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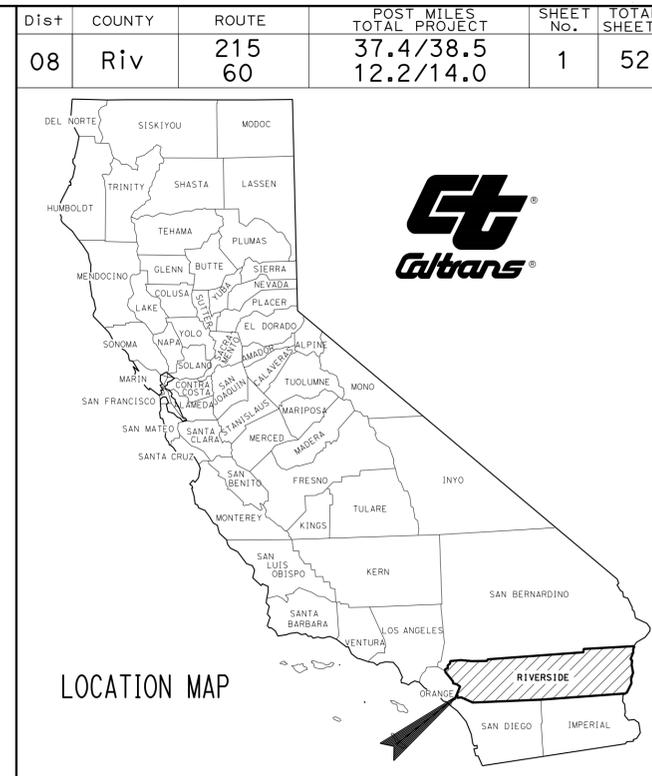
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	KEY MAP
3	CONSTRUCTION AREA SIGNS
4	SPRINKLER SCHEDULE
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THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY  
IN RIVERSIDE COUNTY  
ON ROUTE 215 FROM 0.2 MILE SOUTH OF BOX SPRINGS  
ROAD OVERCROSSING TO EUCALYPTUS AVENUE  
OVERCROSSING AND ON ROUTE 60 FROM 0.2 MILE  
EAST OF BOX SPRINGS ROAD OVERCROSSING TO  
0.3 MILE EAST OF DAY STREET UNDERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010

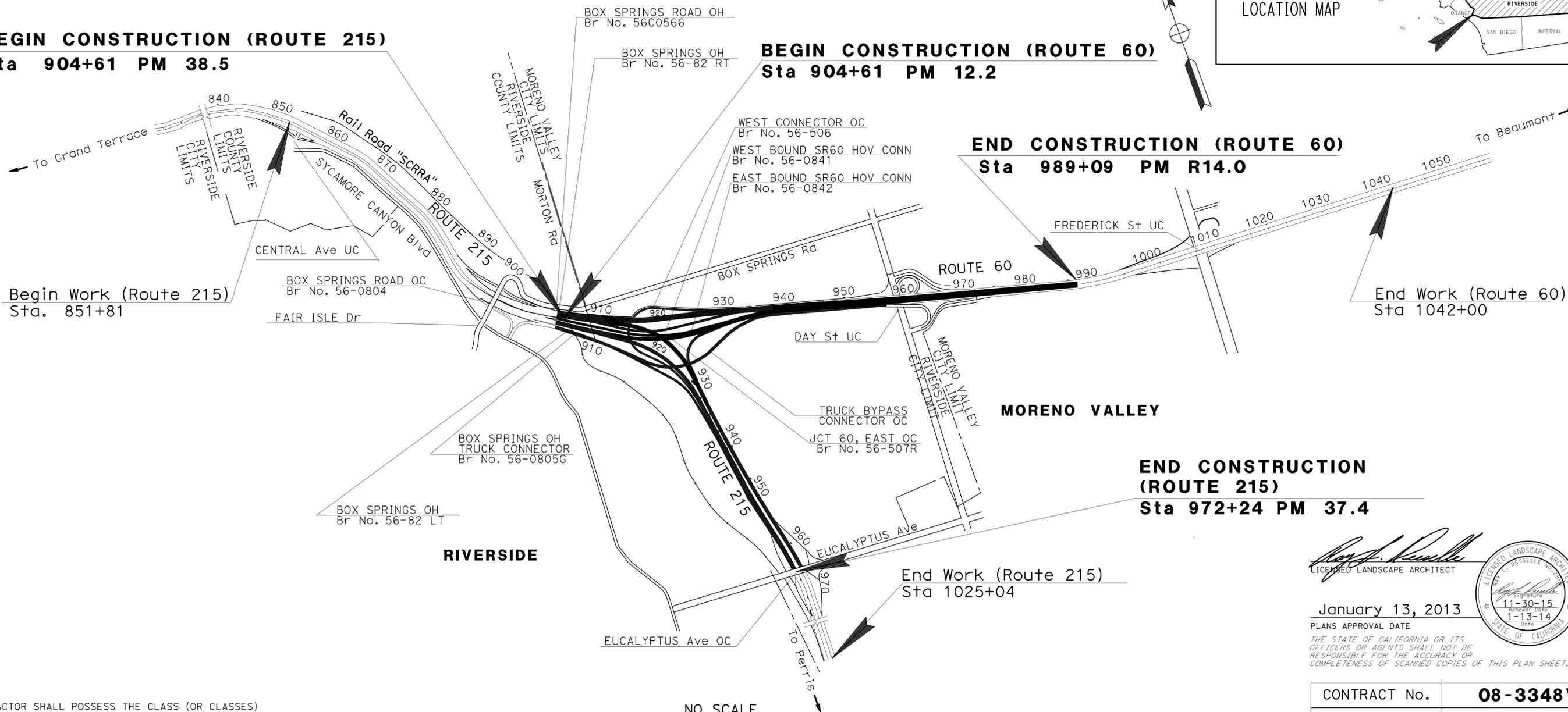


**BEGIN CONSTRUCTION (ROUTE 215)**  
Sta 904+61 PM 38.5

**BEGIN CONSTRUCTION (ROUTE 60)**  
Sta 904+61 PM 12.2

**END CONSTRUCTION (ROUTE 60)**  
Sta 989+09 PM R14.0

**END CONSTRUCTION (ROUTE 215)**  
Sta 972+24 PM 37.4



PROJECT MANAGER  
JANE TIEN

SENIOR LANDSCAPE ARCHITECT  
RAY DESSELLE

*Ray Deselle*  
LICENSED LANDSCAPE ARCHITECT

January 13, 2013  
PLANS APPROVAL DATE

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



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

NO SCALE

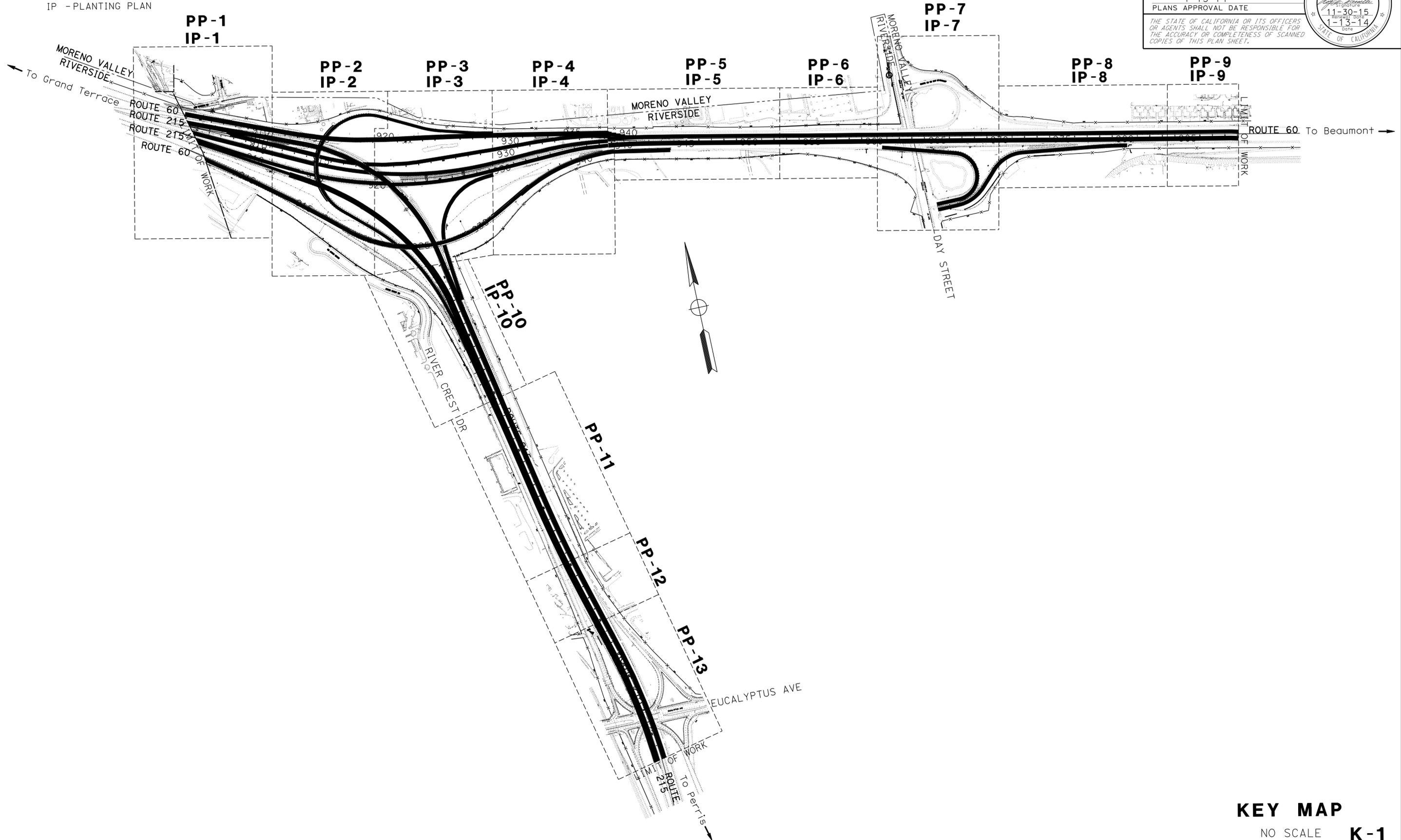
DATE PLOTTED => 12-FEB-2014  
TIME PLOTTED => 07:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	2	52

*Ray Dessel*  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND:**  
 PP - IRRIGATION PLAN  
 IP - PLANTING PLAN



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	DESIGNED BY	REVISOR
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	RAY DESSELLE	CHECKED BY	DATE
		MELAINE HALL	MELAINE HALL
		MIKE BABICH	MIKE BABICH

**KEY MAP**  
 NO SCALE **K-1**

LAST REVISION  
 01-13-14  
 DATE PLOTTED => 12-FEB-2014  
 TIME PLOTTED => 07:44

**NOTE:**

SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

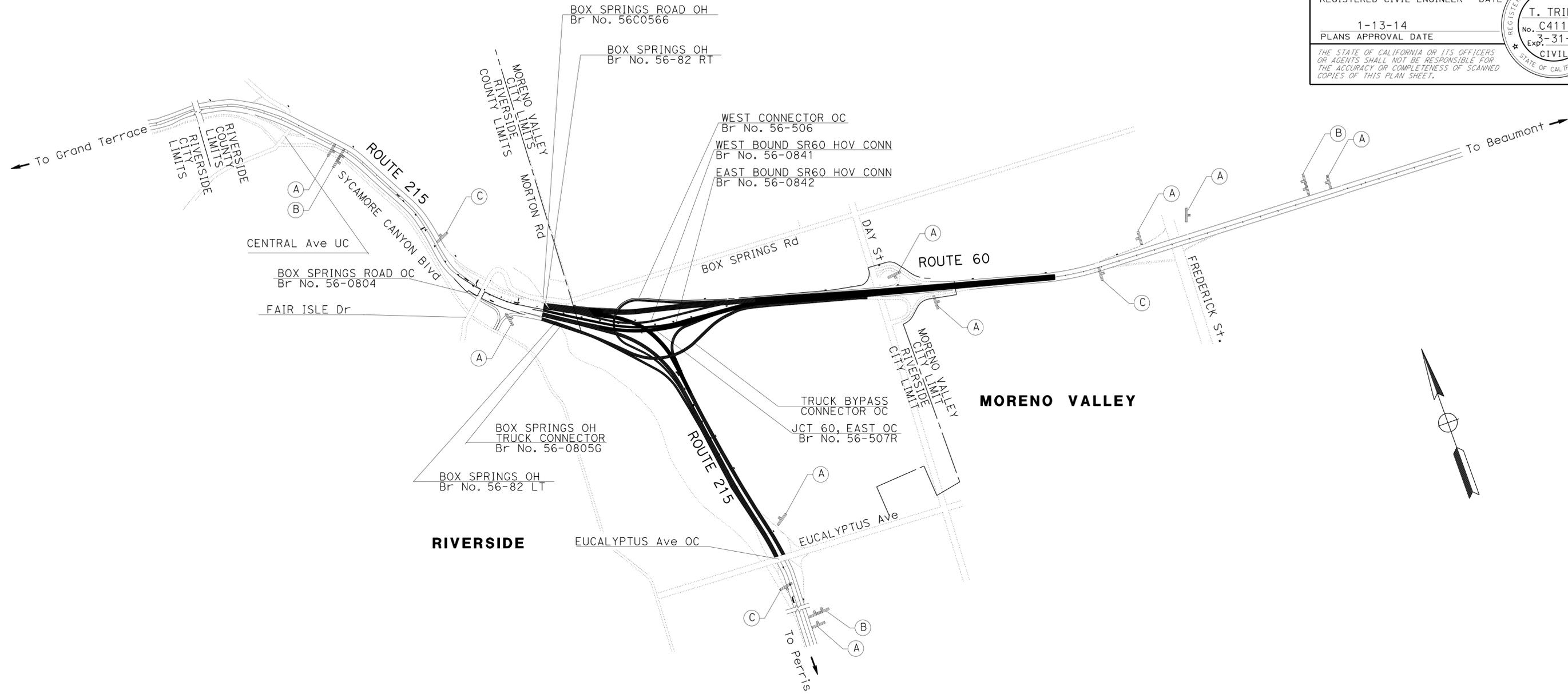
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	3	52

*Thanh Trinh*  
REGISTERED CIVIL ENGINEER  
1-13-14  
DATE

1-13-14  
PLANS APPROVAL DATE

T. TRINH  
No. C41189  
Exp. 3-31-15  
CIVIL

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



**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN LETTER	SIGN CODE		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
	FEDERAL	CALIFORNIA				
(X)						
(A)		W20-1	48" x 48"	LANDSCAPING WORK AHEAD	1 - 6" x 6"	9
(B)		G20-1	90" x 48"	LANDSCAPING WORK NEXT 2 MILES	2 - 6" x 6"	3
(C)		G20-2	36" x 18"	END LANDSCAPING WORK	1 - 6" x 6"	3

**CONSTRUCTION AREA SIGNS**

NO SCALE

**CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
FUNCTIONAL SUPERVISOR **BILL WASSER**  
DESIGNED BY  
CHECKED BY  
REVISOR **KEVIN NGUYEN**  
DATE  
REVISOR **THANH TRINH**  
DATE

### IRRIGATION LEGEND

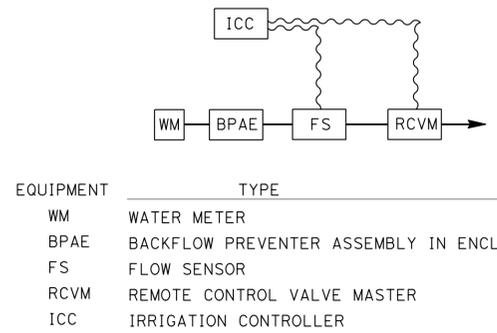
SYMBOL	DESCRIPTION	SPRAY PATTERN	OPERATING PRESSURE (psi)	PRESSURE COMPENSATING	PLUS/MINUS 5% ②				FLOW SHUTOFF DEVICE	SPRINKLER ASSEMBLY							REMARKS	
					DISCHARGE		RADIUS (ft)	WIDTH x LENGTH (ft)		TYPE	RISER		POP-UP		TREE WELL HEIGHT (INCH)			
					GALLONS PER MINUTE (GPM)	GALLONS PER HOUR (GPH)					MATERIAL	SIZE (IPS INCH)	HEIGHT (INCH)	TYPE		INLET CONNECTION (NPT INCH)		SPRINKLER PROTECTOR (TYPE)
											PLASTIC	GALVANIZED						
○	RISER SPRINKLER ASSEMBLY	—	20/90	X	0.5	—	—	—	—	1	X	—	1/2"	6"	—	—	—	FLOOD BUBBLER
●	POP UP SPRINKLER ASSEMBLY	Q	15	—	0.29	—	7	—	—	—	—	—	—	1	1/2"	—	—	⑥ SPRAY - 12" POP UP

**X IN BOX DENOTES REQUIREMENT**

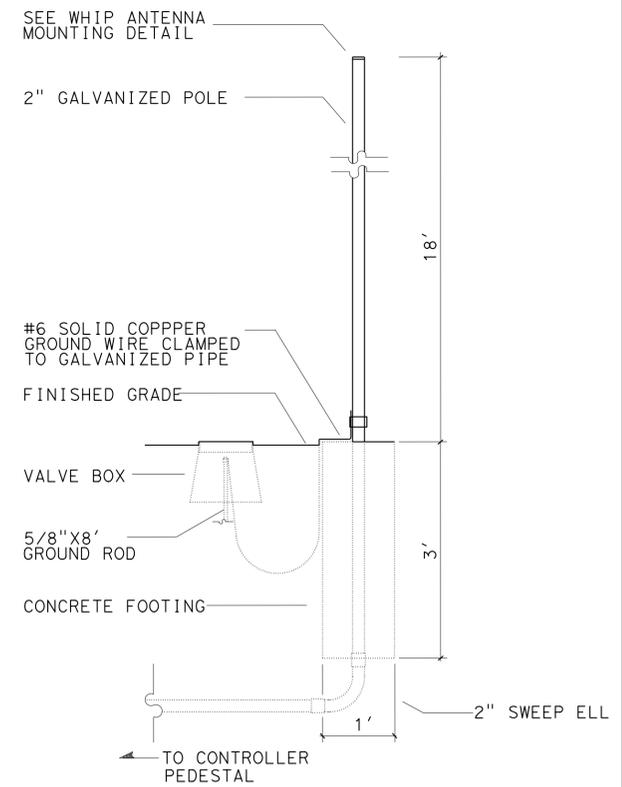
**APPLICABLE WHEN CIRCLED BELOW:**

- 1 - SEE SPECIAL PROVISIONS.
- 2 - IF A PRESSURE COMPENSATING DEVICE IS SPECIFIED, THE DISCHARGE AND RADII SHOWN REFLECT ITS USE.
- 3 - VINYL-COATED CAST IRON HOUSING.
- 4 - SWING JOINTS REQUIRED ADJACENT TO SHOULDERS, CURBS, SIDEWALKS, AND DIKES.
- 5 - UNLESS OTHERWISE SHOWN ON PLANS.

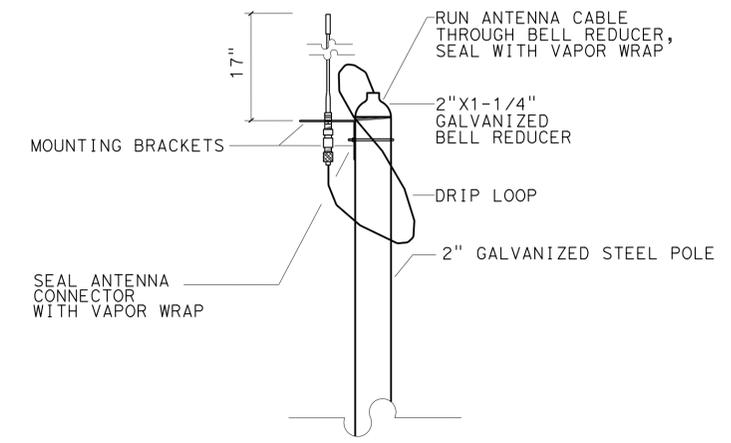
⑥ - WITH DUAL ORIFICES



**TYPICAL IRRIGATION SUPPORT FACILITY STANDARD INSTALLATION SCHEMATIC**



**SECTION  
POLE MOUNTED ANTENNA  
(FOR HAND HELD REMOTE ACCESS DEVICE)  
NO SCALE**



**WHIP ANTENNA MOUNTING DETAIL  
NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 RAY DESSELLE  
 SENIOR LANDSCAPE ARCHITECT  
 MELAINE HALL  
 MIKE BABICH  
 REVISOR BY  
 DATE REVISED  
 CALCULATED/DESIGNED BY  
 CHECKED BY

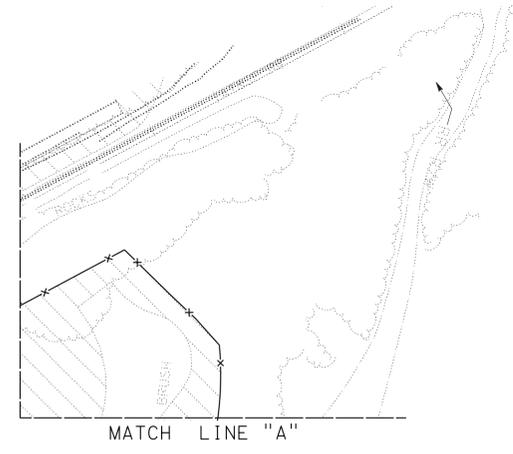
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT RAY DESSELLE  
 CALCULATED/DESIGNED BY CHECKED BY  
 MELAINE HALL MIKE BABICH  
 REVISED BY DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	5	52

1-13-14  
 PLANS APPROVAL DATE

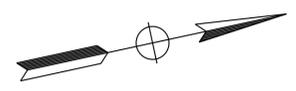
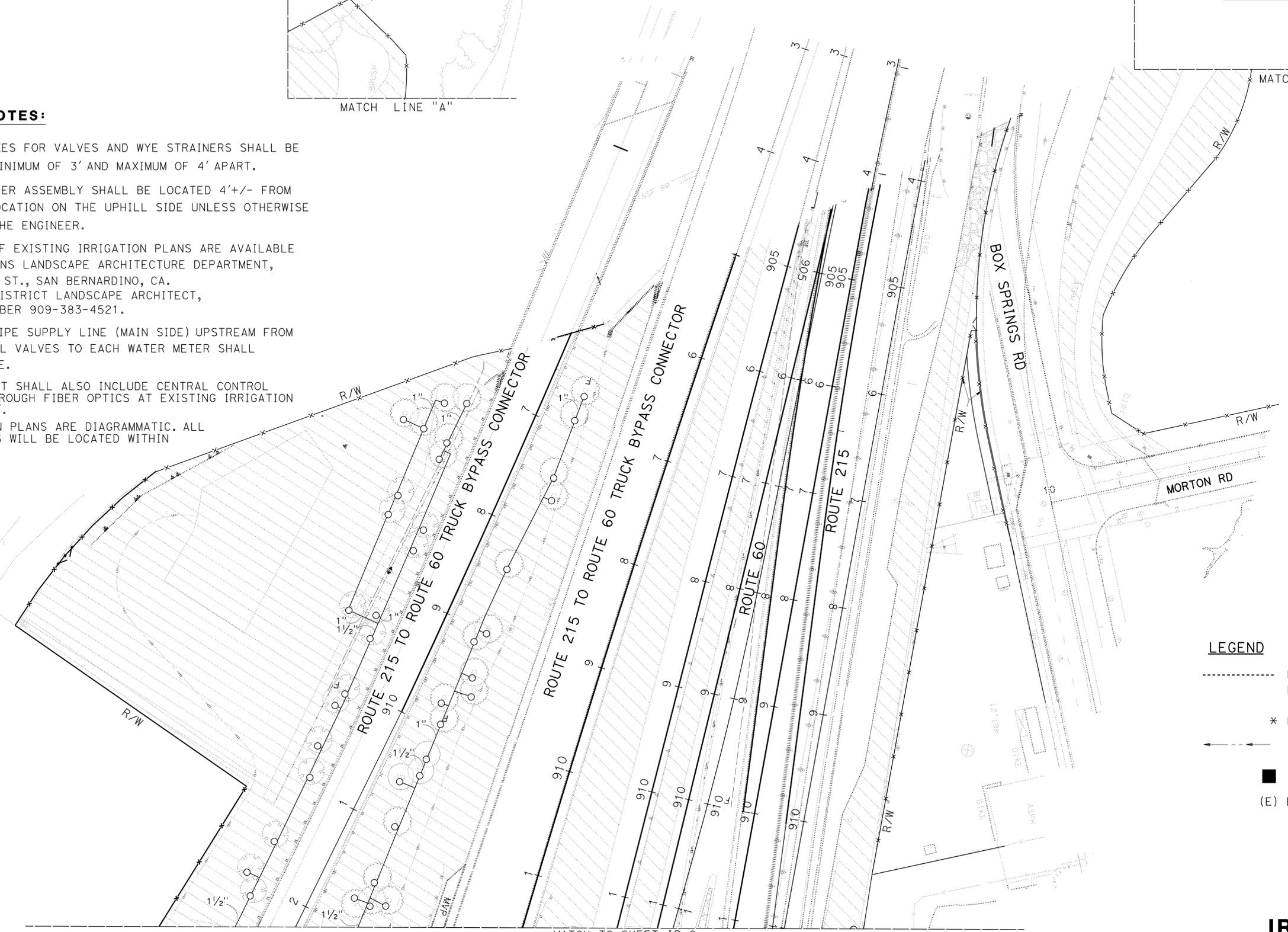
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**IRRIGATION NOTES:**

- ALL VALVE BOXES FOR VALVES AND WYE STRAINERS SHALL BE INSTALLED A MINIMUM OF 3' AND MAXIMUM OF 4' APART.
- POP UP SPRINKLER ASSEMBLY SHALL BE LOCATED 4'+/- FROM EACH PLANT LOCATION ON THE UPHILL SIDE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- HARD COPIES OF EXISTING IRRIGATION PLANS ARE AVAILABLE AT THE CALTRANS LANDSCAPE ARCHITECTURE DEPARTMENT, 464 W. FOURTH ST., SAN BERNARDINO, CA. CONTACT THE DISTRICT LANDSCAPE ARCHITECT, TELEPHONE NUMBER 909-383-4521.
- ALL PLASTIC PIPE SUPPLY LINE (MAIN SIDE) UPSTREAM FROM REMOTE CONTROL VALVES TO EACH WATER METER SHALL BE 2 1/2" IN SIZE.
- CHECK AND TEST SHALL ALSO INCLUDE CENTRAL CONTROL OPERATIONS THROUGH FIBER OPTICS AT EXISTING IRRIGATION CONTROLLER 'C'.
- THE IRRIGATION PLANS ARE DIAGRAMMATIC. ALL NEW FACILITIES WILL BE LOCATED WITHIN EXISTING R/W.



