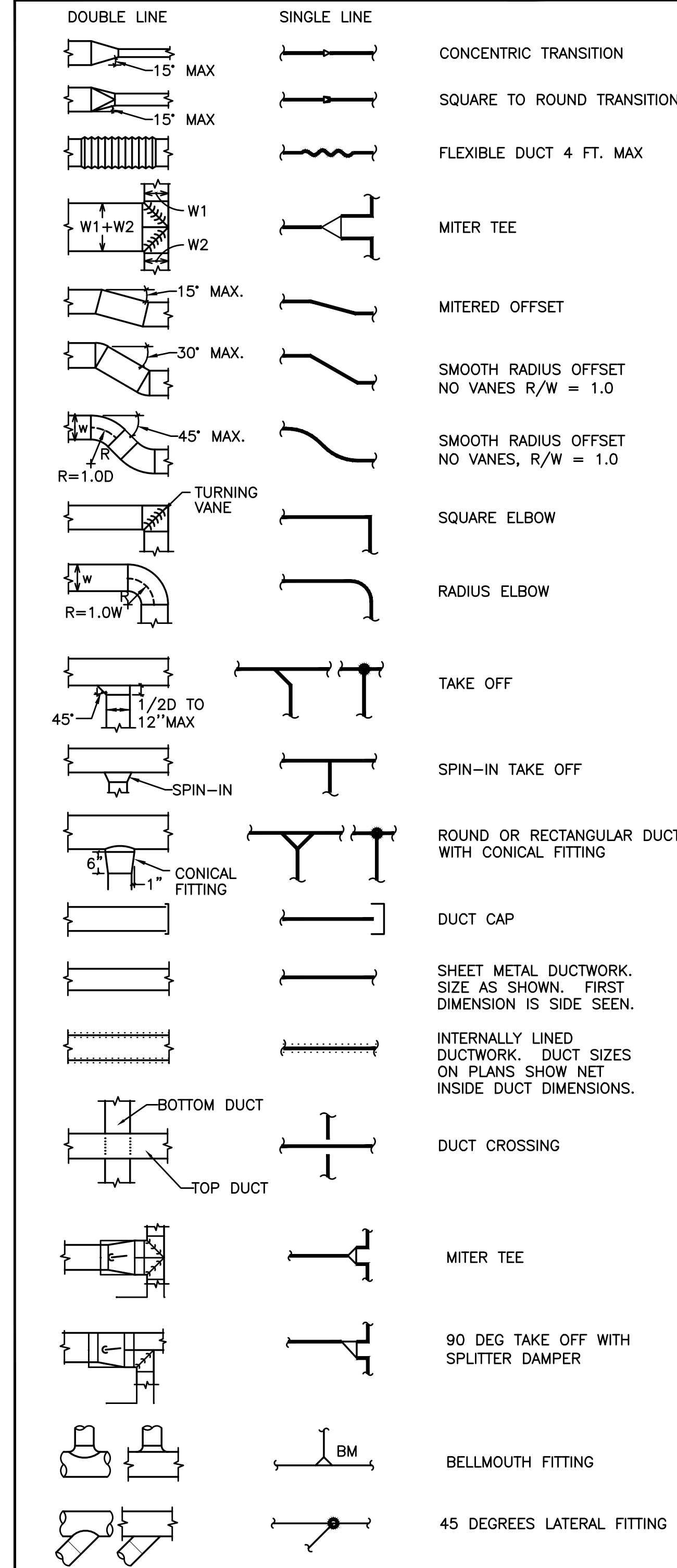


MECHANICAL LEGEND

	SUPPLY AIR DIFFUSER	AFF	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/OUTSIDE AIR DUCT UP & DOWN	BTU	BRITISH THERMAL UNITS
	RETURN AIR DUCT UP & DOWN	CFM	CUBIC FEET PER MINUTE
	EXHAUST AIR DUCT UP & DOWN	CONN.	CONNECTION
	DEMOLISH	CONT.	CONTINUATION
	EXISTING	CW	DOMESTIC COLD WATER
	CONNECT TO EXISTING	DB	DRY BULB
	THERMOSTAT	DIA.	DIAMETER
	TEMPERATURE SENSOR	DIST.	DISTRIBUTION
	NOTE	EXH	EXHAUST AIR
	EQUIPMENT DESIGNATOR	EDB	ENTERING DRY BULB TEMPERATURE
	GATE VALVE/SHUT-OFF VALVE SEE SPECS	EWB	ENTERING WET BULB TEMPERATURE
	CHECK VALVE	EWT	ENTERING WATER TEMPERATURE
	BALANCING VALVE	FF	FINISH FLOOR
	FLOW CONTROL/LIMITING VALVE	FIXT.	FIXTURE
	THERMOMETER	F.O.B.	FLAT ON BOTTOM
	DIRECTION OF FLOW	FPM	FEET PER MINUTE
	PUMP	FPS	FEET PER SECOND
	STRAINER W/DRAIN VALVE	FT.	FEET / FOOT
	PRESSURE GAUGE	GA.	GAUGE
	PETE'S PLUG	GEXH	GREASE EXHAUST AIR DUCT
	DOUBLE CHECK ASSEMBLY	GPM	GALLONS PER MINUTE
	PRESSURE REDUCING VALVE	H	HEIGHT
	UNION	HP	HORSEPOWER
	2-WAY CONTROL VALVE	I.D.	INSIDE DIAMETER
	3-WAY CONTROL VALVE	IN.	INCHES
	TRIPLE DUTY VALVE	L	LENGTH
	CAP	LBS.	POUNDS
	MOTORIZED DAMPER	LDB	LEAVING DRY BULB
	BALL/SHUT-OFF VALVE(SEE SPECS)	LWB	LEAVING WET BULB
	FIRE DAMPER	LWT	LEAVING WATER TEMPERATURE
	FIRE / SMOKE DAMPER	MA	MAKE UP AIR
	SMOKE DAMPER	MAX.	MAXIMUM
	FAN MOTOR	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
			(E) EXISTING
			(D) DEMOLISH
			NEW WORK
			(G) NATURAL GAS
			(CD) CONDENSATE DRAIN
			(RF) TWO OR THREE REFRIGERANT LINES
			(HWS) HEATING WATER SUPPLY
			(HWR) HEATING WATER RETURN
			(CHS) CHILLED WATER SUPPLY
			(CHR) CHILLED WATER RETURN
			EQUIPMENT MAINTENANCE CLEARANCE AND ACCESS

