

MECHANICAL LEGEND

	SUPPLY AIR DIFFUSER	AF	ABOVE FINISH FLOOR
	RETURN AIR DIFFUSER	AHU	AIR HANDLING UNIT
	EXHAUST AIR DIFFUSER	B.D.	BOTTOM OF DUCT
	DIRECTIONAL AIR FLOW	BHP	BRAKE HORSEPOWER
	MANUAL VOLUME DAMPER	BOG	BOTTOM OF GRILLE
	SUPPLY AIR DUCT UP & DOWN	BTU	BRITISH THERMAL UNITS
	RETURN AIR DUCT UP & DOWN	CFM	CUBIC FEET PER MINUTE
	EXHAUST OR OUTSIDE AIR DUCT UP & DOWN	CONN.	CONNECTION
	SUPPLY AIR DUCT UP & DOWN	CONT.	CONTINUATION
	RETURN AIR DUCT UP & DOWN	CW	DOMESTIC COLD WATER
	EXHAUST OR OUTSIDE AIR DUCT UP & DOWN	DB	DRY BULB
	VAV TERMINAL UNIT W/ REHEAT COIL	DIA.	DIAMETER
	DUCT SMOKE SENSOR	DIST.	DISTRIBUTION
	DIFFERENTIAL PRESSURE SENSOR	EXH	EXHAUST AIR
	CONNECT TO EXISTING	EDB	ENTERING DRY BULB TEMPERATURE
	THERMOSTAT	EWB	ENTERING WET BULB TEMPERATURE
	TEMPERATURE SENSOR	EWT	ENTERING WATER TEMPERATURE
	EQUIPMENT DESIGNATOR	FF	FINISH FLOOR
	GATE VALVE	FIXT.	FIXTURE
	CHECK VALVE	F.O.B.	FLAT ON BOTTOM
	BALANCING VALVE	FPM	FEET PER MINUTE
	THERMOMETER	FPS	FEET PER SECOND
	DIRECTION OF FLOW	FT.	FEET / FOOT
	PUMP	GA.	GAUGE
	STRAINER	GEHX	GREASE EXHAUST AIR DUCT
	PRESSURE GAUGE	GPM	GALLONS PER MINUTE
	PETE'S PLUG	H	HEIGHT
	DOUBLE CHECK ASSEMBLY	HP	HORSEPOWER
	PRESSURE REDUCING VALVE	I.D.	INSIDE DIAMETER
	UNION	IN.	INCHES
	2-WAY CONTROL VALVE	LBS.	POUNDS
	3-WAY CONTROL VALVE	LDB	LEAVING DRY BULB
	CAP	LWB	LEAVING WET BULB
	BALL SHUT OFF VALVE	LWT	LEAVING WATER TEMPERATURE
	FIRE DAMPER	MA	MAKE UP AIR
	FIRE / SMOKE DAMPER	MAX.	MAXIMUM
		MBH	THOUSANDS OF BTUs PER HOUR
		MD	MOTORIZED DAMPER
		MIN.	MINIMUM
		MVD	MANUAL VOLUME DAMPER
		NC	NOISE CRITERIA
		N.C.	NORMALLY CLOSED
		N.I.M.	NOT IN MECHANICAL
		NO.	NUMBER
		N.O.	NORMALLY OPEN
		O.A.	OUTSIDE AIR
		P	PERSON
		PSI	POUNDS PER SQUARE INCH
		P/T	PRESSURE / TEMPERATURE
		R.A.	RETURN AIR
		RECT.	RECTANGULAR
		REQ'D	REQUIRED
		S.A.	SUPPLY AIR
		S.P.	STATIC PRESSURE
		SQ.	SQUARE
		TEMP.	TEMPERATURE
		TYP.	TYPICAL
		VAV	VARIABLE AIR VOLUME
		W	WIDTH
		WB	WET BULB
		WPD	WATER PRESSURE DROP
		Ø	DIAMETER
	PILOT TUBE	T/A	T/A SERIES 794 DIFFERENTIAL PRESSURE CONTROLLER
	BALANCING VALVE	T/A	T/A STAD SERIES
	(HWS) HEATING WATER SUPPLY		
	(HWR) HEATING WATER RETURN		
	(HWRR) HEATING WATER REVERSE RETURN		
	(CHS) CHILLED WATER SUPPLY		
	(CHR) CHILLED WATER RETURN		
	(PC) PUMPED CONDENSATE		
	(HPS) HIGH PRESSURE STEAM		
	(HT) HEAT TRACED DOMESTIC HOT WATER		
	(SMR) SNOWMELT RETURN		
	(SMS) SNOWMELT SUPPLY		

