

**PLAQUE CEILING AIR DISTRIBUTION SCHEDULE (a)(b)**

SYMBOL (g)	CFM (c)	CONN. SIZE (d)	RUNOUT	NC (e)	PD (f)	REMARKS
1A CFM	0-99	6" ∅	6" ∅	20	< 0.05	
1B CFM	100-199	6" ∅	8" ∅	23	< 0.05	
1C CFM	200-299	8" ∅	8" ∅	22	< 0.05	
1D CFM	300-399	10" ∅	10" ∅	20	< 0.06	
1E CFM	400-599	12" ∅	12" ∅	24	< 0.10	
1F CFM	600-799	14" ∅	14" ∅	25	< 0.12	
1G CFM	800-899	15" ∅	15" ∅	26	< 0.15	

- (a) 360 DEGREE RADIAL DIFFUSER WITH FACE PLATE
- (b) GRILLES SHALL BE:
- LAY-IN SUPPLY. PRICE (A)SPD, TYPE 31 FRAME
  - LAY-IN RETURN / EXHAUST. PRICE (A)SPD, TYPE 31 FRAME
  - SURFACE MOUNTED SUPPLY. PRICE (A)SPD, TYPE 31 FRAME
  - SURFACE MOUNTED RETURN / EXHAUST. PRICE (A)SPD, TYPE 31 FRAME
  - FINISH: WHITE
- (c) CFM IS FOR GENERAL INFORMATION ONLY. SOME GRILLES MAY BE SIZED LARGER
- (d) ALSO DUCT RUNOUT SIZE IN INCHES (UNLESS LARGER RUNOUT INDICATED ON PLANS). TRANSITION TO NECK IF NECK DIFFERENT SIZE
- (e) NC @ 10db ROOM ATTENUATION (Re: 10<sup>-10</sup> WATTS), 4 WAY THROW
- (f) TOTAL PRESSURE (IN WG)
- (g) LAY-IN TYPE UNITS SHALL HAVE 24"x24" FACE PANEL AND SHALL BE INDICATED BY AN "L" SUFFIX. SEE SPECIFICATIONS FOR DIMENSIONS OF NON LAY-IN TYPE UNITS

**PERFORATED CEILING AIR DISTRIBUTION SCHEDULE (a)(b)**

SYMBOL (g)	CFM (c)	NOM. SIZE (d)	RUNOUT	NC (e)	PD (f)	REMARKS
2A CFM	0-900	22x22	SEE DWGS	<15	< 0.02	
2B CFM	0-200	12x12	SEE DWGS	<15	< 0.02	

- (a) PERFORATED FACE AIR DISTRIBUTION UNITS.
- (b) GRILLES SHALL BE:
- LAY-IN RETURN/EXHAUST. PRICE 10(A)
  - SURFACE MOUNTED RETURN/EXHAUST. PRICE 10(A)
  - FINISH: WHITE
- (c) CFM IS FOR GENERAL INFORMATION ONLY. SOME GRILLES MAY BE SIZED LARGER
- (d) ALSO DUCT RUNOUT SIZE IN INCHES (UNLESS LARGER RUNOUT INDICATED ON PLANS). TRANSITION TO NECK IF NECK DIFFERENT SIZE
- (e) NC @ 10db ROOM ATTENUATION (Re: 10<sup>-10</sup> WATTS), 4 WAY THROW
- (f) TOTAL PRESSURE (IN WG)
- (g) LAY-IN TYPE UNITS SHALL HAVE 24"x24" FACE PANEL AND SHALL BE INDICATED BY AN "L" SUFFIX. SEE SPECIFICATIONS FOR DIMENSIONS OF NON LAY-IN TYPE UNITS

