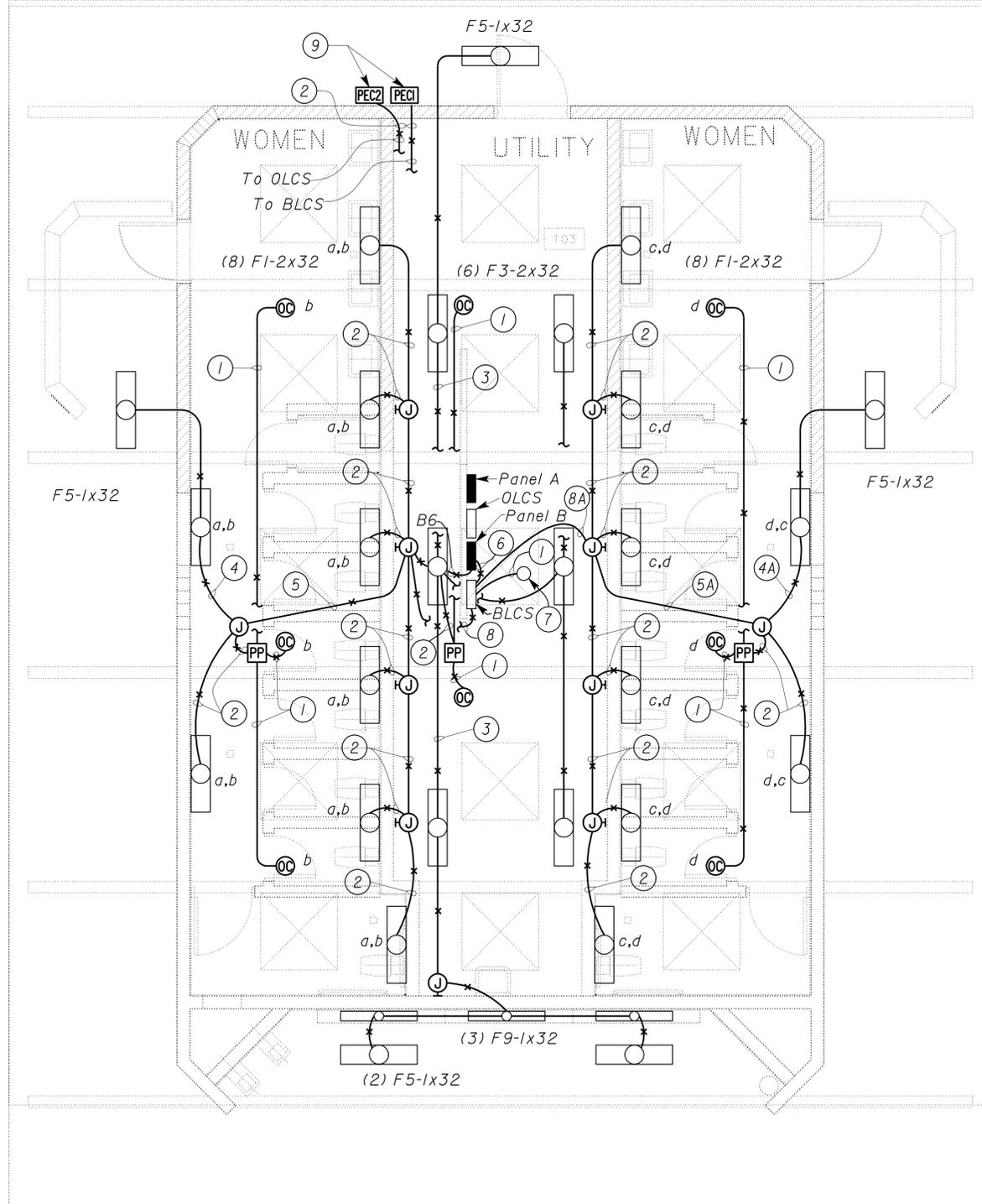
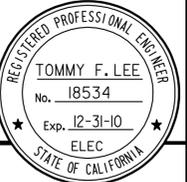


DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	301	335

**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
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 Reviewed by: *Sandy Mergullis*  
 SANDY MERGULLIS  
 Approval date: 12-1-09

*Tommy F. Lee* 12-22-09  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-9-10  
 PLANS APPROVAL DATE  
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**PLAN**  
 1/4" = 1'-0"

**General notes:**

- A. All occupancy sensor shall be ceiling mounted type sensors.
- B. For Building Lighting control schematic for restroom, see sheet EE2-7.
- C. For Outside Lighting control schematic, see sheet EE2-8.

**Notes:**

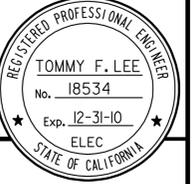
- ① 1/2"C. control cable/conductors as required.
- ② 1/2"C. 3\*12, 1\*12G.
- ③ 1/2"C. 4\*12, 1\*12G.
- ④ 1/2"C. 5\*12, 1\*12G. (N8, N12, 5, 6, 7A, & 1\*12G)
- ④A 1/2"C. 5\*12, 1\*12G. (N10, N12, 5, 8, 9A, & 1\*12G)
- ⑤ 3/4"C. 7\*12, 1\*12G. (B8, N8, N12, 5, 6, 7, 7A, & 1\*12G)
- ⑤A 3/4"C. 7\*12, 1\*12G. (B10, N10, N12, 5, 8, 9, 9A, & 1\*12G)
- ⑥ 3/4"C. 8\*12, 1\*12G. (B8, N8, B10, N10, B12, N12, B26, & N26)
- ⑦ Photo sensor mounted inside sky well per manufacturer recommendation.
- ⑧ 3/4"C. 7\*12, 1\*12G. (B8, N8, N12, 5, 6, 7, 7A, & 1\*12G)
- ⑧A 3/4"C. 7\*12, 1\*12G. (B10, N10, N12, 5, 8, 9, 9A, & 1\*12G)
- ⑨ Install PEC on the roof 1'-0" above roof floor and the PEC shall be facing towards north direction. Provide conduit flashing as required.

DESIGN BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE1-4
			POST MILE 22.4		
DETAILS BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		CU 06340 EA 0A9701	REVISION DATES (PRELIMINARY STAGE ONLY)	
QUANTITIES BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	0	1	2	3	DISREGARD PRINTS BEARING EARLIER REVISION DATES → 10/22/08 1/15/09 4/22/09 11/24/09 12/22/09
DOES SD Imperial Rev. 1/07				SHEET OF	

16-AUG-2010 09:43  
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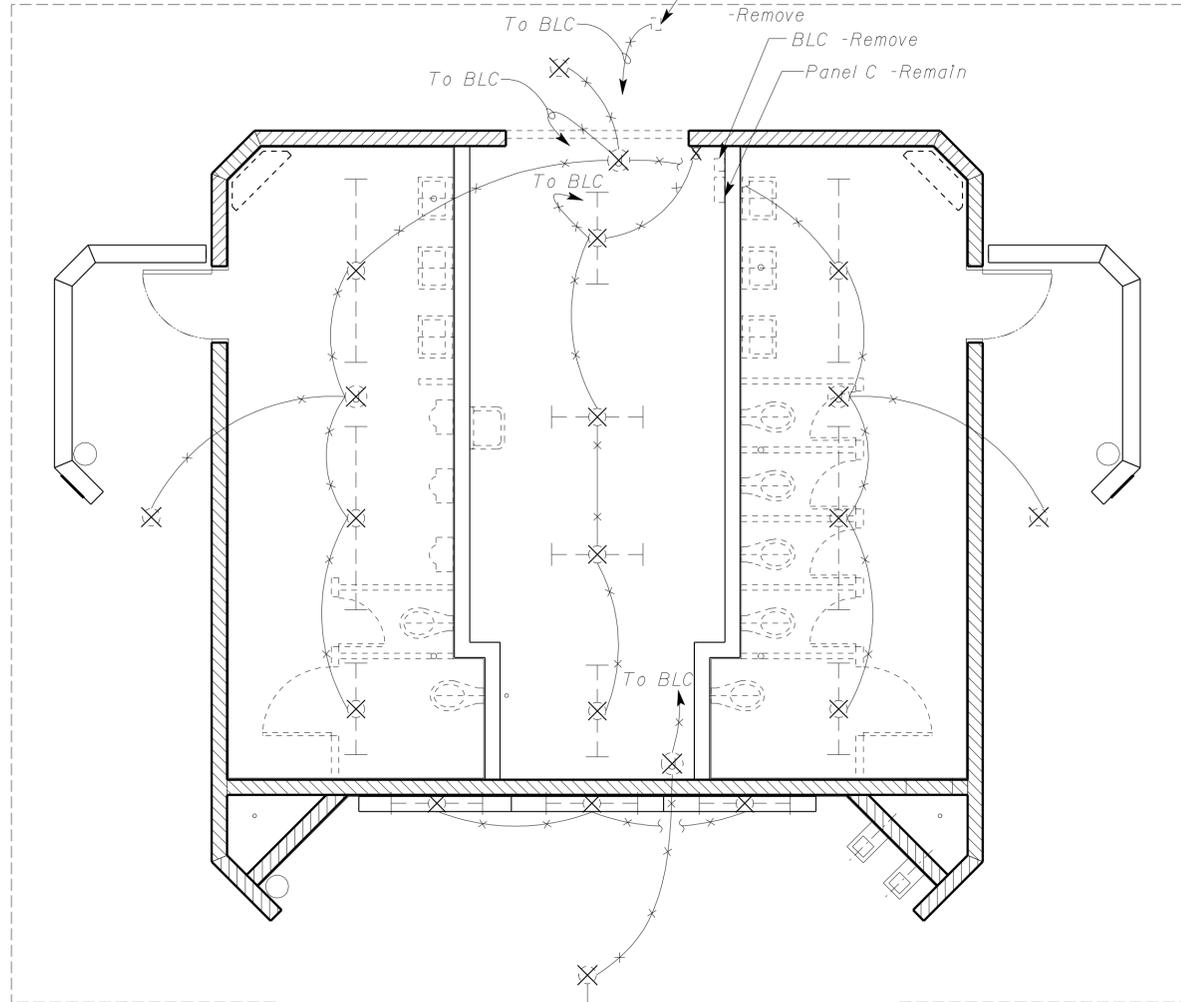
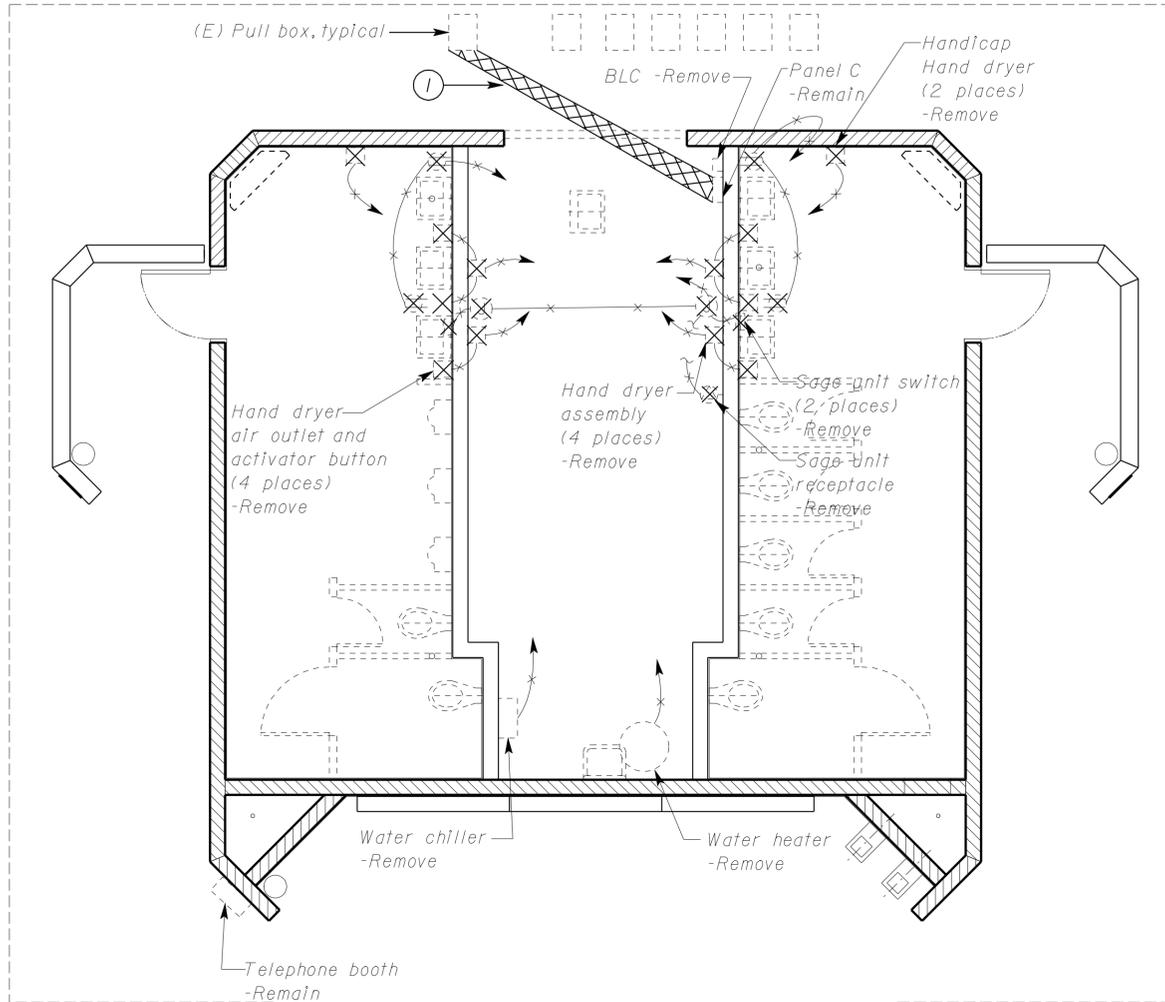
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	302	335

Tommy F. Lee 12-22-09  
 REGISTERED ELECTRICAL ENGINEER DATE



8-9-10  
 PLANS APPROVAL DATE  
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 Reviewed by: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09



**Note:**  
 ① Saw cut and remove concrete as indicated by crosshatched area for installation new underground conduit.

**POWER**

**LIGHTING**

**PLAN**  
 SCALE 1/4" = 1'-0"

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu
DETAILS	BY Tommy Lee	CHECKED Jesse S. Sandhu
QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu

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

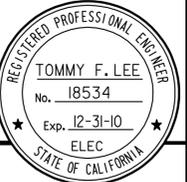
BRIDGE NO. 56R0003R 56R0003L	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-1
POST MILE 22.4		
EXISTING COMFORT STATION B		

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	303	335

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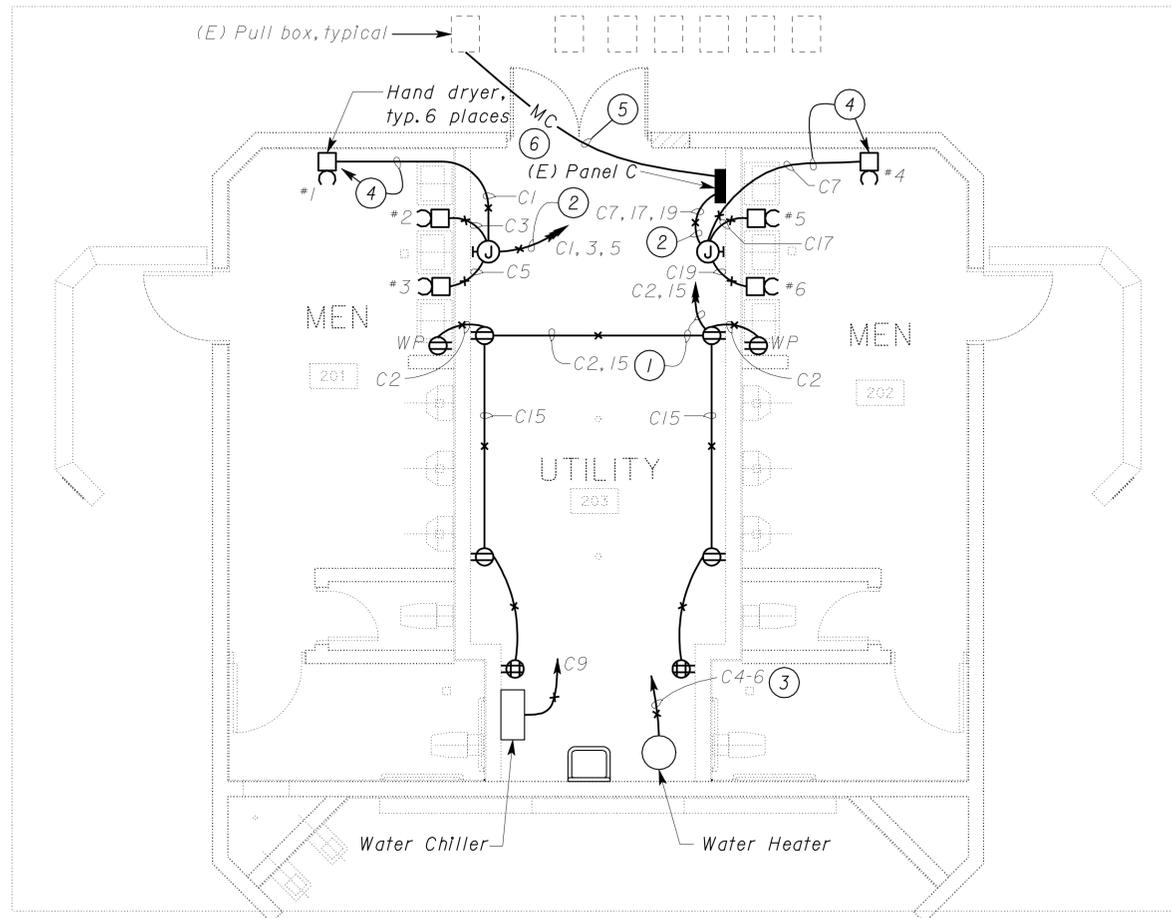
Reviewed by: *Sandy Margullis*  
**SANDY MARGULLIS**  
 Approval date: 12-1-09

*Tommy F. Lee* 12-22-09  
 REGISTERED ELECTRICAL ENGINEER DATE

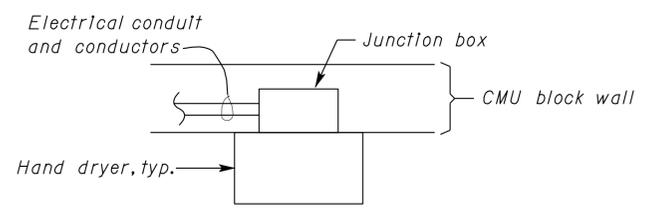


8-9-10  
 PLANS APPROVAL DATE

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- Notes:**
- ① 1/2" C, 4\*12, 1\*12G.
  - ② 1/2" C, 6\*12, 1\*12G.
  - ③ 1/2" C, 2\*10, 1\*10G.
  - ④ Install conduit and junction box inside existing CMU block wall, see Detail I this sheet.
  - ⑤ 2" C, 4\*4, 1\*6G supplying power from Panel C to new Panel E in CHP/Crew Building. Terminate conductors in circuits 14-16-18 at Panel C.
  - ⑥ After installation at new underslab conduit system, patch concrete floor to match existing floor.



**1** **DETAIL**  
 NO SCALE

**PLAN**  
 SCALE 1/4" = 1'-0"

DESIGN	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>
DETAILS	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>
QUANTITIES	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

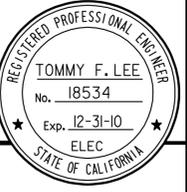
DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

BRIDGE NO. 56R0003R 56R0003L	<b>PHILIP RAINE SAFETY ROADSIDE REST AREA</b>	SHEET <b>EE2-2</b>
POST MILE 22.4		
<b>MODIFIED COMFORT STATION B - POWER I</b>		

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	304	335

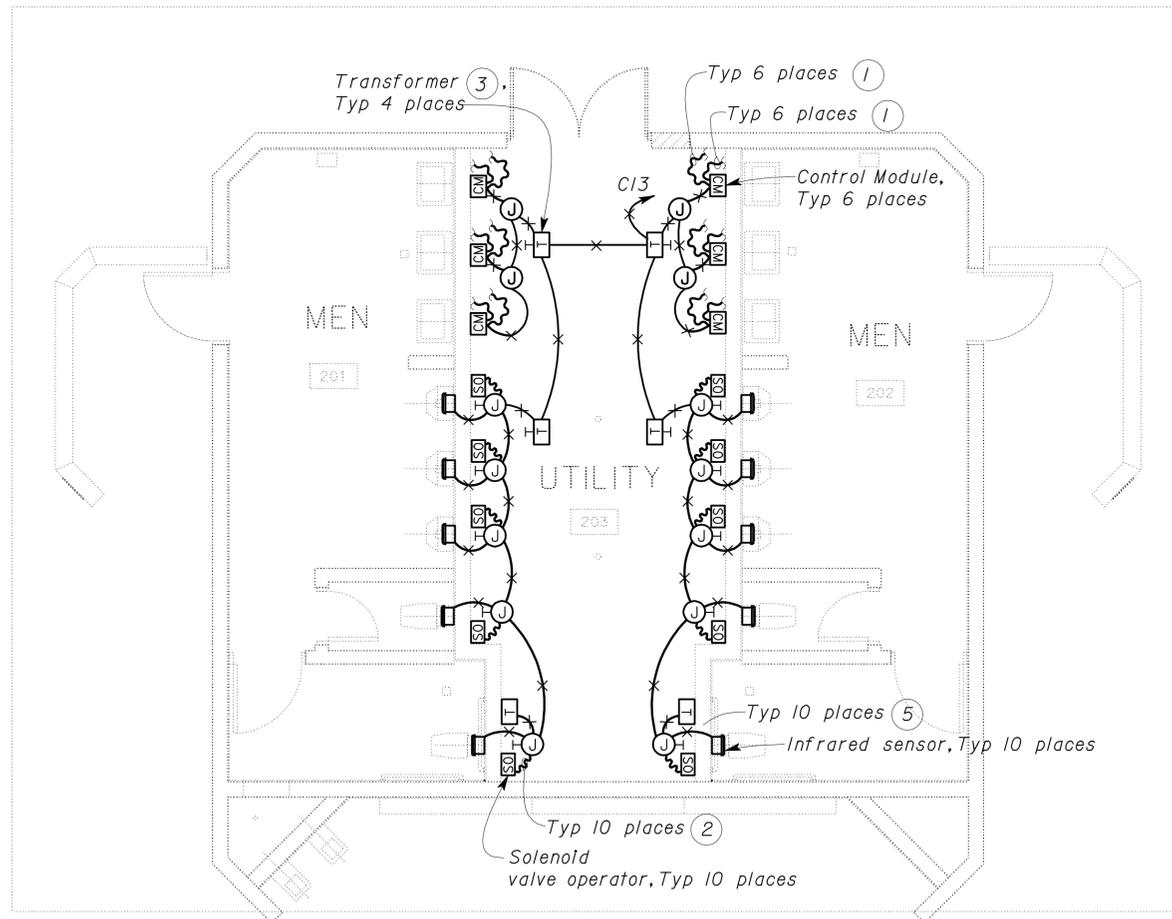
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 Reviewed by: *Sandy Margullis*  
**SANDY MARGULLIS**  
 Approval date: 12-1-09

*Tommy F. Lee* 06-03-10  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-9-10  
 PLANS APPROVAL DATE



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



General Notes:

- A. Install and connect automatic flush system as recommended by the manufacturer.
- B. All devices and accessories for automatic flush system are supplied by water closet, urinal and faucet manufacturers.
- C. Provide and install support systems for supporting armored cable as required.
- D. Transformer supplied by the manufacturer shall be sized adequately to supply all units shown. (Example, 4 water closets powered by one transformer). Contractor has the option of installing one transformer per unit at no extra cost to the State.
- E. Conduits and conductor system as shown is diagrammatic only. Exact system layout shall depend upon the particular automatic flush system installed.
- F. Solenoid valve operators for the lavatory faucets and built-in infrared sensors at the lavatory faucets are not shown for clarity.

Notes:

- ① Armored cable to infrared sensor at the faucet. Install armored cable through the PVC sleeve. For detail of PVC sleeve, see Architectural sheet A7-7.
- ② Armored cable to solenoid valve operator.
- ③ Provide and install all hardware as required for the installation of the low voltage transformer as recommended by the manufacturer. Mount transformer in a surface mounted junction box.
- ④ Mount infrared sensor in a flush mounted junction box at a location recommended by the manufacturer. For details, see Architectural sheet, A7-7.
- ⑤ 1/2" C. conductors as required for operation of infrared sensor and solenoid valve operator.

**PLAN**  
 SCALE 1/4" = 1'-0"

DESIGN	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>
DETAILS	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>
QUANTITIES	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.  
 56R0003R  
 56R0003L  
 POST MILE  
 22.4

**PHILIP RAINE SAFETY ROADSIDE REST AREA**  
 MODIFIED COMFORT STATION B - POWER 2

SHEET **EE2-3**

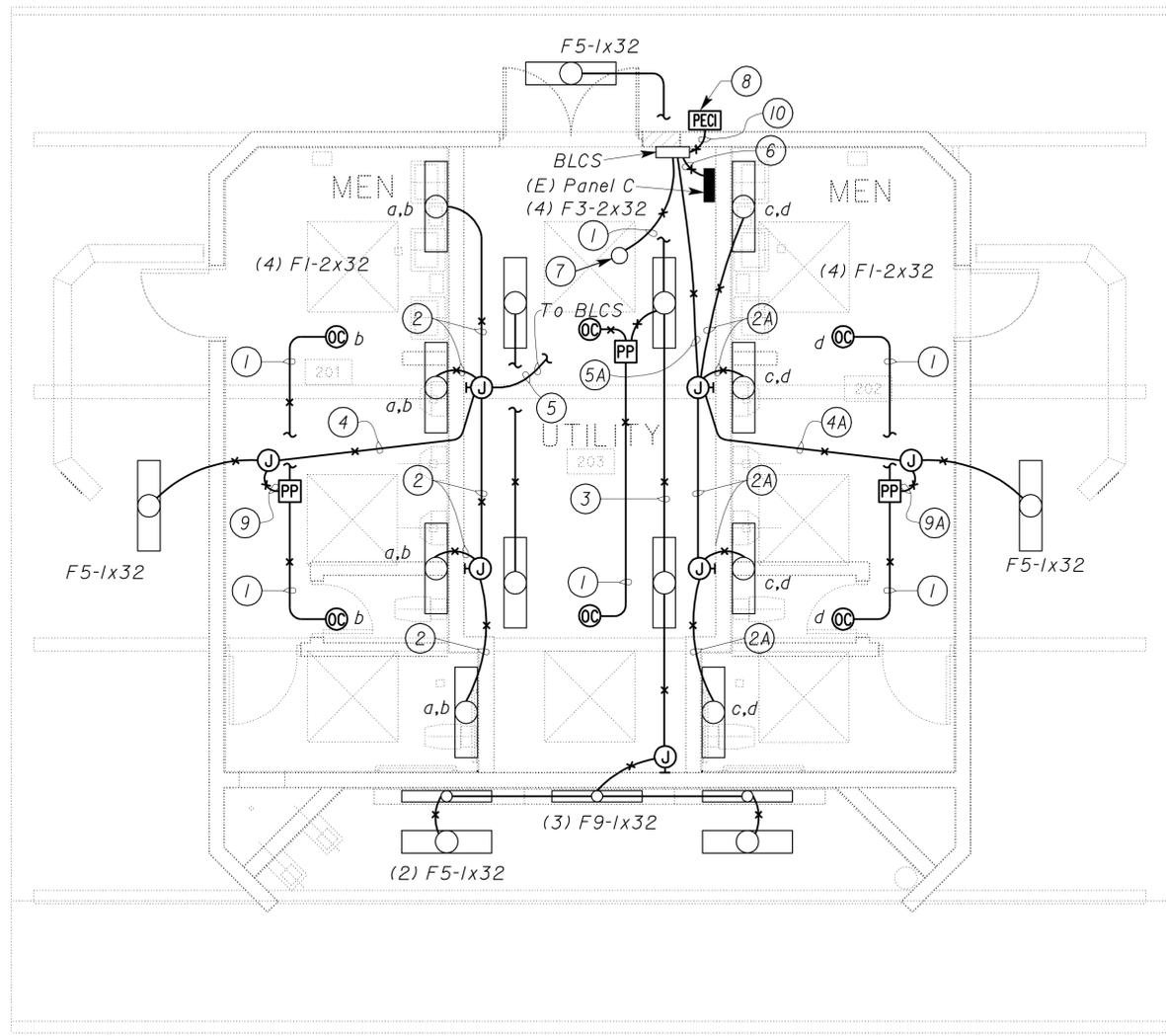
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	305	335

**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
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 Reviewed by: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09

*Tommy F. Lee* 12-22-09  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-9-10  
 PLANS APPROVAL DATE



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**PLAN**  
 SCALE 1/4" = 1'-0"

General notes:

- A. All occupancy sensors shall be ceiling mounted type sensors.
- B. For Building Lighting control schematic for restroom, see sheet EE2-7.
- C. For Outside Lighting control schematic, see sheet EE2-8.