AIR DISTRIBUTION DETAILS



FIRE PENETRATION REQUIREMENTS FOR DUCTS:

2019 OMSC (OREGON MECHANICAL SPECIALTY CODE) & 2019 OSSC (OREGON STRUCTURAL SPECIALTY CODE)

CODE SECTIONS –SPECIFIC REQUIREMENTS, EXCEPTIONS AND DESIGN APPROACH REQUIREMENTS.

SECTION 607.6 – HORIZONTAL ASSEMBLIES
 PENETRATIONS BY DUCTS OF A FLOOR/CEILING OR ROOF/CEILING ASSEMBLY SHALL BE PROTECTED BY A SHAFT ENCLOSURE THAT COMPLIES WITH SECTIONS 713, 717.6.1 THROUGH 717.6.3 (OSSC) (SEE BELOW FOR VERTICAL ASSEMBLIES/SHAFT PENETRATIONS OR VERTICAL FIRE PARTITIONS – THIS WILL APPLY TO ALL DUCTS THAT ARE ROUTED UP IN A RATED SHAFT).
 OR
 SECTIONS 607.6.1 THROUGH 607.6.3 THROUGH PENETRATIONS OF NOT MORE THAN TWO FLOORS TO BE PROTECTED WITH EITHER LISTED FIRE DAMPER OR A THROUGH PENETRATION PER SECTION 714.5
 EXCEPTIONS: DUCTS PERMITTED TO PENETRATE THREE FLOORS OR LESS IF ALL 5 EXCEPTIONS ARE MET UNDER SECTION 607.6.1.

SECTION 607.5.5 SHAFT ENCLOSURES – PENETRATIONS ARE PERMITTED BY DUCTS WITH A LISTED FIRE AND SMOKE DAMPER OR
 EXCEPTIONS: (THE FOLLOWING EXCEPTIONS ARE USED IN PART OR IN WHOLE ON THIS PROJECT)
 1. FIRE DAMPERS ARE NOT REQUIRED FOR ANY OF THE FOLLOWING
 1.1 STEEL EXHAUST SUBDUCTS ARE EXTENDED NOT LESS THAN 22 INCHES ON A SUBDUCT SYSTEM WITH CONTINUOUS FLOW
 1.2 PENETRATIONS ARE TESTED IN ACCORDANCE WITH ASTM E119 OR UL263 (SEE ATTACHED CUT SHEETS ON UL PENETRATION DETAILS)
 2. GROUP R OCCUPANCIES USING A SUB DUCT SYSTEM AS NOTED ABOVE.
 3. SMOKE DAMPERS ARE NOT REQUIRED AT PENETRATIONS OF EXHAUST SHAFTS IN PARKING GARAGES WHEN SHAFTS ARE SEPARATED FROM OTHER SHAFTS BY NOT LESS THAN A 2 HOUR RATING.
 4. FIRE OR FIRE SMOKE DAMPERS ARE NOT REQUIRED IN KITCHEN OR CLOTHES DRYER EXHAUST SYSTEMS.

