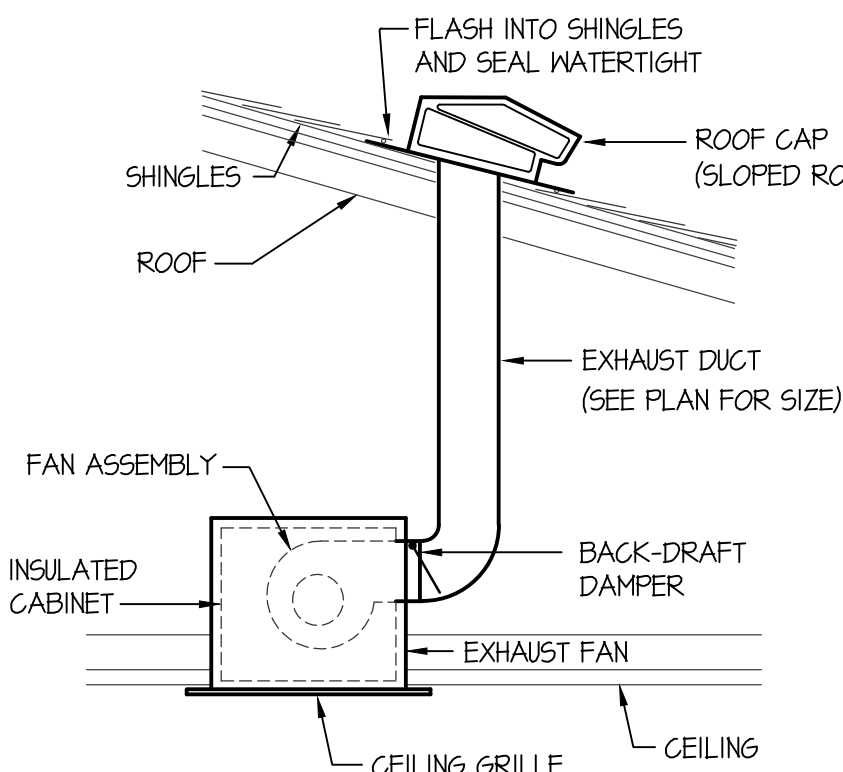


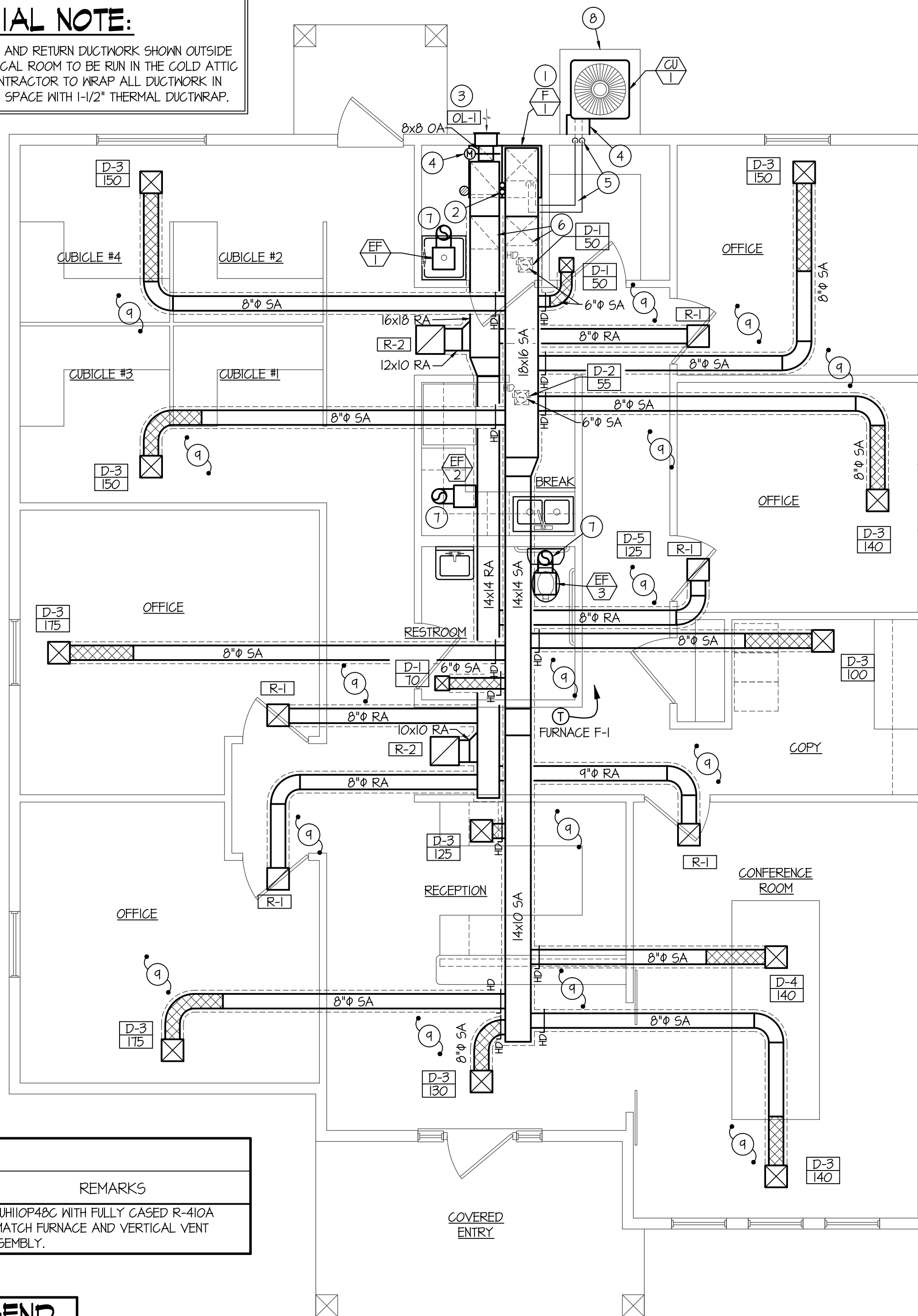
**CEILING DIFFUSER DETAIL WITH FLEXIBLE DUCT**  
NO SCALE



**CEILING MOUNTED EXHAUST FAN DETAIL**  
NO SCALE

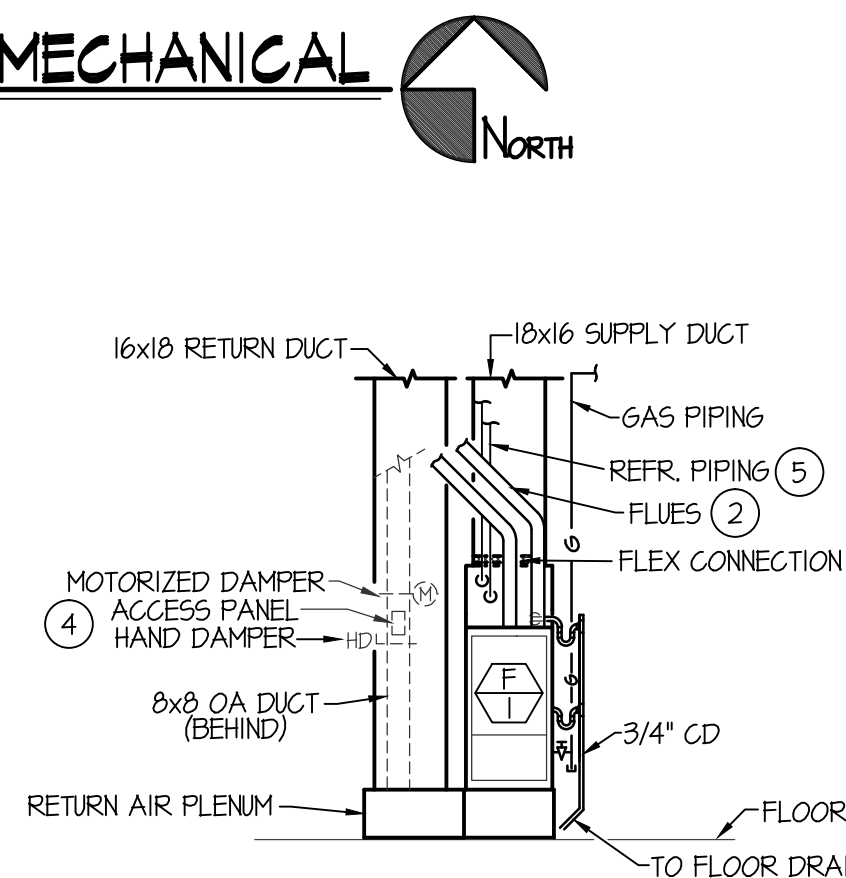
**SPECIAL NOTE:**

ALL SUPPLY AND RETURN DUCTWORK SHOWN OUTSIDE OF MECHANICAL ROOM TO BE RUN IN THE COLD ATTIC SPACE. CONTRACTOR TO WRAP ALL DUCTWORK IN COLD ATTIC SPACE WITH 1-1/2" THERMAL DUCTWRAP.