Notes:

- ① 1/2"C, control cable/conductors as required.
- ② 1/2"C, 3\*12, 1\*12G (6,7A, N8 & 1\*12G).
- ②A 1/2"C, 3\*12, 1\*12G (6,7A, N10 & 1\*12G).
- ③ 1/2"C, 4\*12, 1\*12G.
- ④ 1/2"C, 5\*12, 1\*12G (5,7, C8, N8, N12 & 1\*12G).
- ④A 1/2"C, 5\*12, 1\*12G (5,7, C10, N10, N12 & 1\*12G).
- ⑤ 3/4"C, 7\*12, 1\*12G (5,6,7,7A, C8, N8, N12 & 1\*12G).
- ⑤A 3/4"C, 7\*12, 1\*12G (5,6,7,7A, C10, N10, N12 & 1\*12G).
- ⑥ 3/4"C, 8\*12, 1\*12G (C8, N8, C10, N10, C12, N12, C20, N20 & 1\*12G).
- ⑦ Photo sensor mounted inside sky well per manufacturer recommendation.
- ⑧ Install PEC on the roof 1'-0" above roof floor and the PEC shall be facing towards north direction. Provide conduit flashing as required.
- ⑨ 1/2"C, 3\*12, 1\*12G (7, C8, N8 & 1\*12G).
- ⑨A 1/2"C, 3\*12, 1\*12G (7, C10, N10 & 1\*12G).
- ⑩ 1/2"C, 3\*12, 1\*12G.

DESIGN	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-4
	DETAILS	BY <i>Tommy Lee</i>			CHECKED <i>Jesse S. Sandhu</i>		
QUANTITIES	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06340 EA 0A9701	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET	OF
			0	1	2	3	

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	306	335

Tommy F. Lee  
REGISTERED ELECTRICAL ENGINEER  
No. 18534  
Exp. 12-31-10  
ELEC  
STATE OF CALIFORNIA

06-03-10  
DATE

8-9-10  
PLANS APPROVAL DATE

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MAIN: 100A CIRCUIT BREAKER  
VOLTS: 480/277V, 3-PHASE, 4-WIRE

PANEL A (4)

FEEDER SIZE: 4\*1/0, 1\*6G (6)  
LOCATION: UTILITY ROOM AT WOMEN RESTROOM

DESCRIPTION	AMPERES			BRK	CKT	A	B	C	CKT	BRK	AMPERES			DESCRIPTION
	A	B	C								A	B	C	
TRUCK PARKING LIGHTS	5				1	•			2			9.6		SEWAGE PUMP STATION NO.1
CAR PARKING LIGHTS		5.4		20/3	3	•			4	20/3		9.6		
PICNIC SHELTER LIGHTS			2.3		5			•	6			9.6		
SPARE	-				7	•			8			57.2		TRANSFORMER
		-		20/3	9	•			10	70/3		48.3		
			-		11	•			12			49.6		
SEWAGE LIFT STATION NO.2 (1)	3.5				13	•			14			-		SPACE
		3.5		15/3	15	•			16			-		SPACE
			3.5		17	•			18			-		SPACE

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
75.3	66.8	65	

General Note:

- A. Northbound panelboards are shown and Southbound panelboards are similar except as noted.
- B. Panels A and B schedule as shown is for information only.

Notes:

- (1) Northbound only. Space on Southbound side.
- (2) At South side, circuit breaker for panel D is installed in space 20-22-24.
- (3) At Southbound, circuit breaker for Men handicap hand dryer is installed in space 19, circuit breaker for Women handicap hand dryer is installed in space 21 and circuit breaker for Swamp cooler is installed in space 23.
- (4) Replace the panel and branch circuit breakers at Northbound and Southbound as shown on sheet EE2-6.
- (5) Modify the panel and branch circuit breakers at Northbound and Southbound as shown on sheet EE2-6.
- (6) Southbound panel fed by 4\*1, 1\*6G.

CALIFORNIA STATE FIRE MARSHAL  
APPROVED

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Reviewed by: *Sandy Murgullis*  
SANDY MURGULLIS  
Approval date: 12-1-09

MAIN: 150A CIRCUIT BREAKER  
VOLTS: 208/120V, 3-PHASE, 4-WIRE

PANEL B (4)

FEEDER SIZE: 4\*1/0  
LOCATION: UTILITY ROOM AT WOMEN RESTROOM

DESCRIPTION	AMPERES			BRK	CKT	A	B	C	CKT	BRK	AMPERES			DESCRIPTION
	A	B	C								A	B	C	
MEN HAND DRYER	20			30/1	1	•			2	*20/1	3			WOMEN RECEPTACLES
WOMEN HAND DRYER		20			3	•			4	30/2		22		WATER HEATER
MEN HAND DRYER			20		5			•	6			22		WATER HEATER
WOMEN HAND DRYER	20				7	•			8	*20/1	3			MEN RECEPTACLES
WATER CHILLER		7.2		20/1	9	•			10	20/2		5		MEN'S AND WOMEN'S ROOM LIGHTS
UTILITY ROOM LIGHTS			3.2		11			•	12	20/2		12		EXTERIOR, ARBOR AND DISPLAY LIGHTS
SAGE UNIT RECEPTACLE	17			30/1	13	•			14		75			PANEL C
REFRIGERATOR/SPRINKLER SYSTEM		3		20/1	15	•			16	100/3	67.7			
UTILITY ROOM RECEPTACLE			1.5	*20/1	17	•			18		57.2			
PANEL D VENDING BUILDING (2)	30				19	•			20	20/1	12			MEN HANDICAP HAND DRYER
		30		100/3	21	•			22		12			WOMEN HANDICAP HAND DRYER
			30		23	•			24		15			SWAMP COOLER

\*GFCI CIRCUIT BREAKER

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
180	167	161	

MAIN: 100A CIRCUIT BREAKER  
VOLTS: 208/120 V, 3-PHASE, 4-WIRE

PANEL C (5)

FEEDER SIZE: 4\*2  
LOCATION: UTILITY ROOM AT MEN RESTROOM

DESCRIPTION	AMPERES			BRK	CKT	A	B	C	CKT	BRK	AMPERES			DESCRIPTION
	A	B	C								A	B	C	
MEN HAND DRYER	20			30/1	1	•			2	*20/1	3			WOMEN RECEPTACLES
WOMEN HAND DRYER		20			3	•			4	30/2		22		WATER HEATER
MEN HAND DRYER			20		5			•	6			22		WATER HEATER
WOMEN HAND DRYER	20				7	•			8	*20/1	3			MEN RECEPTACLES
WATER CHILLER		7.2		20/1	9	•			10	20/2		5		MEN AND WOMEN ROOM LIGHTS
UTILITY ROOM LIGHTS			3.2		11			•	12	20/2		12		EXTERIOR, ARBOR AND DISPLAY LIGHTS
SAGE UNIT RECEPTACLE	17			30/1	13	•			14	20/1	12			MEN HANDICAP HAND DRYER
UTILITY ROOM RECEPTACLES		1.5		20/1	15	•			16	20/1		12		WOMEN HANDICAP HAND DRYER
SPACE					17			•	18			-		SPACE
	-				19	•			20		-			
		-			21	•			22		-			
			-		23	•			24		-			

\*GFCI CIRCUIT BREAKER

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
75	67.7	57.2	

DESIGN BY Tommy Lee CHECKED Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R 56R0003L POST MILE 22.4	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-5		
						DETAILS BY Tommy Lee CHECKED Jesse S. Sandhu	EXISTING PANEL SCHEDULES
						QUANTITIES BY Tommy Lee CHECKED Jesse S. Sandhu	
DOES SD Imperial Rev. 1/07	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF		

16-AUG-2010 09:43

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	307	335

Tommy F. Lee	06-03-10
REGISTERED ELECTRICAL ENGINEER	DATE
8-9-10	
PLANS APPROVAL DATE	

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 Reviewed by: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09

MAIN: 100A CIRCUIT BREAKER  
 VOLTS: 480/277V, 3-PHASE, 4-WIRE

FEEDER SIZE: 4\*1/0, 1\*6G (1)  
 LOCATION: UTILITY ROOM AT WOMEN RESTROOM

PANEL A

(2)

(Northbound only.  
 For Southbound mark as spare)

DESCRIPTION	AMPERES			BRK	CKT	A B C			CKT	BRK	AMPERES			DESCRIPTION
	A	B	C			A	B	C			A	B	C	
OUTSIDE LIGHTING CONTROL STATION	5				1	•			2		9.6			
		5.4		20/3	3	•			4	20/3	9.6		SEWAGE PUMP STATION	
			2.3		5		•		6			9.6		
					7	•			8		71			
SPARE		-		20/3	9	•			10	70/3	62		TRANSFORMER	
					11	•			12			64		
	3.5				13	•			14					
SEWAGE LIFT STATION (RV DUMP)		3.5		15/3	15	•			16					
			3.5		17	•			18					
					19	•			20					
					21	•			22					
					23	•			24					
					25	•			26		-			
					27	•			28	40/3	-		GRID-TIE PV SYSTEM	
					29	•			30			-		

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
89.1	80.5	79.4	

Notes:

- (1) Northbound feeder size shown, Southbound feeder size is 4\*1, 1\*6G.
- (2) For light circuits, see Schematic Diagram on sheet EE2-8.

MAIN: 150A CIRCUIT BREAKER  
 VOLTS: 208/120V, 3-PHASE, 4-WIRE

FEEDER SIZE: 4\*1/0, 1\*1/0G  
 LOCATION: UTILITY ROOM AT WOMEN RESTROOM

PANEL B

DESCRIPTION	AMPERES			BRK	CKT	A B C			CKT	BRK	AMPERES			DESCRIPTION
	A	B	C			A	B	C			A	B	C	
HAND DRYER #1	12.5			20/1	1	•			2	*20/1	3			WOMEN ROOM REP. (EAST & WEST)
HAND DRYER #2		12.5			3	•			4	20/1	3			UTILITY ROOM RECEPTACLE
HAND DRYER #3			12.5		5		•		6	20/1		3.1		UTILITY ROOM LIGHTS
HAND DRYER #4	12.5				7	•			8	20/1	4.3			WOMEN ROOM LIGHTS (EAST)
HAND DRYER #5		12.5			9	•			10	20/1		4.3		WOMEN ROOM LIGHTS (WEST)
HAND DRYER #6			12.5		11	•			12	20/1			2.1	EXTERIOR AND DISPLAY LIGHTS
HAND DRYER #7	12.5				13	•			14		71.6			
HAND DRYER #8		12.5			15	•			16	100/3		55.6		PANEL C
WATER CHILLER			7.2		17	•			18			63.4		
SPRINKLER SYSTEM	3				19	•			20		73.8			
		15			21	•			22	100/3		45		PANEL DB VENDING BUILDING FLOOR PLAN B
WATER HEATER			15	30/2	23	•			24			24.5		
REFRIGERATOR	10			20/1	25	•			26	20/1	5			LIGHTING CONTROL STATION
LOW VOLTAGE XFMR (NORTH)		3			27	•			28			-		SPARE
LOW VOLTAGE XFMR (SOUTH)			3		29	•			30			6		PV - UPS, PC and Displays
					31	•			32					
					33	•			34					
					35	•			36					
					37	•			38					
					39	•			40					
					41	•			42					

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
208.2	163.4	149.3	

MAIN: 100A CIRCUIT BREAKER  
 VOLTS: 208/120 V, 3-PHASE, 4-WIRE

FEEDER SIZE: 4\*2, 1\*2G  
 LOCATION: UTILITY ROOM AT MEN RESTROOM

(E) PANEL C

DESCRIPTION	AMPERES			BRK	CKT	A B C			CKT	BRK	AMPERES			DESCRIPTION
	A	B	C			A	B	C			A	B	C	
HAND DRYER #1	12.5			20/1	1	•			2	*20/1	3			MEN RECEPTACLES (EAST & WEST)
HAND DRYER #2		12.5			3	•			4			15		WATER HEATER
HAND DRYER #3			12.5		5		•		6	30/2			15	
HAND DRYER #4	12.5				7	•			8	20/1	2.1			MEN ROOM LIGHTS (EAST)
WATER CHILLER		7.2		20/1	9	•			10			2.1		MEN ROOM LIGHTS (WEST)
UTILITY ROOM LIGHTS			2.1		11	•			12				2.1	EXTERIOR AND DISPLAY LIGHTS
LOW VOLTAGE XFMR	2				13	•			14		22			
UTILITY ROOM RECEPTACLES		1.5			15	•			16	60/3		17.3		PANEL E
HAND DRYER #5			12.5		17	•			18				19.2	
HAND DRYER #6	12.5				19	•			20	20/1	5			LIGHTING CONTROL STATION
SPARE		-			21	•			22			-		SPARE
					23	•			24			-		

\*GFCI CIRCUIT BREAKER

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
71.6	55.6	63.4	

DESIGN BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R 56R0003L POST MILE 22.4	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-6
DOES SD Imperial Rev. 1/07	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF

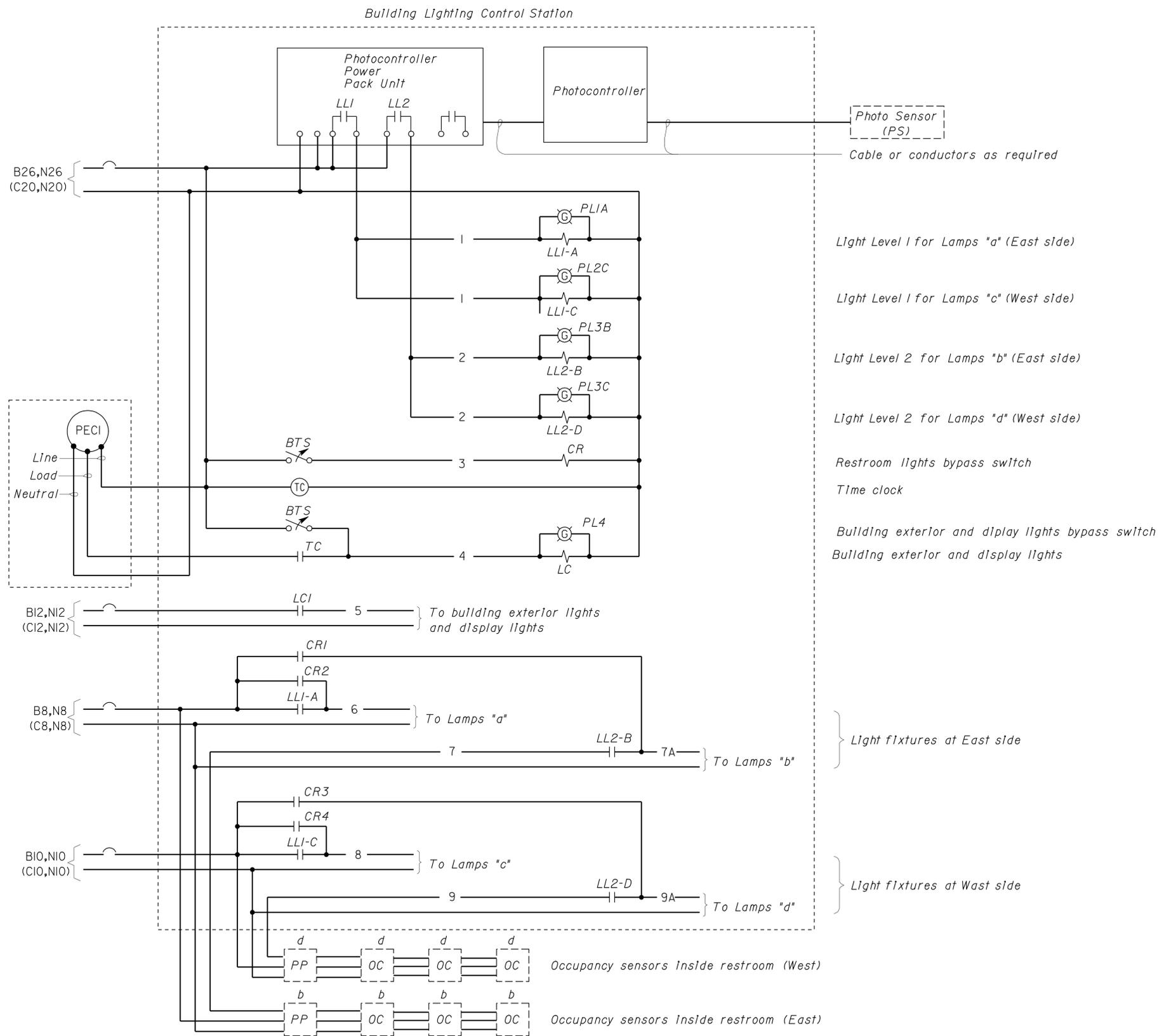
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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	308	335

<b>CALIFORNIA STATE FIRE MARSHAL APPROVED</b> 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: <i>Sandy Margullis</i> <b>SANDY MARGULLIS</b> Approval date: 12-1-09		<b>REGISTERED PROFESSIONAL ENGINEER</b> <b>TOMMY F. LEE</b> No. 18534 Exp. 12-31-10 ELEC STATE OF CALIFORNIA
8-9-10 PLANS APPROVAL DATE		12-22-09 DATE

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Cable or conductors as required

Light Level 1 for Lamps "a" (East side)

Light Level 1 for Lamps "c" (West side)

Light Level 2 for Lamps "b" (East side)

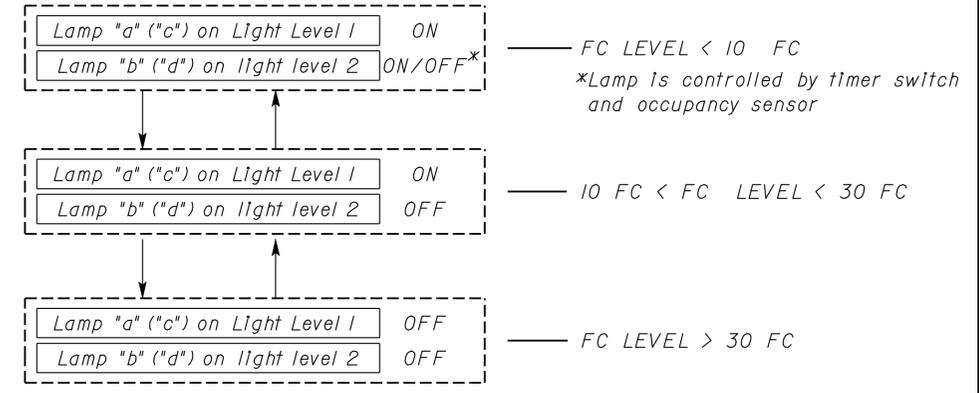
Light Level 2 for Lamps "d" (West side)

Restroom lights bypass switch

Time clock

Building exterior and display lights bypass switch

Building exterior and display lights



**LIGHT SAVER SWITCHING SEQUENCE**

**BUILDING LIGHTING CONTROL STATION (BLCS)**

At comfort station A use circuit B and at comfort station B use circuit C.

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu
DETAILS	BY Tommy Lee	CHECKED Jesse S. Sandhu
QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO. 56R0003R 56R0003L  
POST MILE 22.4

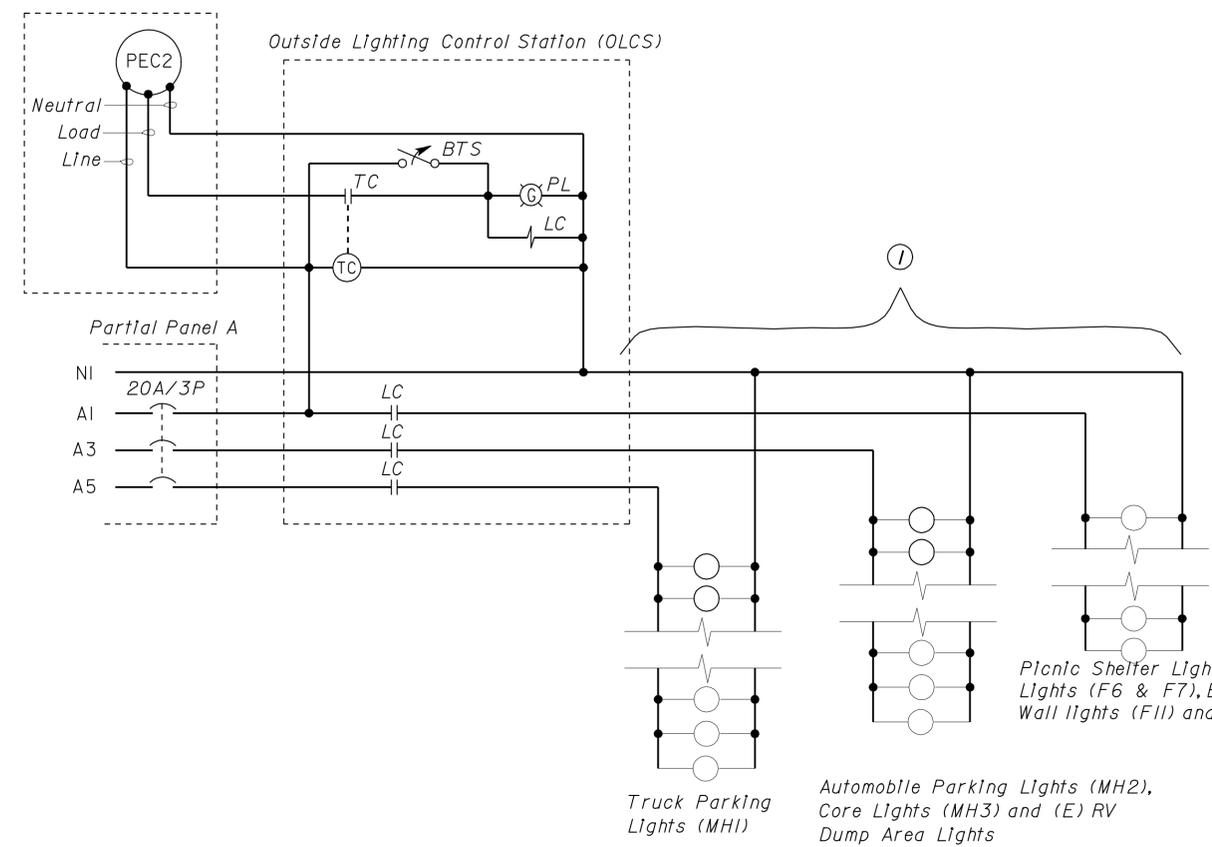
PHILIP RAINE SAFETY ROADSIDE REST AREA  
LIGHTING CONTROL SCHEMATIC FOR RESTROOMS

SHEET EE2-7 OF

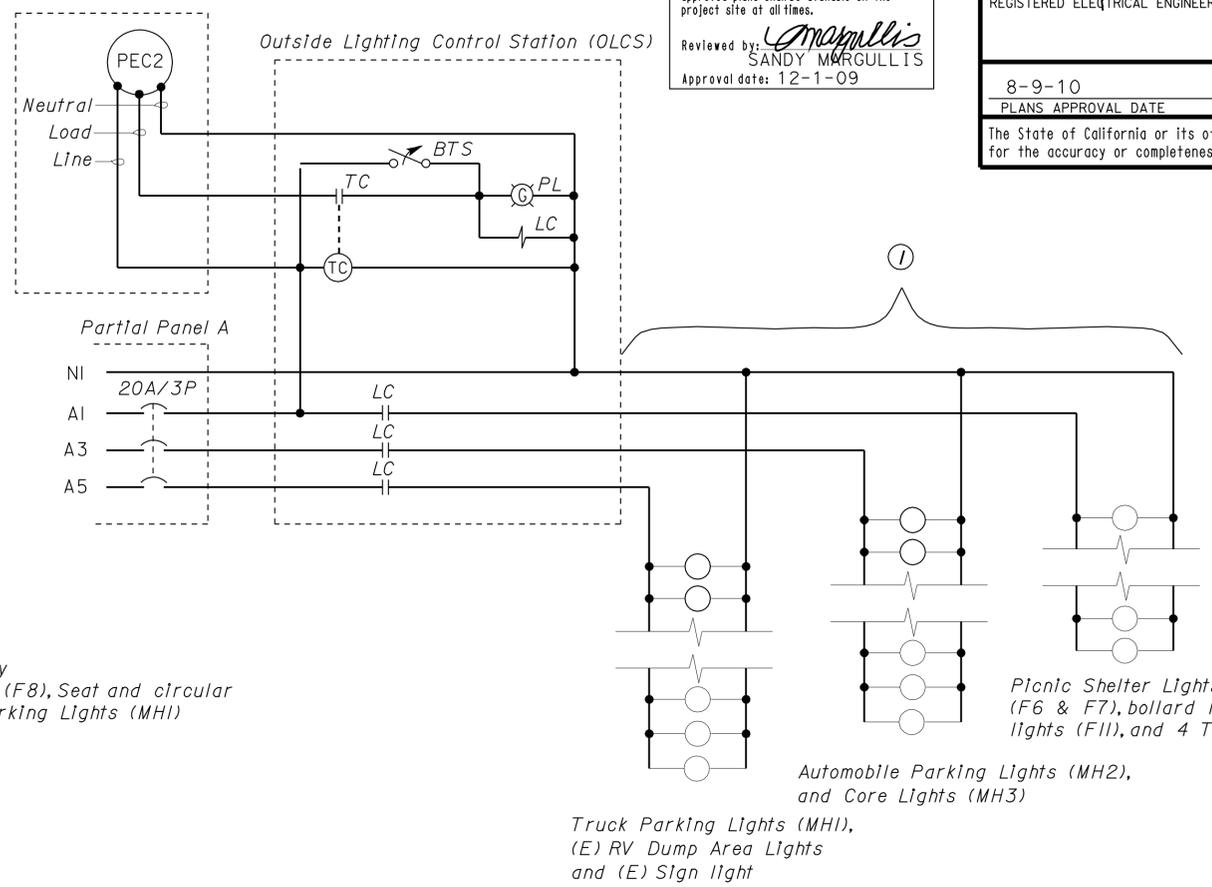
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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**SANDY MURGULLIS**  
 Approval date: 12-1-09

*Tommy F. Lee* 06-03-10  
 REGISTERED ELECTRICAL ENGINEER DATE  
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**NORTHBOUND**



**SOUTHBOUND**

**OUTSIDE LIGHTING CONTROL STATION (OLCS)**

Provide power distribution type terminal block for terminating all field conductors.

- NOTES:**
- ① The field wiring entering the Control Station has been shown in a simplified manner. See plan sheets for the actual conduit and conductors into the Control Station.

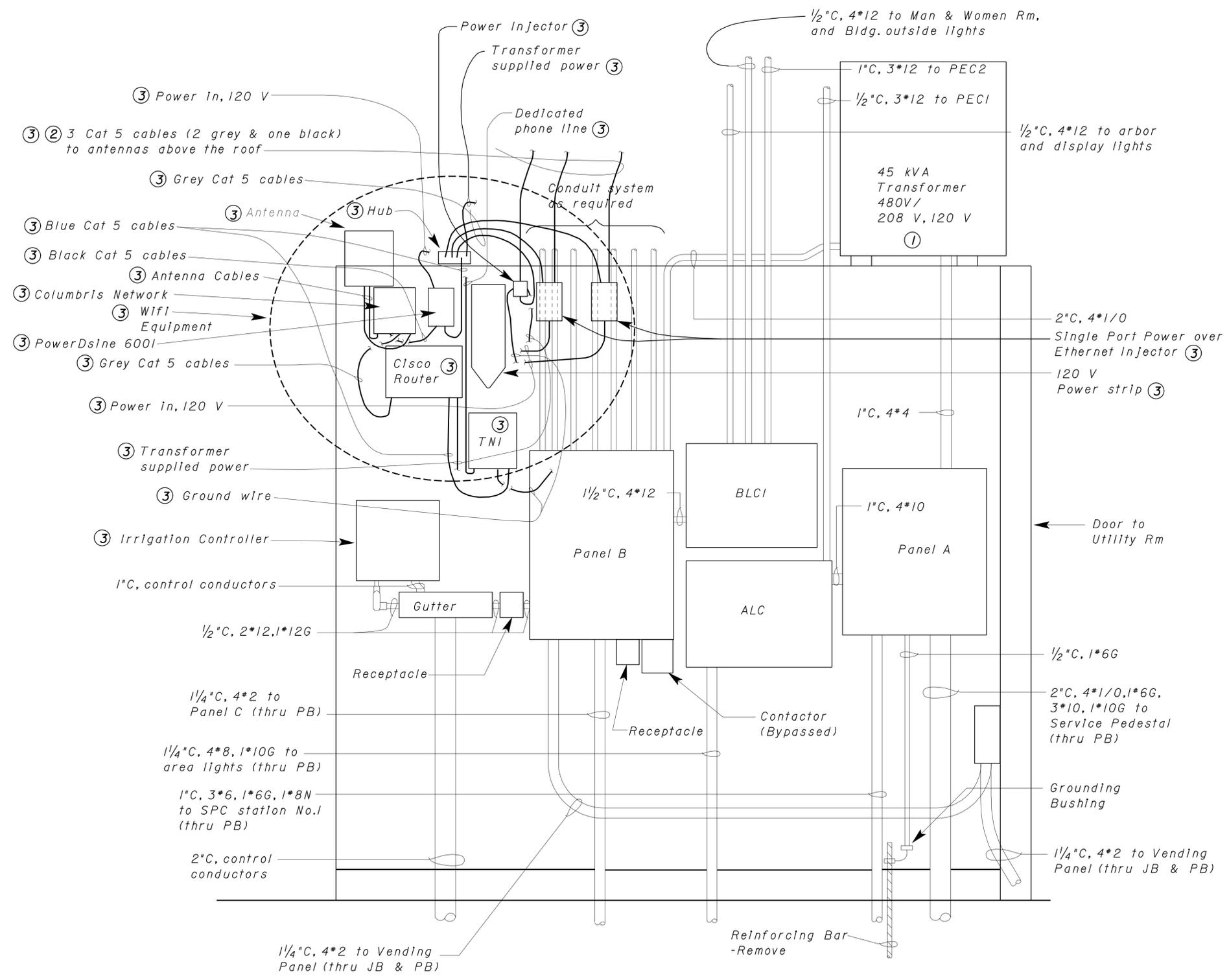
DESIGN	BY	Tommy Lee	CHECKED	Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R 56R0003L POST MILE 22.4	PHILIP RAINE SAFETY ROADSIDE REST AREA LIGHTING CONTROL STATIONS SCHEMATIC DIAGRAM	SHEET EE2-8	
	DETAILS	BY	Tommy Lee	CHECKED						Jesse S. Sandhu
	QUANTITIES	BY	Tommy Lee	CHECKED						Jesse S. Sandhu
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0 1 2 3	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF

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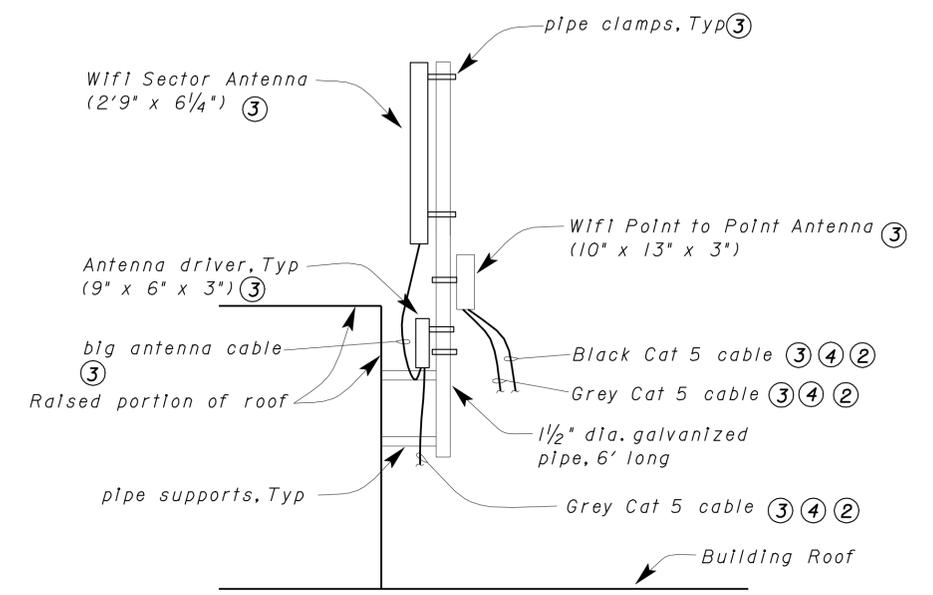
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	310	335

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06-03-10	DATE	
8-9-10	PLANS APPROVAL DATE	
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**A ELEVATION**  
NO SCALE



**B ANTENNA DETAILS**  
NO SCALE

- NOTES:**
- Relocate equipment. See Sheet EE2-II for more information.
  - Replace with new Cat 5 cables and termination devices.
  - Contractor shall verify the full operation of Wi-Fi equipment in the presence of the Engineer prior to disconnecting. Also, prior to disconnecting Contractor shall label conductors and equipment terminals as required for reconnection. Contractor shall safely store equipment and cables until re-installed.
  - Cable goes into the building. For continuation see Elevation A.

