

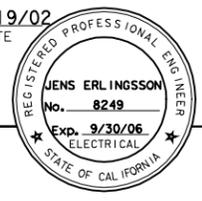


DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		91R1	1204

12/19/02  
 REGISTERED ELECTRICAL ENGINEER DATE

12-6-04  
 PLANS APPROVAL DATE

**PB POWER, Inc.**  
 A Parsons Brinckerhoff Company  
 303 Second St., Suite 700N  
 San Francisco, CA 94107-1317



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Caltrans now has a web site To get to the web site, go to <http://www.dot.ca.gov>

**SYMBOLS**

(See ES-1A and ES-1B for Additional Standard Symbols)

**LAYOUT PLAN**

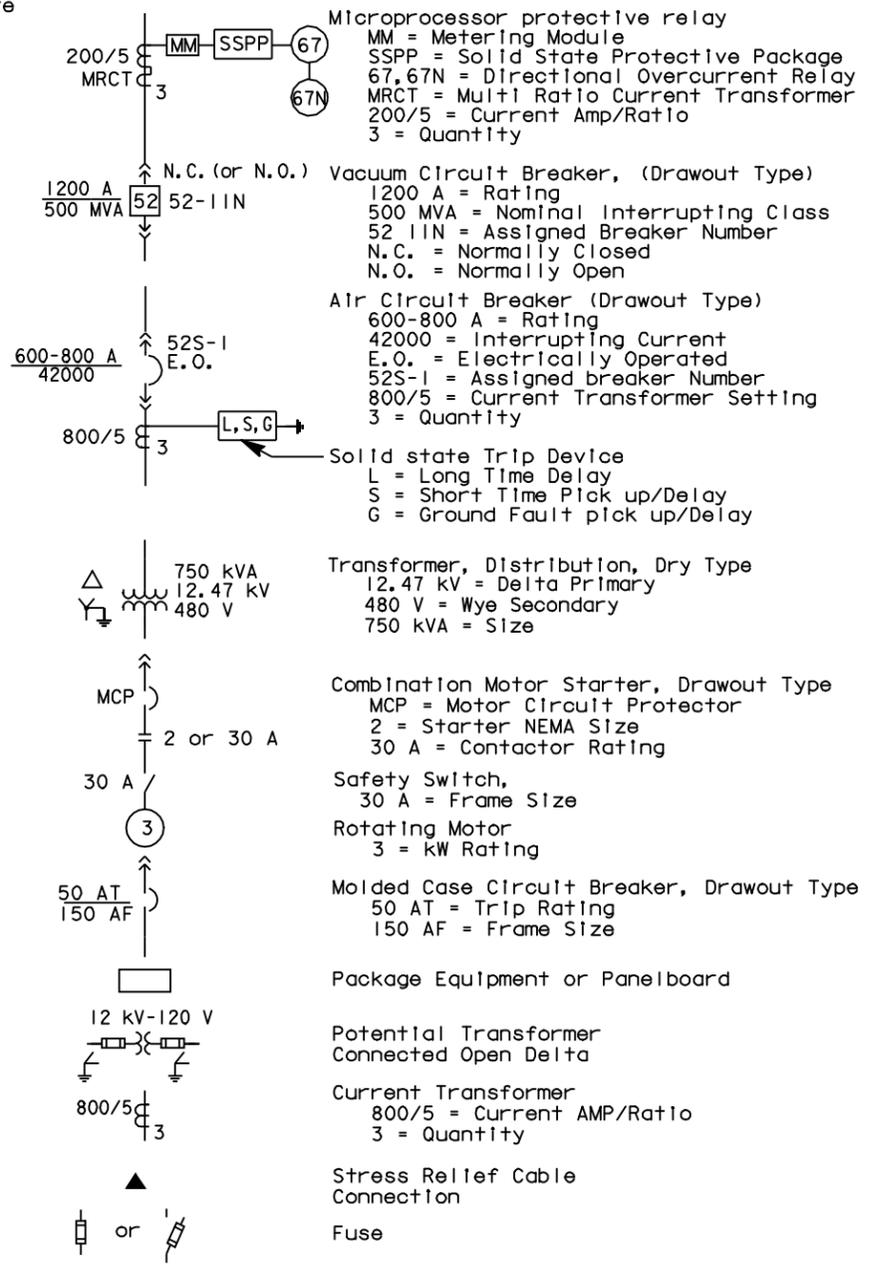
- Barrier Pull Box, for type and size, see Pull Box Schedule
- Pull Box PB-2A for type and size, see Pull Box Schedule
- Conduit Coupling
- Equipment or Material Designation  
A=Sequential description  
I=Sequential number
- Sheet Notes, applicable only to the Drawing  
I=Sequential number
- Project Notes, Applicable for all Drawings  
I=sequential number
- Junction Box, Conduit Fitting
- Electrical Equipment or Indicated on Plan Drawings
- Pole Mounted Lighting Fixture- See Lighting Pole Schedule for Type and Quantity
- Fluorescent Lighting Fixture
- Compact Fluorescent Lighting Fixture, Ceiling Mounted or main cable and suspender base metal halide lighting fixture
- Compact Fluorescent Lighting Fixture Wall Mounted
- Soffit Lighting Fixture or tower marker light
- Navigation Channel Marker Light - Green Color
- Navigation Pier Marker Light - Red Color
- Aviation Lighting
- Fog Detector
- Fog Horn
- Pole Flood Light
- Single Receptacle, 20 A, 125 V, Straight blade, with deep single gang weatherproof and threaded cap
- Duplex Receptacle, 125 V, 20 A  
MH=450 mm above floor unless noted  
GFCI=Ground Fault Circuit Interrupter  
WP=Weatherproof
- Single Pole Switch, 120/277 V, 20 A  
a - Indicates Fixtures controlled  
WP - Weatherproof Cover  
MH - 1400 mm unless noted
- Three-way switch, 120/277 V, 20 A  
a - Indicates Fixtures controlled  
WP - Indicates Weatherproof Cover  
MH - 1400 mm unless noted
- Four-way switch, 120/277 V, 20 A  
a - Indicates Fixtures controlled  
WP - Indicates Weatherproof Cover  
MH - 1400 mm unless noted
- Disconnect Switch  
30 A-Frame size
- Conduit turned up
- Conduit turned down
- Conduit or Cable run, exposed
- Conduit run concealed in wall, concrete barrier, slab or routed underground duct bank
- Combination Expansion - Deflection fittings
- Flexible Conduit
- Cable Tray
- Cables or Conduit down to Equipment (see plan for conduit number)