**MECHANICAL SYMBOL LEGEND**

	SUPPLY OR OUTSIDE AIR GRILLE		CP-1 CONTROL PANEL NO.1
	RETURN AIR GRILLE		BACS-1 BUILDING AUTOMATION CONTROL SYSTEM PANEL NO. 1
	EXHAUST AIR GRILLE		DCP-1 DAMPER CONTROL PANEL NO. 1
	DUCT TURNED TO		ESS EMERGENCY SHUT DOWN SWITCH
	DUCT TURNED AWAY		MPS MANUAL PULL STATION (RANGE HOOD)
	DUCT CAPPED		PS PURGE SWITCH
	ACOUSTICAL DUCT LINER		S SWITCH
	DUAL WALL DUCT (SHADED OR WHERE NOTED)		SWITCH
	EQUIPMENT LOCATED ON ROOF		T THERMOSTAT / SPACE SENSOR
	INSIDE DUCT DIMENSION		THERMOSTAT / SPACE SENSOR
	OPPOSED BLADE VOLUME DAMPER		THERMOSTAT / SPACE SENSOR
	FIRE DAMPER		NTS NIGHT SETBACK THERMOSTAT / SENSOR
	SMOKE DAMPER		TC-1 TIME CLOCK NO. 1
	COMBINATION FIRE / SMOKE DAMPER		OS OVERRIDE SWITCH
	120V POWER IN J-BOX		H HUMIDISTAT / HUMIDITY SENSOR
	RELIEF DAMPER		HUMIDISTAT / HUMIDITY SENSOR
	MOTORIZED DAMPER		UD UNDERCUT DOOR
	CONCEALED REGULATOR		FLEXIBLE DUCT
	BIPOLAR IONIZATION		FILTER SECTION
	CARBON MONOXIDE MONITORING PANEL		DD DUCT SMOKE DETECTOR
	INDICATOR LAMP		CONNECT NEW TO EXISTING
	LIGHT FIXTURE		CONTROL WIRING
	# POUNDS (OR NUMBER)		AD ACCESS DOOR
	10" ∅ 10" ROUND DUCT (INSIDE DIM)		C CLEANOUT
	DIFFERENTIAL PRESSURE		CFM AIR DISTRIBUTION (OTHER SYMBOLS SIM)
	FPS FLAT PLATE SENSOR		EJ EXPANSION JOINT
	VOC VOC SENSOR		CO2 CO2 SENSOR
			PIPE END RISES UP
			PIPE END DROPS DN
			PIPE TEE RISES UP
			PIPE TEE DROPS DN

