SCOPE OF WORK:

REPLACEMENT OF HVAC UNITS ON CLUSTER B, C, D, ACA-IBC, WORLD LANGUAGES, MUSIC AND THE THEATER.

PROVIDE NEW AND/OR UPGRADED CONTROLS. (EXISTING CAMPUS SYSTEM IS ALLERTON)

INSTALLATION OF OFCI DISCONNECTS.
REPLACEMENT OF ALL LIQUID TIGHT ELECTRICAL RACEWAY.

GAS VALVE REPLACEMENT AT ALL UNITS.
NEW GAS PIPING FROM THE NEW VALVE(S) TO THE UNIT(S) SHALL BE BLACK OR GALVANIZED STEEL.
ALL NEW GAS PIPING SHALL BE PAINTED.

INSTALLATION AND VERIFIED TESTING OF DUCT OR UNIT SMOKE DETECTORS. (PROGRAMMING OF DEVICES AND IOR TESTING)

TITLE 24 ACCEPTANCE TESTING AND DOCUMENTATION:
NRCA-MCH-02-A OUTDOOR AIR ACCEPTANCE
NRCA-MCH-03-A (FOR HP UNITS)
NRCA-MCH-05-A AIR ECONOMIZER CONTROLS ACCEPTANCE
NRCA-MCH-DEMAND CONTROL VENTILATION SYSTEMS
NRCA-MCH-07-A SUPPLY FAN VFD ACCEPTANCE
NRCA-MCH-09-A VALVE LEAKAGE TEST
NRCA-MCH-16-A SUPPLY AIR TEMP RESET CNTRLS ACCEPTANCE
NRCA-MCH-18-A ENERGY MGMT CONTROL SYSTEMS
NRCA-MCH-19-A OCCUPANCY STANDBY

Folsom
High School
October 2021

AIR CONDITIONING UNIT SCHEDULE

LOCATION	UNIT	"CARRIER" MODEL NO.	CFM	E.S.P.	SENS. COOL. CAP. MBH	TOTAL COOL. CAP. MBH	EDB (°F) / EWB (°F)	GAS HEATING INPUT MBH	GAS HEATING OUTPUT MBH	ELECTRICAL DATA VOLT.	SUPPLY FAN BHP	SUPPLY FAN FLA	COMPRESSOR LRA	COMPRESSOR RLA	COND. FAN FLA	COMB. FAN FLA	POWER SUPPLY MCA FLA	POWER SUPPLY MOCP	MIN OSA (CFM)	UNIT OPER. WT. (LBS.)	ENER. EFFIC. RATIO	POWER EXH. FLA	POWER EXH. HP	MIN. UNIT DISCONN. SIZE FLA	MIN. UNIT DISCONN. SIZE LRA	MTG. DETAIL
UNIT - J GYM	AC 1J	48HJE007	2100	0.8"	54.0	73.8	105 / 67	115	93.1	460V 3φ 60 HZ.	2.4	2.6	70.0	9.6	0.6	.30	17.9	20	900	925	11.0 EER	1.1	0.5	17	94	2 / M5.1
UNIT - J GYM	AC 2J & 3J	48EWD044	14,000	0.8"	312	429	105 / 67	400	324	460V 3φ 60 HZ.	20 HP	27	173.0 TYP. OF 2	28.8 TYP. OF 2	2.7 TYP. OF 4	0.5	115.2	125	5850	5100	8.5 EER	12.6FLA 23.6LRA	NL	NL	NL	2 / M5.1
UNIT - C CLUSTER	AC 1C	48HJD008	2700	0.8"'	63.3	87.7	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	555	1300	11.0 EER	1.7	1.0	23	124	5 / M5.1
UNIT - C CLUSTER	AC 2C	48HJD008	2300	0.8"'	60.0	86.3	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	5 / M5.1
UNIT - C CLUSTER	AC 3C thru 6C	48HJD006	1800	0.8"	43.4	60.1	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - C CLUSTER	AC 7C thru 9C	48HJD006	1700	0.8"	42.2	59.4	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - C CLUSTER	AC 10C	48HJD008	2260	0.8"'	59.6	86.2	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	3 / M5.1
UNIT - C CLUSTER	AC 11C	48HJE004	1200	0.8"	26.6	36.2	105 / 67	50	41	460V 3φ 60 HZ.	1.2	2.2	39.0	5.1	0.4	.30	11.7	15	170	900	13.0 SEER	1.1	0.5	11	48	3 / M5.1
UNIT - D CLUSTER	AC 1D	48HJD008	2700	0.8"'	63.3	87.7	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	555	1300	11.0 EER	1.7	1.0	23	124	5 / M5.1
UNIT - D CLUSTER	AC 2D	48HJD008	2300	0.8"'	60.0	86.3	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	5 / M5.1
UNIT - D CLUSTER	AC 3D thru 6D	48HJD006	1800	0.8"	43.4	60.1	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - D CLUSTER	AC 7D thru 9D	48HJD006	1700	0.8"	42.2	59.4	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - D CLUSTER	AC 10D	48HJD008	2260	0.8"'	59.6	86.2	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	3 / M5.1
UNIT - D CLUSTER	AC 11D	48HJE004	1200	0.8"	26.6	36.2	105 / 67	50	41	460V 3φ 60 HZ.	1.2	2.2	39.0	5.1	0.4	.30	11.7	15	170	900	13.0 SEER	1.1	0.5	11	48	3 / M5.1
UNIT - E CLASSRM.	AC 1E & 2E	48HJD006	1500	1.0"	39.6	57.7	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	450	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - E CLASSRM.	AC 3E	48HJE004	900	1.0"	23.5	34.6	105 / 67	50	41	460V 3φ 60 HZ.	1.2	2.2	39.0	5.1	0.4	.30	11.7	15	150	900	13.0 SEER	1.1	0.5	11	48	3 / M5.1
UNIT - E CLASSRM.	AC 4E	48HJE005	1200	1.0"	30.2	44.5	105 / 67	50	41	460V 3φ 60 HZ.	1.2	2.2	49.5	7.4	0.4	.30	14.6	20	450	900	13.0 SEER	1.1	0.5	14	58	3 / M5.1
UNIT - E CLASSRM.	AC 5E & 6E	48HJD006	2000	1.0"	45.7	61.1	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	570	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - E CLASSRM.	AC 7E	48HJD012	3200	1.0"	80.2	116.6	105 / 67	120	98.4	460V 3φ 60 HZ.	4.2	4.8	62.0 TYP. OF 2	12.9 TYP. OF 2	0.7 TYP. OF 2	.30	29.2	35	825	1475	11.0 EER	3.3	2.0	30	172	3 / M5.1
UNIT - E CLASSRM.	AC 8E & 9E	48HJD007	1800	0.8"	50.2	72.0	105 / 67	50	41	460V 3φ 60 HZ.	2.4	2.6	70.0	9.6	0.6	.30	17.9	20	540	925	11.0 EER	1.1	0.5	17	94	3 / M5.1
UNIT - E CLASSRM.	AC 10E, 11E, 12E	48HJD009	3000	0.8"'	67.4	96.7	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	49.5 TYP. OF 2	8.2 TYP. OF 2	0.7 TYP. OF 2	.30	26.0	30	555	1300	10.8 EER	1.7	1.0	27	135	3 / M5.1
UNIT - E CLASSRM.	AC 13E	48HJD007	1800	0.8"	50.2	72.0	105 / 67	50	41	460V 3φ 60 HZ.	2.4	2.6	70.0	9.6	0.6	.30	17.9	20	540	925	11.0 EER	1.1	0.5	17	94	3 / M5.1
UNIT - E CLASSRM.	AC 14E	48HJD006	1500	0.8"	39.6	57.7	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	405	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - E CLASSRM.	AC 15E	48HJD007	1900	0.8"	51.4	72.7	105 / 67	50	41	460V 3φ 60 HZ.	2.4	2.6	70.0	9.6	0.6	.30	17.9	20	375	925	11.0 EER	1.1	0.5	17	94	3 / M5.1
UNIT - E CLASSRM.	AC 16E	48HJE005	1365	0.8"	31.9	45.6	105 / 67	50	41	460V 3φ 60 HZ.	1.2	2.2	49.5	7.4	0.4	.30	14.6	20	255	900	13.0 SEER	1.1	0.5	14	58	3 / M5.1
UNIT - F CLUSTER	AC 1F thru 4F	48HJD006	1800	0.8"	43.4	60.1	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - F CLUSTER	AC 5F thru 7F	48HJD006	1700	0.8"	42.2	59.4	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - F CLUSTER	AC 8F	48HJD008	2260	0.8"'	59.6	86.2	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	3 / M5.1
UNIT - G MUSIC	AC 1G & 2G	48HJE014	4100	0.8"	101.1	137.5	105 / 67	200	160	460V 3φ 60 HZ.	5.25	7.4	70.0 TYP. OF 2	12.9 TYP. OF 2	0.7 TYP. OF 2	.30	31.8	35	1500	1475	9.9 EER	3.3	2.0	33	199	10 / M5.2
UNIT - G MUSIC	AC 3G	48HJD008	3000	0.8"	65.9	88.8	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	1005	1300	11.0 EER	1.7	1.0	23	124	10 / M5.2
UNIT - G MUSIC	AC 4G	48HJD008	2650	0.8"	63.0	87.6	105 / 67	90	72.9	460V 3φ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	435	1300	11.0 EER	1.7	1.0	23	124	10 / M5.2
UNIT - G MUSIC	AC 5G	48HJE004	1000	0.8"	24.5	35.1	105 / 67	50	41	460V 3φ 60 HZ.	1.2	2.2	39.0	5.1	0.4	.30	11.7	15	170	900	13.0 SEER	1.1	0.5	11	48	10 / M5.2
UNIT - H THEATER	AC 1H	48EWE048	10,250	0.8"	305.2	464.4	105 / 67	800	648	460V 3φ 60 HZ.	20 HP	27.0	396.0 TOTAL OF 2	71.1 TOTAL OF 2	2.7 TYP. OF 4	0.5	132.1	150	4920	6300	8.5 EER	12.6	4 FANS 1 HP EA.	NL	NL	4 / M5.1
UNIT - H THEATER	AC 2H	48EWE048	10,000	0.8"	301.7	461.5	105 / 67	800	648	460V 3φ 60 HZ.	20 HP	27.0	396.0 TOTAL OF 2	71.1 TOTAL OF 2	2.7 TYP. OF 4	0.5	132.1	150	4875	6300	8.5 EER	12.6	4 FANS 1 HP EA.	NL	NL	4 / M5.1
UNIT - H THEATER	AC 3H & 4H	48TJD028	7400	0.8"	184.7	264.3	105 / 67	275	223	460V 3φ 60 HZ.	11.8	14.6	114.0 TYP. OF 2	22.1 TYP. OF 2	2.8 TYP. OF 2	.30	72	90	750	2850	8.5 EER	2.3	NL	NL	NL	10 / M5.2
UNIT - H THEATER	AC 5H	48HJE006	1750	0.8"	42.8	59.8	105 / 67	115	93.1	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	450	900	13.0 SEER	1.1	0.5	17	86	10 / M5.2
UNIT - H THEATER	AC 6H	48HJE007	2040	0.8"	53.2	73.4	105 / 67	115	93.1	460V 3φ 60 HZ.	2.4	2.6	70.0	9.6	0.6	.30	17.9	20	435	925	11.0 EER	1.1	0.5	17	94	10 / M5.2
UNIT - H THEATER	AC 7H	48HJD006	1600	0.8"	40.9	58.5	105 / 67	50	41	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	300	900	13.0 SEER	1.1	0.5	17	86	10 / M5.2
UNIT - H THEATER	AC 8H & 9H	48HJE006	1500	0.8"	39.6	57.7	105 / 67	115	93.1	460V 3φ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	450	900	13.0 SEER	1.1	0.5	17	86	5 / M5.2

NOTES:

1. PROVIDE ALL UNITS EXCEPT A.C.- 2J & 3J WITH "MICROMETL" POWER EXHAUST ECONOMIZER.
2. PROVIDE A.C.- 2J & 3J WITH POWER EXHAUST & RELIEF BY FACTORY MFR.
3. PROVIDE ALL UNITS WITH ROOF CURB.
4. NL = NOT LISTED
5. PROVIDE SMOKE DETECTOR IN SUPPLY DUCT PER SECTION 608, CMC AT A.C.- 1C, 1D AND 4G. ALL OTHER A.C. UNITS SUPPLYING AIR IN EXCESS OF 2000 CFM HAVE DIRECT ACCESS TO THE OUTDOORS.
6. INTERLOCK A.C.- 1C WITH E.F.- 2C.
7. INTERLOCK A.C.- 1D WITH E.F.- 2D.

MISC. EQUIPMENT SCHEDULE

LOCATION/ MTG. DTL.	SYMBOL	DESCRIPTION
1 / M5.2	IV 1C & 2C	INTAKE VENT - 1C & 2C: "GREENHECK" FABRA HOOD 425 CFM AT .05" S.P., 14x14 THROAT, 24x25 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 130 LBS.
2 / M5.2	RHP 1C & 2C	RADIANT HEATING PANEL - 1C & 2C: "AZTEC" CP254, 24x24 PANEL WITH QSF2424 SURFACE MOUNTING FRAME. 250 WATTS, 120V, 1φ. WEIGHT = 25 LBS.
2 / M5.2	RHP 3C thru 6C	RADIANT HEATING PANEL - 3C thru 6C: "AZTEC" CP504, 24x48 PANEL WITH QSF2448 SURFACE MOUNTING FRAME. 500 WATTS, 120V, 1φ. WEIGHT = 50 LBS.
1 / M5.2	IV 1D & 2D	INTAKE VENT - 1D & 2D: "GREENHECK" FABRA HOOD 425 CFM AT .05" S.P., 14x14 THROAT, 24x25 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 130 LBS.
2 / M5.2	RHP 1D & 2D	RADIANT HEATING PANEL - 1D & 2D: "AZTEC" CP254, 24x24 PANEL WITH QSF2424 SURFACE MOUNTING FRAME. 250 WATTS, 120V, 1φ. WEIGHT = 25 LBS.
2 / M5.2	RHP 3D thru 6D	RADIANT HEATING PANEL - 3D thru 6D: "AZTEC" CP504, 24x48 PANEL WITH QSF2448 SURFACE MOUNTING FRAME. 500 WATTS, 120V, 1φ. WEIGHT = 50 LBS.
1 / M5.2	IV 1E & 2E	INTAKE VENT - 1E & 2E: "GREENHECK" FABRA HOOD 1000 CFM AT .03" S.P., 16x20 THROAT, 24x28 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 175 LBS.
1 / M5.2	IV 3E	INTAKE VENT - 3E: "GREENHECK" FABRA HOOD 1500 CFM AT .03" S.P., 24x20 THROAT, 40x36 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 210 LBS.
DUCT MOUNTED	H 1E	HUMIDIFIER - 1E: "ARMSTRONG" EHU-600, 6 LB/HR AT 208V, 1φ, 10.9 AMP, 15 AMP FUSE FOR DUCT-TYPE DISTRIBUTION. OPERATING WEIGHT = 80 LBS.
11 / M5.2	KH 1E	KILN HOOD - 1E "KEES" 14' x 6' OVERHEAD INDUSTRIAL TAPERED CANOPY HOOD. HOOD TO BE ALL WELDED 18 GA. GALVANIZED STEEL WITH 14" DIAMETER DUCT OPENING IN CENTER OF HOOD. WEIGHT = 1650 LBS.
2 / M5.2	RHP 1G thru 6G	RADIANT HEATING PANEL - 1G thru 6G: "AZTEC" CP254, 24x24 PANEL WITH QSF2424 SURFACE MOUNTING FRAME. 250 WATTS, 120V, 1φ. WEIGHT = 25 LBS.
2 / M5.2	RHP 7G thru 10G	RADIANT HEATING PANEL - 7G thru 10G: "AZTEC" CP504, 24x48 PANEL WITH QSF2448 SURFACE MOUNTING FRAME. 500 WATTS, 120V, 1φ. WEIGHT = 50 LBS.
1 / M5.2	IV 1G & 2G	INTAKE VENT - 1G & 2G: "GREENHECK" FABRA HOOD. 550 CFM AT .05" S.P., 16x16 THROAT, 24x24 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 150 LBS.
5 / M5.2	TD 1G	THERMAL DIFFUSER - 1G: "DYNAFUSER" TC2408CR/DH, 190 CFM AT .07" S.P., 24x24 GRILLE, 4-WAY BLOW.
5 / M5.2	TD 2G	THERMAL DIFFUSER - 2G: "DYNAFUSER" TC2406CR/DH, 150 CFM AT .15" S.P., 24x24 GRILLE, 3-WAY BLOW.
7 / M5.1	IV 1H	INTAKE VENT - 1H: "GREENHECK" FABRA HOOD 750 CFM AT .05" S.P., 18x18 THROAT, 28x36 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 175 LBS.
1 / M5.2	CAV 1H	COMBUSTION AIR VENT - 1H: "GREENHECK" FABRA-HOOD GRAVITY INTAKE. 12 x 18 THROAT, 22 x 36 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 140 LBS.
6 / M5.1	CAV 1P	COMBUSTION AIR VENT - 1P: "GREENHECK" FABRA-HOOD GRAVITY INTAKE. 24 x 54 THROAT, 46 x 84 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 375 LBS.
9 / M5.2	HV 1P	HEATING & VENTILATING UNIT - 1P: "REZNOR" HRPB-125, PACKAGED GAS FIRED HEATING UNIT WITH 'REC-40' EVAPORATIVE COOLING MODULE. 1310 CFM AT 1.0" E.S.P., 996 RPM, 3/4 HP FAN MOTOR, 125,000 BTUH GAS INPUT & 100,000 BTUH OUTPUT. 5.75 AMPS, 208V, 3φ. EVAP. COOLING MODULE WITH 12" CELDEK MEDIA, 1/15 HP, .92 AMPS, 115V, 1φ. UNIT TO BE 100% OUTSIDE AIR IN COOLING MODE AND MINIMUM 195 CFM OUTSIDE AIR IN HEATING MODE. PROVIDE WITH FILTER, ROOF CURB, & THERMOSTAT. WEIGHT = 950 LBS.
8 / M5.2	HV 1Q	HEATING & VENTILATING UNIT - 1Q: "REZNOR" HRPB-150, PACKAGED GAS FIRED HEATING UNIT WITH 'REC-50' EVAPORATIVE COOLING MODULE. 2450 CFM AT 1.0" E.S.P., 1000 RPM, 1 1/2 HP FAN MOTOR, 150,000 BTUH GAS INPUT & 120,000 BTUH OUTPUT. 8.65 AMPS, 208V, 3φ. EVAP. COOLING MODULE WITH 12" CELDEK MEDIA, 1/15 HP, .92 AMPS, 115V, 1φ. UNIT TO BE 100% OUTSIDE AIR IN COOLING MODE AND MINIMUM 195 CFM OUTSIDE AIR IN HEATING MODE. PROVIDE WITH FILTER, ROOF CURB, & THERMOSTAT. WEIGHT = 1000 LBS.
6 / M5.2	FF 1Q & 2Q	FLY FAN - 1Q & 2Q: "MARS" 36CH, 2275 FPM, 1700 CFM, 1/2 HP, 1750 RPM, 3.0 TOTAL AMPS, 115V, 1φ. PROVIDE WITH MICRO SWITCH FOR AUTOMATIC ON/OFF OPERATION. WEIGHT = 63 LBS.
7 / M5.2	FF 3Q thru 10Q	FLY FAN - 3Q thru 10Q: "MARS" W-25, 1400 FPM VELOCITY, 1900 CFM. (1) MOTOR AT 1/20 HP, 1.0 AMP, 115V, 1φ, 60 HZ. 25" WIDE. PROVIDE WITH MICRO SWITCH FOR AUTO ON/OFF CONTROL. WEIGHT = 20 LBS.

DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	TITUS	TUTTLE & BAILEY	METALAIR	KRUEGER
CD-1	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME	MCD - BORDER TYPE 1	AQDV	9000-1	1240 FRAME 22
CD-2	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME 3/4" DROP	MCD - BORDER TYPE 6	AQDBV	9000-2-OBDR	1240 FRAME 21 - 1 1/4"
CDL	MODULAR CORE LAY-IN CEILING DIFFUSER FOR T-BAR CEILING 24x24 PANEL	MCD - BORDER TYPE 3	AQDV-L4	9000-6P-OBDR	1240 FRAME 23
CR	CEILING RETURN WITH 1/2" EGG CRATE CORE SURFACE MOUNT, OBD	MODEL 50 F - BORDER TYPE 1 W/AG-15 OBD	CRE-507	CC5D	EGC-5 OBD
CRL	CEILING RETURN WITH 1/2" EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING, OBD	MODEL 50 F - BORDER TYPE 3 W/AG-15 OBD	CRE-507-L4 W/OBD	CC5D-TBD	EGC-5TB OBD
CR-1 or CRL-1	CEILING RETURN WITH 1/2" EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	MODEL 50 F BORDER TYPE 3	CRE-507-L4	CC5D	EGC-5TB
SR	DOUBLE DEFLECTION SUPPLY REGISTER WITH VERTICAL FRONT BARS, 3/4" SPACING	300 RL - AG-15	T 647	V 4004 SD	880 V
S	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, 3/4" SPACING	300 RL	T 64	V 4004 S	880 V
* RR & ER	RETURN OR EXHAUST REGISTER WITH 35° OR 45° HORIZONTAL BARS AND VERTICAL OBD	350 RL - AG-15 OBD	T 77D OBD	SRHD	S 80 H OBD
R & E	RETURN OR EXHAUST GRILLE WITH 35° OR 45° HORIZONTAL BARS.	350 RL	T 77D	SRH	S 80 H
SG	SOFFIT GRILLE - HEAVY DUTY SINGLE DEFLECTION GRILLE WITH 10 GAUGE, 3/8" WOVEN STEEL MESH SECURED BEHIND FACE BARS. PROVIDE PLASTER FRAME IN PLASTER SOFFIT	355 RL HD WITH 3/8" MESH AND PF WHERE REQUIRED	T 110DG WITH 3/8" MESH AND PF WHERE REQUIRED	HDRH WITH 3/8" MESH AND PF WHERE REQUIRED	S 480 H WITH 3/8" MESH AND PF WHERE REQUIRED
ERH	HEAVY DUTY RETURN REGISTER WITH 35° OR 45° HORIZONTAL BARS AND OBD	355 RL HD WITH AG-15 OBD	T 117-5 OBD	HDRHD	S 480 H OBD
EH	HEAVY DUTY RETURN GRILLE WITH 35° OR 45° HORIZONTAL BARS	355RL HD	T 117-5	HDRH	S 480 H
DML	DRUM LOUVER, STEEL FRAME AND ALUMINUM DRUM, WITH OBD.	MODEL DL	MODEL STRJ	MODEL RL	MODEL DPL
DL	DOOR LOUVER	SEE ARCHITECTURAL DRAWINGS			
*	ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS	3 FL WITH AG-35AA OBD	A 77D	RHD	S 580 H

NOTES:
1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.
2. PROVIDE DIFFUSERS WITH AIR FLOW PATTERN INDICATED ON DRAWINGS.
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.
4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.

EXPANSION ANCHOR SCHEDULE

BOLT DIAMETER	MINIMUM EMBEDMENT	ALLOWABLE TENSION	ALLOWABLE SHEAR	TENSION TEST LOAD
3/8	2 1/2	968	880	1936
1/2	2 3/4	1250	1515	2500
5/8	2 3/4	1400	2875	2800
3/4	3 1/4	1740	3100	3480

NOTES:

1. ALL EXPANSION ANCHORS SHALL BE "HILTI-KWIK-BOLT II" (ICBO REPORT #4627) OR APPROVED EQUAL.
2. ALLOWABLE TENSION AND SHEAR VALUES ARE BASED ON 80% OF THE ALLOWABLE LOADS LISTED IN ICBO REPORT #4627 FOR SPECIAL INSPECTION. CONCRETE STRENGTH fc' = 3000 PSI.
3. TEST 50% OF ANCHORS FOR TENSION TEST LOAD LISTED IN SCHEDULE. IF ANY ANCHOR FAILS, TEST ALL ANCHORS UNTIL 20 CONSECUTIVE ANCHORS PASS, THEN RESUME TESTING AT 50% FREQUENCY.
4. ANCHORS SHALL BE INSTALLED WITH MINIMUM SPACING OF 12 ANCHOR DIAMETERS AND A MINIMUM EDGE DISTANCE OF 10 ANCHOR DIAMETERS.
5. ANCHOR BOLTS CAST IN CONCRETE MAY BE SUBSTITUTED FOR DRILL-IN CONCRETE EXPANSION ANCHORS OF THE SAME DIAMETER. MINIMUM EMBEDMENT SHALL BE 3" FOR 3/8"φ BOLTS, 4" FOR 1/2"φ & 5/8"φ BOLTS.

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C-14648
5/31/99
RENEWAL DATE
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC SCHEDULES

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MECHANICAL LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	ABC	ABOVE CEILING
	AC	AIR CONDITIONING
	BDD	BACK DRAFT DAMPER
	BHP	BRAKE HORSE POWER
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
	CEF	CEILING EXHAUST FAN
	CONC.	CONCRETE
f	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
	DB	DRY BULB (DEGREES FAHRENHEIT)
ϕ	DIA.	DIAMETER , PHASE
	DTL.	DETAIL
	EA.	EACH
	EAL	EXHAUST AIR LOUVER
	EDB	ENTERING DRY BULB
	EER	ENERGY EFFICIENCY RATIO
	EF	EXHAUST FAN
	EMS	ENERGY MANAGEMENT SYSTEM
	ESP	EXTERNAL STATIC PRESSURE
	EWB	ENTERING WET BULB
	°F	DEGREES FAHRENHEIT
	FLA	FULL LOAD AMPS
	FPI	FINS PER INCH
	FPM	FEET PER MINUTE
	FT.	FEET
	GA.	GAUGE
	G.I.	GALVANIZED IRON
	GPM	GALLONS PER MINUTE
	HP	HORSE POWER
	HZ.	HERTZ
	LBS.	POUNDS
	LRA	LOCKED ROTOR AMPERES
	MAD, MD	MANUAL AIR DAMPER
	MAX.	MAXIMUM
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	MCA	MINIMUM CIRCUIT AMPS
	MFR.	MANUFACTURER
	MFS	MAXIMUM FUSE SIZE
	MIN.	MINIMUM
	MOCP	MAXIMUM OVERCURRENT PROTECTION
	MTG.	MOUNTING
	N.O.	NORMALLY OPEN
	OBD	OPPOSED BLADE DAMPER
	O.C.	ON CENTER
	OD	OUTSIDE DIAMETER
	OSA	OUTSIDE AIR
	PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
	RA	RETURN AIR
	RL	REFRIGERANT LIQUID
	RLA	RUNNING LOAD AMPERES
	RPM	REVOLUTIONS PER MINUTE
	RS	REFRIGERANT SUCTION
	SEER	SEASONAL ENERGY EFFICIENCY RATIO
	SM	SHEET METAL
	SP	STATIC PRESSURE
	SQ.	SQUARE
	STR	STRAINER
	TSP	TOTAL STATIC PRESSURE
	TYP.	TYPICAL
	WB	WET BULB
	WG	WATER GAUGE
	w/	WITH
	WT.	WEIGHT
F	FD	FIRE DAMPER
S/F		SMOKE/FIRE DAMPER
	BD	BALANCE DAMPER
T x		TEMPERATURE SENSOR, "X" INDICATES DEVICE CONTROLLED (+42")
$\xrightarrow{D}$		DROP DUCT IN DIRECTION OF AIR FLOW
$\xrightarrow{R}$		RISE DUCT IN DIRECTION OF AIR FLOW
	CAP.	CAPACITY
	COND.	CONDENSER
	COMB.	COMBUSTION
	DISCONN.	DISCONNECT
	EXH.	EXHAUST
	NL	NOT LISTED

RECTANGULAR DUCT LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
24x12	24x12	RECTANGULAR DUCT - WIDTH x DEPTH
26x14L	26x14L	ACOUSTICALLY LINED RECTANGULAR DUCT-DIMENSIONS ARE OUTSIDE
		MANUAL AIR DAMPER
R OR D	RISE OR DROP	RISE OR DROP DUCT IN DIRECTION OF AIR FLOW
	OR	RECTANGULAR TO RECTANGULAR TRANSISTION , MAX. SLOPE OF 1:3 RECTANGULAR TO ROUND TRANSITION , MAX. SLOPE OF 1:3
	W, R, $\frac{R}{W} = 1.5$	ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES
		ELBOW, RECTANGULAR, MITERED, WITH TURNING VANES
		CONVERGING OR DIVERGING TEE, 45° ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAX. SLOPE OF 1:3
	EXTRACTOR	TEE, RECTANGULAR MAIN AND BRANCH WITH EXTRACTOR
		CONICAL DUCT TAKE OFF FROM RECTANGULAR VIA SPIN-IN W/DAMPER AND SCOOP
ROUND DUCT		ROUND DUCT TAKE OFF FROM RECTANGULAR VIA SMOOTH CONVERGING BELL MOUTH
	W, R, $\frac{R}{W} = 1.5$	SYMMETRICAL WYE, DOVETAIL, RECTANGULAR RECTANGULAR (CONVERGING OR DIVERGING)
	2W, W, PROVIDE DIVIDER	ELBOWS, 90° RECTANGULAR TEE SHAPE WITH SQUARE ELBOWS, SPLITTER DAMPER OR MAD'S ON THE 2 BRANCHES
		RECTANGULAR DUCT TEE WITH SPLITTER DAMPER OR MAD'S ON THE 2 BRANCHES AND SQUARE ELBOWS AND TRANSITIONS, THROAT SIZED FOR EQUAL PRESSURE DROP
		RECTANGULAR DUCT SPLIT WITH SPLITTER DAMPER OR MAD'S AND SQUARE ELBOWS AND TRANSITIONS. THROAT SIZED FOR EQUAL PRESSURE DROP
		FOR CONCEALED DUCT: DROP TO DIFFUSER SHALL BE FULL SIZE OF DIFFUSER NECK. FOR EXPOSED DUCT: DROP SHALL BE FULL SIZE OF OD DIFFUSER FRAME, FLANGE FOR MOUNITING DIFFUSER TURNED IN. AIR EXTRACTOR AND EQUALIZER GRID AT CONNECTION TO MAIN.
		SUPPLY AIR DUCT IN SECTION
		RETURN AND OUTSIDE AIR DUCT IN SECTION
		EXHAUST AIR DUCT IN SECTION
		FLEXIBLE DUCT

SPLIT SYSTEM ELECTRICAL ROOM A.C. UNIT SCHEDULE

LOCATION	SYMBOL	"MITSUBISHI" INDOOR UNIT	CFM	FAN FLA	VOLT	WT. (LBS.)	"MITSUBISHI" OUTDOOR UNIT	TOTAL COOL. CAP. BTUH	COMPRESSOR		MCA	MOCP	FAN FLA	VOLT	PIPING		SEER	WT. (LBS.)	IN-DOOR MTG. DTL.	OUT-DOOR MTG. DTL.
									RLA	LRA					RL	RS				
UNIT - J GYM	SAC 1J	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1
UNIT - C CLUSTER	SAC 1C	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1
UNIT - D CLUSTER	SAC 1D	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1
UNIT - E CLUSTER	SAC 1E	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1
UNIT - F CLUSTER	SAC 1F	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1
UNIT - G MUSIC	SAC 1G	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1
UNIT - H THEATER	SAC 1H	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	1/4"	3/8"	10.2	65	13 / M5.2	14 / M5.2

NOTES: 1. PROVIDE ALL INDOOR UNITS WITH THERMOSTAT.

2. COOLING CAPACITY RATED AT 80°F DB / 67°F WB INDOOR AIR AND 95°F DB / 75°F WB OUTDOOR AIR.

ROOF EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	H.P.	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - J AUX. GYM	REF 1J	"GREENHECK"	GB-90	450	1/4"	1/4	120V, 1φ	100	SWITCH WITH EMS SYSTEM	6 / M5.1
UNIT - C CLUSTER	REF 1C & 2C	"GREENHECK"	GB-90	425	1/4"	1/4	120V, 1φ	100	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - D CLUSTER	REF 1D & 2D	"GREENHECK"	GB-90	425	1/4"	1/4	120V, 1φ	100	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - E CLASSROOM	REF 1E & 2E	"GREENHECK"	CUBE-140	1000	3/8"	1/4	120V, 1φ	125	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - E CLASSROOM	REF 3E	"GREENHECK"	CUE-95A	500	1/2"	1/4	120V, 1φ	75	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - E CLASSROOM	REF 4E	"GREENHECK"	CUBE-140	1000	1/2"	1/4	120V, 1φ	125	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - E CLASSROOM	REF 5E	"GREENHECK"	CUBE-160	1500	3/8"	1/4	120V, 1φ	140	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - E CLASSROOM	REF 6E	"GREENHECK"	CUBE-100	800	3/4"	1/4	120V, 1φ	100	SWITCH MANUALLY AT KILN HOOD	7 / M5.1
UNIT - E CLASSROOM	REF 7E	"GREENHECK"	GB-70	150	1/2"	1/4	120V, 1φ	50	SWITCH WITH THERMOSTAT MOUNTED ON WALL SET FOR 85°F.	7 / M5.1
UNIT - F CLASSROOM	REF 1F	"GREENHECK"	GB-70	233	3/8"	1/4	120V, 1φ	50	SWITCH WITH LIGHTS	7 / M5.1
UNIT - G MUSIC	REF 1G	"GREENHECK"	GB-120	1100	3/8"	1/4	120V, 1φ	100	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - P POOL BLDG.	REF 1P	"GREENHECK"	GB-140	1025	1/2"	1/4	120V, 1φ	125	SWITCH WITH EMS SYSTEM	6 / M5.1
UNIT - Q CONCESSION	REF 1Q	"GREENHECK"	GB-140	1375	1/2"	1/4	120V, 1φ	125	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - Q CONCESSION	REF 2Q	"GREENHECK"	GB-160	1600	1/2"	1/4	120V, 1φ	125	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - H THEATER	REF 1H & 2H	"GREENHECK"	GB-90	500	3/8"	1/4	120V, 1φ	100	SWITCH WITH EMS SYSTEM	7 / M5.1
UNIT - H THEATER	REF 3H	"GREENHECK"	GB-120	750	1/4"	1/4	120V, 1φ	100	SWITCH WITH THERMOSTAT MOUNTED ON WALL SET FOR 80°F.	7 / M5.1
UNIT - H THEATER	REF 4H	"GREENHECK"	GB-90	500	1/4"	1/4	120V, 1φ	100	SWITCH WITH THERMOSTAT MOUNTED ON WALL SET FOR 80°F.	7 / M5.1

NOTES: 1. PROVIDE WITH BACKDRAFT DAMPER AND GPFP ROOF CURB.

CEILING EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	WATTS INPUT	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - C CLUSTER	CEF 1C	GREENHECK	SP-224	135	1/4"	83	120V, 1φ	21	PROVIDE WITH RCC-7 ROOF CAP WITH CURB, BACKDRAFT DAMPER, & 5W SPEED SWITCH MTD. IN UNIT CASING SET FOR 135f. SW. w/ LITES.	8 / M5.1
UNIT - D CLUSTER	CEF 1D	GREENHECK	SP-224	135	1/4"	83	120V, 1φ	21	PROVIDE WITH RCC-7 ROOF CAP WITH CURB, BACKDRAFT DAMPER, & 5W SPEED SWITCH MTD. IN UNIT CASING SET FOR 135f. SW. w/ LITES.	8 / M5.1
UNIT - E CLASSROOM	CEF 1E	GREENHECK	SP-224	115	1/4"	83	120V, 1φ	21	PROVIDE WITH RCC-7 ROOF CAP WITH CURB, BACKDRAFT DAMPER, & 5W SPEED SWITCH MTD. IN UNIT CASING SET FOR 115f. SW. w/ LITES.	8 / M5.1
UNIT - E CLASSROOM	CEF 2E	GREENHECK	SP-224	210	3/8"	83	120V, 1φ	21	PROVIDE WITH GRS-10 ROOF CAP WITH CURB AND BACKDRAFT DAMPER. SWITCH ON WITH LIGHTS.	8 / M5.1
UNIT - E CLASSROOM	CEF 3E	GREENHECK	SP-224	140	3/8"	83	120V, 1φ	21	PROVIDE WITH GRS-10 ROOF CAP WITH CURB, BACKDRAFT DAMPER & 5W SPEED SWITCH MTD. IN UNIT CASING SET FOR 140f. SW. w/ LITES.	8 / M5.1
UNIT - G MUSIC	CEF 1G	GREENHECK	SP-210	88	1/4"	49	120V, 1φ	15	PROVIDE WITH MODEL RCC-7 ROOF CAP WITH CURB & BACKDRAFT DAMPER. SWITCH ON/OFF WITH LIGHTS.	8 / M5.1

NOTES: 1. PROVIDE ALL CEF'S WITH BACKDRAFT DAMPER.

EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	WATTS INPUT or HP	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - C CLUSTER	EF 1C	"GREENHECK"	CSP-252	400	3/8"	217	120V, 1φ	36	PROVIDE WITH BACKDRAFT DAMPER & 5W SPEED SWITCH MOUNTED IN UNIT CASING SET FOR 400 CFM. SWITCH WITH LIGHTS.	11 / M5.1
UNIT - C CLUSTER	EF 2C	"GREENHECK"	CSP-226	265	1/4"	80	120V, 1φ	23	PROVIDE WITH BACKDRAFT DAMPER. INTERLOCK WITH A.C.- 1C.	11 / M5.1
UNIT - D CLUSTER	EF 1D	"GREENHECK"	CSP-252	400	3/8"	217	120V, 1φ	36	PROVIDE WITH BACKDRAFT DAMPER & 5W SPEED SWITCH MOUNTED IN UNIT CASING SET FOR 400 CFM. SWITCH WITH LIGHTS.	11 / M5.1
UNIT - D CLUSTER	EF 2D	"GREENHECK"	CSP-226	265	1/4"	80	120V, 1φ	23	PROVIDE WITH BACKDRAFT DAMPER. INTERLOCK WITH A.C.- 1D.	11 / M5.1

NOTES: 1. PROVIDE WITH BACKDRAFT DAMPER.

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GC DESIGNER/DRAFTER 970617 PROJECT

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NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC SCHEDULES

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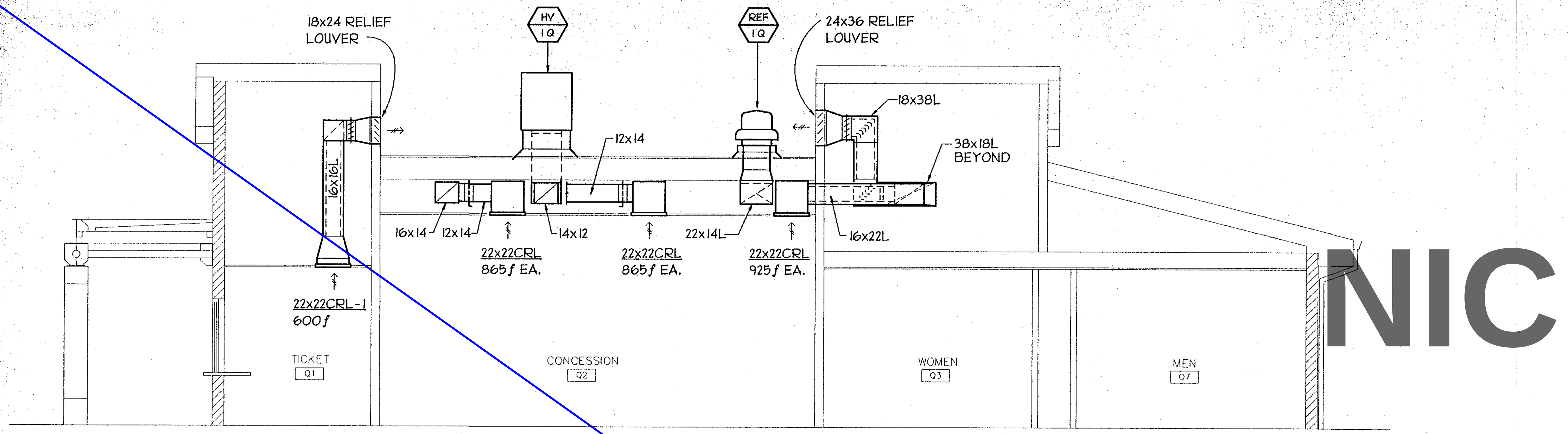
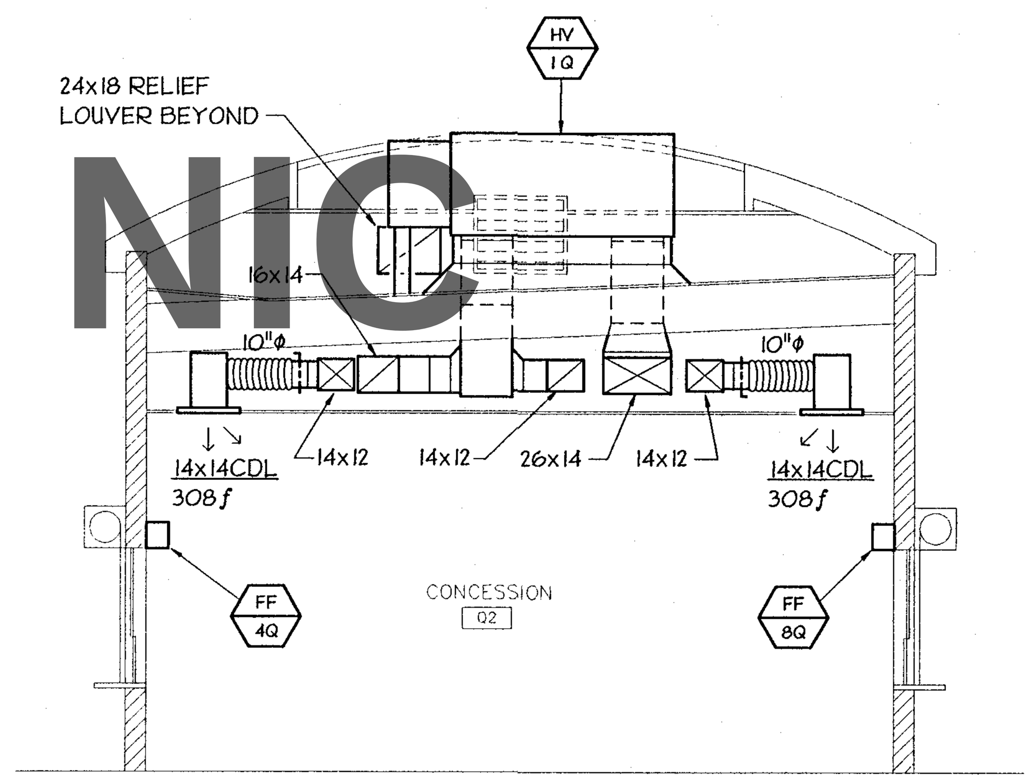


SECTION 3 M1.6.1
SCALE : 1/4" = 1'-0"



SECTION 2 M1.6.1
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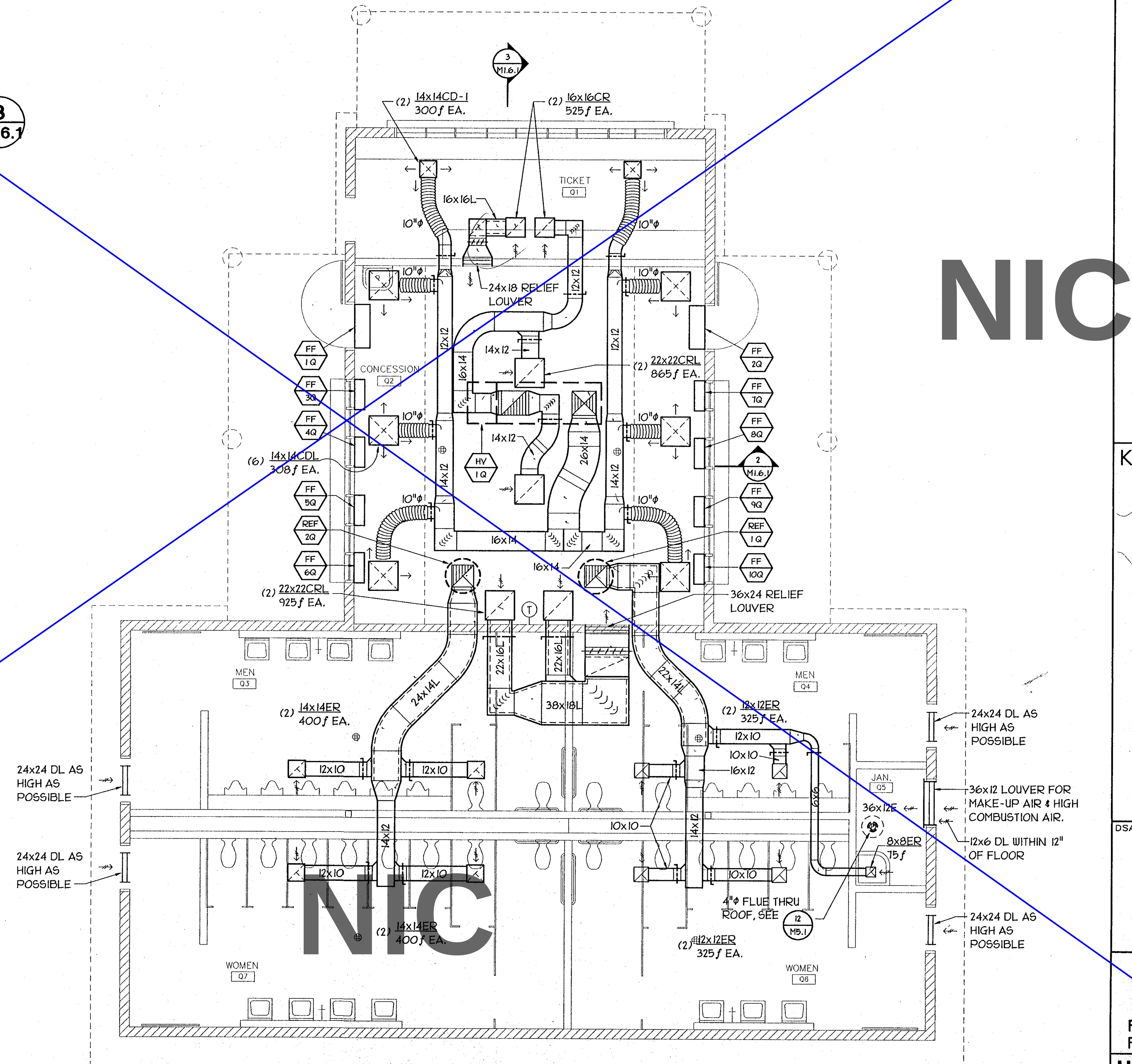

NOTE:
SEE ARCHITECTURAL DRAWINGS FOR DOOR LOUVERS.

FLOOR PLAN 1 M1.6.1
SCALE : 1/4" = 1'-0"

NIC

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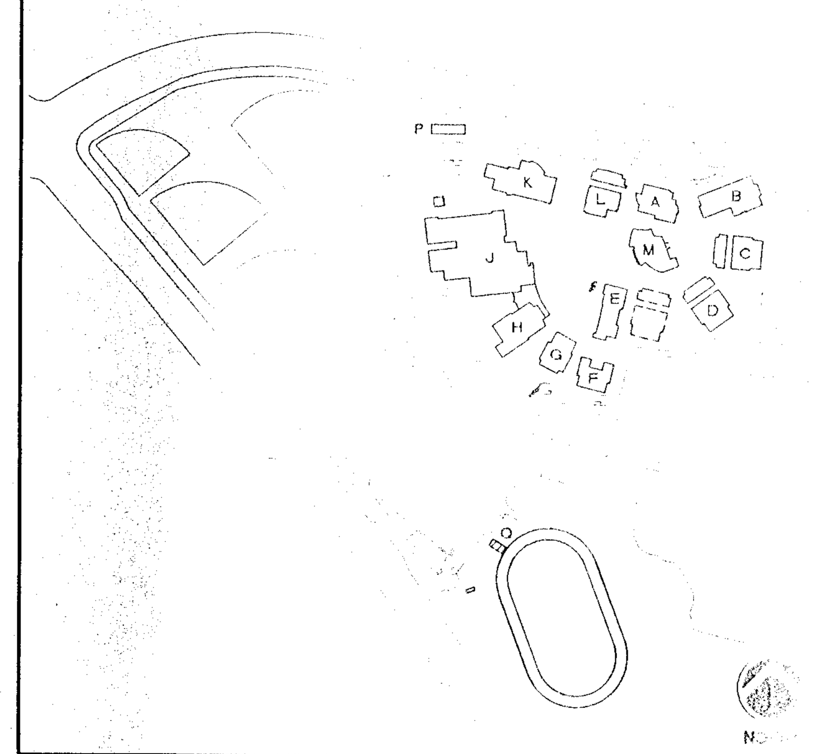

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NEW FOLSOM HIGH SCHOOL PHASE II
FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT Q
HVAC
FLOOR PLAN
ADDITIVE ALTERNATE A

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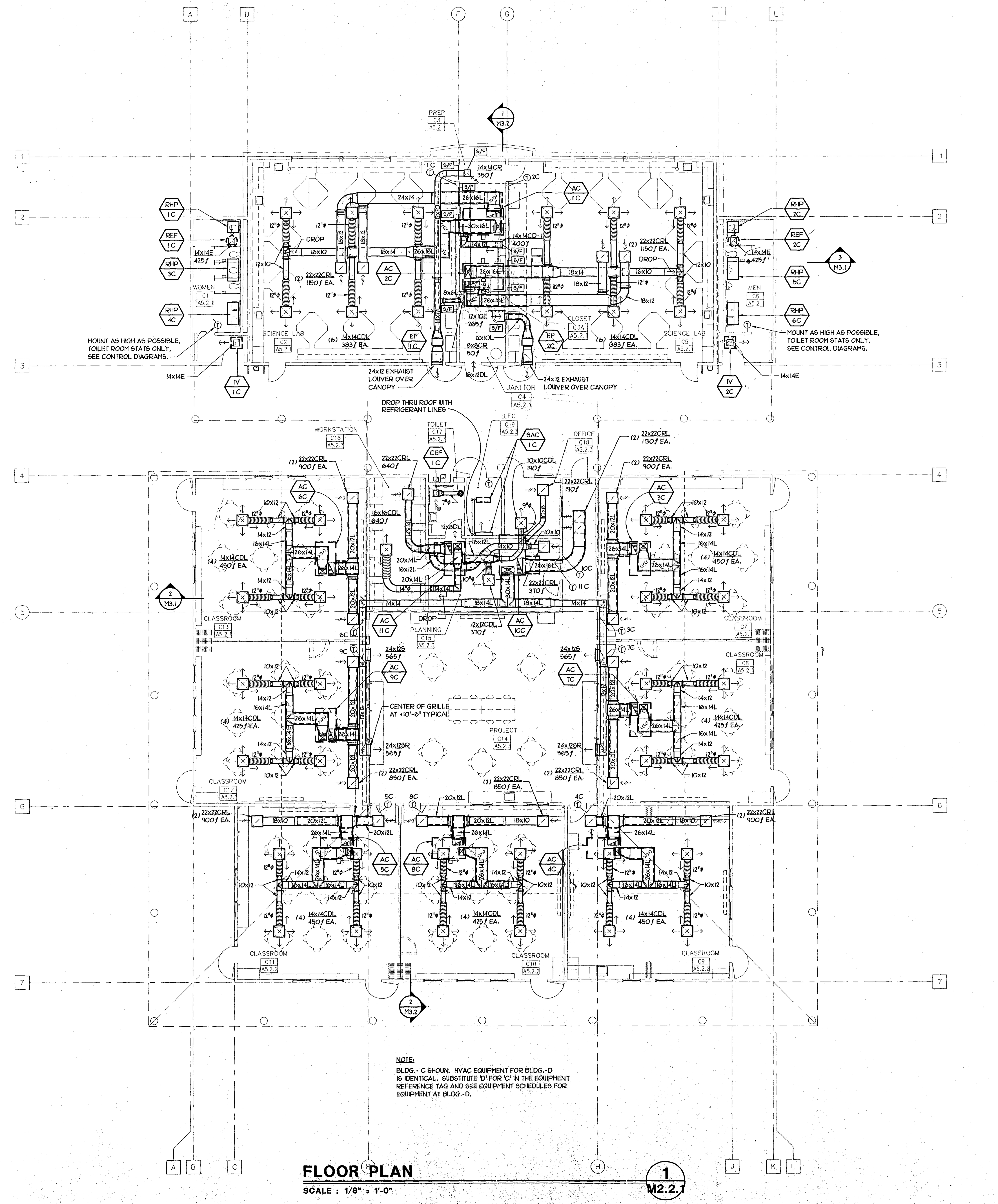
		SCALE 1/4"=1'-0"	SHEET
		CADFILE	M1.6.1
		UPDATED	OF SHEETS



NOTE:
BLDG.-C SHOWN. HVAC EQUIPMENT FOR BLDG.-D IS IDENTICAL. SUBSTITUTE 'D' FOR 'C' IN THE EQUIPMENT REFERENCE TAG AND SEE EQUIPMENT SCHEDULES FOR EQUIPMENT AT BLDG.-D.

