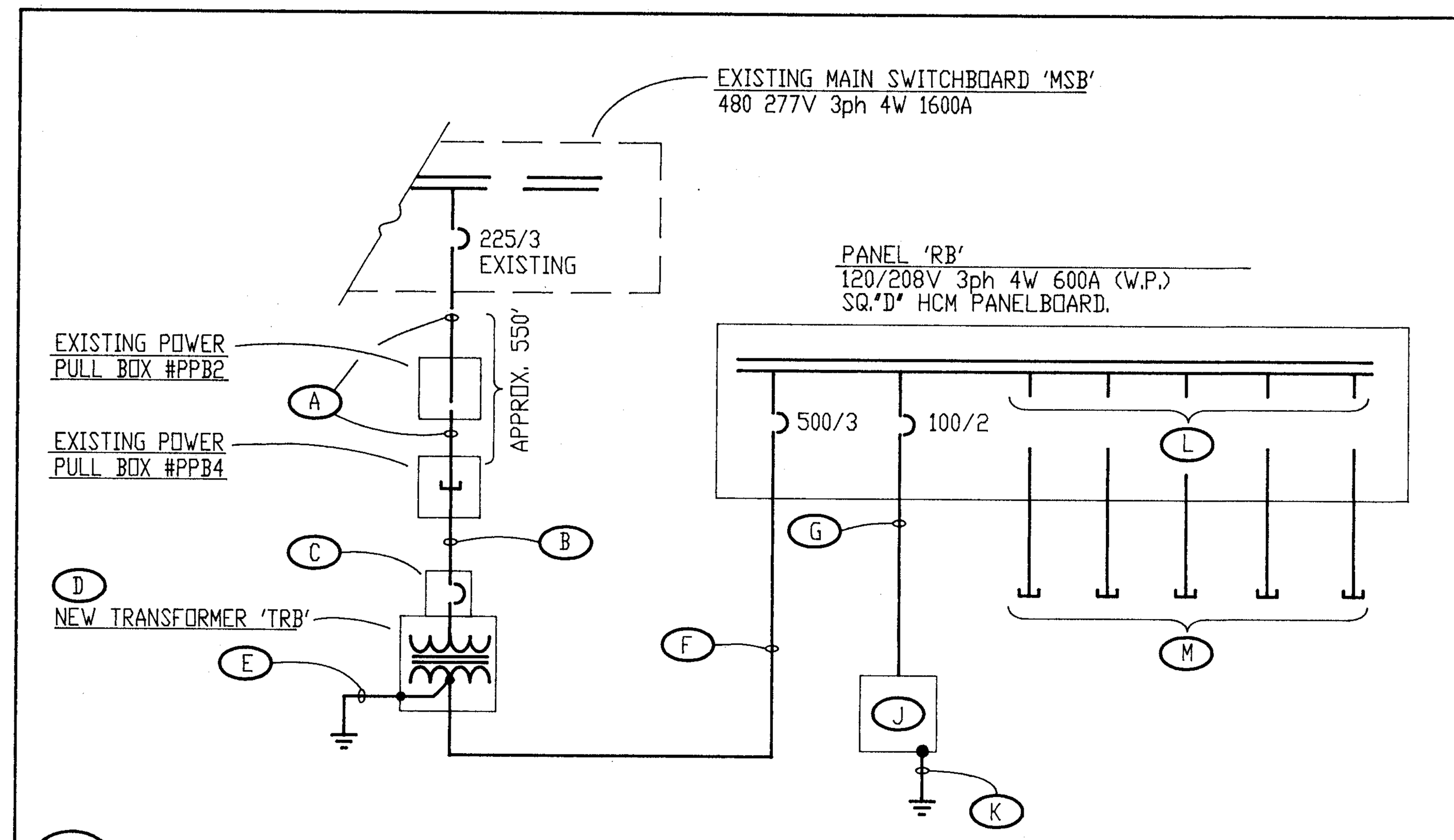


EXISTING MAIN SWITCHBOARD 'MSB' LOAD CALCULATION

EXISTING LOAD..........796 KVA

NEW LOAD BEING ADDED...................16 KVA

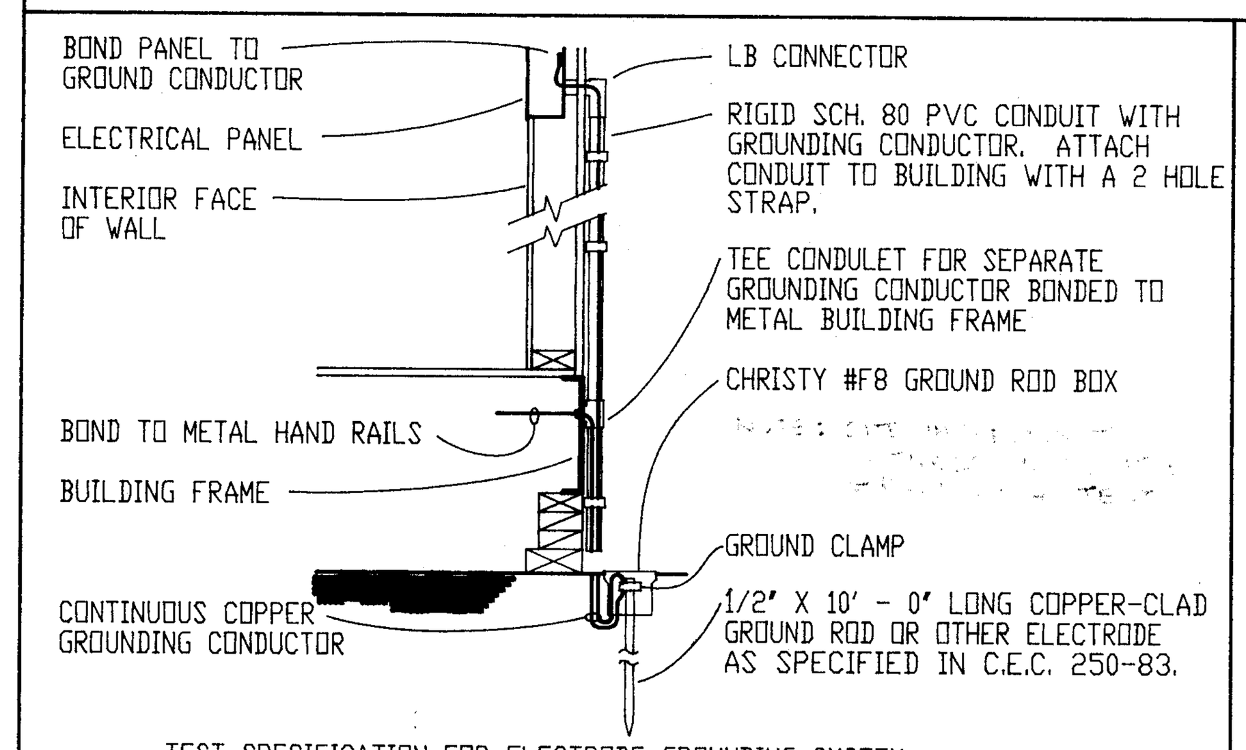
