

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
STRUCTURE PLANS	
2	GENERAL PLAN AND LEGEND
3-7	ELECTRICAL PLANS

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

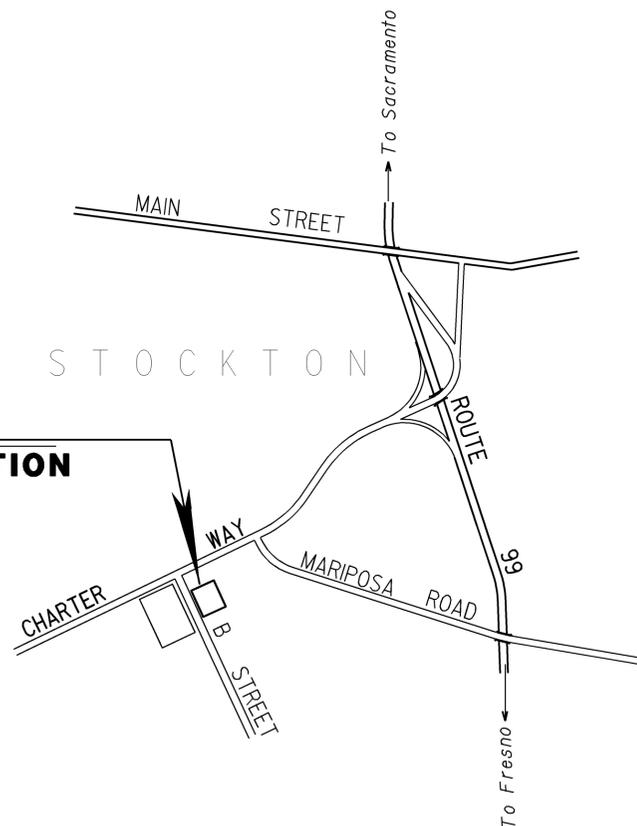
PROJECT PLANS FOR BUILDING CONSTRUCTION  
IN SAN JOAQUIN COUNTY  
IN STOCKTON AT THE  
STOCKTON MAINTENANCE STATION  
AT 1604 B STREET

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	5721		1	7



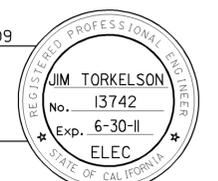
LOCATION OF CONSTRUCTION  
STOCKTON MAINTENANCE STATION  
LOCATION CODE 5721



**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
Reviewed by: *[Signature]*  
JASON D. DEWITT  
Approval date: 01-21-10  
PHOTOVOLTAIC SYSTEM  
CSFM FILE #01-19-11-0141

PROJECT MANAGER  
ARVINDER BAJWA  
DESIGN ENGINEER  
JIM TORKELSON

*[Signature]* 11-16-09  
PROJECT ENGINEER DATE  
REGISTERED ELECTRICAL ENGINEER



04-08-10  
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

CONTRACT No. **10-0AA004**

DIST.	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5721		2	7

REGISTERED ELECTRICAL ENGINEER DATE 11-16-09  
 JIM TORKELOSON No. 13742 Exp. 6-30-11 ELEC STATE OF CALIFORNIA  
 04-08-10 PLANS APPROVAL DATE  
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

## INDEX OF SHEETS

SHEET NO.	DESCRIPTION
GP	GENERAL PLAN
<b>ELECTRICAL</b>	
EE-1	PARTIAL SITE PLAN
EE-2	ROOF PLANS
EE-3	SINGLE LINE DIAGRAM - BLDG #4 & #6
EE-4	SINGLE LINE DIAGRAM - BLDG #3 & #7
EE-5	DETAILS