OSSC SECTION 713.8 PENETRATIONS.
 PENETRATIONS IN A SHAFT ENCLOSURE SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 714 AS REQUIRED FOR FIRE BARRIERS.

SECTION 714.2 A LISTED PENETRATION FIRESTOP SYSTEM SHALL BE INSTALLED.

SECTION 714.4.1 THROUGH PENETRATIONS
 EXCEPTIONS #2
 THE MATERIAL USED TO FILL THE ANNULAR SPACE SHALL PREVENT THE PASSAGE OF FLAME AND HOT GASSES SUFFICIENT TO INGITE COTTON WASTE WHEN SUBJECTED TO ASTM E119 OR UL 263.

SECTION 714.4.1.2 THROUGH PENETRATION FIRE STOP SYSTEM
 THROUGH PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRE STOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL1479. (ASSEMBLY TEST) AND SHALL HAVE A F RATING NOT LESS THAN THE REQUIRED FIRE RESISTIVE RATING OF THE WALL PENETRATING.

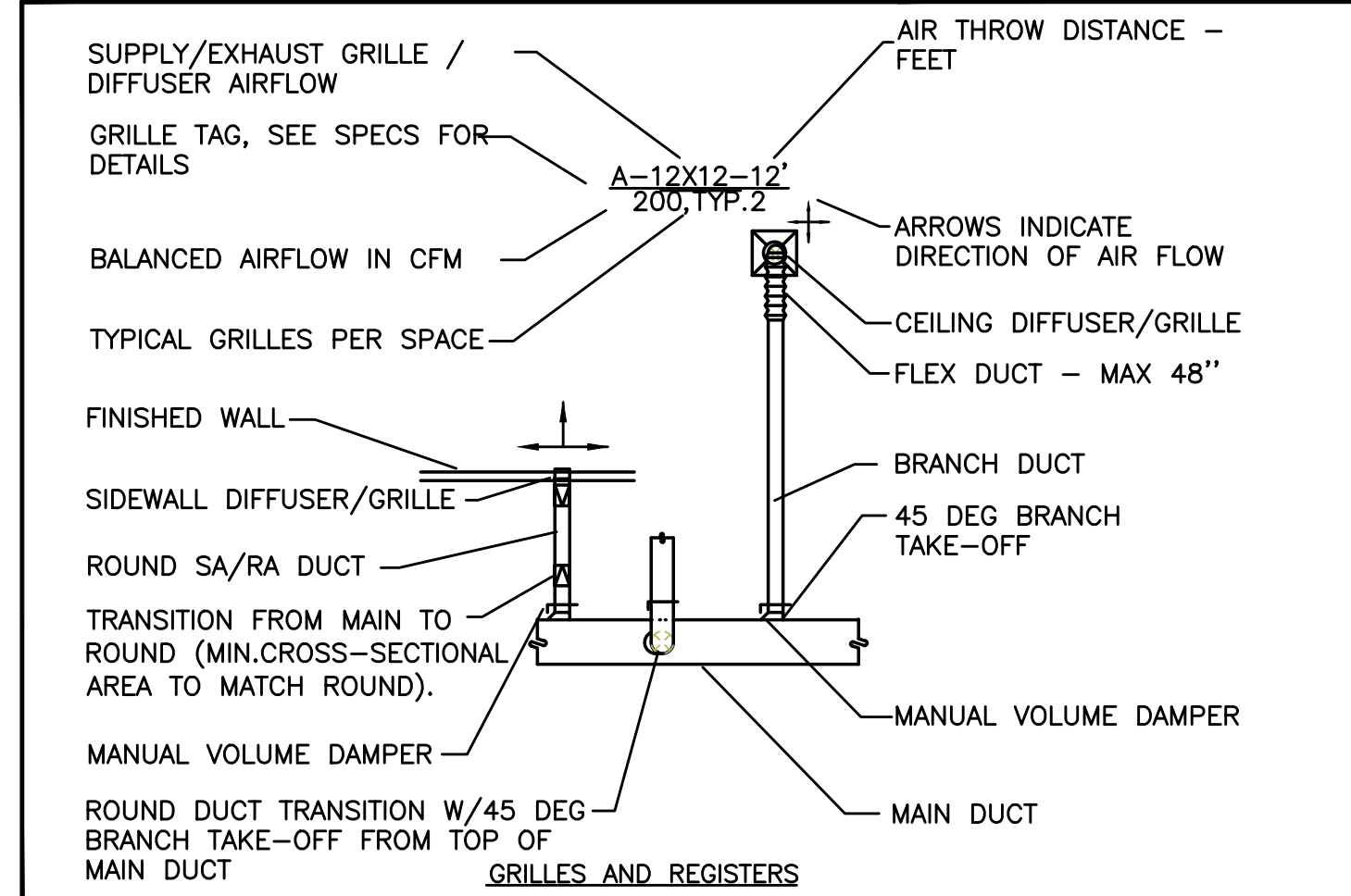
DUCT CONSTRUCTION AND ROUTING:
 • UNLESS PROJECT EXPLICITLY USES A SUB DUCT SYSTEM, SERVED BY ROOF FANS ON A BACK UP POWER SUPPLY, ALL DUCTS ARE ROUTED INDIVIDUALLY TO SIDEWALL OR ROOF TERMINATIONS WITH NO INTER-CONNECTIONS OF DUCT WORK.
 • ALL DUCTWORK IS CONSTRUCTED PER OSMC AND PER SMACNA STANDARDS PER THE REQUIRED PRESSURE CLASSES. ALL DUCTWORK WILL BE SEALED TO BE AIR-TIGHT AND WILL NOT ALLOW TRANSFER OF SMOKE BETWEEN UNITS OR TO LEAK SMOKE INTO SHAFTS.

