

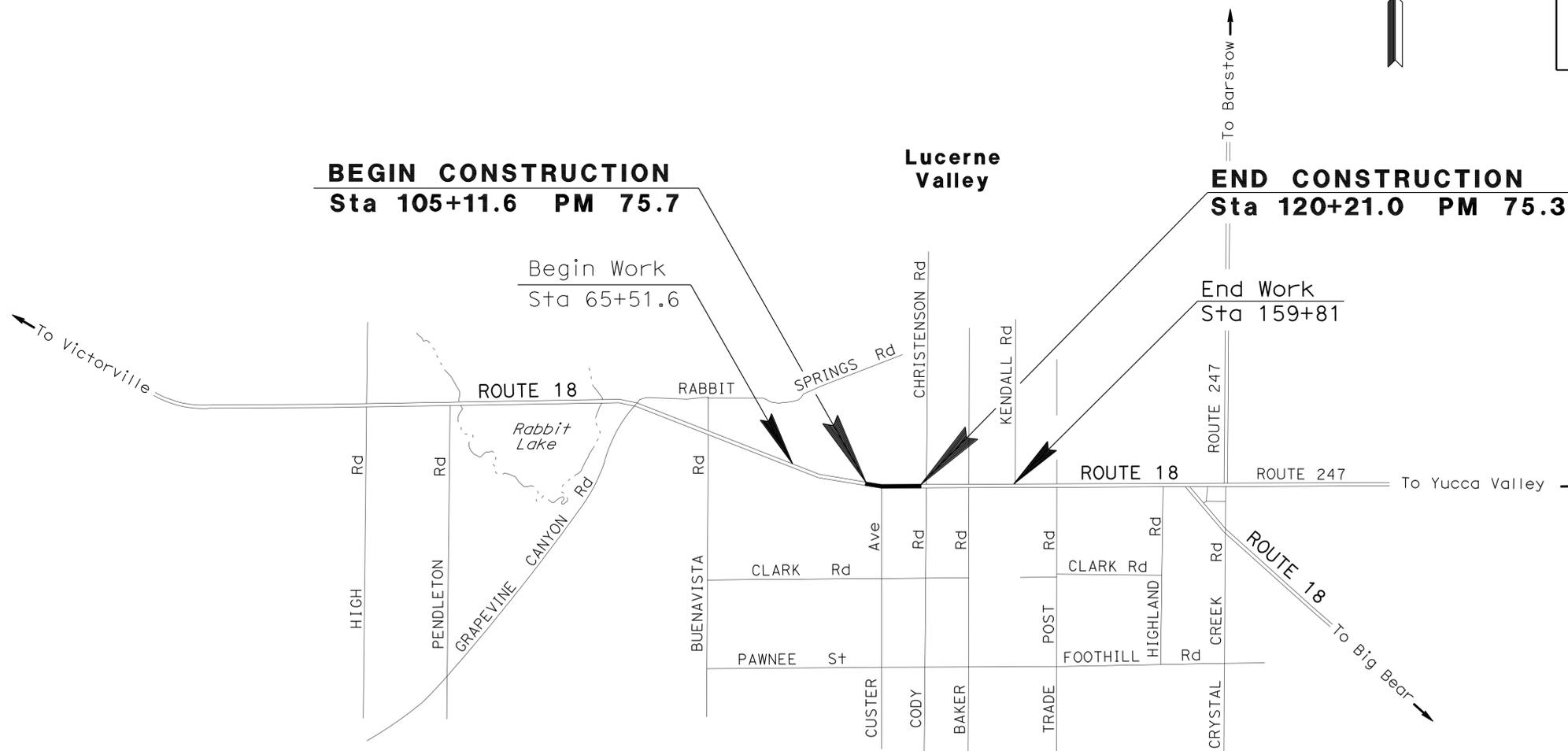
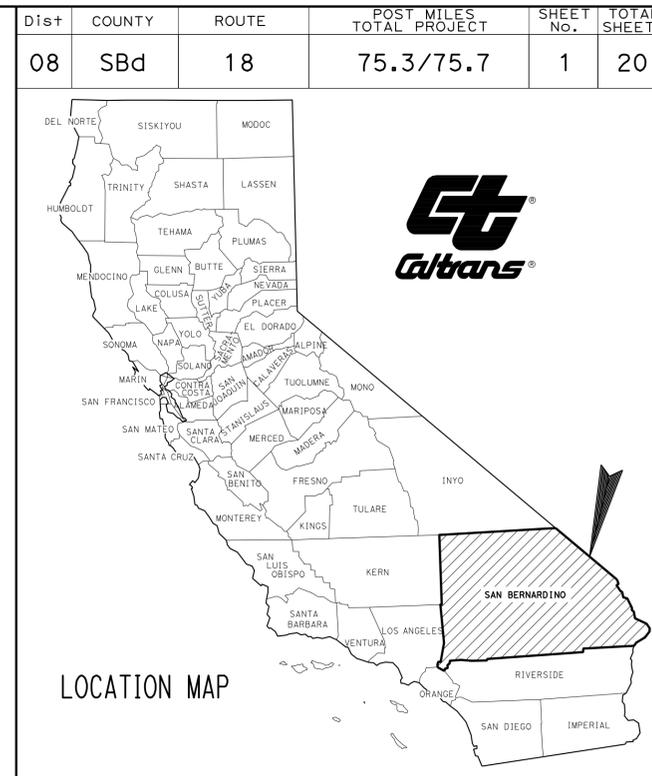
INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3-4	LAYOUTS
5	CONSTRUCTION DETAILS
6-7	UTILITY PLANS
8	CONSTRUCTION AREA SIGNS
9-10	TRAFFIC HANDLING PLANS
11-12	PAVEMENT DELINEATION PLANS
13-14	SIGN PLANS
15	SUMMARY OF QUANTITIES
16-20	REVISED STANDARD PLANS

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

STATE OF CALIFORNIA **ACHSSTP-P018(042)E**  
**DEPARTMENT OF TRANSPORTATION**  
**PROJECT PLANS FOR CONSTRUCTION ON**  
**STATE HIGHWAY**  
**IN SAN BERNARDINO COUNTY**  
**AT LUCERNE VALLEY**  
**FROM 0.2 MILE WEST OF CUSTER AVENUE**  
**TO 0.1 MILE WEST OF CHRISTENSON ROAD**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



NO SCALE

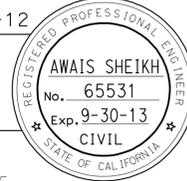
PROJECT MANAGER <b>CHARLES CHEN</b>
DESIGN ENGINEER <b>MICHAEL LEE CHEN</b>

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

PROJECT ENGINEER  
 REGISTERED CIVIL ENGINEER

DATE  
**February 13, 2012**

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.