## ASSUMED BUILDING DATA

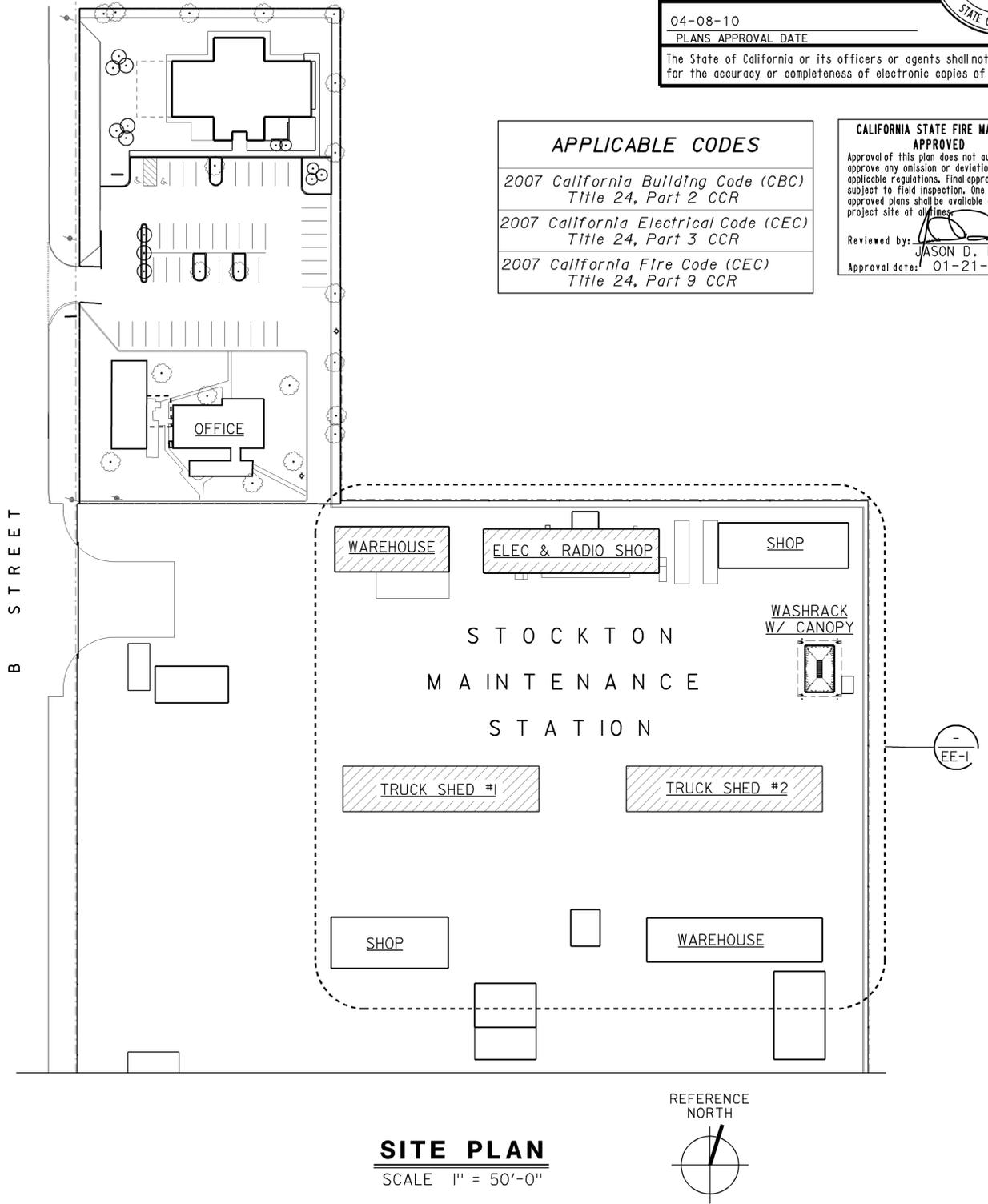
**BLDG NO.3 WAREHOUSE / PAINT STORAGE BLDG**  
 BUILDING TYPE: BASED ON 2007 CBC V-B  
 OCCUPANCY GROUP : SI  
 ACTUAL BUILDING AREA: 2,418 SF  
 ALLOWABLE SF : 2007 CBC CHAPTER 5 9,000 SF  
**ROOF DATA**  
 CORRUGATED METAL ROOFING OVER WOOD PURLINS OVER STRUCTURAL STEEL TRUSS  
**BLDG NO.4 ELECTRIC & RADIO SHOPS**  
 BUILDING TYPE: BASED ON 2007 CBC V-B  
 OCCUPANCY GROUP : SI  
 ACTUAL BUILDING AREA : 3,600 SF  
 ALLOWABLE SF : 2007 CBC CHAPTER 5 9,000 SF  
**ROOF DATA**  
 CORRUGATED METAL ROOFING OVER WOOD PURLINS OVER STRUCTURAL STEEL TRUSS  
**BLDG NO.6 TRUCK SHED NO.1**  
 BUILDING TYPE: BASED ON 2007 CBC V-B  
 OCCUPANCY GROUP: SI  
 ACTUAL BUILDING AREA: 4,154 SF  
 ALLOWABLE SF : 2007 CBC CHAPTER 5 9,000 SF  
**ROOF DATA**  
 CORRUGATED METAL ROOFING OVER WOOD PURLINS OVER STRUCTURAL STEEL TRUSS  
**BLDG NO.7 TRUCK SHED NO.2**  
 BUILDING TYPE: BASED ON 2007 CBC V-B  
 OCCUPANCY GROUP: CBC CHAPTER 3 SI  
 ACTUAL BUILDING AREA: 4,154 SF  
 ALLOWABLE SF : 2007 CBC CHAPTER 5 9,000 SF  
**ROOF DATA**  
 CORRUGATED METAL ROOFING OVER WOOD PURLINS OVER STRUCTURAL STEEL TRUSS  
 YEAR BUILT 1956

## LEGEND

	CONDUIT EXPOSED
	CONDUIT, METALLIC UNDERGROUND
	CONDUIT, POLYVINYL CHLORIDE, UNDERGROUND
	CONDUIT, FLEXIBLE
	CONDUIT, TURN UP
	CONDUIT, TURN DOWN
	CIRCUIT BREAKER
	GROUNDING ELECTRODE
	ENCLOSURE BOND
	ADAPTER, ONE TYPE CONDUIT TO ANOTHER
	EXISTING JUNCTION BOX
	EXISTING UNDERGROUND CONDUIT AND CONDUCTORS - REMOVE
	EXISTING CONDUIT AND CONDUCTORS-TO REMAIN UNLESS OTHERWISE NOTED
	SECTION/ELEVATION LETTER
	SHEET NUMBER
	DETAIL NUMBER
	SHEET NUMBER
	LOCATION OF WORK

## ABBREVIATIONS

Ø	PHASE	G	GROUND
A	AMPERE	JB	JUNCTION BOX
AC	ALTERNATING CURRENT	KW	KILOWATT
Ah	AMPERES - HOUR	MB	MAIN BREAKER
AL	ALUMINUM	MC	METALLIC CONDUIT
BC	BATTERY CHARGER	MDP	MAIN DISTRIBUTION PANEL
BLDG	BUILDING	MIN	MINIMUM
C	CONDUIT	MT	EMPTY CONDUIT
CB	CIRCUIT BREAKER	(N)	NEW
CKT	CIRCUIT	P	POLE
DC	DIRECT CURRENT	PB	PULL BOX
DP	DUPLEX RECEPTACLE	PTC	PV USA TEST CONDITIONS
(E)	EXISTING	PV	PHOTOVOLTAIC
EO	ELECTRICALLY OPERATED	STC	STANDARD TEST CONDITIONS
ELEC	ELECTRICAL	TYP	TYPICAL
		V	VOLTS



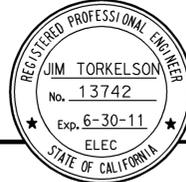
J. Torkelson  
 DESIGN SUPERVISOR  
 Alan M. Torres  
 DESIGN ENGINEER

DESIGN	BY J. Torkelson	CHECKED Tech Ngov
DETAILS	BY J. Kwong	CHECKED Tech Ngov
QUANTITIES	BY J. Torkelson	CHECKED Alan Torres

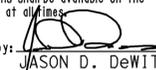
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

