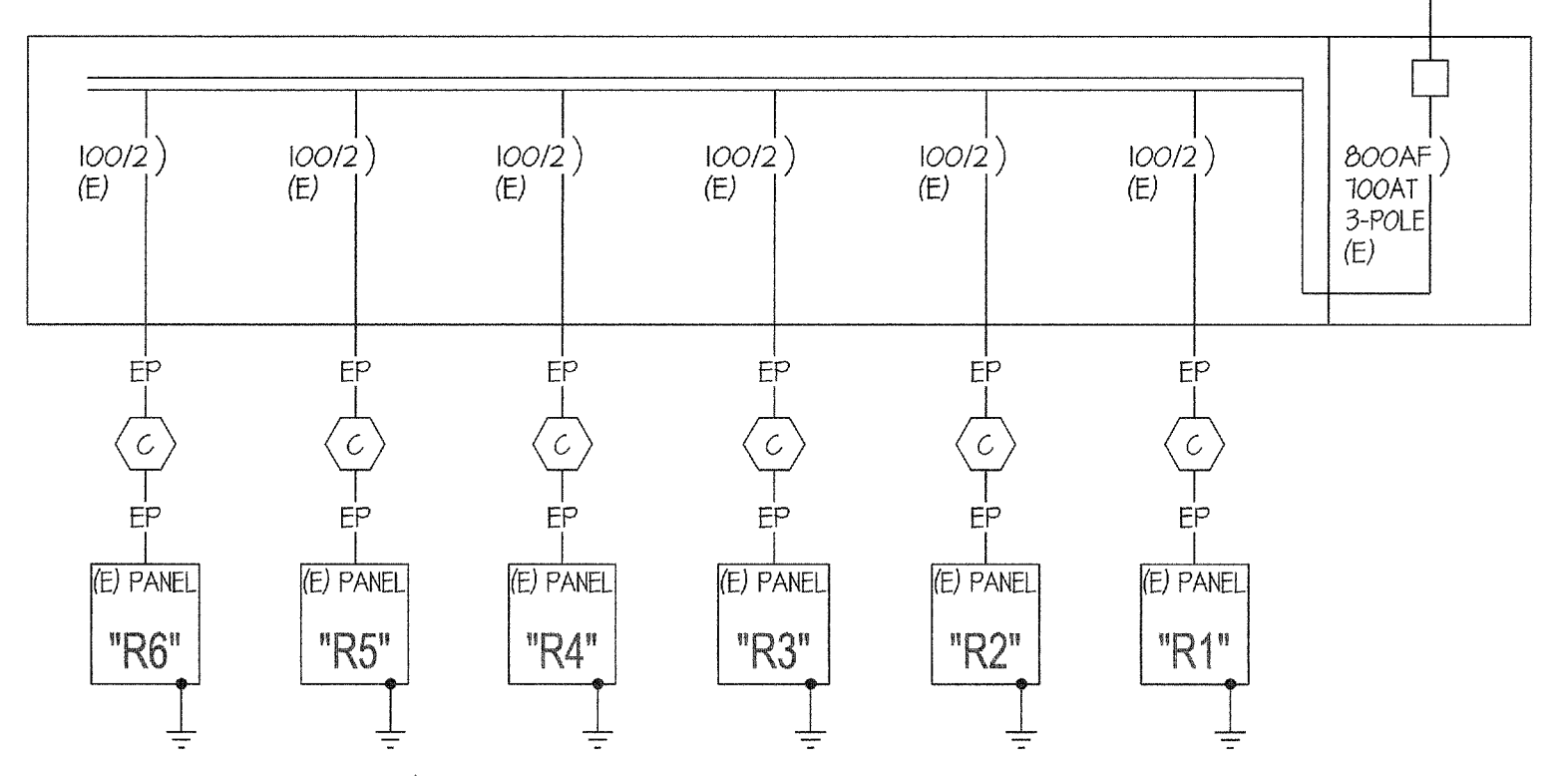
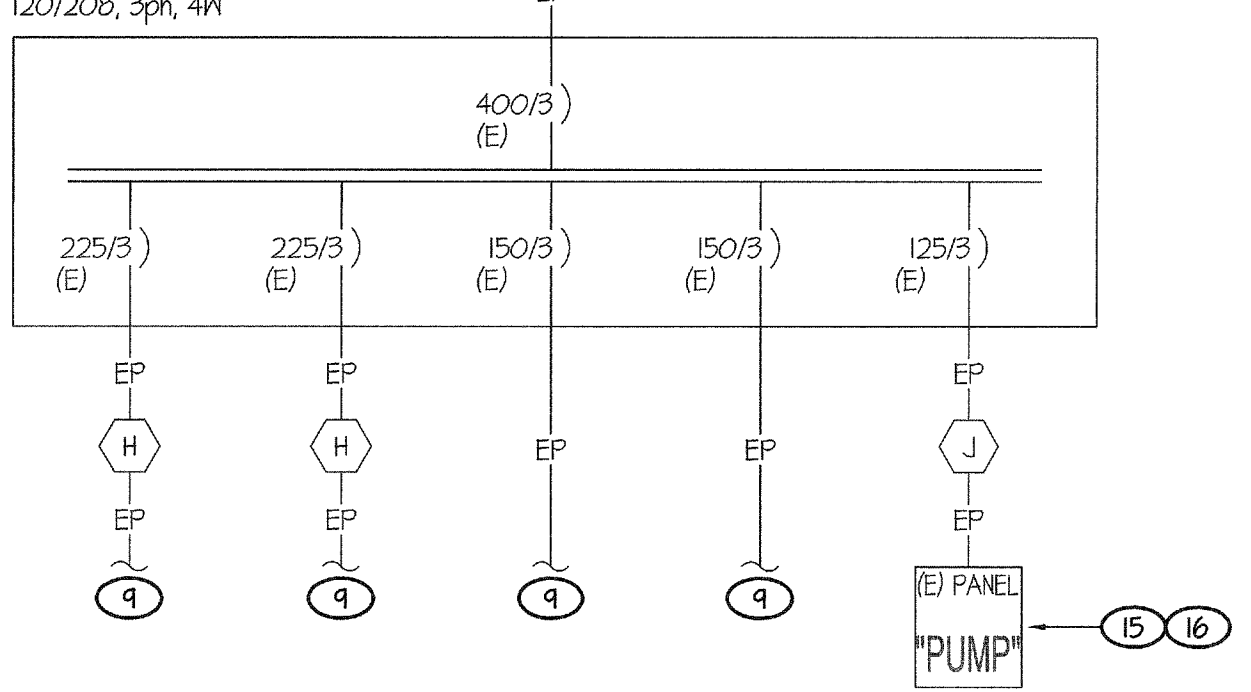