CONTRACT No.	<b>08-OK2004</b>
PROJECT ID	<b>0800000336</b>

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	2	20

REGISTERED CIVIL ENGINEER	DATE
<i>[Signature]</i>	2-8-12
PLANS APPROVAL DATE	
	2-13-12

REGISTERED PROFESSIONAL ENGINEER
AWAIS SHEIKH
No. 65531
Exp. 9-30-13
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.

**NOTES:**

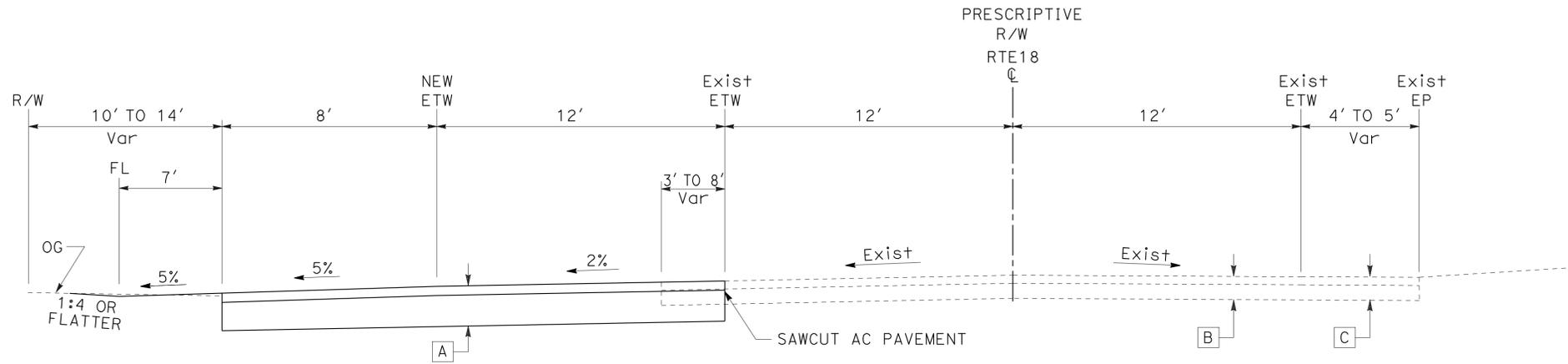
- DIMENSIONS OF THE PAVEMENT STRUCTURAL SECTION ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
- EXACT LOCATION OF SURVEY MONUMENTS SHALL BE DETERMINED BY THE ENGINEER.

**LEGEND:**

- A**
  - 0.10' RUBERIZED HOT MIX ASPHALT (RHMA) - TYPE-O
  - 1.30' HOT MIX ASPHALT (HMA) - TYPE C
- B**
  - 0.74' ASPHALT CONCRETE
  - 0.23' ROAD MIX
- C**
  - 0.65' ASPHALT CONCRETE
  - 0.29' ROAD MIX

**DESIGN DESIGNATION (ROUTE-18)**

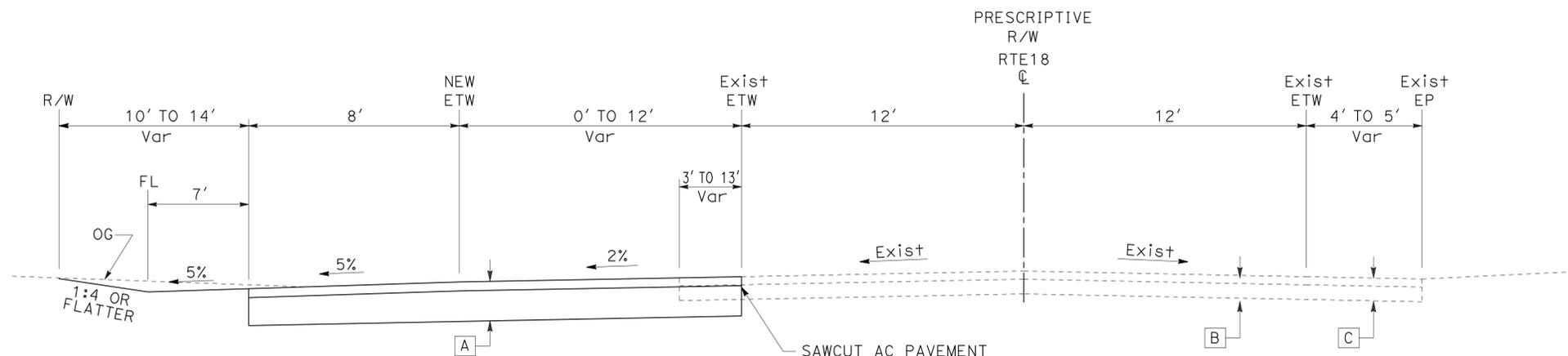
ADT (2012)	10,000
ADT (2032)	13,000
DHV (2032)	1,220
T ADT (2012)	19%
T ADT (2032)	20%
TRAFFIC INDEX MAINLINE (20 YR)	12.0
ESAL MAINLINE	11,605,260
TRAFFIC INDEX SHOULDER (20 YR)	7.5
ESAL SHOULDER	232,105
V - DESIGN SPEED	55