FLOOR PLAN
SCALE : 1/8" = 1'-0"
1 M2.2.1

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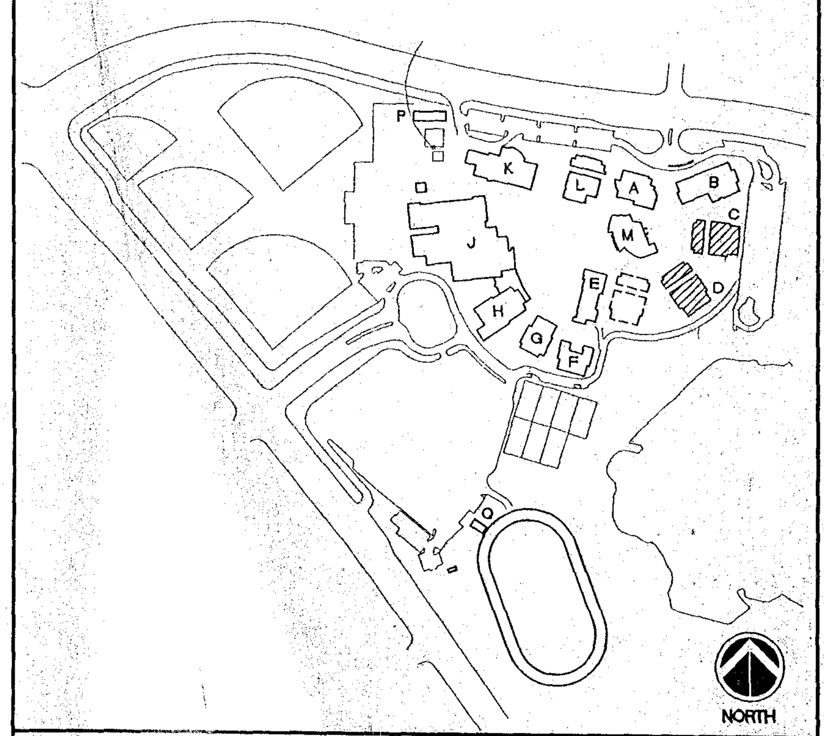

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NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT C and D HVAC FLOOR PLAN

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		CADFILE	M2.2.1
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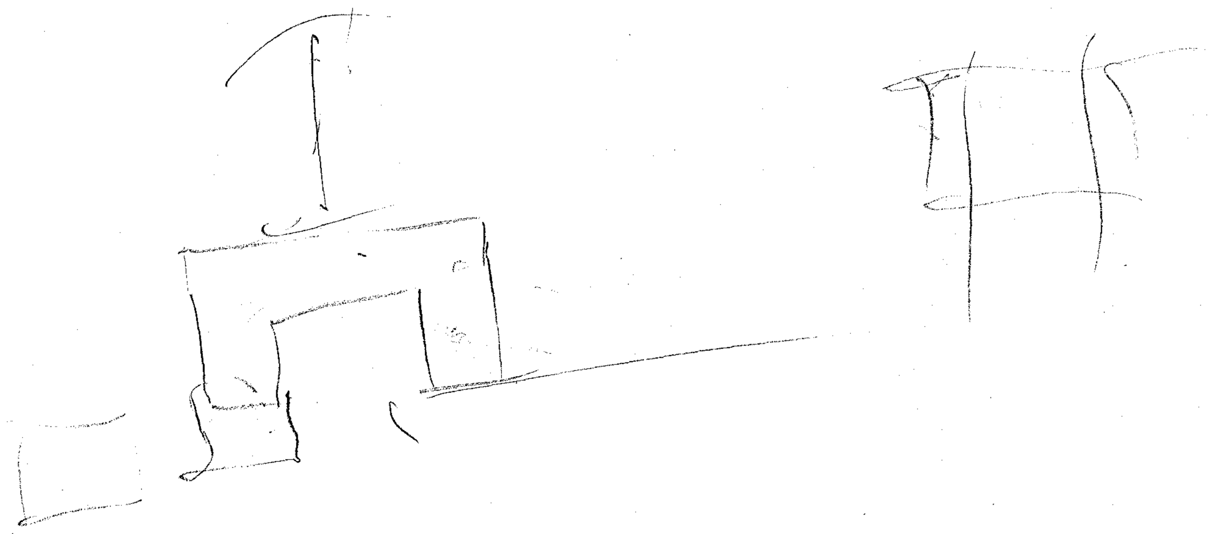

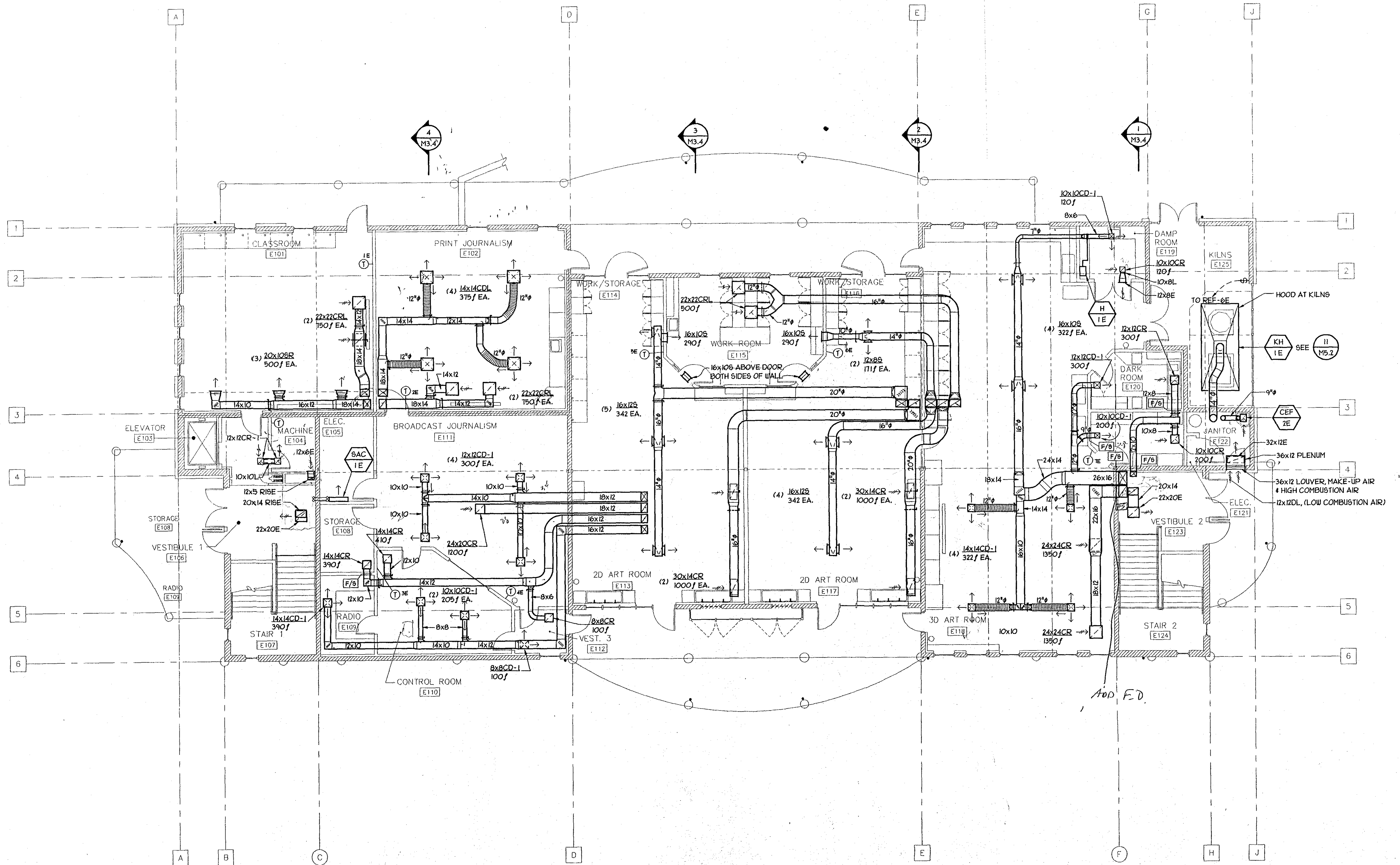

FIRST FLOOR PLAN

SCALE : 1/8" = 1'-0"

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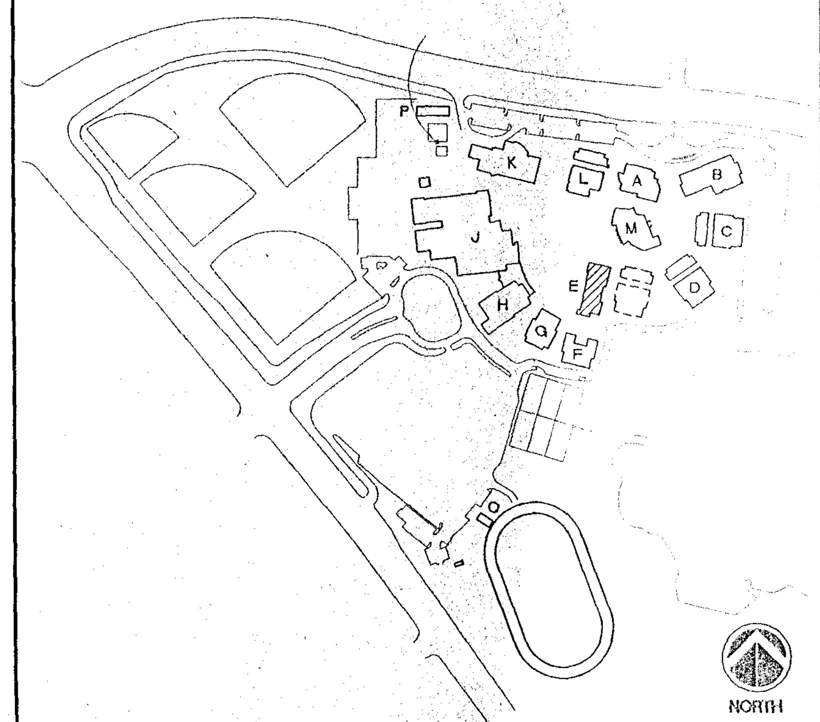

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DIV. OF THE STATE ARCHITECT
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02 100090
AC ___ FLS DL SS RVC
DATE 12/9/98

ARCH

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
5/31/99
RENEWAL DATE
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT E FIRST FLOOR PLAN

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE 1/8"=1'-0"	SHEET
		CADFILE	M2.3.1
		UPDATED	OF SHEETS

Michael RAINFORTH ■ Jeffrey GRAU
A R C H I T E C T S
3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

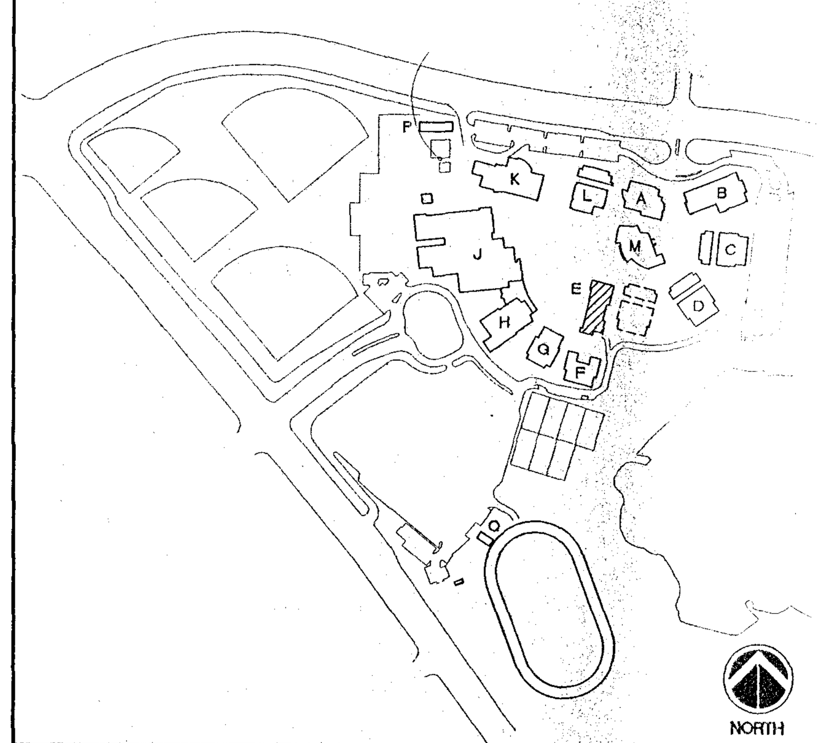
REGISTERED PROFESSIONAL ENGINEER
MECHANICAL
STATE OF CALIFORNIA

Capital Engineering Consultants, Inc.
Sacramento, California

GC
DESIGNER/DRAFTER

970617
PROJECT NO.

KEYMAP



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DATE 12/9/98

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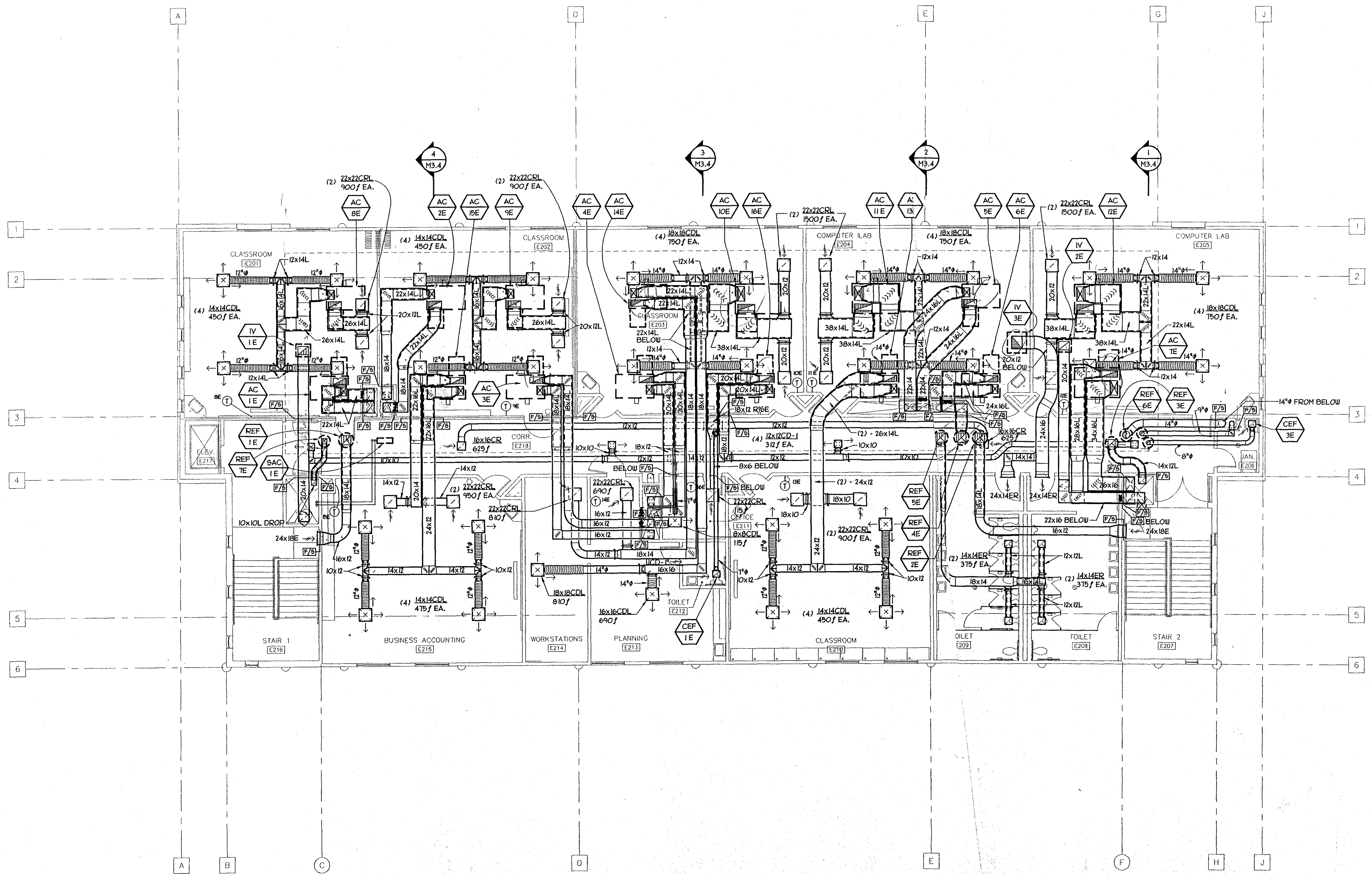
LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
STATE OF CALIFORNIA



SECOND FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
M2.3.2

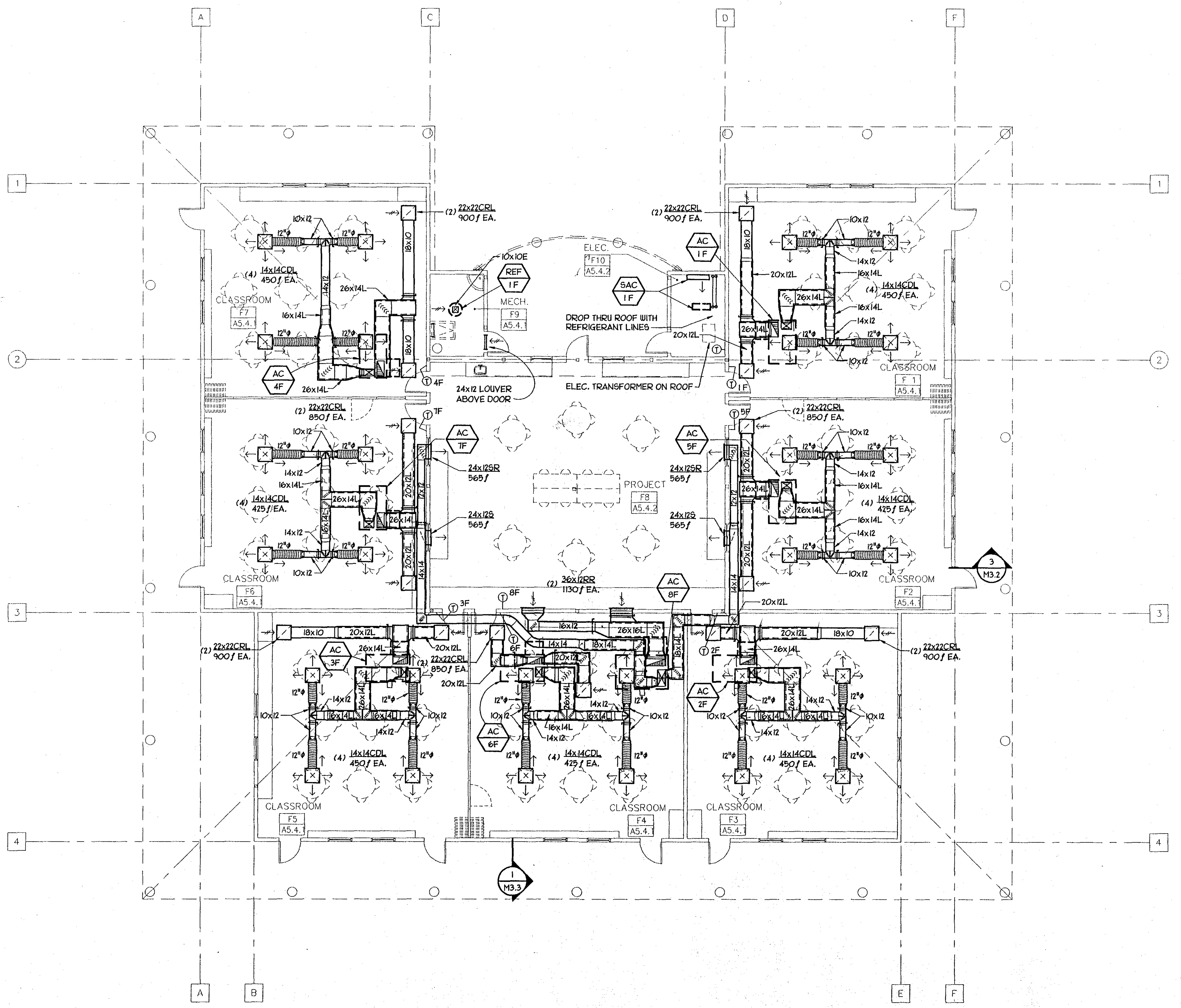
NEW FOLSOM HIGH SCHOOL
PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT E
SECOND FLOOR PLAN

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE 1/8" = 1'-0"	SHEET M2.3.2
		CADFILE	
		UPDATED	OF SHEETS

QC	
INI	%
GC	100
MJR	100
LS	100



FLOOR PLAN

SCALE : 1/8" = 1'-0"

1 M2.4.1

Michael RAINFORTH Jeffrey GRAU
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3250 Ramos Circle • Sacramento, CA 95827
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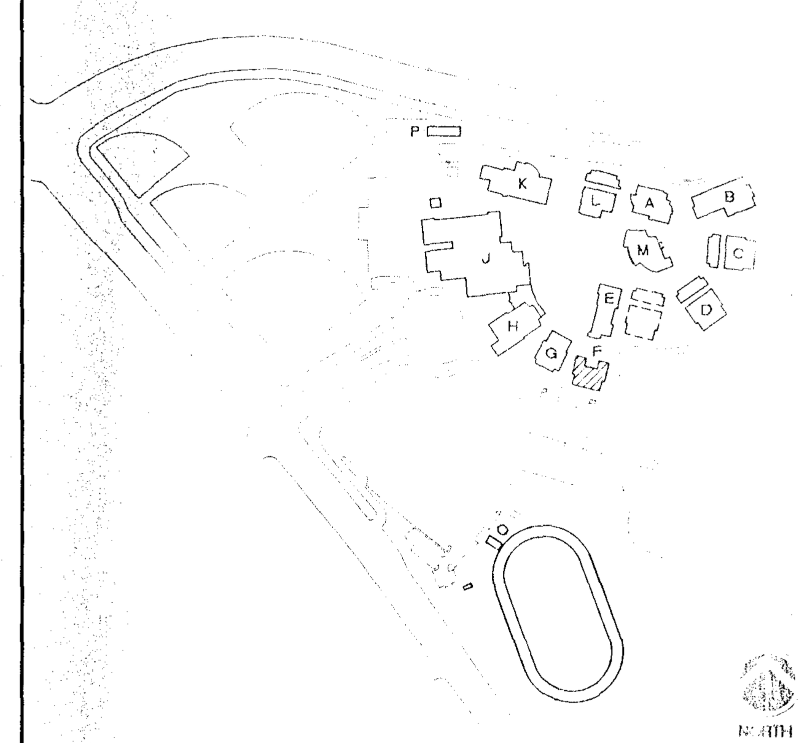
Capital Engineering Consultants, Inc.

GC DESIGNER/DRAFTER

KEYMAP



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ARCH

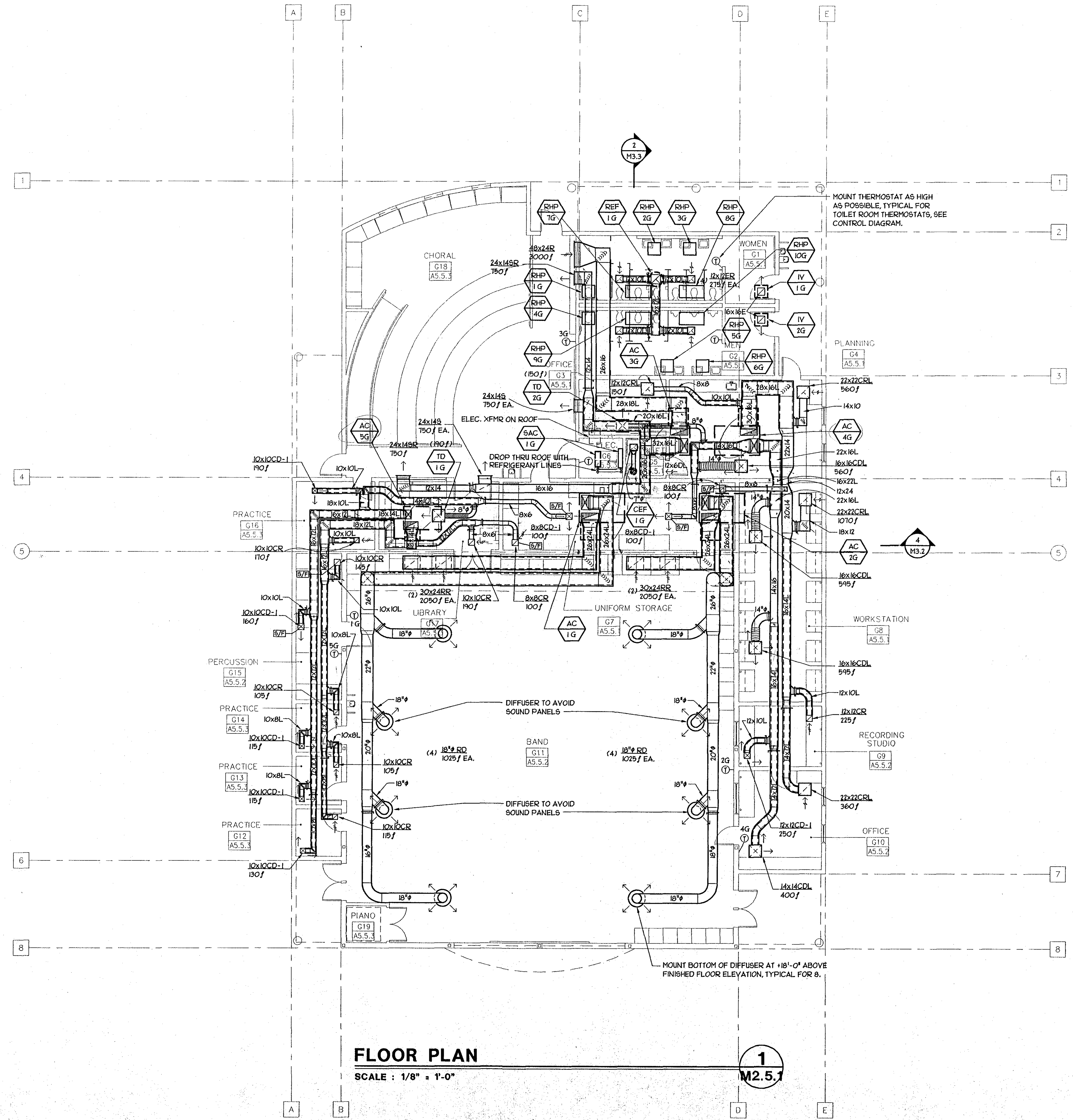
C-14643

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT F HVAC FLOOR PLAN

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 91-444
		CHECKED LS	DATE
		SCALE 1/8" = 1'-0"	SHEET M2.4.1
		CADFILE	
		UPDATED	OF SHEETS



FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
M2.5.1

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Sacramento, California

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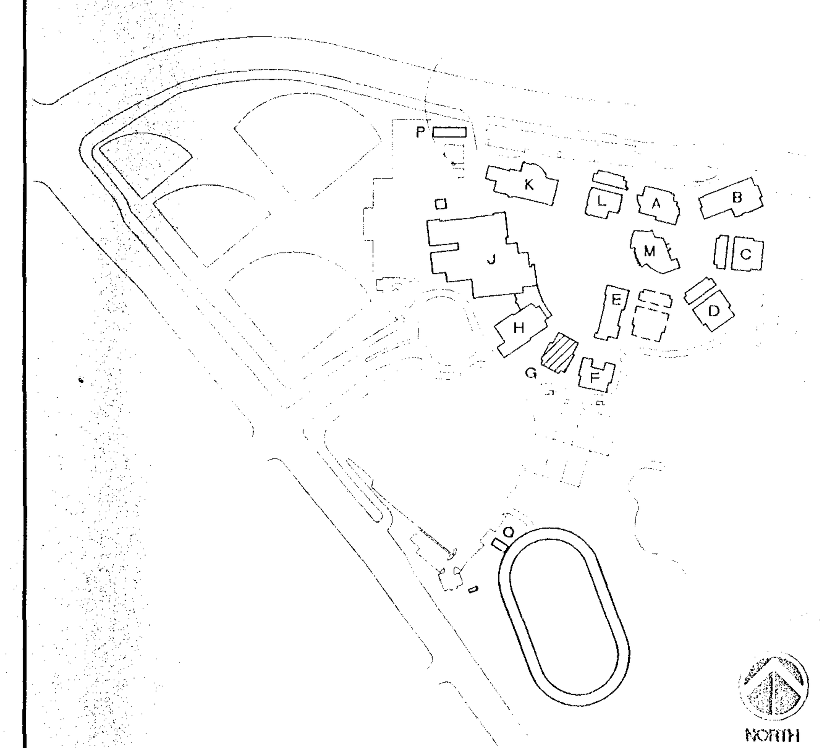
KEYMAP



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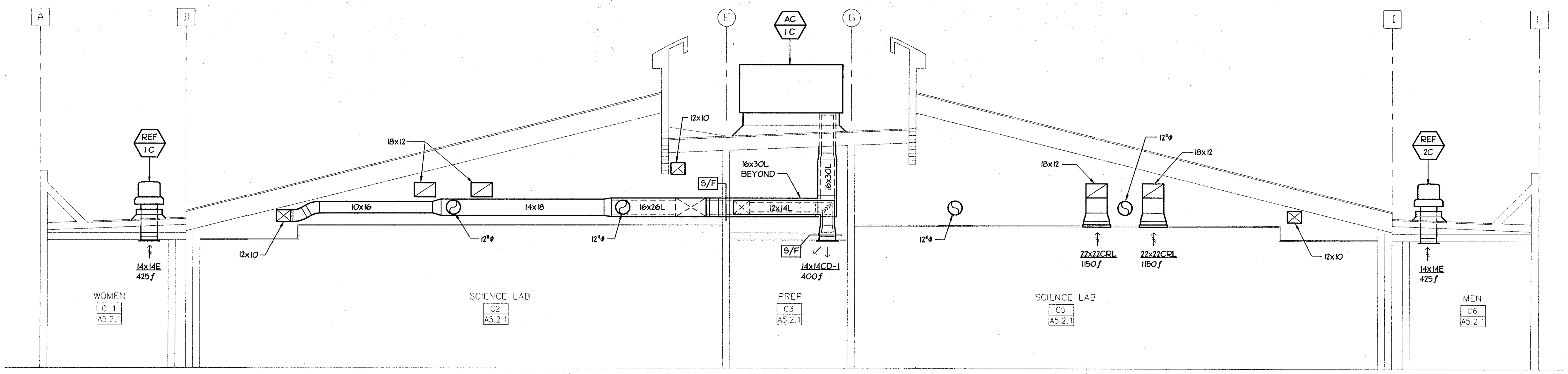
LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

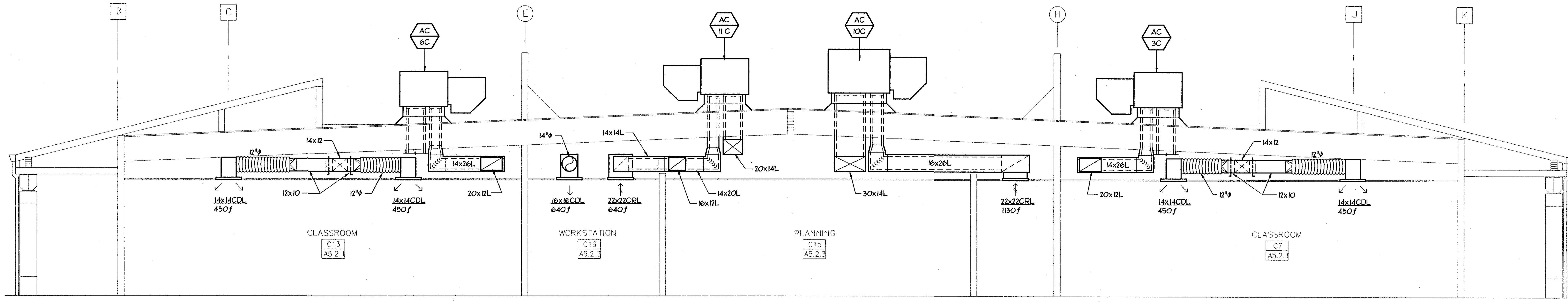
UNIT G
HVAC
FLOOR PLAN

REVISIONS	BY	DRAWN GC	PROJECT NO. 97-444
		CHECKED LB	DATE
		SCALE 1/8" = 1'-0"	SHEET
		CADFILE	M2.5.1
		UPDATED	OF SHEETS



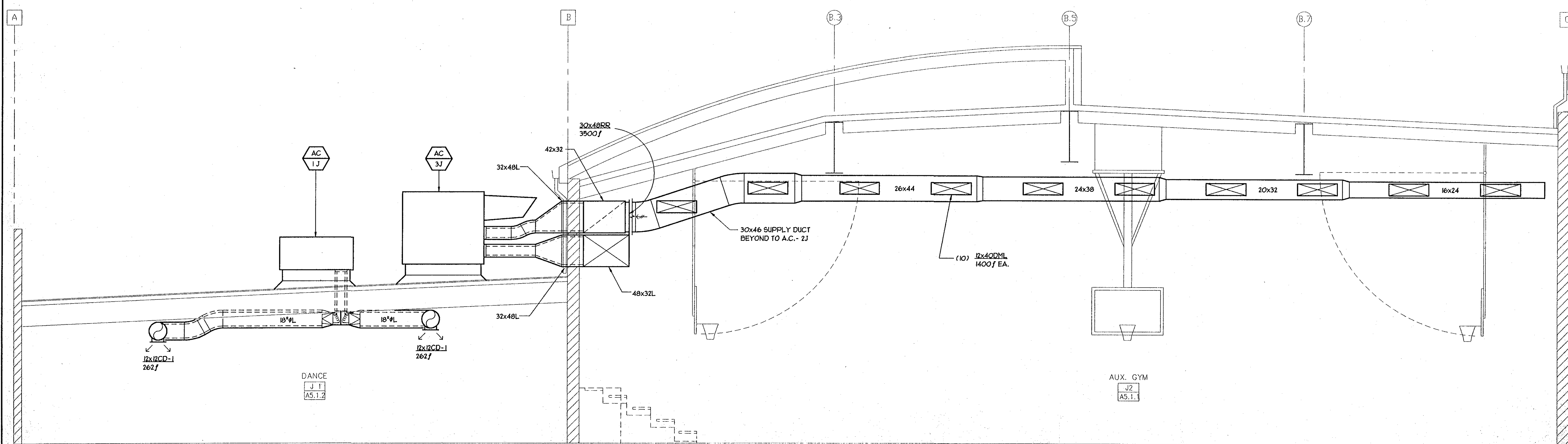
SECTION 3 M3.1

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



SECTION 2 M3.1

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



SECTION N.I.C. 1 M3.1

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

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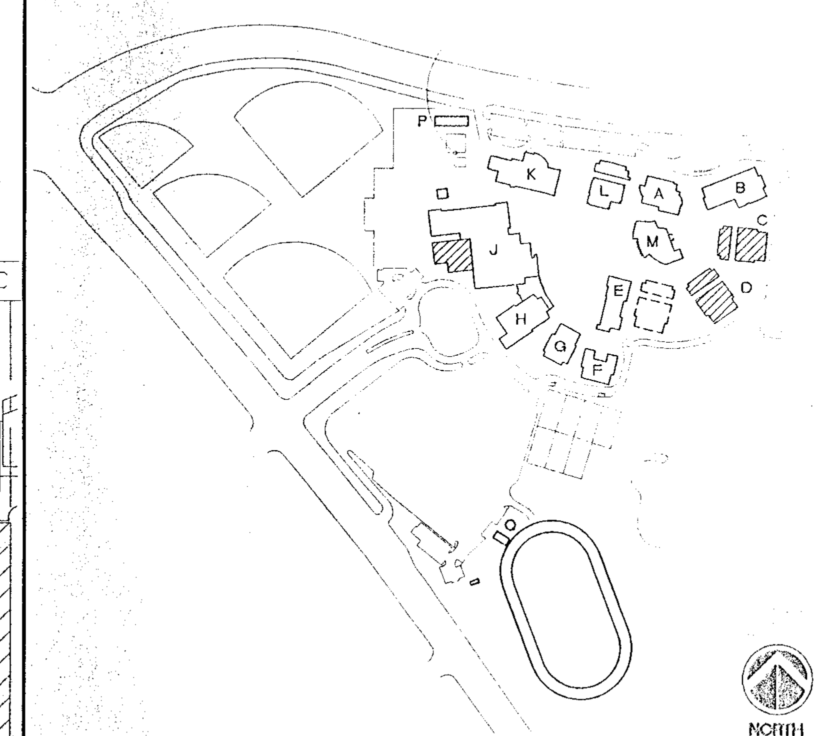
REGISTERED PROFESSIONAL ENGINEER LOWELL E. SHELL M23548 MECHANICAL STATE OF CALIFORNIA

Capital Engineering Consultants, Inc. Sacramento, California

GC DESIGNER/DRAFTER 970617 PROJECT NO.

KEYMAP



DSA/ORS

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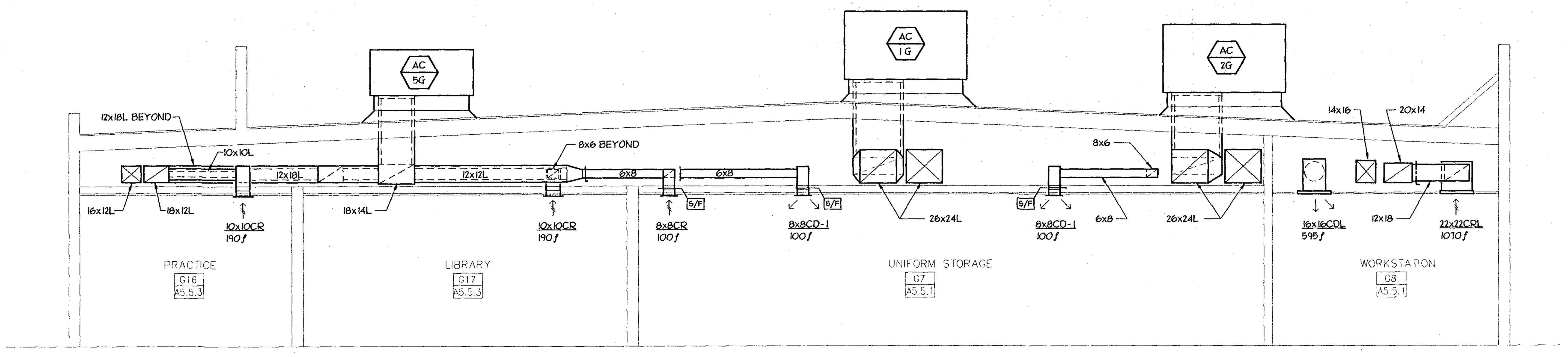
LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 5/31/99 RENEWAL DATE STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

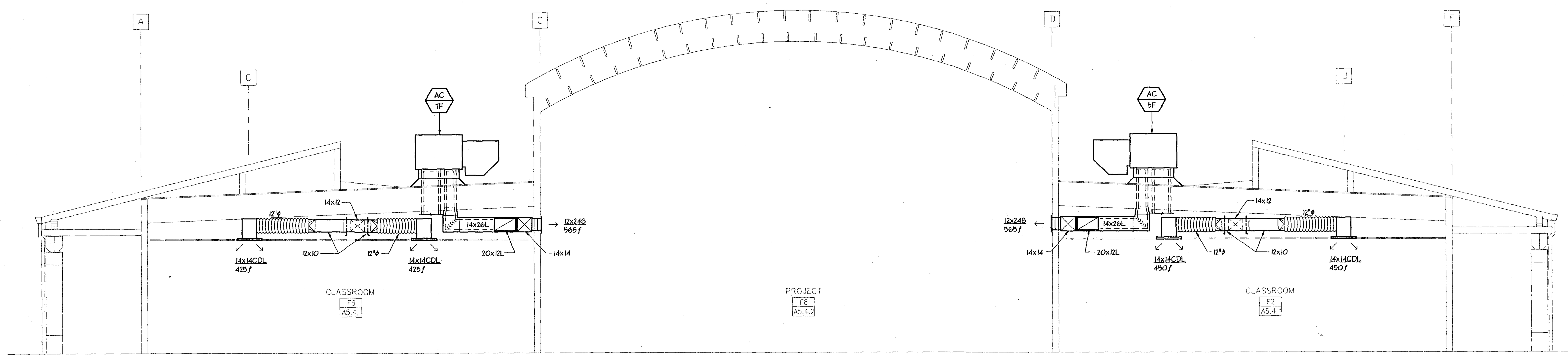
FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC SECTIONS

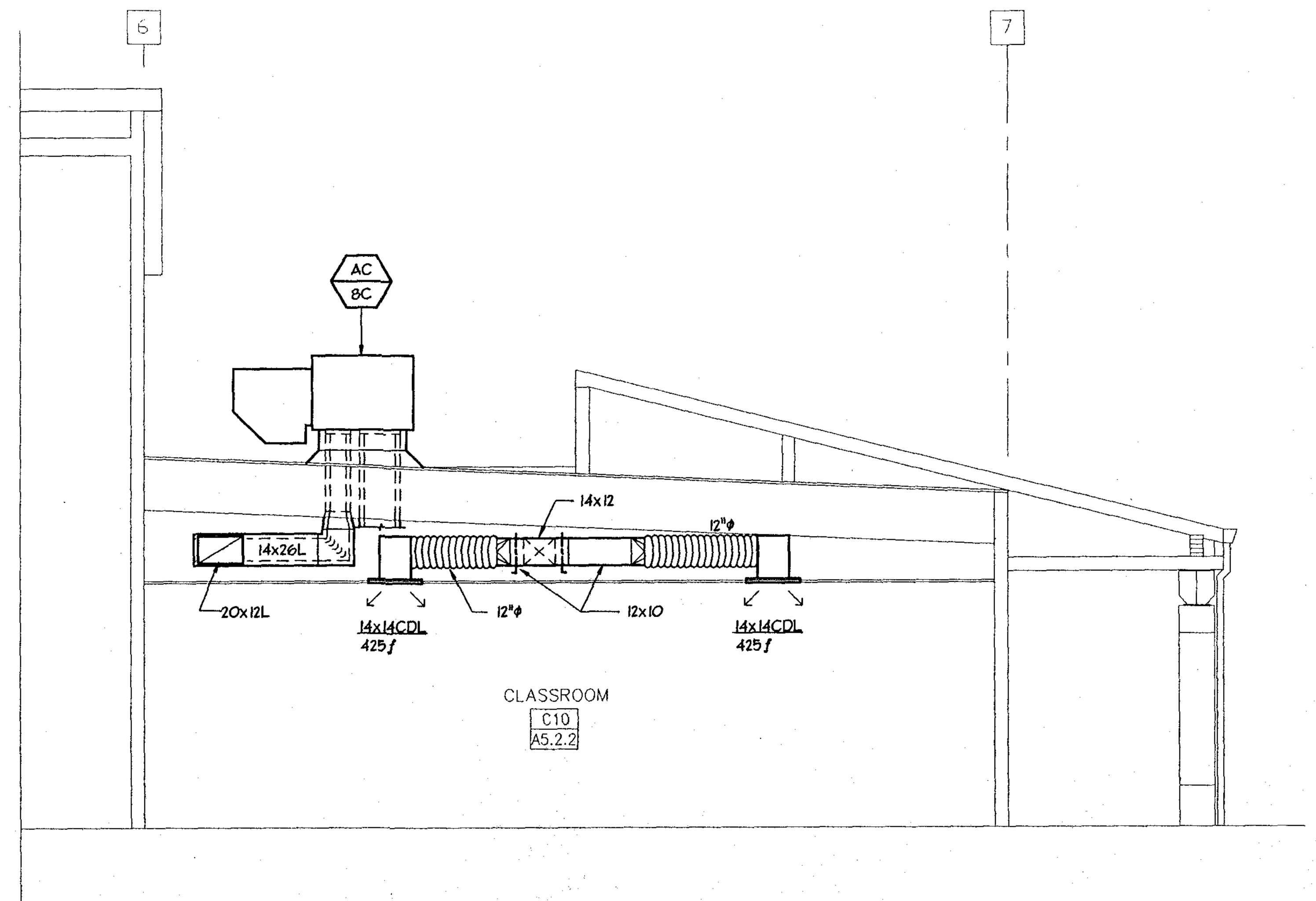
REVISIONS	BY		
		DRAWN GC	PROJECT NO. 91-444
		CHECKED LB	DATE
		SCALE 1/4" = 1'-0"	SHEET M3.1
		CADFILE	
		UPDATED	OF SHEETS



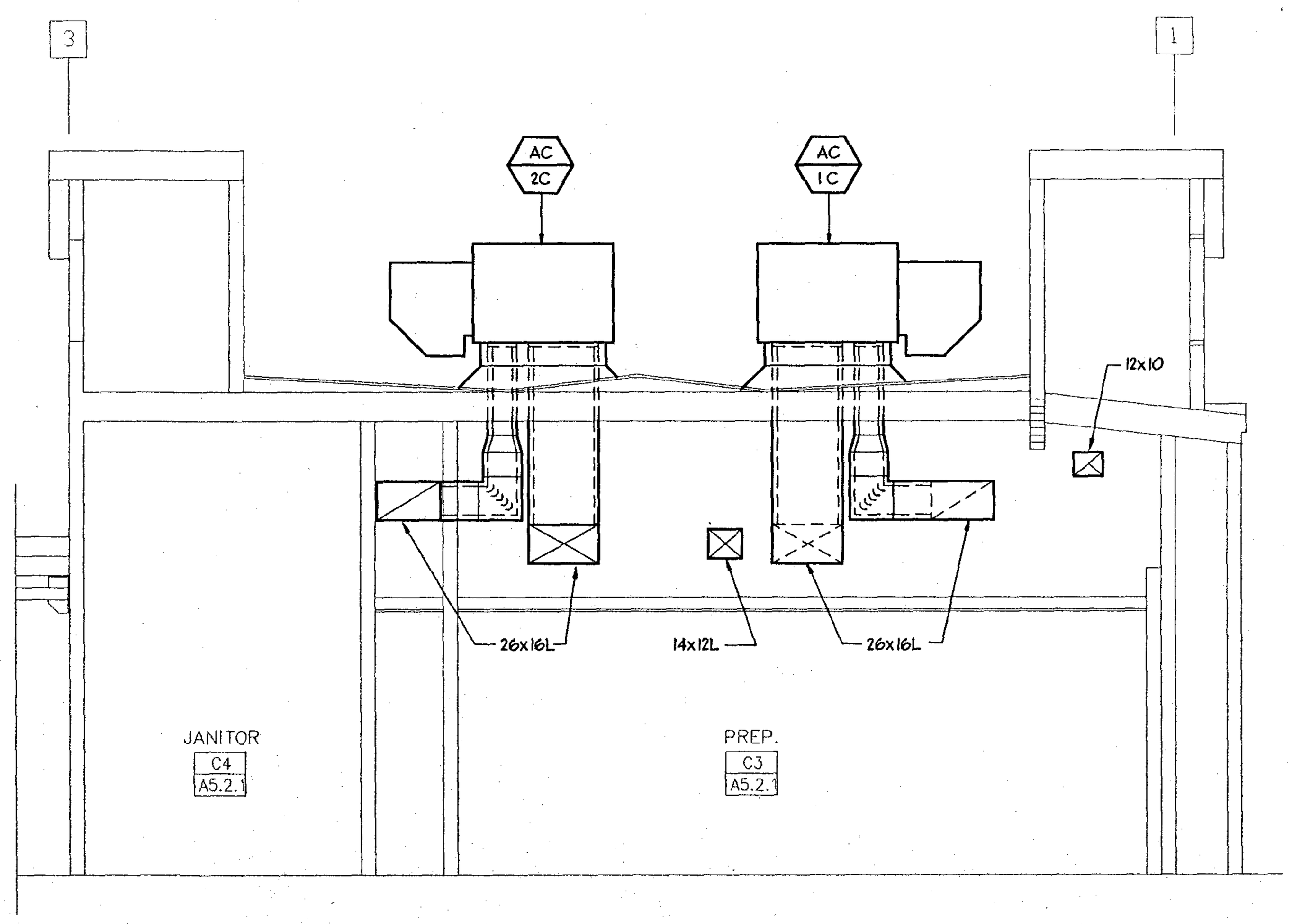
SECTION 4 M3.2
SCALE : 1/4" = 1'-0"



SECTION 3 M3.2
SCALE : 1/4" = 1'-0"



SECTION 2 M3.2
SCALE : 1/4" = 1'-0"



SECTION 1 M3.2
SCALE : 1/4" = 1'-0"

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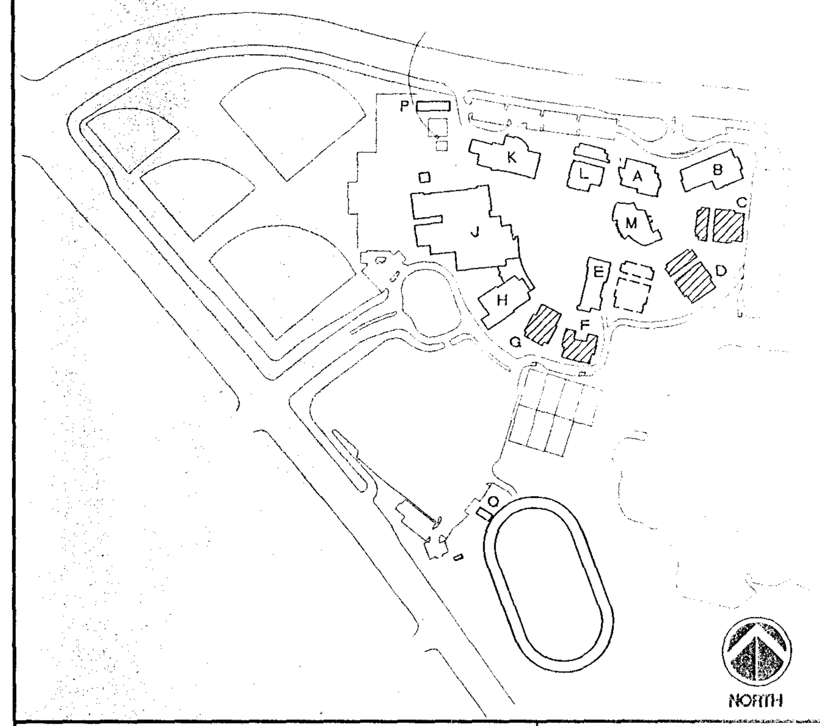
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
MECHANICAL

Capital Engineering Consultants, Inc.
Sacramento, California

GC
DESIGNER/CRAFTER
970617
PROJECT NO.