(E) PANEL "D" (CUTLER-HAMMER) 3. 120/208V, 3ph, 4W, 800 AMP RATED (100 AMP MAIN) 10000, A.I.C.



EXISTING DISTRIBUTION SWITCHBOARD "DS-3" 120/208, 3ph, 4W



LOAD CALCULATION AND (MAIN SWITCHBOARD):

EXISTING LOAD (MAIN SWBD 'MS'):

MAX DEMAND (METER #10045TR42) PER P.G.E. RECORDS	320 kVA
MAXIMUM DEMAND x 125% (PER C.E.C. ARTICLE 220.87)	400 kVA
EXISTING LOAD + NEW LOAD	490.52 kVA
AMPS AT 480/277V, 3ph, 4W	541 AMPS
THEREFORE THE 1200 AMP SERVICE IS ADEQUATE.	

NEW LOAD (PANEL "NR"):

FOUR RELOCATABLE BLDGS	60.44 kVA
TWO FUTURE RELOCATABLE BLDGS	30.08 kVA
TOTAL	90.52 kVA
	252 AMPS

THEREFORE A 400 AMP PANEL IS ADEQUATE

NOTES (THIS DETAIL ONLY):

- 1 ONE SPARE 2 1/2".
- 2 TO EXISTING BRINE CHILLER. NO WORK REQUIRED.
- 3 BOND & GROUND PER DETAIL #4/ES1. TYPICAL OF 4.
- 4 1 #4 CU BETWEEN ADJACENT GROUND RODS.
- 5 SPARE 1 1/2" (WITH NYLON FILL ROPE) FOR FUTURE RELOCATABLE BUILDINGS.
- 6 GROUND PER DETAIL #13/ES1.
- 7 CONNECT PANEL PROVIDED WITH RELOCATABLE BUILDING, TYPICAL.
- 8 TO REMAIN IN USE. NO WORK REQUIRED.
- 9 VARIOUS FEEDERS AND CIRCUIT BREAKERS TO REMAIN. NO WORK REQUIRED.
- 10 AT THIS FULL BOX LOCATION SPLICE 6 #4/0 + 1 #4 GND TO THE EXISTING 6 #1/0 + 1 #4 GND. SPLICE 3 #250 kcmil + 1 #4 GND DOWN TO 3 #210 + 1 #4 GND. PROVIDE N.P. SPLICE KITS AS REQUIRED.
- 11 PROVIDE SPARE CIRCUIT BREAKER, AMP RATING AND CONFIGURATION AS SHOWN.
- 12 REMOVE EXISTING 200A, 3-POLE CIRCUIT BREAKER AND RETURN TO OWNER. PROVIDE NEW 175A, 3-POLE CIRCUIT BREAKER FOR CONNECTION OF NEW RELOCATABLE BUILDINGS.
- 13 THREE SPARE 1 1/2" (WITH NYLON FILL ROPE).
- 14 3 #250 kcmil + 1 #4 GND (CU-XHHW-2).
- 15 PROVIDE THREE NEW 20A, 1-POLE CIRCUIT BREAKERS.
- 16 DISCONNECT THE NEUTRAL BOND AT THIS PANEL.