SUB-TOTAL..........812 KVA

AT 480/277 3ph 4W.......976 AMPS

THEREFORE EXISTING 1600A MAIN SWITCHBOARD 'MSB' HAS CAPACITY

1 E1 ONE LINE DIAGRAM

NTS

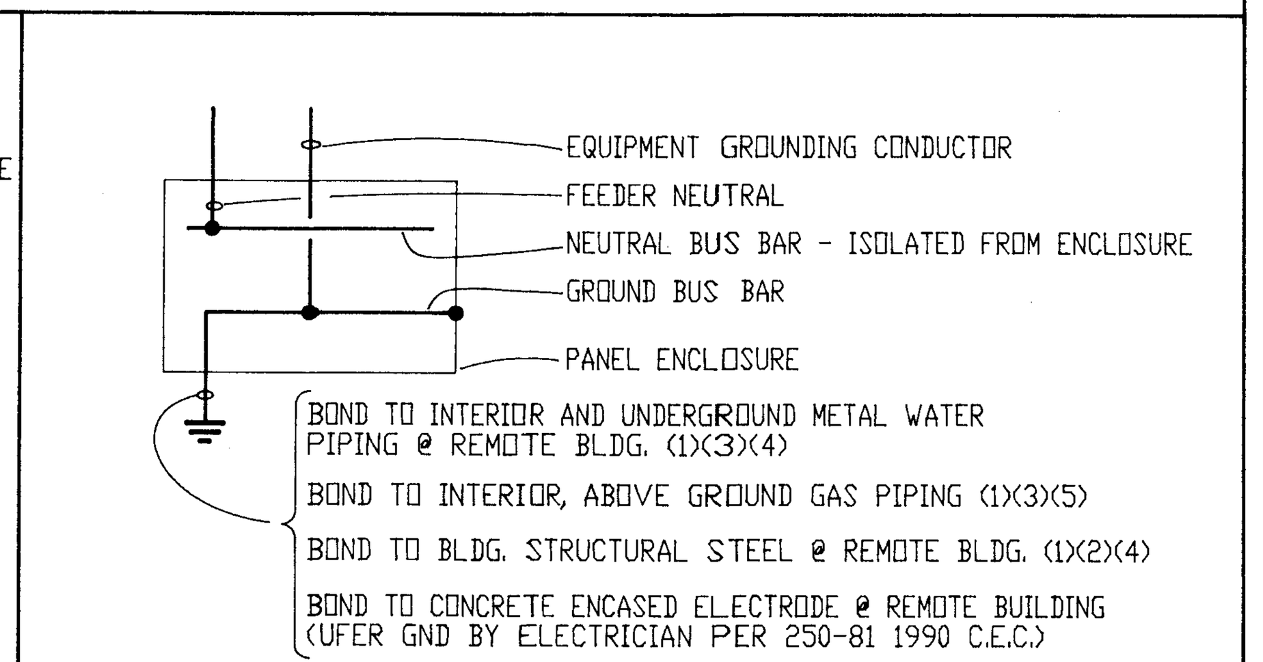


TEST SPECIFICATION FOR ELECTRODE GROUNDING SYSTEM

THE GROUND ELECTRODE(S) SHALL BE TESTED BY THE FALL OF POTENTIAL METHOD AS SPECIFIED IN IEEE STD. 81-1983 & SHOWN TO BE 25 OHMS OR LESS. A COPY OF THE TEST REPORT SHALL BE SUBMITTED TO THE ARCHITECT.