KEYMAP



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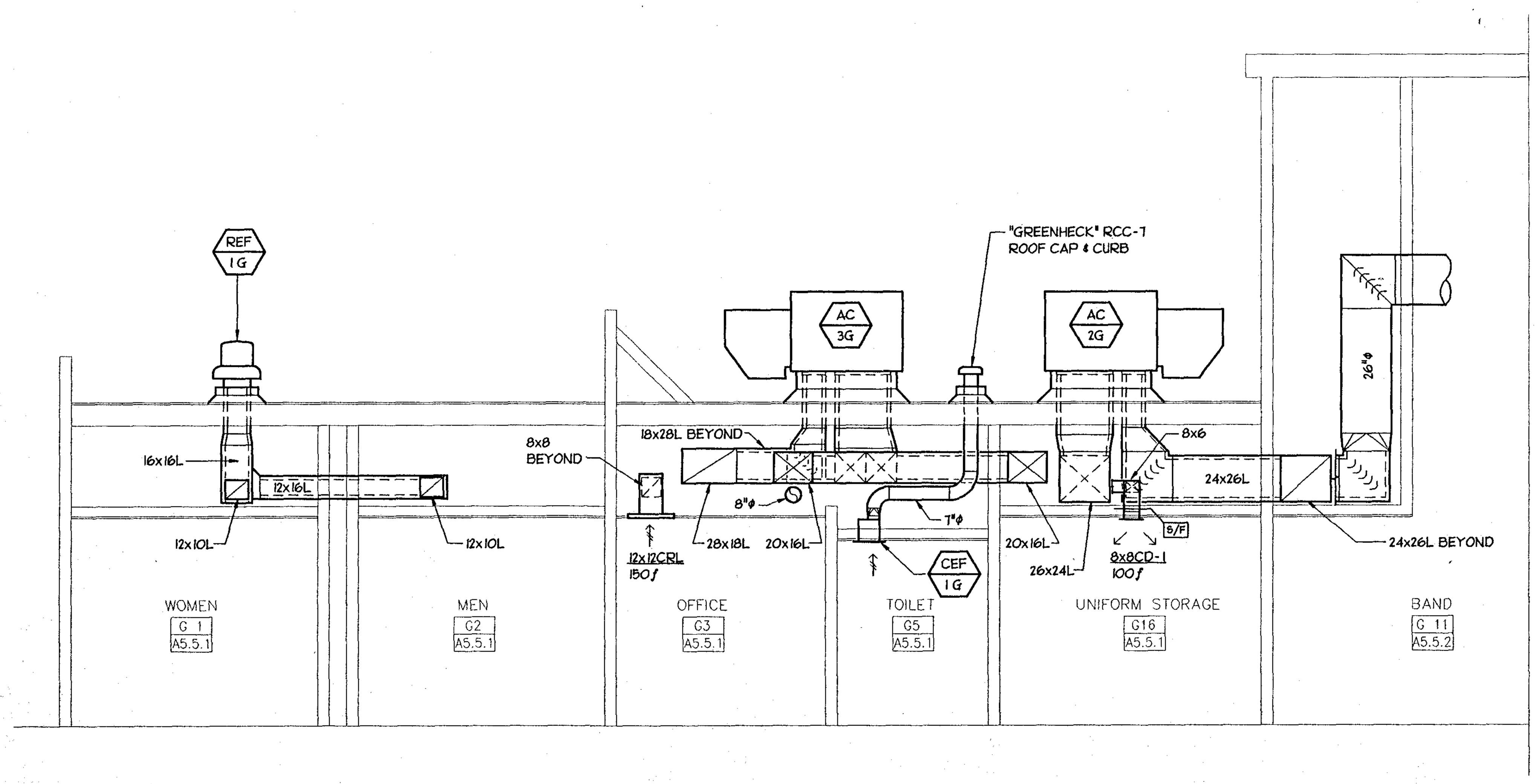
JEFFREY ALAN GRAU
C-14648
RENEWAL DATE
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

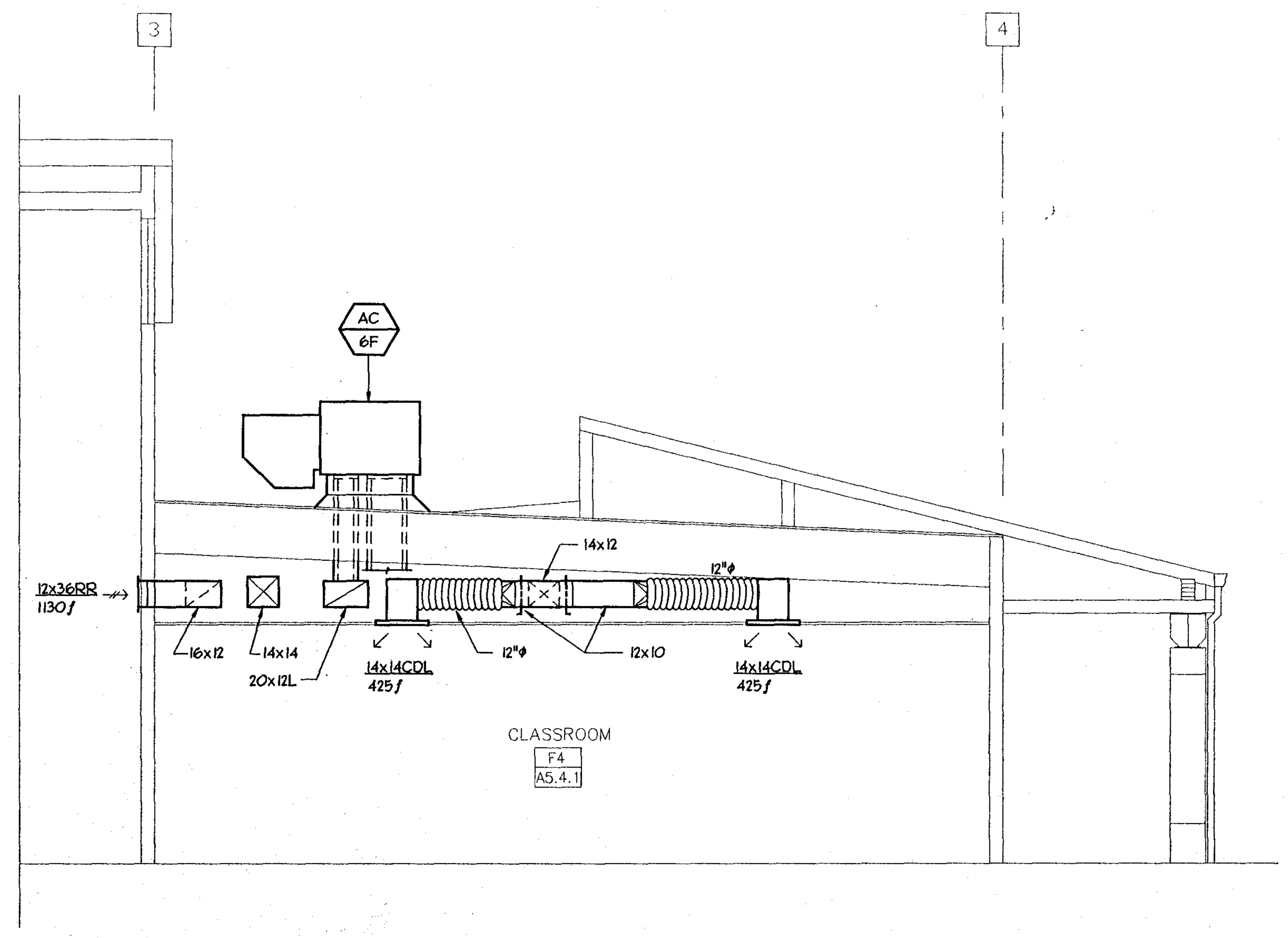
HVAC SECTIONS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE 1/4" = 1'-0"	SHEET
		CADFILE	M3.2
		UPDATED	OF SHEETS



SECTION 2/M3.3

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



SECTION 1/M3.3

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

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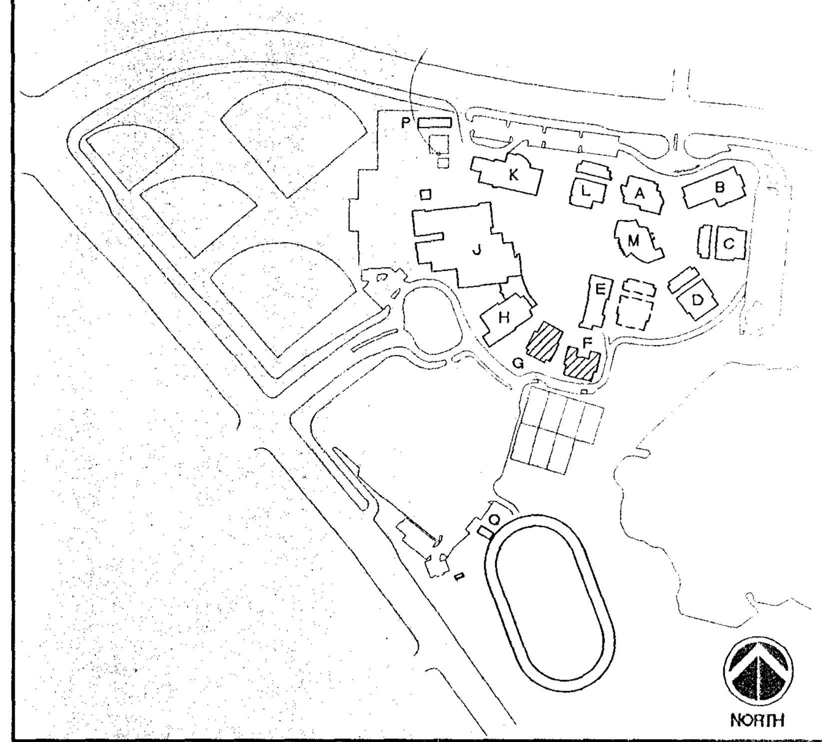
REGISTERED PROFESSIONAL ENGINEER
LOWELL E. SHIELDS
M 21583
EXPIRES 6/99
MECHANICAL
STATE OF CALIFORNIA

Capital Engineering Consultants, Inc.
Sacramento, California

GC
DESIGNER\DRAFTER

970617
PROJECT NO.

KEYMAP



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AC ___ FLS RC SS DKL
DATE 12/9/98

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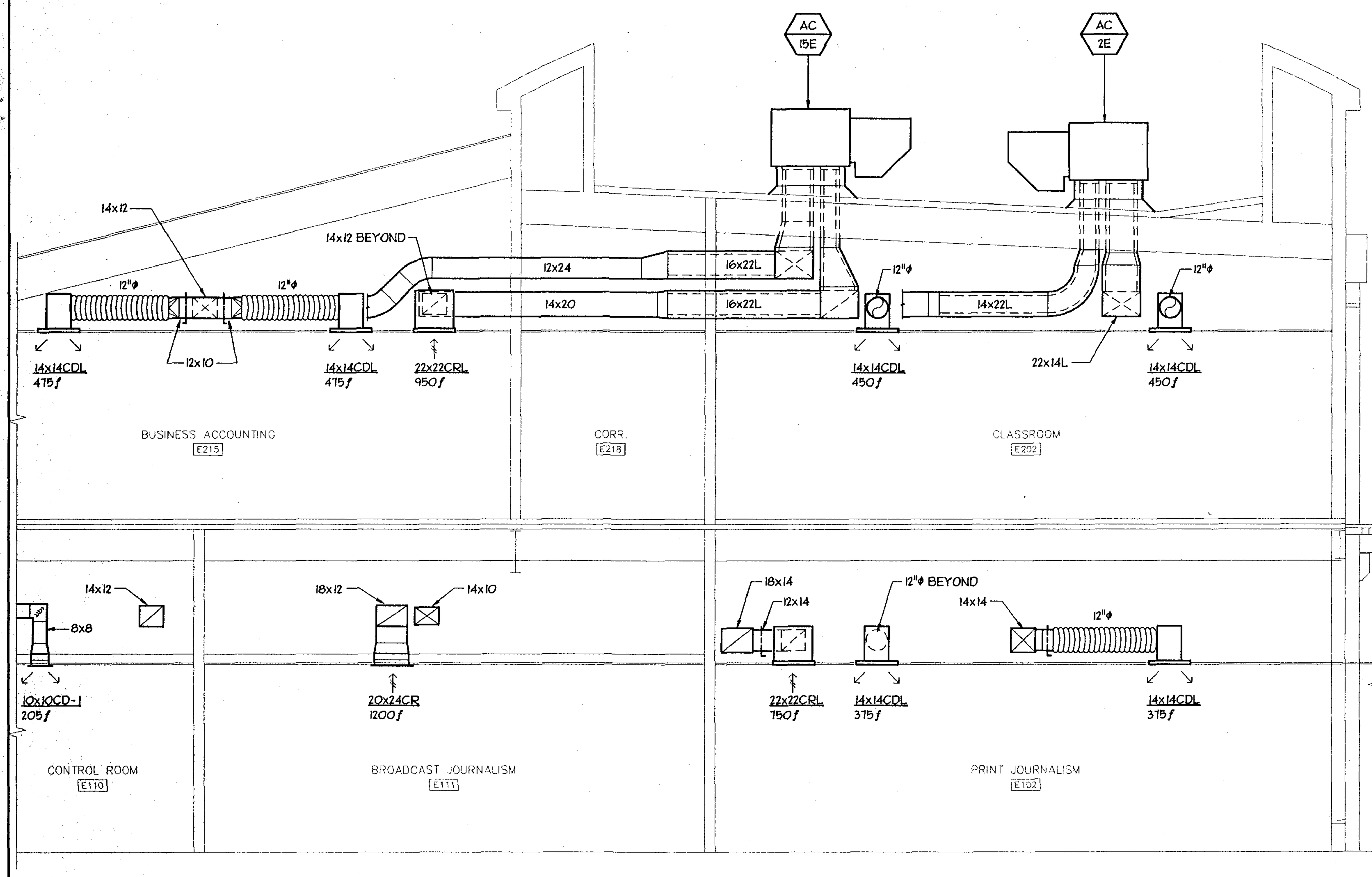
JEFFREY ALAN GRAU
C-14648
5/31/99
RENEWAL DATE
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL
PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

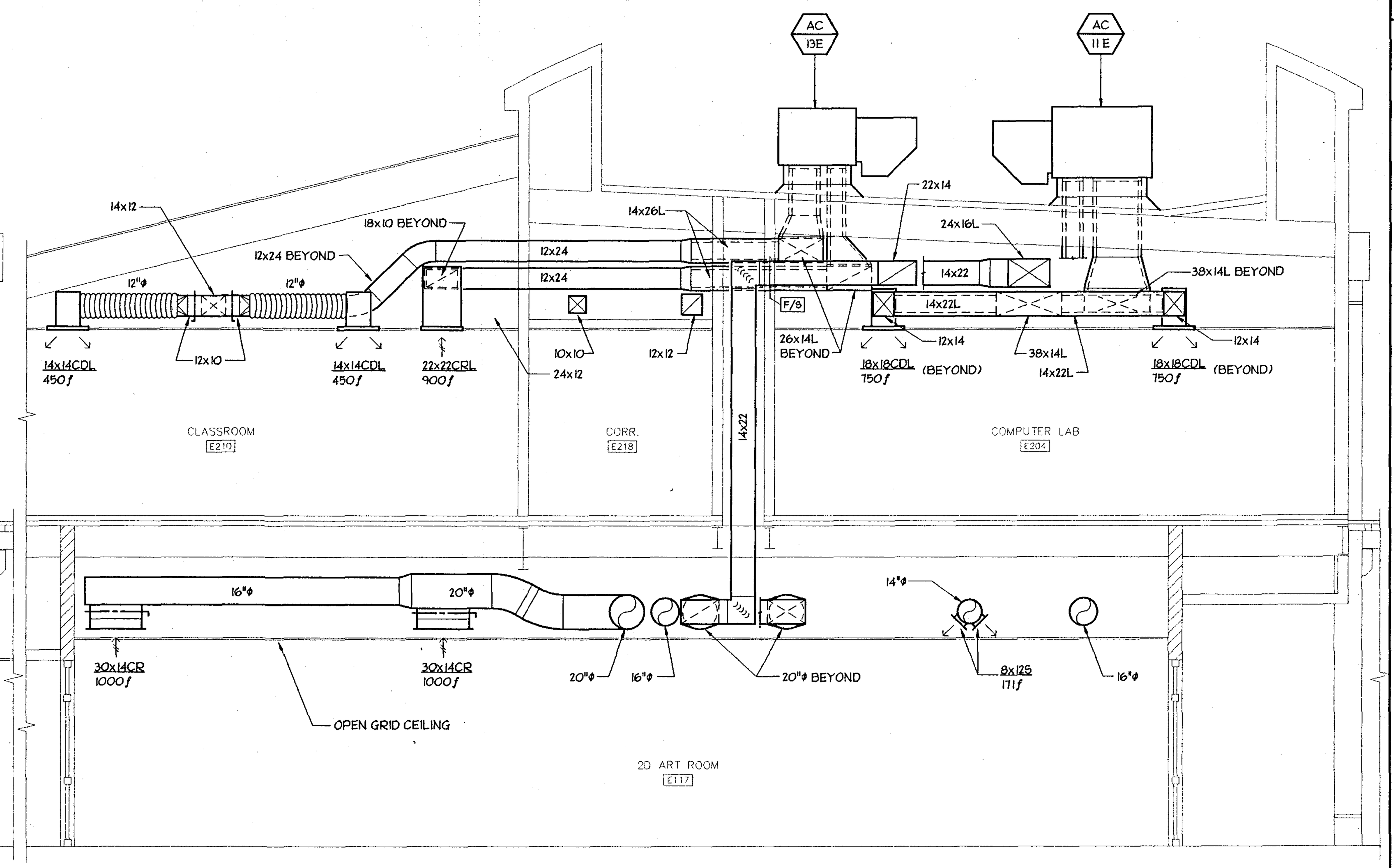
HVAC SECTIONS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE 1/4" = 1'-0"	SHEET
		CADFILE	M3.3
		UPDATED	OF SHEETS



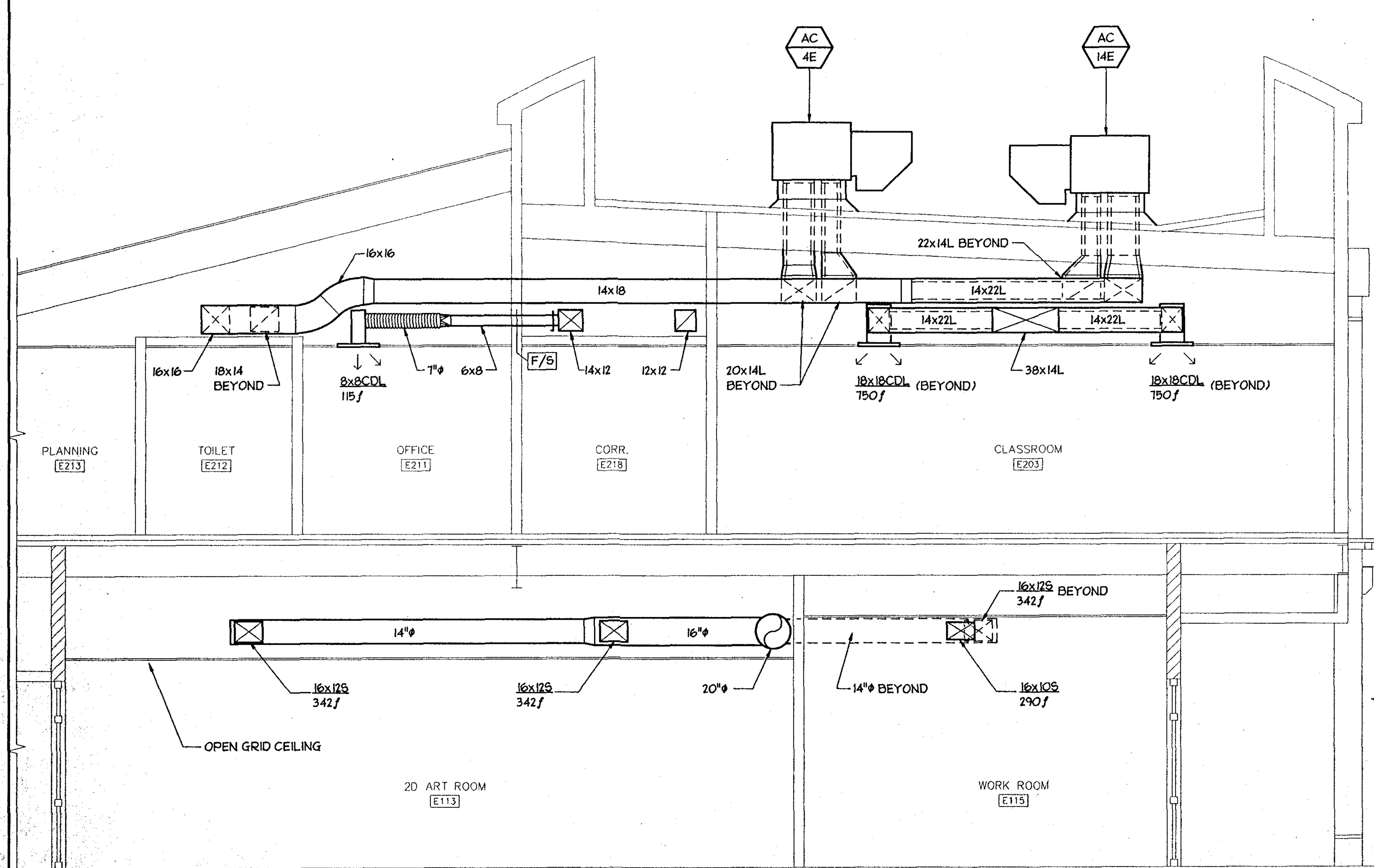
SECTION 4 / M3.4

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



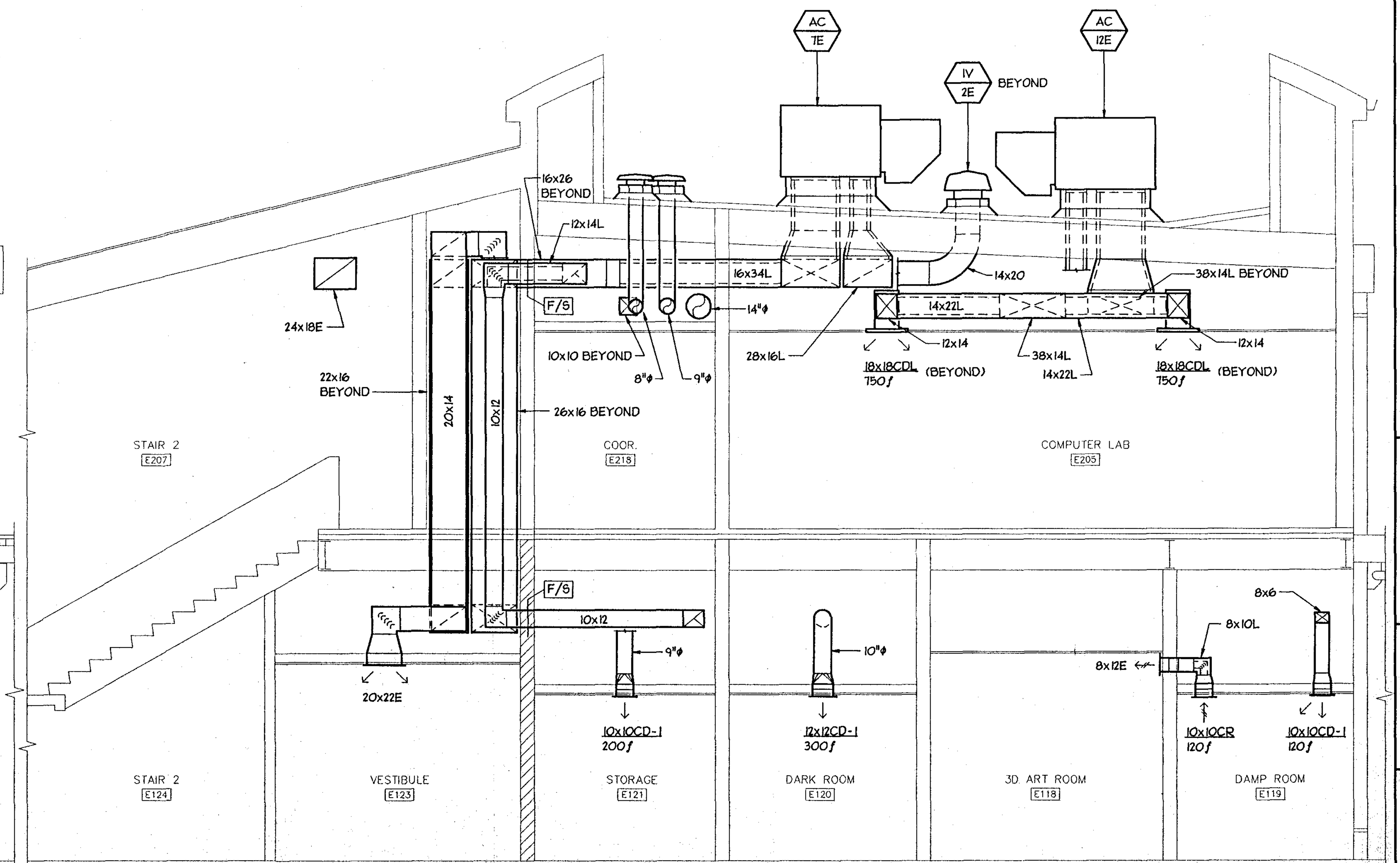
SECTION 2 / M3.4

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



SECTION 3 / M3.4

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



SECTION 1 / M3.4

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

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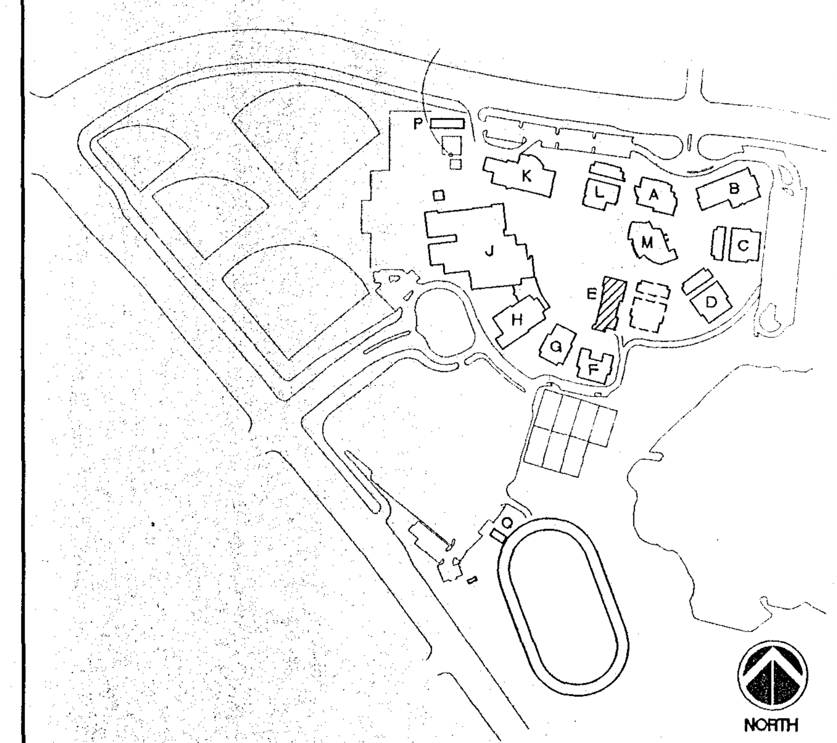
Sacramento, California
GC DESIGNER/DRAFTER
970617 PROJECT NO.

KEYMAP



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NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT E HVAC SECTIONS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE 1/4"=1'-0"	SHEET M3.4
		CADFILE	
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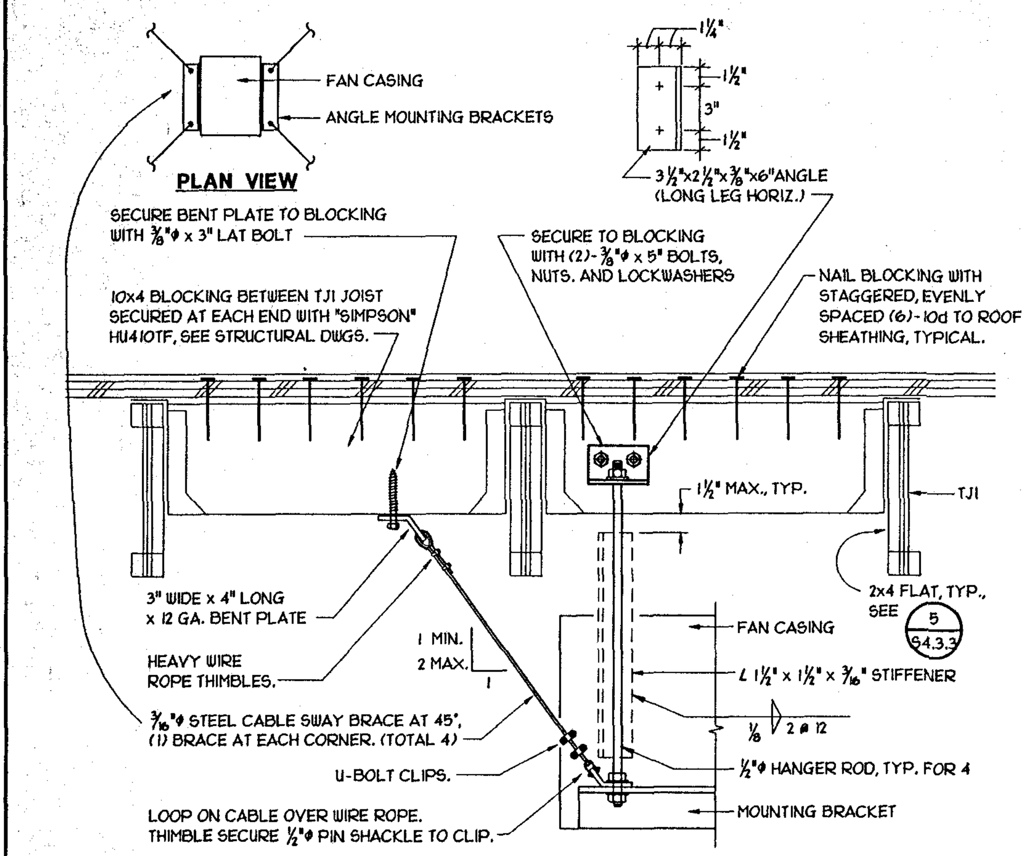
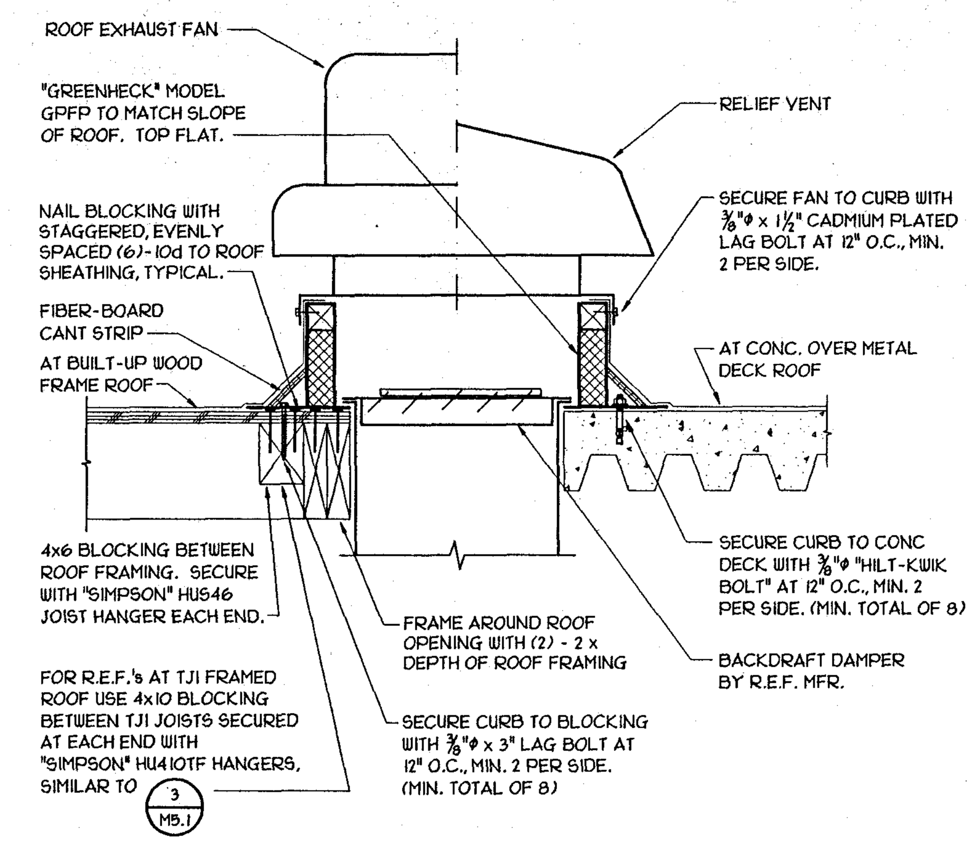


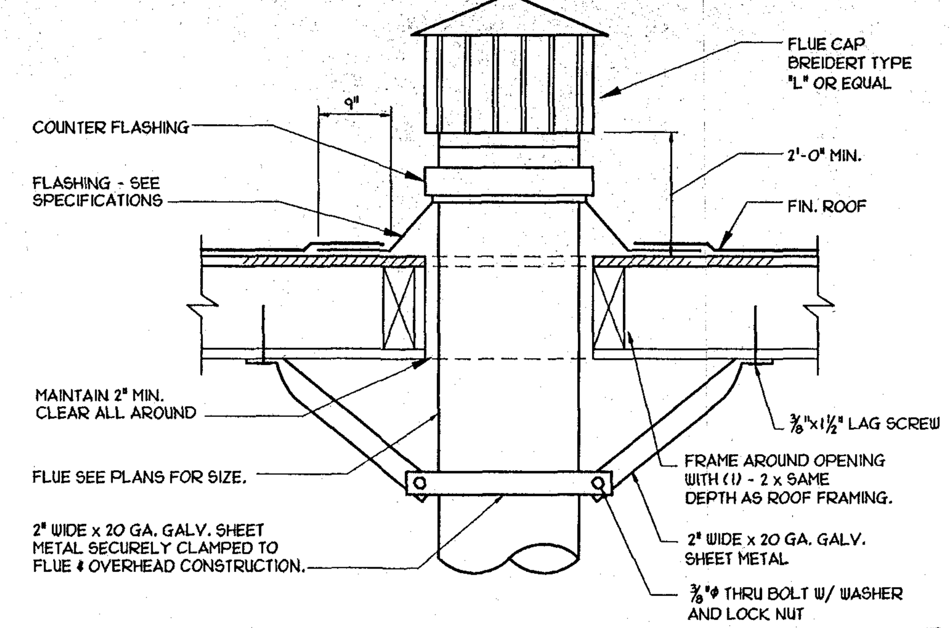
TYPICAL IN-LINE EXH. FAN MOUNTING (11 / M5.1)

SCALE : NONE



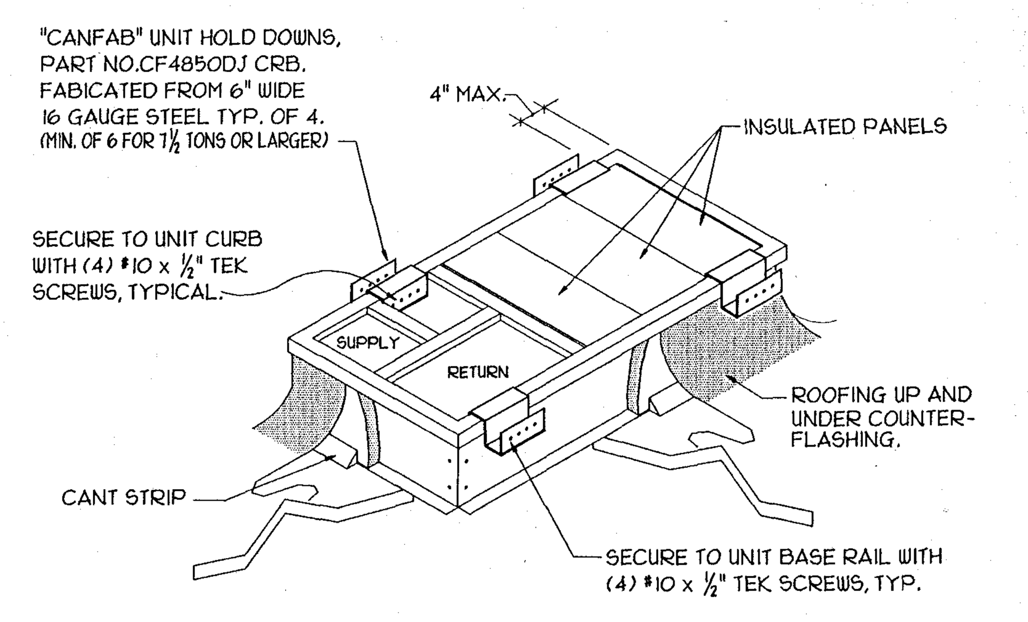
R.E.F. & R.V. MOUNTING (7 / M5.1)

SCALE : NONE

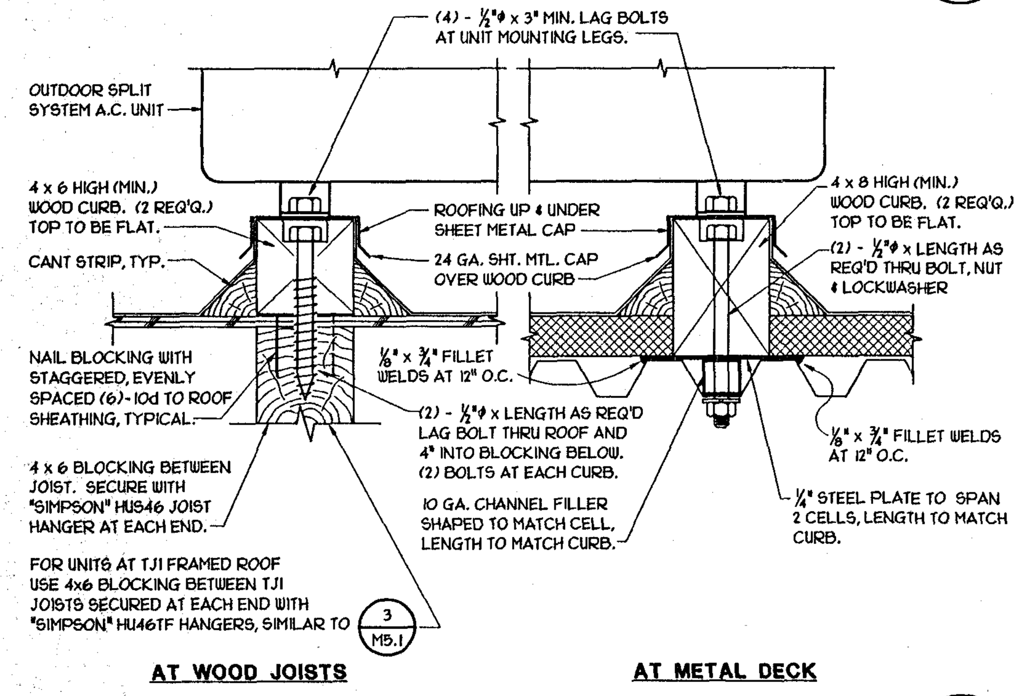


FLUE THRU ROOF DETAIL (12 / M5.1)

SCALE : NONE

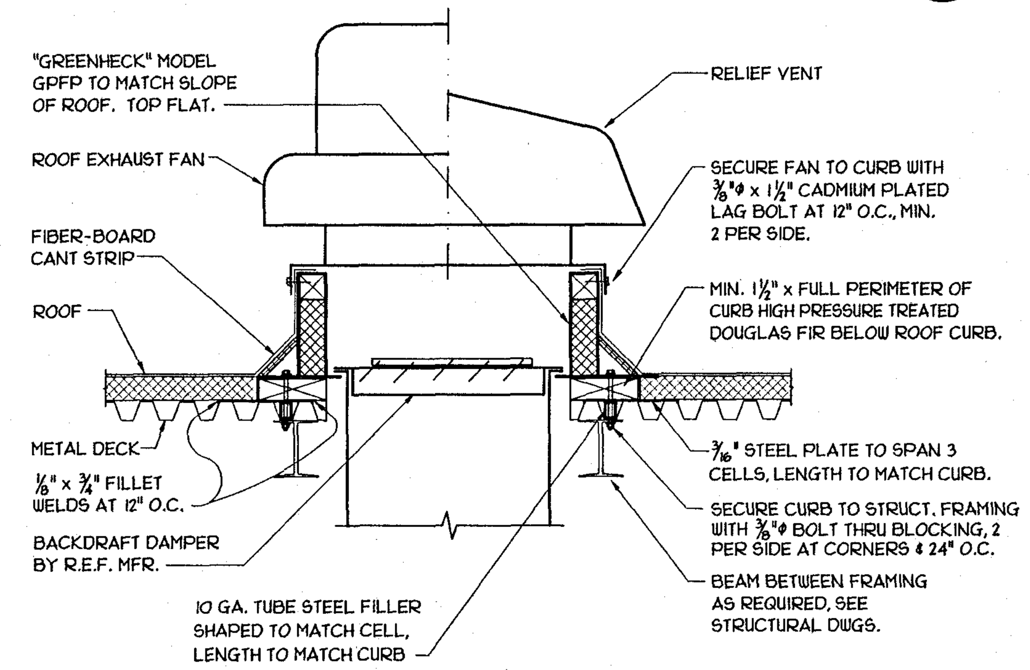


TYPICAL A.C. HOLD DOWN PLACEMENT DETAIL



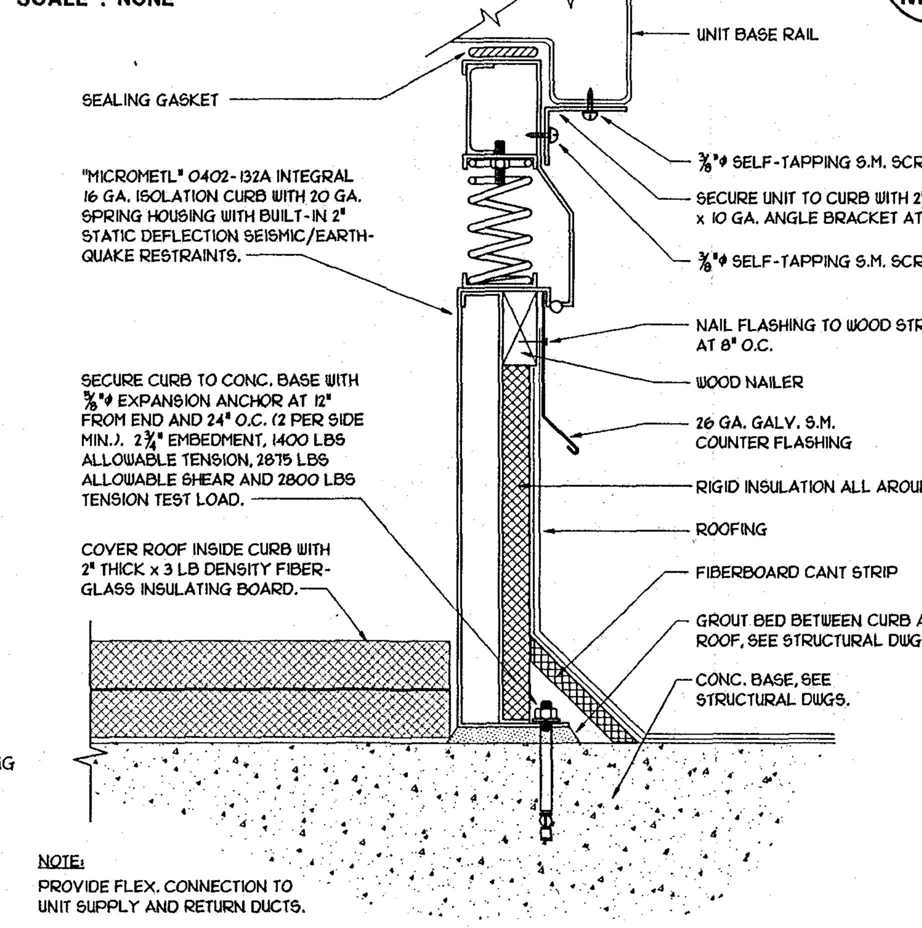
SPLIT SYSTEM OUTDOOR UNIT MOUNTING (10 / M5.1)

SCALE : NONE



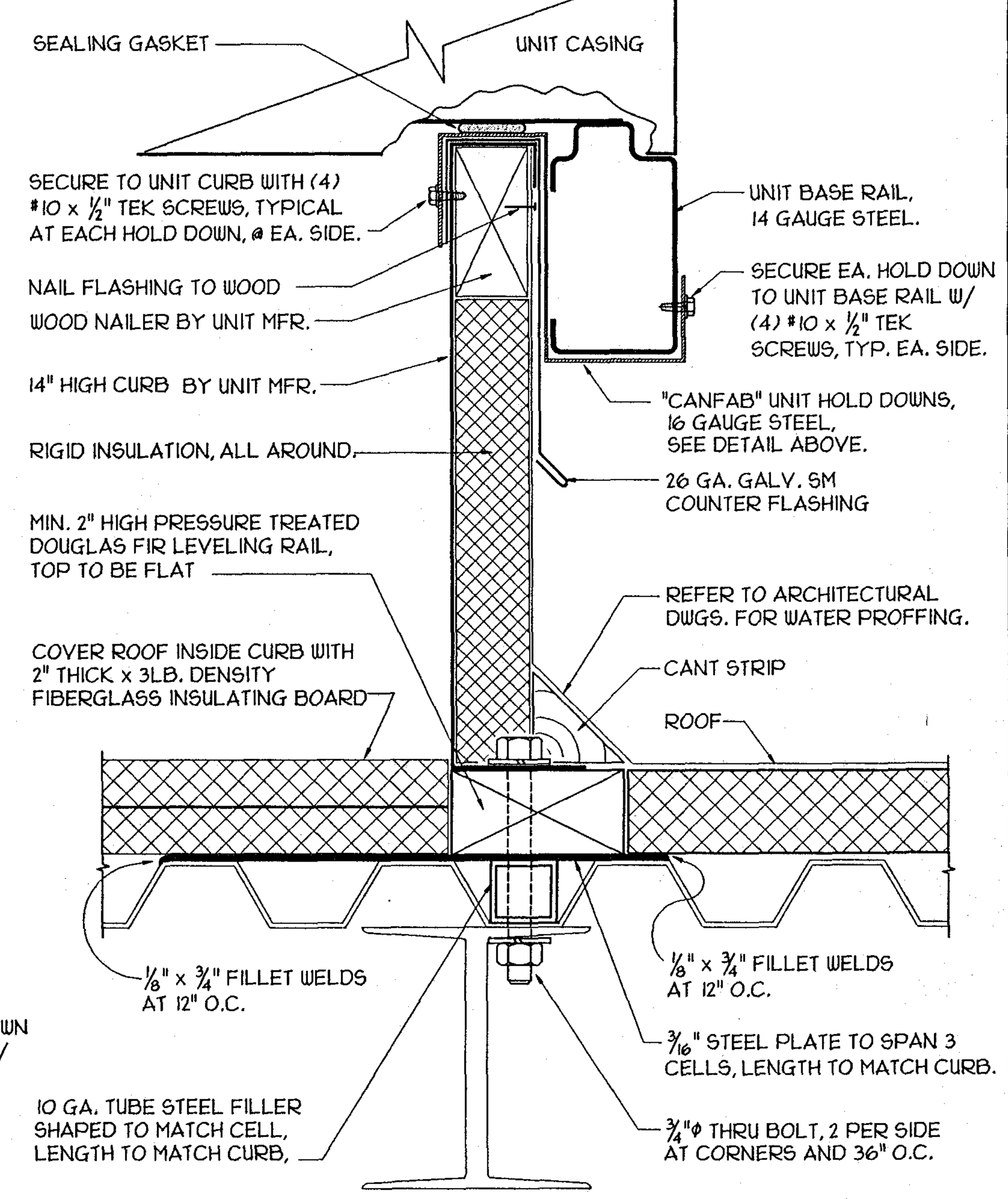
R.E.F. & R.V. MTG. AT METAL DECK (6 / M5.1)

SCALE : NONE



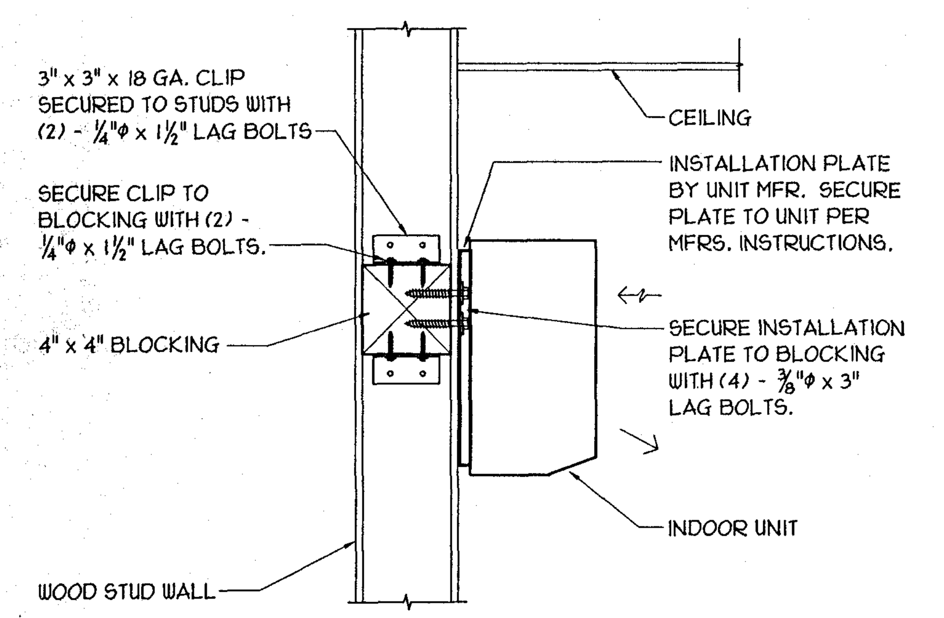
A.C.- 1 H & 2H MOUNTING DETAIL (4 / M5.1)

SCALE : NONE



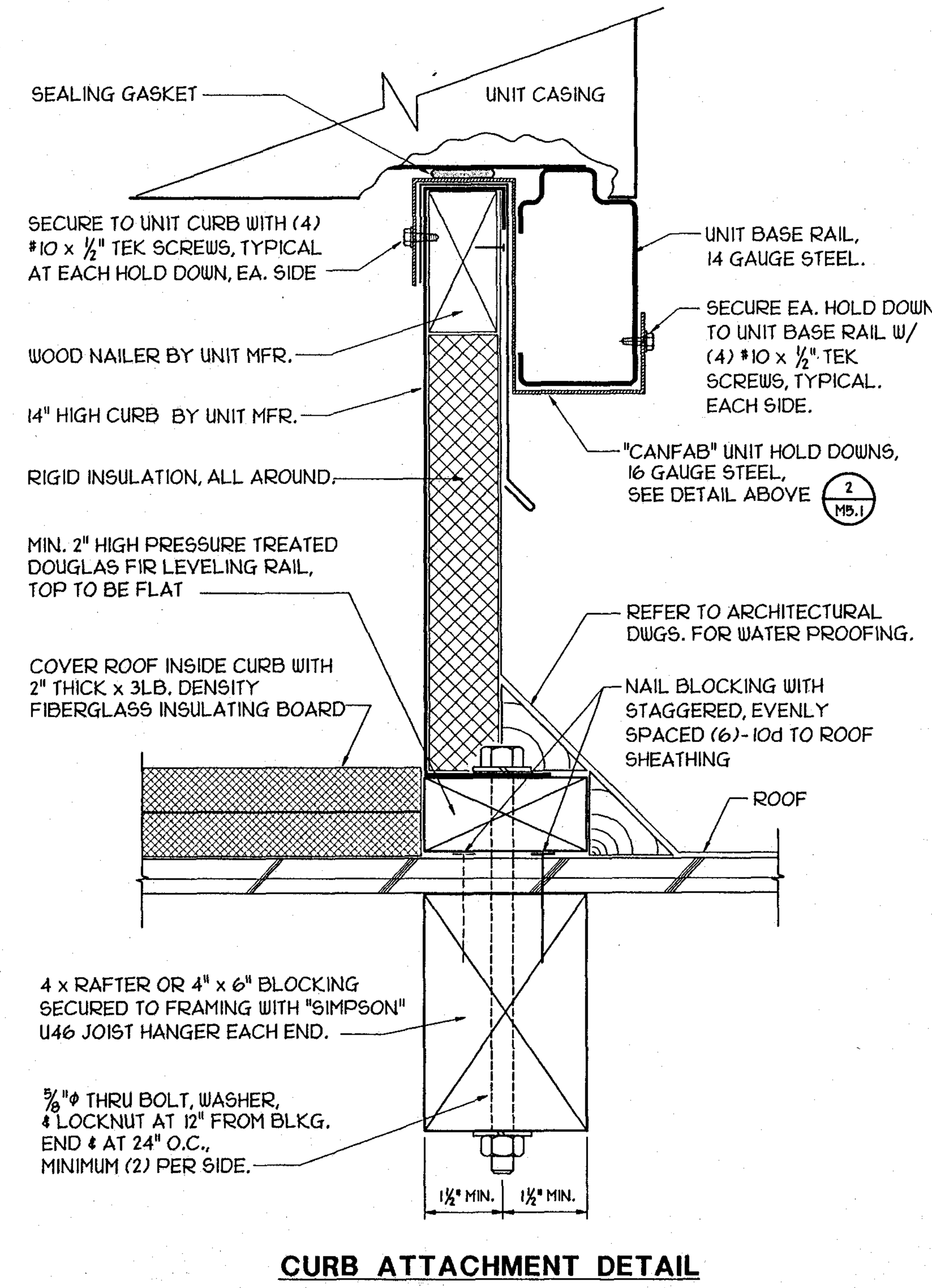
A.C. UNIT MOUNTING AT METAL DECK (2 / M5.1)

SCALE : NONE (CURB INTERNAL TO INSULATION AND NAILER)



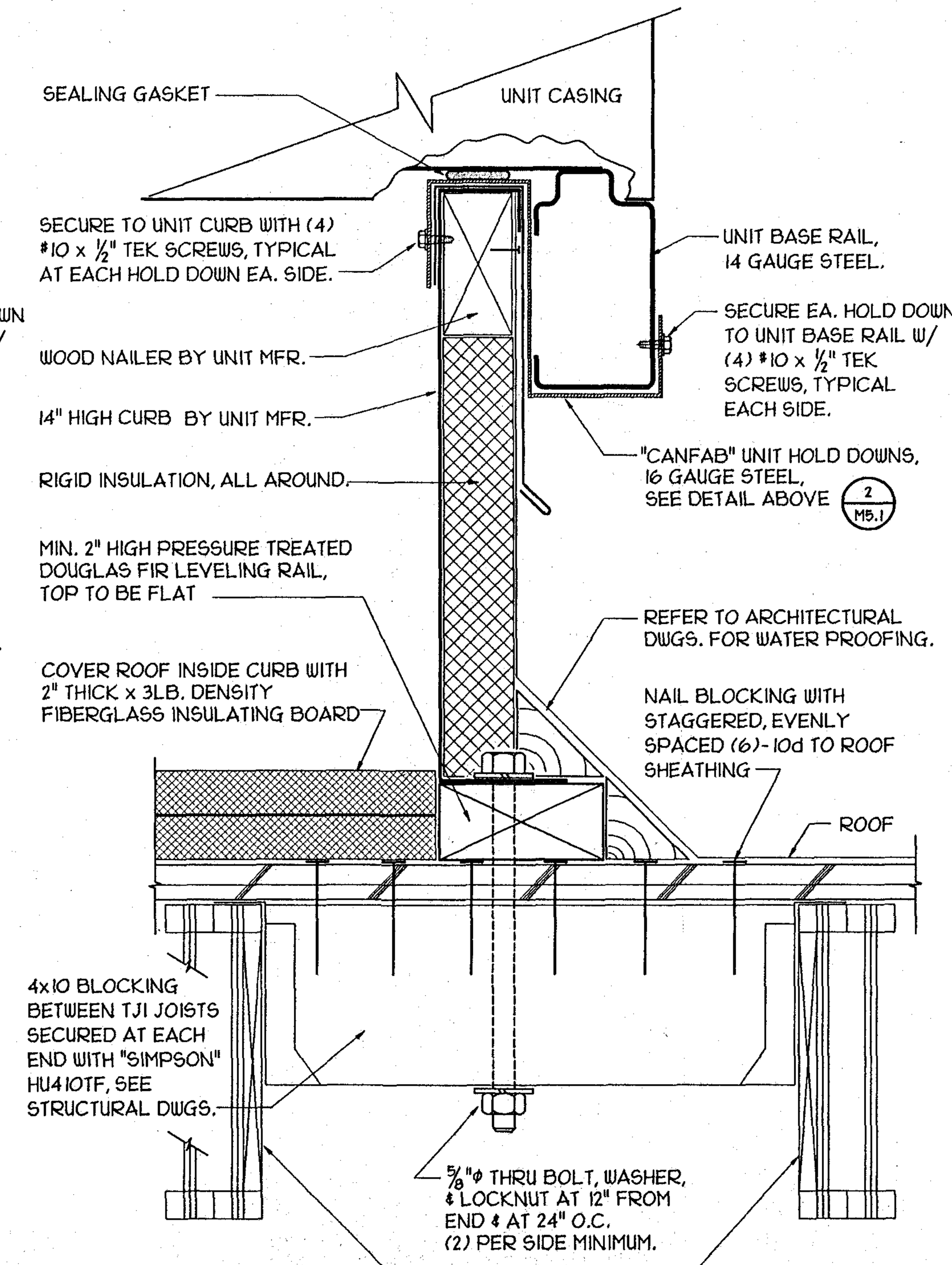
SPLIT SYSTEM INDOOR UNIT MTG. (9 / M5.1)

SCALE : NONE



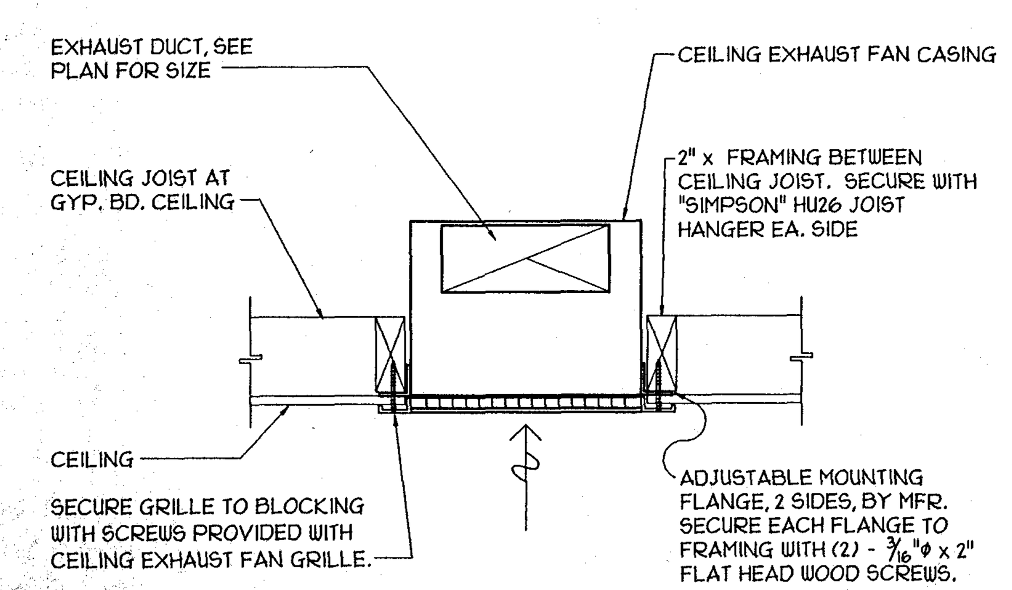
A.C. UNIT MOUNTING AT WOOD JOISTS (5 / M5.1)

SCALE : NONE (CURB INTERNAL TO INSULATION AND NAILER)



A.C. UNIT MOUNTING AT TJI FRAMING (3 / M5.1)

SCALE : NONE



CEILING EXHAUST FAN MOUNTING (8 / M5.1)

SCALE : NONE

EQUIPMENT ANCHORAGE

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:

FIXED EQUIPMENT ON GRADE	20% OF OPERATING WEIGHT
FIXED EQUIPMENT ON STRUCTURE	30% OF OPERATING WEIGHT
EMERGENCY POWER EQUIPMENT ON GRADE	30% OF OPERATING WEIGHT
EMERGENCY POWER EQUIPMENT ON STRUCTURE	40% OF OPERATING WEIGHT

SIMULTANEOUS VERTICAL FORCE - USE 1/3 x HORIZONTAL FORCE.

