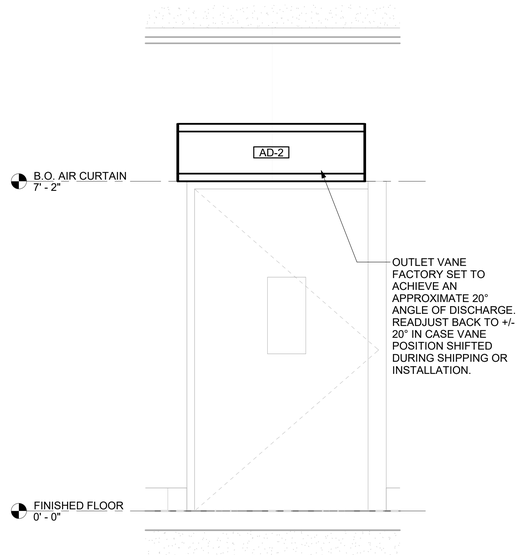
SHEET NUMBER
M-201



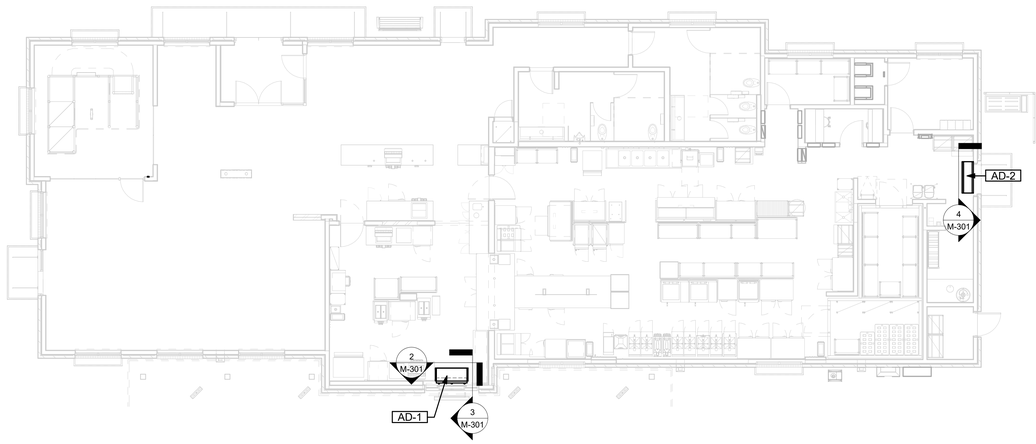
2 AD#1 FRONT VIEW
3/4" = 1'-0"



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



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



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

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR
CONSTRUCTION

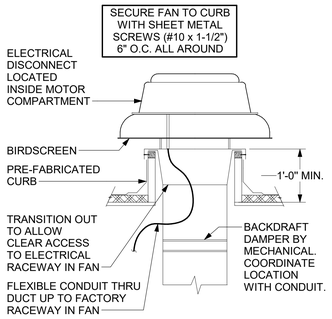
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

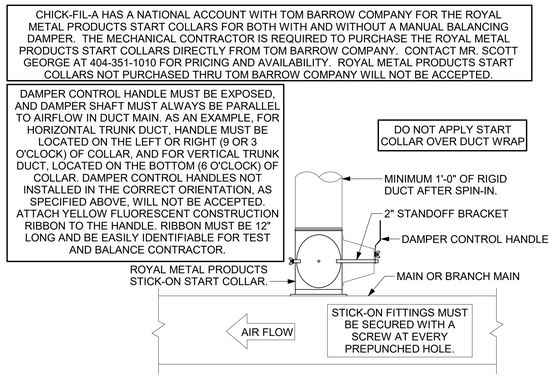
CONSULTANT PROJECT #	24166.EH.S
DATE	05/29/2025
DRAWN BY	BLM

SHEET
SECTIONS

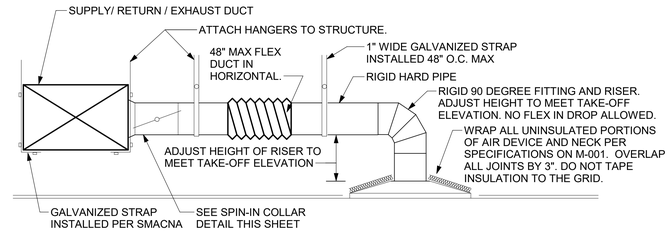
SHEET NUMBER
M-301



3 RESTROOM EXHAUST FAN
NTS



2 START COLLAR
NTS



1 SAG/RAG/GRILLE TAKE-OFF
NTS

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: 25
summer dry bulb: 95

Interior design conditions
winter dry bulb: 69
summer dry bulb: 75
relative humidity: 60%

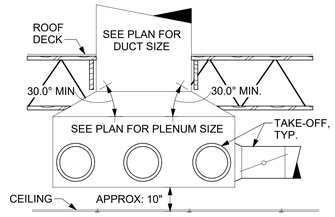
Building heating load: 365,300 BTU/H

Building cooling load: 608,800 BTU/H

Mechanical Spacing Conditioning System
Unitary
description of unit: (5) DX Cooling/Gas Heat Packaged Rooftop Units
heating efficiency: 81% - Gas Heat
cooling efficiency: AC#1: 14.3 IEER || AC#2: 15.4 IEER || AC#3: 15.4 IEER || AC#4: 16.4 SEER2 || AC#5: 16.4 SEER2
size category of unit: AC#1: 25 ton || AC#2: 13 ton || AC#3: 15 ton || AC#4: 4 ton || AC#5: 4 ton
Boiler
Size category. If oversized, state reason.: NA
Chiller
Size category. If oversized, state reason.: NA

List equipment efficiencies: NA

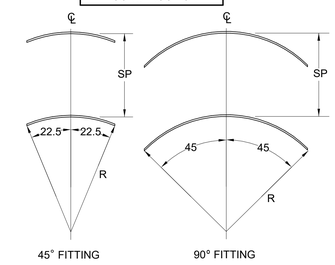
2018 NC Administrative Code and Policies



5 RETURN DROP GEOMETRY
NTS

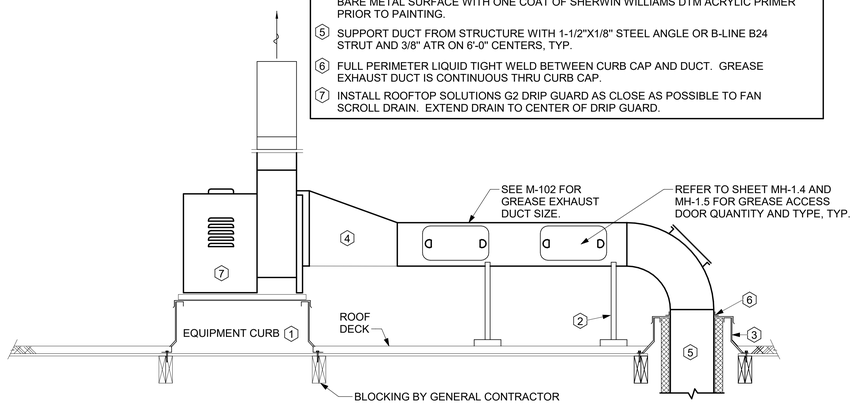
TURNING VANE SCHEDULE		
R	SP	GA
2"	1.5"	24

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



4 TURNING VANES
NTS

KEYED NOTES:
1. 22" EQUIPMENT CURB FURNISHED BY HALTON.
2. 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.
3. 12" HIGH INSULATED CURB FURNISHED BY HALTON. MECHANICAL CONTRACTOR TO PROVIDE MINIMUM 18 GA STAINLESS STEEL CURB CAP AND FLASHING.
4. 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.
5. 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.
6. FULL PERIMETER LIQUID TIGHT WELD BETWEEN CURB CAP AND DUCT. GREASE EXHAUST DUCT IS CONTINUOUS THRU CURB CAP.
7. 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 - UTILITY SET
NTS

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA REGISTERED SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BASE
RELEASE: 25.02
PRINTED FOR CONSTRUCTION

REVISION SCHEDULE

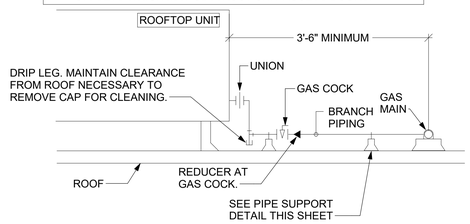
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

SHEET DETAILS

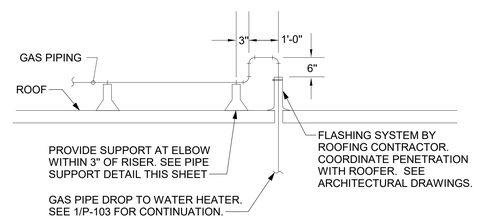
SHEET NUMBER **M-501**

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.

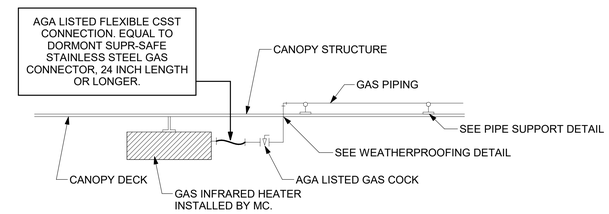


3 GAS PIPING AT RTU
NTS

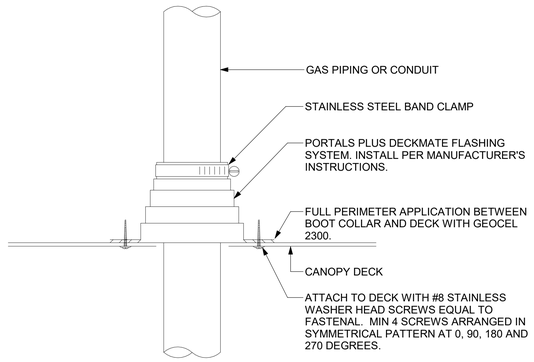
OFFSET PIPING A MINIMUM OF 6" ABOVE TOP EDGE OF FLASHING.



2 GAS PIPE DROP TO WATER HEATER
NTS



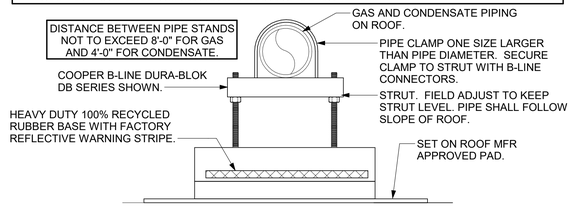
1 GAS CONNECTION AT APPLIANCE
NTS



6 WEATHERPROOFING AT CANOPY PENETRATION
NTS

5 CONDENSATE DRAIN PIPING
NTS

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
NTS

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BASE
RELEASE: 25.02
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	24166.EH.S
DATE	05/29/2025
DRAWN BY	BLM

SHEET
DETAILS

SHEET NUMBER
M-502

VENTILATION SCHEDULE

General			Ventilation												Exhaust							
			People				Area								Area		Toilet					
Room #	Room Name	Area Az ft2	Occupant Density People/1,000 ft2	Occupants People Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz	Primary Zone Airflow CFM Vpz	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/ Operation	Fixture Exhaust Rate CFM/Fixture	Required Fixture Exhaust CFM	Actual Exhaust CFM	Served by Supply	Served by Exhaust
1	Kitchen	1,291	20	26	7.5	195	0.12	155	350	0.8	438	8,125	0.05	1,750	0.7	904	-	-	-	3,315	AC-1L / AC-1T	EF-1 / EF-2
	Total Area	**1,291**				**Total Vbz**			**350**	**Total Supply Airflow**		**8,125**		**1,750**	**Actual Outdoor Airflow**							
						Diversity (D)			**1.00**			**Maximum Zp**		**0.05**								
						Uncorrected Outdoor Air Intake (Vou)			**350**	**System Ventilation Efficiency (Ev)**				**1.00**								
						Required Outdoor Air Intake (CFM)						**350**										

