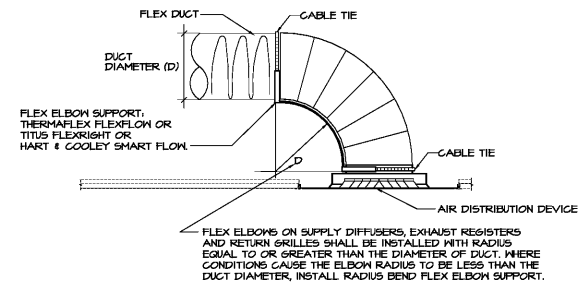
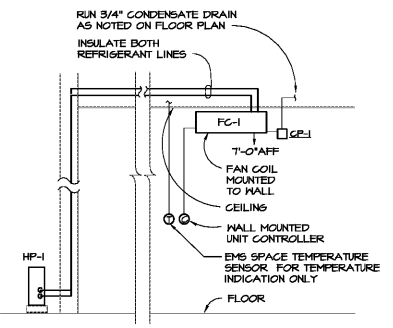


IONIZATION UNITS

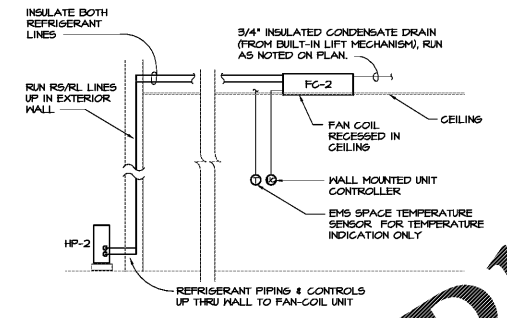
- IONIZATION UNITS SHALL BE SIZED TO COMPLY WITH ASHRAE 62.1-2014 AND SHALL MAINTAIN A CONCENTRATION OF POSITIVE AND NEGATIVE IONS AT A LEVEL OF 500 TO 1500 IONS PER CUBIC CENTIMETER IN THE PRIMARY SPACE SERVED BY THE DEVICE.
- IONIZATION UNITS SHALL BE UL LISTED OR ETL LISTED FOR INSTALLATION IN A RETURN AIR PLENUM.
- INSTALL IONIZATION UNITS IN SUPPLY FAN INLET OR AFTER FILTERS AND BEFORE COIL IN ACCESSIBLE LOCATION.
- CALCULATIONS FOR SIZING THE IONIZATION UNITS SHALL BE BASED ON THE USE OF THE SPACE AND ANY UNUSUAL ODOR PROBLEMS. PROVIDE DOUBLE CAPACITY ON SYMS, FITNESS ROOMS, LOCKER ROOMS, SCIENCE LABS, ART ROOMS, DARK ROOMS, COSMETOLOGY LABS & PRODUCTION AREAS.
- PROVIDE IONIZATION UNITS FOR ALL VPAGS & DUCTED FAN COIL UNITS AS FOLLOWS: 6PS-FC-3 BAS, BAS CONTACT, UNIT MOUNTED, 24V.
- PROVIDE IONIZATION UNITS FOR DUCTLESS SPLIT FAN COILS AS FOLLOWS: 6PS-FC-3T-BAS CONTACT, UNIT MOUNTED, 208V W/24V TRANSFORMER. DO NOT PROVIDE FOR LF OR MDF ROOMS.



