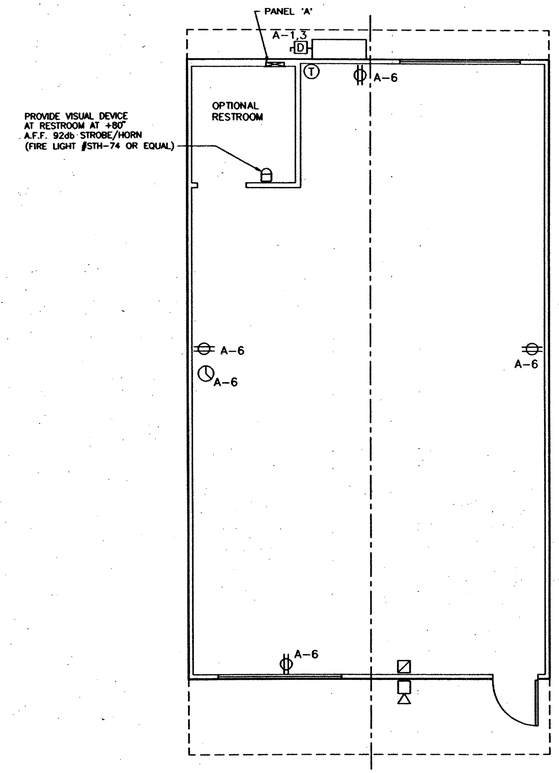
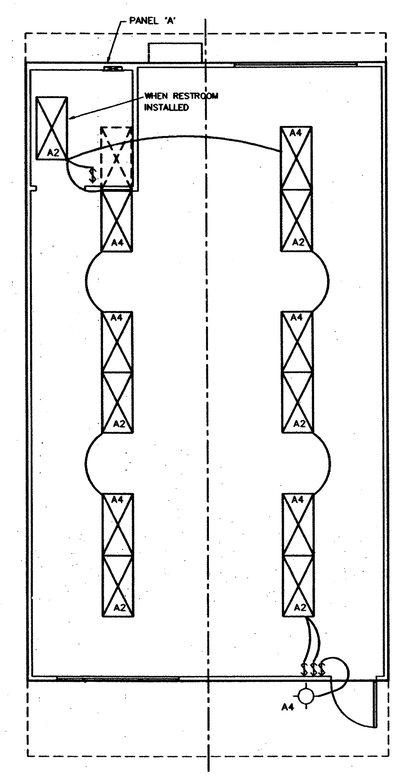


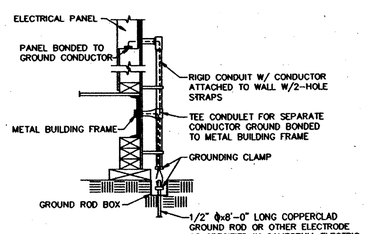
ELECTRICAL POWER PLAN



ELECTRICAL LIGHTING PLAN

SYMBOL LEGEND

- DISCONNECT-GENERAL SWITCH R610-B,60 AMP. NOT REQUIRED ON A/C UNITS WITH INTERNAL DISCONNECT BREAKER
- PULL STATION ● +48" A.F.F.
- EXT. HORN ● +7'-0" A.F.F.
- 110V RECEPTACLE 20 AMP HOSP. GRADE ● +15" A.F.F.
- SWITCH ● +42" A.F.F.
- THERMOSTAT ● +48" A.F.F.
- CLOCK ● +8'-0"
- EXTERIOR LIGHT- SEE FIXTURE SCHEDULE
- STROBE LIGHT ● +80" A.F.F.



NOTES:
1. SIZE OF CONDUCTORS SHALL COMPLY W/CEC TABLE 250-95.
2. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL & TO METAL BUILDING FRAME (CEC 250-81) IN ADDITION TO THE DETAIL SHOWN ABOVE. BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10 FT. INTO THE SOIL IF AVAILABLE (CEC 250-81 & 250-83).
3. ALL MODULES OF METAL FRAME BUILDINGS SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING). INCLUDING RAMP TO STEEL FRAME.
4. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS W/CONDUCTORS AS SHOWN, SEPARATED AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (CEC 250-84).
5. PROJECT INSPECTOR SHALL WITNESS GROUNDING TEST.