- LEGEND**
- EXISTING 2 1/2" PLASTIC PIPE SUPPLY LINE
  - \* EXISTING ET GAUGE
  - ← EXISTING BIOSWALE
  - POLE MOUNTED ANTENNA
  - (E) EXISTING IRRIGATION COMPONENT

APPROVED FOR IRRIGATION WORK ONLY

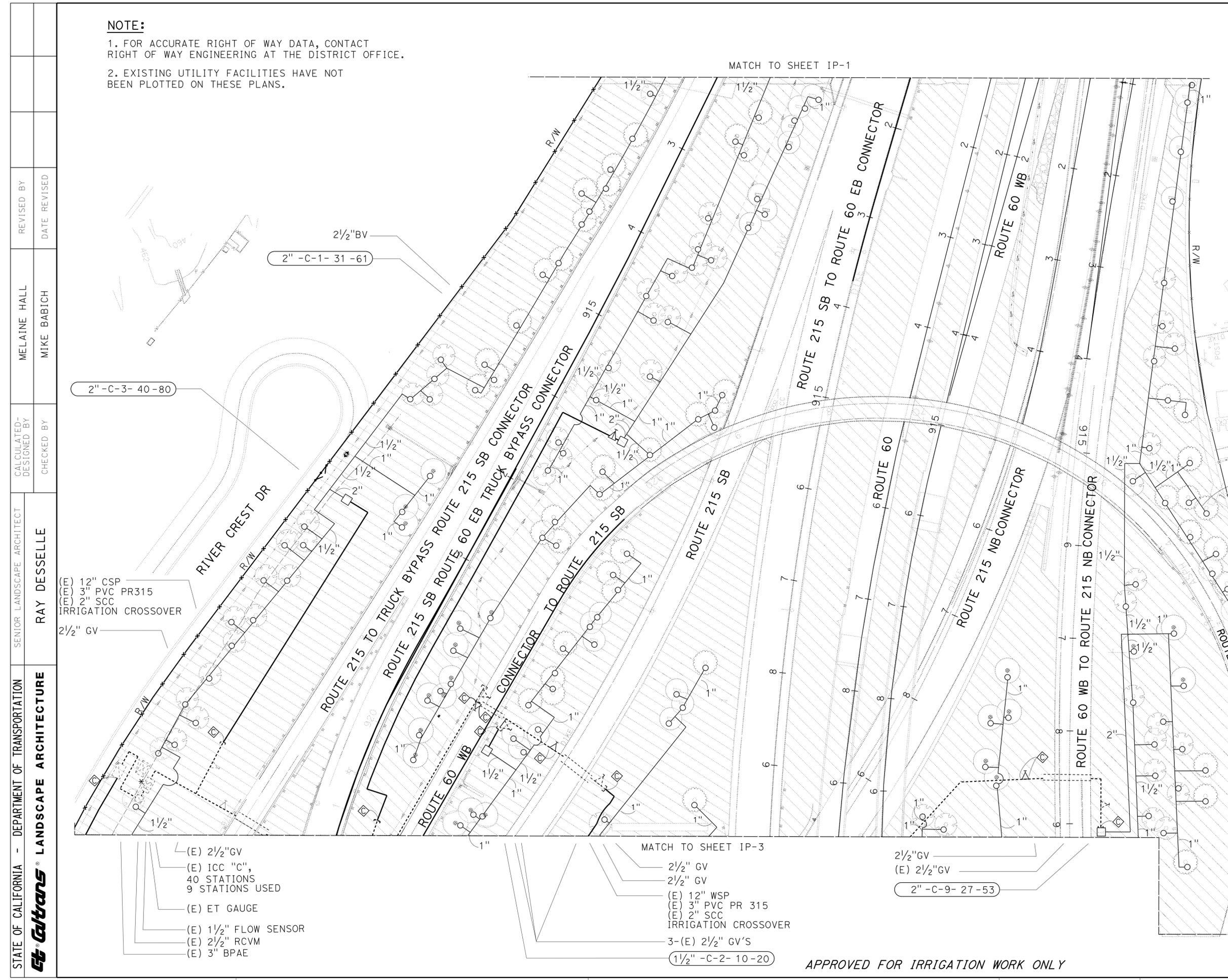
**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP- 1**

LAST REVISION DATE PLOTTED => 12-FEB-2014 01-13-14 TIME PLOTTED => 07:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	6	52

1-13-14  
 PLANS APPROVAL DATE  
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LICENSED LANDSCAPE ARCHITECT  
 Signature: [Signature]  
 11-30-15  
 1-13-14  
 STATE OF CALIFORNIA



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	RAY DESSELLE	CHECKED BY	DATE REVISED
		MELATNE HALL	MIKE BABICH

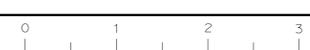
(E) 12" CSP  
 (E) 3" PVC PR315  
 (E) 2" SCC  
 IRRIGATION CROSSOVER

(E) 12" WSP  
 (E) 3" PVC PR 315  
 (E) 2" SCC  
 IRRIGATION CROSSOVER

(E) 2 1/2" GV  
 (E) ICC "C",  
 40 STATIONS  
 9 STATIONS USED  
 (E) ET GAUGE  
 (E) 1 1/2" FLOW SENSOR  
 (E) 2 1/2" RCVM  
 (E) 3" BPAE

MATCH TO SHEET IP-3  
 2 1/2" GV  
 2 1/2" GV  
 (E) 12" WSP  
 (E) 3" PVC PR 315  
 (E) 2" SCC  
 IRRIGATION CROSSOVER  
 3-(E) 2 1/2" GV'S  
 (1 1/2" -C-2- 10-20)

2 1/2" GV  
 (E) 2 1/2" GV  
 (2" -C-9- 27-53)



APPROVED FOR IRRIGATION WORK ONLY

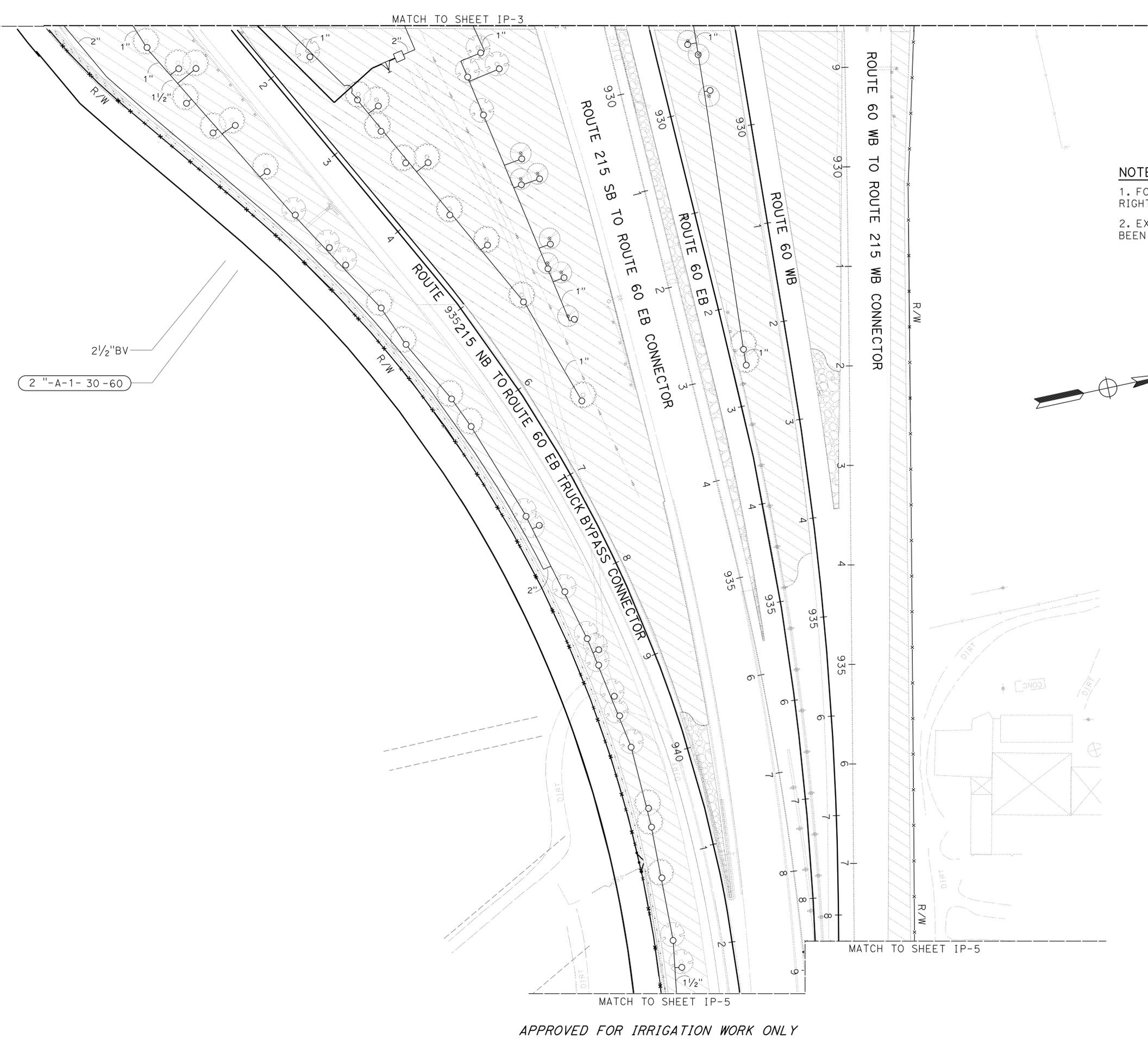
**IRRIGATION PLAN**  
**IP-2**  
 SCALE: 1" = 50'

LAST REVISION: 01-13-14   
 DATE PLOTTED => 12-FEB-2014   
 TIME PLOTTED => 07:45



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT	CHECKED BY	DESIGNED BY	REVISOR	DATE
RAY DESSELLE			MELAINE HALL	
			MIKE BABICH	



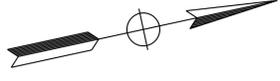
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	8	52

1-13-14  
 PLANS APPROVAL DATE

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**NOTE:**

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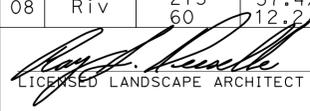


APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
 SCALE: 1" = 50'  
**IP - 4**

LAST REVISION DATE PLOTTED => 12-FEB-2014 01-13-14 TIME PLOTTED => 07:45

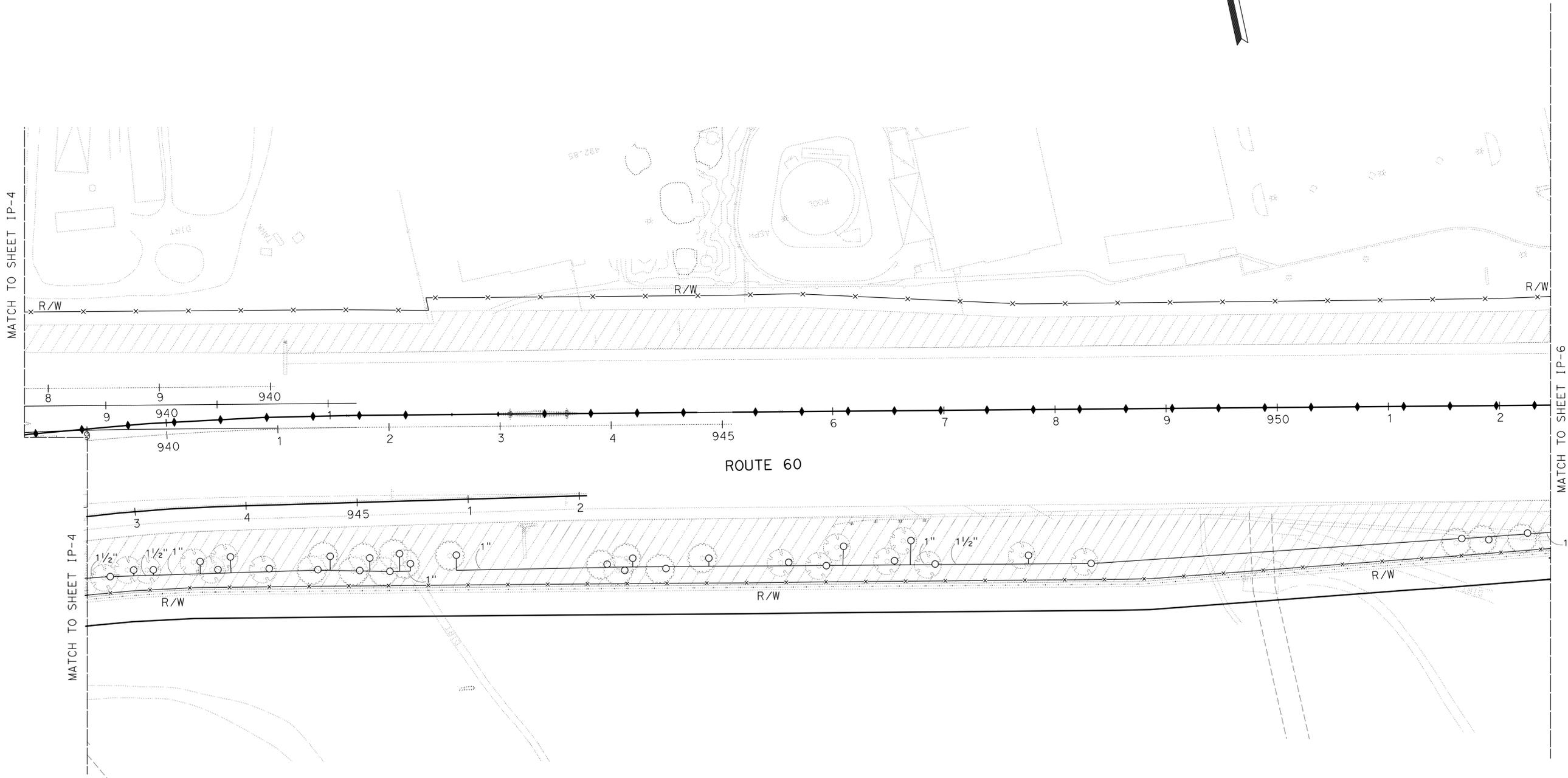
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	9	52

  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
  
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	RAY DESSELLE	CHECKED BY	DATE
		MELAINE HALL	MIKE BABICH



APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
**IP - 5**

SCALE: 1" = 50'

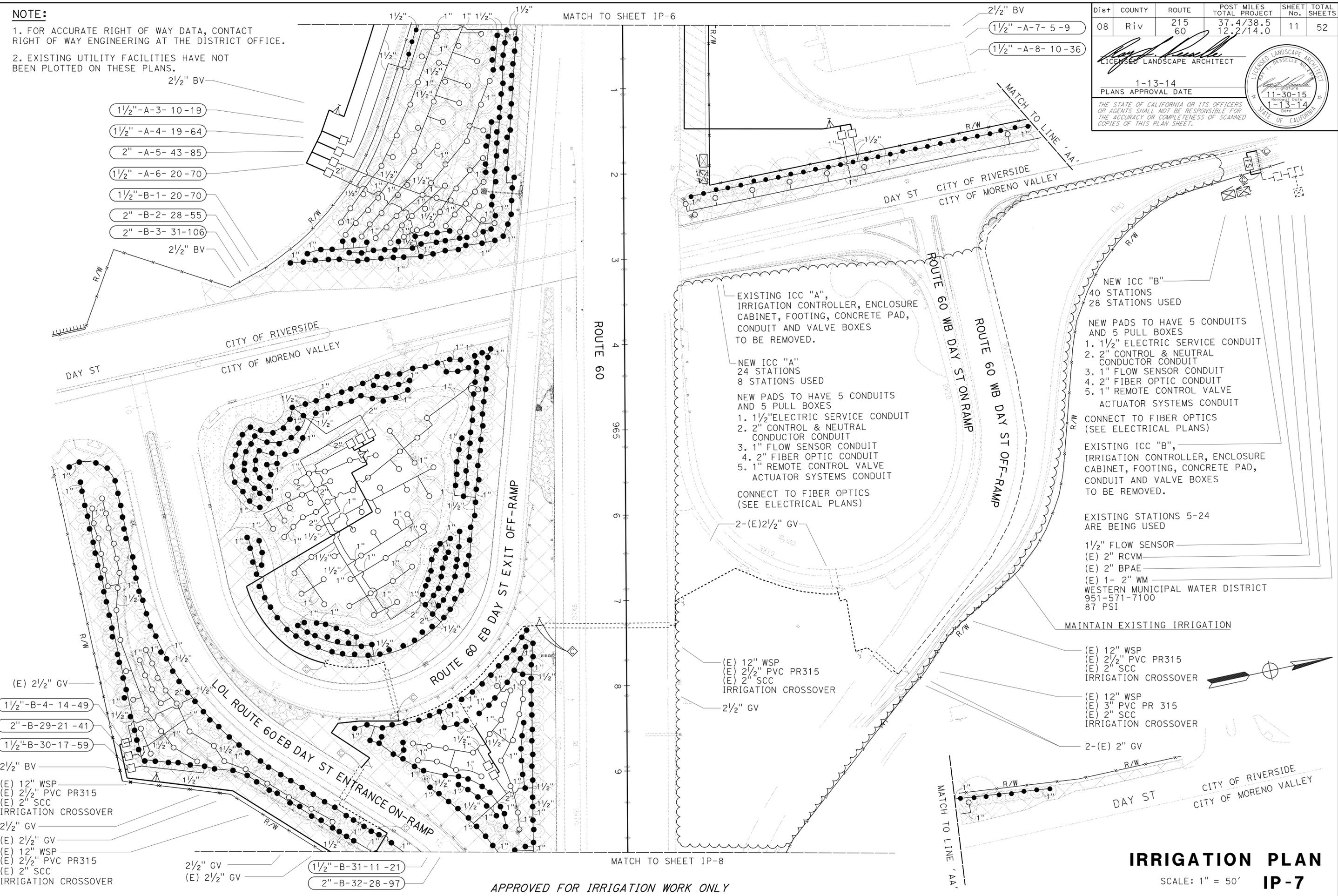


STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	LANDSCAPE ARCHITECTURE	SENIOR LANDSCAPE ARCHITECT	CHECKED BY	DESIGNED BY	REVISIONS
RAY DESSELLE	RAY DESSELLE	RAY DESSELLE	RAY DESSELLE	RAY DESSELLE	
MELATNE HALL	MIKE BABICH				

**NOTE:**  
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	11	52

1-13-14  
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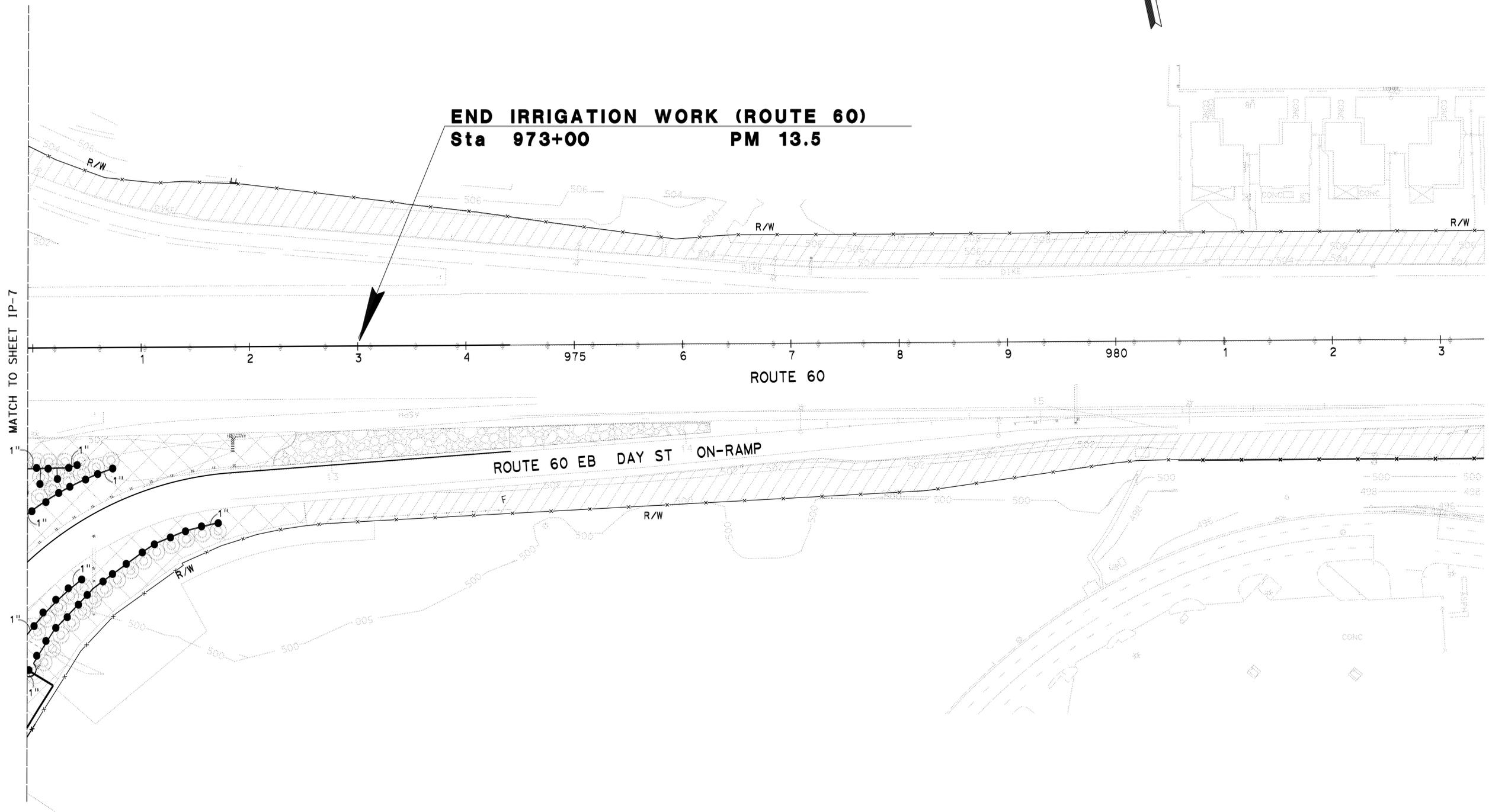
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	12	52

1-13-14  
 PLANS APPROVAL DATE

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	SENIOR LANDSCAPE ARCHITECT	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	RAY DESSELLE	MELATNE HALL	MIKE BABICH
		CALCULATED/DESIGNED BY	CHECKED BY

APPROVED FOR IRRIGATION WORK ONLY

**IRRIGATION PLAN**  
SCALE: 1" = 50'  
**IP - 8**

LAST REVISION    DATE PLOTTED => 12-FEB-2014    TIME PLOTTED => 07:45  
 01-13-14

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	13	52

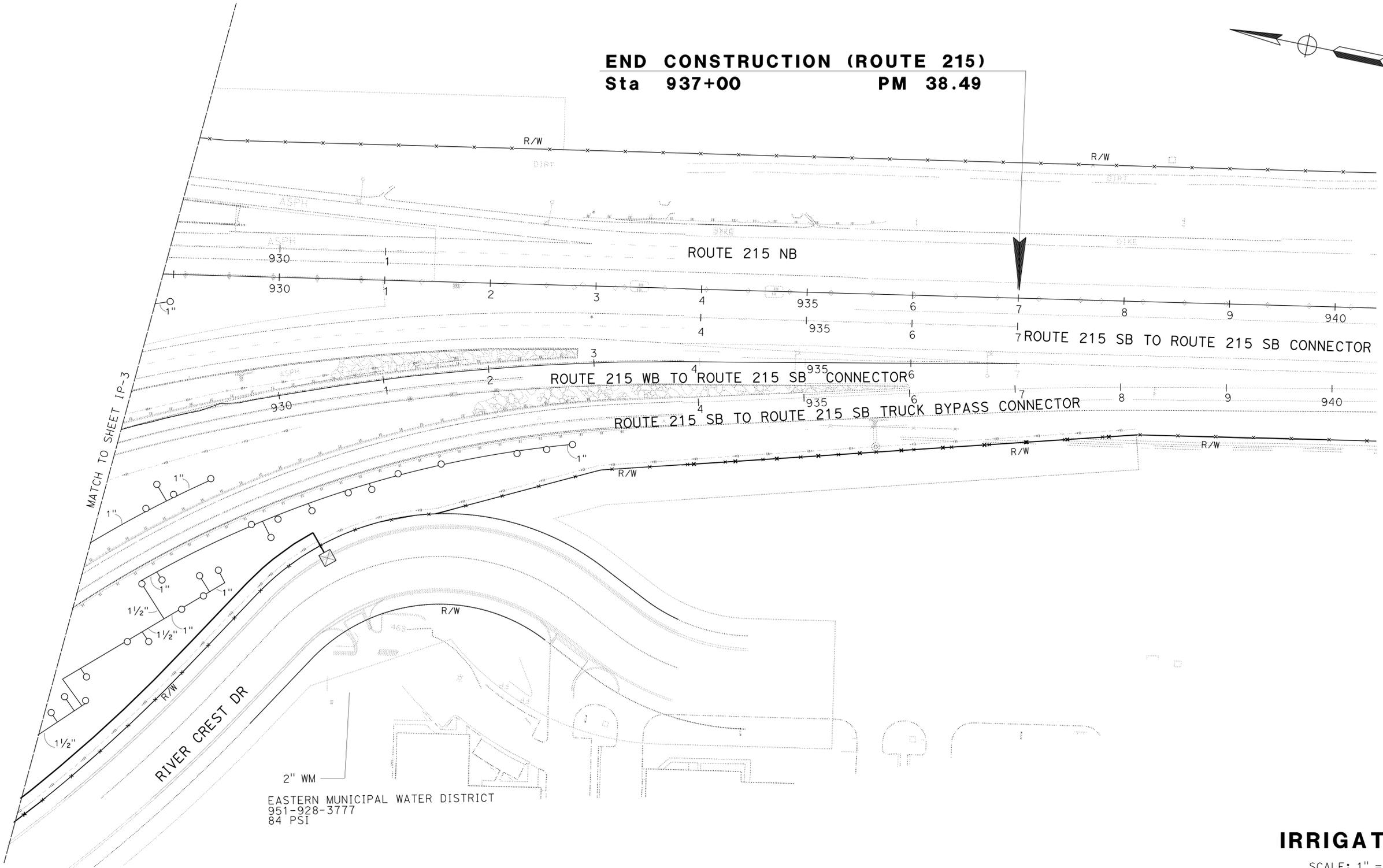
1-13-14  
 PLANS APPROVAL DATE

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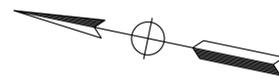
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
<b>Caltrans</b> LANDSCAPE ARCHITECTURE	MELATNE HALL	MIKE BABICH
SENIOR LANDSCAPE ARCHITECT	CALCULATED/DESIGNED BY	CHECKED BY
RAY DESSELLE		



**END CONSTRUCTION (ROUTE 215)  
Sta 937+00 PM 38.49**



**IRRIGATION PLAN  
IP-9**

SCALE: 1" = 50'

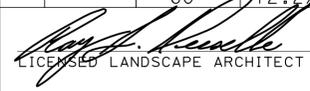
APPROVED FOR IRRIGATION WORK ONLY

LAST REVISION DATE PLOTTED => 12-FEB-2014  
 01-13-14 TIME PLOTTED => 07:45





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	16	52

  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
  
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### PLANTING LEGEND

PLANT GROUP	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY EACH	HOLE SIZE (INCH)		BASIN TYPE	SOIL AMENDMENT ①		IRON SULFATE ①	COMMERCIAL FERTILIZER ①		BASIN MULCH		STAKING	PLANTING LIMITS							REMARKS
							Dia	DEPTH		TYPE	RATE		RATE	PLANTING	PLT ESTB	TYPE		CY	MINIMUM DISTANCE (ft) FROM				ON CENTER (ft)		
																			ETW	Pvmt	FENCE	WALL		PAVED DITCH	
B	1		ACACIA REDOLENS	PROSTRATE ACACIA	No. 5	538	②	②	I	N	.04 CY	—	0.5 LB	0.5 LB	SB	.04	—	⑦	⑦	⑦	⑦	⑦	⑦	⑦	SHRUB
U	2		CERCIDIUM X 'DESERT MUSEUM'	PALO VERDE	No. 15	29	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	3		EUCALYPTUS NICHOLII	NICHOL'S PEPPERMINT	No. 15	96	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	4		EUCALYPTUS POLYANTHEMOS	SILVER DOLLAR GUM	No. 15	174	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	5		GLEDITSIA TRICANTHOS	HONEY LOCUST	No. 15	54	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	6		LAGERSTROEMIA X 'TUSCARORA'	TUSCARORA CRAPE MYRTLE	No. 15	84	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	7		PLATANUS X ACERIFOLIA	LONDON PLANE TREE	No. 15	7	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	8		QUERCUS AGRIFOLIA	COAST LIVE OAK	No. 15	196	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	9		ROBINIA X AMBIGUA 'PURPLE ROBE'	PURPLE ROBE LOCUST	No. 15	62	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑭	⑦	⑦	⑦	⑦	⑦	TREE
	10		WASHINGTONIA ROBUSTA	MEXICAN FAN PALM	BTH	14	②	②	I	N	.07 CY	—	0.5 LB	0.5 LB	SB	.07	④	⑦	⑦	⑦	⑦	⑦	⑦	⑦	12' ⑬

**LEGEND:**

- MULCH
- EXISTING ROCK BLANKET
- EROSION CONTROL (HYDROSEED)
- DECOMPOSED GRANITE

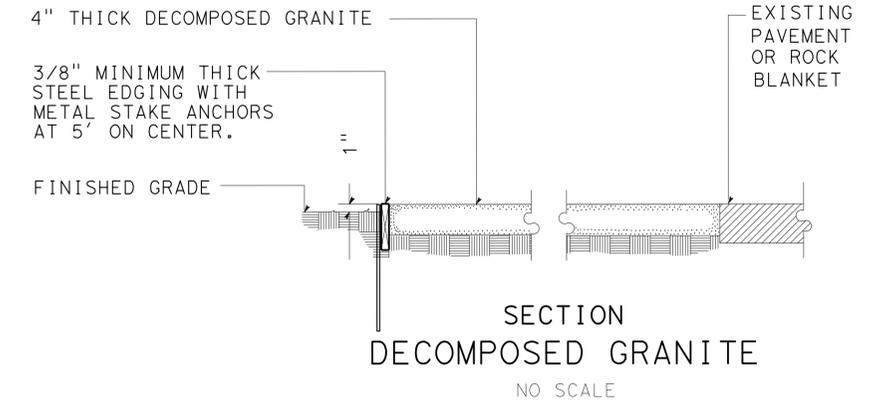
- EXISTING TREE TO REMAIN IN PLACE
- MAINTAIN EXISTING PLANTING

**PLANT GROUP QUANTITIES**

GROUP	UNIT	QUANTITY
B	EA	538
U	EA	1,296

**APPLICABLE WHEN CIRCLED:**

- ① - QUANTITIES SHOWN ARE "PER PLANT" UNLESS SHOWN AS SQFT OR SQYD APPLICATION RATES
- ② - 2 X DIAMETER, 1 X DEPTH OF ROOT BALL
- 3 - SUFFICIENT TO RECEIVE ROOT BALL AND AMENDMENTS IF REQUIRED
- 4 - SEE DETAIL
- 5 - SEE SPECIAL PROVISIONS
- 6 - SEE STANDARD SPECIFICATIONS
- ⑦ - AS SHOWN ON PLANS
- 8 - UNLESS OTHERWISE SHOWN ON PLANS
- 9 - FOLIAGE PROTECTOR REQUIRED
- 10 - ROOT PROTECTOR REQUIRED
- 11 - ROOT BARRIER REQUIRED
- 12 - DEPARTMENT-FURNISHED
- ⑬ - SKINNED
- ⑭ - NO TREE SHALL BE INSTALLED WITHIN 40' OF TRAVEL WAY UNLESS IF IT IS BEHIND A BARRIER THEN INSTALL IT AS SHOWN ON PLAN.



**NOTE:**  
UNDERLINED PORTIONS OF BOTANICAL NAME INDICATE ABBREVIATIONS USED ON PLANTING PLANS.

**PLANT LIST  
PL-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 RAY DESSELLE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MELAINE HALL  
 MIKE BABICH  
 REVISED BY  
 DATE REVISED

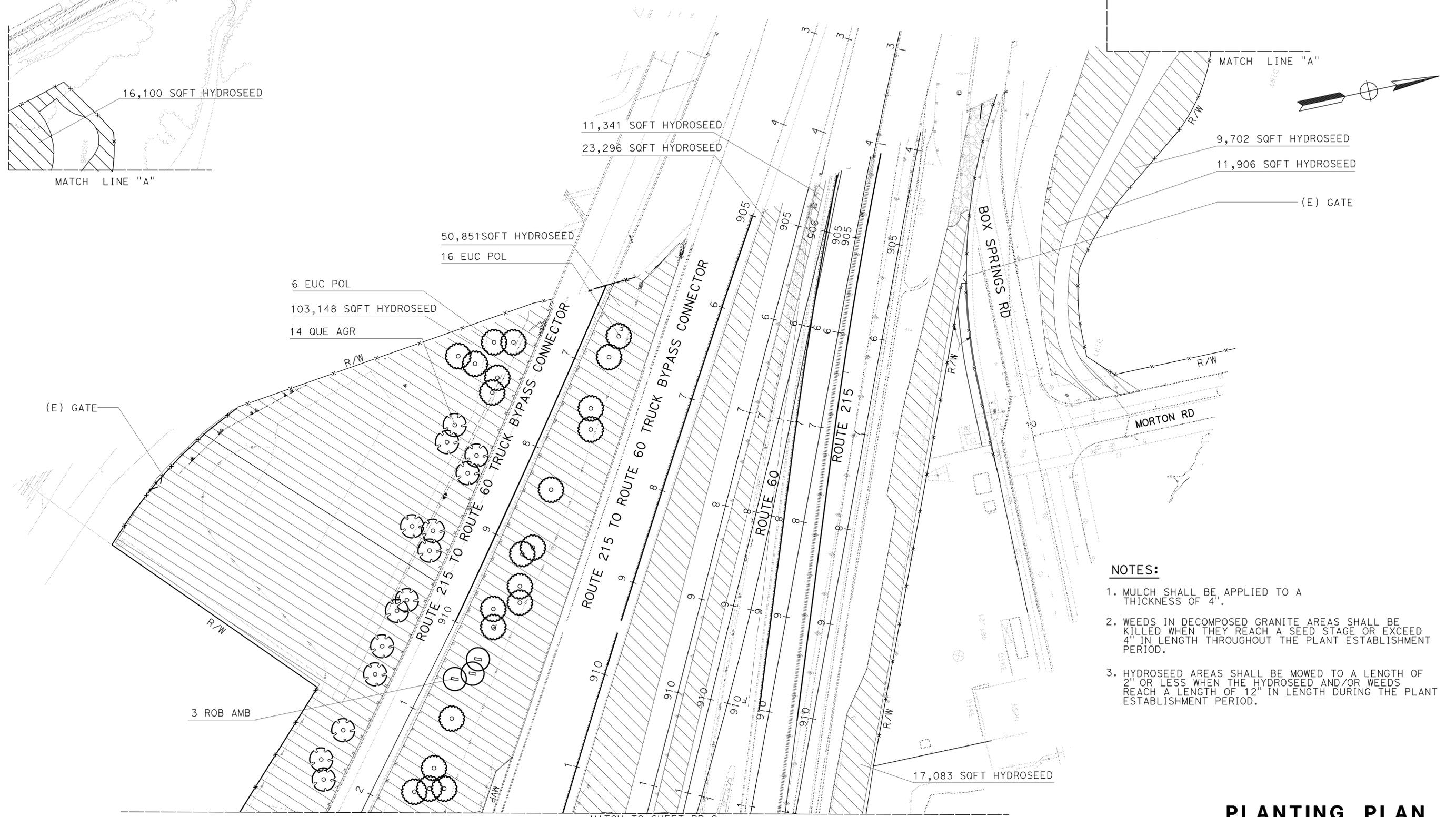
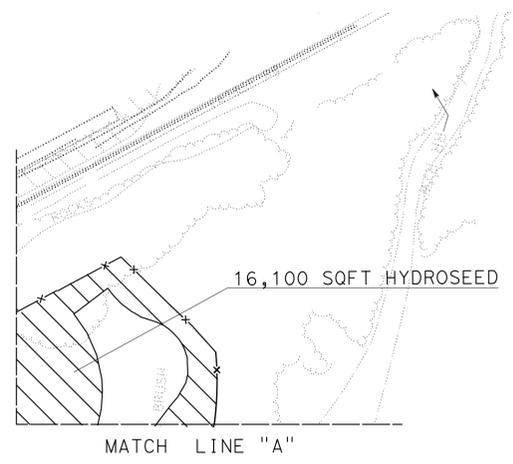
LAST REVISION    DATE PLOTTED => 12-FEB-2014    TIME PLOTTED => 07:45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT RAY DESSELLE  
 CALCULATED/DESIGNED BY CHECKED BY  
 MELAINE HALL MIKE BABICH  
 REVISED BY DATE REVISED

**NOTE:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.  
 2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	17	52

1-13-14  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



- NOTES:**
- MULCH SHALL BE APPLIED TO A THICKNESS OF 4".
  - WEEDS IN DECOMPOSED GRANITE AREAS SHALL BE KILLED WHEN THEY REACH A SEED STAGE OR EXCEED 4" IN LENGTH THROUGHOUT THE PLANT ESTABLISHMENT PERIOD.
  - HYDROSEED AREAS SHALL BE MOWED TO A LENGTH OF 2" OR LESS WHEN THE HYDROSEED AND/OR WEEDS REACH A LENGTH OF 12" IN LENGTH DURING THE PLANT ESTABLISHMENT PERIOD.

APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
 SCALE: 1" = 50'  
**PP-1**

LAST REVISION DATE PLOTTED => 12-FEB-2014 TIME PLOTTED => 07:45

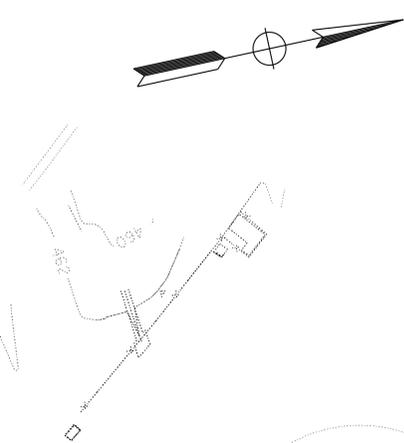
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	18	52

1-13-14  
 PLANS APPROVAL DATE  
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 RAY DESSELLE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MELAINE HALL  
 MIKE BABICH  
 REVISED BY  
 DATE REVISED



APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN PP-2**

SCALE: 1" = 50'

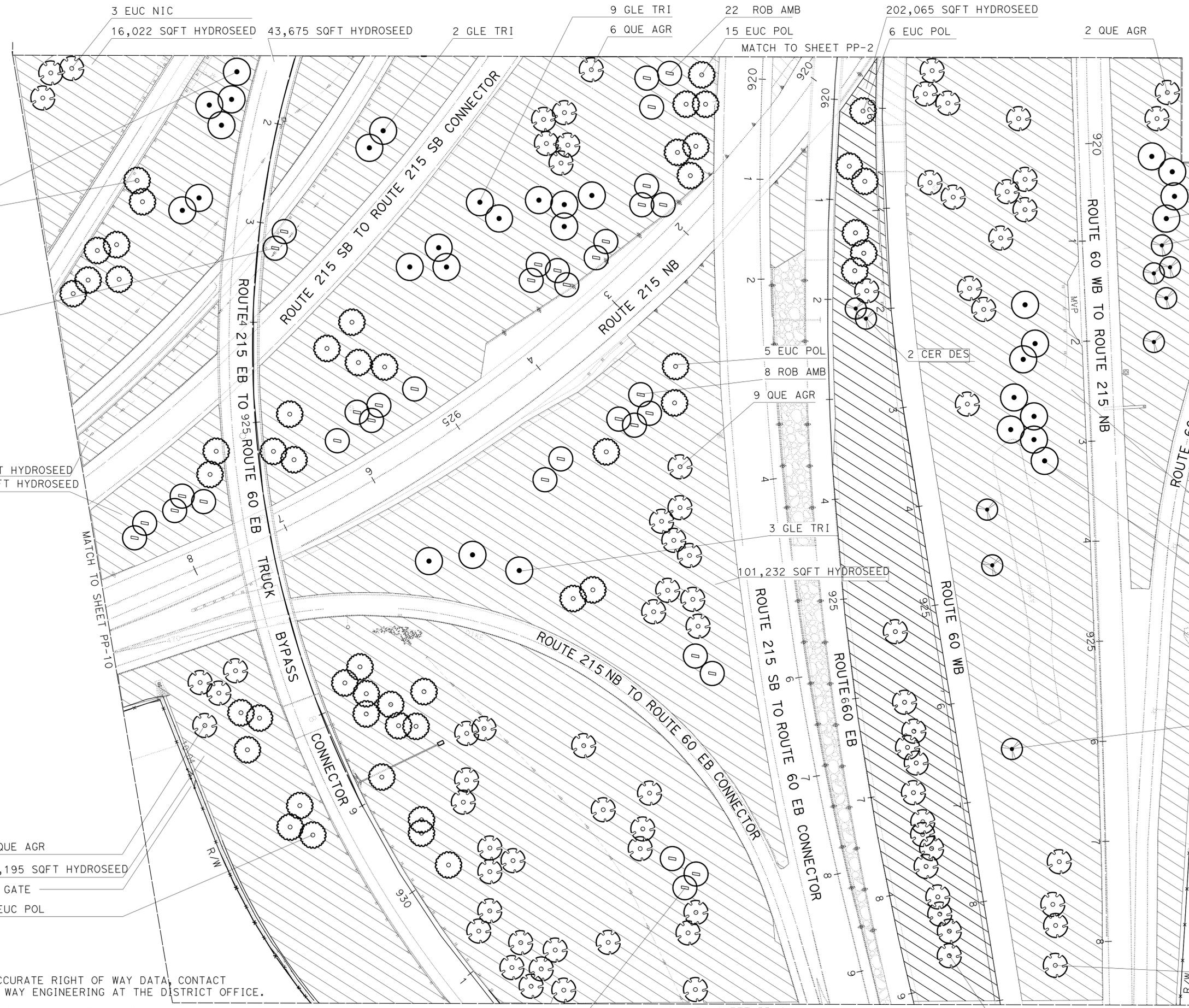
LAST REVISION: DATE PLOTTED => 12-FEB-2014  
 01-13-14 TIME PLOTTED => 07:45

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT RAY DESSELLE  
 CHECKED BY  
 CALCULATED/DESIGNED BY  
 MELATNE HALL MIKE BABICH  
 REVISOR BY DATE  
 REVISOR BY DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	19	52

1-13-14  
 PLANS APPROVAL DATE

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

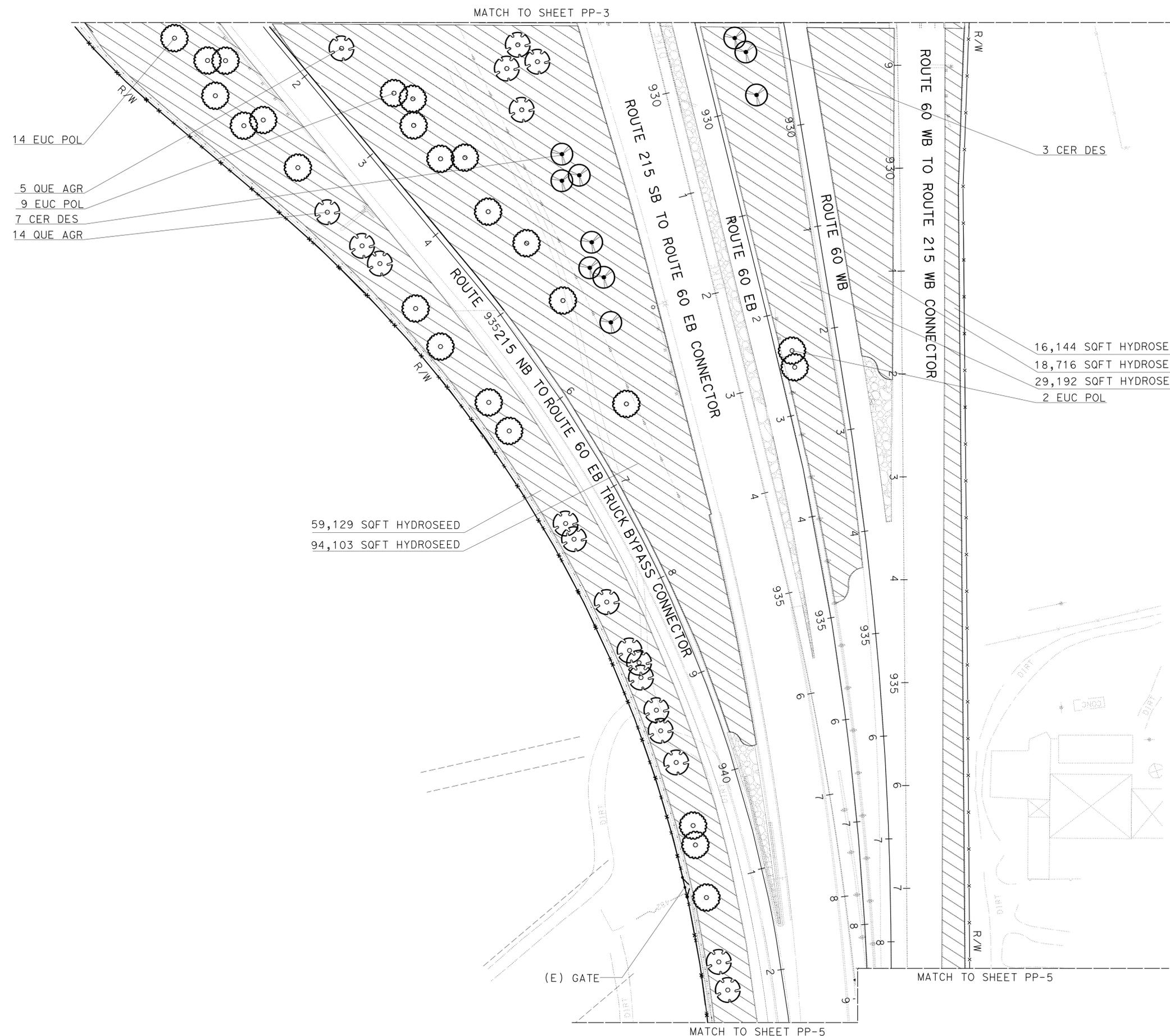


**NOTE:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.  
 2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

**PLANTING PLAN**  
**PP-3**

SCALE: 1" = 50'

APPROVED FOR PLANTING WORK ONLY

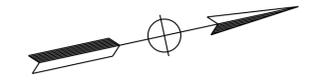


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	20	52

1-13-14  
 PLANS APPROVAL DATE

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**NOTE:**  
 1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.  
 2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.



APPROVED FOR PLANTING WORK ONLY

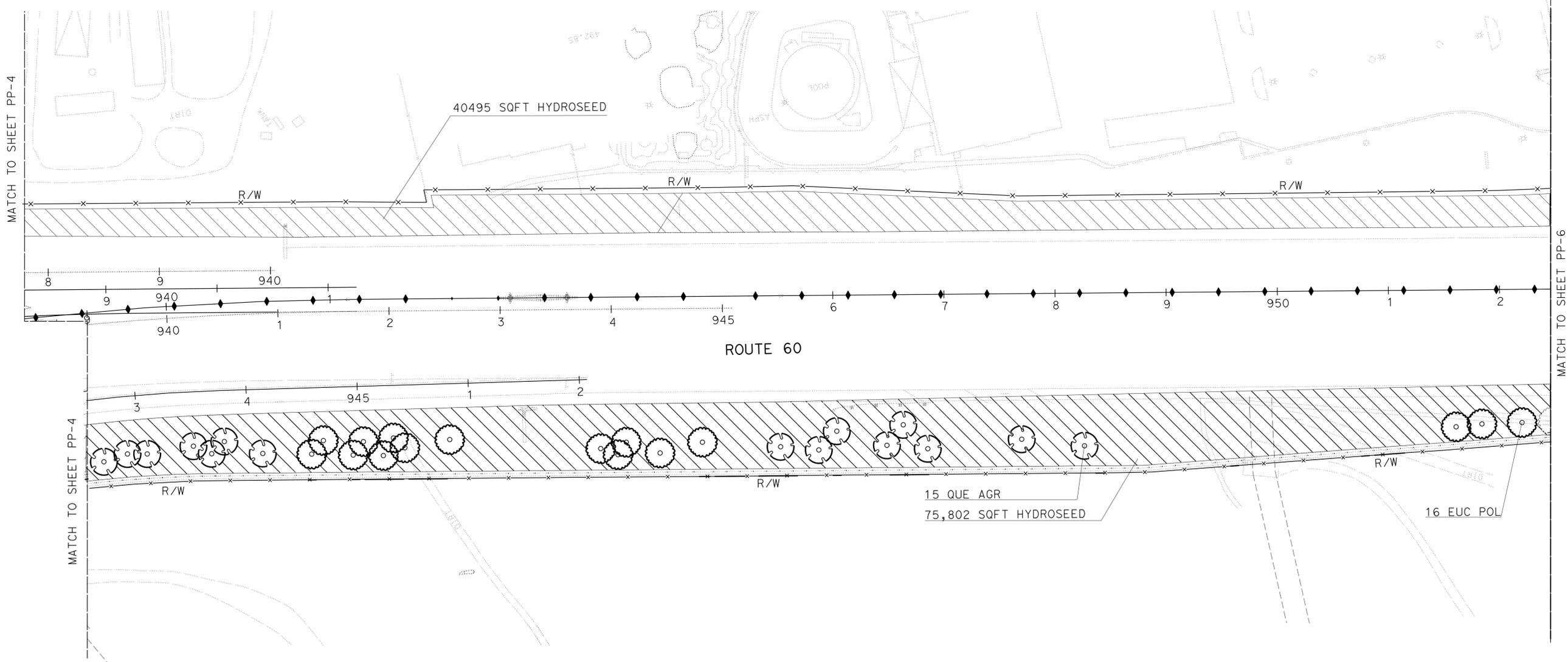
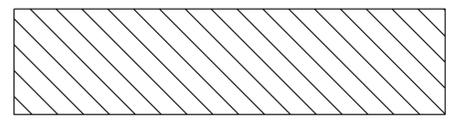
**PLANTING PLAN**  
 SCALE: 1" = 50'  
**PP-4**

LAST REVISION DATE PLOTTED => 12-FEB-2014 01-13-14 TIME PLOTTED => 07:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	21	52

  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT RAY DESSELLE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MELAINE HALL  
 MIKE BABICH  
 REVISED BY  
 DATE REVISED

APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
**PP-5**

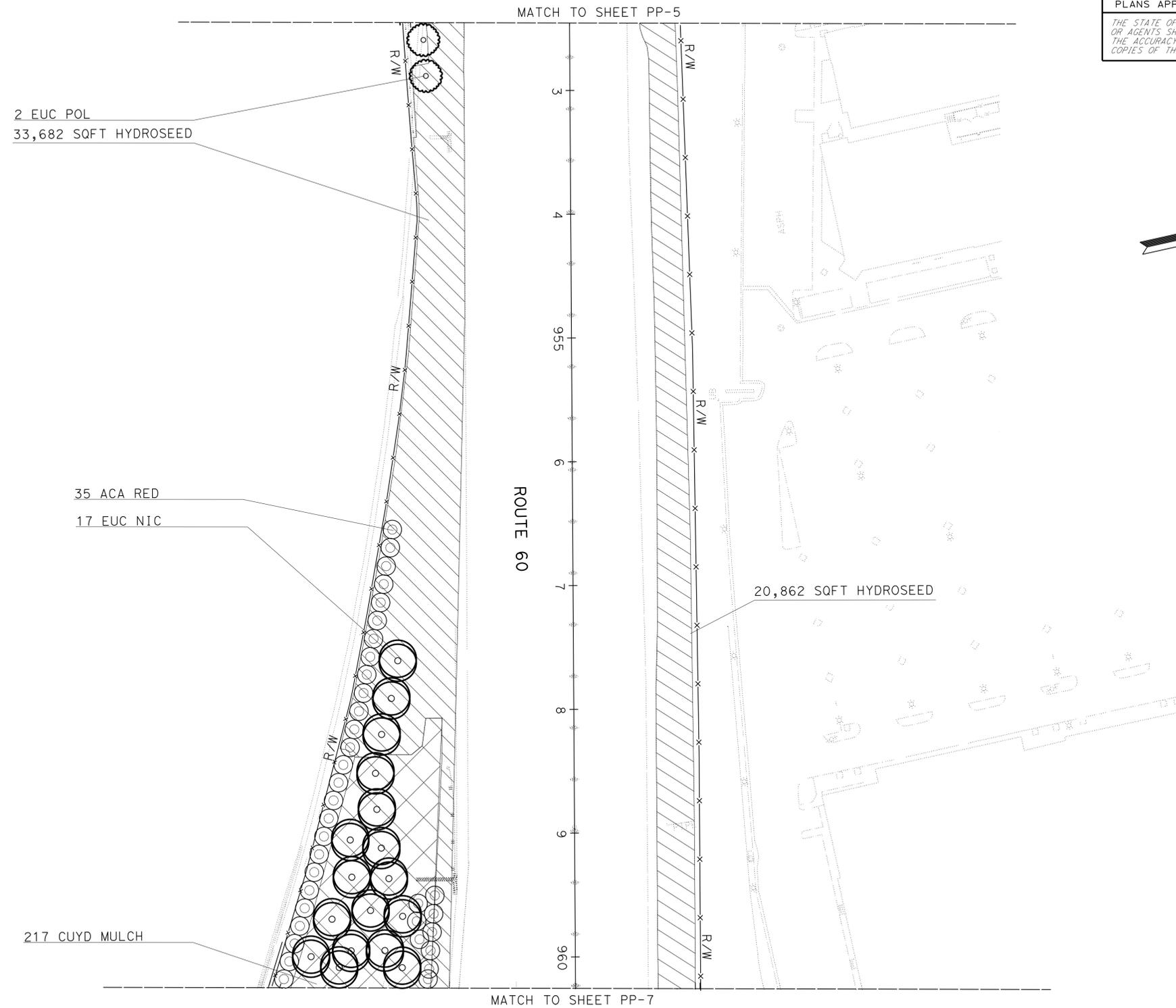
SCALE: 1" = 50'

**NOTE:**

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	22	52

Signature: *Ray Desselles*  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
**PP-6**

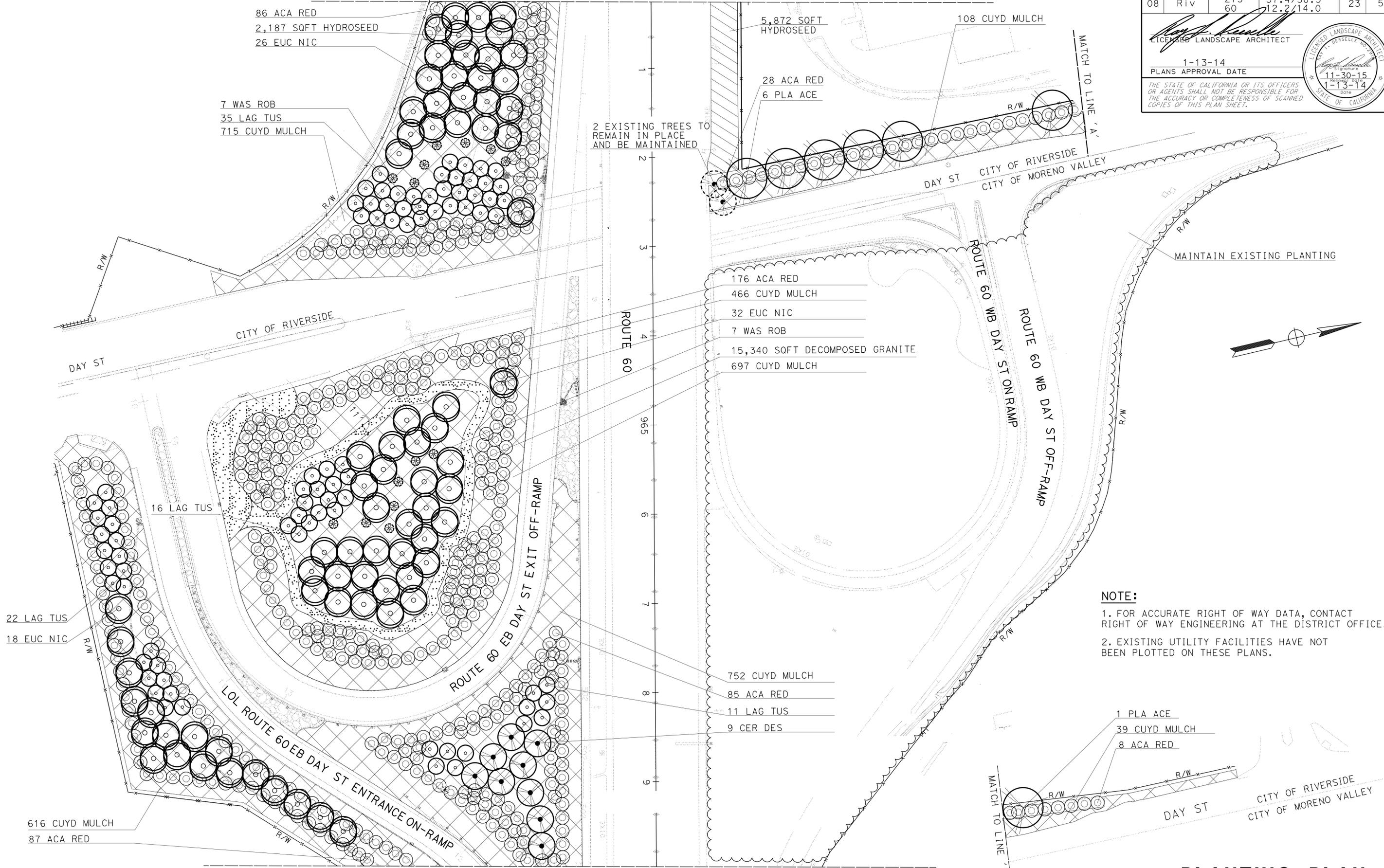
SCALE: 1" = 50'

MATCH TO SHEET PP-6

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	23	52

1-13-14  
 PLANS APPROVAL DATE

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



MATCH TO SHEET PP-8

**NOTE:**  
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 2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
**PP-7**

SCALE: 1" = 50'

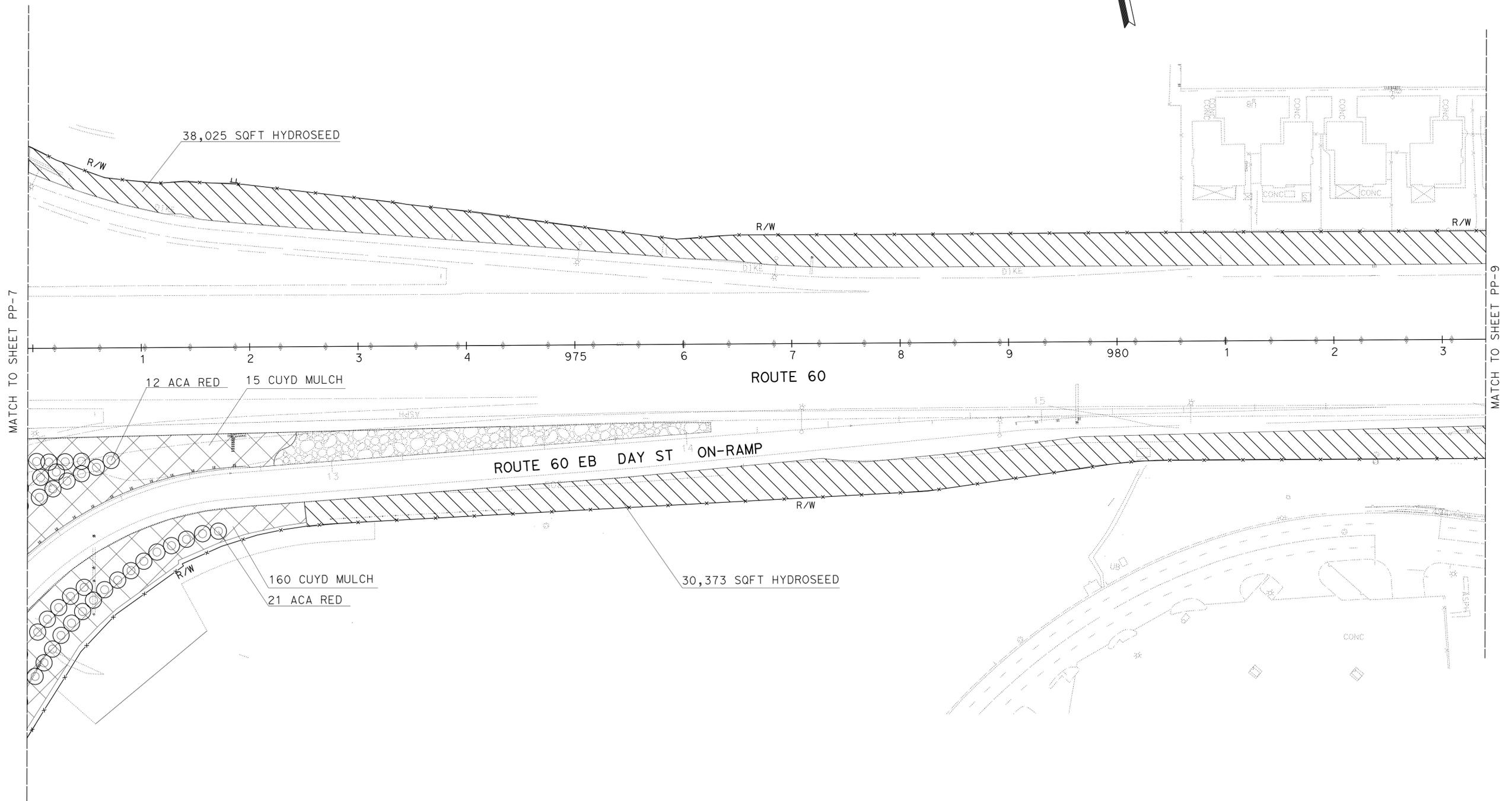
LAST REVISION: DATE PLOTTED => 12-FEB-2014  
 TIME PLOTTED => 07:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	24	52

*Ray D. Deselle*  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 RAY DESSELLE  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 MELAINE HALL  
 MIKE BABICH  
 REVISED BY  
 DATE REVISED

APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
 SCALE: 1" = 50'  
**PP-8**

LAST REVISION: 01-13-14  
 DATE PLOTTED => 12-FEB-2014  
 TIME PLOTTED => 07:46



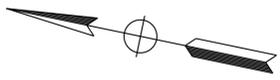
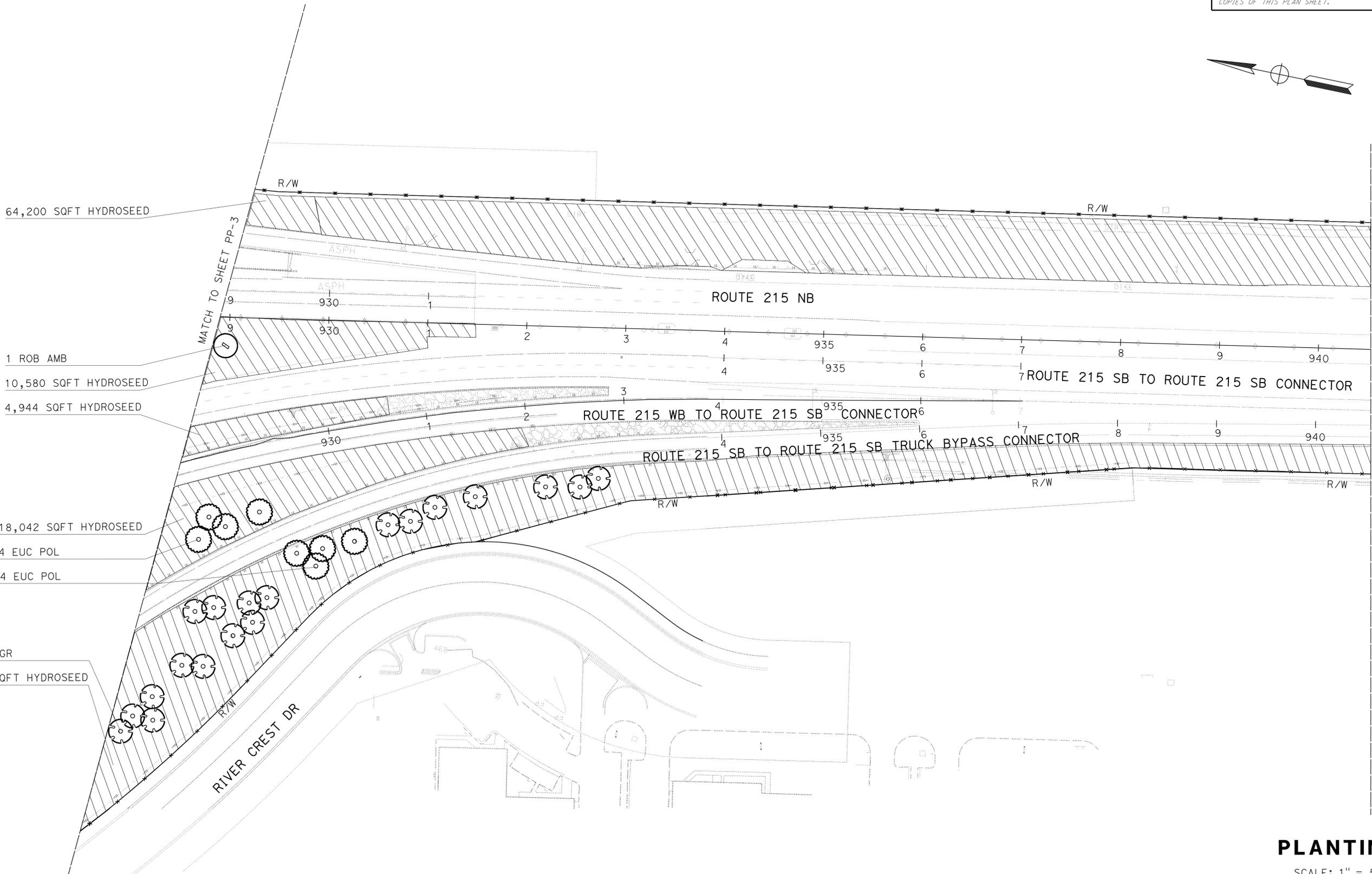
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	26	52

LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
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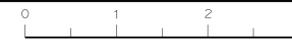
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	REVISOR	DATE
Caltrans® LANDSCAPE ARCHITECTURE	MELANIE HALL	MIKE BABICH
	REVISOR	DATE
SENIOR LANDSCAPE ARCHITECT	CHECKED BY	DESIGNED BY
RAY DESSELLE		



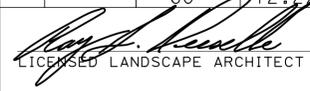
APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
**PP-10**

SCALE: 1" = 50'



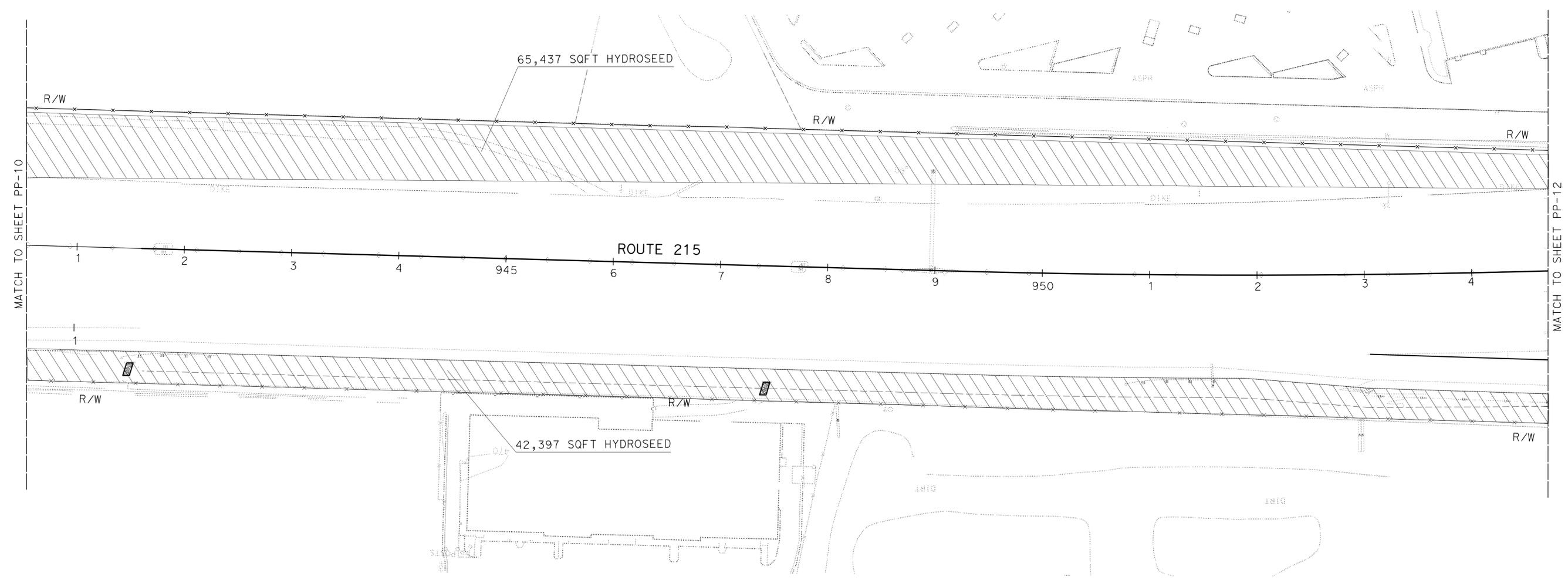
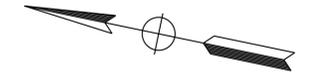
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	27	52

  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
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 MELATNE HALL  
 MIKE BABICH  
 REVISED BY  
 DATE REVISED



APPROVED FOR PLANTING WORK ONLY

**PLANTING PLAN**  
 SCALE: 1" = 50'  
**PP-11**

LAST REVISION: 01-13-14 DATE PLOTTED => 12-FEB-2014 TIME PLOTTED => 07:46





Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	30	52

  
 LICENSED LANDSCAPE ARCHITECT  
 1-13-14  
 PLANS APPROVAL DATE  
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**ABBREVIATIONS**

AMEND — amendment	SQYD — square yard	SF — state furnished
BTH — brown trunk height	CF — cubic feet	TRVD — traveled
B & B — balled and burlapped	Max — maximum	
Dia — diameter	Min — minimum	
EA — each	NCN — no common name	
(E) — existing	No. — number	
LB — pound	Pkt — packet	
Oz — ounce	PLT ESTB — plant establishment	
F+ — foot/feet	Pvmt — pavement	
SQFT — square feet	R/W — right of way	

**HYDROSEED AND DECOMPOSED GRANITE**

SHEETS	HYDROSEED (SQFT)	DECOMPOSED GRANITE (SQFT)
PP-1	243,427	-
PP-2	506,731	-
PP-3	923,500	-
PP-4	217,284	-
PP-5	116,297	-
PP-6	54,544	-
PP-7	8,059	15,340
PP-8	68,398	-
PP-9	37749	-
PP-10	163,194	-
PP-11	107,834	-
PP-12	45,231	-
PP-13	165,960	-
TOTAL	2,658,208	15,340

**SEED MIX**

SEED	BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	PURE LIVE SEED (POUNDS PER ACRE)
MIX	ATRIPLEX SEMIBACCATA (CREEPING SALTBRUSH) <sup>1</sup>	40	8.0
	ERIOGONUM FASCICULATUM POLIFOLIUM (CALIFORNIA BUCKWHEAT) <sup>1</sup>	40	2.0
	LASTHENIA CALIFORNICA (DWARF GOLDFIELDS) <sup>1</sup>	30	1.5
	MELICA IMPERFECTA (COAST RANGE MELIC) <sup>1</sup>	50	5.0
	POA SECUNDA (ONE-SIDED BLUEGRASS) <sup>1</sup>	50	2.0
	SALVIA COLUMBARIAE (CHIA) <sup>1</sup>	70	6.0
<sup>1</sup> SEED PRODUCED IN CALIFORNIA ONLY.		TOTAL	24.5

**EROSION CONTROL**

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE
		DESCRIPTION	TYPE	
STEP 1	HYDROSEED	SEED	MIX	24.50 LB/ACRE
		BFM FIBER		2,500 LB/ACRE
		BFM TACKIFIER		

**BMP QUANTITY**

ITEM DESCRIPTION	UNIT	QUANTITY
TEMPORARY SOIL BINDER	SQYD	650
TEMPORARY FIBER ROLL	LF	14,520
TEMPORARY DRAIN INLET PROTECTION	EA	25

**WOOD MULCH**

TYPE	LOCATION		QUANTITY (CY)
	BASIN (CY)	SPREAD (CY)	
SHREDDED BARK (N)	126	3,796	3,922

(N)-NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY

**EDGING**

TYPE	QUANTITY (LF)
METAL	1,680

**EROSION CONTROL QUANTITIES ECQ-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT RAY DESSELLE  
 CALCULATED/DESIGNED BY CHECKED BY  
 MELAINE HALL MIKE BABICH  
 REVISED BY DATE REVISED  
 x x x x x x x x x x

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	31	52

Katherine Dinh 1-13-14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 1-13-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTE:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**PROJECT NOTES: (FOR THIS SHEET ONLY)**

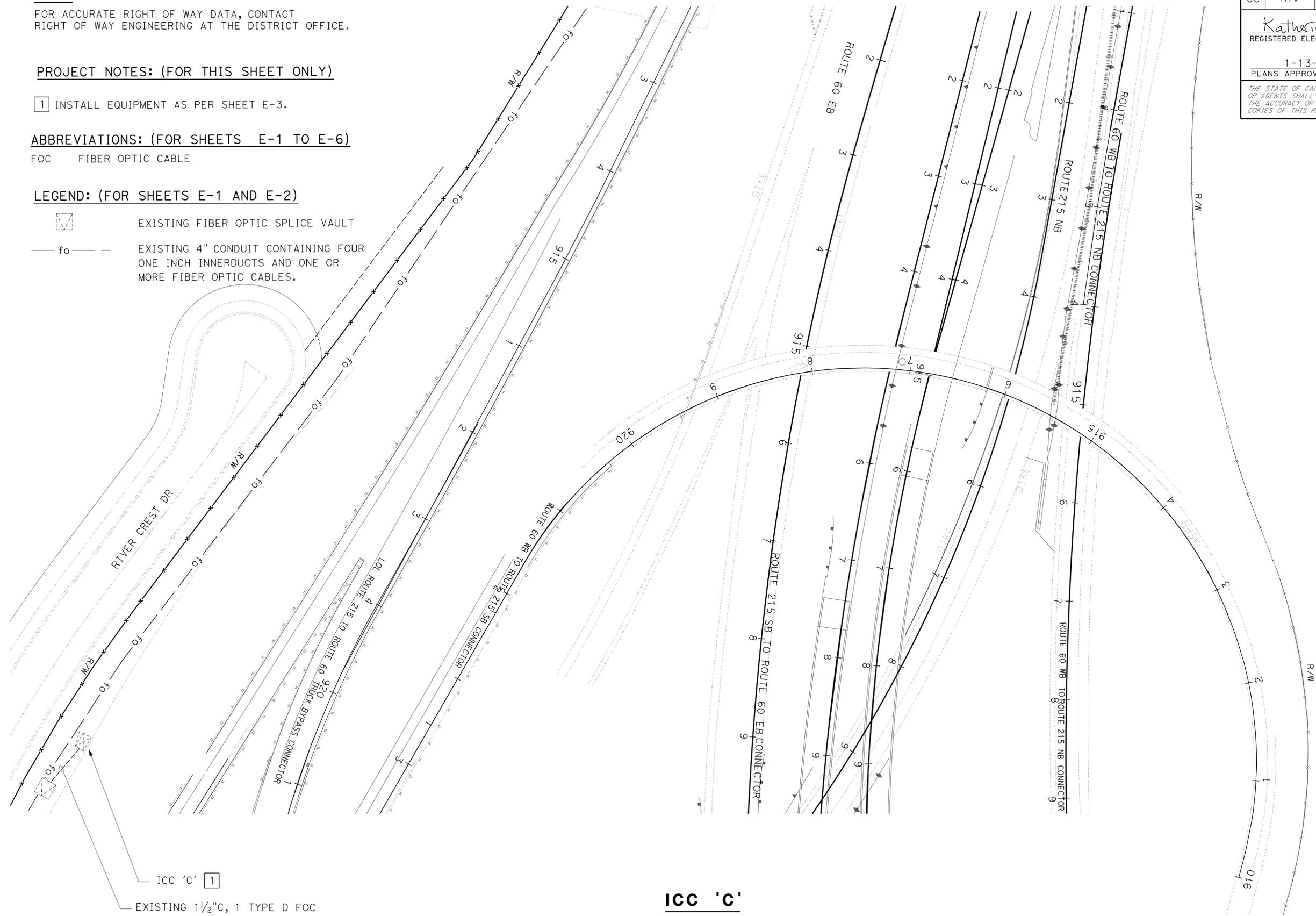
- 1 INSTALL EQUIPMENT AS PER SHEET E-3.

**ABBREVIATIONS: (FOR SHEETS E-1 TO E-6)**

FOC FIBER OPTIC CABLE

**LEGEND: (FOR SHEETS E-1 AND E-2)**

- EXISTING FIBER OPTIC SPLICE VAULT
- EXISTING 4" CONDUIT CONTAINING FOUR ONE INCH INNERDUCTS AND ONE OR MORE FIBER OPTIC CABLES.



ICC 'C' 1  
EXISTING 1/2" C, 1 TYPE D FOC

ICC 'C'

**MODIFY COMMUNICATION SYSTEM (IRRIGATION)**

**E-1**

APPROVED FOR ELECTRICAL WORK ONLY

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> ELECTRICAL DESIGN B	FERDINAND DE LA CRUZ	CHECKED BY	KATHERINE DINH
			FERDINAND DE LA CRUZ
			DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	32	52

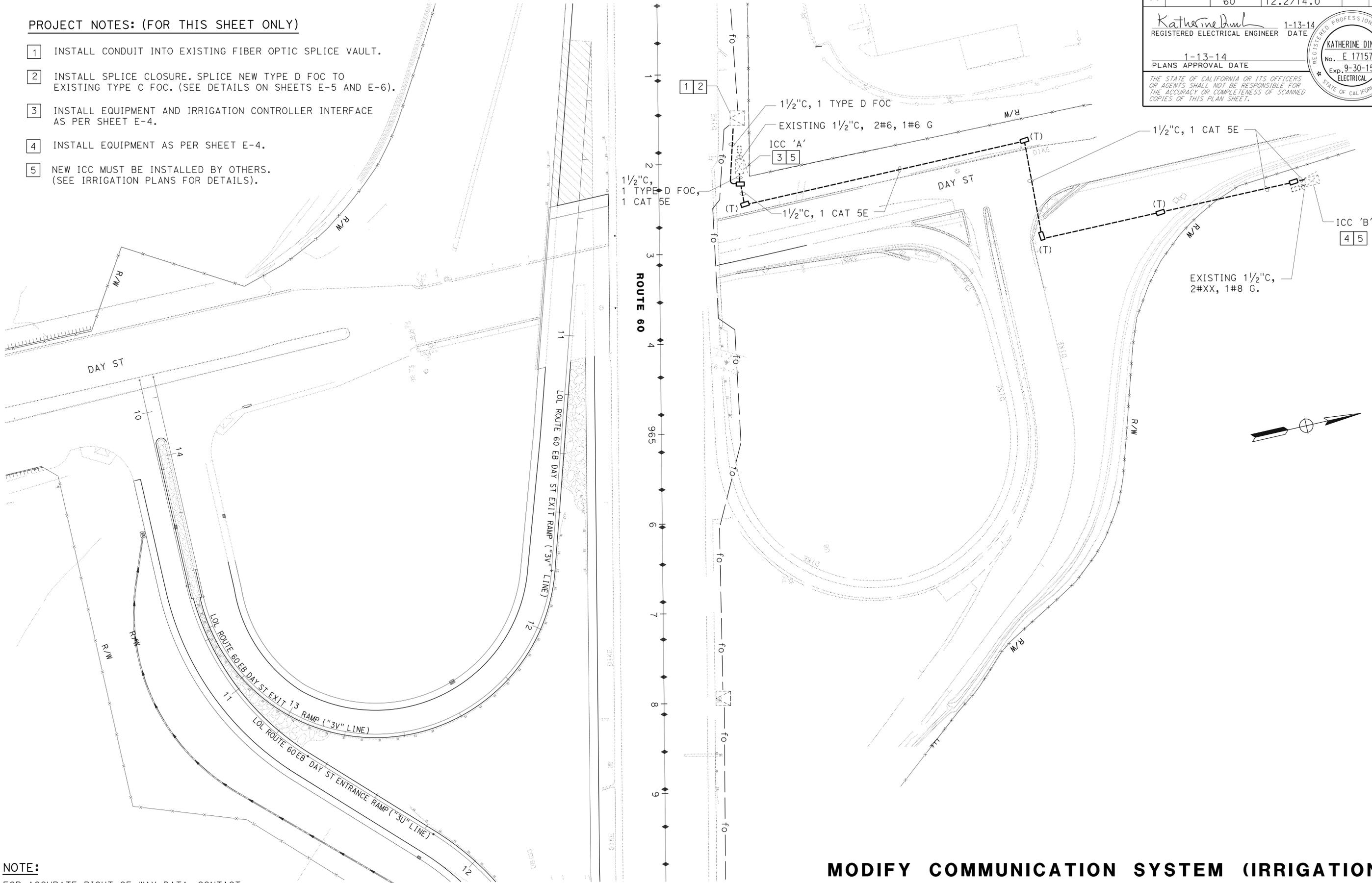
  

Katherine Dinh		1-13-14
REGISTERED ELECTRICAL ENGINEER	DATE	
1-13-14		
PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

REGISTERED PROFESSIONAL ENGINEER  
**KATHERINE DINH**  
 No. E 17157  
 Exp. 9-30-15  
 ELECTRICAL  
 STATE OF CALIFORNIA

**PROJECT NOTES: (FOR THIS SHEET ONLY)**

- 1 INSTALL CONDUIT INTO EXISTING FIBER OPTIC SPLICE VAULT.
- 2 INSTALL SPLICE CLOSURE. SPLICE NEW TYPE D FOC TO EXISTING TYPE C FOC. (SEE DETAILS ON SHEETS E-5 AND E-6).
- 3 INSTALL EQUIPMENT AND IRRIGATION CONTROLLER INTERFACE AS PER SHEET E-4.
- 4 INSTALL EQUIPMENT AS PER SHEET E-4.
- 5 NEW ICC MUST BE INSTALLED BY OTHERS. (SEE IRRIGATION PLANS FOR DETAILS).



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> ELECTRICAL DESIGN B	FERNAND DE LA CRUZ	FERNAND DE LA CRUZ	KATHERINE DINH
	FERNAND DE LA CRUZ	FERNAND DE LA CRUZ	FERNAND DE LA CRUZ

**NOTE:**  
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

APPROVED FOR ELECTRICAL WORK ONLY

**MODIFY COMMUNICATION SYSTEM (IRRIGATION)**  
NO SCALE  
**E-2**

LAST REVISION DATE PLOTTED => 12-FEB-2014 01-13-14 TIME PLOTTED => 07:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	33	52

<i>Katherine Dinh</i>		1-13-14
REGISTERED ELECTRICAL ENGINEER	DATE	
1-13-14		
PLANS APPROVAL DATE		

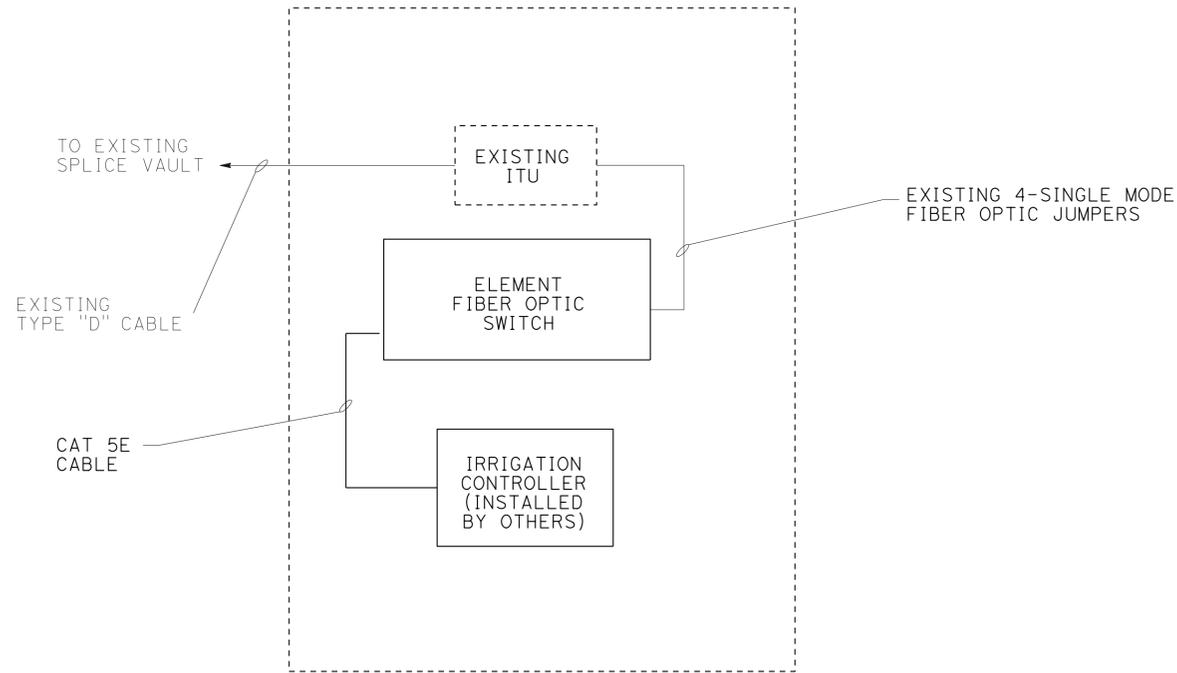
KATHERINE DINH	
No. E 17157	
Exp. 9-30-15	
ELECTRICAL	

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

SYMBOLS		
NEW	EXISTING	
—	-----	Optical Fiber or Fiber Optic Cable, Pigtail, or Jumper
	-----	Buffer Tube around Optical Fiber bundles in Fiber Optic Cable
	-----	Element, Vault or Irrigation Controller Interface
●	○	Splice-Fiber to Fiber
x	x	Cut End of Fiber
□	□	Connector (ST or SC per plans & specs) on FDU, ITU, or Element
▶	▶	Connector (ST or SC per plans & specs) on end of Jumper

ABBREVIATIONS (COLORS)			
AQ	Aqua	RD	Red
BK	Black	RS	Rose
BL	Blue	SL	Slate
BR	Brown	VL	Violet
GR	Green	WT	White
OR	Orange	YL	Yellow

ABBREVIATIONS (TERMS)	
AFOM	Asynchronous Fiber Optic Modem
ITU	Interconnect Termination Unit
EFOS	ELEMENT FIBER OPTIC SWITCH
RMS	Ramp Metering System
RX	Receive
TX	Transmit
SM	SINGLE MODE FIBER OPTIC CABLE



**ICC 'C'**  
(SEE SHEET E-1)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN B  
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ  
 CALCULATED/DESIGNED BY: FERDINAND DE LA CRUZ  
 CHECKED BY:  
 KATHERINE DINH  
 FERDINAND DE LA CRUZ  
 REVISED BY: KATHERINE DINH  
 DATE REVISED:

**ELECTRICAL DETAILS**

NO SCALE **E-3**

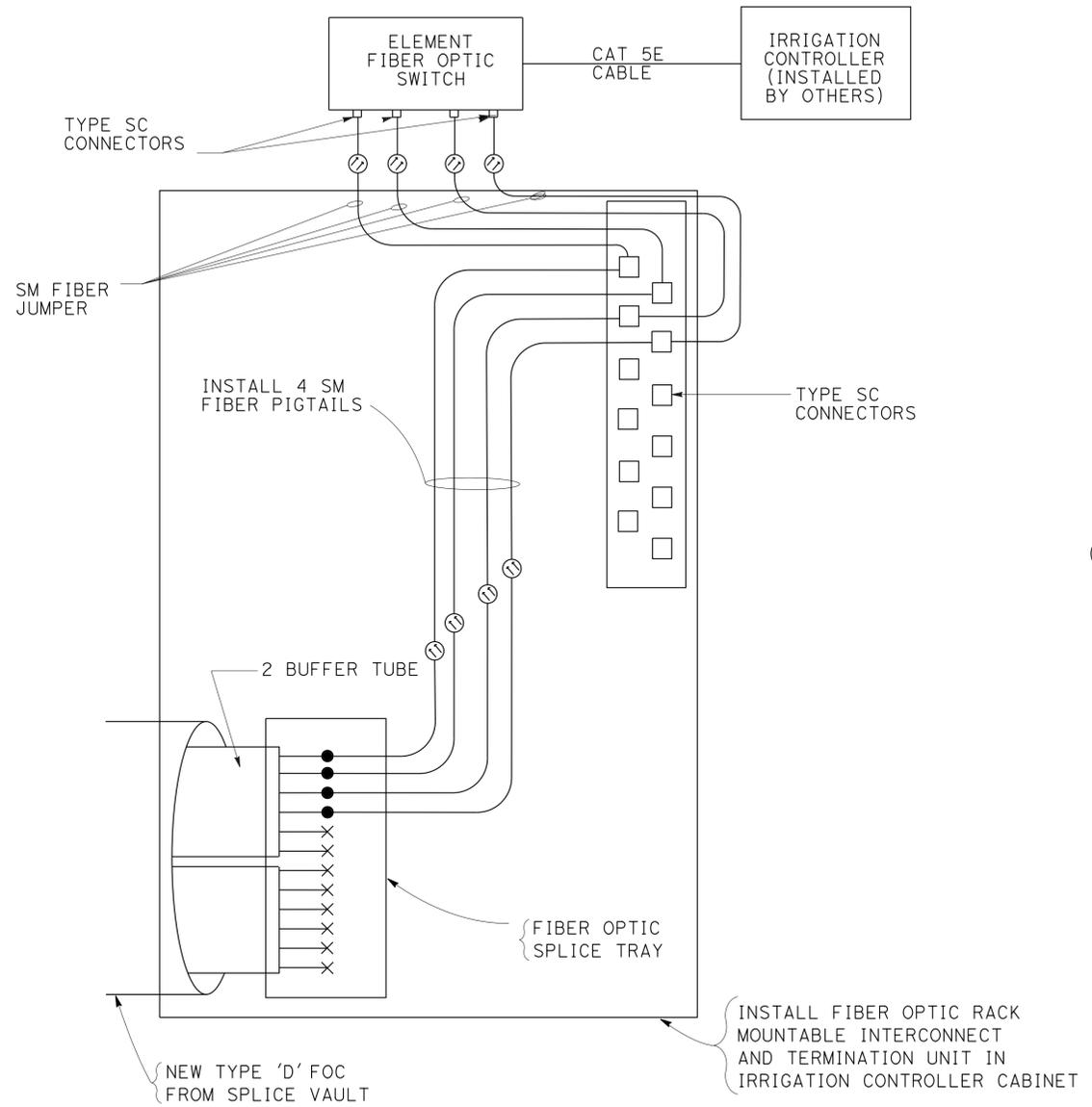
APPROVED FOR ELECTRICAL WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	34	52

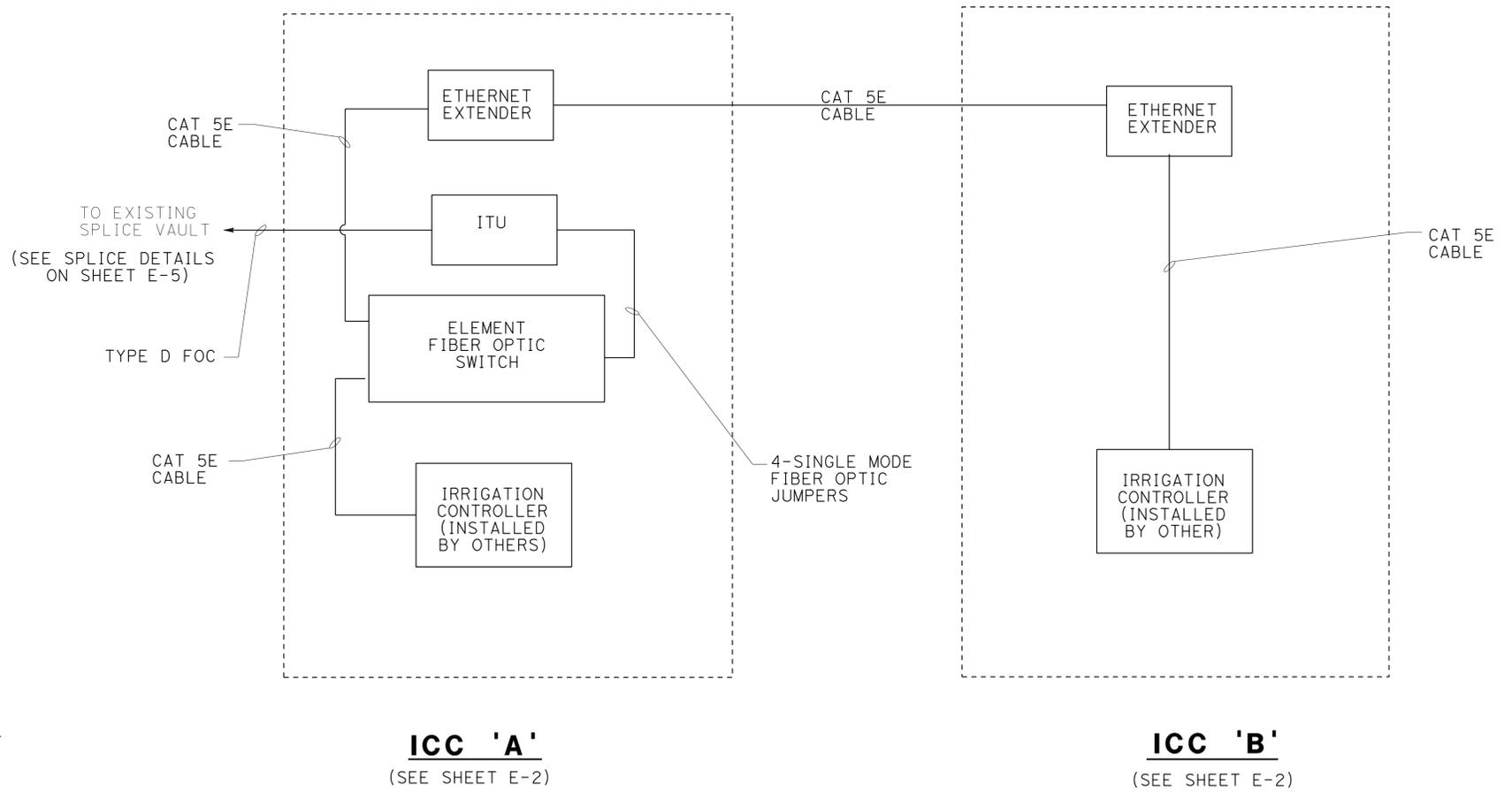
Katherine Dinh 1-13-14  
 REGISTERED ELECTRICAL ENGINEER DATE  
 1-13-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER  
 KATHERINE DINH  
 No. E 17157  
 Exp. 9-30-15  
 ELECTRICAL  
 STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN B  
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ  
 CHECKED BY: FERDINAND DE LA CRUZ  
 KATHERINE DINH  
 REVISOR: FERDINAND DE LA CRUZ  
 DATE: 7/2/2010



**IRRIGATION CONTROLLER INTERFACE FOR ICC 'A'**



**ICC 'A'**  
(SEE SHEET E-2)

**ICC 'B'**  
(SEE SHEET E-2)

**ELECTRICAL DETAILS**  
NO SCALE **E-4**

APPROVED FOR ELECTRICAL WORK ONLY

LAST REVISION DATE PLOTTED => 12-FEB-2014  
 01-13-14 TIME PLOTTED => 07:46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	35	52

