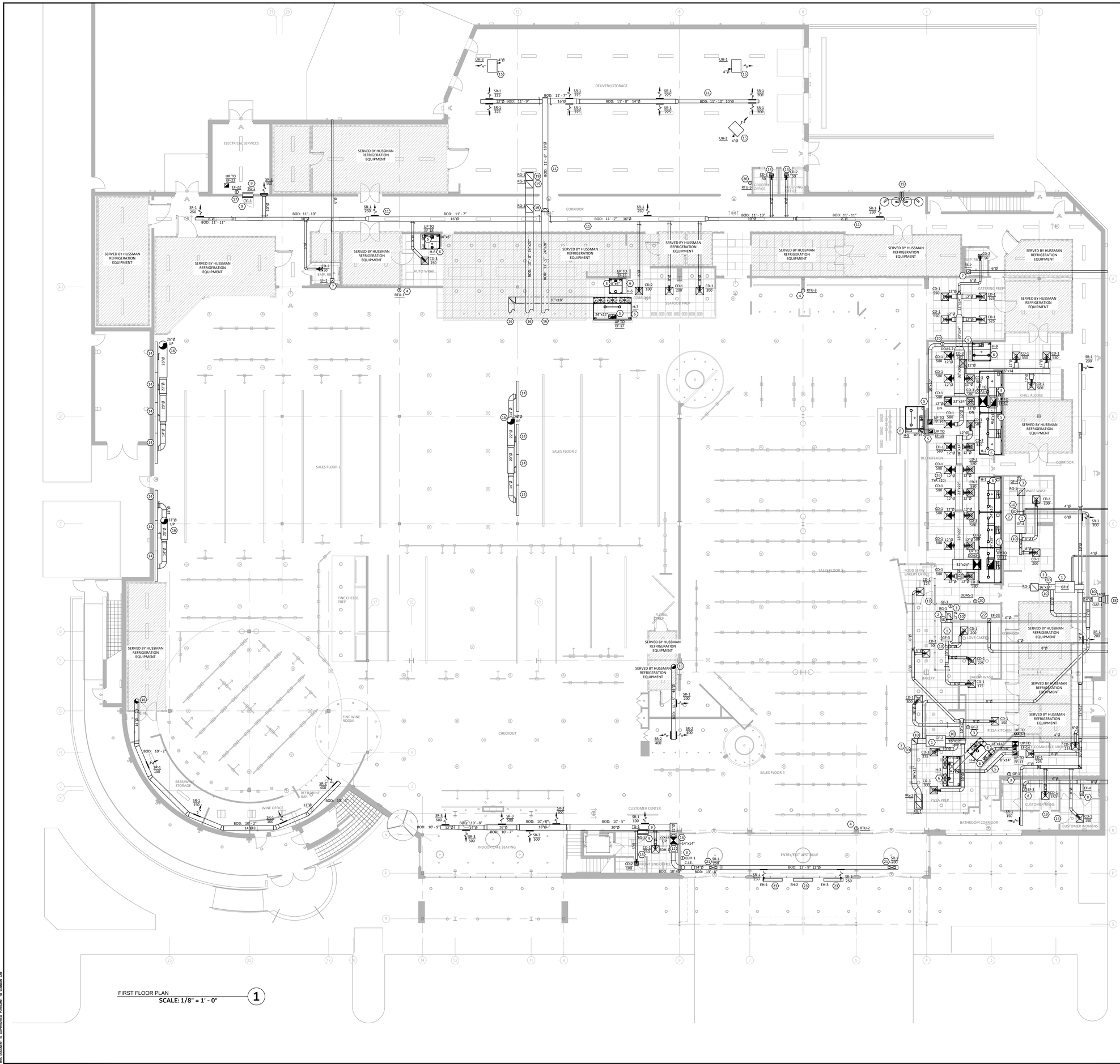

FIRST FLOOR PLAN
SCALE: 1/8" = 1' - 0"

1

KEYED NOTES

1. PROVIDE CONDENSING GAS FURNACE AND LOCATE ON ANGLE IRON FRAME ABOVE CEILING. MOUNT FRAME TO STRUCTURE WITH BEAM CLAMPS, THREADED RODS AND SPRING VIBRATION ISOLATORS. ALL FILTER ACCESS TO BE ON THE SIDE OF FURNACE. ROUTE 2½" COMBUSTION AIR INTAKE AND FLUE VENT TO CONCENTRIC VENT KIT THROUGH WALL. SIZE AND INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. LOCATE CONCENTRIC VENT KIT MINIMUM TEN FEET AWAY FROM AIR INTAKE AND EXHAUST VENTS AND PAINT TO MATCH WALL COLOR. ROUTE 3/4" CONDENSATE DRAIN LINE WITH TRAP TO FLOOR DRAIN. PROVIDE CONDENSATE PUMP AS REQUIRED. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING PLAN. FOR UNITS ABOVE CEILINGS, PROVIDE AUXILIARY DRAIN PAN WITH HIGH LEVEL ALARM UNDER FURNACE, IN ACCORDANCE WITH SECTION 307.2.3 OF IMC. HIGH LEVEL ALARM SHALL SHUT UNIT OFF UPON DETECTION OF CONDENSATE IN THE OVERFLOW DRAIN PAN.
2. EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
3. PROVIDE THERMOSTAT AND MOUNT ON WALL 4 FEET A.F.F.
4. PROVIDE COMBINATION THERMOSTAT, HUMIDISTAT AND CO2 SENSOR AND INSTALL ON WALL 4' AFF. CO2 SENSOR TO MODULATE OUTDOOR AIR DAMPER TO MAINTAIN MAXIMUM CO2 LEVELS OF 800 PPM, IN ACCORDANCE WITH SECTION 6.2.7 OF ASHRAE STANDARD 62.1.
5. PROVIDE 16 GA. STEEL DUCT, WITH SEAMS WELDED LIQUID TIGHT, IN ACCORDANCE WITH SECTION 506.3 OF INTERNATIONAL MECHANICAL CODE AND SLOPE DUCT AT ¼"/FT TOWARDS HOOD. PROVIDE CLEANOUT AT EVERY CHANGE OF DIRECTION, EVERY 20' HORIZONTALLY AND AS REQUIRED BY NFPA 96. PROVIDE 2 LAYERS OF 3M 615+, OR EQUIVALENT, FIRE BARRIER DUCT WRAP ON EXHAUST DUCT BETWEEN HOOD AND ROOF.
6. TYPE I HOOD WITH ANSUL FIRE SUPPRESSION SYSTEM FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD AT 80" A.F.F.. REFER TO HOOD DRAWINGS FOR ADDITIONAL INFORMATION.
7. PROVIDE NEW EXHAUST FAN, CONTROLLED BY LIGHT SWITCH, AND ROUTE EXHAUST DUCTWORK TO FLUSH MOUNT LOUVERED FLAPPER GRILLE. PAINT GRILLE TO MATCH WALL COLOR.
8. PROVIDE NEW EXHAUST FAN, CONTROLLED BY LIGHT SWITCH, AND ROUTE 6" EXHAUST DUCT OFF EACH RESTROOM EXHAUST FAN AND COMBINE INTO AN 8" EXHAUST DUCT. PROVIDE FLUSH MOUNT LOUVERED FLAPPER GRILLE. PAINT GRILLE TO MATCH WALL COLOR.
9. PROVIDE TRANSFER GRILLE AND MOUNT HIGH ON BOTH SIDES OF WALL.
10. INTERNALLY LINE FIRST 10 FEET OF SUPPLY, OUTSIDE AIR, AND RETURN AIR DUCTWORK WITH JOHN'S MANVILLE, OR EQUIVALENT, 1 INCH THICK SHRACOUSTIC FIBERGLASS DUCT LINER. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
11. ALL SPIRAL DUCTWORK TO BE PAINT GRIP GALVANIZED TO ALLOW FOR FIELD PAINTING.
12. PROVIDE IN-LINE DUCT HEATER AND INSTALL IN LOCATION INDICATED, IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
13. UNDERCUT DOOR 1" TO ALLOW FOR AIR TRANSFER INTO/OUT OF ROOM.
14. 10"x14"x8" LONG RETURN OVER WALL. BALANCE TO 320 CFM.
15. PROVIDE NATURAL GAS UNIT HEATER, WITH UNIT MOUNTED THERMOSTAT. HEATER SHALL BE MOUNTED FROM STRUCTURE ON WALL. SET THERMOSTAT TO 60°F (ADJUSTABLE). ROUTE FLUE UP THRU ROOF. TERMINATE WITH B-VENT CAP. REFER TO DETAIL 12 ON SHEET M-4 FOR ADDITIONAL INFORMATION.
16. DUCT CONSTRUCTION CONTINUED ON SHEET M-2.
17. PROVIDE WALL MOUNTED DIGITAL THERMOSTAT TO CONTROL ELECTRIC ROOM THERMOSTAT (EF-22) AND MOUNT ON WALL 4' A.F.F.
18. PROVIDE 24"X22" INTAKE WALL LOUVER, EQUIVALENT TO RUSKIN ELF-375DX, AND MOUNT HIGH ON WALL, COMPLETE WITH BIRDSCREEN. PROVIDE DUCTWORK PLENUM BOX BEHIND LOUVER AND SEAL WATER TIGHT.
19. PROVIDE RETURN GRILLE AND INSTALL ON TOP OF RETURN DUCT. PROVIDE SHEET METAL AT END OF DUCT, SAME GAUGE AS DUCTWORK, AND SEAL AIR TIGHT.
20. PROVIDE COMBINATION THERMOSTAT/HUMIDISTAT AND MOUNT ON WALL 4 FEET A.F.F.
21. MOUNT AIR DEVICE ON TOP OF DUCT AND ANGLE TOWARDS CLEARSTORY GLAZING.
22. PROVIDE NEW EXHAUST FAN, CONTROLLED BY WALL SWITCH, AND ROUTE EXHAUST DUCTWORK TO FLUSH MOUNT LOUVERED FLAPPER GRILLE. PAINT GRILLE TO MATCH WALL COLOR.
23. PROVIDE WALL MOUNTED INFRA-RED ELECTRIC HEATER. INSTALL PER MANUFACTURER GUIDELINES.
24. GAS WATER HEATER CONCENTRIC VENTS. REFER TO ROOF PLAN M3.0 FOR CONTINUATION.
25. ROUTE 4" WATER HEATER CONCENTRIC VENT KIT THROUGH WALL. SIZE AND INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS (FOR FOUR CONCENTRIC TERMINATIONS). LOCATE CONCENTRIC VENT KIT MINIMUM TEN FEET AWAY FROM AIR INTAKE AND EXHAUST VENTS AND PAINT TO MATCH WALL COLOR. COORDINATE WITH PLUMBING CONTRACTOR AND SHEET P-1.
26. BLANK OFF PORTION OF AIR DEVICE AS SHOWN.

GENERAL NOTES

A. THE DRAWINGS ARE DIAGRAAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONFLICT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.

B. ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/ OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECTS OPINION, SHALL BE REDONE AT THE CONTRACTORS EXPENSE.

C. ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.

D. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.

E. OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.

F. WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.

G. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.

H. CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.

I. COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.

J. COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

K. INSTALL DUCTWORK AS HIGH AS POSSIBLE.

L. EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.

M. ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.

N. PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES /WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CFR TITLE 8 , SECTION 5142 AND OTHER RELATED REGULATIONS.

O. ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

HOOD AIR BALANCE REPORT

PRIOR TO THE HOOD FINAL INSPECTION, AN AIR BALANCE REPORT FOR THE HOOD WILL BE REQUIRED. THE REPORT SHALL INCLUDE THE MEASURED EXHAUST AIR QUANTITY (CFM), VELOCITY (FPM), MAKEUP AIR QUANTITY (CFM), OUTSIDE AIR (CFM) AND PRESSURE RELATIONSHIP BETWEEN THE SERVING AREA AND THE SALES AREA. THIS IS REQUIRED ON ALL HOODS.

ROOF PENETRATIONS

COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

REGISTER DIRECTION NOTE

ALL REGISTERS OR GRILLES NEAR OPEN CASE REFRIGERATION SHALL BE INSTALLED IN SUCH A MANNER WHERE NO DIRECT AIRFLOW WILL BE BLOWN INTO CASES.

HVAC LEGEND

1	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"ø	NEW ROUND DUCTWORK AND SIZE
M	BALANCING/VOLUME DAMPER
	FLEX DUCT
T	THERMOSTAT
CD-1 240	NEW SUPPLY AIR DIFFUSER AND CFM
CD-2 240	NEW PERFORATED SUPPLY AIR DIFFUSER AND CFM
RG-1	NEW RETURN GRILLE
	NEW EXHAUST FAN
	AIR FLOW DIRECTION
SD	SMOKE DETECTOR
	SUPPLY DUCT UP THROUGH ROOF
	RETURN/EXHAUST DUCT UP THROUGH ROOF
M	MOTOR OPERATED DAMPER
C.I.E.	CHANGE IN ELEVATION

HVAC DESIGN CONDITIONS

COOLING:	HEATING:
OUTDOOR = 92°FDB/74°FWB	OUTDOOR = 1°FDB
INDOOR = 72°FDB/50%RH	INDOOR = 70°FDB

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOSEPH M. MARQUE
79076
REGISTERED PROFESSIONAL ENGINEER
7/28/23

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MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
FIRST FLOOR PLAN

DWG. NO.
M-1

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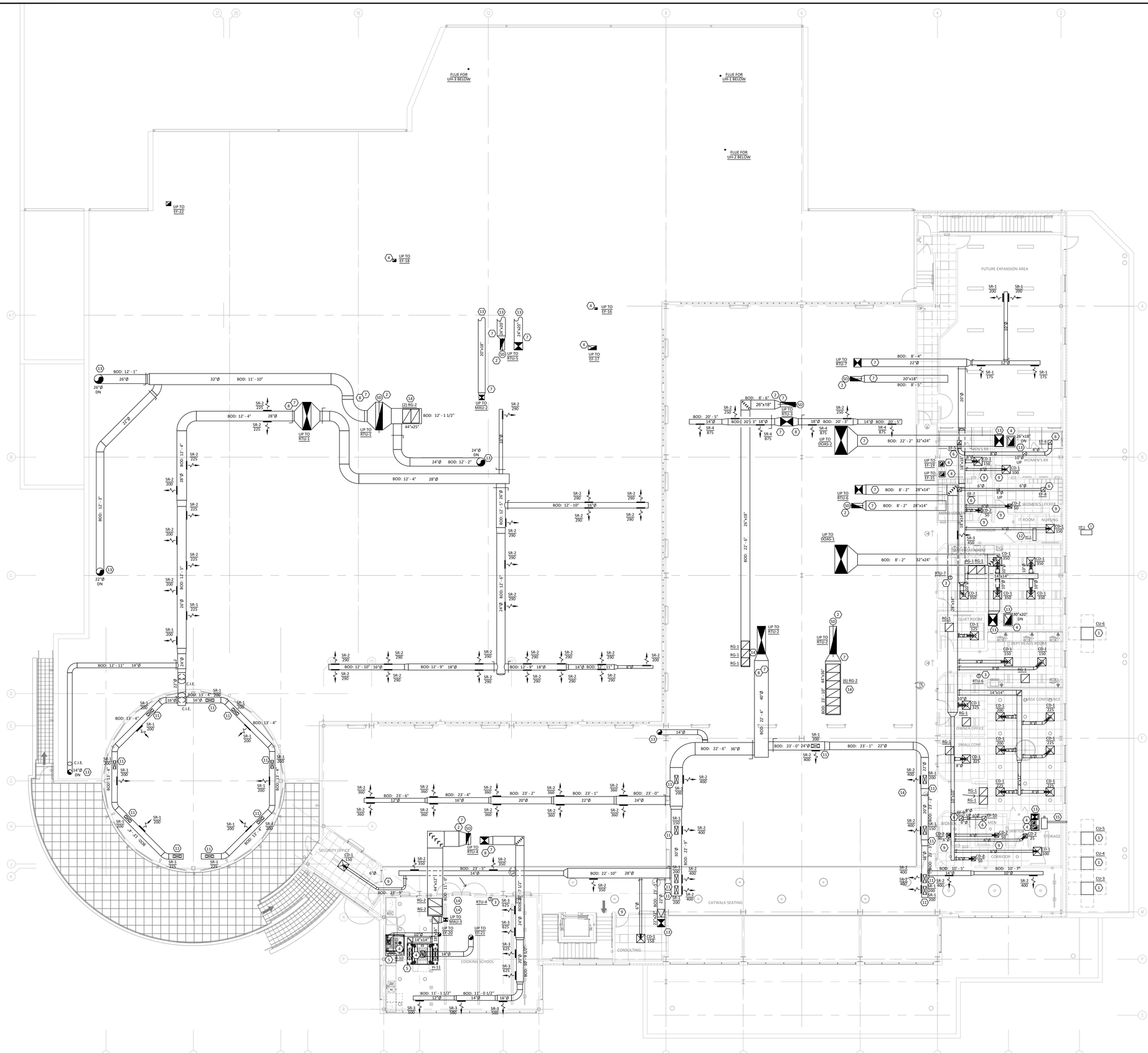

MEZZANINE FLOOR PLAN
SCALE: 1/8" = 1' - 0"

1

KEYED NOTES

1. PROVIDE CONDENSING UNIT/HEAT PUMP AND LOCATE ON ROOF ON ANVIL INTERNATIONAL HAYDON H-BLOCK, OR EQUIVALENT, ROOFTOP SUPPORT SYSTEM, COMPLETE WITH ROOF PAD. MAINTAIN UNIT MINIMUM REQUIRED SERVICE AND AIRFLOW CLEARANCE. ROUTE REFRIGERANT LIQUID AND SUCTION LINES BETWEEN CONDENSING UNIT AND FURNACE COOLING COIL AND SEAL PENETRATIONS WEATHER-TIGHT. PROVIDE PATE, OR EQUIVALENT, PIPE CURB FOR ALL ROOF PENETRATIONS. ROUTE AND SIZE LINES AND ACCESSORIES PER MANUFACTURER'S GUIDELINES. PROVIDE A FULLY CHARGED SYSTEM AND INSULATE ALL REFRIGERANT PIPING WITH ARMAFLEX INSULATION.
2. EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM. IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
3. PROVIDE COMBINATION THERMOSTAT/HUMIDISTAT AND MOUNT ON WALL 4 FEET A.F.F.
4. PROVIDE 16 GA. STEEL DUCT, WITH SEAMS WELDED LIQUID TIGHT, IN ACCORDANCE WITH SECTION 506.3 OF INTERNATIONAL MECHANICAL CODE AND SLOPE DUCT AT ¼" /FT TOWARDS HOOD. PROVIDE CLEANOUT AT EVERY CHANGE OF DIRECTION, EVERY 20' HORIZONTALLY AND AS REQUIRED BY NFPA 96. PROVIDE 2 LAYERS OF 3M 615+, OR EQUIVALENT, FIRE BARRIER DUCT WRAP ON EXHAUST DUCT BETWEEN HOOD AND ROOF. AS AN OPTION TO UTILIZING 16 GA STEEL DUCT, PROVIDE CAPTIVE AIRE MODEL DW ROUND 20 GAUGE STAINLESS STEEL DOUBLE WALL DUCT SYSTEM.
5. TYPE I HOOD WITH ANSUL FIRE SUPPRESSION SYSTEM FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD AT 80" A.F.F.. REFER TO HOOD DRAWINGS FOR ADDITIONAL INFORMATION.
6. PROVIDE NEW EXHAUST FAN, CONTROLLED BY LIGHT SWITCH, AND ROUTE EXHAUST DUCT OFF EACH RESTROOM EXHAUST FAN AND COMBINE EXHAUST DUCT. ROUTE EXHAUST DUCTWORK TO MANUFACTURER'S STANDARD VENT CAP.
7. INTERNALLY LINE FIRST 10 FEET OF SUPPLY, OUTSIDE AIR, AND RETURN AIR DUCTWORK WITH JOHN'S MANVILLE, OR EQUIVALENT, 1 INCH THICK SPIRACOUSTIC FIBERGLASS DUCT LINER. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
8. ALL SPIRAL DUCTWORK TO BE PAINT GRIP GALVANIZED TO ALLOW FOR FIELD PAINTING.
9. UNDERCUT DOOR 1" TO ALLOW FOR AIR TRANSFER INTO/OUT OF ROOM.
10. PROVIDE TRANSFER GRILLE AND MOUNT HIGH ON BOTH SIDES OF WALL.
11. MOUNT AIR DEVICE ON TOP OF DUCT AND ANGLE TOWARDS CLEARSTORY GLAZING.
12. PROVIDE WALL MOUNTED DUCTLESS SPLIT SYSTEM AND INSTALL IN LOCATION INDICATED. ROUTE CONDENSATE TO NEAREST APPROVED RECEPTACLE. PROVIDE CONDENSATE PUMP AS REQUIRED. PROVIDE WIRED THERMOSTAT TO CONTROL DUCTLESS SPLIT SYSTEM. MOUNT THERMOSTAT AT 4' AFF.
13. DUCT CONSTRUCTION CONTINUED ON SHEET M-1.
14. PROVIDE RETURN GRILLE AND INSTALL ON TOP OF RETURN DUCT. PROVIDE SHEET METAL AT END OF DUCT, SAME GAUGE AS DUCTWORK, AND SEAL AIR TIGHT.
15. ROUTE 4" SNOW MELT BOILER CONCENTRIC VENT KIT THROUGH WALL. SIZE AND INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. LOCATE CONCENTRIC VENT KIT MINIMUM TEN FEET AWAY FROM AIR INTAKE AND EXHAUST VENTS AND PAINT TO MATCH WALL COLOR. COORDINATE WITH PLUMBING CONTRACTOR AND SHEET P-2.

GENERAL NOTES

A. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONFLICT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.

B. ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/ OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECTS OPINION, SHALL BE REDONE AT THE CONTRACTORS EXPENSE.

C. ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.

D. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.

E. OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.

F. WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.

G. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.

H. CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.

I. COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.

J. COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

K. INSTALL DUCTWORK AS HIGH AS POSSIBLE.

L. EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.

M. ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.

N. PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES /WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR TITLE 8 , SECTION 5142 AND OTHER RELATED REGULATIONS.

O. ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

HOOD AIR BALANCE REPORT

PRIOR TO THE HOOD FINAL INSPECTION, AN AIR BALANCE REPORT FOR THE HOOD WILL BE REQUIRED. THE REPORT SHALL INCLUDE THE MEASURED EXHAUST AIR QUANTITY (CFM), VELOCITY (FPM), MAKEUP AIR QUANTITY (CFM), OUTSIDE AIR (CFM) AND PRESSURE RELATIONSHIP BETWEEN THE SERVING AREA AND THE SALES AREA. THIS IS REQUIRED ON ALL HOODS.

ROOF PENETRATIONS

COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

REGISTER DIRECTION NOTE

ALL REGISTERS OR GRILLES NEAR OPEN CASE REFRIGERATION SHALL BE INSTALLED IN SUCH A MANNER WHERE NO DIRECT AIRFLOW WILL BE BLOWN INTO CASES.

RETURN AIR PLENUM

THE ENTIRE AREA ON EAST SIDE OF MEZZANINE AND ABOVE THE CEILING IS A RETURN AIR PLENUM. ALL WIRING SHALL BE PLENUM RATED OR IN CONDUIT, AND NO PVC PIPING IS ALLOWED, UNLESS UNIFRAX, OR EQUIVALENT, FYREWRAP 0.5 PLENUM INSULATION IS APPLIED TO THE PVC PIPE

HVAC LEGEND

1	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"ø	NEW ROUND DUCTWORK AND SIZE
	BALANCING/VOLUME DAMPER
	FLEX DUCT
T	THERMOSTAT
CD-1 240	NEW SUPPLY AIR DIFFUSER AND CFM
CD-2 240	NEW PERFORATED SUPPLY AIR DIFFUSER AND CFM
RG-1	NEW RETURN GRILLE
	NEW EXHAUST FAN
	AIR FLOW DIRECTION
SD	SMOKE DETECTOR
	SUPPLY DUCT UP THROUGH ROOF
	RETURN/EXHAUST DUCT UP THROUGH ROOF
M	MOTOR OPERATED DAMPER
C.I.E.	CHANGE IN ELEVATION

HVAC DESIGN CONDITIONS

COOLING:	HEATING:
OUTDOOR = 92°FDB/74°FWB	OUTDOOR = 1°FDB
INDOOR = 72°FDB/50%RH	INDOOR = 70°FDB

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO — JOSEPH A. MARQUE — 79076 — REGISTERED PROFESSIONAL ENGINEER — 7/28/23

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7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
MEZZANINE FLOOR PLAN

DWG. NO.
M-2

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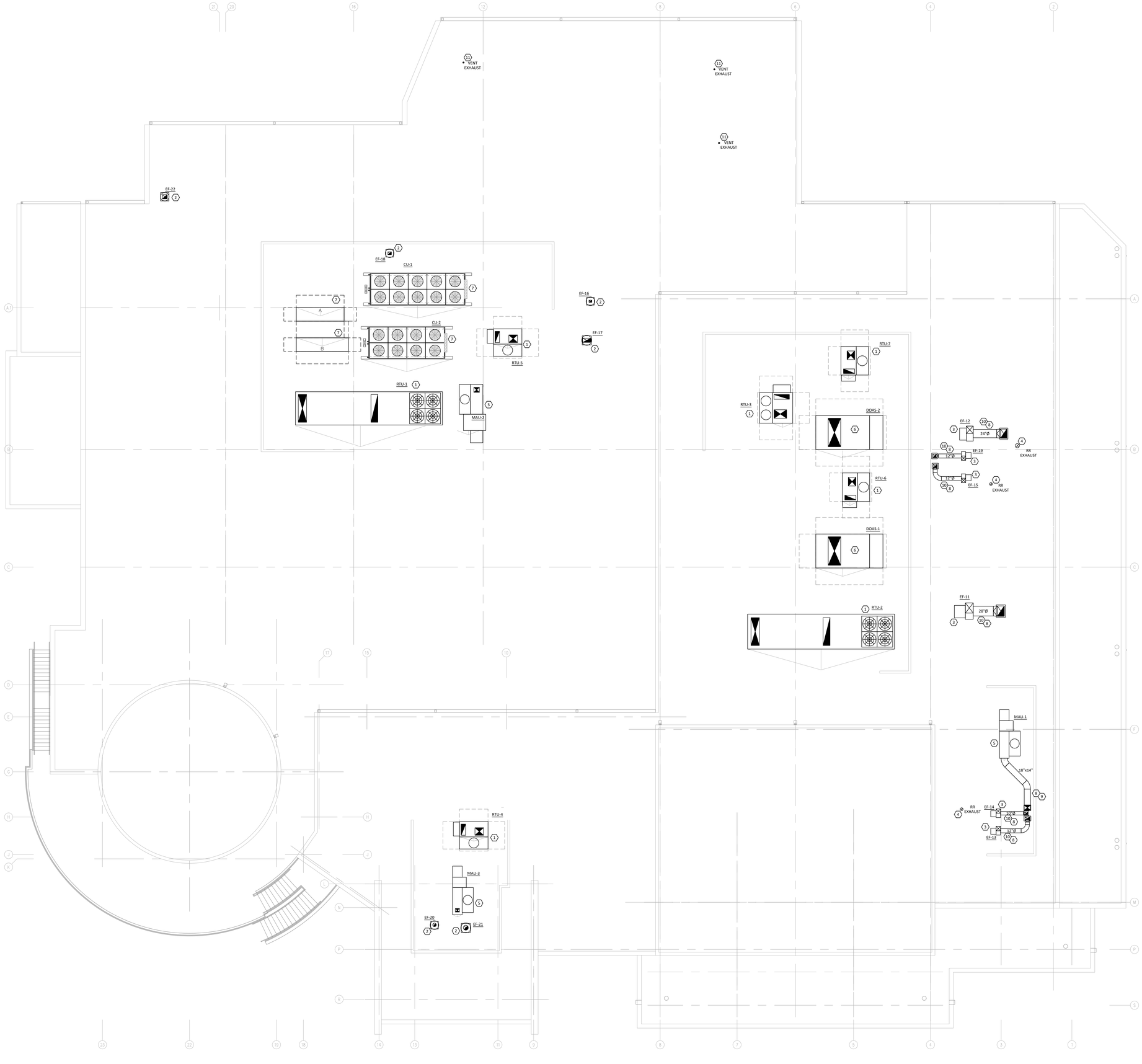

ROOF PLAN
SCALE: 1/8" = 1' - 0"
1

KEYED NOTES

1. PROVIDE NEW ROOFTOP UNIT AND CURB. ROUTE SUPPLY/RETURN DROPS DOWN THROUGH ROOF. REFER TO HVAC PLAN FOR CONTINUATION. COORDINATE ROOFTOP UNIT LOCATION WITH STRUCTURE BELOW. PROVIDE NEW THERMOSTAT, CONTROL WIRING, AND STAND ALONE CONTROLS FOR RTU OPERATION. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED.
2. PROVIDE EXHAUST FAN AND INSTALL ON 20" HIGH INSULATED AND VENTILATED ROOF CURB. DISCHARGE OPENING SHALL BE NO LESS THAN 40" ABOVE THE ROOF. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.
3. PROVIDE UTILITY EXHAUST FAN AND LOCATE ON ROOF ON ANVIL INTERNATIONAL HAYDON H-BLOCK, OR EQUIVALENT, ROOFTOP SUPPORT SYSTEM. MAINTAIN UNIT MINIMUM REQUIRED SERVICE AND AIRFLOW CLEARANCE. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES. MECHANICAL CONTRACTOR TO CONFIRM FAN ORIENTATION AND FAN ROTATION PRIOR TO ORDERING FAN.
4. VENT CAP FOR RESTROOM BELOW. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.
5. PROVIDE NEW MAKE UP AIR UNIT, CURB, CONTROL WIRING, AND STAND ALONE CONTROLS FOR UNIT OPERATION. ROUTE SUPPLY DUCT ALONG ROOF (MAU-1 ONLY). UTILIZE HAYDON H-BLOCK, OR EQUIVALENT DUCT SUPPORTS AND ROUTE DUCT THROUGH ROOF. UTILIZE ROOF CURB FOR DUCT PENETRATION. FLASH DUCT PENETRATION FOR A WEATHERPROOF SEAL. MAINTAIN MINIMUM 10' SEPARATION BETWEEN MAKEUP AIR UNIT INTAKE AND ALL EXHAUST FANS AND VENT THROUGH ROOFS.
6. PROVIDE NEW DEDICATED OUTSIDE AIR UNIT AND CURB. ROUTE SUPPLY DROPS DOWN THROUGH ROOF. REFER TO HVAC PLAN FOR CONTINUATION. COORDINATE ROOFTOP UNIT LOCATION WITH STRUCTURE BELOW. PROVIDE NEW THERMOSTAT, CONTROL WIRING, AND STAND ALONE CONTROLS FOR RTU OPERATION. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED.
7. LOCATED FOR HUSSMAN CONDENSING UNIT AND RACKS. REFER TO HUSSMAN DRAWINGS FOR ADDITIONAL INFORMATION.
8. PROVIDE ANVIL INTERNATIONAL HAYDON H-BLOCK, OR EQUIVALENT, ROOFTOP DUCT SUPPORT SYSTEM, COMPLETE WITH MOUNTING PAD, FOR ALL EXTERIOR DUCTWORK. INSTALL DUCT SUPPORT IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.
9. INSULATE ALL EXTERIOR DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION WITH OUTDOOR JACKET. INSULATION SHALL HAVE MINIMUM INSTALLED "R" VALUE OF 6.0. PROVIDE A SELF-ADHESIVE OUTDOOR JACKET FOR ALL EXPOSED DUCTWORK OUTSIDE. JACKET SHALL HAVE LAMINATED VAPOR BARRIER AND WATERPROOFING MEMBRANE CONSISTING OF A RUBBERIZED BITUMINOUS RESIN ON A CROSS LAMINATED POLYETHYLENE FILM COVERED WITH STUCCO-EMBOSSED ALUMINUM-FOIL FACING.
10. PROVIDE 16 GA. STEEL DUCT, WITH SEAMS WELDED LIQUID TIGHT, IN ACCORDANCE WITH SECTION 506.3 OF INTERNATIONAL MECHANICAL CODE AND SLOPE DUCT AT $\frac{1}{2}$"/FT TOWARDS HOOD. PROVIDE CLEANOUT AT EVERY CHANGE OF DIRECTION, EVERY 20' HORIZONTALLY AND AS REQUIRED BY NFPA 96. PROVIDE 2 LAYERS OF 3M 615+, OR EQUIVALENT, FIRE BARRIER DUCT WRAP ON EXHAUST DUCT BETWEEN HOOD AND ROOF. AS AN OPTION TO UTILIZING 16 GA STEEL DUCT, PROVIDE CAPTIVE AIRE MODEL DW ROUND 20 GAUGE STAINLESS STEEL DOUBLE WALL DUCT SYSTEM.
11. VENT CAP FOR UNIT HEATERS BELOW. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.