VENTILATION SCHEDULE

General			Ventilation												Exhaust							
			People				Area								Area		Toilet					
Room #	Room Name	Area Az ft2	Occupant Density People/1,000 ft2	Occupants People Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz	Primary Zone Airflow CFM Vpz	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/ Operation	Fixture Exhaust Rate CFM/Fixture	Required Fixture Exhaust CFM	Actual Exhaust CFM	Served by Supply	Served by Exhaust
2	Meal Fulfillment Area	422	15	7	7.5	52.5	0.12	51	104	0.8	130	4,500	0.03	975	-	-	-	-	-	-	AC-2L / AC-2T	-
	Total Area	**422**				**Total Vbz**			**104**	**Total Supply Airflow**		**4,500**		**975**	**Actual Outdoor Airflow**							
						Diversity (D)			**1.00**			**Maximum Zp**		**0.03**								
						Uncorrected Outdoor Air Intake (Vou)			**104**	**System Ventilation Efficiency (Ev)**				**1.00**								
						Required Outdoor Air Intake (CFM)						**104**										

VENTILATION SCHEDULE

General			Ventilation												Exhaust							
			People				Area								Area		Toilet					
Room #	Room Name	Area Az ft2	Occupant Density People/1,000 ft2	Occupants People Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz	Primary Zone Airflow CFM Vpz	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/ Operation	Fixture Exhaust Rate CFM/Fixture	Required Fixture Exhaust CFM	Actual Exhaust CFM	Served by Supply	Served by Exhaust
3	Dining	995	100	100	7.5	750	0.18	179	929	0.8	1,161	3,700	0.31	899	-	-	-	-	-	-	AC-3L / AC-3T	-
4	Serving	587	15	9	7.5	68	0.12	70	138	0.8	173	1,250	0.14	304	-	-	-	-	-	-	AC-3L / AC-3T	-
5	Men's RR	180	-	-	-	-	-	-	-	0.8	-	100	-	24	-	-	Continuous	50	150	180	AC-3L / AC-3T	EF-3
6	Women's RR	200	-	-	-	-	-	-	-	0.8	-	100	-	24	-	-	Continuous	50	150	180	AC-3L / AC-3T	EF-3
7	RR Vestibule	107	-	-	-	-	0.06	6	6	0.8	9	100	0.09	24	-	-	-	-	-	-	AC-3L / AC-3T	-
	Total Area	**2,069**				**Total Vbz**			**1,073**	**Total Supply Airflow**		**5,250**		**1,275**	**Actual Outdoor Airflow**							
						Diversity (D)			**0.92**			**Maximum Zp**		**0.31**								
						Uncorrected Outdoor Air Intake (Vou)			**1,008**	**System Ventilation Efficiency (Ev)**				**0.80**								
						Required Outdoor Air Intake (CFM)						**1,260**										

VENTILATION SCHEDULE

General			Ventilation												Exhaust							
			People				Area								Area		Toilet					
Room #	Room Name	Area Az ft2	Occupant Density People/1,000 ft2	Occupants People Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz	Primary Zone Airflow CFM Vpz	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/ Operation	Fixture Exhaust Rate CFM/Fixture	Required Fixture Exhaust CFM	Actual Exhaust CFM	Served by Supply	Served by Exhaust
8	Team Member Room	108	50	6	5	30	0.06	7	36	0.8	45	275	0.16	35	-	-	-	-	-	-	AC-4L / AC-4T	-
9	Riser Room	42	-	-	-	-	0.12	5	5	0.8	7	200	0.04	26	-	-	-	-	-	-	AC-4L / AC-4T	-
10	Service / Beverage	195	-	-	-	-	0.12	24	24	0.8	30	550	0.05	71	-	-	-	-	-	-	AC-4L / AC-4T	-
11	Office	44	5	1	5	5	0.06	3	8	0.8	10	175	0.06	23	-	-	-	-	-	-	AC-4L / AC-4T	-
12	Flex	62	-	-	-	-	0.12	8	8	0.8	10	200	0.05	25	-	-	-	-	-	-	AC-4L / AC-4T	-
	Total Area	**451**				**Total Vbz**			**81**	**Total Supply Airflow**		**1,400**		**180**	**Actual Outdoor Airflow**							
						Diversity (D)			**1.00**			**Maximum Zp**		**0.16**								
						Uncorrected Outdoor Air Intake (Vou)			**81**	**System Ventilation Efficiency (Ev)**				**0.90**								
						Required Outdoor Air Intake (CFM)						**90**										

VENTILATION SCHEDULE

General			Ventilation												Exhaust							
			People				Area								Area		Toilet					
Room #	Room Name	Area Az ft2	Occupant Density People/1,000 ft2	Occupants People Pz	Outdoor Airflow Rate CFM/Person Rp	Outdoor Airflow CFM Pz x Rp	Outdoor Airflow Rate CFM/ft2 Ra	Outdoor Airflow CFM Az x Ra	Breathing Zone Outdoor Airflow CFM Vbz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Airflow CFM Voz	Primary Zone Airflow CFM Vpz	Primary Outdoor Air Fraction Zp	Actual Outdoor Airflow CFM	Required Exhaust Rate CFM/ft2	Total Required Exhaust CFM	Exhaust Control/ Operation	Fixture Exhaust Rate CFM/Fixture	Required Fixture Exhaust CFM	Actual Exhaust CFM	Served by Supply	Served by Exhaust
13	Play	265	7	2	20	40	0.18	48	68	0.8	85	1,300	0.07	150	-	-	-	-	-	-	AC-5L / AC-5T	-
	Total Area	**265**				**Total Vbz**			**68**	**Total Supply Airflow**		**1,300**		**150**	**Actual Outdoor Airflow**							
						Diversity (D)			**1.00**			**Maximum Zp**		**0.07**								
						Uncorrected Outdoor Air Intake (Vou)			**68**	**System Ventilation Efficiency (Ev)**				**1.00**								
						Required Outdoor Air Intake (CFM)						**68**										

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
PRINTED FOR CONSTRUCTION

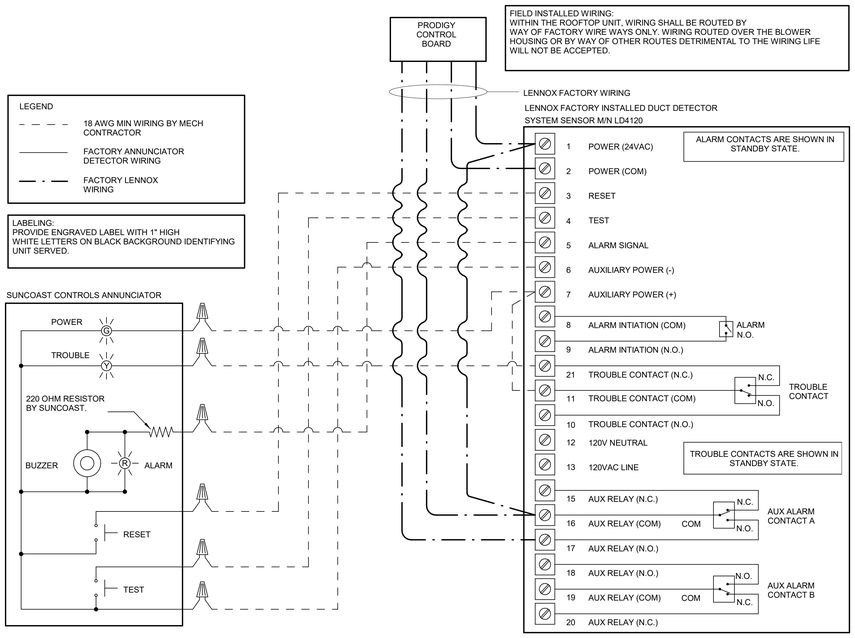
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

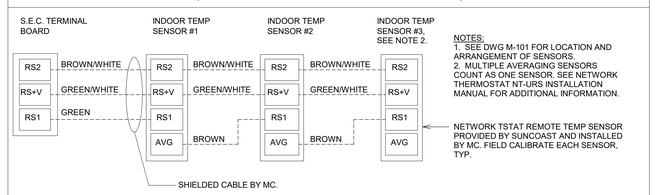
SHEET
HVAC VENTILATION SCHEDULES

SHEET NUMBER
M-602



1 SMOKE DETECTOR AND ANNUNCIATOR WIRING - LENNOX
NTS

AVERAGING SENSORS (WHERE SHOWN ON PLANS)



KEYED NOTES:

1. LOW VOLTAGE WIRING TO RTU TO BE ROUTED TO UNIT THRU FACTORY WIREWAY.

2. WIRING TO HUMIDITY SENSOR TO BE MADE WITH SINGLE 18/2 SENSOR CABLE: BELDEN 8760 OR EQUAL. HUMIDITROL INTERFACE TO SET RELATIVE HUMIDITY. SET TO 60%.

3. NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. SENSOR IS INTENDED TO BE SURFACE MOUNTED AND DOES NOT REQUIRE A SINGLE GANG BOX OR CONDUIT. FIELD CALIBRATE EACH SENSOR. SEAL CABLE PENETRATION AT ALL WALL LOCATIONS.

4. FACTORY WIRING IN SUNCOAST T-500 PANEL NOT SHOWN FOR CLARITY. SEE SUNCOAST WIRING DIAGRAM FOR ADDITIONAL INFORMATION.

NOTES:

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

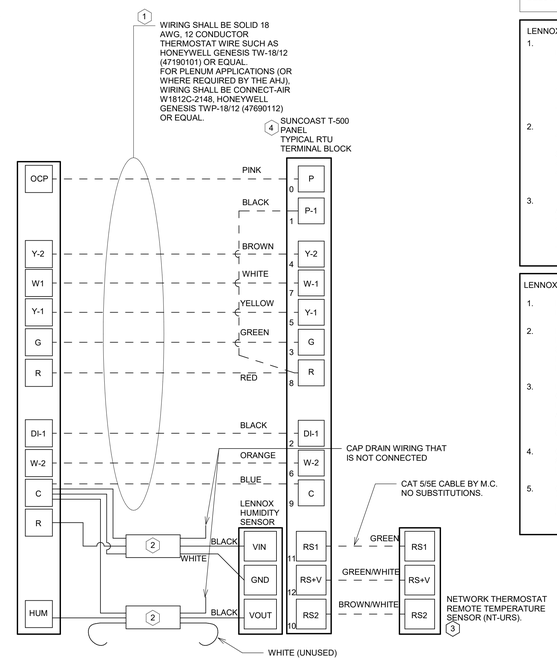
2. SEE DETAILS ON THIS SHEET FOR SMOKE DETECTOR AND ANNUNCIATOR WIRING.

3. SET ALL THERMOSTATS TO AUTO CHANGEOVER.

4. PROVIDE PLASTIC ENGRAVABLE AT ALL SENSORS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKROUND (E.G., "AC#2 HUMIDITY SENSOR" OR "AC#2 TEMP SENSOR"). PLACE LABELS ON WALL DIRECTLY ABOVE OR BELOW THE SENSOR. DO NOT APPLY LABEL DIRECTLY TO DEVICE.

LEGEND

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



LENNOX PRODIGY 2.0 OR CORE UNIT CONTROLLER SETTINGS:

1. FOR ALL RTUs, 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

2. FOR HUMIDITROL UNITS THE MENU PATH IS:
   - MAIN MENU > SETTINGS > RTU OPTIONS > DEHUMIDIFIER MODE > NO CONDITIONS

   SELECT LOCAL SENSOR AND SAVE
   - SET POINT (#106): 60%
   - DEHUMID DEADBAND (#107): 3%

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

LENNOX FRESH AIR TEMPERING SETUP (IF SPECIFIED):

1. INSTALL FRESH AIR TEMPERING KIT WIRING HARNESS AS RECOMMENDED BY LENNOX.

2. LOCATE SUPPLY AIR TEMPERATURE SENSOR IN SUPPLY DUCT DOWNSTREAM OF FIRST ELBOW. SECURE WIRING TO DUCT OR STRUCTURE WITH RUBBER COATED CLAMPS. DO NOT RUN WIRING INSIDE DUCT WORK. PROTECT ALL WIRING PENETRATIONS WITH RUBBER GROMMETS.

