# DIVISION 15 SPECIFICATIONS

PART I - GENERAL

1.01 SCOPE

A. IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY FOR COORDINATION.

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

C. SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM. TEN FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OUTSIDE AIR INTAKES AND EXHAUST FANS AND PLUMBING VENT TERMINALS.

D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM.

E. UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO CONDITION ACCEPTABLE TO THE OWNERS REPRESENTATIVE. ALL EQUIPMENT, COMPONENTS, DUCTWORK AND AIR DEVICES SHALL BE INSPECTED AND THOROUGHLY CLEANED, CLEARED OF DEBRIS, AND READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.

F. CONTRACTOR SHALL PROVIDE TWO SETS OF 2" MERV 8 OR HIGHER THROW AWAY TYPE FILTERS. A CLEAN SET SHALL BE PROVIDED PRIOR TO TEST AND BALANCE AND AGAIN PRIOR TO OPENING.

PART II - PRODUCTS

2.01 HEATING AND COOLING EQUIPMENT

A. FURNISH AND INSTALL R-410A ROOFTOP SINGLE PACKAGE COMBINATION ELECTRIC COOLING AND NATURAL GAS FIRED HEATING UNITS AS SHOWN ON DRAWINGS. EQUIPMENT SHALL BE ARI CERTIFIED AND A.G.A. AND U.L. LISTED.

B. ACCESSORIES SHALL INCLUDE LOW AND HIGH PRESSURE SAFETIES, CRANK CASE HEATER, OVERCURRENT AND OVERTEMPERATURE SAFETY, COMPRESSOR VIBRATION ISOLATORS, FILTER DRIERS, REFRIGERANT SERVICE VALVES, COIL HAIL GUARDS WHERE SCHEDULED, CONVENIENCE OUTLETS FACTORY INSTALLED ON SCHEDULED UNITS, UNIT MOUNTED NON-FUSED DISCONNECTS, LOW AMBIENT OPERATION DOWN TO 30 DEGREES F AND EVAPORATOR FREEZE STAT.

C. COMPRESSORS SHALL BE HERMETIC SCROLL TYPE WITH INTERNAL VIBRATION ISOLATORS. COMPRESSORS SHALL BE PROVIDED WITH A MINIMUM FIVE (5) YEAR FULL WARRANTY.

D. THE UNIT HEAT EXCHANGERS SHALL BE ALUMINIZED STEEL COATING. HEATING CONTROLS SHALL CONSIST OF REDUNDANT GAS VALVES, INTERMITTENT PILOT WITH ELECTRONIC SPARK OR HOT PLATE IGNITION SYSTEM, COMBUSTION/EXHAUST FAN PROTECTED BY CENTRIFUGAL SWITCHES, HEAT LIMIT SWITCHES, TIME-DELAY RELAY, FLAME, AND PILOT SENSORS. HEAT EXCHANGERS SHALL HAVE A TEN (10) YEAR WARRANTY. BURNERS SHALL BE IN-SHOT TYPE. THE DRAFT MOTOR SHALL BE MONITORED BY THE CONTROL SYSTEM.

2.02 DUCTWORK (C15735)

A. ACCEPTABLE MANUFACTURERS OF INSULATION SHALL BE: JOHNS MANVILLE, OWENS CORNING OR KNAUF.

B. ALL DUCTWORK SHALL BE SHEET METAL, UNLESS NOTED OTHERWISE (U.N.O.).

C. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS, U.N.O.

D. CONSTRUCTION OF DUCTWORK SHALL MEET SMACNA 1" W.C. PRESSURE CLASS STANDARD AND RECOMMENDATIONS. SMACNA SHALL BE FOLLOWED WITH RESPECT TO GAGE THICKNESS, JOINTS, REINFORCING, CONSTRUCTION, INSTALLATION AND SUPPORT FOR PRESSURE CLASS STATED. ALL TRANSVERSE JOINTS IN RECTANGULAR AND ROUND DUCT INCLUDING DUCT CONNECTION TO AIR DEVICE COLLAR SHALL BE SEALED PER SMACNA SEAL CLASS C WITH U.L. DUCT MASTIC SEALANT APPROVED FOR INTENDED USE. DUCT TAPE IS NOT AN ACCEPTABLE SUBSTITUTE FOR MASTIC UNLESS EQUAL TO HARDCAST FOIL-GRIP 1402 BUTYL RUBBER ADHESIVE TAPE.

E. DUCT SHALL BE SUPPORTED AT BASE OF DUCT DROPS. CURB DUCT RAILS ARE NOT INTENDED TO AND SHALL NOT SUPPORT THE WEIGHT OF THE DUCT.

F. ALL DUCT WRAP SHALL BE MINIMUM 2" THICK, 3/4 PCF AND 6 R-VALUE INSTALLED WITH EITHER A VAPOR BARRIER WITH MAXIMUM PERMEANCE 0.05 OR A MINIMUM 2 MIL ALUMINUM REINFORCED FOIL/KRAFT FACING.

G. ALL DUCT DROPS FROM THE ROOFTOP UNITS SHALL BE EXTERNALLY INSULATED.

H. SUPPLY AND RETURN AIR DUCTWORK SERVING ALL AREAS SHALL BE EXTERNALLY INSULATED.

I. ALL AIR CONVEYANCE COMPONENTS SUCH AS, BUT NOT LIMITED TO DUCT, DUCT PLENUMS, GRILLES/DIFFUSERS, BACK PANS, AND BOOTS SHALL BE INSULATED. INSULATION TYPE IS COVERED ELSEWHERE IN THIS SPECIFICATION.

J. RESTROOM RECTANGULAR EXHAUST AIR DUCTWORK SHALL BE LINED WITH 1" THICK, 1-1/2 PCF INSULATION. RESTROOM ROUND EXHAUST DUCT SHALL BE EXTERNALLY INSULATED PER SECTION 2.02F.

K. DUCT DROPS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND U.L. APPROVED FLEXIBLE CONNECTORS INSTALLED AT THE TOP OF BOTH SUPPLY AND RETURN DROPS.

L. INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR RUNOUTS TO GRILLES AND DIFFUSERS ONLY IN THE HORIZONTAL POSITION AND IN MAXIMUM LENGTHS OF 4'-0", NO EXCEPTIONS.

M. CONSTRUCTION OF FLEXIBLE DUCTWORK SHALL INCLUDE SPIRAL METAL HELIX BONDED TO A POLYESTER CORE, FIBERGLASS INSULATION WITH POLYETHYLENE OR MYLAR VAPOR BARRIER. ALL COMPONENTS SHALL HAVE APPROPRIATE U.L. APPROVAL AND SHALL BE EQUIVALENT TO THERMAFLEX MKE. FLEX DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.

N. FLEXIBLE DUCT SHALL BE INSTALLED PER THE "ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS, 4TH ED" USING FOIL TAPE AND DRAWBAND ON THE INNER CORE AND TAPE OR DRAWBAND ON THE OUTER JACKET.

O. DUCT TAPE SHALL BE EQUAL TO FASSON 181-B FX, 2-1/2" WIDE.

P. SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT ALL 90 DEGREE ELBOWS WHERE THE CENTERLINE RADIUS (R) IS LESS THAN THE WIDTH OF THE DUCT AND ANY ONE DIMENSION IS GREATER THAN 12".

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

2.03 CONTROLS

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

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

C. A FACTORY INSTALLED SMOKE DETECTOR IN THE SUPPLY 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 |
| | | 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.

This item has been digitally signed and sealed by B. Marzley on the date adjacent to the seal.

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06/05/25


CHICK-FIL-A
MT. DORA GROVES
19360 US HWY 441
MT. DORA, FL 32757

FSR#05600
BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR
ISSUED FOR CONSTRUCTION

REVISION SCHEDULE

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
DRAWN BY JDF



SHEET
GENERAL NOTES, LEGENDS, SYMBOLS, AND ABBREVIATIONS
SHEET NUMBER
M-001


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**2023 FBC Commissioning Requirements for Mechanical**

2023 FBC COMMISSIONING REQUIREMENTS

C408.1 MECHANICAL SYSTEMS SHALL BE DOCUMENTED IN ACCORDANCE WITH THE FOLLOWING SECTIONS.

C408.1.1 PROVIDE AN OPERATION AND MAINTENANCE MANUAL WHICH INCLUDES THE FOLLOWING,

1. PROVIDE HVAC EQUIPMENT SUBMITTAL DATA.
2. PROVIDE MANUFACTURER'S OPERATION AND MAINTENANCE MANUALS FOR HVAC EQUIPMENT. ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
3. PROVIDE THE NAME AND ADDRESS OF AT LEAST ONE HVAC SERVICE AGENCY.
4. PROVIDE HVAC CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCES. TENANT DESIRED OR FIELD DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR IN SYSTEM PROGRAMMING INSTRUCTIONS.
5. PROVIDE A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SETPOINTS.

C408.2 COMMISSIONING OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS.

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED IN ACCORDANCE WITH THIS SECTION AND SHALL INCLUDE THE FOLLOWING ITEMS.

1. A NARRATIVE DESCRIPTION OF THE ACTIVITIES *TO* BE PERFORMED.
2. A LIST OF THE SYSTEMS AND EQUIPMENT REQUIRED TO BE COMMISSIONED.
3. A LIST OF THE **TEST** FUNCTIONS TO BE PERFORMED ON THE CORRESPONDING EQUIPMENT.
4. CONDITIONS UNDER WHICH THE TEST WILL BE PERFORMED.
5. MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.2 CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT A WRITTEN BALANCE REPORT BE PROVIDED TO THE OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER FOR HVAC SYSTEMS SERVING ZONES WITH A TOTAL CONDITIONED AREA EXCEEDING 5000 SQUARE FEET (465 M2). AIR DISTRIBUTION SYSTEMS SHALL BE TESTED, ADJUSTED AND BALANCED BY A LICENSED ENGINEER OR A COMPANY OR INDIVIDUAL HOLDING A CURRENT CERTIFICATION FROM A RECOGNIZED TESTING AND BALANCING AGENCY ORGANIZATION IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS.

C408.2.2.1 AIR SYSTEM BALANCING SHALL BE ACCOMPLISHED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES; THEN FOR FANS WITH FAN SYSTEM POWER GREATER THAN 1 HP, FAN SPEEDS SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS, THE ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS, OR EQUIVALENT PROCEDURES.

C408.2.2.2 INDIVIDUAL HYDRONIC HEATING AND COOLING COILS SHALL BE EQUIPPED WITH MEANS FOR BALANCING AND MEASURING FLOW. HYDRONIC SYSTEMS SHALL BE PROPORTIONATELY BALANCED IN A MANNER TO FIRST MINIMIZE THROTTLING LOSSES, THEN THE PUMP IMPELLER SHALL BE TRIMMED OR PUMP SPEED SHALL BE ADJUSTED TO MEET DESIGN FLOW CONDITIONS. EACH HYDRONIC SYSTEM SHALL HAVE EITHER THE CAPABILITY TO MEASURE PRESSURE ACROSS THE PUMP, OR TEST PORTS AT EACH SIDE OF EACH PUMP.

C408.2.3 FUNCTIONAL PERFORMANCE TESTING SPECIFIED IN SECTIONS C408.2.3.1 THROUGH C408.2.3.3 SHALL BE WITNESSED AND DOCUMENTED BY A LICENSED DESIGN PROFESSIONAL, ELECTRICAL ENGINEER, MECHANICAL ENGINEER OR APPROVED AGENCY. THE REPORTING COMMISSIONING PROFESSIONAL SHALL BE PRESENT FOR ANY FUNCTIONAL PERFORMANCE TESTS BEING CONDUCTED.

C408.2.3.1 PERFORM FUNCTIONAL PERFORMANCE TESTING FOR HVAC EQUIPMENT IN ORDER TO DEMONSTRATE THE OPERATION OF COMPONENTS, SYSTEMS AND SYSTEM-TO-SYSTEM INTERACTION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER REQUIREMENTS. TESTING SHALL INCLUDE FULL-LOAD, PART-LOAD AND EMERGENCY OPERATING CONDITIONS AND SHALL COVER ALL OPERATING MODES LISTED IN THE SEQUENCE OF OPERATION AS DEFINED IN THE CONSTRUCTION DOCUMENTS.

C408.2.3.2 HVAC SYSTEMS SHALL BE TESTED IN ORDER TO DOCUMENT THAT CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS ARE CALIBRATED AND ADJUSTED TO OPERATE IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. HVAC CONTROL SYSTEMS

C408.2.3.3 AIR SIDE ECONOMIZERS SHALL UNDERGO FUNCTIONAL PERFORMANCE TESTING IN ORDER TO ENSURE OPERATIONAL MODES ARE FUNCTIONING IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

C408.2.4 COMPLETE A PRELIMINARY COMMISSIONING REPORT OUTLINING TEST PROCEDURES AND RESULTS IN ACCORDANCE WITH THIS SECTION. THE REPORT SHALL IDENTIFY:

1. ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
2. DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF THE REPORT PREPARATION DUE TO CLIMATIC CONDITIONS.
3. CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.

C408.2.4.1 BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C104.3 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT.

C408.2.4.2 THE CODE OFFICIAL SHALL REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT AND PROVIDED TO THE CODE OFFICIAL WITHIN 90 DAYS OF THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

C408.2.5.1 CONSTRUCTION DOCUMENTS SHALL INCLUDE THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT.

C408.2.5.2 AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED AND INCLUDE ALL OF THE FOLLOWING:

1. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
2. MANUFACTURER'S OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
3. NAME AND ADDRESS OF AT LEAST ONE SERVICE AGENCY.
4. HVAC AND SERVICE HOT WATER CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN SYSTEM PROGRAMMING INSTRUCTIONS.
5. A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SET POINTS.

C408.2.5.3 A WRITTEN REPORT DESCRIBING THE ACTIVITIES AND MEASUREMENTS COMPLETED IN ACCORDANCE WITH SECTION

C408.2.5.4 A REPORT OF TEST PROCEDURES AND RESULTS IDENTIFIED AS "FINAL COMMISSIONING REPORT" SHALL BE DELIVERED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL SYSTEM AND SERVICE HOT WATER SYSTEM FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL INCLUDE THE FOLLOWING:

1. RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
2. DISPOSITION OF DEFICIENCIES FOUND DURING TESTING, INCLUDING DETAILS OF CORRECTIVE MEASURES USED OR PROPOSED.
3. FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE, PROVIDED HEREIN FOR REPEATABILITY.