**MECHANICAL GENERAL NOTES**

- DO NOT SCALE DRAWINGS. (SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS) FIELD VERIFY EXISTING CONDITIONS OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.
- EXTEND ALL DRAIN LINES AND RELIEF LINES TO NEAREST FLOOR DRAIN OR AS INDICATED ON PLANS. CONDENSATE DRAINS SHALL BE TRAPPED. GENERALLY ROUTE PIPE DOWN WALL, EXPOSED IN MECH. ROOMS AND TO DRAIN UNLESS NOTED OTHERWISE. ROUTE TO MINIMIZE TRIPPING HAZARD. PROVIDE CLEANOUTS AT ALL CHANGES OF DIRECTION GREATER THAN 90 DEGREES.
- ALL PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS, ROOFS AND PARTITIONS EXCEPT WHERE PROHIBITED BY FIRE CODES.
- LOCATE ALL THERMOSTATS, HUMIDISTATS AND SWITCHES 48" TO TOP OF DEVICE ABOVE FINISH FLOOR. UNLESS NOTED OTHERWISE.
- ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE SPECIFICATIONS. HANGERS SHALL BE ADJACENT TO ELBOWS AND AT EQUIPMENT TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT. SUPPORT DETAILS SHALL BE SUBMITTED TO THE MECHANICAL ENGINEER.
- ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED WITH THE WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID INTERFERENCE.
- AIR DISTRIBUTION SYSTEMS WITH MORE THAN ONE BRANCH, OR MULTIPLE OUTLETS ON A BRANCH, SHALL HAVE VOLUME DAMPERS TO BALANCE AIR FLOWS. SPIN IN FITTINGS ARE PERMITTED FOR CONNECTING FLEX DUCT TO BRANCH OR TRUNK DUCTS WHERE FLEX DUCTS ARE INDICATED. IF FLEX DUCT CANNOT BE CONNECTED WITH A SPIN IN, A HARD DUCTED TAKEOFF MUST BE PROVIDED.
- 45 DEGREE TAKEOFFS SHALL BE USED ON ALL HARD DUCTED SUPPLY BRANCHES.
- MOUNT SUSPENDED COOLING UNITS HIGH ENOUGH ABOVE CEILING FOR PROPER SLOPE ON DRAIN LINE.
- ALL PIPING, DUCTS, VENTS, ETC. EXTENDING THRU EXTERIOR WALLS AND ROOFS SHALL BE FLASHED AND COUNTERFLASHED.
- PROVIDE ALL TRANSITIONS REQUIRED FOR INSTALLATION OF DUCT, DUCT HEATERS, AIR VOLUME CONTROLLERS, AIR HANDLING UNITS, FANS, AND ALL OTHER EQUIPMENT AND APPURTENANCES.
- PROVIDE INSULATED BLANK-OFF PANEL FOR ALL UNUSED PORTION OF LOUVER (WHICH HAVE MECHANICAL DUCT CONNECTIONS).
- ALL TRANSFER DUCTS SHALL BE LINED WITH ONE INCH ACOUSTICAL LINER.
- ALL DUCT IS GALVANIZED SHEETMETAL EXCEPT AS NOTED.
- DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- INTAKES FOR AIR HANDLING EQUIPMENT SHALL BE A MINIMUM OF TEN FEET AWAY FROM ANY EXHAUST OR VENT.
- ALL COOLING UNITS LOCATED IN CONCEALED LOCATIONS SHALL HAVE AUXILIARY DRAIN PANS.
- AIR DISTRIBUTION UNITS SHALL HAVE TRIM REQUIRED FOR FINISHED SERVICE.
- NO OPENINGS IN ROOF FOR DUCT, PIPING, EQUIPMENT OR ACCESSORIES WITHIN 5 FEET OF BUILDING FIRE WALL. (I.E. WALL RATED GREATER THAN 2 HOUR)
- ALL EQUIPMENT SHALL MEET THE PROJECT'S SEISMIC DESIGN AND WIND LOAD REQUIREMENTS.
- WHERE DUCTS ARE INDICATED TO BE OFFSET, OFFSET THE LOWER VELOCITY DUCT WHILE KEEPING THE HIGHER VELOCITY DUCT AS STRAIGHT AS PRACTICAL.