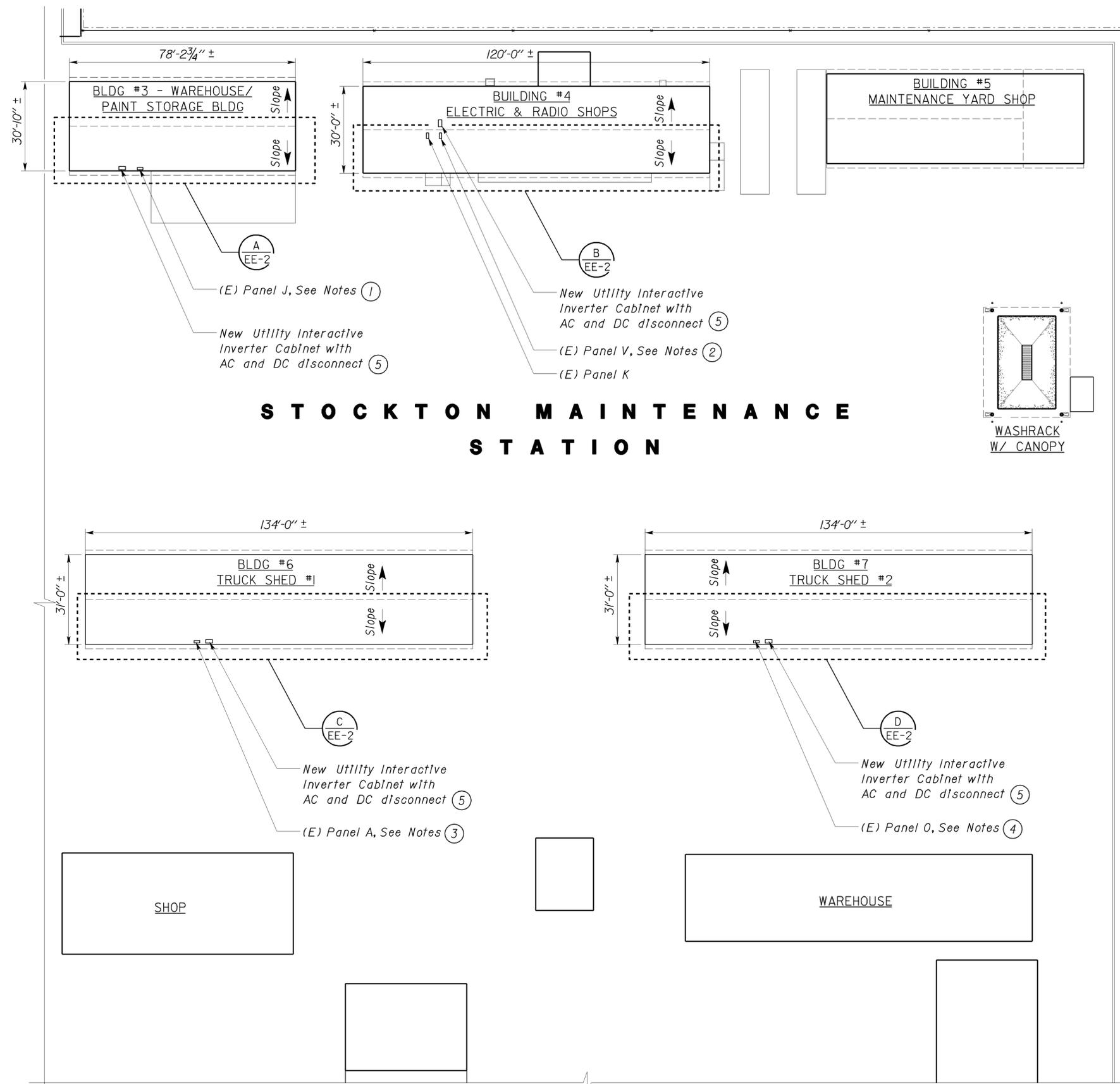
BRIDGE NO.	29M5721	POST MILE	-
STOCKTON MAINTENANCE STATION PHOTOVOLTAIC SYSTEM			
GENERAL PLAN			
SHEET	GP	SHEET	OF

DIST.	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5721		3	7


 REGISTERED ELECTRICAL ENGINEER DATE 11-16-09  
 PLANS APPROVAL DATE 04-08-10

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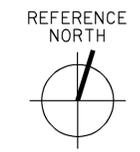
**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
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 Reviewed by:   
 JASON D. DEWITT  
 Approval date: 01-21-10



**STOCKTON MAINTENANCE STATION**

*Notes:*

- ① (E) Panel J is a wall mounted 100-Ampere, 120/240-volt, single-phase panelboard fed from Panel K in Building #4. There is a 100-Ampere fused disconnect switch mounted next to Panel J. Replace the (E) disconnect switch with a new 100-Ampere fused, two-pole disconnect switch with the required multiple load side lugs to feed (E) Panel J and the new Utility Interactive System. See sheet EE-3.
- ② (E) Panel V is a wall mounted 125-Ampere, 120/240-volt, three-phase panelboard fed from Panel K in Building #4. Intercept the conduit feeding Panel V and install a new 100-Ampere, three-pole fused disconnect switch with the required multiple load side lugs to feed (E) Panel V and the new Utility Interactive System. See sheet EE-3.
- ③ (E) Panel A is a wall mounted 100-Ampere, 120/240-volt, three-phase panelboard fed from Panel K in Building #4. Intercept the conduit feeding Panel A and install a new 100-Ampere, three-pole fused disconnect switch with the required multiple load side lugs to feed (E) Panel A and the new Utility Interactive System. See sheet EE-3.
- ④ (E) Panel O is a wall mounted 125-Ampere, 120/240-volt, single-phase panelboard fed from Panel K in Building #4. Intercept the conduit feeding Panel O and install a new 100-Ampere, two-pole fused disconnect switch with the required multiple load side lugs to feed (E) Panel V and the new Utility Interactive System. See sheet EE-3.
- ⑤ Install the new Utility Interactive Inverter Cabinet on the wall at Buildings #3 and #7 using the available space near the (E) Panelboard. The Utility Interactive Inverter Cabinet at building #4 and #6 shall be floor mounted. Route the conduit up the wall and penetrate the roof for connection to the new PV Array Circuit Combiner Box.



**PARTIAL SITE PLAN**

SCALE 1" = 20'-0"

THIS DRAWING ACCURATE FOR ELECTRICAL WORK ONLY.

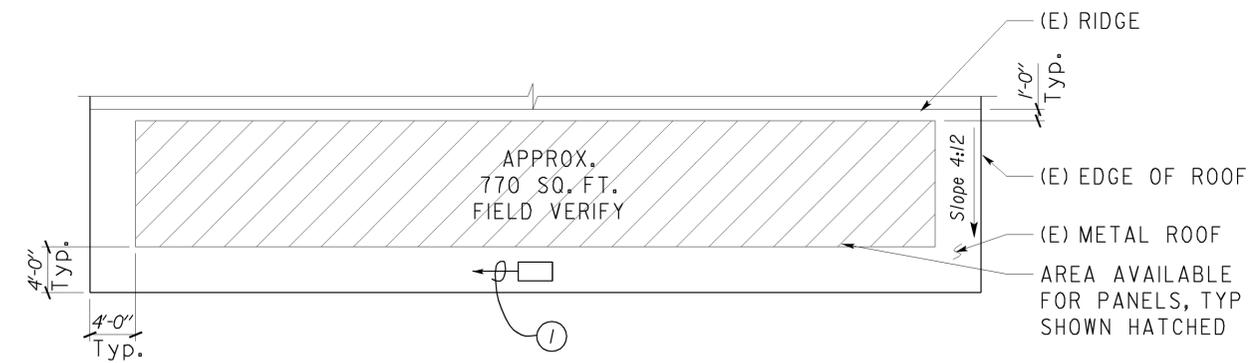
DESIGN BY <i>J. Torkelson</i>	CHECKED <i>Tech Ngov</i>	STATE OF CALIFORNIA		BRIDGE NO. 29M5721	STOCKTON MAINTENANCE STATION PHOTOVOLTAIC SYSTEM		SHEET EE-1
		DEPARTMENT OF TRANSPORTATION			PARTIAL SITE PLAN		
		DETAILS BY <i>J. Kwong</i>	CHECKED <i>Tech Ngov</i>		ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN		
QUANTITIES BY <i>J. Torkelson</i>	CHECKED <i>Alan Torres</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 10116 EA 0AA001	10/1/09	12/2/09	