Katherine Dinh		1-13-14
REGISTERED ELECTRICAL ENGINEER	DATE	
1-13-14		
PLANS APPROVAL DATE		

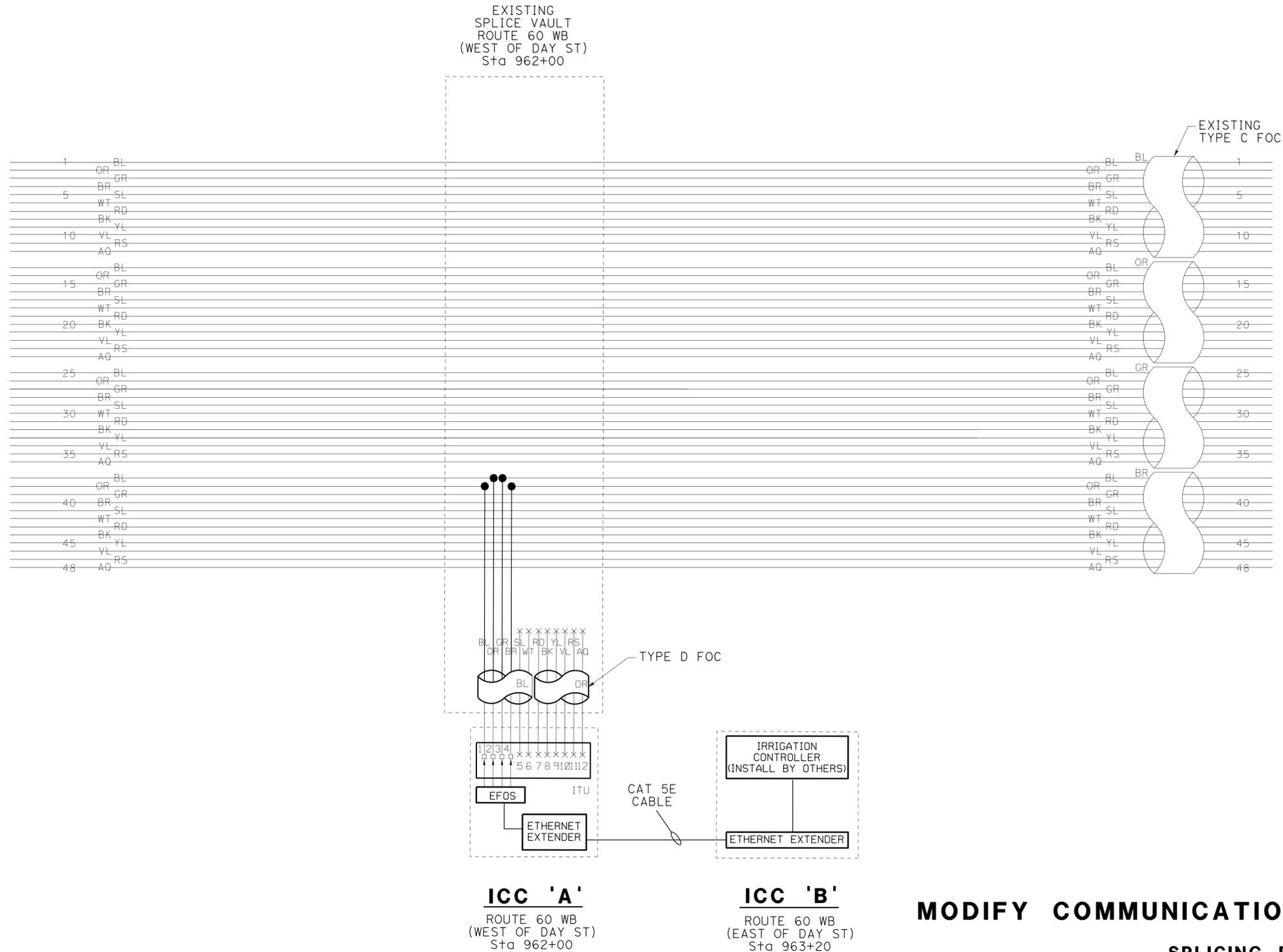
  

REGISTERED PROFESSIONAL ENGINEER
KATHERINE DINH
No. E 17157
Exp. 9-30-15
ELECTRICAL
STATE OF CALIFORNIA

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**NOTES: (FOR THIS SHEET ONLY)**

1. SEE SHEETS E-4 FOR EQUIPMENT INSIDE EACH CABINET.



**MODIFY COMMUNICATION SYSTEM (IRRIGATION)**  
**SPlicing DETAILS**  
**ICC 'A' AND ICC 'B'**  
 NO SCALE

APPROVED FOR ELECTRICAL WORK ONLY

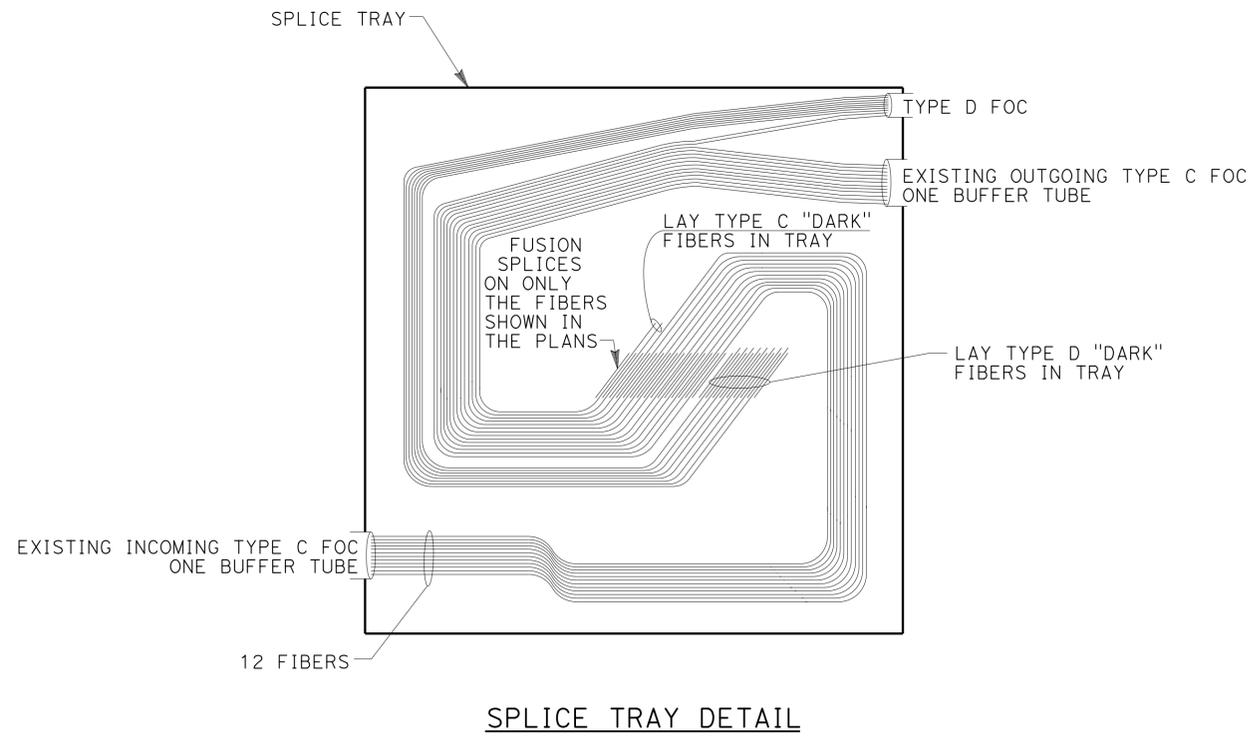
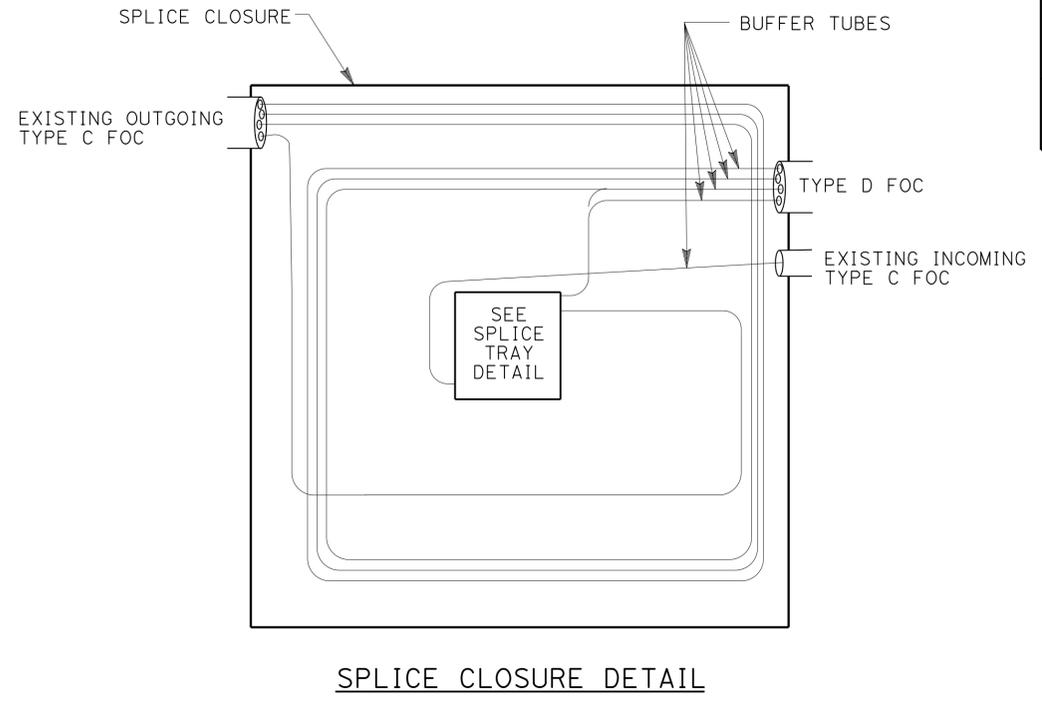
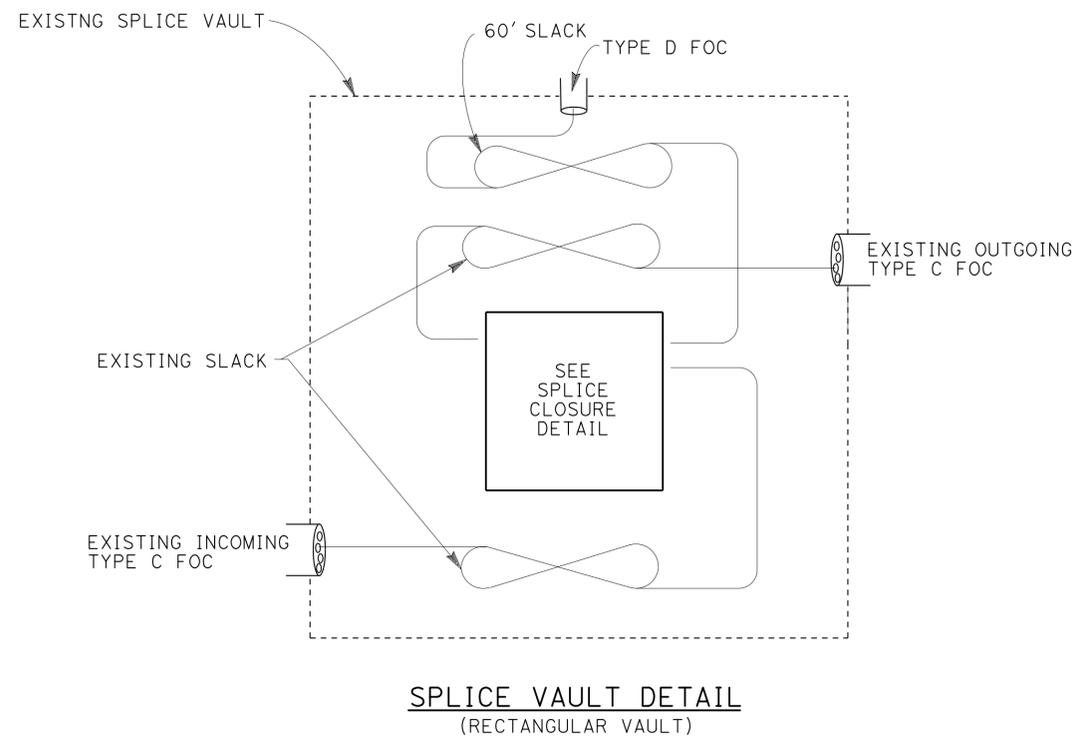
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN B  
 KATHERINE DINH  
 FERDINAND DE LA CRUZ  
 FERDINAND DE LA CRUZ  
 FERDINAND DE LA CRUZ

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	36	52

Katherine Dinh		1-13-14
REGISTERED ELECTRICAL ENGINEER	DATE	
1-13-14		
PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>		

REGISTERED PROFESSIONAL ENGINEER  
 KATHERINE DINH  
 No. E 17157  
 Exp. 9-30-15  
 ELECTRICAL  
 STATE OF CALIFORNIA



**MODIFY COMMUNICATION SYSTEM (IRRIGATION)**  
**(SPLICE VAULT DETAILS)**

APPROVED FOR ELECTRICAL WORK ONLY

NO SCALE

**E-6**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** ELECTRICAL DESIGN B  
 FUNCTIONAL SUPERVISOR: FERDINAND DE LA CRUZ  
 KATHERINE DINH  
 FERDINAND DE LA CRUZ  
 REVISIONS: (Grids X, Y, Z)  
 REVISION BY: (Grids X, Y, Z)  
 DATE REVISED: (Grids X, Y, Z)  
 CALCULATED/DESIGNED BY: (Grids X, Y, Z)  
 CHECKED BY: (Grids X, Y, Z)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	37	52

*Grace M. Tsushima*  
REGISTERED CIVIL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED \_\_\_\_\_

**UNIT OF MEASUREMENT SYMBOLS:**

Some of the symbols used in the project plan quantity tables and in the Bid Item List are:

**TABLE A**

SYMBOL USED	DEFINITIONS
ACRE	ACRE
CF	CUBIC FOOT
CY	CUBIC YARD
EA	EACH
GAL	GALLON
LB	POUND
LF	LINEAR FOOT
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
STA	100 FEET
TAB	TABLET
TON	2,000 POUNDS

Some of the symbols used in the plans other than in the project plan quantity tables are:

**TABLE B**

SYMBOL USED	DEFINITIONS
ksi	KIPS PER SQUARE INCH
ksf	KIPS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
psf	POUNDS PER SQUARE FOOT
lb/ft <sup>3</sup> , pcf	POUNDS PER CUBIC FOOT
tsf	TONS PER SQUARE FOOT
mph, MPH *	MILES PER HOUR
∅	NOMINAL DIAMETER
oz	OUNCE
lb	POUND
kíp	1,000 POUNDS
cal	CALORIE
ft	FOOT OR FEET
gal	GALLON

\* For use on a sign panel only

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ABBREVIATIONS  
(SHEET 2 OF 2)**

NO SCALE

RSP A10B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A10B  
DATED MAY 20, 2011 - PAGE 2 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP A10B**

**M**

Maint	MAINTENANCE
Max	MAXIMUM
MB	METAL BEAM
MBB	METAL BEAM BARRIER
MBGR	METAL BEAM GUARD RAILING
Med	MEDIAN
MGS	MIDWEST GUARDRAIL SYSTEM
MH	MANHOLE
Min	MINIMUM
Misc	MISCELLANEOUS
Misc I & S	MISCELLANEOUS IRON AND STEEL
Mkr	MARKER
Mod	MODIFIED, MODIFY
Mon	MONUMENT
MP	METAL PLATE
MPGR	METAL PLATE GUARD RAILING
MR	MOVEMENT RATING
MSE	MECHANICALLY STABILIZED EMBANKMENT
Mt	MOUNTAIN, MOUNT
MtI	MATERIAL
MVP	MAINTENANCE VEHICLE PULLOUT

**N**

N	NORTH
NB	NORTHBOUND
No.	NUMBER (MUST HAVE PERIOD)
Nos.	NUMBERS (MUST HAVE PERIOD)
NPS	NOMINAL PIPE SIZE
NS	NEAR SIDE
NSP	NEW STANDARD PLAN
NTS	NOT TO SCALE

**O**

Obir	OBLITERATE
OC	OVERCROSSING
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OG	ORIGINAL GROUND
OGAC	OPEN GRADED ASPHALT CONCRETE
OGFC	OPEN GRADED FRICTION COURSE
OH	OVERHEAD
OHWM	ORDINARY HIGH WATER MARK
O-O	OUT TO OUT
Opp	OPPOSITE
OSD	OVERSIDE DRAIN

**P**

p	PAGE
PAP	PERFORATED ALUMINUM PIPE
PB	PULL BOX
PC	POINT OF CURVATURE, PRECAST
PCC	POINT OF COMPOUND CURVE, PORTLAND CEMENT CONCRETE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PCP	PERFORATED CONCRETE PIPE, PRESTRESSED CONCRETE PIPE
PCVC	POINT OF COMPOUND VERTICAL CURVE
PEC	PERMIT TO ENTER AND CONSTRUCT
Ped	PEDESTRIAN
Ped OC	PEDESTRIAN OVERCROSSING
Ped UC	PEDESTRIAN UNDERCROSSING
Perm MtI	PERMEABLE MATERIAL

**P continued**

PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PJP	PARTIAL JOINT PENETRATION
Pkwy	PARKWAY
PL, PL	PLATE
P/L	PROPERTY LINE
PM	POST MILE, TIME FROM NOON TO MIDNIGHT
PN	PAVING NOTCH
POC	POINT OF HORIZONTAL CURVE
POT	POINT OF TANGENT
POVC	POINT OF VERTICAL CURVE
PP	PIPE PILE, PLASTIC PIPE, POWER POLE
PPL	PREFORMED PERMEABLE LINER
PPP	PERFORATED PLASTIC PIPE
PRC	POINT OF REVERSE CURVE
PRF	PAVEMENT REINFORCING FABRIC
PRVC	POINT OF REVERSE VERTICAL CURVE
PS&E	PLANS, SPECIFICATIONS AND ESTIMATES
PS, P/S	PRESTRESSED
PSP	PERFORATED STEEL PIPE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Pvmt	PAVEMENT

**Q**

**R**

Qty	QUANTITY
R	RADIUS
R & D	REMOVE AND DISPOSE
R & S	REMOVE AND SALVAGE
R/C	RATE OF CHANGE
RCA	REINFORCED CONCRETE ARCH
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
Rd	ROAD
Reinf	REINFORCED, REINFORCEMENT, REINFORCING
Rel	RELOCATE
Repl	REPLACEMENT
Ret	RETAINING
Rev	REVISED, REVISION
Rdwy	ROADWAY
RHMA	RUBBERIZED HOT MIX ASPHALT
Riv	RIVER
RM	ROAD-MIXED
RP	RADIUS POINT, REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION, REVISED STANDARD PLAN
Rt	RIGHT
Rte	ROUTE
RW	REDWOOD, RETAINING WALL
R/W	RIGHT OF WAY
Rwy	RAILWAY

**S**

S	SOUTH, SUPPLEMENT
SAE	STRUCTURE APPROACH EMBANKMENT
Salv	SALVAGE
SAPP	STRUCTURAL ALUMINUM PLATE PIPE
SB	SOUTHBOUND
SC	SAND CUSHION
SCSP	SLOTTED CORRUGATED STEEL PIPE
SD	STORM DRAIN
Sec	SECOND, SECTION
Sep	SEPARATION
SG	SUBGRADE
Shld	SHOULDER
Sht	SHEET
Sim	SIMILAR
±	STATION LINE
SM	SELECTED MATERIAL
Spec	SPECIAL, SPECIFICATIONS
SPP	SLOTTED PLASTIC PIPE
SS	SLOPE STAKE
SSBM	STRAP AND SADDLE BRACKET METHOD
SSD	STRUCTURAL SECTION DRAIN
SSPA	STRUCTURAL STEEL PLATE ARCH
SSPP	STRUCTURAL STEEL PLATE PIPE
SSPPA	STRUCTURAL STEEL PLATE PIPE ARCH
SSRP	STEEL SPIRAL RIB PIPE
St	STREET
Sta	STATION
STBB	SINGLE THRIE BEAM BARRIER
Std	STANDARD
Str	STRUCTURE
Surf	SURFACING
SW	SIDEWALK, SOUND WALL
Swr	SEWER
Sym	SYMMETRICAL
S4S	SURFACE 4 SIDES

**T**

T	SEMI-TANGENT
Tan	TANGENT
TBB	THRIE BEAM BARRIER
Tbr	TIMBER
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TCE	TEMPORARY CONSTRUCTION EASEMENT
TeI	TELEPHONE
Temp	TEMPORARY
TG	TOP OF GRADE
Tot	TOTAL
TP	TELEPHONE POLE
TPB	TREATED PERMEABLE BASE
TPM	TREATED PERMEABLE MATERIAL
Trans	TRANSITION

**T continued**

TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL

**U**

UC	UNDERCROSSING
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UP	UNDERPASS

**V**

V	VALVE, DESIGN SPEED
Var	VARIABLE, VARIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
Vert	VERTICAL
Via	VIADUCT
Vol	VOLUME

**W**

W	WEST, WIDTH
WB	WESTBOUND
WH	WEEP HOLE
WM	WIRE MESH
WS	WATER SURFACE
WSP	WELDED STEEL PIPE
Wt	WEIGHT
WV	WATER VALVE
WW	WINGWALL
WWLOL	WINGWALL LAYOUT LINE

**X**

X Sec	CROSS SECTION
Xing	CROSSING

**Y**

Yr	YEAR
Yrs	YEARS

**LEGEND:**

<b>AB</b>	ABANDON. IF APPLIED TO CONDUIT, REMOVE CONDUCTORS
<b>BC</b>	INSTALL PULL BOX IN EXISTING CONDUIT RUN
<b>BP</b>	PEDESTRIAN BARRICADE, TYPE AS INDICATED ON PLAN
<b>CB</b>	INSTALL CONDUIT INTO EXISTING PULL BOX
<b>CC</b>	CONNECT NEW AND EXISTING CONDUIT. REMOVE EXISTING CONDUCTORS AND INSTALL CONDUCTORS AS INDICATED
<b>CF</b>	CONDUIT TO REMAIN FOR FUTURE USE. REMOVE CONDUCTORS. INSTALL PULL TAPE
<b>DH</b>	DETECTOR HANDHOLE
<b>FA</b>	FOUNDATION TO BE ABANDONED
<b>IS</b>	INSTALL SIGN ON SIGNAL MAST ARM
<b>NS</b>	NO SLIP BASE ON STANDARD
<b>PEC</b>	PHOTOELECTRIC CONTROL
<b>PEU</b>	PHOTOELECTRIC UNIT
<b>RC</b>	EQUIPMENT OR MATERIAL TO BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR
<b>RE</b>	REMOVE ELECTROLIER, FUSES AND BALLAST. TAPE ENDS OF CONDUCTORS
<b>RL</b>	RELOCATE EQUIPMENT
<b>RR</b>	REMOVE AND REUSE EQUIPMENT
<b>RS</b>	REMOVE AND SALVAGE EQUIPMENT
<b>SC</b>	SPLICE NEW TO EXISTING CONDUCTORS
<b>SD</b>	SERVICE DISCONNECT
<b>TSP</b>	TELEPHONE SERVICE POINT

**ABBREVIATIONS**

APS	ACCESSIBLE PEDESTRIAN SIGNAL	M/M	MULTIPLE TO MULTIPLE TRANSFORMER
BBS	BATTERY BACKUP SYSTEM	Mtg	MOUNTING
BC	BOLT CIRCLE	MV	MERCURY VAPOR LIGHTING FIXTURE
BPB	BICYCLE PUSH BUTTON	MVDS	MICROWAVE VEHICLE DETECTION SYSTEM
C	CONDUIT	N	NEUTRAL (GROUNDED CONDUCTOR)
CB	CIRCUIT BREAKER	NB	NEUTRAL BUS
CCTV	CLOSED CIRCUIT TELEVISION	NC	NORMALLY CLOSE
Ck+	CIRCUIT	NO	NORMALLY OPEN
CMS	CHANGEABLE MESSAGE SIGN	P	CIRCUIT BREAKER'S POLE
Ctid	CALTRANS IDENTIFICATION	PB	PULL BOX
Comm	COMMUNICATION	PBA	PUSH BUTTON ASSEMBLY
DLC	LOOP DETECTOR LEAD-IN CABLE	PEC	PHOTOELECTRIC CONTROL
EMS	EXTINGUISHABLE MESSAGE SIGN	Ped	PEDESTRIAN
EVUC	EMERGENCY VEHICLE UNIT CABLE	PEU	PHOTOELECTRIC UNIT
EVUD	EMERGENCY VEHICLE UNIT DETECTOR	PT	CONDUIT WITH PULL TAPE
FB	FLASHING BEACON	RE	RELOCATED EQUIPMENT
FBCA	FLASHING BEACON CONTROL ASSEMBLY	RM	RAMP METERING
FBS	FLASHING BEACON WITH SLIP BASE	RWIS	ROADSIDE WEATHER INFORMATION SYSTEM
FO	FIBER OPTIC	SB	SLIP BASE
G	EQUIPMENT GROUNDING CONDUCTOR	SIC	SIGNAL INTERCONNECT CABLE
GB	GROUND BUS	Sig	SIGNAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SMA	SIGNAL MAST ARM
HAR	HIGHWAY ADVISORY RADIO	SNS	STREET NAME SIGN
Hex	HEXAGONAL	SP	SERVICE POINT
HPS	HIGH PRESSURE SODIUM	TDC	TELEPHONE DEMARCATION CABINET
IISNS	INTERNALLY ILLUMINATED STREET NAME SIGN	TMS	TRAFFIC MONITORING STATION
ISL	INDUCTION SIGN LIGHTING	TOS	TRAFFIC OPERATIONS SYSTEM
LED	LIGHT EMITTING DIODE	Veh	VEHICLE
LMA	LUMINAIRE MAST ARM	VIVDS	VIDEO IMAGE VEHICLE DETECTION SYSTEM
LPS	LOW PRESSURE SODIUM	WIM	WEIGH-IN-MOTION
Ltg	LIGHTING	Xfmr	TRANSFORMER
Lum	LUMINAIRE		
M	METERED		
MAT	MAST ARM MOUNTING TOP ATTACHMENT		
MAS	MAST ARM MOUNTING SIDE ATTACHMENT		

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	38	52

*Theresa Gabriel*  
REGISTERED ELECTRICAL ENGINEER

July 19, 2013  
PLANS APPROVAL DATE

Theresa  
Aziz Gabriel  
No. E15129  
Exp. 6-30-14  
ELECTRICAL  
STATE OF CALIFORNIA

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TO ACCOMPANY PLANS DATED 1-13-14

**SOFFIT AND WALL MOUNTED LUMINAIRES**

- PENDANT, 70 W HPS UNLESS OTHERWISE SPECIFIED
- FLUSH, 70 W HPS UNLESS OTHERWISE SPECIFIED
- WALL SURFACE, 70 W HPS UNLESS OTHERWISE SPECIFIED
- EXISTING SOFFIT OR WALL LUMINAIRE TO REMAIN UNMODIFIED
- EXISTING SOFFIT OR WALL LUMINAIRE TO BE MODIFIED AS SPECIFIED

**NOTE:**  
Arrow indicates "street side" of luminaire.

COMMONLY USED SYMBOLS FOR UNITED STATES CUSTOMARY UNITS OF MEASUREMENT:

SYMBOL USED	DEFINITIONS
$\Omega$	OHMS
min	MINUTE
s	SECOND
bps	BITS PER SECOND
Bps	BYTES PER SECOND
A	AMPERE
V	VOLT
V(dc)	VOLT (DIRECT CURRENT)
V(ac)	VOLT (ALTERNATING CURRENT)
FC	FOOT - CANDLE
W	WATTS
VA	VOLT-AMPERE
M	MEGA
k	KILO
m	MILLI
$\mu$	MICRO
P	PICO
HZ	HERTZ

**MISCELLANEOUS ELECTROLIERS**

NEW	EXISTING	
		LUMINAIRE ON WOOD POLE
		NON-STANDARD ELECTROLIER (SEE PROJECT NOTES OR PROJECT PLANS)
		CITY ELECTROLIER
		ELECTROLIER FOUNDATION (FUTURE INSTALLATION)

- NOTES:**
- HPS luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. HPS luminaires shall be 200 W when installed on other type standards or poles, unless otherwise specified.
  - LED luminaires shall be 235 W when installed on Type 21, 21D, 30, 31 and 32 Standards, unless otherwise specified. LED luminaires shall be 165 W when installed on other type standards or poles, unless otherwise specified.
  - Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.

**STANDARD ELECTROLIER**

NEW	EXISTING	STANDARD TYPE
		15
		15D
		15 STRUCTURE
		15D STRUCTURE
		21
		21D
		21 STRUCTURE
		21D STRUCTURE
		30
		31
		32

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS  
(LEGEND AND ABBREVIATIONS)**

NO SCALE

RSP ES-1A DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 20, 2011 - PAGE 425 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-1A**

2010 REVISED STANDARD PLAN RSP ES-1A

### CONDUIT

### SIGNAL EQUIPMENT

NEW	EXISTING	
---	---	LIGHTING CONDUIT, UNLESS OTHERWISE INDICATED OR NOTED
---	---	TRAFFIC SIGNAL CONDUIT
---C---	---c---	COMMUNICATION CONDUIT
---T---	---t---	TELEPHONE CONDUIT
---F---	---f---	FIRE ALARM CONDUIT
---FO---	---fo---	FIBER OPTIC CONDUIT
---	---	CONDUIT TERMINATION
		CONDUIT RISER ATTACHED TO THE STRUCTURE OR SERVICE POLE

NEW	EXISTING	
		PEDESTRIAN SIGNAL HEAD "C" INDICATES COUNTDOWN PEDESTRIAN HEAD
		PUSH BUTTON ASSEMBLY POST
		PEDESTRIAN BARRICADE
		VEHICLE SIGNAL HEAD (WITH BACKPLATE AND 3-SECTIONS: RED, YELLOW AND GREEN)
		VEHICLE SIGNAL HEAD WITH ANGLE VISOR
		MODIFICATIONS OF BASIC SYMBOL: "L" INDICATES ALL NON-ARROW SECTIONS LOUVERED "LG" INDICATES LOUVERED GREEN SECTION ONLY "PV" INDICATES ALL 12" SECTIONS PROGRAMMED VISIBILITY "8" INDICATES ALL 8" SECTIONS (ONLY WHEN SPECIFIED)

### SIGNAL EQUIPMENT Cont

NEW	EXISTING	
		GUARD POST
		TYPE 1 STANDARD WITH RAMP METERING SIGN
		OPTICAL DETECTOR FOR THE EMERGENCY VEHICLE DETECTION SYSTEM

### SERVICE EQUIPMENT

NEW	EXISTING	
---OH---	---oh---	OVERHEAD LINES
		WOOD POLE, "U" INDICATES UTILITY OWNED
		POLE GUY WITH ANCHOR
		UTILITY TRANSFORMER - GROUND MOUNTED
		SERVICE EQUIPMENT ENCLOSURE TYPE. DOOR INDICATES FRONT OF ENCLOSURE
		TELEPHONE DEMARCATION CABINET

		VEHICLE SIGNAL HEAD CONSISTING OF RED, YELLOW AND GREEN LEFT ARROW SECTIONS
		VEHICLE SIGNAL HEAD CONSISTING OF RED AND YELLOW SECTIONS WITH AN UP GREEN ARROW SECTION
		VEHICLE SIGNAL HEAD (5 SECTION) CONSISTING OF RED, YELLOW AND GREEN SECTIONS WITH YELLOW AND GREEN RIGHT ARROW SECTIONS
		TYPE 15TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		TYPE 21TS STANDARD WITH VEHICLE SIGNAL HEAD AND LUMINAIRE
		STANDARD WITH LUMINAIRE AND SIGNAL MAST ARMS AND ATTACHED VEHICLE SIGNAL HEADS
		TYPE 1 STANDARD WITH ATTACHED VEHICLE SIGNAL HEADS
		STANDARD WITH A SIGNAL MAST ARM, ATTACHED VEHICLE SIGNAL HEADS AND INTERNALLY ILLUMINATED STREET NAME SIGN
		CONTROLLER ASSEMBLY. DOOR INDICATES FRONT OF CABINET

### NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.

### POLE-MOUNTED SERVICE DESIGNATION

	TYPE H SERVICE, 28'-10"	TYPE OF INSTALLATION AND POLE HEIGHT ABOVE GRADE
--	-------------------------	--

### FLASHING BEACON

NEW	EXISTING	
		FLASHING BEACON (ONE VEHICLE SIGNAL HEAD WITH BACKPLATE AND VISOR) "R" INDICATES RED INDICATION, "Y" INDICATES YELLOW INDICATION
		FLASHING BEACON WITH TYPE 15-FBS STANDARD AND A SIGN.
		FLASHING BEACON WITH TYPES 9, 9A OR 9B SIGN UNLESS OTHERWISE SPECIFIED OR INDICATED

### ILLUMINATED OVERHEAD SIGN

NEW	EXISTING	
		SINGLE POST, SINGLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, DOUBLE ILLUMINATED SIGN, BALANCED BUTTERFLY
		SINGLE POST, SINGLE ILLUMINATED SIGN, FULL CANTILEVER
		DOUBLE POST, SINGLE ILLUMINATED SIGN
		SINGLE ILLUMINATED SIGN MOUNTED ON STRUCTURE
		DOUBLE POST, SINGLE ILLUMINATED SIGN WITH ELECTROLIER

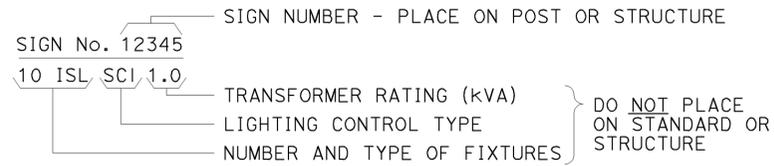
STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
(LEGEND AND ABBREVIATIONS)**

NO SCALE  
RSP ES-1B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1B DATED MAY 20, 2011 - PAGE 426 OF THE STANDARD PLANS BOOK DATED 2010.