FOR FLEXIBLY-MOUNTED EQUIPMENT, SEE TITLE 24, SECTION 1630 A.2 CBC, 1995.

WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.

EQUIPMENT ANCHORAGE (1 / M5.1)

SCALE : NONE

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(916) 368-7990 • Fax: (916) 368-7996

Capital Engineering Consultants, Inc.
Sacramento, California
GC DESIGNER/DRAFTER
970617 PROJECT NO.

KEYMAP

DSA/ORS

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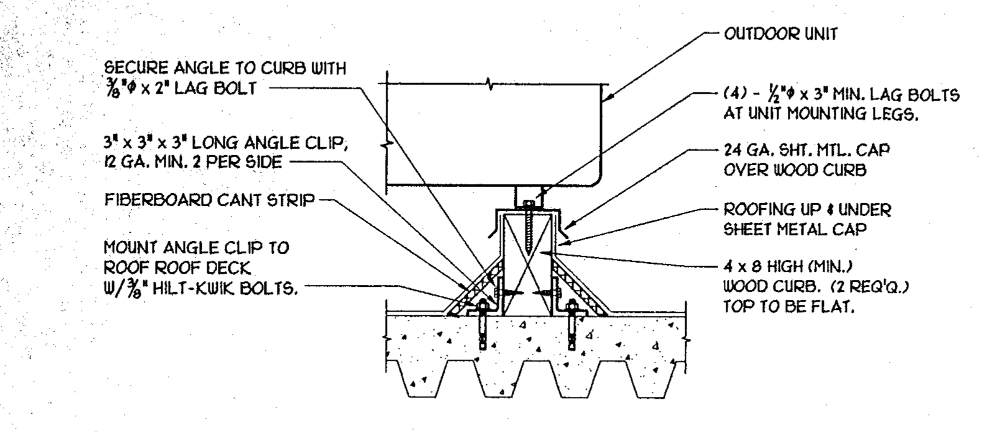
LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

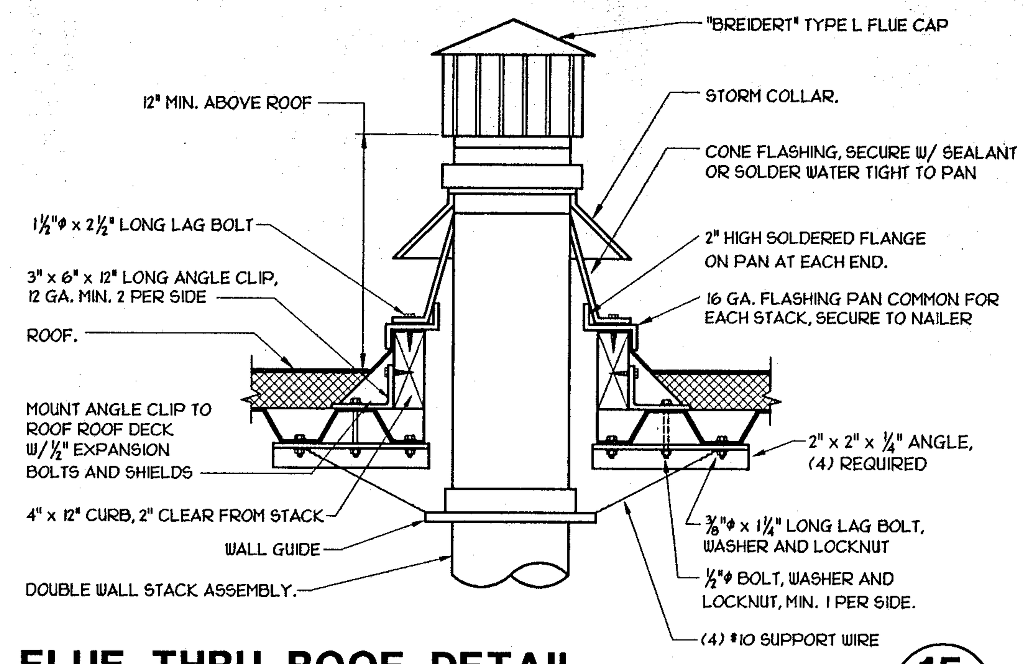
HVAC DETAILS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE NONE	SHEET
		CADFILE	M5.1
		UPDATED	OF SHEETS



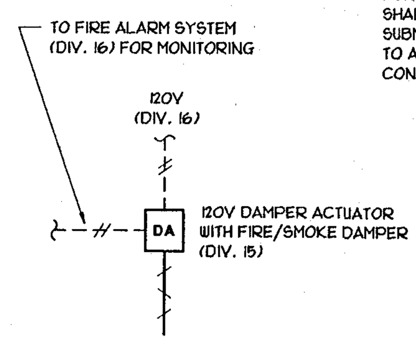
OUTDOOR A.C. UNIT MTG. @ CONC. ROOF 14 M5.2

SCALE : NONE



FLUE THRU ROOF DETAIL 15 M5.2

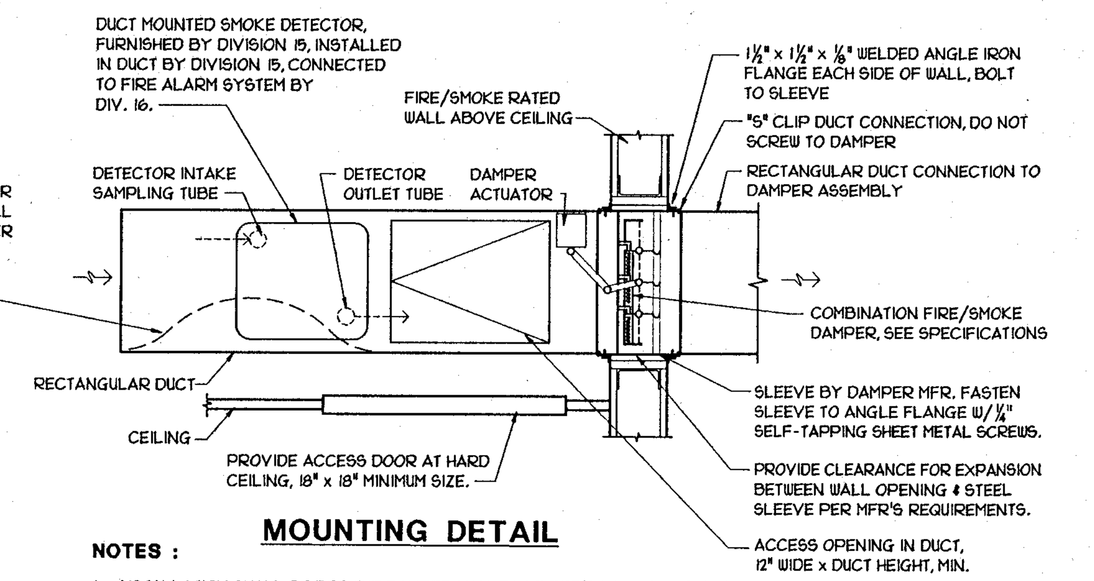
SCALE : NONE



WIRING DIAGRAM

SHEET METAL AIRFLOW DEFLECTOR INSIDE DUCT TO INCREASE AIR VELOCITY TO THAT REQUIRED BY SMOKE DETECTOR MFR. FOR PROPER DETECTOR OPERATION. DIVISION 15 CONTRACTOR SHALL COORDINATE WITH ACTUAL DETECTORS USED AND SHALL SUBMIT DETAILS AND VELOCITY TABULATIONS FOR EACH DAMPER TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION AND INSTALLATION.

FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY. DETAILS SHOWN ARE FOR REFERENCE ONLY.



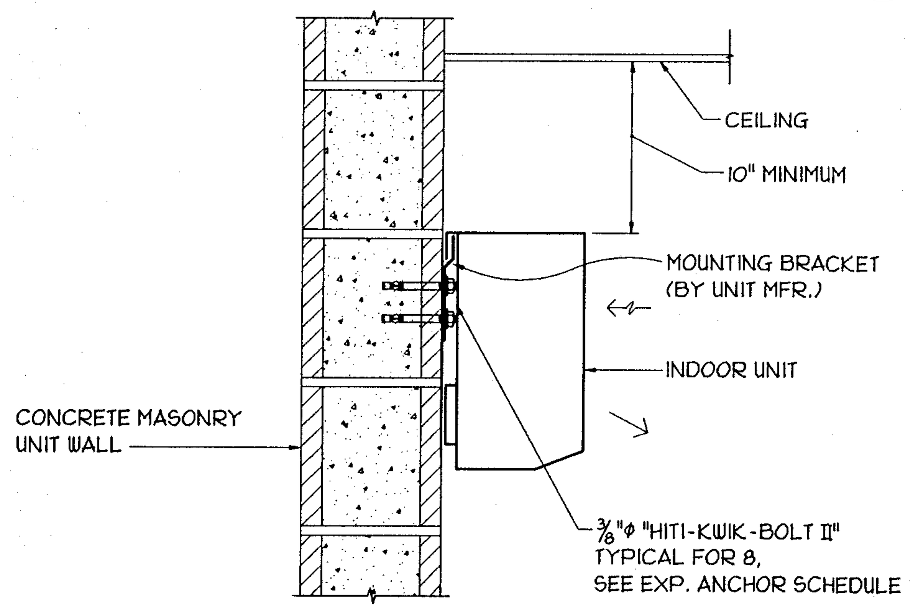
MOUNTING DETAIL

NOTES :

1. INSTALLATION SHALL BE PER THE DAMPER MANUFACTURER'S U.L. LISTING FOR DAMPER IN THE PLANE OF THE WALL AND ACTUATOR OUTSIDE OF THE DUCT. MANUFACTURER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL THE DAMPERS PER THIS REQUIREMENT.
2. WIRE TO CLOSE DAMPER UPON SENSING OF SMOKE IN AIR STREAM, FOR WIRING DIAGRAM SEE ABOVE. PROVIDE ALL WIRING , CONDUIT , RELAYS , ETC. REQUIRED TO RENDER SYSTEM COMPLETE.

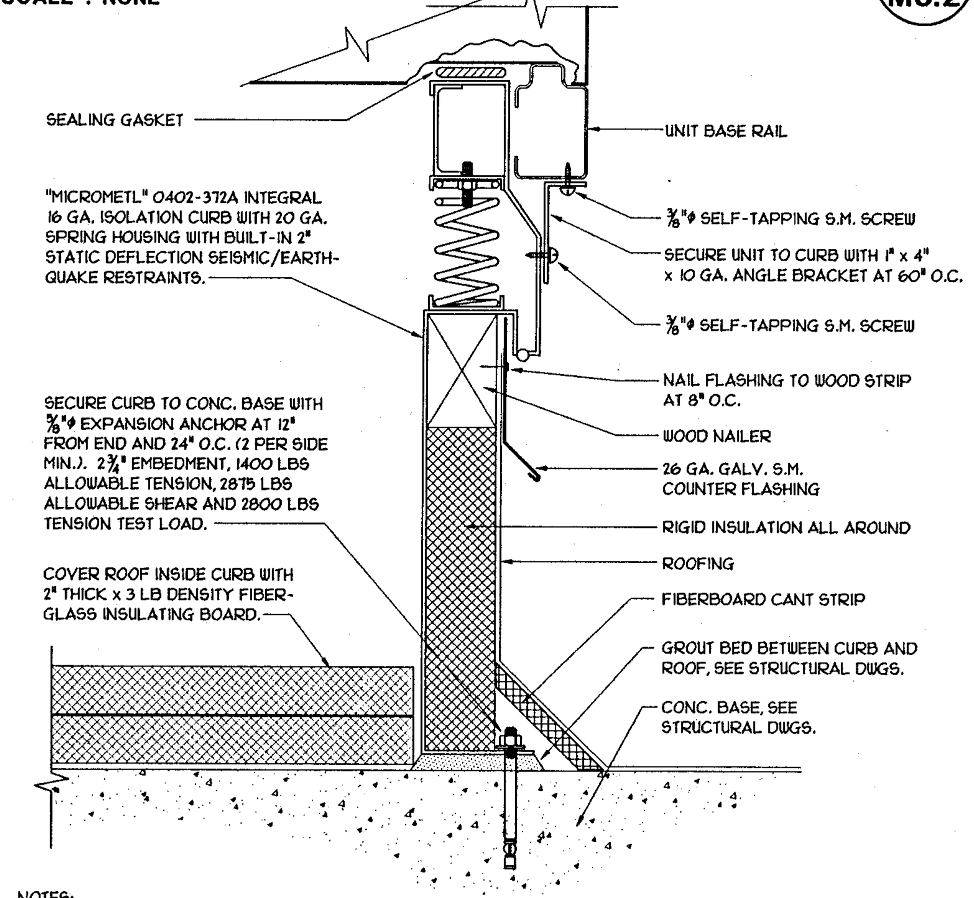
COMBINATION FIRE/SMOKE DAMPER DETAIL AT WALL 4 M5.2

SCALE : NONE



INDOOR A.C. UNIT MTG. @ C.M.U. WALL 13 M5.2

SCALE : NONE

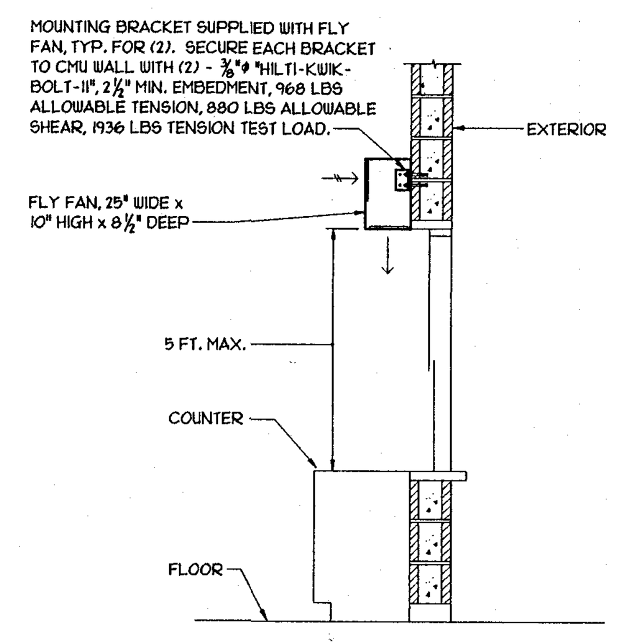


NOTES:

1. PROVIDE FLEX. CONNECTION TO UNIT SUPPLY AND RETURN DUCTS.
2. A.C.- 3H & 4H IS SIMILAR EXCEPT USE "MICROMETL" ISOLATION CURB MODEL 0402-462A.

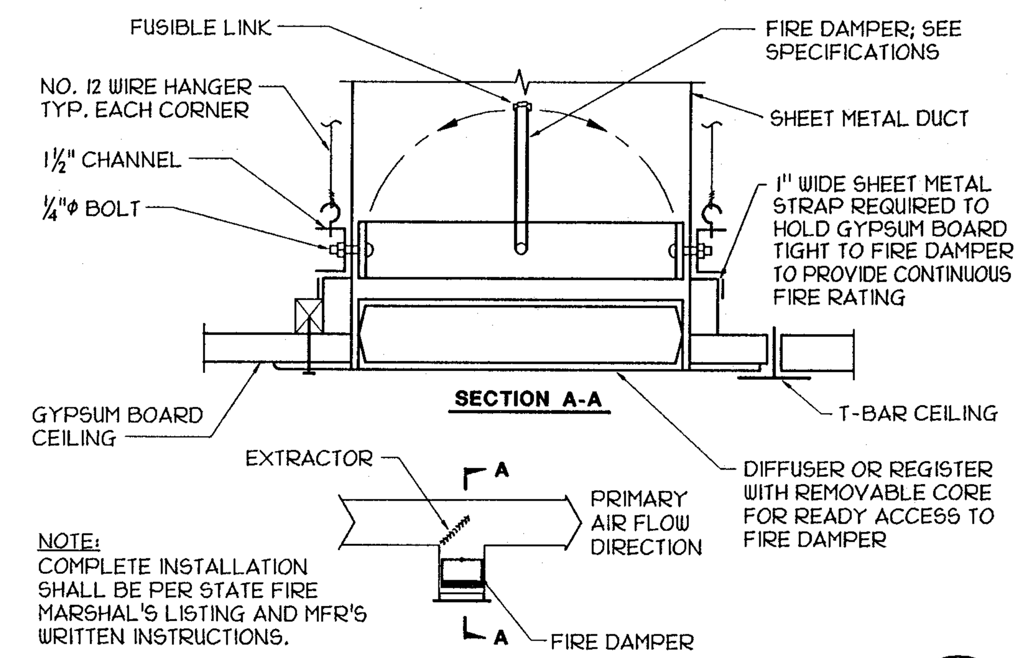
A.C.- 1 G thru 5G & 5H thru 6H MTG. 10 M5.2

SCALE : NONE



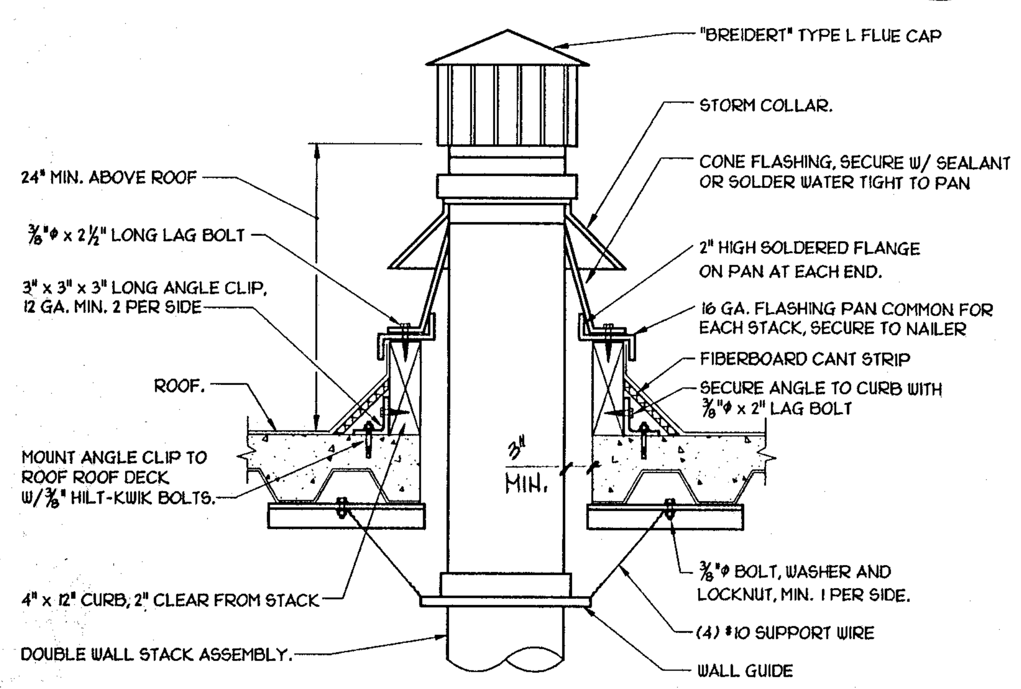
FLY FAN - 3Q thru 10Q MOUNTING 7 M5.2

SCALE : NONE



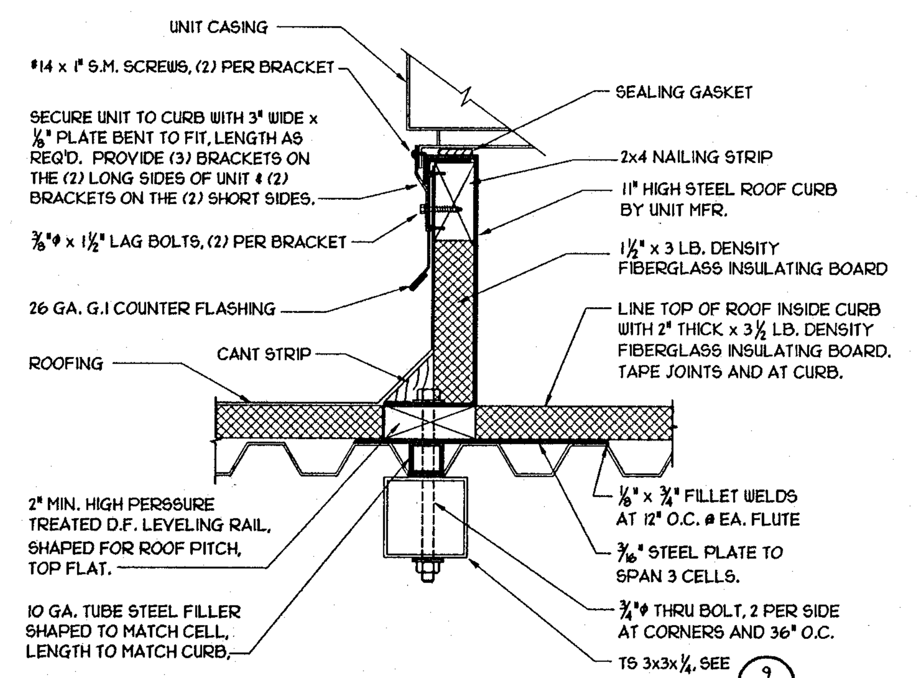
FIRE DAMPER AT CEILING DETAIL 3 M5.2

SCALE : NONE



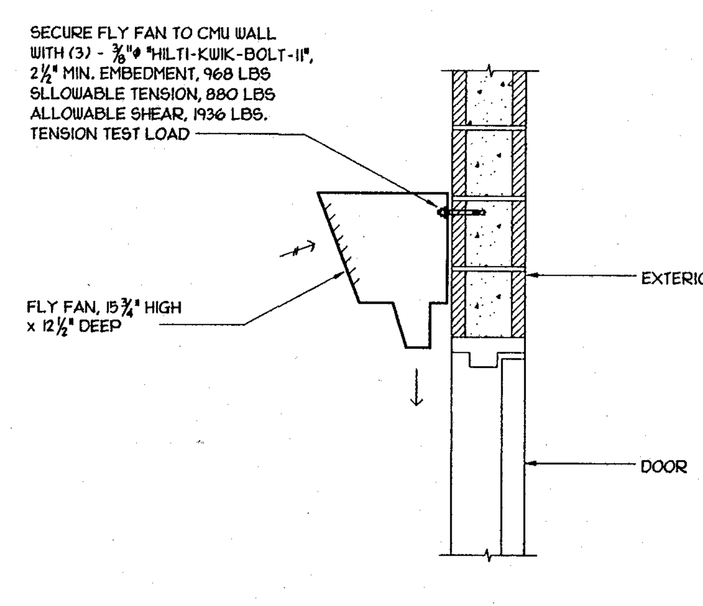
FLUE THRU ROOF DETAIL 12 M5.2

SCALE : NONE



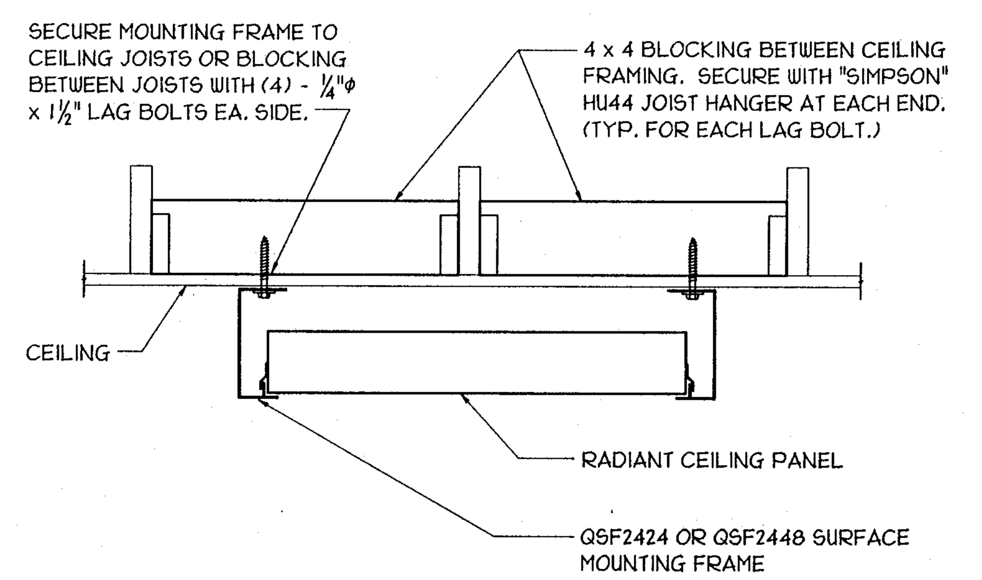
H.V. - 1 P MOUNTING DETAIL 9 M5.2

SCALE : NONE



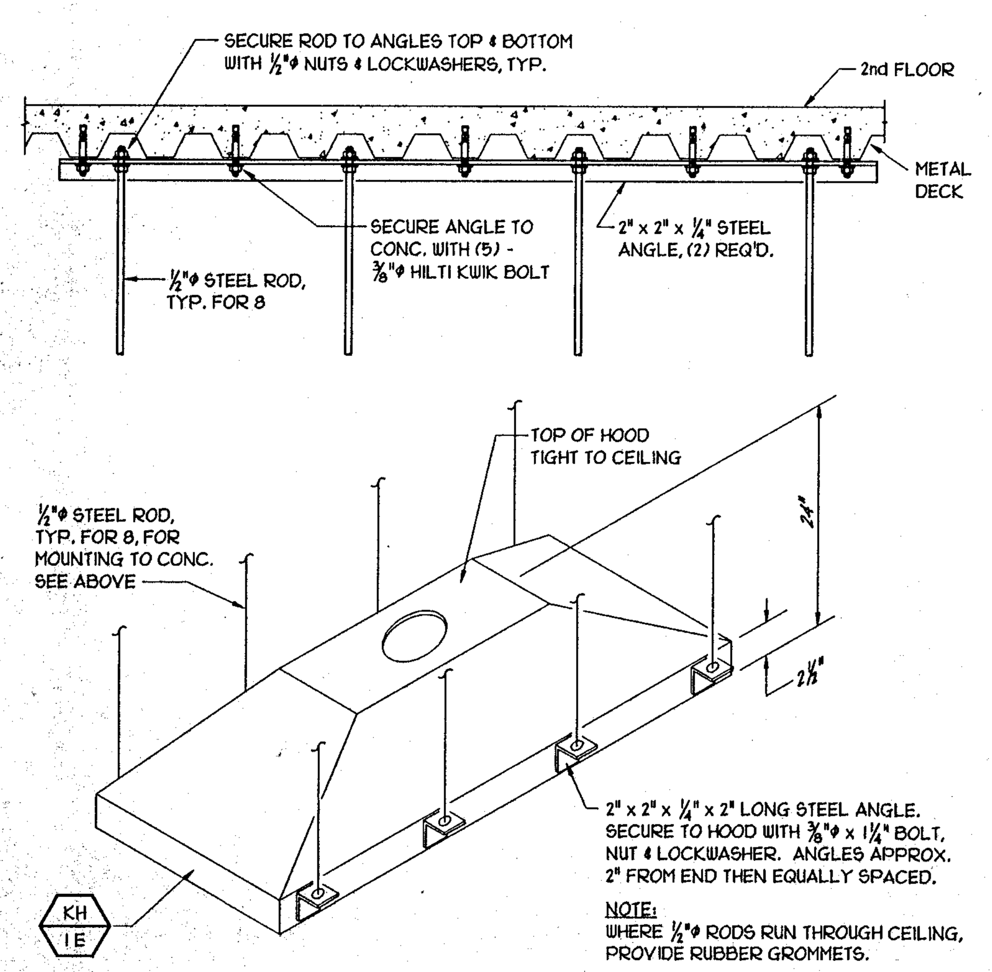
FLY FAN - 1 Q & 2Q MOUNTING 6 M5.2

SCALE : NONE



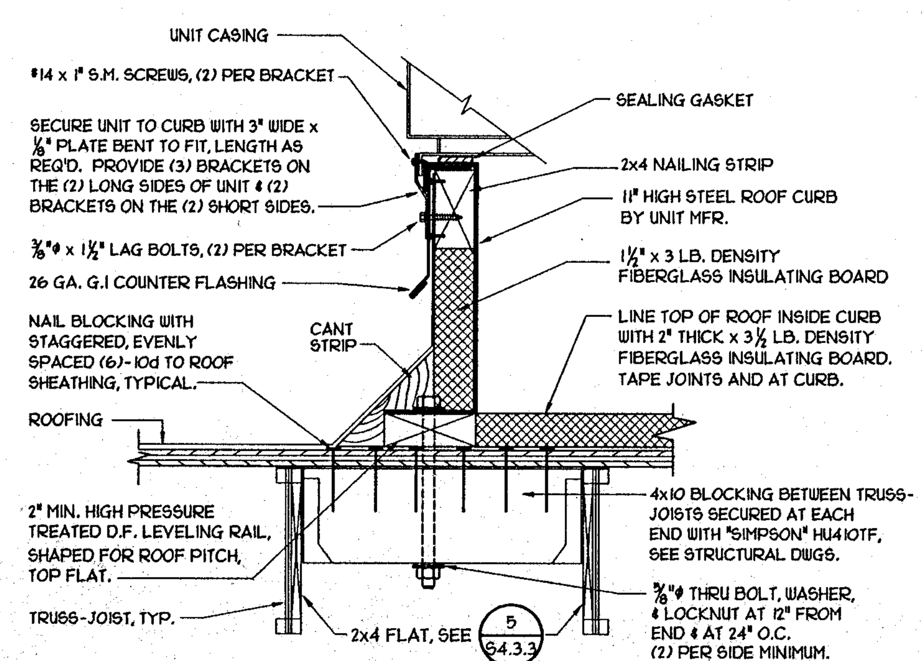
RADIANT CEILING PANEL MOUNTING 2 M5.2

SCALE : NONE



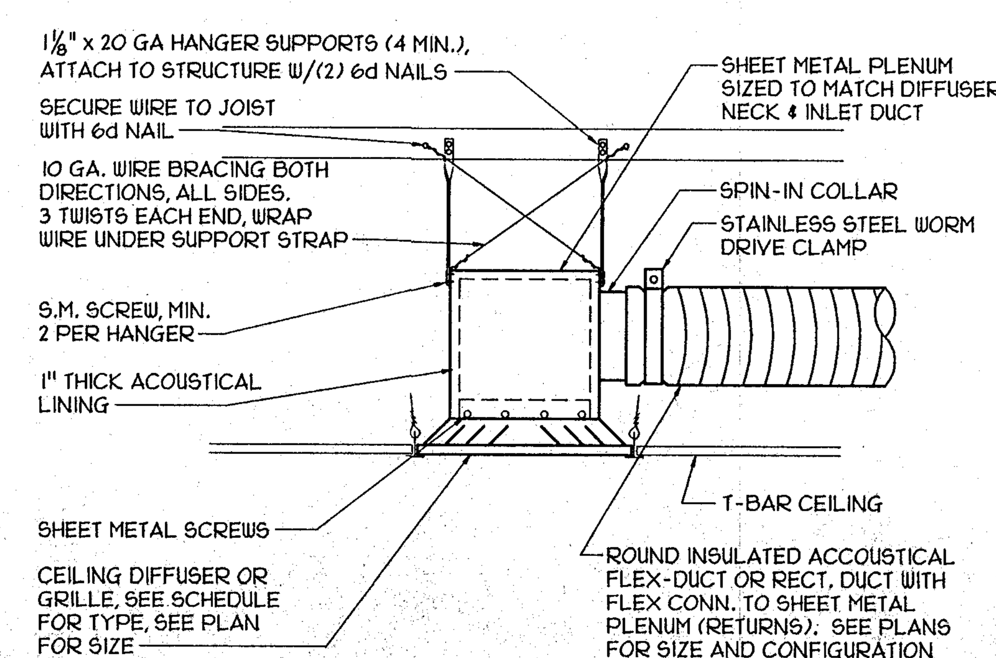
KILN EXHAUST HOOD MOUNTING 11 M5.2

SCALE : NONE



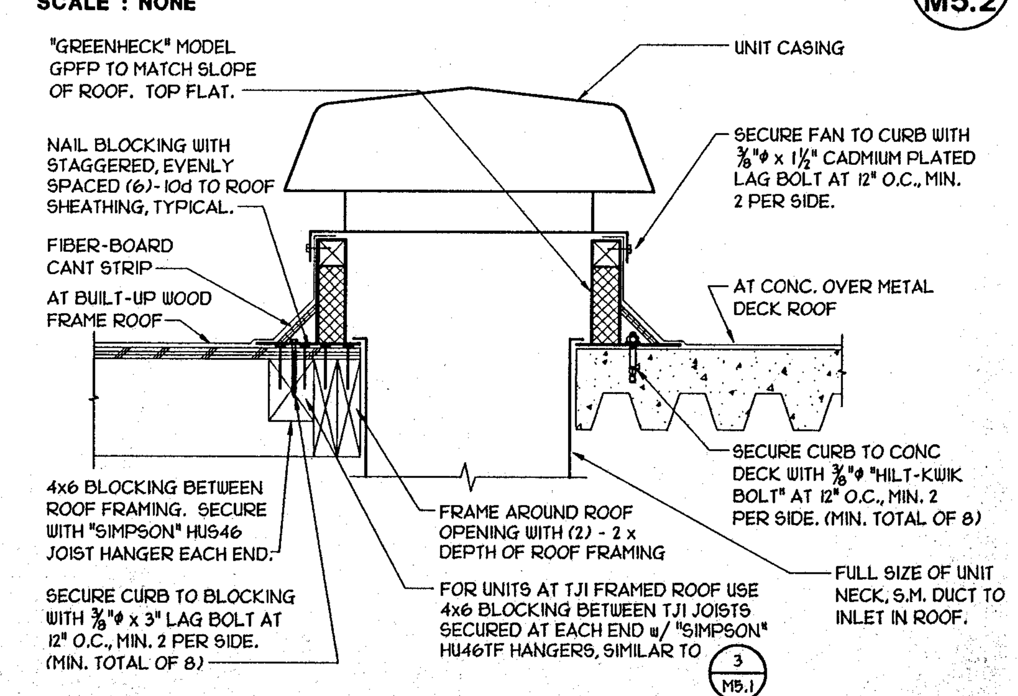
H.V. - 1 Q MOUNTING DETAIL 8 M5.2

SCALE : NONE



CEILING DIFFUSER 5 M5.2

SCALE : NONE



TYPICAL INTAKE VENT MOUNTING 1 M5.2

SCALE : NONE

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Capital Engineering Consultants, Inc.
Sacramento, California
GC DESIGNER/DRAFTER
970617 PROJECT NO.

KEYMAP

DSA/ORS

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
02 100090
AC FLS SS
DATE 12/9/98

ARCH

LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC DETAILS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE NONE	SHEET M5.2
		CADFILE	
		UPDATED	OF SHEETS

SEQUENCE OF OPERATION

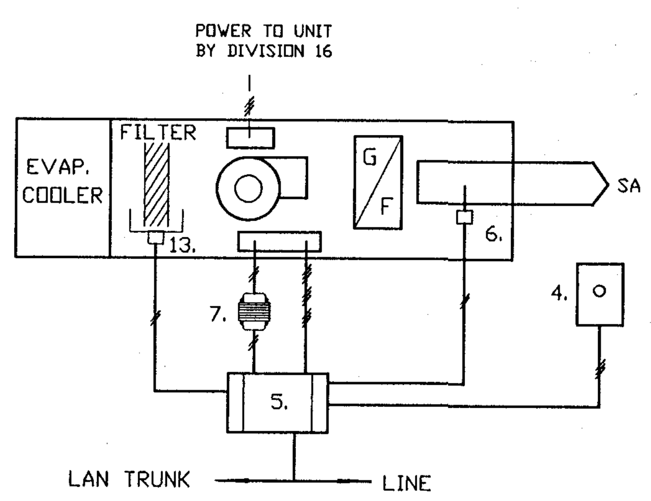
GENERAL
THE ENERGY MANAGEMENT SYSTEM (EMS) SHALL CONSIST OF AN APEX LT GLOBAL CONTROLLER AND APPLICATION SPECIFIC TUX CONTROLLERS. THE APEX SHALL BE PROGRAMMED TO PROVIDE THE OPERATING SCHEDULES OF EACH TUX CONTROLLER AS DESIGNATED BY THE SCHOOL DISTRICT. TEMPERATURE CONTROL CONTRACTOR (TCC) SHALL PROVIDE THE FOLLOWING COLORGRAPHIC COMPUTER SCREENS ONTO THE EXISTING EMS COMPUTER AND THE EXISTING LAPTOP SERVICE TOOL; A. SITE PLAN B. INDIVIDUAL BUILDING PLANS SHOWING BASIC FLOOR PLANS AND ZONE SENSOR LOCATIONS. C. CONTROL PANEL GRAPHIC SHOWING ALL ATTRIBUTES OF EACH INDIVIDUAL DDC CONTROLLER FOR EASE OF TROUBLESHOOTING. D. EQUIPMENT GRAPHIC DEPICTING ACTUAL EQUIPMENT SHOWING STATUS AND TEMPERATURES.

AC PACKAGE UNITS
DURING PERIODS OF OCCUPANCY THE AC UNIT TUX CONTROLLER WILL ENABLE THE FAN AND PROVIDE STAGED HEATING AND COOLING TO MAINTAIN ROOM SETPOINT. EACH AC UNIT WILL HAVE FACTORY ECONOMIZER CONTROLS THAT WILL POSITION THE ECONOMIZER DAMPERS TO PROVIDE COOLING AS REQUIRED. A FILTER PRESSURE SWITCH WILL CLOSE WHENEVER THE FILTER STATIC REACHES FINAL STATIC SETPOINT AND THE TUX WILL GO INTO ALARM MODE, WHICH CAN BE MONITORED AT THE DISTRICT ALERTON COMPUTER. FILTER FINAL STATIC SETPOINT TO BE DETERMINED AT STARTUP. PROVIDE SUPPLY AIR SMOKE DETECTOR FOR ALL UNITS LISTED TO SHUT-DOWN AC UNIT UPON DETECTION OF SMOKE. INTERLOCK ANY ASSOCIATED EXHAUST FANS TO OPERATE WHENEVER AC UNIT IS ENABLED.

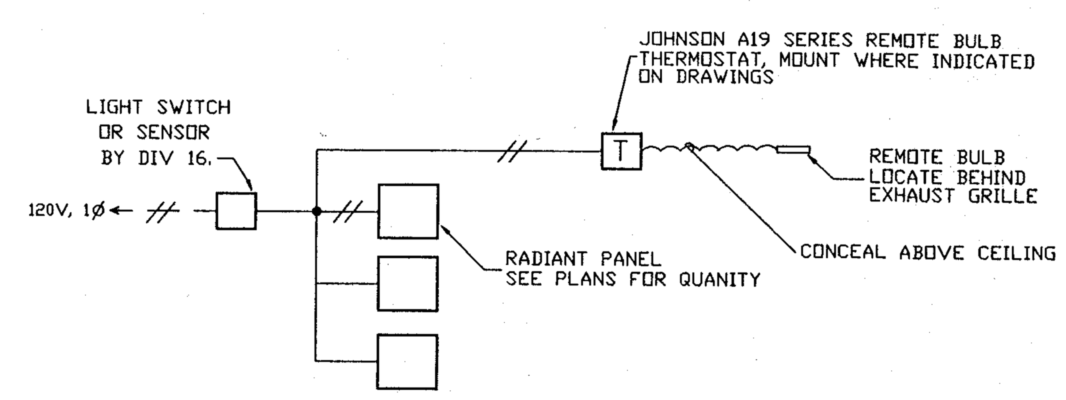
HV UNITS
DURING PERIODS OF OCCUPANCY THE HV UNIT TUX CONTROLLER WILL ENABLE THE FAN AND PROVIDE HEATING AND EVAP COOLING TO MAINTAIN ROOM SETPOINT. EACH HV UNIT WILL HAVE FACTORY CONTROLS TO PROVIDE EVAP COOLING AND HEATING AS REQUIRED. A FILTER PRESSURE SWITCH WILL CLOSE WHENEVER THE FILTER STATIC REACHES FINAL STATIC SETPOINT AND THE TUX WILL GO INTO ALARM MODE, WHICH CAN BE MONITORED AT THE DISTRICT ALERTON COMPUTER. FILTER FINAL STATIC SETPOINT TO BE DETERMINED AT STARTUP.

RADIANT CEILING PANELS (RCP)
INTERLOCK R.C.P.S TO LIGHTS. MOUNT REMOTE BULB THERMOSTAT BEHIND EXHAUST GRILL TO ALLOW R.C.P.S TO HEAT ROOM WHENEVER LIGHTS ARE ON AND TEMPERATURE IS BELOW SETPOINT OF 60 DEGREES F. (ADJUSTABLE) SEE SCHEDULE AND PLANS FOR QUANTITIES AND LOCATIONS.

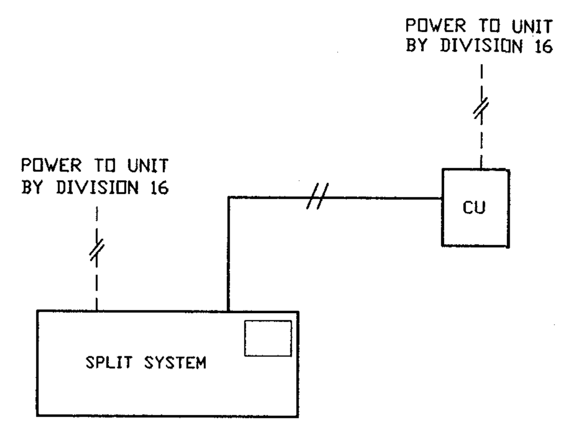
SPLIT SYSTEM UNITS
THE SPLIT SYSTEM UNITS WILL HAVE FACTORY MOUNTED CONTROLS. TEMPERATURE CONTROL CONTRACTOR TO INTERLOCK INDOOR UNIT TO OUTDOOR UNIT.



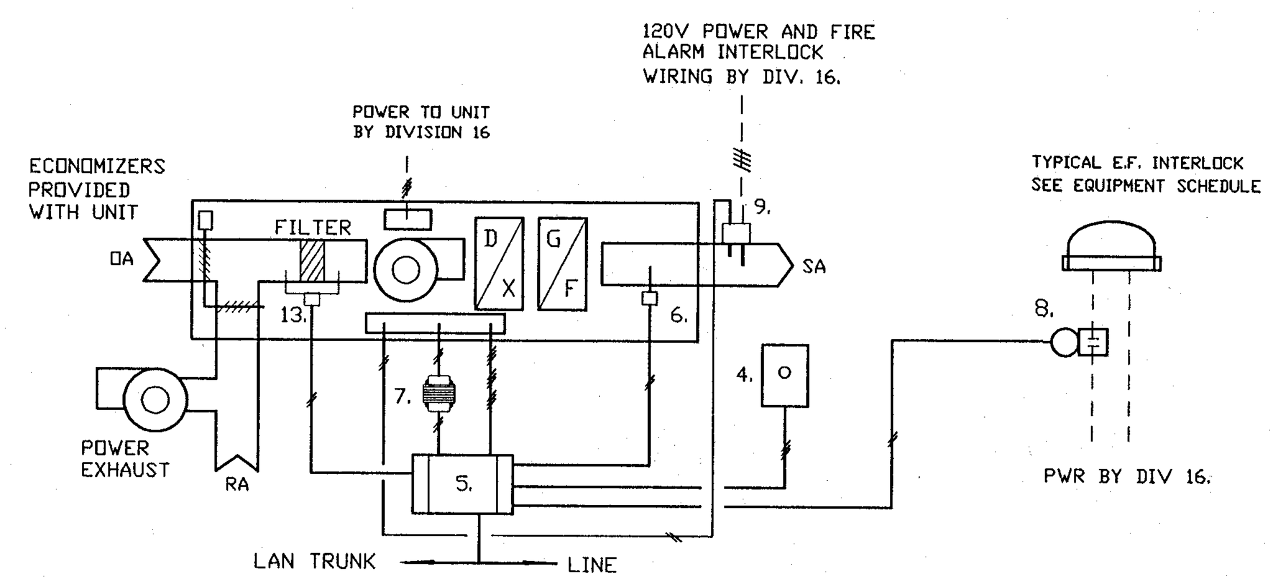
HV UNIT CONTROL DIAGRAM



RADIANT CEILING PANEL (RCP) CONTROL DIAGRAM

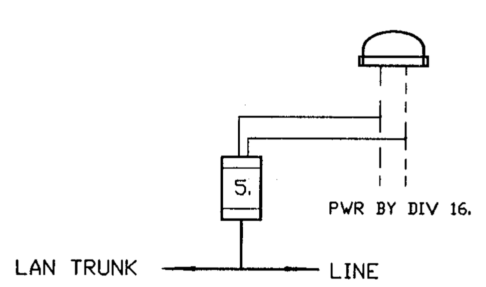


SAC CONTROL DIAGRAM
TYPICAL OF 7

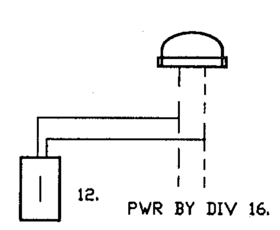


AC UNIT CONTROL DIAGRAM
SMOKE DETECTORS ONLY ON A.C.- 1 C, 1 D, & 4G

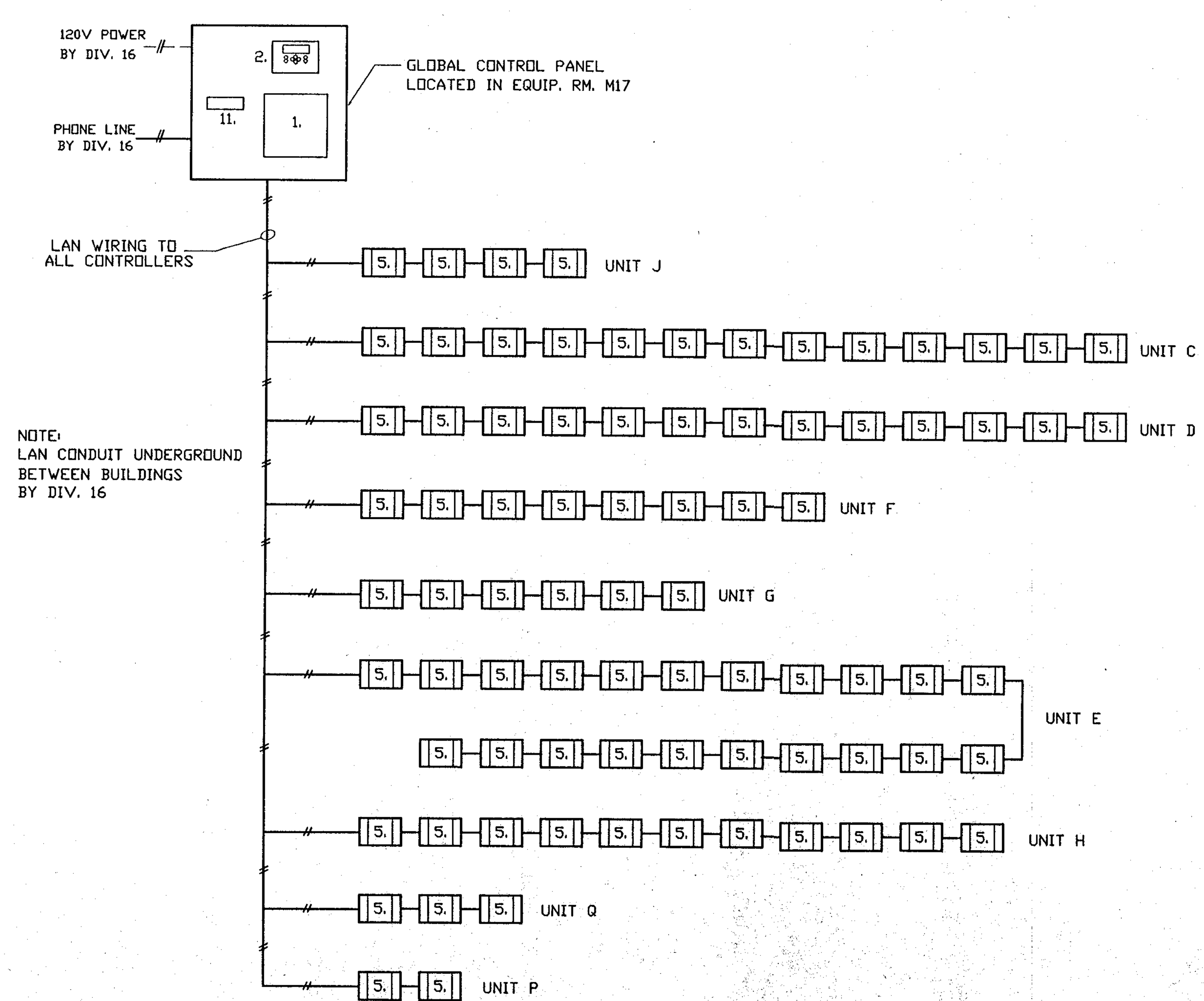
SMOKE DETECTORS TO BE RESETTABLE FROM FIRE ALARM PANEL.