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06/05/25


# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR

**ISSUED FOR CONSTRUCTION**

**REVISION SCHEDULE**

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
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SHEET
**COMMISSIONING REQUIREMENTS - MECHANICAL**
SHEET NUMBER
**M-002**




6/4/2025 12:23:59 PM Autodesk Docs://FL_05600_Mt Dora Groves FSU_2024.5_FSR/05600_Mt Dora Groves FSU_MEC.rvt
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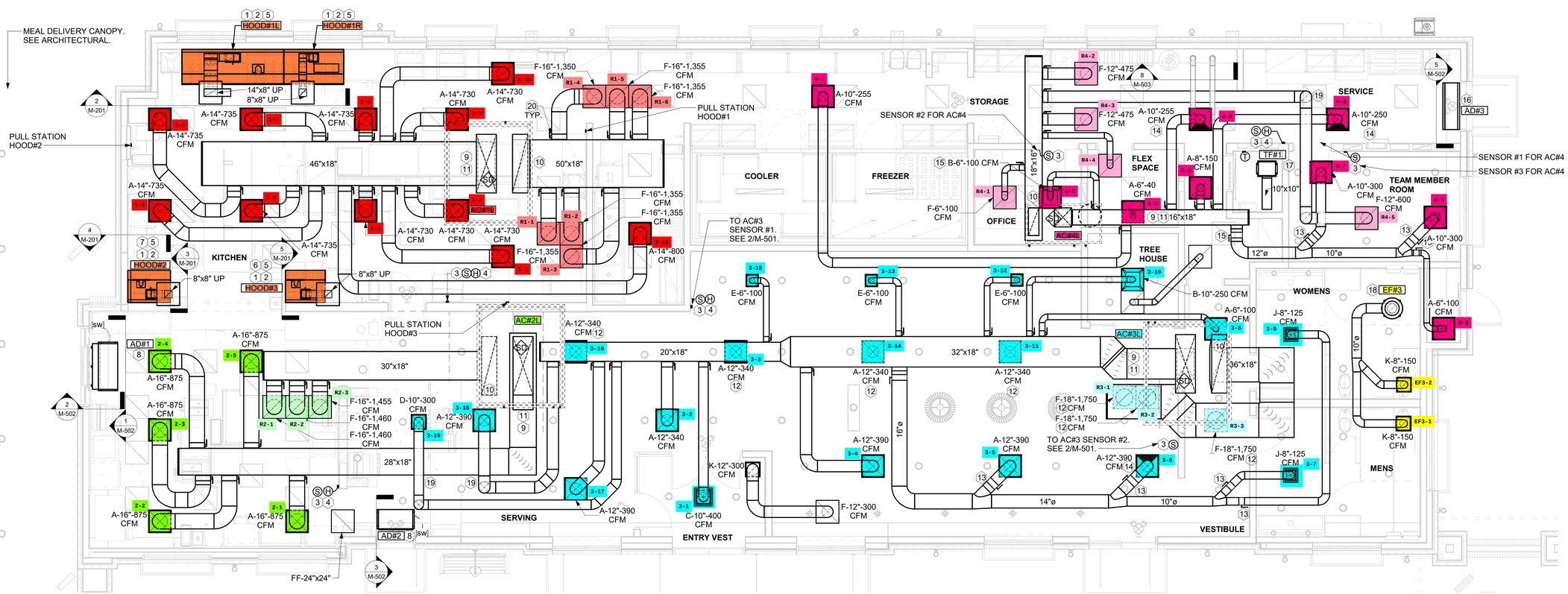
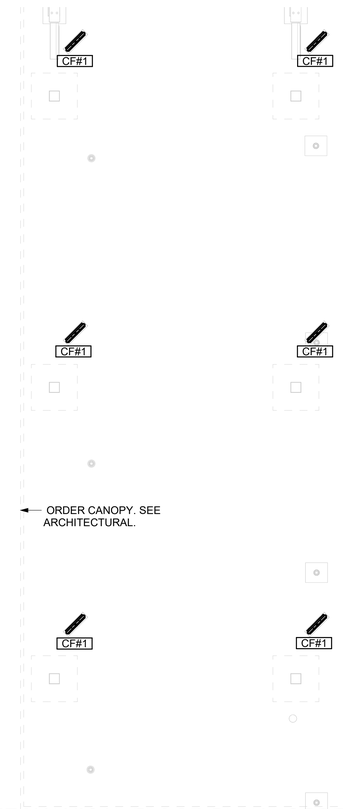



1 EQUIPMENT AND DUCTWORK PLAN
1/4" = 1'-0"




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 CFM | 8,125 CFM | 1,750 CFM | 0 CFM | |
| AC#2L | 4,375 CFM | 4,375 CFM | 1,075 CFM | 0 CFM | |
| AC#3L | 5,250 CFM | 5,250 CFM | 1,275 CFM | 0 CFM | |
| AC#4L | 1,750 CFM | 1,750 CFM | 425 CFM | 0 CFM | |
| EF#1 | 0 CFM | 0 CFM | 0 CFM | 1,913 CFM | |
| EF#2 | 0 CFM | 0 CFM | 0 CFM | 1,402 CFM | |
| EF#3 | 0 CFM | 0 CFM | 0 CFM | 300 CFM | |
| | 19,500 CFM | 19,500 CFM | 4,525 CFM | 3,615 CFM | 910 CFM |

## KEY NOTES

1. SEE ELEVATIONS ON M-201 FOR CJ FAN DUCTING REQUIREMENT.
2. HALTON KBD DAMPER AT HOOD COLLAR BY MECHANICAL CONTRACTOR. SEE HOOD ELEVATIONS ON M-201 FOR LOCATION.
3. 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.
4. MOUNT HUMIDITY SENSOR ON WALL ABOVE SPACE TEMP SENSOR AND ROUTE WIRING TO UNIT ON ROOF.
5. PULL STATION FOR KITCHEN EXHAUST HOOD MOUNTED 42" TO 48" A.F.F. COORDINATE EXACT LOCATION WITH KITCHEN EQUIPMENT ELEVATIONS. JUNCTION BOX AND CONDUIT PROVIDED BY ELECTRICAL CONTRACTOR. PROVIDE PLASTIC ENGRAVED LABEL - RED WITH 1" HIGH WHITE LETTERING. LABELS SHALL BE AS FOLLOWS: HOOD #1 - "MAIN COOKLINE", HOOD #2 - "PASS THRU - RIGHT", HOOD #3 - "PASS THRU - LEFT".
6. INSTALL RIGHT SIDE OF HOOD WITH FINISHED EDGE OF PASS-THRU OPENING.
7. INSTALL LEFT SIDE OF HOOD FLUSH WITH FINISHED EDGE OF PASS-THRU OPENING.
8. MOUNT AIR DOOR IN CEILING. CENTERED ON DRIVE-THRU/MFA DOOR OPENING. REFER TO WIRING DIAGRAM ON SHEET M-702 FOR MORE INFORMATION.
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.
10. TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. SEE DETAIL 6/M-501 FOR REQUIRED TRANSITION GEOMETRY. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITHOUT TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
11. TRANSITION IN VERTICAL DROP FROM FULL SIZE OF CURB OPENING TO SIZE SHOWN. TRANSITION WITHIN CURB WHERE REQUIRED TO AVOID STRUCTURE. WHERE THE DUCT IS SHOWN OFFSET HORIZONTALLY, PROVIDE ELBOW WITH TURNING VANES. FOR DROPS WITH NO HORIZONTAL OFFSET, EXTEND DROP BELOW STRUCTURE TO ACCOMMODATE START COLLARS. TERMINATE DROP A MINIMUM 0'-10" ABOVE CEILING (0'-4" ABOVE CEILING IF REQUIRED TO ACCOMMODATE TAKE-OFF AND DROP IS NOT LOCATED DIRECTLY ABOVE A LIGHT).
12. TAKE OFF WITH DAMPER AT THE BOTTOM OF DUCTWORK, TYP.
13. RUSKIN MDRS25 MVD W/LOCKING QUADRANT HANDLE.
14. MECHANICAL CONTRACTOR TO CLOSE THE AIR PATTERN DEFLECTORS ON SHADED SIDE.
15. MAXIMUM HEATING AND COOLING AIRFLOWS INDICATED. SET MINIMUM AIRFLOW TO 25 CFM.
16. 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.
17. CEILING MOUNTED RECIRCULATING FAN. DUCT AND DISCHARGE ABOVE CEILING.
18. 10" UP THRU ROOF.
19. ROUTE DUCT WITHIN STRUCTURE.
20. DAMPER HANDLES SHOULD BE INSTALLED SUCH THAT THE DAMPERS ROTATION AXIS IS PERPENDICULAR TO THE FLOOR WITH THE HANDLE FULLY ACCESSIBLE UNDERNEATH THE DUCT IT CONTROLS. (TYPICAL OF ALL DAMPERS AT THE SAME PLENUM.)



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06/05/25

# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR

**ISSUED FOR CONSTRUCTION**

**REVISION SCHEDULE**

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
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SHEET
**EQUIPMENT AND DUCTWORK PLAN - LENNOX**

SHEET NUMBER
**M-101L**

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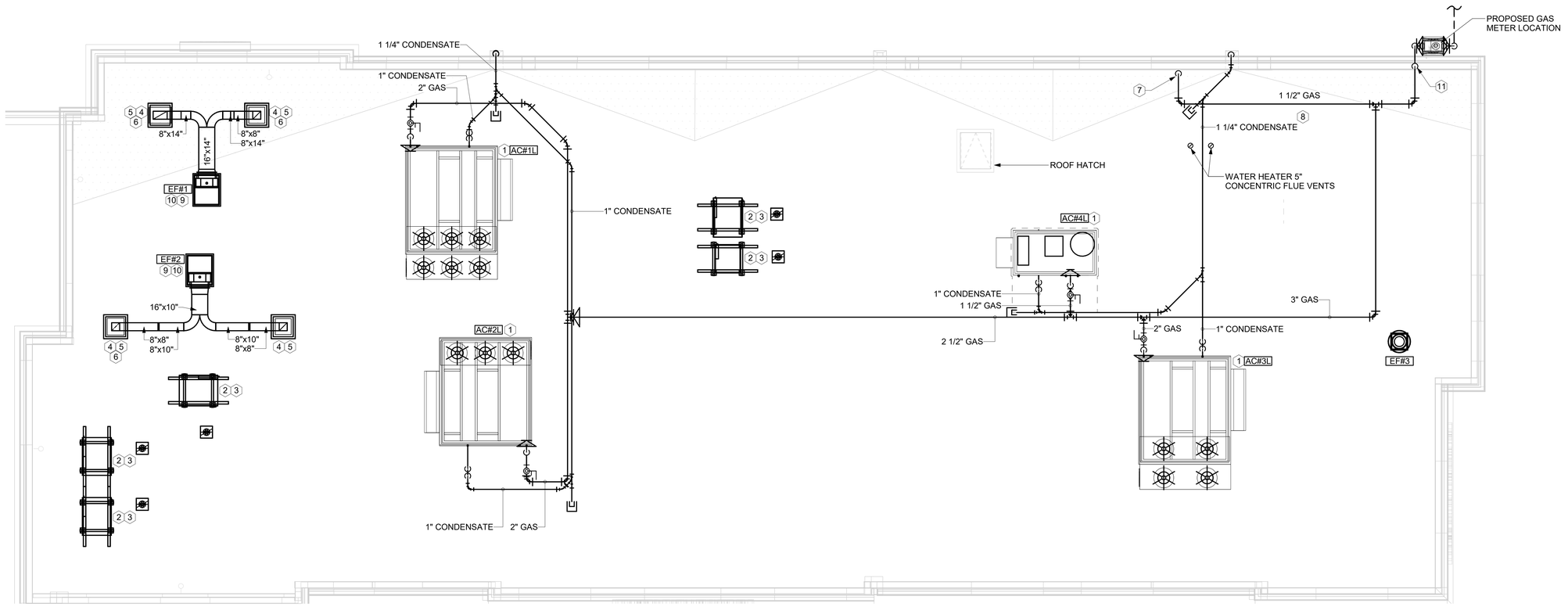


# 1 EQUIPMENT ROOF PLAN - LENNOX

1/4" = 1'-0"

## KEY NOTES

1. MECHANICAL CONTRACTOR TO SEE ARCHITECTURAL ROOF PLAN FOR NOTES REGARDING LEVELING FRAMES FOR RTUS. COORDINATE WITH GENERAL CONTRACTOR EXACT LOCATIONS AND SIZE NEEDED.
2. GC SHALL PROVIDE EQUIPMENT STANDS AS MANUFACTURERED BY AVCOA OR EQUAL. STANDS SHALL BE INSTALLED PRIOR TO ROOF INSULATION SO THAT THE INSULATION IS CONTINUOUS UP TO THE PIPE POSTS. POSTS SHALL BE FLASHED IN ACCORDANCE WITH ROOFING MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE BLOCKING BELOW THE ROOF DECK AS REQUIRED.
3. DO NOT DISCHARGE OF CONDENSING UNITS INTO CONDENSER SECTION OF ROOFTOP UNITS, TYP.
4. ROOF CURB FOR DUCT PENETRATION. REFER TO MH-1.3 AND MH-1.4 FOR DETAILS.
5. TURN DOWN THRU ROOF. SEE M-101L/M-101T FOR CONTINUATION.
6. DUCT PENETRATIONS ON ROOF MUST BE AT LEAST 18" FROM ADJACENT PARAPETS.
7. 1-1/2" GAS DOWN THRU ROOF TO WATER HEATER. SEE DETAIL 3/P-502 FOR MORE INFORMATION ON CONSTRUCTION AND PENETRATION. WHEN CONTRACTOR OPTS TO PROVIDE ALTERNATIVE WATER-HEATER, INCREASE PIPE SIZE AS NEEDED PER CODE.
8. SEE ARCHITECTURAL DETAILS FOR ROOFTOP PIPE PENETRATIONS.
9. GREASE EXHAUST DUCT LOCATED ON ROOF SHALL SLOPE ¼"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.
10. FABRICATE DISCHARGE AIR NOZZLE. VERIFY EXHAUST TERMINATION IS A MINIMUM 10'-0" FROM PARAPETS AND OUTSIDE AIR INTAKES. REFER TO MH-1.3 AND MH-1.4 FOR DETAILS.
11. TURN 3" GAS UP WITHIN WALL, THRU PARAPET AND ONTO ROOF.