GENERAL NOTES

A. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONFLICT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.

B. ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/ OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECTS OPINION, SHALL BE REDONE AT THE CONTRACTORS EXPENSE.

C. ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.

D. PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.

E. OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.

F. WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.

G. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.

H. CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.

I. COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.

J. COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

K. INSTALL DUCTWORK AS HIGH AS POSSIBLE.

L. EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.

M. ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.

N. PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES /WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR TITLE 8 , SECTION 5142 AND OTHER RELATED REGULATIONS.

O. ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

ROOF PENETRATIONS

COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.

HVAC LEGEND

1	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"ø	NEW ROUND DUCTWORK AND SIZE
	SUPPLY DUCT UP THROUGH ROOF
	RETURN/EXHAUST DUCT UP THROUGH ROOF

HVAC DESIGN CONDITIONS

COOLING:	HEATING:
OUTDOOR = 92°FDB/74°FWB	OUTDOOR = 1°FDB
INDOOR = 72°FDB/50%RH	INDOOR = 70°FDB

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOSEPH A. MARQUE
79076
REGISTERED PROFESSIONAL ENGINEER
7/28/23

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CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
ROOF PLAN

DWG. NO.
M-3

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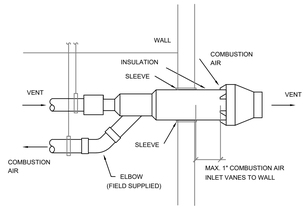

13 CONCENTRIC VENT WALL DETAIL
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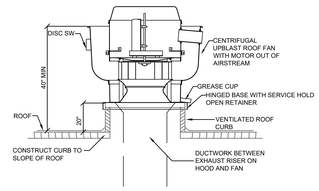

9 TYPE I HOOD EXH FAN DETAIL
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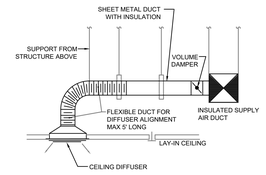

5 CEILING DIFFUSER DETAIL
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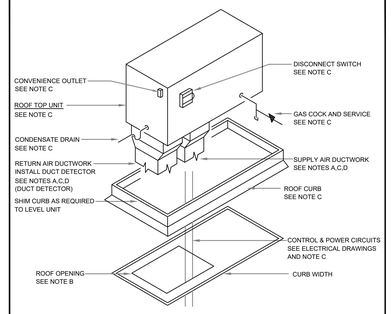


ROOF TOP UNIT NOTES

A. DUCT TRANSITION FROM RTU TO DUCT SIZE SHOWN ON MECHANICAL DRAWING SHALL BE MADE BETWEEN RTU & TOP OF ROOF WITH-IN CURB.

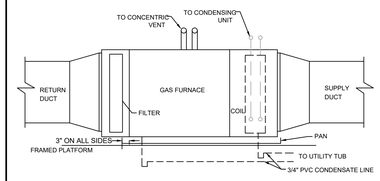
B. SIZE OF OPENING IN ROOF DECK TO BE AS SMALL AS POSSIBLE. COORDINATE WITH STRUCTURAL DRAWINGS (6" MIN. LARGER THAN DUCT SIZE SHOWN).

C. INSTALL PER MANUFACTURER'S RECOMMENDATION AND INSTALLATION MANUAL. PROVIDE TAPERED INSULATION SADDLE AT ROOF CURB. COORDINATE WITH ROOFING CONTRACTOR. SEE ARCHITECTS DETAIL.

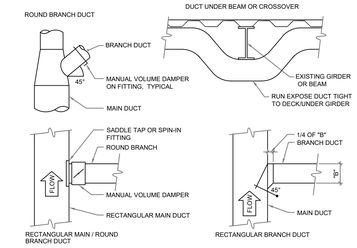
D. NEOPRENE FLEXIBLE CONNECTOR.

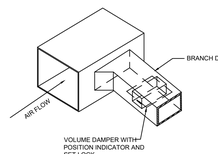
1 RTU/DOAS UNIT DETAIL
SCALE: NONE

14 WATER HEATER CONCENTRIC VENT WALL DETAIL
SCALE: NONE

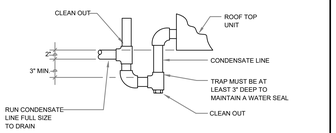


10 GAS FURNACE DETAIL
SCALE: NONE





6 BRANCH DUCT TAKEOFF DETAIL
SCALE: NONE



2 CONDENSING DRAIN DETAIL
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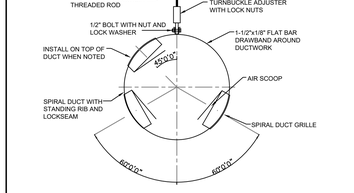
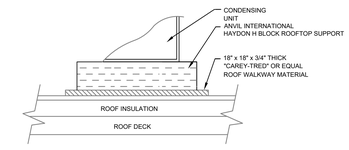
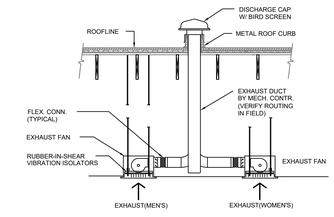


11 SPIRAL DUCT GRILLE DETAIL
SCALE: NONE

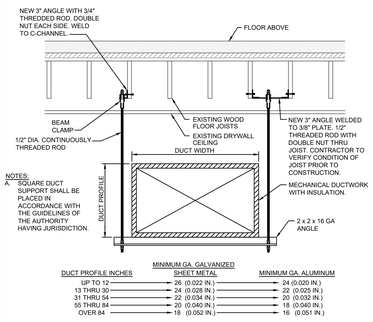


7 CU/HP SUPPORT DETAIL
SCALE: NONE

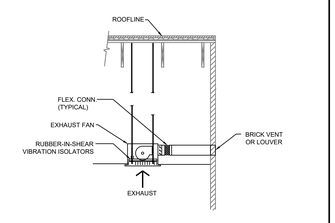


3 EXHAUST RISER DETAIL
SCALE: NONE

12 TYPICAL UNIT HEATER DETAIL
SCALE: NONE



8 RECT. DUCT SUPPORT DETAIL
SCALE: NONE



4 EXHAUST RISER DETAIL
SCALE: NONE

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO — JOSEPH M. MARQUE — 79076 — REGISTERED PROFESSIONAL ENGINEER — 7/28/23

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PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
DETAILS

DWG. NO.
M-4

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UNIT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	INPUT BTUH	OUTPUT BTUH	CFM	VOLTAGE	PHASE	AMP	HP	WEIGHT	REMARKS
UH-1	MODINE	PTC110	110,000	102,300	1,750	120	1	6.75	1/8	128	A,B,C,D
UH-2	MODINE	PTC110	110,000	102,300	1,750	120	1	6.75	1/8	128	A,B,C,D
UH-3	MODINE	PTC55	55,000	51,150	1,097	120	1	4.35	1/8	93	A,B,C,D

REMARKS:
A. NATURAL GAS FIRED UNIT HEATER WITH 80% THERMAL EFFICIENCY
B. SUPPORTS WITH THREADED RODS AND SPRING VIBRATION ISOLATORS
C. UNIT MOUNTED THERMOSTAT
D. UNIT HEATER CONTROLLED BY DOOR LIMIT SWITCH (PROVIDED BY EC)

ELECTRIC HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	CFM	KW	STAGES	ELECTRICAL			REMARKS
						VOLTAGE	Ø	AMPS	
EDH-1	INDEECO	QUA	1,000	13.3	2	480	3	16.0	A,B,D
EH-1	SCHWANK	ESD-6061	-	6.0	1	480	1	12.5	A,C,D
EH-2	SCHWANK	ESD-6061	-	6.0	1	480	1	12.5	A,C,D
EH-3	SCHWANK	ESD-6061	-	6.0	1	480	1	12.5	A,C,D

REMARKS:
A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE
B. OPEN COIL DUCT HEATER WITH FLANGED FRAME, AIRFLOW PROVING SWITCH, AND HIGH TEMPERATURE ALARM
C. INFRA-RED HEATER WITH ON/OFF SWITCH AND HIGH TEMPERATURE ALARM
D. ACCEPTABLE MANUFACTURERS INCLUDE : INDEECO, SCHWANK, MODINE, AND REDD-I

DUCTLESS SPLIT SYSTEM SCHEDULE

TAG	MANUFACTURER	MODEL	SUPPLY CFM	ESP IN W.C.	COOLING MBH			VOLTS/PH	FAN HP	FLA	MCA	MOCP	REMARKS
					TOTAL	SENSIBLE	SEER						
AC-1	MITSUBISHI	TRUZA0121LA00A	385	-	-	-	-	208/1	-	0.19	1	-	B
HP-1	MITSUBISHI	TRUZA0121KA70NA	-	-	12.0	9.0	21.0	208/1	-	0.5	11	28	A,C

REMARKS:
A. COOLING CAPACITY INDICATED IS AT 75°F DB, 45% RH AND 95°F OUTSIDE AIR CONDITIONS.
B. INDOOR UNIT POWERED OFF OUTDOOR UNIT.

AIR DEVICE SCHEDULE

TAG	MANUFACTURER	MODEL	FUNCTION	FACE SIZE	BORDER TYPE	MATERIAL	FINISH	REMARKS
CD-1	TITUS	OMNI	SUPPLY	24x24	SURFACE/ LAY-IN	STEEL	WHITE	A,B,D
CD-2	TITUS	OMNI	SUPPLY	12x12	SURFACE/ LAY-IN	STEEL	WHITE	A,B,D
CD-3	TITUS	PAR	SUPPLY	24x24	LAY-IN	STEEL	WHITE	A,B,D
SR-1	TITUS	S300FS	SUPPLY	14x4	DUCT	ALUMINUM	ANOD. ALUMINUM	C,D
SR-2	TITUS	S300FS	SUPPLY	16x6	DUCT	ALUMINUM	ANOD. ALUMINUM	C,D
SR-3	TITUS	S300FS	SUPPLY	18x8	DUCT	ALUMINUM	ANOD. ALUMINUM	C,D
SR-4	TITUS	S300FS	SUPPLY	18x12	DUCT	ALUMINUM	ANOD. ALUMINUM	C,D
RG-1	TITUS	PAR-AA	RETURN	24x24	LAY-IN/ DUCT	ALUMINUM	ANOD. ALUMINUM	B,D
RG-2	TITUS	3FL	RETURN	42x24	DUCT	ALUMINUM	ANOD. ALUMINUM	D
TG-1	TITUS	3FL	RETURN	18x10	SURFACE	ALUMINUM	ANOD. ALUMINUM	D

REMARKS:
A. PROVIDE VOLUME DAMPERS IN TAKEOFFS WHERE ACCESSIBLE. WHERE DAMPERS ARE NOT ACCESSIBLE, PROVIDE OPPOSED BLADE DAMPER AT DIFFUSER
B. COORDINATE FRAME TYPE WITH ARCHITECTURAL REFLECTED CEILING PLAN
C. SCOOP DAMPER
D. ACCEPTABLE MANUFACTURERS INCLUDE : PRICE AND TITUS

DEDICATED OUTSIDE AIR UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	SUPPLY CFM	OA CFM	MIN OA CFM	ESP IN W.C.	TOT BTUH	SENS BTUH	STAGE	HTG IN BTUH	HTG OUT BTUH	BURNER EFFICIENCY	ELECTRICAL						WEIGHT	REMARKS
													HP	VOLTAGE	Ø	MCA	MOCP			
DOAS-1	ACCUREX	XRV-75-50I-Q-E1	7,700	7,700	7,700	0.75	637,600	314,900	VARI. SPEED	800,000	640,000	80	(2) 2	480	3	112.5	150	6,120	A,B,C,D,E,F,G,H,I,J
DOAS-2	ACCUREX	XRV-75-50I-Q-E1	7,700	7,700	7,700	0.75	637,600	314,900	VARI. SPEED	800,000	640,000	80	(2) 2	480	3	112.5	150	6,120	A,B,C,D,E,F,G,H,I,J

REMARKS:
A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE
B. MERV 13 PLEATED FILTER
C. UNIT MOUNTED NON FUSED DISCONNECT SWITCH
D. SMOKE DETECTOR WITH REMOTE ANNUNCIATOR (BY EC)
E. 14" HIGH INSULATED ROOF CURB
F. UNIT MOUNTED NON POWERED CONVENIENCE OUTLET
G. VARIABLE FREQUENCY DRIVE
H. 10:1 COOLING TURNDOWN RATIO
I. HOT-GAS-REHEAT
J. ACCEPTABLE MANUFACTURERS INCLUDE : AAON, TRANE, CARRIER, AND GREENHECK

VENTILATION SCHEDULE

Dorothy Lane Market - Mason, OH

Table 403.3.1.1

ROOM #	ROOM NAME	Az	OCCUPANCY CATEGORY	Rp CFM/P	Ra CFM/SQFT	Pz	Vbz = Az x Ra + Rp x Pz								Zp = Voz / Vpz	Ev	Vot = Voz / Ev
							PEOPLE	AREA	OA	AIR		SA					
		SQFT				people	Rp x Pz	Az x Ra	CFM	Ef	Voz= Vbz/Ez	CFM	OA				
														22%			
	Sales Floor 1	6678	Supermarket	7.5	0.06	53	401	401	801	0.8	1002	5200	1144	0.19	0.90	1113
	Sales Floor 2	7383	Supermarket	7.5	0.06	59	443	443	886	0.8	1107	5800	1276	0.19	0.90	1231
	Floral Prep	150	Kitchen	7.5	0.12	1	8	18	26	0.8	32	200	44	0.16	0.90	35
	Beer/Wine Storage	205	Storage	5	0.06	1	5	12	17	0.8	22	150	33	0.14	0.90	24
	Beer/Wine Bar	137	Bar Lounge	7.5	0.18	3	23	25	47	0.8	59	400	88	0.15	0.90	66
	Wine Office	150	Office	5	0.06	1	5	9	14	0.8	18	150	33	0.12	0.90	19
	Order Walkup	52	Office	5	0.06	1	5	3	8	0.8	10	100	22	0.10	0.90	11
	RTU-1	14755				119					2249	12000	2640			2499
														18%		
	Sales Floor 4	2142	Supermarket	7.5	0.06	30	225	129	354	0.8	442	2900	522	0.15	0.90	491
	Coffee Bar	279	Bar Lounge	7.5	0.18	7	53	50	103	0.8	128	800	144	0.16	0.90	143
	Cut Fruit Prep	128	Kitchen	7.5	0.12	1	8	15	23	0.8	29	200	36	0.14	0.90	32
	Customer Center	101	Office	5	0.06	1	5	6	11	0.8	14	100	18	0.14	0.90	15
	Front End Office	205	Office	5	0.06	3	15	12	27	0.8	34	250	45	0.14	0.90	38
	Cash Room	32	Office	5	0.06	1	5	2	7	0.8	9	100	18	0.09	0.90	10
	Indoor Café Seating	286	Dining	7.5	0.18	35	263	51	314	0.8	392	2500	450	0.16	0.90	436
	Entry/Exit Vestibule	721	Corridor	0	0.06	0	0	43	43	0.8	54	1000	180	0.05	0.90	60
	Consulting	131	Office	5	0.06	2	10	8	18	0.8	22	150	27	0.15	0.90	25
	Catwalk Seating	1663	Seating Area	5	0.06	88	440	100	540	0.8	675	4250	765	0.16	0.90	750
	Security Office	178	Office	5	0.06	1	5	11	16	0.8	20	150	27	0.13	0.90	22
	Checkout	2917	Supermarket	7.5	0.06	38	285	175	460	0.8	575	3600	648	0.16	0.90	639
	RTU-2	8783				207					2394	16000	2880			2660
														24%		
	Sales Floor 3	6472	Supermarket	7.5	0.06	52	388	388	777	0.8	971	4000	972	0.24	1.00	971
	RTU-3	6472				52					971	4000	975			971
														18%		
	Cooking School	1000	Kitchen	7.5	0.12	58	435	120	555	0.8	694	4000	720	0.17	1.00	694
	RTU-4	1000				58					694	4000	720			694
														21%		
	Auto Wrap	136	Office	5	0.06	1	5	8	13	0.8	16	250	53	0.07	0.90	18
	Corridor	127	Corridor	0	0.06	0	0	8	8	0.8	10	100	21	0.10	0.90	11
	Delivery/Storage	3879	Warehouse	0	0.06	2	0	233	233	0.8	291	1750	368	0.17	0.90	323
	Electrical	275	Corridor	0	0.06	0	0	17	17	0.8	21	350	74	0.06	0.90	22
	Grocery Office	43	Office	5	0.06	1	5	3	8	0.8	9	50	11	0.19	0.90	11
	Receiving Office	43	Office	5	0.06	1	5	3	8	0.8	9	50	11	0.19	0.90	11
	Employee RR	41	Restroom	0	0	0	0	0	0	0.8	0	50	11	0.00	0.90	0
	East Corridor	2276	Corridor	0	0.06	0	0	137	137	0.8	171	1000	210	0.17	0.90	190
	Seafood Prep	210	Kitchen	7.5	0.12	1	8	25	33	0.8	41	400	84	0.10	0.90	45
	RTU-5	7030				6					568	4000	840			631
														100%		
	Catering Prep	328	Kitchen	7.5	0.12	1	8	39	47	0.8	59	2150	2150	0.03	1.00	59
	Deli Kitchen	1289	Kitchen	7.5	0.12	5	38	155	192	0.8	240	11600	11600	0.02	1.00	240
	Chill Alcove	263	Kitchen	7.5	0.12	1	8	32	39	0.8	49	1600	1600	0.03	1.00	49
	Employee RR	41	Restroom	0	0	0	0	0	0	0.8	0	50	50	0.00	1.00	0
	DOAS-1/2	1921				7					348	15400	15400			348
														22%		
	Bathroom Corridor	216	Corridor	0	0.06	0	0	13	13	0.8	16	150	33	0.11	0.90	18
	Customer Mens	129	Restroom	0	0	0	0	0	0	0.8	0	150	33	0.00	0.90	0
	Customer Womens	137	Restroom	0	0	0	0	0	0	0.8	0	150	33	0.00	0.90	0
	E-Commerce Area	512	Kitchen	7.5	0.12	2	15	61	76	0.8	96	550	122	0.17	0.90	106
	Corridor	1594	Corridor	0	0.06	0	0	96	96	0.8	120	600	133	0.20	0.90	133
	GF-1	2588				2					231	1600	355			257
														20%		
	Bakery	466	Kitchen	7.5	0.12	3	23	56	78	0.8	98	575	115	0.17	0.90	109
	Pizza Prep	269	Kitchen	7.5	0.12	1	8	32	40	0.8	50	300	60	0.17	0.90	55
	Food Serv/Bakery Office	82	Office	5	0.06	2	10	5	15	0.8	19	125	25	0.15	0.90	21
	Pizza Kitchen	119	Kitchen	7.5	0.12	1	8	14	22	0.8	27	150	30	0.18	0.90	30
	Corridor	107	Corridor	0	0.06	0	0	6	6	0.8	8	50	10	0.16	0.90	9
	GF-2	1043				7					202	1200	240			224
														19%		
	Bakery Wash	125	Kitchen	7.5	0.12	1	8	15	23	0.8	28	175	33	0.16	0.90	31
	Love Cakes	289	Kitchen	7.5	0.12	3	23	35	57	0.8	71	425	81	0.17	0.90	79
	GF-3	414				4					100	600	115			111
														17%		
	Ware Wash	320	Kitchen	7.5	0.12	2	15	38	53	0.8	67	400	68	0.17	1.00	67
	GF-4	320				2					67	400	70			67
														16%		
	Mezzanine Storage	92	Storage	5	0.06	1	5	6	11	0.8	13	100	16	0.13	1.00	13
	RR Corridor	96	Corridor	0	0.06	0	0	6	6	0.8	7	50	8	0.14	1.00	7
	Janitor Closet	28	Storage	0	0.06	0	0	2	2	0.8	2	25	4	0.08	1.00	2
	Men's RR	63	Restroom	0	0	0	0	0	0	0.8	0	50	8	0.00	1.00	0
	Women's RR	62	Restroom	0	0	0	0	0	0	0.8	0	50	8	0.00	1.00	0
	Large Conference Room	542	Conference/Meeting Room	5	0.06	25	125	33	158	0.8	197	1300	208	0.15	1.00	197
	Small Conference Room	112	Conference/Meeting Room	5	0.06	4	20	7	27	0.8	33	225	36	0.15	1.00	33
	Owner's Office	169	Office	5	0.06	6	30	10	40	0.8	50	325	52	0.15	1.00	50
	Mezzanine Corridor	870	Corridor	0	0.06	0	0	52	52	0.8	65	450	72	0.15	1.00	65
	Department Heads Room	243	Office	5	0.06	4	20	15	35	0.8	43	300	48	0.14	1.00	43
	Quiet Room	85	Office	5	0.06	2	10	5	15	0.8	19	125	20	0.15	1.00	19
	RTU-6	2362				42					430	3000	480			430
														14%		
	Breakroom	503	Breakroom	5	0.06	29	145	30	175	0.8	219	1750	245	0.13	1.00	219
	Employee Nursing	42	Office	5	0.06	2	10	3	13	0.8	16	150	21	0.10	1.00	16
	Men's Lockers	130	Locker/Dressing Room	0	0	0	0	0	0	0.8	0	50	7	0.00	1.00	0
	Women's Lockers	131	Locker/Dressing Room	0	0	0	0	0	0	0.8	0	50	7	0.00	1.00	0
	Men's Employee RR	147	Restroom	0	0	0	0	0	0	0.8	0	150	21	0.00	1.00	0
	Women's Employee RR	169	Restroom	0	0	0	0	0	0	0.8	0	100	14	0.00	1.00	0
	Future Expansion Area	1387	Office	5	0.06	0	0	83	83	0.8	104	750	105	0.14	1.00	104
	RTU-7	2509				31					339	3000	420			339

ROOFTOP UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	TONNAGE	SUPPLY CFM	OA CFM	TSP IN IN. W.C.	TOT BTUH	SENS BTUH	EER	STAGE	HTG IN BTUH	HTG OUT BTUH	BURNER EFFICIENCY	ELECTRICAL					WEIGHT (LBS.)	REMARKS
														HP	VOLTAGE	Ø	MCA	MOCP		
RTU-1	SEASONS 4	LA025/1SJK35-0262-TNS.0-12HG	25.0	12,000	2,640	2.55	317,814	232,939	12.7	VARI. SPEED	500,000	405,000	81%	10.0	460	3	66.0	80	10,200	A,B,C,D,E,F,G,H,I,J,K
RTU-2	SEASONS 4	LA030/1SJK35-0322-TNS.0-16HG	30.0	16,000	2,880	3.45	395,428	285,208	12.0	VARI. SPEED	500,000	405,000	81%	15.0	460	3	92.0	110	10,400	A,B,C,D,E,F,G,H,I,J,K
RTU-3	AAON	RN-011-3-0-KB09-3GB	11.0	4,000	975	1.68	127,020	103,140	11.4	VARI. SPEED	292,500	234,000	80%	3.0	460	3	25.0	30	1,844	A,B,C,D,E,F,G,H,I,J,K
RTU-4	AAON	RN-010-3-0-KB09-3KB	10.0	4,000	720	2.52	113,260	93,200	11.1	VARI. SPEED	150,000	120,000	80%	3.0	460	3	25.0	35	1,350	A,B,C,D,E,F,G,H,I,J,K
RTU-5	AAON	RN-010-3-0-KB09-3KB	10.0	4,000	840	2.65	113,910	94,090	11.1	VARI. SPEED	150,000	120,000	80%	3.0	460	3	25.0	35	1,350	A,B,C,D,E,F,G,H,I,J,K
RTU-6	AAON	RN-008-3-0-KB09-32B	7.5	3,000	480	2.15	90,360	73,050	11.6	VARI. SPEED	90,000	72,900	81%	2.0	460	3	22.0	30	1,245	A,B,C,D,E,F,G,H,I,J,K
RTU-7	AAON	RN-008-3-0-KB09-32B	7.5	3,000	420	2.05	90,110	73,300	11.6	VARI. SPEED	90,000	72,900	81%	2.0	460	3	22.0	30	1,245	A,B,C,D,E,F,G,H,I,J,K