**General notes:**

A. All equipment and devices including conduit and conductors shown on this elevation shall be removed by the Contractor. See notes above for exceptions and equipment to be re-installed.

DESIGN BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-9					
			POST MILE 22.4			EXISTING ELEVATION - NORTHBOUND				
DETAILS BY <i>Dall Zhou</i> CHECKED <i>Jesse S. Sandhu</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06340 EA 0A9701	REVISION DATES (PRELIMINARY STAGE ONLY)							
QUANTITIES BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES	10/28/08	1/27/09	2/11/09	2/18/09	4/28/09	12/22/09	6/3/10	SHEET OF

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	311	335

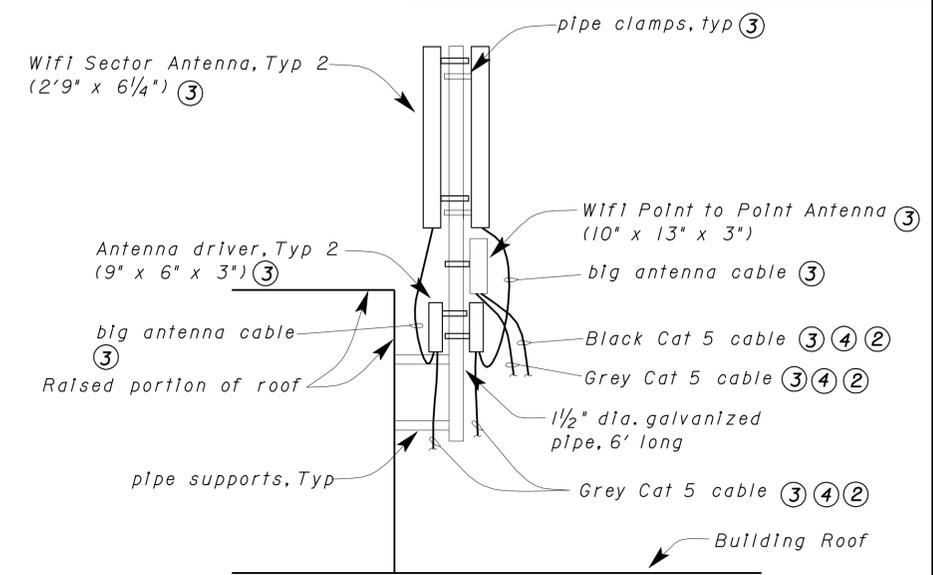
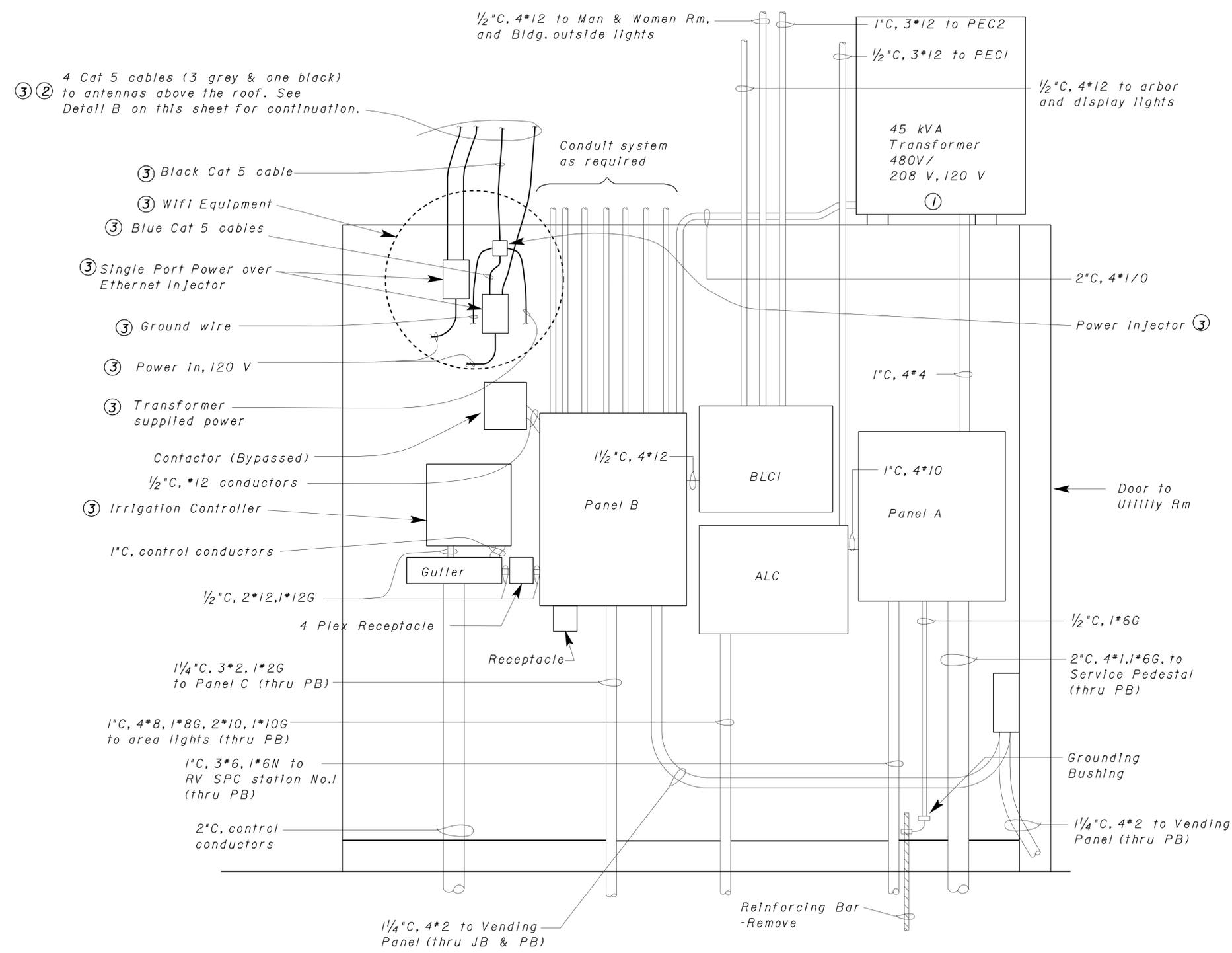
Tommy F. Lee		06-03-10
REGISTERED ELECTRICAL ENGINEER	DATE	

8-9-10
PLANS APPROVAL DATE

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Reviewed by: *Sandy Margullis*  
**SANDY MARGULLIS**  
Approval date: 12-1-09



- Notes:
- Relocate equipment. See Sheet EE2-12 for more information.
  - Replace with new Cat 5 cable and terminations.
  - Contractor shall verify the full operation of Wi-Fi equipment in the presence of the engineer prior to disconnecting. Also, prior to disconnecting contractor shall label conductors and equipment terminals as required for reconnection. Contractor shall safely store equipment and cables until re-installed.
  - Cable goes into the building. For continuation see Elevation A.

General notes:

A. All equipment and devices including conduit and conductors shown on this elevation shall be removed by the Contractor. See notes above for exceptions and equipment to be re-installed.

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R 56R0003L	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-10
	DETAILS	BY Dall Zhou			CHECKED Jesse S. Sandhu		
QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06340 EA 0A9701	REVISION DATES (PRELIMINARY STAGE ONLY)		SHEET OF
			0 1 2 3	DISREGARD PRINTS BEARING EARLIER REVISION DATES		10/28/08 1/27/09 2/11/09 2/18/09 4/28/09 12/28/09 6/3/10	

Notes:

- ① Disconnect shall be wired in a fashion connected to interrupt the positive conductor from the combiner boxes.
- ② Three single phase inverters (277 Volt AC output).
- ③ 2"C, 6\*4, 1\*8G to combiner boxes on top of the canopy.
- ④ 1"C, 2\*4, 1\*8G.
- ⑤ 1"C, 3\*6, 1\*8G
- ⑥ To Panel A, circuit 26-28-30.
- ⑦ 1"C, 2\*6, 1\*8G.
- ⑧ Existing power injector.

- ⑨ Existing single port power over ethernet injector.
- ⑩ Exact location will be as directed by the Engineer.
- ⑪ Reinforcing bar extends to foundation footing reinforcing. See sheet STI-1 for more information.
- ⑫ Transformer shall be centered in the wall opening and secured to the 4 x 4 blocks.
- ⑬ Power cord for device, 120 volt or transformer supplied.
- ⑭ Existing ground wire. Connect to enclosure ground.
- ⑮ Existing PowerDsine 600I.
- ⑯ Existing Columbris Network.

- ⑰ Wi-fi equipment inside enclosure, cat 5 cables, TNI, antennas and all associated equipment shall be re-installed by the Contractor as required for operation.
- ⑱ See Architectural sheets for installation details.
- ⑲ Route cables through service entrance cap and inside building to Wi-fi equipment. See Elevation A for continuation.
- ⑳ Install new termination devices as required for operation.
- ㉑ Install screw on type nameplate with letter height 1/2 inch to read "THIS PANEL FED BY MULTIPLE SOURCES, SERVICE CABINET AND SOLAR POWER".

- ㉒ Install Environmental Data Device (EDD) with irradiance sensor aimed to the South (Just like the Photovoltaic Panels).

General Notes:

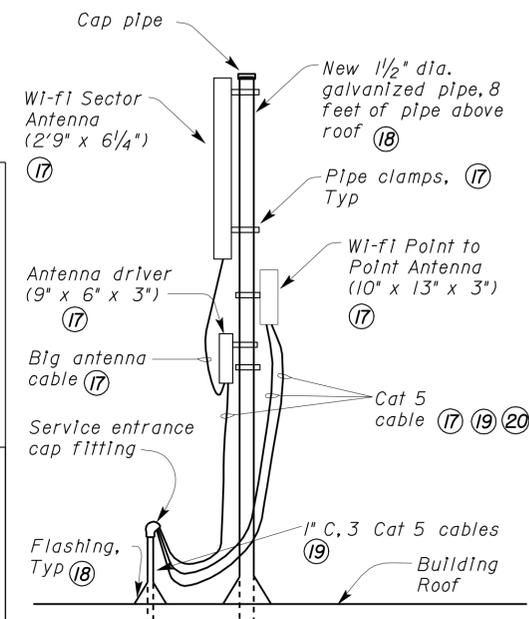
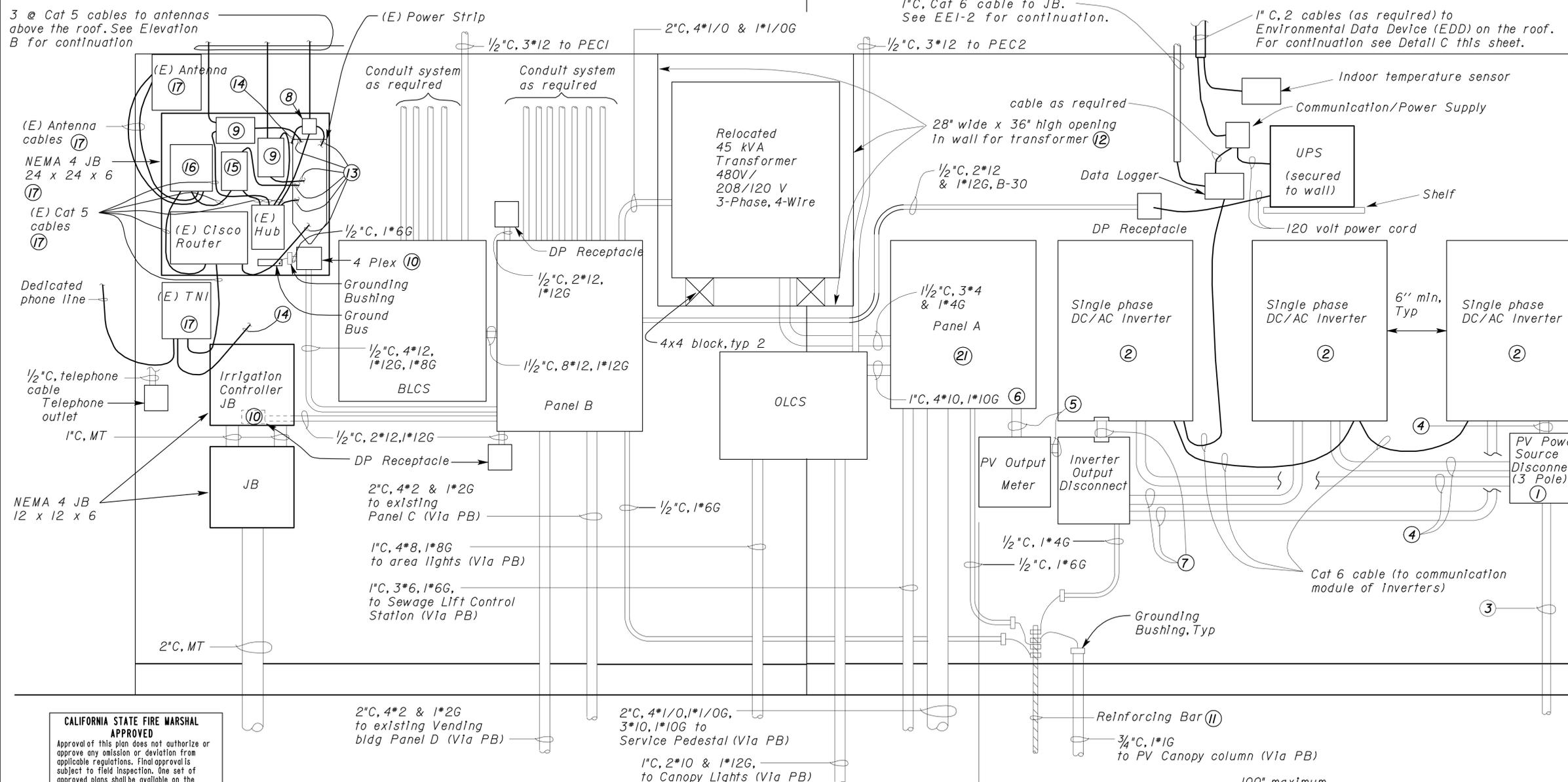
- A. Contractor may design the Photovoltaic System with a three phase inverter. If so the inverter, inverter output disconnect and conductors and new equipment layout shall be submitted for approval. The change to three phase inverter system shall be done with no additional cost to the State.
- B. Provide stainless steel mounting bracket kits for mounting antennas and sensors securely to the galvanized pipe.
- C. Cat 5 cable shall be outdoor rated Cat 5e cable with UV resistant outer jacket.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	312	335

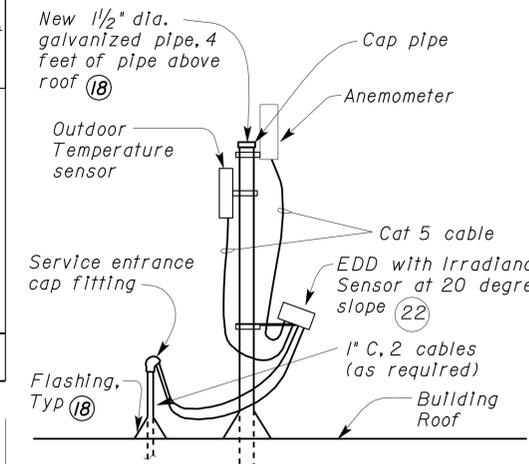
Tommy F. Lee  
REGISTERED ELECTRICAL ENGINEER  
DATE 06-03-10  
No. 18534  
Exp. 12-31-10  
ELEC  
STATE OF CALIFORNIA

8-9-10  
PLANS APPROVAL DATE

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**B ANTENNA DETAIL**  
NO SCALE



**C SENSORS DETAIL**  
NO SCALE

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Reviewed by: *Sandy Murgullis*  
SANDY MURGULLIS  
Approval date: 12-1-09

**A ELEVATION**  
NO SCALE

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-11
	DETAILS BY Dall Zhou	CHECKED Jesse S. Sandhu			POST MILE 22.4		
	QUANTITIES BY Tommy Lee	CHECKED Jesse S. Sandhu			MODIFIED ELEVATION - NORTHBOUND		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)	
0 1 2 3					10/28/08 1/27/09 2/11/09 2/18/09 4/24/09 4/27/09 8/04/09 9/02/09 12/22/09 6/3/10		SHEET OF

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Notes:

- ① Disconnect shall be wired in a fashion connected to interrupt the positive conductor from the combiner boxes).
- ② Three single phase Inverters (277 volt AC output)
- ③ 2"C, 6\*4 & 1\*8G to combiner boxes on top of the canopy.
- ④ 1"C, 2\*4, 1\*8G.
- ⑤ 1"C, 3\*6, 1\*8G.
- ⑥ To Panel A, circuit 26-28-30.
- ⑦ 1"C, 2\*6, 1\*8G.
- ⑧ Existing Power injector.
- ⑨ Existing port power over ethernet injector.
- ⑩ Exact location will be as directed by the Engineer.
- ⑪ Reinforcing bars extends to foundation footing reinforcing. See sheet STI-1 for more information.
- ⑫ Transformer shall be centered in the wall opening and secured to the 4x4 blocks.
- ⑬ Wi-fi equipment inside enclosure, cat 5 cables, TNI, antennas and all associated equipment shall be re-installed by the Contractor as required for operation.
- ⑭ See Architectural sheets for installation details.
- ⑮ Route cables thru Service Entrance cap and inside building to Wi-Fi equipment. See Elevation A for continuation.
- ⑯ Install new termination devices as required for operation.
- ⑰ Install screw on type nameplate with letter height 1/2 inch to read "THIS PANEL FED BY MULTIPLE SOURCES, SERVICE CABINET AND SOLAR POWER".
- ⑱ Install Environmental Data Device (EDD) with Irradiance sensor aimed to the South (Just like the Photovoltaic Panels).

General Notes:

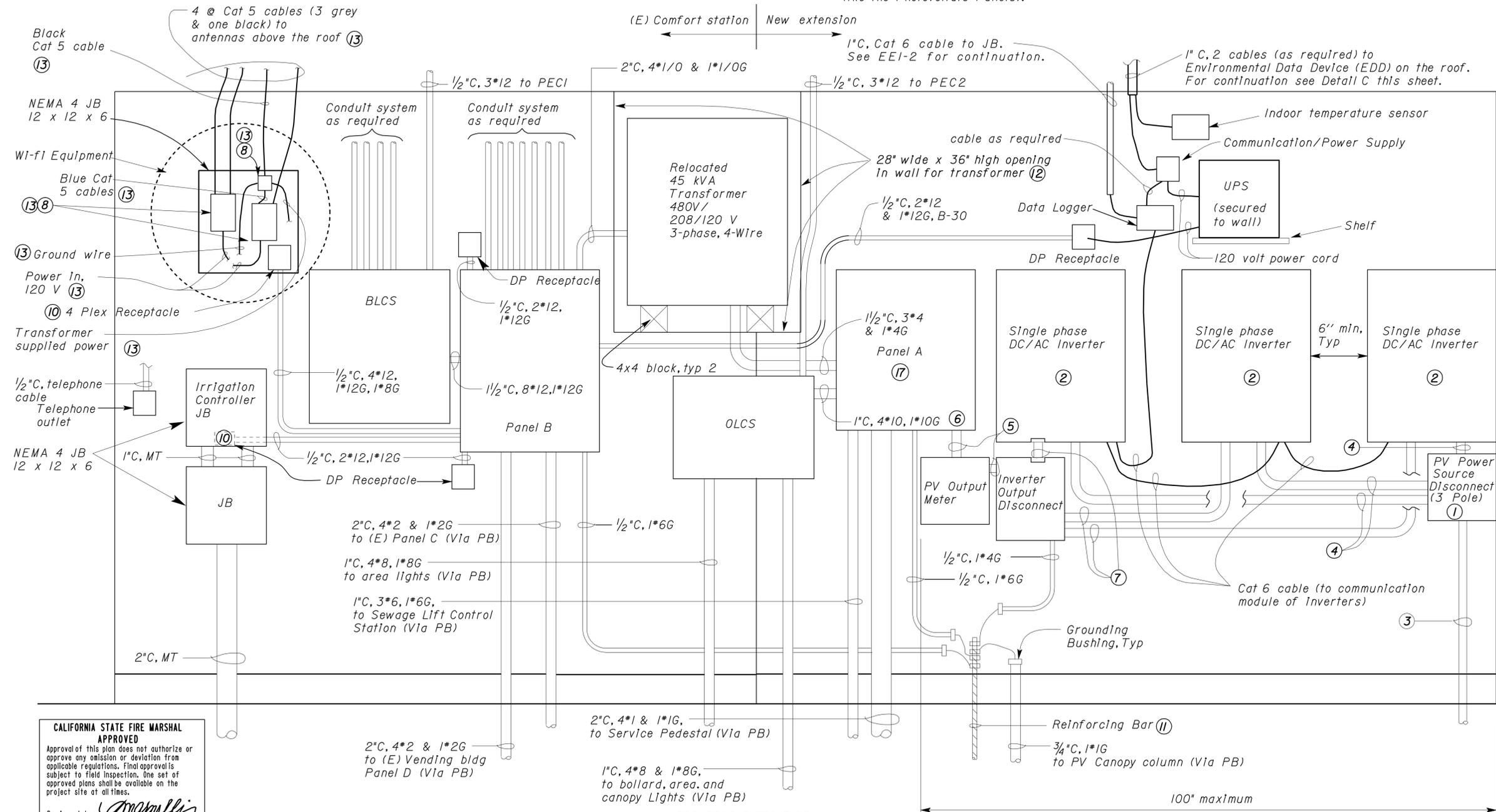
- A. Contractor may design the Photovoltaic System with a three phase Inverter. If so the Inverter, Inverter output disconnect and conductors and new equipment layout shall be submitted for Approval. The change to three phase Inverter system shall be done with no additional cost to the State.
- B. Provide stainless steel mounting bracket kits for mounting antennas and sensors securely to the galvanized pipe.
- C. Cat 5 cable shall be outdoor rated Cat 5e cable with UV resistant outer jacket.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	313	335

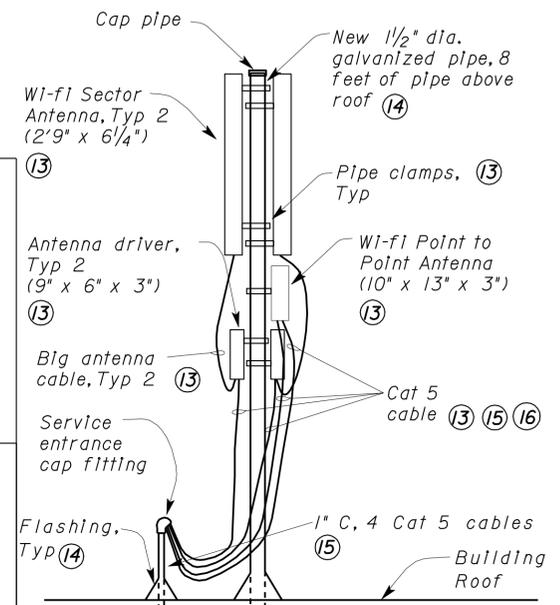
Tommy F. Lee  
REGISTERED ELECTRICAL ENGINEER  
DATE 06-03-10  
No. 18534  
Exp. 12-31-10  
ELEC  
STATE OF CALIFORNIA

8-9-10  
PLANS APPROVAL DATE

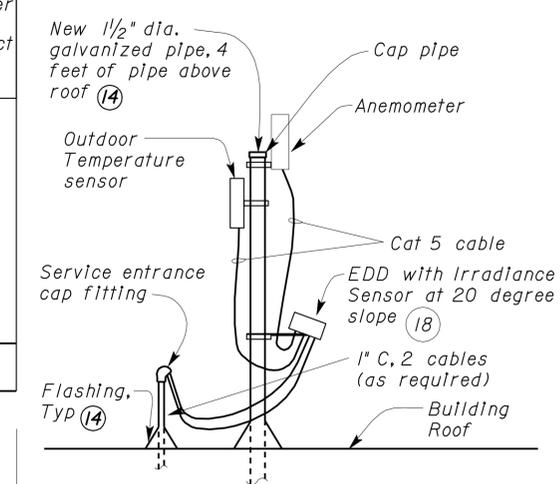
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**A ELEVATION**  
NO SCALE



**B ANTENNA DETAILS**  
NO SCALE



**C SENSORS DETAIL**  
NO SCALE

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SANDY MARGULLIS  
Approval date: 12-1-09

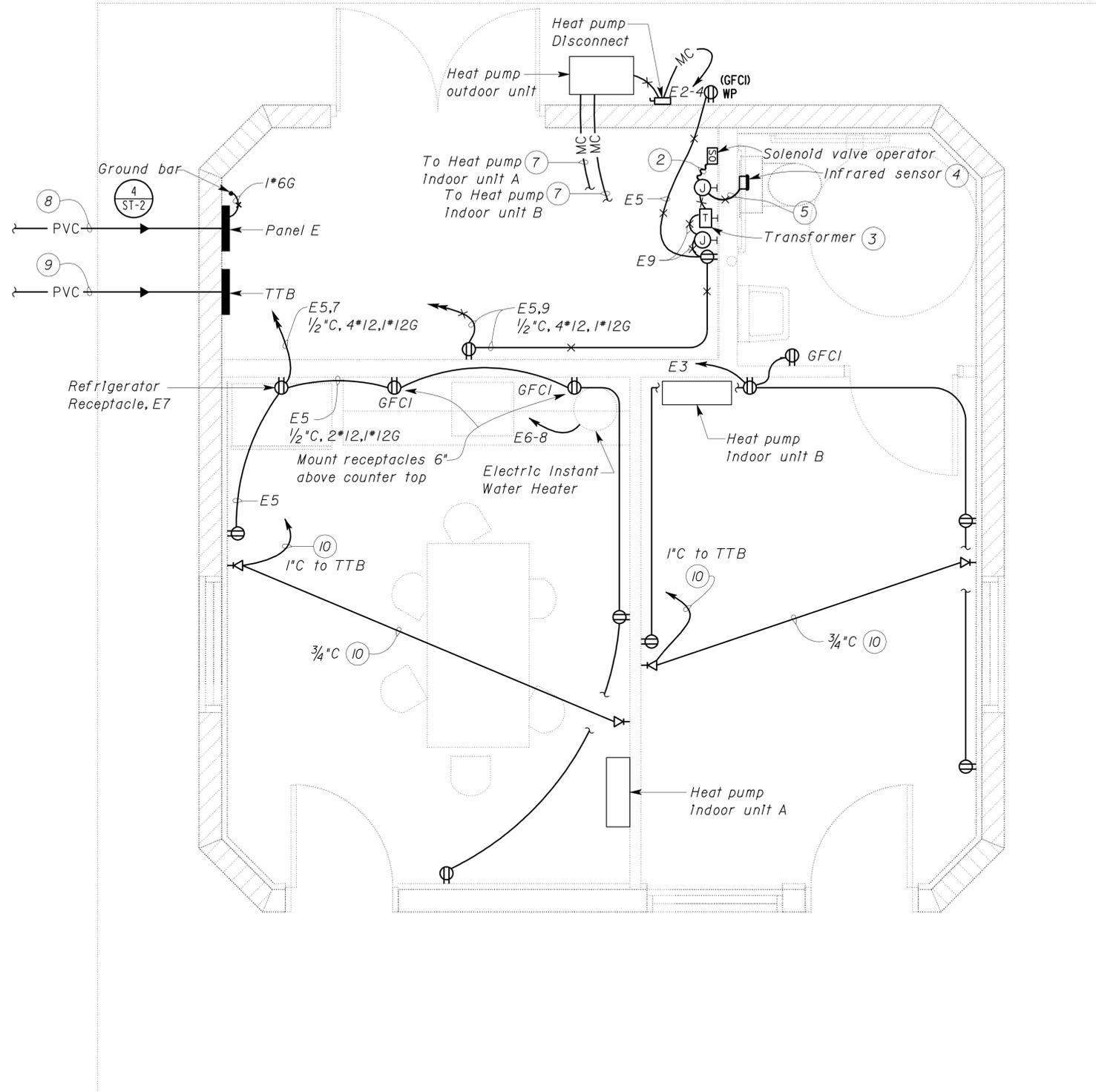
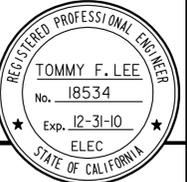
DESIGN BY Tommy Lee	CHECKED Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE2-12
DETAILS BY Dall Zhou	CHECKED Jesse S. Sandhu			POST MILE 22.4		
QUANTITIES BY Tommy Lee	CHECKED Jesse S. Sandhu			MODIFIED ELEVATION - SOUTHBOUND		
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		0 1 2 3	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES (PRELIMINARY STAGE ONLY)
DOES SD Imperial Rev. 1/07				10/28/08 1/27/09 2/18/09 2/18/09 4/24/09 4/27/09 8/04/09 12/22/09 6/3/10		SHEET OF

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DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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**SANDY MARGULLIS**  
Approval date: 12-1-09

*Tommy F. Lee* 06-03-10  
REGISTERED ELECTRICAL ENGINEER DATE  
8-9-10  
PLANS APPROVAL DATE  
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**PLAN**  
SCALE 1/2" = 1'-0"

**General Notes:**

- A. Install and connect automatic flush system as recommended by the manufacturer.
- B. All devices and accessories for automatic flush system are supplied by water closet and urinal manufacturers.
- C. Provide and install support systems for supporting armored cable as required.
- D. Transformer supplied by the manufacturer shall be sized adequately to supply all units shown. (Example, 4 water closets powered by one transformer). Contractor has the option of installing one transformer per unit at no extra cost to the State.
- E. Conduits and conductor system as shown is diagrammatic only. Exact system layout shall depend upon the particular automatic flush system installed.
- F. For exact location of heat pump outdoor and indoor units, see Mechanical sheet M3-1.