2 E1 SYSTEM GROUND DETAIL

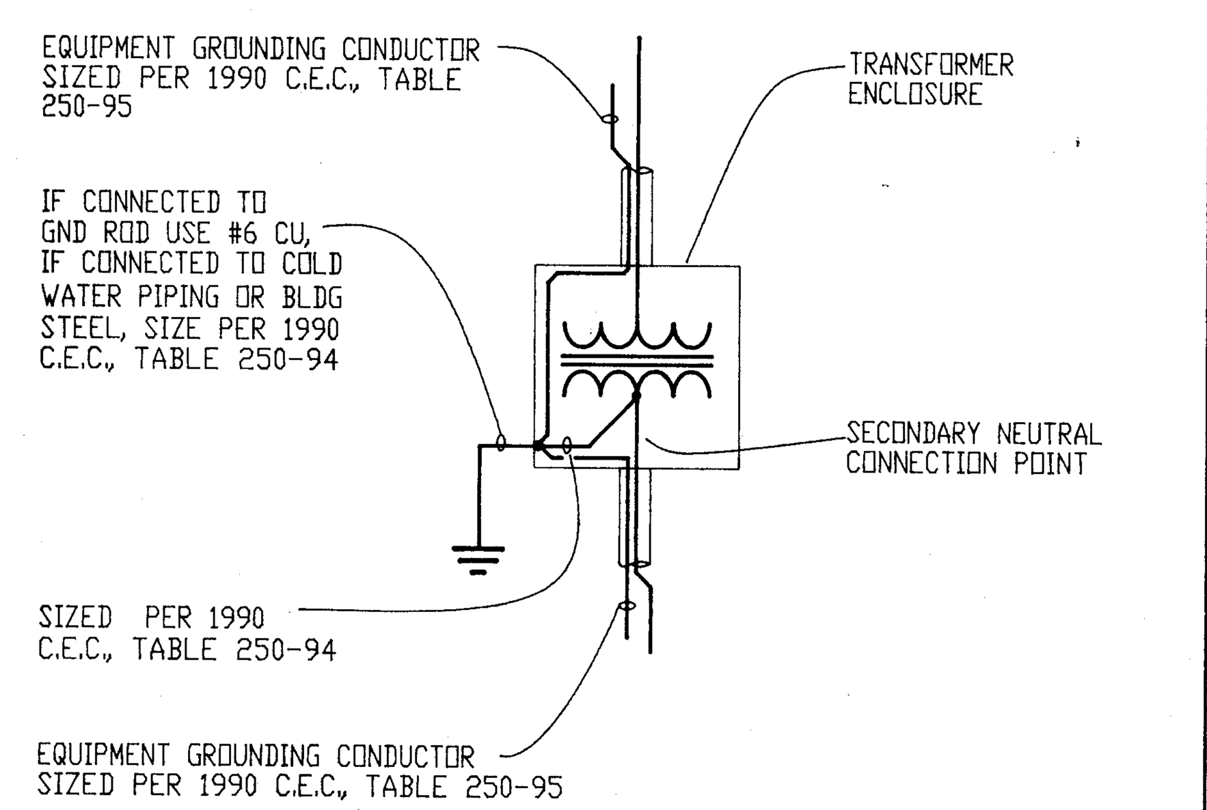
NTS



(1) IF AVAILABLE ON THE PREMISES
(2) BOND PER 250-81 1990 C.E.C.
(3) BOND PER 250-80 1990 C.E.C.
(4) CONDUCTOR SIZED PER 1990 C.E.C., TABLE 250-94
(5) CONDUCTOR SIZED PER 1990 C.E.C., TABLE 250-95