WESTBOUND EASTBOUND

**ROUTE 18**

STA 108+82.06 TO STA 116+87.70



WESTBOUND EASTBOUND

**ROUTE 18**

STA 105+11.61 TO STA 108+82.06  
STA 116+87.70 TO STA 120+20.72

**TYPICAL CROSS SECTIONS**

NO SCALE

**X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC OPERATIONS

FUNCTIONAL SUPERVISOR  
BEHZAD SEDIGHI

CALCULATED/DESIGNED BY  
CHECKED BY

MICHAEL LEE CHEN  
AWAIS SHEIKH

REVISED BY  
DATE REVISED



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	4	20

	2-8-12
REGISTERED CIVIL ENGINEER	DATE
2-13-12	
PLANS APPROVAL DATE	

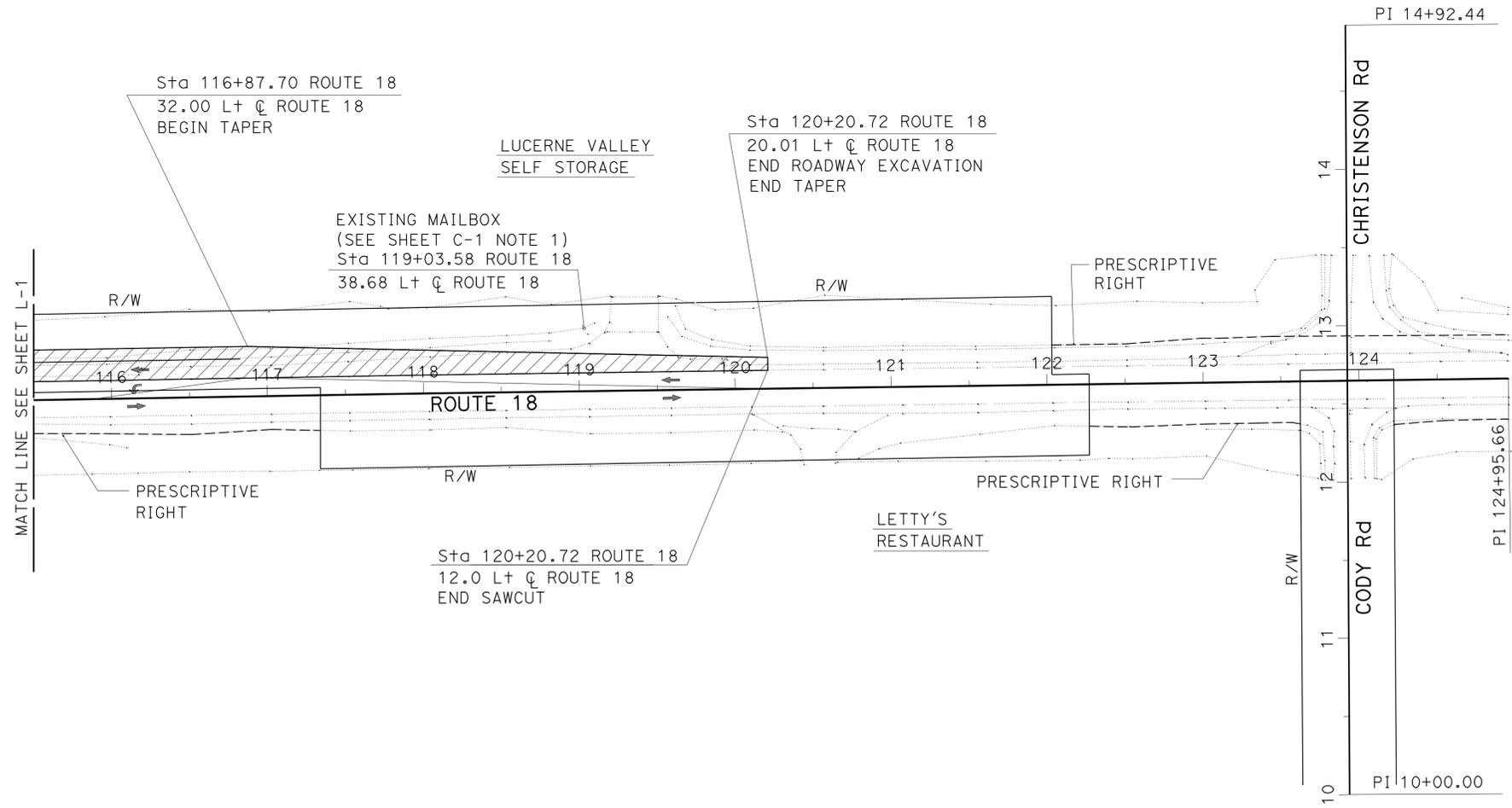
  

REGISTERED PROFESSIONAL ENGINEER
AWAIS SHEIKH
No. 65531
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

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.

**NOTE:**

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



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> TRAFFIC OPERATIONS	BEHZAD SEDIGHI	MICHAEL LEE CHEN	MICHAEL LEE CHEN
		CHECKED BY	DATE REVISED
		AWAIS SHEIKH	

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	5	20

	2-8-12
REGISTERED CIVIL ENGINEER	DATE
2-13-12	
PLANS APPROVAL DATE	

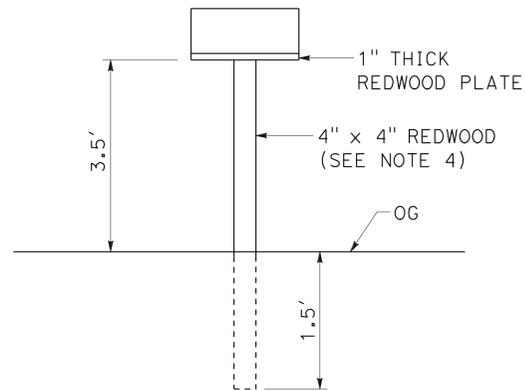
  

REGISTERED PROFESSIONAL ENGINEER
<b>AWAIS SHEIKH</b>
No. 65531
Exp. 9-30-13
CIVIL
STATE OF CALIFORNIA

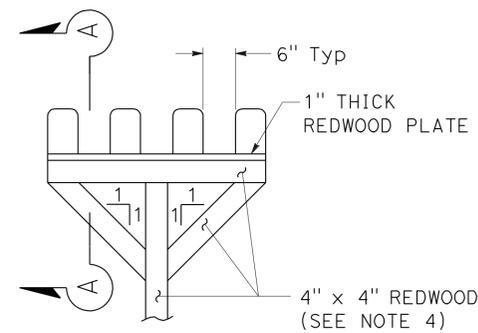
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

- EXISTING MAILBOX RELOCATION WILL BE DETERMINE BY THE RESIDENT ENGINEER.
- EACH MAILBOX SHALL BE NAILED OR SCREWED ON TO THE TOP PLATE.
- EACH TOP PLATE OR WOOD BLOCK SHALL BE NAILED OR SCREWED TO THE REDWOOD POST.
- 4" x 4" PRESSURE TREATED S4S TIMBER CAN BE USED IN PLACE OF REDWOOD.

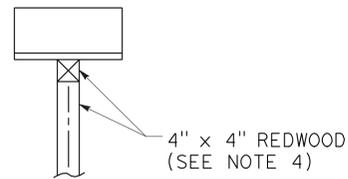


**RELOCATE MAILBOX**



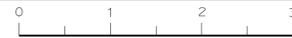
**MULTI-BOX INSTALLATION**

SIMILAR AT 2 AND 3 UNITS



**SECTION A-A**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED/DESIGNED BY	REVISOR
<b>Caltrans</b> TRAFFIC OPERATIONS	BEHZAD SEDIGHI	CHECKED BY	DATE
		MICHAEL LEE CHEN	
		AWAIS SHEIKH	



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	6	20

 2-8-12  
 REGISTERED CIVIL ENGINEER DATE  
 2-13-12  
 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  
**AWAIS SHEIKH**  
 No. 65531  
 Exp. 9-30-13  
 CIVIL  
 STATE OF CALIFORNIA

**NOTES:**

- ELEVATION SHOWN REFER TO THE TOP OF PIPE OR CONDUIT, UNLESS OTHERWISE STATED.
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND:**