FAN COIL UNIT

MARK NUMBER	FCU A1
DESIGN ELEVATION, FT	3,500
AREA SERVED	BLDG A VESTIBULE
CFM	3,160
MIN OSA, CFM	30
EXTERNAL STATIC PRESSURE (IN. W.C.)	1.0
MOTOR B.H.P.	2.49
MOTOR H.P.	3
WHEEL DIA/ TYPE	10.62/DWDI
CFM	3,160
MIN. ROWS	2
EAT/LAT (°F)	55/100
LWT/LMT (°F)	140/110
TOTAL CAPACITY (MBH)	138
FLOW RATE (GPM)	11
MAX. AIR PRESSURE DROP, IN. W.C.	0.3
MAX. WATER PRESSURE DROP, FT. HEAD	0.6
MIXING VALVE TYPE	3-WAY
CONNECTION SIZE, INCH	1-1/4
MIN. ROWS	3
FIN DIMS, HXL, INCHES	
MAX AIR PRESS DROP (°H2O)	
MAX. FLUID PRESSURE DROP, FT. W.C.	
DESIGN WEIGHT (LBS)	945
SMOKE DETECTOR	YES
ISOLATION TYPE	INT. SPRING
SMOKE DETECTOR	YES
DESIGN WEIGHT (LBS)	945

NOTE: SUPPLY FAN BHP ACCOUNTS FOR FUTURE COOLING COIL STATIC PRESSURE DROP. ADJUST DRIVE ACCORDINGLY.

HEATING WATER COIL

MARK NUMBER	HC E1	HC E2
DESIGN ELEVATION, FEET	3,500	3,500
AREA SERVED	BUILDING E	
SYSTEM	AHU-E1	AHU-E2
HEATING CFM	2125	3010
COOLING CFM	4350	6025
ENTERING AIR TEMP (°F.)		
LEAVING AIR TEMP (°F.)		
ENTERING WATER TEMP. (°F.)	140	140
LEAVING WATER TEMP (°F.)	110	110
TOTAL CAPACITY (MBH)		
FLOW RATE (GPM)		
FACE AREA (SQ FT)		
MAX. FACE VELOCITY (FPM)		
MIXING VALVE TYPE	3-WAY	3-WAY
CONNECTION SIZE, INCH		
MIN ROWS	3	3
FIN DIMS, HXL, INCHES		
MAX AIR PRESS DROP (°H2O)		
MAX. FLUID PRESSURE DROP, FT. W.C.		

EXHAUST FANS

MARK NUMBER	EF E1	EF E2	EF E3	EF E4
DESIGNED ELEVATION, FT	3500 FT			
TYPE	ROOF	ROOF	ROOF	ROOF
SYSTEM	SCIENCE 1101	SCIENCE 1102	SCIENCE 1218	SCIENCE PREP
CFM	1400	1400	1400	500
TOTAL SP. (IN H2O)	0.50	0.50	0.50	0.50
DRIVE	DD	DD	DD	DD
VFD	YES	YES	YES	YES
FAN RPM	1395	1395	1395	1
MOTOR HP	1/2	1/2	1/2	1/10
CONTROLLED BY	DDC	DDC	DDC	DDC
INTERLOCK WITH				
WHEEL TYPE	B.I.	B.I.	B.I.	B.I.
BACK DRAFT DAMPER/MOTORIZED DAMPER	-/YES	-/YES	-/YES	-/YES
ISOLATION	RIS	RIS	RIS	RIS
DESIGN WEIGHT (LBS)	50	50	50	50
MAX. SONES	12.5	12.5	12.5	7.7
BASIS OF DESIGN: GREENHECK	G-123-VG	G-123-VG	G-123-VG	G-090-VG