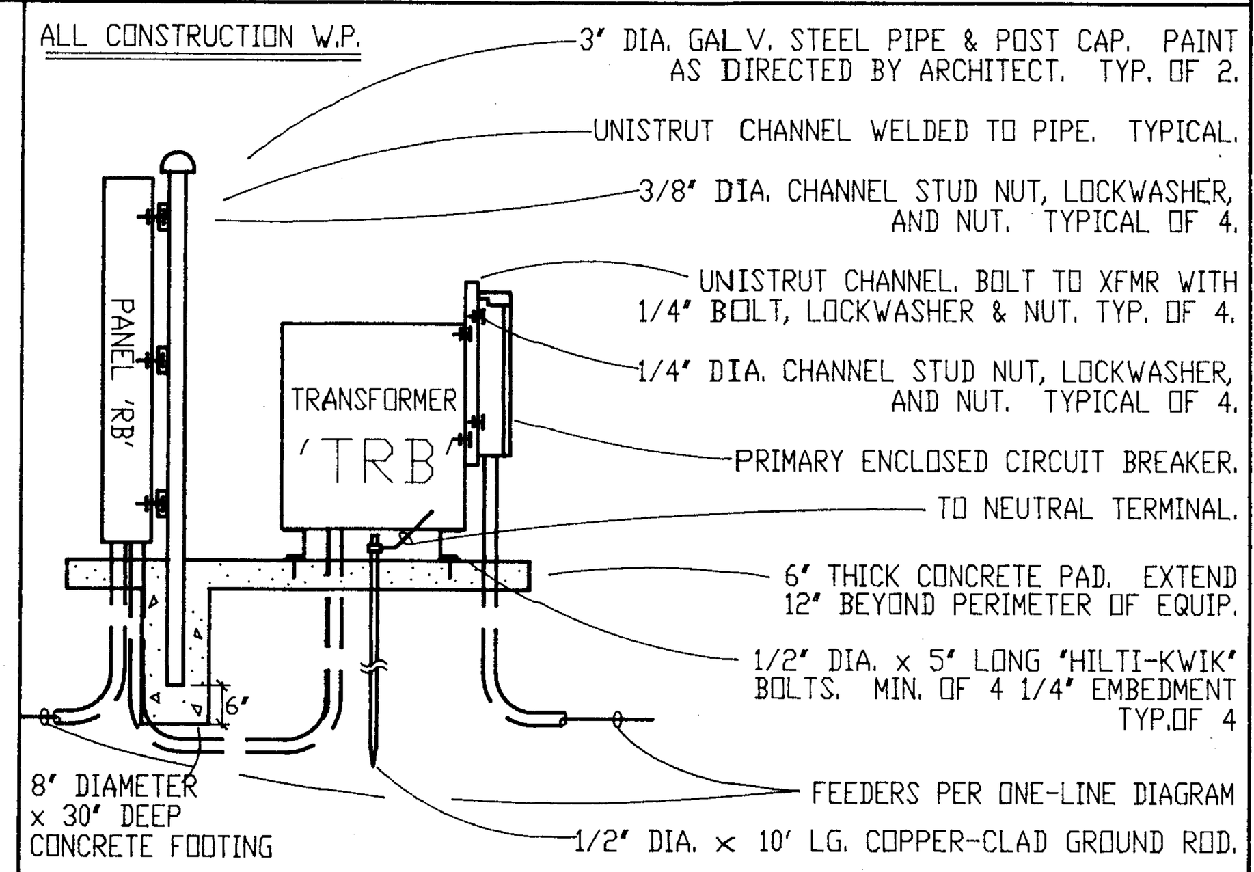
3 E1 GROUNDING ELECTRODE SYSTEM FOR REMOTE BUILDING SUB PANELS

NTS



4 E1 TRANSFORMER GROUNDING & BONDING

NTS



5 E1 XFMR 'TRB' & PANEL 'RB' MOUNTING

NTS

FIRE ALARM PANEL BATTERY CALCULATIONS:

1. **BATTERY AMP HOURS REQUIRED:**
   24 HOURS IN NON-ALARM CONDITION,
   5 MINUTES IN ALARM CONDITION.

2. **BATTERY CALCULATIONS:**
   NON-ALARM AMPS = .063 x 24 HOURS = 1.51 A.H.

ALARM AMPS	(EXISTING)	(NEW)
MASTER PANEL	.370	
HORNS	1.260	.063
VISUALS	.450	.050
AUDIO/VISUALS	.190	
MINI-HORNS	.590	.028
	2.86	.141
	= 3.001 x	.084 = 0.252 A.H.

TOTAL AMP HOURS REQUIRED = 1.762

THEREFORE EXISTING 6.0 AMP HOUR BATTERIES ARE ADEQUATE

NOTES (THIS SHEET ONLY):

(ALL CONDUCTORS SHALL BE THWN-CU, U.O.N.)

- (A) EXISTING 3"C STUB FROM EXISTING MAIN SWITCHBOARD 'MSB'. PULL-IN NEW CONDUCTORS PER NOTE (B) AND CONNECT TO EXISTING 225/3 CIRCUIT BREAKER.
- (B) (E) 3"C - (N) 3 #250 MCM +1 #2 GND. RUN UNDERGROUND.
- (C) 225/3 PRIMARY CIRCUIT BREAKER IN A NEMA 3R ENCLOSURE.
- (D) TRANSFORMER 'TRB' SHALL BE RATED AT, 150 KVA, 480120/208V 3φ 4W, NEMA 3R.
- (E) BOND AND GROUND TRANSFORMER PER DETAIL #4/E1.
- (F) TWO 3"C - 4 #250 MCM +1 #2 GND IN PARALLEL.
- (G) 1 1/4"C - 3 #2 +1 #8 GND. RUN UNDERGROUND.
- (H) EXISTING 1 1/4"C (FIRE ALARM); 2"C (INTERCOM); 1"C (TELEVISION); 1"C (BURGLAR ALARM); 1 1/4"C (COMPUTER); 1"C (SPARE). PULL-IN NEW WIRING PER NOTE (N).