FEEDER SCHEDULE:

(ALL CONDUCTORS IN 480V OR 480/277V UNDERGROUND FEEDERS SHALL BE CU-XHHW-2. ALL OTHER CONDUCTORS, INCLUDING THE EQUIPMENT GROUNDING CONDUCTOR, SHALL BE CU-TINN-2 FOR #6 AWG OR LARGER AND CU-TINN FOR #10 AWG OR SMALLER.)

- A EXISTING P48E SECONDARY TO REMAIN.
- B (E) 41C - 6 #1/0 + 1 #4 GND. PULL OUT CONDUCTORS FROM MAIN SWITCHBOARD BACK TO EXISTING FULL BOX #2 AND COIL UP FOR RECONNECTION. PULL IN NEW 3 #300 + 6 #4/0 + 1 #4 GND.
- C (E) 1 1/2" C - 3 #2 + 1 #6 GND.
- D (E) TWO 3" C - 4 #400 kcmil + 1 #1/0 GND IN EACH.
- E (E) 3 1/2" C - 4 #350 MCM CU.
- F (E) 2" C - 3 #310 AWG CU.
- G (E) 3 1/2" C - 4 #500 MCM CU.
- H (E) 3" C - 3 #410 AWG CU.
- I (E) 1 1/2" (NIFFLE) - 4 #1 + 1 #6 GND.
- J TWO 3 1/2" C - 4 #350 kcmil + 1 #1 GND IN EACH CONDUIT.
- K 1 1/2" C - 3 #2 + 1 #6 GND.
- L 2" C - 3 #210 + 1 #4 GND (CU-XHHW-2).

NOTE:

ALL VOLTAGE DROP CALCULATIONS ARE DONE USING 80% OF THE AMP RATING OF THE EQUIPMENT BEING SUPPLIED.

1 ONE LINE DIAGRAM

120/208 VOLTS 3 4 WIRE 10000 BREAKER A.I.C. 400 A BUSBARS NO. A MAIN BKR. 6 1/4" MAX. ENCL. DEPTH 30 CIRCUIT BOLT-ON GET BKRS/PNLBD WEATHERPROOF MOUNTING

BRK	NO	LOAD V.A.	DESCRIPTION	DESCRIPTION	LOAD V.A.	BRK	NO
1	1660		RELOC. BLDG. "R08"	RELOC. BLDG. "R11"	1660	2	
3	1380				1380	4	
5	1660		RELOC. BLDG. "R09"	SPARE		6	
7	1380					8	
9	1660		RELOC. BLDG. "R10"	SPARE		10	
11	1380					12	
13						14	
15						16	
17						18	
19						20	
21						22	
23						24	
25						26	
27						28	
29						30	

TOTAL LOAD: #A: 22,100 V.A. #B: 22,100 V.A. #C: 15,040 V.A.
L.C.L. x 25%: 22,100 V.A. 184 A 22,100 V.A. 184 A 15,040 V.A. 126 A

120/208 VOLTS 3 4 WIRE 10000 BREAKER A.I.C. 125 A BUSBARS NO. A MAIN BKR. 3 3/4" MAX. ENCL. DEPTH 16 CIRCUIT BOLT-ON GET BKRS/PNLBD WEATHERPROOF MOUNTING

BRK	NO	LOAD V.A.	DESCRIPTION	DESCRIPTION	LOAD V.A.	BRK	NO
1	3100		PUMP	RECEPT - INC	900	2	
3	3100				1080	4	
5	3100				1080	6	
7	1080		RECEPT - INC		900	8	
9	1260				120	10	
11			SPARE		900	12	
13	500		FIRE ALARM DIGITAL VOICE PANEL	RECEPT - DACT XFHR	180	14	
15	500		FIRE ALARM AMPLIFIER PANEL	FIRE ALARM CONTROL PANEL	500	16	