**FLOOR PLAN - MECHANICAL**

SCALE: 1/4" = 1'-0"




**TYPICAL UPFLOW FURNACE ELEVATION**  
NO SCALE

**CONDENSING UNIT SCHEDULE**

SYM.	BTU	EAT	CHAR.	MCA	MF5	SEER	REFR.	PIPE SIZING LIQUID	SUCTION	REMARKS
CU-1	48,000	84°F	240/60/1	28.9	50.0	13.0	R-410A	1/2"	7/8"	LENNOX MODEL 13ACX-048 WITH 0°F LOW AMBIENT HARD START KIT.

**FURNACE AND DX COOLING COIL SCHEDULE**

FURNACE AND DX COOLING COIL SCHEDULE																							
SYM.	TYPE	C.F.M.	SP <sub>E</sub>	SPEED	H.P.	CHAR.	A.G.A.		E.A.T.	L.A.T.	GAS TYPE	DX COOLING COIL				PIPING SIZES				REMARKS			
							INPUT	OUTPUT				Ø ELEV.	B.T.U.	E.A.T.	L.A.T.	MAX. P.D.	LIQUID	SUCTION	G.D.		NAT GAS	INTAKE	EXHAUST
	UPFLOW	1800	.60"	M-HIGH	3/4	120/60/1	110,000	103,000	74,000	65°F	105°F	NAT	48,000	75°F	55°F	.25"	SEE C. UNIT SCHED.	SEE C. UNIT SCHED.	3/4"	3/4"	2" PVC	2" PVC	LENNOX EL145H10P48C WITH FULLY CASED R-410A DX COIL TO MATCH FURNACE AND VERTICAL VENT TERMINAL ASSEMBLY.

**EXHAUST FAN SCHEDULE**

SYM.	TYPE	C.F.M.	S.P.E.	WATTS	CHAR.	R.P.M.	CONTROL	REMARKS
EF-1	CEILING MOUNTED	100	.25	87	120/60/1	710	SEE ELECT.	BROAN LOSONE SELECT MODEL L100 WITH BACKDRAFT DAMPER. 6" Ø DUCT TO SLOPED ROOF CAP.
EF-2	CEILING MOUNTED	100	.25	87	120/60/1	710	SEE ELECT.	BROAN LOSONE SELECT MODEL L100 WITH BACKDRAFT DAMPER. 6" Ø DUCT TO SLOPED ROOF CAP.
EF-3	CEILING MOUNTED	100	.25	87	120/60/1	710	SEE ELECT.	BROAN LOSONE SELECT MODEL L100 WITH BACKDRAFT DAMPER. 6" Ø DUCT TO SLOPED ROOF CAP.

**GRILLE AND REGISTER SCHEDULE**

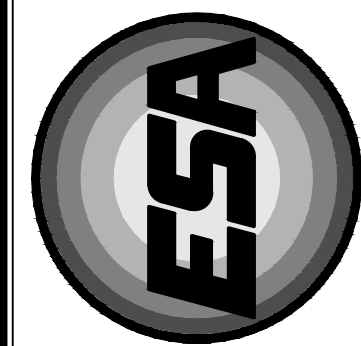
SYM.	TYPE	SIZE	CFM RANGE	THROW PATTERN	CONSTR.	FINISH	BALANCING DAMPER	FIRE DAMPER	REMARKS
D-1 CFM	CEILING	6x6	50-100	⬇	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL SMD WITH BEVELED FRAME
D-2 CFM	CEILING	6x6	50-100	⬇	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL SMD WITH BEVELED FRAME
D-3 CFM	CEILING	9x9	110-280	⬇	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL SMD WITH BEVELED FRAME
D-4 CFM	CEILING	9x9	110-280	⬇	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL SMD WITH BEVELED FRAME
D-5 CFM	CEILING	9x9	100-280	⬇	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL SMD WITH BEVELED FRAME
R-1	CEILING	10x10	100-300	NA	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL 535
R-2	CEILING	16x16	400-700	NA	STEEL	COLOR BY ARCH.	NA	NA	PRICE MODEL 535
OL-1	INTAKE LOUVER	12x12	100-400	NA	ALUM	COLOR BY ARCH.	NA	NA	AMERICAN WARMING LE-31 WITH INSECT SCREEN