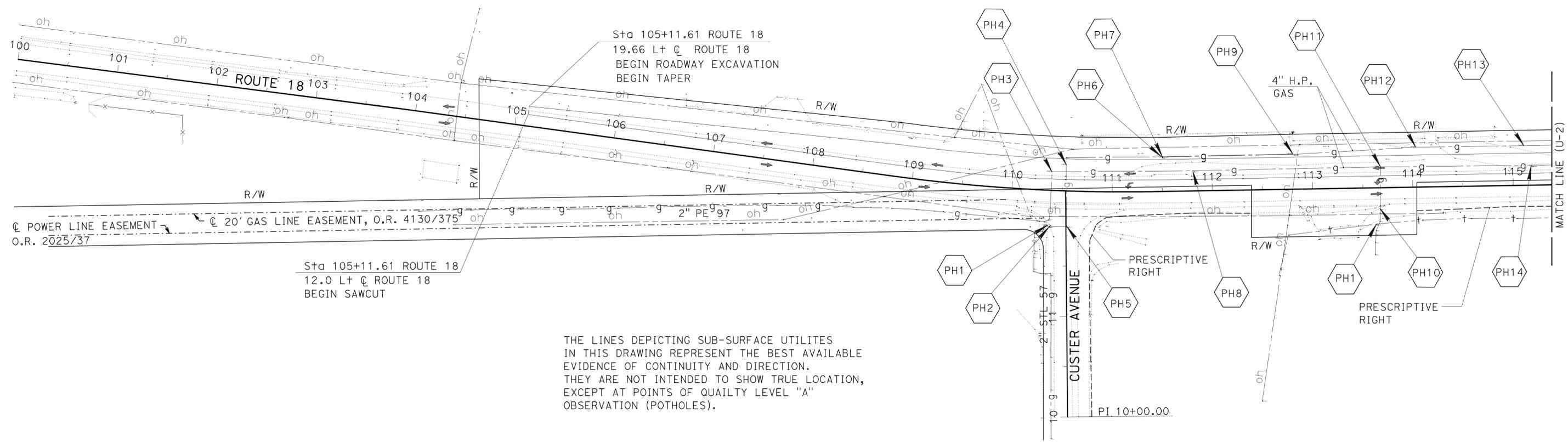
- g—g—g—g— EXISTING GAS LINE (SWG)
- oh—oh—oh—oh— EXISTING OVERHEAD (oh) CABLES
- t—t—t—t—t— EXISTING BURIED CABLE (BCAB) VERIZON

**POT HOLE TABLE (SOUTHWEST GAS)**

No.	STA	OFFSET	OG Elev	DEPTH	SIZE	NORTHING (Y)	EASTING (X)
PH#1	110+37.20	34.85 R+	2971.05	2.3	N/A	1985372.806	6868910.859
PH#2	110+38.73	36.20 R+	2971.36	3.2	N/A	1985371.306	6868912.416
PH#3	110+39.07	18.51 L+	2971.05	4.5	4"	1985426.035	6868915.06
PH#4	110+53.40	25.88 L+	2971.41	3.3	4"	1985432.843	6868929.483
PH#5	110+55.68	35.19 R+	2971.55	3.1	4"	1985371.728	6868929.68
PH#6	110+49.60	34.78 L+	2970.11	3.3	4"	1985441.038	6869025.14
PH#7	110+50.57	34.67 L+	2970.10	2.5	4"	1985440.783	6869025.121
PH#8	111+80.77	20.09 L+	2969.78	4.2	4"	1985426.973	6869055.607
PH#9	112+80.88	35.12 L+	2969.33	2.0	4"	1985443.280	6869155.469
PH#10	113+66.96	20.78 R+	2969.02	3.4	N/A	1985389.270	6869242.458
PH#11	113+68.08	20.88 L+	2968.46	4.4	4"	1985430.922	6869242.842
PH#12	114+3.55	39.82 L+	2968.70	2.9	4"	1985450.497	6869277.996
PH#13	115+11.45	39.47 L+	2968.66	3.4	4"	1985451.979	6869385.887
PH#14	115+18.35	19.70 L+	2967.59	3.9	4"	1985432.354	6869393.126
PH#15	116+09.00	39.94 L+	2968.04	3.5	4"	1985454.056	68699483.475
PH#16	116+85.72	21.29 L+	2966.48	3.8	2" TO 1" TEE	1985436.593	6869560.443
PH#17	117+66.50	19.83 L+	2966.65	4.5	2"	1985436.737	6869641.197
PH#18	117+66.81	39.57 L+	2966.76	2.4	4"	1985456.476	6869641.209
PH#19	118+42.26	20.47 L+	2966.10	4.3	2" GAS TEE	1985438.532	6869717.075
PH#20	118+42.13	33.46 R+	2966.37	3.9	2"	1985385.152	6869718.182
PH#21	119+77.43	40.03 L+	2965.07	3.2	4"	1985459.977	6869851.926
PH#22	119+77.46	20.45 L+	2964.78	4.3	2"	1985440.398	6869852.234

**POT HOLE TABLE (BURIED CABLE - VERIZON)**

No.	STA	OFFSET	OG Elev	DEPTH	SIZE	NORTHING (Y)	EASTING (X)
PH#1	113+63.18	36.04 R+	2970.42	2.3	3"	1985373.959	6869238.936
PH#2	116+84.74	34.16 R+	2966.84	2.7	3"	1985381.352	6869560.416
PH#3	118+44.52	31.71 R+	2966.39	2.16	1"	1985386.349	6869719.970
PH#4	118+81.72	50.51 L+	2965.20	2.9	4"	1985469.136	6869756.084
PH#5	119+77.61	47.75 L+	2965.07	3.3	4"	1985467.705	6869852.002
PH#6	120+77.60	27.89 R+	2963.88	3.4	1"	1985393.411	6869953.032



THE LINES DEPICTING SUB-SURFACE UTILITES IN THIS DRAWING REPRESENT THE BEST AVAILABLE EVIDENCE OF CONTINUITY AND DIRECTION. THEY ARE NOT INTENDED TO SHOW TRUE LOCATION, EXCEPT AT POINTS OF QUALITY LEVEL "A" OBSERVATION (POTHOLES).

APPROVED FOR UTILITY INFORMATION ONLY

**UTILITY PLAN**  
SCALE: 1"=50' **U-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC OPERATIONS  
 FUNCTIONAL SUPERVISOR: BEHZAD SEDIGHI  
 REVISIONS: MICHAEL LEE CHEN, AWAIS SHEIKH  
 CALCULATED/DESIGNED BY: AWAIS SHEIKH  
 CHECKED BY: AWAIS SHEIKH  
 REVISOR: MICHAEL LEE CHEN  
 DATE: 7/2/2010

LAST REVISION: 02-08-12  
 DATE PLOTTED => 08-FEB-2012  
 TIME PLOTTED => 08:49



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	8	20

REGISTERED CIVIL ENGINEER DATE 2-8-12  
 TRAN HOANG  
 No. 54996  
 Exp. 6-30-12  
 CIVIL  
 PLANS APPROVAL DATE 2-13-12

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.