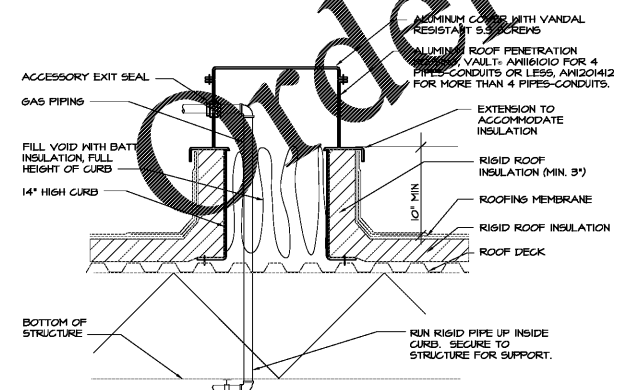
3 FLEX SUPPORT DETAIL
M2.1 NO SCALE



4 DUCTLESS SPLIT HEAT PUMP SYSTEM
M2.1 NO SCALE



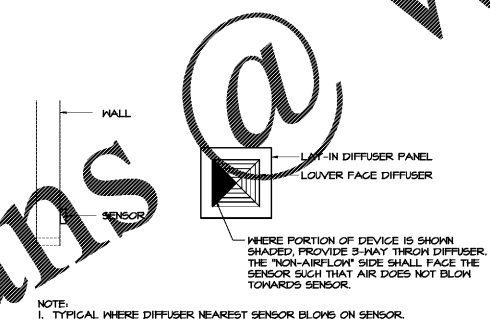
5 DUCTLESS SPLIT HEAT PUMP SYSTEM
M2.1 NO SCALE



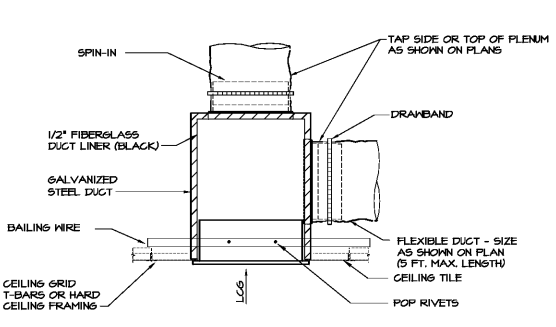
6 PIPE CURB DETAIL
M2.1 NO SCALE

HVAC LEGEND

SYMBOL	DESCRIPTION
[Symbol]	SUPPLY DUCT
[Symbol]	RETURN OR EXHAUST DUCT
[Symbol]	RECTANGULAR DUCT UP (SUPPLY SHOWN)
[Symbol]	RECTANGULAR DUCT DOWN (SUPPLY SHOWN)
[Symbol]	RECTANGULAR DUCTWORK - 20\"/>



1 DIFFUSER BLANK-OFF DETAIL
M2.1 NO SCALE



2 LCG, CG, OR PLENUM DETAIL
M2.1 NO SCALE

DESIGN CONDITIONS

SEASON	OUTSIDE	DB	WB	MCDB
SUMMER	- OUTSIDE	93.9F	74.2F	MCDB
	- INSIDE	78.7F	58.9F	MCDB
WINTER	- OUTSIDE	21.5F		
	- INSIDE	72F		
	- INSIDE	70F		GYMNASIUMS

SYSTEMS ARE DESIGNED TO COMPLY WITH THE 2018 INTERNATIONAL MECHANICAL CODE WITH ALL SUBSEQUENT GEORGIA AMENDMENTS, THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE WITH ALL SUBSEQUENT GEORGIA SUPPLEMENTS AND AMENDMENTS, AND ASHRAE STANDARD 62.1-2014 IAQ PROCEDURE. IONIZATION UNITS ARE USED TO REDUCE THE CONTAMINANTS LISTED IN APPENDIX B TO LESS THAN THE MAXIMUM ACCEPTABLE LEVEL. OUTSIDE AIR IS PROVIDED AT A MINIMUM OF 5 CFM PER PERSON IN EACH SPACE (7.5 CFM PER PERSON IN CLASSROOMS) OR MORE IF REQUIRED TO OFFSET BUILDING EXHAUST & MAINTAIN A POSITIVE PRESSURE IN THE BUILDING.

ELECTRIC UNIT HEATERS

HEATER DESIG.	TYPE MOUNTING	W / V / FR.	MANUFACTURER & MODEL NUMBER	ACCESSORIES
EH-1	RECESSED WALL MOUNTED	15 / 208 / 1Ø	QMARK APN	RECESSED BOX, 6 GA. BRASS INTERNAL 1ST DISCONNECT
EH-2	RECESSED CEILING MOUNTED	3.0 / 208 / 1Ø	QMARK CD	INTEGRATED DISCONNECT, 24V CONTROL TRANSFORMER & RELAY FROM ROOM

EXHAUST FANS

FAN DESIG.	TYPE	CFM	EXT. S.P. TH. Ø	MOTOR HP	DRIVE TYPE	MAX RPM	MAX. BONES & MODEL NO.	MANUFACTURER	CONTROL SEQUENCE
EF-1	POWER ROOF VENTILATOR	125	1/25	1/25 HP	DIRECT	1800	4.0	FENN D4105	EMS
EF-2	POWER ROOF VENTILATOR	200	1/25	1/25 HP	DIRECT	1800	4.0	FENN D4105	SM
EF-3	POWER ROOF VENTILATOR	480	1/25	1/6 HP	DIRECT	1550	10.0	FENN D413R	EMS
EF-4	POWER ROOF VENTILATOR	340	1/25	1/11 HP	DIRECT	1800	4.0	FENN D4115	EMST

AIR DISTRIBUTION DEVICES

MARK	TYPE	NOMINAL SIZE	NECK SIZE	FLEXIBLE DUCT SIZE	SERVICE
A	LGD	4 x 4	6\"/>		

AIR DISTRIBUTION DEVICES LEGEND

SYMBOL	DESCRIPTION
LGD	LAY-IN CEILING SUPPLY DIFFUSER - KRUEGER 55H SQUARE LOWER FACE ALUMINUM DIFFUSER WITH 24\"/>
LCG	LAY-IN CEILING RETURN GRILLE - KRUEGER EGCS GRILLE. 1/2\"/>
CG	CEILING EXHAUST GRILLE - KRUEGER 5555H GRILLE WITH HORIZONTAL ANGLE ALUMINUM BLADES SPACED 1/2\"/>
CR	CEILING EXHAUST REGISTER - KRUEGER EGCS REGISTER WITH 1/2\"/>
BG	LOW SIDEWALL RETURN GRILLE - KRUEGER 555H ALUMINUM GRILLE WITH HORIZONTAL ANGLE BLADES SPACED 1/2\"/>

VERTICAL PACKAGED GAS/ELEC A.C.