**Notes:**

- ① Not used.
- ② Armored cable to solenoid valve operator.
- ③ Provide and install all hardware as required for the installation of the low voltage transformer as recommended by the manufacturer. Mount transformer in a surface mounted junction box.
- ④ Mount infrared sensor in a flush mounted junction box at a location recommended by the manufacturer. For details, see Architectural sheet.
- ⑤ 1/2" C, conductors as required for operation of infrared sensor and solenoid valve operator.
- ⑥ Not used.
- ⑦ 3/4" C, 3\*12, 1\*12G.
- ⑧ 2" C, 4\*6, 1\*6G to Panel C at comfort station B.
- ⑨ 1" C, telephone cable conductors. For Continuation, see sheet EE0-11.
- ⑩ Telephone cable

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu
DETAILS	BY Tommy Lee	CHECKED Jesse S. Sandhu
QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO. 56R0003R  
56R0003L  
POST MILE 22.4

**PHILIP RAINE SAFETY ROADSIDE REST AREA**  
CHP/CREW BUILDING - POWER

SHEET **EE3-1** OF

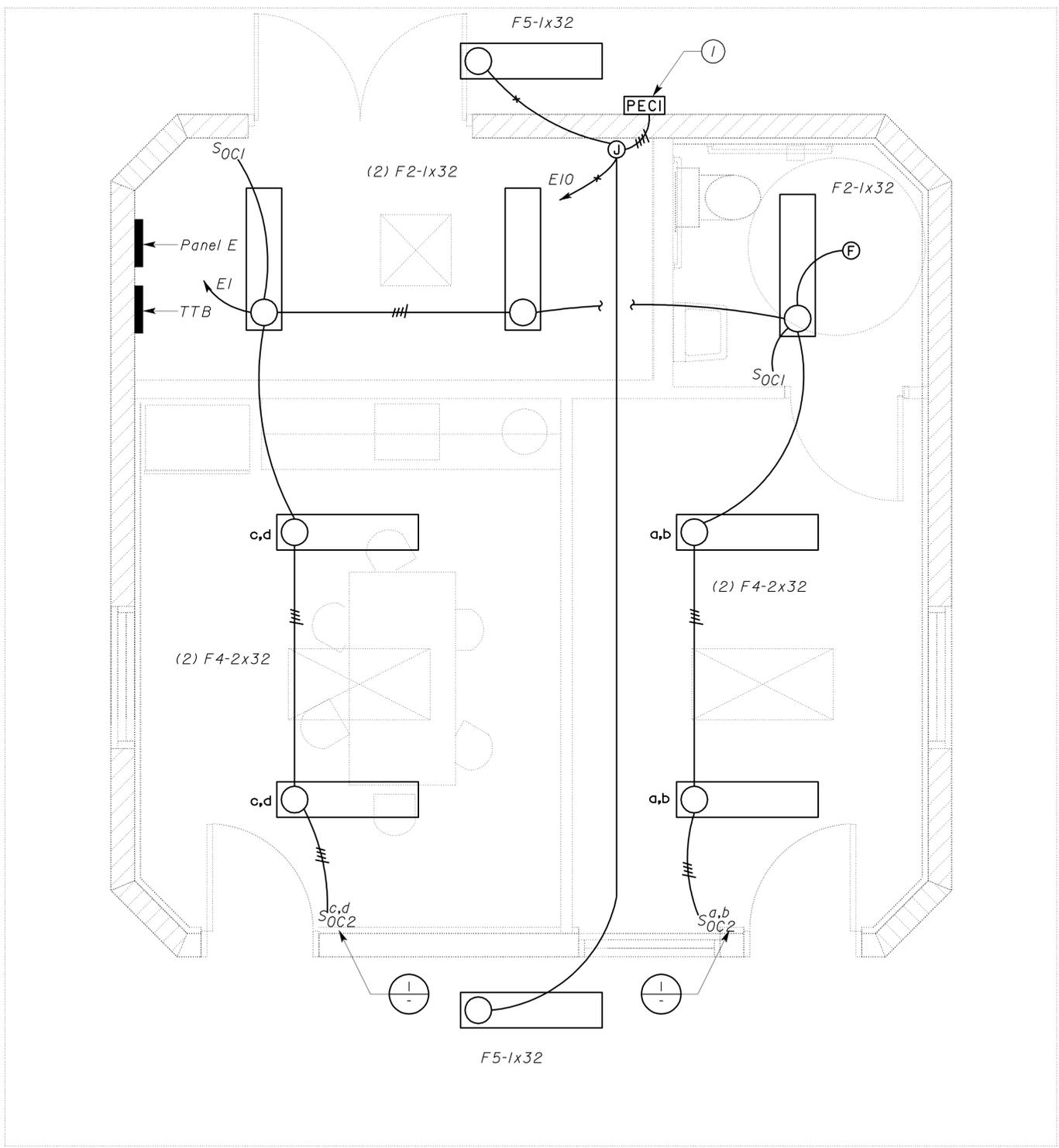
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	315	335

Tommy F. Lee 12-22-09  
 REGISTERED ELECTRICAL ENGINEER DATE

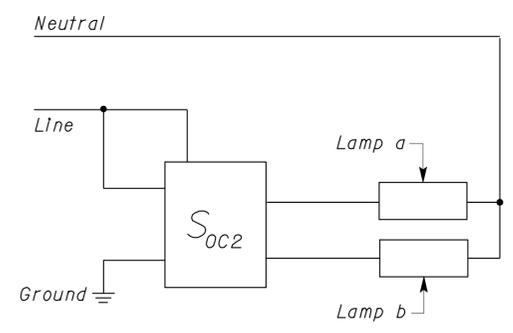
8-9-10  
 PLANS APPROVAL DATE

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**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: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09



**Note:**  
 ① Install PEC on the roof 1'-0" above roof floor and the PEC shall be facing towards north direction. Provide conduit flushing as required.



**1 WALL SWITCH OCCUPANCY SENSOR (BI-LEVEL)**

**PLAN**  
 SCALE 1/2" = 1'-0"

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu
DETAILS	BY Tommy Lee	CHECKED Jesse S. Sandhu
QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu

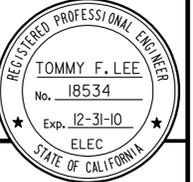
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

BRIDGE NO. 56R0003R 56R0003L	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE3-2
POST MILE 22.4	CHP/CREW BUILDING - LIGHTING	

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	316	335

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 SANDY MARGULLIS  
 Approval date: 12-1-09

*Tommy F. Lee* 06-03-10  
 REGISTERED ELECTRICAL ENGINEER DATE



8-9-10  
 PLANS APPROVAL DATE

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MAIN: 60A CIRCUIT BREAKER  
 VOLTS: 208/120V, 3-PHASE, 4-WIRE

PANEL E

FEEDER SIZE: 4\*6,1#6G  
 LOCATION: CREW/CHP BUILDING

DESCRIPTION	AMPERES			BRK	CKT	A	B	C	CKT	BRK	AMPERES			DESCRIPTION
	A	B	C								A	B	C	
CHP/CREW/UTILITY/REST RM LIGHTS	3			20/1	1	•			2	20/2	8.8			OUTDOOR/INDOOR A/C UNIT
CHP/REST RM RECEPTACLES		7.5		20/1	3		•		4			8.8		
CREW ROOM/UTILITY RM RECEPTACLES			12	20/1	5			•	6	15/2			7.2	WATER HEATER
REFRIGERATOR RECEPTACLE	3			20/1	7	•			8		7.2			
TRANSFORMER		2		20/1	9		•		10	20/1		0.6		EXTERIOR BUILDING LIGHTS
SPARE			-	20/1	11			•	12	20/1			-	SPARE

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
22	18.9	19.2	

DESIGN	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>
DETAILS	BY <i>Dall Zhou</i>	CHECKED <i>Jesse S. Sandhu</i>
QUANTITIES	BY <i>Tommy Lee</i>	CHECKED <i>Jesse S. Sandhu</i>

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.  
 56R0003R  
 56R0003L  
 POST MILE  
 22.4

PHILIP RAINE SAFETY ROADSIDE REST AREA  
 CHP/CREW BLDG  
 PANEL SCHEDULE

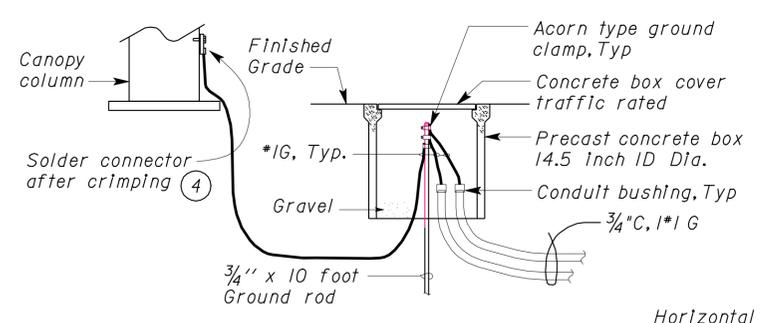
SHEET  
**EE3-3**

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	317	335

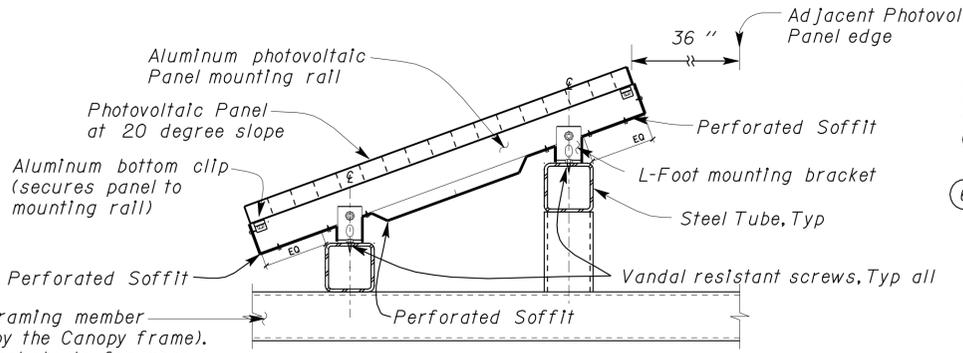
  

8-9-10 PLANS APPROVAL DATE	06-03-10 DATE

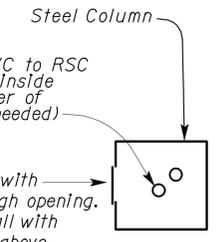
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**1 GROUND BOX DETAIL**  
NO SCALE

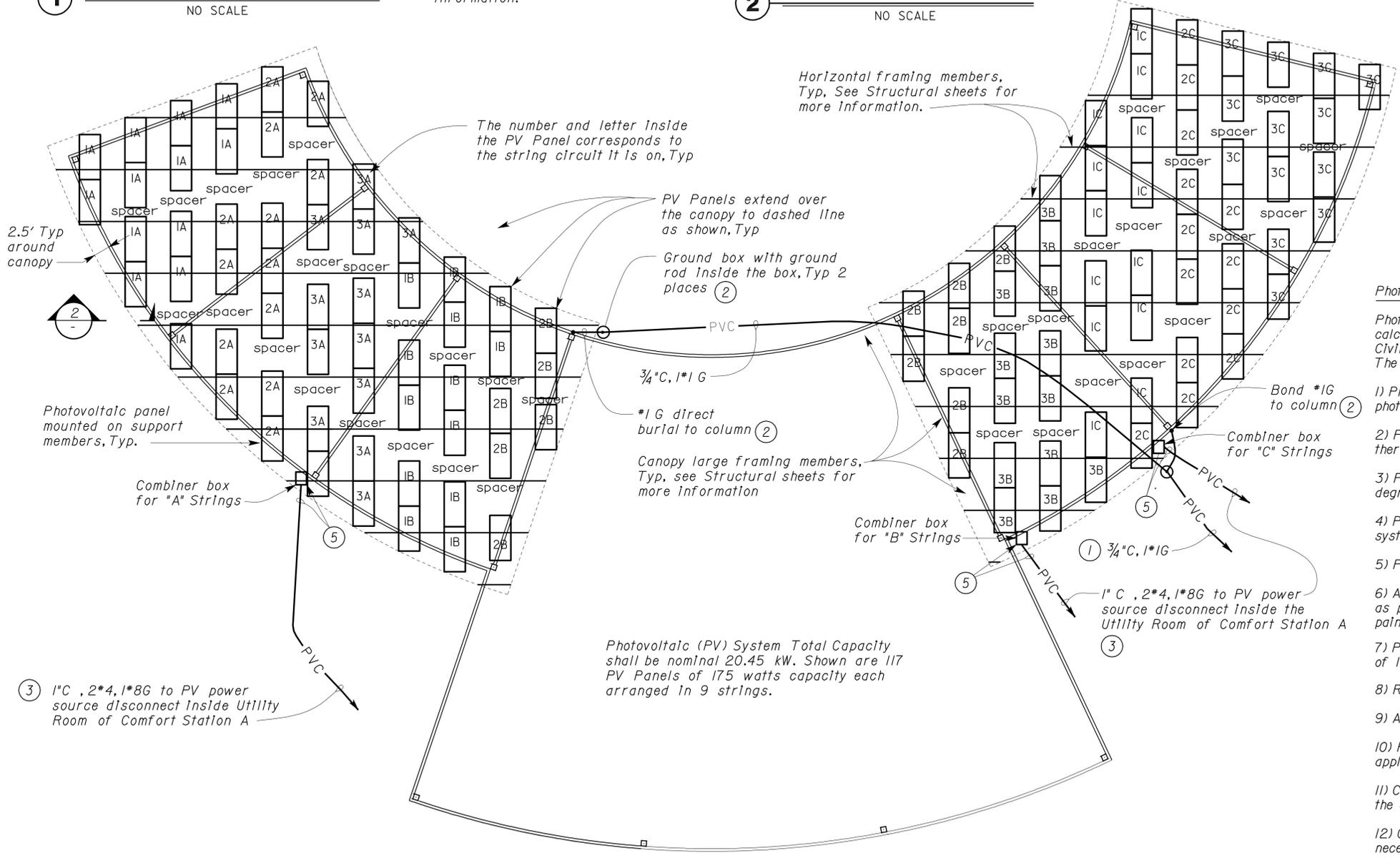


**2 MOUNTING DETAIL**  
NO SCALE



**3 COLUMN DETAIL**  
NO SCALE

**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
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Reviewed by: *Sandy Margullis*  
SANDY MARGULLIS  
Approval date: 12-1-09



**PLAN**  
NO SCALE

- Notes:
- To grounding electrode system inside Comfort Station A. For continuation see Sheet EE2-9.
  - See "Ground Box Detail" this sheet.
  - For continuation see Sheet EE4-4.
  - Secure connector to column with steel bolt and paint all exposed metal to match column.
  - PV system RSC conduit(s) enter column cap at canopy level, descend the column and exit the bottom at the stubbed up conduit. All column caps shall have drilled holes and silicon sealant to seal around the conduit exit points. For conduit stub up detail, see "Column Detail" this sheet and for column cap information see details 2 and 6 on Sheet EE4-4.
  - Columns with concrete benches shall have hand hole installed 6" above bench concrete finish level. Column without benches shall have hand holes 6" above finish concrete grade. Conduit stub ups (for lighting system) shall be extended to 2" below the bottom of hand hole and PV system conduits shall be continuous up through the entire column and exit the top.

- 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 by the Contractor for approval. The Photovoltaic System design shall meet or exceed the following requirements:
- Photovoltaic system nominal design capacity shall be 20.45 kilowatts. Shown are 117 photovoltaic panels with each panel rated at 175 watts.
  - Photovoltaic system panels layout as shown is for aesthetic purpose only and therefore, no variation in panel layout shall be made.
  - Photovoltaic system panels be mounted on a steel structure in a manner to provide 20 degrees of angle aimed at due South.
  - Photovoltaic system panels sizing as shown is 33-inch wide by 63-inch long. Photovoltaic system panels with dimensions other than shown may be submitted for considerations.
  - Photovoltaic system panel row spacing shall be designed to prevent shading from adjacent panels.
  - All wiring shall be concealed (in conduit, or soffit skin). Conduit system shall be installed as per the direction of the Engineer. Any exposed conduits system components shall be painted to match surrounding structures (as directed by the Engineer).
  - Photovoltaic system panels structural support system shall be designed to withstand wind forces of 100-mile per hour or greater.
  - Refer to Architectural plan sheets for additional requirements.
  - All photovoltaic system fasteners and connectors shall be vandal resistant.
  - Photovoltaic system wiring and protective devices shall meet or exceed the requirements of all applicable codes.
  - Combiner boxes location as shown is arbitrary only. Contractor shall install the combiner boxes in the canopy at locations that best suit the photovoltaic system strings layout.
  - Conduit homeruns from the photovoltaic system array to the comfort station may be adjusted as necessary to best suit the system installed.
  - Solar PV Installation shall comply with the latest guideline from California Department of Forestry & Fire Protection, Office of the State Fire Marshal and the latest program Handbook from California Solar Initiative (CSI).
  - 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 photovoltaic installation.

DESIGN	BY	James R. Lacy	CHECKED	Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 46R0001L 46R0001R POST MILE 22.45/22.40	PHILIP RAINE SAFETY ROADSIDE REST AREA PHOTOVOLTAIC SYSTEM - NORTHBOUND	SHEET EE4-1
	DETAILS	BY	James R. Lacy	CHECKED					
QUANTITIES	BY	James R. Lacy	CHECKED	Tommy F. Lee	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF	

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

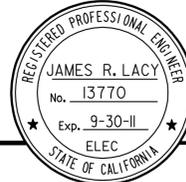
DOES SD Imperial Rev. 1/07

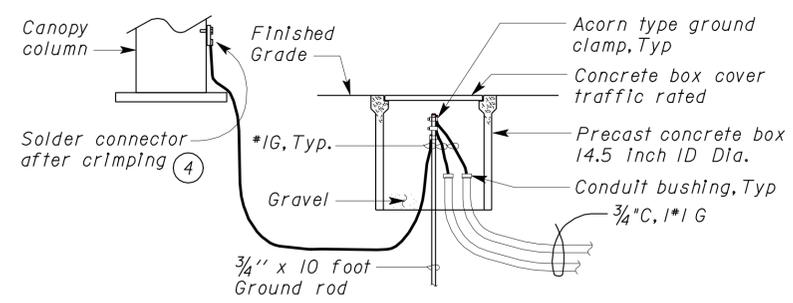
16-AUG-2010 09:44

ee4\_01.dgn

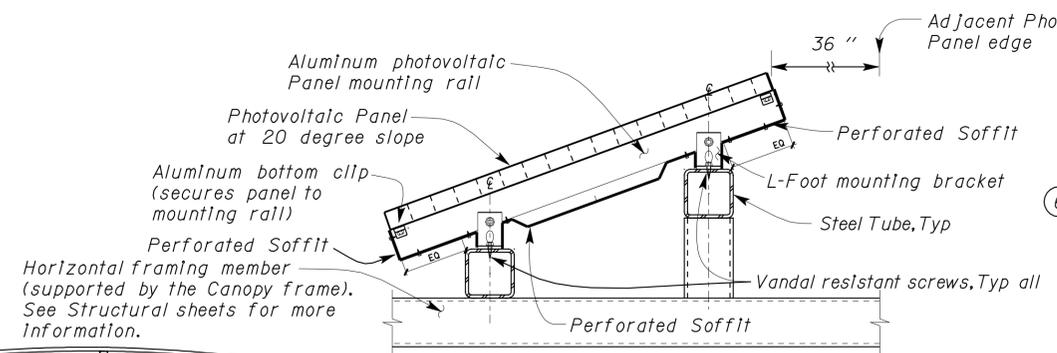
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	318	335

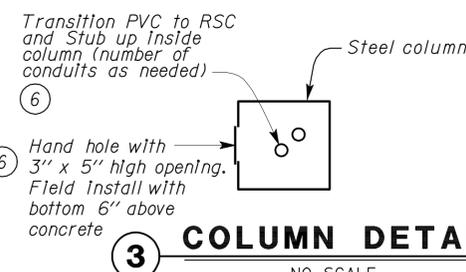
	
REGISTERED ELECTRICAL ENGINEER DATE 06-03-10	REGISTERED ELECTRICAL ENGINEER DATE 06-03-10
PLANS APPROVAL DATE 8-9-10	
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**1 GROUND BOX DETAIL**  
NO SCALE

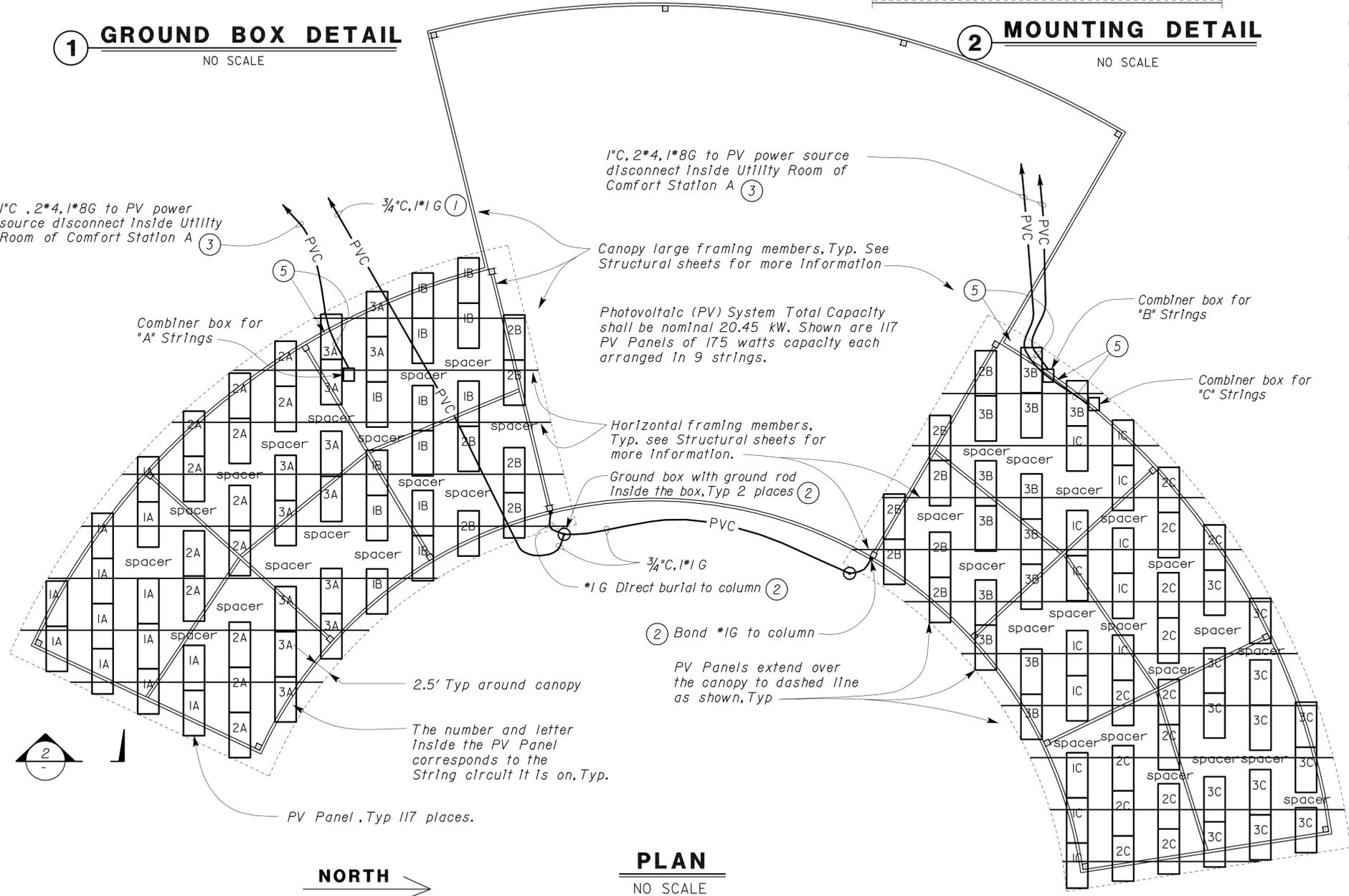


**2 MOUNTING DETAIL**  
NO SCALE



**3 COLUMN DETAIL**  
NO SCALE

- Notes:**
- To grounding electrode system inside Comfort Station A. For continuation see Sheet EE2-9.
  - See "Ground Box Detail" this sheet.
  - For continuation see Sheet EE4-5.
  - Secure connector to column with steel bolt and paint all exposed metal to match column.
  - PV system RCS Conduit(s) enter column cap at canopy level, descend the column and exit the bottom at the stubbed up conduit. All Column caps shall have drilled holes and silicon sealant to seal around the conduit exit points. For conduit stub up detail, see "Column Detail" this sheet and for column cap information see details 2 and 6 on Sheet EE4-5.
  - Columns with concrete benches shall have hand hole installed 6" above bench concrete finish level. Column without benches shall have hand holes 6" above finish concrete grade. Conduit stub ups (for lighting system) shall be extended to 2" below the bottom of hand hole and PV system conduits shall be continuous up through the entire column and exit the top.
- 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 by the Contractor for approval. The Photovoltaic System design shall meet or exceed the following requirements:
- Photovoltaic system nominal design capacity shall be 20.45 kilowatts. Shown are 117 photovoltaic panels with each panel rated at 175 watts.
  - Photovoltaic system panels layout as shown is for aesthetic purpose only and therefore, no variation in panel layout shall be made.
  - Photovoltaic system panels be mounted on a steel structure in a manner to provide 20 degrees of angle aimed at due South.
  - Photovoltaic system panels sizing as shown is 33-inch wide by 63-inch long. Photovoltaic system panels with dimensions other than shown may be submitted for considerations.
  - Photovoltaic system panel row spacing shall be designed to prevent shading from adjacent panels.
  - All wiring shall be concealed (in conduit, or soffit skin). Conduit system shall be installed as per the direction of the Engineer. Any exposed conduits system components shall be painted to match surrounding structures (as directed by the Engineer).
  - Photovoltaic system panels structural support system shall be designed to withstand wind forces of 100-mile per hour or greater.
  - Refer to Architectural plan sheets for additional requirements.
  - All photovoltaic system fasteners and connectors shall be vandal resistant.
  - Photovoltaic system wiring and protective devices shall meet or exceed the requirements of all applicable codes.
  - Combiner boxes location as shown is arbitrary only. Contractor shall install the combiner boxes in the canopy at locations that best suit the photovoltaic system strings layout.
  - Conduit homeruns from the photovoltaic system array to the comfort station may be adjusted as necessary to best suit the system installed.
  - Solar photovoltaic installation shall comply with the latest guideline from California Department of Forestry & Fire Protection, Office of the State Fire Marshal and the latest program Handbook from California Solar Initiative (CSI).
  - 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 photovoltaic installation.