TOTAL LOAD: #A: 6660 V.A. #B: 6660 V.A. #C: 5080 V.A.
L.C.L. x 25%: 6660 V.A. 55 A 6660 V.A. 55 A 5080 V.A. 43 A

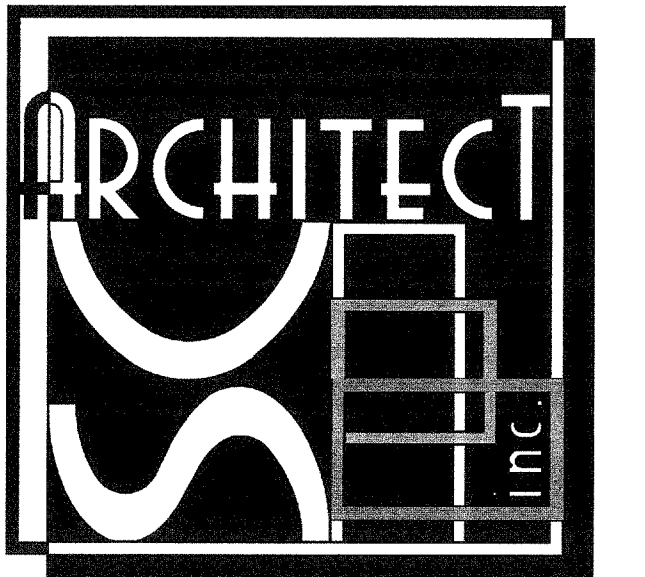
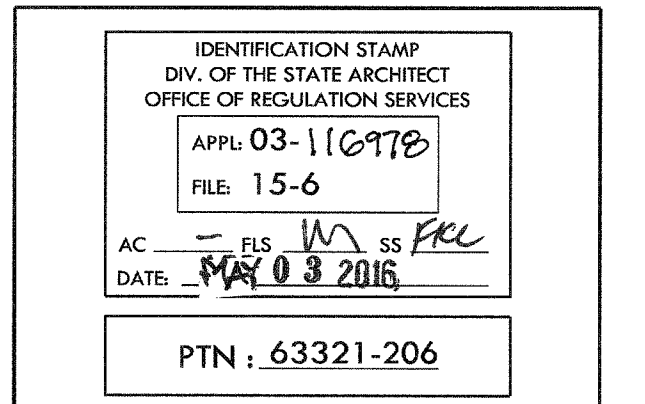
PANEL SCHEDULE NOTES:

- (1) PROVIDE NEW CIRCUIT BREAKER, AMP RATING AS SHOWN.

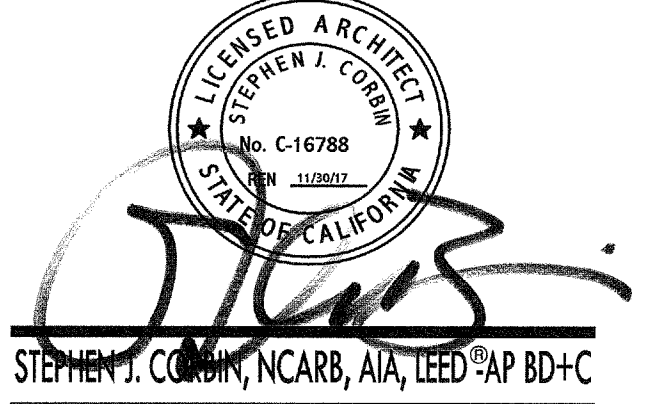
MARK	DATE	REVISIONS
Δ		
Δ		
Δ		

CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH THE WORK. REPORT DISCREPANCIES TO THE ARCHITECT. ALL CONSTRUCTION SHALL CONFORM TO THE C.B.C.

HORACE MANN ELEMENTARY SCHOOL
SITE IMPROVEMENTS FOR (4) MODULAR CLASSROOMS
2710 NILES STREET
FOR
BAKERSFIELD SCHOOL DISTRICT
BAKERSFIELD, KERN COUNTY, CALIFORNIA



1601 NEW STINE ROAD, SUITE 280
BAKERSFIELD, CA 93309
PH: (661) 397-4377
FAX: (661) 397-4378
WWW.SCARCHITECT.COM



ONE LINE DIAGRAM AND PANEL SCHEDULE

JOB NO. 1218
DRAWN: CS
CHECKED: DS
DATE: 04-26-16

4.1
OF SHEETS

Z:\Working\Jobs\NSA\SCHOOL\BFLD\Bakersfield City Schools\Voice Memo\EA1.dwg DATE PLOTTED: 04/22/16 BY: Casey JOB # 15098-JJ