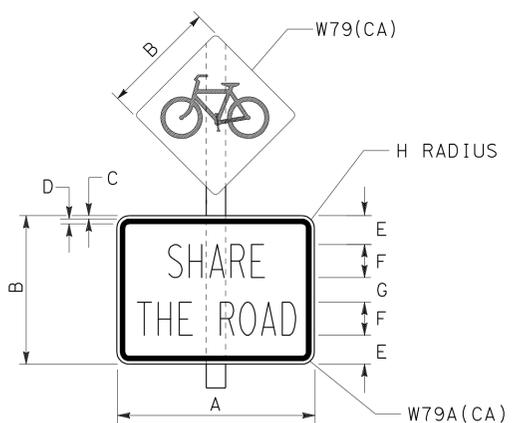
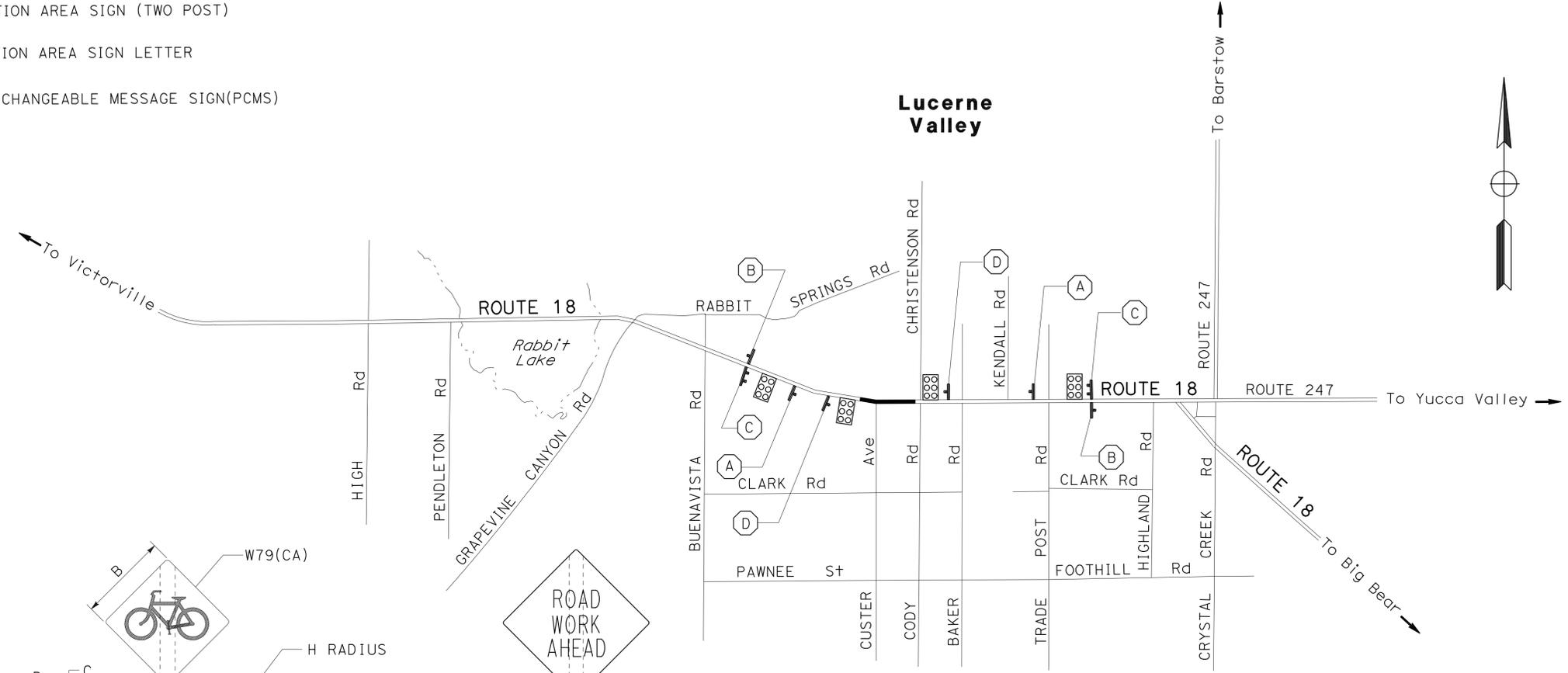
**NOTES:**

1. LOCATIONS OF CONSTRUCTION AREA SIGNS AND PCMS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. CONTRACTOR SHALL MAINTAIN AND PROVIDE TRAFFIC ACCESS TO LOCAL RESIDENCE AND BUSINESSES AT ALL TIMES.
3. USE TRAFFIC CONTROL SYSTEM STANDARD PLAN T13 FOR PLACEMENT AND REMOVAL OF TEMPORARY RAILING, AND CRASH CUSHIONS.
4. DISPLAY "NARROW LANE AHEAD", AND "LOWER YOUR SPEED", ON THE PCMS' SHOWN ON PLAN.

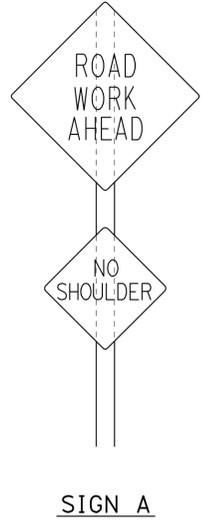
**LEGEND:**

- CONSTRUCTION AREA
- ↑ CONSTRUCTION AREA SIGN (ONE POST)
- ↑↑ CONSTRUCTION AREA SIGN (TWO POST)
- ⊗ CONSTRUCTION AREA SIGN LETTER
- ▣ PORTABLE CHANGEABLE MESSAGE SIGN(PCMS)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 Caltrans® TRAFFIC DESIGN B  
 FUNCTIONAL SUPERVISOR LARRY SARTORI  
 CALCULATED/DESIGNED BY CHECKED BY  
 DARYUSH NAMI TRAN HOANG  
 REVISED BY DATE REVISED



SIGN D SIZE	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
36" X 30"	36	30	5/8	7/8	6-1/2	6C	5	2-1/4



**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

SIGN No. ⊗	SIGN CODE	SIGN MESSAGE	PANEL SIZE	NUMBER OF POSTS AND SIZE	No. OF SIGNS
A	W20-1	ROAD WORK AHEAD	48" x 48"	1 - 6" x 6"	2
	C31A(CA)	NO SHOULDER	30" x 30"		
B	G20-2	END ROAD WORK	48" x 24"	1 - 4" x 6"	2
C	C40(CA)	TRAFFIC FINES DOUBLE IN CONSTRUCTION ZONES	108" x 42"	2 - 6" x 6"	2
D	W79(CA) SPECIAL	BICYCLE	30" x 30"	1 - 6" x 6"	2
	W79A(CA) SPECIAL	SHARE THE ROAD	36" x 30"		