**PLAN**  
NO SCALE

DESIGN	BY James R. Lacy	CHECKED Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 46R0001L	<b>PHILIP RAINE SAFETY ROADSIDE REST AREA</b>	SHEET <b>EE4-2</b>	
	DETAILS BY James R. Lacy	CHECKED James R. Lacy			POST MILE 22.45/22.40			<b>PHOTOVOLTAIC SYSTEM - SOUTHBOUND</b>
	QUANTITIES BY James R. Lacy	CHECKED Tommy F. Lee			REVISION DATES (PRELIMINARY STAGE ONLY)			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	9/18/08 11/18/08 1/13/09 4/24/09 8/19/09 9/02/09 9/27/09 10/27/09 12/16/09 6/3/10	16-AUG-2010 09:44		

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	319	335

*James R. Lacy*  
 REGISTERED ELECTRICAL ENGINEER  
 No. 13770  
 Exp. 9-30-11  
 ELEC  
 STATE OF CALIFORNIA

8-9-10  
 PLANS APPROVAL DATE  
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**General Note:**

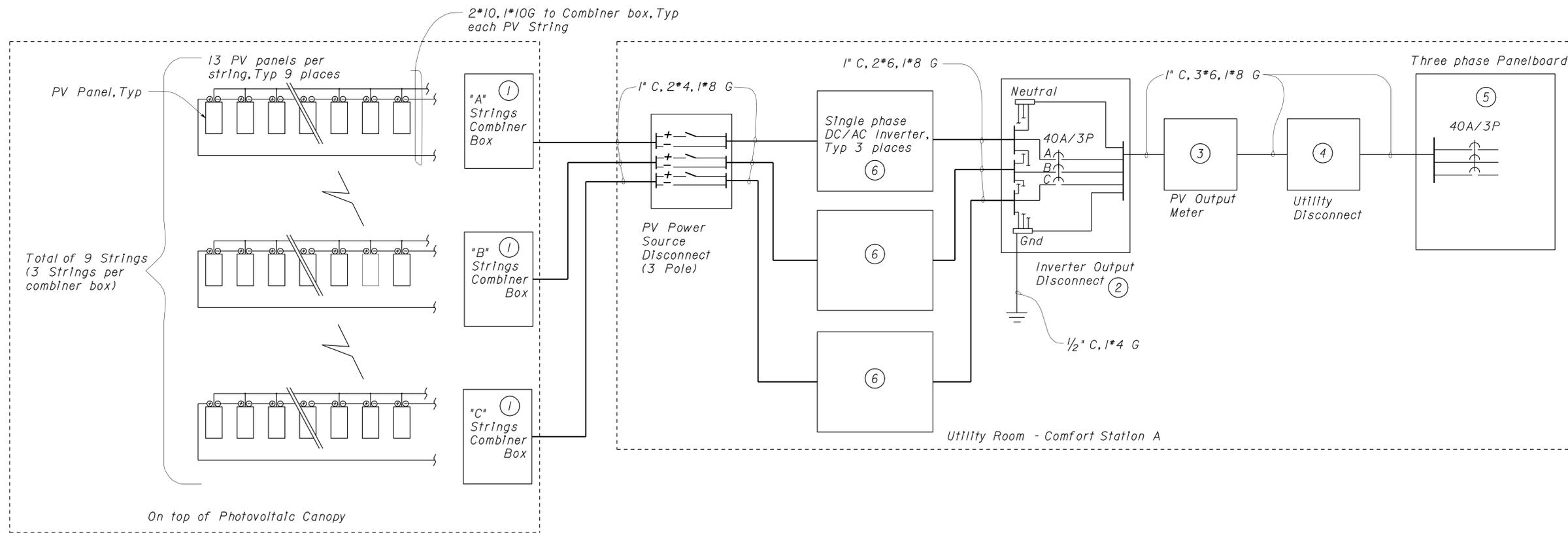
A. Northbound Photovoltaic system one line diagrams shown and one line diagram for Southbound is identical.

**Notes:**

- ① Only three fused combiner boxes are shown. The Contractor may design the system with more than three if needed.
- ② All inverter outputs shall be terminated on 3 pole, 480-Volt, circuit breaker as shown. Circuit breaker ampacity shall be chosen as required for the inverters installed.
- ③ PV Output meter shall meet or exceed SCE requirements for Net metering of the PV System.
- ④ Utility Disconnect shall be a 480-Volt, 3-pole, 60-Ampere, non-fusible, heavy duty, safety switch suitable for locking in the open position.

- ⑤ Existing Panelboard A is a Westinghouse 100-Ampere, 480/277 Volt, 3-phase and 4-wire panelboard with branch circuit breakers. Replace Panelboard with new 225-Ampere rated Panelboard and breakers. Provide and install a 40-Ampere, 3-pole circuit breaker in spaces number 14-16-18. Provide and install Panelboard cover as required. New Panelboard is shown on Panel Schedule on sheet EE2-6.
- ⑥ The Contractor may design Photovoltaic System with a three phase Inverter rated for the Photovoltaic System output. Inverter, inverter output disconnect and wiring changes shall be submitted for approval.

**CALIFORNIA STATE FIRE MARSHAL**  
**APPROVED**  
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 Reviewed by: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09



**PHOTOVOLTAIC ONE LINE DIAGRAM**

DESIGN	BY James R. Lacy	CHECKED Jesse S. Sandhu
DETAILS	BY James R. Lacy	CHECKED James R. Lacy
QUANTITIES	BY James R. Lacy	CHECKED Tommy F. Lee

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

BRIDGE NO.	46R0001L
POST MILE	22.45/22.40

**PHILIP RAINE SAFETY ROADSIDE REST AREA**  
**PHOTOVOLTAIC ONE LINE DIAGRAM**

SHEET OF  
**EE4-3**

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	320	335

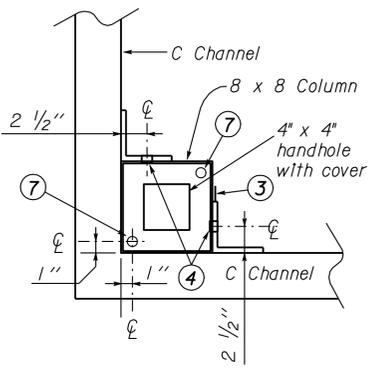
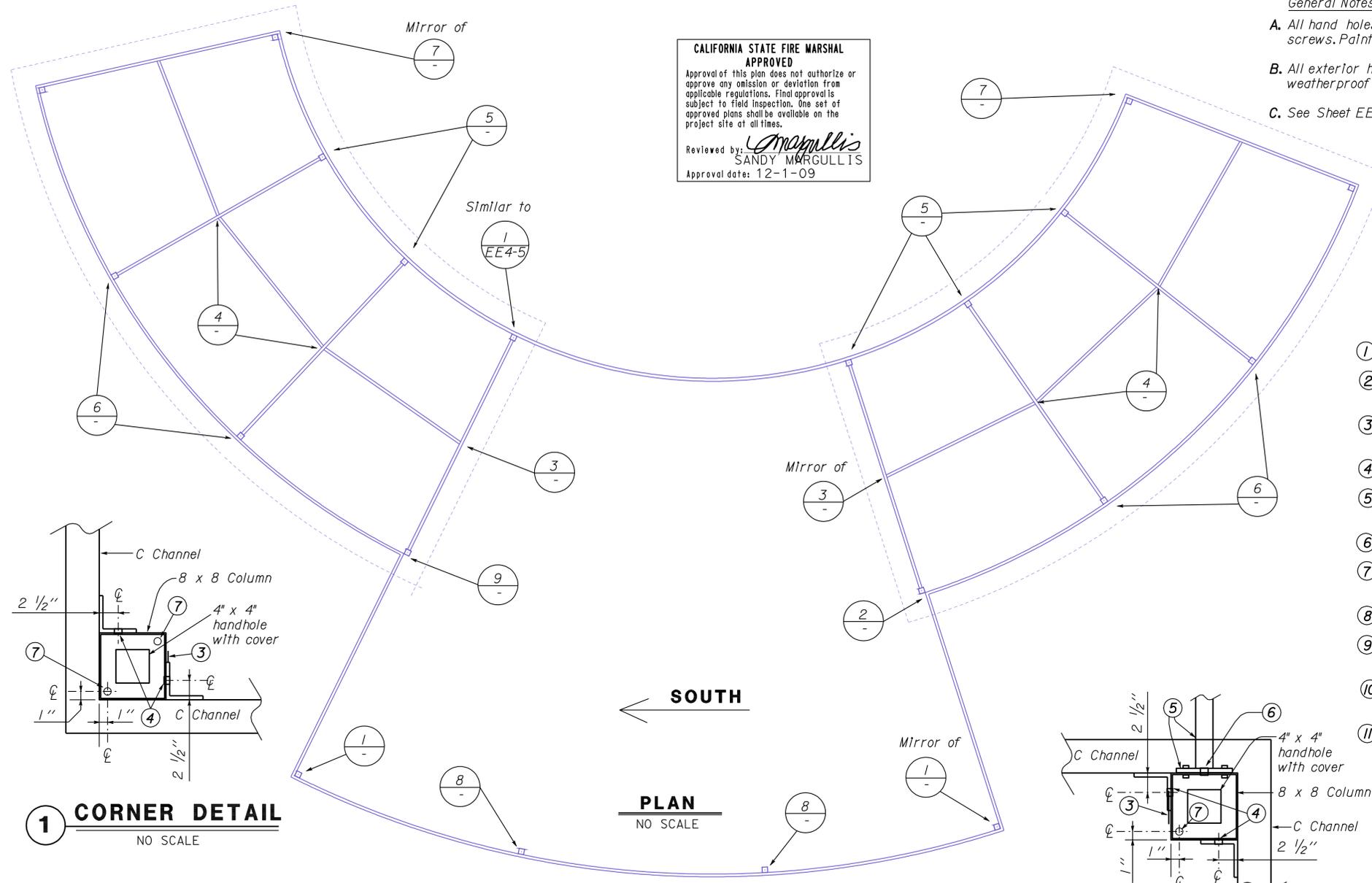
  

REGISTERED ELECTRICAL ENGINEER	DATE 12-22-09
8-9-10 PLANS APPROVAL DATE	
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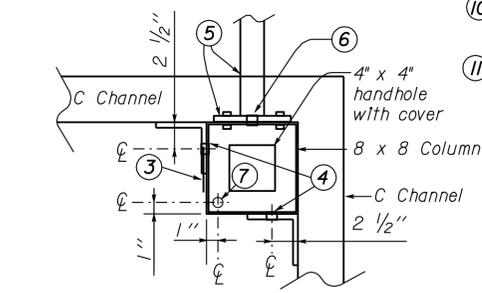
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 Reviewed by: *Sandy Margullis*  
**SANDY MARGULLIS**  
 Approval date: 12-1-09

- General Notes:**
- A. All hand holes shall have gasketed cover plates with vandal resistant screws. Paint cover plate and screws to match surrounding structure.
  - B. All exterior holes into the canopy structure shall have removable weatherproof plugs. Paint plugs to match surrounding structure.
  - C. See Sheet EE0-9 for additional handholes and holes in the canopy.
  - D. All hand holes and 2" diameter reamed holes shall be factory made prior to canopy assembly. See Detail 3 on Sheet EE4-5 for hand hole details.
  - E. Support conduits to the backside of the C Channel with one hole clamp back straps. Install conduit in a manner so mounting holes are in the middle third of the cross section of the C Channel.
  - F. Exposed conduit system and supports shall be painted to match surrounding structure.

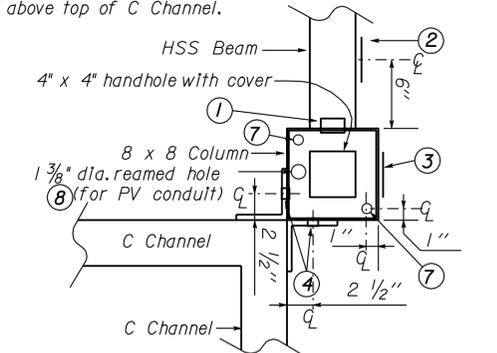
- Notes:**
- 1 2" diameter reamed hole from Column into HSS beam or beam to beam as indicated.
  - 2 4" wide x 3" high hand hole with cover. Centerline of handhole shall line up with the centerline of the HSS beam.
  - 3 3" wide x 5" high hand hole with cover in the lower part of the column. Bottom of handhole shall be at 6" above finished concrete grade or 6" above concrete bench (for those columns with a bench).
  - 4 Half way up the angle drill and tap hole (thru angle and column) for 1/2" diameter rigid steel conduit.
  - 5 1 1/2" diameter mounting arm with base (for fixture F7). Secure mounting arm on to C Channel/column with 4 @ 3/8" diameter bolts. For additional details see Sheet EE0-9.
  - 6 1/2" diameter reamed hole through column and mounting arm base.
  - 7 Drill and tap hole through column cap for 3/4" diameter rigid steel conduit. Offset dimensions for holes to the corner of the column are the same.
  - 8 Field drill and ream only the columns with the Photovoltaic System (PV) conduits.
  - 9 3" wide x 5" high hand hole centered on column centerline. Bottom edge of hand hole shall be 3" above the top of the C Channel.
  - 10 Drill and tap hole through column for 3/4" diameter rigid steel conduit. Holes shall be on column centerline and located 4" above the top of the C Channel.
  - 11 Location shall be on column centerline and located 10" above top of C Channel.



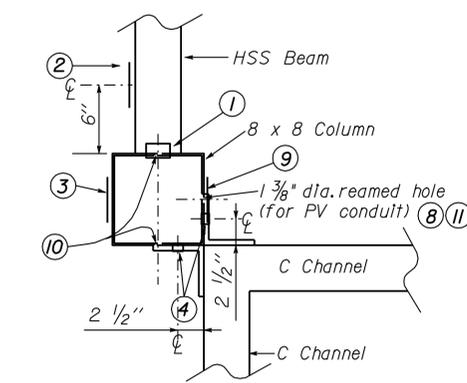
**1 CORNER DETAIL**  
NO SCALE



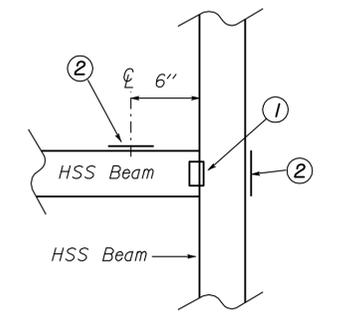
**7 CORNER CONNECTION**  
NO SCALE



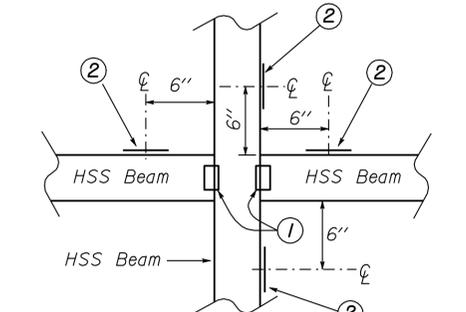
**9 CONNECTION DETAIL**  
NO SCALE



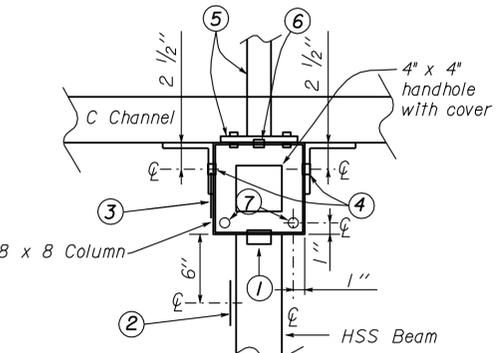
**2 CONNECTION DETAIL**  
NO SCALE



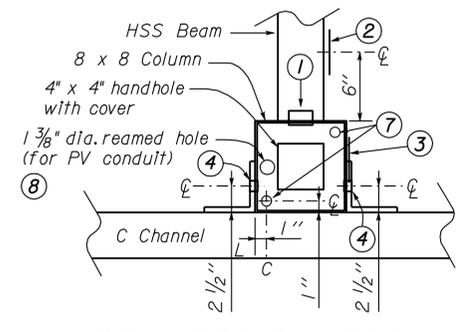
**3 MIDPOINT DETAIL**  
NO SCALE



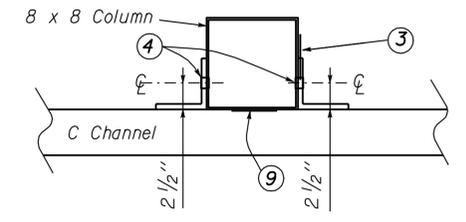
**4 HSS JUNCTION DETAIL**  
NO SCALE



**5 F7 CONNECTION DETAIL**  
NO SCALE



**6 CONNECTION DETAIL**  
NO SCALE



**8 CONNECTION DETAIL**  
NO SCALE

DESIGN	BY James R. Lacy	CHECKED Jesse S. Sandhu
DETAILS	BY X	CHECKED James R. Lacy
QUANTITIES	BY James R. Lacy	CHECKED Tommy F. Lee

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

BRIDGE NO. 46R0001L	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET OF
POST MILE 22.45/22.40		
ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN		EE4-4
PHOTOVOLTAIC CANOPY CONDUIT HOLES AND HAND HOLES - NORTHBOUND		

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



CU 06340  
EA 0A9701

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
	9/18/08 11/18/08 1/24/09 5/25/09 9/28/09 10/28/09 12/22/09	

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	321	335

<i>James R. Lacy</i>		12-22-09
REGISTERED ELECTRICAL ENGINEER	DATE	

8-9-10
PLANS APPROVAL DATE

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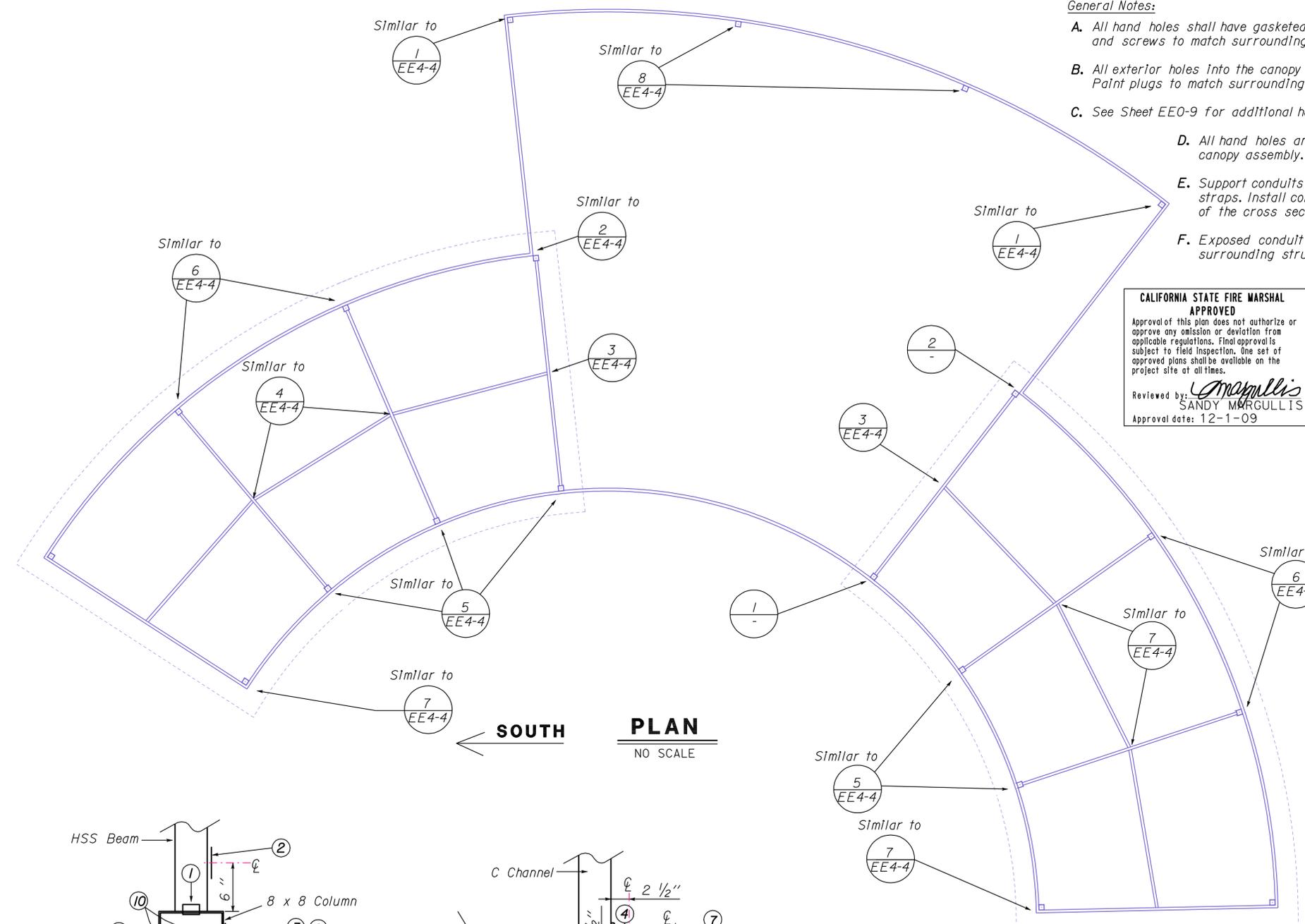
**General Notes:**

- A. All hand holes shall have gasketed cover plates with vandal resistant screws. Paint cover plate and screws to match surrounding structure.
- B. All exterior holes into the canopy structure shall have removable weatherproof plugs. Paint plugs to match surrounding structure.
- C. See Sheet EE0-9 for additional handholes and holes in the canopy.
- D. All hand holes and 2" diameter reamed holes shall be cut and drilled prior to canopy assembly. See Detail 3 this sheet for Hand Hole Details.
- E. Support conduits to the backside of the C Channel with one hole clamp back straps. Install conduit in a manner so mounting holes are in the middle third of the cross section of the C Channel.
- F. Exposed conduit system and supports shall be painted to match surrounding structure.

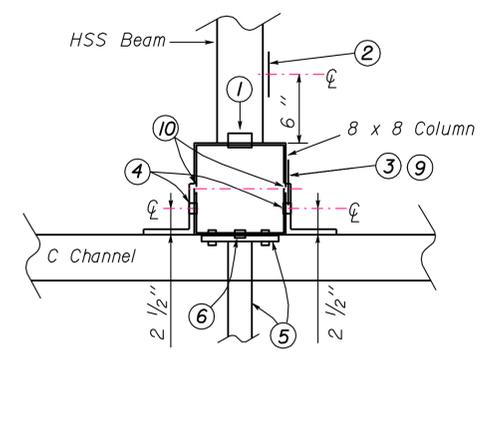
**CALIFORNIA STATE FIRE MARSHAL APPROVED**  
 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.  
 Reviewed by: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09

**Notes:**

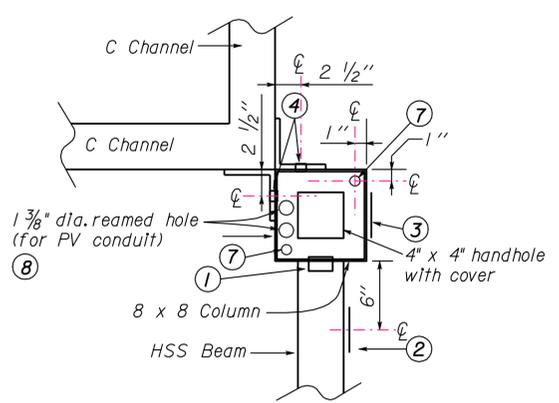
- ① 2" diameter reamed hole from Column into HSS beam or beam to beam as indicated.
- ② 5" wide x 3" high hand hole with cover. Centerline of hand hole shall line up with the centerline of the HSS beam.
- ③ 3" wide x 5" high hand hole with cover in the lower part of column. Bottom of hand hole shall be at 6" above finished concrete level or 6" above concrete bench (for those columns with a bench).
- ④ Half way up the angle drill and tap hole (thru angle and column) for 1/2" diameter rigid steel conduit.
- ⑤ 1 1/2" diameter mounting arm with base (for fixture F7). Secure mounting arm on to C Channel/column with 4 @ 3/8" diameter bolts. For additional details see Sheet EE0-9.
- ⑥ 1/2" diameter reamed hole through column and mounting arm base.
- ⑦ Drill and tap hole through column cap for 3/4" diameter rigid steel conduit. Offset dimensions for holes to the corner of the column are the same.
- ⑧ Field drill and ream only the columns with the Photovoltaic System (PV) conduits.
- ⑨ 3" wide x 5" high hand hole centered on column centerline. Bottom edge of hand hole shall be 3" above the top of the C Channel.
- ⑩ Drill and tap hole through column for 3/4" diameter rigid steel conduit. Holes shall be on column centerline and located 4" above the top of the C Channel.
- ⑪ Screws shall be SST Vandal resistant #12 self drilling and self tapping screws.



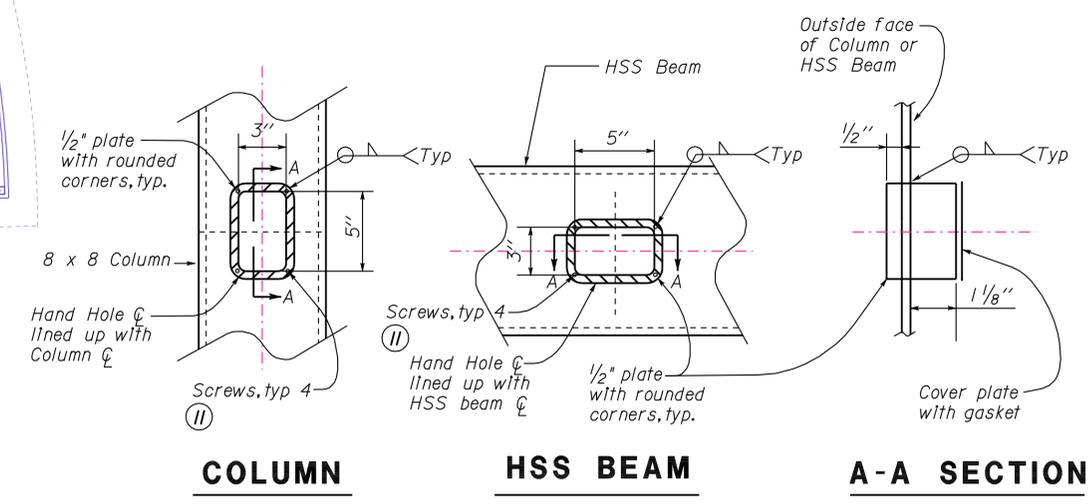
**PLAN**  
NO SCALE



**1 F7 CONNECTION DETAIL**  
NO SCALE



**2 CONNECTION DETAIL**  
NO SCALE



**3 HAND HOLE DETAILS**  
NO SCALE

DESIGN	BY James R. Lacy	CHECKED Jesse S. Sandhu
DETAILS	BY X	CHECKED James R. Lacy
QUANTITIES	BY James R. Lacy	CHECKED Tommy F. Lee

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO. 46R0001L 46R0001R  
POST MILE 22.45/22.40  
**PHILIP RAINE SAFETY ROADSIDE REST AREA**  
PHOTOVOLTAIC CANOPY CONDUIT HOLES AND HAND HOLES - SOUTHBOUND

SHEET **EE4-5** OF

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	322	335

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 Reviewed by: *Sandy Margullis*  
 SANDY MARGULLIS  
 Approval date: 12-1-09

Tommy F. Lee 06-03-10  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-9-10  
 PLANS APPROVAL DATE

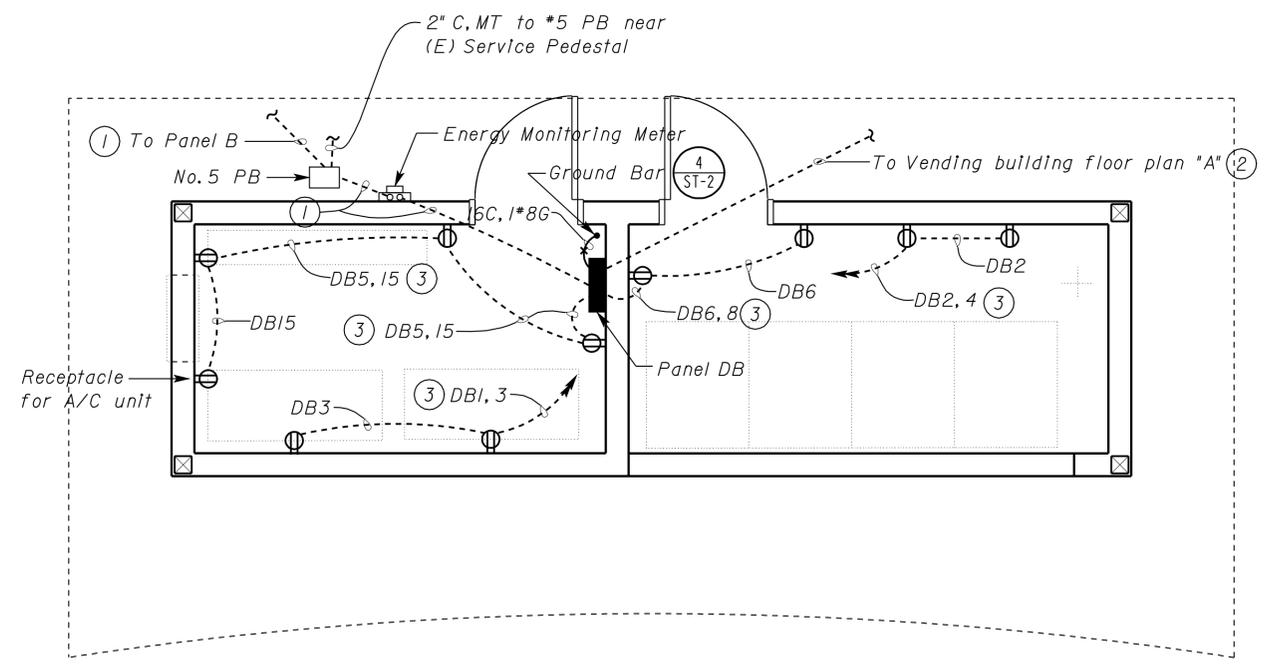


General note:

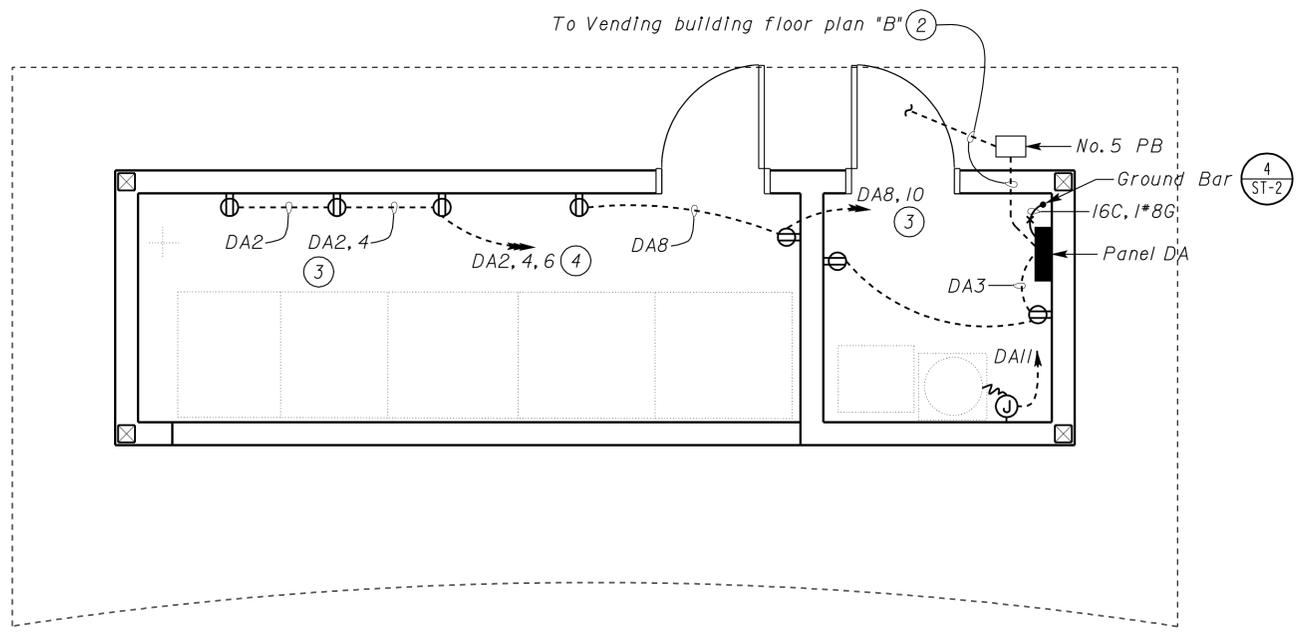
All receptacle shall be weatherproof covers and UL rated for wet locations while in use.