3. FOR PRODIGY 2.0 OR CORE UNIT CONTROLLER WITHIN MAIN MENU GO TO SET-UP TO TEST AND BALANCE TO DAMPER. FOLLOW MENU PATH SET FRESH AIR HEATING ENABLE TO "YES"
   A. SET FAH SETPOINT TO 60F FOR AC#1
   B. SET FAH SETPOINT TO 62F FOR AC#2
   C. SET FAH SETPOINT TO 63F FOR AC#3, AC#4, AND AC#5

4. CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER #157. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER VALUE TO 5 FOR A 5 DEG DEADBAND AND SAVE.

5. CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER # 158. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER ADJUST VALUE TO 300 SECONDS FOR 5 MINUTE CYCLE TIME AND SAVE.

2 ROOFTOP UNIT CONTROL WIRING - LENNOX
NTS

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BASE
RELEASE: 25.02
PRINTED FOR
CONSTRUCTION

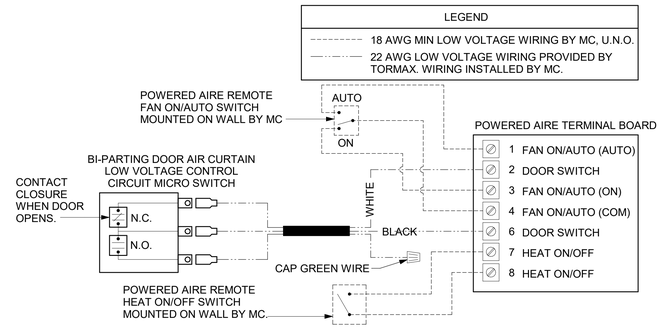
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

SHEET
CONTROL WIRING DIAGRAMS - LENNOX

SHEET NUMBER
M-701L



2 AIR CURTAIN WIRING DIAGRAM
NTS

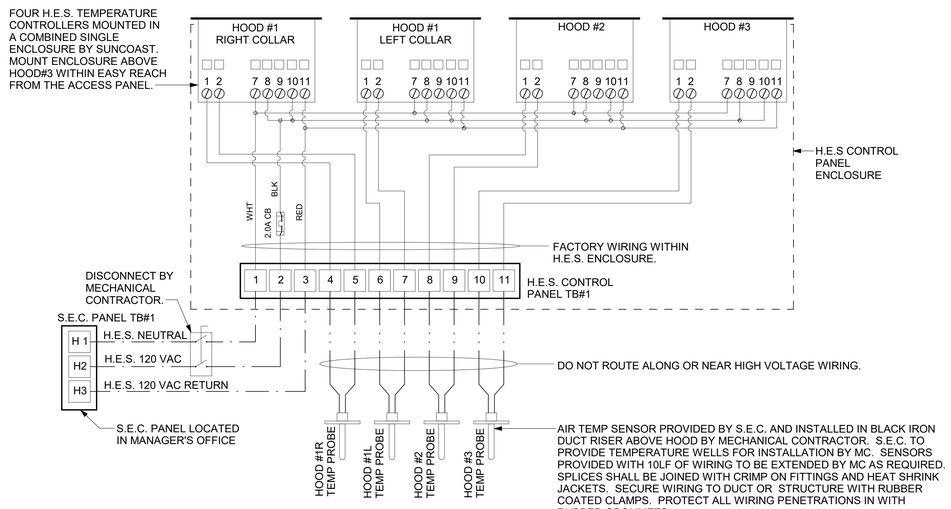
LEGEND	
S.E.C.	SUNCOAST ENVIRONMENTAL CONTROLS CFA-500 ENERGY MGT PANEL
H.E.S.	SUNCOAST ENVIRONMENTAL CONTROLS HOOD EXHAUST SAFETY CONTOLLER
M.C.	MECHANICAL CONTRACTOR
———	18 AWG MIN UNSHIELDED LOW VOLTAGE WIRING BY MC, U.N.O.
— · —	120 VAC WIRING BY MECHANICAL CONTRACTOR

GENERAL NOTES

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

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

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



1 HOOD EXHAUST SAFETY SYSTEM WIRING
NTS

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

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

KURZYNSKE & ASSOCIATES LICENSE NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BASE
RELEASE: 25.02
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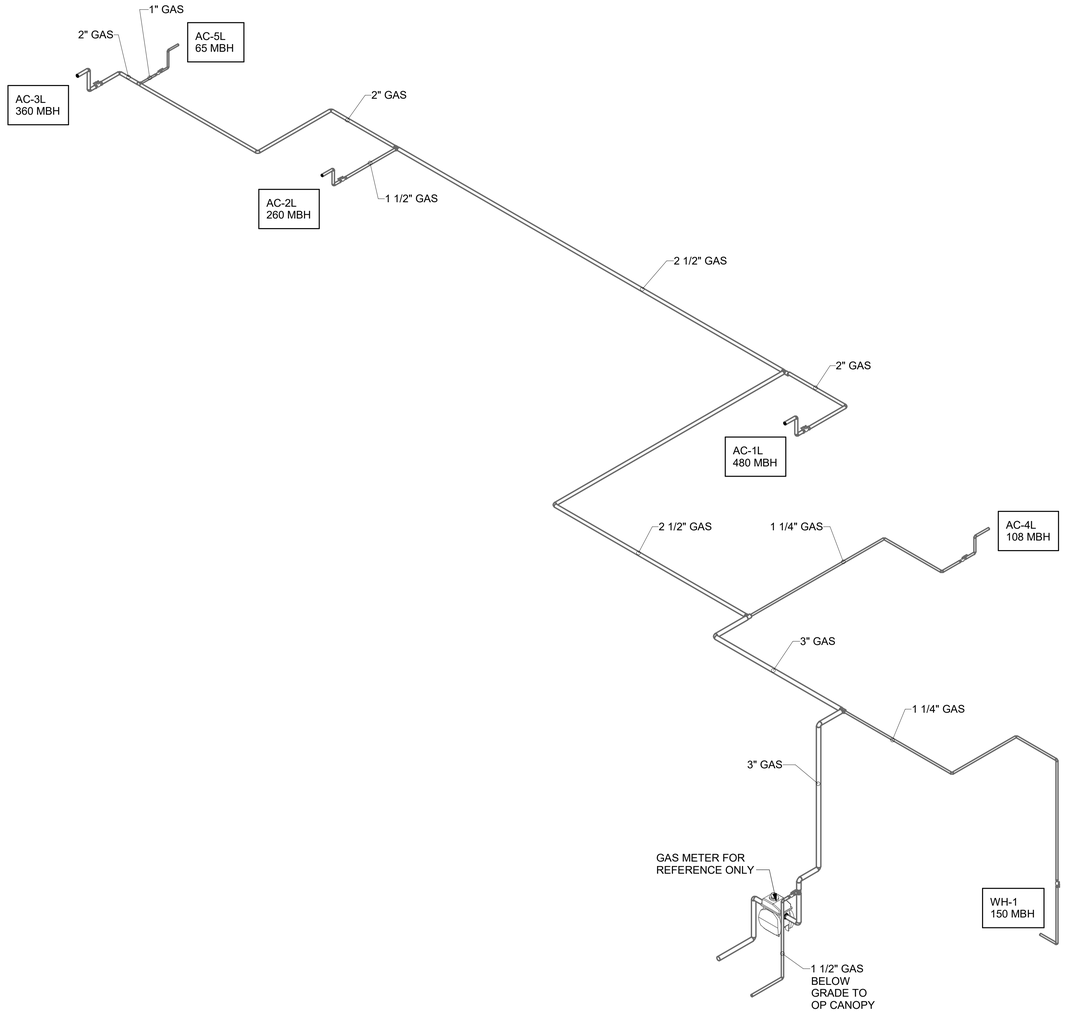
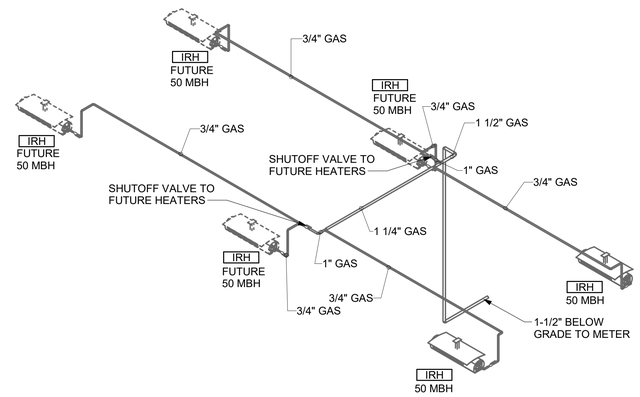
CONSULTANT PROJECT # 24166.EH.S
DATE 05/29/2025
DRAWN BY BLM

SHEET
CONTROL WIRING DIAGRAMS

SHEET NUMBER
M-702



1 GAS PIPING ISOMETRIC - LENNOX



2 ORDER CANOPY PIPING ISOMETRIC - LENNOX

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

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

KURZYNSKE & ASSOCIATES LICENSE
NO. F-0823, EXPIRES 12/31/25

NORTH CAROLINA PROFESSIONAL SEAL 20575 ENGINEER MARK T. KURZYNSKE

07/02/25

CHICK-FIL-A
WENDELL FALLS FSU

2100 TREELIGHT WAY
WENDELL, NC 28412

FSR#06012

BUILDING TYPE / SIZE: P14 LSR BN
RELEASE: 25.02
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REVISION SCHEDULE

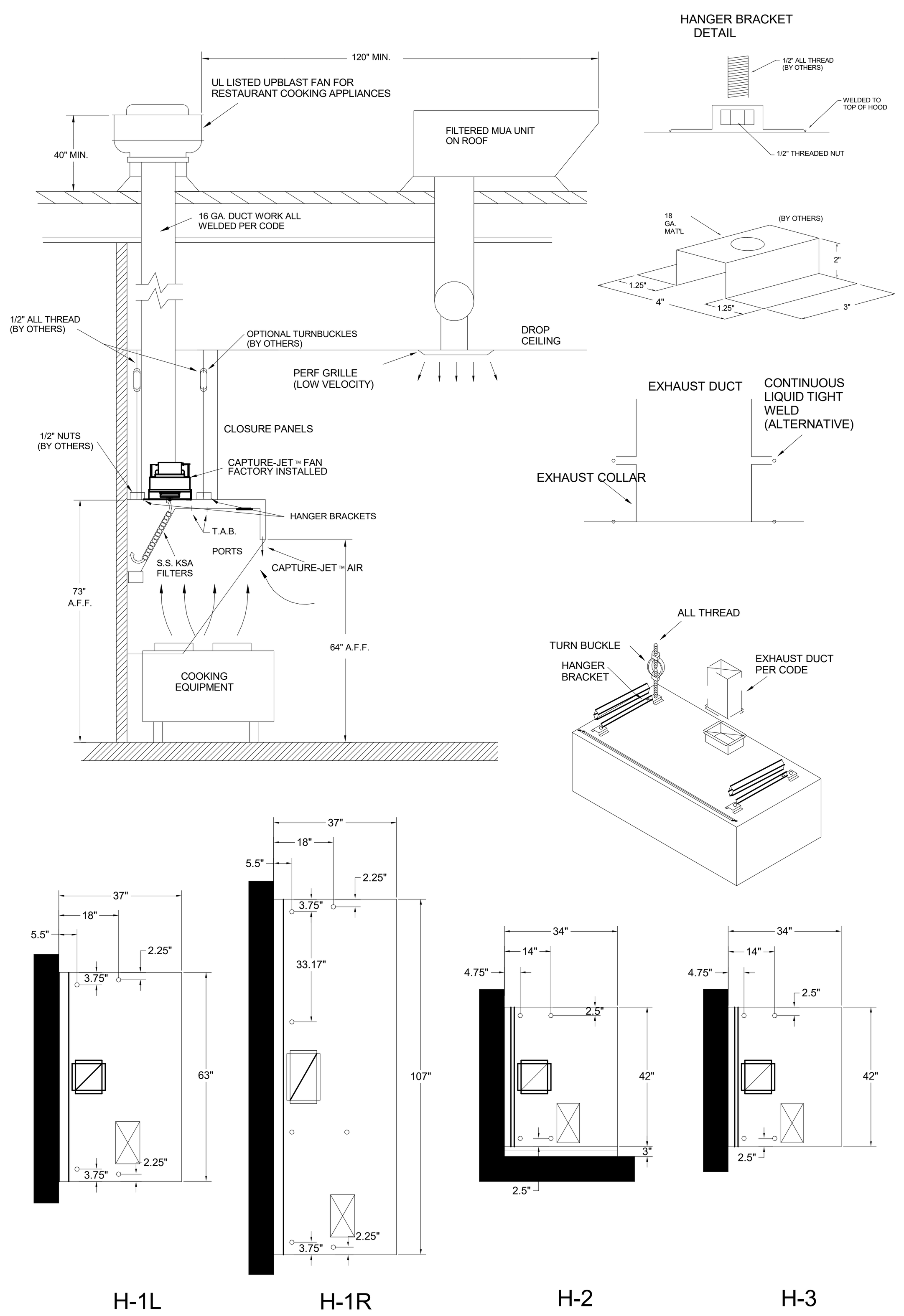
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	24166.EH.S
DATE	05/29/2025
DRAWN BY	BLM