## 3. GAS LOAD SCHEDULE

| EQUIPMENT | GAS LOAD |
|---|---|
| AC#1L | 480,000 BTUS |
| AC#2L | 360,000 BTUS |
| AC#3L | 480,000 BTUS |
| AC#4L | 150,000 BTUS |
| WATER HEATER | 398,000 BTUS |
| TOTAL BASIS OF DESIGN LOAD | 1,868,000 BTUS |
| REMARKS: | 1. EQUIVALENT TO 1,868.0 CFH<br>2. 7" W.C. DELIVERY PRESSURE<br>3. DEVELOPED LENGTH: 200 FT, (METER TO AC#2) |


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# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
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SHEET
**EQUIPMENT ROOF PLAN - LENNOX**

SHEET NUMBER
**M-102L**




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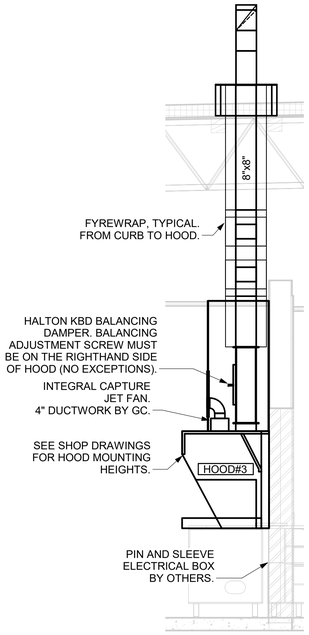
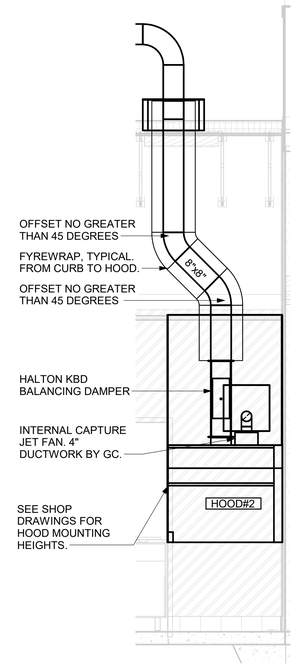
30-LE-05600-M-102L-EQUIPMENT ROOF PLAN - LENNOX

| 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. |

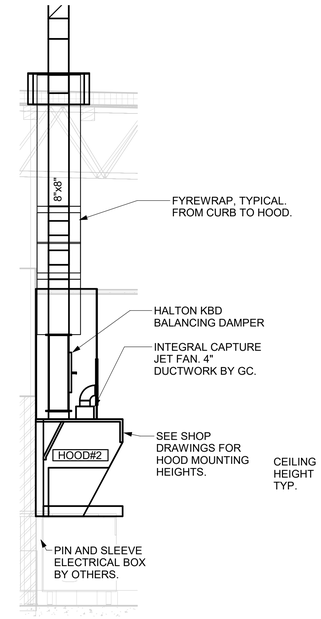
| CLEANOUT DOOR NOTE: |
| --- |
| DUCT WRAP SHALL BE APPLIED TO THE CLEANOUT DOOR PER THE WRAP MFR'S INSTALLATION INSTRUCTIONS. NO EXCEPTIONS. ALSO, THE CLEANOUT DOOR MUST BE REMOVABLE WITHOUT TOOLS AND MUST BE CLEARLY AND PERMANENTLY LABELED. |



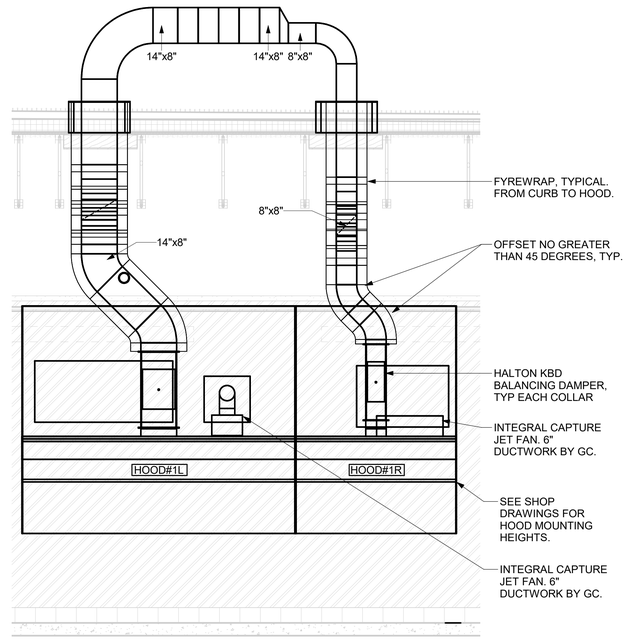

5 HOOD ELEVATION - HOOD#3
NOT TO SCALE



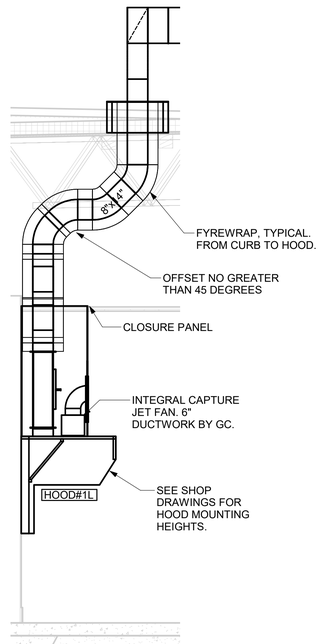

4 HOOD ELEVATION - HOOD#2 - FRONT
NOT TO SCALE




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




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




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



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CONSULTANT PROJECT # 2023223.55
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SHEET
**EXHAUST HOOD ELEVATIONS**

SHEET NUMBER
**M-201**

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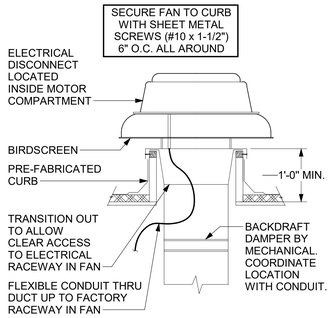
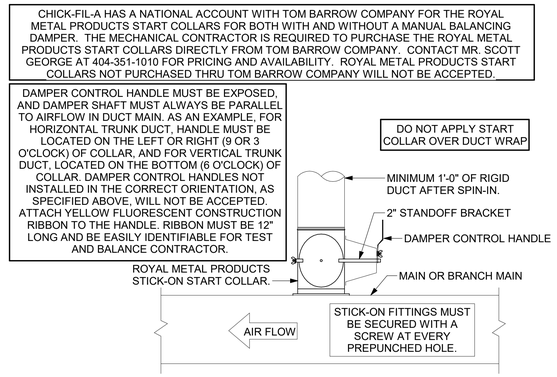


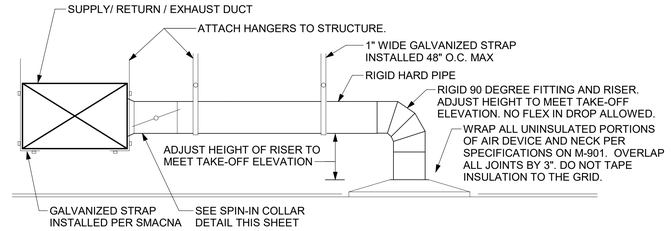

## 3 RESTROOM EXHAUST FAN
NOT TO SCALE

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

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



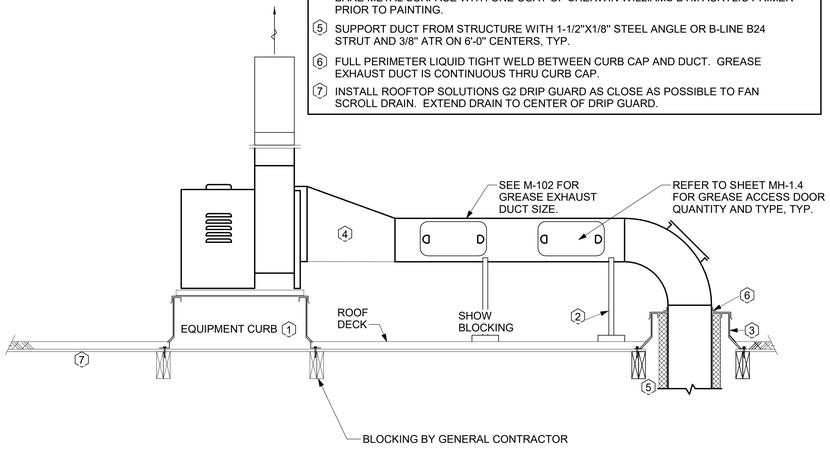

## 2 START COLLAR
NOT TO SCALE



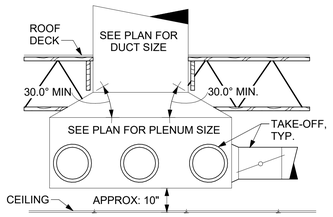

## 1 SAG/RAG/GRILLE TAKE-OFF
NOT TO SCALE

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.



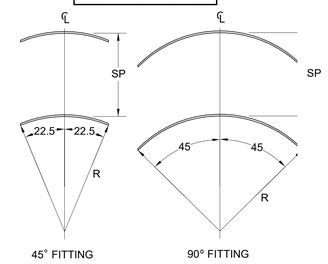

## 6 KITCHEN HOOD EXHAUST FAN
NOT TO SCALE




## 5 RETURN DROP GEOMETRY
NOT TO SCALE

| TURNING VANE SCHEDULE | | |
|---|---|---|
| R | SP | GA |
| 2" | 1.5" | 24 |

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




## 4 TURNING VANES
NOT TO SCALE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BRANDON M. MARZLEY
LICENSE No. 77967

BRANDON M. MARZLEY LICENSE No 77967 STATE OF FLORIDA PROFESSIONAL ENGINEER
B. Marzley
06/05/25


# CHICK-FIL-A
## MT. DORA GROVES
19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR
**ISSUED FOR CONSTRUCTION**

**REVISION SCHEDULE**

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
DRAWN BY JDF



SHEET
**DETAILS**

SHEET NUMBER
**M-501**

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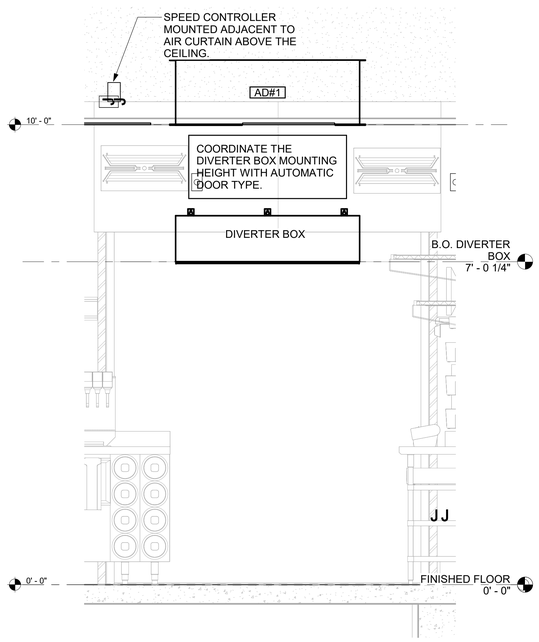
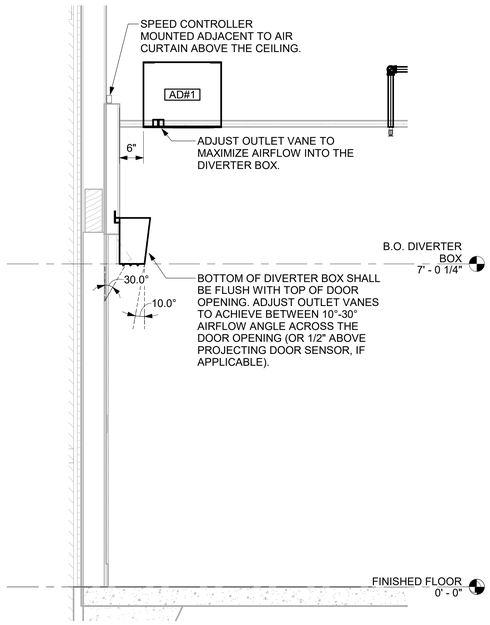
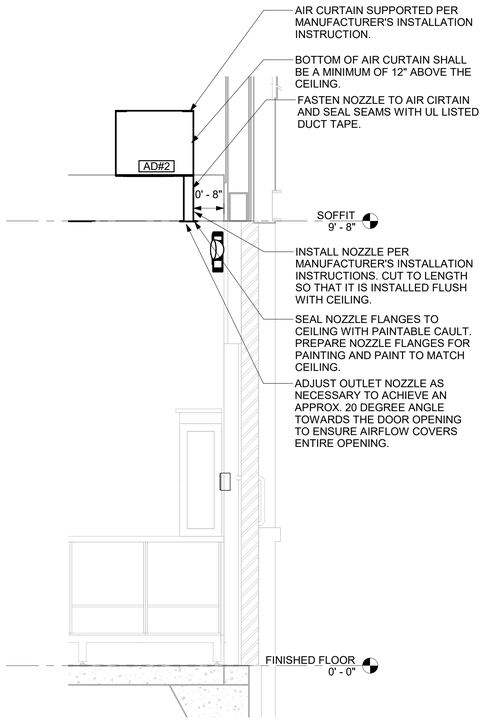


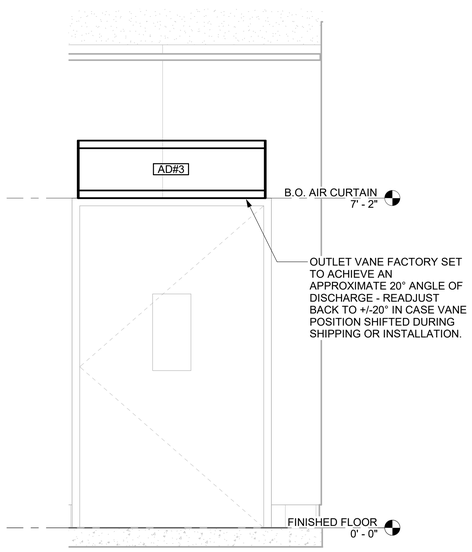

1 AD#1 FRONT VIEW
3/4" = 1'-0"




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




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




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

Chick-fil-A
5200 Buffington Road
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06/05/25

# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

## FSR#05600

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR

**ISSUED FOR CONSTRUCTION**

**REVISION SCHEDULE**

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CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
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SHEET
**DETAILS**

SHEET NUMBER
**M-502**

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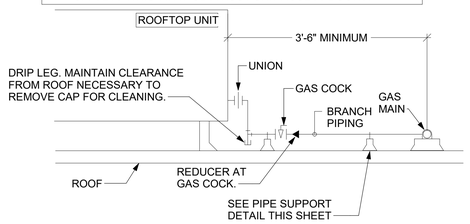
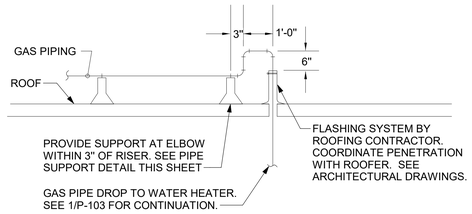
30-LE-05600-M-502-DETAILS