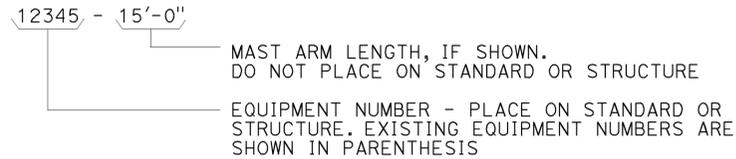
2010 REVISED STANDARD PLAN RSP ES-1B

### EQUIPMENT IDENTIFICATION

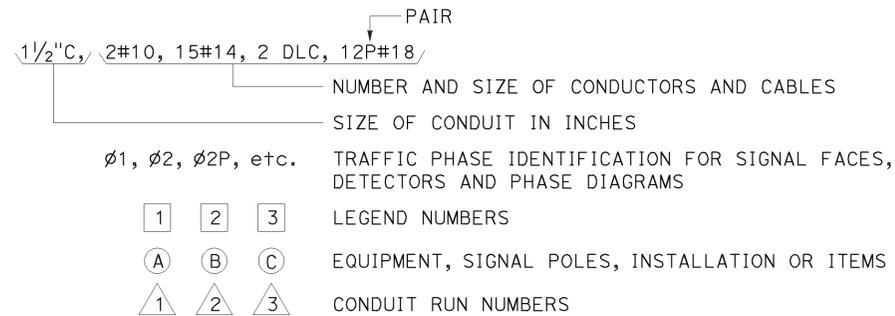
#### ILLUMINATED SIGN IDENTIFICATION NUMBER:



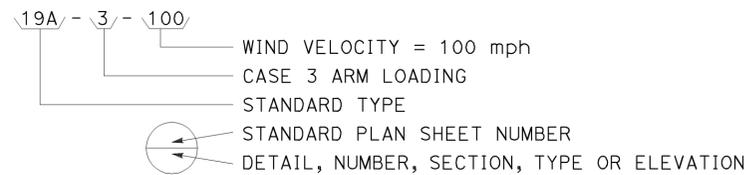
#### ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



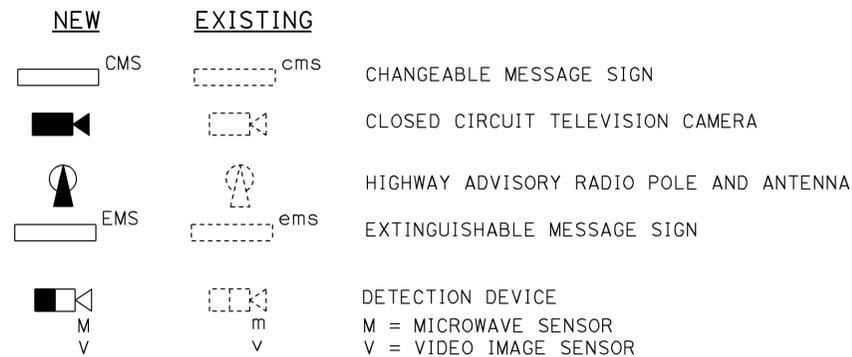
#### CONDUIT AND CONDUCTOR IDENTIFICATION:



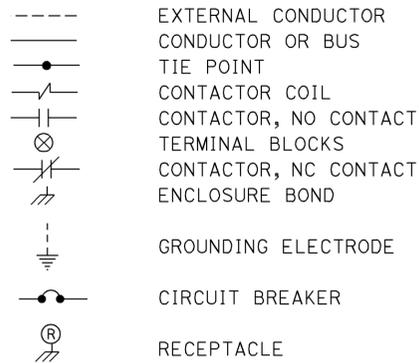
#### SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



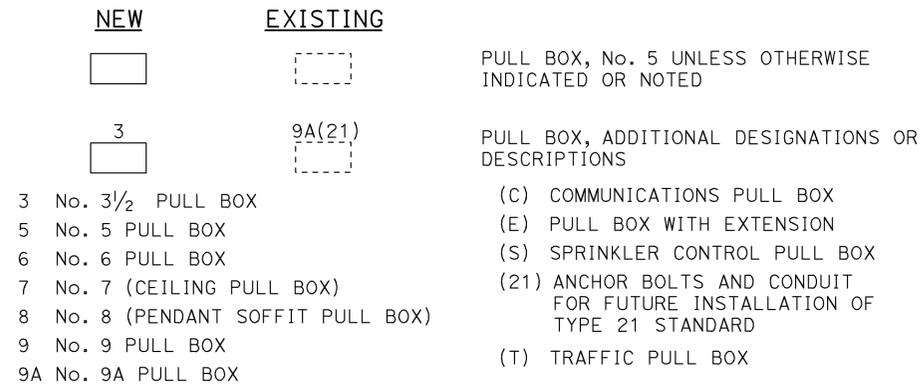
### MISCELLANEOUS EQUIPMENT



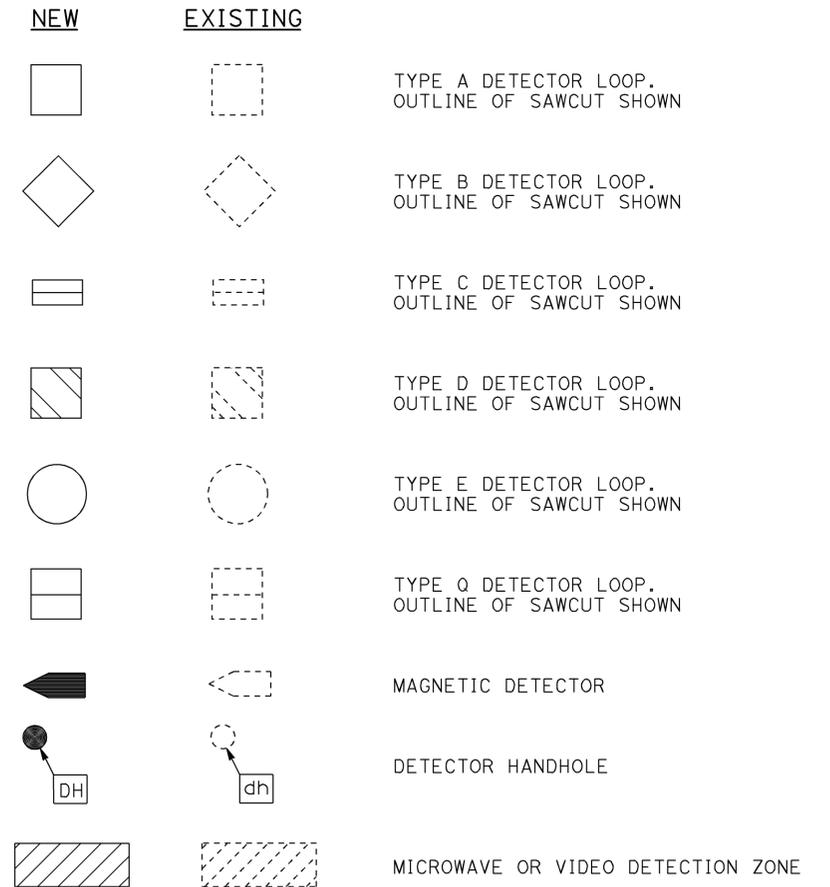
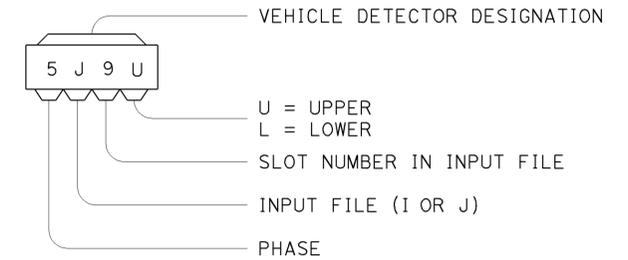
### WIRING DIAGRAM LEGEND



### PULL BOXES



### VEHICLE DETECTORS



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

## ELECTRICAL SYSTEMS (LEGEND AND ABBREVIATIONS)

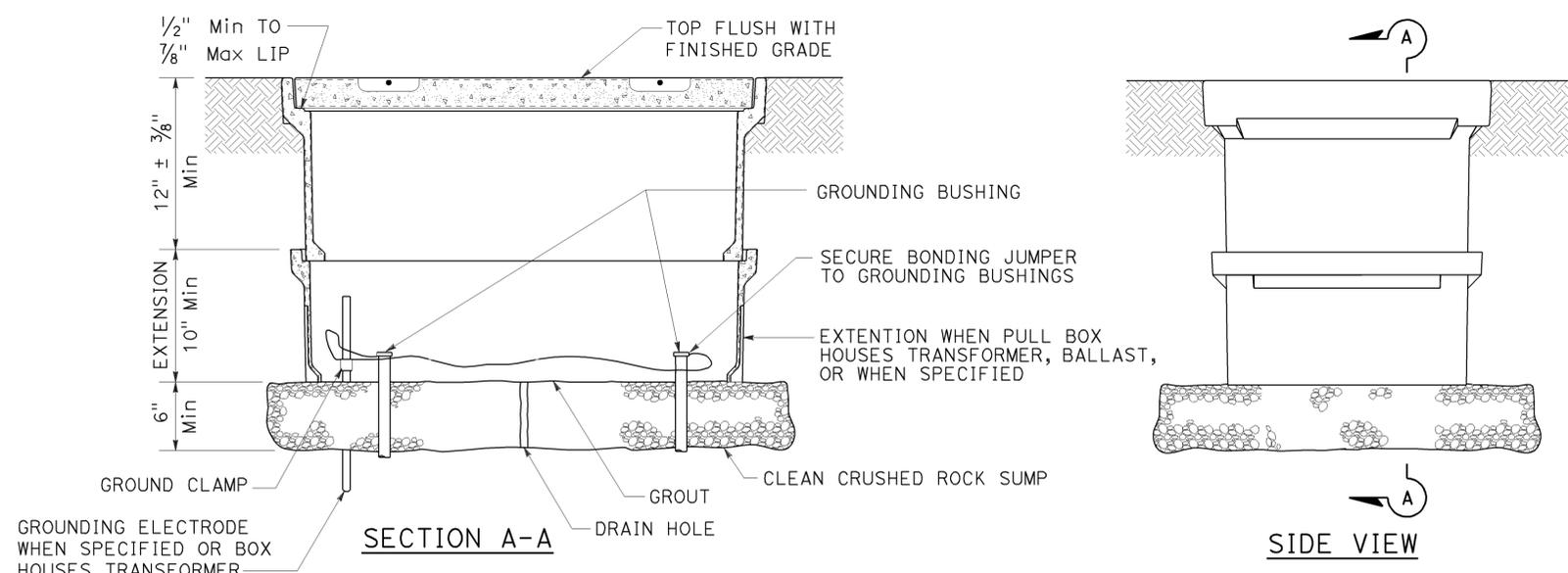
NO SCALE

RSP ES-1C DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN ES-1C  
DATED MAY 20, 2011 - PAGE 427 OF THE STANDARD PLANS BOOK DATED 2010.

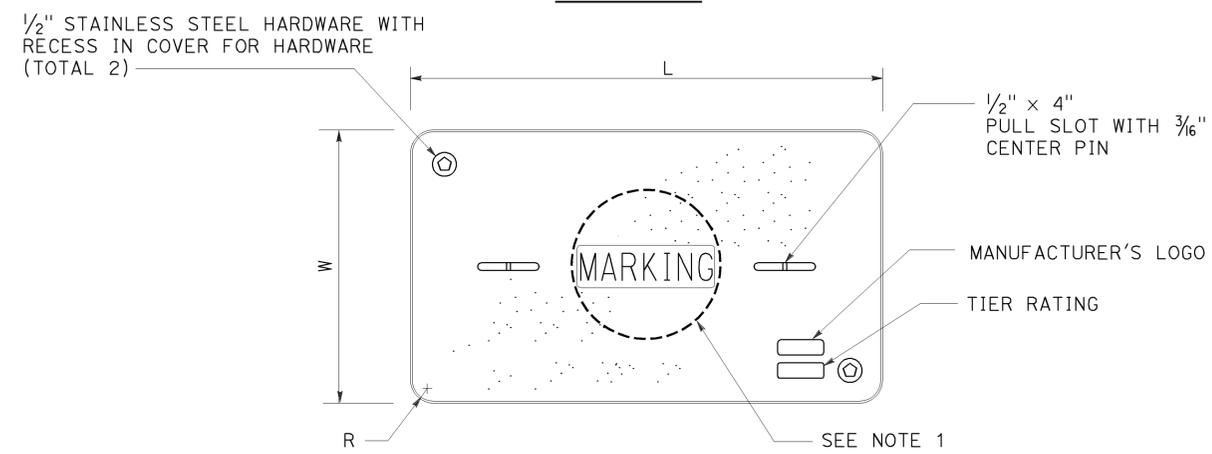
**REVISED STANDARD PLAN RSP ES-1C**

2010 REVISED STANDARD PLAN RSP ES-1C

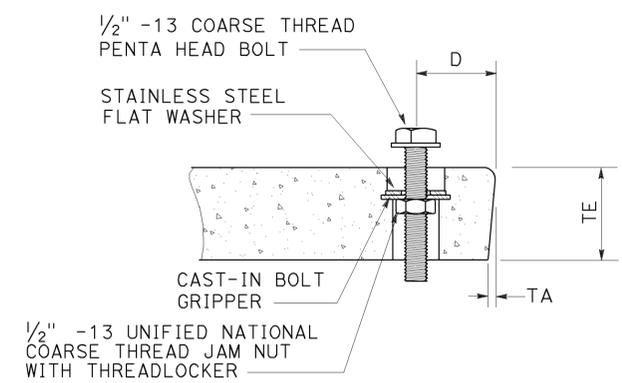
2010 REVISED STANDARD PLAN RSP ES-8A



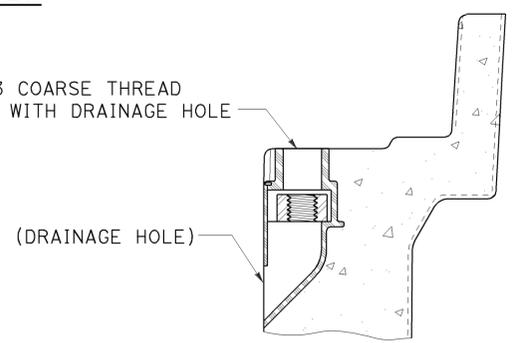
**INSTALLATION DETAILS**  
**DETAIL A**



**COVER TOP VIEW**



**TYPICAL COVER CAPTIVE BOLT**  
**OR SIMILAR**



**TYPICAL THREADED INSERT**  
**OR SIMILAR**

**NOTES:**

- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" sprinkler control circuits, 50 V or less; "CALTRANS" on all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service;
  - No. 3 1/2 pull box.
    - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
    - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
  - No. 5, 6, 9 or 9A pull box.
    - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
    - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
    - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
    - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
    - "RAMP METER" - Ramp meter circuits.
    - "COUNT STATION" - Count or speed monitor circuits.
    - "COMMUNICATIONS" - Communication circuits.
    - "TOS COMMUNICATIONS" - TOS communication line.
    - "TOS POWER" - TOS power.
    - "TDC POWER" - Telephone demarcation cabinet power.
    - "CCTV" - Closed circuit television circuits.
    - "TMS" - Traffic monitoring station circuits.
    - "CMS" - Changeable message sign circuits.
    - "HAR" - Highway advisory radio circuits.
    - "BOOSTER PUMP" - Booster pump circuit.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8". Top outside radius of covers and pull boxes shall have a 1/8" radius.
- Pull box extension may be another pull box as long as the bottom edge of the pull box can fit into the cover opening.
- All dimensions for the cover for non-traffic pull box are nominal values.

TO ACCOMPANY PLANS DATED 1-13-14

DIMENSION TABLE										
PULL BOX	PULL BOX			COVER						
	MINIMUM DEPTH BOX	MINIMUM DEPTH EXTENSION	MAXIMUM WEIGHT	L	W	R	TE	TA	D	MAXIMUM WEIGHT
No. 3 1/2	12"	N/A	40 lb	1' - 3 3/8"	10 1/8"	1 3/8"	2"	1/8"	1 3/4"	30 lb
No. 5	12"	10"	55 lb	1' - 11 1/4"	1' - 1 3/4"	1 3/8"	2"	1/8"	1 3/4"	60 lb
No. 6	12"	10"	70 lb	2' - 6 1/2"	1' - 5 1/2"	1 3/8"	2"	1/8"	2"	85 lb

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS**  
**(NON-TRAFFIC PULL BOX)**  
NO SCALE

RSP ES-8A DATED JULY 19, 2013 SUPERSEDES RSP ES-8A DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-8A**

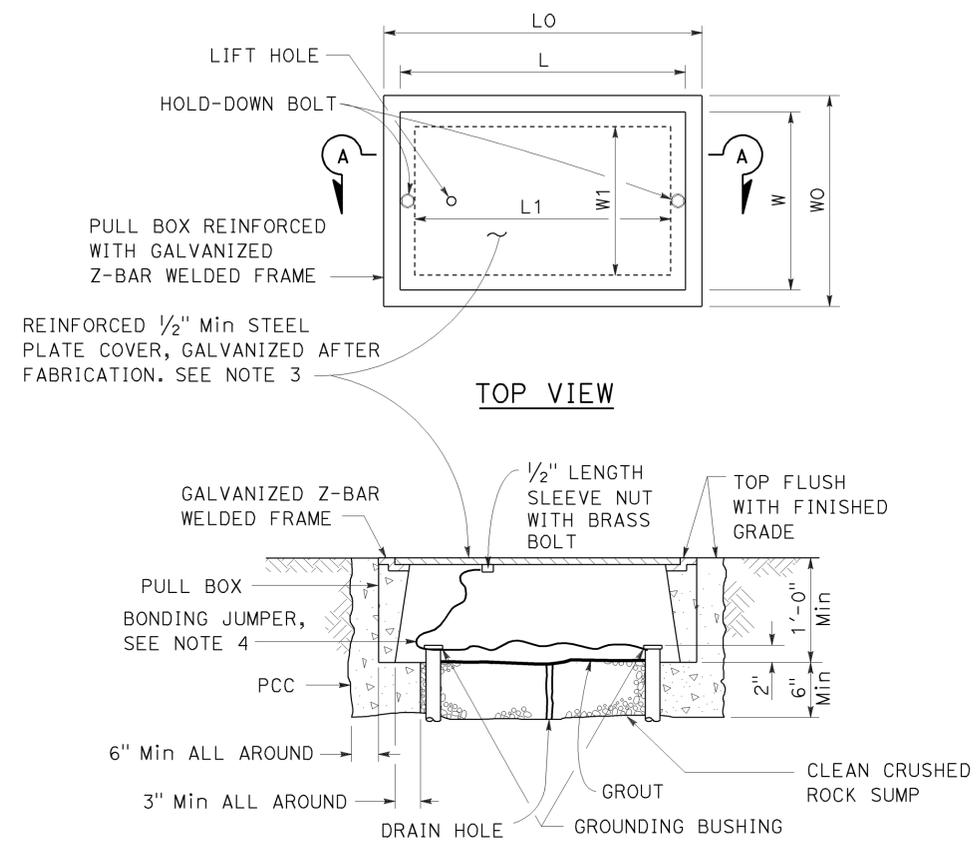
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	42	52

Theresa Gabriel  
 REGISTERED ELECTRICAL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Theresa Aziz Gabriel  
 No. E15129  
 Exp. 6-30-14  
 ELECTRICAL  
 STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 1-13-14



SECTION A-A  
**No. 3 1/2(T), No. 5(T) AND  
 No. 6(T) TRAFFIC PULL BOX**

**NOTES:**

- Traffic pull box shall be provided with steel cover and special concrete footing. Steel cover shall have embossed non-skid pattern.
- Steel reinforcing shall be as regularly used in the standard products of the respective manufacturer.
- Pull box covers shall be marked as follows: "SERVICE" Service circuits between service point and service disconnect; "SPRINKLER-CONTROL" Sprinkler control circuits, 50 V or less; "CALTRANS" On all pull boxes, except pull boxes marked "SPRINKLER-CONTROL"; and "TELEPHONE" Telephone service.
  - No. 3 1/2(T) pull box.
    - "SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
    - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
  - No. 5(T) or 6(T) pull box.
    - "TRAFFIC SIGNAL" - Traffic signal circuits with or without lighting or sign lighting circuits.
    - "LIGHTING" - Lighting or sign lighting circuits where voltage is under 600 V.
    - "LIGHTING-HIGH VOLTAGE" - Lighting or sign lighting circuits where voltage is above 600 V.
    - "IRRIGATION" - Circuits to irrigation controller 120 V or more.
    - "RAMP METER" - Ramp meter circuits.
    - "COUNT STATION" - Count or speed monitor circuits.
    - "COMMUNICATION" - Communication circuits.
    - "TOS COMMUNICATIONS" - TOS communications line.
    - "TOS POWER" - TOS power.
    - "TDC POWER" - Telephone demarcation cabinet power.
    - "CCTV" - Closed circuit television circuits.
    - "TMS" - Traffic monitoring station circuits.
    - "CMS" - Changeable message sign circuits.
    - "HAR" - Highway advisory radio circuits.
    - "BOOSTER PUMP" - Booster pump circuit.
- Bonding jumper for metal covers shall be 3' long, minimum.
- The nominal dimensions of the opening in which the cover sets shall be the same as the cover dimensions except the length and width dimensions shall be 1/8" greater.
- Covers and boxes shall be interchangeable with California standard male and female gages. When interchanged with a standard male or female gage, the top surfaces shall be flush within 1/8".

PULL BOX	PULL BOX						COVER				
	MINIMUM * THICKNESS	MINIMUM DEPTH BOX AND EXTENSION	W0	L0	L1	W1	L **	W **	R	EDGE THICKNESS	EDGE TAPER
No. 3 1/2(T)	1 1/2"	1'-0"	1'-5"± 1"	1'-8 3/8"±	1'-2 1/2"±	10 5/8"± 1"	1'-8"±	1'-1 3/4"±	0"	1/2"	NONE
No. 5(T)	1 3/4"	1'-0"	1'-11 1/2"± 1"	2'-5 1/2"±	1'-7"±	1'-1"± 1"	2'-3"±	1'-4"±	0"	1/2"	NONE
No. 6(T)	2"	1'-0"	2'-6"± 1"	2'-11 1/2"±	1'-11 1/2"±	1'-5"± 1"	2'-9"±	1'-8"±	0"	1/2"	NONE

\* EXCLUDING CONDUIT WEB \*\* TOP DIMENSION

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**ELECTRICAL SYSTEMS  
 (TRAFFIC PULL BOX)**  
 NO SCALE

RSP ES-8B DATED JULY 19, 2013 SUPERSEDES RSP ES-8B DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP ES-8B**

2010 REVISED STANDARD PLAN RSP ES-8B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	43	52

*Gregory A. Balzer*  
LICENSED LANDSCAPE ARCHITECT

July 19, 2013  
PLANS APPROVAL DATE

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

TO ACCOMPANY PLANS DATED 1-13-14

**A**

AB AGGREGATE BASE  
 ABS ACRYLONITRILE-BUTADIENE-STYRENE  
 AC ASPHALT CONCRETE  
 ACC ARMOR-CLAD CONDUCTORS  
 Adj ADJACENT/ADJUSTABLE  
 AIC AUXILIARY IRRIGATION CONTROLLER  
 Alt ALTERNATIVE  
 AMEND AMENDMENT  
 ARV AIR RELEASE VALVE  
 AUTO AUTOMATIC  
 AUX AUXILIARY  
 AVB ATMOSPHERIC VACUUM BREAKER

**B**

B&B BALLED AND BURLAPPED  
 B/B BRASS/BRONZE  
 B/B/PL BRASS/BRONZE/PLASTIC  
 B/PL BRASS/PLASTIC  
 BFM BONDED FIBER MATRIX  
 Bit Ctd BITUMINOUS COATED  
 BP BOOSTER PUMP  
 BPA BACKFLOW PREVENTER ASSEMBLY  
 BPE BACKFLOW PREVENTER ENCLOSURE  
 BV BALL VALVE

**C**

C CONDUIT  
 CAP CORRUGATED ALUMINUM PIPE  
 CARV COMBINATION AIR RELEASE VALVE  
 CB COUPLING BAND  
 CCA CAM COUPLER ASSEMBLY  
 CEC CONTROLLER ENCLOSURE CABINET  
 CHDPE CORRUGATED HIGH DENSITY POLYETHYLENE  
 CL CHAIN LINK  
 CNC CONTROL AND NEUTRAL CONDUCTORS  
 Conc CONCRETE  
 CP COPPER PIPE  
 CS COMPOST SOCK  
 CSP CORRUGATED STEEL PIPE  
 CST CENTER STRIP  
 CV CHECK VALVE

**D**

Dia DIAMETER  
 DIP DUCTILE IRON PIPE  
 DIT DRIP IRRIGATION TUBING  
 DG DECOMPOSED GRANITE  
 DN DIAMETER NOMINAL  
 DVA DRIP VALVE ASSEMBLY

**E**

EC EROSION CONTROL  
 ECTC EROSION CONTROL TECHNOLOGY COUNCIL  
 ElecT ELECTRIC/ELECTRICAL  
 Elev ELEVATION  
 ELL ELBOW  
 ENCL ENCLOSURE  
 EP EDGE OF PAVEMENT  
 ES EDGE OF SHOULDER  
 EST END STRIP  
 ESTB ESTABLISHMENT  
 ETW EDGE OF TRAVELED WAY

**F**

F FULL CIRCLE  
 F/P FULL/PART CIRCLE  
 FCV FLOW CONTROL VALVE  
 FERT FERTILIZER  
 FG FINISHED GRADE  
 FH FLEXIBLE HOSE  
 FIPT FEMALE IRON PIPE THREAD  
 FIS FERTILIZER INJECTOR SYSTEM  
 FL FLOW LINE  
 FR FIBER ROLL  
 FS FLOW SENSOR  
 FSC FLOW SENSOR CABLE  
 FV FLUSH VALVE

**G**

Galv GALVANIZED  
 GARV GARDEN VALVE  
 GARVA GARDEN VALVE ASSEMBLY  
 GM GRAVEL MULCH  
 GPH GALLONS PER HOUR  
 GPM GALLONS PER MINUTE  
 GSP GALVANIZED STEEL PIPE  
 GV GATE VALVE

**H**

H HALF CIRCLE  
 HDPE HIGH DENSITY POLYETHYLENE  
 HP HORSEPOWER/HINGE POINT  
 HPL HIGH PRESSURE LINE  
 Hwy HIGHWAY

**I**

IC IRRIGATION CONTROLLER  
 ICC IRRIGATION CONTROLLER(S)  
 IN CONTROLLER ENCLOSURE CABINET  
 ID INSIDE DIAMETER  
 IFS IRRIGATION FILTRATION SYSTEM  
 IPS IRON PIPE SIZE  
 IPT IRON PIPE THREAD  
 Irr IRRIGATION

**L**

L LENGTH

**M**

Max MAXIMUM  
 MBGR METAL BEAM GUARD RAILING  
 MCV MANUAL CONTROL VALVE  
 MIC MASTER IRRIGATION CONTROLLER  
 Min MINIMUM  
 MIPT MALE IRON PIPE THREAD  
 Misc MISCELLANEOUS  
 MtI MATERIAL  
 MVP MAINTENANCE VEHICLE PULLOUT

**N**

NCN NO COMMON NAME  
 NL NOZZLE LINE  
 No. NUMBER  
 NPT NATIONAL PIPE THREAD

**O**

O/C ON CENTER  
 OD OUTSIDE DIAMETER  
 OL OVERLAP

**P**

P PART CIRCLE  
 PB PULL BOX  
 PCC PORTLAND CEMENT CONCRETE  
 PE POLYETHYLENE  
 Pkt+ PACKET  
 PL PLASTIC  
 PLS PURE LIVE SEED  
 PLT PLANT/PLANTING  
 PLT ESTB PLANT ESTABLISHMENT  
 PM POST MILE  
 PR PRESSURE RATED  
 PRLV PRESSURE RELIEF VALVE  
 PRV PRESSURE REGULATING VALVE  
 PVC POLYVINYL CHLORIDE  
 Pvm+ PAVEMENT

**Q**

Q QUARTER CIRCLE  
 QCV QUICK COUPLING VALVE

**NOTE:**  
 For additional abbreviations,  
 see Standard Plans A10A and A10B.

**R**

R RADIUS  
 RCP REINFORCED CONCRETE PIPE  
 RCV REMOTE CONTROL VALVE  
 RCVM REMOTE CONTROL VALVE (MASTER)  
 RCVMF REMOTE CONTROL VALVE (MASTER) W/FLOW SENSOR  
 RCVP REMOTE CONTROL VALVE W/PRESSURE REGULATOR  
 RCW RECYCLED WATER  
 RECP ROLLED EROSION CONTROL PRODUCT  
 REQ REQUIRED  
 RICS REMOTE IRRIGATION CONTROL SYSTEM  
 R/W RIGHT OF WAY

**S**

S SLIP  
 SCH SCHEDULE  
 SF STATE-FURNISHED  
 Shld SHOULDER  
 Sq SQUARE  
 SST SIDE STRIP  
 Sta STATION  
 Std STANDARD  
 SW SIDEWALK/SOUND WALL

**T**

T THIRD CIRCLE/THREAD  
 TLS TRUCK LOADING STANDPIPE  
 TQ THREE QUARTER CIRCLE  
 TRM TURF REINFORCEMENT MAT  
 TT TWO-THIRDS CIRCLE  
 TWSA TREE WELL SPRINKLER ASSEMBLY  
 Typ TYPICAL

**U**

UG UNDERGROUND

**W**

W WIDTH  
 W/ WITH  
 WM WATER METER  
 WS WYE STRAINER  
 WSA WYE STRAINER ASSEMBLY  
 WSP WELDED STEEL PIPE  
 WWM WELDED WIRE MESH