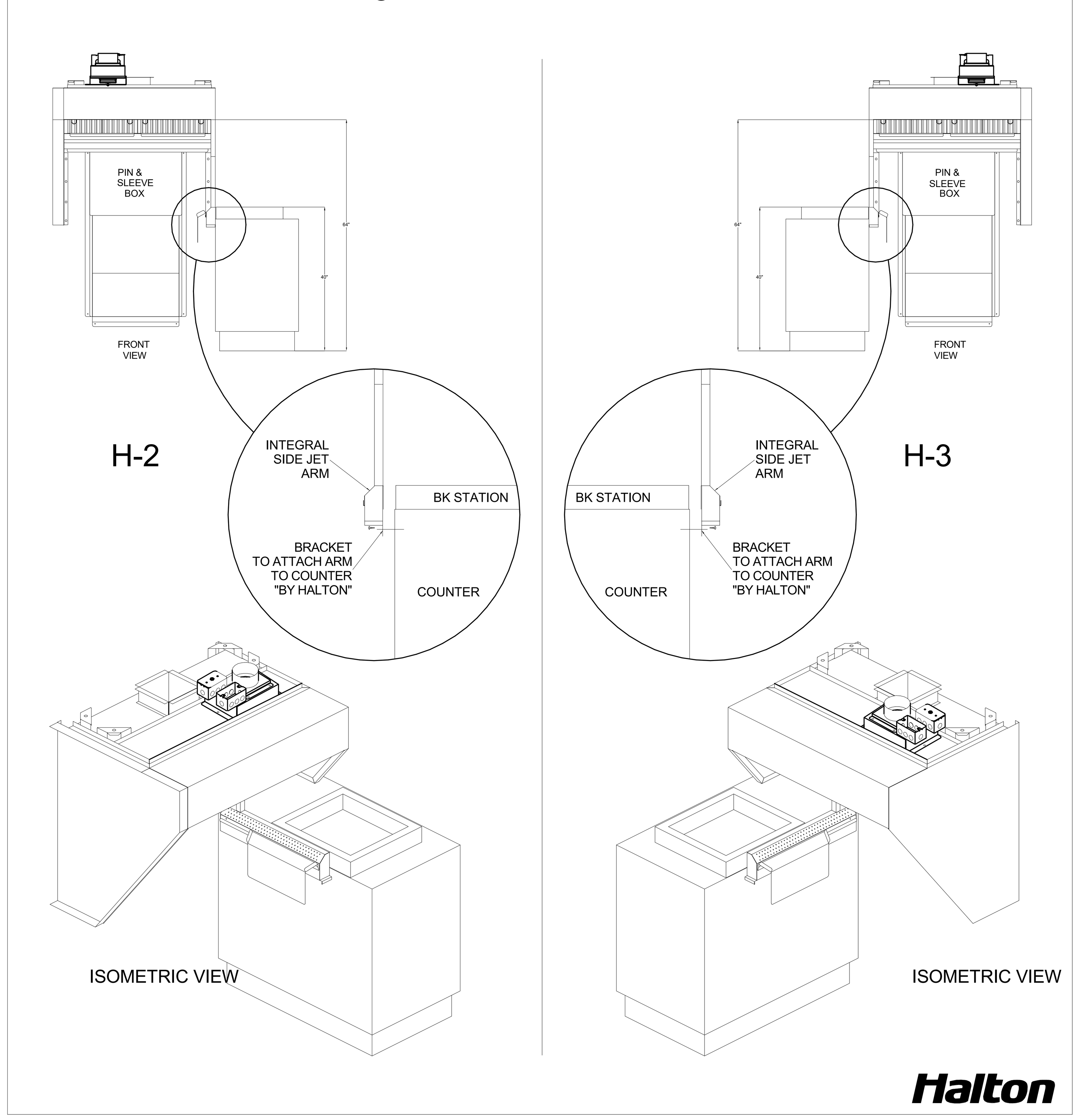
SHEET
GAS PIPING ISOMETRICS - LENNOX

SHEET NUMBER
M-901L

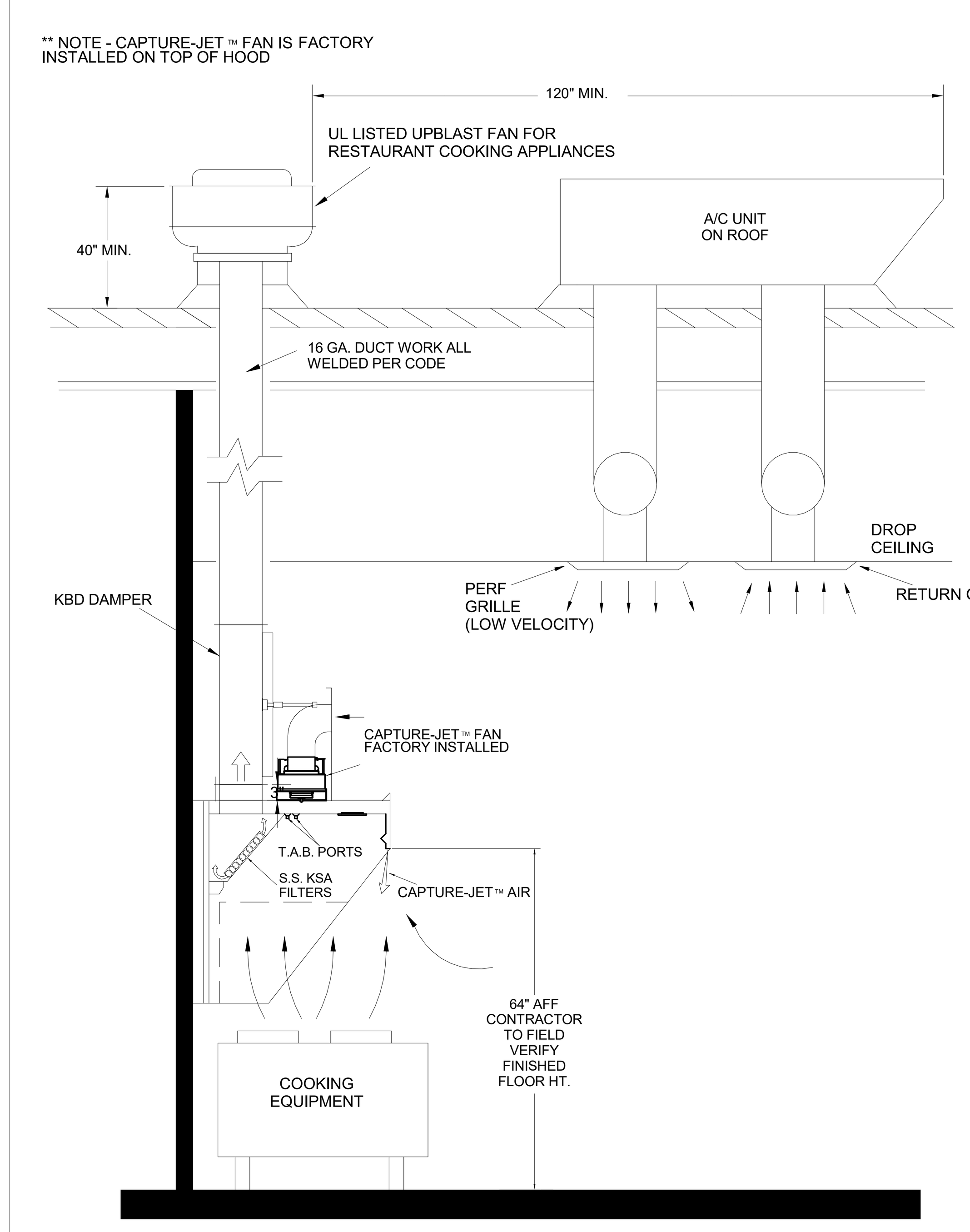
HANGER BRACKET DETAIL



Integral Side Jet Arm



TYPICAL INSTALLATION

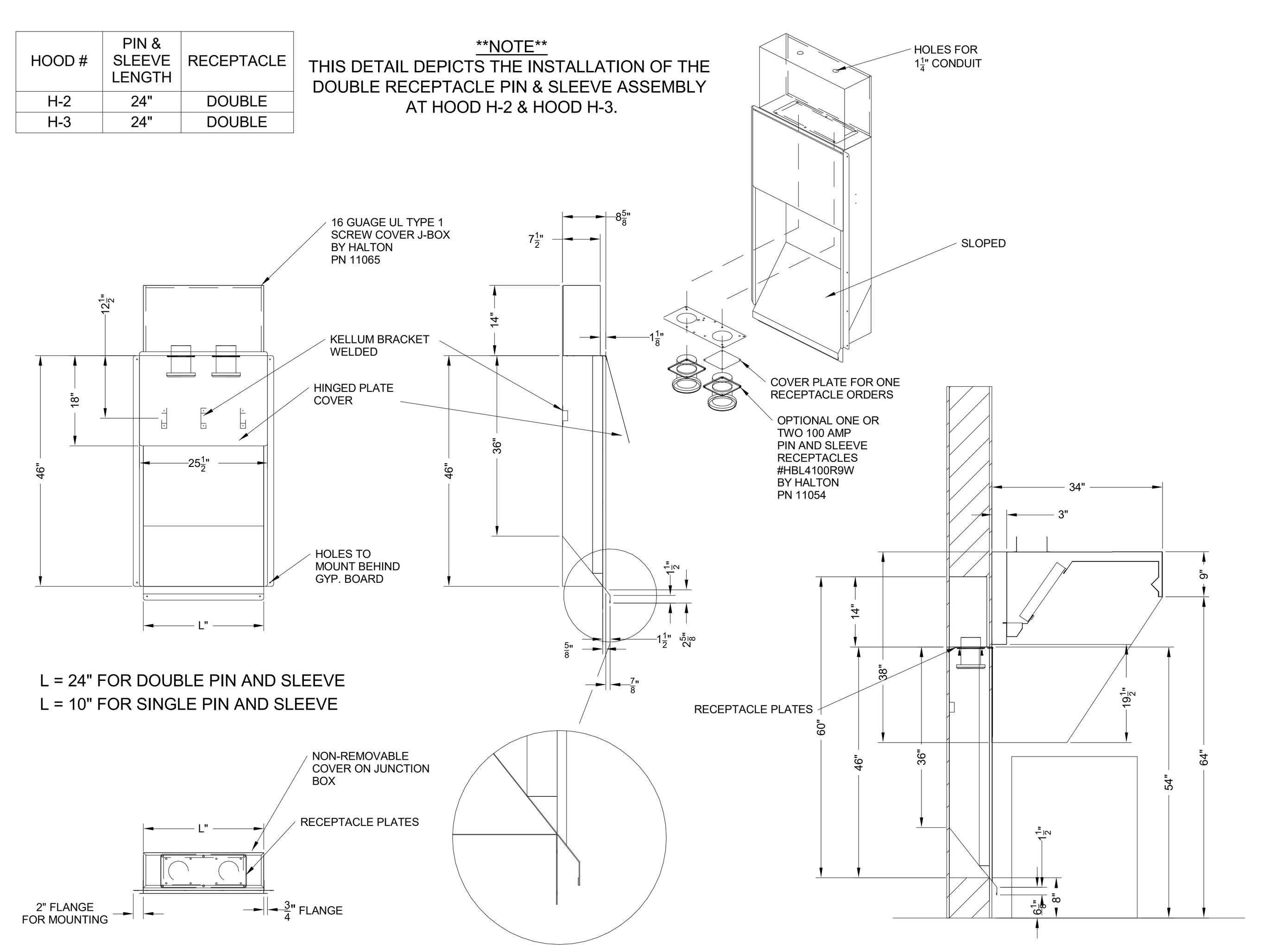


4105A

PIN & SLEEVE BOX DETAIL

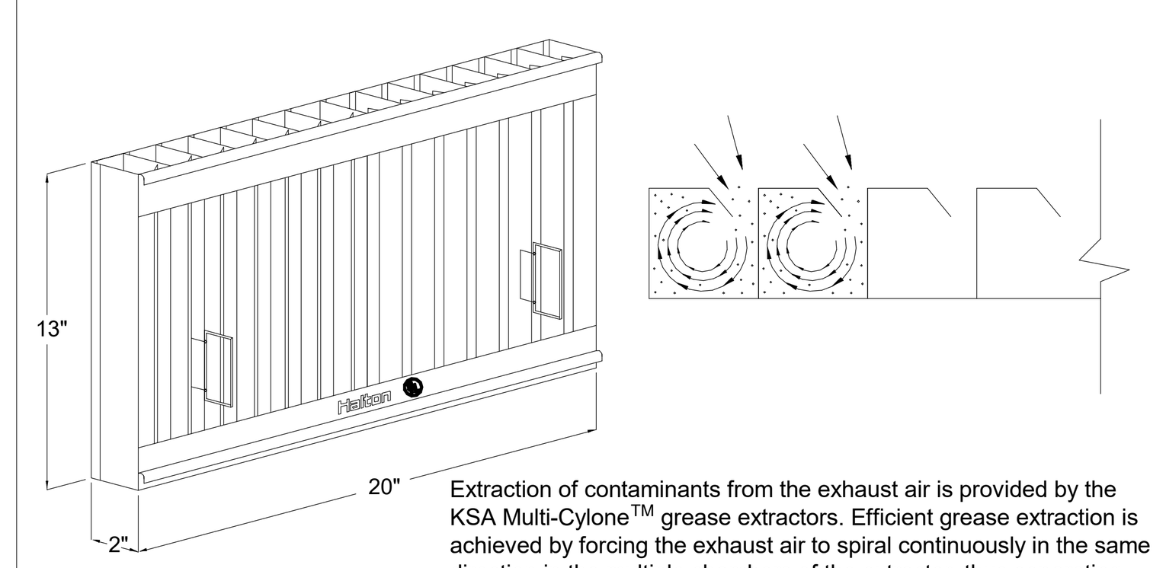
HOOD #	PIN & SLEEVE LENGTH	RECEPTACLE
H-2	24"	DOUBLE
H-3	24"	DOUBLE

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

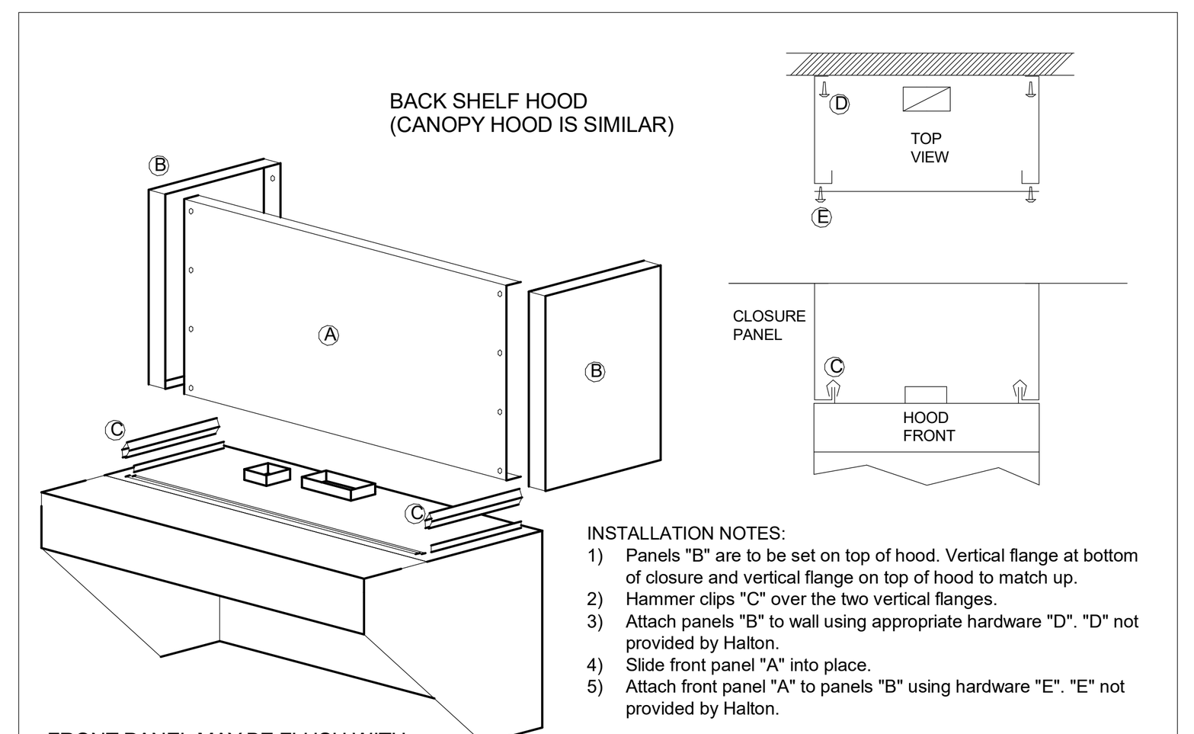