- (J) CONNECT SUB-PANEL SUPPLIED WITH RELOCATABLE BUILDING. VERIFY EXACT LOCATION AT SITE. PROVIDE LB CONNECTOR AS REQUIRED.
- (K) BOND AND GROUND PANEL PER DETAILS #2/E1 & #3/E1.
- (L) SPACE FOR MINIMUM OF FIVE 100/2 CIRCUIT BREAKERS.
- (M) FIVE 1 1/4"C STUB OUTS (FROM PANEL 'RB') FOR FUTURE RELOCATABLE BUILDINGS. STUB CONDUITS OUT 2' BEYOND EDGE OF CONCRETE PAD, CAP AND TAG.
- (N) PICK-UP 'SPARE' FIRE ALARM CIRCUITS (4 #12, 4 #14) IN EXISTING SIGNAL T.C. 'F', EXTEND TO NEW FUTURE RELOCATABLE BUILDINGS AS SHOWN.
- (P) 3/4"C - 4 #12, 4 #14 (FIRE ALARM); 3/4"C (FUTURE SIGNALS). TERMINATE CONDUITS IN RESPECTIVE JUNCTION BOX PER NOTE (X).
- (R) TYPICAL OF NEW FIRE ALARM DEVICES: CONTRACTOR SHALL INSTALL NEW DEVICE AT EXISTING ROUGH-IN BOX. CONTRACTOR SHALL REMOVE ANY EXISTING DEVICES AND RETURN TO OWNER. IF ROUGH-IN BOX DOES NOT EXIST, CONTRACTOR SHALL PROVIDE SURFACE METAL RACEWAY COMPATIBLE OUTLET BOX AND SURFACE METAL RACEWAY (WIREMOLD #700 OR EQUAL) AS REQUIRED.
- (S) RUN 3/4"C - 4 #12, 4 #14 UP OUTSIDE WALL TO ABOVE T-BAR CEILING LEVEL. PUNCH THRU WALL, THEN LB INTO ACCESSIBLE ATTIC SPACE AND RUN TO NEW VISUAL ALARM IN TOILET.
- (T) 1/2"C - 4 #12. RUN IN ATTIC.
- (U) 1/2"C - 4 #14. RUN IN ATTIC.
- (V) 3/4"C - 4 #12, 4 #14. RUN IN ATTIC.
- (X) PROVIDE TWO 6"W X 6"H X 4"D NEMA 3R SCREW COVER CANS AND SURFACE MOUNT ON EXTERIOR WALL AT +12" A.F.F. (ONE FOR FIRE ALARM AND ONE FOR FUTURE SIGNALS).