DIST.	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5721		4	7

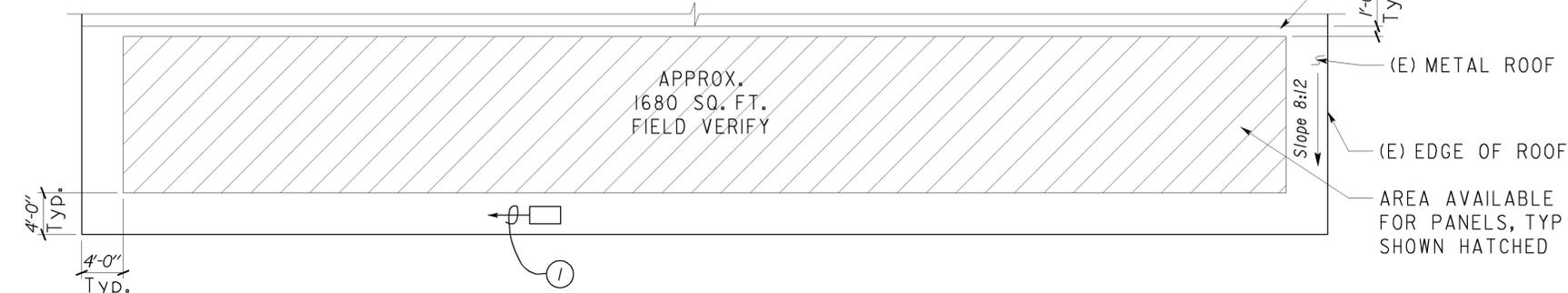
**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
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 Reviewed by: Jason D. DeWitt  
 Approval date: 01-21-10

Jim A. Torkelson 11-16-09  
 REGISTERED ELECTRICAL ENGINEER DATE  
 No. 13742  
 Exp. 6-30-11  
 ELEC  
 STATE OF CALIFORNIA

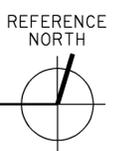
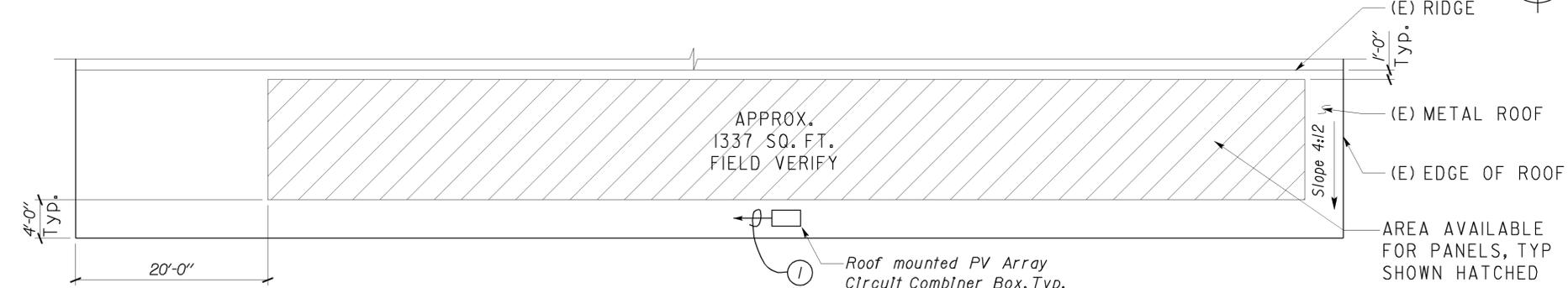
04-08-10  
 PLANS APPROVAL DATE  
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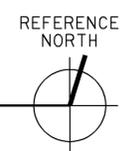
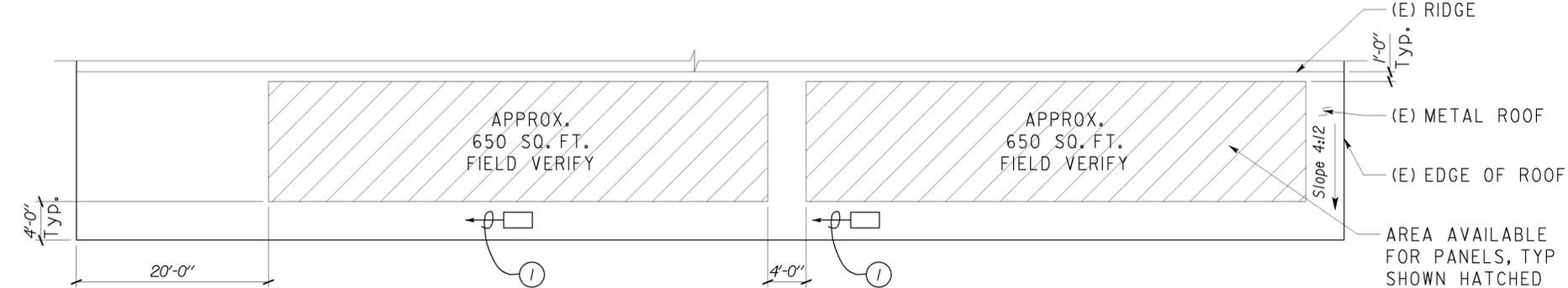
**A ROOF PLAN - BUILDING #3**  
 SCALE 1/8" = 1'-0"



**B ROOF PLAN - BUILDING #4**  
 SCALE 1/8" = 1'-0"



**C ROOF PLAN - BUILDING #6**  
 SCALE 1/8" = 1'-0"



**D ROOF PLAN - BUILDING #7**  
 SCALE 1/8" = 1'-0"

Note:

① 2" C with DC conductors and equipment grounding conductor to Utility Interactive System, see Sheet EE-1.