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND  
 EROSION CONTROL ABBREVIATIONS**  
 NO SCALE

RSP H1 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H1  
 DATED MAY 20, 2011 - PAGE 218 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H1**

2010 REVISED STANDARD PLAN RSP H1

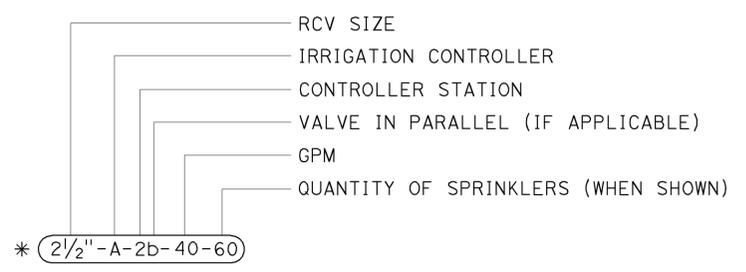
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	44	52

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 November 15, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 1-13-14

EXISTING	NEW	ITEM DESCRIPTION
		WATER METER (WM)
		BACKFLOW PREVENTER ASSEMBLY (BPA)
		BACKFLOW PREVENTER ENCLOSURE (BPE)
		BOOSTER PUMP (BP)
		TRUCK LOADING STANDPIPE (TLS)
		FLOW SENSOR (FS)
		MASTER IRRIGATION CONTROLLER (MIC)
		AUXILIARY IRRIGATION CONTROLLER (AIC)
		IRRIGATION CONTROLLER (IC)
		IRRIGATION CONTROLLER (IC) (BATTERY)
		IRRIGATION CONTROLLER (IC) (SOLAR)
		IRRIGATION CONTROLLER (IC) (TWO WIRE)
		IRRIGATION CONTROLLER(S) IN CONTROLLER ENCLOSURE CABINET (ICC)
		ARMOR-CLAD CONDUCTORS (ACC)
		CONTROL AND NEUTRAL CONDUCTORS (CNC)
		IRRIGATION CONDUIT
		EXTEND IRRIGATION CONDUIT
		DUCTILE IRON PIPE (SUPPLY LINE) (MAIN) (DIP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (MAIN) (GSP)
		GALVANIZED STEEL PIPE (SUPPLY LINE) (LATERAL) (GSP)
		PLASTIC PIPE (SUPPLY LINE) (MAIN)
		PLASTIC PIPE (SUPPLY LINE) (LATERAL)
		COPPER PIPE (SUPPLY LINE)
		DRIP IRRIGATION TUBING
		REMOTE CONTROL VALVE (RCV)
		REMOTE CONTROL VALVE (MASTER) (RCVM)
		REMOTE CONTROL VALVE (MASTER) W/FLOW METER (RCVMF)
		REMOTE CONTROL VALVE W/PRESSURE REGULATOR (RCVP)
		EXISTING MANUAL CONTROL VALVE (MCV)
		DRIP VALVE ASSEMBLY (DVA)
		WYE STRAINER ASSEMBLY (WSA)

EXISTING	NEW	ITEM DESCRIPTION
		GATE VALVE (GV)
		BALL VALVE (BV)
		QUICK COUPLING VALVE (QCV)
		CAM COUPLER ASSEMBLY (CCA)
		GARDEN VALVE ASSEMBLY (GARVA)
		PRESSURE REGULATING VALVE (PRV)
		PRESSURE RELIEF VALVE (PRLV)
		FLOW CONTROL VALVE (FCV)
		COMBINATION AIR RELEASE VALVE (CARV)
		CHECK VALVE (CV)
		FLUSH VALVE (FV)
		EXISTING NOZZLE LINE W/TURNING UNION
		EXISTING IRRIGATION SYSTEM
		EXISTING IRRIGATION SYSTEM TO BE REMOVED
		CHAIN LINK GATE
		QUICK COUPLING VALVE W/SPRINKLER PROTECTOR
		SPRINKLER W/SPRINKLER PROTECTOR
		CONNECT TO EXISTING SYSTEM
		CAP
		CAP EXISTING
		FIBER ROLL
		COMPOST SOCK



**VALVE CODE**

\* VALVE CODES FOR EXISTING VALVES ARE SHOWN IN A DASHED ENCLOSURE.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE AND EROSION CONTROL SYMBOLS**  
 NO SCALE

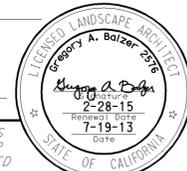
RSP H2 DATED NOVEMBER 15, 2013 SUPERSEDES RSP H2 DATED JULY 19, 2013 AND STANDARD PLAN H2 DATED MAY 20, 2011 - PAGE 219 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H2**

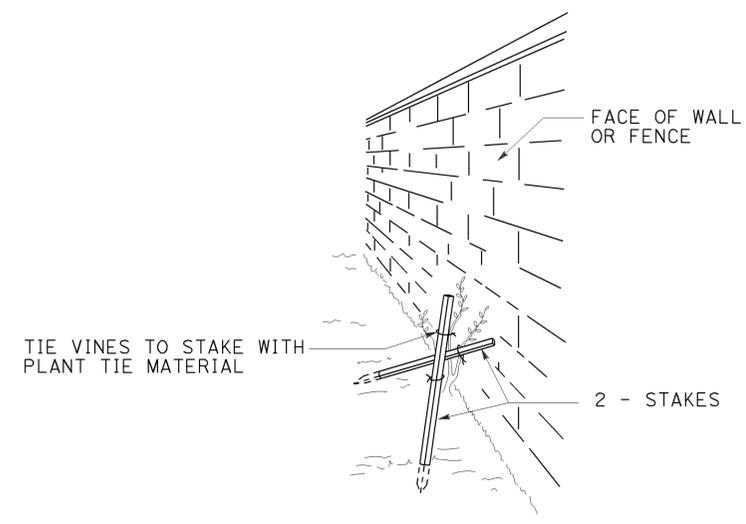
2010 REVISED STANDARD PLAN RSP H2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	45	52

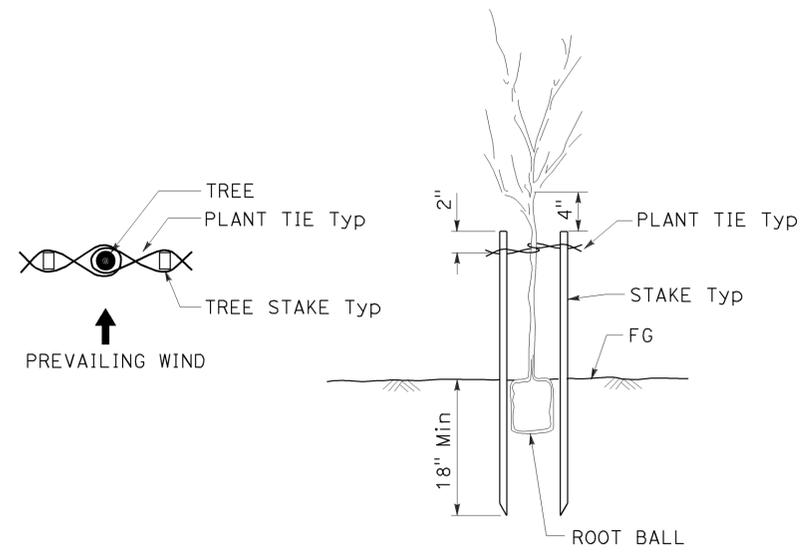
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



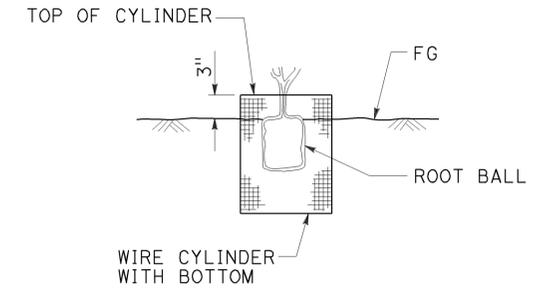
TO ACCOMPANY PLANS DATED 1-13-14



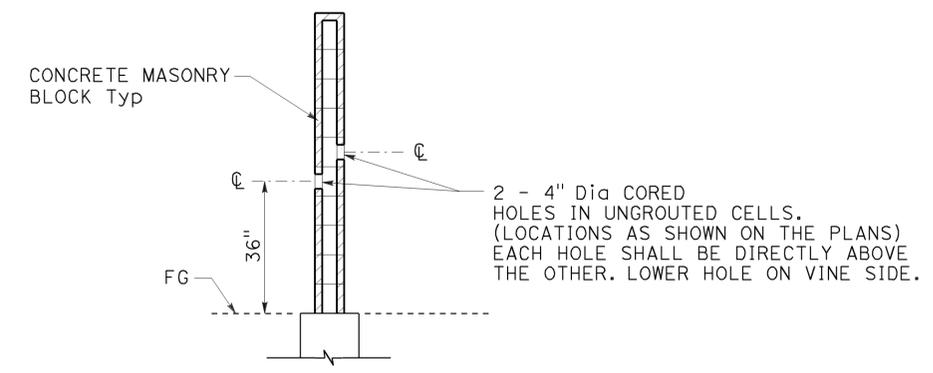
PERSPECTIVE VINE STAKING



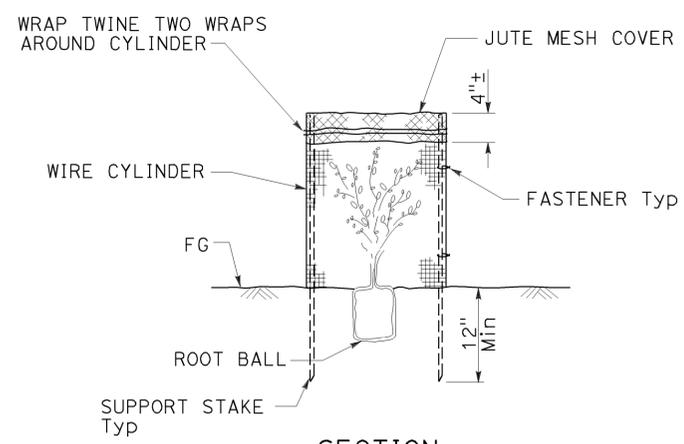
TREE STAKING



SECTION ROOT PROTECTOR



SECTION CORE HOLE (VINE)



SECTION FOLIAGE PROTECTOR

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

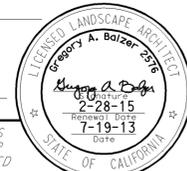
RSP H4 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H4 DATED MAY 20, 2011 - PAGE 221 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H4**

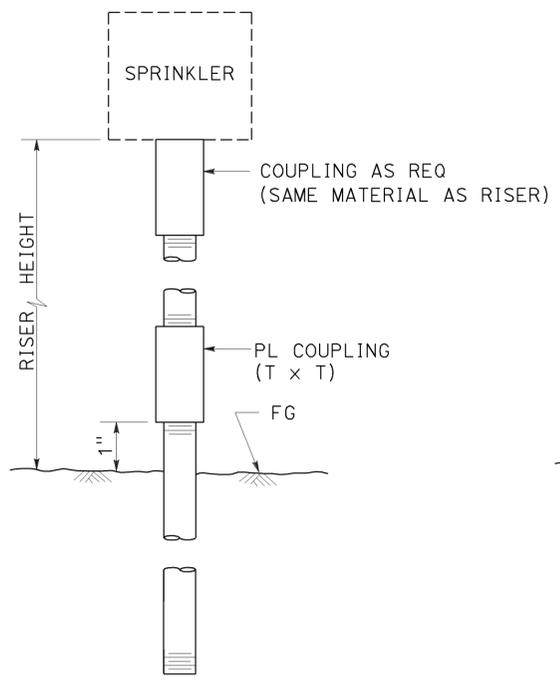
2010 REVISED STANDARD PLAN RSP H4

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	46	52

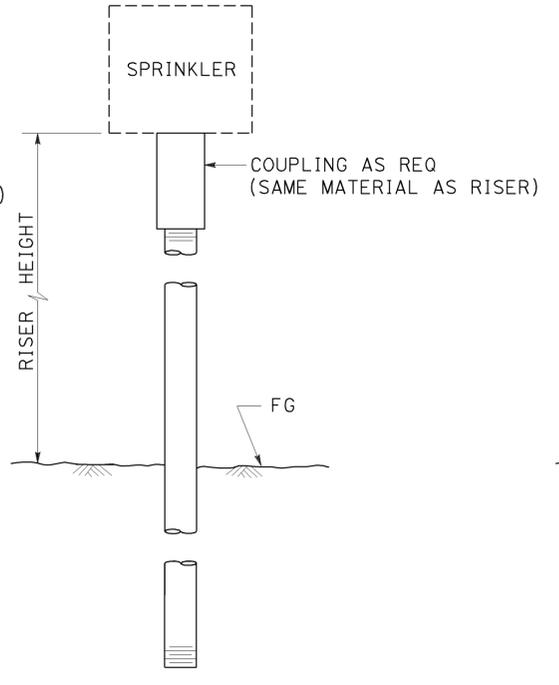
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



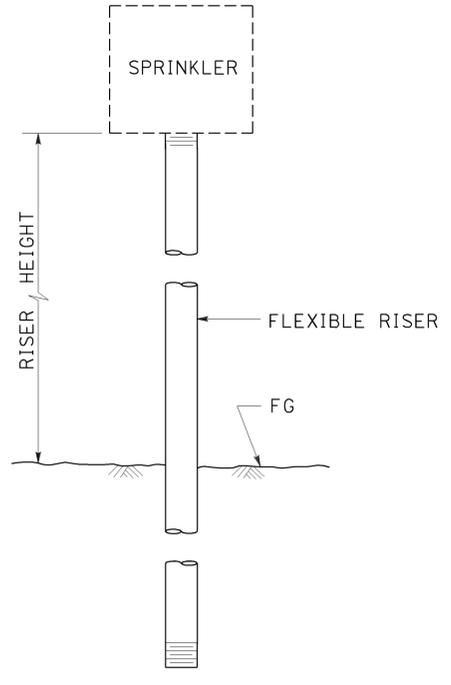
TO ACCOMPANY PLANS DATED 1-13-14



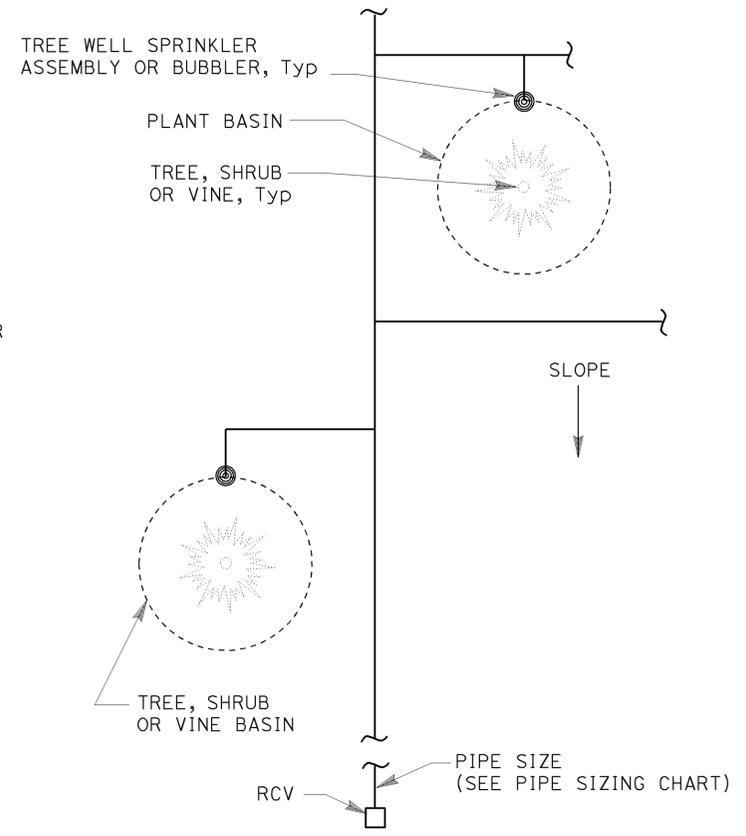
**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE I**



**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE II**



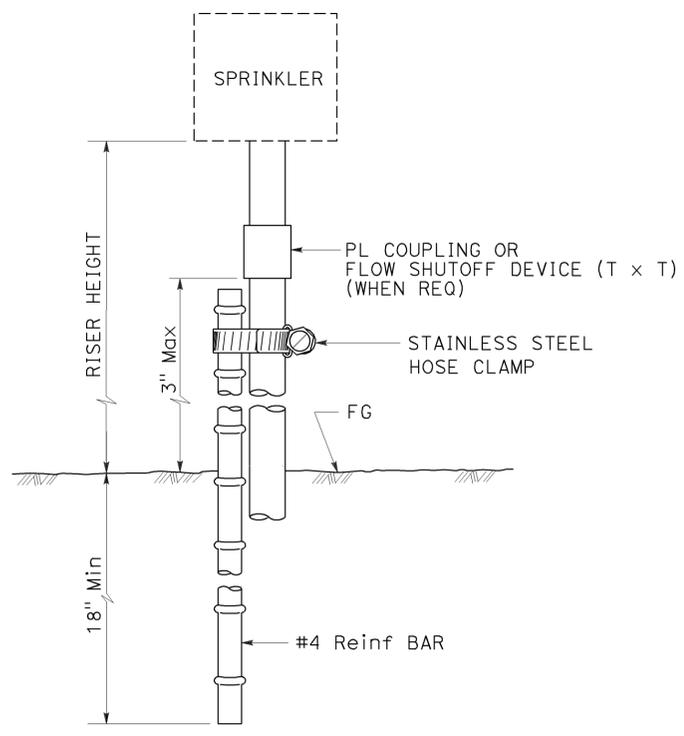
**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE III**



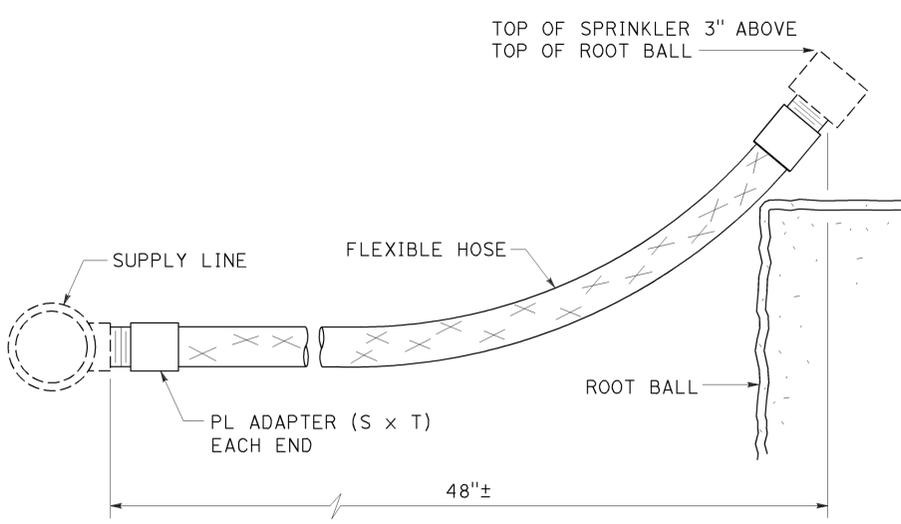
**PLAN**

**NOTES:**

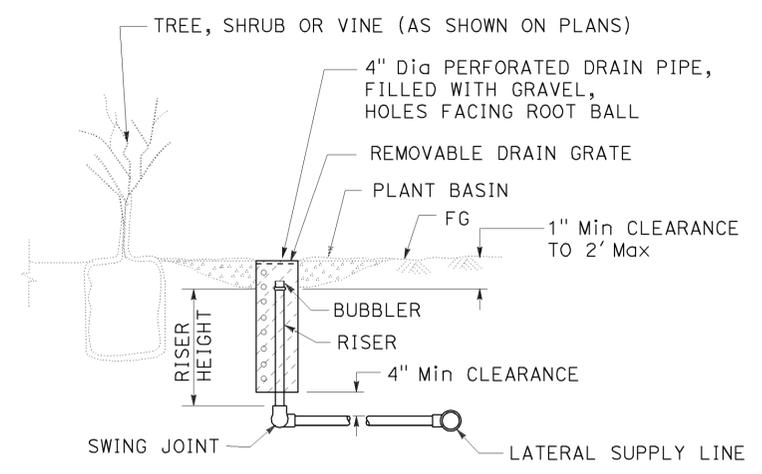
1. Install tree well sprinkler assembly on up-hill side of plant when on slope.
2. Install bubbler within basin.



**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE IV**



**ELEVATION**  
**RISER SPRINKLER ASSEMBLY TYPE V**



**SECTION**  
**TREE WELL SPRINKLER ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**

NO SCALE

RSP H5 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H5 DATED MAY 20, 2011 - PAGE 222 OF THE STANDARD PLANS BOOK DATED 2010.

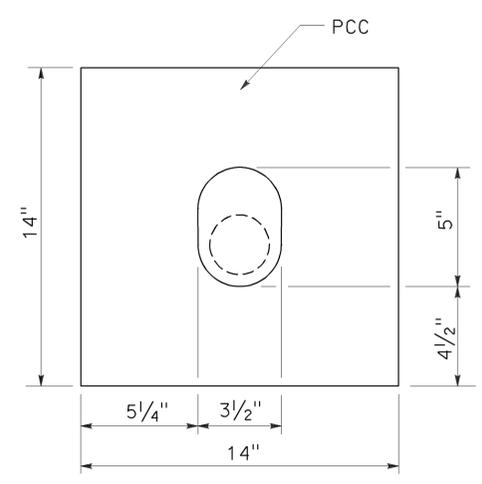
**REVISED STANDARD PLAN RSP H5**

2010 REVISED STANDARD PLAN RSP H5

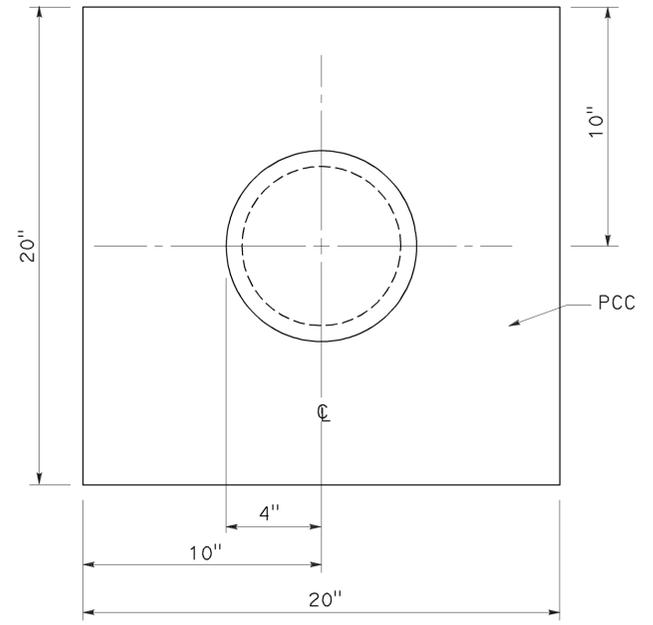
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	47	52

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
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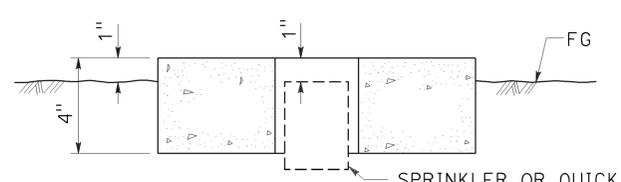
TO ACCOMPANY PLANS DATED 1-13-14



PLAN

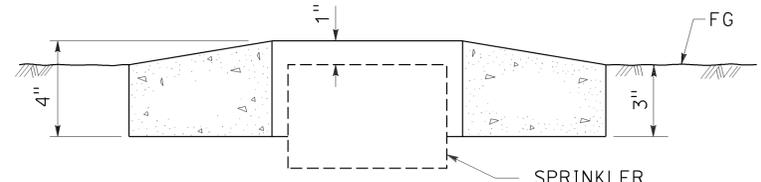


PLAN



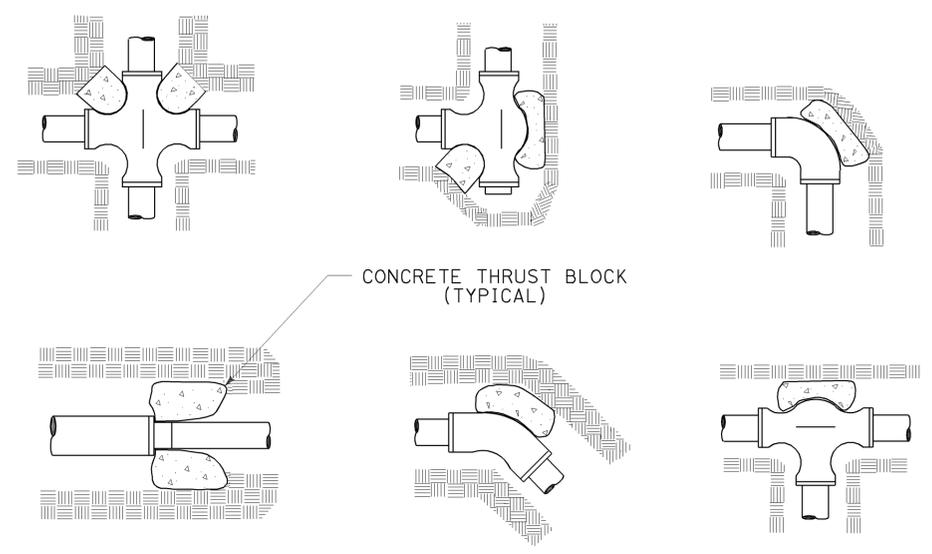
SECTION SPRINKLER OR QUICK COUPLING VALVE

SPRINKLER PROTECTOR TYPE I

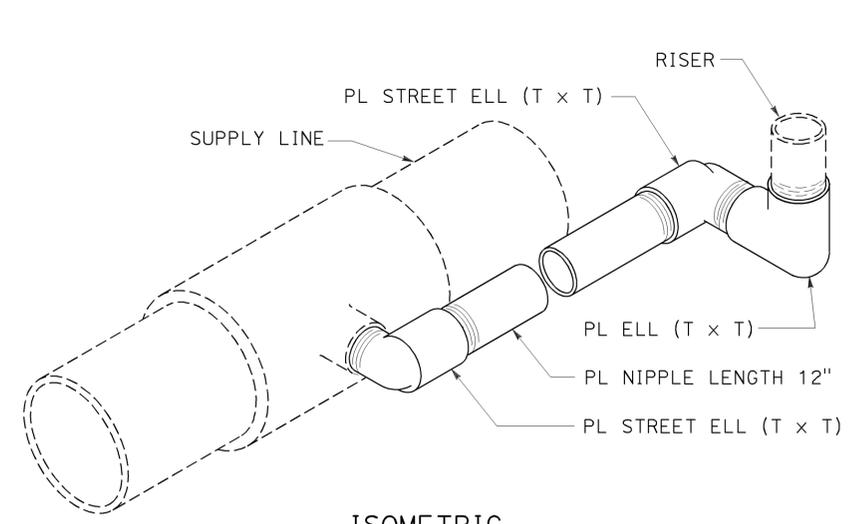


SECTION SPRINKLER

SPRINKLER PROTECTOR TYPE II

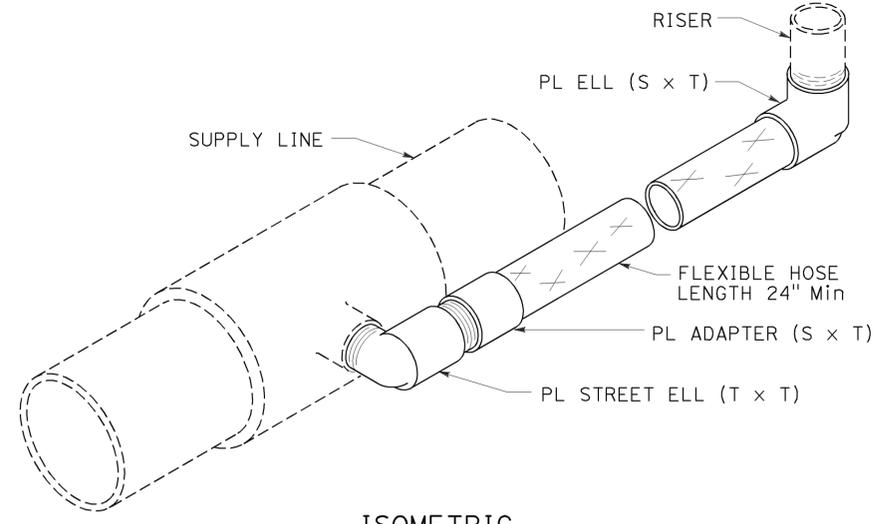


TYPICAL THRUST BLOCKS



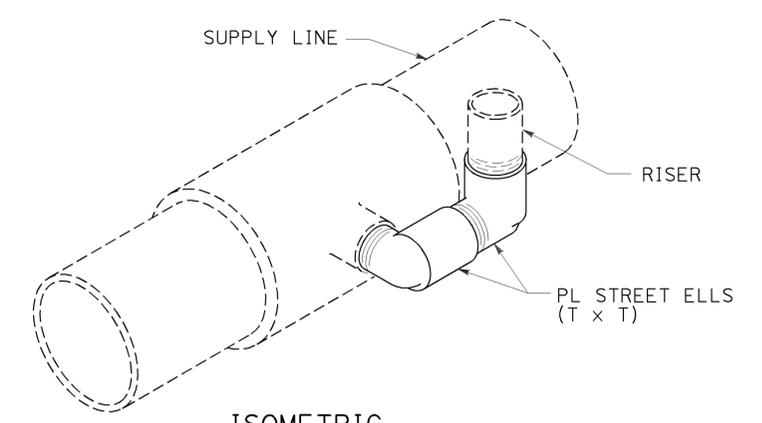
ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE I



ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE II



ISOMETRIC

POP-UP SPRINKLER ASSEMBLY TYPE III

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**

NO SCALE

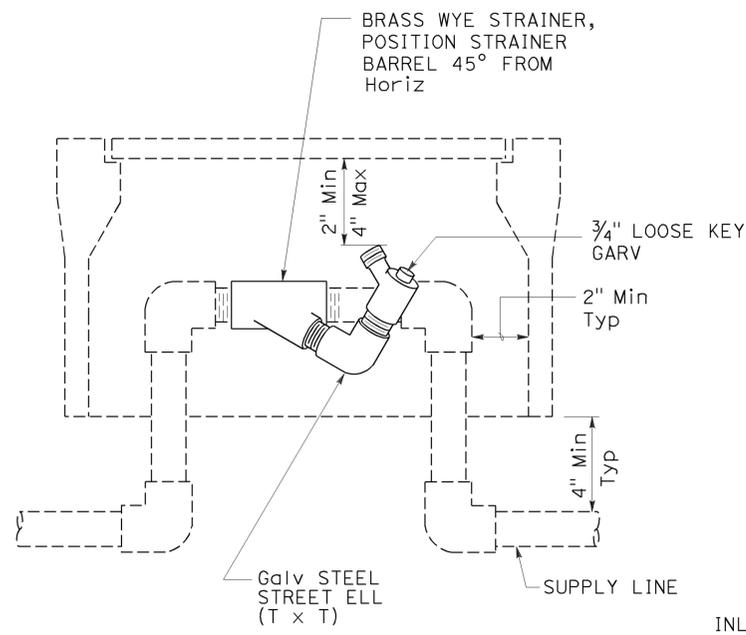
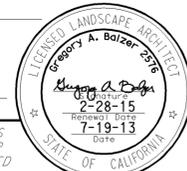
RSP H6 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H6  
 DATED MAY 20, 2011 - PAGE 223 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H6**