L = 24" FOR DOUBLE PIN AND SLEEVE
L = 10" FOR SINGLE PIN AND SLEEVE

KSA Grease Extractor



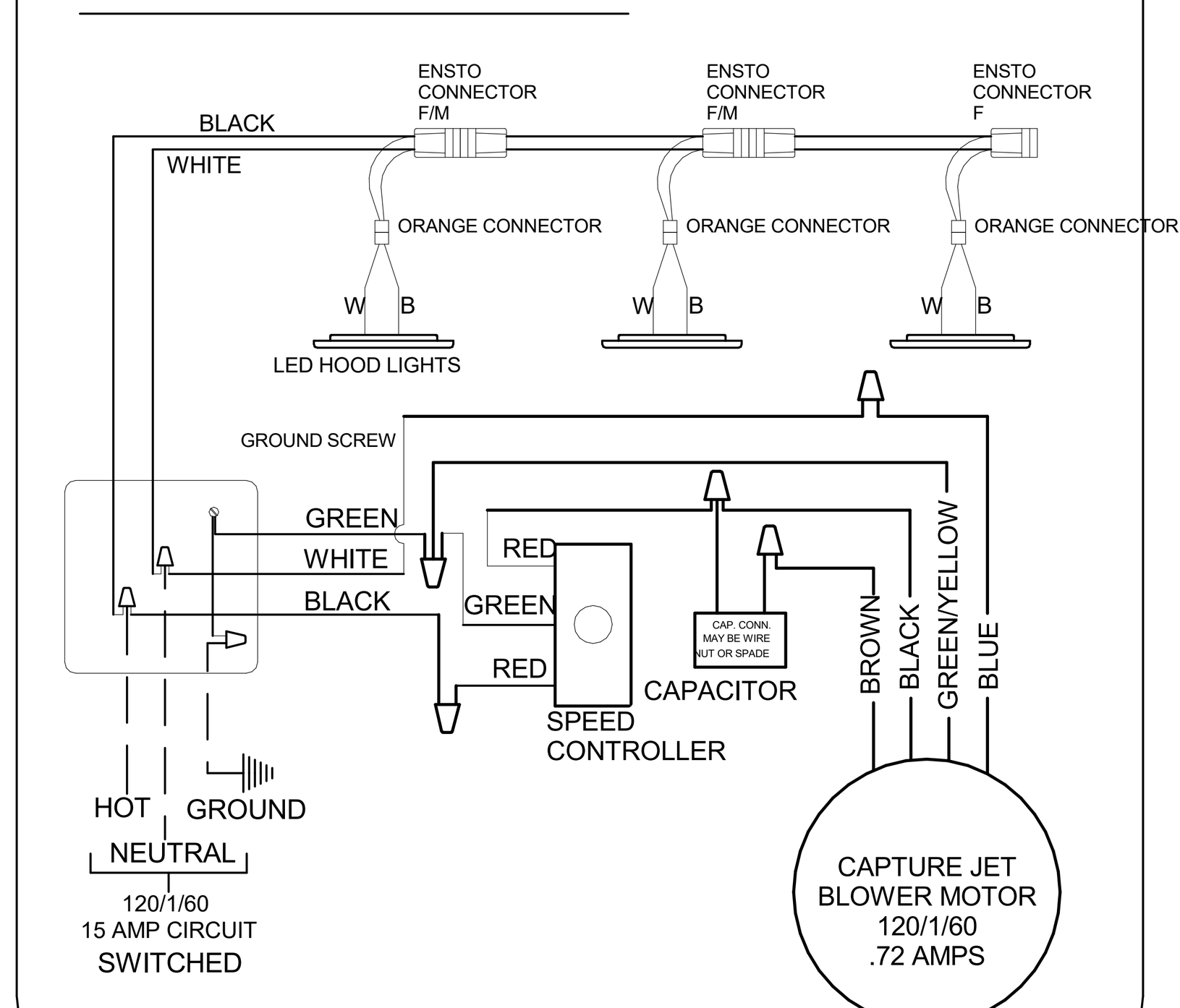
Extraction of contaminants from the exhaust air is provided by the KSA Multi-Cyclone™ grease extractors. Efficient grease extraction is achieved by forcing the exhaust air to spiral continuously in the same direction in the multiple chambers of the extractor, thus separating the grease particles from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