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



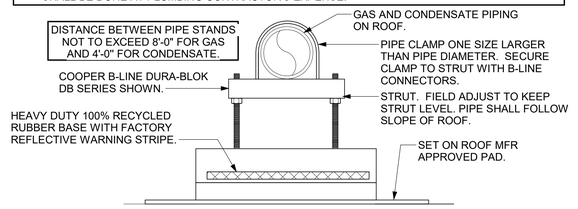

## 3 GAS PIPING AT RTU
NOT TO SCALE

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

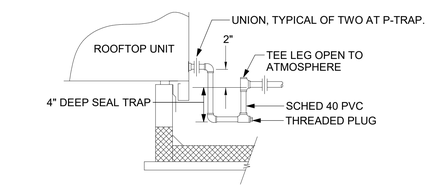



## 2 GAS PIPE DROP TO WATER HEATER
NOT TO SCALE

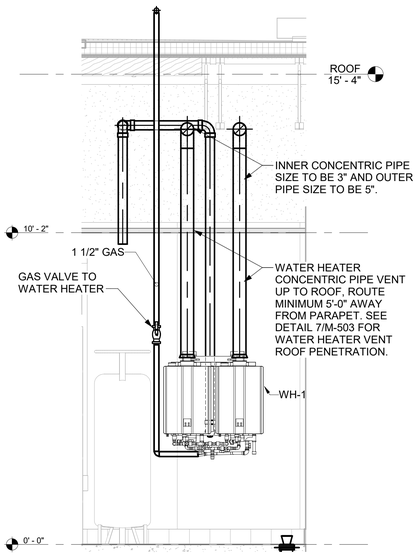
NOTES:
1. NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
3. ENSURE GAS AND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



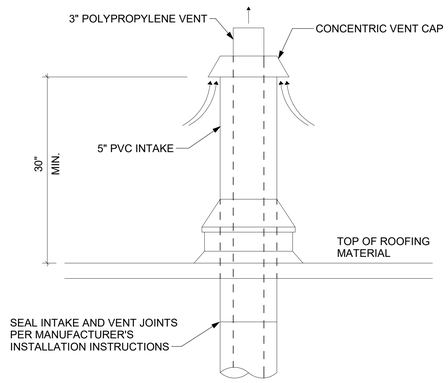

## 4 PIPING SUPPORT ON ROOF
NOT TO SCALE




## 5 CONDENSATE DRAIN PIPING
NOT TO SCALE




## 8 WATER HEATER GAS PIPING AND VENTING
NOT TO SCALE




## 7 WATER HEATER VENT ROOF PENETRATION
NOT TO SCALE

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# CHICK-FIL-A
# MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR
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**REVISION SCHEDULE**

| NO. | DATE | DESCRIPTION |
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CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
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SHEET
**DETAILS**

SHEET NUMBER
**M-503**

## 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 | LGT300S4M | 10.3 | 14.5 | 3149.00 lb | 8,125 | 1,750 | 7.5 | 0.8 | 278.3 | 210.5 | 480 | 389 | 208 | 3 | 135 | 150 | 1,3,4,5,6,7,8,9,10,12,13,14,15,16,17 |
| AC#2L | LENNOX | LGT156H4M | 12 | 15.5 | 2494.00 lb | 4,375 | 1,075 | 3 | 0.8 | 139.2 | 101.4 | 360 | 292 | 208 | 3 | 64 | 80 | 2,3,4,5,6,7,8,9,10,12,13,14,15,16,17 |
| AC#3L | LENNOX | LGT180H4M | 12 | 15 | 2614.00 lb | 5,250 | 1,275 | 3 | 0.8 | 174.7 | 131.7 | 480 | 389 | 208 | 3 | 64 | 70 | 2,3,4,5,6,7,8,9,10,12,13,14,15,16,17 |
| AC#4L | LENNOX | LGT060H4E | 12.7 | 17.1 | 1007.00 lb | 1,750 | 425 | 1.5 | 0.8 | 60.1 | 44.8 | 150 | 121 | 208 | 3 | 25 | 35 | 2,3,4,5,6,7,8,9,10,12,13,14,15,16 |

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. PROVIDE WITH RESTRAINT CLIP KIT.
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 SUPPLY 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 COIL HAIL GUARD, FIELD INSTALLED.
11. FRESH AIR TEMPERING KIT.
12. HOT GAS DEHUMIDIFICATION OPTION WITH WALL MOUNTED HUMIDITY SENSOR.
13. NOT USED.
14. FACTORY CONFIGURED PHASE LOSS PROTECTION.
15. FACTORY INSTALLED CONDENSATE PAN DRAIN OVERFLOW SWITCH.
16. FACTORY ALUMINIZED STEEL HEAT EXCHANGER.
17. 100K SCCR RATING.

## HOOD SCHEDULE

| MARK | EXHAUST CFM | SP @ TAB PORT (in-wg) | CAPTURE JET CFM & S.P. | TYPE | COLLAR SIZE | WIDTH | DEPTH | HEIGHT | MANUFACTURER | MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HOOD#1L | 1,204 | 0.13 | 80 @ 0.30" | BACKSHELF | 14"X8" | 107" | 37" | 38" | HALTON | KVL-2 IC | 1, 2, 3, 4, 5, 7, 8, 9, 12, 16, 21, 23 |
| HOOD#1R | 709 | 0.13 | 47 @ 0.30" | BACKSHELF | 8"X8" | 63" | 37" | 38" | HALTON | KVL-2 IC | 1, 2, 3, 5, 7, 8, 9, 12, 20, 21, 22 |
| HOOD#2 | 701 | 0.3 | 30 @ 0.29" | BACKSHELF | 8"X8" | 42" | 34" | 38" | HALTON | KVL-C IC | 1, 2, 3, 6, 7, 8, 9, 13, 15, 16, 18, 21 |
| HOOD#3 | 701 | 0.3 | 30 @ 0.29" | BACKSHELF | 8"X8" | 42" | 34" | 38" | HALTON | KVL-C IC | 1, 2, 3, 4, 6, 7, 8, 9, 13, 17, 21 |

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

REMARKS
1. STAINLESS STEEL CONSTRUCTION.
2. PROVIDE FULL HEIGHT SS CLOSURE PANEL WITH ACCESS PANEL IN FRONT LARGE ENOUGH TO REMOVE CAPTURE JET FAN, FIRE SUPPRESSION COMPONENTS, AND/OR TO ACCESS KBD EQUALIZER JACK SCREW.
3. PRE-PIPED FIRE SUPPRESSION SYSTEM.
4. FIRE SUPPRESSION CABINET AND COMPONENTS ABOVE HOOD ON LEFT SIDE.
5. 3" ZERO CLEARANCE TO COMBUSTIBLE BACK SPACER.
6. 3" ZERO CLEARANCE TO COMBUSTIBLE CUSTOM BACK SPACER TO ACCOMMODATE PIN AND SLEEVE ELECTRICAL BOX.
7. EQUIPMENT I.D. LABELS LOCATED ON FRONT LEADING EDGE OF HOOD.
8. FACTORY WALL MOUNTING ANGLE AT TOP OF HOOD.
9. INTEGRAL CAPTURE JET FAN.
10. NOT USED.
11. NOT USED.
12. NOT USED.
13. PIN AND SLEEVE ELECTRICAL BOX (DOUBLE CONNECTION). SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
14. NOT USED.
15. 3" ZERO CLEARANCE TO COMBUSTIBLE RIGHT SIDE SPACER.
16. NOTCHED LEFT END SIDE PANEL.
17. NOTCHED RIGHT END SIDE PANEL.
18. 3"X3" HORIZONTAL AND VERTICAL TRIM ANGLE FOR RIGHT SIDE OF HOOD TO FINISH OFF GAP AT WALL.
19. FULL LEFT END SIDE PANEL.
20. FULL RIGHT END SIDE PANEL.
21. HALTON KBD EQUALIZER.
22. CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT.
23. CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT.

## FAN SCHEDULE

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

NOTES
- NATIONAL ACCOUNT - NO SUBSTITUTIONS PERMITTED.

REMARKS
1. FANS SUPPLIED BY HALTON.
2. U.L. 705 LISTED AND LABELED FOR RESTAURANT APPLICATIONS.
3. FACTORY INSTALLED PREWIRED DISCONNECT SWITCH.
4. 19" 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 5/M-501.
14. STARTER BY ELECTRICAL CONTRACTOR. INTERLOCK WITH LIGHTS BY ELECTRICAL CONTRACTOR.
15. 12" HIGH CURB.
16. FACTORY INSTALLED AND WIRED SPEED CONTROLLER.
17. PROVIDE NEMA 1 PREWIRED DISCONNECT.
18. INTEGRAL POTENTIOMETER ON FAN MOTOR. SET TO FULL SPEED.
19. PROVIDE THERMOSTAT THERMOSTAT / TEMPERATURE CONTROLLER. SET TO 76°F.
20. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
21. PROVIDE WITH ON/OFF SWITCH.
22. NOT USED.
23. NOT USED.
24. FAN SUPPLIED BY TOM BARROW OR POWERS OF ARKANSAS FOR SOUTHWEST REGION.

## AIR DOOR SCHEDULE

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

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

REMARKS
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 M502.
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.
6. PROVIDE WITH NOZZLE EXTENSION, SEE DETAIL 3/M502.

## AIR DEVICE SCHEDULE

| MARK | DESCRIPTION | LOCATION | NECK SIZE | FACE SIZE | FRAME TYPE | REMARKS |
|---|---|---|---|---|---|---|
| A | PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS. | DINING / KITCHEN | VARIES | 24"x24" | LAY-IN | 1,7 |
| B | VARITHERM PLAQUE DIFFUSER | OFFICE | 8" | 24"x24" | LAY-IN | 1,7,8 |
| C | PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS. | ENTRY | 14"x14" | 16"x16" | BEVELLED | 1,3,5,6 |
| D | PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS. | SERVING | VARIES | 16"x16" | SURFACE | 1,3,5,6 |
| E | PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS. | DINING | 6" | 12"x12" | SURFACE | 1,3,5,6 |
| F | PRICE MODEL 80 EGGCRATE RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK. | DINING / KITCHEN / MFA | 24"x24" | 24"x24" | LAY-IN | 1,7,8 |
| FF | PRICE MODEL 80FF STEEL FILTER RETURN AIR GRILLE WITH REMOVABLE WHITE CORE, FACTORY FLAT BLACK BACKPAN AND ROUND NECK | MFA | 24"x24" | 24"x24" | LAY-IN | 1,7,8 |
| J | PRICE MODEL SMCD STEEL SUPPLY AIR DIFFUSER FIELD ADJUSTABLE AIR PATTERN CONTROLLERS. | RESTROOMS | VARIES | 10"x10" | BEVELLED | 1,2,3,5,6 |
| K | PRICE MODEL APDDR ALUMINUM PERFORATED FACE RETURN AIR GRILLE. | RESTROOMS / ENTRY | 14"x14" | 16"x16" | SURFACE | 1,4,5,6 |

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

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


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SHEET
**EQUIPMENT SCHEDULES - LENNOX**

SHEET NUMBER
**M-601L**




6/4/2025 12:23:07 PM Autodesk Docs://FL_05600_Mt Dora Groves FSU_2024.5_FSR/05600_Mt Dora Groves FSU_MEC.rvt
30-LE-05600-M-601L-EQUIPMENT SCHEDULES - LENNOX

# VENTILATION SCHEDULE

| General | | | Ventilation | | | | | | | | | | | | Exhaust | | | | | | | Served by | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 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 | Supply | Exhaust |
| 1 | Kitchen | 880 | 20 | 18 | 7.5 | 135 | 0.12 | 106 | 241 | 0.8 | 301 | 7,325 | 0.04 | 1,578 | 0.70 | 616 | - | - | - | 3,315 | AC#1L / AC#1T | EF-1 / EF-2 |
| 2 | Kitchen (Dish Washing) | 128 | 15 | 2 | 7.5 | 15 | 0.18 | 23 | 38 | 0.8 | 48 | 800 | 0.06 | 172 | - | - | - | - | - | - | AC#1L / AC#1T | - |
| | Total Area | 1,008 | | | | | | Total Vbz | 279 | | Total Supply Airflow | | 8,125 | | 1,750 | Actual Outdoor Airflow | | | | | | |
| | | | | | | | | Diversity (D) | 1.00 | | | Maximum Zp | 0.06 | | | | | | | | | | |
| | | | | | | | | Uncorrected Outdoor Air Intake (Vou) | 279 | | System Ventilation Efficiency (Ev) | | 1.00 | | | | | | | | | | |
| | | | | | | | | Required Outdoor Air Intake (CFM) | 278 | | | | | | | | | | | | | | |

# VENTILATION SCHEDULE

| General | | | Ventilation | | | | | | | | | | | | Exhaust | | | | | | | Served by | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 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 | Supply | Exhaust |
| 5 | Meal Fulfillment Area | 460 | 15 | 7 | 7.5 | 52.5 | 0.18 | 83 | 135 | 0.8 | 170 | 4,375 | 0.04 | 1,075 | - | - | - | - | - | - | AC#2L / AC#2T | - |
| | Total Area | 460 | | | | | | Total Vbz | 135 | | Total Supply Airflow | | 4,375 | | 1,075 | Actual Outdoor Airflow | | | | | | |
| | | | | | | | | Diversity (D) | 1.00 | | | Maximum Zp | 0.03 | | | | | | | | | | |
| | | | | | | | | Uncorrected Outdoor Air Intake (Vou) | 135 | | System Ventilation Efficiency (Ev) | | 1.00 | | | | | | | | | | |
| | | | | | | | | Required Outdoor Air Intake (CFM) | 135 | | | | | | | | | | | | | | |

# VENTILATION SCHEDULE

| General | | | Ventilation | | | | | | | | | | | | Exhaust | | | | | | | Served by | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 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 | Supply | Exhaust |
| 1 | Dining | 1,209 | 70 | 85 | 7.5 | 637.5 | 0.18 | 218 | 855 | 0.8 | 1069 | 4,000 | 0.267 | 971 | - | - | - | - | - | - | AC#3L / AC#3T | - |
| 2 | Serving | 313 | 15 | 5 | 7.5 | 38 | 0.18 | 56 | 94 | 0.8 | 118 | 500 | 0.23 | 121 | - | - | - | - | - | - | AC#3L / AC#3T | - |
| 3 | Men's RR | 152 | - | - | - | - | - | - | - | 0.8 | - | 125 | - | 30 | - | - | Continuous | 50 | 100 | 150 | AC#3L / AC#3T | EF-3 |
| 4 | Women's RR | 152 | - | - | - | - | - | - | - | 0.8 | - | 125 | - | 30 | - | - | Continuous | 50 | 100 | 150 | AC#3L / AC#3T | EF-3 |
| 5 | RR Vestibule | 134 | - | - | - | - | 0.06 | 8 | 8 | 0.8 | 11 | 100 | 0.10 | 24 | - | - | - | - | - | - | AC#3L / AC#3T | - |
| 6 | Entry Vestibule | 73 | - | - | - | - | 0.06 | 4 | 4 | 0.8 | 6 | 400 | 0.01 | 97 | - | - | - | - | - | - | AC#3L / AC#3T | - |
| | Total Area | 2,033 | | | | | | Total Vbz | 961 | | Total Supply Airflow | | 5,250 | | 1,275 | Actual Outdoor Airflow | | | | | | |
| | | | | | | | | Diversity (D) | 0.82 | | | Maximum Zp | 0.267 | | | | | | | | | | |
| | | | | | | | | Uncorrected Outdoor Air Intake (Vou) | 910 | | System Ventilation Efficiency (Ev) | | 0.80 | | | | | | | | | | |
| | | | | | | | | Required Outdoor Air Intake (CFM) | 1,138 | | | | | | | | | | | | | | |