CODE, RULES & REGULATIONS

ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST REGULATIONS OF THE STATE FIRE MARSHAL, CALIFORNIA CODE OF REGULATIONS, SERVING UTILITY COMPANIES AND OTHER APPLICABLE STATE ORDINANCES. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED AS TO PERMIT WORK NOT CONFORMING TO THESE CODES. WHERE WORK OF A HIGHER DEGREE IS INDICATED IN THE PLANS OR SPECIFICATIONS THIS REQUIREMENT SHALL GOVERN.

FIRE ALARM SYSTEM

THE FIRE ALARM SHALL COMPLY WITH T-24 PART 2-809 AND PART 3 ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE.

UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY. LETTER OF APPROVAL SHALL BE SENT TO ARCHITECT.

MATERIAL SPECIFICATIONS

CONDUIT

UNDERGROUND - SCHEDULE 40 PVC OR FULL WT. GALV. STEEL 24" MIN. COVER
- ANY RIGID STEEL USED, TO BE FACTORY WRAPPED WITH PVC TAPE.

CONCEALED IN BLDG. - EMT OR METALLIC FLEX.

EXPOSED, OUTSIDE - EMT WITH W.P. FITTINGS

WIRE

ALL WIRE SHALL BE COPPER, THWN.

DISCONNECTS

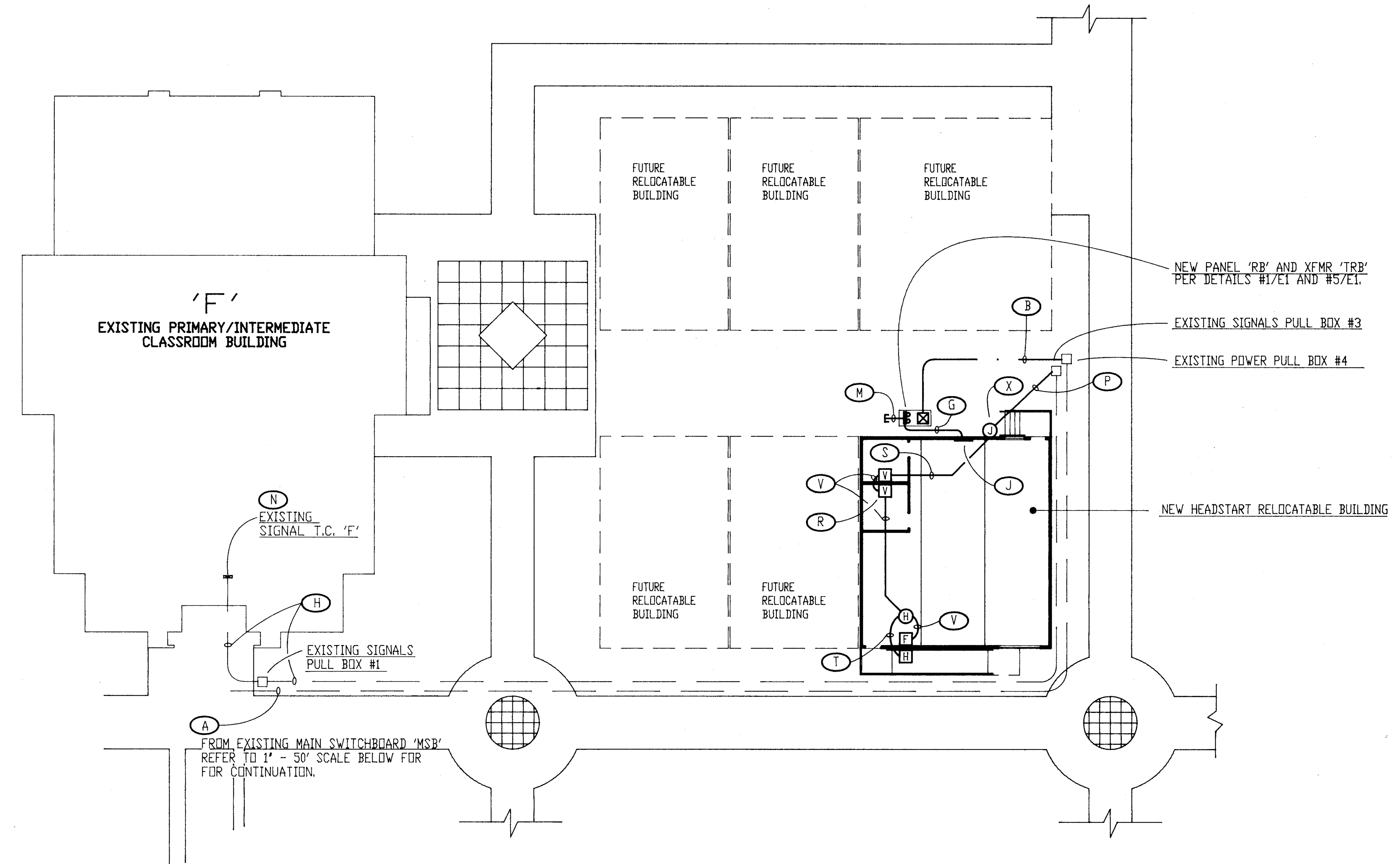
PROVIDE FUSED DISCONNECTS FOR ALL MOTORS, HVAC UNITS AND PUMPS IF NOT PROVIDED BY OTHERS. USE DUAL ELEMENT FUSES PER EQUIPMENT SUPPLIER RECOMMENDATION.

FIRE ALARM EQUIPMENT

- (F) MANUAL PULL STATION, +48" - THORN #B-5; (C.S.F.M. #7150-062:015). Mount on Exterior.
- (H) EXTERIOR HORN, +8'-0" - THORN #36T-24-R-WBB; (C.S.F.M. #7135-785:007)
- (V) VISUAL ALARM, +7'-0" - THORN #VST-24-FR; (C.S.F.M. #7300-785:011)
- (H) INTERIOR MINI-HORN CEILING MOUNTED - WHEELOCK #MIZ-24-R; (C.S.F.M. #7135-785:110)