**MECHANICAL ABBREVIATIONS**

ABV ABOVE	IDHP-1 INDOOR HEAT PUMP NO.1
AFF ABOVE FINISHED FLOOR	IH-1 INTAKE HOOD NO.1
AHU-1 AIR HANDLING UNIT NO.1	IN INCHES
AFMS-1 AIRFLOW MEASURING STATION NO.1	KHF-1 KITCHEN HOOD FAN SYSTEM NO.1
BACS BUILDING AUTOMATION CONTROL SYSTEM	MAU-1 MAKEUP AIR UNIT NO.1
BHP BRAKE HORSE POWER	MER MECHANICAL EQUIPMENT ROOM
BOD BOTTOM OF DUCT	MOD MOTOR OPERATED DAMPER
BOP BOTTOM OF PIPE	MVD MANUAL VOLUME DAMPER
BV BRICK VENT	NC NORMALLY CLOSED
CART CARTRIDGE (FILTER)	NO NORMALLY OPEN
CEF-1 CEILING EXHAUST FAN NO.1	OC ON CENTER
CFM CUBIC FEET PER MINUTE.	ODAC-1 OUTDOOR AIR CONDITIONER NO.1
CLG CEILING	ODHP-1 OUTDOOR HEAT PUMP NO. 1
CO CLEAN OUT	ODP OPEN DRIP PROOF
CP-1 CONDENSATE PUMP NO.1	PD PRESSURE DROP
CU-1 CONDENSING UNIT NO.1	PFD PIPE TO FLOOR DRAIN
CUH-1 CEILING UNIT HEATER NO.1	PH PHASE
CV-1 CONSTANT VOLUME UNIT NO.1	REF REFRIGERANT LINES
D DRAIN	RH-1 RELIEF HOOD NO.1
DC-1 DUST COLLECTION SYSTEM NO.1	RTU-1 ROOFTOP UNIT NO.1
DG DOOR GRILLE	SF SQUARE FOOT
DHS-1 DEHUMIDIFICATION SYSTEM NO.1	SF-1 SUPPLY FAN NO.1
ECH-1 ELECTRIC CABINET HEATER NO.1	SP STATIC PRESSURE SENSOR
EDH-1 ELECTRIC DUCT HEATER NO.1	SPAC-1 SINGLE PACKAGE AIR CONDITIONER NO.1
EF-1 EXHAUST FAN NO.1	SPHP-1 SINGLE PACKAGE HEAT PUMP NO.1
EFF EFFICIENCY	SSAC-1 SPLIT SYSTEM AIR CONDITIONER NO.1
EJ EXPANSION JOINT	SSHP-1 SPLIT SYSTEM HEAT PUMP NO.1
ELEC ELECTRICAL	T1-2 TERMINAL UNIT NO.2, AHU NO.1
ERHP-1 ELECTRIC RADIANT HEATING PANEL NO.1	TA THROW AWAY (FILTER)
ESP EXTERNAL STATIC PRESSURE	TC TIME CONTROL
EUH-1 ELECTRIC UNIT HEATER NO.1	TD TRANSFER DUCT
EW-1 ELECTRIC WALL HEATER NO.1	TEAO TOTALLY ENCLOSED AIR OVER
EXT EXTERNAL	TEFC TOTALLY ENCLOSED FAN COOLED
FPS FEET PER SECOND	UH-1 UNIT HEATER NO.1
FT FEET	UNO UNLESS NOTED OTHERWISE
FLR FLOOR	VAV-1 VARIABLE AIR VOLUME BOX NO.1
GCO GRADE CLEANOUT	VFD VARIABLE FREQUENCY DRIVE
HC-1 HEATING COIL NO.1	VEL VELOCITY
HP HORSE POWER	VOLT VOLTAGE
HVU-1 HEATING AND VENTILATING UNIT NO.1	WMAC-1 WALL MOUNTED AIR CONDITIONER NO.1
IDAC-1 INDOOR AIR CONDITIONER NO.1	WMHP-1 WALL MOUNTED HEAT PUMP NO.1

**ROOFTOP DX VARIABLE AIR VOLUME AIR HANDLER UNIT SCHEDULE**

ROOFTOP VAV #	LOCATION	EXT * SP(a)	CFM			FANS				COMPRESSOR NO	ELECTRIC HEAT RLA	KW	VOLT/PH	COOLING COIL CAPACITY								MAX. WEIGHT #	ELECTRIC			MANUFACTURER AND MODEL	REMARKS
			TOT	MIN	OA	NO	FLA	BHP	HP					OUTDOOR DB T		ENT AIR		LVG AIR		EER(b)	MCA		MOC	VOLT/PH			
														DB	WB	DB	WB	DB	WB								
SPAC-1	ROOF	3.0	9,000	-	-	2	2.9/2.7	3.91/3.91	5.0/5.0	2	27.6/23.2	30	460/3	348.88	227.81	95	79	66.6	52.44	52.38	10.7	7250	85	110	460/3	TRANE RE030	1 2 3 4 5 6 7 8 9
SPAC-2	ROOF	3.0	10,000	-	-	2	2.9/2.7	4.34/3	5.0/5.0	2	27.6/23.2	30	460/3	351.82	240.62	95	78.6	66.2	53.7	53.6	10.7	6594.7	85	110	460/3	TRANE RE030	1 2 3 4 5 6 7 8 9

- \* ESP INCLUDES DUCT, GRILLES, AND LOADED FILTERS (a) INCHES WG (b) ARI CONDITIONS
- ROOFTOP CURB
  - DOWN DISCHARGE
  - SCR HEATER
  - FAN VFD'S
  - DIGITAL SCROLL OR INVERTER COMPRESSORS
  - DISCONNECT SWITCH
  - SINGLE PT CONNECTION
  - NON-POWERED GFI RECEPTACLE
  - MOUNTED OA DAMPER