# VENTILATION SCHEDULE

| General | | | Ventilation | | | | | | | | | | | | Exhaust | | | | | | | Served by | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 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 | Supply | Exhaust |
| 1 | Team Member Room | 158 | 50 | 8 | 5 | 40 | 0.06 | 9 | 49 | 0.8 | 62 | 600 | 0.10 | 146 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| 2 | Service | 157 | - | - | - | - | 0.12 | 19 | 19 | 0.8 | 24 | 185 | 0.13 | 45 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| 3 | Beverage | 166 | - | - | - | - | 0.12 | 20 | 20 | 0.8 | 25 | 275 | 0.09 | 67 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| 4 | Utility | 100 | - | - | - | - | 0.12 | 12 | 12 | 0.8 | 15 | 300 | 0.05 | 73 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| 5 | Dry Storage | 471 | - | - | - | - | 0.12 | 57 | 57 | 0.8 | 71 | 150 | 0.47 | 36 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| 6 | Office | 79 | 5 | 1 | 5 | 5 | 0.06 | 5 | 10 | 0.8 | 13 | 100 | 0.12 | 24 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| 7 | Employee RR | 62 | - | - | - | - | - | - | - | 0.8 | - | 40 | - | 10 | - | - | Intermittent | 70 | 70 | 75 | AC#4L / AC#4T | EF#4 |
| 8 | Riser | 19 | - | - | - | - | 0.12 | 2 | 2 | 0.8 | 3 | 100 | 0.03 | 24 | - | - | - | - | - | - | AC#4L / AC#4T | - |
| | Total Area | 1,212 | | | | | | Total Vbz | 169 | | Total Supply Airflow | | 1,750 | | 425 | Actual Outdoor Airflow | | | | | | |
| | | | | | | | | Diversity (D) | 1.00 | | | Maximum Zp | 0.47 | | | | | | | | | | |
| | | | | | | | | Uncorrected Outdoor Air Intake (Vou) | 169 | | System Ventilation Efficiency (Ev) | | 0.60 | | | | | | | | | | |
| | | | | | | | | Required Outdoor Air Intake (CFM) | 281 | | | | | | | | | | | | | | |


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BRANDON M. MARZLEY
LICENSE No. 77967
BRANDON M. MARZLEY LICENSE No 77967 STATE OF FLORIDA PROFESSIONAL ENGINEER
B. Marzley
06/05/25


CHICK-FIL-A
MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR

**ISSUED FOR CONSTRUCTION**

REVISION SCHEDULE

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
DRAWN BY JDF

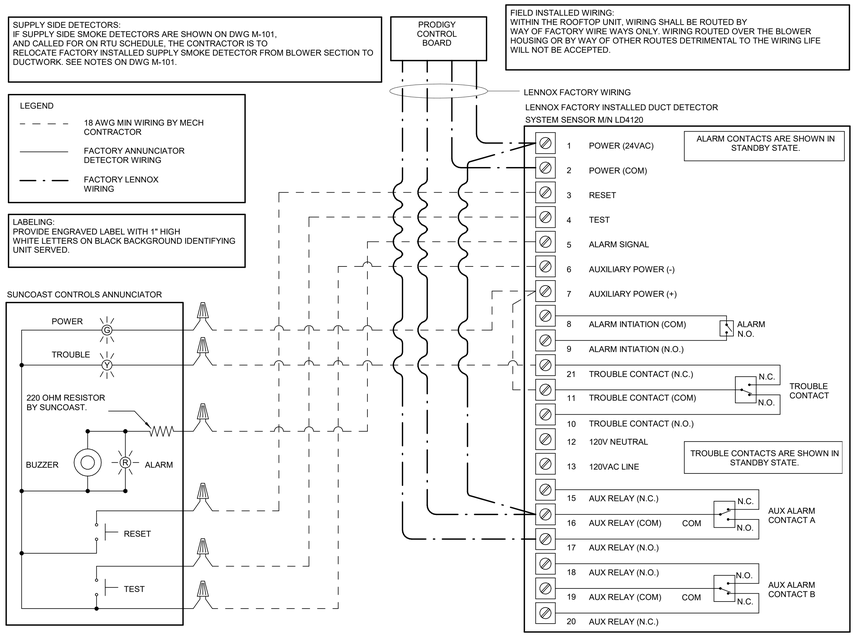


SHEET
**VENTILATION SCHEDULES**

SHEET NUMBER
**M-602**

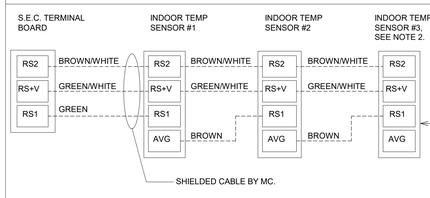
This item has been digitally signed and sealed by B. Marzley on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.




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

## AVERAGING SENSORS (WHERE SHOWN ON PLANS)




NOTES:
1. SEE DWG M-101 FOR LOCATION AND ARRANGEMENT OF SENSORS.
2. MULTIPLE AVERAGING SENSORS COUNT AS ONE SENSOR. SEE NETWORK THERMOSTAT NT-URS INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

NETWORK TSTAT REMOTE TEMP SENSOR PROVIDED BY SUNCOAST AND INSTALLED BY MC. FIELD CALIBRATE EACH SENSOR, TYP.

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. |

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.

5. CAT 5/5E CABLE BY M.C. NO SUBSTITUTIONS.

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 IN 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.

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. ALL — FOR ALL UNITS, SET BLOWER TO OPERATE AT ONE AIRFLOW FOR 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):

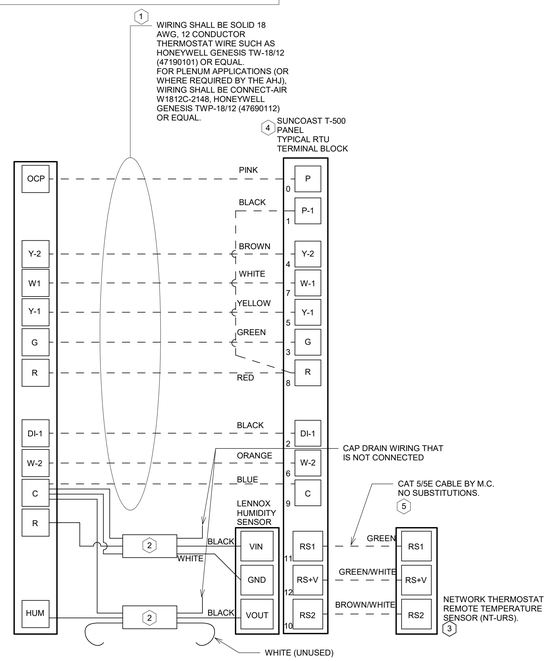
1. INSTALL FRESH AIR TEMPERING KIT WIRING HARNESS AS RECOMMENDED BY LENNOX.

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" SET FAH SETPOINT TO 66F THIS WILL TEMPER SUPPLY AIR BELOW 66F WITH INTERMITTENT HEATING WHEN THERMOSTAT IS NOT ACTIVELY CALLING FOR HEAT.

4. CHANGE PRODIGY 2.0 OR CORE UNIT CONTROLLER PARAMETER # 157. WITHIN MAIN MENU GO TO SETTINGS TO RTU OPTIONS TO EDIT PARAMETER VALUE TO 14 FOR A 14F FAH DEADBAND AND SAVE.

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




2 ROOFTOP UNIT CONTROL WIRING - LENNOX
NOT TO SCALE


Chick-fil-A
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BRANDON M. MARZLEY
LICENSE No. 77967
STATE OF FLORIDA
PROFESSIONAL ENGINEER
06/05/25


# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR
**ISSUED FOR CONSTRUCTION**

REVISION SCHEDULE

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
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SHEET
**CONTROL WIRING DIAGRAMS - LENNOX**

SHEET NUMBER
**M-701L**




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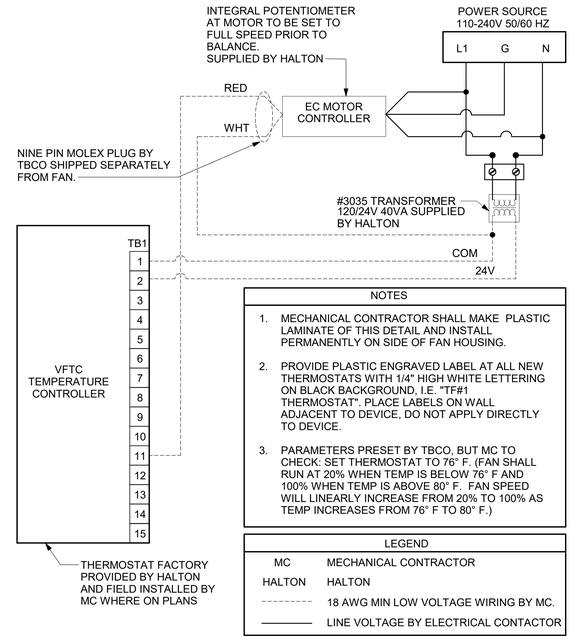
30-LE-05600-M-701L-CONTROL WIRING DIAGRAMS - LENNOX




NOTES

1. MECHANICAL CONTRACTOR SHALL MAKE PLASTIC LAMINATE OF THIS DETAIL AND INSTALL PERMANENTLY ON SIDE OF FAN HOUSING.
2. PROVIDE PLASTIC ENGRAVED LABEL AT ALL NEW THERMOSTATS WITH 1/4" HIGH WHITE LETTERING ON BLACK BACKGROUND, I.E. "TF#1 THERMOSTAT". PLACE LABELS ON WALL ADJACENT TO DEVICE, DO NOT APPLY DIRECTLY TO DEVICE.
3. PARAMETERS PRESET BY TBCO, BUT MC TO CHECK: SET THERMOSTAT TO 76° F. (FAN SHALL RUN AT 20% WHEN TEMP IS BELOW 76° F AND 100% WHEN TEMP IS ABOVE 80° F. FAN SPEED WILL LINEARLY INCREASE FROM 20% TO 100% AS TEMP INCREASES FROM 76° F TO 80° F.)

LEGEND

| | |
|---|---|
| MC | MECHANICAL CONTRACTOR |
| HALTON | HALTON |
| - - - - - - - - | 18 AWG MIN LOW VOLTAGE WIRING BY MC. |
| ———— | LINE VOLTAGE BY ELECTRICAL CONTACTOR |

## 1 TECH CLOSET CONTROL DIAGRAM

NOT TO SCALE


Chick-fil-A
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BRANDON M. MARZLEY
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BRANDON M. MARZLEY LICENSE No 77967 STATE OF FLORIDA PROFESSIONAL ENGINEER
06/05/25


# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR

**ISSUED FOR CONSTRUCTION**

**REVISION SCHEDULE**

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
DRAWN BY JDF



SHEET
**CONTROL WIRING DIAGRAMS**

SHEET NUMBER
**M-702**




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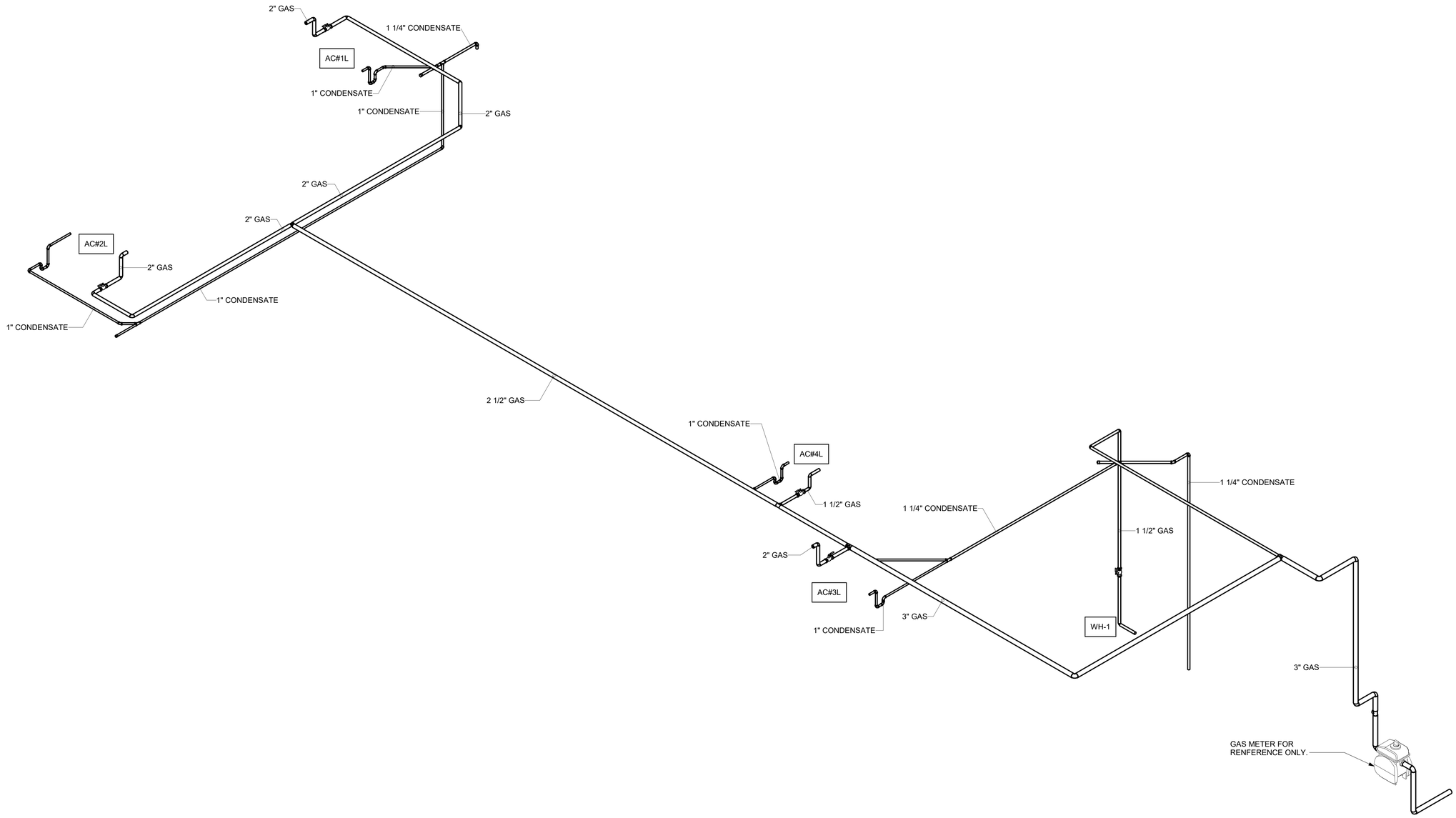
30-LE-05600-M-702-CONTROL WIRING DIAGRAMS