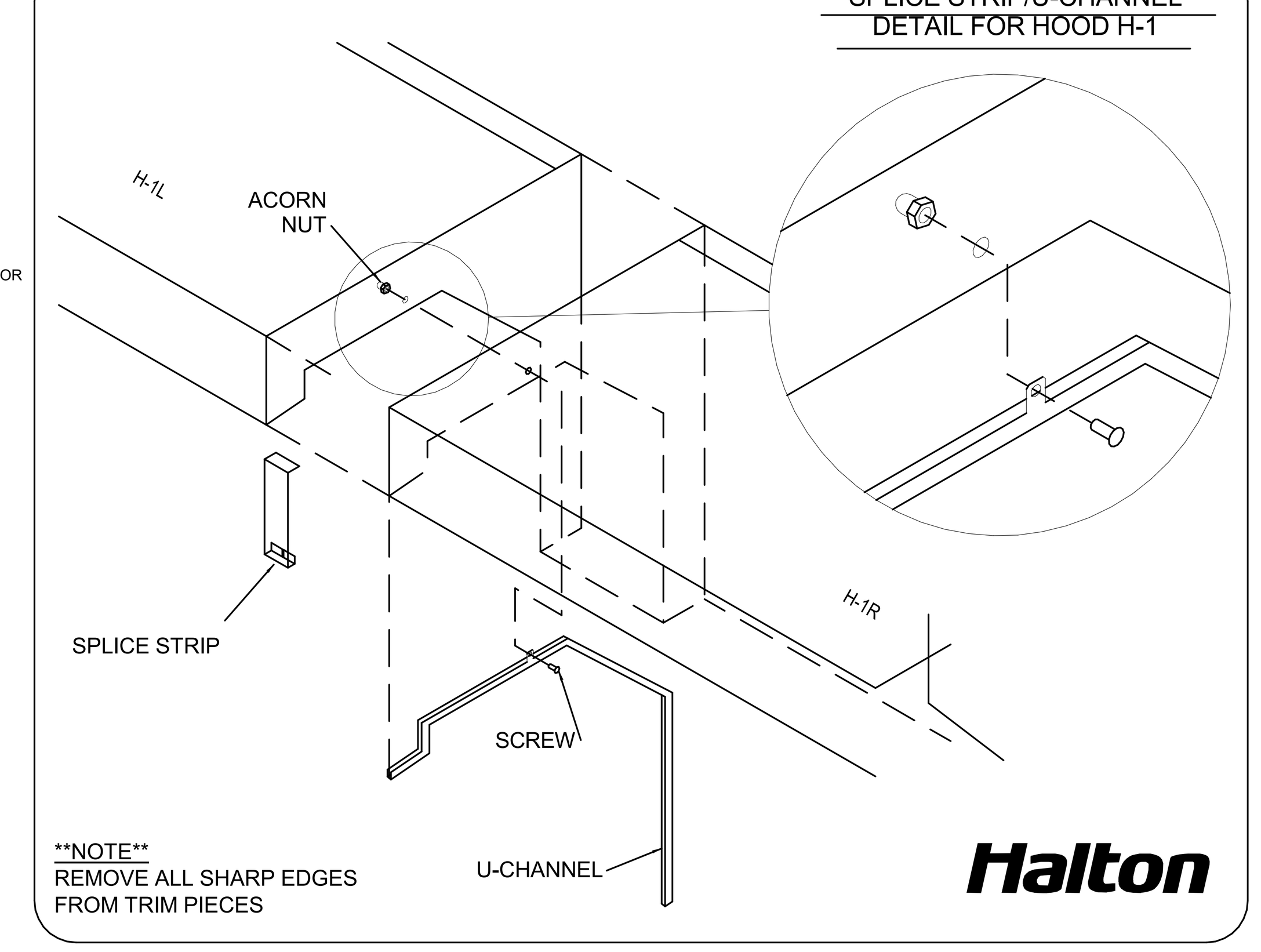
INSTALLATION NOTES:
1) Panels "B" are to be set on top of hood. Vertical flange at bottom of closure and vertical flange on top of hood to match up.
2) Hammer clips "C" over the two vertical flanges.
3) Attach panels "B" to wall using appropriate hardware "D". "D" not provided by Halton.
4) Slide front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

FIG: #2

TYPICAL WIRING OF CAPTURE-JET FAN



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



NOTE
REMOVE ALL SHARP EDGES FROM TRIM PIECES

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

NSF Halton ETL — CONFORMS TO UL STD UL STD 710 CERTIFIED TO ULC STD S646
INTERTEK 3012225

HALTON COMPANY, 101 INDUSTRIAL DR., SCOTTSVILLE, KY 42164

MODEL NO. KVL-C-IC — SERIAL NO. — ITEM NO.

GENERAL REQUIREMENTS

FILTER TYPE EXHAUST HOOD FOR COMMERCIAL AND INSTITUTIONAL KITCHENS
THE FAN CIRCUIT IS RATED FOR 125V, 15A, 60HZ.
THE LIGHTING CIRCUIT IS RATED FOR 125V, 15A, 60HZ.
THE HOOD HAS BEEN CERTIFIED BY ETL FOR 0 INCH CLEARANCE TO COMBUSTIBLE
MATERIALS (TOP, SIDES, FRONT AND REAR) IN COMPLIANCE WITH UL710 WITH CONSIDERATIONS TO NFPA 96.
THE HOOD IS PROVIDED WITH REPLACEABLE KSA FILTERS AND LIGHTING FIXTURES
REPLACE FILTERS ONLY WITH UL CLASSIFIED FILTER TYPE OF THE SAME MODEL AND MANUFACTURER.
SUITABLE FOR USE TO MEDIUM DUTY COOKING APPLIANCES.

DUTY LEVEL	MINIMUM OVERHANG		DISTANCE BETWEEN FRONT EDGE OF HOOD AND COOKING SURFACE, IN		MIN. EXHAUST CFM/FT OF HOOD LENGTH
	FRONT, IN	SIDE, IN	MIN	MAX	
MEDIUM	0	0	21	31	138
JET SUPPLY AIR FLOW SHALL ONLY BE SET AT 0.30 IN H20					

NSF Halton ETL — CONFORMS TO UL STD UL STD 710 CERTIFIED TO ULC STD S646
INTERTEK 3012225

HALTON COMPANY, 101 INDUSTRIAL DR., SCOTTSVILLE, KY 42164

MODEL NO. KVL-2-IC — SERIAL NO. — ITEM NO.

GENERAL REQUIREMENTS

FILTER TYPE EXHAUST HOOD FOR COMMERCIAL AND INSTITUTIONAL KITCHENS
THE FAN CIRCUIT IS RATED FOR 125V, 15A, 60HZ.
THE LIGHTING CIRCUIT IS RATED FOR 125V, 15A, 60HZ.
THE HOOD HAS BEEN CERTIFIED BY ETL FOR 0 INCH CLEARANCE TO COMBUSTIBLE
MATERIALS (TOP, SIDES, FRONT AND REAR) IN COMPLIANCE WITH UL710 WITH CONSIDERATIONS TO NFPA 96.
THE HOOD IS PROVIDED WITH REPLACEABLE KSA FILTERS AND LIGHTING FIXTURES
REPLACE FILTERS ONLY WITH UL CLASSIFIED FILTER TYPE OF THE SAME MODEL AND MANUFACTURER.
SUITABLE FOR USE TO HEAVY DUTY COOKING APPLIANCES.

DUTY LEVEL	MINIMUM OVERHANG		DISTANCE BETWEEN FRONT EDGE OF HOOD AND COOKING SURFACE, IN		MIN. EXHAUST CFM/FT OF HOOD LENGTH
	FRONT, IN	SIDE, IN	MIN	MAX	
MEDIUM	6 (+)	0	20	30	121
MEDIUM	6	0	20	32	106
MEDIUM	6	0	20	36	133
HEAVY	0	2	20	25	191
HEAVY	0	2	20	30	216
+ - SETBACK/UNDERHANG DISTANCE					
JET SUPPLY AIR FLOW SHALL ONLY BE SET AT 0.26 IN H20					

FOR REFERENCE ONLY

THIS DRAWING MUST BE CHECKED, SIGNED AND RETURNED TO THE APPROPRIATE FACTORY. PLEASE VERIFYING 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 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 ______

COMPLIES WITH LATEST NFPA-96

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

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

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

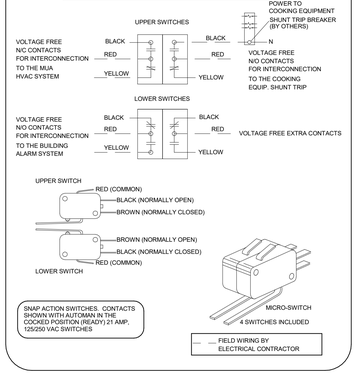
REV.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			
7			

PROJECT: **CHICK-FIL-A**
LOCATION: WENDELL FALLS FSU
SN#: 06012
DRAWN BY:
DATE: 05/29/2025
SCALE: NTS
Halton Dwg: U25-408-02

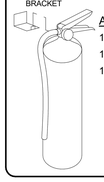
Halton CARE FOR INDOOR AIR

Sheet
MH-1.2

AMEREX MICROSWITCH DETAIL



FIRE EXTINGUISHER



AMEREX

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

SUPPLIED BY HALTON

FOR REFERENCE ONLY

AMEREX

FIRE SYSTEM HOODS H-1L & H-1R

- (2) KP375 TANKS & (1) KP250 TANK MOUNTED ON HOOD H-1L FOR HOODS H-1L & H-1R MAXIMUM FLOWPOINTS = 29
- 1/2" & 3/8" BLACK IRON PIPING WITH 3/8" S.S. APPLIANCE DROPS

AMEREX PART #	HALTON PART #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
16416	12148	2	DUCT NOZZLES	2
11982	12147	2	PLENUM NOZZLES	2
14178	12149	2	APPLIANCE NOZZLES	4
11984	13387	7	APPLIANCE NOZZLES	3.5
			TOTAL FLOW POINTS	11.5
ITEM		QTY	DESCRIPTION	
12508-P001	11897	8	DETECTORS BRACKET ASSEMBLY	
26948	13389	1	KP250 AGENT CYLINDER (2.61 GALLON TANK)	
13334	11938	2	KP375 AGENT CYLINDER (3.75 GALLON TANK)	
11977	12152	1	MECHANICAL RELEASE MODULE WITHOUT ENCLOSURE WITH DOUBLE POLE MICRO SWITCH	
12524	11942	2	EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)	
21481	12155	1	REMOTE MANUAL PULL STATION	

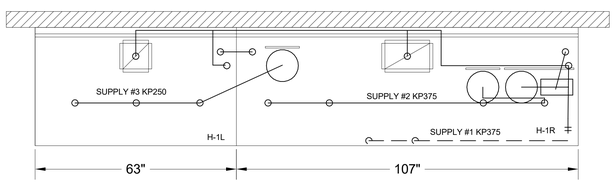
FIRE SYSTEM HOODS H-2 & H-3

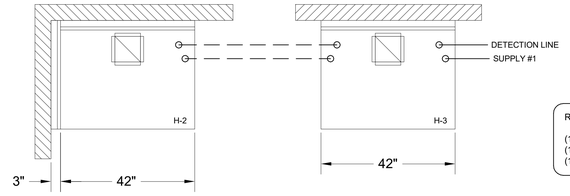
- (1) KP475 TANK SYSTEM REMOTE MOUNTED FOR HOODS H-2 & H-3 MAXIMUM FLOWPOINTS = 14
- 3/8" BLACK IRON PIPING WITH 3/8" S.S. APPLIANCE DROPS

AMEREX PART #	HALTON PART #	QTY	DESCRIPTION	FLOW PTS (TOTAL)
16416	12148	2	DUCT NOZZLES	2
11982	12147	2	PLENUM NOZZLES	2
28147 Y-FITTING	13384	4	APPLIANCE NOZZLES	8
			TOTAL FLOW POINTS	12
ITEM		QTY	DESCRIPTION	
12508-P001	11897	2	DETECTORS BRACKET ASSEMBLY	
17379	11939	1	KP475 AGENT CYLINDER (4.75 GALLON TANK)	
18001	11940	1	MECHANICAL RELEASE MODULE WITH ENCLOSURE WITH DOUBLE POLE MICRO SWITCH	
12524	11942	2	EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL. MODULE)	
21481	12155	1	REMOTE MANUAL PULL STATION	

NOZZLE	ID	QTY	DESCRIPTION
16416	0R-0G	1 EA.	DUCT NOZZLES
11982	2R-0G	1 PER 10'	PLENUM NOZZLES
11982 Y-FITTING	2R-0G	1 FITTING WITH 2 NOZZLES PER FRYER	ALL OPEN FRYERS
11984	4R-0G	1 PER FRYER	ALL PRESSURE FRYERS
14178	0R-1G	1 PER GRILL	ALL GRILLS

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

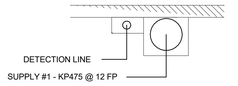




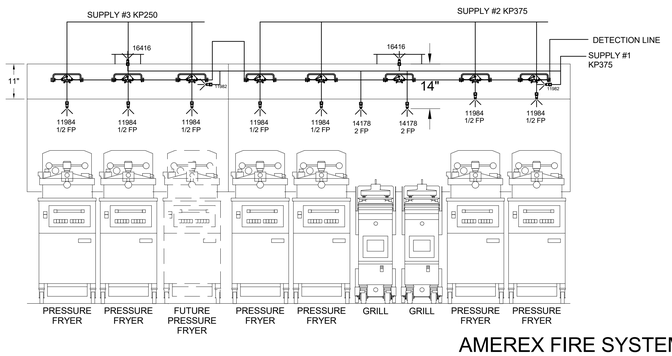
PROTECTS HOODS H-2 & H-3

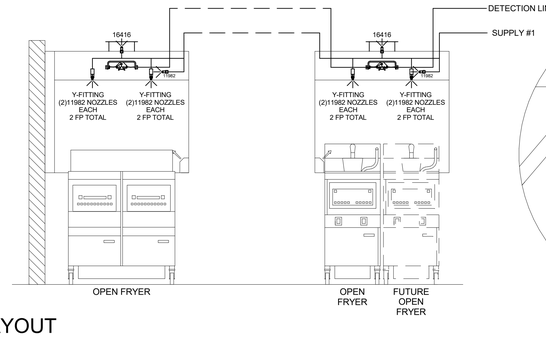
REMOTE MOUNTED:

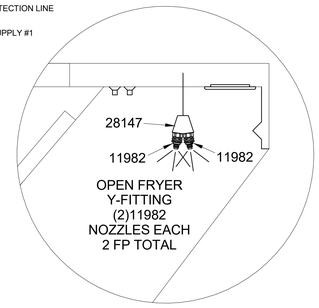
(1) SYSTEM ENCLOSURE
(1) MECHANICAL RELEASE MODULE
(1) KP475 AGENT CYLINDER (4.75 GALLON TANK)



PRESSURE AND GRILL NOZZLES WITH SWIVELS ONLY







AMEREX FIRE SYSTEM LAYOUT

FUSIBLE LINK RATINGS

ITEM	TEMP
OPEN FRYERS	450°
2 BURNER / FLAT TOP	450°
PRESSURE FRYERS	450°
GRILL	450°
EXHAUST COLLARS	450°

AMEREX FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

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

ALL DRAWINGS MUST BE CHECKED AND APPROVED BY THE APPROPRIATE AUTHORITIES BEFORE PROCEEDING WITH THE INSTALLATION.