REMARKS:
A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE
B. MERV 13 PLEATED FILTER
C. UNIT MOUNTED NON FUSED DISCONNECT SWITCH
D. SMOKE DETECTOR WITH REMOTE ANNUNCIATOR (BY EC)
E. 14" HIGH INSULATED ROOF CURB
F. UNIT MOUNTED NON POWERED CONVENIENCE OUTLET
G. VARIABLE FREQUENCY DRIVE
H. 10:1 COOLING TURNDOWN RATIO
I. PROVIDE DEMAND CONTROL VENTILATION TO MODULATE OUTSIDE AIR.
J. HOT-GAS-REHEAT
K. ACCEPTABLE MANUFACTURERS INCLUDE : SEASONS 4, AAON, CAPTIVE AIRE, TRANE, CARRIER, AND GREENHECK

CONDENSING UNIT SCHEDULE

TAG	GF TAG	MANUFACTURER	MODEL	NOMINAL TONNAGE	NET TOT BTUH	NET SENS BTUH	SEER	ELECTRICAL					WEIGHT (LBS.)	REMARKS
								VOLTAGE	PHASE	FLA	MCA	MOCP		
CU-1	-	KRACK	LAVF25410M	2.5	30,000	22,500	13.8	460	3	25.0	25.63	30	4,046	A,B,C,D,E,F
CU-2	-	KRACK	LAVF24410M	4.0	48,000	36,000	13.8	460	3	20.0	20.63	25	2,884	A,B,C,D,E,F
CU-3	GF-1	ICP	N4A5S48KAWA	4.0	46,165	34,334	14.0	460	3	-	32.8	50	199	A,B,C,D,E,F
CU-4	GF-2	ICP	N4A5S36KAWA	3.0	23,024	16,248	14.3	460	3	-	16.7	25	169	A,B,C,D,E,F
CU-5	GF-3	ICP	N4A5S18KAWA	1.5	18,254	13,659	16.0	460	3	-	11.4	20	126	A,B,C,D,E,F
CU-6	GF-4	ICP	N4A5S18KAWA	1.5	18,254	13,659	16.0	460	3	-	11.4	20	126	A,B,C,D,E,F

REMARKS:
A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE
B. COOLING CAPACITY BASED ON 80°F EDB/67°F EWB AND 95°F CONDENSING TEMPERATURE
C. COMPRESSOR START ASSIST, LIQUID SOLENOID VALVE, THERMOSTATIC EXPANSION VALVE(RPB). TIME-DELAY RELAY
D. PROVIDE CRANKCASE HEATER WHEN INTERCONNECTING TUBE LENGTH EXCEEDS 50 FT
E. FREEZE PROTECTION REQUIRED FOR SYSTEMS OPERATING IN LOW DESIGN TEMPERATURES
F. ACCEPTABLE MANUFACTURERS INCLUDE : CARRIER, TRANE, TEMPSTAR, YORK, AND DAIKIN

GAS FURNACE SCHEDULE

TAG	CU TAG	MANUFACTURER	MODEL	GAS HEATING CAPACITY			SUPPLY FAN			ELECTRICAL DATA				WEIGHT (LBS.)	REMARKS
				INPUT MBH	OUTPUT MBH	AFUE %	CFM	ESP IN. W.C.	O.S.A. CFM	FAN (H.P.)	VOLTS	PHASE	MCA	MOCP	
GF-1	CU-3	ICP	N96MSN0601716A	60	58	96%	1,600	0.5	355	0.75	120	1	13.6	15	142	A,B,C,D,E,F
GF-2	CU-4	ICP	N96MSN0401410A	40	39	96%	1,200	0.5	240	0.5	120	1	9.7	15	123	A,B,C,D,E,F
GF-3	CU-5	ICP	N96MSN0261410A	26	25	96%	600	0.5	115	0.33	120	1	7.5	15	119	A,B,C,D,E,F
GF-4	CU-6	ICP	N96MSN0261410A	26	25	96%	600	0.5	70	0.33	120	1	7.5	15	119	A,B,C,D,E,F

REMARKS:
A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE
B. MERV 8 PLEATED FILTER
C. CONDENSING GAS FURNACE
D. DISCONNECT SWITCH
E. CASED COOLING COIL
F. ACCEPTABLE MANUFACTURERS INCLUDE : CARRIER, TRANE, TEMPSTAR, YORK, AND DAIKIN

AIR BALANCE SCHEDULE

EXHAUST		SUPPLY		
UNIT	CFM	UNIT	CFM	OA CFM
EF-1	75	RTU-1	12,000	2,640
EF-2	75	RTU-2	16,000	2,880
EF-3	225	RTU-3	4,000	975
EF-4	225	RTU-4	4,000	720
EF-5	300	RTU-5	4,000	840
EF-6	225	RTU-6	3,000	480
EF-7	75	RTU-7	3,000	420
EF-8	75	DOAS-1	7,700	7,700
EF-9	75	DOAS-2	7,700	7,700
EF-10	75	GF-1	1,600	355
EF-11	7,950	GF-2	1,200	240
EF-12	6,600	GF-3	600	115
EF-13	1,400	GF-4	400	70
EF-14	900	MAU-1	1,840	1,840
EF-15	1,350	MAU-2	3,020	3,020
EF-16	525	MAU-3	2,320	2,320
EF-17	3,250			
EF-18	900			
EF-19	1,350			
EF-20	900			
EF-21	2,000			
EF-22	1,000			
TOTAL	29,550	TOTAL	32,315	
BUILDING IS 3,065 CFM POSITIVE				

TYPE I HOOD EXHAUST SCHEDULE

HOOD EXHAUST			
HOOD #	CFM	DUCT SIZE	DUCT VELOCITY (FPM)
H-1	7,950	30x20	1,908
H-2	6,600	26x18	2,030
H-3	1,400	8x14	1,800
H-4	900	8x8	2,040
H-5	1,350	10x12	1,730
H-6	525	8x6	1,575
H-7	3,250	24x12	1,625
H-8	900	10x8	1,620
H-9	1,350	10x10	1,944
H-10	900	10x8	1,620
H-11	2,000	16x10	1,800
DUCT VELOCITY FALLS IN THE ALLOWABLE RANGE OF 500-2,500 FPM.			

OUTSIDE AIR/EXHAUST FAN SCHEDULE

TAG	MANUFACTURER	MODEL	CFM	ESP	RPM	HP	VOLTAGE	PHASE	FLA	WEIGHT (LBS.)	SONES	REMARKS
EF-1	GREENHECK	SP-B90	75	.25	700	21W	120	1	-	10	1.2	B,C,D,E,J
EF-2	GREENHECK	SP-B90	75	.25	700	21W	120	1	-	10	1.2	B,C,D,E,J
EF-3	GREENHECK	SP-A390-VG	225	.25	935	47W	277	1	0.7	24	2.5	B,C,D,E,J
EF-4	GREENHECK	SP-A390-VG	225	.25	935	47W	277	1	0.7	24	2.5	B,C,D,E,J
EF-5	GREENHECK	SP-A390-VG	300	.25	1340	100W	277	1	1.46	24	5.0	B,C,D,E,J
EF-6	GREENHECK	SP-A390-VG	225	.25	935	47W	277	1	0.7	24	2.5	B,C,D,E,J
EF-7	GREENHECK	SP-B90	75	.25	700	21W	120	1	-	10	1.2	B,C,D,E,J
EF-8	GREENHECK	SP-B90	75	.25	700	21W	120	1	-	10	1.2	B,C,D,E,J
EF-9	GREENHECK	SP-B90	75	.25	700	21W	120	1	-	10	1.2	B,C,D,E,J
EF-10	GREENHECK	SP-B90	75	.25	700	21W	120	1	-	10	1.2	B,C,D,E,J
EF-11	ACCUREX	XUEF-24	7,950	2.25	1,169	7.5	460	3	11	586	-	A,F,G,H,I,J
EF-12	ACCUREX	XUEF-22	6,600	2.25	1,326	5.0	460	3	-	575	-	A,F,G,H,I,J
EF-13	ACCUREX	XUEF-12	1,400	1.5	1,933	1.0	460	3	-	223	-	A,F,G,H,I,J
EF-14	ACCUREX	XUEF-12	900	1.0	1,724	0.5	460	3	-	151	-	A,F,G,H,I,J
EF-15	ACCUREX	XUEF-13	1,350	1.15	1,535	0.39	460	3	-	170	-	A,F,G,H,I,J
EF-16	ACCUREX	XCUE-099-VG	525	1.0	1,616	0.25	120	1	5.8	54	-	A,F,G,H,I,J
EF-17	ACCUREX	XCUE-160-VG	3,250	1.25	1,510	2.0	208	1	13.2	122	-	A,F,G,H,I,J
EF-18	ACCUREX	XCUE-100-VG	900	1.0	1,694	0.25	120	1	5.8	63	-	A,F,G,H,I,J
EF-19	ACCUREX	XUEF-13	1,350	1.15	1,535	0.5	460	3	-	164	-	A,F,G,H,I,J
EF-20	ACCUREX	XCUE-100-VG	900	0.25	1,694	0.25	120	1	5.8	63	-	A,F,G,H,I,J
EF-21	ACCUREX	XCUE-140-VG	2,000	1.0	1,514	1.0	120	1	16.0	92	-	A,F,G,H,I,J
EF-22	GREENHECK	GB-130	1,000	.25	883	0.25	460

DIVISION 23 MECHANICAL SPECIFICATIONS

23 05 01 COMMON REQUIREMENTS FOR HVAC

ALL MECHANICAL WORK AND TESTS SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST STATE, COUNTY, AND LOCAL REGULATIONS, LAWS, AND ORDINANCES WHICH MAY BE APPLICABLE.

BEFORE SUBMITTING A BID, EXAMINE DOCUMENTS OF ALL OTHER TRADES, VISIT THE SITE AND GET ACQUAINTED WITH ALL CONDITIONS THAT MAY IN ANY WAY AFFECT THE EXECUTION OF THIS CONTRACT. TAKE MEASUREMENTS AND BE RESPONSIBLE FOR EXACT SIZE AND LOCATIONS OF ALL OPENINGS REQUIRED. VERIFY INSTALLATION MAY BE MADE IN COMPLETE ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS. IN THE EVENT OF DISCREPANCY, IMMEDIATELY NOTIFY THE PROFESSIONAL ENGINEER OF RECORD. DO NOT PROCEED WITH THE INSTALLATION IN AREAS OF DISCREPANCY UNTIL ALL SUCH DISCREPANCIES HAVE BEEN FULLY RESOLVED.

IT IS NOT THE INTENT OF THE DRAWINGS THAT EXISTING CONDITIONS BE ACCURATELY SHOWN. EXISTING MECHANICAL WORK IS SHOWN TO LIMITED EXTENT ON DRAWINGS AND IS SHOWN FOR GENERAL REFERENCE ONLY. LOCATIONS AND INFORMATION WERE DERIVED FROM CURSORY SITE VISUAL OBSERVATIONS OR FROM DOCUMENTS THAT WERE PREPARED FOR PREVIOUSLY INSTALLED WORK WHEN AVAILABLE.

THE WORK COVERED BY THESE SPECIFICATIONS SHALL CONSIST OF PROVIDING ALL NEW MATERIAL, LABOR, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE MECHANICAL INSTALLATION AS SPECIFIED HEREIN. WORK IN THIS SECTION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS:

- PACKAGED ROOF TOP UNITS
- CONDENSING GAS FURNACES
- CONDENSING UNITS
- DEDICATED OUTSIDE AIR UNITS
- MAKE UP AIR UNITS
- TOILET EXHAUST FANS
- KITCHEN HOOD AND EXHAUST FAN
- LOW VOLTAGE THERMOSTATS/REMOTE SENSORS
- DUCT
- DAMPERS
- DIFFUSERS, REGISTERS, AND LOUVERS

WHENEVER THE WORDS "CONTRACTOR" APPEAR ON MECHANICAL DRAWINGS OR IN THESE SPECIFICATIONS, IT SHALL REFER TO THE MECHANICAL SUB-CONTRACTOR. WHENEVER THE WORD "PROVIDE" APPEARS IN THESE DOCUMENTS, IT SHALL BE INTERPRETED TO MEAN "FURNISH AND INSTALL".

COORDINATE ALL WORK WITH THE OWNER TO MINIMIZE INTERRUPTION OF BUILDING OPERATION.

COORDINATE THE INSTALLATION OF MECHANICAL ITEMS WITH THE SCHEDULES FOR WORK OF ALL OTHER TRADES TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

THIS CONTRACTOR SHALL VERIFY AND SATISFY HIMSELF THAT ALL EQUIPMENT FURNISHED WILL PROPERLY FIT IN THE SPACE PROVIDED, THAT IT WILL FUNCTION PROPERLY, AND THAT ALL PARTS OF EQUIPMENT REQUIRING SERVICE ARE READILY ACCESSIBLE.

ALL PIPING SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS AND FRAMING SYSTEM. ALL VERTICAL RUNS SHALL BE HELD AGAINST WALLS, COLUMNS, ETC., AS POSSIBLE TO PERMIT MAKING OF PIPE JOINTS.

CONTRACTOR SHALL PROVIDE A GUARANTEE IN WRITTEN FORM STATING THAT ALL WORK SHALL BE FREE OF DEFECTS OR ERRORS, AND ALL EQUIPMENT, MATERIALS, OR PARTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF OWNER'S FINAL ACCEPTANCE AND SHALL REPAIR, REVISE OR REPLACE AT NO COST TO THE OWNER ANY SUCH DEFECTS OCCURRING WITHIN THE GUARANTEE PERIOD.

CONTRACTOR SHALL ALSO STATE IN WRITTEN FORM THAT ANY ITEMS OR OCCURRENCES ARISING DURING THE GUARANTEE PERIOD WILL BE ATTENDED TO IN A TIMELY MANNER AND WILL IN NO CASE EXCEED THREE (3) WORKING DAYS FROM DATE OF NOTIFICATION BY OWNER.

PROVIDE A COMPLETE INSTALLATION IN CONFORMANCE WITH THE FOLLOWING STANDARDS.
AGA: AMERICAN GAS ASSOCIATION
ASHRAE: AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
NFPA:NATIONAL FIRE PROTECTION ASSOCIATION
SMACNA: SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION.
STATEWIDE BUILDING CODE
INTERNATIONAL MECHANICAL CODE

CONTRACTOR SHALL DO ALL CUTTING AND PATCHING REQUIRED FOR INSTALLATION OF THIS WORK. ALL OPENINGS IN WALLS, FLOORS OR CEILINGS SHALL BE PROPERLY SEALED AND RESTORED IN KIND. FLASH AND COUNTERFLASH AT ROOF OPENINGS.

ALL EQUIPMENT SHALL BE LISTED AND LABELED, UNLESS OTHERWISE APPROVED.

ALL WIRING SHALL MEET THE REQUIREMENTS LISTED IN THE ELECTRICAL SPECIFICATIONS. ALL CONTROL AND INTERLOCK WIRING AND CONDUIT (120V OR 24V) SHALL BE BY THE MECHANICAL CONTRACTOR.

EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THIS CODE.

CLEANING: THIS CONTRACTOR SHALL REMOVE FROM THE PREMISES ALL ACCUMULATION OF DIRT, DEBRIS, WASTE MATERIALS AND RUBBISH CAUSED BY HIS EMPLOYEES OR WORK, AT LEAST ONCE A WEEK, EXCEPT THAT COMBUSTIBLE MATERIALS SHALL BE REMOVED DAILY.

DURING PROGRESS OF THE WORK, MAINTAIN ON DRAWINGS AT THE SITE, AN ACCURATE RECORD OF THE INSTALLATION OF THE MECHANICAL SYSTEM, INDICATING ALL ITEMS WHICH HAVE BEEN CHANGED OR ADDED.

APPLY FOR AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY LOCAL AUTHORITY, FOR THE APPROVAL OF WORK.

A CERTIFICATE OF FINAL INSPECTION AND APPROVAL SHALL BE SUBMITTED WITH THE CONTRACTOR'S REQUEST FOR FINAL PAYMENT. NO FINAL PAYMENT WILL BE APPROVED WITHOUT THIS CERTIFICATE.

GUARANTEE ALL WORKMANSHIP, MATERIAL, AND EQUIPMENT AND REPLACE ANY FOUND DEFECTIVE WORK WITHOUT COST TO THE OWNER, FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.

EXISTING CONDITIONS

DO NOT REUSE REMOVED MECHANICAL MATERIALS UNLESS SPECIFICALLY INDICATED ON DRAWINGS. EXISTING SYSTEMS MAY BE UTILIZED ONLY TO THE EXTENT INDICATED ON DRAWINGS.

IF REQUIRED TO ACCOMMODATE CONSTRUCTION RELATED ACTIVITIES TEMPORARILY REMOVE, STORE IN PROTECTED LOCATION ON SITE, AND REINSTALL CONFLICTING MECHANICAL EQUIPMENT, OR DEVICES THAT ARE TO REMAIN OR TO BE RELOCATED.

WHERE THE TERM "DEMOLITION" IS USED HEREIN, INTERPRET IT TO MEAN "DEMOLITION" OR "SELECTIVE DEMOLITION" WHERE APPLICABLE.

PROVIDE MECHANICAL DEMOLITION WORK AS REQUIRED TO ACCOMMODATE PROJECT DEMOLITION AND AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION. DISCONNECT AND REMOVE WORK TO BE ABANDONED, AND AS REQUIRED TO ACCOMMODATE WORK OF OTHER TRADES, IN AREAS AFFECTED BY THIS PROJECT.

LEGALLY DISPOSE OF MATERIALS TO SALVAGED OR RETAINED.

23 05 03 SUBMITTALS FOR MECHANICAL SYSTEMS

DESIGN BASIS MANUFACTURERS OF MATERIAL AND EQUIPMENT ARE SPECIFIED AND PLANS ARE DETAILED ACCORDING TO THIS MATERIAL. CONTRACTOR SHALL BASE HIS BID ON FURNISHING AND INSTALLING THIS MAKE OF MATERIAL AND EQUIPMENT.

AN ACCEPTABLE MANUFACTURER'S NAME AND MODEL NUMBER OF A PRODUCT MAY BE PROVIDED IN THESE DOCUMENTS. THIS IS THE EQUIPMENT INCLUDED DURING THE DESIGN PROCESS AND FORMS THE BASIS OF A STANDARD OF QUALITY. WHERE MORE THAN ONE MAKE OF MATERIAL OR EQUIPMENT IS SPECIFIED, THE CONTRACTOR SHALL STATE IN HIS BID WHICH MAKE HE PROPOSES TO FURNISH AND INSTALL. SHOP DRAWING APPROVAL SHALL BE OBTAINED PRIOR TO SHIPMENT OF EQUIPMENT.

VERIFY THE MODEL NUMBER OR PRODUCT IS STILL ACCURATE AND MEETS ALL REQUIREMENTS SHOWN ON THE DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN THE REQUIREMENTS AND THE PRODUCT OR MODEL NUMBER, THE STRICTER OF THE TWO SHALL GOVERN.

SUBMIT SHOP DRAWINGS AND/OR PRODUCT DATA (ELECTRONIC COPIES) ON THE FOLLOWING ITEMS FOR REVIEW BEFORE FABRICATION OR SHIPMENT:

- PACKAGED ROOFTOP UNITS
- CONDENSING GAS FURNACES
- CONDENSING UNITS
- DEDICATED OUTSIDE AIR UNITS
- MAKE UP AIR UNITS
- TOILET EXHAUST FANS
- KITCHEN HOOD AND EXHAUST FAN
- LOW VOLTAGE THERMOSTATS/REMOTE SENSORS
- DUCT
- DAMPERS
- DIFFUSERS, REGISTERS, AND LOUVERS

MAINTENANCE MANUALS: THE MANUALS SHALL INCLUDE WIRING DIAGRAMS, MAINTENANCE AND OPERATING INSTRUCTIONS, PARTS LISTINGS, AND COPIES OF OTHER SUBMITTALS INDICATED FOR INCLUSION.

REVIEW AND CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS, PRODUCT DATA: CATALOGS, CUT SHEETS, CHARTS, AND OTHER ITEMS DURING CONSTRUCTION PHASE SUBMITTAL REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS, FOR PROVIDING A COMPLETE AND FUNCTIONING PROJECT, NOR SHALL THEY RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS OR ERRORS OF ANY SORT. THIS REVIEW IS FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. CONTRACTOR REMAINS RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATIONS, VERIFYING MATERIALS REQUIRED, OBTAINING FIELD MEASUREMENTS AND RELATED CRITERIA, COORDINATING WORK WITH OTHER DISCIPLINES AND PERFORMING WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

ANY CHANGES TO ITEMS SPECIFIED MUST BE SUBMITTED IN WRITING AS A SUBSTITUTION, WITH COMPLETE DOCUMENTATION OF PRICE DIFFERENTIAL AND EQUIPMENT DETAILS. ANY SUBSTITUTIONS PROVIDED SHALL BE REVIEWED AT MARQUE ENGINEERING'S HOURLY RATES. REVIEW SHALL BE PAID FOR BY THE CONTRACTOR TO MARQUE ENGINEERING AT NO COST TO THE OWNER. BY USING PRE-APPROVED SUBSTITUTIONS, THE CONTRACTOR ACCEPTS ALL RESPONSIBILITY AND ASSOCIATED COSTS FOR ALL REQUIRED MODIFICATIONS TO THE CONTRACT DOCUMENTS TO INCLUDE BUT NOT LIMITED TO MATERIAL OR EQUIPMENT COSTS FOR THEIR OR OTHER TRADES, AND ENSURING THAT SUBSTITUTED MATERIALS AND EQUIPMENT TO BE FURNISHED FIT INTO SPACE AVAILABLE.

EXTENSIVE REVISIONS NECESSITATED TO THE CONTRACT DOCUMENTS, OR SUBSTITUTION ACTIONS RELATED TO ANY SPECIFIED PRODUCT NOT ABLE TO BE PROVIDED DUE TO A FAILURE TO COMMENCE WORK, RELEASE PRODUCT OR COORDINATE CONSTRUCTION ACTIVITIES SHALL BE PROVIDED AT MARQUE ENGINEERING'S HOURLY RATES. COSTS SHALL BE BORN BY THE CONTRACTOR AT NO COST TO THE OWNER.

23 05 29 HANGERS AND SUPPORTS

SUPPORT ALL PIPING, DUCTWORK AND EQUIPMENT BY HANGERS OR BRACKETS. FURNISH STRUCTURAL STEEL MEMBERS WHERE REQUIRED TO SUPPORT PIPING AND EQUIPMENT. NO PORTION OF PIPING OR VALVES SHALL BE SUPPORTED BY EQUIPMENT.
DUCTWORK - SUPPORT BY MEANS OF HANGERS AS FOLLOWS:

DUCT WIDTH	30 OR LESS
HANGER SIZE	(16 GAUGE)
TYPE MAX. SPACING	8

A PAIR OF HANGERS SHALL BE LOCATED AT EVERY TRANSVERSE JOINT AND ELSEWHERE ACCORDING TO THE TABLE.

23 05 93 HVAC SYSTEM TESTING , ADJUSTING AND BALANCING FOR HVAC

ALL SYSTEMS AND EQUIPMENT SHALL BE CAREFULLY ADJUSTED TO PROVIDE COMFORTABLE AND UNIFORM CONDITIONS IN EACH AND EVERY SPACE TO THE OWNER'S SATISFACTION. PROVIDE ANY REQUIRED DRIVES TO SATISFY QUANTITIES INDICATED. PROVIDE A CERTIFIED AIR BALANCE OF THE DIFFUSERS AND AIR HANDLERS.

AIR SYSTEM:

AIR BALANCE AND TESTING SHALL NOT BEGIN UNTIL THE SYSTEM HAS BEEN COMPLETED AND IS IN FULL WORKING ORDER. CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR CONDITIONING SYSTEM AND EQUIPMENT INTO FULL OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING. CONTRACTOR SHALL SUBMIT WITHIN 30 DAYS AFTER RECEIPT OF CONTRACT, COPIES OF SUBMITTAL DATA FOR THE TESTING AND BALANCING OF THE AIR CONDITIONING, HEATING, AND VENTILATING SYSTEMS. THE AIR BALANCE AND TESTING AGENCY SHALL PROVIDE PROOF OF HAVING SUCCESSFULLY COMPLETED AT LAST FIVE PROJECTS OF SIMILAR SIZE AND SCOPE.

CONTRACTOR SHALL PROCURE THE SERVICES OF AN INDEPENDENT AIR BALANCE AND TESTING AGENCY, APPROVED BY THE ENGINEER, AND A MEMBER OF AABC OR NEBB, WHICH SPECIALIZES IN THE BALANCING AND TESTING OF HEATING VENTILATION AND AIR CONDITIONING SYSTEMS, TO BALANCE, ADJUST AND TEST AIR MOVING EQUIPMENT AND AIR DISTRIBUTION OR EXHAUST SYSTEMS AS HEREIN SPECIFIED.

ALL WORK BY THIS AGENCY SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A QUALIFIED HEATING AND VENTILATING ENGINEER EMPLOYED BY THIS AGENCY. ALL INSTRUMENTS USED BY THIS AGENCY SHALL BE ACCURATELY CALIBRATED AND MAINTAINED IN GOOD WORKING ORDER.

23 07 13 DUCT INSTALLATION

INSULATE ALL SUPPLY, DIFFUSER PLENUMS, AND OUTSIDE AIR DUCTWORK OF ALL UNITS WITH OWENS CORNING "ALL SERVICE DUCT WRAP" TYPE 150 GLASS FIBER INSULATION UNLESS OTHERWISE NOTED. INSULATION SHALL BE 1-1/2" THICK (2" THICK FOR SUPPLY AND RETURN IN TRUSS SPACE). 1.5 PCF. DENSITY WITH FRK JACKET .002 THICK REINFORCED ALUMINUM FOIL VAPOR BARRIER. INSULATION SHALL CONFORM TO NFPA 90A AND 90B PER ASTM E-84 FOR FLAME SPREAD AND SMOKE DEVELOPED RATING.

INSULATE ALL EXTERIOR SUPPLY AND RETURN DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION WITH OUTDOOR JACKET. INSULATION SHALL BE 2" THICK WITH A 'K' VALUE OF 0.23 AT 75 F. INSTALL ON DUCTWORK USING IMPALE ANCHORS AND WIRES. SEAL VAPOR BARRIER WITH VAPOR BARRIER ADHESIVE.

PROVIDE INSULATION ON ALL CONCEALED SUPPLY, RETURN DUCTWORK. ALL LINERS, INSULATION AND ADHESIVES SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.

RIGID FIBERGLASS DUCTWORK INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 612, TYPE IB, WITHOUT FACING AND WITH VAPOR BARRIER ALL-SERVICE JACKET MANUFACTURED FROM KRAFT PAPER, REINFORCING SCRIM, ALUMINUM FOIL, AND VINYL FILM. INSULATION SHALL HAVE A MINIMUM R VALUE AS REQUIRED BY CODE.

FLEXIBLE FIBERGLASS DUCTWORK INSULATION: GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 553, TYPE II, WITHOUT FACING AND WITH VAPOR BARRIER ALL-SERVICE JACKET MANUFACTURED FROM KRAFT PAPER, REINFORCING SCRIM, ALUMINUM FOIL, AND VINYL FILM. INSULATION SHALL HAVE A MINIMUM R VALUE AS REQUIRED BY CODE.

VAPOR BARRIER MATERIAL FOR DUCTWORK: PAPER-BACKED ALUMINUM-FOIL, EXCEPT AS OTHERWISE INDICATED; STRENGTH AND PERMEABILITY RATING EQUIVALENT TO FACTORY-APPLIED VAPOR BARRIERS ON ADJOINING DUCTWORK INSULATION, WHERE AVAILABLE; WITH FOLLOWING ADDITIONAL CONSTRUCTION CHARACTERISTICS:

HIGH PUNCTURE RESISTANCE: LOW VAPOR TRANSMISSION (FOR DUCTS IN EXPOSED AREAS: MECH. ROOMS, ETC.)
MODERATE PUNCTURE RESISTANCE: MEDIUM VAPOR TRANSMISSION (FOR DUCTS IN CONCEALED AREAS).

INSTALLATION IS NOT PERMITTED ABOVE DRYWALL CEILINGS AND INACCESSIBLE CEILINGS.

23 09 93 SEQUENCE OF OPERATION

PACKAGED ROOFTOP UNIT
STARTUP
THE UNIT SHALL OPERATE ON A 7 DAY/NIGHT PROGRAMMABLE THERMOSTAT. DURING STARTUP. THE FAN SHALL RUN WITH THE DAMPERS IN THE FULL RECIRCULATION POSITION. PROVIDE OCCUPIED CHANGEOVER SEQUENCE WITH OPTIMUM START FUNCTION. WHEN THE RETURN AIR TEMPERATURE REACHES OCCUPIED SETPOINT (ADJUSTABLE), THE MINIMUM OUTSIDE AIR DAMPER SHALL OPEN TO THE CONTROLLED MINIMUM OUTDOOR AIR POSITION.

SUPPLY FAN CONTROL
THE SUPPLY FAN SPEED SHALL BE CONSTANT AND SET TO THE REQUIRED CFM.