1. PERFORMANCE TEST IN COMPLIANCE WITH OMSC 507.16 SHALL BE REQUIRED FOR THE TESTING OF EACH KITCHEN HOOD SYSTEM.
 2. PROVIDE EF-11 WITH WALL COLLAR, MOTOR SIDE GUARD, CONTROL DAMPER AND EXTERIOR LOUVER.
 3. EF-8: PROVIDE ALUMINUM WHEEL, ALUMINUM RUB RING AND SHAFT SEAL.
 4. BF-1: PROVIDE MANUAL OVERRIDE SWITCH IN EACH OFFICE TO TURN FAN OFF. SEE ELECTRICAL FOR LOCATION AND DETAILS.

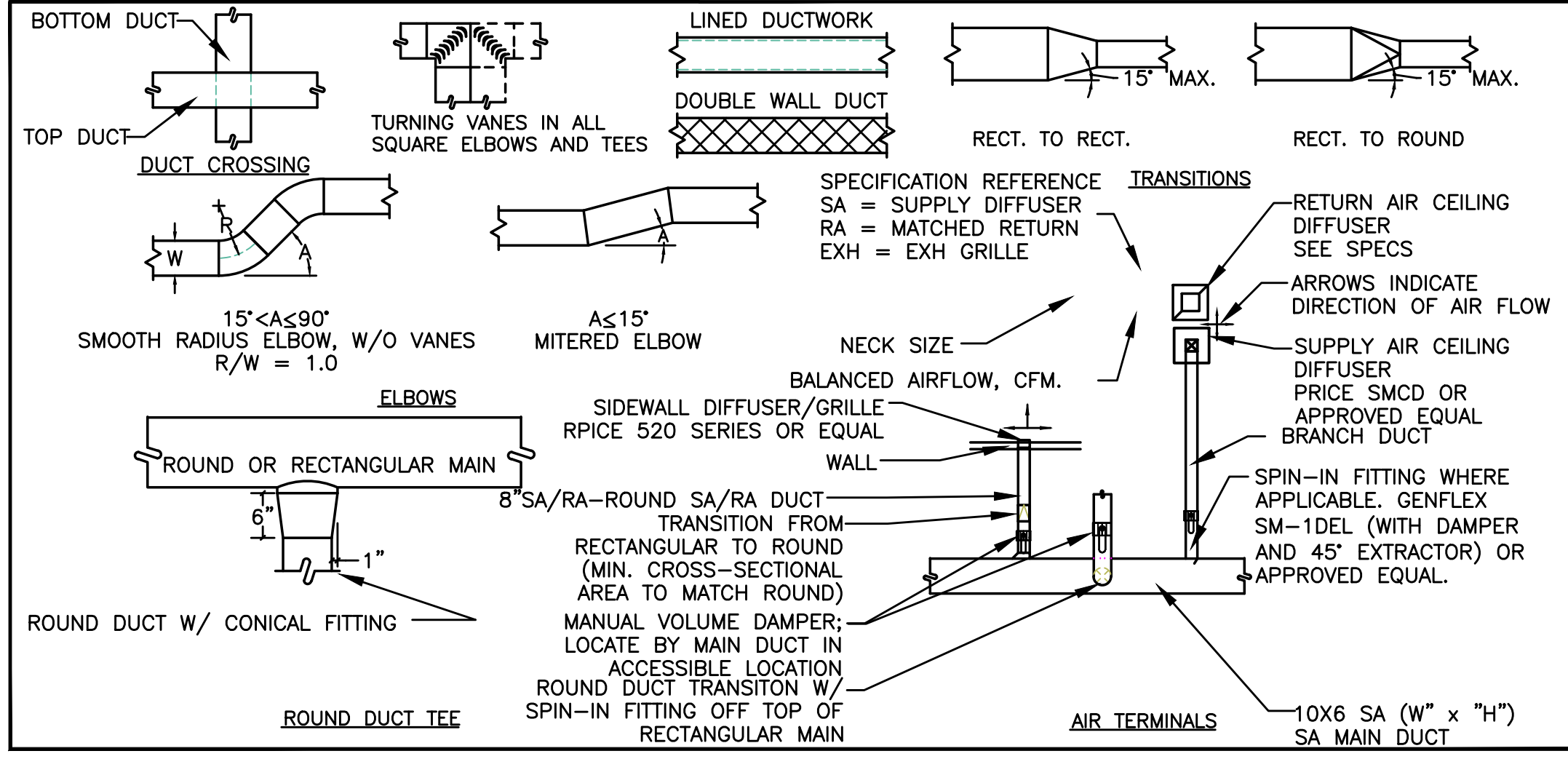
RETURN FANS

MARK NUMBER	RF E1	RF E2
DESIGNED ELEVATION, FT	3500 FT	
TYPE	IN-LINE	IN-LINE
SYSTEM	AHU-E1	AHU-E2
CFM	3995	5410
TOTAL SP. (IN H2O)	0.75	0.75
DRIVE	DD	DD
VFD	YES	YES
FAN RPM	951	1095
MOTOR HP	5	5
CONTROLLED BY	DDC	DDC
INTERLOCK WITH	AHU-E1	AHU-E2
BACK DRAFT DAMPER/MOTORIZED DAMPER	-/-	-/-
ISOLATION	FIS	YES
DESIGN WEIGHT (LBS)	370	370
MAX. SONES(INLET/OUTLET)	11.8/13.2	14.2/15.8
DISCHARGE/CONFIGURATION	INLINE	INLINE
BASIS OF DESIGN: GREENHECK	QEID-20-90-A50	QEID-20-90-A50

PUMPS

MARK NUMBER	SMP E1	P E1	P E2
SERVICE	HE-1 COLD SIDE	HX-1 COLD SIDE	HX-1 COLD SIDE
DESIGNED ALTITUDE, FT			
ARRANGEMENT	CENTRIFUGAL IN-LINE	CENTRIFUGAL IN-LINE	CENTRIFUGAL IN-LINE
STARTER TYPE	STARTER	STARTER	STARTER
FLOW RATE (GPM)			
HEAD (FT)			