General Note:

A. Mount all PV arrays parallel to roof.

THIS DRAWING ACCURATE FOR ELECTRICAL WORK ONLY.

DESIGN	BY <u>J. Torkelson</u>	CHECKED <u>Tech Ngov</u>
DETAILS	BY <u>J. Kwong</u>	CHECKED <u>Tech Ngov</u>
QUANTITIES	BY <u>J. Torkelson</u>	CHECKED <u>Alan Torres</u>

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

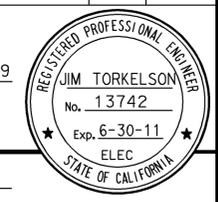
BRIDGE NO.	29M5721
POST MILE	-

**STOCKTON MAINTENANCE STATION PHOTOVOLTAIC SYSTEM**  
 ROOF PLANS

SHEET **EE-2** OF

DIST.	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5721		5	7

	
 REGISTERED ELECTRICAL ENGINEER	11-16-09 DATE
04-08-10 PLANS APPROVAL DATE	
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**Photovoltaic Module**

PV modules shall be polycrystalline silicon cell type module, with Interconnection connectors rated for 90°C. PV modules shall be UL 1703 listed, with a maximum system voltage of 600 VDC. PV module manufacturer shall be one of those manufacturers listed as an eligible California Solar Initiative (CSI) PV module manufacturer.

**Photovoltaic Array Circuit Combiner Box**

PV array circuit combiner box shall be factory assembled, 600 VDC rated combiner box, with fused input circuits, two isolated DC bus bars, ground bus bar, all enclosed inside NEMA 3R lockable hinged cover enclosure. The combiner box shall be UL 1741 listed.

PV array circuit combiner box shall have the following components:

- DIN rail mounted touch safe fuse holders with fuse.
- Positive DC bus bar, negative DC bus bar and ground bus bar.
- DIN rail mounted Grid-Tie surge arrester: The surge arrester shall be rated to withstand 20 kA (8/20 micro second) induced transient surge type, and compatible to use with grounded PV arrays.

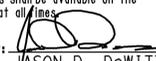
**Utility Interactive Inverter Cabinet**

Utility Interactive Inverter cabinet shall be outdoor type, factory assembled cabinet consisting of the following equipment:

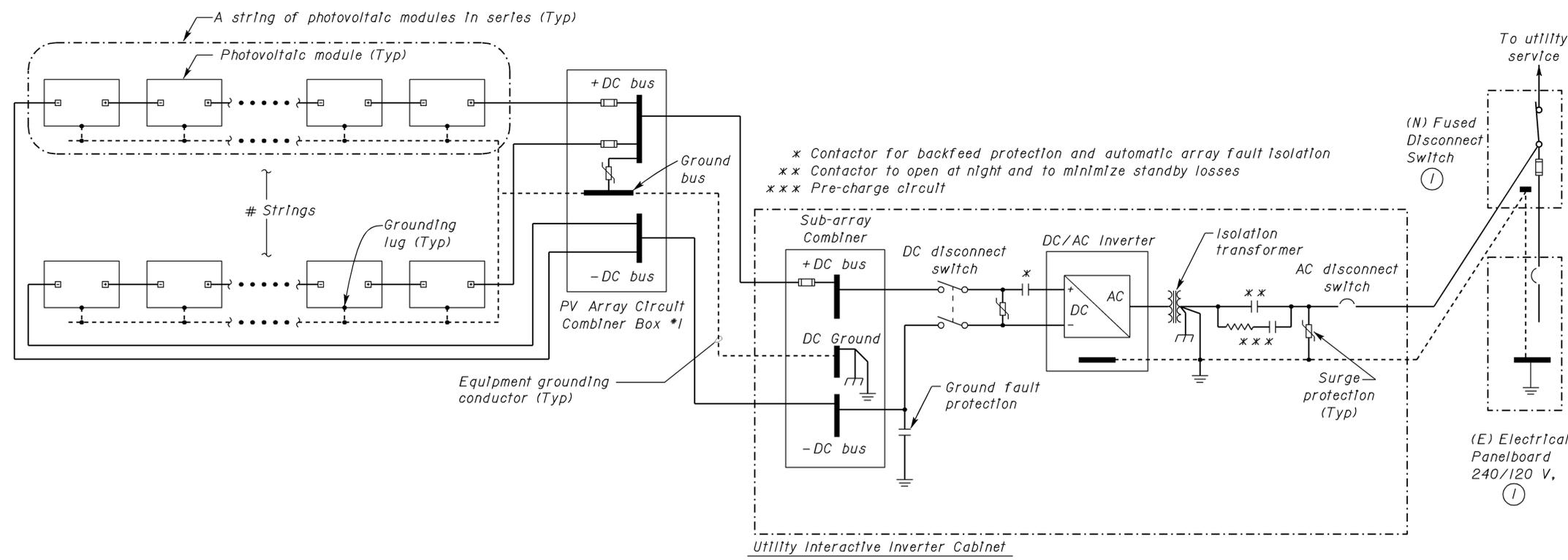
- DC/AC Inverter: DC/AC Inverter rated at maximum continuous output power of 13 kW (13 kVA), 240/120 V, 3-phase, 4-wire, at a power factor of 0.99 or greater, efficiency 95.5%, with input operating voltage range between 225 to 380 VDC, and maximum DC input current shall be 60 A. Inverter shall be capable of operating at ambient temperature range (Full power) of -4°F to +122°F. DC/AC Inverter manufacturer shall be one of those manufacturers listed as an eligible California Solar Initiative (CSI) DC/AC Inverter manufacturer.
- Fused sub-array combiner, with minimum of 4 array inputs for positive DC, negative DC, and DC ground bus bars. Positive array inputs fuse size to match loading.
- Built-in DC and AC disconnect switches, size to match loading.
- Integrated 15 kVA, 240/120 V, 3-phase, 4-wire, output isolation type transformer.
- Ground fault protection.
- Integrated AC and DC surge protections.
- Integrated AC and DC contactors.
- Pre-charge circuit.
- Human Machine Interface (HMI): AC/DC Inverter's HMI shall be equipped with LCD and keypad displaying main menu. HMI main menu shall display system monitoring, status and faults, and operation. Monitoring menu shall display system status, metering, daily, weekly and monthly energy production. Status and faults menu shall display status messages, system output, and number of faults. Operation menu shall display control and settings.
- Local and remote monitoring systems capabilities.
- AC ground bus bars.
- NEMA 3R enclosure: Enclosure shall be NEMA 3R, 14-gauge, and powder-coated standard factory finish steel enclosure. All screws, latches, hinge pins and similar hardware shall be stainless steel. HMI, AC and DC disconnect switches and equipment rating labels shall be mounted on the exterior door. Exterior door shall have interlock switch and be lockable with a padlock. The cabinet shall have MEV13 rated filtered, top entry forced air cooling system with one fan, sloped roof, and shall be suitable for Seismic Design Category D compliance.