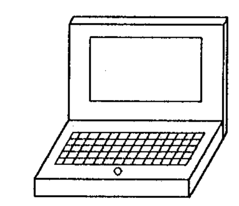
R.E.F. CONTROL DIAGRAM



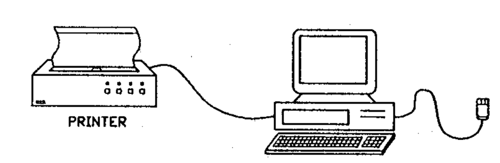
TYPICAL C.E.F. & E.F. SWITCHED WITH LIGHT SWITCH
TYPICAL FOR E.F.- 1 C & 1 D.



SYSTEM ARCHITECTURE



ALERTON LAPTOP SERVICE TOOL
EXISTING LAPTOP SERVICE TOOL AT SCHOOL DISTRICT



ALERTON EMS WORKSTATION
EXISTING AT DISTRICT MAINTENANCE OFFICE

MATERIAL LEGEND

ALL PART NUMBERS ARE ALERTON UNLESS OTHERWISE NOTED

1. APEX LT GLOBAL CONTROLLER (AL-1000)
2. LANVIEW (LVIEW)
3. PROGRAMMABLE TUX CONTROLLER (653P)
4. STAINLESS STEEL SENSOR WITH BYPASS
5. SA TUX CONTROLLER (TX-SA)
6. DUCT TEMPERATURE SENSOR (TS-2000)
7. ISOLATION TRANSFORMER (KELE)
8. RELAY IN A BOX (RIB)
9. FENWAL CPD-7021 SMOKE DETECTOR
10. BELIMO DAMPER ACTUATOR (SIZE AS REQ'D)
11. MODEM PRACTICAL PERIPHERIALS 28.8 BAUD
12. LIGHT SWITCH
13. FILTER DIFFERENTIAL SWITCH (KELE RH-3)
14. VAV TUX (TX-VAV)
15. MIRCOSET ROOM SENSOR (MS-1010)
16. VAV BOX WITH CROSS FLOW SENSOR AND DAMPER (BY MECH. CONTRACTOR)
17. MODUS DIFFERENTIAL PRESSURE TRANSDUCER
18. WATER TEMP. SENSOR WITH WELL

WIRING BY DIVISION 15

WIRING BY DIVISION 16

Michael RAINFORTH Jeffrey GRAU
ARCHITECTS
3250 Ramos Circle ■ Sacramento, CA 95827
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Capital Engineering Consultants, Inc.
Sacramento, California
GC
DESIGNER/DRAFTER
970617
PROJECT NO.

KEYMAP

DSA/ORS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
02 100090
AC ___ FLS ___ SS ___
DATE 12/19/98

ARCH

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

CONTROL DIAGRAMS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE NONE	SHEET
		CADFILE	M6.1
		UPDATED	OF SHEETS

AIR CONDITIONING UNIT SCHEDULE

LOCATION	UNIT	"CARRIER" MODEL NO.	CFM	E.S.P.	SENS. COOL. CAP. MBH	TOTAL COOL. CAP. MBH	EDB (°F) / EWB (°F)	GAS HEATING INPUT MBH	GAS HEATING OUTPUT MBH	ELECTRICAL DATA VOLT.	SUPPLY FAN BHP	SUPPLY FAN FLA	COMPRESSOR LRA	COMPRESSOR RLA	COND. FAN FLA	COMB. FAN FLA	POWER SUPPLY MCA FLA	POWER SUPPLY MOCP	MIN OSA (CFM)	UNIT OPER. WT. (LBS.)	ENER. EFFIC. RATIO	POWER EXH. FLA	POWER EXH. HP	MIN. UNIT DISCONN. SIZE FLA	MIN. UNIT DISCONN. SIZE LRA	* MTG. DETAIL
UNIT - N CLUSTER	AC 1N	48HJD008	2700	0.8"'	63.3	87.7	105 / 67	90	72.9	460V 3ϕ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	555	1300	11.0 EER	1.7	1.0	23	124	5 / M5.1
UNIT - N CLUSTER	AC 2N	48HJD008	2300	0.8"'	60.0	86.3	105 / 67	90	72.9	460V 3ϕ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	5 / M5.1
UNIT - N CLUSTER	AC 3N thru 6N	48HJD006	1800	0.8"	43.4	60.1	105 / 67	50	41	460V 3ϕ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - N CLUSTER	AC 7N thru 9N	48HJD006	1700	0.8"	42.2	59.4	105 / 67	50	41	460V 3ϕ 60 HZ.	1.8	2.6	62.0	9.0	0.8	.30	17.4	20	540	900	13.0 SEER	1.1	0.5	17	86	3 / M5.1
UNIT - N CLUSTER	AC 10N	48HJD008	2260	0.8"'	59.6	86.2	105 / 67	90	72.9	460V 3ϕ 60 HZ.	2.9	3.4	44.0 TYP. OF 2	6.4 TYP. OF 2	0.7 TYP. OF 2	.30	21.9	25	480	1300	11.0 EER	1.7	1.0	23	124	3 / M5.1
UNIT - N CLUSTER	AC 11N	48HJE004	1200	0.8"	26.6	36.2	105 / 67	50	41	460V 3ϕ 60 HZ.	1.2	2.2	39.0	5.1	0.4	.30	11.7	15	170	900	13.0 SEER	1.1	0.5	11	48	3 / M5.1

NOTES:
1. PROVIDE ALL UNITS WITH "MICROMETL" POWER EXHAUST ECONOMIZER.
2. PROVIDE ALL UNITS WITH ROOF CURB.
3. PROVIDE SMOKE DETECTOR IN SUPPLY DUCT PER SECTION 608, CMC AT A.C.- 1N. ALL OTHER A.C. UNITS SUPPLYING AIR IN EXCESS OF 2000 CFM HAVE DIRECT ACCESS TO THE OUTDOORS.
4. INTERLOCK A.C.- 1N WITH E.F.- 2N.

SPLIT SYSTEM ELECTRICAL ROOM A.C. UNIT SCHEDULE

LOCATION	SYMBOL	"MITSUBISHI" INDOOR UNIT	CFM	FAN FLA	VOLT	WT. (LBS.)	"MITSUBISHI" OUTDOOR UNIT	TOTAL COOL. CAP. BTUH	COMPRESSOR RLA	COMPRESSOR LRA	MCA	MOCP	FAN FLA	VOLT	PIPING RL	PIPING RS	SEER	WT. (LBS.)	IN-DOOR MTG. DTL.	OUT-DOOR MTG. DTL.
UNIT - N CLUSTER	SAC 1N	MS09NW	177	0.37	115V, 1ϕ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1ϕ	1/4"	3/8"	10.2	65	9 / M5.1	10 / M5.1

NOTES:
1. PROVIDE INDOOR UNIT WITH THERMOSTAT.
2. COOLING CAPACITY RATED AT 80°F DB / 67°F WB INDOOR AIR AND 95°F DB / 75°F WB OUTDOOR AIR.

ROOF EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	H.P.	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - N CLUSTER	REF 1N & 2N	"GREENHECK"	GB-90	425	1/4"	1/4	120V, 1ϕ	100	SWITCH WITH EMS SYSTEM	7 / M5.1

NOTES: 1. PROVIDE WITH BACKDRAFT DAMPER AND GPFP ROOF CURB.

EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	WATTS INPUT or HP	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - N CLUSTER	EF 1N	"GREENHECK"	CSP-252	400	3/8"	217	120V, 1ϕ	36	PROVIDE WITH BACKDRAFT DAMPER & 5W SPEED SWITCH MOUNTED IN UNIT CASING SET FOR 400 CFM. SWITCH WITH LIGHTS.	11 / M5.1
UNIT - N CLUSTER	EF 2N	"GREENHECK"	CSP-226	265	1/4"	80	120V, 1ϕ	23	PROVIDE WITH BACKDRAFT DAMPER. INTERLOCK WITH A.C.- 1N.	11 / M5.1

NOTES: 1. PROVIDE WITH BACKDRAFT DAMPER.

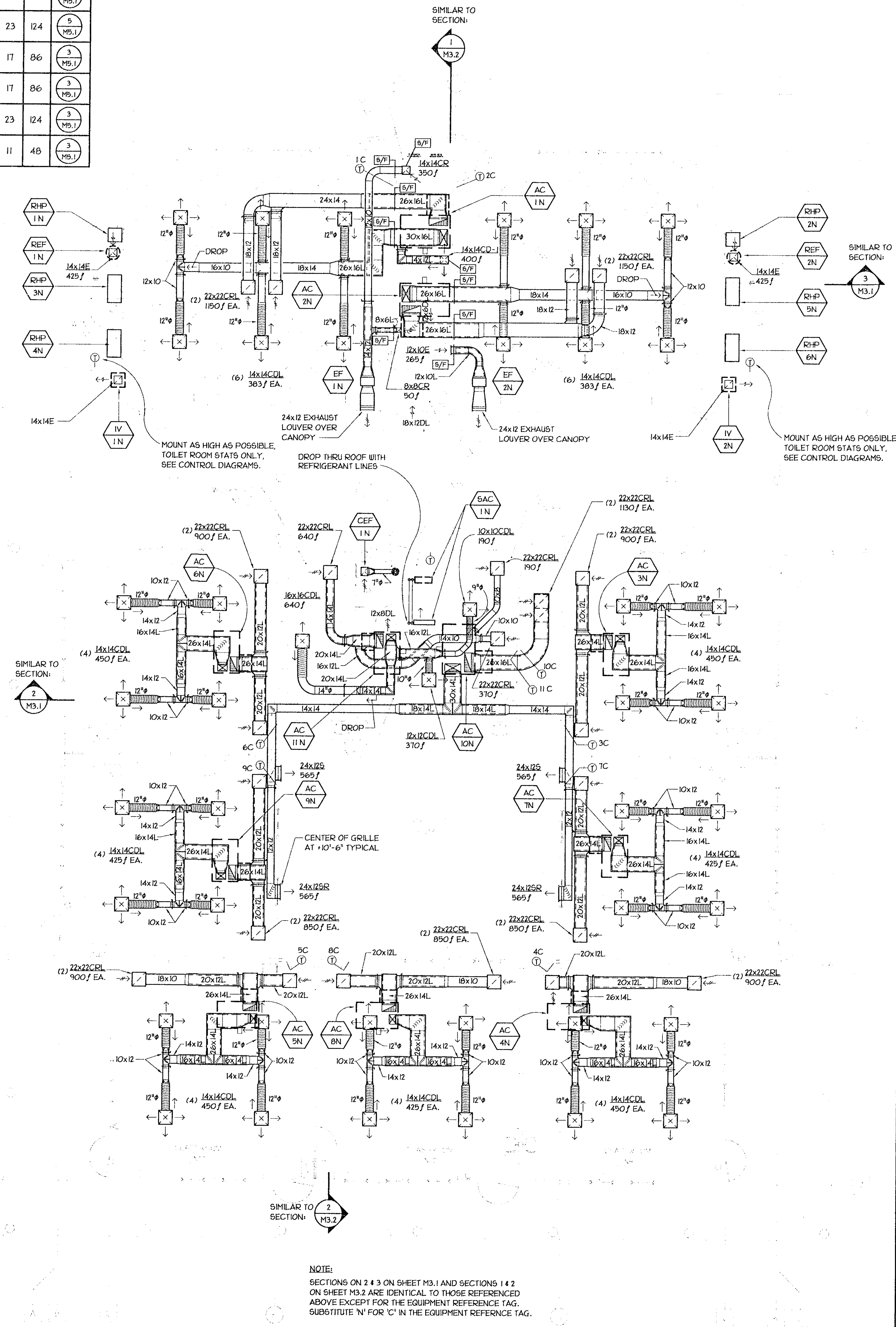
CEILING EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	WATTS INPUT	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - N CLUSTER	CEF 1N	GREENHECK	SP-224	135	1/4"	83	120V, 1ϕ	21	PROVIDE WITH RCC-T ROOF CAP WITH CURB, BACKDRAFT DAMPER, & 5W SPEED SWITCH MTD. IN UNIT CASING SET FOR 135 CFM. SW. w/ LITES.	8 / M5.1

NOTES: 1. PROVIDE WITH BACKDRAFT DAMPER.

MISC. EQUIPMENT SCHEDULE

LOCATION/ MTG. DTL.	SYMBOL	DESCRIPTION
1 / M5.2	IV 1N & 2N	INTAKE VENT - 1N & 2N: "GREENHECK" FABRA HOOD 425 CFM AT .05" S.P., 14x14 THROAT, 24x25 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 130 LBS.
2 / M5.2	RHP 1N & 2N	RADIANT HEATING PANEL - 1N & 2N: "AZTEC" CP254, 24x24 PANEL WITH QSF2424 SURFACE MOUNTING FRAME. 250 WATTS, 120V, 1ϕ. WEIGHT = 25 LBS.
2 / M5.2	RHP 3N thru 6N	RADIANT HEATING PANEL - 3N thru 6N: "AZTEC" CP504, 24x48 PANEL WITH QSF2448 SURFACE MOUNTING FRAME. 500 WATTS, 120V, 1ϕ. WEIGHT = 50 LBS.



NOTE:
SECTIONS ON 2 & 3 ON SHEET M3.1 AND SECTIONS 1 & 2 ON SHEET M3.2 ARE IDENTICAL TO THOSE REFERENCED ABOVE EXCEPT FOR THE EQUIPMENT REFERENCE TAG. SUBSTITUTE 'N' FOR 'C' IN THE EQUIPMENT REFERNCE TAG.

FLOOR PLAN - BLDG. N
SCALE : 1/8" = 1'-0"
1 / M2.2.1N

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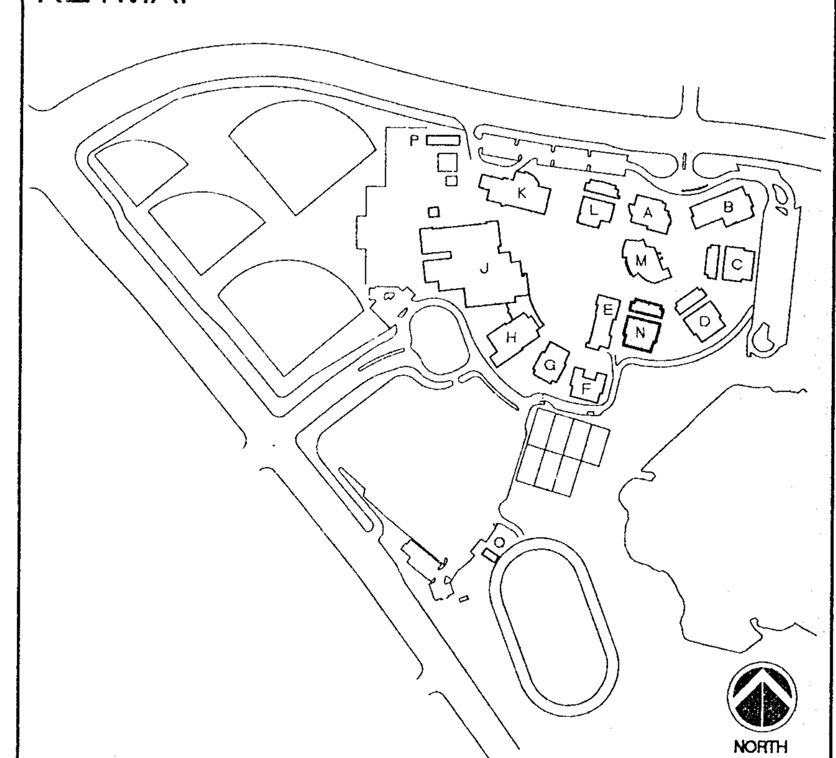
3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

REGISTERED PROFESSIONAL ENGINEER — M 21583 — EXPIRES 6/99 — MECHANICAL — STATE OF CALIFORNIA

Capital Engineering Consultants, Inc.
Sacramento, California
GC — DESIGNER/DRAFTER
970817 — PROJECT NO.

KEYMAP



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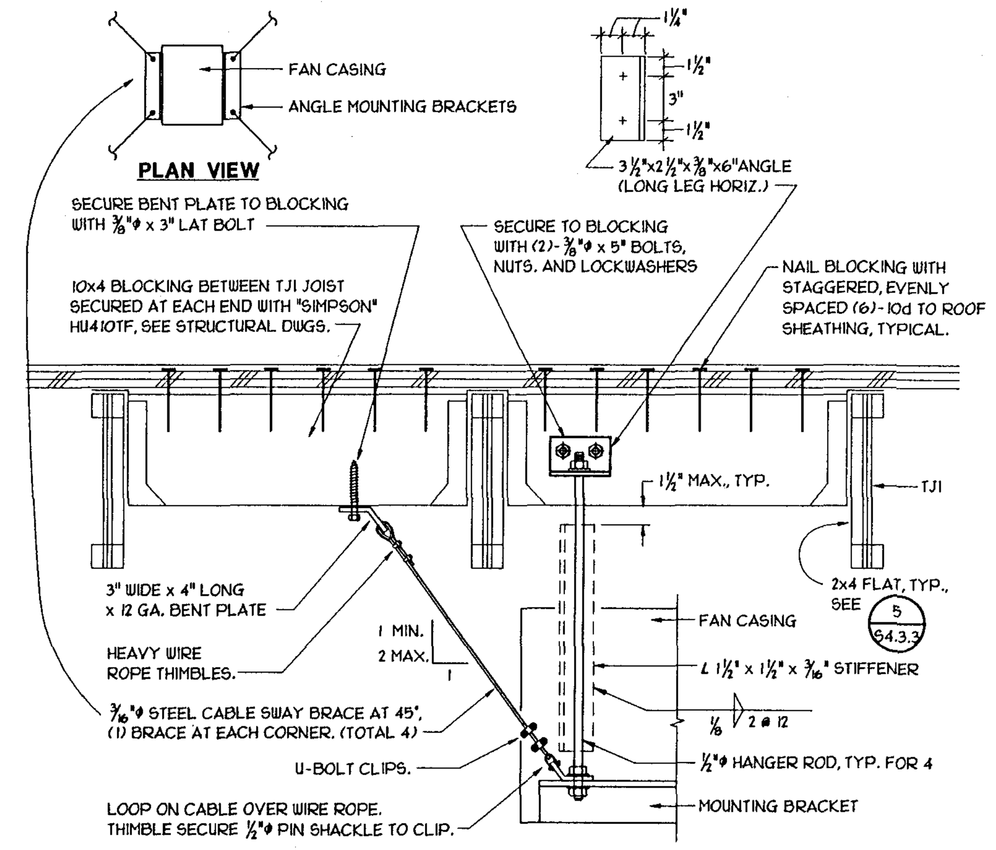
ARCH
LICENSED ARCHITECT — JEFFREY ALAN GRAU — C-14648 — 5/31/99 2001 RENEWAL DATE — STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL
PHASE II
FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

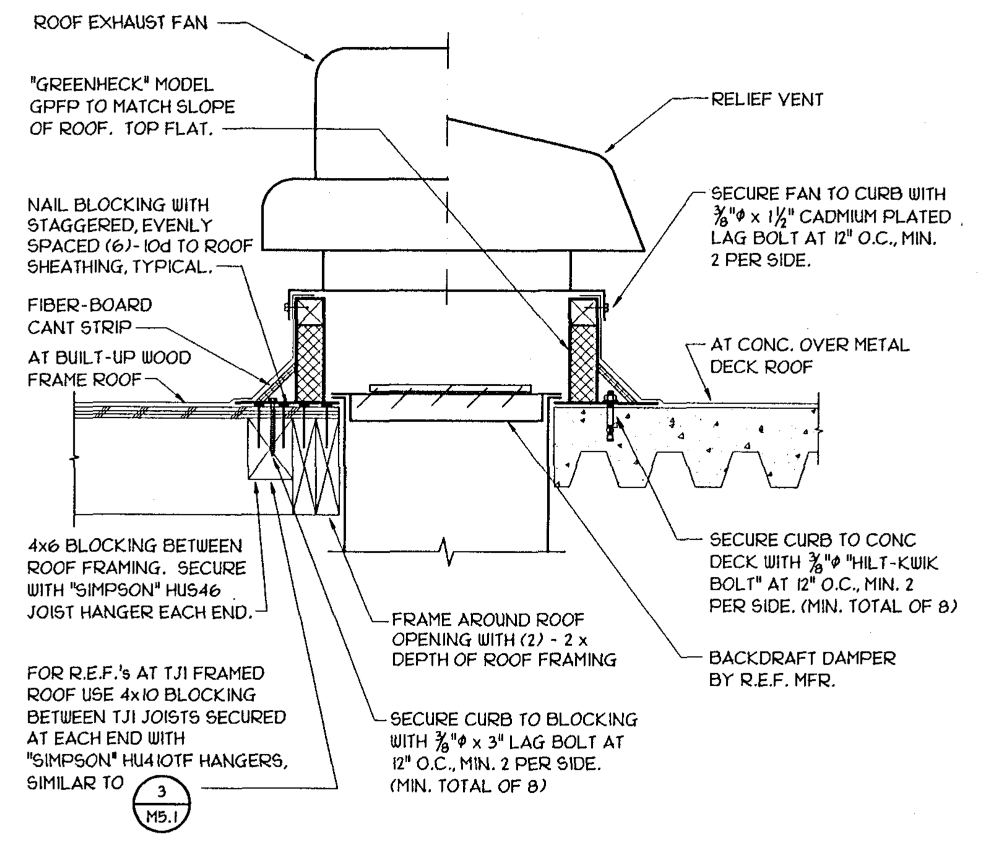
UNIT N
HVAC
FLOOR PLAN

REVISIONS	BY		
INCREMENT 4 7/30/99 (1)		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE
		SCALE 1/8" = 1'-0"	SHEET (1) M2.2.1N OF SHEETS
		CADFILE	
		UPDATED	



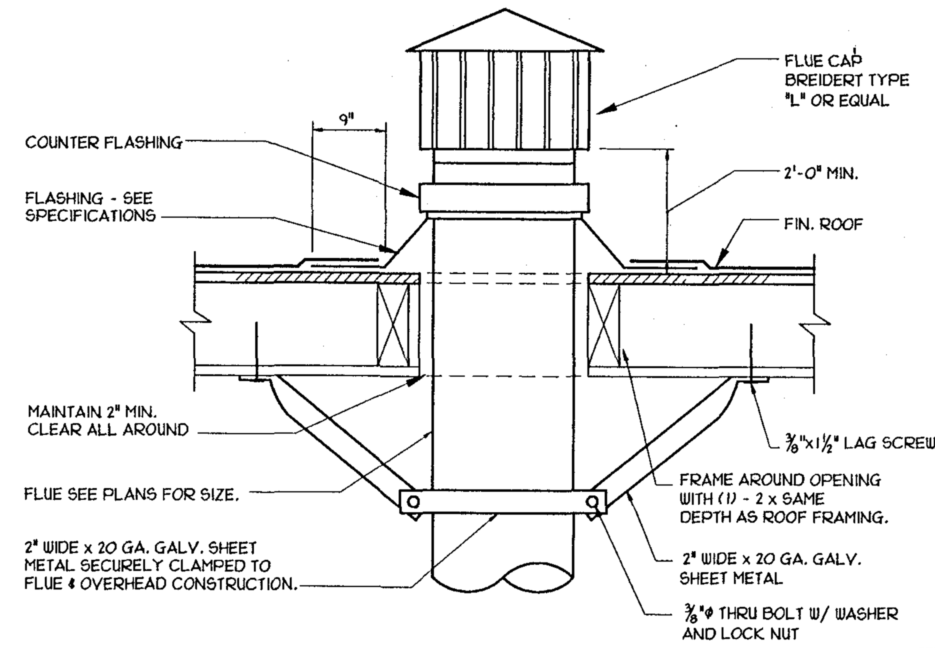
TYPICAL IN-LINE EXH. FAN MOUNTING (11/M5.1)

SCALE : NONE



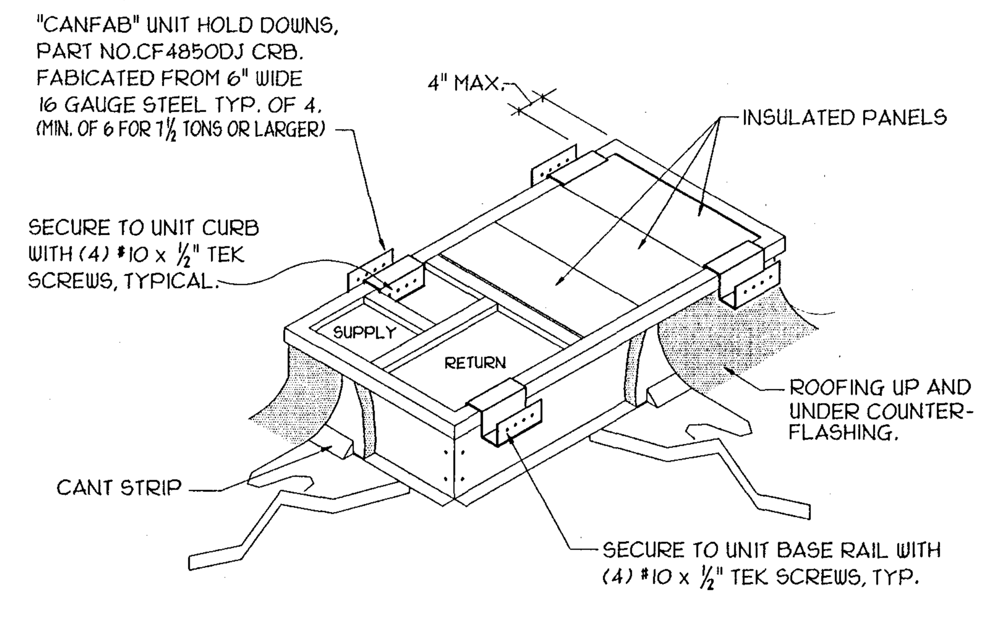
R.E.F. & R.V. MOUNTING (7/M5.1)

SCALE : NONE

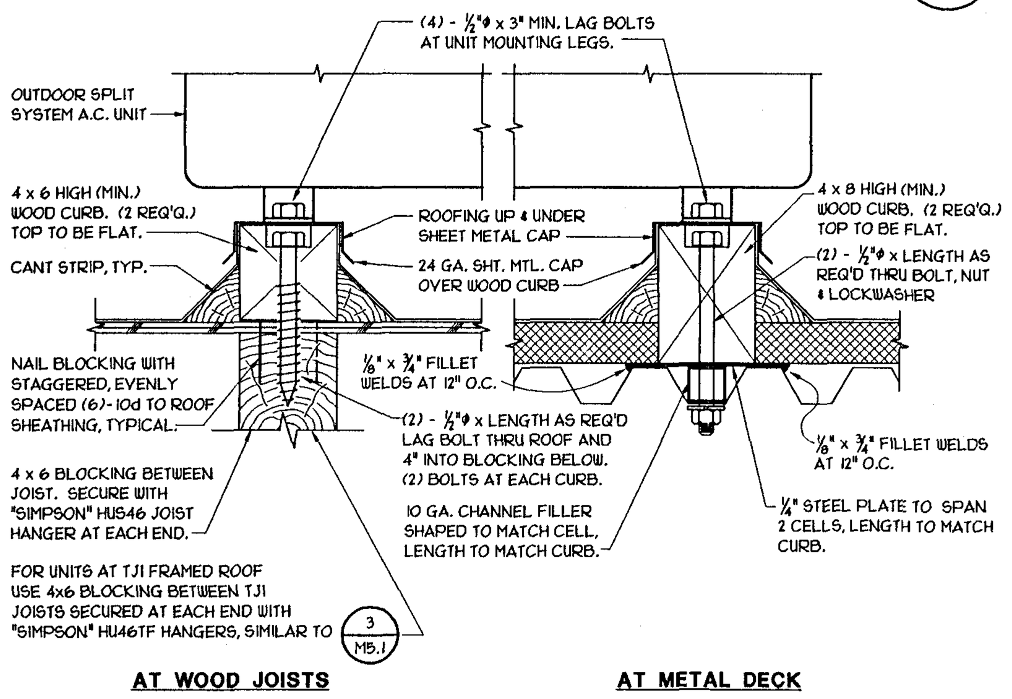


FLUE THRU ROOF DETAIL (12/M5.1)

SCALE : NONE

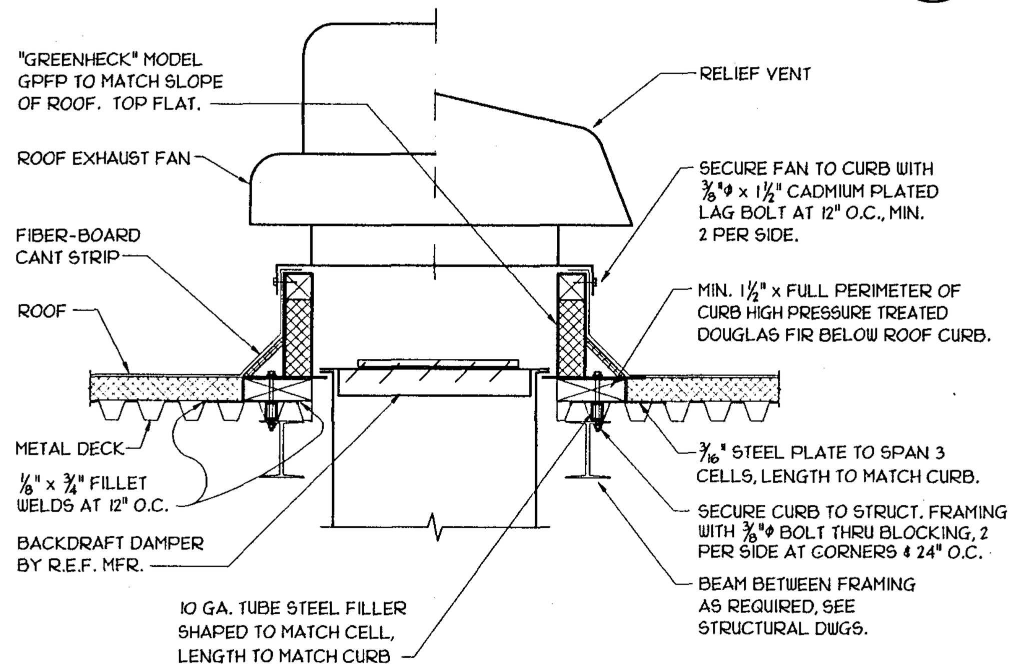


TYPICAL A.C. HOLD DOWN PLACEMENT DETAIL



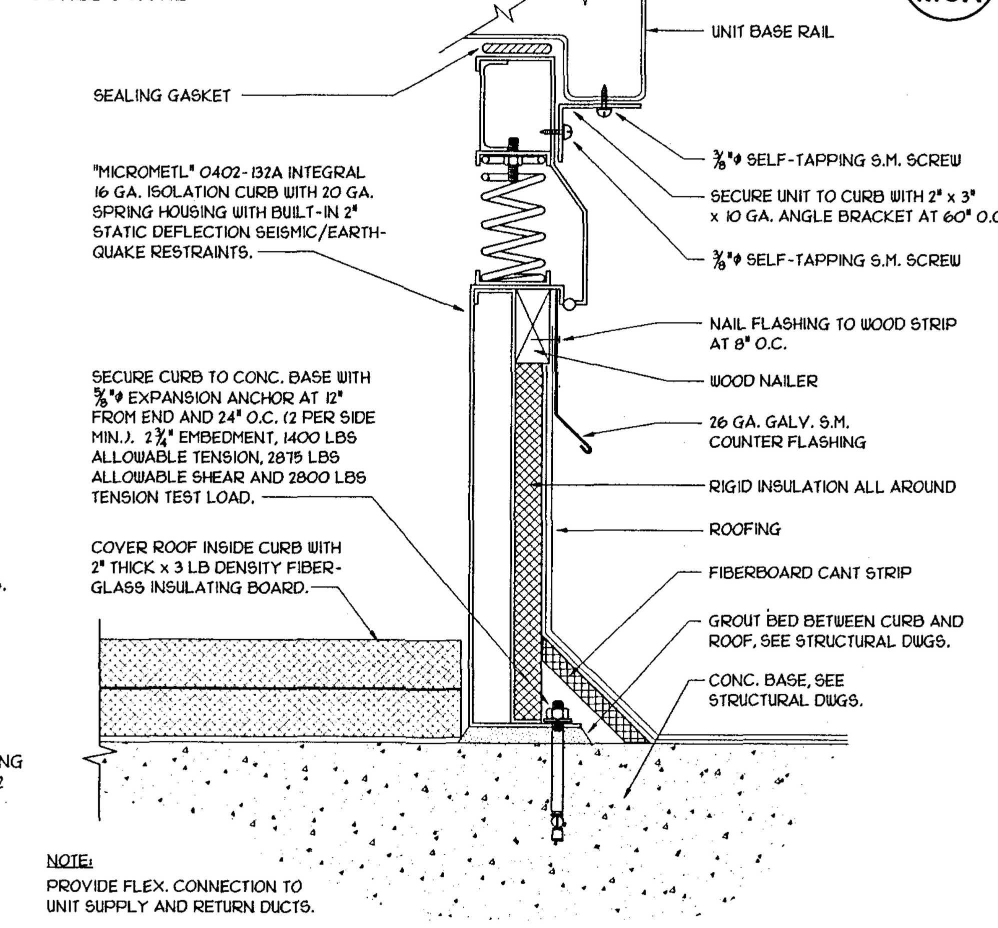
SPLIT SYSTEM OUTDOOR UNIT MOUNTING (10/M5.1)

SCALE : NONE



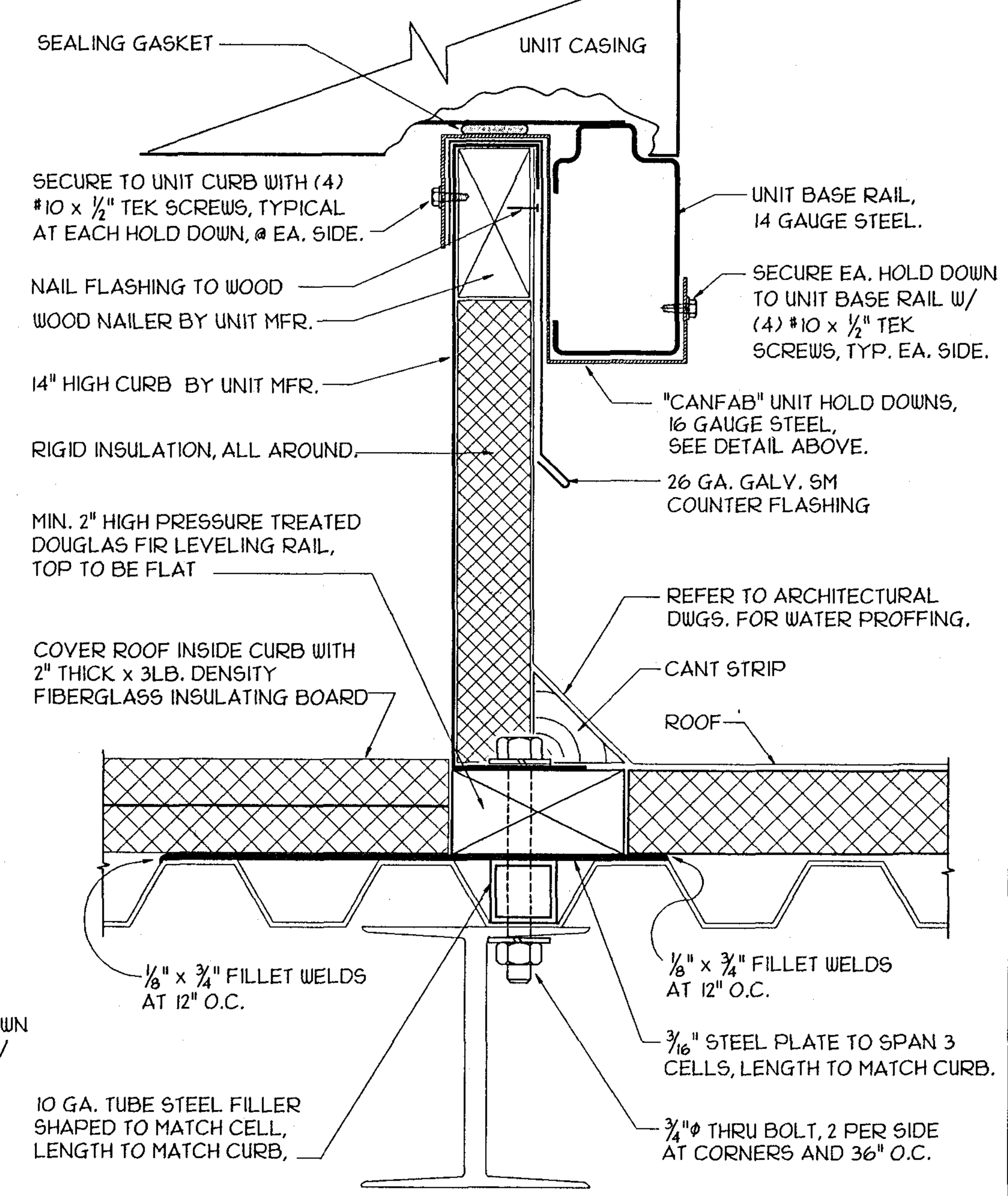
R.E.F. & R.V. MTG. AT METAL DECK (6/M5.1)

SCALE : NONE



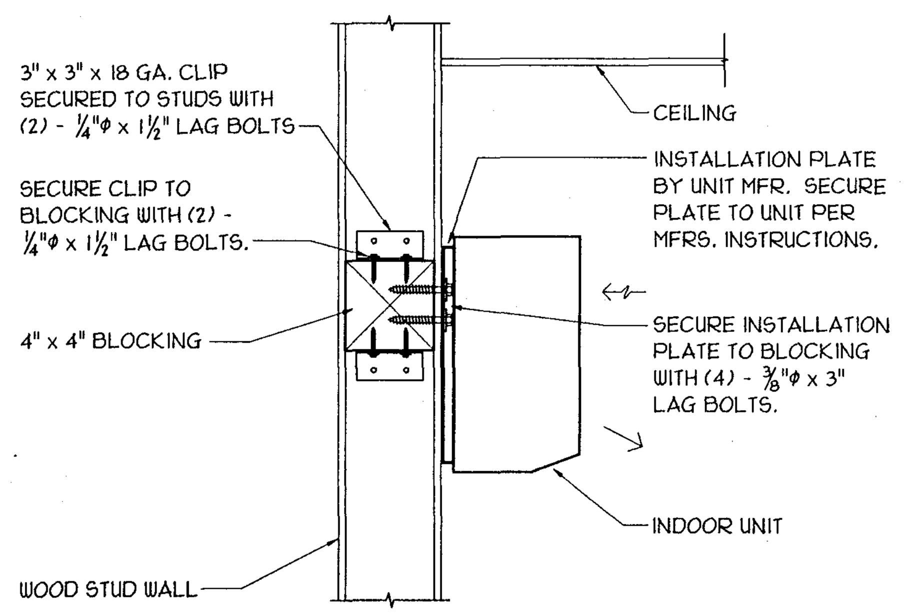
A.C.- 1 H & 2H MOUNTING DETAIL (4/M5.1)

SCALE : NONE



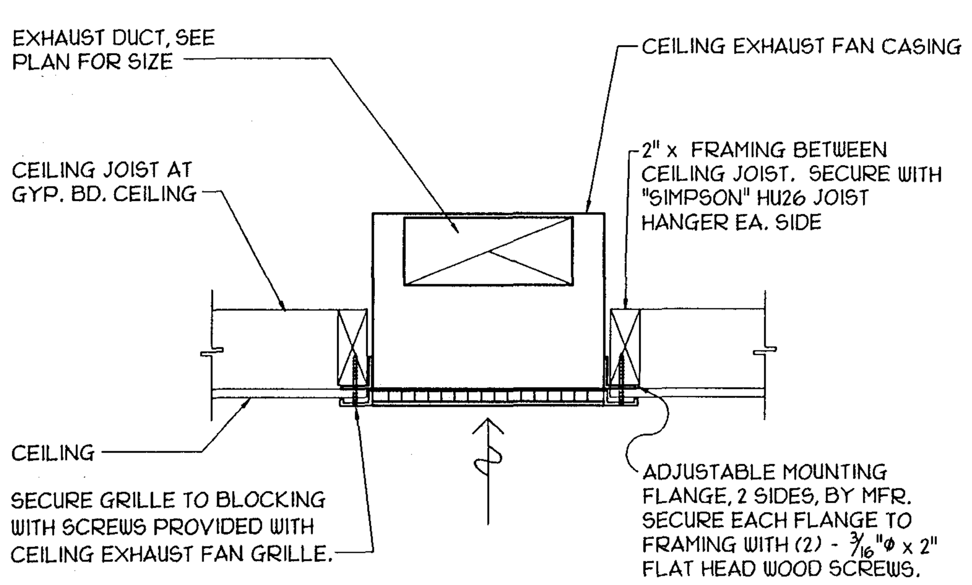
A.C. UNIT MOUNTING AT METAL DECK (2/M5.1)

SCALE : NONE (CURB INTERNAL TO INSULATION AND NAILER)



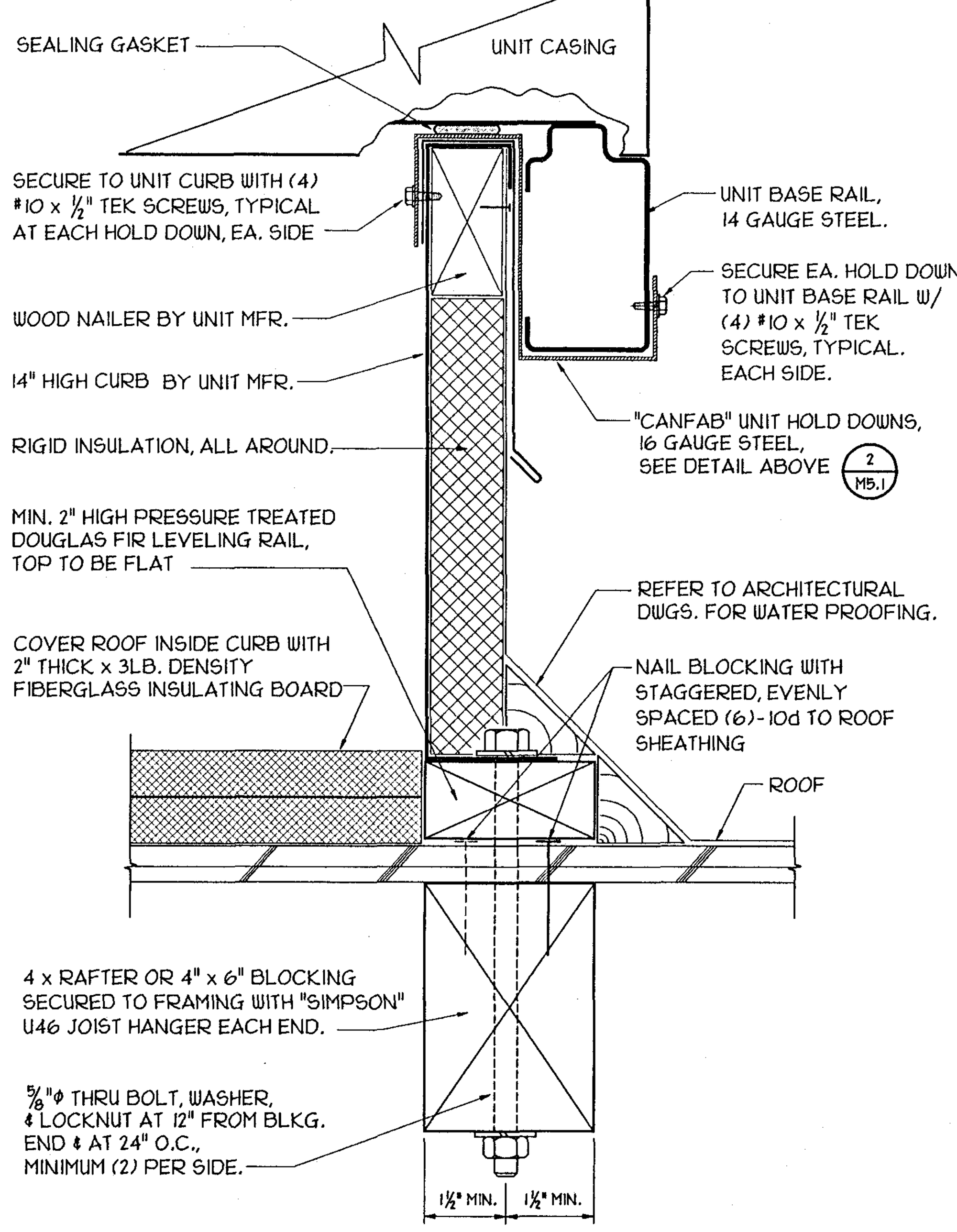
SPLIT SYSTEM INDOOR UNIT MTG. (9/M5.1)

SCALE : NONE



CEILING EXHAUST FAN MOUNTING (8/M5.1)

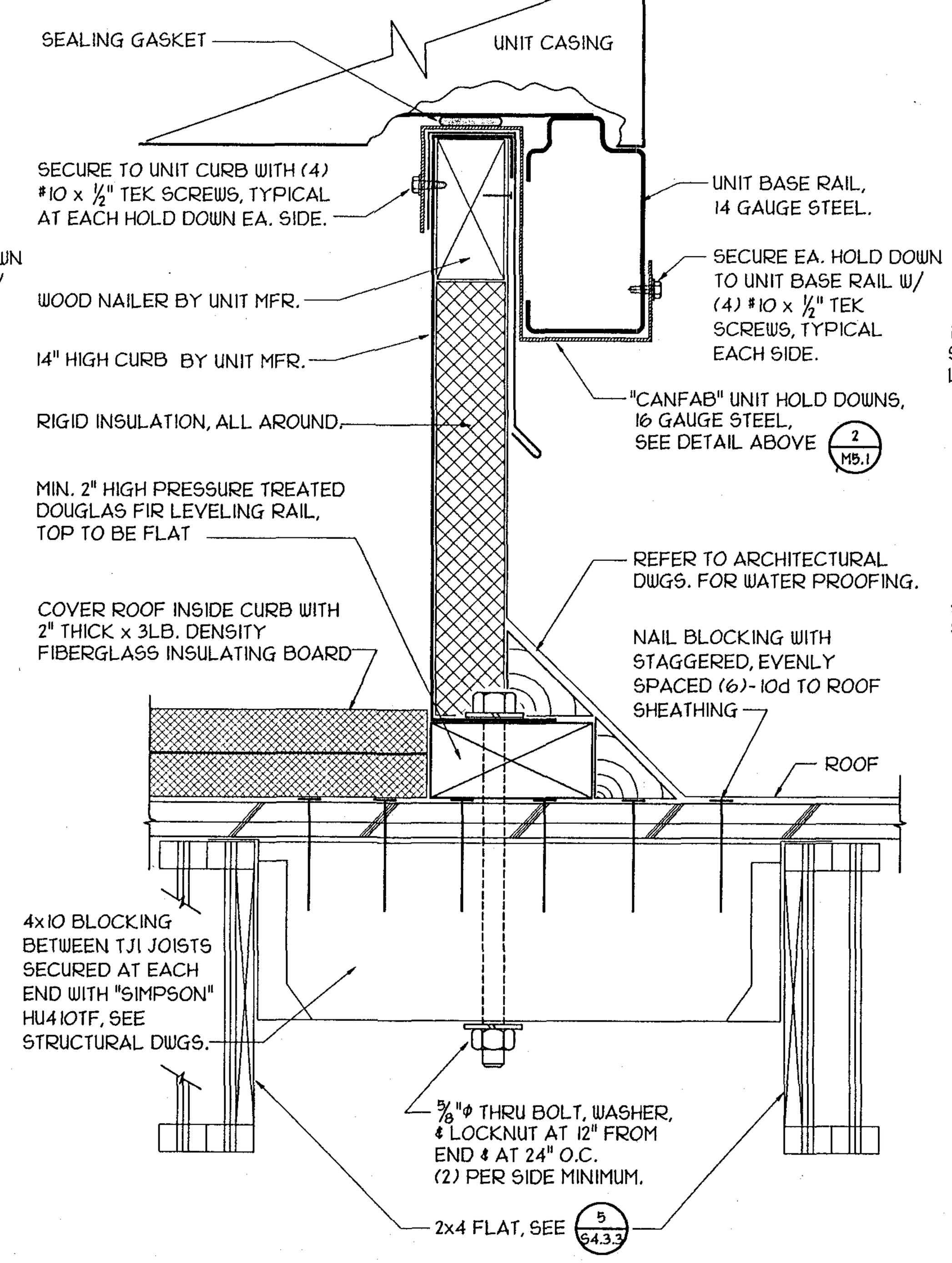
SCALE : NONE



CURB ATTACHMENT DETAIL

A.C. UNIT MOUNTING AT WOOD JOISTS (5/M5.1)

SCALE : NONE (CURB INTERNAL TO INSULATION AND NAILER)



A.C. UNIT MOUNTING AT TJI FRAMING (3/M5.1)

SCALE : NONE

EQUIPMENT ANCHORAGE

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:

FIXED EQUIPMENT ON GRADE	20% OF OPERATING WEIGHT
FIXED EQUIPMENT ON STRUCTURE	30% OF OPERATING WEIGHT
EMERGENCY POWER EQUIPMENT ON GRADE	30% OF OPERATING WEIGHT
EMERGENCY POWER EQUIPMENT ON STRUCTURE	40% OF OPERATING WEIGHT

SIMULTANEOUS VERTICAL FORCE - USE ⅓ x HORIZONTAL FORCE.

FOR FLEXIBLY-MOUNTED EQUIPMENT, SEE TITLE 24, SECTION 1630 A.2 CBC, 1995.

WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.

EQUIPMENT ANCHORAGE (1/M5.1)

SCALE : NONE

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(916) 368-7990 ■ Fax: (916) 368-7996

Capital Engineering Consultants, Inc.
Sacramento, California
GC DESIGNER/DRAFTER
970617 PROJECT NO.