1 GAS AND CONDENSATE ISOMETRIC - LENNOX



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06/05/25

# CHICK-FIL-A
## MT. DORA GROVES

19360 US HWY 441
MT. DORA, FL 32757

**FSR#05600**

BUILDING TYPE / SIZE: P14 LE BS
RELEASE: 24.05
PRINTED FOR
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**REVISION SCHEDULE**

| NO. | DATE | DESCRIPTION |
|---|---|---|

CONSULTANT PROJECT # 2023223.55
DATE 05/22/25
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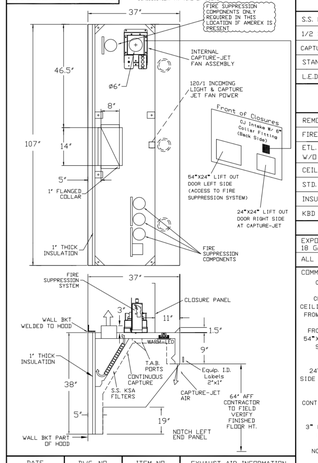
SHEET
**GAS AND CONDENSATE ISOMETRIC - LENNOX**

SHEET NUMBER
**M-901L**

6/4/2025 12:23:46 PM Autodesk Docs://FL_05600_Mt Dora Groves FSU_2024.5_FSR05600_Mt Dora Groves FSU_MEC.rvt
30-LE-05600-M-901L-GAS AND CONDENSATE ISOMETRIC - LENNOX

## MODEL: KVL-2-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE




| STANDARD FEATURES | |
|---|---|
| S.S. FILTERS (KSA) | 5 |
| 1/2 S.S. FILTERS (KSA) | – |
| CAPTURE-JET | ✱ |
| STAND-OFF | ✱ |
| L.E.D. LIGHTS | 3 |
| **OPTIONS** | |
| REMOTE SWITCH PANEL | |
| FIRE PROTECTION | ✱ |
| ETL LISTED W/O EXHAUST DAMPER | ✱ |
| CEILING CLOSURE | 2 |
| STD. BACKSPLASH | |
| INSULATED BACKSPLASH | |
| KBD DAMPER | ✱ |
| **MATERIAL** | |
| EXPOSED SURFACES 18 GA. S.S. | ✱ |
| ALL 18 GA. S.S. | |

COMMENTS:
CLOSURE HEIGHT = 51" (TWO SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF

FRONT CLOSURE PANEL WITH 64"x24" LIFT OUT DOOR LEFT SIDE (ACCESS TO FIRE SUPPRESSION)

24"x24" LIFT OUT DOOR RIGHT SIDE AT CAPTURE-JET W/ FRONT CJ INTAKE

CONTINUOUS CAPTURE INTERNAL RIGHT END CUTOUT

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

NOTCHED LEFT END PANEL

EQUIPMENT COVERED (4)PRESSURE FRYERS (2)GRILLS

FIRE SUPPRESSION WEIGHT = ANSUL 63 LBS / AMEREX 264LBS
HOOD WEIGHT= 669 LBS

| DATE | DWG. NO. | ITEM NO. | EXHAUST AIR INFORMATION | | |
|---|---|---|---|---|---|
| 08.09.22 | U22-606-01 | H-1L | CFM | TAB | SP |
| PROJECT: CHICK-FIL-A P14 LS/LE/SE/DTO/DTN BUILDING | | | 1204 | .13" | .22" |
| LOCATION: -- | | | CAPTURE AIR INFORMATION | | |
| | | | CFM | | SP |
| SUBMITTED BY: HALTON CO. | | | 80 | | .30" |

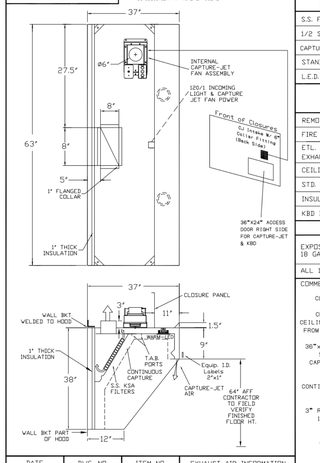
4123

K FACTOR EQUATION: CFM = K FACTOR ✱ √ΔP

K FACTOR = 3365

## MODEL: KVL-2-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE




| STANDARD FEATURES | |
|---|---|
| S.S. FILTERS (KSA) | 3 |
| 1/2 S.S. FILTERS (KSA) | – |
| CAPTURE-JET | ✱ |
| STAND-OFF | ✱ |
| L.E.D. LIGHTS | 2 |
| **OPTIONS** | |
| REMOTE SWITCH PANEL | |
| FIRE PROTECTION | ✱ |
| ETL LISTED W/O EXHAUST DAMPER | ✱ |
| CEILING CLOSURE | 2 |
| STD. BACKSPLASH | |
| INSULATED BACKSPLASH | |
| KBD DAMPER | ✱ |
| **MATERIAL** | |
| EXPOSED SURFACES 18 GA. S.S. | ✱ |
| ALL 18 GA. S.S. | |

COMMENTS:
CLOSURE HEIGHT = 51" (TWO SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 11" FROM FRONT TO CREATE SHELF

36"x24" ACCESS DOOR RIGHT SIDE FOR ACCESS TO CAPTURE-JET W/ FRONT CJ INTAKE & KBD

CONTINUOUS CAPTURE INTERNAL LEFT END CUTOUT

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

EQUIPMENT COVERED (3)PRESSURE FRYERS

HOOD WEIGHT= 394 LBS

| DATE | DWG. NO. | ITEM NO. | EXHAUST AIR INFORMATION | | |
|---|---|---|---|---|---|
| 08.09.22 | U22-606-01 | H-1R | CFM | TAB | SP |
| PROJECT: CHICK-FIL-A P14 LS/LE/SE/DTO/DTN BUILDING | | | 709 | .13" | .23" |
| LOCATION: -- | | | CAPTURE AIR INFORMATION | | |
| | | | CFM | | SP |
| SUBMITTED BY: HALTON CO. | | | 47 | | .30" |

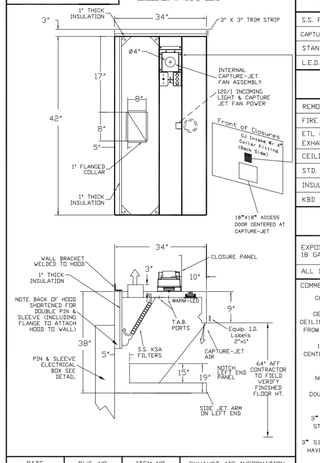
4123

K FACTOR EQUATION: CFM = K FACTOR ✱ √ΔP

K FACTOR = 1959

## MODEL: KVL-C-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE




| STANDARD FEATURES | |
|---|---|
| S.S. FILTERS (KSA) | 2 |
| CAPTURE-JET | ✱ |
| STAND-OFF | ✱ |
| L.E.D. LIGHTS | 1 |
| **OPTIONS** | |
| REMOTE SWITCH PANEL | |
| FIRE PROTECTION | ✱ |
| ETL LISTED W/O EXHAUST DAMPER | ✱ |
| CEILING CLOSURE | 2 |
| STD. BACKSPLASH | |
| INSULATED BACKSPLASH | |
| KBD DAMPER | ✱ |
| **MATERIAL** | |
| EXPOSED SURFACES 18 GA. S.S. | ✱ |
| ALL 18 GA. S.S. | |

COMMENTS:
CLOSURE HEIGHT = 51" (TWO SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF

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

NOTCH LEFT END PANEL

DOUBLE RECEPTACLE PIN & SLEEVE

3" X 3" TRIM STRIP FOR STANDOFF ON RIGHT END

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

EQUIPMENT COVERED (2)FRYERS

| DATE | DWG. NO. | ITEM NO. | EXHAUST AIR INFORMATION | | |
|---|---|---|---|---|---|
| 08.09.22 | U22-606-01 | H-2 | CFM | T.A.B. | SP |
| PROJECT: CHICK-FIL-A P14 LS/LE/SE/DTO/DTN BUILDING | | | 701 | .30" | .39" |
| LOCATION: -- | | | CAPTURE AIR INFORMATION | | |
| | | | CFM | | SP |
| SUBMITTED BY: HALTON CO. | | | 30 | | .29" |

4123

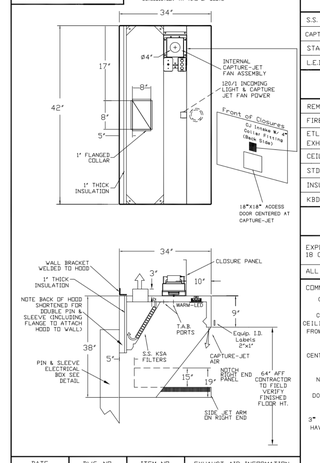
K FACTOR EQUATION: CFM = K FACTOR ✱ √ΔP

K FACTOR = 1291

HOOD WEIGHT= 262 LBS

## MODEL: KVL-C-IC

FACTORY MUST BE ADVISED OF ANY SPECIAL ✱ REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE




| STANDARD FEATURES | |
|---|---|
| S.S. FILTERS (KSA) | 2 |
| CAPTURE-JET | ✱ |
| STAND-OFF | ✱ |
| L.E.D. LIGHTS | 1 |
| **OPTIONS** | |
| REMOTE SWITCH PANEL | |
| FIRE PROTECTION | ✱ |
| ETL LISTED W/O EXHAUST DAMPER | ✱ |
| CEILING CLOSURE | 3 |
| STD. BACKSPLASH | |
| INSULATED BACKSPLASH | |
| KBD DAMPER | ✱ |
| **MATERIAL** | |
| EXPOSED SURFACES 18 GA. S.S. | ✱ |
| ALL 18 GA. S.S. | |

COMMENTS:
CLOSURE HEIGHT = 51" (THREE SIDES)
CEILING HEIGHT = 122"
CEILING CLOSURE RECESSED 10" FROM FRONT TO CREATE SHELF

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

NOTCH RIGHT END PANEL

DOUBLE RECEPTACLE PIN & SLEEVE

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

EQUIPMENT COVERED (2)FRYERS

| DATE | DWG. NO. | ITEM NO. | EXHAUST AIR INFORMATION | | |
|---|---|---|---|---|---|
| 08.09.22 | U22-606-01 | H-3 | CFM | T.A.B. | SP |
| PROJECT: CHICK-FIL-A P14 LS/LE/SE/DTO/DTN BUILDING | | | 701 | .30" | .39" |
| LOCATION: -- | | | CAPTURE AIR INFORMATION | | |
| | | | CFM | | SP |
| SUBMITTED BY: HALTON CO. | | | 30 | | .29" |

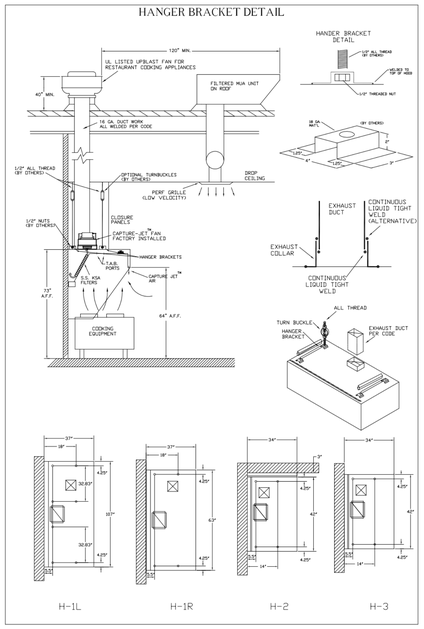
4123

K FACTOR EQUATION: CFM = K FACTOR ✱ √ΔP

K FACTOR = 1291

HOOD WEIGHT= 245 LBS

## HANGER BRACKET DETAIL




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

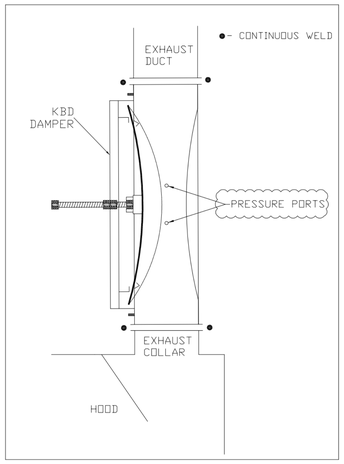
1. ALL DIMENSIONAL INFORMATION, MOUNTING POSITIONS AND CLEARANCES.
2. THE LOCATION AND TYPE OF COOKING EQUIPMENT.

NOTE: ANY CHANGES INCLUDING 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.

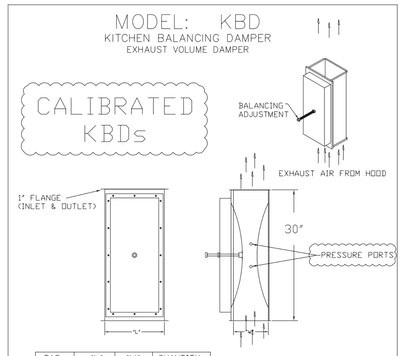
☐ REVISE AND RESUBMIT

APPROVED FOR FABRICATION ☐ WITH NO CHANGES ☐ WITH CHANGES AS NOTED

APPROVED BY _____ DATE _____



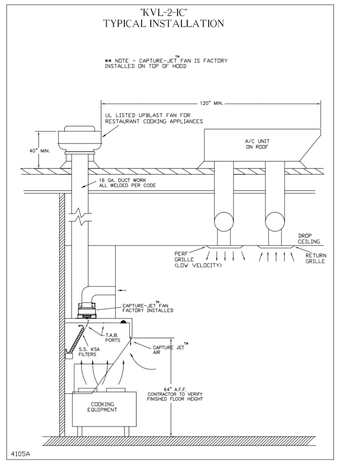

## MODEL: KBD
KITCHEN BALANCING DAMPER
EXHAUST VOLUME DAMPER




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

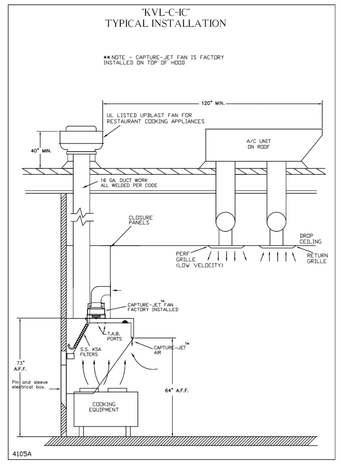
MATERIAL:
FRAME - 16GA CONT. WELDED GALV.
ADJUSTABLE PANEL 18 GA S.S.