**CONSTRUCTION AREA SIGNS**  
NO SCALE **CS-1**

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	9	20

REGISTERED CIVIL ENGINEER	DATE
<i>Tran Hoang</i>	2-8-12
PLANS APPROVAL DATE	
	2-13-12

REGISTERED PROFESSIONAL ENGINEER
TRAN HOANG
No. 54996
Exp. 6-30-12
CIVIL

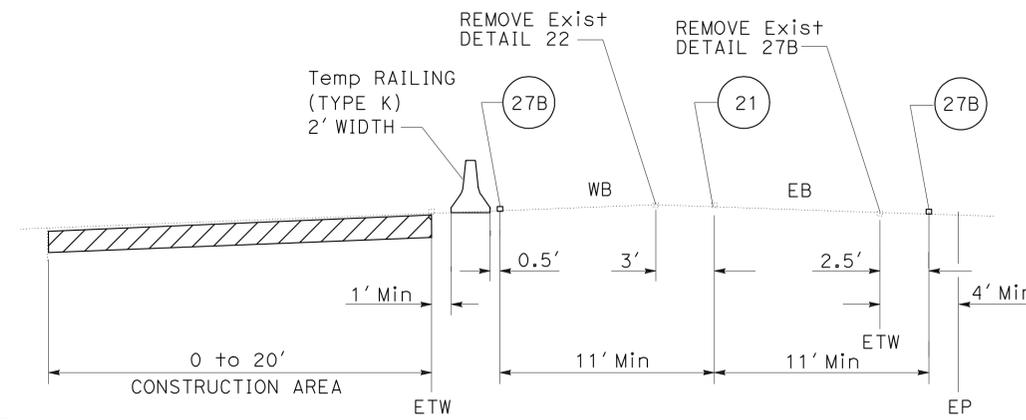
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**LEGEND:**

- DIRECTION OF TRAVEL
- TEMPORARY RAILING (TYPE K)
- TEMPORARY RAILING (TYPE K) 10 FEET LENGTH
- TEMPORARY STRIPING (PAINT) DETAIL No.
- CHANNELIZERS @ 15' SPACING (OR AS NOTED)
- TEMPORARY CRASH CUSHION (SAND FILLED) ARRAY 'TS14'
- CONSTRUCTION AREA

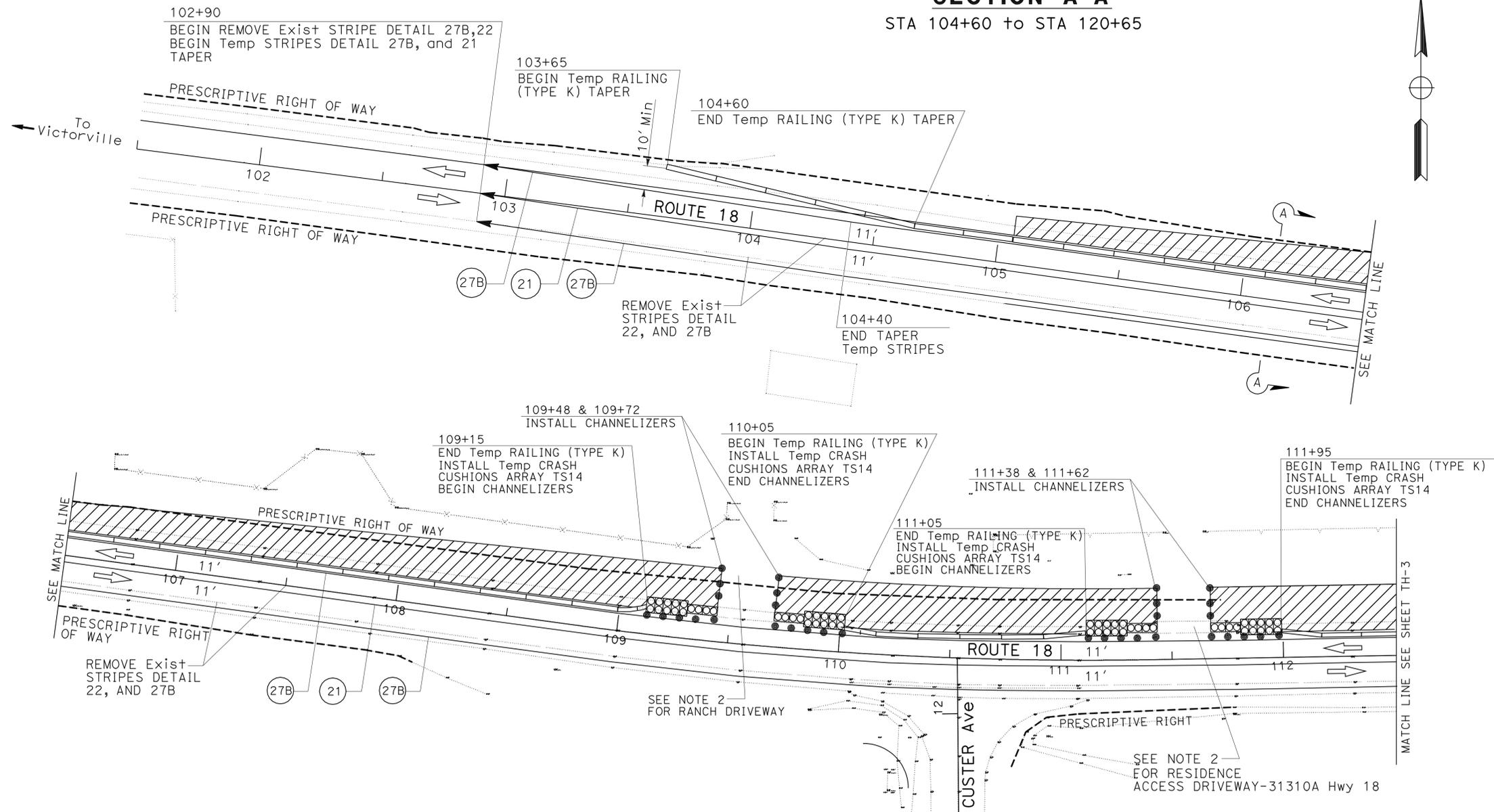
**NOTES:**

1. CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES AND RESIDENCE AT ALL TIMES.
2. USE FLAGGER TRAFFIC CONTROLLED SYSTEM FOR THE DRIVEWAYS AND ACCESS' RE-CONSTRUCTION.
3. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**SECTION A-A**