**CALIFORNIA STATE FIRE MARSHAL APPROVED**

Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.

Reviewed by:   
 JASON D. DEWITT  
 Approval date: 01-21-10

- General Notes:**
- Provide and install all necessary warning labels/markings, per Article 690 of California Electrical Code (CEC), and the State Fire Marshal's guideline for solar PV installation.
  - Solar PV installation shall comply with the latest guideline from California Department of Forestry & Fire Protection, Office of the State Fire Marshal and latest Program Handbook from California Solar Initiative (CSI).
- Notes:**
- See sheet EE-1 for specific details.



**Photovoltaic System Requirements**

Photovoltaic system complete design and installation details, inclusive of all engineering calculations signed by a Professional Engineer of the respective field (both Electrical and Civil Engineering) in the State of California, shall be submitted for approval by the Contractor. The PV design shall meet or exceed the following requirements:

- Total designed capacity of photovoltaic system at existing Building shall have CEC-AC rating of 12.5 kW. Number of PV modules per string shall be arranged in a manner to meet or exceed the following:
  - Maximum system voltage based on lowest expected ambient temperature at the site (Voc maximum on coldest day) shall be no less than 1% of the inverter's maximum input DC voltage range.
  - Maximum system power voltage, based on highest continuous ambient temperature at the site (Vmp on warmest day), shall be 20% greater than the inverter's minimum input DC voltage range.
- Photovoltaic system module row spacing shall be designed to prevent shading from adjacent module.
- All wiring, except at module interconnection, shall be concealed inside conduit system.
- Photovoltaic system modules structural support system shall be designed to withstand wind forces of 85-mile per hour.
- Photovoltaic system wiring and protective devices shall meet or exceed the requirements of all applicable codes.
- PV Array Circuit Combiner Boxes locations as shown are arbitrary only. Contractor shall install the combiner boxes at locations that best suit the photovoltaic system strings layout.

DOES SD Imperial Rev.10/09	DESIGN	BY J. Torkelson	CHECKED Tech Ngov	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	29M5721	STOCKTON MAINTENANCE STATION PHOTOVOLTAIC SYSTEM	SHEET <b>EE-3</b>	
	DETAILS	BY J. Kwong	CHECKED Tech Ngov			POST MILE	-			SINGLE LINE DIAGRAM - BLDG #4 & #6
	QUANTITIES	BY J. Torkelson	CHECKED Alan Torres	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 10116 EA 0AA001	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	11/17/09 12/2/09	SHEET OF

12-MAY-2010 13:32 ee\_03.dgn

DIST.	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5721		6	7

04-08-10	PLANS APPROVAL DATE
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**Photovoltaic Module**

PV modules shall be polycrystalline silicon cell type module, with interconnection connectors rated for 90°C. PV modules shall be UL 1703 listed, with a maximum system voltage of 600 VDC. PV module manufacturer shall be one of those manufacturers listed as an eligible California Solar Initiative (CSI) PV module manufacturer.

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**Photovoltaic Array Circuit Combiner Box**

PV array circuit combiner box shall be factory assembled, 600 VDC rated combiner box, with fused input circuits, two isolated DC bus bars, ground bus bar, all enclosed inside NEMA 3R lockable hinged cover enclosure. The combiner box shall be UL 1741 listed.

PV array circuit combiner box shall have the following components:

- DIN rail mounted touch safe fuse holders with fuse.
- Positive DC bus bar, negative DC bus bar and ground bus bar.
- DIN rail mounted Grid-Tie surge arrester: The surge arrester shall be rated to withstand 20 kA (8/20 micro second) induced transient surge type, and compatible to use with grounded PV arrays.

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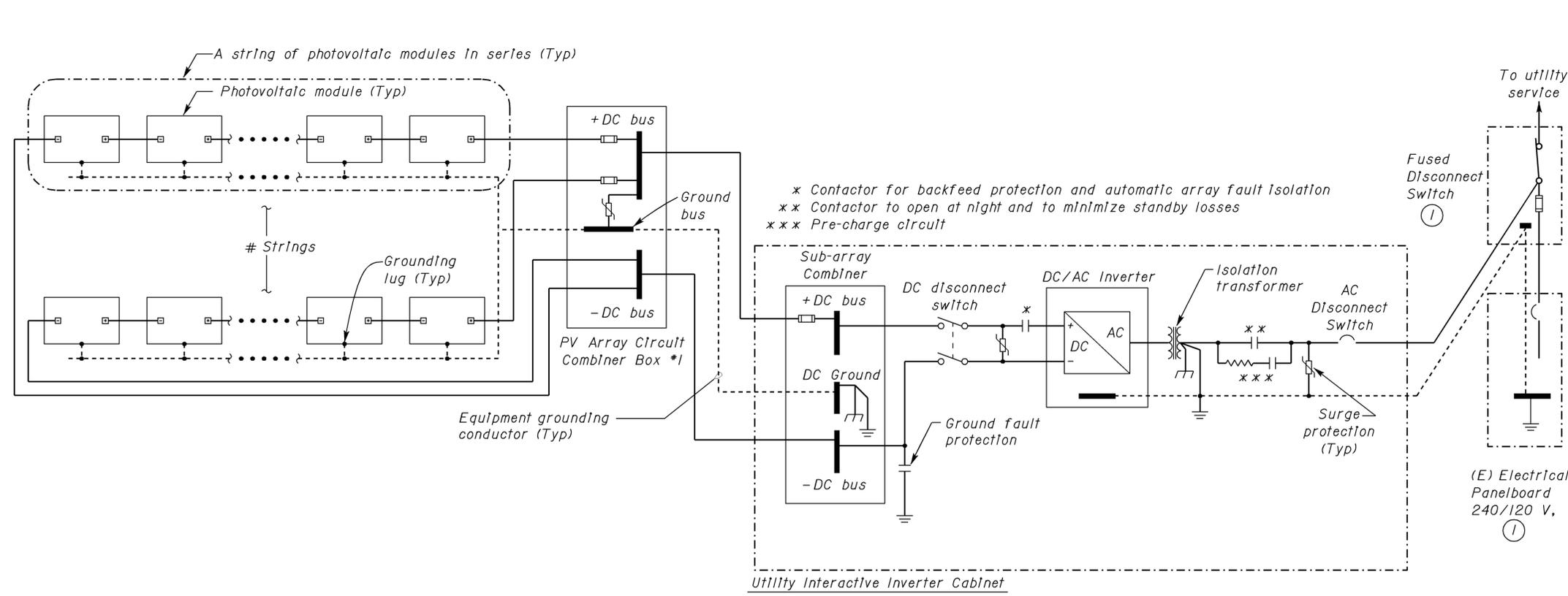
Reviewed by: JASON D. DeWITT  
Approval date: 01-21-10