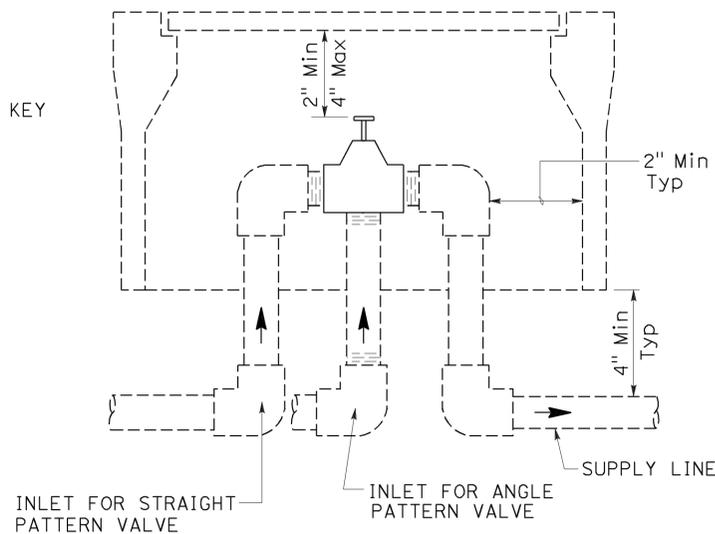
2010 REVISED STANDARD PLAN RSP H6

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	48	52

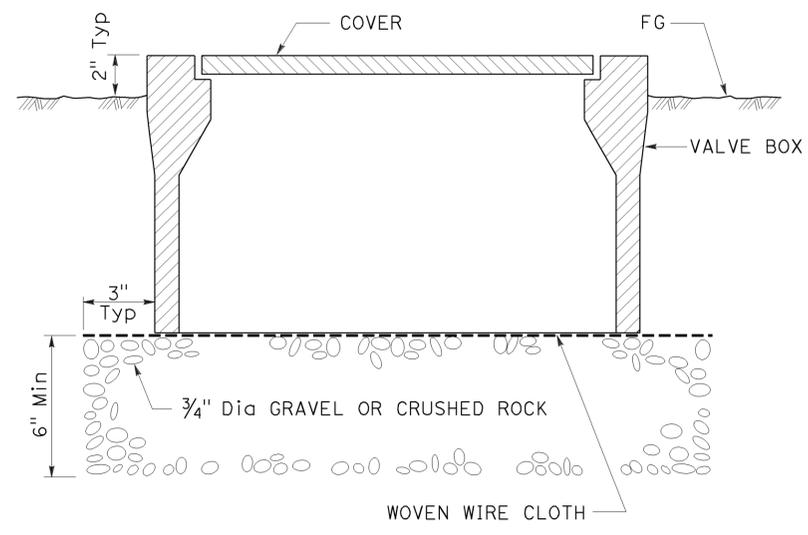
*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



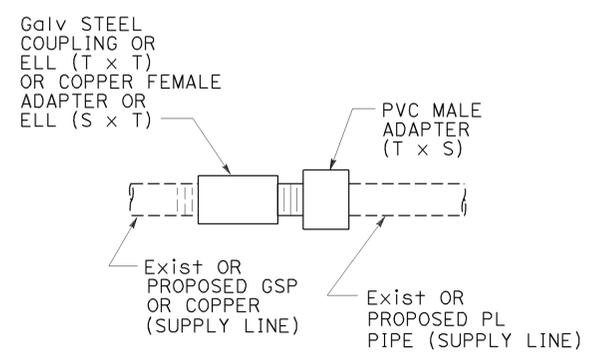
**ELEVATION**  
**WYE STRAINER ASSEMBLY**



**ELEVATION**  
**VALVE**

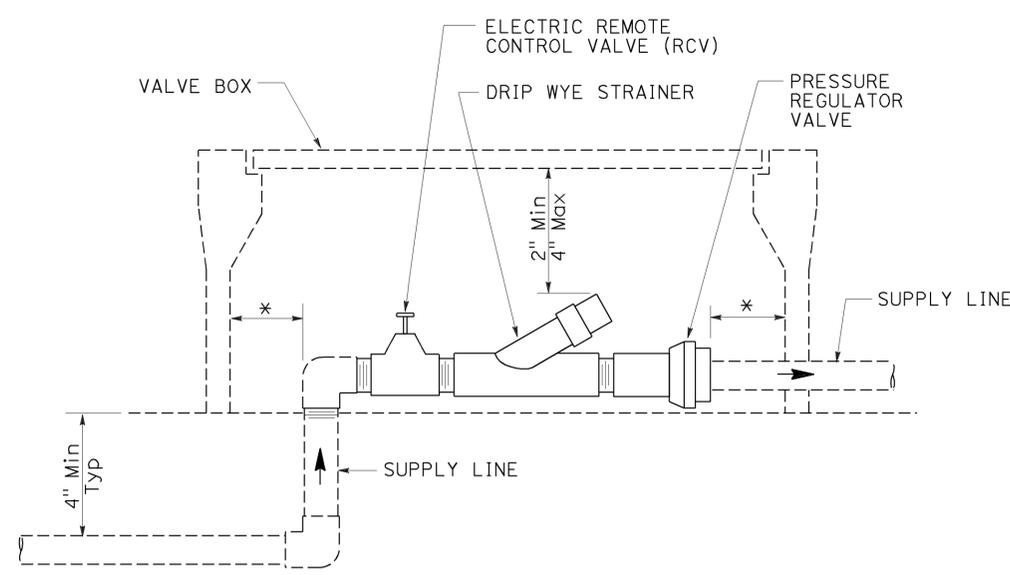


**SECTION**  
**VALVE BOX**



**GALVANIZED OR COPPER PIPE CONNECTION TO PLASTIC PIPE**

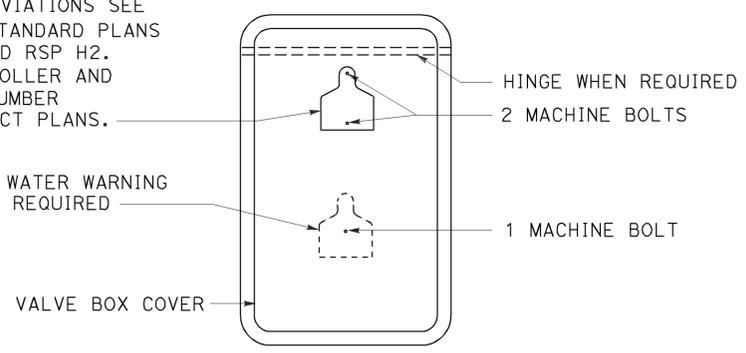
TO ACCOMPANY PLANS DATED 1-13-14



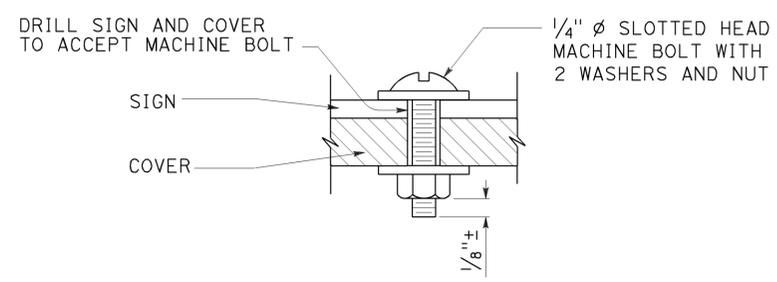
**ELEVATION**  
**DRIP VALVE ASSEMBLY**

IDENTIFICATION LABEL:  
FOR ABBREVIATIONS SEE  
REVISED STANDARD PLANS  
RSP H1 AND RSP H2.  
FOR CONTROLLER AND  
STATION NUMBER  
SEE PROJECT PLANS.

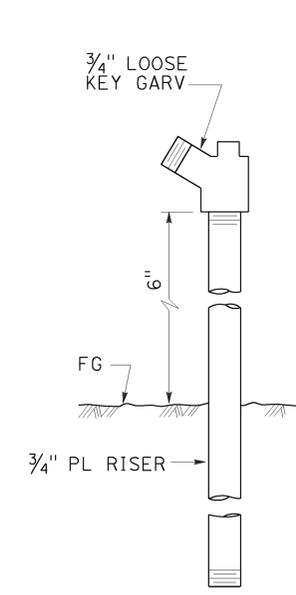
RECYCLED WATER WARNING  
SIGN WHEN REQUIRED



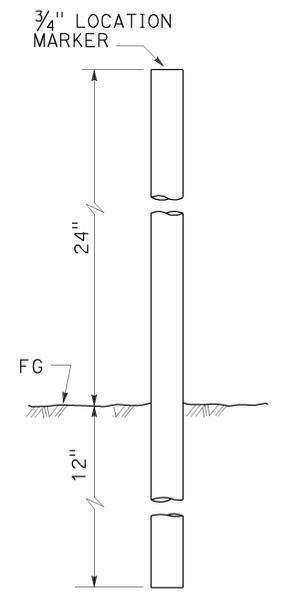
**PLAN**



**SECTION**  
**VALVE BOX IDENTIFICATION**



**ELEVATION**  
**GARDEN VALVE ASSEMBLY**



**ELEVATION**  
**LOCATION MARKER**

**GARDEN VALVE ASSEMBLY**

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**LANDSCAPE DETAILS**

NO SCALE

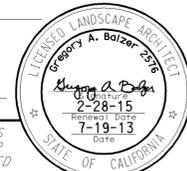
RSP H7 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H7  
DATED MAY 20, 2011 - PAGE 224 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H7**

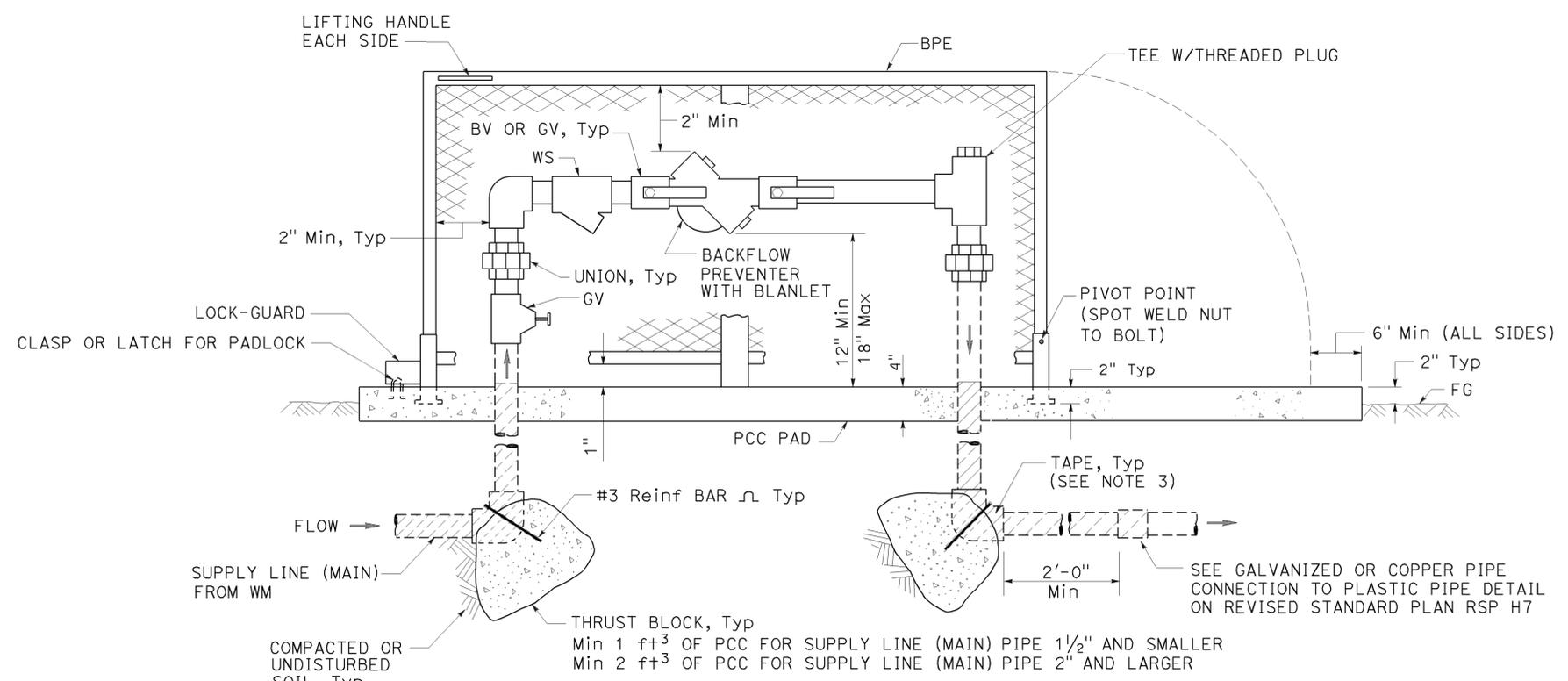
2010 REVISED STANDARD PLAN RSP H7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	49	52

*Gregory A. Balzer*  
 LICENSED LANDSCAPE ARCHITECT  
 July 19, 2013  
 PLANS APPROVAL DATE  
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



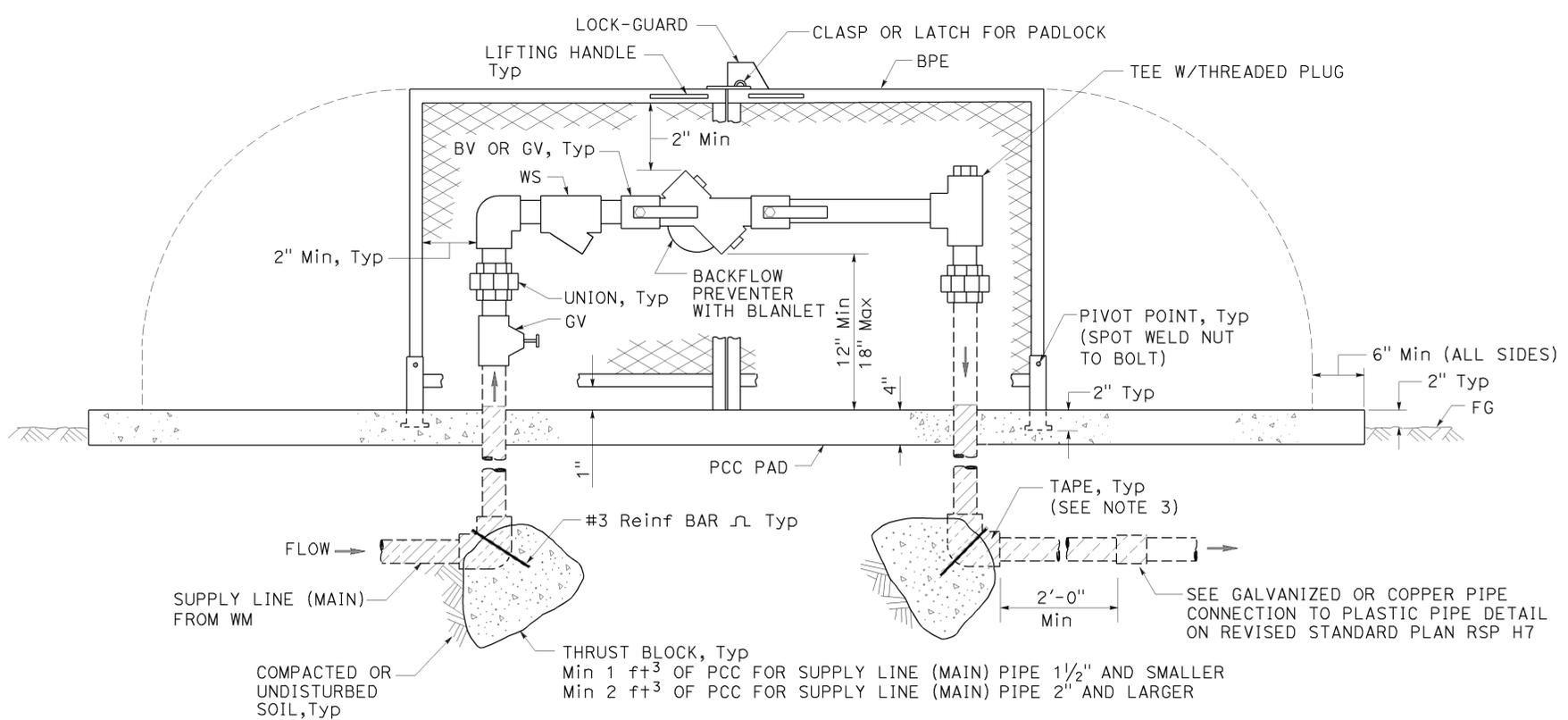
TO ACCOMPANY PLANS DATED 1-13-14



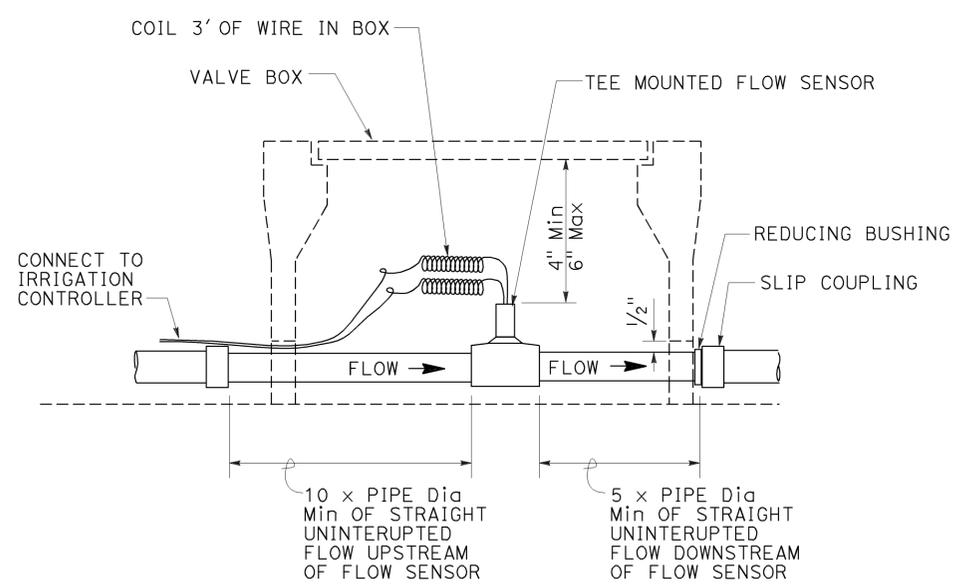
**ELEVATION**  
**BACKFLOW PREVENTER ASSEMBLY**  
 IN ONE PIECE ENCLOSURE

**NOTES:**

1. Wye strainer and fittings must be the same size as the backflow preventer shown on the plans.
2. Backflow preventer assembly manifold pipe must be the same pipe as the supply line (main) pipe to be installed from the water meter to the backflow preventer assembly.
3. All metal in contact with soil and Portland Cement Concrete must be wrapped with 2" wide plastic backed adhesive polyethylene tape 20 mil thick with 1/2" overlap.



**ELEVATION**  
**BACKFLOW PREVENTER ASSEMBLY**  
 IN TWO PIECE ENCLOSURE



**SECTION**  
**FLOW SENSOR**

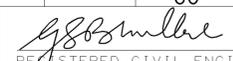
STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**LANDSCAPE DETAILS**  
 NO SCALE

RSP H8 DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN H8 DATED MAY 20, 2011 - PAGE 225 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP H8**

2010 REVISED STANDARD PLAN RSP H8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	50	52

  
 REGISTERED CIVIL ENGINEER  
 July 19, 2013  
 PLANS APPROVAL DATE



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TO ACCOMPANY PLANS DATED 1-13-14

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING							
SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	X	Y	Z **
					TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	55	110	27
60	1440	720	360	240	60	120	30
65	1560	780	390	260	65	130	32
70	1680	840	420	280	70	140	35

\* - For other offsets, use the following merging taper length formula for L:  
 For speed of 40 mph or less,  $L = WS^2/60$   
 For speed of 45 mph or more,  $L = WS$

Where: L = Taper length in feet  
 W = Width of offset in feet  
 S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

\*\* - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING				
SPEED *	Min D **	DOWNGRADE Min D ***		
		-3%	-6%	-9%
		ft	ft	ft
mph	ft	ft	ft	ft
20	115	116	120	126
25	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785
70	730	771	825	891

\* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph  
 \*\* - Longitudinal buffer space or flagger station spacing  
 \*\*\* - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING			
ROAD TYPE	DISTANCE BETWEEN SIGNS *		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

\* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommended distances.

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM TABLES  
 FOR LANE AND RAMP CLOSURES**

NO SCALE

RSP T9 DATED JULY 19, 2013 SUPERSEDES RSP T9 DATED APRIL 19, 2013 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T9**

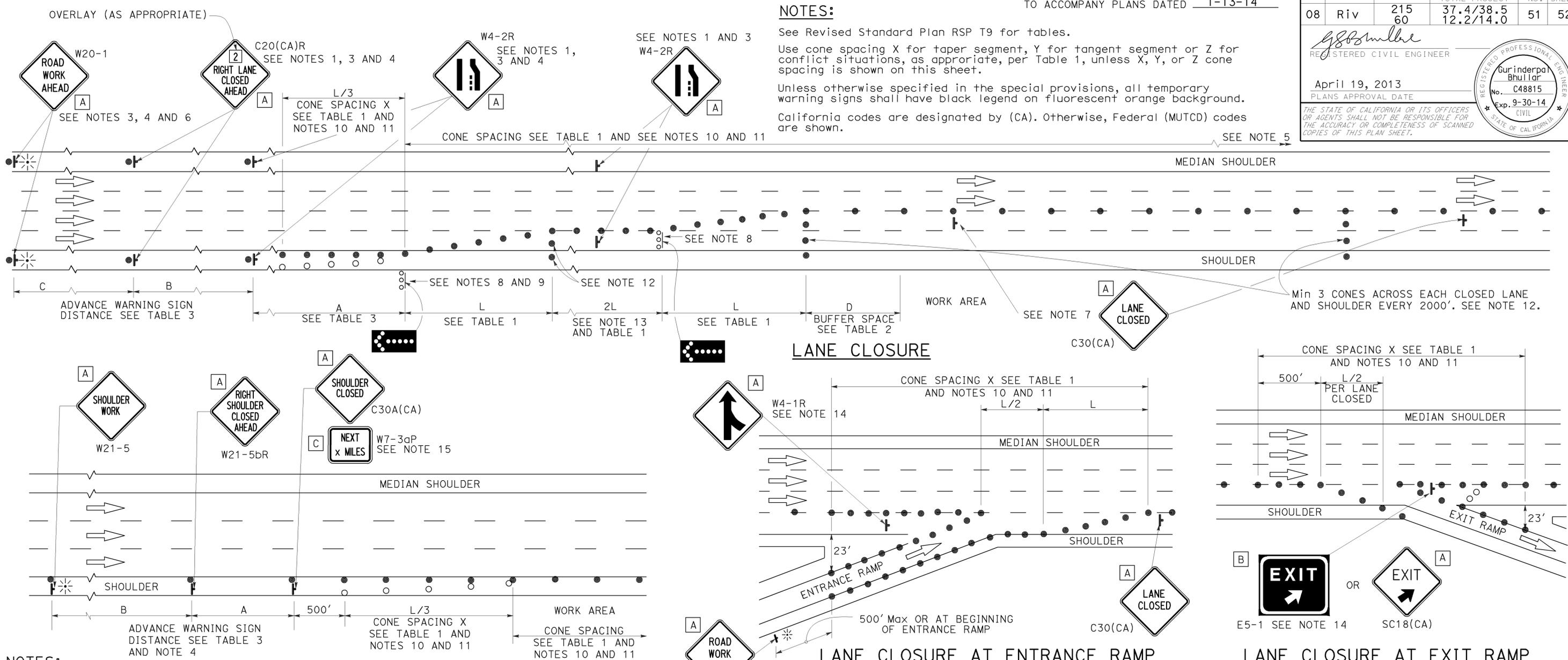
2010 REVISED STANDARD PLAN RSP T9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	51	52

REGISTERED CIVIL ENGINEER  
 April 19, 2013  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

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



- NOTES:**
- Median lane closures shall conform to the details as shown except that C20(CA)L and W4-2L signs shall be used.
  - At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
  - Duplicate sign installations are not required:
    - On opposite shoulder if at least one-half of the available lanes remain open to traffic.
    - In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
  - Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
  - A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.

- SHOULDER CLOSURE**
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_\_\_ MILES", use a C20(CA) "NEXT \_\_\_\_\_ MILES" sign for the first advance warning sign.
  - Place a C30(CA) sign every 2000' throughout length of lane closure.
  - One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
  - A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at top of crest vertical curve or on a horizontal curve.
  - All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
  - Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.

- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- Unless otherwise specified in the special provisions, the E5-1 or SC18(CA) signs shall be used as shown.
- A W7-3aP "NEXT \_\_\_\_\_ MILES" plaque must be used if the shoulder closure extends beyond the distance that can be perceived by road users.

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- ⬢ FLASHING ARROW SIGN (FAS)
- ⬢ FAS SUPPORT OR TRAILER
- ☼ PORTABLE FLASHING BEACON

**SIGN PANEL SIZE (Min)**

A	48" x 48"
B	72" x 60"
C	36" x 30"

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURE ON  
 FREEWAYS AND EXPRESSWAYS**

NO SCALE

RSP T10 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10  
 DATED MAY 20, 2011 - PAGE 237 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10**

2010 REVISED STANDARD PLAN RSP T10

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	215 60	37.4/38.5 12.2/14.0	52	52

REGISTERED CIVIL ENGINEER  
 Gurinderpal Bhullar  
 No. C48815  
 Exp. 9-30-14  
 CIVIL  
 STATE OF CALIFORNIA

April 19, 2013  
 PLANS APPROVAL DATE

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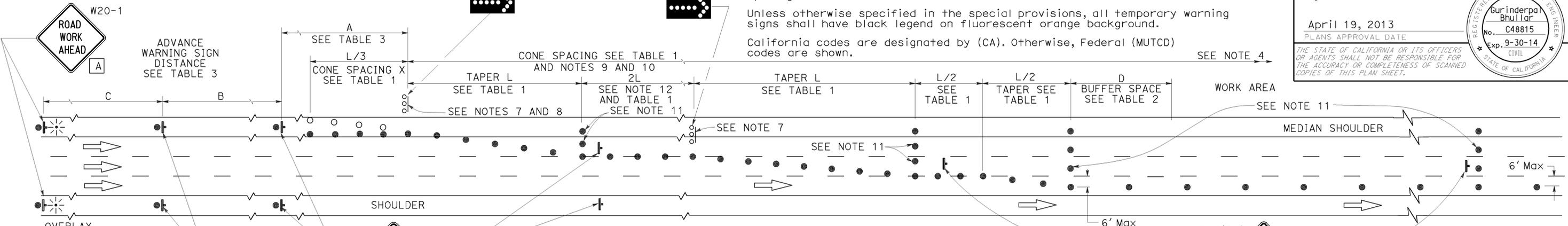
NOTES: See Revised Standard Plan RSP T9 for tables. TO ACCOMPANY PLANS DATED 1-13-14

Use cone spacing X for taper segment, Y for tangent segment or Z for conflict situations, as appropriate, per Table 1, unless X, Y, or Z cone spacing is shown on this sheet.

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on fluorescent orange background.

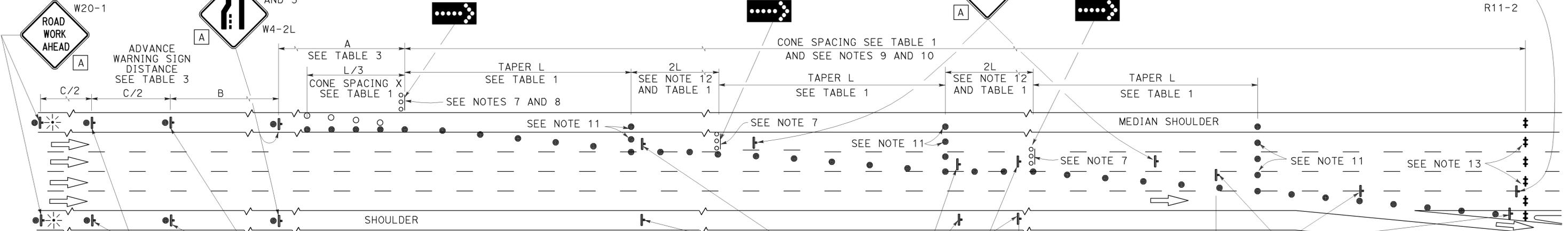
California codes are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

SEE NOTES 3 AND 5



**LANE CLOSURE WITH PARTIAL SHOULDER USE**

SEE NOTES 3 AND 5



**COMPLETE CLOSURE**

**NOTES:**

- Lane closures on the right side using partial median shoulder as a traffic lane shall conform to the details as shown except that C20(CA)R and W4-2R signs shall be used.
- At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
- Each advance warning sign on each side of the roadway shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" X 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
- A G20-2 "END ROAD WORK" sign, with minimum size of 48" x 24" as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious or ends within a larger project's limits.
- If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT \_\_\_ MILES", use a C20(CA) sign for the first advance warning sign.
- Place a C30(CA) sign every 2000' throughout length of lane closure.
- One flashing arrow sign for each lane closed. The flashing arrow signs shall be Type I.
- A minimum 1500' of sight distance shall be provided where possible for vehicles approaching the first flashing arrow sign. Lane closures shall not begin at the top of crest vertical curve or on a horizontal curve.
- All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
- Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
- Unless otherwise specified in the special provisions, a minimum of 3 cones shall be placed transversely across each closed lane and shoulder at each location where a taper across a traffic lane ends and every 2000' as shown on the "Lane Closure With Partial Shoulder Use" detail. Two Type II barricades may be used instead of the 3 cones. The transverse alignment of the cones or barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- Unless otherwise specified in the special provisions, the 2L tangent shown along lane lines shall be used between the L tapers required for each closed traffic lane.
- A minimum of Two Type II or III barricades shall be placed across each closed lane and shoulder at the location shown and every 2000' within the complete closure area. Within the complete closure area, the transverse alignment of the barricades on the closed shoulder may be shifted from the transverse alignment to provide access to the work.
- When specified in the special provisions, a W20-2 "DETOUR AHEAD" sign is to be used in place of the W20-3 "FREEWAY CLOSED AHEAD" sign.

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 48" x 18"
- C 48" x 30"

**LEGEND**

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- † TEMPORARY TRAFFIC CONTROL SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- ⚡ PORTABLE FLASHING BEACON

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL SYSTEM  
 FOR LANE CLOSURES ON  
 FREEWAYS AND EXPRESSWAYS**  
 NO SCALE

RSP T10A DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T10A DATED MAY 20, 2011 - PAGE 238 OF THE STANDARD PLANS BOOK DATED 2010.

**REVISED STANDARD PLAN RSP T10A**

2010 REVISED STANDARD PLAN RSP T10A