MOTOR HP	2	1/4	1/4
RPM	1750	1750	1750
CONTROLLED BY	DDC	DDC	DDC
FLUID			
SUCTION PIPE SIZE			
DISCHARGE PIPE SIZE			
EFF @ FULL DESIGN FLOW			
BASE DESIGN MODEL, TACO:			

AIR DISTRIBUTION DETAILS



SNOW MELT SYSTEM

MARK NUMBER	HE E1
DESIGNED ALTITUDE, FT	3,500
TYPE	PLATE & FRAME
SYSTEM	SNOW MELT
CAPACITY, MBH	545
GPM	70.4
ENT. WATER (°F.)	140
LVG. WATER (°F.)	110
MAX PRESS DROP, FT. H2O	-
% PROPYLENE GLYCOL	40%
GPM	61.2
ENT. WATER (°F.)	180
LVG. WATER (°F.)	140
MAX PRESS DROP, FT. H2O	-
OPERATING WEIGHT, LBS	511

CONTRACTOR TO PROVIDE A FULL SUBMITTAL PACKAGE INCLUDING THE PEX PIPING LOOP LAYOUT FOR THE SNOW MELT ZONE.

CONTRACTOR SHALL FLUSH ALL SNOW MELT PIPING AND REFILL THE SYSTEM WITH A 45% MIXTURE OF NOT TOXIC POLYPROPYLENE ANTIFREEZE (WITH CORROSION INHIBITOR) PROVIDING FREEZE PROTECTION TO -16F AND BURST PROTECTION TO -51F.

NOTE:
1. SNOW MELT SYSTEM SHALL BE TREATED TO 40% PROPYLENE GLYCOL.

#	Date	Description
Revision Schedule		

PILOT BUTTE MIDDLE SCHOOL - BLDGS E&F
Project Address

BLRB architects

Drawing Title:

MECHANICAL LEGEND AND SCHEDULES

Date: 11.11.2017 Drawn By: INITIALS

Revised Date: Project No. 17.34B

Stamp Sheet No.

M6.01