SPACE TEMPERATURE CONTROL
PROVIDE LOCAL WALL MOUNTED ROOM TEMPERATURE THERMOSTAT WITH DIGITAL DISPLAY OFROOMTEMPERATURE AND SETPOINT (+/- DEG. F. ADJUSTABLE), AND OVERRIDE FEATURE. PROVIDE REMOTE SENSOR TO MONITOR SPACE TEMPERATURE AND MAINTAIN THERMOSTAT SETPOINT.

MINIMUM OUTSIDE AIR CONTROL
DURING OCCUPIED MODE THE MINIMUM OUTSIDE AIR DAMPER SHALL BE OPEN. PROVIDE MOTORIZED OUTDOOR AIR DAMPER.

ECONOMIZER CONTROL
DRY BULB CONTROLLED ECONOMIZER: OPERATED TO AUTOMATICALLY USE OUTDOOR AIR FOR "FREE COOLING" WHEN OUTDOOR AIR TEMPERATURE IS AT ACCEPTABLE LEVELS. AUTOMATICALLY MODULATED OUTDOOR AND RETURN AIR DAMPERS MAINTAIN PROPER DISCHARGE AIR TEMPERATURE INTO THE CONDITIONED SPACE. ADJUSTABLE MINIMUM POSITION CONTROL IS STANDARD. ECONOMIZER SHALL HAVE POWERED OR BAROMETRIC RELIEF, AS SCHEDULED.

COOLING CONTROL
COOLING SHALL BE CONTROLLED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ON A CALL FOR COOLING THE HEATING SHALL BE OFF. ON A FURTHER CALL FOR COOLING, ENABLE THE ECONOMIZER MODE. ON A FURTHER CALL FOR COOLING, DISABLE THE ECONOMIZER MODE AND THE MECHANICAL COOLING SHALL BE STAGED ON.

HEATING CONTROL
HEATING SHALL BE CONTROLLED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ON A CALL FOR HEATING, THE MECHANICAL COOLING SHALL BE OFF. ON A FURTHER CALL FOR HEATING, THE ECONOMIZER MODE SHALL BE DISABLED. ON A FURTHER CALL FOR HEATING THE GAS HEATING SHALL BE STAGED ON.

DEHUMIDIFICATION
PROVIDE HOT GAS REHEAT FOR DEHUMIDIFICATION. PROVIDE SPACE HUMIDITY SENSOR. WHEN THE SPACE HUMIDITY RISES ABOVE 60% (ADJUSTABLE), PROVIDE FULL COOLING AND MODULATE THE HOT GAS REHEAT TO MAINTAIN SPACE TEMPERATURE SETPOINT. WHEN THE SPACE HUMIDITY REACHES SETPOINT, RESUME WITH NORMAL HEATING & COOLING OPERATION.

SMOKE DETECTOR
WHEN THE SMOKE DETECTOR IS ALARMED, THE SYSTEM SHALL BE ALARMED AND THE AIR HANDLER SHALL FAIL SAFE WITH MANUAL RESET. ELECTRICAL CONTRACTOR SHALL FURNISH, HVAC CONTRACTOR SHALL MOUNT & ELECTRICAL CONTRACTOR SHALL WIRE A UL LISTED PHOTOELECTRIC SMOKE DETECTOR PER LOCAL CODE AUTHORITY HAVING JURISDICTION.

UNOCCUPIED MODE
DURING THE UNOCCUPIED MODE OF OPERATION, THE RTU SHALL GO INTO NIGHT SETBACK MODE. AT NIGHT SETBACK/SHUTDOWN THE RTU SHALL GO TO FAIL SAFE POSITION. FAIL SAFE POSITION IS DEFINED BY THE FOLLOWING: THE SUPPLY FAN IS OFF, THE OUTDOOR AIR INTAKE DAMPER IS CLOSED, THE HEATING IS OFF AND THE MECHANICAL COOLING IS OFF. THE SUPPLY FAN SHALL CYCLE IN CONJUNCTION WITH EITHER THE HEATING OR COOLING SYSTEM TO MAINTAIN A MINIMUM/MAXIMUM SPACE TEMPERATURE DEPENDING ON THE SEASON.

COOL SUPPLY AIR: ON AN INCREASE IN SPACE TEMPERATURE THE PRODIGY REGULATES THE THE DIFFUSER'S AIR DAMPER OPEN TO INCREASE THE FLOW OF COOL AIR. ON AN INCREASE OF SPACE TEMPERATURE GREATER THAN THE COOLING PROPORTIONAL BAND, THE DAMPER POSITION (%) IS MAINTAINED AT ITS PRE-SELECTED MAXIMUM SETTING.
ON A DECREASE IN SPACE TEMPERATURE THE PRODIGY REGULATES THE DIFFUSER'S AIR DAMPER CLOSED TO REDUCE THE FLOW OF COOL AIR. IF THE SPACE TEMPERATURE DECREASES TO LESS THAN THE COOLING PROPORTIONAL BAND, THE DAMPER POSITION (%) IS MAINTAINED AT THE PRE-SELECTED MINIMUM SETTING.

WARM SUPPLY AIR: ON A DECREASE IN SPACE TEMPERATURE THE PRODIGY REGULATES THE DIFFUSER'S AIR DAMPER OPEN TO INCREASE THE FLOW OF WARM AIR. ON A DECREASE OF SPACE TEMPERATURE GREATER THAN THE HEATING PROPORTIONAL BAND, THE DAMPER POSITION (%) IS MAINTAINED AT ITS PRE-SELECTED MAXIMUM SETTING.
ON AN INCREASE IN SPACE TEMPERATURE THE PRODIGY REGULATES THE DIFFUSER'S AIR DAMPER TO REDUCE THE FLOW OF WARM AIR. IF THE SPACE TEMPERATURE INCREASES ABOVE THE HEATING PROPORTIONAL BAND, THE DAMPER POSITION (%) IS MAINTAINED AT THE PRE-SELECTED MINIMUM SETTING.

LOW VOLTAGE THERMOSTATS SHALL BE PROVIDED AND WIRED BY THE HVAC CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE 4" SQUARE X 1- 1/2" DEEP WALL OUTLET BOXES (WITH SINGLE-GANG RINGS) FOR ALL THERMOSTATS/SENSORS. ELECTRICAL CONTRACTOR SHALL PROVIDE ONE 3/4" EMPTY CONDUIT FROM EACH THERMOSTAT/SENSOR LOCATION, TURNED OUT ABOVE ACCESSIBLE CEILINGS (IN JOIST SPACE OR AGAINST OVERHEAD SLAB/DECK). HVAC/TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE ALL OTHER NECESSARY CONDUIT, RACEWAY AND WIRING RELATED WORK. CONDUIT SHALL BE IDENTIFIED IN CEILING CAVITY AND SHALL BE PROVIDED WITH SWEEP BENDS, BUSHINGS AND DRAGLINE.

EXHAUST FANS SHALL BE TIED TO LIGHT SWITCH, WHICH SHALL BE FURNISHED, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. WHEN ACTIVATED, EXHAUST FAN MOTOR DAMPER SHALL OPEN AND FAN SHALL START.

KITCHEN HOOD EXHAUST FANS: PROVIDE HEAT DETECTOR IN HOOD COLLAR INTERLOCKED TO FAN OPERATION. KITCHEN HOOD EXHAUST SYSTEM SHALL BE INITIATED BY THE HEAT DETECTOR. PROVIDE INDICATOR LIGHT ON FACE OF HOOD. AT STARTUP, ENERGIZE EXHAUST FAN MOTOR. INTERLOCK TO MAKEUP AIR SYSTEM (WHETHER DEDICATED MAKEUP AIR OR MAKEUP AIR FROM HVAC SYSTEM), SO THAT MAKEUP AIR IS PROVIDED WHENEVER EXHAUST FAN IS RUNNING. EXHAUST FAN SHALL RUN CONTINUOUSLY AT CONSTANT SPEED. AT SHUTDOWN, THE EXHAUST FAN SHALL STOP.

PROVIDE ALL CONTROLS AND WIRING FOR COMPLETE INTERLOCK AND OPERATION OF KITCHEN HOOD, EXHAUST FAN, ROOFTOP UNIT, ETC. AND ALL ASSOCIATED MOTOR DAMPERS.

ALL DUCT SMOKE DETECTORS WILL BE FURNISHED BY ELECTRICAL CONTRACTOR, INSTALLED BY THE HVAC CONTRACTOR, AND WIRED BY THE ELECTRICAL CONTRACTOR PER LOCAL CODES. HVAC CONTRACTOR WILL INTERLOCK FAN WITH SMOKE DETECTOR.

MOTOR OPERATED DAMPERS: ALL FRESH AIR INTAKES AND EXHAUST LOUVERS SHALL HAVE MOTOR OPERATED DAMPERS. DAMPERS SHALL BE LOW LEAK WITH BLADE AND EDGE SEALS. 24 V MOTOR OPERATED DAMPERS SHALL BE PROVIDED AND WIRED BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED. PROVIDE ALL NECESSARY TRANSFORMERS, CONTACTORS, CONTROLS AND WIRING FOR INTERLOCKING EQUIPMENT TO MOTOR OPERATED DAMPERS.

23 22 00 CONDENSATE DRAIN PIPING

INSTALL TRAP AT EVAPORATOR COIL DRAIN. EXTEND DRAIN LINE FROM COIL TRAP TO DRAIN. PIPING SHALL BE STANDARD WEIGHT, PVC PIPE AND FITTINGS AND WITH JOINTS OF PVC SOLVENT CEMENT. PROVIDE CLEANOUTS THROUGHOUT RUN AND AT TOPS OF TRAPS.

23 30 00 AIR DISTRIBUTION SYSTEM

CEILING AIR DIFFUSERS:
SQUARE: SQUARE HOUSING, CORE OF SQUARE CONCENTRIC LOUVERS, SQUARE OR ROUND DUCT CONNECTION.

VAV DIFFUSER: THE VAV SQUARE PLAQUE DIFFUSER SHALL BE SUPPLIES TO DELIVER A 360 DEGREE RADIAL, HORIZONTAL AIR FLOW PATTERN. THE BACK CONE SHALL BE A ONE-PIECE DIE-FORMED DESIGN WITH SMOOTH, AERODYNAMICALLY DESIGNED SURFACES AND NO CORNER JOINTS.

CONSTRUCTION:
DIFFUSER CONSTRUCTION SHALL BE 24x24 STEEL WITH ONE-PIECE BACK PAN, AERODYNAMICALLY DESIGNED INNER CONE DAMPER ASSEMBLY, AND PLAQUE FACEPLATE.

A PLAQUE ASSEMBLY SHALL BE INCORPORATED AND SHALL DROP NO MORE THAN ½ INCH BELOW THE CEILING PLAN TO ASSURE PROPER AIR DISTRIBUTION PERFORMANCE

THE PLAQUE ASSEMBLY SHALL BE COMPLETELY REMOVABLE FROM THE DIFFUSER FACE TO ALLOW FOR FULL ACCESS TO ANY DAMPERS OR OTHER DUCTWORK COMPONENTS LOCATED NEAR THE DIFFUSER NECK.

POWER REQUIREMENTS:
THE VAV DIFFUSERS SHALL BE POWERED BY 24VAC, 3.0 VA PER UNIT, WITH SUPPLY POWER FREQUENCY: 60 HZ

MODULATING DAMPER ASSEMBLY:
THE MODULATING DAMPER ASSEMBLY SHALL HAVE THE FOLLOWING FEATURES:
- QUIET, ULTRA-LONG LIFE BRUSHLESS A DRIVE MOTOR
- DIRECT DRIVE SYSTEM WITHOUT GEARS, BELTS, OR LEVERS, RESULTING IN ZERO MAINTENANCE AND LONG LIFE

DIFFUSER SHALL BE SUPPLIED WITH A 120 VOLT 277 VOLT, 24 VAC 20 VA TRANSFORMER

A PRESSURE RELIEF COLLAR SHALL BE FITTED TO THE INLET COLLAR OF THE VAV DIFFUSER TO RELIEVE EXCESS STATIC PRESSURE ARISING FROM MODULATION OF THE AIR FLOW.

A WALL MOUNTED THERMOSTAT WILL PROVIDE ROOM TEMPERATURE SENSING AS WELL AS SET-POINT ADJUSTMENT FOR HEATING AND COOLING.

LINEAR: EXTRUDED ALUMINUM CONTINUOUS SLOT, SINGLE OR MULTIPLE.

DIFFUSER MOUNTINGS:
SURFACE MOUNT: DIFFUSER SHALL HAVE ROLLED EDGE BELOW FINISHED CEILING FOR SURFACE MOUNTING OR DIFFUSER SHALL BE FURNISHED WITH ACCESSORY PLASTER FRAME.

LAY-IN: DIFFUSER HOUSING SIZED TO FIT BETWEEN CEILING EXPOSED SUSPENSION TEE BARS AND REST ON TOP SURFACE OF TEE BAR.

DIFFUSER ACOUSTIC PERFORMANCE: NC LESS THAN OR EQUAL TO 30

DIFFUSER ACCESSORIES: PLASTER RING: PERIMETER RING DESIGNED TO ACT AS PLASTER STOP AND DIFFUSER ANCHOR.

DIFFUSER FINISHES: WHITE ENAMEL: SEMI-GLOSS WHITE ENAMEL PRIME FINISH.

CEILING AND WALL REGISTERS & GRILLES:
STEEL CONSTRUCTION: MANUFACTURER'S STANDARD STAMPED SHEET STEEL FRAME AND ADJUSTABLE BLADES.

REGISTER AND GRILLE FINISHES: WHITE ENAMEL: SEMI-GLOSS WHITE ENAMEL PRIME FINISH.

REGISTER AND GRILLE ACOUSTIC PERFORMANCE: NC LESS THAN OR EQUAL TO 30

23 31 13 METAL DUCTS

CONSTRUCTION, INSTALLATION AND SUPPORT OF ALL DUCTWORK SHALL CONFORM TO THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARD -METAL AND FLEXIBLE".

ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ACHIEVE AIR-TIGHT (5% LEAKAGE FOR SYSTEMS RATED 3" AND UNDER; 1% FOR SYSTEMS RATED OVER 3") AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS. INSTALL EACH RUN WITH MINIMUM NUMBER OF JOINTS. ALIGN DUCTWORK ACCURATELY AT CONNECTIONS, WITHIN 1/8" MISALIGNMENT TOLERANCE AND WITH INTERNAL SURFACES SMOOTH.

SUPPORT VERTICAL DUCTS AT EVERY FLOOR. SUPPORT DUCT WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET.

DUCTS SHALL BE GALVANIZED SHEET METAL OF STANDARD GAUGES. DUCTWORK SHALL HAVE A MINIMUM THICKNESS OF .24 GAUGE. ALL DUCT ELBOWS SHALL BE EITHER FULL RADIUS OR WITH TURNING VANES.

WHERE DUCTWORK IS INDICATED TO BE EXPOSED IN OCCUPIED SPACES, PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPERFECTIONS INCLUDING PITTING, SEAM MARKS, ROLLER MARKS, STAINS AND DISCOLORATIONS, AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING.

EXPOSED DUCTWORK WHICH IS TO BE PAINTED SHALL HAVE PAINT GRIP APPL

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title:
Location: Mason, Ohio
Climate Zone: 5a
Project Type: New Construction

Construction Site:
VETERANS PARKWAY
MASON, Ohio 45040

Owner/Agent:

Designer/Contractor:
JOHN QUILLEN
MARQUE ENGINEERING
2230 PARK AVE, STE. 100
CINCINNATI, Ohio 45206
513-457-7131

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Mechanical Systems List

Quantity **System Type & Description**

1 RTU-1 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 405 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 318 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.70 EER, Required Efficiency = 9.80 IEER
Proposed Part Load Efficiency = 14.70 IEER, Required Part Load Efficiency = 9.90 IEER

1 RTU-2 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 405 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 395 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.00 EER, Required Efficiency = 9.80 IEER
Proposed Part Load Efficiency = 13.90 IEER, Required Part Load Efficiency = 9.90 IEER

1 RTU-3 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 234 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 127 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.40 EER, Required Efficiency = 11.00 EER
Proposed Part Load Efficiency = 18.20 IEER, Required Part Load Efficiency = 11.20 IEER

1 RTU-4 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 120 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 113 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.10 EER, Required Efficiency = 11.00 EER
Proposed Part Load Efficiency = 21.50 IEER, Required Part Load Efficiency = 11.20 IEER

1 RTU-5 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 120 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 114 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.10 EER, Required Efficiency = 11.00 EER
Proposed Part Load Efficiency = 21.50 IEER, Required Part Load Efficiency = 11.20 IEER

1 RTU-6 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 73 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 90 kBtu/h, Air-Cooled Condenser, Air Economizer

Quantity **System Type & Description**

Proposed Efficiency = 11.60 EER, Required Efficiency = 11.00 EER
Proposed Part Load Efficiency = 22.50 IEER, Required Part Load Efficiency = 11.20 IEER

1 RTU-7 (Single Zone):
Heating: 1 each - Other, Gas, Capacity = 73 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 90 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.60 EER, Required Efficiency = 11.00 EER
Proposed Part Load Efficiency = 22.50 IEER, Required Part Load Efficiency = 11.20 IEER

1 GWH-1:
Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 200 kBtu/h
Proposed Efficiency: 97.00 % Et, Required Efficiency: 80.00 % Et

1 GWH-2:
Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 200 kBtu/h
Proposed Efficiency: 97.00 % Et, Required Efficiency: 80.00 % Et

1 GWH-3:
Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 200 kBtu/h
Proposed Efficiency: 97.00 % Et, Required Efficiency: 80.00 % Et

1 GWH-4:
Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 200 kBtu/h
Proposed Efficiency: 97.00 % Et, Required Efficiency: 80.00 % Et

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2012 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

John Quillen, P.E. — Name - Title
Signature
07/17/2023 — Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2012 IECC

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C103.2 [PR3][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.2.4.5 [FO9][1]	Freeze protection and snow/ice melting system sensors for future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.3 [PL5][1]	Temperature controls installed on service water heating systems (110 F for dwelling units and lavatories in public restrooms and 90 F for other occupancies.)	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [PL5][1]	Temperature controls installed on service water heating systems (110 F for dwelling units and lavatories in public restrooms and 90 F for other occupancies.)	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [PL5][1]	Temperature controls installed on service water heating systems (110 F for dwelling units and lavatories in public restrooms and 90 F for other occupancies.)	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [PL5][1]	Temperature controls installed on service water heating systems (110 F for dwelling units and lavatories in public restrooms and 90 F for other occupancies.)	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.2 [PL4][1]	Heat traps installed on non-circulating storage water tanks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.2 [PL4][1]	Heat traps installed on non-circulating storage water tanks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.2 [PL4][1]	Heat traps installed on non-circulating storage water tanks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.2 [PL4][1]	Heat traps installed on non-circulating storage water tanks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.3 [ME55][1]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.2.5.1 [ME59][1]	Demand control ventilation provided for spaces >500 sq.ft. and >25 people/1000 sq.ft. occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1 [ME60][1]	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.8.1 [ME7][1]	Piping Insulation exposed to weather is protected from damage (due to sun, moisture, wind, etc.).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.8 [ME41][1]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1 [ME10][1]	Ducts and plenums sealed based on static pressure and location.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.3 [ME11][1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.3 [ME11][1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.3 [ME11][1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.3 [ME11][1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.7.1.3 [ME11][1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.7.1.3 [ME11][1]	Ductwork operating >3 in. water column requires air leakage testing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1, C403.3.1.1 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1, C403.3.1.1 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1, C403.3.1.1 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1, C403.3.1.1 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1, C403.3.1.1 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1, C403.3.1.1 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][1]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.2 [ME66][2]	VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.6 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.2.6	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.11 [ME71][1]	Unenclosed spaces that are heated use only radiant heat.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.1 [FI47][1]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][1]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][1]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][1]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][1]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47][1]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI38][1]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI20][1]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.3 [FI39][1]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.3 [FI40][1]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5.1 [FI7][1]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C303.3, C408.2.5.3 [FI8][1]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][1]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][1]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][1]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][1]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.3 [FI11][1]	Public lavatory faucet water temperature <=110°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.5 [FI45][2]	First 8 ft of outlet piping is insulated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.5 [FI45][2]	First 8 ft of outlet piping is insulated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.5 [FI45][2]	First 8 ft of outlet piping is insulated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C404.5 [FI45][2]	First 8 ft of outlet piping is insulated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27][1]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.1.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.3 [FI32][1]	Economizers have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

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DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOHN M. QUILLEN
79076
REGISTERED
PROFESSIONAL ENGINEER

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MARQUE ENGINEERING
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513.457.7131 - WWW.MARQUEENG.COM

building your vision.
CINTECH CONSTRUCTION
RECEIVED
Date 07/28/2023
By Steve Michaelis
Via Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
ENERGY
COMPLIANCE

DWG. NO.
M-7

ACCUREX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

HOOD INFORMATION

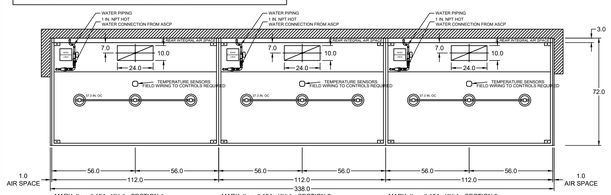
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION	WATER USAGE GPM
1	ITEM # 194 - KH-1	XWAE-X-112-S	112	72	30	300 SS 100%	HEAVY	2650	10	24		2650	1.34			1424.3	LEFT	32.6
2	ITEM # 194 - KH-1	XWAE-X-112-S	112	72	30	300 SS 100%	HEAVY	2650	10	24		2650	1.34			1424.3	MIDDLE	32.6
3	ITEM # 194 - KH-1	XWAE-X-112-S	112	72	30	300 SS 100%	HEAVY	2650	10	24		2650	1.34			1424.3	RIGHT	32.6

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY.	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	UTILITY CABINET(S) SIZE (IN.) L	H	LOCATION	FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM # 194 - KH-1	ROUND LED	3	71.47	X-TRACTOR STAINLESS STEEL	6	16		WALL				
						5	20					ASCP-V	
2	ITEM # 194 - KH-1	ROUND LED	3	71.47	X-TRACTOR STAINLESS STEEL	6	16						
						5	20						
3	ITEM # 194 - KH-1	ROUND LED	3	71.47	X-TRACTOR STAINLESS STEEL	6	16						
						5	20						

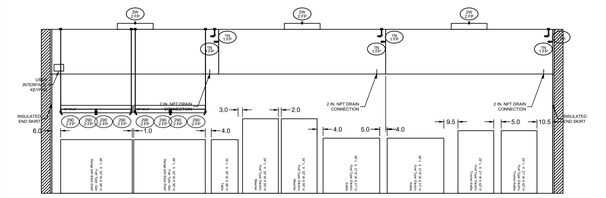
HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- BACK INTEGRAL AIR SPACE - 3 IN WIDE - ZERO CLEARANCE
- LEFT NON-INTEGRAL AIR SPACE - 1 IN THICK - ZERO CLEARANCE
- RIGHT NON-INTEGRAL AIR SPACE - 1 IN THICK - ZERO CLEARANCE
- CONTINUOUS CAPTURE
- FACTORY MOUNTED EXHAUST COLLAR(S)
- EXHAUST AIR BALANCING BAFFLE(S) - (EABB)
- WALL UTILITY CABINET 30 IN HIGH 60 IN LONG 12 IN WIDE
- LEFT INSULATED END PANEL WITH ADJUSTABLE LEG 80 IN HIGH 27.00 IN TOP WIDTH 21.0 IN BOTTOM WIDTH
- RIGHT INSULATED END PANEL WITH ADJUSTABLE LEG 80 IN HIGH 27.00 IN TOP WIDTH 21.0 IN BOTTOM WIDTH
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item # 194 - KH-1 - SECTION 1
PLAN VIEW

MARK: Item # 194 - KH-1 - SECTION 2
PLAN VIEW

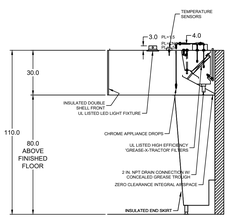
MARK: Item # 194 - KH-1 - SECTION 3
PLAN VIEW



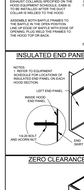
MARK: Item # 194 - KH-1 - SECTION 1
ELEVATION VIEW

MARK: Item # 194 - KH-1 - SECTION 2
ELEVATION VIEW

MARK: Item # 194 - KH-1 - SECTION 3
ELEVATION VIEW

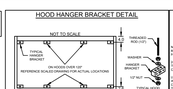


MARK: Item # 194 - KH-1 (LAST HOOD IN ROW)
SECTION VIEW



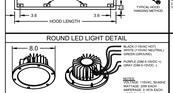
FIRE SYSTEM MARK: Item #195 - Fire Suppression
FIRE & CONSULT
BY AMSUL DISTRIBUTOR

HOOD HANGER BRACKET DETAIL

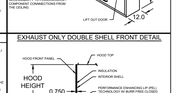


UTILITY CABINET DETAIL

ROUND LED LIGHT DETAIL



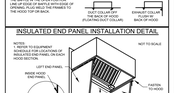
EXHAUST ONLY DOUBLE SHELL FRONT DETAIL



AVAILABLE ON EXHAUST ONLY RECTANGULAR HOOD MODELS ONLY

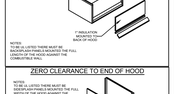
EXHAUST AIR BALANCING BAFFLE (EABB) INSTALLATION DETAIL

INSULATED END PANEL INSTALLATION DETAIL



ZERO CLEARANCE TO BACK OF HOOD

ZERO CLEARANCE TO END OF HOOD



HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

- ☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
- ☐ OTHER HANGING HEIGHT = " FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
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DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 194 - KH-1
PROJECT ID: 220203
MODEL

ACCUREX

HOOD INFORMATION

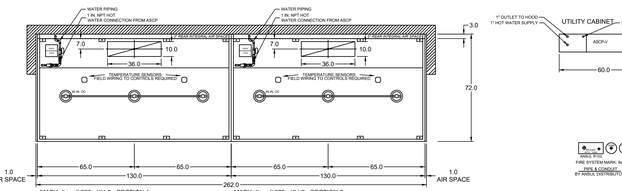
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION	WATER USAGE GPM
1	ITEM # 220 - KH-2	XWAE-X-130-S	130	72	30	300 SS 100%	HEAVY	3792	10	36		3792	1.385			1657.438	LEFT	37.916666666666667
2	ITEM # 220 - KH-2	XWAE-X-130-S	130	72	30	300 SS 100%	HEAVY	3792	10	36		3792	1.385			1657.438	RIGHT	37.916666666666667

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

HOOD INFORMATION

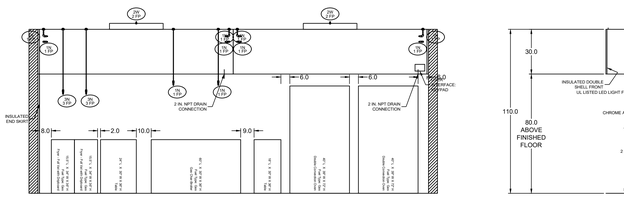
HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY.	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	UTILITY CABINET(S) SIZE (IN.) L	H	LOCATION	FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM # 220 - KH-2	ROUND LED	3	68.09	X-TRACTOR STAINLESS STEEL	0	16		WALL				
						6	20					ASCP-V	
2	ITEM # 220 - KH-2	ROUND LED	3	68.09	X-TRACTOR STAINLESS STEEL	0	16						
						6	20						

HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- LEFT NON-INTEGRAL AIR SPACE - 1 IN THICK - ZERO CLEARANCE
- RIGHT NON-INTEGRAL AIR SPACE - 1 IN THICK - ZERO CLEARANCE
- CONTINUOUS CAPTURE
- FACTORY MOUNTED EXHAUST COLLAR(S)
- EXHAUST AIR BALANCING BAFFLE(S) - (EABB)
- WALL UTILITY CABINET 30 IN HIGH 60 IN LONG 12 IN WIDE
- LEFT INSULATED END PANEL WITH ADJUSTABLE LEG 80 IN HIGH 27.00 IN TOP WIDTH 21.0 IN BOTTOM WIDTH
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



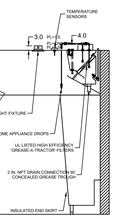
MARK: Item # 220 - KH-2 - SECTION 1
PLAN VIEW

MARK: Item # 220 - KH-2 - SECTION 2
PLAN VIEW



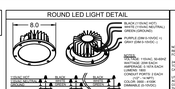
MARK: Item # 220 - KH-2 - SECTION 1
ELEVATION VIEW

MARK: Item # 220 - KH-2 - SECTION 2
ELEVATION VIEW



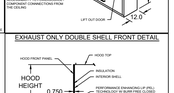
MARK: Item # 220 - KH-2 (LAST HOOD IN ROW)
SECTION VIEW