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

MECHANICAL EQUIPMENT THAT AFFECTS ENERGY REPORTS OR EQUIPMENT POSITION MAY AFFECT EXHAUST AIRFLOW. HALTON MUST BE NOTIFIED AND OF THESE CHANGES OCCUR. A RECALCULATION EXHAUST AIRFLOW MAY BE REQUIRED.

☐ REVISE AND RESUBMIT
APPROVED FOR FABRICATION ☐ WITH CHANGES AS NOTED
☐ WITH NO CHANGES

APPROVED BY: DATE:

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW

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

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

WEBSITE: WWW.HALTONCOMPANY.COM

REV.:	BY:	DATE
1		
2		
3		
4		
5		
6		
7		

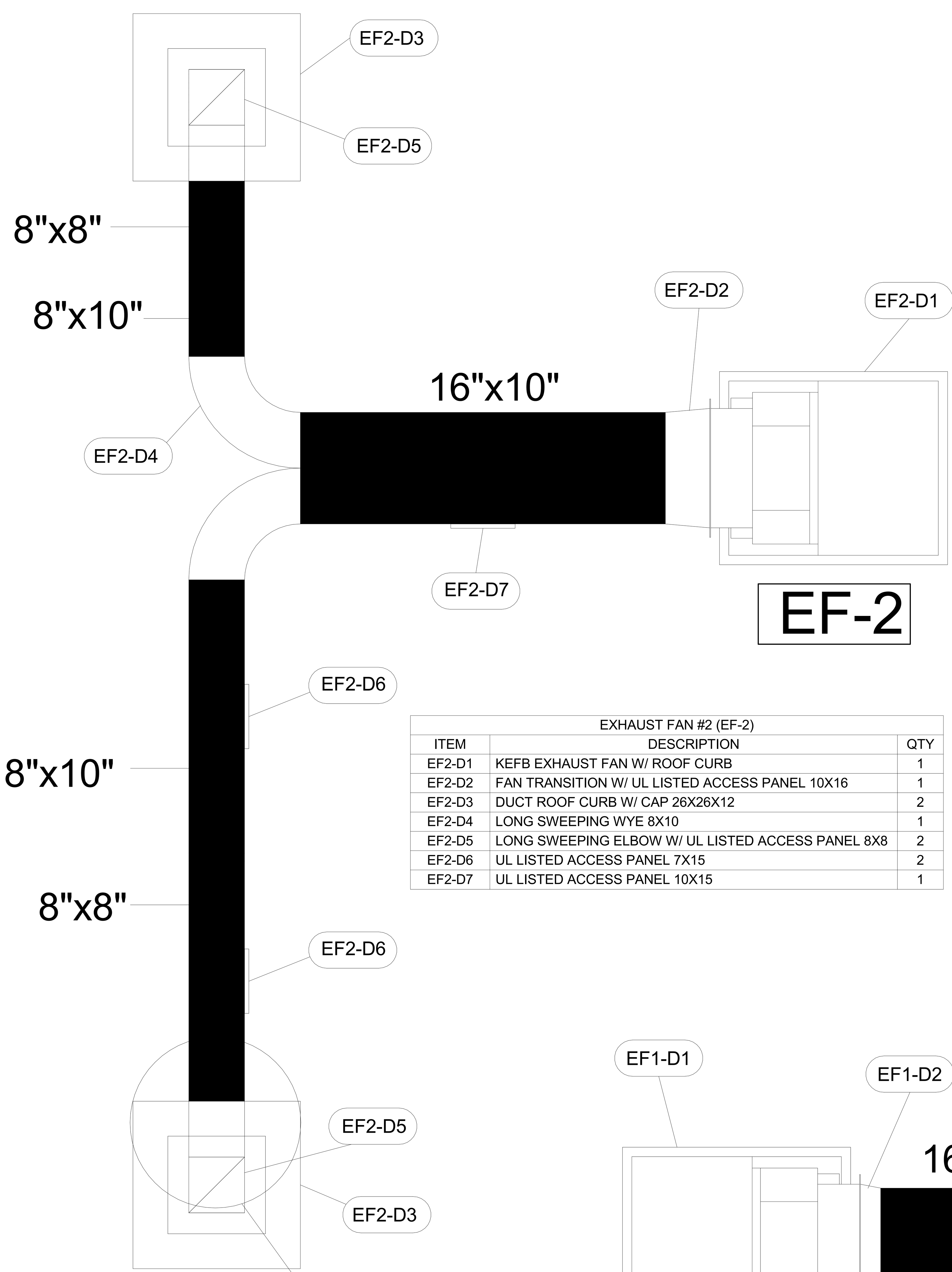
REVISION DESCRIPTION:

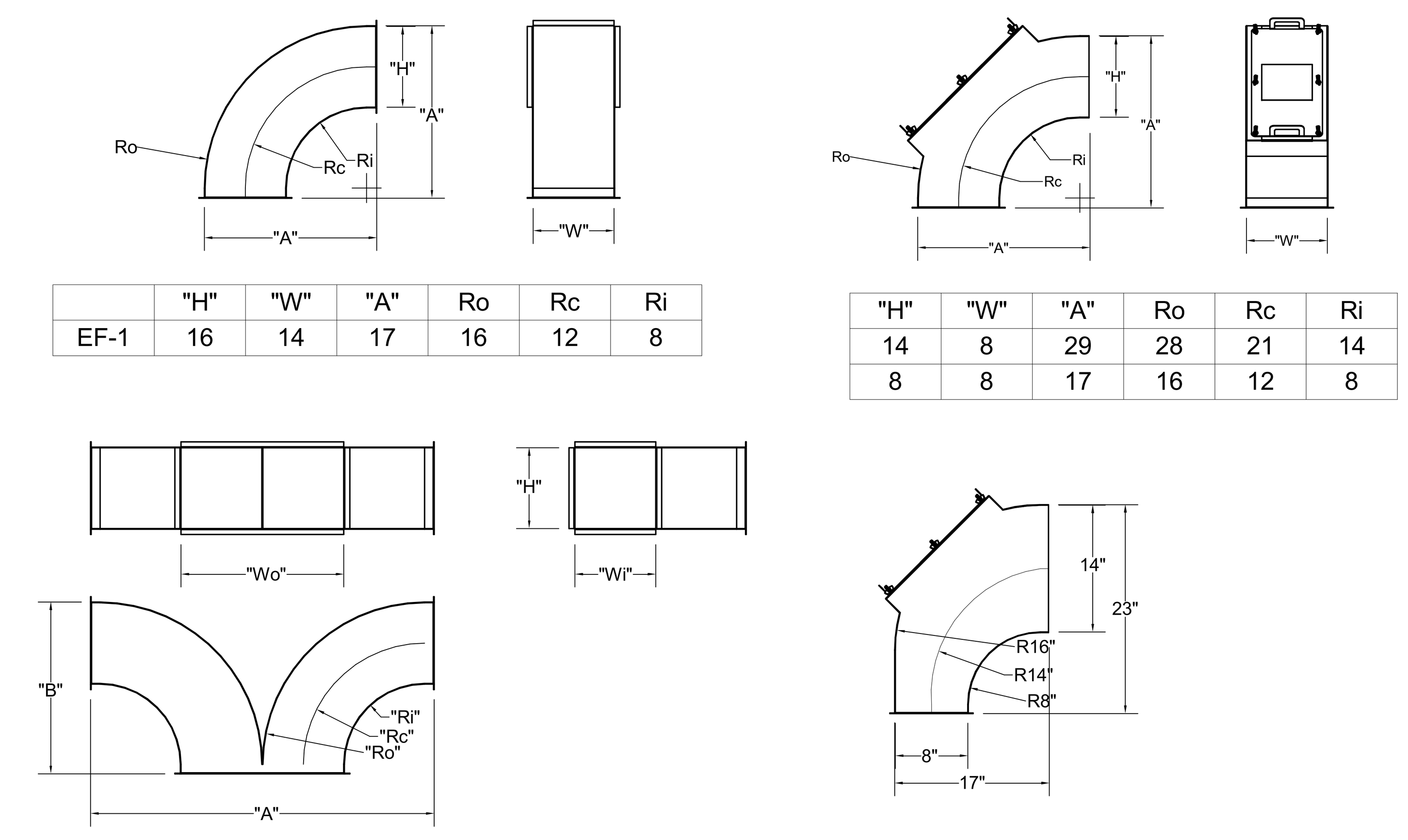
PROJECT: **CHICK-FIL-A**

LOCATION: WENDELL FALLS FSU
DRAWN By: [illegible]
SCALE: NTS
Halton Dwg: U25-408-03
SW#: 06012
DATE: 05/29/2025