**MECHANICAL LEGEND**

SYMBOL	DESCRIPTION
①	ELECTRONIC THERMOSTAT
F	EQUIPMENT SYMBOL
L S	REFRIGERANT PIPING
⌈ HD	THERMAL WRAPPED DUCTWORK LOCATED IN COLD ATTIC SPACE
⌈ HD	HAND DAMPER
⌈ M	MOTORIZED DAMPER
⌈ R	SIDEMALL REGISTER SUPPLY OR RETURN AIR
⌈ R	RETURN AIR OR EXHAUST GRILLE
⌈ D	CEILING DIFFUSER
⌈ F	VERTICAL UPFLOW GAS FURNACE
⌈ CU	CONDENSING UNIT

**PLAN NOTES:**

- INSTALL FURNACE ON 12" HIGH ANGLE IRON RETURN AIR PLENUM. SEE DETAIL ON SHEET M-2.
- RISE (2) 2" Ø FLUES FROM FURNACE UP TO VERTICAL VENT TERMINAL ASSEMBLY ON ROOF. SEE DETAIL ON SHEET M-2. PENETRATION TO BE LOCATED NEAR PEAK OF ROOF TO PREVENT SNOW SHEAR.
- INSTALL OUTSIDE AIR LOUVER ON WALL AS HIGH AS POSSIBLE.
- CONNECT 8x8 OUTSIDE AIR DUCT TO LOUVER AND DROP DUCT DOWN TO RETURN AIR PLENUM AND CONNECT. INSTALL MOTORIZED DAMPER, ACCESS PANEL AND HAND DAMPER IN VERTICAL PORTION OF 8x8 OA DUCT. INTERLOCK MOTORIZED DAMPER WITH FURNACE AND BALANCE HAND DAMPER TO 200 CFM.
- COVER EXPOSED REFRIGERANT PIPING AS SHOWN ON DETAIL ON SHEET M-2.
- RISE REFRIGERANT PIPING UP IN WALL TO ATTIC SPACE AND RUN ACROSS TO MECH. ROOM. DROP DOWN INSIDE MECH. ROOM AND CONNECT TO COOLING COIL.
- DROP 16x16 SA DUCT AND 16x18 RA DUCT DOWN THRU CEILING OF MECH. ROOM AND RUN AS HIGH AS POSSIBLE ACROSS CEILING. DROP DOWN AND CONNECT TO FURNACE AND RETURN AIR PLENUM AS SHOWN.
- RISE EXHAUST DUCT UP TO SLOPED ROOF CAP. SEE SCHEDULE ON THIS SHEET FOR DUCT SIZE AND DETAIL ON THIS SHEET.
- CONDENSING UNIT TO BE INSTALLED ON 4" THICK CONCRETE PAD 6" LARGER THAN FOOTPRINT OF UNIT.
- ALL SUPPLY AND RETURN DUCTWORK SHOWN OUTSIDE OF MECHANICAL ROOM TO BE RUN IN THE COLD ATTIC SPACE. CONTRACTOR TO WRAP ALL DUCTWORK IN COLD ATTIC SPACE WITH 1-1/2" THERMAL DUCTWRAP.



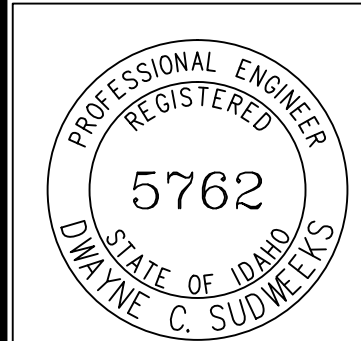
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A NEW OFFICE BUILDING FOR:  
**EAGLE ROCK FABRICATION**  
IDAHO FALLS, IDAHO

**MECHANICAL FLOOR PLAN & SCHEDULES**

PROJECT:



DRWN. BY: SR	CKD. BY: DCS
JOB NO. 14068	DATE: JUNE 2014

SHEET:  
**M-1**  
OF: TWO

ORIGINAL DRAWING SIGNED BY: DWAYNE C. SUDWECKS  
DATE ORIGINAL SIGNED: Jun 30, 2014  
ORIGINAL ON FILE AT ENGINEERED SYSTEMS ASSOCIATES  
1355 EAST CENTER, POCATELLO, IDAHO 83201