ACCEPTABLE GROUNDING DETAIL

BY OWNER

PANELBOARD SCHEDULE W/ OPTIONAL WATER HEATER — PANEL A(1)

VOLTS 120/240 — PHASE 1 — BUSS 100 A — FEED BOTTOM
MAIN BRKR 100 A — WIRE 3 — MOUNT FLUSH — LOCATION INTERIOR

DESCRIPTION	WATTS A#	WATTS B#	WIRE SIZE	BREAKER	POLE	CKT. NO.	A	B	CKT. NO.	POLE	BREAKER	WIRE SIZE	WATTS A#	WATTS B#	DESCRIPTION
HVAC 3.5 TON	5290	—	8	50	2	1			2	1	20	12	864	—	LIGHTS
HVAC 3.5 TON	—	5290	8	–	–	3			4	1	20	12	—	964	LIGHTS/PORCH
OPTIONAL WATER HEATER	—	1400	12	20	1	5			6	1	20	12	720	—	RECEPT
–	—	—	–	–	–	7			8	–	–	–	—	—	–
–	—	—	–	–	–	9			10	–	–	–	—	—	–
–	—	—	–	–	–	11			12	–	–	–	—	—	–
SUB TOTAL	5290	6690											1584	964	SUB TOTAL

LOAD KW: A 6,874 — B 7,654 — TOT 14,528
*L.C.L. = 1,828 x 1.25 = 2,285
OTHER = 12,700
MAX DEMAND = 14,985
TOTAL LOAD: CONN. 60.5 AMPS — MAX DEMAND 62.4 AMPS

PANELBOARD SCHEDULE — PANEL A

VOLTS 120/240 — PHASE 1 — BUSS 100 A — FEED BOTTOM
MAIN BRKR 100 A — WIRE 3 — MOUNT FLUSH — LOCATION INTERIOR

DESCRIPTION	WATTS A#	WATTS B#	WIRE SIZE	BREAKER	POLE	CKT. NO.	A	B	CKT. NO.	POLE	BREAKER	WIRE SIZE	WATTS A#	WATTS B#	DESCRIPTION
HVAC 3.5 TON	5290	—	8	50	2	1			2	1	20	12	864	—	LIGHTS
HVAC 3.5 TON	—	5290	8	–	–	3			4	1	20	12	—	964	LIGHTS/PORCH
–	—	—	–	–	–	5			6	1	20	12	720	—	RECEPT
–	—	—	–	–	–	7			8	–	–	–	—	—	–
–	—	—	–	–	–	9			10	–	–	–	—	—	–
–	—	—	–	–	–	11			12	–	–	–	—	—	–
SUB TOTAL	5290	5290											1584	964	SUB TOTAL

LOAD KW: A 6,874 — B 6,254 — TOT 13,128
*L.C.L. = 1,828 x 1.25 = 2,285
OTHER = 11,300
MAX DEMAND = 13,585
TOTAL LOAD: CONN. 54.7 AMPS — MAX DEMAND 56.6 AMPS

NOTES:
1. FIRE ALARM SYSTEM SHALL COMPLY W/ TITLE 24 SEC. 305.9, TITLE 24, PART 3, ARTICLE 760 OF THE CALIFORNIA CODE OF REGULATIONS AND CALIFORNIA FIRE RECULATIONS, ARTICLE 10.
2. INSTALLATION OF FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAIL PLANS, SPECIFICATIONS AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STUCTURAL ENGINEER IN GENERAL CHARGE OF DESIGN AND THE SIGNATURE OF THE ARCHITECT OR PROFESSIONAL ENGINEER WHO HAS BEEN DELEGATED RESPONSIBILITY COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION, AND APPROVED BY THE OFFICE OF THE STATE ARCHITECT AND STATE FIRE MARSHAL.

FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	WATTS	MANUFACTURER
⊠	2'x 4' FLUORESCENT DROP-IN LIGHT FIXTURE, ACRYLIC PRISMATIC LENS, ENERGY SAVING BALLAST, (4) 35 WATT TUBES. WEIGHT- 27 lbs	144 WATTS	
⊕	INCANDESCENT SURFACE MOUNTED EXTERIOR LIGHT FIXTURE WITH IMPACT RESISTANT ENCLOSURE.	100 WATTS	

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PC-

ARCHITECT APPROVAL

STRUCTURAL ENGINEERS STAMP — REGISTERED PROFESSIONAL ENGINEER — JAMES T. SIMONS — No. 3812 — STRUCTURAL — STATE OF CALIFORNIA — LICENSE EXPIRES 6-30-98

STATE AGENCY APPROVAL — IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT — 117095 — DATE 10/31/2016

STATE AGENCY APPROVAL — IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT — 100078 — DATE JAN 15 1998

STATE AGENCY APPROVAL — IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT — 100073 — DATE JAN 15 1998

#110

PROJECT: 24'X40' MODULAR CLASSROOM BUILDING

TITLE: ELECTRICAL LIGHTING PLAN / ELECTRICAL POWER PLAN / PANEL SCHEDULE

24x40

JOB #

DATE 12-8-97

DRAWN BY R.D.L.

SCALE

APPROVED

REVISIONS

SHEET NO. E-1-24