- Call Box, State furnished
- Ground Bare Copper Wire, Stranded
- Cable To Cable Exothermic Type Ground Connections
- Cable Ground Connection to Equipment, Compression Type
- Cable with Pigtail Ground Connections (see plan for length)

**TRAFFIC OPERATIONS SYSTEMS (TOS)**

- CCTV Camera (Mounted at Lighting Pole)
- Changeable Message Sign
- Preformed Loops
- Microwave Vehicle Detection Sensor (Mounted at Lighting Pole)
- Ramp Meter Signal

**SINGLE LINE DIAGRAM**



8-06-07	Revision to misc. electric work, Change roadway barrier receptacle type per RFI-242.	MP	EL	RR	42
MARK	DATE	DESCRIPTIONS	BY	CK	CCO
		REVISIONS			

CONTRACT CHANGE ORDER NO. 42  
 SHEET x OF xx

**ELEMENTARY/CONNECTION DIAGRAMS**

- Signal Cable with Shield
- Contact, Normally open
- Contact, Normally Closed
- Relay, Mechanical  
M = Motor  
C = Contactor  
42 = Running Circuit Breaker  
X or Y = Auxiliary  
R = Industrial  
TD = Time Delay  
PEC = Photo Electric Control
- Motor Starter Overload Relay Thermal Bimetallic Element (OL-Overload)
- ON/OFF Switch
- DC Batteries
- AC/DC Inverter (Battery Charger/Rectifier)
- End Resistor and Capacitor
- Photoelectric Sensor
- Communication Cable Noise Suppressor
- Terminal Block
- Duplex Receptacle
- Cabinet Fluorescent Light

**DEVICE NUMBER DEFINITIONS**

- 27B 12.47 kV Bus Undervoltage Relay
- 27D DC Undervoltage Relay
- 27F Feeder Undervoltage Relay
- 27UV 480 V Bus Undervoltage Relay
- 42 Running Circuit Breaker
- 43/R Manual Transfer / Remote
- 43/L Manual Transfer / Local
- 49 Thermal Relay
- 50 Instantaneous Overcurrent Relay
- 51 AC Time Overcurrent Relay
- 51/51N Phase and Ground Fault Time Overcurrent Relay
- 52 AC Circuit Breaker
- 67 AC Directional Overcurrent Relay
- 67N AC Directional Ground Overcurrent Relay
- 86 Lock-Out Relay
- 88 Auxiliary Motor

**ELECTRICAL SYMBOLS**

NO SCALE



REGISTERED ELECTRICAL ENGINEER

REVISOR: BEHZAD GOLEHAMMADI  
 DATE: 08/02  
 CHECKED BY: JW  
 DATE: 09/02  
 DESIGN OVERSIGHT: BEHZAD GOLEHAMMADI  
 DEPARTMENT OF TRANSPORTATION

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

DGN FILE => 04-0120f1\_0091R01.dgn  
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DATE PLOTTED => 29-AUG-2007  
 TIME PLOTTED => 16:31