**FAN SCHEDULE**

FAN #	LOCATION	SERVICE	CFM	ESP	MAX BHP	MAX HP	RPM	MAX * SONES	MAX WEIGHT (#)	ELECTRICAL VOLT / PH	CONTROL	MANUFACTURER AND MODEL	REMARKS
EF-1	ROOFTOP	TOILET	1725	0.75	0.4	0.5	1550	14	75	115/1	BAS	GREENHECK G-130-V	1 2 3 4 5 6 7
EF-2	ROOFTOP	TOILET	1725	0.5	0.32	0.5	1550	13.9	75	115/1	BAS	GREENHECK G-130-V	1 2 3 4 5 6 7

\* SOUND LEVEL DOES NOT INCLUDE ANY UNIT ACOUSTICAL OPTIONS

- ROOFTOP FAN
- DIRECT DRIVE
- BACKDRAFT DAMPER
- BIRDSCREEN
- DISCONNECT SWITCH
- ROOF CURB
- ECM MOTOR WITH MOTOR MOUNTED DIAL

**SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE (DUCTLESS)**

INDOOR AC #	LOCATION	INDOOR UNIT				OUTDOOR UNIT										REMARKS															
		CFM		ESP * (a)	HP	ELECTRIC HEAT KW	MAX WEIGHT (#)	ELECTRICAL			MANUFACTURER AND MODEL	OUTDOOR AC #	FANS		COMPRESSOR NO		ELECTRICAL RLA	MAX WEIGHT (#)	COOLING COIL CAPACITY			SEER (b)									
		TOTAL	OA					MAX MCA	MOC	VOLT / PH			HP	NO					TOTAL	SENS	ENT AIR DB		WB	LVG AIR DB	WB						
IDAC-1	WALL MOUNTED	370	-	-	-	50	-	-	208/1	-	-	MITSUBISHI PKA A18	ODAC-1	-	1	1	-	125	11	25	208/1	MITSUBISHI PUY A36 BS	18	12.2	95	80	67	-	-	18.5	1 2 3 4 5 6 7 8 9
IDAC-2	WALL MOUNTED	370	-	-	-	50	-	-	208/1	-	-	MITSUBISHI PKA A18	ODAC-2	-	1	1	-	125	11	25	208/1	MITSUBISHI PUY A36 BS	18	12.2	95	80	67	-	-	18.5	1 2 3 4 5 6 7 8 9

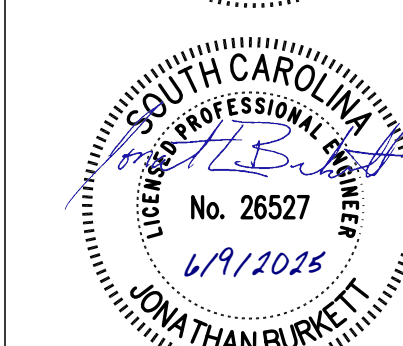
- \* INCLUDES DUCT, GRILLES, AND LOADED FILTERS; (a) INCHES WG; (b) @ ARI CONDITIONS
- PROVIDE START CAPACITOR FOR SINGLE PHASE UNITS
  - LOW AMBIENT CONTROL TO \_F
  - FACTORY MOUNTED CONDENSATE PUMP
  - POWER INDOOR UNIT FROM OUTDOOR UNIT
  - CEILING MOUNTED RECESSED INDOOR UNIT
  - WALL MOUNTED INDOOR UNIT
  - DIGITAL SCROLL OR INVERTER COMPRESSOR
  - 454B REFRIGERANT
  - HARD WIRED THERMOSTAT

LAKE MURRAY ELEMENTARY SCHOOL ADDITION  
1531 THREE DOG ROAD  
CHAPIN, SC 29036



ISSUE	DATE
ISSUE FOR BID	06/09/2025

DRAWN BY: HUH  
CHECKED BY: JEB



HVAC SCHEDULES

M2.01