## "KVL-2-IC" TYPICAL INSTALLATION



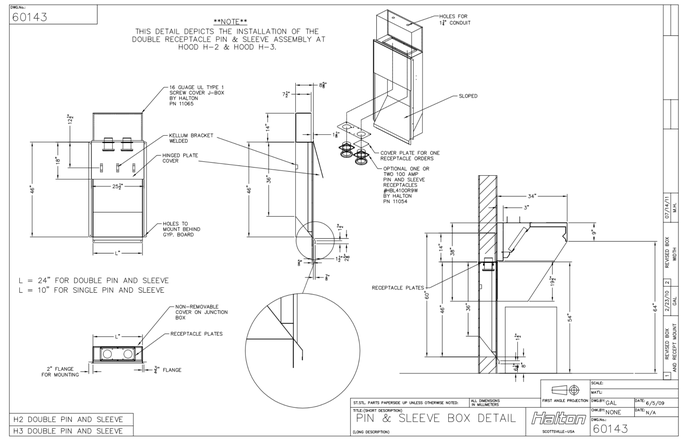

4105A

## "KVL-C-IC" TYPICAL INSTALLATION

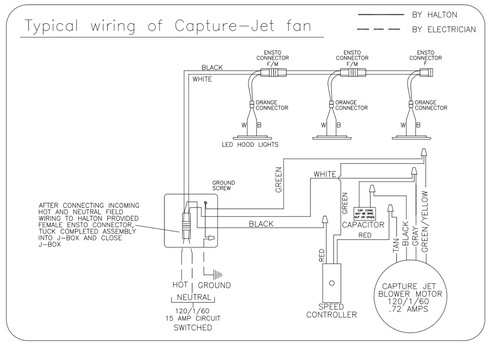



4105A

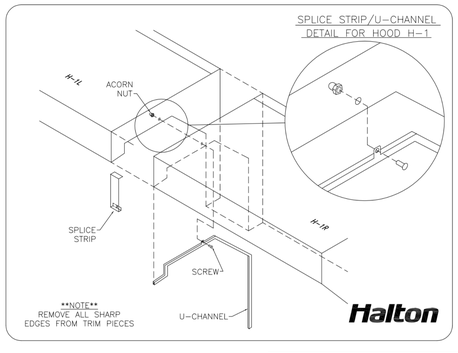
60143



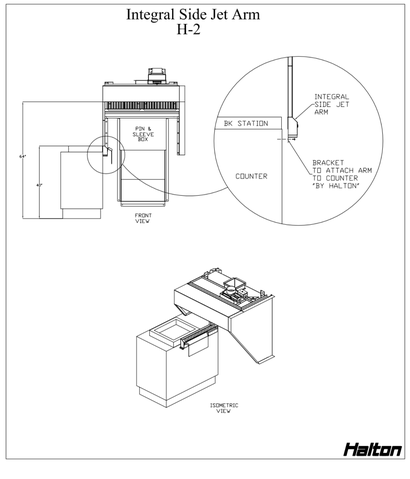

## Typical wiring of Capture-Jet fan



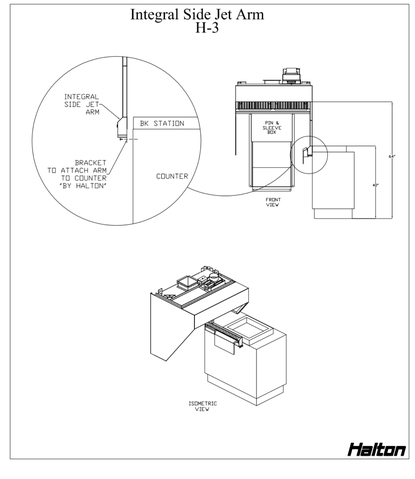

## SPLICE STRIP/U-CHANNEL DETAIL FOR HOOD H-1

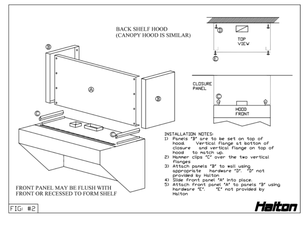



## Integral Side Jet Arm H-2

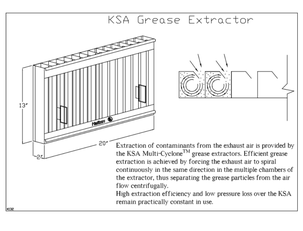



## Integral Side Jet Arm H-3




## KSA Grease Extractor




Extraction of contaminants from the exhaust air is provided by the KSA Multi-Cyclone™ grease extractors. Effcient 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.

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. | SERIAL NO. | ITEM NO. |
|---|---|---|
| KVL-2-IC | | |

GENERAL REQUIREMENTS

FILTER TYPE EXHAUST HOOD FOR COMMERCIAL AND INSTITUTIONAL KITCHENS
THE FAN CIRCUIT IS RATED FOR 120V, 15A, 60HZ.
THE LIGHTING CIRCUIT IS RATED FOR 120V, 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, B | | MIN EXHAUST VOLUME AT 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 | 196 |
| HEAVY | 0 | 2 | 20 | 30 | 216 |
| + = SETBACK/OVERHANG DISTANCE | | | | | |
| JCT SUPPLY AIR FLOW SHALL ONLY BE SET AT 0.26 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. | SERIAL NO. | ITEM NO. |
|---|---|---|
| KVL-C-IC | | |

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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, B | | MIN EXHAUST VOLUME AT HOOD LENGTH |
|---|---|---|---|---|---|
| | FRONT, IN | SIDE, IN | MIN | MAX | |
| MEDIUM | 6 | 0 | 20 | 36 | 139 |
| JCT SUPPLY AIR FLOW SHALL ONLY BE SET AT 0.30 IN H20 | | | | | |


WEBSITE: WWW.HALTON.COM

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

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

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


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

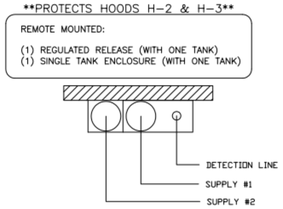
PROJECT: CHICK-FIL-A P14 LS/LE/SE/DTO/DTN BUILDING
LOCATION: -- | DATE: 08.09.22
DRAWN BY: CG | SCALE: NTS
Halton Dwg: U22-606-01

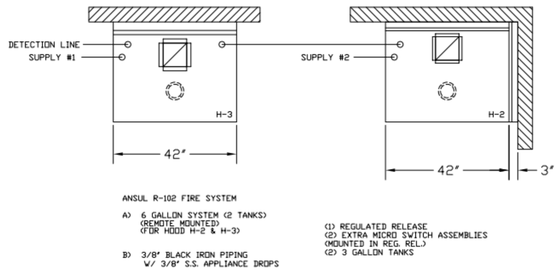
Halton CARE FOR INDOOR AIR

Sheet MH-1.1

## NOTE:

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



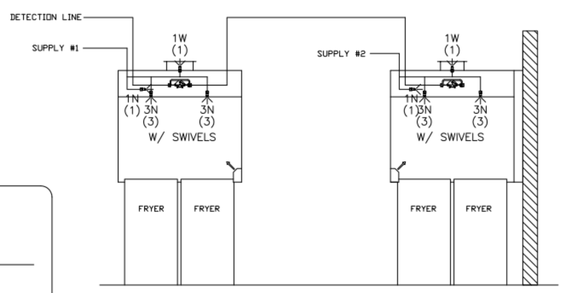




ANSUL R-102 FIRE SYSTEM

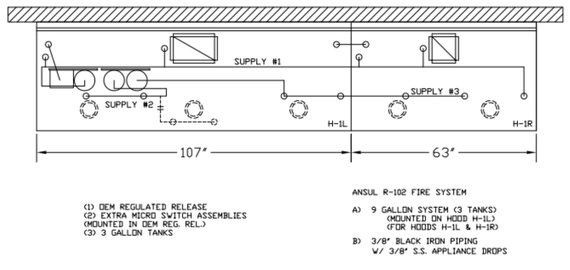
A) 6 GALLON SYSTEM (2 TANKS) (REMOTE MOUNTED) (FOR HOOD H-2 & H-3)

B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS

(1) REGULATED RELEASE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN REG. REL.)
(2) 3 GALLON TANKS




ANSUL R-102 FIRE SYSTEM LAYOUT

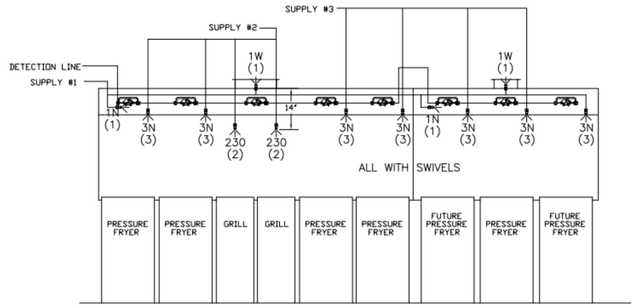



(1) OEM REGULATED RELEASE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN OEM REG. REL.)
(3) 3 GALLON TANKS

ANSUL R-102 FIRE SYSTEM

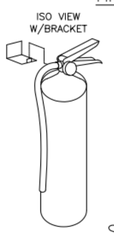
A) 9 GALLON SYSTEM (3 TANKS) (MOUNTED ON HOOD H-1L) (FOR HOODS H-1L & H-1R)

B) 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS




ANSUL R-102 FIRE SYSTEM LAYOUT

FIRE EXTINGUISHER




5 LBS. ABC
MODEL B402 QTY:_____

10 LBS. ABC
MODEL B456 QTY:_____

6 LTR CLASS K
MODEL C-260 QTY:_____

SUPPLIED BY HALTON

FUSIBLE LINK RATINGS

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

ANSUL R-102 FIRE SYSTEM NOTES
THREE TANK SYSTEM MOUNTED ON TOP OF (H-1L)
MAXIMUM FLOW POINTS = 33

ANSUL R-102 FIRE SYSTEM NOTES
TWO TANK SYSTEM REMOTE MOUNTED
MAXIMUM FLOW POINTS = 22

| ITEM # | QTY | DESCRIPTION | FLOW PTS (TOTAL) |
|---|---|---|---|
| 1W | 4 | DUCT NOZZLES | 4 |
| 1N | 4 | PLENUM NOZZLES | 4 |
| 230 | 2 | APPLIANCE NOZZLES | 4 |
| 3N | 11 | APPLIANCE NOZZLES | 33 |
| | | TOTAL FLOW POINTS - 45 | |

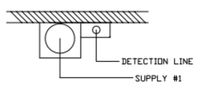
| ITEM # | QTY | DESCRIPTION |
|---|---|---|
| #200 | 8 | SERIES DETECTORS W/ FUSIBLE LINKS |
| #201 | 2 | TERMINAL DETECTOR W/ FUSIBLE LINKS |
| #202 | 1 | OEM REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH |
| #202 | 1 | REGULATED RELEASE W/ DOUBLE POLE MICRO SWITCH |
| #203 | 5 | 3 GALLON TANKS |
|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

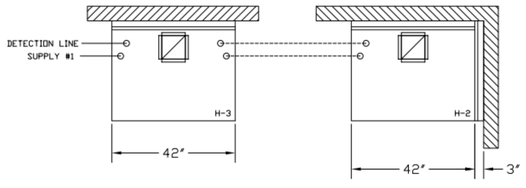
ANSUL R-102 FIRE SYSTEM
UL LISTED PER STD LATEST STD 300

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

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

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



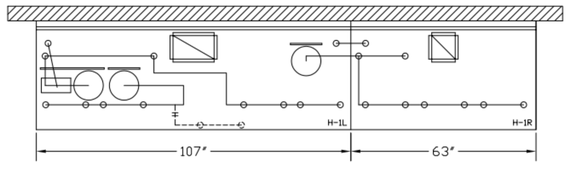




(1) SYSTEM ENCLOSURE
(1) WALL MOUNTING BRACKET
(1) MECHANICAL RELEASE MODULE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL MODULE)
(1) KP475 AGENT CYLINDERS (4.75 GALLON TANK)

AMEREX FIRE SYSTEM

A) (1) KP475 TANKS - 14 FLOW POINTS (REMOTE MOUNTED) (FOR HOOD H-2 & H-3)

B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS



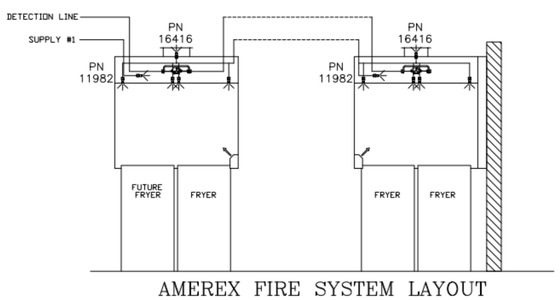

(1) MECHANICAL RELEASE MODULE
(2) EXTRA MICRO SWITCH ASSEMBLIES (MOUNTED IN MECHANICAL REL MODULE)
(1) 3.75 GALLON TANK
(2) 4.75 GALLON TANKS

AMEREX FIRE SYSTEM

A) (1) KP375 TANK - 11 FLOW POINTS
(2) KP475 TANKS - 14 FLOW POINTS (MOUNTED ON HOOD H-1L) (FOR HOODS H-1L & H-1R)

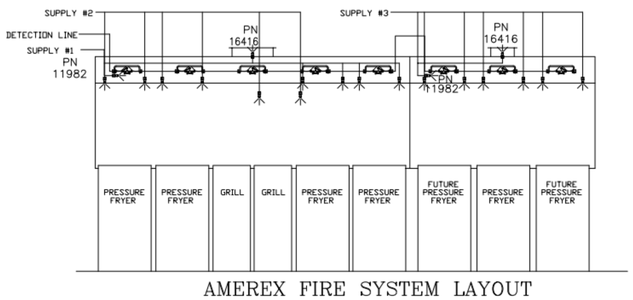
B) 1/2" & 3/8" BLACK IRON PIPING W/ 3/8" S.S. APPLIANCE DROPS

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




AMEREX FIRE SYSTEM LAYOUT

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




AMEREX FIRE SYSTEM LAYOUT

FUSIBLE LINK RATINGS

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

AMEREX FIRE SYSTEM NOTES
(1) KP375 & (2) KP475 TANK SYSTEM MOUNTED ON TOP OF (H-1L)
MAXIMUM FLOW POINTS = 39

AMEREX FIRE SYSTEM NOTES
KP475 TANK SYSTEM REMOTE MOUNTED
(1) TANK
MAXIMUM FLOW POINTS = 14

| ITEM # | QTY | DESCRIPTION | FLOW PTS (TOTAL) |
|---|---|---|---|
| 16416 | 4 | DUCT NOZZLES | 4 |
| 11982 | 4 | PLENUM NOZZLES | 4 |
| 11982 | 8 | APPLIANCE NOZZLES | 8 |
| 14178 | 2 | APPLIANCE NOZZLES | 4 |
| 13729 | 14 | APPLIANCE NOZZLES | 28 |
| | | TOTAL FLOW POINTS - 48 | |

| ITEM # | QTY | DESCRIPTION |
|---|---|---|
| 12508-P001 | 10 | DETECTOR BRACKET ASSEMBLY |
| 13334 | 1 | KP375 AGENT CYLINDER |
| 17379 | 3 | KP475 AGENT CYLINDER |
| 18001 | 1 | MECHANICAL RELEASE MODULE W/ DOUBLE POLE MICRO SWITCH |
| 25851 | 1 | SYSTEM ENCLOSURE W/ DOUBLE POLE MICRO SWITCH |
| 16920 | 1 | WALL MOUNTING BRACKET |
| 21481 | 3 | REMOTE MANUAL PULL STATION |