ROUND LED LIGHT DETAIL



UTILITY CABINET DETAIL

EXHAUST ONLY DOUBLE SHELL FRONT DETAIL



AVAILABLE ON EXHAUST ONLY RECTANGULAR HOOD MODELS ONLY

EXHAUST AIR BALANCING BAFFLE (EABB) INSTALLATION DETAIL

INSULATED END PANEL INSTALLATION DETAIL

ZERO CLEARANCE TO END OF HOOD

HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

- ☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
- ☐ OTHER HANGING HEIGHT = " FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

HOOD HANGER BRACKET DETAIL

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DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 220 - KH-2
PROJECT ID: 220203
MODEL

ACCUREX

STATE OF OHIO
JOSEPH M. MARQUE
79076
REGISTERED PROFESSIONAL ENGINEER

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MARQUE ENGINEERING
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513.457.7131 - WWW.MARQUEENG.COM

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM # 109 - KH-3	XXEW-96-S	96	42	24	430 SS WHERE EXPOSED	MEDIUM	1400	10	12		1400	0.546	1120		246.698	SINGLE

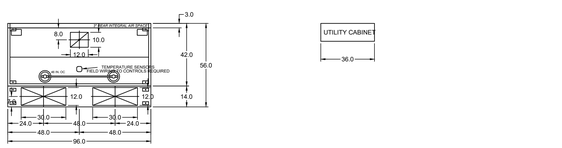
HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY.	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	UTILITY CABINET(S) SIZE (IN.) L	H	LOCATION	FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM # 109 - KH-3	ROUND LED	2	66.49	X-TRACTOR STAINLESS STEEL	6	16		WALL				
						5	20						

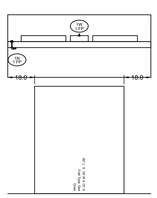
SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.) L	W	H	INSULATED	DAMPER(S)	LED LIGHT(S) SUPPLIED	QTY.	TOTAL CFM	TOTAL S.P.	COLLARS TYPE	MOUNTING	QTY	W	L	DIA.	CFM	VEL.
1	ITEM # 109 - KH-3	FRONT	ASP	96	14	4	NO	YES	NO		1120	0.01	MUA	FACTORY	2	12	30		560	224

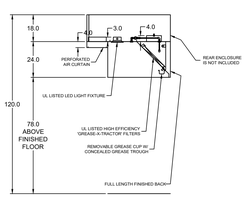
HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- FINISHED BACK - FULL LENGTH
- 18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- WALL UTILITY CABINET 24 IN HIGH 36 IN LONG 12 IN WIDE
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item # 109 - KH-3 - SECTION 1
PLAN VIEW



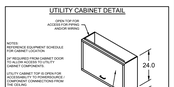
MARK: Item # 109 - KH-3 - SECTION 1
ELEVATION VIEW



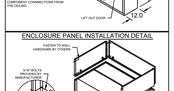
MARK: Item # 109 - KH-3
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

UTILITY CABINET DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL

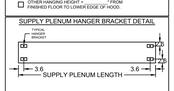


HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

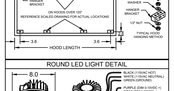
- ☐ RECOMMENDED HANGING HEIGHT = 78" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
- ☐ OTHER HANGING HEIGHT = " FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

SUPPLY PLENUM HANGER BRACKET DETAIL



HOOD HANGER BRACKET DETAIL

ROUND LED LIGHT DETAIL



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DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 109 - KH-3
PROJECT ID: 220203
MODEL

ACCUREX

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM # 114 - KH-4	XXEW-48-S	48	48	24	430 SS WHERE EXPOSED	HEAVY	900	8	10		900	0.578	720		149.569	SINGLE

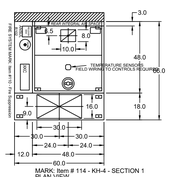
HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY.	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	UTILITY CABINET(S) SIZE (IN.) L	H	LOCATION	FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM # 114 - KH-4	ROUND LED	1	54.59	X-TRACTOR STAINLESS STEEL	3	16		LEFT	ANSUL R102	3	XKC	TOUCHSCREEN
						0	20	26					

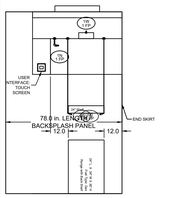
SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.) L	W	H	INSULATED	DAMPER(S)	LED LIGHT(S) SUPPLIED	QTY.	TOTAL CFM	TOTAL S.P.	COLLARS TYPE	MOUNTING	QTY	W	L	DIA.	CFM	VEL.
1	ITEM # 114 - KH-4	FRONT	ASP	60	18	4	YES	YES	NO		720	0.01	MUA	FACTORY	1	16	30		720	216

HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- 18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- RIGHT MINI END SKIRT - 30 IN HIGH 30.00 IN TOP WIDTH 4.0 IN BOTTOM WIDTH
- BACKSPLASH 122.00 IN HIGH 78.00 IN LONG
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item # 114 - KH-4 - SECTION 1
PLAN VIEW


4.0
7/8
18.0
PERFORATED AIR CURTAIN
3.0
4.0
42.0
24.0
USER INTERFACE TOUCH SCREEN
78.0 in. LENGTH BACKSPLASH PANEL
12.0
12.0
END SKIRT
122.0
80.0 ABOVE FINISHED

ACCUREX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

HOOD INFORMATION

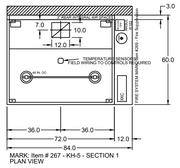
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM # 267 - KH-5	XXEW-72-S	72	60	24	430 SS WHERE EXPOSED	HEAVY	1350	10	12		1350	0.645			224.394	SINGLE

HOOD INFORMATION

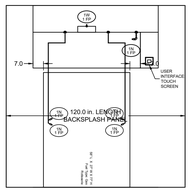
HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	SIZE (IN.) H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	CONTROLS INTERFACE
1	ITEM # 267 - KH-5	ROUND LED	2	69.71	K-TRACTOR STAINLESS STEEL	2	16	20	RIGHT	ANSUL R102	3	XXvc	TOUCHSCREEN

HOOD OPTIONS

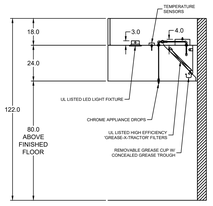
UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK INTEGRAL AIR SPACE - 3 IN WIDE
18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
BACKSPLASH 122.00 IN HIGH 120.00 IN LONG
PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item # 267 - KH-5 - SECTION 1
PLAN VIEW



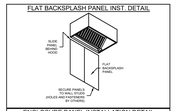
MARK: Item # 267 - KH-5 - SECTION 1
ELEVATION VIEW



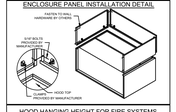
MARK: Item # 267 - KH-5
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

FLAT BACKSPLASH PANEL INST. DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL

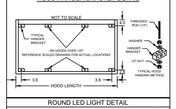


HOOD HANGING HEIGHT FOR FIRE SYSTEMS

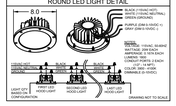
VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

- ☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
- ☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

HOOD HANGER BRACKET DETAIL



ROUND LED LIGHT DETAIL



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(513)505-5511

DOROTHY LANE MARKET-MASON, OH - REV 3
ITEM # 267 - KH-5
PROJECT ID: 220205
MARK: 1
DESIGNED BY: KMK
DRAWN BY: KMK

ACCUREX

HOOD INFORMATION

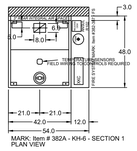
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM # 382A - KH-6	XXEW-42-S	42	48	24	430 SS WHERE EXPOSED	MEDIUM	525	6	8		525	0.427			134.413	SINGLE

HOOD INFORMATION

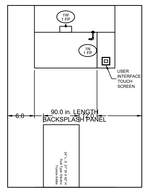
HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	SIZE (IN.) H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	CONTROLS INTERFACE
1	ITEM # 382A - KH-6	ROUND LED	1	55.07	K-TRACTOR STAINLESS STEEL	2	16	20	RIGHT	ANSUL R102	3	XXvc	TOUCHSCREEN

HOOD OPTIONS

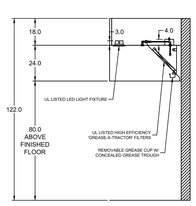
UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK INTEGRAL AIR SPACE - 3 IN WIDE
18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
BACKSPLASH 122.00 IN HIGH 90.00 IN LONG
PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item # 382A - KH-6 - SECTION 1
PLAN VIEW



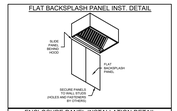
MARK: Item # 382A - KH-6 - SECTION 1
ELEVATION VIEW



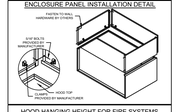
MARK: Item # 382A - KH-6
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

FLAT BACKSPLASH PANEL INST. DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL

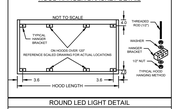


HOOD HANGING HEIGHT FOR FIRE SYSTEMS

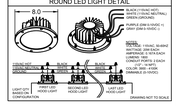
VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

- ☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
- ☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

HOOD HANGER BRACKET DETAIL



ROUND LED LIGHT DETAIL



ACCUREX SOUTH OH KY IN
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DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 382A - KH-6
PROJECT ID: 220205
MARK: 1
DESIGNED BY: KMK
DRAWN BY: KMK

ACCUREX

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM # 386 - KH-7	XXEW-120-S	120	54	24	430 SS WHERE EXPOSED	HEAVY	3250	12	24		3250	0.867	2600		322.583	SINGLE

HOOD INFORMATION

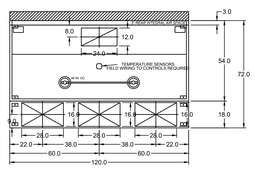
HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	SIZE (IN.) H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	CONTROLS INTERFACE
1	ITEM # 386 - KH-7	ROUND LED	2	61.06	X-TRACTOR STAINLESS STEEL	0	16	20	WALL				
						6	20						

SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.) L	W	H	INSULATED	DAMPER(S)	LED LIGHT(S) SUPPLIED	QTY	COLLARS TOTAL CFM.	TOTAL S.P.	TYPE	MOUNTING	QTY	W	L	DIA.	CFM	VEL
1	ITEM # 386 - KH-7	FRONT	ASP	120	18	4	YES	YES	NO		2600	0.02	MUA	FACTORY	3	16	28		867	279

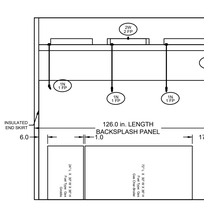
HOOD OPTIONS

UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK INTEGRAL AIR SPACE - 3 IN WIDE
18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
WALL UTILITY CABINET 24 IN HIGH 36 IN LONG 12 IN WIDE
LEFT INSULATED END PANEL WITH ADJUSTABLE LEG 80 IN HIGH 27.00 IN TOP WIDTH 21.0 IN BOTTOM WIDTH
RIGHT INSULATED END PANEL WITH ADJUSTABLE LEG 80 IN HIGH 27.00 IN TOP WIDTH 21.0 IN BOTTOM WIDTH
BACKSPLASH 122.00 IN HIGH 126.00 IN LONG
PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH

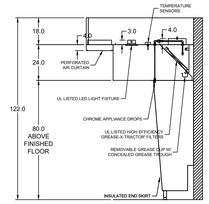


MARK: Item # 386 - KH-7 - SECTION 1
PLAN VIEW

UTILITY CABINET
36.0



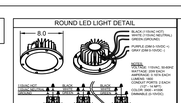
MARK: Item # 386 - KH-7 - SECTION 1
ELEVATION VIEW



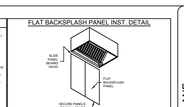
MARK: Item # 386 - KH-7
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

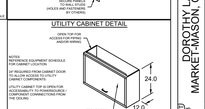
ROUND LED LIGHT DETAIL



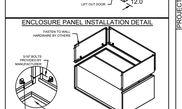
FLAT BACKSPLASH PANEL INST. DETAIL



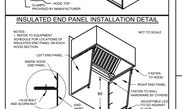
UTILITY CABINET DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL



INSULATED END PANEL INSTALLATION DETAIL



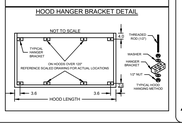
HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

- ☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
- ☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

SUPPLY PLENUM HANGER BRACKET DETAIL

HOOD HANGER BRACKET DETAIL



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DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 386 - KH-7
PROJECT ID: 220205
MARK: 1

ACCUREX

HOOD INFORMATION

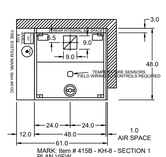
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM # 415B - KH-8	XXEW-48-S	48	48	24	430 SS WHERE EXPOSED	HEAVY	900	9	9		900	0.649			150.569	SINGLE

HOOD INFORMATION

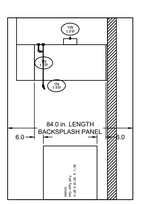
HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L	SIZE (IN.) H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	CONTROLS INTERFACE
1	ITEM # 415B - KH-8	ROUND LED	1	54.59	X-TRACTOR STAINLESS STEEL	3	16	20	LEFT	ANSUL R102	1.5		
						0	20						

HOOD OPTIONS

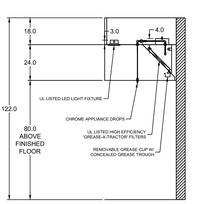
UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK INTEGRAL AIR SPACE - 3 IN WIDE
RIGHT NON-INTEGRAL AIR SPACE - 1 IN THICK - ZERO CLEARANCE
18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
BACKSPLASH 122.00 IN HIGH 84.00 IN LONG
PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item # 415B - KH-8 - SECTION 1
PLAN VIEW



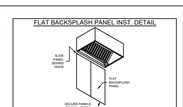
MARK: Item # 415B - KH-8 - SECTION 1
ELEVATION VIEW



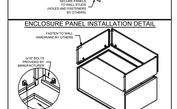
MARK: Item # 415B - KH-8
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

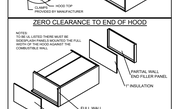
FLAT BACKSPLASH PANEL INST. DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL



ZERO CLEARANCE TO END OF HOOD



HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

- ☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.
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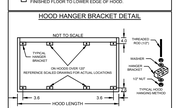
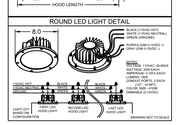
HOOD HANGER BRACKET DETAIL



ROUND LED LIGHT DETAIL



ACCUREX SOUTH OH KY IN
BRYAN OSBORN
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(513)505-5511

DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 415B - KH-8
PROJECT ID: 220205
MARK: 1
DESIGNED BY: KMK
DRAWN BY: KMK

ACCUREX

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MARQUE ENGINEERING
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513.457.7131 - WWW.MARQUEENG.COM

building your vision
CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-9

STATE OF OHIO
JOSEPH M. MARQUE
79076
REGISTERED PROFESSIONAL ENGINEER
7/28/23

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ACCURAX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

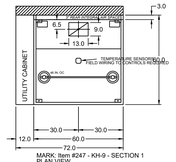
HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM #247 - KH-9	XXEW-60-S	60	60	24	430 SS WHERE EXPOSED	MED-HEAVY	1350	9	13		1350	0.793			195.62	SINGLE

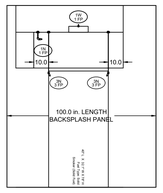
HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY.	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	SIZE (IN.) L	H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM #247 - KH-9	ROUND LED	2	72.3	X-TRACTOR STAINLESS STEEL	6	16	20	LEFT				
						3	20						

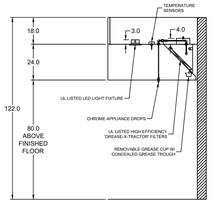
HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- 18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- BACKSPLASH 122.00 IN HIGH 100.00 IN LONG
- HOOD CONTAINS SOLID FUEL COOKING APPLIANCES
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item #247 - KH-9 - SECTION 1
PLAN VIEW



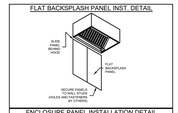
MARK: Item #247 - KH-9 - SECTION 1
ELEVATION VIEW



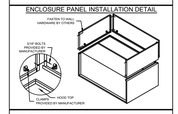
MARK: Item #247 - KH-9
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

FLAT BACKSPLASH PANEL INST. DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL



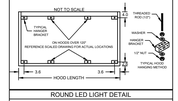
HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

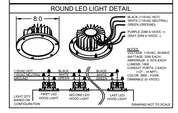
☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.

☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

HOOD HANGER BRACKET DETAIL



ROUND LED LIGHT DETAIL



DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM #247 - KH-9
PROJECT ID 220203
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5011

ACCUREX

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM #451 - KH-10	XXEW-48-S	48	54	24	430 SS WHERE EXPOSED	HEAVY	900	9	9		900	0.649	720		158.649	SINGLE

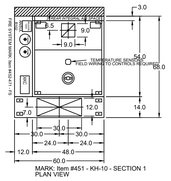
HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	SIZE (IN.) L	H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM #451 - KH-10	ROUND LED	1	54.59	X-TRACTOR STAINLESS STEEL	3	16	20	LEFT	ANSUL R102	6	XXC	TOUCHSCREEN
						3	20						

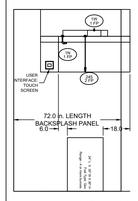
SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.) L	W	H	INSULATED DAMPER(S)	LED LIGHT(S) SUPPLIED	QTY	TOTAL CFM	TOTAL S.P.	COLLARS TYPE	MOUNTING	QTY	W	L	DIA.	CFM	VEL.
1	ITEM #451 - KH-10	FRONT	ASP	60	14	4	NO	YES		720	0.02	MUA	FACTORY	1	12	30		720	288

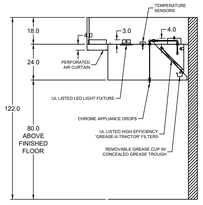
HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- BACK INTEGRAL AIR SPACE - 3 IN WIDE
- 18 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- BACKSPLASH 122.00 IN HIGH 72.00 IN LONG
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item #451 - KH-10 - SECTION 1
PLAN VIEW



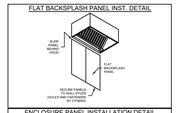
MARK: Item #451 - KH-10 - SECTION 1
ELEVATION VIEW



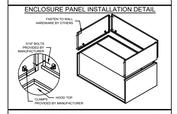
MARK: Item #451 - KH-10
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

FLAT BACKSPLASH PANEL INST. DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL



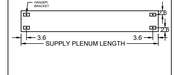
HOOD HANGING HEIGHT FOR FIRE SYSTEMS

VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

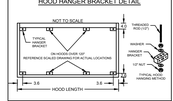
☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.

☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

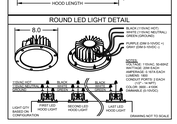
SUPPLY PLENUM HANGER BRACKET DETAIL



HOOD HANGER BRACKET DETAIL



ROUND LED LIGHT DETAIL



DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM #451 - KH-10
PROJECT ID 220203
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5011

ACCUREX

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST TOTAL CFM	COLLAR(S) WIDTH	LENGTH	DIA.	CFM	S.P.	SUPPLY MUA CFM	SUPPLY AC CFM	TOTAL WEIGHT LBS.	SECTION LOCATION
1	ITEM #470 - KH-11	XXEV-60-S	60	60	24	430 SS WHERE EXPOSED	HEAVY	2000	10	19		2000	0.529	1600		246.616	SINGLE

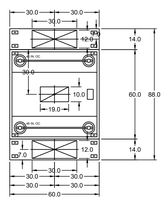
HOOD INFORMATION

HOOD NO.	MARK	LIGHTING DETAILS FIXTURE TYPE BULB / LAMP INFO	QTY.	FOOT CANDLES	GREASE FILTRATION DETAILS TYPE / MODEL MATERIAL	QTY.	SIZE (IN.) L	H	LOCATION	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	CONTROLS MODEL	INTERFACE
1	ITEM #470 - KH-11	ROUND LED	4	111.42	X-TRACTOR STAINLESS STEEL	0	16	20					
						6	20						

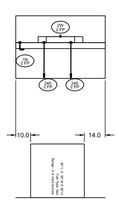
SUPPLY PLENUM INFORMATION

HOOD NO.	MARK	POS.	TYPE	SIZE (IN.) L	W	H	INSULATED DAMPER(S)	LED LIGHT(S) SUPPLIED	QTY	TOTAL CFM	TOTAL S.P.	COLLARS TYPE	MOUNTING	QTY	W	L	DIA.	CFM	VEL.
1	ITEM #470 - KH-11	FRONT	ASP	60	14	4	NO	YES		800	0.02	MUA	FACTORY	1	12	30		800	320
1	ITEM #470 - KH-11	BACK	ASP	60	14	4	NO	YES		800	0.02	MUA	FACTORY	1	12	30		800	320

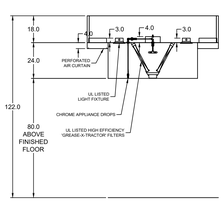
HOOD OPTIONS
- UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
- 18 IN HIGH CEILING ENCLOSURES - FRONT BACK LEFT RIGHT - FIELD INSTALLED
- FACTORY MOUNTED EXHAUST COLLAR(S)
- PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
- STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH



MARK: Item #470 - KH-11 - SECTION 1
PLAN VIEW



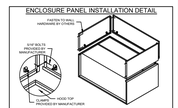
MARK: Item #470 - KH-11 - SECTION 1
ELEVATION VIEW



MARK: Item #470 - KH-11
SECTION VIEW

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ENCLOSURE PANEL INSTALLATION DETAIL



HOOD HANGING HEIGHT FOR FIRE SYSTEMS

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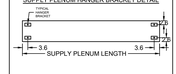
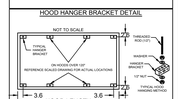
☐ RECOMMENDED HANGING HEIGHT = 80" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.

☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

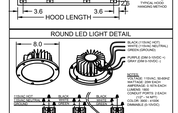
SUPPLY PLENUM HANGER BRACKET DETAIL



HOOD HANGER BRACKET DETAIL



ROUND LED LIGHT DETAIL



DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM #470 - KH-11
PROJECT ID 220203
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5011

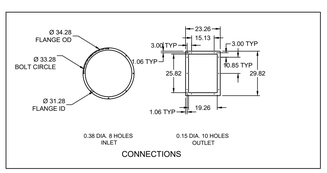
ACCUREX

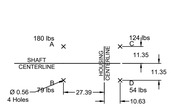
Universal Single Width Fan

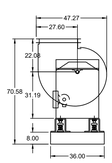
MARK INFORMATION QTY	MARK	MODEL	FAN INFORMATION VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	MOTOR INFORMATION SIZE (HP)	VIC/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	Item #196 - KEF-1	XUEF-24	7,950	2.25	1,169	4.79	586	7.5	460/60/3	OP	1725	1	11

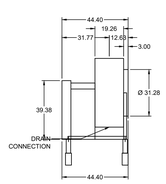
NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory

Item #196 - KEF-1 : SELECTED OPTIONS AND ACCESSORIES
- Finish - Coated
- Coating - Permaletcor, Concrete Gray-RAL 7023, Mil Finish on Aluminum Components
- Direct Mount Isolators, Isolator-Spring, Restrained, 2 Inch, Indoor / Outdoor Use, Base Coating - N/A
- Rotation - CW
- Bearings - L10 Standard Life, 215k hours at OperatingPoint
- Discharge Position - UB
- UL/cUL-762 Outdoor - Power Vent. for Restaurant Exhaust Appliances
- Polished Steel Shaft
- Access Door - Bolted
- Drain Connection - 1 inch threaded male
- Extended Lube Lines - Nylon
- Inlet Flange, Punched
- Outlet Flange, Punched
- Weatherhood - Steel Construction
- Outlet Guard, steel, coated w/Safety yellow finish
- Shaft Seal - Standard
- Grease Trap, Shipped Loose
- Fasteners - Standard









CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM #196 - KEF-1
PROJECT ID 220203
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5011

ACCUREX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO — BRYAN J. SOUTH — 79076 — REGISTERED PROFESSIONAL ENGINEER — 7/28/23

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MARQUE ENGINEERING
2230 PARK AVE., STE. 100, CINCINNATI, OH 45206
513.457.7131 - WWW.MARQUEENG.COM

building your vision
CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-10

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ACCUREX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

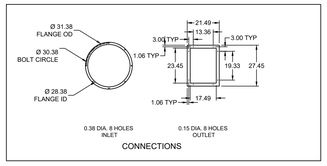
Universal Single Width Fan

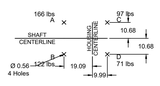
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/CP	ENCLOSURE	MOTOR RPM	WINDINGS
1	Item #223 - KEF-2	XUEF-22	6,600	2.25	1,326	3.5	575	5	460/60/3	TF	1770	1

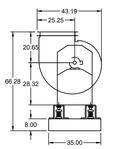
CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

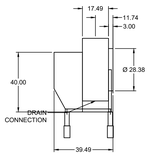
Item #223 - KEF-2 : SELECTED OPTIONS AND ACCESSORIES

Finish - Coated
Coating - Permatector, Concrete Gray-RAL 7023, Fan and Attached Accessories
Direct Mount Isolators, Isolator-Spring, Restrained, 2 Inch, Indoor / Outdoor Use, Base Coating - N/A
Housing - PermaLock
Arrangement - 4
Wheel - Backward Inclined
UL Listed for Grease Exhaust - UL/cUL-762 Outdoor - "Power Vent. for Restaurant Exhaust Appliances"
Access Door - Bolted
Drain Connection - 1 inch threaded male
Inlet Flange, Punched
Outlet Flange, Punched
Motor Cover - Steel Construction
Outlet Guard, Steel, Coated w/Safety Yellow Frish
Shaft Seal - Standard
Grease Trap with Drain Connection, Shipped Loose
Fasteners - Standard
Factory Vibration Test, 0.1 in/sec, Peak, Filter-in as measured at the fan RPM









DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #223 - KEF-2
PROJECT NO. 22/2003
MARK 7

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5511

ACCUREX

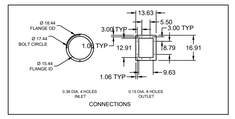
Universal Single Width Fan

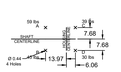
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/CP	ENCLOSURE	MOTOR RPM	WINDINGS
1	Item #111 - KEF-3	XUEF-12	1,400	1.5	1,933	0.52	223	1	460/60/3	TF	1770	1

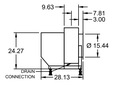
CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

Item #111 - KEF-3 : SELECTED OPTIONS AND ACCESSORIES

Finish - Coated
Coating - Permatector, Concrete Gray-RAL 7023, Fan and Attached Accessories
Direct Mount Isolators, Isolator-Spring, Free Standing, 1 Inch, Indoor Use Only, Base Coating - N/A
Housing - PermaLock
Arrangement - 4
Wheel - Backward Inclined
UL Listed for Grease Exhaust - UL/cUL-762 Outdoor - "Power Vent. for Restaurant Exhaust Appliances"
Access Door - Bolted
Drain Connection - 1 inch threaded male
Inlet Flange, Punched
Outlet Flange, Punched
Motor Cover - Steel Construction
Outlet Guard, Steel, Coated w/Safety Yellow Frish
Shaft Seal - Standard
Grease Trap with Drain Connection, Shipped Loose
Fasteners - Standard
Factory Vibration Test, 0.1 in/sec, Peak, Filter-in as measured at the fan RPM







DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #111 - KEF-3
PROJECT NO. 22/2003
MARK 7

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5511

ACCUREX

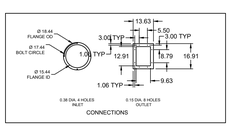
Universal Single Width Fan

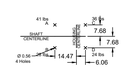
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/CP	ENCLOSURE	MOTOR RPM	WINDINGS
1	Item #116 - KEF-4	XUEF-12	900	1	1,724	0.23	151	0.5	460/60/3	OP	1770	1

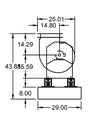
CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

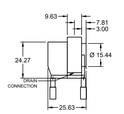
Item #116 - KEF-4 : SELECTED OPTIONS AND ACCESSORIES

Finish - Coated
Coating - Permatector, Concrete Gray-RAL 7023, Mill Finish on Aluminum Components
Direct Mount Isolators, Isolator-Spring, Restrained, 1 Inch, Indoor / Outdoor Use, Base Coating - N/A
Rotation - CW
Discharge Position - UB
Arrangement - 4
UL/cUL-762 Outdoor - Power Vent. for Restaurant Exhaust Appliances
Access Door - Bolted
Drain Connection - 1 inch threaded male
Inlet Flange, Punched
Outlet Flange, Punched
Motor Cover - Steel Construction
Outlet Guard, steel, coated w/Safety yellow finish
Shaft Seal - Standard
Grease Trap, Shipped Loose
Fasteners - Standard









DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #116 - KEF-4
PROJECT NO. 22/2003
MARK 7

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)504-5511

ACCUREX

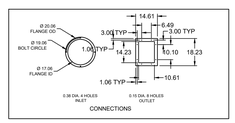
Universal Single Width Fan

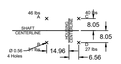
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/CP	ENCLOSURE	MOTOR RPM	WINDINGS
1	Item #267 - KEF-5	XUEF-13	1,350	1.15	1,535	0.39	170	0.75	460/60/3	OP	1770	1

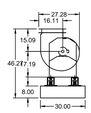
CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

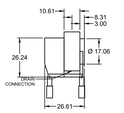
Item #267 - KEF-5 : SELECTED OPTIONS AND ACCESSORIES

Finish - Coated
Coating - Permatector, Concrete Gray-RAL 7023, Mill Finish on Aluminum Components
Direct Mount Isolators, Isolator-Spring, Restrained, 1 Inch, Indoor / Outdoor Use, Base Coating - N/A
Rotation - CW
Discharge Position - UB
Arrangement - 4
UL/cUL-762 Outdoor - Power Vent. for Restaurant Exhaust Appliances
Access Door - Bolted
Drain Connection - 1 inch threaded male
Inlet Flange, Punched
Outlet Flange, Punched
Motor Cover - Steel Construction
Outlet Guard, steel, coated w/Safety yellow finish
Shaft Seal - Standard
Grease Tray, Shipped Loose
Fasteners - Standard









DOROTHY LANE
MARKET-MASON, OH - REV 3
ITEM #267 - KEF-5
PROJECT NO. 22/2003
MARK 7

ACCUREX SOUTH OH KY IN
AARON GEARHART
AARON.GEARHART@ACCUREX.COM
(513)504-5511

ACCUREX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOSEPH A. MARQUE
79076
REGISTERED PROFESSIONAL ENGINEER
7/28/23

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2230 PARK AVE., STE. 100, CINCINNATI, OH 45206
513.457.7131 - WWW.MARQUEENG.COM

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CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-11

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ACCURAX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

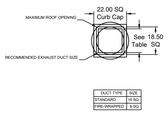
Direct Drive Upblast Centrifugal Roof Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	Item #382A - KEF-6	XCUE-099-VG	525	1	1,616	0.18	54	0.25	115/60/1	TN	1725	1	5.8

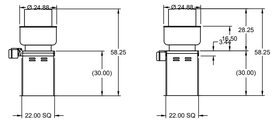
*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

Item #382A - KEF-6 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 22 Square
UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

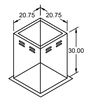


DUCT TYPE	SIZE
STANDARD	18 SQ
FIRE-WRAPPED	9 SQ



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON
MOTOR, ADAPTER, AND/OR HINGE BASE.



DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #382A - KEF-6
PROJECT NO. 56307
WORK 7

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

ACCURAX

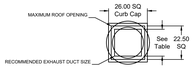
Direct Drive Upblast Centrifugal Roof Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	Item #386 - KEF-7	XCUE-160-VG	3,250	1.25	1,510	1.3	122	2	208/60/1	TF	1725	1	13.2

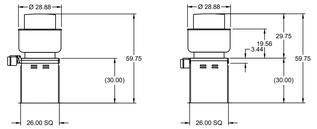
*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

Item #386 - KEF-7 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 26 Square
UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

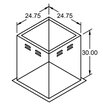


DUCT TYPE	SIZE
STANDARD	18 SQ
FIRE-WRAPPED	12 SQ



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON
MOTOR, ADAPTER, AND/OR HINGE BASE.



DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #386 - KEF-7
PROJECT NO. 56307
WORK 7

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

ACCURAX

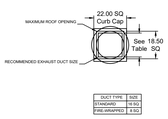
Direct Drive Upblast Centrifugal Roof Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	Item #415B - KEF-8	XCUE-100-VG	900	1	1,694	0.27	63	0.25	115/60/1	TN	1725	1	5.8

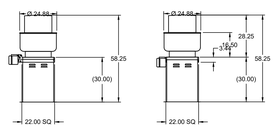
*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

Item #415B - KEF-8 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 22 Square
UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

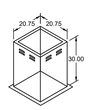


DUCT TYPE	SIZE
STANDARD	18 SQ
FIRE-WRAPPED	9 SQ



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON
MOTOR, ADAPTER, AND/OR HINGE BASE.



DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #415B - KEF-8
PROJECT NO. 56307
WORK 7

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

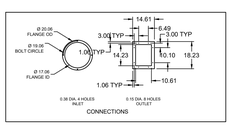
ACCURAX

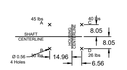
Universal Single Width Fan

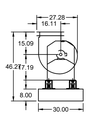
MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION				
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	VI/P	ENCLOSURE	MOTOR RPM	WINDINGS
1	Item #247 - KEF-9	XUEF-13	1,350	1.15	1,535	0.39	164	0.5	460/60/3	OP	1770	1

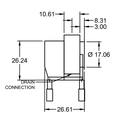
Item #247 - KEF-9 : SELECTED OPTIONS AND ACCESSORIES
Finish - Coated
Coating - Permaletcor, Concrete Gray-RAL 7023, Mil Finish on Aluminum Components
Direct Mount Isolators, Isolator-Spring, Restrained, 1 Inch, Indoor / Outdoor Use, Base Coating - N/A
Rotation - CW
Discharge Position - UB
Arrangement - 4
UL/cUL-762 Outdoor - Power Vent. for Restaurant Exhaust Appliances
Access Door - Bolted
Drain Connection - 1 Inch threaded male
Inlet Flange, Punched
Outlet Flange, Punched
Motor Cover - Steel Construction
Outlet Guard, steel, coated w/Safety yellow finish
Shaft Seal - Standard
Grease Trap, Shipped Loose
Fasteners - Standard

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY









DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #247 - KEF-9
PROJECT NO. 56307
WORK 7

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

ACCURAX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOSEPH
79076
REGISTERED
PROFESSIONAL ENGINEER
7/28/23

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513.457.7131 - WWW.MARQUEENG.COM

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RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-12

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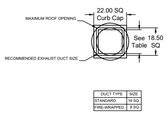
Direct Drive Upblast Centrifugal Roof Exhaust Fan

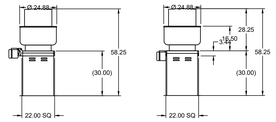
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION						
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	Item #453 - KEF-10	XCUE-100-VG	900	1	1,694	0.27	63	0.25	115/60/1	TN	1725	1	5.8

NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory

Item #453 - KEF-10 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 22 Square
UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)

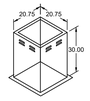


DUCT TYPE	SIZE
STANDARD	18 SQ
PRE-WRAPPED	9 SQ



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON:
MOTOR, ADAPTER, AND/OR HINGE BASE.



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DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #453 - KEF-10
PROJECT NO. 56307
MODEL

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

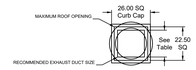
ACCURAX

Direct Drive Upblast Centrifugal Roof Exhaust Fan

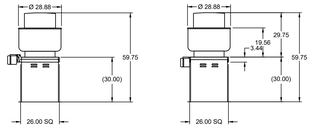
MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION						
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	Item #472 - KEF-11	XCUE-140-VG	2,000	1	1,514	0.66	92	1	115/60/1	OP	1725	1	16

NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory

Item #472 - KEF-11 : SELECTED OPTIONS AND ACCESSORIES
One piece fully welded windband
Tapered bushing wheel hub
Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)
Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)
Larger Curb Cap Size - 26 Square
UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)
Switch, NEMA-3R, Toggle, Shipped with Unit
Hinge, Factory Installed
High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)
Grease Trap (PN 475538)

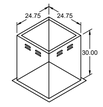


DUCT TYPE	SIZE
STANDARD	18 SQ
PRE-WRAPPED	12 SQ



DUCT DIMENSIONS ARE LARGEST POSSIBLE DUCT TO FIT THROUGH CURB.
CONSULT SYSTEM DESIGN ENGINEER FOR RECOMMENDED DUCT SIZE.

OVERALL HEIGHT MAY BE GREATER DEPENDING ON:
MOTOR, ADAPTER, AND/OR HINGE BASE.



CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #472 - KEF-11
PROJECT NO. 56307
MODEL

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

ACCURAX

EQUIPMENT SCHEDULE

Packaged Ventilator

Mark Name	Qty	Model	Mounting Location	Weight
DOAS - 1	1	XRV-75-500-GUE1	Outdoor	6,120 lb

Supply Fan

Outdoor Air Volume	Supply ESP	Supply TSP	FRPM	Supply BHP	Supply Motor
7,700 CFM	0.75 in. wg	1.545 in. wg	1104	1.337	(2) 2 hp

Electrical

Voltage	Frequency	Phase	Unit MCA	Unit MOP
460	60	3	112.3	150

Cooling Section

Coil Entering DB	Coil Entering WB	Coil Leaving DB	Coil Leaving WB	Nominal Tonnage	Total Capacity	Sensible Capacity	Coil Face Velocity	Coil Pressure Drop	Rows Deep	Fins per Inch	Compressor Type	Compressor Qty	AHRI 920 EMRE
92.8 F	77.9 F	54.9 F	54.7 F	50.0	637.6 MBH	514.9 MBH	228 ft/min	0.326 in. wg	6	12	Inverter Scroll	3	6.2

Heating Section

Gas Type	Input	Output	EAT	LAT	Furnace Control	Temp Rise
Natural	900.0 MBH	640.0 MBH	8.3 F	83.3 F	10:1 Modulating	77.0 F

Hot Gas Reheat

Hot Gas Reheat Capacity	LAT
311.8 MBH	81.1 F

NOTES

Painted exterior with 2,500 hr. salt spray rating.
Double wall 3" R13 insulated floor mounted cabinet.
Single condenser fan shall not exceed a sound power level of 79 Leq.
Condenser fans shall be statically and dynamically balanced and fan motor(s) isolated and transmitted sound.
Direct-drive fans with factory mounted VFDs.
Controller must have simplified access via a laptop to view and change unit operation, set points, alarm history & 1 week of trending.
Unit
Modulating gas furnace with 10:1 Modulating turndown and a 25 year HX warranty.

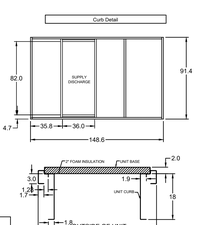
OPTIONS AND ACCESSORIES

Weatherhood Downturned Hood
Supply Fans - 2" Pleated MERV 8, 4 Inch(es) A-Inch(s)
Outdoor Air Dampers - Motorized Low Leakage
Factory Exterior - Concrete Gray (RAL 7030)
Painted Exterior - Concrete Gray (RAL 7030)
Microprocessor Controls
Gas Piping From Furnace - 0 Inch(s) By Others
24 Hr Service
Space Thermostat - 1 Temperature Only
Phase and Brown Out Protection
Phase and Brown Out Protection
Branch Circuit Fusing
Roof Curb - 24 Inch(es) (Factory mounted and wired)
Unit Disconnect - Mounted By Factory
Shipped Loose Smoke Detectors - Supply
Shipped Loose Filters - Supply
Unit Warranty: 18 Months Standard

Curb Installation Instructions

1. Factory supplied roof curbs. Roof curbs are model GKD which ship in a knockdown kit (includes duct adapters) and require field assembly (by others) on all units except XRV-110 which are shipped assembled. Assembly instructions are included with the curb kit.
2. Install curb. Locate curb over roof opening and fasten in place. Check that the diagonal dimensions are within ± 1/8 inch of each other and adjust as necessary. For proper coil drainage and unit operation, it is important that the installation be level. Shim the curb as required to level. Install gasketing on top surface of curb (provided by others).
3. Install ductwork. Installation of all ducts should be done in accordance with SMACNA and AMCA guidelines. Duct adapters are provided to support ducts prior to setting the unit.
4. Set the unit. Lift unit to a point directly above the curb and duct openings. Guide unit while lowering to align with duct openings. Roof curbs fit inside the unit base. Make sure the unit is properly seated on the curb and level.
5. Fasten the unit. Fasten the unit to the curb/equipment support(s) using the appropriate methods. The installer is responsible for determining appropriate support and fastening methods to ensure compliance with all applicable codes.
6. Install vestibule. If unit was ordered with a vestibule and it has not yet been attached to the unit, caulk and attach the vestibule at this time.

Curb Detail



Curb Specifications

Height (in)	Length (in)	Width (in)	Material	Finish Type	Duct Adapter	Weight (lb)
18	148.6	91.4	Galvanized	Galvanized	Yes	375

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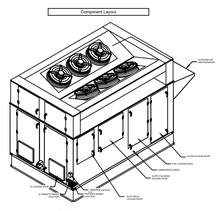
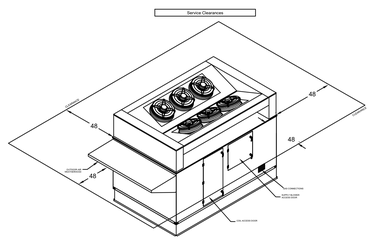
Component Layout



Service Clearances



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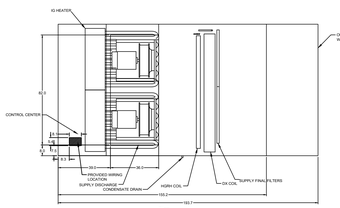
DOROTHY LANE
MARKET-MASON, OH - REV 2
DOAS - 1
PROJECT NO. 56307
MODEL

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

ACCURAX

Dimensional Overview



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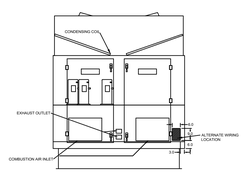
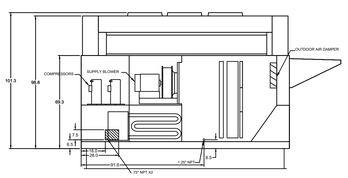
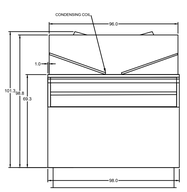


Left End



Elevation



Right End

DOROTHY LANE
MARKET-MASON, OH - REV 2
DOAS - 1
PROJECT NO. 56307
MODEL

ACCURAX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCURAX.COM
(513)500-5011

ACCURAX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOSEPH
DEMARCO
79076
REGISTERED
PROFESSIONAL ENGINEER
7/28/23

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MARQUE ENGINEERING
2230 PARK AVE., STE. 100, CINCINNATI, OH 45206
513.457.7131 - WWW.MARQUEENG.COM

building your vision.
CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-13

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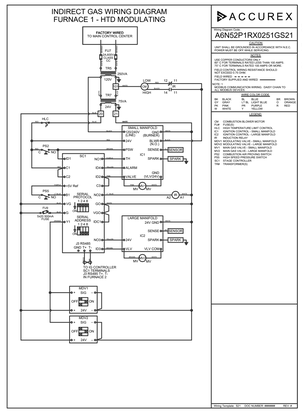
INDIRECT GAS WIRING DIAGRAM FURNACE 1 - HTD MODULATING



ACCUREX

Rating Number: A6N52P1RX0251GS21

WARNING
Disconnect power before servicing. Replace only with exact factory-specified fuse. Do not bypass safety devices. Keep combustible materials, gasoline and other flammable vapors and liquids away from this appliance. Failure to follow these instructions can result in fire, explosion, property damage, personal injury or death.

NOTICE
Use COPPER CONDUCTORS ONLY
SET 1 FOR TEMPERATURE RISE (Not Static Set-Point)
SET 2 FOR CFM (Not Static Set-Point) (Optional)
HEAT ANTICIPATOR SETTINGS SHOULD BE:
FIELD WIRED - - -

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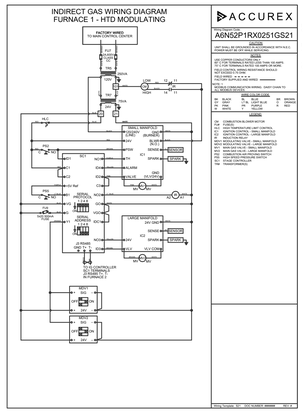
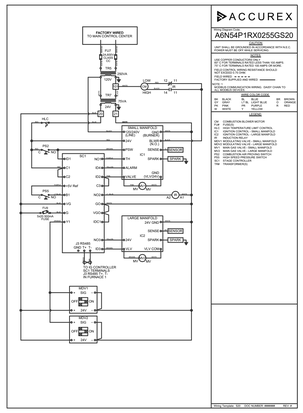
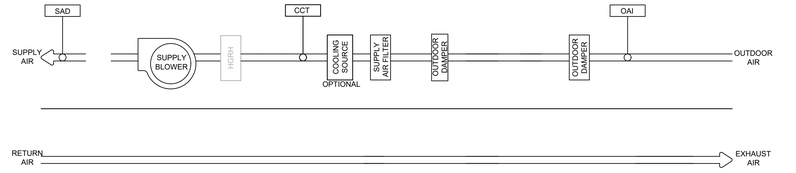
INDIRECT GAS WIRING DIAGRAM FURNACE 1 - HTD MODULATING







SENSORS

SAD: Supply air discharge temperature
OAI: Outdoor air intake temperature
CS: Condensate overflow switch
CCT: Cooling coil temperature

PROJECT: DOROTHY LANE MARKET-MASON, OH - REV 2
WORK: DOAS - 2

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

ACCUREX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO — JOSEPH A. MARQUE — 79076 — REGISTERED PROFESSIONAL ENGINEER — 7/28/23

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CINTECH CONSTRUCTION — building your vision.
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7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD DRAWINGS

DWG. NO.
M-15

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EQUIPMENT SCHEDULE

Tempered Make-Up Air Unit — Mark: Item# 109-114 - MUA

Qty	Accuvex Model	Volume	External SP	Total SP	MCA	MOP	Weight	Model
1	XDQ-102-020-E	3,840 CFM	0.5 in. wg	1.419 in. wg	28.4	40	1,136 lb	N/A

Motor Information

Size	VFD?	Enclosure	Motor with Shaft Grounding	Motor RPM	Operating Power
1.1/2 hp	208/60/3	ODP	No	1725	0.88 hp

Heating

Type	Gas Type	Temperature			Energy		Efficiency	Modulating	Control	Gas Pressure	
		Entering DB	Rise	Leaving DB	Input	Output	Thermal	Firing	Access	Min	Max
Direct Gas	Natural	8.3 F	60.7 F	72.0 F	137.5 MBH	126.5 MBH	92%	10:1 Fire	Right Hand	5 in. wg	13.5 PSI

Cooling Type	Coil Model	Rows Deep	Fins Per Inch	Face Area	Total Capacity	Sensible Capacity	Entering Air (F) DB	Entering Air (F) WB	Leaving Air (F) DB	Leaving Air (F) WB
Packaged DX	DX36SS2G10-30x36	2	16	30in 36in	118.8 MBH	111 MBH	111	76.1 F	76.1 F	62.3 F

Coil SP	Refrigerant	Suction Temp	Liquid Temp	Superheat	Head Pressure	Circuits / Slab	Circuits / Slab
					Code 16/19	Qty / Size	Qty / Size
N/A	R-410a	46.7 F	114 F	8 F		3	N/A

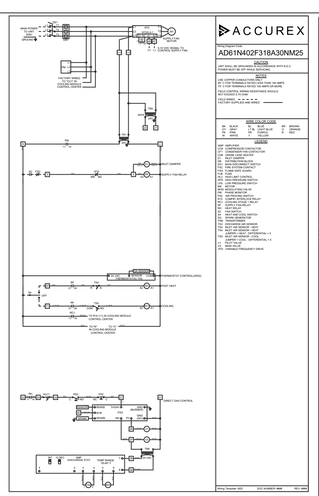
Outlet Sound Power By Octave Band

63.5	125	250	500	1000	2000	4000	8000	Lwt	dbA	Sones
88.7	85.1	83.4	77.2	74.1	69.7	67.2	62.1	76.4	68.4	16.5

1. DBA = A-WEIGHTED SOUND POWER LEVEL. 2. FOR MORE INFO SEE SPECIFICATION SHEET.

OPTIONS AND ACCESSORIES

Air Flow Arrangement: Variable Volume
Weatherhood: Aluminum Mesh, 30x20x2 - (1), 16x20x2 - (1)
Discharge Position: Bottom
Outdoor Air Intake Position: End
Discharge Position: End
Cooling Coil Coating: None
Insulation: Double Wall - Tempering On
Supply Fan Control: VFD
VFD Control: External 0-10 VDC
Motor: 1.1/2 hp, Premium
Control Center
Real Inlet Air Sensor
Real Outlet Air Sensor
Unit Controls: Terminal Strip
Temperature Control: Discharge
Gas Piping: Manifolds/Accessories
Approvals: ETL
Flip Compliant
Ignition Control: Flame Rod
Ignition Control: Pilot



ACCUREX

AD61N402F318A30NM25

SEQUENCE OF OPERATION
UNIT SHALL BE GROUNDED IN ACCORDANCE WITH N.E.C.
EQUIPMENT BE OFF WHILE REMOVING.
WIRING
USE COPPER CONDUCTORS ONLY
SET 1 FOR TERMINALS RATED 22A THAN 3A AMPS
SET 2 FOR TERMINALS RATED 30A THAN 22A AMPS
HEAT CONTROL WIRING RESISTANCE SHOULD
FIELD WIRED
FACTORY SUPPLIED AND WIRED
NOTES
USE A COMMON POWER WIRING. DASH CHAN TO
SEE SEQUENCE OF OPERATION
WIRING DIAGRAM KEY
BK BLACK
BL BLUE
BR BROWN
GR GREEN
GY GRAY
OR ORANGE
PK PINK
PU PURPLE
RD RED
WH WHITE
YL YELLOW
LEGEND
CAP CAPACITOR
CCT CURRENT TRANSFORMER LIMIT CONTROL
DLC DISCHARGE AIR LIMIT CONTROL
IGC IGNITION CONTROL - LARGE MANIFOLD
ISC IGNITION CONTROL - SMALL MANIFOLD
MGV1 MODULATING VALVE - SMALL MANIFOLD
MGV2 MODULATING VALVE - LARGE MANIFOLD
MV1 MAIN GAS VALVE - SMALL MANIFOLD
MV2 MAIN GAS VALVE - LARGE MANIFOLD
PSC COMBUSTION AIR PROVING SWITCH
SAI SUPPLY AIR LIMIT
SV1 IGNITE CONTROLLER
TRANS TRANSFORMER(S)
PSC COMBUSTION AIR PROVING SWITCH
PSH HIGH PRESSURE SWITCH
RC1 COOLING STAGE 1 RELAY
RC2 COOLING STAGE 2 RELAY
RH HEAT RELAY
S1 HEAT AND COOL SWITCH
SAI SUPPLY AIR LIMIT
TB1 TERMINAL BLOCK
TB2 TERMINAL BLOCK
TM1 INLET AIR SENSOR - HEAT
TM2 INLET AIR SENSOR - COOL
TM3 OUTDOOR AIR SENSOR
V1 HEAT VALVE
V2 COOL VALVE
VFD VARIABLE FREQUENCY DRIVE

PROJECT: DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM#: 109-114 - MUA

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

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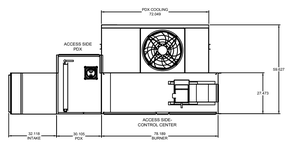
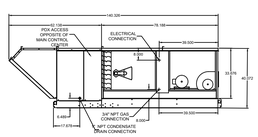
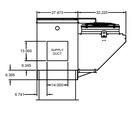


PLAN VIEW



ELEVATION VIEW



END VIEW

FOOTPRINT

NOTE: Roof Opening Requirements:

Minimum Roof Opening: The minimum roof opening size is the illustrated duct diameter plus 0.25 in. on all sides.
For example: If the duct size is 14 x 14 in. square, the minimum roof opening size is 14.5 x 14.5 in. square.

Maximum Roof Opening: There must be a minimum perimeter of 1.75 in. between the roof opening and the roof curb.
For example: If the roof curb is 75 x 30 in. square, the maximum roof opening is 71.5 x 26.5 in. inches square.

NOTE: The weatherhood and filter sections of the make-up air unit are not supported by the curb.
This is by design, in order to help alleviate water infiltration issues. MUA Unit supports are shipped loose with unit.

PROJECT: DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM#: 302-386-415 - MUA 2

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

ACCUREX

EQUIPMENT SCHEDULE

Tempered Make-Up Air Unit — Mark: Item# 382-386-415 - MUA 2

Qty	Accuvex Model	Volume	External SP	Total SP	MCA	MOP	Weight	Model
1	XDQ-112-020-E	3,740 CFM	0.65 in. wg	1.798 in. wg	37.3	60	1,694 lb	N/A

Motor Information

Size	VFD?	Enclosure	Motor with Shaft Grounding	Motor RPM	Operating Power
3 hp	208/60/3	ODP	No	1725	2.34 hp

Heating

Type	Gas Type	Temperature			Energy		Efficiency	Modulating	Control	Gas Pressure	
		Entering DB	Rise	Leaving DB	Input	Output	Thermal	Firing	Access	Min	Max
Direct Gas	Natural	8.3 F	63.7 F	72.0 F	278.7 MBH	247.5 MBH	92%	24"	12 PSI	Right Hand	5 in. wg

Cooling Type	Coil Model	Rows Deep	Fins Per Inch	Face Area	Total Capacity	Sensible Capacity	Entering Air (F) DB	Entering Air (F) WB	Leaving Air (F) DB	Leaving Air (F) WB
Packaged DX	DX36SS2G10-52x48	2	16	52in 48in	212.7 MBH	198.4 MBH	111	111	76.1 F	62.3 F

Coil SP	Refrigerant	Suction Temp	Liquid Temp	Superheat	Head Pressure	Circuits / Slab	Circuits / Slab
					Code 16/19	Qty / Size	Qty / Size
N/A	R-410a	46.7 F	114 F	8 F		3	N/A

Outlet Sound Power By Octave Band

63.5	125	250	500	1000	2000	4000	8000	Lwt	dbA	Sones
87.5	85.2	83.4	78.2	75.1	72.7	71.7	67.6	80.4	71.8	19.8

1. DBA = A-WEIGHTED SOUND POWER LEVEL. 2. FOR MORE INFO SEE SPECIFICATION SHEET.

OPTIONS AND ACCESSORIES

Air Flow Arrangement: Variable Volume
Weatherhood: Aluminum Mesh, 16x20x2 - (2), 20x20x2 - (2)
Discharge Position: Bottom
Outdoor Air Intake Position: End
Discharge Position: Bottom
Supply Fan Control: VFD
Cooling Coil Coating: None
Insulation: Double Wall - Tempering On
Supply Fan Control: VFD
VFD Control: External 0-10 VDC
Motor: 3 hp, Premium (Light Harsh)
Control Center
Real Inlet Air Sensor
Real Outlet Air Sensor
Unit Controls: Terminal Strip
Temperature Control: Discharge
Gas Piping: Manifolds/Accessories
Approvals: ETL
Flip Compliant
Ignition Control: Flame Rod
Ignition Control: Pilot

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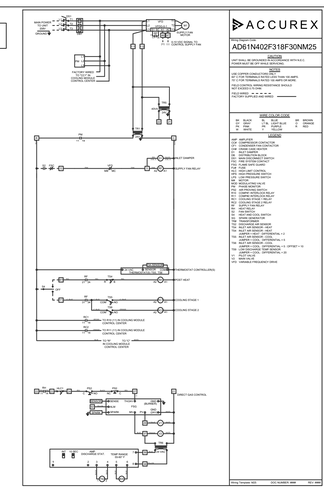

ACCUREX

AD61N402F318F30NM25

SEQUENCE OF OPERATION
UNIT SHALL BE GROUNDED IN ACCORDANCE WITH N.E.C.
EQUIPMENT BE OFF WHILE REMOVING.
WIRING
USE COPPER CONDUCTORS ONLY
SET 1 FOR TERMINALS RATED 22A THAN 3A AMPS
SET 2 FOR TERMINALS RATED 30A THAN 22A AMPS
HEAT CONTROL WIRING RESISTANCE SHOULD
FIELD WIRED
FACTORY SUPPLIED AND WIRED
NOTES
USE A COMMON POWER WIRING. DASH CHAN TO
SEE SEQUENCE OF OPERATION
WIRING DIAGRAM KEY
BK BLACK
BL BLUE
BR BROWN
GR GREEN
GY GRAY
OR ORANGE
PK PINK
PU PURPLE
RD RED
WH WHITE
YL YELLOW
LEGEND
CAP CAPACITOR
CCT CURRENT TRANSFORMER LIMIT CONTROL
DLC DISCHARGE AIR LIMIT CONTROL
IGC IGNITION CONTROL - LARGE MANIFOLD
ISC IGNITION CONTROL - SMALL MANIFOLD
MGV1 MODULATING VALVE - SMALL MANIFOLD
MGV2 MODULATING VALVE - LARGE MANIFOLD
MV1 MAIN GAS VALVE - SMALL MANIFOLD
MV2 MAIN GAS VALVE - LARGE MANIFOLD
PSC COMBUSTION AIR PROVING SWITCH
PSH HIGH PRESSURE SWITCH
RC1 COOLING STAGE 1 RELAY
RC2 COOLING STAGE 2 RELAY
RH HEAT RELAY
S1 HEAT AND COOL SWITCH
SAI SUPPLY AIR LIMIT
TB1 TERMINAL BLOCK
TB2 TERMINAL BLOCK
TM1 INLET AIR SENSOR - HEAT
TM2 INLET AIR SENSOR - COOL
TM3 OUTDOOR AIR SENSOR
V1 HEAT VALVE
V2 COOL VALVE
VFD VARIABLE FREQUENCY DRIVE

PROJECT: DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM#: 382-386-415 - MUA 2

ACCUREX SOUTH OH KY IN
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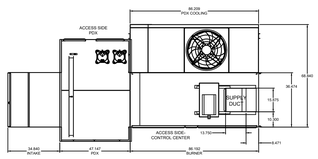
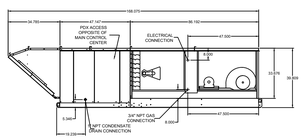
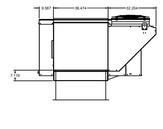
ACCUREX



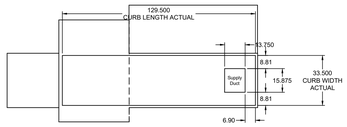
PLAN VIEW



ELEVATION VIEW



END VIEW



FOOTPRINT

NOTE: Roof Opening Requirements:

Minimum Roof Opening: The minimum roof opening size is the illustrated duct diameter plus 0.25 in. on all sides.
For example: If the duct size is 14 x 14 in. square, the minimum roof opening size is 14.5 x 14.5 in. square.