Halton
CARE FOR INDOOR AIR

Sheet
MH-1.3



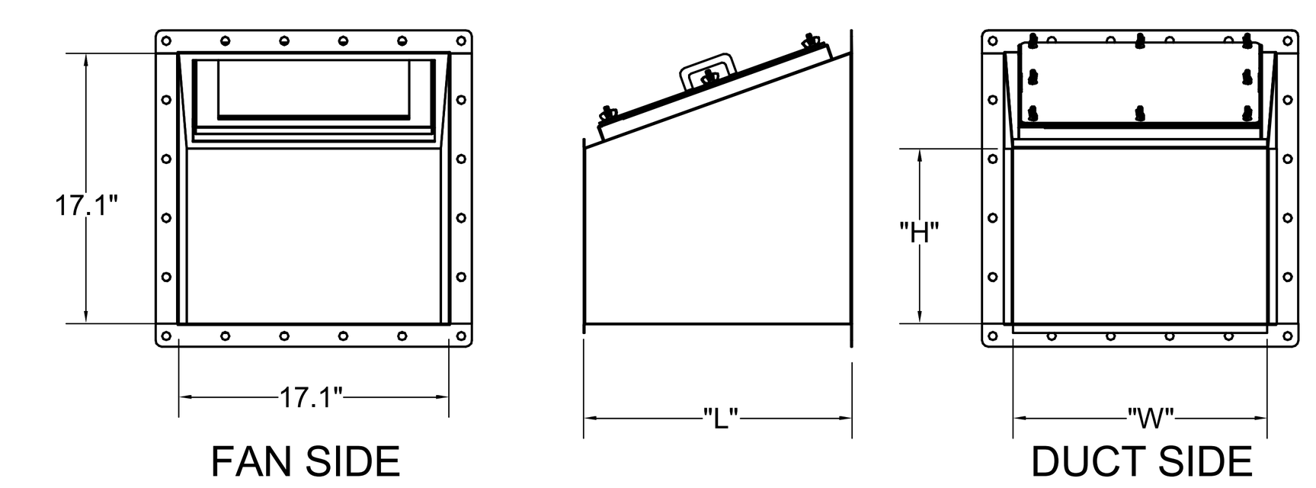


	"H"	"W"	"A"	Ro	Rc	Ri
EF-1	16	14	17	16	12	8

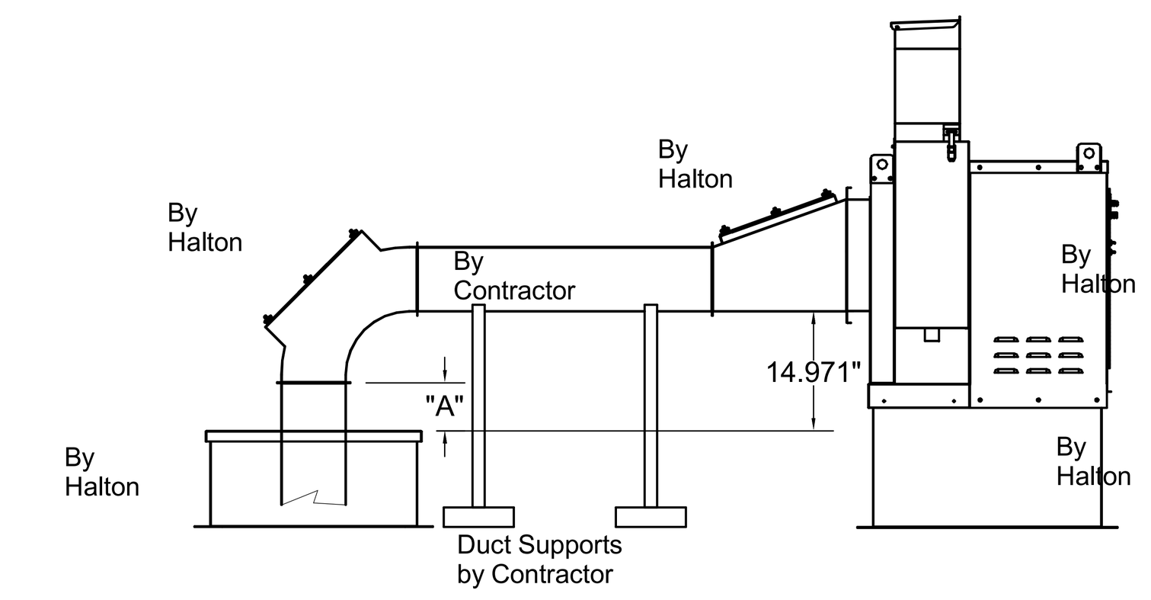
"H"	"W"	"A"	Ro	Rc	Ri
14	8	29	28	21	14
8	8	17	16	12	8

	"Wi"	"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

	QTY
EF-1	1
EF-2	-



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



"A" DISTANCE AVAILABLE FOR DUCT SLOPE

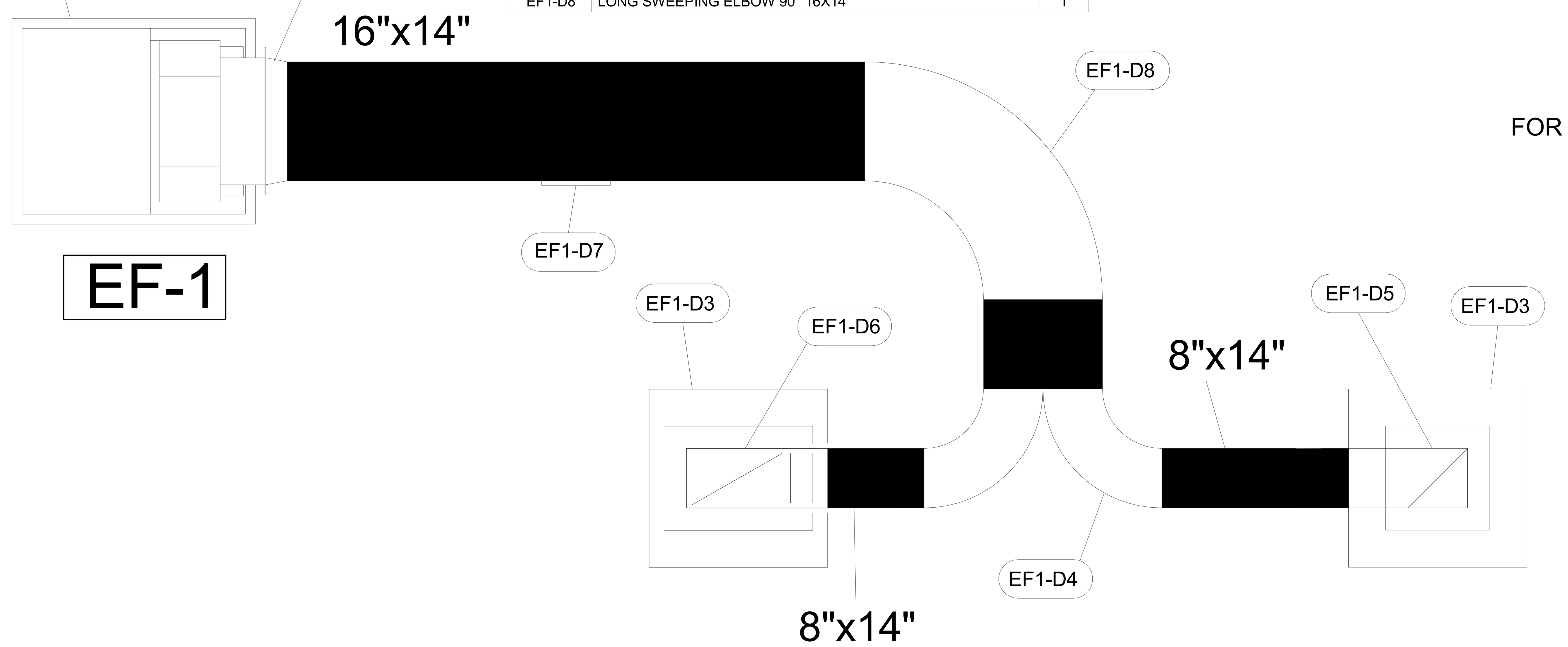
	ELBOW	"A"
EF-1	14X8	8
EF-2	8X8	10

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

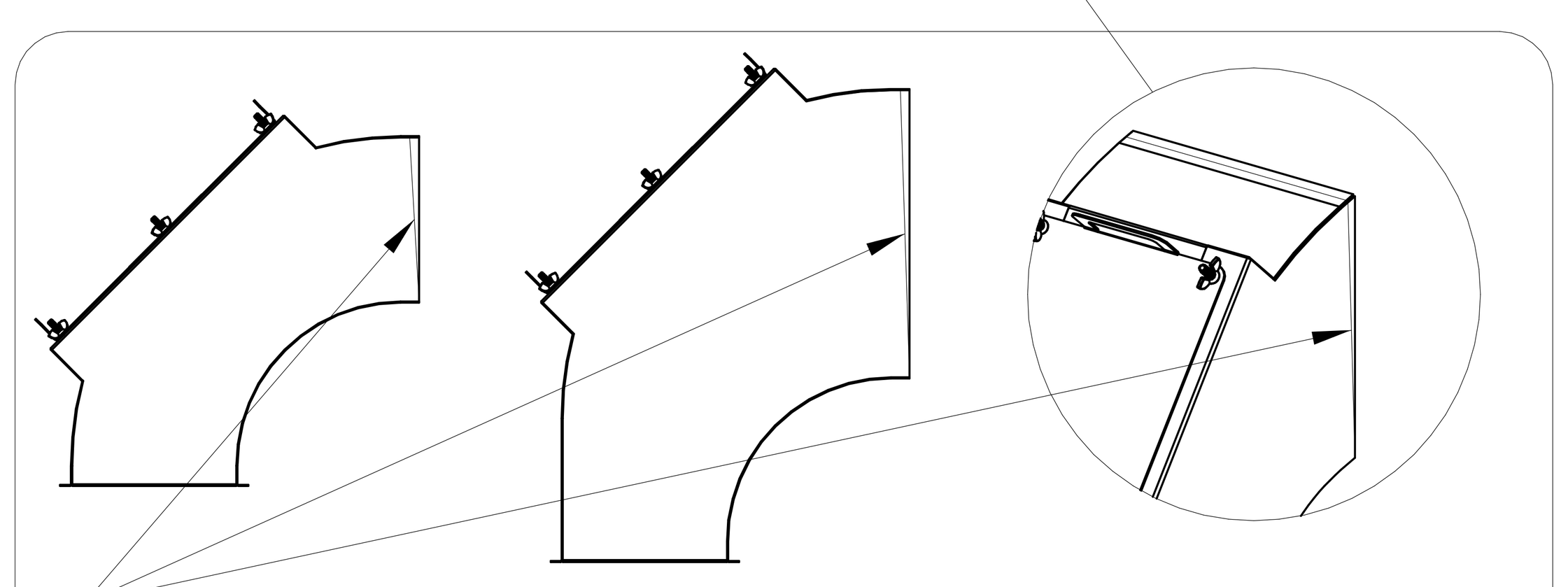
- CONTACT HALTON CUSTOMER SERVICE FOR HALTON PROVIDED ITEMS. ONLY DUCT SECTIONS SPECIFIED BY NUMBERS AND SHOWN IN THE ABOVE CHART ARE PROVIDED BY HALTON.
- ALL OTHER DUCTS AND FITTINGS BY HVAC CONTRACTOR. DUCT SECTIONS PROVIDED BY HVAC CONTRACTOR ARE SHOWN IN ORDER TO DEPICT TOTAL SYSTEM DESIGN. THE UL LISTED ACCESS PANELS PROVIDED BY HALTON MUST BE INSTALLED IN DUCT SECTIONS NOT PROVIDED BY HALTON BY HVAC CONTRACTOR.
- ALL FIELD AND OWNER SUPPLIED EXTERIOR ROOF GREASE DUCT SHALL BY FIELD PAINTED ONCE COMPLETE.
- MATERIAL: 16 GA STEEL WITH ALUMINIZED CORROSION PROTECTION.
- CLEAN, PRIMER AND PAINT PER CHICK-FIL-A SPECIFICATIONS.

EXHAUST FAN #2 (EF-2)		
ITEM	DESCRIPTION	QTY
EF2-D1	KEFB EXHAUST FAN W/ ROOF CURB	1
EF2-D2	FAN TRANSITION W/ UL LISTED ACCESS PANEL 10X16	1
EF2-D3	DUCT ROOF CURB W/ CAP 26X26X12	2
EF2-D4	LONG SWEEPING WYE 8X10	1
EF2-D5	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 8X8	2
EF2-D6	UL LISTED ACCESS PANEL 7X15	2
EF2-D7	UL LISTED ACCESS PANEL 10X15	1

EXHAUST FAN #1 (EF-1)		
ITEM	DESCRIPTION	QTY
EF1-D1	KEFB EXHAUST FAN W/ ROOF CURB	1
EF1-D2	FAN TRANSITION W/ UL LISTED ACCESS PANEL 14X16	1
EF1-D3	DUCT ROOF CURB W/ CAP 26X26X12	2
EF1-D4	LONG SWEEPING STRAIGHT WYE 14X8	1
EF1-D5	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 8X8	1
EF1-D6	LONG SWEEPING ELBOW W/ UL LISTED ACCESS PANEL 14X8	1
EF1-D7	UL LISTED ACCESS PANEL 10X15	1
EF1-D8	LONG SWEEPING ELBOW 90° 16X14	1



FOR REFERENCE ONLY



CONTRACTOR TO TRIM AS NEEDED TO ACCOMMODATE DUCT SLOPE. ALL ELBOWS WITH ACCESS PANELS. BOTH EF-1 AND EF-2

HALTON CO. (USA)

HALTON CO. (CANADA)

PROJECT: CHICK-FIL-A

LOCATION: WENDELL FALLS FSU

DATE: 05/29/2025

SCALE: NTS

Halton Dwg: U25-408-05

SN#: 06012

Sheet MH-1.5