Notes:

- ① 2" C, 4\*2, 1\*2G.
- ② 2" C, 4\*6, 1\*6G.
- ③ 1/2" C, 4\*12, 1\*12G.
- ④ 3/4" C, 6\*12, 1\*12G.



**VENDING BUILDING FLOOR PLAN 2**



**VENDING BUILDING FLOOR PLAN 1**

**PLAN**  
 SCALE 3/8" = 1'-0"

DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu
DETAILS	BY Dall Zhou	CHECKED Jesse S. Sandhu
QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu

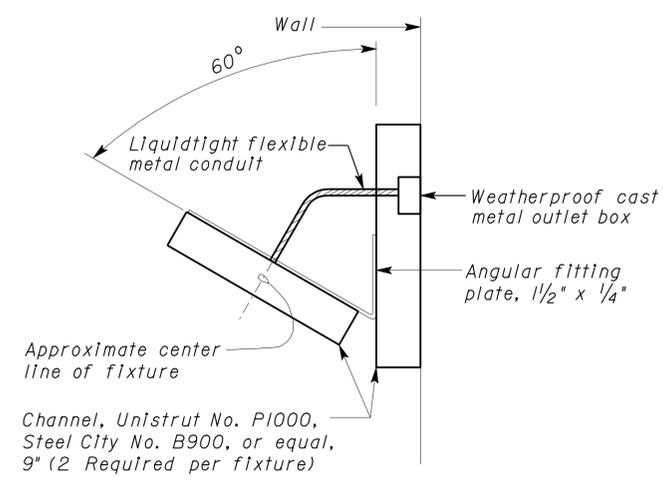
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
 ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN

BRIDGE NO. 56R0003R  
 56R0003L  
 POST MILE 22.4  
**PHILIP RAINE SAFETY ROADSIDE REST AREA**  
 VENDING BUILDING FLOOR PLAN - POWER

SHEET **EE4-6**

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	323	335
Tommy F. Lee REGISTERED ELECTRICAL ENGINEER DATE 12-22-09					
8-9-10 PLANS APPROVAL DATE					
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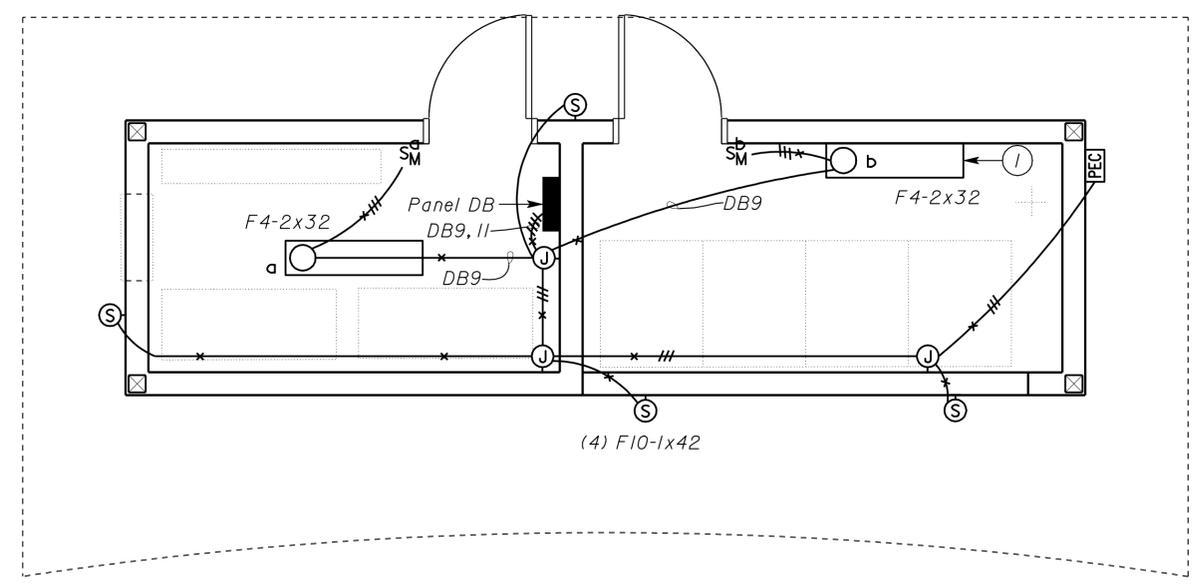
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 SANDY MARGULLIS  
 Approval date: 12-1-09



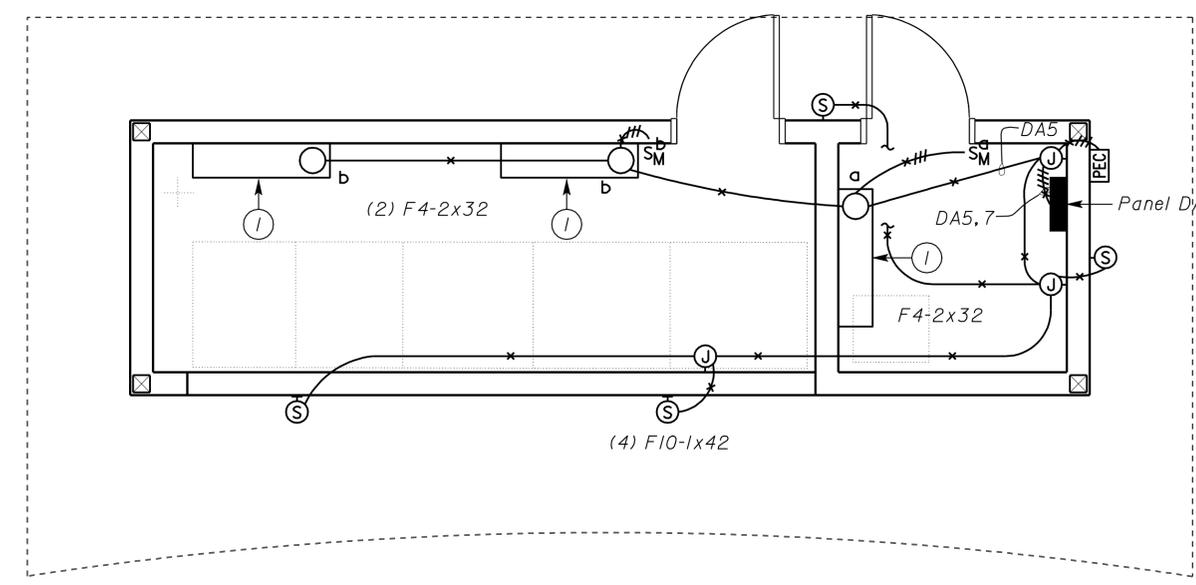
**FIXTURE MOUNTING DETAIL**

General notes:  
 A. Install exterior light fixtures, wall mounted light fixtures and Photo electric sensor six inches below the top of wall.

Notes:  
 ① See fixture mounting detail on this sheet.



**VENDING BUILDING FLOOR PLAN 2**



**VENDING BUILDING FLOOR PLAN 1**

**PLAN**  
 SCALE 3/8" = 1'-0"

DOES SD Imperial Rev. 1/07	DESIGN	BY Tommy Lee	CHECKED Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET
	DETAILS	BY Dall Zhou	CHECKED Jesse S. Sandhu			56R0003R 56R0003L		VENDING BUILDING PLAN - LIGHTING
	QUANTITIES	BY Tommy Lee	CHECKED Jesse S. Sandhu			POST MILE		
				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	22.4		
				CU 06340 EA 0A9701		DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	
							7/21/09 12/18/09 12/22/09	

16-AUG-2010 09:51  
 ee4\_07.dgn

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	324	335

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 Reviewed by: *Sandy Margullis*  
**SANDY MARGULLIS**  
 Approval date: 12-1-09

*Tommy F. Lee* 06-03-10  
 REGISTERED ELECTRICAL ENGINEER DATE  
 8-9-10  
 PLANS APPROVAL DATE

**REGISTERED PROFESSIONAL ENGINEER**  
**TOMMY F. LEE**  
 No. 18534  
 Exp. 12-31-10  
 ELEC  
 STATE OF CALIFORNIA

MAIN: 60A CIRCUIT BREAKER  
 VOLTS: 208/120 V, 3-PHASE, 4-WIRE

PANEL DA

FEEDER SIZE: 4#6, 1#6G  
 LOCATION: VENDING BUILDING FLOOR PLAN A

DESCRIPTION	AMPERES			BRK	CKT	A	B	C	CKT	BRK	AMPERES			DESCRIPTION
	A	B	C								A	B	C	
SPARE				20/1	1	•			2	20/1	10			RECP - VENDING MACHINE #1
RECP	-	3			3	•			4			10		RECP - VENDING MACHINE #2
LIGHTING - INTERIOR			2		5	•			6				10	RECP - VENDING MACHINE #3
LIGHTING - EXTERIOR	3				7	•			8		10			RECP - VENDING MACHINE #4
SPARE		-			9	•			10			10		RECP - VENDING MACHINE #5
ELECTRIC WATER HEATER			14		11	•			12				-	SPARE
SPARE	-				13	•			14		-			SPARE
SPARE		-			15	•			16			-		SPARE
SPACE			-		17	•			18				-	SPARE
					19	•			20					SPACE
					21	•			22					
					23	•			24					

A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
23	23	26	

MAIN: 100A CIRCUIT BREAKER  
 VOLTS: 208/120 V, 3-PHASE, 4-WIRE

PANEL DB

FEEDER SIZE: 4#2, 1#2G  
 LOCATION: VENDING BUILDING FLOOR PLAN B

DESCRIPTION	AMPERES			BRK	CKT	A	B	C	CKT	BRK	AMPERES			DESCRIPTION
	A	B	C								A	B	C	
RECP - REFRIGERATOR	10			20/1	1	•			2	20/1	10			RECP - VENDING MACHINE #1
RECP - FREEZER		10			3	•			4			10		RECP - VENDING MACHINE #2
RECP			4.5		5	•			6				10	RECP - VENDING MACHINE #3
SPARE	-				7	•			8		10			RECP - VENDING MACHINE #4
LIGHTING - INTERIOR		2			9	•			10			-		SPARE
LIGHTING - EXTERIOR			3		11	•			12				-	SPARE
SPARE	-				13	•			14		23			
RECP - A/C		6.8			15	•			16	60/3		23		VENDING BUILDING FLOOR PLAN A
SPARE			-		17	•			18				26	
SPARE	-				19	•			20					SPACE
SPACE					21	•			22					
					23	•			24					

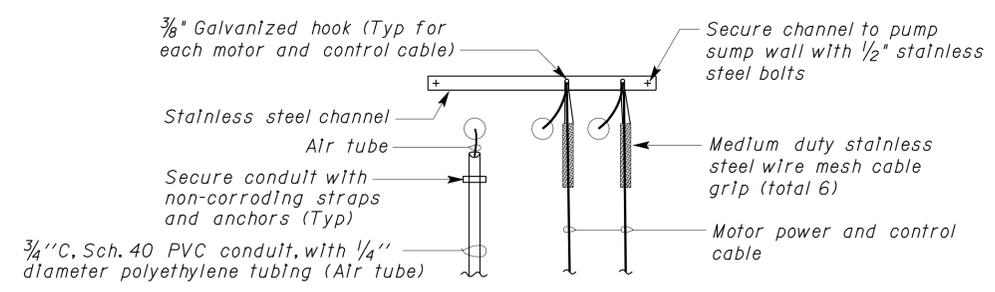
A	B	C	TOTAL CONNECTED LOAD (AMPERES PER PHASE)
53	51.8	43.5	

DESIGN BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 56R0003R 56R0003L	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE4-8
			POST MILE 22.4		VENDING BUILDING
DETAILS BY <i>Dall Zhou</i> CHECKED <i>Jesse S. Sandhu</i>	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 06340 EA 0A9701	REVISION DATES (PRELIMINARY STAGE ONLY) 7/21/09 10/21/09 12/22/09 6/3/10	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
QUANTITIES BY <i>Tommy Lee</i> CHECKED <i>Jesse S. Sandhu</i>	DOES SD Imperial Rev. 1/07		ee4_08.dgn		04-001-2010 14104

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	325	335

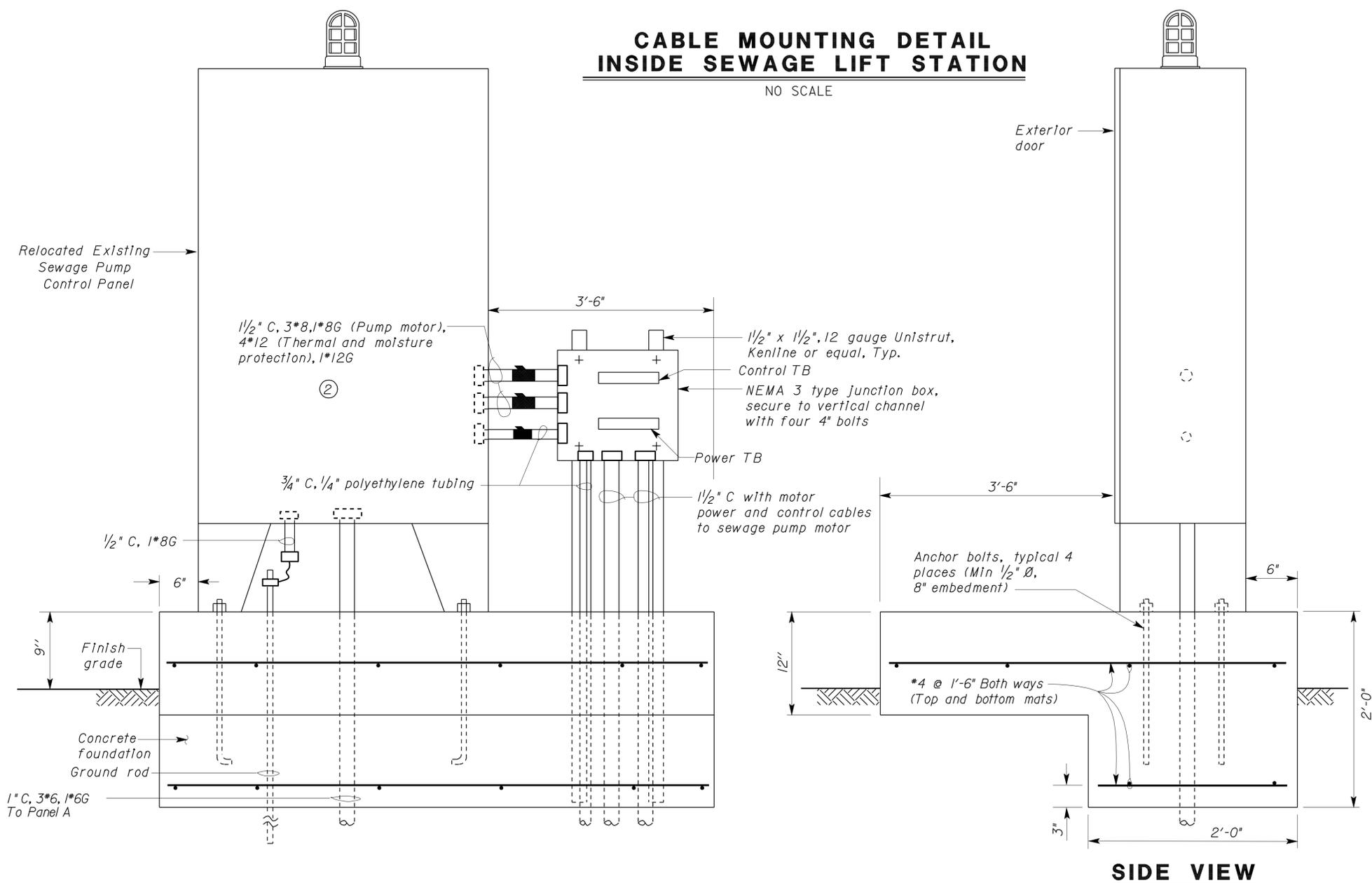
  

<b>CALIFORNIA STATE FIRE MARSHAL APPROVED</b> Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times. Reviewed by: <i>Sandy Murgullis</i> <b>SANDY MURGULLIS</b> Approval date: 12-1-09		<b>REGISTERED PROFESSIONAL ENGINEER</b> <b>TOMMY F. LEE</b> No. 18534 Exp. 12-31-10 ELEC STATE OF CALIFORNIA
Tommy F. Lee	06-03-10	
REGISTERED ELECTRICAL ENGINEER	DATE	
8-9-10		
PLANS APPROVAL DATE		
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**CABLE MOUNTING DETAIL  
INSIDE SEWAGE LIFT STATION**

NO SCALE



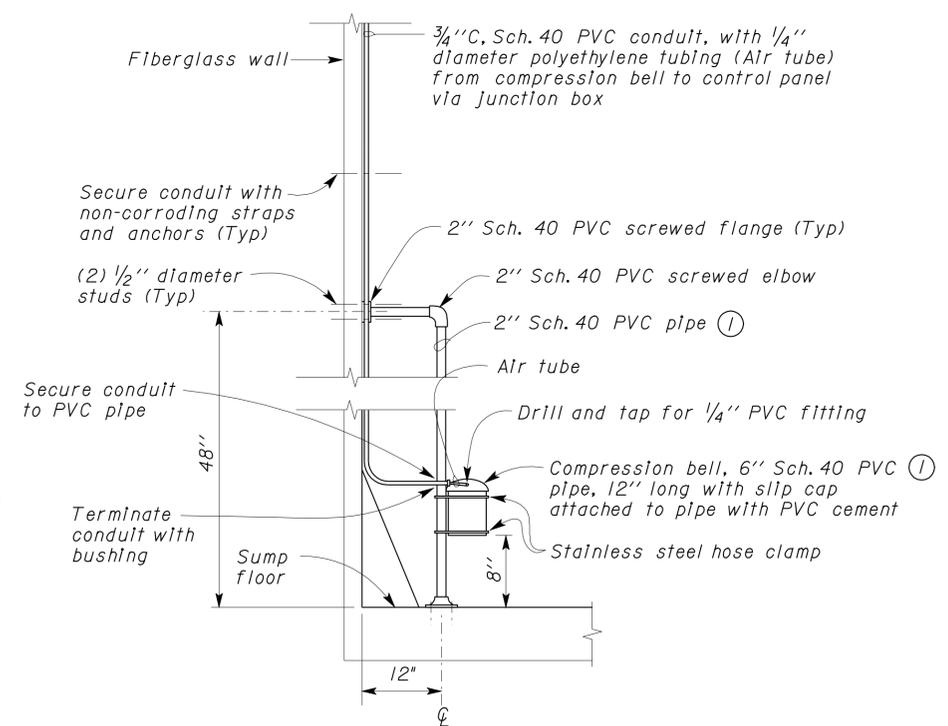
(CONTROL PANEL EXTERIOR DOOR NOT SHOWN, INTERIOR HINGED DOOR CLOSED)      (JUNCTION BOX EXTERIOR HINGED DOOR NOT SHOWN)

**ELEVATION**  
NO SCALE

**SIDE VIEW**

**General Notes:**

- A All bolts, fasteners and straps in the sump shall be stainless steel. Connections to the fiberglass material shall be made watertight so no leaks may occur.
- Notes:**
- ① Exact location of PVC pipe in sump and compression bell orientation shall be as directed by the Engineer in the field.
  - ② The Contractor shall make all connections and reconnections as needed for conductors, cables and the air bubbler tube as required for the full operation of the lift station. All aspects of the operation will be tested after installation. Operation shall include; Lead Pump on, Lag Pump on, All pumps off, Pump alternation, High level alarm, Low level alarm. Direction of pump rotation shall be the same as prior to work. With input from the Engineer the Liquitronic Controller level set points will be adjusted for the new sump depth.



**AIR TUBE AND COMPRESSION  
BELL MOUNTING DETAIL**

①

NO SCALE

DESIGN	BY	Tommy Lee	CHECKED	Jesse S. Sandhu	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	56R0003R	PHILIP RAINE SAFETY ROADSIDE REST AREA	SHEET EE5-1
	DETAILS	BY	Tommy Lee	CHECKED			Jesse S. Sandhu	POST MILE		
QUANTITIES	BY	Tommy Lee	CHECKED	Jesse S. Sandhu	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF

# ABBREVIATIONS

AB	AGGREGATE BASE	lbs	POUNDS
AC	ASPHALT CONCRETE	LOP	LIMIT OF PAYMENT
ACP	ASBESTOS CONCRETE PIPE	L/S	LANDSCAPE
AVC	AIR VOLUME CONTROLLER	Max	MAXIMUM
B	BUNG	MBV	MOTORIZED BALL VALVE
Bldg	BUILDING	MH	MANHOLE
C	CONDUIT	Min	MINIMUM
C-C	CENTER TO CENTER	NHT	NATIONAL HOSE THREAD
CI	CAST-IRON	O.C.	ON CENTER
CL	CHAIN LINK	OD	OUTSIDE DIAMETER
CMP	CORRUGATED METAL PIPE	OG	ORIGINAL GROUND
Conc	CONCRETE	OS&Y	OPEN STEM AND YOKE
COTF	CLEANOUT TO FLOOR	P/L	PROPERTY LINE
COTG	CLEANOUT TO GRADE	PCC	PORTLAND CEMENT CONCRETE
DBH	DIAMETER AT BREAST HEIGHT	PG	PRESSURE GAUGE
DI	DRAINAGE INLET	PRV	PRESSURE REGULATING VALVE
Di <sub>a</sub>	DIAMETER	PS	PRESSURE SWITCH
DP	DRAIN PIPE	psi	POUNDS PER SQUARE INCH
E	ELECTRICAL	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	R	RADIUS
EG	EXISTING GRADE	RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	RCVM	REMOTE CONTROL VALVE MASTER
EP	EDGE OF PAVEMENT	RPM	REVOLUTIONS PER MINUTE
FF	FINISH FLOOR	RT	RIGHT
FL	FLOW LINE	R/W	RIGHT-OF-WAY
FOC	FACE OF CONCRETE	S	SEWER
FS	FLOAT SWITCH	Sch	SCHEDULE
ft	FEET	SD	STORM DRAIN
Galv	GALVANIZED	sq	SQUARE
gpm	GALLONS PER MINUTE	Sta	STATION
GSP	GALVANIZED STEEL PIPE	TBM	TEMPORARY BENCHMARK
HF	HOSE FAUCET	TOC	TOP OF CURB, CONCRETE
H	HEIGHT	Tot	TOTAL
HP	HORSEPOWER	Typ	TYPICAL
HZ	HERTZ	V	VOLT
ID	INSIDE DIAMETER	VCP	VITRIFIED CLAY PIPE
IE	INVERT ELEVATION	W	WATER
In	INCHES	W/O	WITHOUT
JB	JUNCTION BOX	WP	WATER PIPE
		WSP	WELDED STEEL PIPE

# LEGEND

----- S -----	SANITARY SEWER		DETAIL SHEET NUMBER
----- D -----	DRAIN	99.00	NEW GRADE IN FEET
----- RD -----	RETURN DRAIN	X (100.00)	EXISTING SPOT GRADE IN FEET
----- V -----	VENT		SURFACE DRAINAGE
----- W -----	WATER		ABANDON (E)
----- FM -----	FORCE MAIN		BENCHMARK ELEVATION
----- L -----	LEACH LINES		CENTERLINE
			DIAMETER
			SECTION / ELEVATION LETTER SHEET NUMBER
			TREE

# GENERAL WORK NOTES

The Contractor shall verify all controlling field dimensions and conditions before ordering or fabricating any materials.

The Contractor shall verify exact location of all underground facilities and utilities prior to start of construction.

No 90 degree bends allowed on drain or sewer pipe.

Type of Fitting	90° Bend	45° Bend	11 1/4° or 22 1/2° Bend	Tee or Dead end	Cross w/plug	Tee w/plug
Typical Installation						

# THRUST BLOCK BEARING AREA (SQ. FT.)

Type of Fitting	90° Bend	45° Bend	11 1/4° or 22 1/2° Bend	Tee or Dead end	Tee w/ Plug	Cross w/ plug
4"	2	1	1	2	2	2
6"	4	4	2	4	4	4
8"	7	4	2	5	7	7
10"	12	6	3	8	12	12
12"	16	10	5	12	16	16
14"	20	12	6	14	20	20
16"	27	15	8	18	27	27
18"	45	25	13	32	45	45
24"	65	35	18	46	65	65

# PIPE FITTINGS AND VALVES

	CAP, THREADED
	ELBOW, TURNED DOWN
	FLEXIBLE CONNECTOR
	REDUCER, CONCENTRIC
	REDUCER, ECCENTRIC
	PRESSURE GAUGE (WITH VALVE AND SNUBBER)
	UNION
	UNION, INSULATING
	VALVE, BALL
	VALVE, CHECK
	VALVE, GATE
	VALVE, SAFETY RELIEF
	VALVE, PRESSURE REDUCING

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	326	335

8-9-10  
 PLANS APPROVAL DATE

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Reviewed by:   
 SANDY MARGULLIS  
 Approval date: 12-1-09

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	327	335

<i>Jerome R. Yantis</i> 12/30/09	
REGISTERED CIVIL ENGINEER	DATE

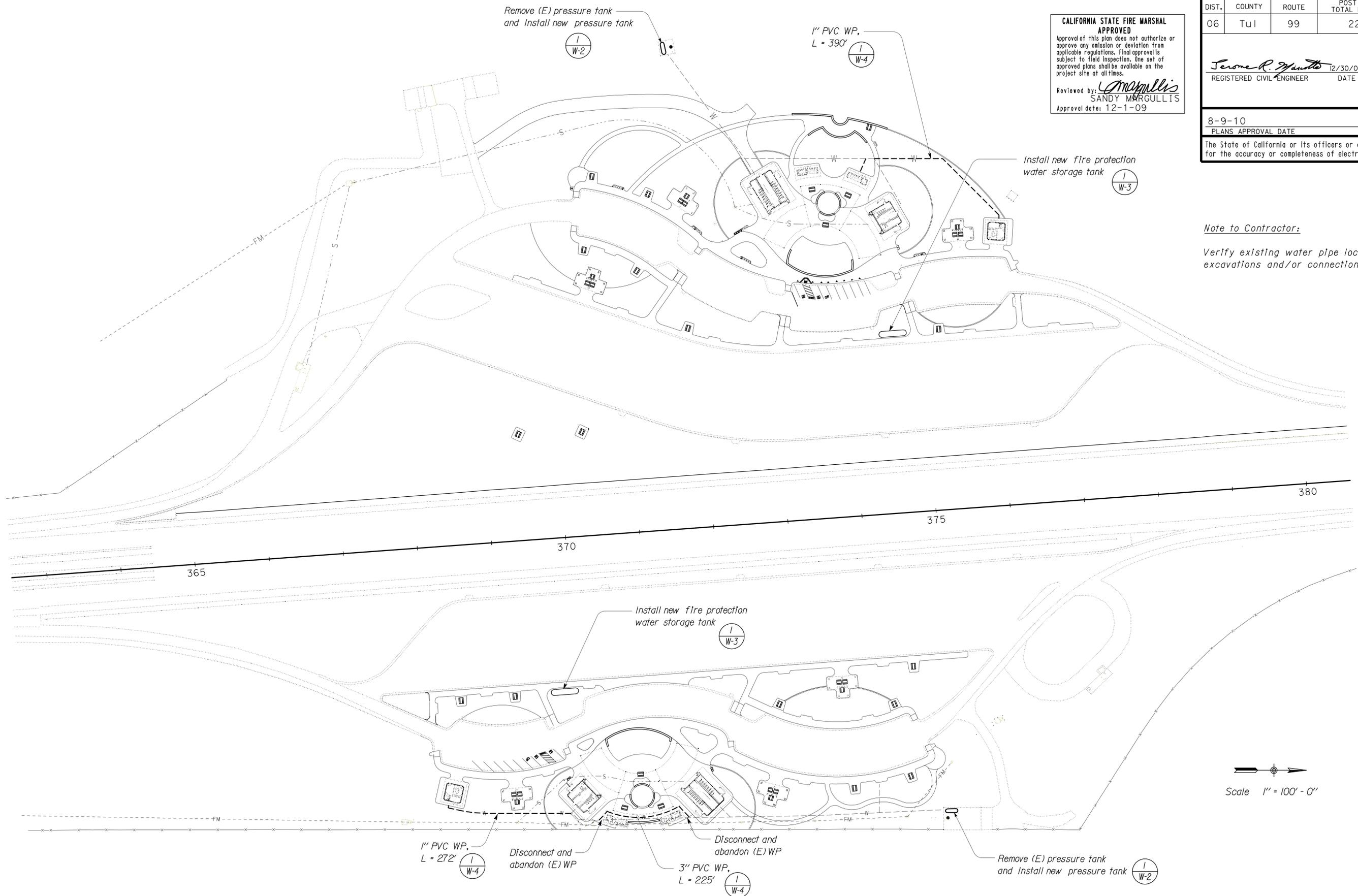
Reviewed by: <i>Sandy Margullis</i>	
SANDY MARGULLIS	
Approval date: 12-1-09	

8-9-10	
PLANS APPROVAL DATE	

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**Note to Contractor:**  
Verify existing water pipe locations prior to excavations and/or connections.