STA 104+60 to STA 120+65



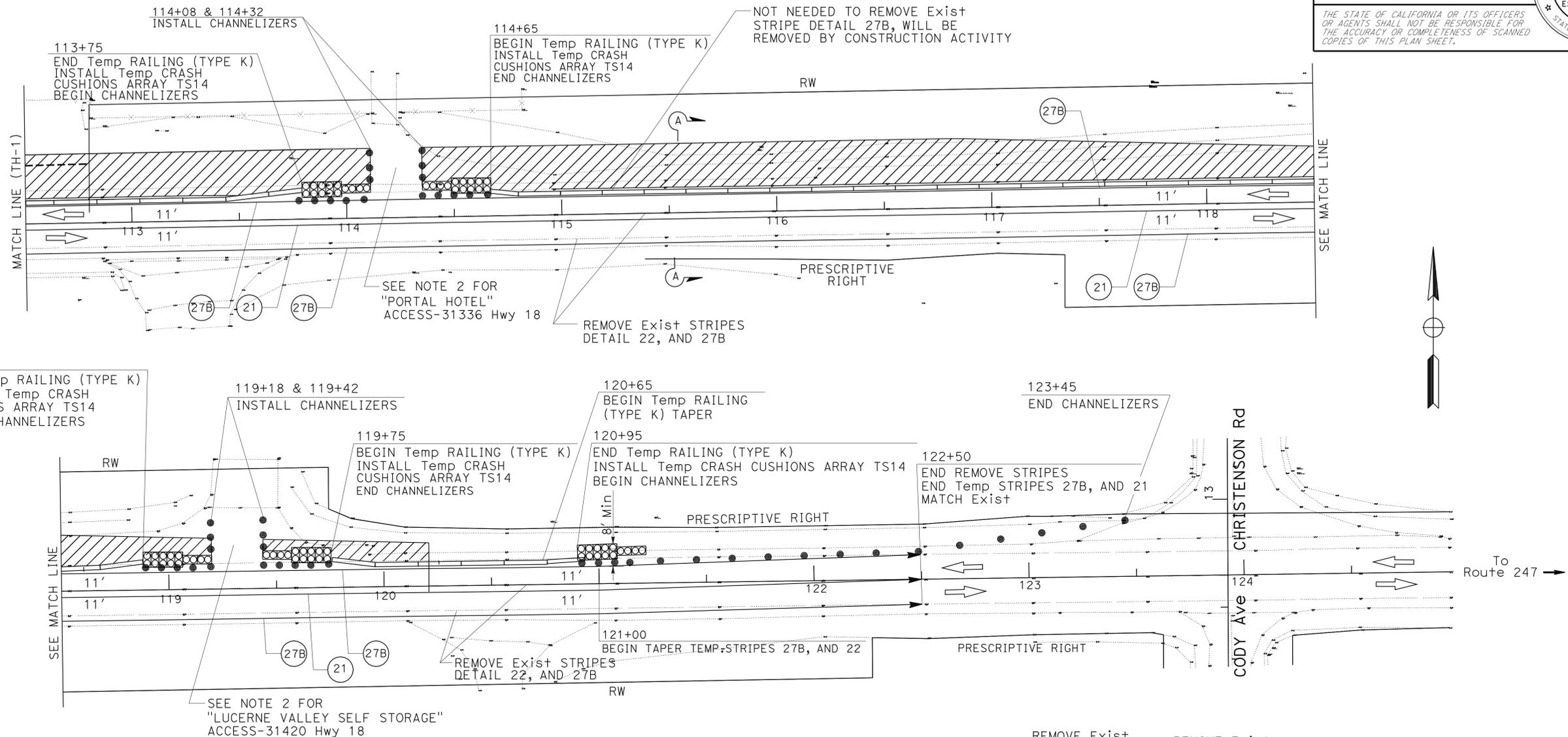
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN B  
 FUNCTIONAL SUPERVISOR: LARRY SARTORI  
 CALCULATED/DESIGNED BY: TRAN HOANG  
 CHECKED BY: DARYUSH NAMI  
 REVISED BY: DATE REVISIONS

APPROVED FOR TRAFFIC HANDLING WORK ONLY

**TRAFFIC HANDLING PLAN**  
NO SCALE **TH-1**

LAST REVISION: DATE PLOTTED => 08-FEB-2012  
 TIME PLOTTED => 08:50

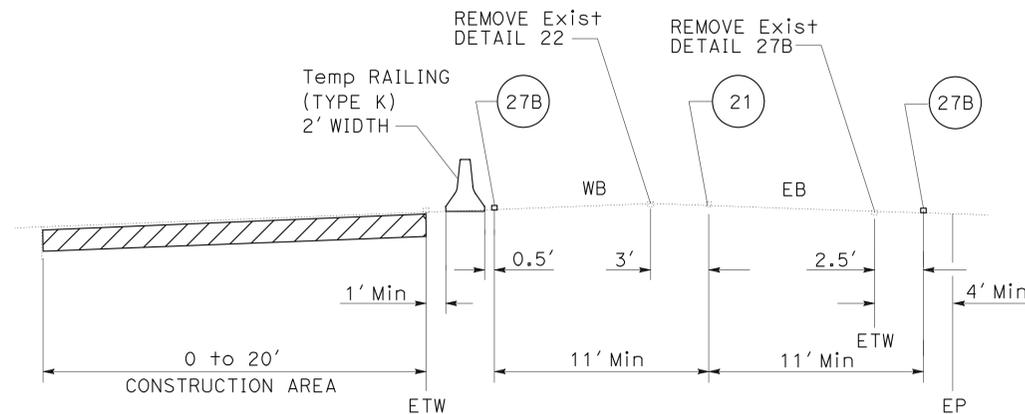
**NOTE:**  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT  
 RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



**TRAFFIC HANDLING QUANTITIES**

TEMPORARY TRAFFIC STRIPE (PAINT)	CHANNELIZERS	PORTABLE CHANGEABLE MESSAGE SIGN	TEMPORARY RAILING TYPE K	TEMPORARY RAILING TYPE K REFLECTORS (N)	REMOVE TRAFFIC STRIPES (PAINT) (N)	TEMPORARY CRASH CUSHIONS SAND FILLED
LF	EACH	EACH	LF	EACH	LF	EACH
5880	82	4	1370	70	5880	126

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



**SECTION A-A**  
 STA 104+60 to STA 120+65

**TRAFFIC HANDLING PLAN**  
 NO SCALE **TH-2**

APPROVED FOR TRAFFIC HANDLING WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	11	20

<i>Tran Hoang</i>	2-8-12
REGISTERED CIVIL ENGINEER	DATE
2-13-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
TRAN HOANG
No. 54996
Exp. 6-30-12
CIVIL

