



	SUPPLY AIR DIFFUSER	AFF	ABOVE FINISH FLOOR
	RETURN AIR DIFFUSER	AHU	AIR HANDLING UNIT
	EXHAUST AIR DIFFUSER	BOG	BOTTOM OF GRILLE
	DIRECTIONAL AIR FLOW	BTU	BRITISH THERMAL UNITS
	MANUAL VOLUME DAMPER	CFM	CUBIC FEET PER MINUTE
	SUPPLY AIR DUCT UP & DOWN	CONN.	CONNECTION
	RETURN AIR DUCT UP & DOWN	CONT.	CONTINUATION
	EXHAUST OR OUTSIDE AIR DUCT UP & DOWN	EXH	EXHAUST AIR
	SUPPLY AIR DUCT UP & DOWN	FPM	FEET PER MINUTE
	RETURN AIR DUCT UP & DOWN	FPS	FEET PER SECOND
	EXHAUST OR OUTSIDE AIR DUCT UP & DOWN	FT.	FEET / FOOT
	VAV TERMINAL UNIT W/ REHEAT COIL	GA.	GAUGE
	CONNECT TO EXISTING	IN.	INCHES
	TEMPERATURE SENSOR	L	LENGTH
	NOTE	LBS.	POUNDS
	EQUIPMENT DESIGNATOR	MAX.	MAXIMUM
	FIRE DAMPER	MBH	THOUSANDS OF BTUs PER HOUR
	FIRE / SMOKE DAMPER	MD	MOTORIZED DAMPER
	SMOKE DAMPER	MIN.	MINIMUM
	CAP EXISTING DUCT	MVD	MANUAL VOLUME DAMPER
		OA	OUTSIDE AIR
		R.A.	RETURN AIR
		REQ'D	REQUIRED
		S.A.	SUPPLY AIR
		TEMP.	TEMPERATURE
		TYP.	TYPICAL
		VAV	VARIABLE AIR VOLUME
		W	WIDTH
		WB	WET BULB
		ø	DIAMETER
		- - - - -	DEMOLISH, (R) RELOCATE
		(E)	EXISTING
		NEW WORK	NEW WORK
		=====	(HWS) HEATING WATER SUPPLY
		=====	(HWR) HEATING WATER RETURN
		=====	(HWRR) HEATING WATER REVERSE RETURN

BOTTOM DUCT

TOP DUCT

DUCT CROSSING

TURNING VANES IN ALL SQUARE ELBOWS AND TEES

LINED DUCTWORK

DOUBLE WALL DUCT

RECT. TO RECT.

RECT. TO ROUND

TRANSITIONS

RETURN AIR CEILING DIFFUSER PRICE PDDR OR APPROVED EQUAL

ARROWS INDICATE DIRECTION OF AIR FLOW

SUPPLY AIR CEILING DIFFUSER PRICE SMCD OR APPROVED EQUAL

PROVIDE TYPE 1 FRAME FOR HARD LID CEILING

BRANCH DUCT

SPIN-IN FITTING WHERE APPLICABLE, GENFLEX

SM-1DEL (WITH DAMPER AND 45° EXTRACTOR) OR APPROVED EQUAL

10X6 SA (W" x "H") SA MAIN DUCT

AIR TERMINALS

SPECIFICATION REFERENCE  
SA = SUPPLY DIFFUSER  
RA = MATCHED RETURN  
EXH = EXH GRILLE

8X8 SA 200 CFM

NECK SIZE

BALANCED AIRFLOW, CFM

SIDEWALL DIFFUSER  
SEE PLANS

SOFFIT WALL

6" x 1"

ROUND DUCT W/ CONICAL FITTING

8" SA/RA - ROUND SA/RA DUCT

TRANSITION FROM  
RECTANGULAR TO ROUND  
(MIN. CROSS-SECTIONAL  
AREA TO MATCH ROUND)

MANUAL VOLUME DAMPER;  
LOCATE BY MAIN DUCT IN  
ACCESSIBLE LOCATION

ROUND DUCT TRANSITION W/  
SPIN-IN FITTING OFF TOP OF  
RECTANGULAR MAIN

15° < A ≤ 90°  
SMOOTH RADIUS ELBOW, W/O VANES  
R/W = 1.0

A ≤ 15°  
MITERED ELBOW

ROUND OR RECTANGULAR MAIN

ROUND DUCT TEE

ROUND DUCT TRANSITION

1. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR AREA OF WORK.
2. PROVIDE SPRINKLER HEADS AS REQUIRED IN LOBBY AND CORRIDOR; RELOCATE EXISTING SPRINKLER HEADS IN CORRIDOR AS REQUIRED;
3. CONTRACTOR TO KEEP RECORD OF NEW SYSTEM INSTALLED AS WELL AS EXISTING TO REMAIN, AND ITEMS DISCOVERED OR ENCOUNTERED ON SITE THAT WERE NOT SHOWN ON THE PLANS. THESE INCLUDE SYSTEMS, DUCTWORK, PIPE, ETC. THAT DO NOT AFFECT OR ARE NOT PART OF THE PROJECT SCOPE, BUT ARE WITHIN THE BOUNDARIES OF THE PROJECT SCOPE. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS THAT ACCURATELY REFLECT THE CONDITIONS WITHIN THE BOUNDARY OF THE PROJECT SCOPE AT THE END OF THE PROJECT.
4. COORDINATE CEILING DIFFUSER LOCATION WITH ELECTRICAL, LOW VOLTAGE AND FIRE PROTECTION DISCIPLINES.
5. ALL SHOWN EXISTING DUCTWORK, DIFFUSERS, EQUIPMENT AND CAPACITIES ARE GATHERED FROM VARIOUS AS BUILTS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY SIZE AND LOCATION PRIOR TO COMMENCING WORK.

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**Bend-La Pine Schools SECURITY UPGRADES**  
**High Lakes Elementary School**  
2500 NW High Lakes Loop  
Bend, Oregon 97703

ISSUED:	DATE:
PERMIT SET / BID SET	02/14/18
CONFORMANCE SET	03/28/18
APR-11	06/08/18
AS-BUILT	09/04/18

JOB NUMBER:	
DRAWN BY:	EVK
CHECKED BY:	JVB

SHEET TITLE

ENLARGED  
HVAC  
FLOOR PLAN

SHEET NUMBER  
M1.1