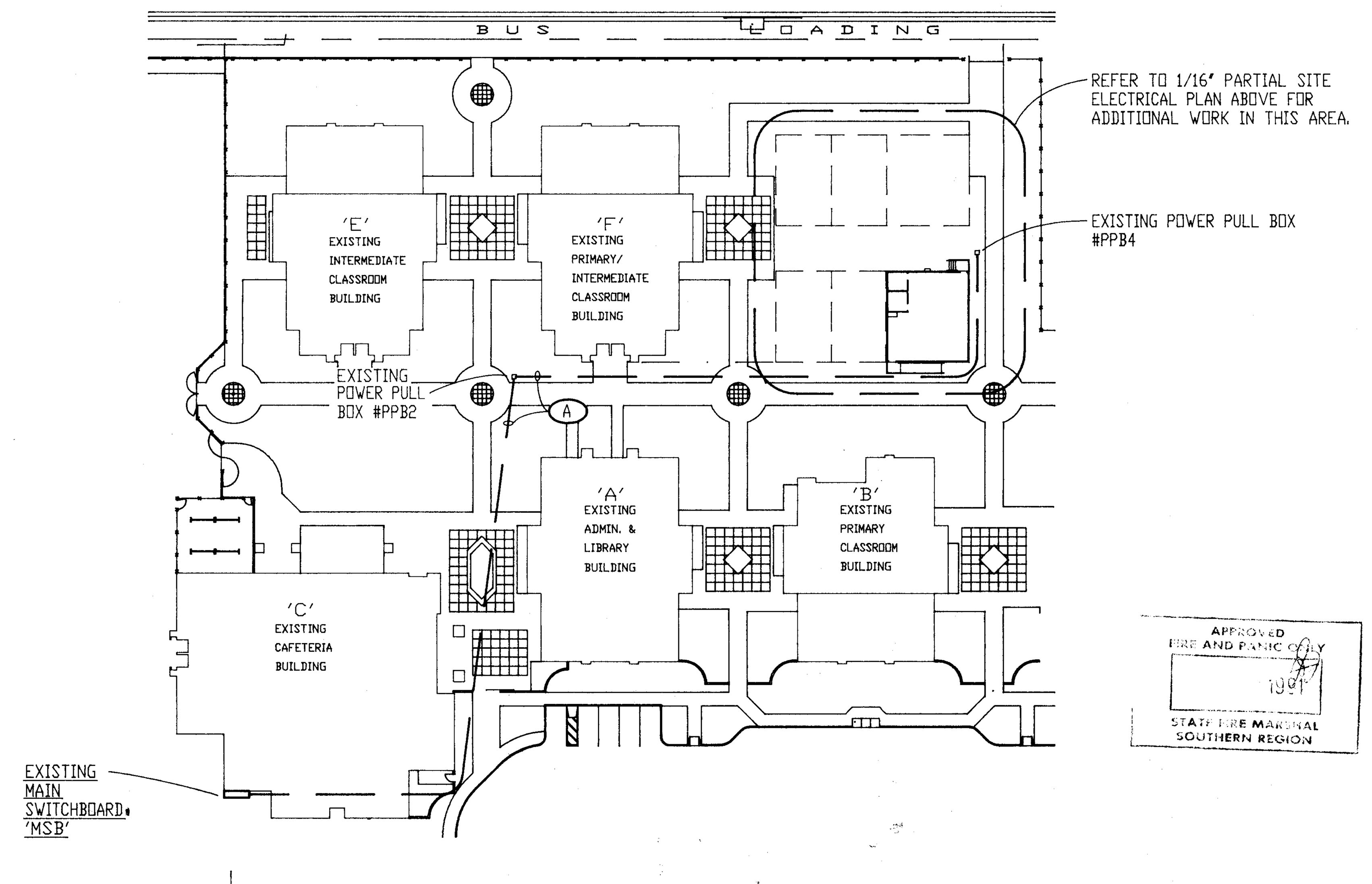
" SOURCE OF POWER HAS BEEN REVIEWED FROM CHECKING APPROVED PLANS FOR NEW SCHOOL AND IS ADEQUATE FOR THE NEW LOAD "

Glen Hartzell



PARTIAL SITE ELECTRICAL PLAN

SCALE : 1/16" = 1'-0"



PARTIAL SITE ELECTRICAL PLAN

SCALE : 1" = 50'-0"

APPROVED FIRE AND PANIC ONLY 1991 STATE FIRE MARSHAL SOUTHERN REGION

NO.	REVISION	DATE	BY

FIRE MARSHAL

OFFICE OF THE STATE ARCHITECT ACCESS COMPLIANCE SECTION

APPLICATION NO. 56960 SEP 05 '91

APPROVAL of this plan does not authorize or approve any omission or deviation from applicable regulat. Reviewed by

A.C.S.

ED/LA

O.S.A.

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918 W. Main St.- Ph.733-2671
Visalia, California 93291
Gerald Cornelius Calif.no.7198

Glenn Hartzell A.I.A.

26 'H' STREET, 93304 (805) 324-6416

P.O. BOX 2344, 93303, BAKERSFIELD, CALIFORNIA

ARCHITECT C-10298

LICENSED ARCHITECT GLENN E. HARTZELL No. C-10298 OCT. 31, 1991 REN. DATE STATE OF CALIFORNIA

SITE ELECT. PLAN ~ PARTIAL SITE ELECT. PLAN ~ NOTES ~ SPECS. ~ DETAILS

(HEADSTART RELOCATABLE BUILDING)

STELLA HILLS SCHOOL

BAKERSFIELD CITY SCHOOL DISTRICT

BAKERSFIELD, KERN COUNTY, CALIFORNIA

DATE 8-15-91

DRAWN

JOB NO. 152

SHEET NO. E1

SHEET 1 OF 1