DESIGN SUPERVISOR <i>Paul Schreff</i> DESIGN ENGINEER <i>Jerome R. Yantis</i>	DESIGN BY Andy Quan	CHECKED Don Hansen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 46R0001R	<b>PHILIP S. RAINE SAFETY ROADSIDE REST AREA</b> SHEET W-1
	DETAILS BY Andy Quan	CHECKED Don Hansen		ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	46R0001L	
	QUANTITIES BY Andy Quan	CHECKED Don Hansen		POST MILE 22.45/22.40	SITE PLAN	
DOES SD Imperial Rev. 9/02	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	
			0 1 2 3		REVISION DATES (PRELIMINARY STAGE ONLY)	
					4-24-09   7-22-09   9-03-09   12-30-09	

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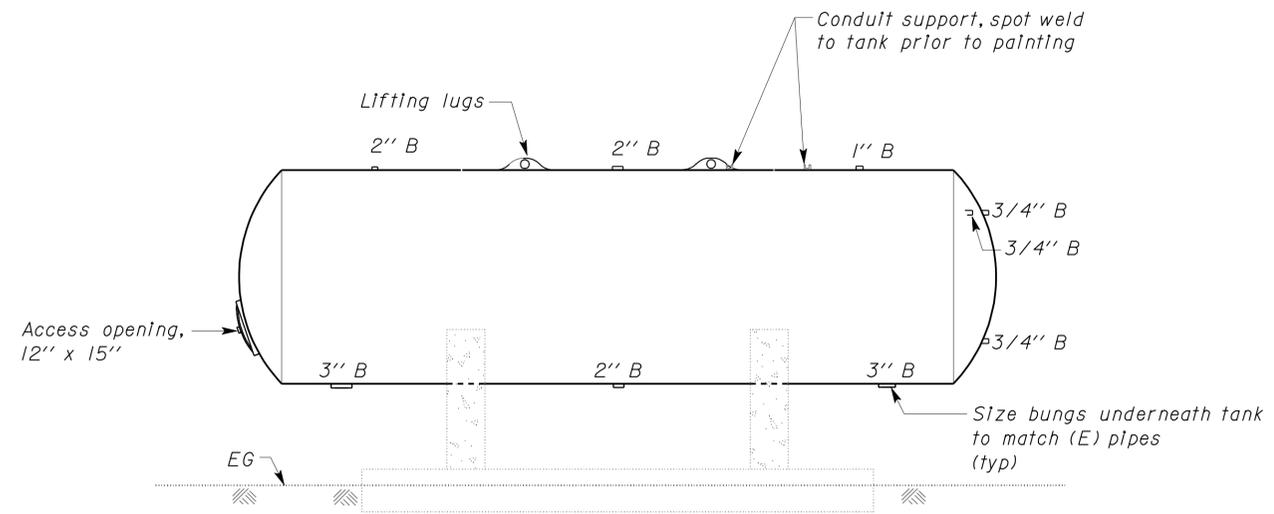
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	328	335

*Jerome R. Marcotte* 12/30/09  
 REGISTERED CIVIL ENGINEER DATE

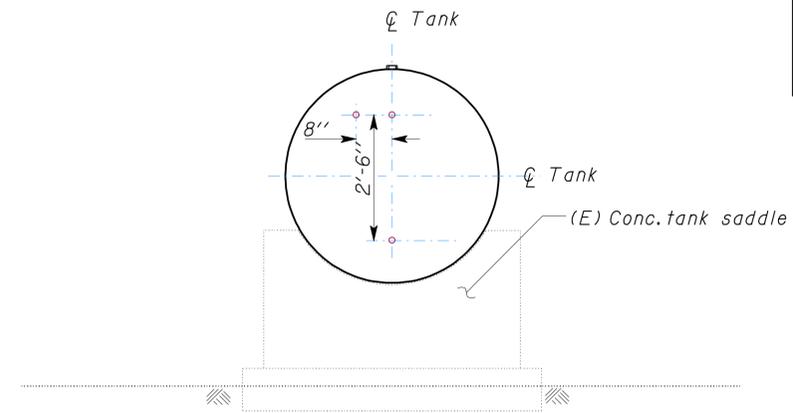


8-9-10  
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 SANDY MARGULLIS  
 Approval date: 12-1-09



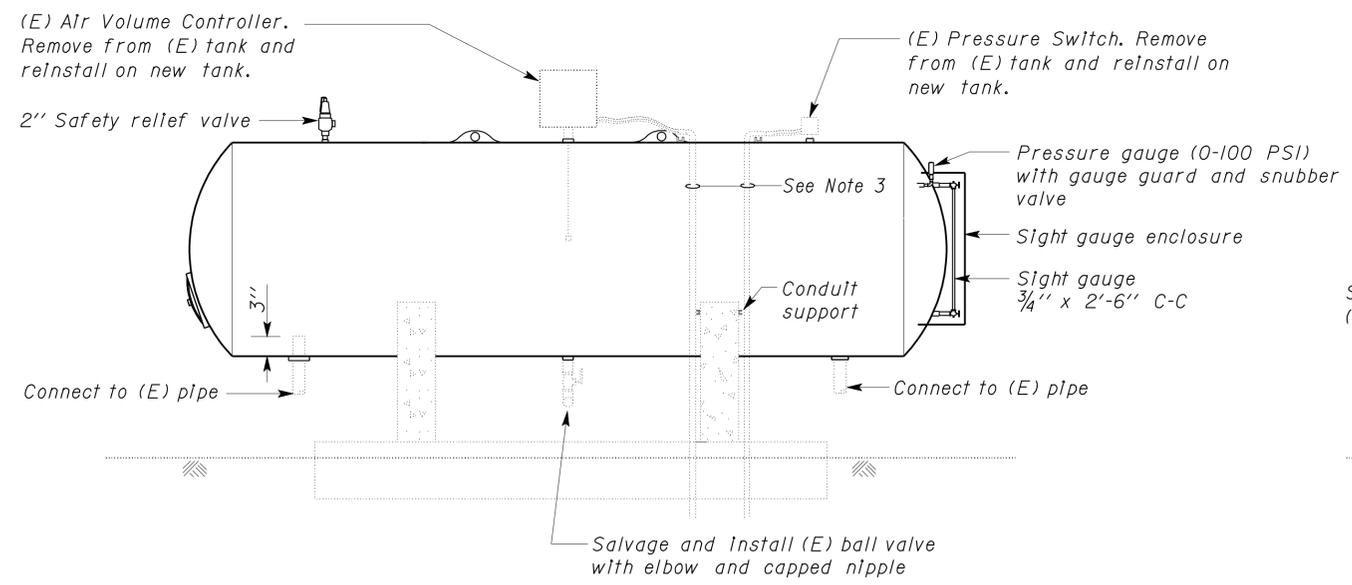
**LONGITUDINAL SECTION**



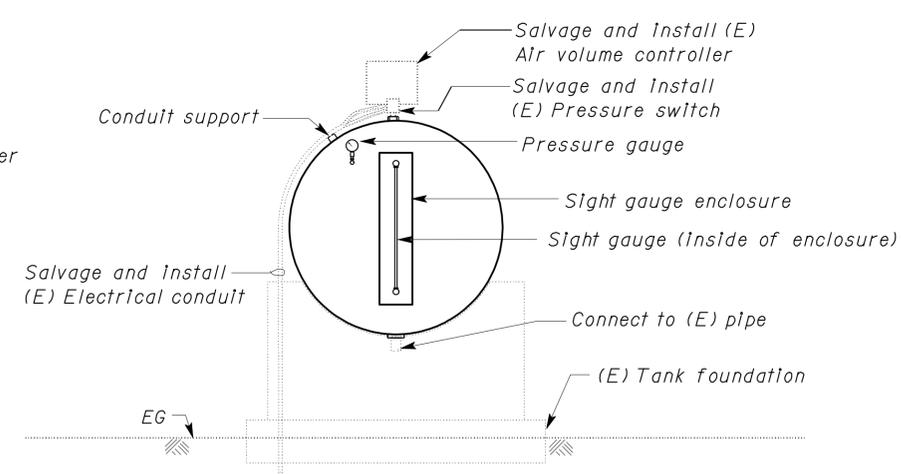
**TRANSVERSE SECTION**

**TANK SUPPORT AND SHELL DETAILS**

NO SCALE



**SIDE VIEW**



**END VIEW**

**1 PRESSURE TANK - 1,150 GALLON (NOMINAL)**

NO SCALE

- Note to Contractor:**
1. Tank diameter shall be 4' and painted silver.
  2. Pressure Tank to be NSF-certified.
  3. (E) Electrical conduit and conductors. Remove from (E) tank and reinstall on new tank. Modify or replace conduit and conductors as required for operation.

DOES SD Imperial Rev. 9/02	DESIGN	BY Andy Quan	CHECKED Don Hansen	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	PHILIP S. RAINE SAFETY ROADSIDE REST AREA	SHEET W-2
	DETAILS	BY Andy Quan	CHECKED Don Hansen			POST MILE		
	QUANTITIES	BY Andy Quan	CHECKED Don Hansen			22.45/22.40	PRESSURE TANK DETAILS	
			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF

16-AUG-2010 09:52 W\_2.dgn

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
06	Tul	99	22.4	329	335

<i>Jerome R. Marcotte</i> 12/30/09 REGISTERED CIVIL ENGINEER DATE	
Reviewed by: <i>Sandy Margullis</i> SANDY MARGULLIS Approval date: 12-1-09	

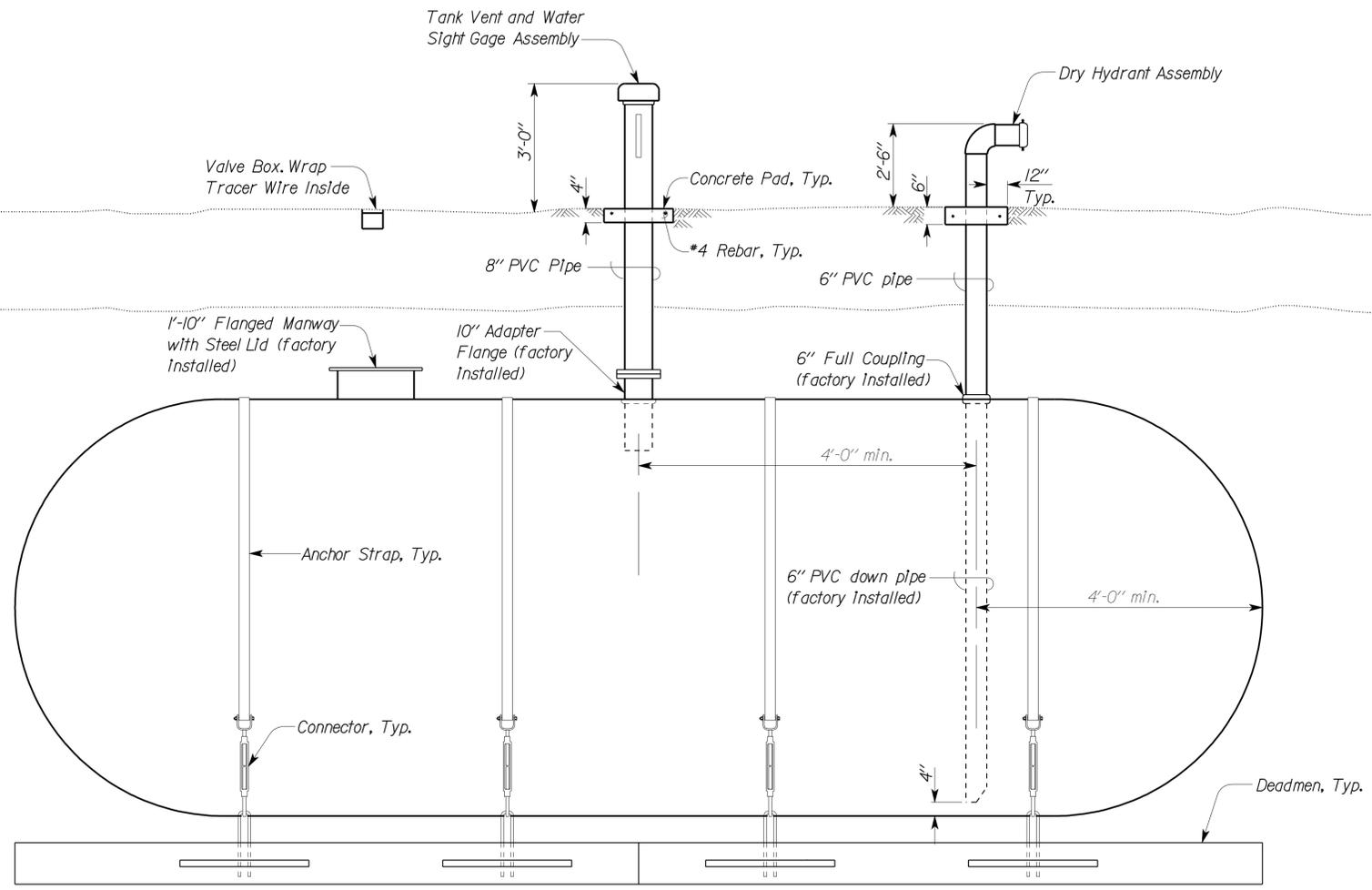
8-9-10
PLANS APPROVAL DATE

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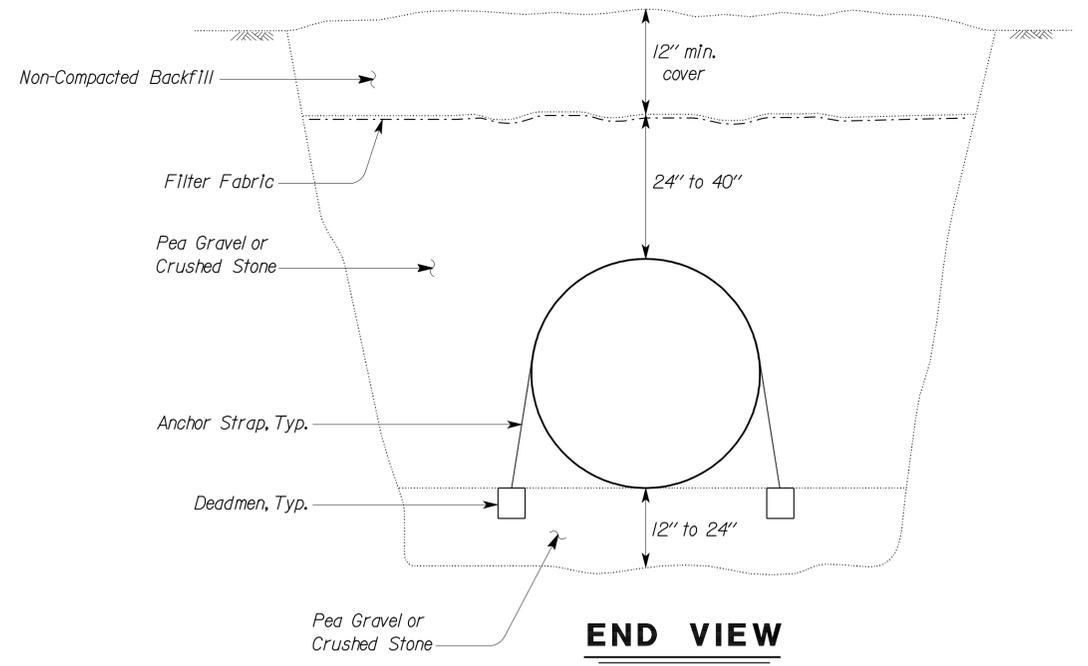
**Notes:**

1. Use pipe sleeve when pipe passes through concrete pad.
2. Anchor straps, connectors, and deadmen to be tank manufacturer's standard anchoring design.

TANK DIAMETER	NOMINAL CAPACITY (GALLONS)	NOMINAL LENGTH	NOMINAL WEIGHT (Lbs)
8'	12,000	37'	3,800



**SIDE VIEW**



**END VIEW**

**1 TANK DETAILS - 12,000 GALLON (NOMINAL)**  
NO SCALE

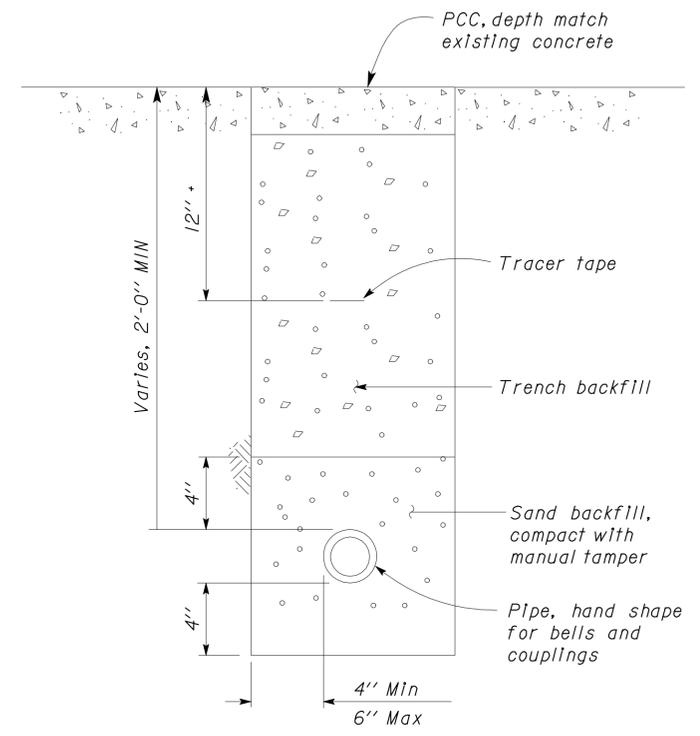
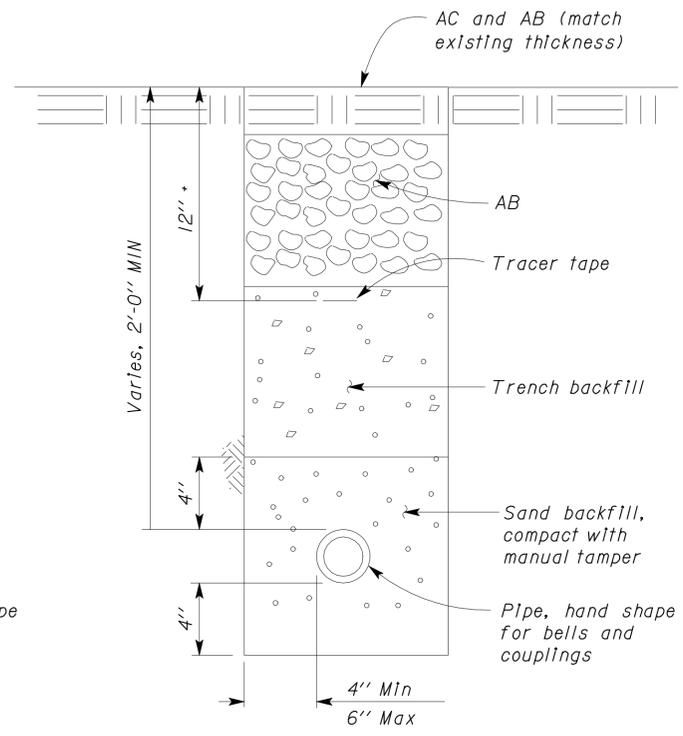
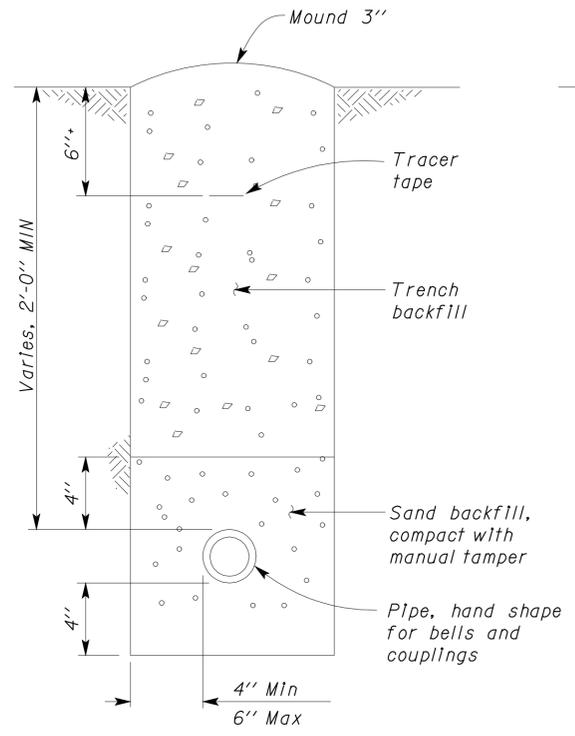
DESIGN	BY Andy Quan	CHECKED Jerry Marcotte	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 46R0001R	PHILIP S. RAINE SAFETY ROADSIDE REST AREA	SHEET W-3
	DETAILS	BY Andy Quan			CHECKED Jerry Marcotte		
QUANTITIES	BY Andy Quan	CHECKED Jerry Marcotte	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
			0 1 2 3		4-24-09 7-22-09 9-03-09 12-30-09		

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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 Reviewed by: *Sandy Margullis*  
**SANDY MARGULLIS**  
 Approval date: 12-1-09

*Jerome R. Marcotte* 12/30/09  
 REGISTERED CIVIL ENGINEER DATE  
 No. C 36844  
 Exp. 06/30/10  
 CIVIL  
 STATE OF CALIFORNIA

8-9-10  
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**1 WATER PIPE**  
 NO SCALE

DESIGN	BY Andy Quan	CHECKED Don Hansen
DETAILS	BY Andy Quan	CHECKED Don Hansen
QUANTITIES	BY Andy Quan	CHECKED Don Hansen

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

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

BRIDGE NO.	46R0001R
POST MILE	22.45/22.40

**PHILIP S. RAINE SAFETY ROADSIDE REST AREA**  
 DETAILS

SHEET **W-4** OF

# ABBREVIATIONS

AB	AGGREGATE BASE	IN	INCH
AC	ASPHALT CONCRETE	JB	JUNCTION BOX
B	BUNG	KW	KILOWATT
BLDG	BUILDING	LB	POUND
C	CONDUIT	LT	LEFT
C-C	CENTER TO CENTER	MAX	MAXIMUM
CFS	CUBIC FEET PER SECOND	MBV	MOTORIZED BALL VALVE
CI	CAST IRON	MH	MANHOLE
CL	CHAIN LINK	MIN	MINIMUM
CMP	CORRUGATED METAL PIPE	N	NORTH
CONC	CONCRETE	NB	NORTHBOUND
COTF	CLEANOUT TO FLOOR	NIC	NOT IN CONTRACT
COTG	CLEANOUT TO GRADE	NO	NUMBER
CPLG	COUPLING	OC	ON CENTER
CW	COLD WATER PIPE	OD	OUTSIDE DIAMETER
D	DRAIN	OG	ORIGINAL GROUND
DBH	DIAMETER AT BREAST HEIGHT	P	PITCH
DI	DRAIN INLET	PCC	PORTLAND CEMENT CONCRETE
DIA	DIAMETER	PH	PHASE
DP	DRAIN PIPE	PRV	PRESSURE REDUCING VALVE
E	ELECTRICAL	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	R	RADIUS
EA	EACH	RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	REQ	REQUIRED
EP	EDGE OF PAVEMENT	rpm	REVOLUTIONS PER MINUTE
EQ	EQUAL	RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
FOB	FACE OF BUILDING	RPU	RECYCLE PROCESS UNIT
FF	FINISH FLOOR	RT	RIGHT
FG	FINISH GRADE	R/W	RIGHT-OF-WAY
FL	FLOW LINE	S	SLOPE
FM	FORCE MAIN	SB	SOUTHBOUND
FOC	FACE OF CONCRETE	SCH	SCHEDULE
FS	FLOW SWITCH	SD	STORM DRAIN
FT	FEET	SP	SEWER PIPE
FTR	FLUE THROUGH ROOF	SQ	SQUARE
GA	GAUGE	STA	STATION
GAC	GRANULAR ACTIVATED CARBON	STD	STANDARD
GAL	GALLON	TBM	TEMPORARY BENCH MARK
GPM	GALLONS PER MINUTE	TOC	TOP OF CONCRETE
GALV	GALVANIZED	TOT	TOTAL
GSP	GALVANIZED STEEL PIPE	TYP	TYPICAL
GV	GATE VALVE	VAC	VOLTS AC
GS	GOVERNMENT SERVICE LINE	VCP	VITRIFIED CLAY PIPE
H	HEIGHT	W	WATER
HP	HOSE FAUCET	W/O	WITHOUT
HF	HORSEPOWER	WP	WATER PIPE
HZ	HERTZ	WSP	WELDED STEEL PIPE
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION (IN FEET)		

# LEGEND

	FENCE		DETAIL SHEET NUMBER
	SURFACE DRAINAGE	99.00	NEW GRADE IN FEET
	ABANDON	X (100.00)	EXISTING SPOT GRADE IN FEET
	SANITARY SEWER		SURFACE DRAINAGE
	DRAIN		ABANDON
	RETURN DRAIN		BENCHMARK ELEVATION
	VENT		CENTERLINE
	WATER		DIAMETER
	FORCE MAIN		SECTION / ELEVATION LETTER SHEET NUMBER
	LEACH LINES		TREE
L	ANGLE		DIRECTION OF TRAFFIC
C	CONDUIT		
Clr	CLEAR		
EL	ELEVATION		
FS	FLOW SWITCH		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
kW	KILOWATT		
LS	LUMP SUM		
Max	MAXIMUM		
Min	MINIMUM		
mm	MILLIMETER		
OD	OUTSIDE DIAMETER		
PVC	POLYVINYL CHLORIDE		
Sch	SCHEDULE		
RPM	REVOLUTION PER MINUTE		
Typ	TYPICAL		

# PIPE FITTINGS AND VALVES

	CAP
	ELBOW, TURNED DOWN
	FLEXIBLE CONNECTOR
	REDUCER, CONCENTRIC
	REDUCER, ECCENTRIC
	PRESSURE GAUGE (WITH VALVE AND SNUBBER)
	UNION
	UNION, INSULATING
	VALVE, BALL
	VALVE, CHECK
	VALVE, GATE
	VALVE, SAFETY RELIEF
	VALVE, PRESSURE REDUCING
	HOSE FAUCET

# GENERAL WORK NOTES

The Contractor shall verify all controlling field dimensions and conditions before ordering or fabricating any materials.

The Contractor shall verify exact location of all underground facilities and utilities prior to start of construction.