**Utility Interactive Inverter Cabinet**

Utility Interactive Inverter cabinet shall be outdoor type, factory assembled cabinet consisting of the following equipment:

- DC/AC Inverter: DC/AC Inverter rated at maximum continuous output power of 5kW (5 kVA), 240/120 V, 1-phase, 3-wire, at a power factor of 0.99 or greater, efficiency 95.5%, with input operating voltage range between 212 to 264 VDC, and maximum DC input current shall be 22 A. Inverter shall be capable of operating at ambient temperature range (Full power) of -4°F to +122°F. DC/AC Inverter manufacturer shall be one of those manufacturers listed as an eligible California Solar Initiative (CSI) DC/AC Inverter manufacturer.
- Fused sub-array combiner, with minimum of 4 array inputs for positive DC, negative DC, and DC ground bus bars. Positive array inputs fuse size to match loading.
- Built-in DC and AC disconnect switches, size to match loading.
- Integrated 5kVA, 240/120 V, 1-phase, 3-wire, output isolation type transformer.
- Ground fault protection.
- Integrated AC and DC surge protections.
- Integrated AC and DC contactors.
- Pre-charge circuit.
- Human Machine Interface (HMI): AC/DC Inverter's HMI shall be equipped with LCD and keypad displaying main menu. HMI main menu shall display system monitoring, status and faults, and operation. Monitoring menu shall display system status, metering, daily, weekly and monthly energy production. Status and faults menu shall display status messages, system output, and number of faults. Operation menu shall display control and settings.
- Local and remote monitoring systems capabilities.
- AC ground bus bars.
- NEMA 3R enclosure: Enclosure shall be NEMA 3R, 14-gauge, and powder-coated standard factory finish steel enclosure. All screws, latches, hinge pins and similar hardware shall be stainless steel. HMI, AC and DC disconnect switches and equipment rating labels shall be mounted on the exterior door. Exterior door shall have interlock switch and be lockable with a padlock. The cabinet shall have MEV13 rated filtered, top entry forced air cooling system with one fan, sloped roof, and shall be suitable for Seismic Design Category D compliance.

- General Notes:**
- Provide and install all necessary warning labels/markings, per Article 690 of California Electrical Code (CEC), and the State Fire Marshal's guideline for solar PV installation.
  - Solar PV installation shall comply with the latest guideline from California Department of Forestry & Fire Protection, Office of the State Fire Marshal and latest Program Handbook from California Solar Initiative (CSI).
  - Building #7 will have two identical 5kW Utility Interactive Systems fed from the new Fusible Disconnect Switch.
- Notes:**
- See sheet EE-1 for specific details at different locations



**Photovoltaic System Requirements**

Photovoltaic system complete design and installation details, inclusive of all engineering calculations signed by a Professional Engineer of the respective field (both Electrical and Civil Engineering) in the State of California, shall be submitted for approval by the Contractor. The PV design shall meet or exceed the following requirements:

- Total designed capacity of photovoltaic system at existing Building shall have CEC-AC rating of 5 kW. Number of PV modules per string shall be arranged in a manner to meet or exceed the following:
  - Maximum system voltage based on lowest expected ambient temperature at the site (Voc maximum on coldest day) shall be no less than 1% of the inverter's maximum input DC voltage range.
  - Maximum system power voltage, based on highest continuous ambient temperature at the site (Vmp on warmest day), shall be 20% greater than the inverter's minimum input DC voltage range.
- Photovoltaic system module row spacing shall be designed to prevent shading from adjacent module.
- All wiring, except at module interconnection, shall be concealed inside conduit system.
- Photovoltaic system modules structural support system shall be designed to withstand wind forces of 85-mile per hour.
- Photovoltaic system wiring and protective devices shall meet or exceed the requirements of all applicable codes.
- PV Array Circuit Combiner Boxes locations as shown are arbitrary only. Contractor shall install the combiner boxes at locations that best suit the photovoltaic system strings layout.

DESIGN	BY J. Torkelson	CHECKED Tech Ngov	STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES	BRIDGE NO.	STOCKTON MAINTENANCE STATION	SHEET
	BY J. Kwong	CHECKED Tech Ngov			29M5721		
DETAILS	BY J. Torkelson	CHECKED Alan Torres	DEPARTMENT OF TRANSPORTATION	ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	POST MILE	SINGLE LINE DIAGRAM - BLDG #3 & #7	EE-4
QUANTITIES							

DOES SD Imperial Rev. 10/09	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 10116 EA 0AA001	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
	0 1 2 3		10/1/09 12/2/09		