KEYMAP

DSA/ORS

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
02 100090
AC FLS SS
DATE

ARCH

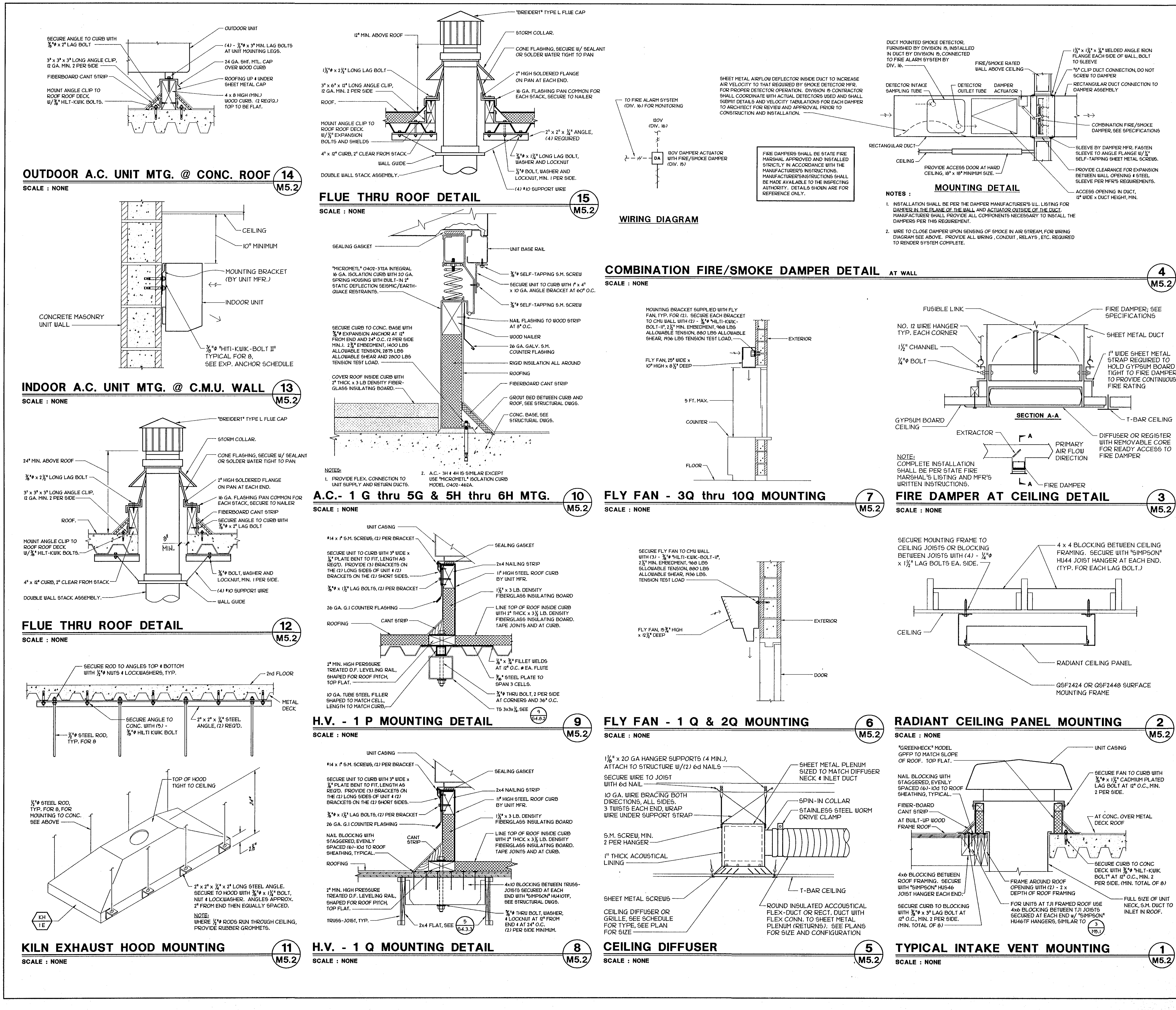
LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC DETAILS

REVISIONS	BY	DRAWN GC	PROJECT NO. 97-444
		CHECKED LB	DATE
		SCALE NONE	SHEET M5.1
		CADFILE	
		UPDATED	OF SHEETS



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AC FLS SS
DATE 12/9/98

ARCH

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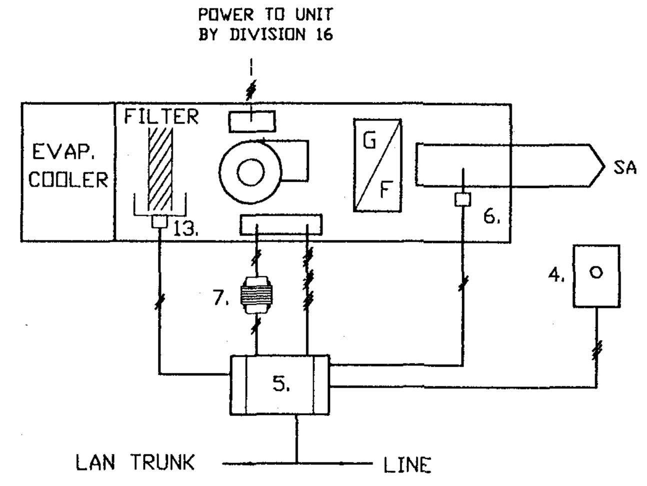
NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

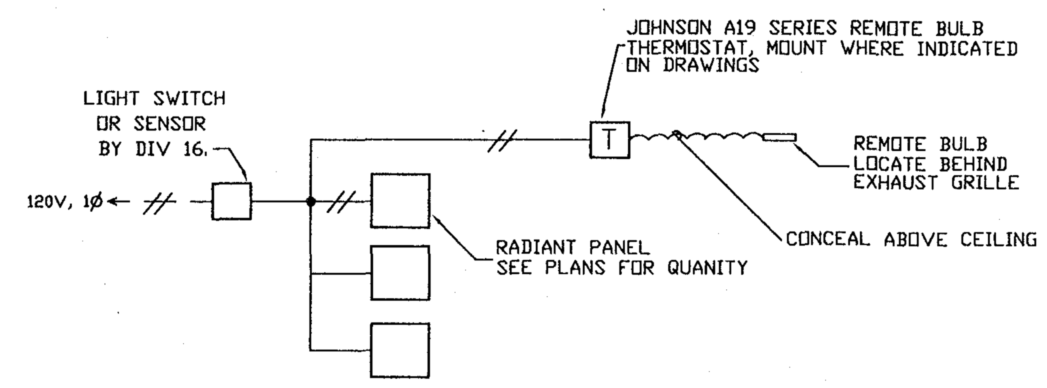
HVAC DETAILS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LB	DATE
		SCALE NONE	SHEET
		CADFILE	M5.2
		UPDATED	OF SHEETS

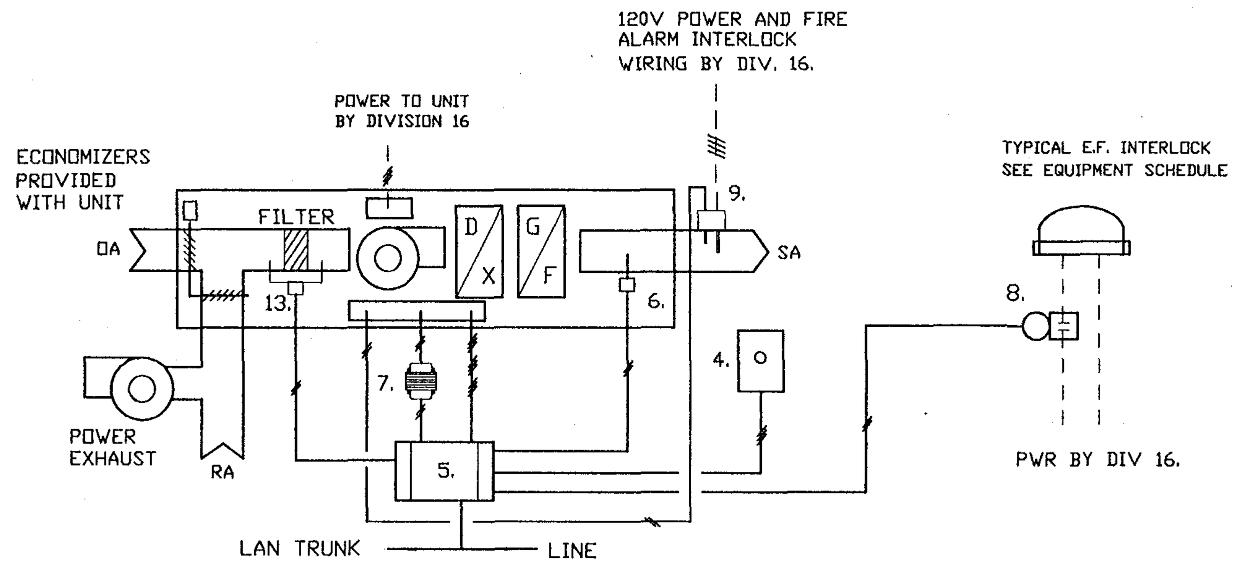
QC	
INI	%
GC	100
MJR	100
LB	100



HV UNIT CONTROL DIAGRAM



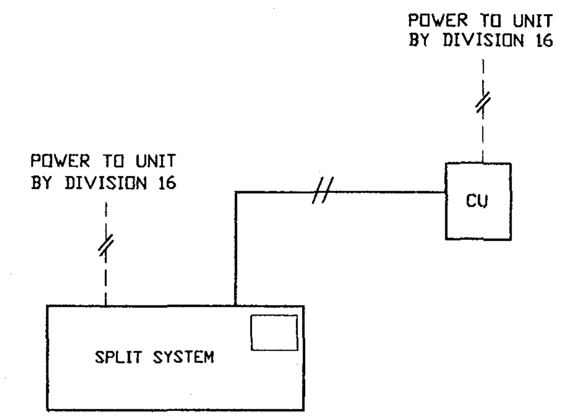
RADIANT CEILING PANEL (RCP) CONTROL DIAGRAM



AC UNIT CONTROL DIAGRAM

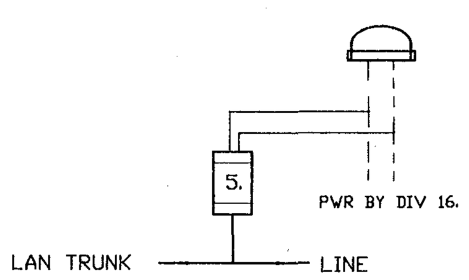
SMOKE DETECTORS ONLY ON A.C.- 1 C, 1 D, 4G and 1 N

SMOKE DETECTORS TO BE RESETTABLE FROM FIRE ALARM PANEL.

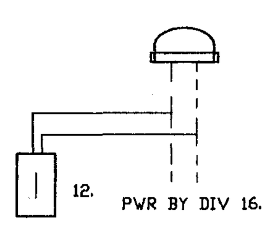


SAC CONTROL DIAGRAM

TYPICAL OF 7

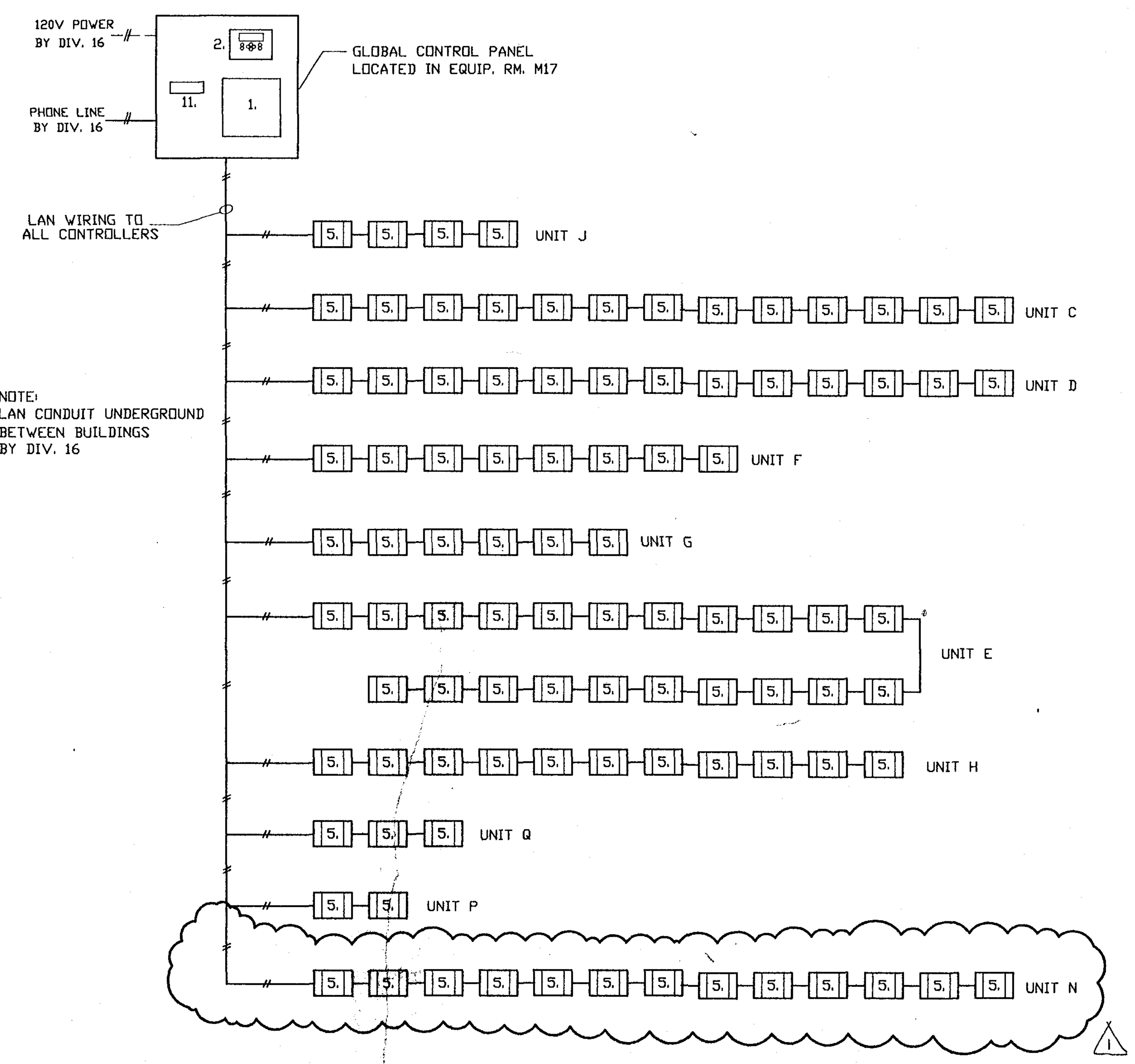


R.E.F. CONTROL DIAGRAM



TYPICAL C.E.F. & E.F. SWITCHED WITH LIGHT SWITCH

TYPICAL FOR E.F.- 1 C , 1 D and 1 N.



SYSTEM ARCHITECTURE

SEQUENCE OF OPERATION

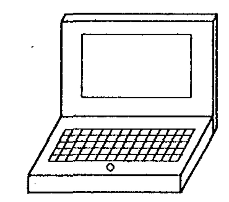
GENERAL
THE ENERGY MANAGEMENT SYSTEM (EMS) SHALL CONSIST OF AN APEX LT GLOBAL CONTROLLER AND APPLICATION SPECIFIC TUX CONTROLLERS. THE APEX SHALL BE PROGRAMMED TO PROVIDE THE OPERATING SCHEDULES OF EACH TUX CONTROLLER AS DESIGNATED BY THE SCHOOL DISTRICT. TEMPERATURE CONTROL CONTRACTOR (TCC) SHALL PROVIDE THE FOLLOWING COLORGRAPHIC COMPUTER SCREENS ONTO THE EXISTING EMS COMPUTER AND THE EXISTING LAPTOP SERVICE TOOL; A. SITE PLAN B. INDIVIDUAL BUILDING PLANS SHOWING BASIC FLOOR PLANS AND ZONE SENSOR LOCATIONS. C. CONTROL PANEL GRAPHIC SHOWING ALL ATTRIBUTES OF EACH INDIVIDUAL DDC CONTROLLER FOR EASE OF TROUBLESHOOTING. D. EQUIPMENT GRAPHIC DEPICTING ACTUAL EQUIPMENT SHOWING STATUS AND TEMPERATURES.

AC PACKAGE UNITS
DURING PERIODS OF OCCUPANCY THE AC UNIT TUX CONTROLLER WILL ENABLE THE FAN AND PROVIDE STAGED HEATING AND COOLING TO MAINTAIN ROOM SETPOINT. EACH AC UNIT WILL HAVE FACTORY ECONOMIZER CONTROLS THAT WILL POSITION THE ECONOMIZER DAMPERS TO PROVIDE COOLING AS REQUIRED. A FILTER PRESSURE SWITCH WILL CLOSE WHENEVER THE FILTER STATIC REACHES FINAL STATIC SETPOINT AND THE TUX WILL GO INTO ALARM MODE, WHICH CAN BE MONITORED AT THE DISTRICT ALERTON COMPUTER. FILTER FINAL STATIC SETPOINT TO BE DETERMINED AT STARTUP. PROVIDE SUPPLY AIR SMOKE DETECTOR FOR ALL UNITS LISTED TO SHUT-DOWN AC UNIT UPON DETECTION OF SMOKE. INTERLOCK ANY ASSOCIATED EXHAUST FANS TO OPERATE WHENEVER AC UNIT IS ENABLED.

HV UNITS
DURING PERIODS OF OCCUPANCY THE HV UNIT TUX CONTROLLER WILL ENABLE THE FAN AND PROVIDE HEATING AND EVAP COOLING TO MAINTAIN ROOM SETPOINT. EACH HV UNIT WILL HAVE FACTORY CONTROLS TO PROVIDE EVAP COOLING AND HEATING AS REQUIRED. A FILTER PRESSURE SWITCH WILL CLOSE WHENEVER THE FILTER STATIC REACHES FINAL STATIC SETPOINT AND THE TUX WILL GO INTO ALARM MODE, WHICH CAN BE MONITORED AT THE DISTRICT ALERTON COMPUTER. FILTER FINAL STATIC SETPOINT TO BE DETERMINED AT STARTUP.

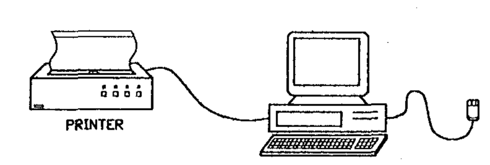
RADIANT CEILING PANELS (RCP)
INTERLOCK R.C.P.S TO LIGHTS. MOUNT REMOTE BULB THERMOSTAT BEHIND EXHAUST GRILL TO ALLOW R.C.P.S TO HEAT ROOM WHENEVER LIGHTS ARE ON AND TEMPERATURE IS BELOW SETPOINT OF 60 DEGREES F. (ADJUSTABLE) SEE SCHEDULE AND PLANS FOR QUANTITIES AND LOCATIONS.

SPLIT SYSTEM UNITS
THE SPLIT SYSTEM UNITS WILL HAVE FACTORY MOUNTED CONTROLS. TEMPERATURE CONTROL CONTRACTOR TO INTERLOCK INDOOR UNIT TO OUTDOOR UNIT.



ALERTON LAPTOP SERVICE TOOL

EXISTING LAPTOP SERVICE TOOL AT SCHOOL DISTRICT



ALERTON EMS WORKSTATION

EXISTING AT DISTRICT MAINTENANCE OFFICE

MATERIAL LEGEND

ALL PART NUMBERS ARE ALERTON UNLESS OTHERWISE NOTED

1. APEX LT GLOBAL CONTROLLER (AL-1000)
2. LANVIEW (LVIEW)
3. PROGRAMMABLE TUX CONTROLLER (653P)
4. STAINLESS STEEL SENSOR WITH BYPASS
5. SA TUX CONTROLLER (TX-SA)
6. DUCT TEMPERATURE SENSOR (TS-2000)
7. ISOLATION TRANSFORMER (KELE)
8. RELAY IN A BOX (RIB)
9. FENWAL CPD-7021 SMOKE DETECTOR
10. BELIMO DAMPER ACTUATOR (SIZE AS REQ'D)
11. MODEM PRACTICAL PERIPHERIALS 28.8 BAUD
12. LIGHT SWITCH
13. FILTER DIFFERENTIAL SWITCH (KELE RH-3)
14. VAV TUX (TX-VAV)
15. MIRCOSET ROOM SENSOR (MS-1010)
16. VAV BOX WITH CROSS FLOW SENSOR AND DAMPER (BY MECH. CONTRACTOR)
17. MODUS DIFFERENTIAL PRESSURE TRANSDUCER
18. WATER TEMP. SENSOR WITH WELL

WIRING BY DIVISION 15

WIRING BY DIVISION 16

Michael RAINFORTH Jeffrey GRAU
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(916) 368-7990 ■ Fax: (916) 368-7996

REGISTERED PROFESSIONAL ENGINEER LOWELL E. SHIELDS M 21583 EXPIRES 6/99 MECHANICAL STATE OF CALIFORNIA

Capital Engineering Consultants, Inc.
Sacramento, California

GC
DESIGNER/DRAFTER

970617
PROJECT NO.

KEYMAP

DSA/ORS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
02 100090
AC FLS SS
DATE JUL 30 1999

ARCH

LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 2001 RENEWAL DATE STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE II

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

CONTROL DIAGRAMS

REVISIONS	BY		
INCREMENT 4 7/30/99		DRAWN GC	PROJECT NO. 97-444
		CHECKED LB	DATE
		SCALE NONE	SHEET M6.1N
		CADFILE	
		UPDATED	OF SHEETS

970617-FLBS-16JYO - July 14, 1999 - GC - 10

SF = 0.9(

ALL FEATURES, NOTES AND DIMENSIONS NOT SPECIFICALLY SHOWN OR NOTED AS CHANGED SHALL REMAIN AS SHOWN ON PREVIOUSLY ISSUED DOCUMENTS.

AIR CONDITIONING UNIT SCHEDULE

NEW FOLSOM HIGH SCHOOL PHASE III

DRAWING TITLE

ADI-M01B

ADDENDUM

DATE SIGNED:

...LE

...ATA COMB. FAN FLA	POWER SUPPLY MCA FLA	POWER SUPPLY MOCP	MIN OSA (CFM)	UNIT OPER. WT. (LBS.)	ENER. EFFIC. RATIO	POWER EXH. FLA	POWER EXH. HP	MIN. UNIT DISCONN. SIZE FLA	MIN. UNIT DISCONN. SIZE LRA	MTG. DETAIL
NL	113.9	125	4920	8000	9.3 EER	12.6	4 FANS 1 HP EA.	NL	NL	4/M5.1
NL	113.9	125	4875	8000	9.3 EER	12.6	4 FANS 1 HP EA.	NL	NL	4/M5.1
.30	63.0	80	750	2700	9.5 EER	2.3	NL	NL	NL	4/M5.1
.30	17.4	20	450	900	13.0 SEER	1.1	0.5	17	86	5/M5.1
.30	17.9	20	435	925	11.0 EER	1.1	0.5	17	94	5/M5.1
.30	17.4	20	300	900	13.0 SEER	1.1	0.5	17	86	5/M5.1
.30	14.6	20	450	850	13.0 SEER	1.1	0.5	17	86	2/M5.1

...KE DETECTOR IN SUPPLY AIR DUCT OF A.C.- 1H & 2H ONLY, ALL OTHER UNITS
...IR IN EXCESS OF 2000 CFM HAVE DIRECT ACCESS TO THE OUTDOORS.
... DIAGRAMS ON SHEET M6.1.

...ST STAGE HEAT ONLY.

MISC. EQUIPMENT SCHEDULE

LOCATION/ MTG. DTL.	SYMBOL	DESCRIPTION
7/M5.1	IV/1H	INTAKE VENT - 1H: "GREENHECK" FABRA HOOD 750 CFM AT .05" S.P., 18x18 THROAT, 28x36 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 175 LBS.
7/M5.1	CAV/1H	COMBUSTION AIR VENT - 1H: "GREENHECK" FABRA-HOOD GRAVITY INTAKE. 12 x 18 THROAT, 22 x 36 HOOD. PROVIDE WITH GPFP ROOF CURB. WEIGHT = 140 LBS.
1/M5.2	HV/1Q, 1	HEATING & VENTILATING UNIT - 1Q: "REZNOR" HRPB-150, PACKAGED GAS FIRED HEATING UNIT WITH 'REC-50' EVAPORATIVE COOLING MODULE. 2450 CFM AT 1.0" E.S.P., 1000 RPM, 1½ HP FAN MOTOR 150,000 BTUH GAS INPUT & 120,000 BTUH OUTPUT. 8.65 AMPS, 208V, 3φ. EVAP. COOLING MODULE WITH 12" CELDEK MEDIA, 1/15 HP, .92 AMPS, 115V, 1φ. UNIT TO BE 100% OUTSIDE AIR IN COOLING MODE AND MINIMUM 195 CFM OUTSIDE AIR IN HEATING MODE. PROVIDE WITH FILTER, ROOF CURB, & THERMOSTAT. WEIGHT = 1000 LBS.
2/M5.2	FF/1Q & 2Q	FLY FAN - 1Q & 2Q: "MARS" 36CH, 2275 FPM, 1700 CFM, ½ HP, 1750 RPM, 3.0 TOTAL AMPS, 115V, 1φ. PROVIDE WITH MICRO SWITCH FOR AUTOMATIC ON/OFF OPERATION. WEIGHT = 63 LBS.

DIFFUSER, REGISTER & GRILLE SCHEDULE

SYMBOL	DESCRIPTION	TITUS	TUTTLE & BAILEY	METALAIR	KRUEGER
CD-1	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME	MCD - BORDER TYPE 1	AGDV	9000-1	1240 FRAME 22
1 CDL	MODULAR CORE LAY-IN CEILING DIFFUSER FOR T-BAR CEILING 24x24 PANEL. NO OBD	MCD - BORDER TYPE 3 RATING < 17 NC	EQUAL TO 'TITUS' MCD	EQUAL TO 'TITUS' MCD	EQUAL TO 'TITUS' MCD
CR	CEILING RETURN WITH ½" EGG CRATE CORE SURFACE MOUNT, OBD	MODEL 50 F - BORDER TYPE 1 W/AG-15 OBD	CRE-507	CC5D	EGC-5 OBD
1 CRL	CEILING RETURN WITH ½" EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING, NO OBD	MODEL 50 F - BORDER TYPE 3 RATING < 17 NC	EQUAL TO 'TITUS' 50F	EQUAL TO 'TITUS' 50F	EQUAL TO 'TITUS' 50F
CR-1 or CRL-1	CEILING RETURN WITH ½" EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	MODEL 50 F BORDER TYPE 3	CRE-507-L4	CC5D	[illegible]
SR	DOUBLE DEFLECTION SUPPLY REGISTER WITH VERTICAL FRONT BARS, ¾" SPACING	300 RL - AG-15	T 641	V 4004 S	[illegible]
S	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, ¾" SPACING	300 RL	T 64	V 4004 S	[illegible]
1 * RR & ER	RETURN OR EXHAUST GRILLE WITH 38° FIXED DEFLECTION. NO OBD	33RL RATING < 17 NC	EQUAL TO 'TITUS' 33RL	EQUAL TO 'TITUS' 33RL	EQUAL TO 'TITUS' 33RL
1 R & E	RETURN OR EXHAUST GRILLE WITH 38° FIXED DEFLECTION. NO OBD	33RL RATING < 17 NC	EQUAL TO 'TITUS' 33RL	EQUAL TO 'TITUS' 33RL	EQUAL TO 'TITUS' 33RL
RD	ADJUSTABLE ROUND CEILING DIFFUSER	TMRA	P3	SERIES 3000	SERIES RMI
1 SD	FLOWBAR LINEAR SLOT DIFFUSER. NO OBD	FL-20, 1 SLOT WITH JET THROW, PLENUM & BORDER TYPE 66 RATING < 17 NC	EQUAL TO 'TITUS' FL-20	EQUAL TO 'TITUS' FL-20	EQUAL TO 'TITUS' FL-20
RD	ADJUSTABLE ROUND CEILING DIFFUSER	TMRA	P3	SERIES 3000	SERIES RMI
SD	MODULAR LINEAR SLOT DIFFUSER	MP-38-SP WITH MP PLENUM	6200 SERIES WITH PLENUM	SERIES 6000 WITH PLENUM	PTBS15 WITH PLENUM
DL	DOOR LOUVER	SEE ARCHITECTURAL DRAWINGS			
*	ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS	3 FL WITH AG-35AA OBD	A 11D	RHD	S 580 H

ALL FEATURES, NOTES and DIMENSIONS NOT SPECIFICALLY SHOWN OR NOTED AS CHANGED SHALL REMAIN AS SHOWN ON PREVIOUSLY ISSUED DOCUMENTS. 1 ADDENDUM

DATE SIGNED:

NOTES:
1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.
2. PROVIDE DIFFUSERS WITH AIR FLOW PATTERN INDICATED ON DRAWINGS.
3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.
4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.

MECHANICAL LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	ABC	ABOVE CEILING
	AC	AIR CONDITIONING
	BDD	BACK DRAFT DAMPER
	BHP	BRAKE HORSE POWER
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
	CEF	CEILING EXHAUST FAN
	CONC.	CONCRETE
f	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
	DB	DRY BULB (DEGREES FAHRENHEIT)
φ	DIA.	DIAMETER, PHASE
	DTL.	DETAIL
	EA.	EACH
	EAL	EXHAUST AIR LOUVER
	EDB	ENTERING DRY BULB
	EER	ENERGY EFFICIENCY RATIO
	EF	EXHAUST FAN
	EMS	ENERGY MANAGEMENT SYSTEM
	ESP	EXTERNAL STATIC PRESSURE
	EWB	ENTERING WET BULB
	°F	DEGREES FAHRENHEIT
	FLA	FULL LOAD AMPS
	FPI	FINS PER INCH
	FPM	FEET PER MINUTE
	FT.	FEET
	GA.	GAUGE
	G.I.	GALVANIZED IRON
	GPM	GALLONS PER MINUTE
	HP	HORSE POWER
	HZ.	HERTZ
	LBS.	POUNDS
	LRA	LOCKED ROTOR AMPERES
	MAD, MD	MANUAL AIR DAMPER
	MAX.	MAXIMUM
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	MCA	MINIMUM CIRCUIT AMPS
	MFR.	MANUFACTURER
	MFS	MAXIMUM FUSE SIZE
	MIN.	MINIMUM
	MOCP	MAXIMUM OVERCURRENT PROTECTION
	MTG.	MOUNTING
	N.O.	NORMALLY OPEN
	OBD	OPPOSED BLADE DAMPER
	O.C.	ON CENTER
	OD	OUTSIDE DIAMETER
	OSA	OUTSIDE AIR
	PSI (G) (A)	POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE)
	RA	RETURN AIR
	RL	REFRIGERANT LIQUID
	RLA	RUNNING LOAD AMPERES
	RPM	REVOLUTIONS PER MINUTE
	RS	REFRIGERANT SUCTION
	SEER	SEASONAL ENERGY EFFICIENCY RATIO
	SM	SHEET METAL
	SP	STATIC PRESSURE
	SQ.	SQUARE
	STR	STRAINER
	TSP	TOTAL STATIC PRESSURE
	TYP.	TYPICAL
	WB	WET BULB
	WG	WATER GAUGE
	w/	WITH
	WT.	WEIGHT
F	FD	FIRE DAMPER
S/F		SMOKE/FIRE DAMPER
	BD	BALANCE DAMPER
T x		TEMPERATURE SENSOR, "X" INDICATES DEVICE CONTROLLED
D		DROP DUCT IN DIRECTION OF AIR FLOW
R		RISE DUCT IN DIRECTION OF AIR FLOW
	CAP.	CAPACITY
	COND.	CONDENSER
	COMB.	COMBUSTION
	DISCONN.	DISCONNECT
	EXH.	EXHAUST
	NL	NOT LISTED

RECTANGULAR DUCT LEGEND

SINGLE LINE SYMBOL	DOUBLE LINE SYMBOL	DESCRIPTION
24x12	24x12	RECTANGULAR DUCT - WIDTH x DEPTH
26x14L	26x14L	ACOUSTICALLY LINED RECTANGULAR DUCT-DIMENSIONS ARE OUTSIDE
		MANUAL AIR DAMPER
R OR D	RISE OR DROP	RISE OR DROP DUCT IN DIRECTION OF AIR FLOW
	OR	RECTANGULAR TO RECTANGULAR TRANSISTION, MAX. SLOPE OF 1:3 RECTANGULAR TO ROUND TRANSITION, MAX. SLOPE OF 1:3
	W, R, R/W = 1.5	ELBOW, RECTANGULAR, SMOOTH RADIUS, WITHOUT TURNING VANES
		ELBOW, RECTANGULAR, MITERED, WITH TURNING VANES
		CONVERGING OR DIVERGING TEE, 45° ENTRY, RECTANGULAR MAIN AND BRANCH. WHEN REDUCING MAIN, SIDE OF TAKE OFF OR ENTRY BRANCH TO BE FLAT, OTHER SIDES MAX. SLOPE OF 1:3
	EXTRACTOR	TEE, RECTANGULAR MAIN AND BRANCH WITH EXTRACTOR
		CONICAL DUCT TAKE OFF FROM RECTANGULAR VIA SPIN-IN W/DAMPER AND SCOOP
	ROUND DUCT	ROUND DUCT TAKE OFF FROM RECTANGULAR VIA SMOOTH CONVERGING BELL MOUTH
	W, R, R/W = 1.5	SYMMETRICAL WYE, DOVETAIL, RECTANGULAR RECTANGULAR (CONVERGING OR DIVERGING)
	2W, W, W, PROVIDE DIVIDER	ELBOWS, 90° RECTANGULAR TEE SHAPE WITH SQUARE ELBOWS, SPLITTER DAMPER OR MAD'S ON THE 2 BRANCHES
		RECTANGULAR DUCT TEE WITH SPLITTER DAMPER OR MAD'S ON THE 2 BRANCHES AND SQUARE ELBOWS AND TRANSITIONS, THROAT SIZED FOR EQUAL PRESSURE DROP
		RECTANGULAR DUCT SPLIT WITH SPLITTER DAMPER OR MAD'S AND SQUARE ELBOWS AND TRANSITIONS. THROAT SIZED FOR EQUAL PRESSURE DROP
		FOR CONCEALED DUCT: DROP TO DIFFUSER SHALL BE FULL SIZE OF DIFFUSER NECK. FOR EXPOSED DUCT: DROP SHALL BE FULL SIZE OF OD DIFFUSER FRAME, FLANGE FOR MOUNTING DIFFUSER TURNED IN. AIR EXTRACTOR AND EQUALIZER GRID AT CONNECTION TO MAIN.
		SUPPLY AIR DUCT IN SECTION
		RETURN AND OUTSIDE AIR DUCT IN SECTION
		EXHAUST AIR DUCT IN SECTION
		FLEXIBLE DUCT

EXPANSION ANCHOR SCHEDULE

BOLT DIAMETER	MINIMUM EMBEDMENT	ALLOWABLE TENSION	ALLOWABLE SHEAR	TENSION TEST LOAD
3/8	2½	540	384	1080
½	2¾	776	680	1552
5/8	2¾	776	840	1552
¾	3¼	776	840	1552

ALLOWABLE LOADS FOR ANCHORS IN CMU

NOTES:
1. ALL EXPANSION ANCHORS SHALL BE "HILTI-KWIK-BOLT II", CITY OF LOS ANGELES REPORT #25226, TABLE IX.
2. ALLOWABLE TENSION AND SHEAR VALUES ARE BASED ON 80% OF THE ALLOWABLE LOADS LISTED IN THE CITY OF LOS ANGELES REPORT #25226, TABLE IX.
3. TEST 50% OF ANCHORS FOR TENSION TEST LOAD LISTED IN SCHEDULE. IF ANY ANCHOR FAILS, TEST ALL ANCHORS UNTIL 20 CONSECUTIVE ANCHORS PASS, THEN RESUME TESTING AT 50% FREQUENCY.
4. ANCHORS SHALL BE INSTALLED WITH MINIMUM SPACING OF 12 ANCHOR DIAMETERS AND A MINIMUM EDGE DISTANCE OF 10 ANCHOR DIAMETERS.
5. ANCHOR BOLTS CAST IN CMU MAY BE SUBSTITUTED FOR DRILL-IN CONCRETE EXPANSION ANCHORS OF THE SAME DIAMETER. MINIMUM EMBEDMENT SHALL BE 3" FOR 3/8"φ BOLTS, 4" FOR ½"φ & 5/8"φ BOLTS.

SPLIT SYSTEM ELECTRICAL ROOM A.C. UNIT SCHEDULE

LOCATION	SYMBOL	"MITSUBISHI" INDOOR UNIT	CFM	FAN FLA	VOLT	WT. (LBS.)	"MITSUBISHI" OUTDOOR UNIT	TOTAL COOL. CAP. BTUH	COMPRESSOR RLA	COMPRESSOR LRA	MCA	MOCP	FAN FLA	VOLT	PIPING RL	PIPING RS	SEER	WT. (LBS.)	IN-DOOR MTG. DTL.	OUT-DOOR MTG. DTL.
UNIT - H THEATER	SAC/1H	MS09NW	177	0.37	115V, 1φ	20	MU09NW	8,500	10.0	37.0	14	15	0.66	115V, 1φ	¼"	3/8"	10.2	65	8/M5.1	9/M5.1

NOTES:
1. PROVIDE WITH WALL THERMOSTAT.
2. COOLING CAPACITY RATED AT 80°F DB / 67°F WB INDOOR AIR AND 95°F DB / 75°F WB OUTDOOR AIR.

ROOF EXHAUST FAN SCHEDULE

LOCATION	SYMBOL	MFR.	MODEL	CFM	S.P.	H.P.	VOLTAGE	WEIGHT (LBS.)	REMARKS	MOUNTING DETAIL
UNIT - H THEATER	REF/1H & 2H	"GREENHECK"	GB-90	500	3/8"	¼	120V, 1φ	100	SWITCH WITH EMS SYSTEM	6/M5.1
UNIT - H THEATER	REF/3H	"GREENHECK"	GB-120	750	¼"	¼	120V, 1φ	100	SWITCH WITH THERMOSTAT MOUNTED ON WALL SET FOR 80°F.	6/M5.1
UNIT - H THEATER	REF/4H	"GREENHECK"	GB-90	500	¼"	¼	120V, 1φ	100	SWITCH WITH THERMOSTAT MOUNTED ON WALL SET FOR 80°F.	6/M5.1
UNIT - Q CONCESSION	REF/1Q	"GREENHECK"	GB-140	1400	½"	¼	120V, 1φ	125	SWITCH WITH EMS SYSTEM	4/M5.2
UNIT - Q CONCESSION	REF/2Q	"GREENHECK"	GB-180	1700	½"	¼	120V, 1φ	150	SWITCH WITH EMS SYSTEM 1	4/M5.2

NOTES: 1. PROVIDE WITH BACKDRAFT DAMPER AND GPFP ROOF CURB.

SHEET NOTES

1. VERTICAL AND LATERAL SUPPORTS OF DUCTWORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF SPEC. SECTION 15140.

Michael RAINFORTH Jeffrey GRAU ARCHITECTS
3250 Ramos Circle Sacramento, CA 95827
(916) 368-7990 Fax: (916) 368-7996

REGISTERED PROFESSIONAL ENGINEER LOWELL E. SHIELDS M 21583 EXPIRES 6/03 MECHANICAL STATE OF CALIFORNIA

DATE SIGNED: 3/18/02

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA
GC\MJR DESIGNER/DRAFTER 970617 PROJECT NO.

KEYMAP

FOR CONSTRUCTION
DATE 7-17-02 COMMENT

AS-BUILT
DATE 7-17-02 COMMENT

DSA/ORS
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES
02 100090
AC FLS SS
DATE 4/2/02

ARCH
LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 5/31/2003 RENEWAL DATE STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE 3

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC SCHEDULES and LEGENDS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/28/99
		SCALE NONE	SHEET M0.1
		CADFILE	
		UPDATED	OF SHEETS

Michael RAINFORTH • Jeffrey GRAU
ARCHITECTS

ARCHITECT'S SUPPLEMENTAL INSTRUCTION #14

Architecture & Planning • 3250 Ramos Circle • Sacramento, CA 95827-2513 • (916) 368-7990 • FAX: (916) 368-7996 • A Professional Corporation •

Project Name:	New Folsom High School – Phase III
Owner:	Folsom Cordova Unified School District
Contractor:	Roebbelen Construction Management Services
Inspector:	John Hanna
Architect's Project No.:	00-574
DSA File/Appl. #:	34-H3 / 02-100090
Date of Instruction:	December 6, 2002

The work shall be carried out in accordance with the following Supplemental Instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time, unless noted hereafter. Contractor has five (5) calendar days from issuance of these Instructions to appeal, through the Architect, for terms of a Change Order or relief from these Instructions.

Description:

Duct revisions at Side Light Position 1: The Contractor is directed to revise the duct that runs over the top of Side Light Position 1 as described in the attached drawings CL-1 and CL-2. This revision simplifies the duct routing and provides additional head clearance in this area.

Cost Impact:
(none)

Cost approval required prior to the performance of this work:	☐ YES ☒ NO
DSA approval required prior to the performance of this work:	☐ YES ☒ NO
A change order is required due to a change in the drawings or cost:	☐ YES ☒ NO

Attachments:	(as listed)
Issued By:	Chris Smith
Copies:	Matt Washburn; FCUSD John Hanna; IOR

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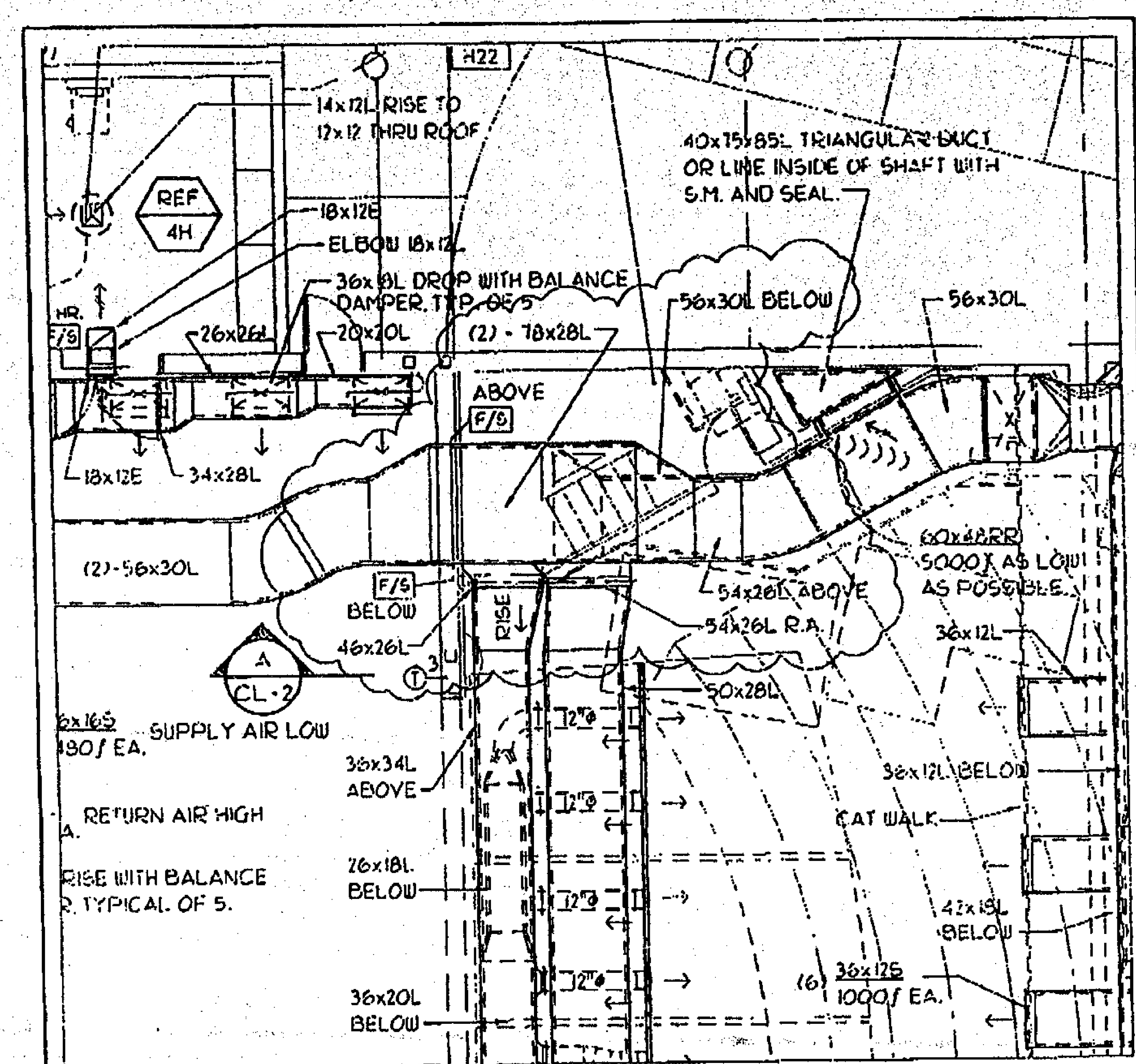


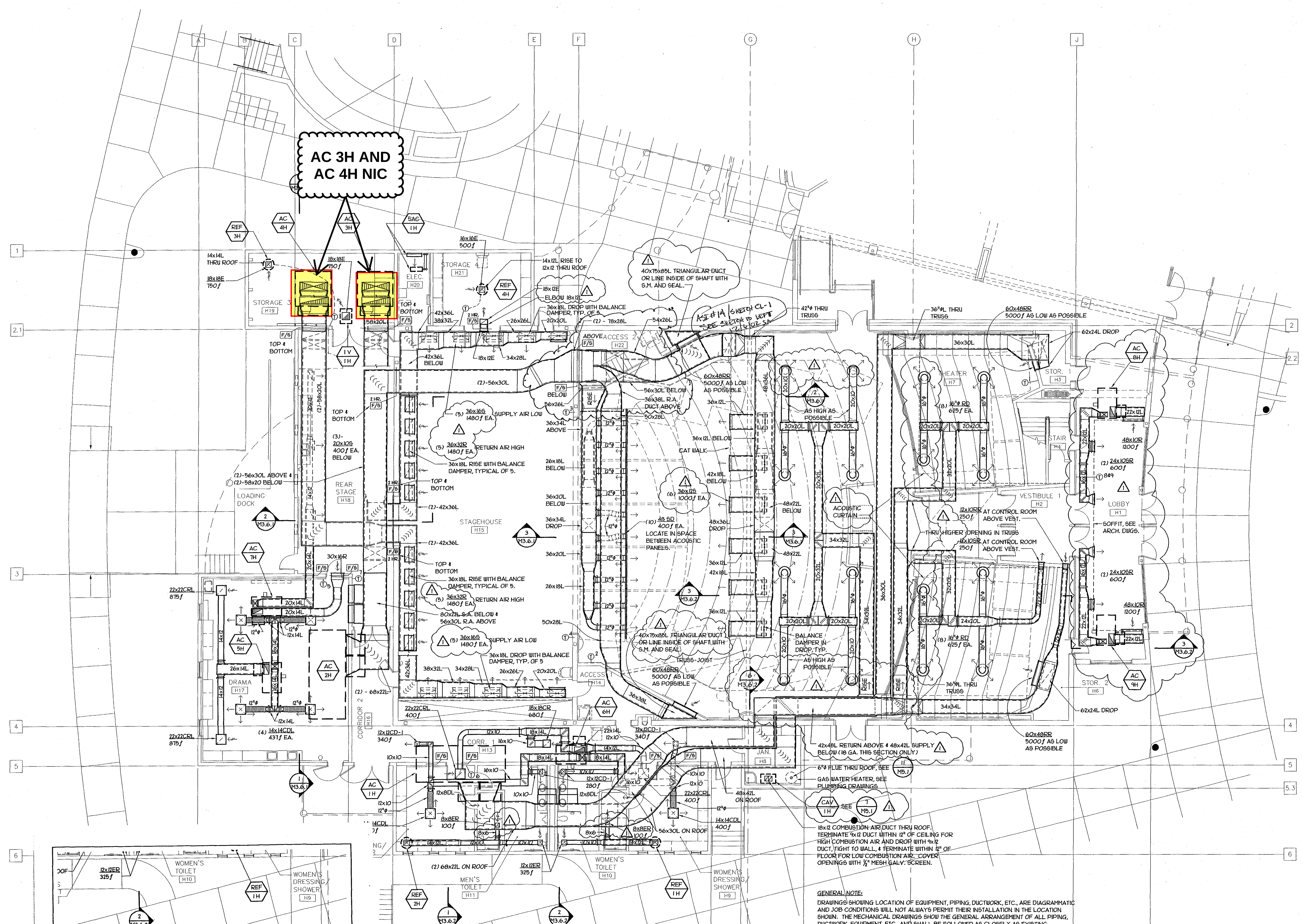
PARTIAL HVAC PLAN

SCALE : 1/8" = 1'-0"

ALL FEATURES, NOTES and DIMENSIONS NOT SPECIFICALLY SHOWN OR NOTED AS CHANGED SHALL REMAIN AS SHOWN ON PREVIOUSLY ISSUED DOCUMENTS.

ADDENDUM

Michael RAINFORTH • Jeffrey GRAU ARCHITECTS 3250 Ramos Circle • Sacramento, CA 95827 (916) 368-7990 • Fax: (916) 368-7996	THEATER PARTIAL HVAC PLAN	REFERENCE SHEET M2-6-1
	NEW FOLSOM HIGH SCHOOL PHASE III FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT FOLSOM, SACRAMENTO COUNTY, CALIFORNIA	JOB NO. 00-574 DRAWING CL-1 SHT. OF



NOTES: 1. ALL DUCTWORK EXPOSED ON ROOF TO HAVE 2" OF INSULATION ON THE INSIDE OF THE DUCTWORK. THE DIMENSIONS GIVEN ARE OUTSIDE TO OUTSIDE.

2. COORDINATE PAINTING OF THE EXPOSED DUCTWORK WITH THE ARCHITECT.

3. EXPOSED DUCTWORK TO BE FREE OF DENTS, BLEMISHES AND LABELS.

4. ALL DIFFUSERS & REGISTERS IN THEATER H7, STAGE H15 & DRAMA CL.RM. H17 TO HAVE A RATING OF NOT GREATER THAN NC-17.

5. NO EXTERNAL WRAP TO BE APPLIED TO ANY OF THE DUCTWORK INSIDE THEATER H7 OR STAGE H15.

FLOOR PLAN

NOTES:

1. ALL DUCTWORK EXPOSED ON ROOF TO HAVE 2" OF INSULATION ON THE INSIDE OF THE DUCTWORK. THE DIMENSIONS GIVEN ARE OUTSIDE TO OUTSIDE.

2. COORDINATE PAINTING OF THE EXPOSED DUCTWORK WITH THE ARCHITECT.

3. EXPOSED DUCTWORK TO BE FREE OF DENTS, BLEMISHES AND LABELS.

GENERAL NOTE:

DRAWINGS SHOWING LOCATION OF EQUIPMENT, PIPING, DUCTWORK, ETC., ARE DIAGRAMMATIC AND JOB CONDITIONS WILL NOT ALWAYS PERMIT THEIR INSTALLATION IN THE LOCATION SHOWN. THE MECHANICAL DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL PIPING, DUCTWORK, EQUIPMENT, ETC., AND SHALL BE FOLLOWED AS CLOSELY AS EXISTING CONDITIONS, ACTUAL BUILDING CONSTRUCTION, AND THE WORK OF OTHER TRADES WILL PERMIT. BECAUSE OF THE SMALL SCALE OF THE MECHANICAL DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE HIS WORK ACCORDINGLY PROVIDING SUCH FITTINGS AND ACCESSORIES AS MAY BE REQUIRED TO MEET CONDITIONS. GENERAL ARRANGEMENT AND LOCATION OF PIPING, DUCTWORK, EQUIPMENT, ETC. ARE SHOWN ON DRAWINGS. CAREFULLY EXAMINE OTHER WORK THAT MAY CONFLICT WITH THIS WORK. IN ADVANCE OF CONSTRUCTION, WORK OUT MINOR CHANGES AND RELOCATION TO SUIT ACTUAL CONDITIONS AND WORK OF OTHER TRADES TO AVOID CONFLICT THEREWITH. THIS SHALL NOT BE CAUSE FOR ADDITIONAL COST.

FLOOR PLAN

SCALE : 1/8" = 1'-0"

1
M2.6.1

Michael RAINFORTH ■ Jeffrey GRAU
ARCHITECTS
3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

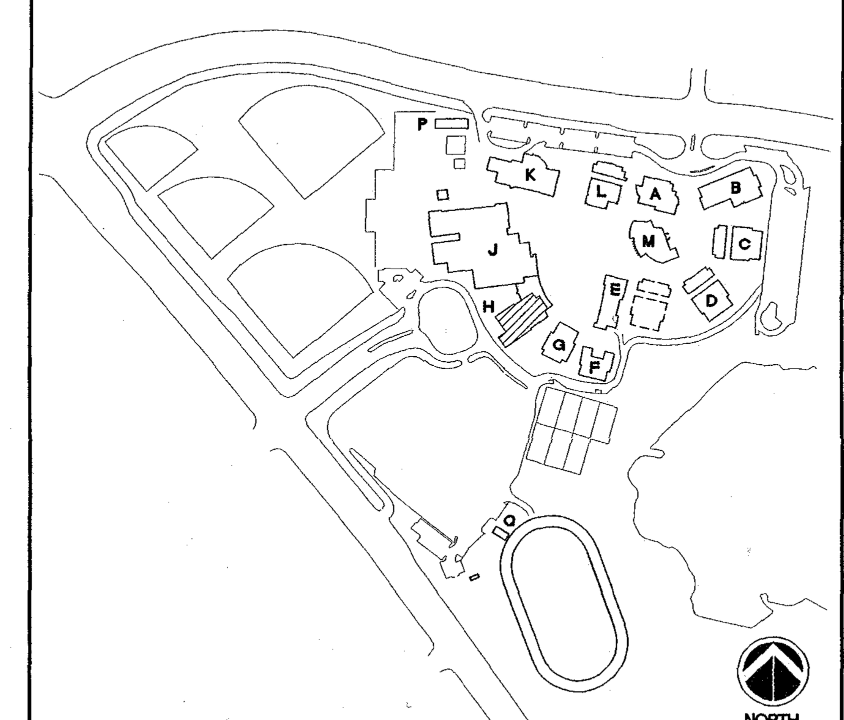
FOR CONSTRUCTION
DATE 9-17-02 COMMENT

AS-BUILT
DATE 9-17-02 COMMENT

REGISTERED PROFESSIONAL ENGINEER LOWELL E. SHIELDS M 21883 EXPIRES 6/03 MECHANICAL STATE OF CALIFORNIA
DATE SIGNED: 3/18/02

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA
GC\MJR DESIGNER\DRAFTER 970617 PROJECT NO.