No 90 degree bends allowed on drain or sewer pipe. Where 90 degree bends are shown, use two 45 degree bends

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06	Tul	99	22.4	331	335

REGISTERED CIVIL ENGINEER DATE 11/23/09  
 No. C 36844  
 Exp. 06/30/10  
 CIVIL  
 STATE OF CALIFORNIA

8-9-10  
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Reviewed by:   
SANDY MARGULLIS  
Approval date: 12-1-09

DESIGN	BY	KOSHA SHAH	CHECKED	DON HANSEN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO.	46R000IL	PHILIP S. RAINE SAFETY ROADSIDE REST AREA	NOTES, LEGENDS & ABBREVIATIONS	SHEET OF SS-0	
	DETAILS	BY	KOSHA SHAH	CHECKED			DON HANSEN	POST MILE				22.45/22.40
	QUANTITIES	BY	KOSHA SHAH	CHECKED			JERRY MARCOTTE	REVISION DATES (PRELIMINARY STAGE ONLY)				08-22-08 10-31-08 01-16-09 02-24-09 07-22-09 08-05-09 09-01-09 11-23-09
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS					0 1 2 3	CU 06 340 EA 0A970I	DISREGARD PRINTS BEARING EARLIER REVISION DATES		SHEET OF	X X		

DOES SD Imperial Rev. 1/8

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<i>Jerome R. Marcotte</i>	11/23/09
REGISTERED CIVIL ENGINEER	DATE

8-9-10
PLANS APPROVAL DATE

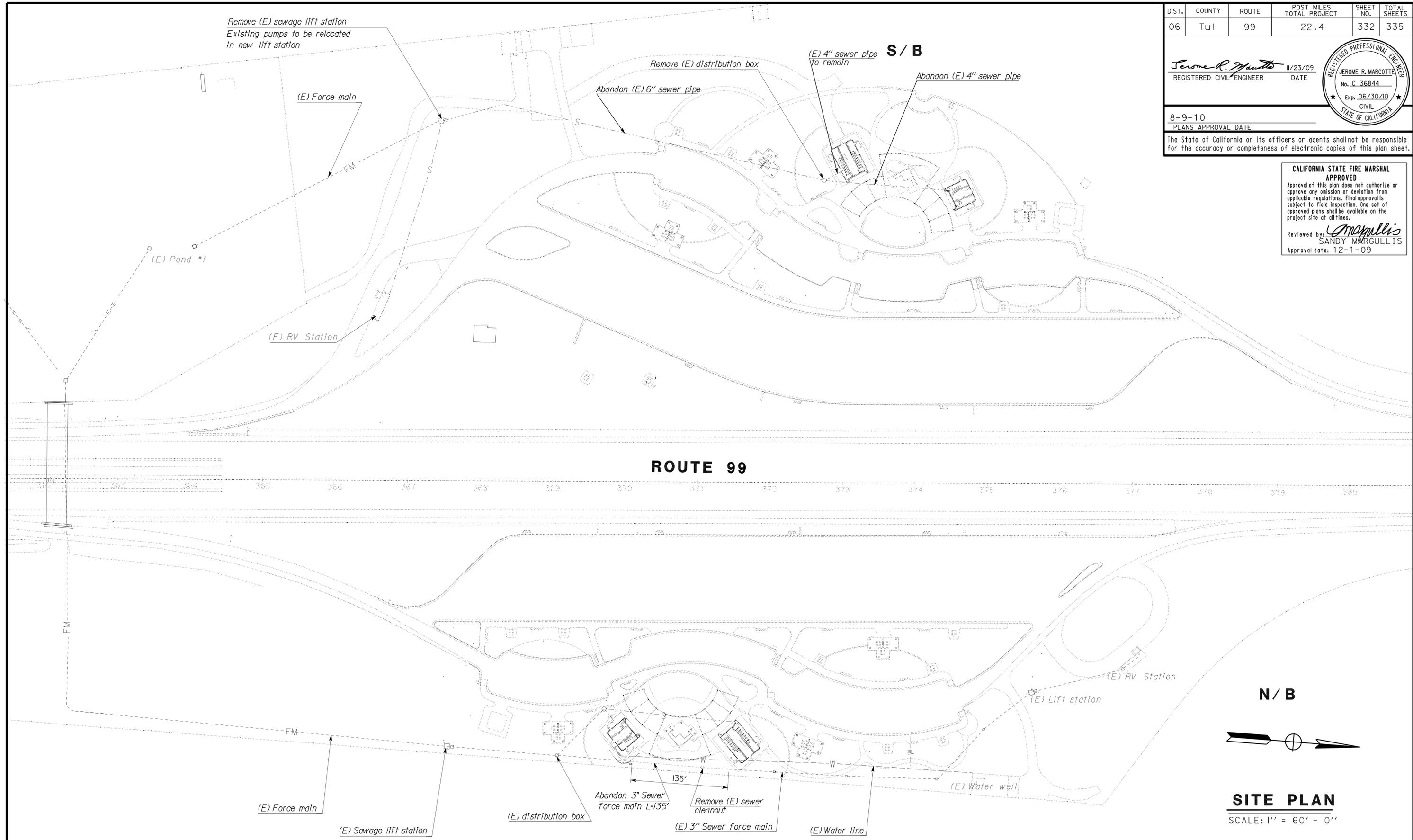
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SANDY MARGULLIS  
Approval date: 12-1-09



DOES SD Imperial Rev. 1/8 DESIGN SUPERVISOR <i>Paul Schreff</i> DESIGN ENGINEER <i>Jerome R. Marcotte</i>	DESIGN	BY KOSHA SHAH	CHECKED DON HANSEN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 46R0001L 46R0001R POST MILE 22.45/22.40	PHILIP S. RAINE SAFETY ROADSIDE REST AREA	SHEET OF <b>SS-1</b>
	DETAILS	BY KOSHA SHAH	CHECKED DON HANSEN					
	QUANTITIES	BY KOSHA SHAH	CHECKED JERRY MARCOTTE	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3	CU 06 340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY) 08-22-08 10-31-08 01-14-09 02-24-09 07-22-09 08-05-09 09-01-09 11-23-09	SHEET OF X X

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06	Tul	99	22.4	333	335

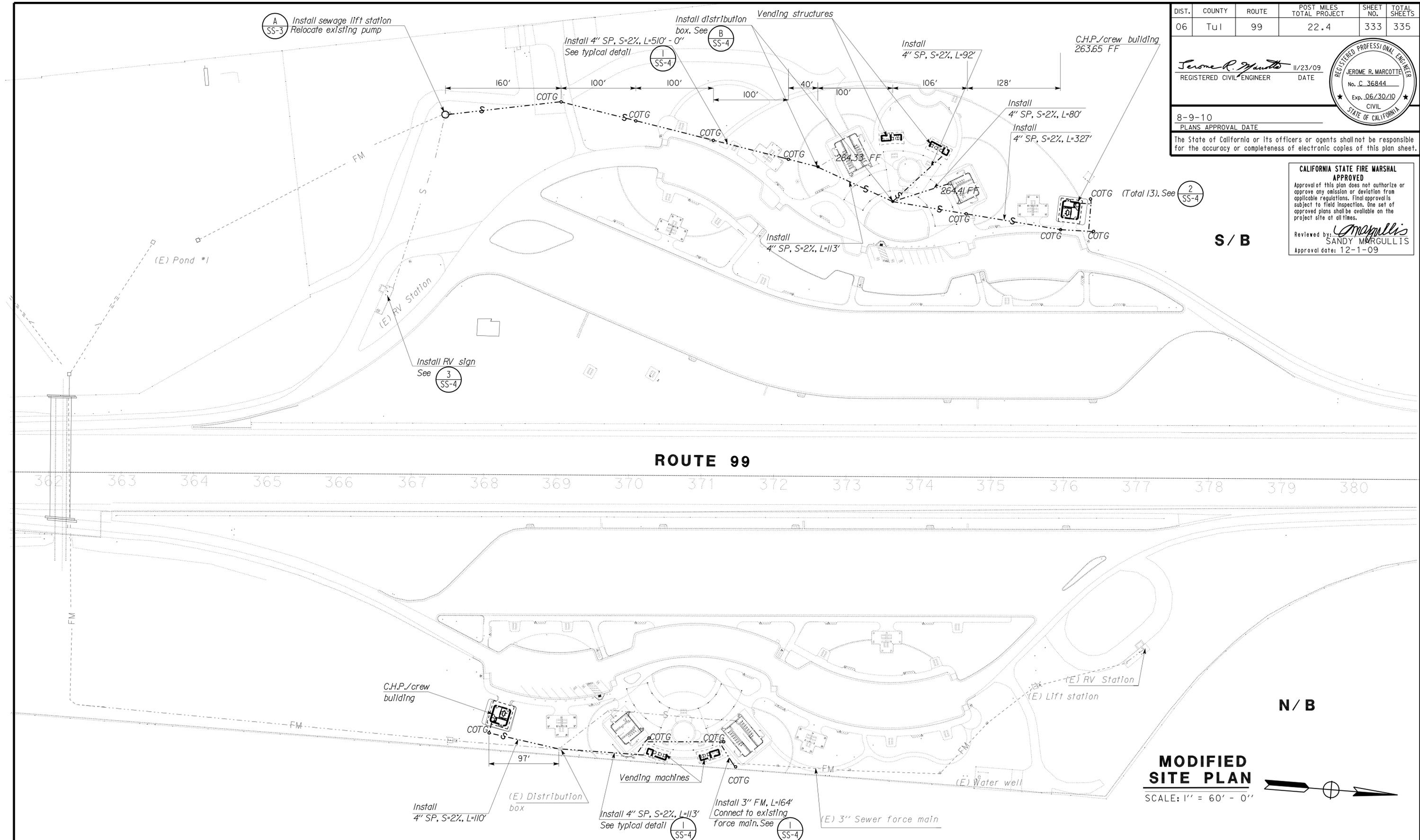
Jerome R. Marcotte 11/23/09  
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**ROUTE 99**

362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380

S / B

N / B

**MODIFIED SITE PLAN**  
SCALE: 1" = 60' - 0"



DESIGN	BY KOSHA SHAH	CHECKED DON HANSEN
DETAILS	BY KOSHA SHAH	CHECKED DON HANSEN
QUANTITIES	BY KOSHA SHAH	CHECKED JERRY MARCOTTE

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

BRIDGE NO. 46R0001L 46R0001R	PHILIP S. RAINE SAFETY ROADSIDE REST AREA	SHEET SS-2
POST MILE 22.45/22.40		
MODIFIED SITE PLAN		

DOES SD Imperial Rev. 1/6

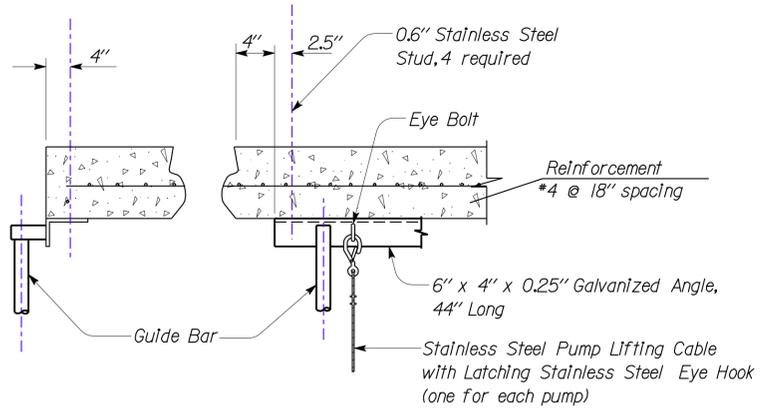
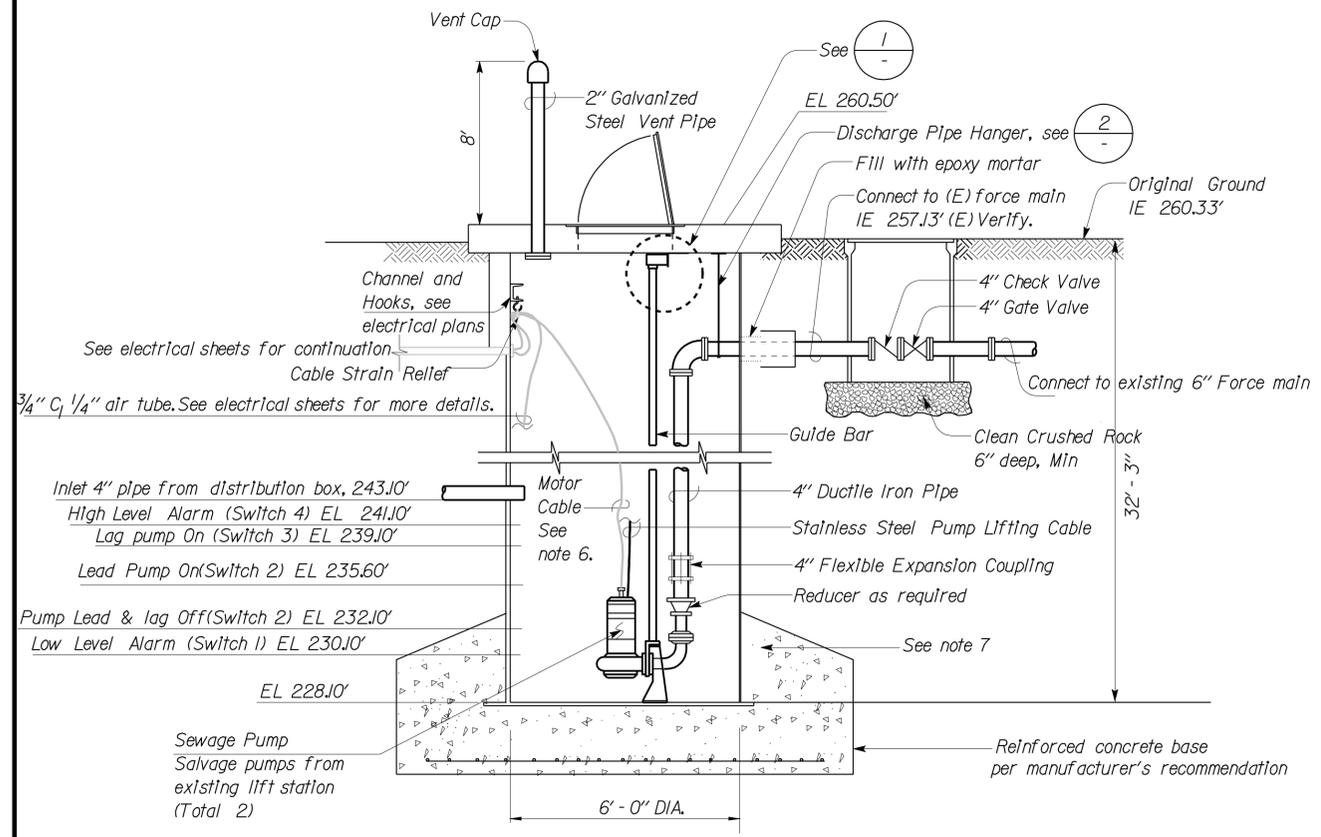
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

CU 06 340  
EA 0A9701

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF
	08-22-08 10-31-08 01-16-09 02-24-09 07-22-09 08-05-09 09-01-09 11-23-09	X OF X

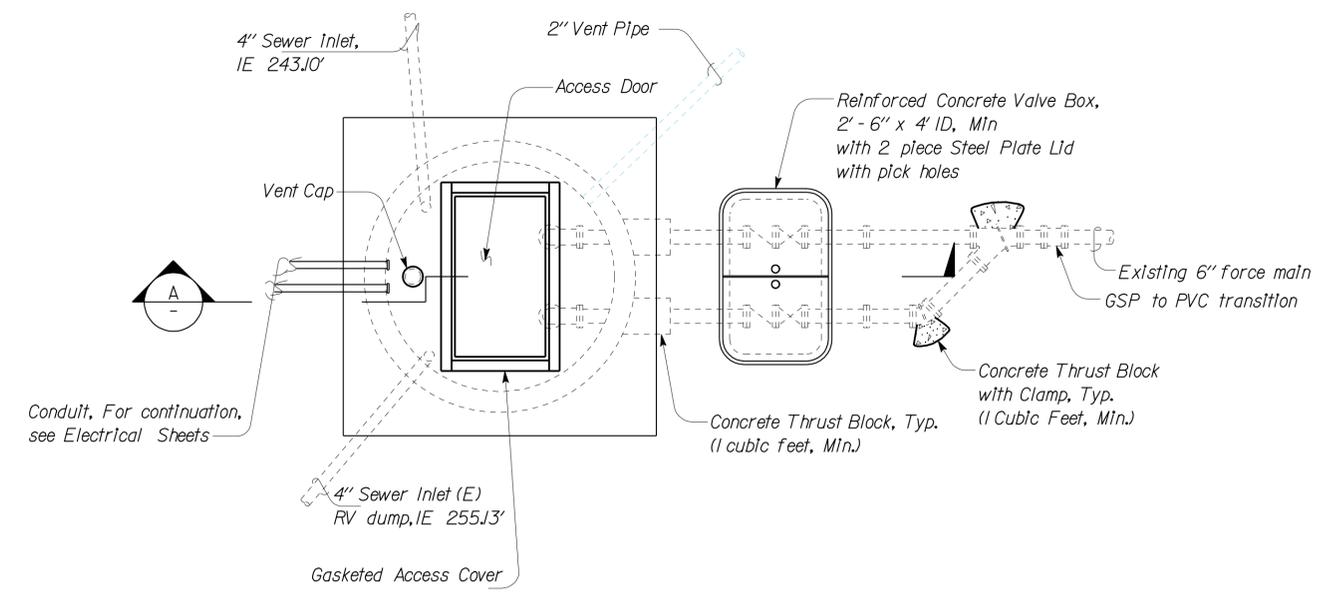


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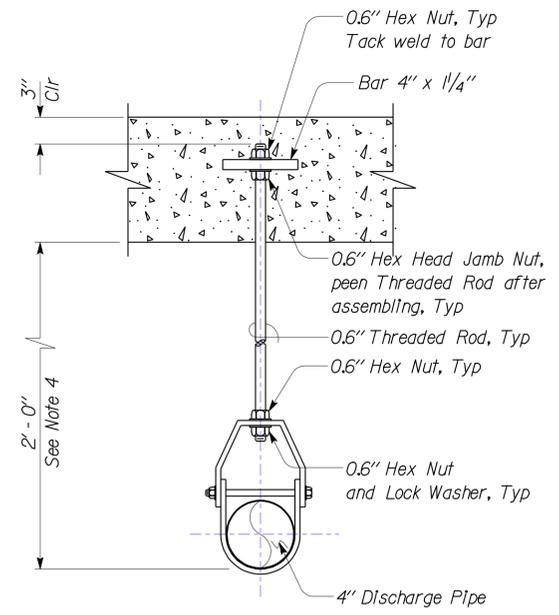
**1 SECTION**

**A SECTION**



**SEWAGE LIFT STATION PLAN**

NO SCALE



**2 PIPE HANGER DETAIL**

SALVAGE PUMP EQUIPMENT SCHEDULE						
EQUIPMENT	PUMPING RATE (GPM)	TOTAL DYNAMIC HEAD (FT)	SPEED (RPM)	HP	VOLTS	PHASE
SEWAGE PUMP (NO.1 & 2)	35	45'	3450 (Max)	4	460	3
	45	48'				
	55	42'				

**NOTES:**

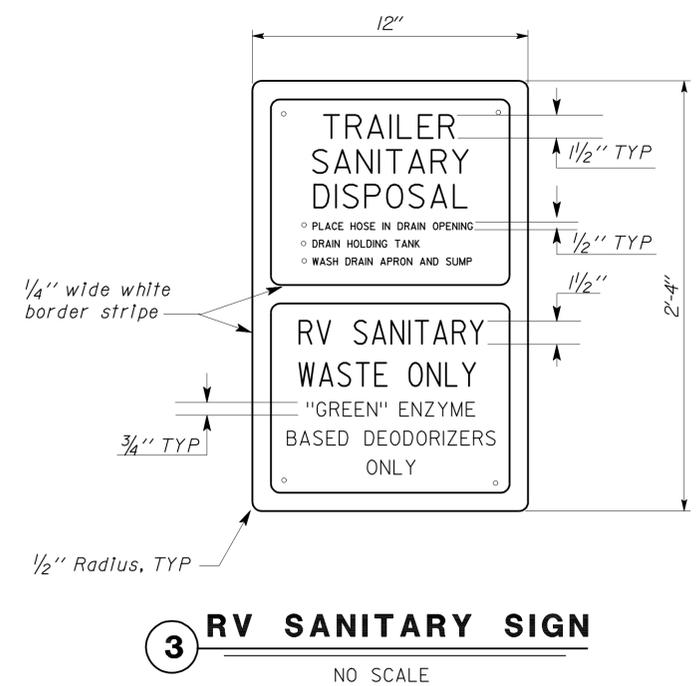
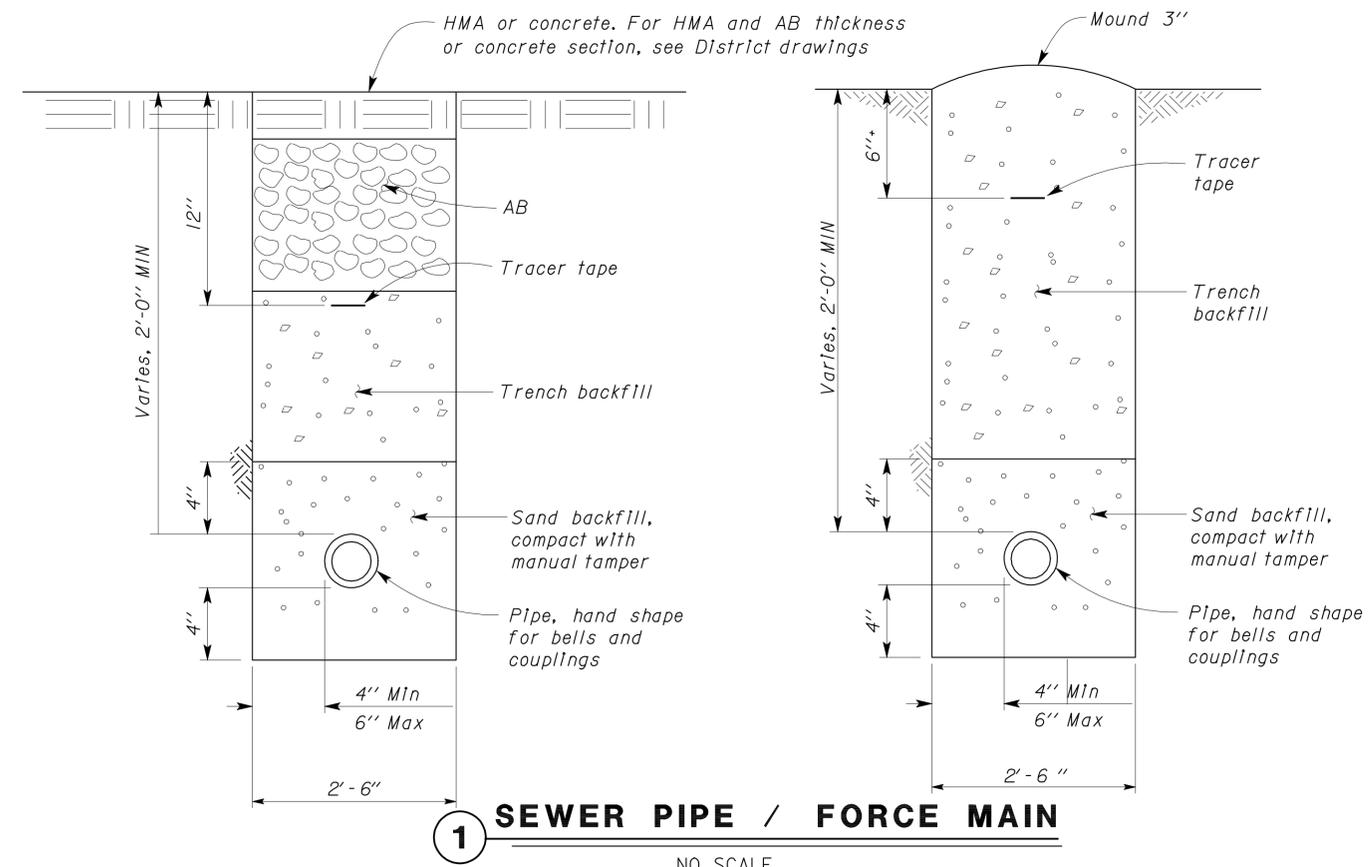
- For Inlet, Outlet and Vent orientation and Installation location, see Sanitary Sheet SS-2.
- Guide Bar to suit Pump manufacturer's recommendation.
- Pumping Station grades are based on Inlet grades. If Inlet Elevation changes, adjust grades as per Engineer's Instructions.
- All ferrous parts of Pipe Hanger shall be hot-dipped galvanized after fabrication.
- All fastener to concrete and fiberglass shall be devices with Stainless Steel threaded stud, hex nut and flat washer. Size of stud is as shown.
- Cable length shall be continuous from motor to controls without splices.
- Provide fastening as required by manufacturer.
- See EE-5 for Information on elevations of switches.

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PLANS APPROVAL DATE 8-9-10		

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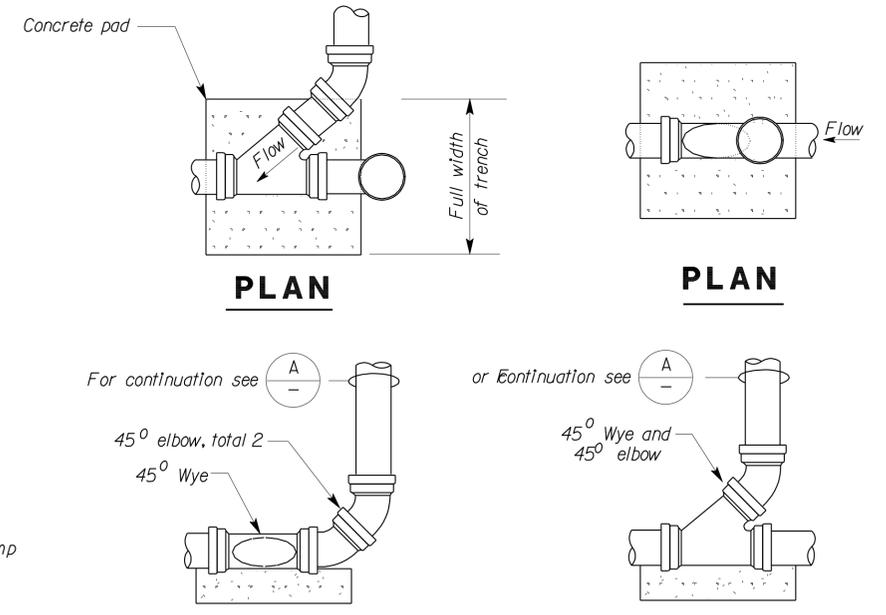
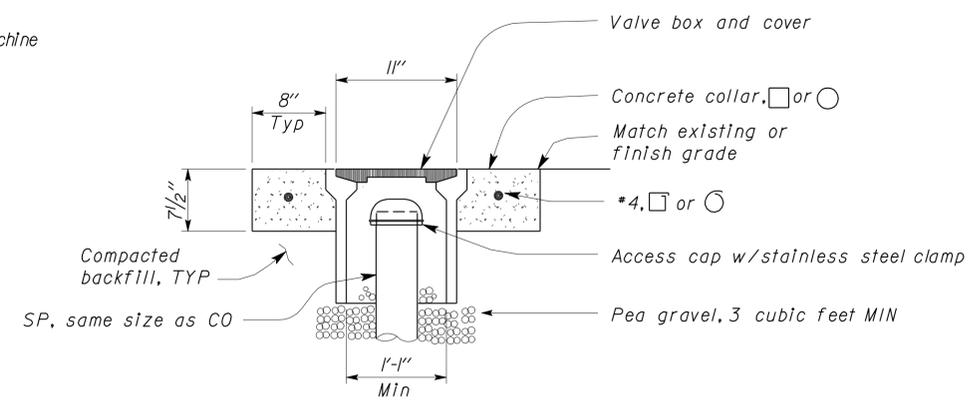
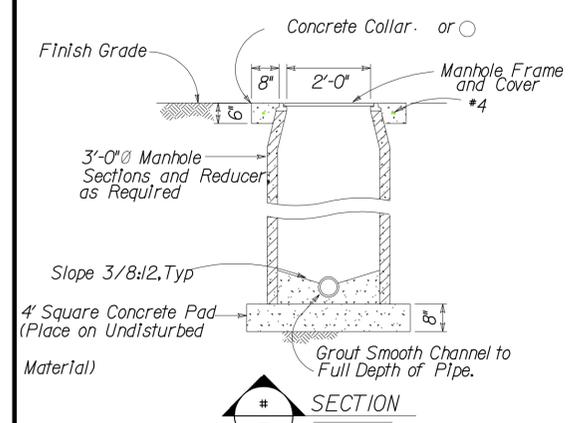
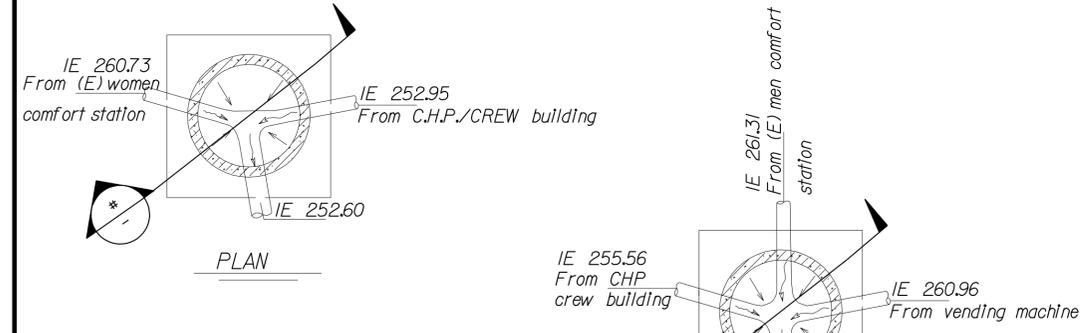


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**Notes:**

- All letters shall be black on white background except the word "RV SANITARY WASTE ONLY GREEN ENZYME BASED DEODORIZERS ONLY" shall be green.
- Lettering and background shall be Type II Reflective Sheeting. Sign shall be finished with protective film overlay.

Attach to nearest column facing RV Sanitary Station



DESIGN	BY KOSHA SHAH	CHECKED DON HANSEN	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES ELECTRICAL-MECHANICAL-WATER AND WASTEWATER DESIGN	BRIDGE NO. 46R0001L 46R0001R POST MILE 22.45/22.40	PHILIP S. RAINE SAFETY ROADSIDE REST AREA SEWAGE LIFT STATION DETAILS	SHEET OF <b>SS-4</b>
	DETAILS	BY KOSHA SHAH					
QUANTITIES	BY KOSHA SHAH	CHECKED JERRY MARCOTTE	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	CU 06 340 EA 0A9701	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET OF

16-AUG-2010 09:52  
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