Maximum Roof Opening: There must be a minimum perimeter of 1.75 in. between the roof opening and the roof curb.
For example: If the roof curb is 75 x 30 in. square, the maximum roof opening is 71.5 x 26.5 in. inches square.

NOTE: The weatherhood and filter sections of the make-up air unit are not supported by the curb.
This is by design, in order to help alleviate water infiltration issues. MUA Unit supports are shipped loose with unit.

ACCUREX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

EQUIPMENT SCHEDULE

Tempered Make-Up Air Unit — Mark: Item# 451-470 - MUA 3

Qty	Airstyle Model	Volume	External SP	Total BP	MCA	MOP	Weight	Ga.A/S
1	MDD-1160-H10-S	2,000 CFM	0.5 in. wg	1.57 in. wg	39.5	45	1,133 lb	Belt

Motor Information

Size	VOCP	Enclosure	Drive with Swift Locking	Motor RPM	Operating Power
5 hp	208/60/3	ODP	No	1725	1.25 hp

Heating

Type	Gas Type	Temperature Rise	Temperature Output	Energy Input	Efficiency	Burners	Controls Res. (Yes)	Piloting Ignition	Control Access	Gas Pressure Min.	Gas Pressure Max.
Direct Gas	Natural	42.5 F	82.7 F	175.5 MBH	166.6 MBH	92%	24#	1/2 PSI	Right Hand	7 in. wc	13.5 PSI

Cooling

Cooling Type	Coil Model	Rows Deep	Fins Per Inch	Face Area (Sq.Ft.)	Total Capacity	Sensible Capacity	Entering Air (F.)		Leaving Air (F.)	
							DB	WB	DB	WB
Packaged DX	DX36SS310-10-SI-30	3	10	5.0	111,000 BTUH	84,000 BTUH	82.0	67.0	55.1	54.7

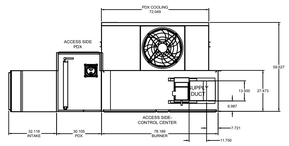
Cut Off	Refrigerant	Suction Temp.	Liquid Temp.	Sound Rated	Code 18/19	Suction Line Size	Liquid Line Size
						Qty / Size	Qty / Size
NA	R-410a	46.7 F	113 F	8.0	0	NA	NA

Outlet Sound Power By Octave Band

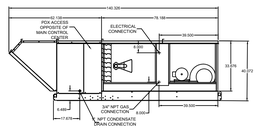
63 Hz	125	250	500 Hz	1 kHz	2 kHz	4 kHz	8kHz	Lwa	dbA	Sones
42 h	84.1	83.7	78.8	74	71.9	70.2	65.7	82.8	71.8	22.8

OPTIONS AND ACCESSORIES:
Air Flow Arrangement: Variable Volume
Weatherhood: Aluminum Mesh, 25x25x2 - (1), 16x25x2 - (1)
Inlet Screen
Outdoor Air Intake Position: End
Discharge Position: Bottom
Coil Protection: None
Cooling Coil Coating: None
Insulation: Double Wall - Tempering On
Filters: 2" MERV 8 Pleated
SPD Control: External 4-20 VDC
Access Side: Right-Hand
Roof Curb: No
Heat Hot Air Sensor
Cool Hot Air Sensor
Unit Controls: Terminal Strip
Temperature Control: Discharge
Factory Installed Accessories
Approvals: ETL
Filter Compliant
Gas Train Configuration: Flame Rod
Ignition Control: Pilot

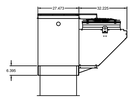
CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY



PLAN VIEW



ELEVATION VIEW



END VIEW

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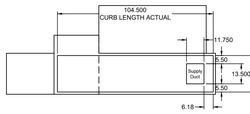
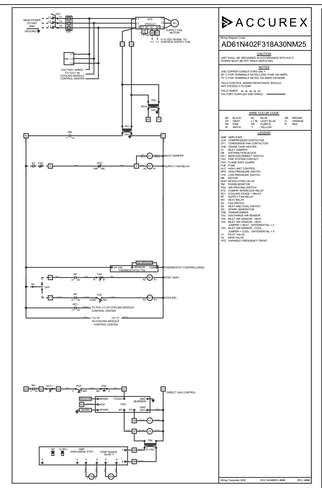
This is by design, in order to help alleviate water infiltration issues. MUA Unit supports are shipped loose with unit.



FOOTPRINT



ACCUREX
AD61N402F318A30NM25

DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM# 451-470 - MUA 3
PROJECT ID: 22022023
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

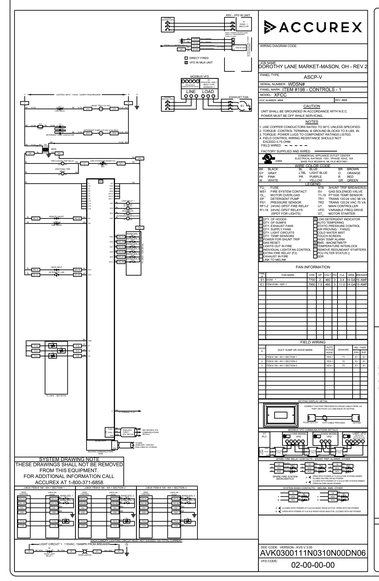
ACCUREX

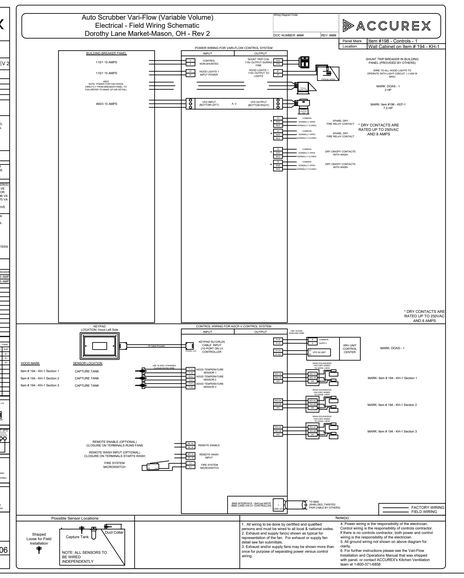
CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED			
	MODEL	LOCATION	TYPE	LOCATION	MARK	TYPE	VOLT	PHASE	HP
Item #198 - Controls - 1	ASCP-V	WALL CABINET – Item # 194 - KH-1	Keypad	HOOD – FACE MOUNT LEFT END OF Item # 194 - KH-1	DOAS - 1	supply	460	3	2
					Item #196 - KEF-1	exhaust	460	3	7 1/2

CONTROL FEATURES
Control Panel Dimensions - 0 X 12 X 30
Extra Fire Relay - Qty 1
Lights Out In Fire
Power For Shunt Trip
Low Detergent Indicator
Building Management with BACnet MSTP

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY





CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED			
	MODEL	LOCATION	TYPE	LOCATION	MARK	TYPE	VOLT	PHASE	HP
Item #220/247 Controls - 2	ASCP-V	WALL CABINET – Item # 220 - KH-2	Keypad	HOOD – FACE MOUNT RIGHT END OF Item # 220 - KH-2	DOAS - 2	supply	460	3	2
					Item #223 - KEF-2	exhaust	460	3	5
					Item #247 - KEF-9	exhaust	460	3	1/2

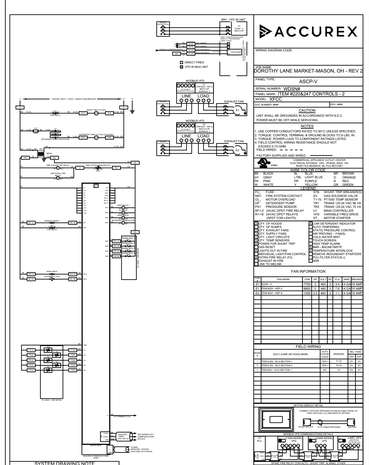
CONTROL FEATURES
Control Panel Dimensions - 0 X 12 X 30
Extra Fire Relay - Qty 1
Lights Out In Fire
Power For Shunt Trip
Low Detergent Indicator
Building Management with BACnet MSTP

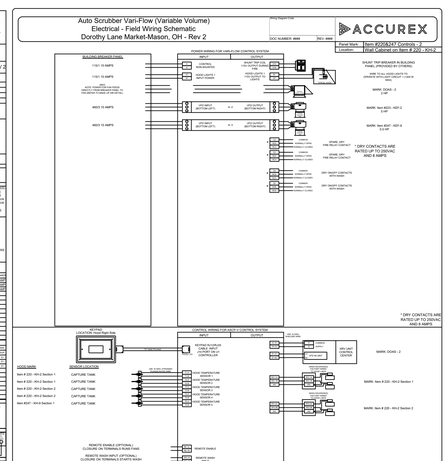
CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM #220/247 CONTROLS - 2
PROJECT ID: 22022023
MARK:

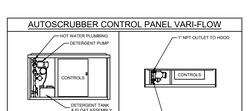
ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

ACCUREX

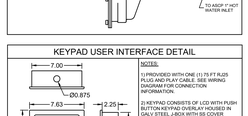




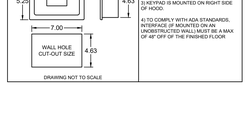
AUTOSCRUBBER CONTROL PANEL VARI-FLOW



REDUCED PRESSURE BACKFLOW PREVENTER (FACTORY PROVIDED) FIELD INSTALLED



KEYPAD USER INTERFACE DETAIL



NOTES:
1) PROVIDED WITH ONE (1) 75 FT RJ25 PLUG AND PLAY CABLE. SEE WIRING DIAGRAM FOR CONNECTION INFORMATION.
2) KEYPAD CONSISTS OF LCD WITH PUSH BUTTON KEYPAD OVERLAY HOUSED IN GALV STEEL J-BOX WITH SS COVER PLATE.
3) KEYPAD IS MOUNTED ON RIGHT SIDE OF HOOD.
4) TO COMPLY WITH ADA STANDARDS, INTERFACE OF MOUNTED ON AN UNOBSTRUCTED WALL) MUST BE A MAX OF 48" OFF OF THE FINISHED FLOOR

DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM #198 - CONTROLS - 1
PROJECT ID: 22022023
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

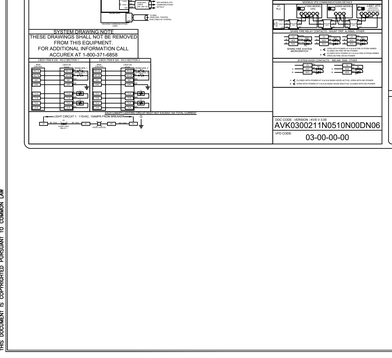
ACCUREX

CONTROL INFORMATION

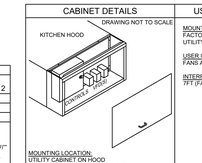
MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED															
	MODEL	LOCATION	TYPE	LOCATION	FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
ITEM # 109114 CONTROLS - 3	XKC-DCV-SB-21-2-1-0	LEFT CABINET ON ITEM # 114 - KH-4	FULL COLOR TOUCHSCREEN	CABINET – LEFT CABINET ON ITEM # 114 - KH-4	1	EXHAUST	E1	ITEM #111 - KEF-3	1	1400	1	460	60	3	NO	YES
					2	SUPPLY	S1	ITEM 109-114 - MUA	1	1540	1.5	208	60	3	NO	NO
					3	EXHAUST	E2	ITEM #116 - KEF-4	1	900	0.5	460	58	3	NO	YES

CONTROL FEATURES
HOOD LIGHT CONTROL
TEMP SENSORS (FACTORY INSTALLED) - QTY. 2
DRY FIRE CONTACTS - QTY. 2
LIGHTS OFF DURING FIRE
EXHAUST MAX DURING FIRE
SUPPLY OFF DURING FIRE
BMS INTEGRATION - BACNET MSTP

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY



CABINET DETAILS



USER INTERFACE DETAILS

MOUNTING TYPE
FACTORY MOUNTED
UTILITY CABINET - LEFT END OF HOOD

USER INTERFACE CONTROL
FANS AND LIGHTS

INTERFACE CABLE LENGTH
7FT (FACTORY PROVIDED)

ZONE CONFIGURATION:

ZONE #	ZONE	ROOM TEMP
1	21	PRESET

HOOD CONFIGURATION:

HOOD #	HOOD	HOOD MARK	ZONE	EXHAUST	SUPPLY	MB-TEMP SENSOR#	HLO
1	H1	ITEM # 109 - KH-3 SECTION 1	Z1	E1	S1	TS1	NO
2	H2	ITEM # 114 - KH-4 SECTION 1	Z1	E2	S1	TS2	NO

FAN CONFIGURATION:

FAN #	TYPE	FAN	FAN MARK	ZONE	MIN CFM	MAX CFM	MODBUS VFD	VFD ADDRESS	MIN FREQ	MAX FREQ	MIN VDC	MAX VDC
1	EXHAUST	E1	ITEM #111 - KEF-3	Z1	700	1400	YES	1	30	60	-	-
2	SUPPLY	S1	ITEM 109-114 - MUA	Z1	520	1540	NO	-	-	-	0.5	10.0
3	EXHAUST	E2	ITEM #116 - KEF-4	Z1	420	900	YES	3	20	58	-	-

WIRING DIAGRAM CODE: ####
JOB NAME: DOROTHY LANE MARKET-MASON, OH - REV 2
MODEL: XKC-DCV-SB-21-2-1-0
SERIAL NUMBER: WDSN#
MARK: ITEM # 109114 CONTROLS - 3
VOC 16-MAR-6 ####
REV: ####
DEFAULT SETTINGS / PARAMETRIS FAR DEFAULT
FACTORY SETTINGS
TEMP SENSORS
CONFIGURATION: STANDARD
ZONES: 1
HOODS: 2
DAMPS: 0
EXHAUST FANS: 2
SUPPLY FANS: 1
MB ROOM SENSOR: NO
HOOD TEMP FAULT: 1
HOOD TEMP FAULT: NO
FREEZE PROTECTION: YES
FIRE: YES
FAN PROVING: NO
BMS: BACNET MSTP
HOOD SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT
HOOD SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT
EXHAUST FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT
SUPPLY FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT
BUILDING SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT
USER INTERFACE SETTINGS (MB)
ITEM # 109114 CONTROLS - 3 (KEYPAD SHOWN BELOW)
USER INTERFACE SETTINGS (ACB)
NA
GENERAL SETTINGS
TEMP SENSOR CONTROL DAYLIGHT (DEFAULT)
ENERGY SAVING SETTINGS
EXHAUST MAX DURING FIRE: MAX
SUPPLY CLEARING FIRE: OFF
LIGHTS DURING FIRE: OFF
BMS SETTINGS
BAUD RATE: 9600
MSTP NODE: 127
MAX MASTER: 127
MAX INFO FRAMES: 20
PRO VERSION: v4

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DOROTHY LANE MARKET-MASON, OH - REV 2
ITEM # 109114 CONTROLS - 3
PROJECT ID: 22022023
MARK:

ACCUREX SOUTH OH KY IN
BRYAN OSBORN
BRYAN.OSBORN@ACCUREX.COM
(513)560-5011

ACCUREX

MARQUE ENGINEERING
2230 PARK AVE., STE. 100, CINCINNATI, OH 45206
513.457.7131 - WWW.MARQUEENG.COM

building your vision.
CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM MASON OHIO STORE

DWG. TITLE
HOOD DRAWINGS

DWG. NO.
M-16

STATE OF OHIO
JOSEPH
MICHAELIS
79076
REGISTERED PROFESSIONAL ENGINEER

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DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

ACCUREX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED													
	MODEL	LOCATION	TYPE	LOCATION	FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
ITEM #267 - CONTROLS -4	XKC-DCV-SB-10-1-1-0	RIGHT CABINET ON ITEM # 267 - KH-5	FULL COLOR TOUCHSCREEN	CABINET – RIGHT CABINET ON ITEM # 267 - KH-6	1	EXHAUST	E1	ITEM #267 - KEF-5	1	975	0.5	460	63	3	NO	YES

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

CONTROL FEATURES
- HOOD LIGHT CONTROL
- TEMP SENSORS (FACTORY INSTALLED) - QTY. 1
- DRY FIRE CONTACTS - QTY. 2
- LIGHTS OFF DURING FIRE
- EXHAUST MAX DURING FIRE
- SUPPLY OFF DURING FIRE
- BMS INTEGRATION - BACNET MSTP

ACCUREX

DOC NUMBER: ####

REV: ####

CAUTION

UNIT MUST BE GROUNDED IN ACCORDANCE WITH N.E.C. POWER MUST BE OFF WHILE SERVICING

ATTENTION

1. APPROVED JOINT STRESS MUST BE A TERMS COMPLIANT WITH ALL CODE E.C.L.'S. ALIMENTATION OUT OF THIS COUPLE DURING CONNECTION.

COMMERCIAL APPLIANCE OUTLET CENTER
ELECTRICAL RATINGS: 115/240V / PHASE, 50-60HZ, 15A
BASE FILE #E200618, ML FILE #E313901

4.00M

THESE DRAWINGS SHALL NOT BE REMOVED FROM THIS EQUIPMENT. USE COPPER CONDUCTORS RATED TO 90°C UNLESS SPECIFIED. TORQUE ALL LUGS TO 4.5 LBS. IN. FIELD CONTROL WIRING POWER LOSS/CROSS TO COMPONENT RATINGS LISTED. TORQUE CONTROL BOARD SCREW TERMINALS TO 3.5 LBS. IN. FIELD CONTROL WIRING RESISTANCE SHOULD NOT EXCEED 0.15 OHM. SEE FOR ADDITIONAL INFORMATION, OR CALL FACTORY AT 1-800-272-9858.

FIELD WIRED CABLE (LOCALMENT) ——
FACTORY WIRED CABLE & CONNECTORS ——

SEE THIS REVISED CEO DESIGNS OR 124° EQUIPMENT. SHUT INDICATION CONTAINS UTILIZER DES CONDUCTEURS EN CUIVRE CLASSES A 90°C A MOINS QUE SPÉCIFIÉ. COUPLE DE TORSION DE TOUS LES FILS À 4.5 LB/PO. SERRER LES CONNEXIONS D'ALIMENTATION AUX COUPLES DE BORNES DU TABLEAU DE COMMANDE À 3.5 LB-PO. LA RÉSISTANCE DU CÂBLAGE DE COMMANDE LOCAL NE DOIT PAS DÉPASSER 0,15 OHM. POUR PLUS D'INFORMATION, CONSULTER LE MANUEL OU APPELER 1-800-272-9858.

FIELD WIRED CABLE (LOCALMENT) ——
FACTORY WIRED CABLE & CONNECTORS ——

WIRING DIAGRAM CODE: ####

JOB NAME: DOROTHY LANE
MARKET-MASON, OH - REV 2

MODEL: XKC-DCV-SB-10-1-1-0

SERIAL NUMBER: WDSN#

MARK: ITEM #267 - CONTROLS -4

DOC NUMBER: #### REV: ####

DEFAULT SETTINGS / PARAMETRES PAR DEFAUT

FACTORY SETTINGS
TYPE: VAV
CONFIGURATION: STANDARD
HOODS: 1
HOOD: 2
EXHAUST FANS: 3
SUPPLY FANS: 1
MB ROOM SENSOR: NO
MB TEMP SENSORS: 1
HIGH TEMP FAULT: NO
FREEZE PROTECTION: YES
GAS RESET: NO
FAN PROVING: NO
BMS: BACNET MSTP

HOOD SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT

EXHAUST FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SUPPLY FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SENSOR SETTINGS
SEE ROOM CONFIGURATION IN TABLE ON LEFT

USER INTERFACE SETTINGS AND
FAN & LIGHT BUTTONS: SHOW BOTH (SEPERATE)

USER INTERFACE SETTINGS (HCB):
NA

GENERAL SETTINGS
TIME ZONE CONTROL: DAYLIGHT (DEFAULT)

FIRE/GAS SETTINGS
FIRE DAMPER CONTROL: MAX
SUPPLY DURING FIRE: OFF
LIGHTS DURING FIRE: OFF

BMS SETTINGS
BAUD RATE: MSTP
MAC ADDRESS: 1
MAX MASTER: 127
MAX INFO FRAMES: 20

PRG VERSION: 1.0

POWER WIRING FOR KITCHEN CONTROLS
(WIRING TO BE DONE BY ELECTRICIAN)

BUILDING BREAKER PANEL: 110V-120V / 1PH POWER FOR CONTROLS / LIGHTS (NON SHUNTED 15A BREAKER)

MAIN CONTROL PANEL: HOT, NEUTRAL, GROUND; TB1-1, TB1-2, TB1-3; BLACK, WHITE, GREEN

HOOD LIGHTS 115VAC 1200W MAX

UPON FIRE
OR NO POWER TO PANEL
C TO NO WILL CLOSE
C TO NC WILL OPEN
NO, NC, COMMON — NORMALLY OPEN, NORMALLY CLOSED — FIRE SYSTEM DRY CONTACT 1*

UPON FIRE
OR NO POWER TO PANEL
C TO NO WILL CLOSE
C TO NC WILL OPEN
NO, NC, COMMON — NORMALLY OPEN, NORMALLY CLOSED — FIRE SYSTEM DRY CONTACT 2*

460V / 3PH POWER FOR E1: MCA: 7.98, MOP: 15

VFD: L1, L2, L3, GND; T1, T2, T3, GND; LOND 1, LOND 2, LOND 3, GROUND

EXHAUST E1 — 1.1 FLA, 0.5 HP, 460V / 3PH

*FIRE SYSTEM DRY CONTACT WIRING EXAMPLES

SHUNT TRIP (BY OTHERS) WIRING EXAMPLE: C1, NO/NC — COMMON, NORMALLY OPEN — HOT, NEUTRAL — SHUNT TRIP BREAKER COIL

APPLIANCE CONTACTORS (BY OTHERS) WIRING EXAMPLE: C1, NO/NC — COMMON, NORMALLY CLOSED — HOT, NEUTRAL — APPLIANCE CONTACTOR COIL

CONTROL WIRING FOR KITCHEN CONTROLS
(WIRING TO BE DONE BY ELECTRICIAN. IF NO CONTROLS CONTRACTOR. USE 18-22GA WIRE UNLESS SPECIFIED)

MAIN CONTROL PANEL

MAIN CONTROL PANEL (CONTINUED)

MB (MAIN BOARD): FS-C, FS-NC — FAILSAFE WIRED IF FACTORY MOUNTED NEXT TO FIRE SYSTEM

TS-1A, TS-1B — HOOD 1 TEMP SENSOR — HOOD MARK: ITEM # 267 - KH-5 SECTION 1

TS-2A, TS-2B — HOOD 2 TEMP SENSOR — HOOD MARK: ITEM # 267 - KH-6 SECTION 1

FIRE SUPPRESSION FIRE SYSTEM SWITCH (REMOVE JUMPER IF USED)**

DI-1A, DI-1B — DIGITAL IN 1 FAN ON/OFF (DEFAULT)

DI-2A, DI-2B — DIGITAL IN 2 LIGHT ON/OFF (DEFAULT)

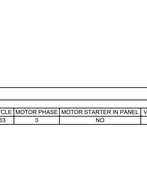
J23: A+, B-, GND — TX/RX(+), TX/RX(-), GND — TO BMS (BACNET MSTP)

**WHEN FIRE SYSTEM IS ARMED, FS-C TO FS-NC SHOULD HAVE CONTINUITY

CABINET DETAILS

DRAWING NOT TO SCALE

KITCHEN HOOD



MOUNTING LOCATION:
UTILITY CABINET ON HOOD
(INNER CONTROL BOX: 12 X 20 X 6)

NOTES:
1) WHEN CONTROLS ARE MOUNTED IN HOOD-MOUNTED OR WALL-MOUNTED UTILITY CABINET, FOR HOOD OR WALL CABINET DIMENSIONS SEE HOOD SUBMITTAL.

2) MINIMUM OF 36" OF CLEARANCE RECOMMENDED IN FRONT OF CONTROL CABINET

USER INTERFACE DETAILS

MOUNTING TYPE
FACTORY MOUNTED:
UTILITY CABINET - RIGHT END OF HOOD

USER INTERFACE CONTROL
FANS AND LIGHTS

INTERFACE CABLE LENGTH
7FT (FACTORY PROVIDED)

ZONE CONFIGURATION

ZONE #	ZONE	ROOM TEMP
1	Z1	PRESET

HOOD CONFIGURATION

HOOD #	HOOD	HOOD MARK	ZONE	EXHAUST	SUPPLY	MB-TEMP SENSORS	HCB
1	H1	ITEM # 267 - KH-5 SECTION 1	Z1	E1		TS1	NO

FAN CONFIGURATION

FAN #	TYPE	FAN	FAN MARK	ZONE	MIN CFM	MAX CFM	MODBUS VFD	VFD ADDRESS	MIN FREQ	MAX FREQ	MIN VDC	MAX VDC
1	EXHAUST	E1	ITEM #267 - KEF-5	Z1	488	975	YES	1	30	60	–	–

PROJECT: DOROTHY LANE MARKET-MASON, OH - REV 2 — ITEM #267 - CONTROLS -4 — ISSUED: 07/19/2023 — MARK: 1

ACCUREX SOUTH OH KY IN
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CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED													
	MODEL	LOCATION	TYPE	LOCATION	FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
ITEM #382-386-415-CONTROLS - 5	XKC-DCV-SB-31-3-1-0	RIGHT CABINET ON ITEM # 382A - KH-6	FULL COLOR TOUCHSCREEN	CABINET – RIGHT CABINET ON ITEM # 382A - KH-6	1	EXHAUST	E1	ITEM #382A - KEF-6	1	525	0.25	115	60	1	NO	NO
					2	EXHAUST	E2	ITEM #386 - KEF-7	1	3250	2	208	60	1	NO	NO
					3	SUPPLY	S1	ITEM# 382-386-415 - MUA 2	1	3740	3	208	60	3	NO	NO
					4	EXHAUST	E3	ITEM #415B - KEF-8	1	900	0.25	115	60	1	NO	NO

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

CONTROL FEATURES
- HOOD LIGHT CONTROL
- TEMP SENSORS (FACTORY INSTALLED) - QTY. 3
- DRY FIRE CONTACTS - QTY. 2
- LIGHTS OFF DURING FIRE
- EXHAUST MAX DURING FIRE
- SUPPLY OFF DURING FIRE
- BMS INTEGRATION - BACNET MSTP

ACCUREX

DOC NUMBER: ####

REV: ####

CAUTION

UNIT MUST BE GROUNDED IN ACCORDANCE WITH N.E.C. POWER MUST BE OFF WHILE SERVICING

ATTENTION

1. APPROVED JOINT STRESS MUST BE A TERMS COMPLIANT WITH ALL CODE E.C.L.'S. ALIMENTATION OUT OF THIS COUPLE DURING CONNECTION.