KEYMAP



DSA/ORS

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DATE APR 0 2 2002

ARCH

LICENSED ARCHITECT JEFFREY ALAN GRAU C-14648 5/31/2003 RENEWAL DATE STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE 3

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT H HVAC FLOOR PLAN

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/28/99
		SCALE 1/8"=1'-0"	SHEET M2.6.1
		CADFILE	
		UPDATED	OF SHEETS

Michael RAINFORTH Jeffrey GRAU
A R C H I T E C T S

ARCHITECT'S SUPPLEMENTAL INSTRUCTION #14

Architecture & Planning • 3250 Ramos Circle • Sacramento, CA 95827-2513 • (916) 368-7990 • FAX: (916) 368-7996 • A Professional Corporation •

Project Name:	New Folsom High School – Phase III
Owner:	Folsom Cordova Unified School District
Contractor:	Roebbelen Construction Management Services
Inspector:	John Hanna
Architect's Project No.:	00-574
DSA File/Appl. #:	34-H3 / 02-100090
Date of Instruction:	December 6, 2002

The work shall be carried out in accordance with the following Supplemental Instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time, unless noted hereafter. Contractor has five (5) calendar days from issuance of these Instructions to appeal, through the Architect, for terms of a Change Order or relief from these Instructions.

Description:

Duct revisions at Side Light Position 1: The Contractor is directed to revise the duct that runs over the top of Side Light Position 1 as described in the attached drawings CL-1 and CL-2. This revision simplifies the duct routing and provides additional head clearance in this area.

Cost Impact:
(none)

Cost approval required prior to the performance of this work:	☐ *YES* ☒ *NO*
DSA approval required prior to the performance of this work:	☐ *YES* ☒ *NO*
A change order is required due to a change in the drawings or cost:	☐ *YES* ☒ *NO*

Attachments: (as listed)

Issued By: Chris Smith

Copies: Matt Washburn; FCUSD
John Hanna; IOR

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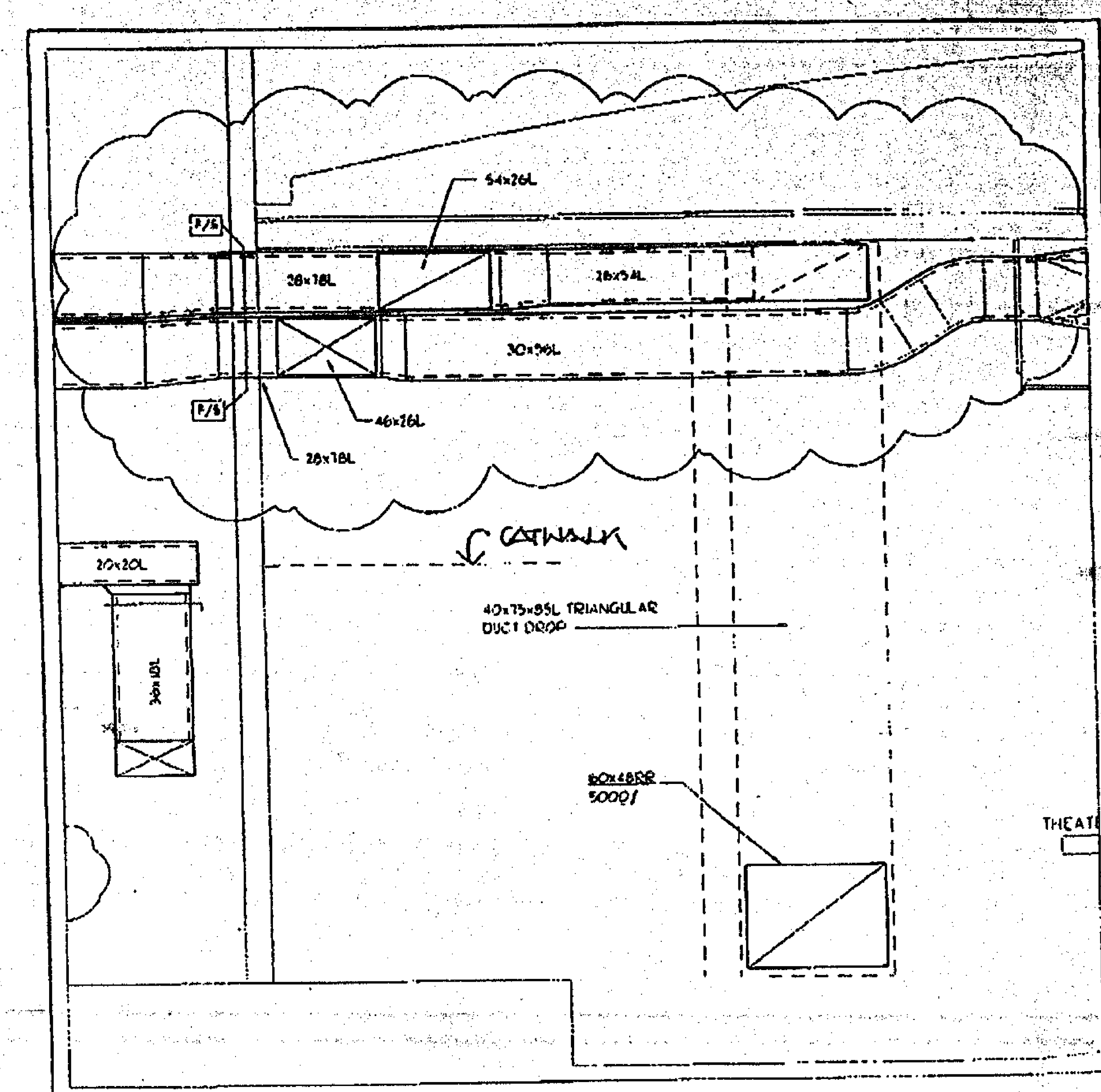

SECTION - A

SCALE : NONE

ALL FEATURES, NOTES and DIMENSIONS NOT SPECIFICALLY SHOWN OR NOTED AS CHANGED SHALL REMAIN AS SHOWN ON PREVIOUSLY ISSUED DOCUMENTS.

X ADDENDUM

Michael RAINFORTH Jeffrey GRAU ARCHITECTS
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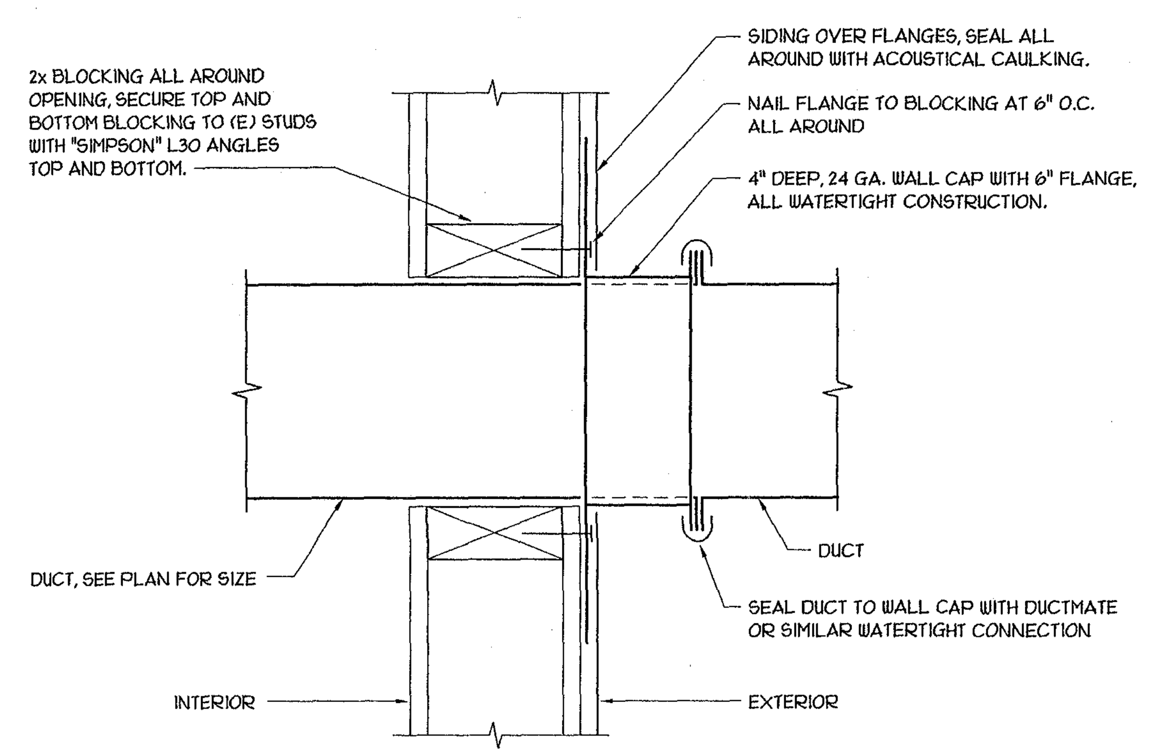
SECTION - A

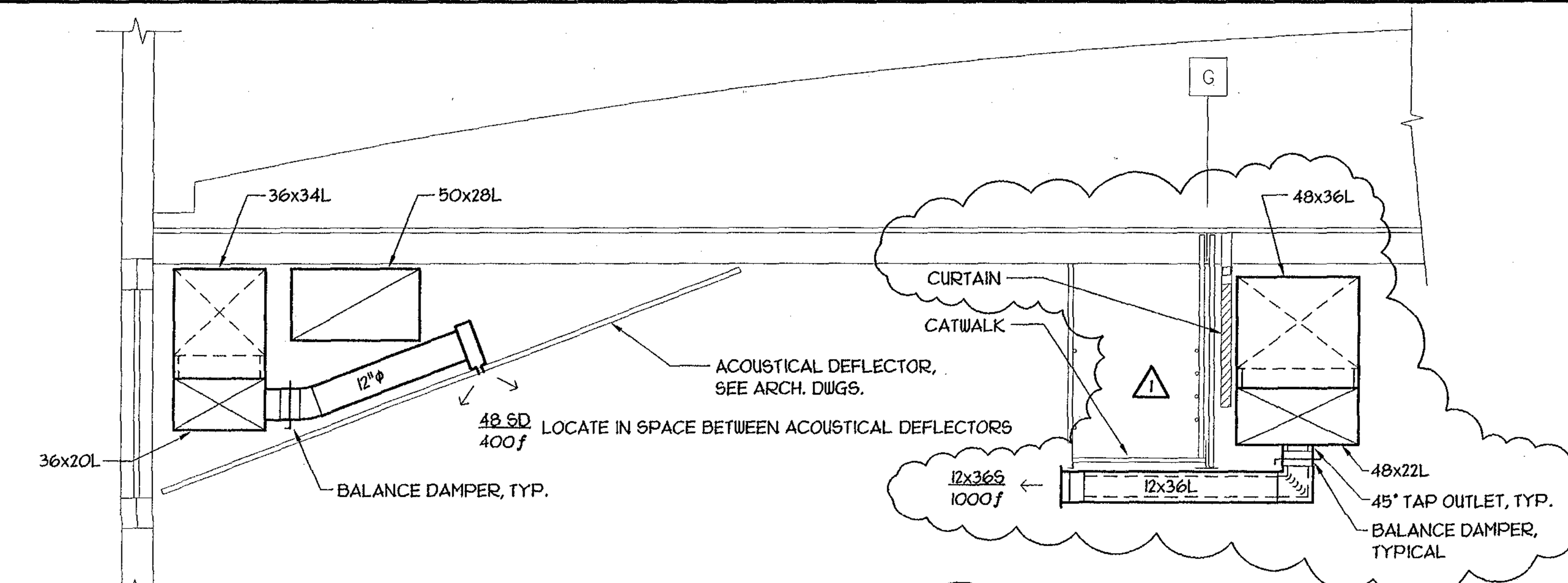
NEW FOLSOM HIGH SCHOOL
PHASE III
FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

REFERENCE SHEET M3-6-1
JOB NO. 00-574
DRAWING CL-2



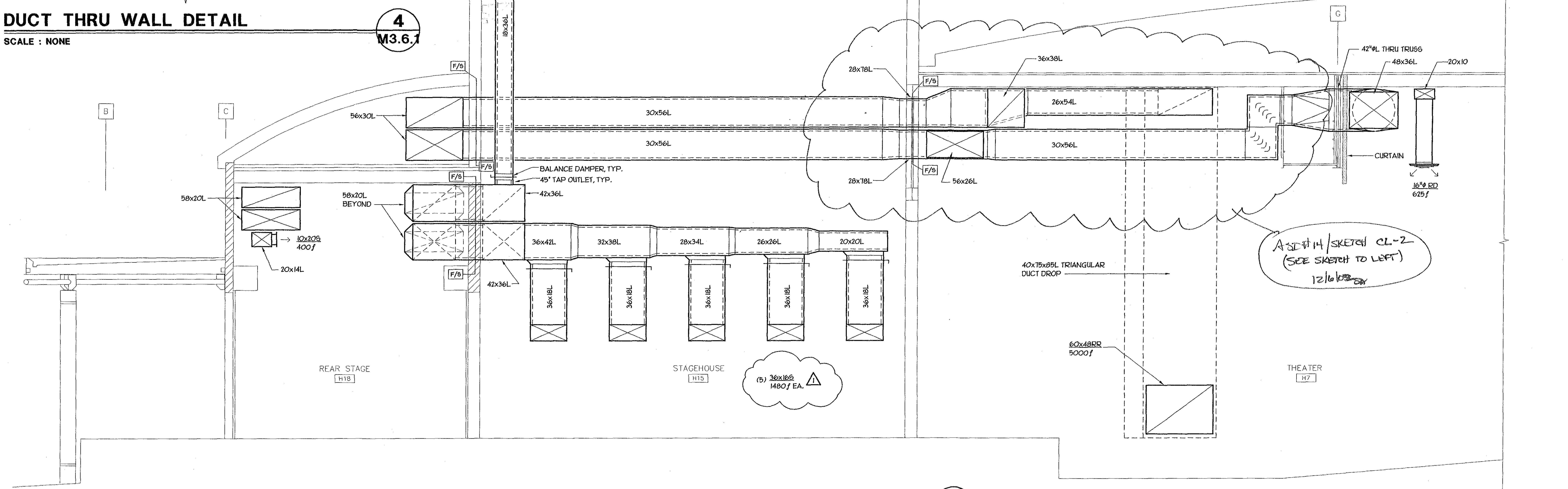
DUCT THRU WALL DETAIL (4 / M3.6.1)

SCALE : NONE



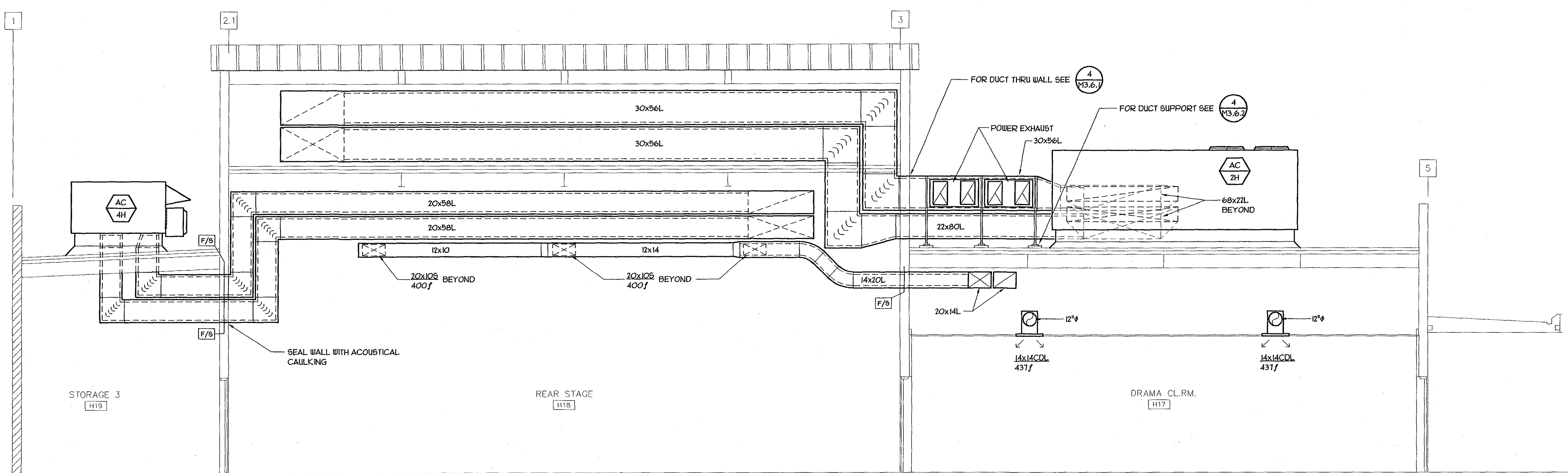
SECTION (3 / M3.6.1)

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



SECTION (2 / M3.6.1)

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



SECTION (1 / M3.6.1)

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

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3250 Ramos Circle ■ Sacramento, CA 95827
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FOR CONSTRUCTION

DATE 7-17-02 COMMENT

AS-BUILT

DATE 9-17-02 COMMENT

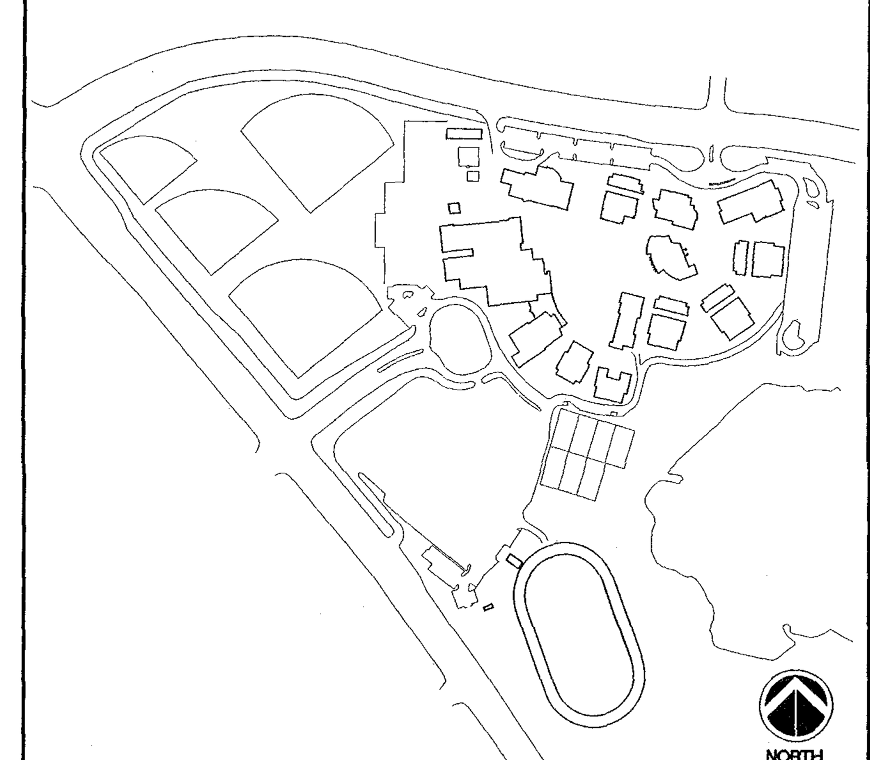
REGISTERED PROFESSIONAL ENGINEER — LOWELL E. SHIELDS — M 21591 — MECHANICAL — STATE OF CALIFORNIA

DATE SIGNED: 3/18/02

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA

GC/WJR — DESIGNER/DRAFTER; 970617 — PROJECT NO.

KEYMAP



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ARCH

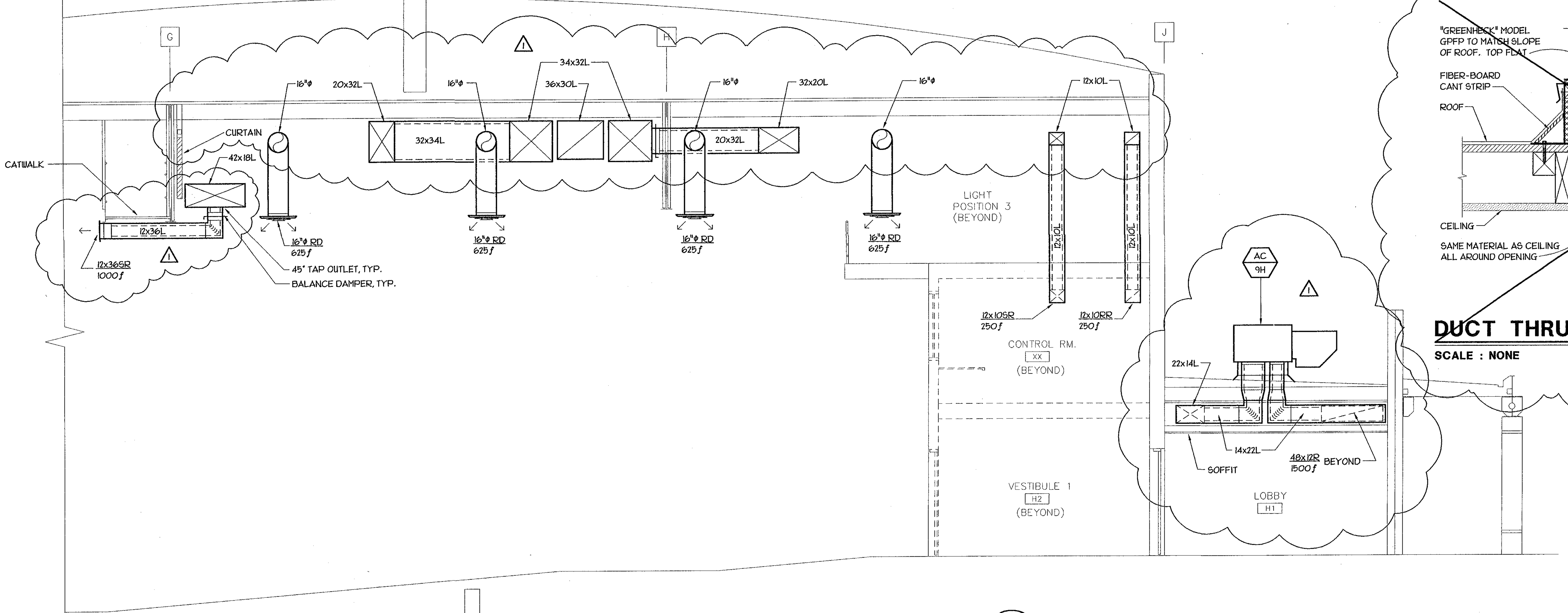
LICENSED ARCHITECT — JEFFREY ALAN GRAU — C-14648 — 5/31/2003 RENEWAL DATE — STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL PHASE 3

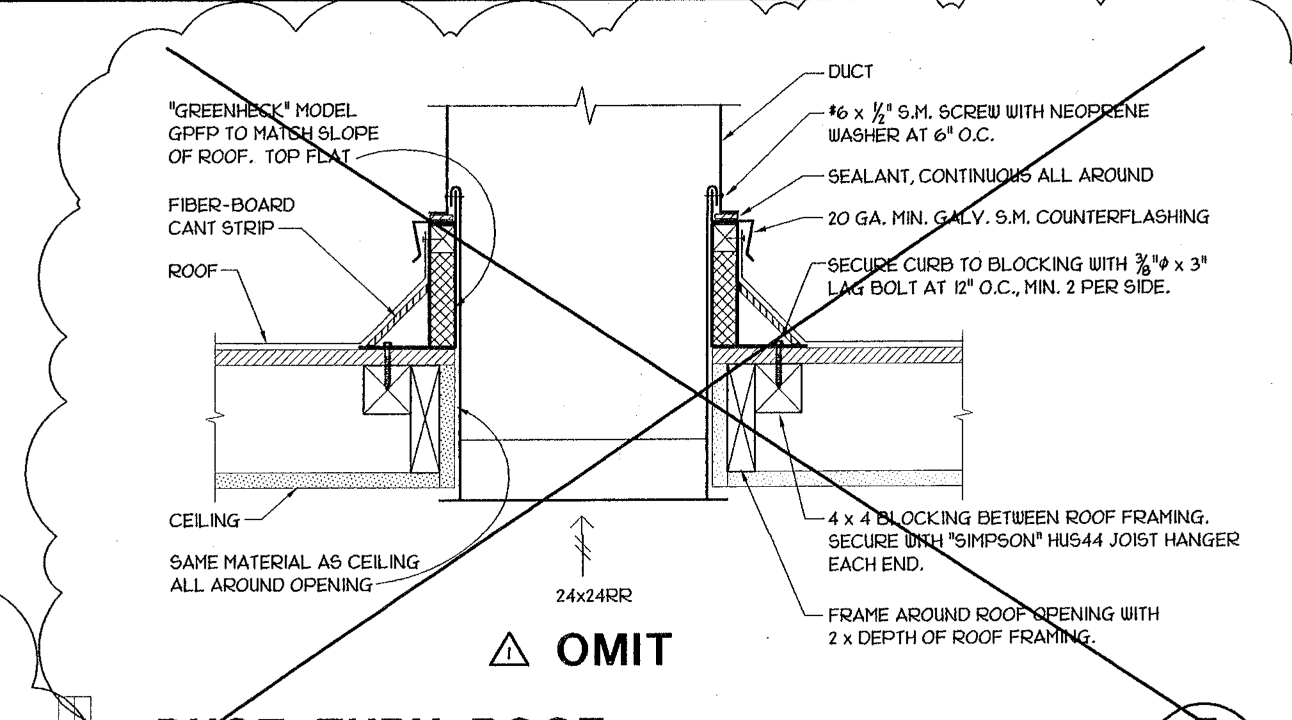
FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT H HVAC SECTIONS

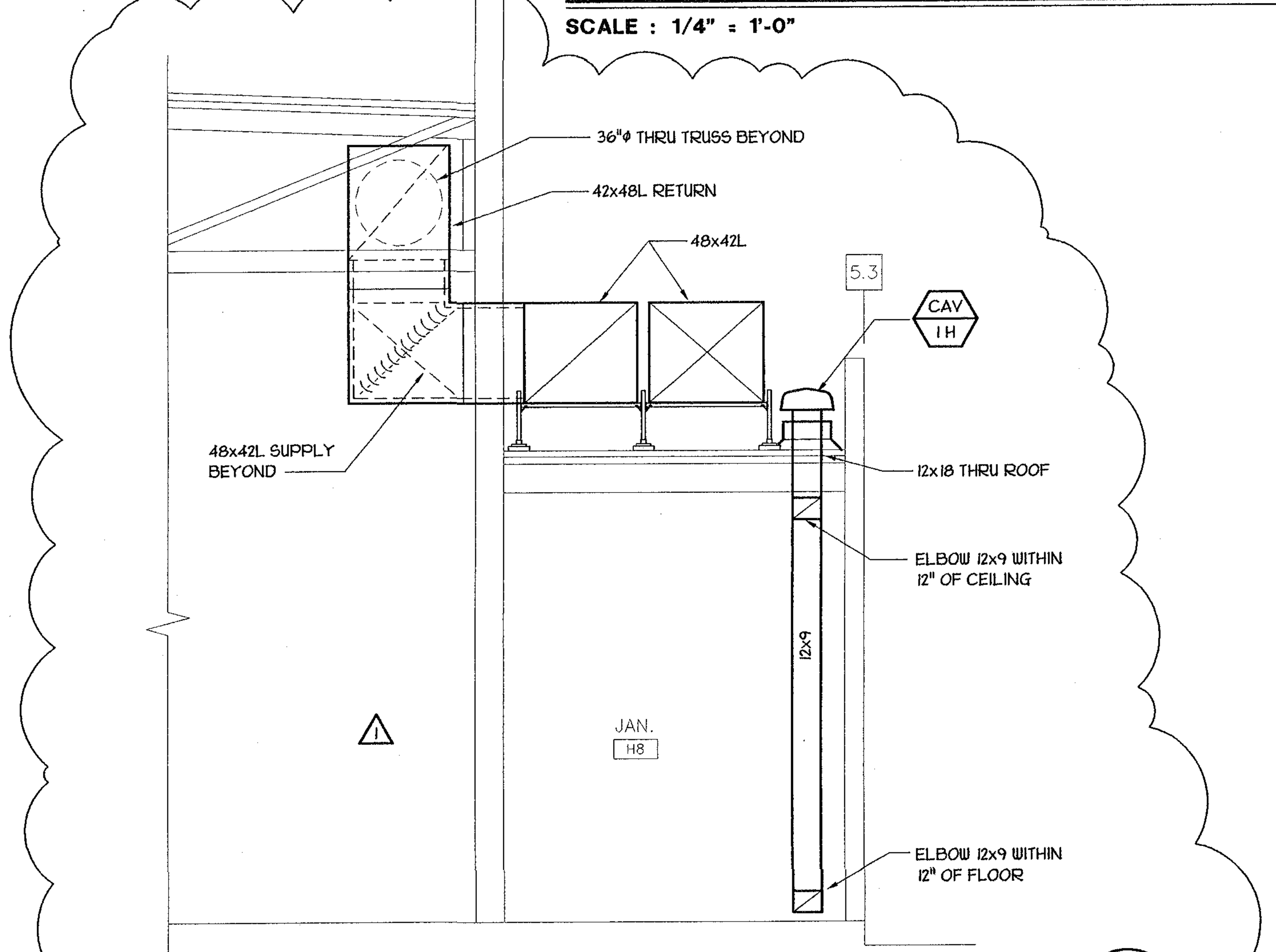
REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/28/99
		SCALE 1/4"=1'-0"	SHEET M3.6.1
		CADFILE	
		UPDATED	OF SHEETS



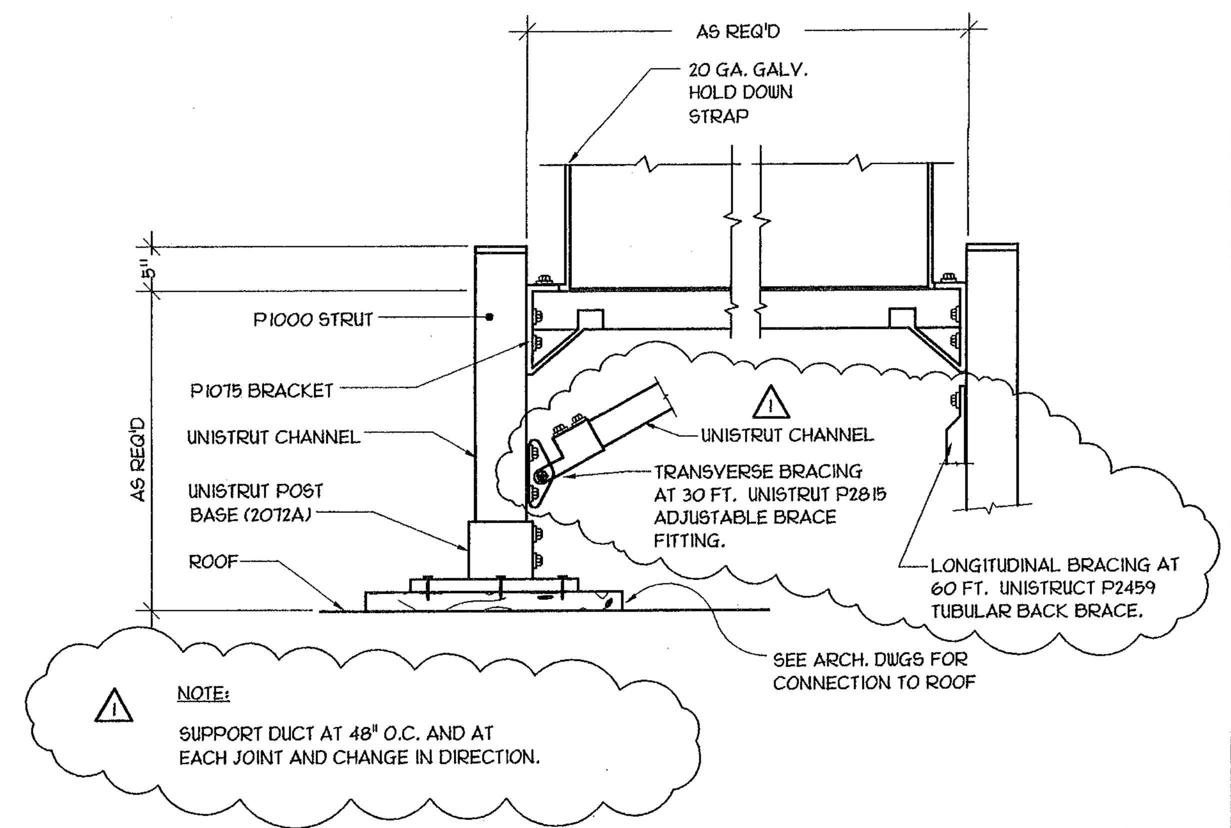
SECTION 3
SCALE : 1/4" = 1'-0"
M3.6.2



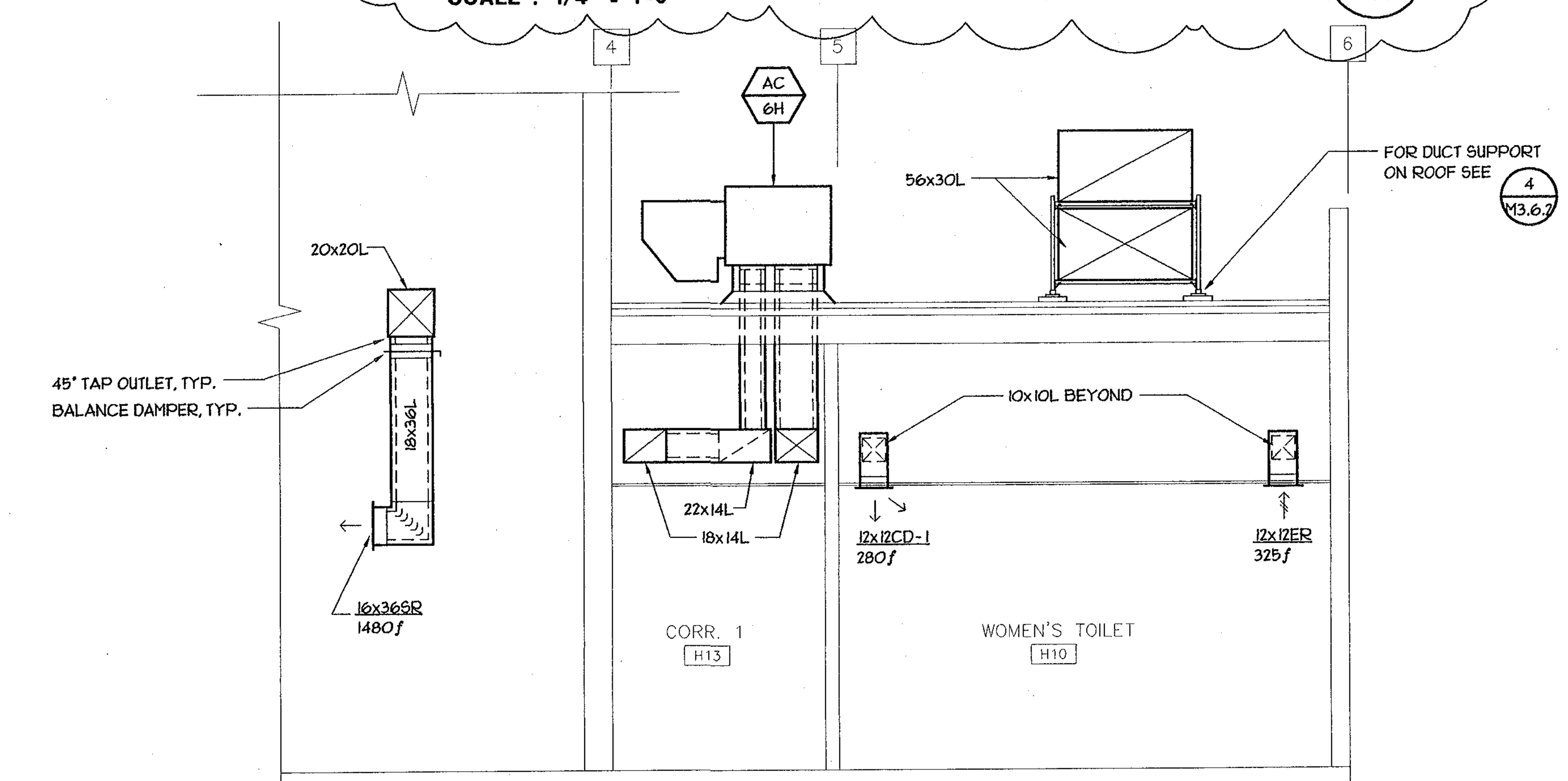
DUCT THRU ROOF 5
SCALE : NONE
M3.6.2



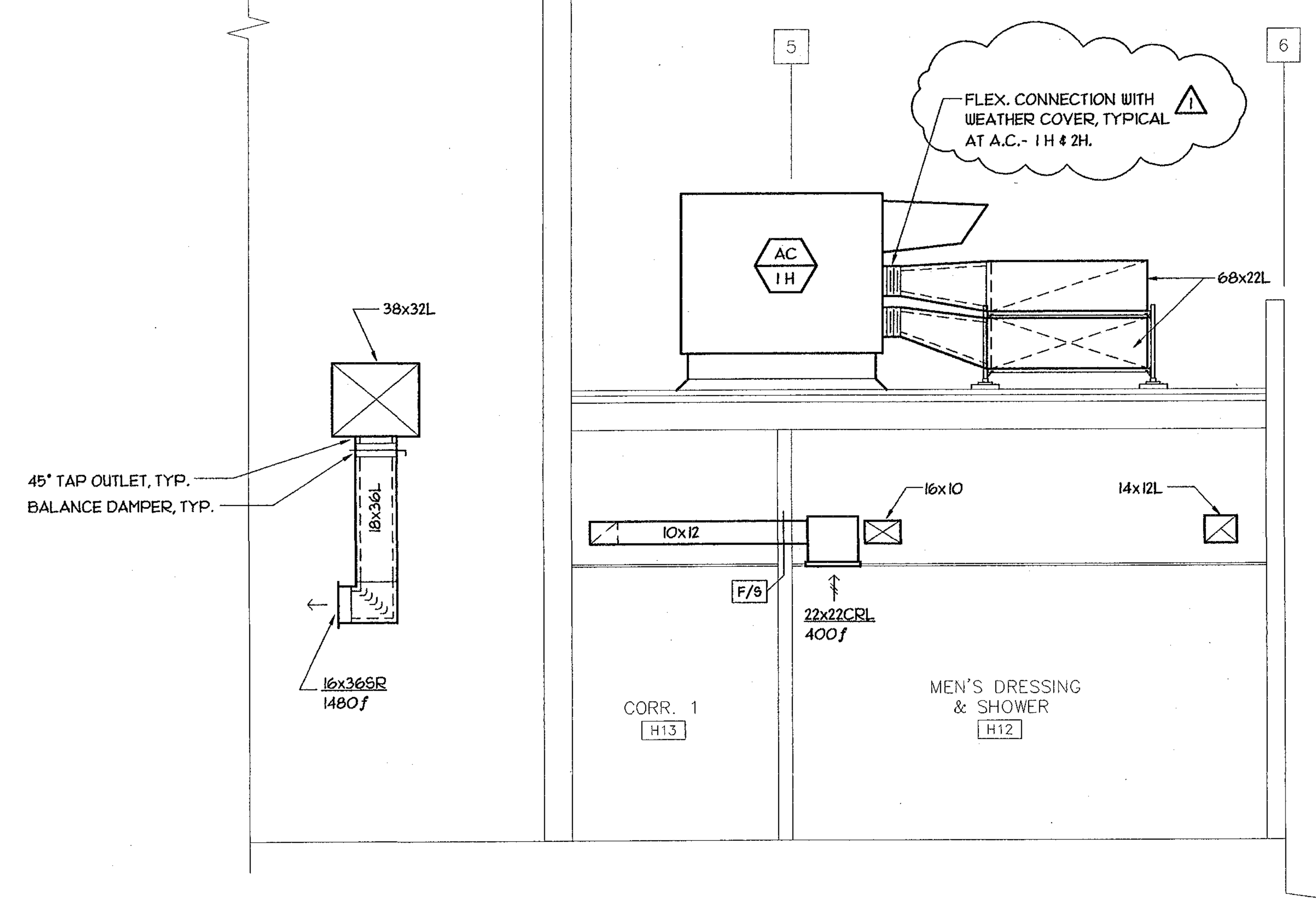
SECTION 6
SCALE : 1/4" = 1'-0"
M3.6.2



DUCT SUPPORT ON ROOF DETAIL 4
SCALE : NONE
M3.6.2



SECTION 2
SCALE : 1/4" = 1'-0"
M3.6.2



SECTION 1
SCALE : 1/4" = 1'-0"
M3.6.2

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3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

FOR CONSTRUCTION
DATE 9-17-02 COMMENT

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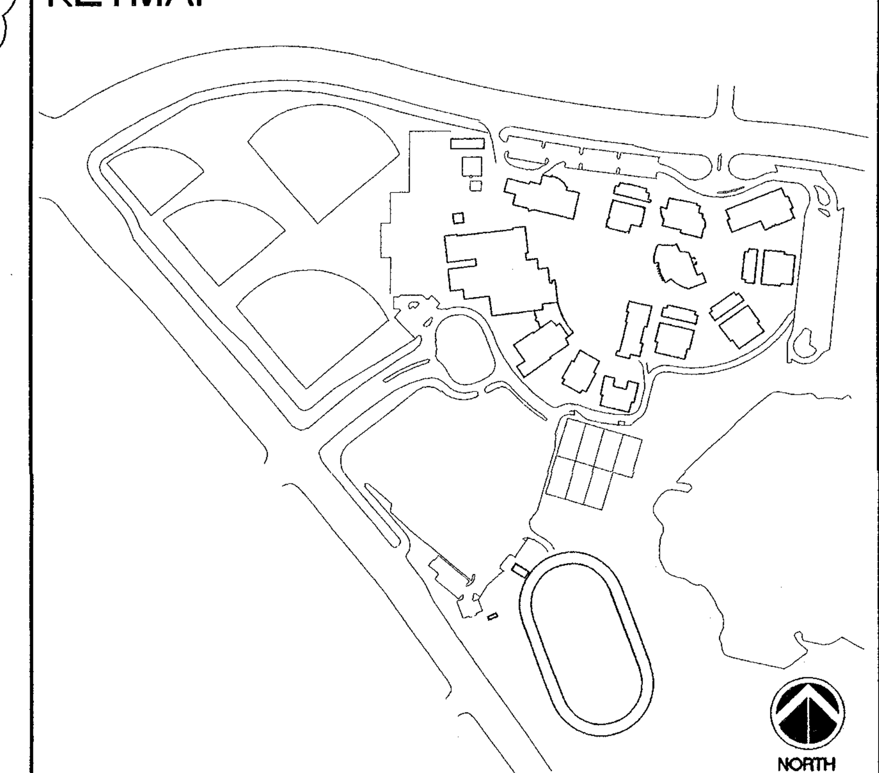
DATE SIGNED: 9/17/02

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA
GC\MJR 970617
DESIGNER/DRAFTER PROJECT NO.

KEYMAP



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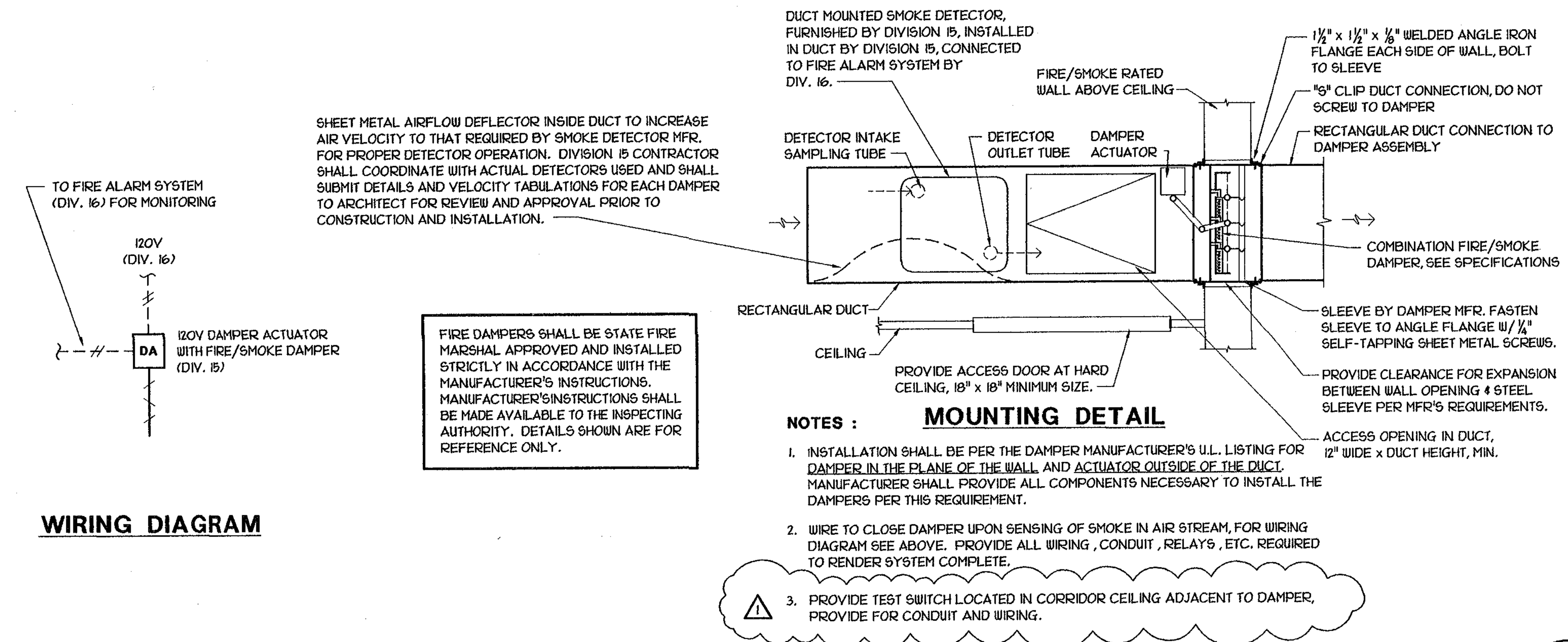
ARCH

NEW FOLSOM HIGH SCHOOL PHASE 3

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

UNIT H HVAC SECTION

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/20/99
		SCALE 1/4" = 1'-0"	SHEET
		CADFILE	M3.6.2
		UPDATED	OF SHEETS

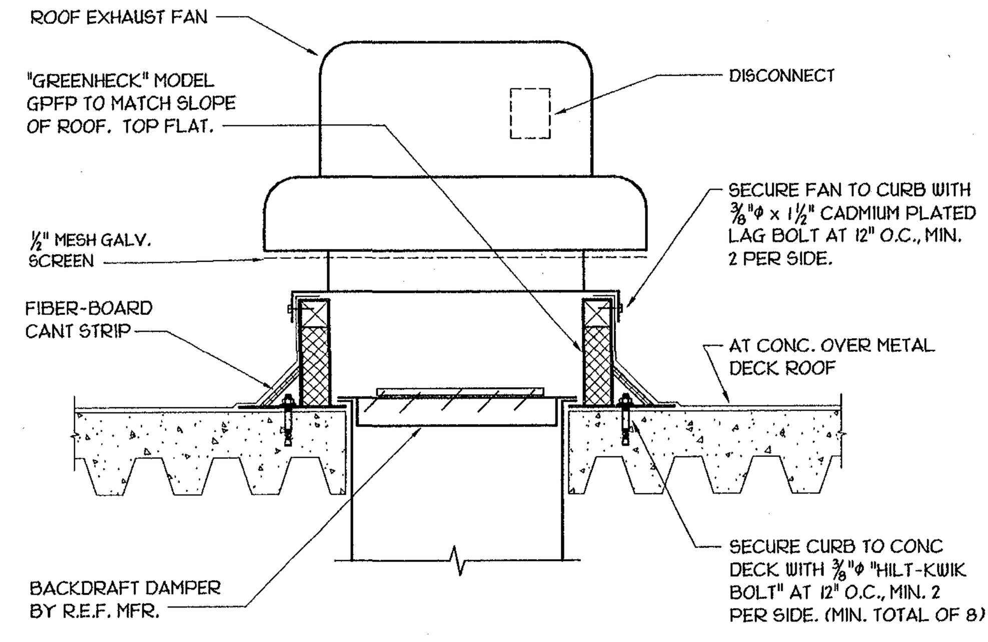


NOTES :

1. INSTALLATION SHALL BE PER THE DAMPER MANUFACTURER'S U.L. LISTING FOR DAMPER IN THE PLANE OF THE WALL AND ACTUATOR OUTSIDE OF THE DUCT. MANUFACTURER SHALL PROVIDE ALL COMPONENTS NECESSARY TO INSTALL THE DAMPERS PER THIS REQUIREMENT.
2. WIRE TO CLOSE DAMPER UPON SENSING OF SMOKE IN AIR STREAM, FOR WIRING DIAGRAM SEE ABOVE. PROVIDE ALL WIRING, CONDUIT, RELAYS, ETC. REQUIRED TO RENDER SYSTEM COMPLETE.
3. PROVIDE TEST SWITCH LOCATED IN CORRIDOR CEILING ADJACENT TO DAMPER, PROVIDE FOR CONDUIT AND WIRING.