BUILDING CONSTRUCTION, FIRE RATED WALLS AND RATED SHAFTS:
 • SEE ARCHITECTURAL LIFE SAFETY PLANS FOR RATED WALLS AND SHAFTS
 • SEE ARCHITECTURAL WALL SECTION DETAILS AND SHAFT WALL CONSTRUCTION DETAILS FOR REQUIRED FIRE RATINGS AND CONSTRUCTION METHODS.
 • PROVIDE A UL LISTED FIRE STOP SYSTEM TO MATCH DUCT CONSTRUCTION AND WALL OR FLOOR CEILING CONSTRUCTION TO ENSURE COMPLIANCE WITH ASTM E119 AND UL 263 STANDARDS – WHICH IS DEMONSTRATED BY THE USE OF UL CONSTRUCTION METHODS COMPLYING WITH ASTM E814 OR UL1479.

MECHANICAL SHEET INDEX

M0.01	MECHANICAL LEGENDS, NOTES & SCHEDULES
M0.02	MECHANICAL NOTES & SCHEDULES
M0.03	MECHANICAL SCHEDULES
M2.01	MECHANICAL PLAN – LEVEL 1
M2.02	MECHANICAL PLAN – LEVEL 2
M2.03	MECHANICAL PLAN – LEVEL 3
M2.04	MECHANICAL PLAN – LEVEL 4
M2.05	MECHANICAL ATTIC PLAN
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M6.02	MECHANICAL DETAILS
M6.03	MECHANICAL DETAILS
M6.04	MECHANICAL DETAILS

AIR DISTRIBUTION DETAILS



ELEC HEATER – CEILING

MARK NUMBER	CH 1
DESCRIPTION	RECESSED CEILING
LOCATION	CORRIDOR
SIZE	24X24
WATTS	5000
CONTROLLED BY:	WALL T-STAT
POWER (VOLTS/PHASE) *	208/1
DESIGN WEIGHT (LBS)	30
BASIS OF DESIGN: KING	KDSR

* – ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS
 ** INSTALLATION BY ELECTRICAL CONTRACTOR

ELECTRIC DUCT HEATER

MARK NUMBER	SF 1
SIZE (KW)	1.44 KW
CFM	210
DUCT SIZE	8"Ø
STEPS	2
MCA	12.6
POWER (VOLTS/PHASE) *	120/1
BASIS OF DESIGN: HOTPOD	HP8

* – ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

PROVIDE UNIT W/ 12X12 ACCESS PANEL AT ALL INACCESSIBLE CEILING LOCATIONS.

ELECTRIC WALL HEATER

MARK NUMBER	EH 1	EH 2
TYPE	WALL MOUNT	WALL MOUNT
SIZE (KW)	1.5	1.0
VOLTAGE	240	120

UNITS TO BE SUPPLIED WITH REMOTE THERMOSTAT



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CENTRAL CITY CONCERN

REVISION	DATE	REASON FOR ISSUE

MECHANICAL LEGENDS, NOTES & SCHEDULES

PERMIT SET

DATE	PROJECT NUMBER
08/29/2022	203970

SHEET NUMBER

M0.01