UNIT DESIGNATION	V30
MANUFACTURER	BAIRD
MODEL NUMBER	H30G
VOLTAGE / PHASE	208V-1Ø

EVAPORATOR FAN PERFORMANCE

TOTAL SUPPLY AIR (CFM)	1000
MINIMUM OUTSIDE AIR (CFM)	150
EXTERNAL STATIC PRESSURE (\"/>	

COOLING PERFORMANCE

TOTAL CAPACITY (BTUH)	24,800
SENSIBLE CAPACITY (BTUH)	22,840
ENTERING AIR TEMPERATURE DBWB (\"/>	

HEATING PERFORMANCE

HEATING INPUT (BTUH)	45,000
HEATING OUTPUT (BTUH)	36,000
TEMPERATURE RISE (\"/>	

ACCESSORIES

FILTERS	YES
MOTORIZED FRESH AIR DAMPER	YES
BUILT-IN BREAKER	NO
DEHUMIDIFICATION WITH HOT-GAS REHEAT	YES
HALL ADAPTA CURB	NO
UNIT COLOR	GRAY/BEIGE

SPLIT SYSTEM HEAT PUMP UNIT

UNIT DESIGNATION	FC/HP-3 (48)
MANUFACTURER	CARRIER
FAN-COIL UNIT MODEL NUMBER	FX40D4R
HEATER MODEL NUMBER	KFCEH60B15
HEAT PUMP MODEL NUMBER	25HC542
REFRIGERANT	R410a

SUPPLY FAN PERFORMANCE

SUPPLY AIR (CFM)	1600
MINIMUM OUTSIDE AIR (CFM)	140
EXTERNAL STATIC PRESSURE (\"/>	

COOLING PERFORMANCE

TOTAL CAPACITY (BTUH)	41,500
SENSIBLE CAPACITY (BTUH)	36,260
ENTERING AIR TEMPERATURE DBWB (\"/>	

HEATING PERFORMANCE

HEAT PUMP OUTPUT (BTUH)	28,000
ENTERING AIR TEMPERATURE (\"/>	

ELECTRIC HEAT

RESISTANCE HEATER W / V / PH	11.3 / 208 / 3
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ACCESSORIES

LOW AMBIENT CONTROL	YES
LONG LINE APPLICATION COMPONENTS	NO
ACCESSORY LINESSET COVER	YES

DUCTLESS SPLIT SYSTEM UNITS

UNIT DESIGNATION	FC/HP-(12)	FC/HP-(12)
MANUFACTURER	CARRIER	CARRIER
FAN-COIL UNIT MODEL NUMBER	40HAGE12B	40MEG12
FAN-COIL UNIT TYPE	WALL MOUNTED	CASSETTE
CONDENSING UNIT MODEL NUMBER	—	—
HEAT PUMP UNIT MODEL NUMBER	38MARB12	38MARB12

SUPPLY FAN PERFORMANCE

SUPPLY AIR (CFM)	360	340
EXTERNAL STATIC PRESSURE (\"/>		

COOLING PERFORMANCE

TOTAL CAPACITY (BTUH)	12,000	12,000
ENTERING AIR TEMPERATURE DBWB (\"/>		

HEATING PERFORMANCE

HEAT PUMP OUTPUT (BTUH)	12,000	12,000
ENTERING AIR TEMPERATURE (\"/>		

ACCESSORIES

WALL-MTD, HARD-WIRED CONTROLLER	YES	YES
ADAPTER FOR EMS START/STOP	YES	YES
ACCESSORY FOR HEATING CYCLE LOCK-OUT	YES	YES
LOW AMBIENT CONTROL, CRANKCASE HEATER	YES	YES

CONDENSATE PUMP

GE-L 60 GPH @ 5', 24\"/>

DRAWING ISSUE RECORD

DATE	REVISIONS	NO.
4-6-2021	ISSUE TO BID	

cunningham forehand matthews moore
 ADDITION TO COLHAM FERRY ELEMENTARY SCHOOL
 191 COLHAM FERRY ROAD, WATKINSVILLE, GA 30677
 FOR BOARD OF EDUCATION
 OCONEE COUNTY, GEORGIA
 OCEAN COUNTY, GA
 DOE FACILITY CODE 3030
 DATE: DECEMBER 15, 2020 9:41:00 AM
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