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

1. FINAL INSTALLATION IS TO BE MADE IN ACCORDANCE WITH ALL APPLICAPABLE 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

ANSUL

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: 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

AMEREX

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

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

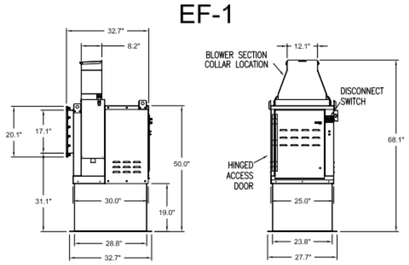
| REV. | REVISION DESCRIPTION | BY | DATE |
|---|---|---|---|
| 1 | - | - | - |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |

PROJECT: CHICK-FIL-A P14
LS/LE/SE/DTO/DTN BUILDING
LOCATION: - -
DRAWN BY: CG
DATE: 08.09.22
SCALE: NTS
Halton Dwg: U22-606-02FS

Halton CARE FOR INDOOR AIR

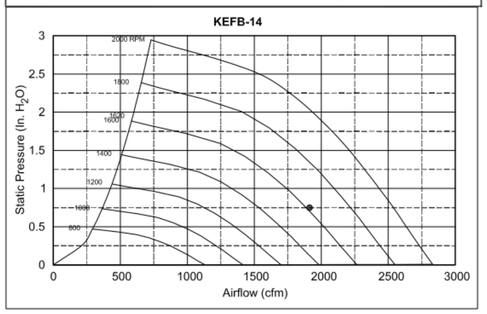
Sheet MH-1.2

## EF-1

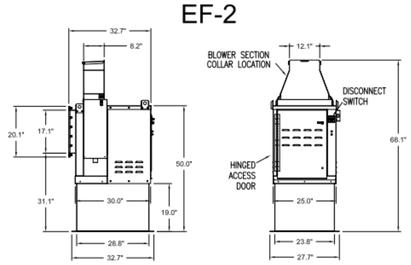



Halton KEFB Exhaust Fan

| | | | | | |
|---|---|---|---|---|---|
| Job Name | Chick-fil-A | | | | |
| Location | EF-1 | | | | |
| Date | 1/26/2023 | Item No | Qty | | |
| Model | | KEFB-14 | Fan RPM 1,620 | Volts/Ph/Amps: | 115/1/60 |
| Airflow, cfm | | 1,913 | Fan BHP 0.55 | Motor HP | 0.75 |
| Static Pressure, in WC | | 0.75 | dB 85.3 | TAB Port, in WC | 4.8 |

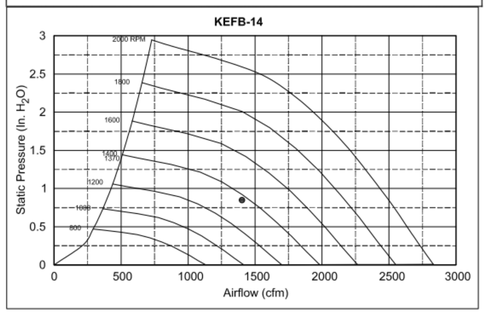



## EF-2



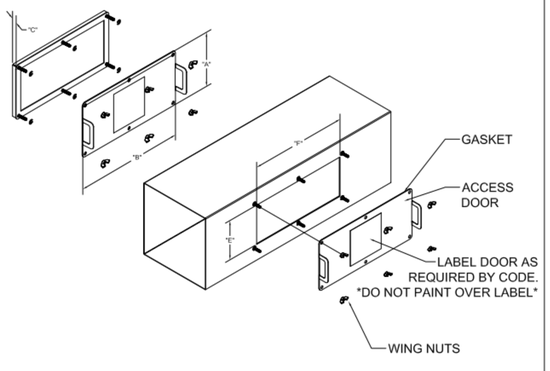

Halton KEFB Exhaust Fan

| | | | | | |
|---|---|---|---|---|---|
| Job Name | Chick-fil-A | | | | |
| Location | EF-2 | | | | |
| Date | 1/26/2023 | Item No | Qty | | |
| Model | | KEFB-14 | Fan RPM 1,370 | Volts/Ph/Amps: | 115/1/60 |
| Airflow, cfm | | 1,402 | Fan BHP 0.34 | Motor HP | 0.75 |
| Static Pressure, in WC | | 0.95 | dB 81 | TAB Port, in WC | 2.6 |

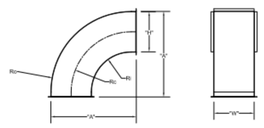



| GREASE ACCESS DOOR SCHEDULE | | | | | |
|---|---|---|---|---|---|
| | DOOR SIZE | | OPTIONAL FLANGE | OPENING SIZE | |
| MODEL | "A" | "B" | "C" | "E" | "F" |
| KAP0715 | 7 | 15 | FLAT | 5.5 | 13.5 |
| KAP1015 | 10 | 15 | 1/2 | 7 | 12 |

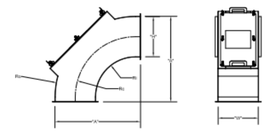
ACCESS DOORS SHALL BE U.L. 1978 LISTED OR FIELD FABRICATED, REQUIRE NO TOOLS FOR REMOVAL AND MEET THE REQUIREMENTS OF THE CURRENT EDITION OF THE IMC. ACCESS DOOR SHALL BE SECURED WITH THUMB SCREWS. ACCESS DOORS SHALL BE SEALED WITH A MINIMUM 1500 DEREE GASKET MATERIAL



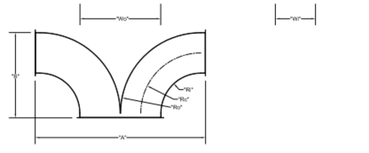

INSTALL PER MANUFACTURER'S INSTRUCTIONS




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

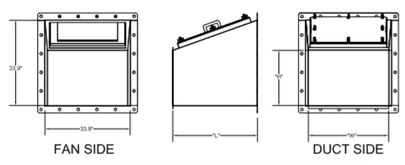



| "H" | "W" | "A" | Ro | Rc | Ri |
|---|---|---|---|---|---|
| 14 | 8 | 29 | 28 | 21 | 14 |
| 8 | 8 | 17 | 16 | 12 | 8 |

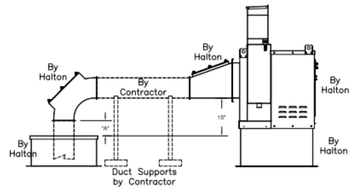




| | "Wi" | "H" | Wo | Ro | Rc | Ri | "A" | "B" |
|---|---|---|---|---|---|---|---|---|
| EF-1 | 8 | 14 | 16 | 16 | 12 | 8 | 34 | 17 |
| EF-2 | 8 | 10 | 16 | 16 | 12 | 8 | 34 | 17 |


| | "W" | "H" |
|---|---|---|
| EF-1 | 16 | 14 |



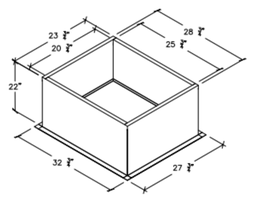

| TRANSITION | "H" | "W" | "L" |
|---|---|---|---|
| EF-1 (5) | 14 | 16 | 25 |
| EF-2 (6) | 10 | 16 | 17 |



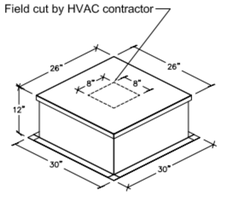

"A" DISTANCE AVAILABLE FOR DUCT SLOPE

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

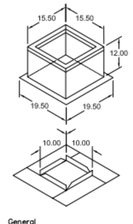
Halton Kitchen Exhaust Fan Curb
Insulated Duct Curb




Kitchen Exhaust Fan Roof Curb
Standard Construction Features:
– Roof Curb fits between the building roof and the fan mounted directly to the roof support structure – Constructed of 18 ga 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–G
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

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☐ REVISE AND RESUBMIT

APPROVED FOR FABRICATION
☐ WITH NO CHANGES ☐ WITH CHANGES AS NOTED

APPROVED BY _____ DATE _____

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

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

☐

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

WEBSITE: www.halton.com

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| | | | |

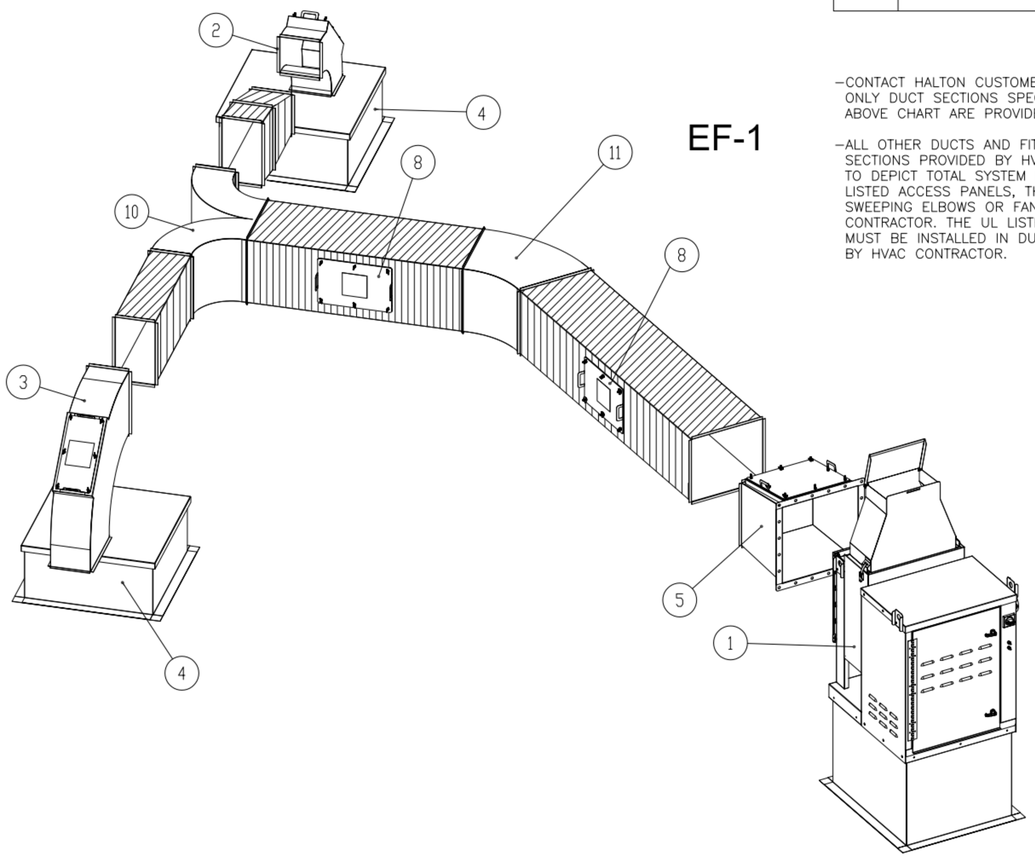
PROJECT: CHICK–FIL–A FAN DETAILS
LOCATION: PROTO SE/LE/LS/LSR (BN & BP)
DRAWN BY: ACF
DATE: 05.10.23
SCALE:
CONSULTANT:

Halton

DRAWING TITLE: CFA FAN DETAILS
DRAWING No.: U23–459
REV. NO.: 0
SHEET NO.: 1 of 2

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

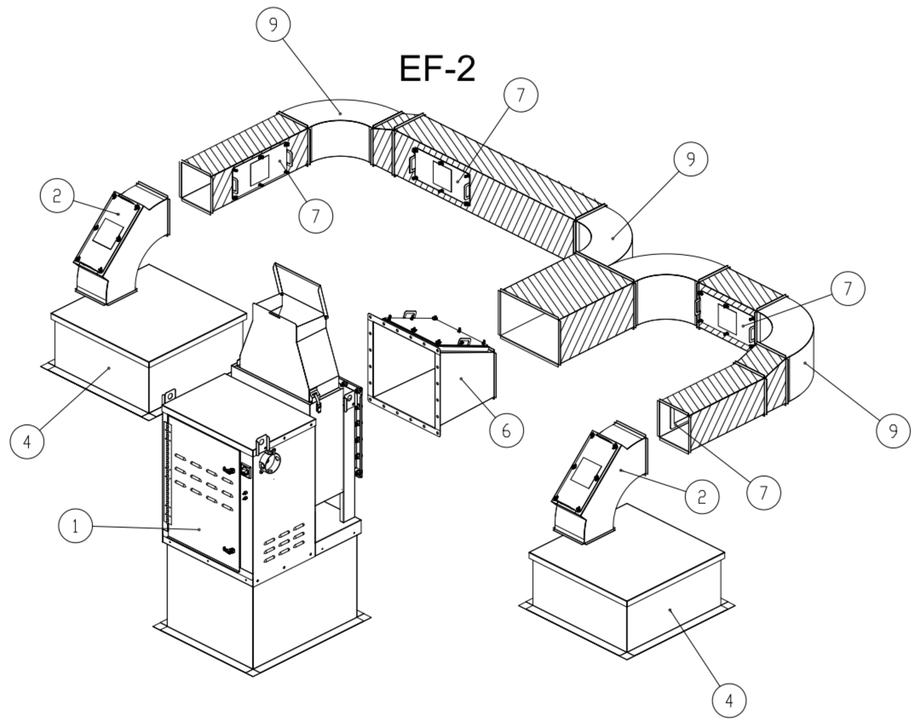
## EF-1




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

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

## EF-2




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

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

NOTE TO APPROVER

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☐ REVISE AND RESUBMIT

APPROVED FOR FABRICATION

☐ WITH NO CHANGES ☐ WITH CHANGES AS NOTED

APPROVED BY: DATE

MAIL APPROVED DRAWINGS TO APPROPRIATE FACTORY BELOW:

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

☐

HALTON CO. (CANADA)
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1-905-624-0301

WEBSITE: www.halton.com

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

PROJECT: CHICK-FIL-A FAN DETAILS
LOCATION: PROTO SE/LE/LS/LSR (BN & BP)
DRAWN BY: ACF DATE: 05.10.23
SCALE:
CONSULTANT:

Halton

DRAWING TITLE: CFA FAN DETAILS

DRAWING No.: U23-459

REV. NO.: 0

SHEET NO.: 2 of 2