COMMERCIAL APPLIANCE OUTLET CENTER
ELECTRICAL RATINGS: 115/240V / PHASE, 50-60HZ, 15A
BASE FILE #E200618, ML FILE #E313901

4.00M

THESE DRAWINGS SHALL NOT BE REMOVED FROM THIS EQUIPMENT. USE COPPER CONDUCTORS RATED TO 90°C UNLESS SPECIFIED. TORQUE ALL LUGS TO 4.5 LBS. IN. FIELD CONTROL WIRING POWER LOSS/CROSS TO COMPONENT RATINGS LISTED. TORQUE CONTROL BOARD SCREW TERMINALS TO 3.5 LBS. IN. FIELD CONTROL WIRING RESISTANCE SHOULD NOT EXCEED 0.15 OHM. SEE FOR ADDITIONAL INFORMATION, OR CALL FACTORY AT 1-800-272-9858.

FIELD WIRED CABLE (LOCALMENT) ——
FACTORY WIRED CABLE & CONNECTORS ——

SEE THIS REVISED CEO DESIGNS OR 124° EQUIPMENT. SHUT INDICATION CONTAINS UTILIZER DES CONDUCTEURS EN CUIVRE CLASSES A 90°C A MOINS QUE SPÉCIFIÉ. COUPLE DE TORSION DE TOUS LES FILS À 4.5 LB/PO. SERRER LES CONNEXIONS D'ALIMENTATION AUX COUPLES DE BORNES DU TABLEAU DE COMMANDE À 3.5 LB-PO. LA RÉSISTANCE DU CÂBLAGE DE COMMANDE LOCAL NE DOIT PAS DÉPASSER 0,15 OHM. POUR PLUS D'INFORMATION, CONSULTER LE MANUEL OU APPELER 1-800-272-9858.

FIELD WIRED CABLE (LOCALMENT) ——
FACTORY WIRED CABLE & CONNECTORS ——

WIRING DIAGRAM CODE: ####

JOB NAME: DOROTHY LANE
MARKET-MASON, OH - REV 2

MODEL: XKC-DCV-SB-31-3-1-0

SERIAL NUMBER: WDSN#

MARK: ITEM #382-386-415-CONTROLS - 5

DOC NUMBER: #### REV: ####

DEFAULT SETTINGS / PARAMETRES PAR DEFAUT

FACTORY SETTINGS
TYPE: VAV
CONFIGURATION: STANDARD
HOODS: 1
HOOD: 3
EXHAUST FANS: 3
SUPPLY FANS: 1
MB ROOM SENSOR: NO
MB TEMP SENSORS: 2
HIGH TEMP FAULT: NO
FREEZE PROTECTION: YES
GAS RESET: NO
FAN PROVING: NO
BMS: BACNET MSTP

HOOD SETTINGS
SEE HOOD CONFIGURATION IN TABLE ON LEFT

EXHAUST FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SUPPLY FAN SETTINGS
SEE FAN CONFIGURATION IN TABLE ON LEFT

SENSOR SETTINGS
SEE ROOM CONFIGURATION IN TABLE ON LEFT

USER INTERFACE SETTINGS AND
FAN & LIGHT BUTTONS: SHOW BOTH (SEPERATE)

USER INTERFACE SETTINGS (HCB):
NA

GENERAL SETTINGS
TIME ZONE CONTROL: DAYLIGHT (DEFAULT)

FIRE/GAS SETTINGS
FIRE DAMPER CONTROL: MAX
SUPPLY DURING FIRE: OFF
LIGHTS DURING FIRE: OFF

BMS SETTINGS
BAUD RATE: MSTP
MAC ADDRESS: 1
MAX MASTER: 127
MAX INFO FRAMES: 20

PRG VERSION: 1.0

POWER WIRING FOR KITCHEN CONTROLS
(WIRING TO BE DONE BY ELECTRICIAN)

BUILDING BREAKER PANEL: 110V-120V / 1PH POWER FOR CONTROLS / LIGHTS (NON SHUNTED 15A BREAKER)

MAIN CONTROL PANEL: HOT, NEUTRAL, GROUND; TB1-1, TB1-2, TB1-3; BLACK, WHITE, GREEN

HOOD LIGHTS 115VAC 1200W MAX

UPON FIRE
OR NO POWER TO PANEL
C TO NO WILL CLOSE
C TO NC WILL OPEN
NO, NC, COMMON — NORMALLY OPEN, NORMALLY CLOSED — FIRE SYSTEM DRY CONTACT 1*

UPON FIRE
OR NO POWER TO PANEL
C TO NO WILL CLOSE
C TO NC WILL OPEN
NO, NC, COMMON — NORMALLY OPEN, NORMALLY CLOSED — FIRE SYSTEM DRY CONTACT 2*

POWER WIRING FROM BREAKER PANEL DIRECT TO FANS
(WIRING TO BE DONE BY ELECTRICIAN)

BUILDING BREAKER PANEL

115V / 1PH POWER FOR E1: MCA: 7.25, MOP: 15 — EXHAUST E1 — 0.6 FLA, 0.25 HP, 115V / 1PH — MARK: ITEM #382A - KEF-6

115V / 1PH POWER FOR E2: MCA: 20.00, MOP: 30 — EXHAUST E2 — 16.0 FLA, 1 HP, 115V / 1PH — MARK: ITEM #372 - KEF-11

208V / 3PH POWER FOR S1: MCA: 29.30, MOP: 40 — SUPPLY S1 — 7.5 FLA, 3 HP, 208V / 3PH — MARK: ITEM 457-470 - MUA 1

115V / 1PH POWER FOR E3: MCA: 7.25, MOP: 15 — EXHAUST E3 — 0.8 FLA, 0.25 HP, 115V / 1PH — MARK: ITEM #415A - KEF-8

CONTROL WIRING FOR KITCHEN CONTROLS
(WIRING TO BE DONE BY ELECTRICIAN. IF NO CONTROLS CONTRACTOR. USE 18-22GA WIRE UNLESS SPECIFIED)

MAIN CONTROL PANEL

FAN SPEED 0-10VDC OUT: E1, E2, E3 — 0-10VDC+ — RED; 0-10VDC- — WHITE

VARI-GREEN MOTOR (ECM)

DRY RUN OUTPUT: COMMON, NORMALLY OPEN, NORMALLY CLOSED

FAN SPEED 0-10VDC OUT: S1 — 0-10VDC+ — RED; 0-10VDC- (COM) — WHITE

**REMOVE FACTORY INSTALLED JUMPER BETWEEN TERMINAL 3 AND 5 AT PRESENT

MUA UNIT

MAIN CONTROL PANEL (CONTINUED)

MB (MAIN BOARD): FS-C, FS-NC — FAILSAFE WIRED IF FACTORY MOUNTED NEXT TO FIRE SYSTEM

TS-1A, TS-1B — HOOD 1 TEMP SENSOR — HOOD MARK: ITEM #267 - KH-5 SECTION 1

TS-2A, TS-2B — HOOD 2 TEMP SENSOR — HOOD MARK: ITEM # 267 - KH-7 SECTION 1

TS-3A, TS-3B — HOOD 3 TEMP SENSOR — HOOD MARK: ITEM # 415B - KH-8 SECTION 1

FIRE SUPPRESSION FIRE SYSTEM SWITCH (REMOVE JUMPER IF USED)**

DI-1A, DI-1B — DIGITAL IN 1 FAN ON/OFF (DEFAULT)

DI-2A, DI-2B — DIGITAL IN 2 LIGHT ON/OFF (DEFAULT)

J23: A+, B-, GND — TX/RX(+), TX/RX(-), GND — TO BMS (BACNET MSTP)

**WHEN FIRE SYSTEM IS ARMED, FS-C TO FS-NC SHOULD HAVE CONTINUITY

*FIRE SYSTEM DRY CONTACT WIRING EXAMPLES

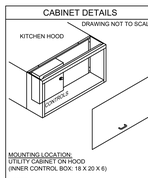
SHUNT TRIP (BY OTHERS) WIRING EXAMPLE: C1, NO/NC — COMMON, NORMALLY OPEN — HOT, NEUTRAL — SHUNT TRIP BREAKER COIL

APPLIANCE CONTACTORS (BY OTHERS) WIRING EXAMPLE: C1, NO/NC — COMMON, NORMALLY CLOSED — HOT, NEUTRAL — APPLIANCE CONTACTOR COIL

CABINET DETAILS

DRAWING NOT TO SCALE

KITCHEN HOOD



MOUNTING LOCATION:
UTILITY CABINET ON HOOD
(INNER CONTROL BOX: 18 X 20 X 6)

NOTES:
1) WHEN CONTROLS ARE MOUNTED IN HOOD-MOUNTED OR WALL-MOUNTED UTILITY CABINET FOR HOOD OR WALL CABINET DIMENSIONS SEE HOOD SUBMITTAL.

2) MINIMUM OF 36" OF CLEARANCE RECOMMENDED IN FRONT OF CONTROL CABINET

USER INTERFACE DETAILS

MOUNTING TYPE
FACTORY MOUNTED:
UTILITY CABINET - RIGHT END OF HOOD

USER INTERFACE CONTROL
FANS AND LIGHTS

INTERFACE CABLE LENGTH
7FT (FACTORY PROVIDED)

ZONE CONFIGURATION

ZONE #	ZONE	ROOM TEMP
1	Z1	PRESET

HOOD CONFIGURATION

HOOD #	HOOD	HOOD MARK	ZONE	EXHAUST	SUPPLY	MB-TEMP SENSORS	HCB
1	H1	ITEM #267 - KH-5 SECTION 1	Z1	E1	S1	TS1	NO
2	H2	ITEM #267 - KH-7 SECTION 1	Z1	E2	S1	TS2	NO
3	H3	ITEM # 415B - KH-8 SECTION 1	Z1	E3	S1	TS3	NO

FAN CONFIGURATION

FAN #	TYPE	FAN	FAN MARK	ZONE	MIN CFM	MAX CFM	MODBUS VFD	VFD ADDRESS	MIN FREQ	MAX FREQ	MIN VDC	MAX VDC
1	EXHAUST	E1	ITEM #382A - KEF-6	Z1	263	525	NO	–	–	–	5.0	10.0
2	EXHAUST	E2	ITEM #386 - KEF-7	Z1	1625	3250	NO	–	–	–	5.0	10.0
3	SUPPLY	S1	ITEM# 382-386-415 - MUA 2	Z1	1870	3740	NO	–	–	–	5.0	10.0
4	EXHAUST	E3	ITEM #415B - KEF-8	Z1	450	900	NO	–	–	–	5.0	10.0

PROJECT: DOROTHY LANE MARKET-MASON, OH - REV 2 — ITEM #382-386-415-CONTROLS - 5 — ISSUED: 07/19/2023 — MARK: 1

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FIRE SYSTEM INFORMATION

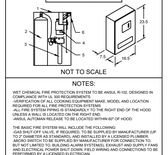
MARK	MODEL	LOCATION	FLOW POINTS		SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
			HOODS	PCU			
ITEM #195 - FIRE SUPPRESSION	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	29 UTILIZED 33 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM # 194 - KH-1 SECTION 1 ITEM # 194 - KH-1 SECTION 2 ITEM # 194 - KH-1 SECTION 3

FIRE SYSTEM OPTIONS AND ACCESSORIES
- FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
- CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
- METAL BLOW-OFF CAPS - INCLUDED
- GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200
- HOOD SUPPRESSION TANK - INCLUDED - 9 GAL. - (3) 3.0 TANK[S]
- REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC

CONTROL PANEL
1. STAINLESS STEEL ENCLOSURE
2. 120VAC INPUT POWER
3. CONTROLLER BOARD WITH CAPTIVE SCREW TERMINALS
4. REGULATOR
5. MANUFACTURER WIRING MICROSWITCH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ACCUREX DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

FIRE SYSTEM INFORMATION

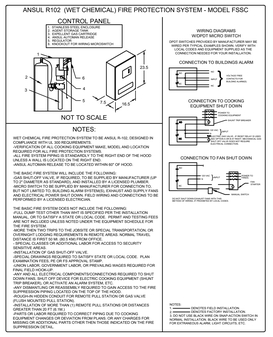
MARK	MODEL	LOCATION	FLOW POINTS HOODS	FLOW POINTS PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
ITEM #222-247A - FS	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	28 UTILIZED 33 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM # 220 - KH-2 SECTION 1 ITEM # 220 - KH-2 SECTION 2 ITEM #247 - KH-9 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200
HOOD SUPPRESSION TANK - INCLUDED - 9 GAL - [(3) 3.0 TANK(S)]
REMOTE PULL STATION - MULTIPLE - FIELD INSTALLATION AT TWO POINTS OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC



NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
-VERIFICATION OF ALL COOKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD UNLESS A WALL IS LOCATED ON THE RIGHT END.
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 66" OF HOOD.

THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-ANSUL R-102 WET CHEMICAL SYSTEM (2 TANKS AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN, FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-ANY ITEMS NOT SPECIFICALLY LISTED AS INCLUDED FROM THE INSTALLATION MANUAL, OR TO SATISFY A STATE OR LOCAL CODE. PERMIT AND TESTING FEES ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR THE FIRE SYSTEM.
-MORE THAN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
-ANY CHARGES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS.
-INSTALLATION OF GAS SHUT-OFF VALVE.
-ELECTRICAL WORK REQUIRED TO MEET STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR FS APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR THE INSTALLATION.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER) OR GAS VALVE (FACTORY INSTALLED).
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE (FLUSH MOUNTED PULL STATION).
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-ANY ADDITIONAL PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS, OR ANY CHANGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ========== DENOTES FIELD INSTALLATION.
2. ---------- DENOTES FACTORY WIRING.
3. DO NOT USE BLACK WIRE ON MAP-ACTUATION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM LIGHT CIRCUITS, ETC.

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DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #222-247A - FS

PROJECT NO. 56307
DRAWN BY: LMK

ACCUREX

FIRE SYSTEM INFORMATION

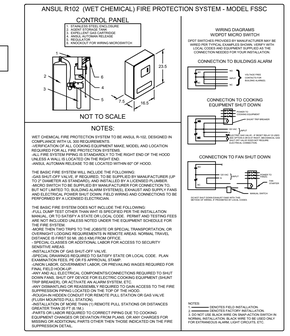
MARK	MODEL	LOCATION	FLOW POINTS HOODS	FLOW POINTS PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
ITEM #110-115 - FS	ANSUL R-102 WET CHEMICAL	CABINET – LEFT END OF ITEM # 114 - KH-4	8 UTILIZED 11 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM # 109 - KH-3 SECTION 1 ITEM # 114 - KH-4 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200
HOOD SUPPRESSION TANK - INCLUDED - 3 GAL - [(1) 3.0 TANK(S)]
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC



NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
-VERIFICATION OF ALL COOKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD UNLESS A WALL IS LOCATED ON THE RIGHT END.
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 66" OF HOOD.

THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-ANSUL R-102 WET CHEMICAL SYSTEM (2 TANKS AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN, FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-ANY ITEMS NOT SPECIFICALLY LISTED AS INCLUDED FROM THE INSTALLATION MANUAL, OR TO SATISFY A STATE OR LOCAL CODE. PERMIT AND TESTING FEES ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR THE FIRE SYSTEM.
-MORE THAN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
-ANY CHARGES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS.
-INSTALLATION OF GAS SHUT-OFF VALVE.
-ELECTRICAL WORK REQUIRED TO MEET STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR FS APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR THE INSTALLATION.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER) OR GAS VALVE (FACTORY INSTALLED).
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE (FLUSH MOUNTED PULL STATION).
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-ANY ADDITIONAL PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS, OR ANY CHANGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ========== DENOTES FIELD INSTALLATION.
2. ---------- DENOTES FACTORY WIRING.
3. DO NOT USE BLACK WIRE ON MAP-ACTUATION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM LIGHT CIRCUITS, ETC.

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ITEM #110-115 - FS

PROJECT NO. 56307
DRAWN BY: LMK

ACCUREX

FIRE SYSTEM INFORMATION

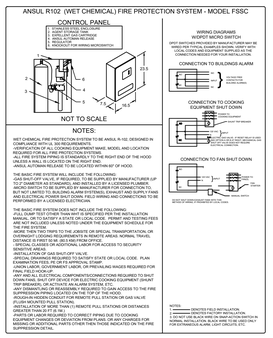
MARK	MODEL	LOCATION	FLOW POINTS HOODS	FLOW POINTS PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
ITEM #269 - FIRE SUPPRESSION	ANSUL R-102 WET CHEMICAL	CABINET – RIGHT END OF ITEM # 267 - KH-5	4 UTILIZED 5 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM # 267 - KH-5 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 1.5", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE150
HOOD SUPPRESSION TANK - INCLUDED - 1.5 GAL - [(1) 1.5 TANK(S)]
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC



NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
-VERIFICATION OF ALL COOKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END UNLESS A WALL IS LOCATED ON THE RIGHT END.
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 66" OF HOOD.

THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-ANSUL R-102 WET CHEMICAL SYSTEM (1 TANK AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN, FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-ANY ITEMS NOT SPECIFICALLY LISTED AS INCLUDED FROM THE INSTALLATION MANUAL, OR TO SATISFY A STATE OR LOCAL CODE. PERMIT AND TESTING FEES ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR THE FIRE SYSTEM.
-MORE THAN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
-ANY CHARGES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS.
-INSTALLATION OF GAS SHUT-OFF VALVE.
-ELECTRICAL WORK REQUIRED TO MEET STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR FS APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR THE INSTALLATION.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER) OR GAS VALVE (FACTORY INSTALLED).
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE (FLUSH MOUNTED PULL STATION).
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-ANY ADDITIONAL PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS, OR ANY CHANGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ========== DENOTES FIELD INSTALLATION.
2. ---------- DENOTES FACTORY WIRING.
3. DO NOT USE BLACK WIRE ON MAP-ACTUATION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM LIGHT CIRCUITS, ETC.

ACCUREX SOUTH OH KY IN
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DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #269 - FIRE SUPPRESSION

PROJECT NO. 56307
DRAWN BY: LMK

ACCUREX

FIRE SYSTEM INFORMATION

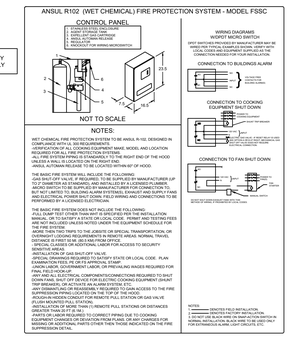
MARK	MODEL	LOCATION	FLOW POINTS HOODS	FLOW POINTS PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
ITEM #382-387 - FS	ANSUL R-102 WET CHEMICAL	CABINET – RIGHT END OF ITEM # 382A - KH-6	8 UTILIZED 11 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM # 382A - KH-6 SECTION 1 ITEM # 386 - KH-7 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE200
HOOD SUPPRESSION TANK - INCLUDED - 3 GAL - [(1) 3.0 TANK(S)]
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC



NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
-VERIFICATION OF ALL COOKING EQUIPMENT MAKE, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD UNLESS A WALL IS LOCATED ON THE RIGHT END.
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 66" OF HOOD.

THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-ANSUL R-102 WET CHEMICAL SYSTEM (3 TANKS AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN, FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-ANY ITEMS NOT SPECIFICALLY LISTED AS INCLUDED FROM THE INSTALLATION MANUAL, OR TO SATISFY A STATE OR LOCAL CODE. PERMIT AND TESTING FEES ARE NOT INCLUDED UNLESS NOTED UNDER THE EQUIPMENT SCHEDULE FOR THE FIRE SYSTEM.
-MORE THAN TWO TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
-ANY CHARGES OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS.
-INSTALLATION OF GAS SHUT-OFF VALVE.
-ELECTRICAL WORK REQUIRED TO MEET STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR FS APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR THE INSTALLATION.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS, SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER) OR GAS VALVE (FACTORY INSTALLED).
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION PIPING LOCATED ON THE TOP OF THE HOOD.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE (FLUSH MOUNTED PULL STATION).
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-ANY ADDITIONAL PARTS OR LABOR REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS, OR ANY CHANGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ========== DENOTES FIELD INSTALLATION.
2. ---------- DENOTES FACTORY WIRING.
3. DO NOT USE BLACK WIRE ON MAP-ACTUATION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM LIGHT CIRCUITS, ETC.

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DOROTHY LANE
MARKET-MASON, OH - REV 2
ITEM #382-387 - FS

PROJECT NO. 56307
DRAWN BY: LMK

ACCUREX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
JOSEPH
MICHAELIS
79076
REGISTERED
PROFESSIONAL ENGINEER
7/28/23

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RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-18

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FIRE SYSTEM INFORMATION

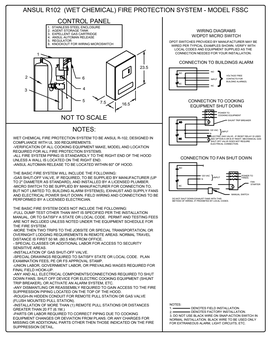
MARK	MODEL	LOCATION	FLOW POINTS HOODS	FLOW POINTS PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
ITEM #415C - FS	ANSUL R-102 WET CHEMICAL	CABINET – LEFT END OF ITEM # 415B - KH-8	3 UTILIZED 5 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM # 415B - KH-8 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 1.5", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE150
HOOD SUPPRESSION TANK - INCLUDED - 1.5 GAL - ([1] 1.5 TANK(S))
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC



NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
CONTACT LOCAL ANSUL DISTRIBUTOR FOR NAME, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
-ALL FIRE SYSTEM PIPING IS STANDARDLY TO THE RIGHT END OF THE HOOD
-ANSUL AUTOMAN RELEASE TO BE LOCATED WITHIN 66" OF HOOD.

THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
-GAS SHUT-OFF VALVE, IF REQUIRED, TO BE SUPPLIED BY MANUFACTURER (UP TO 2" DIAMETER AS STANDARD), AND INSTALLED BY A LICENSED PLUMBER.
-ALL ELECTRICAL WORK TO BE PERFORMED BY A LICENSED ELECTRICIAN, BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN. FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-ANY ITEMS NOT LISTED IN THE SYSTEM AS SHOWN ABOVE FROM THE INSTALLATION MANUAL, OR TO COMPLY WITH STATE OR LOCAL CODE. PERMIT AND TESTING FEES.
-ANY ADDITIONAL EQUIPMENT OR MODIFICATIONS REQUIRED BY THE AHJ TO MAKE THE FIRE SYSTEM
-SPECIAL SHIPPING TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
-ANY OVERTIME, PREMIUM OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS
-INSTALLATION OF GAS SHUT-OFF VALVE.
-ANY ELECTRICAL WORK REQUIRED BY STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR ES APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR THE INSTALLATION.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS. SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER OR MOTOR RATED CONTACTOR).
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION EQUIPMENT OR TO COMPLY WITH NFPA 96.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE
-ANY CONDUIT OR WIRING.
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-ANY ADDITIONAL ITEMS REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS, OR ANY CHANGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ========== DENOTES FIELD INSTALLATION.
2. DO NOT USE BLACK WIRE ON MANUFACTURER SWITCH #4
3. DO NOT USE BLACK AND ORANGE WIRE ON SWITCH #3 ONLY FOR EXTINGUISH ALARM, LIGHT CIRCUITS, ETC.

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DOROTHY LANE
MARKET-MASON, OH - REV 2

ITEM #415C - FS

PROJECT NO.
56307

DRAWN
KMK

ACCUREX

FIRE SYSTEM INFORMATION

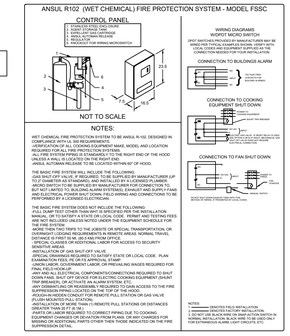
MARK	MODEL	LOCATION	FLOW POINTS HOODS	FLOW POINTS PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
ITEM #452-471 - FS	ANSUL R-102 WET CHEMICAL	CABINET – LEFT END OF ITEM #451 - KH-10	12 UTILIZED 22 AVAILABLE		CONTINUOUS	FUSIBLE LINK	ITEM #451 - KH-10 SECTION 1 ITEM #470 - KH-11 SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
METAL BLOW-OFF CAPS - INCLUDED
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 1.5", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE150
HOOD SUPPRESSION TANK - INCLUDED - 6 GAL - ([2] 3.0 TANK(S))
REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

CAPTIVE AIRE DRAWINGS ARE ENGINEERED BY OTHERS AND INCLUDED FOR REFERENCE ONLY

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC



NOTES:

WET CHEMICAL FIRE PROTECTION SYSTEM TO BE ANSUL R-102, DESIGNED IN COMPLIANCE WITH UL 300 REQUIREMENTS.
CONTACT LOCAL ANSUL DISTRIBUTOR FOR NAME, MODEL AND LOCATION REQUIRED FOR ALL FIRE PROTECTION SYSTEMS.
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THE BASIC FIRE SYSTEM WILL INCLUDE THE FOLLOWING:
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-ALL ELECTRICAL WORK TO BE PERFORMED BY A LICENSED ELECTRICIAN, BUT NOT LIMITED TO, BUILDING ALARM SYSTEM(S), EXHAUST AND SUPPLY FANS AND ELECTRICAL POWER SHUT DOWN. FIELD WIRING AND CONNECTIONS TO BE PERFORMED BY A LICENSED ELECTRICIAN.

THE BASIC FIRE SYSTEM DOES NOT INCLUDE THE FOLLOWING:
-ANY ITEMS NOT LISTED IN THE SYSTEM AS SHOWN ABOVE FROM THE INSTALLATION MANUAL, OR TO COMPLY WITH STATE OR LOCAL CODE. PERMIT AND TESTING FEES.
-ANY ADDITIONAL EQUIPMENT OR MODIFICATIONS REQUIRED BY THE AHJ TO MAKE THE FIRE SYSTEM
-SPECIAL SHIPPING TRIPS TO THE JOBSITE OR SPECIAL TRANSPORTATION, OR OVERNIGHT LODGING REQUIREMENTS IN REMOTE AREAS. NORMAL TRAVEL DISTANCE IS FIRST 50 MI. (80.5 KM) FROM OFFICE.
-ANY OVERTIME, PREMIUM OR ADDITIONAL LABOR FOR ACCESS TO SECURITY SENSITIVE AREAS
-INSTALLATION OF GAS SHUT-OFF VALVE.
-ANY ELECTRICAL WORK REQUIRED BY STATE OR LOCAL CODE. PLAN EXAMINATION FEES, PE OR ES APPROVAL STAMP.
-UNION LABOR, GOVERNMENT LABOR, OR PREVAILING WAGES REQUIRED FOR THE INSTALLATION.
-ANY AND ALL ELECTRICAL COMPONENTS/CONNECTIONS REQUIRED TO SHUT DOWN FANS. SHUT OFF DEVICE FOR ELECTRIC COOKING EQUIPMENT (SHUNT TRIP BREAKER OR MOTOR RATED CONTACTOR).
-ANY DISMANTLING OR REASSEMBLY REQUIRED TO GAIN ACCESS TO THE FIRE SUPPRESSION EQUIPMENT OR TO COMPLY WITH NFPA 96.
-ROUGH-IN HIDDEN CONDUIT FOR REMOTE PULL STATION OR GAS VALVE
-ANY CONDUIT OR WIRING.
-INSTALLATION OF MORE THAN (1) REMOTE PULL STATIONS OR DISTANCES GREATER THAN 20 FT (6.1M.)
-ANY ADDITIONAL ITEMS REQUIRED TO CORRECT PIPING DUE TO COOKING EQUIPMENT CHANGES OR DEVIATION FROM PLANS, OR ANY CHANGES FOR MISSING OR ADDITIONAL PARTS OTHER THEN THOSE INDICATED ON THE FIRE SUPPRESSION DETAIL.

NOTES:
1. ========== DENOTES FIELD INSTALLATION.
2. DO NOT USE BLACK WIRE ON MANUFACTURER SWITCH #4
3. DO NOT USE BLACK AND ORANGE WIRE ON SWITCH #3 ONLY FOR EXTINGUISH ALARM, LIGHT CIRCUITS, ETC.

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DOROTHY LANE
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ITEM #452-471 - FS

PROJECT NO.
56307

DRAWN
KMK

ACCUREX

DATE	DESCRIPTION
07/19/23	FINAL COORDINATION
07/28/23	BID/PERMIT DRAWINGS

STATE OF OHIO
BRYAN
OSBORN
79076
REGISTERED
PROFESSIONAL ENGINEER
7/28/23

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CINTECH CONSTRUCTION
RECEIVED
Date: 07/28/2023
By: Steve Michaelis
Via: Download Link

DOROTHY LANE MARKET
7200 MASON-MONTGOMERY ROAD
MASON, OH 45040

PROJECT NO.
56307

PROJECT TITLE
DLM
MASON
OHIO
STORE

DWG. TITLE
HOOD
DRAWINGS

DWG. NO.
M-20

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