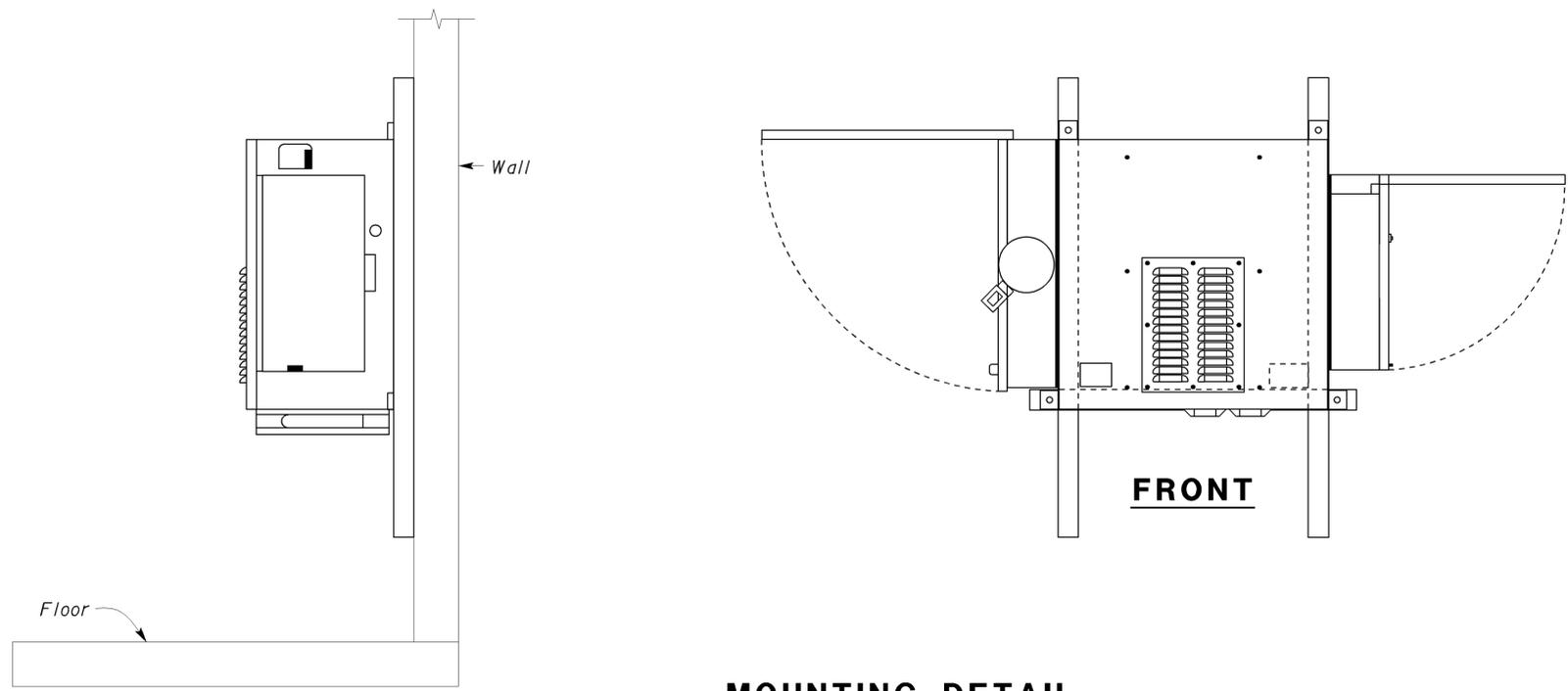
12-MAY-2010 13:32 ee\_04.dgn

DIST.	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
10	SJ	5721		7	7

REGISTERED ELECTRICAL ENGINEER: *Jim A. Torkelson* DATE: 11-16-09  
 No. 13742  
 Exp. 6-30-11  
 ELEC  
 STATE OF CALIFORNIA

04-08-10  
 PLANS APPROVAL DATE

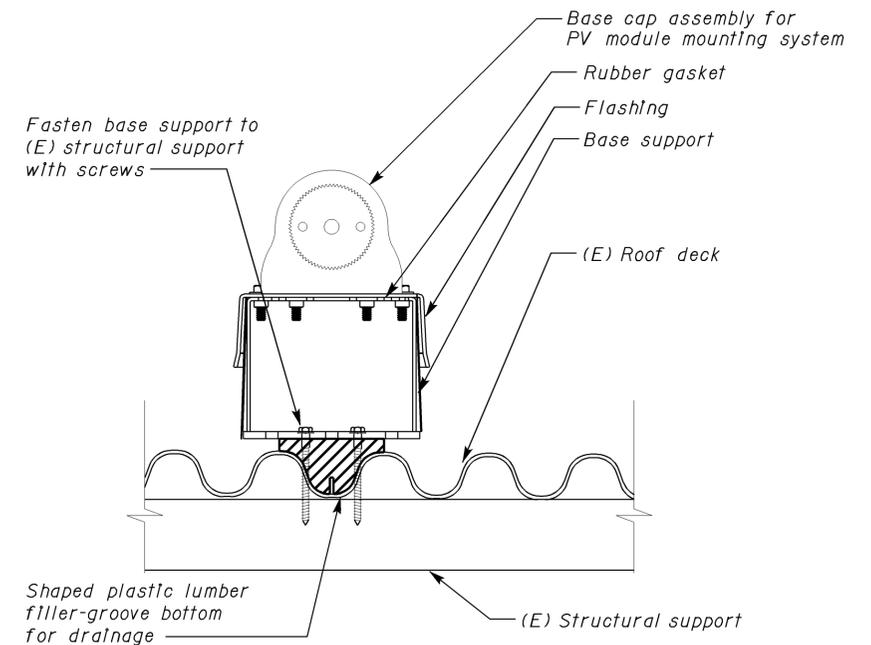
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



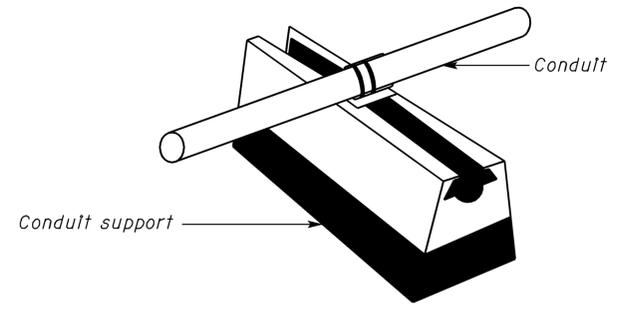
**1 MOUNTING DETAIL**  
**UTILITY INTERACTIVE INVERTER CABINET**

NO SCALE  
 Note: Support shall use standard method recommended by the Utility Interactive Inverter Cabinet manufacturer

**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
 Reviewed by: *JASON D. DeWITT*  
 Approval date: 01-21-10



**2 CORRUGATED DECKING**  
 NO SCALE



**1 ROOF EXPOSED CONDUIT SUPPORT**  
 NO SCALE

THIS DRAWING ACCURATE FOR ELECTRICAL WORK ONLY.

DESIGN	BY <i>J. Torkelson</i>	CHECKED <i>Tech Ngov</i>
DETAILS	BY <i>J. Kwong</i>	CHECKED <i>Tech Ngov</i>
QUANTITIES	BY <i>J. Torkelson</i>	CHECKED <i>Alan Torres</i>

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

BRIDGE NO.	29M5721	POST MILE	-
STOCKTON MAINTENANCE STATION PHOTOVOLTAIC SYSTEM			
DETAILS			

SHEET **EE-5** OF