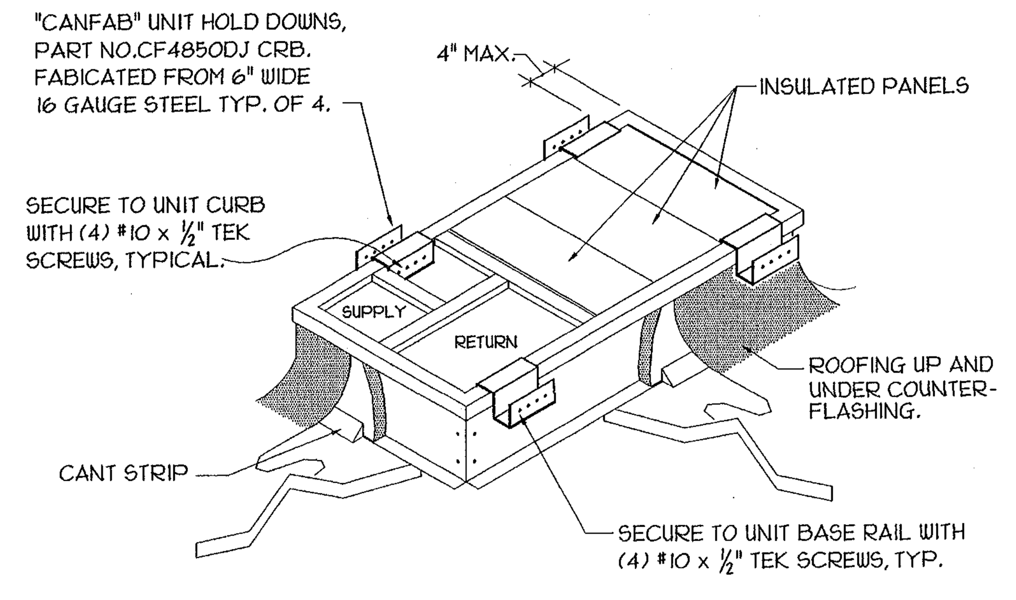
COMBINATION FIRE/SMOKE DAMPER DETAIL AT WALL — 10 / M5.1

SCALE : NONE



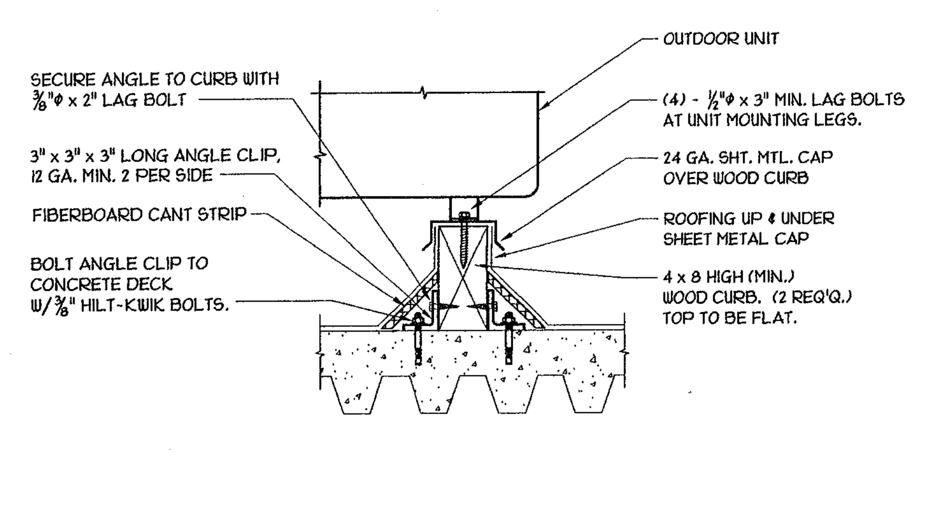
R.E.F. - 1 H thru 4H MOUNTING — 6 / M5.1

SCALE : NONE



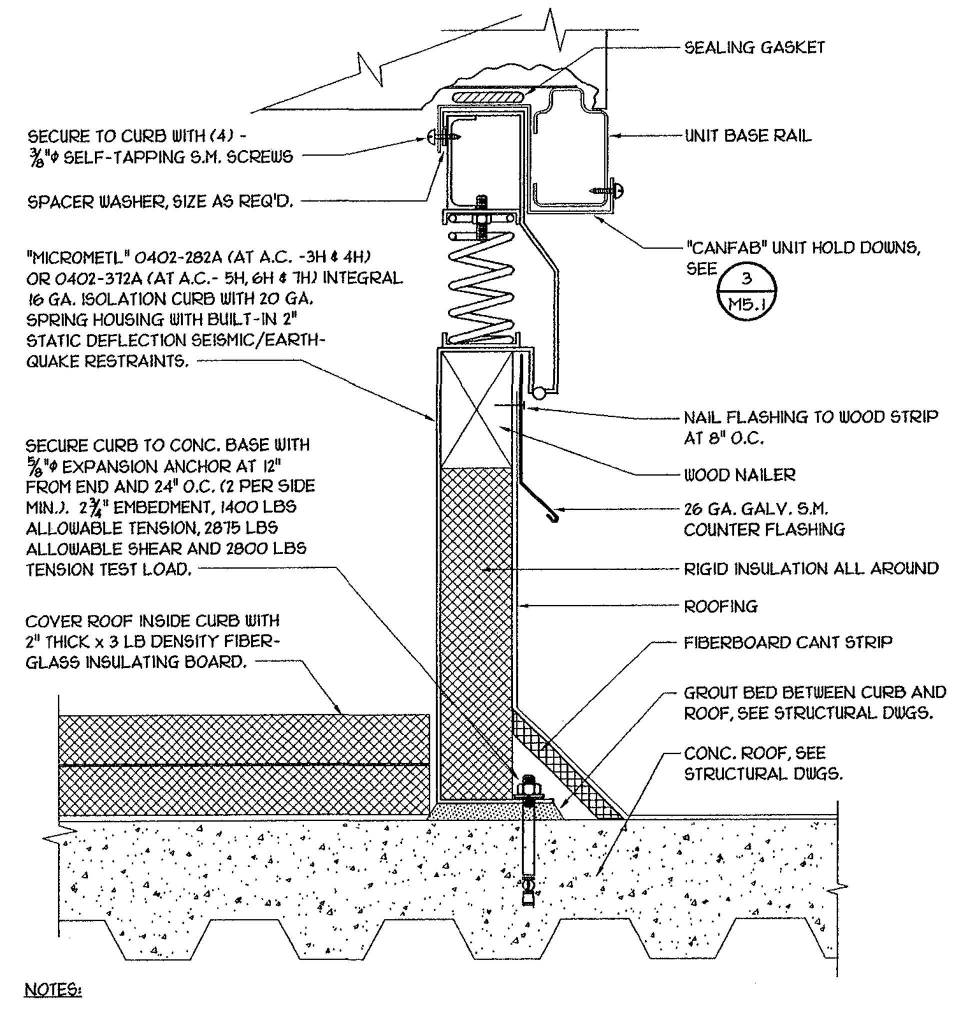
A.C. HOLD DOWN DETAIL — 3 / M5.1

SCALE : NONE



OUTDOOR S.A.C. - 1 H MOUNTING — 9 / M5.1

SCALE : NONE

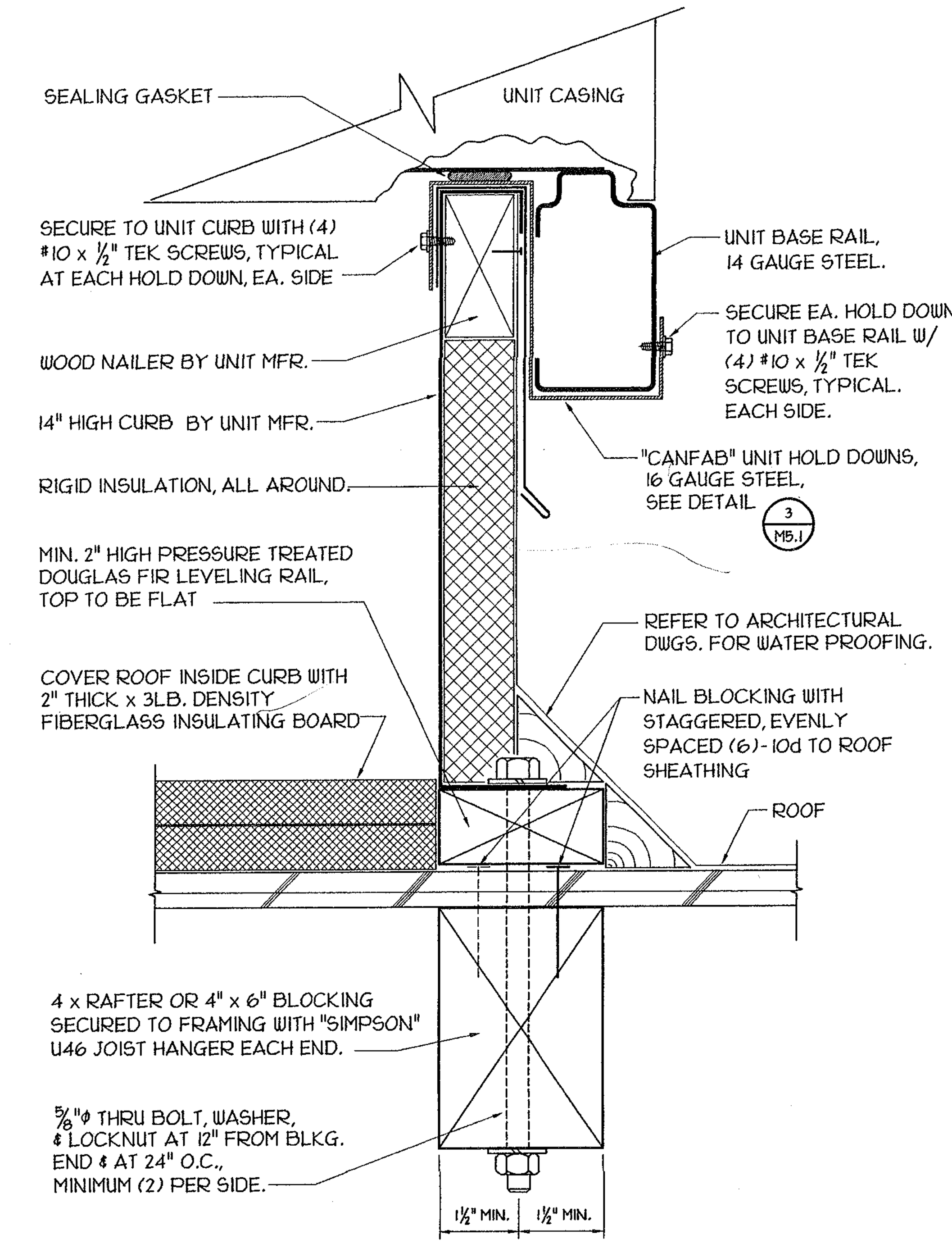


NOTES:

1. PROVIDE FLEX. CONNECTION TO UNIT SUPPLY AND RETURN DUCTS.
2. A.C.- 3H & 4H IS SIMILAR EXCEPT USE "MICROMETL" ISOLATION CURB MODEL 0402-462A.

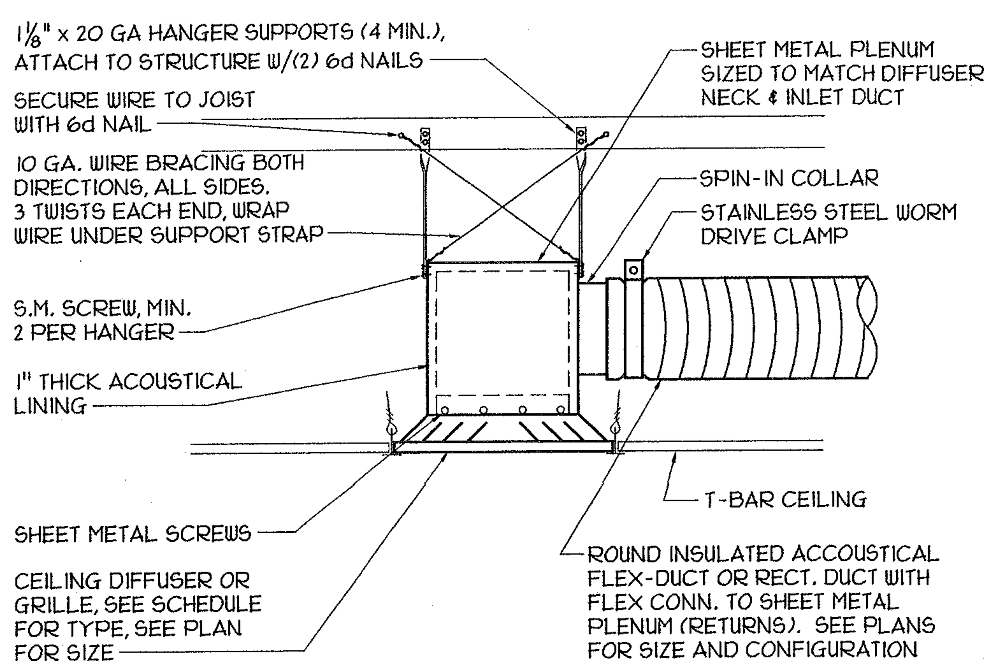
A.C.- 5H thru 7H MOUNTING — 5 / M5.1

SCALE : NONE



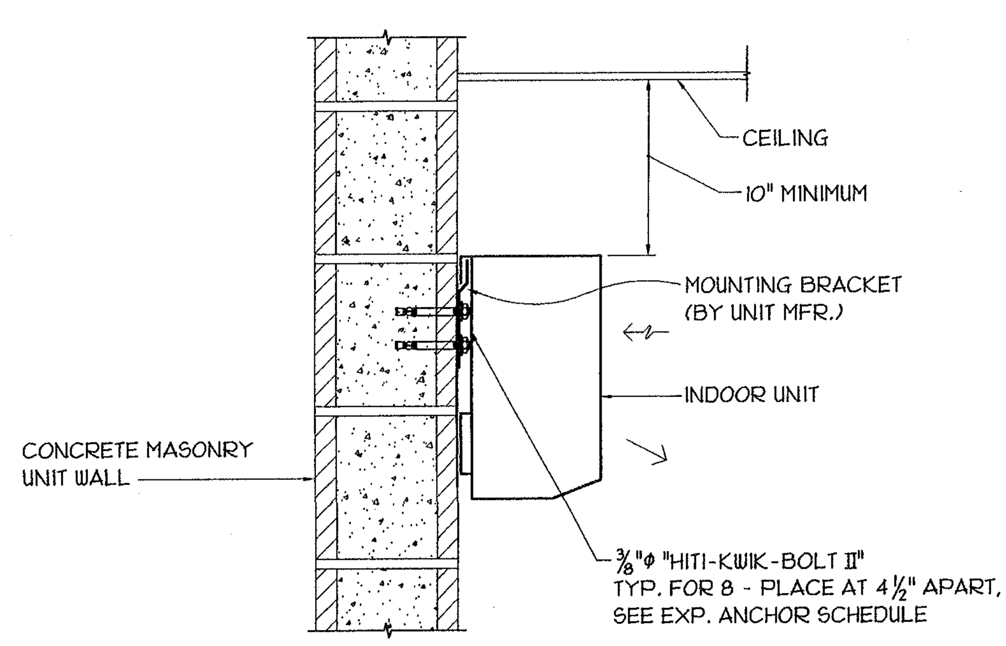
A.C. - 8H & 9H MOUNTING DETAIL — 2 / M5.1

SCALE : NONE (CURB INTERNAL TO INSULATION AND NAILER)



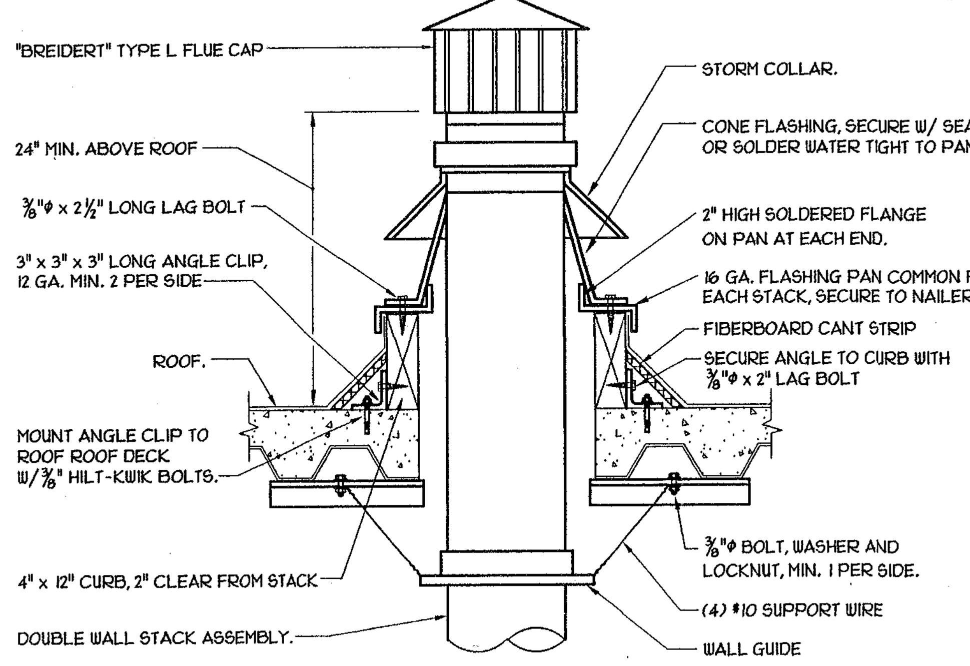
CEILING DIFFUSER — 12 / M5.1

SCALE : NONE



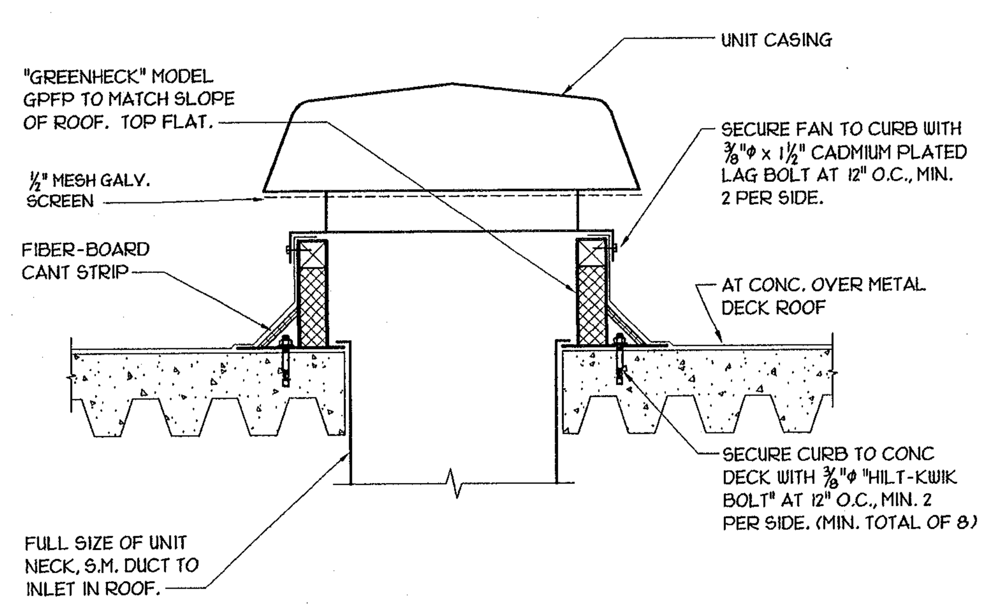
INDOOR S.A.C. - 1 H MOUNTING — 8 / M5.1

SCALE : NONE



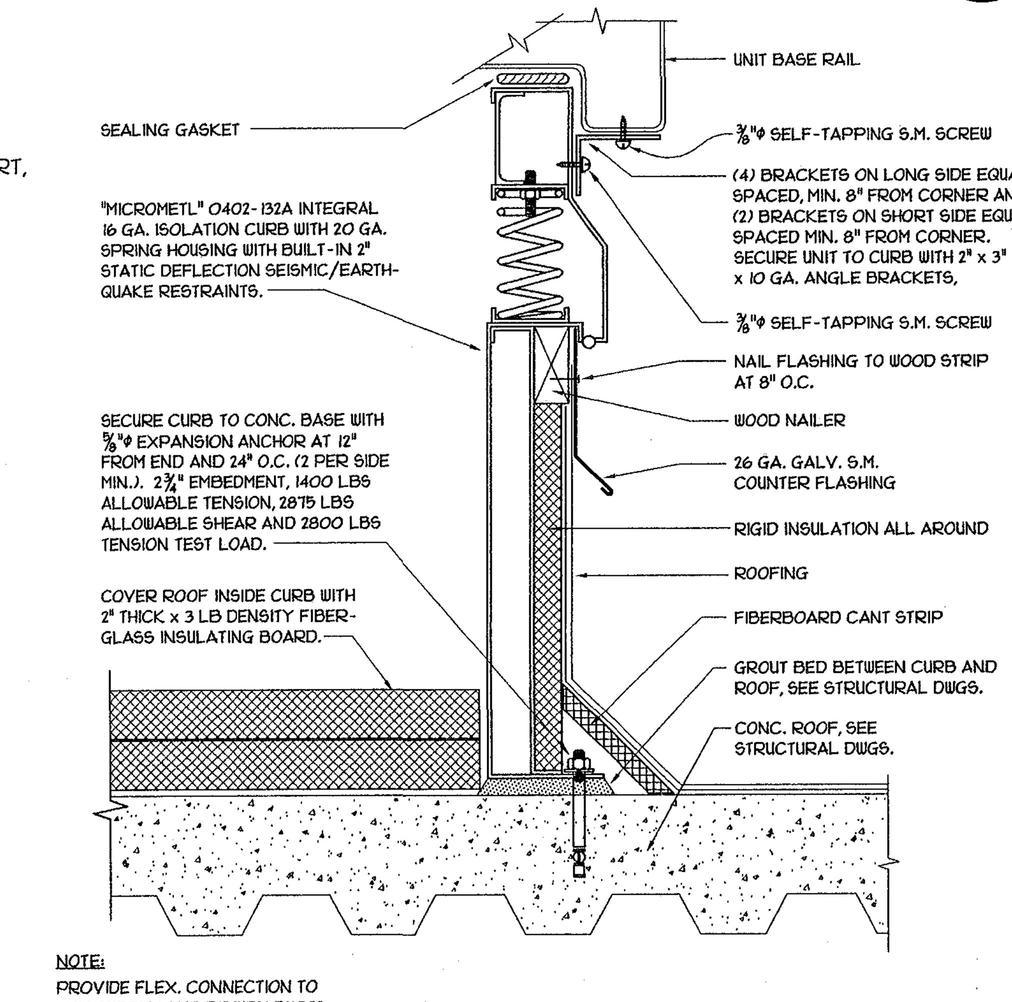
FLUE THRU ROOF DETAIL — 11 / M5.1

SCALE : NONE



C.A.V. - 1 H & I.V. - 1 H MOUNTING — 7 / M5.1

SCALE : NONE



NOTE:

PROVIDE FLEX. CONNECTION TO UNIT SUPPLY AND RETURN DUCTS.

A.C.- 1 H thru 4H MOUNTING DETAIL — 4 / M5.1

SCALE : NONE

EQUIPMENT ANCHORAGE

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:

FIXED EQUIPMENT ON GRADE	20% OF OPERATING WEIGHT
FIXED EQUIPMENT ON STRUCTURE	30% OF OPERATING WEIGHT
EMERGENCY POWER EQUIPMENT ON GRADE	30% OF OPERATING WEIGHT
EMERGENCY POWER EQUIPMENT ON STRUCTURE	40% OF OPERATING WEIGHT

SIMULTANEOUS VERTICAL FORCE - USE ⅓ x HORIZONTAL FORCE.

FOR FLEXIBLY-MOUNTED EQUIPMENT, SEE TITLE 24, SECTION 1630 A.2 CBC, 1995.

WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.

EQUIPMENT ANCHORAGE — 1 / M5.1

SCALE : NONE

Michael RAINFORTH ■ Jeffrey GRAU
A R C H I T E C T S
3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

FOR CONSTRUCTION
DATE 9-17-02 COMMENT

AS- BUILT
DATE 9-17-02 COMMENT

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA
GC\MJR 970617
DESIGNER/DRAFTER PROJECT NO.

DATE SIGNED: 3/1/02

KEYMAP

DSA/ORS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
02 100090
AC ___ FLS ___ SS ___
DATE APR 0 2 2002

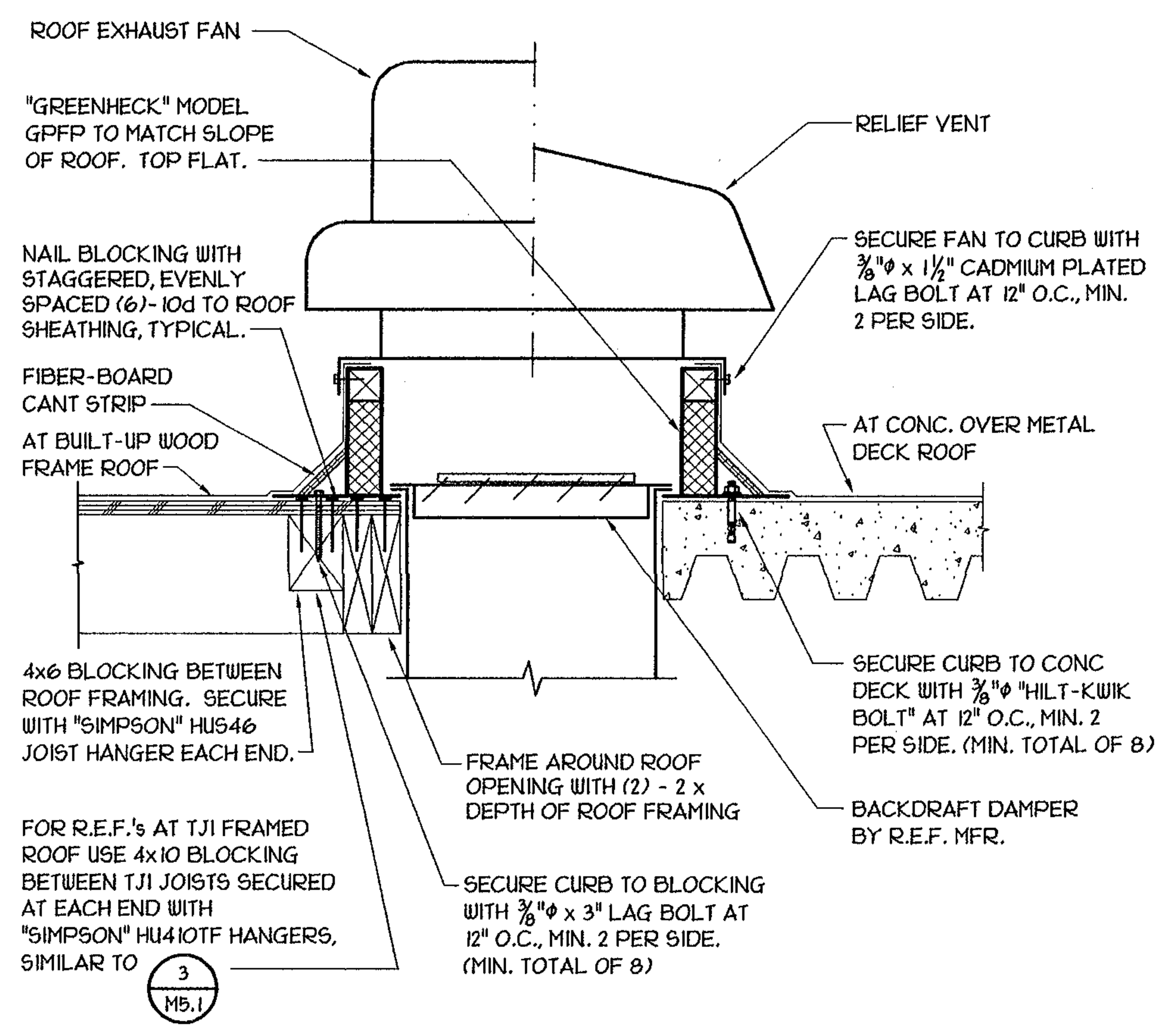
ARCH

NEW FOLSOM HIGH SCHOOL
PHASE 3

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC DETAILS

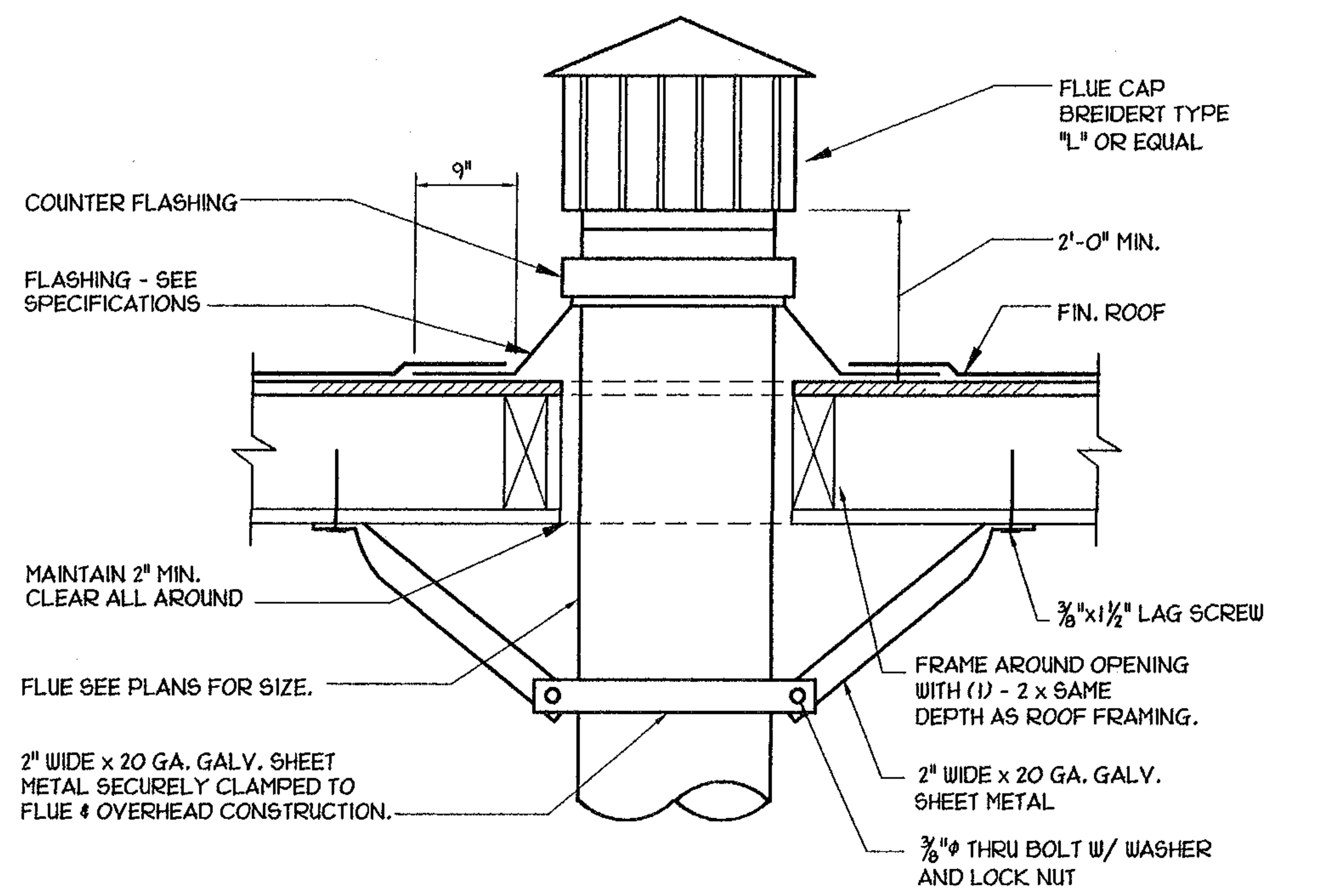
REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/28/99
		SCALE NONE	SHEET
		CADFILE	M5.1
		UPDATED	OF SHEETS



R.E.F. & R.V. MOUNTING

4 M5.2

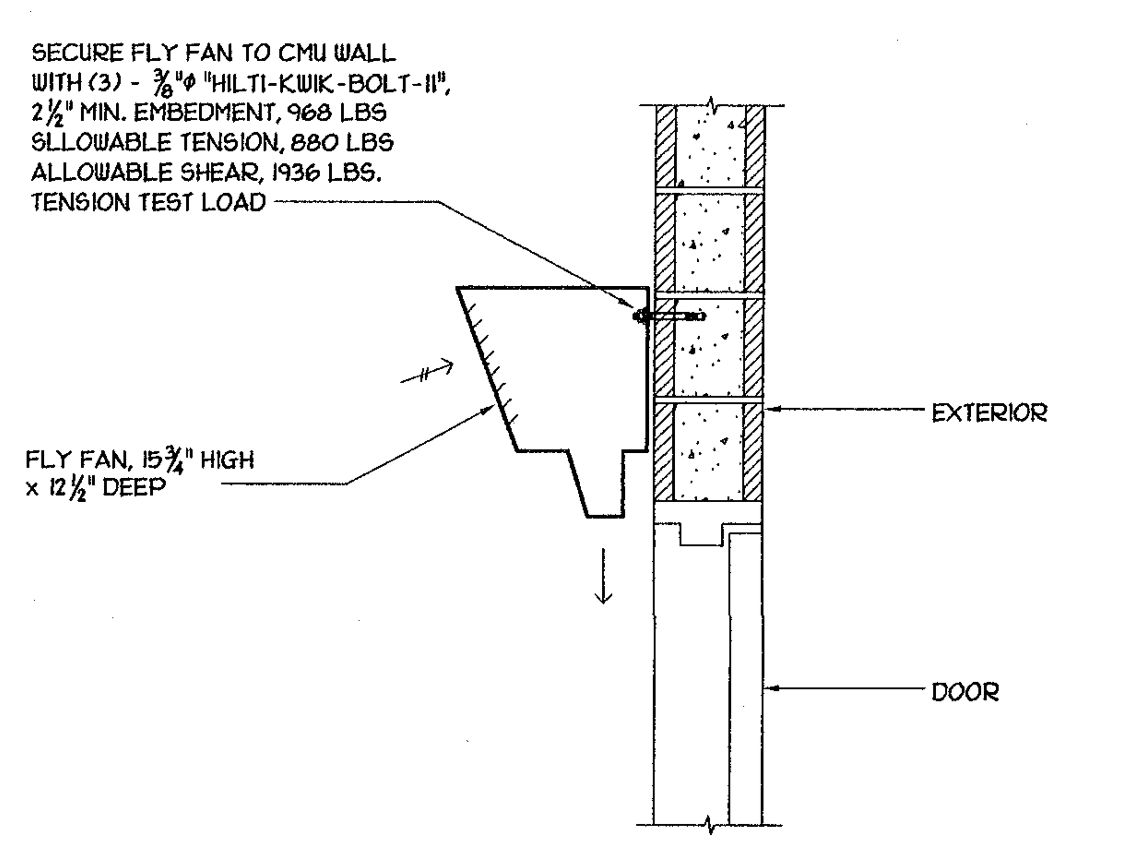
SCALE : NONE



FLUE THRU ROOF DETAIL

3 M5.2

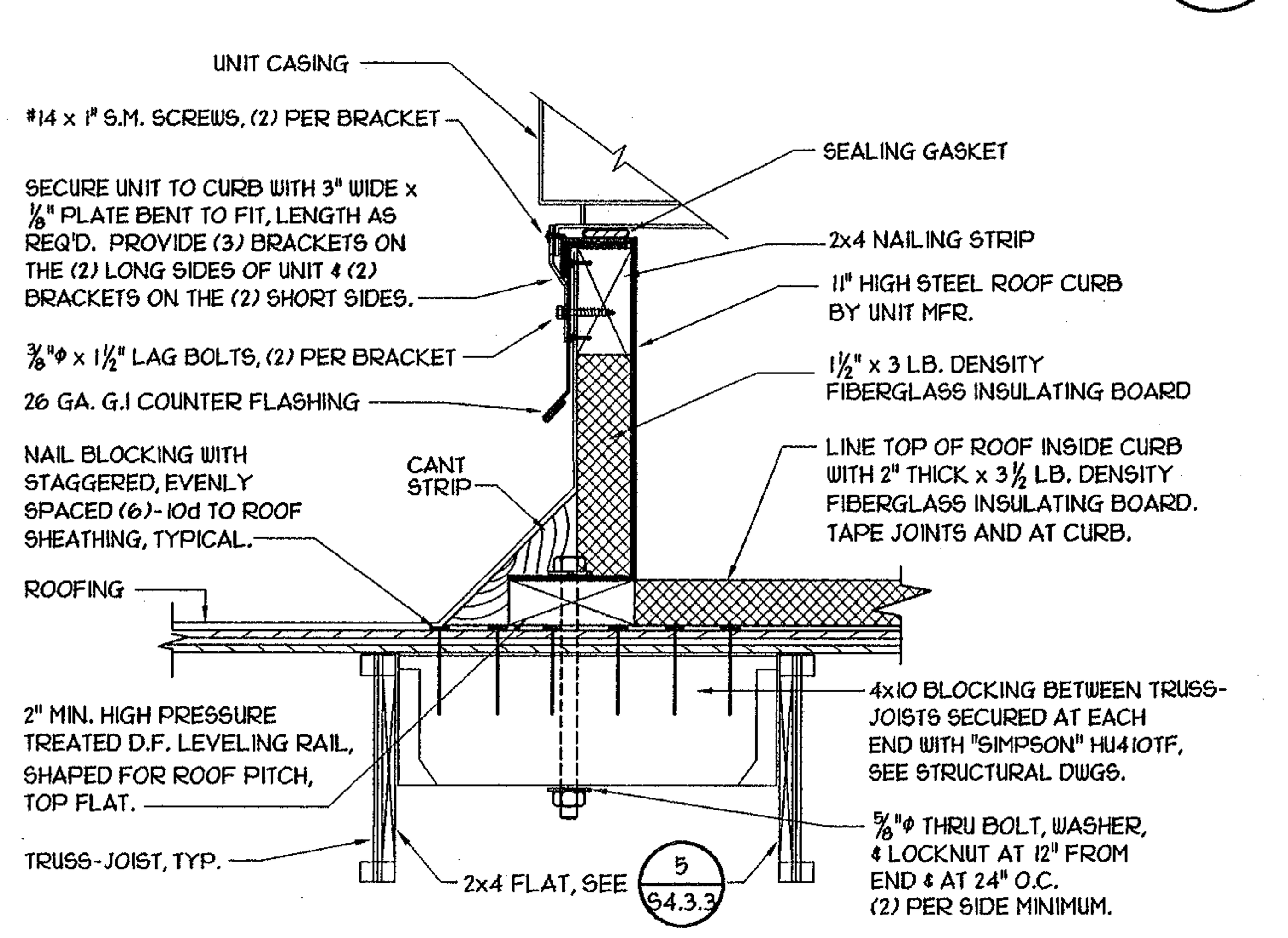
SCALE : NONE



FLY FAN - 1 Q & 2Q MOUNTING

2 M5.2

SCALE : NONE



H.V. - 1 Q MOUNTING DETAIL

1 M5.2

SCALE : NONE

Michael RAINFORTH ■ Jeffrey GRAU
ARCHITECTS
3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

FOR CONSTRUCTION

DATE 9-17-02 COMMENT

AS-BUILT

DATE 9-17-02 COMMENT

REGISTERED PROFESSIONAL ENGINEER
LOWELL E. SHIELDS
M 21583
EXPIRES 6/03
MECHANICAL
STATE OF CALIFORNIA

DATE SIGNED: 3/18/02

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA

GC\MJR — DESIGNER/DRAFTER
970617 — PROJECT NO.

KEYMAP

DSA/ORS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
02 100090
AC ___ FLS ___ SS ___
DATE APR 0 2 2002

ARCH

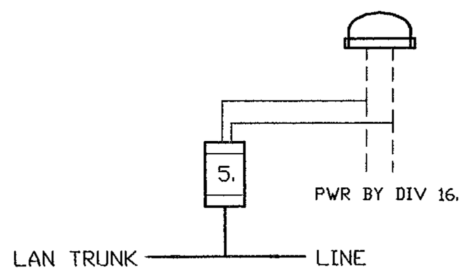
LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-14648
5/31/2003
RENEWAL DATE
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL
PHASE 3

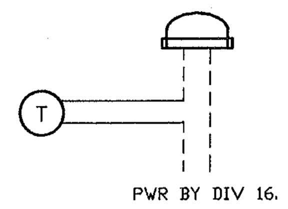
FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

HVAC DETAILS

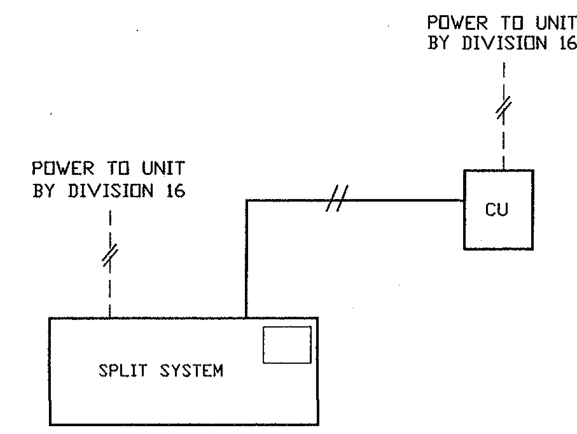
REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/28/99
		SCALE NONE	SHEET M5.2
		CADFILE	
		UPDATED	OF SHEETS



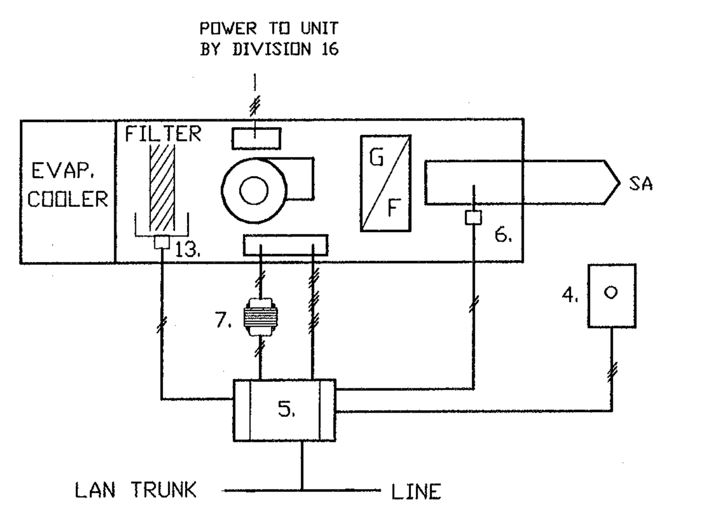
R.E.F.- 1H & 2H CONTROL DIAGRAM
and R.E.F.- 1Q & 2Q CONTROL DIAGRAM



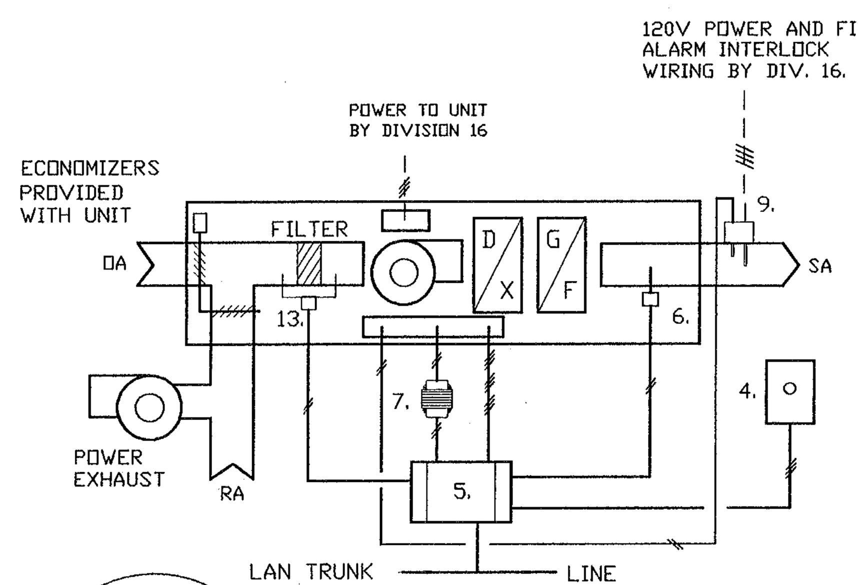
R.E.F.- 3H & 4H CONTROL DIAGRAM



SAC-1 CONTROL DIAGRAM



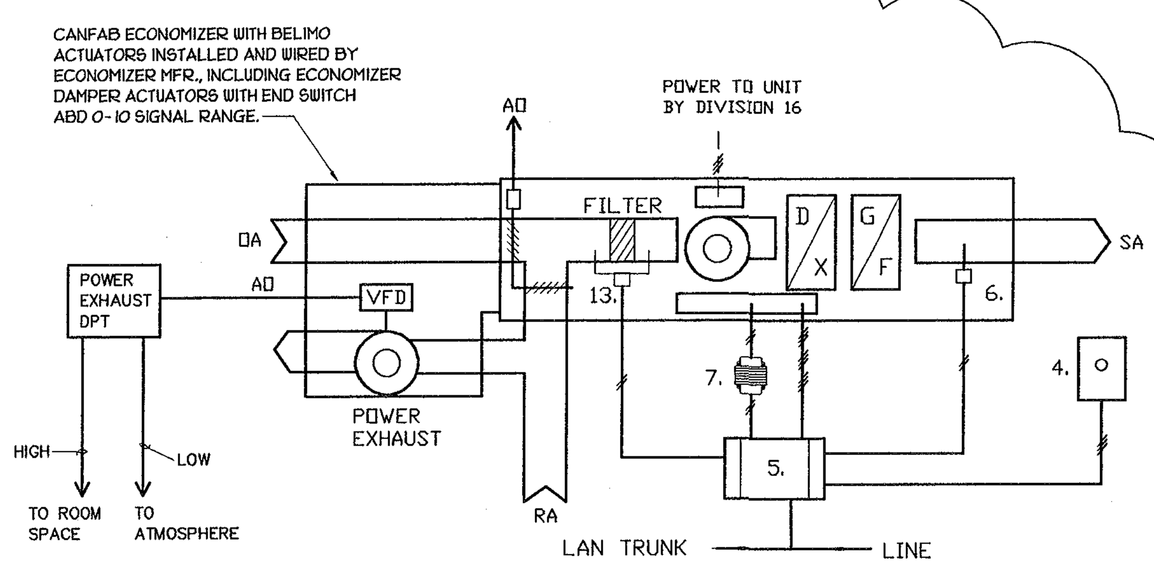
HV UNIT CONTROL DIAGRAM



NOTES:

1. SMOKE DETECTORS REQUIRED AT A.C.- 1H & 2H ONLY

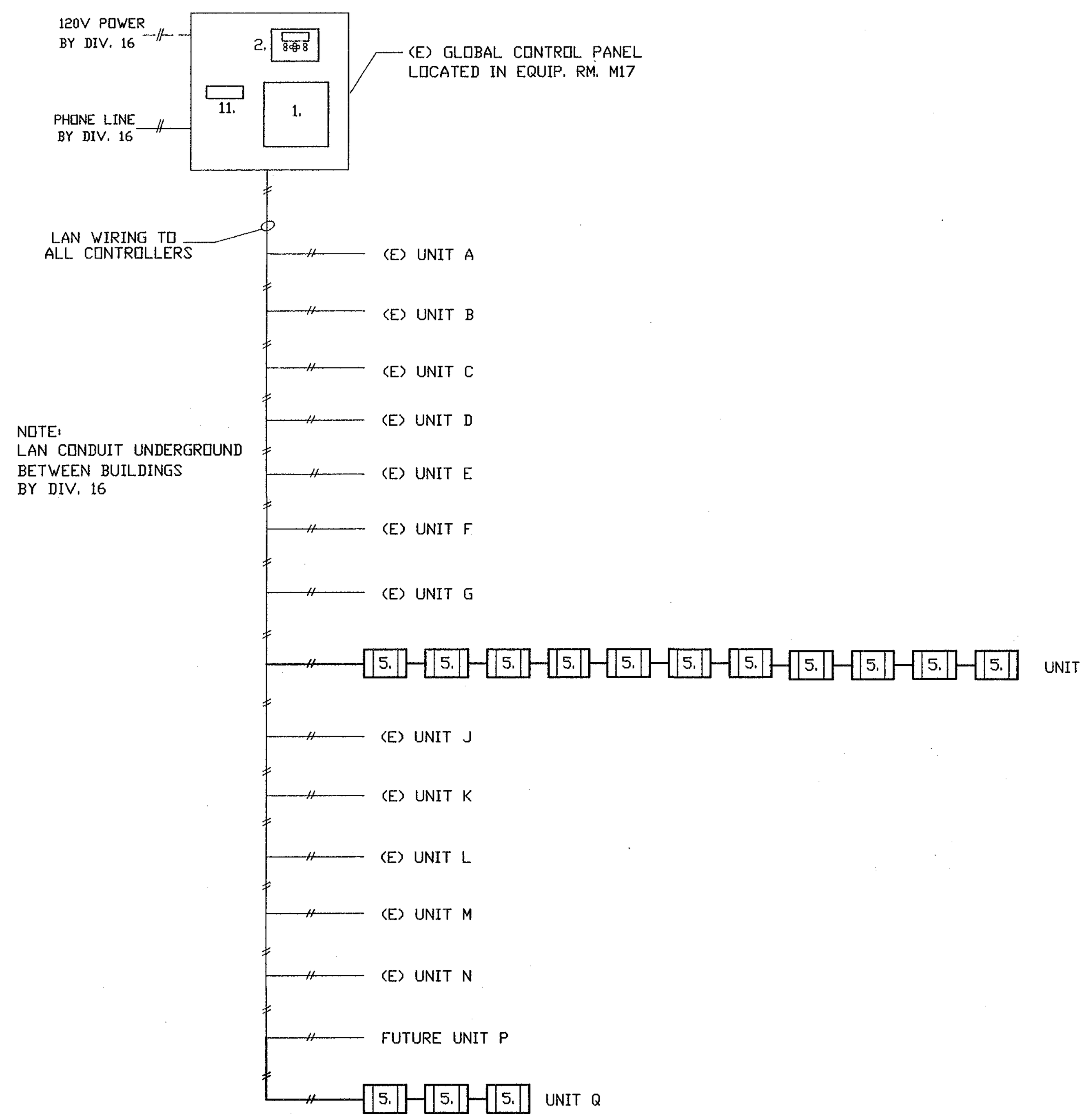
⚠ AC UNIT 1 H thru 4H CONTROL DIAGRAM



NOTES:

⚠ 1. A.C.- 8H & 9H CONNECT TO COMMON SENSOR.

AC UNIT 5H thru 9H CONTROL DIAGRAM



SYSTEM ARCHITECTURE

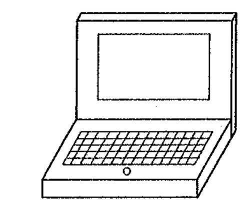
SEQUENCE OF OPERATION

GENERAL
THE ENERGY MANAGEMENT SYSTEM (EMS) SHALL CONSIST OF AN APEX LT GLOBAL CONTROLLER AND APPLICATION SPECIFIC TUX CONTROLLERS. THE APEX SHALL BE PROGRAMMED TO PROVIDE THE OPERATING SCHEDULES OF EACH TUX CONTROLLER AS DESIGNATED BY THE SCHOOL DISTRICT. TEMPERATURE CONTROL CONTRACTOR (TCC) SHALL PROVIDE THE FOLLOWING COLORGRAPHIC COMPUTER SCREENS ONTO THE EXISTING EMS COMPUTER AND THE EXISTING LAPTOP SERVICE TOOL; A. SITE PLAN B. INDIVIDUAL BUILDING PLANS SHOWING BASIC FLOOR PLANS AND ZONE SENSOR LOCATIONS. C. CONTROL PANEL GRAPHIC SHOWING ALL ATTRIBUTES OF EACH INDIVIDUAL DDC CONTROLLER FOR EASE OF TROUBLESHOOTING. D. EQUIPMENT GRAPHIC DEPICTING ACTUAL EQUIPMENT SHOWING STATUS AND TEMPERATURES.

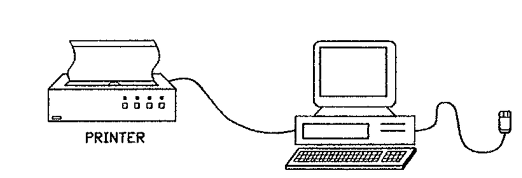
AC PACKAGE UNITS
DURING PERIODS OF OCCUPANCY THE AC UNIT TUX CONTROLLER WILL ENABLE THE FAN AND PROVIDE STAGED HEATING AND COOLING TO MAINTAIN ROOM SETPOINT. EACH AC UNIT WILL HAVE FACTORY ECONOMIZER CONTROLS THAT WILL POSITION THE ECONOMIZER DAMPERS TO PROVIDE COOLING AS REQUIRED. A FILTER PRESSURE SWITCH WILL CLOSE WHENEVER THE FILTER STATIC REACHES FINAL STATIC SETPOINT AND THE TUX WILL GO INTO ALARM MODE, WHICH CAN BE MONITORED AT THE DISTRICT ALERTON COMPUTER. FILTER FINAL STATIC SETPOINT TO BE DETERMINED AT STARTUP. PROVIDE SUPPLY AIR SMOKE DETECTOR FOR ALL UNITS LISTED TO SHUT-DOWN AC UNIT UPON DETECTION OF SMOKE. INTERLOCK ANY ASSOCIATED EXHAUST FANS TO OPERATE WHENEVER AC UNIT IS ENABLED.

SPLIT SYSTEM UNITS
THE SPLIT SYSTEM UNITS WILL HAVE FACTORY MOUNTED CONTROLS. TEMPERATURE CONTROL CONTRACTOR TO INTERLOCK INDOOR UNIT TO OUTDOOR UNIT.

HV UNITS
DURING PERIODS OF OCCUPANCY THE HV UNIT TUX CONTROLLER WILL ENABLE THE FAN AND PROVIDE HEATING AND EVAP COOLING TO MAINTAIN ROOM SETPOINT. EACH HV UNIT WILL HAVE FACTORY CONTROLS TO PROVIDE EVAP COOLING AND HEATING AS REQUIRED. A FILTER PRESSURE SWITCH WILL CLOSE WHENEVER THE FILTER STATIC REACHES FINAL STATIC SETPOINT AND THE TUX WILL GO INTO ALARM MODE, WHICH CAN BE MONITORED AT THE DISTRICT ALERTON COMPUTER. FILTER FINAL STATIC SETPOINT TO BE DETERMINED AT STARTUP.



(E) ALERTON LAPTOP SERVICE TOOL
EXISTING LAPTOP SERVICE TOOL AT SCHOOL DISTRICT



(E) ALERTON EMS WORKSTATION
EXISTING AT DISTRICT MAINTENANCE OFFICE

MATERIAL LEGEND

ALL PART NUMBERS ARE ALERTON UNLESS OTHERWISE NOTED

1. APEX LT GLOBAL CONTROLLER (AL-1000)
2. LANVIEW (LVIEW)
3. PROGRAMMABLE TUX CONTROLLER (653P)
4. STAINLESS STEEL SENSOR WITH BYPASS
5. SA TUX CONTROLLER (TX-SA)
6. DUCT TEMPERATURE SENSOR (TS-2000)
7. ISOLATION TRANSFORMER (KELE)
8. RELAY IN A BOX (RIB)
9. FENWAL CPD-7021 SMOKE DETECTOR
10. BELIMO DAMPER ACTUATOR (SIZE AS REQ'D)
11. MODEM PRACTICAL PERIPHERIALS 28.8 BAUD
12. NOT USED
13. FILTER DIFFERENTIAL SWITCH (KELE RH-3)
14. NOT USED
15. NOT USED
16. NOT USED
17. NOT USED
18. NOT USED

WIRING BY DIVISION 15

WIRING BY DIVISION 16

Michael RAINFORTH ■ Jeffrey GRAU
ARCHITECTS
3250 Ramos Circle ■ Sacramento, CA 95827
(916) 368-7990 ■ Fax: (916) 368-7996

FOR CONSTRUCTION
DATE 9-17-02 COMMENT

AS-BUILT
DATE 9-17-02 COMMENT

DATE SIGNED: 3/13/02

CAPITAL ENGINEERING CONSULTANTS, INC.
SACRAMENTO, CALIFORNIA
GC\MJR 970617
DESIGNER/DRAFTER PROJECT NO.

KEYMAP

DSA/ORS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
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AC ___ FLS ___ SS ___
DATE APR 0 2 2002

ARCH

LICENSED ARCHITECT
JEFFREY ALAN GRAU
C-13648
STATE OF CALIFORNIA

NEW FOLSOM HIGH SCHOOL
PHASE 3

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT
FOLSOM, SACRAMENTO COUNTY, CALIFORNIA

CONTROL DIAGRAMS

REVISIONS	BY		
		DRAWN GC	PROJECT NO. 97-444
		CHECKED LS	DATE 8/28/99
		SCALE NONE	SHEET
		CADFILE	M6.1
		UPDATED	OF SHEETS