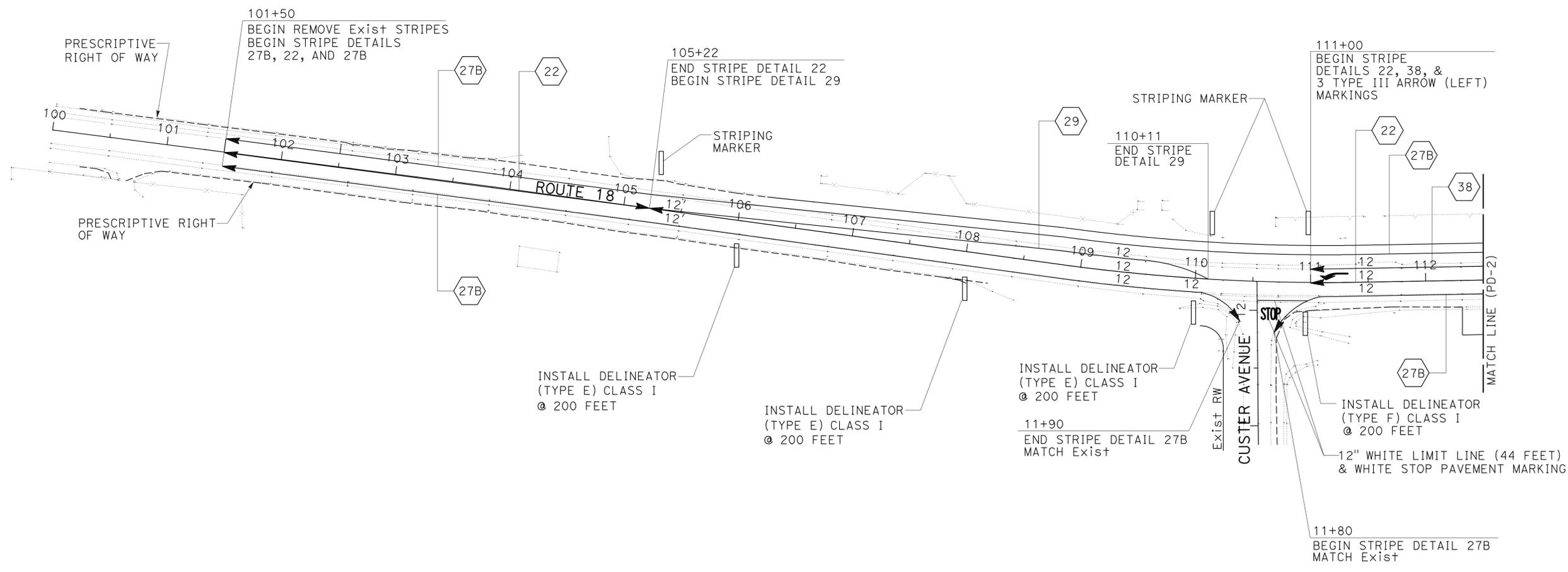
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



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

- LEGEND:**
- ⬡ (xx) STRIPING DETAIL No.
  - STOP "STOP" MARKING
  - ↩ TYPE III ARROW (LEFT)
  - ▭ DELINEATOR CLASS I

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN B  
 FUNCTIONAL SUPERVISOR: LARRY SARTORI  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 DARYUSH NAMI: TRAN HOANG  
 REVISED BY: DATE REVISED:



APPROVED FOR PAVEMENT DELINEATION WORK ONLY

**PAVEMENT DELINEATION PLAN**  
SCALE: 1"=50' **PD-1**

LAST REVISION:   
 DATE PLOTTED => 08-FEB-2012   
 TIME PLOTTED => 08:50

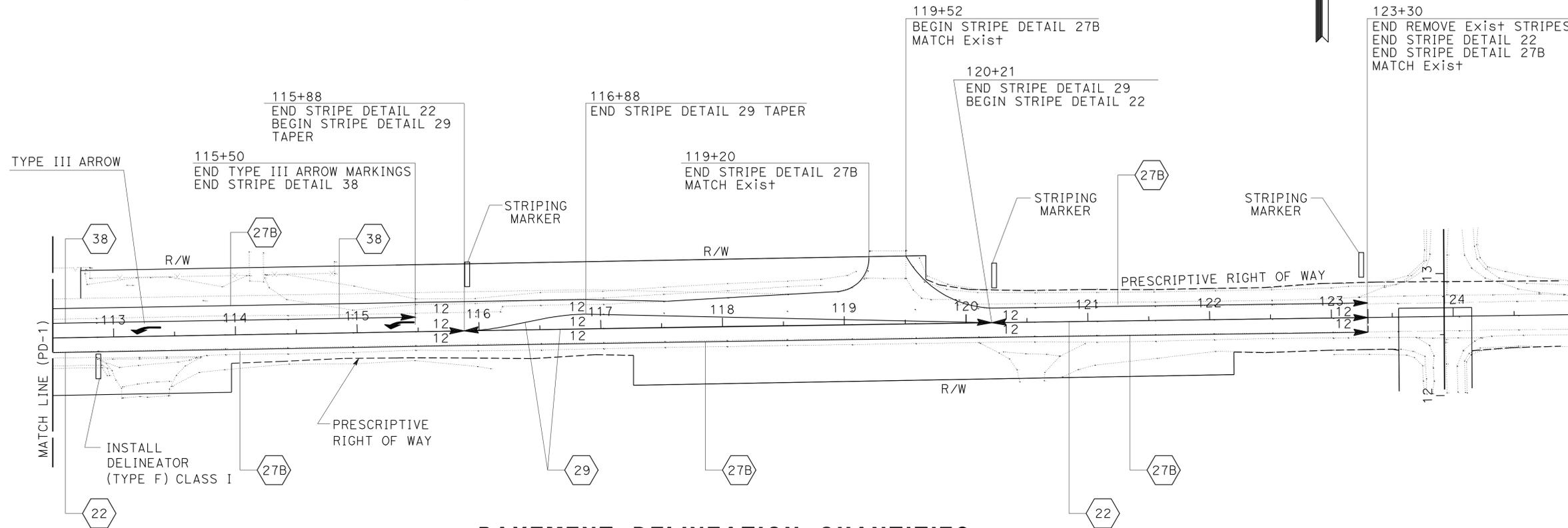
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	12	20

REGISTERED CIVIL ENGINEER **TRAN HOANG** No. 54996 Exp. 6-30-12  
 DATE 2-8-12  
 PLANS APPROVAL DATE 2-13-12

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:**
- ⬡ (xx) STRIPING DETAIL No.
  - STOP "STOP" MARKING
  - ➡ TYPE III ARROW (LEFT)
  - ▬ DELINEATOR CLASS I



**PAVEMENT DELINEATION QUANTITIES**

LOCATION & DIRECTION				DETAIL No. OR PAVEMENT MARKING	REMOVE THERMOPLASTIC STRIPES		REMOVE PAVEMENT MARKER	PAVEMENT MARKER		THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)			THERMOPLASTIC PAVEMENT MARKING
					YELLOW Hazardous Waste	WHITE		RETROREFLECTIVE REFLECTIVE		4" YELLOW	4" WHITE	8" WHITE	
FROM STA	TO STA	LOCATION	Dir		LF	EA	D	G	EA	EA	EA	SQFT	
101+50	123+30	Rte 18	EB	27B									
101+50	123+30	Rte 18	WB	27B									
101+50	105+22	Rte 18	EB	22	372	34	34			372			
105+22	110+11	Rte 18	EB	29	489	44	44			978			
110+11	111+00	Rte 18	EB	22	89	10							
111+00	115+50	Rte 18	WB	TYPE III ARROW (LEFT)								126	
12+07	12+07	CUSTER	FNBT	Limit Line (44')								44	
12+00	12+00	CUSTER	FNBT	STOP								22	
111+00	115+50	Rte 18	WB	38				22			450		
111+00	115+88	Rte 18	EB	22	488	44	44			488			
115+88	120+21	Rte 18	WB	29	433	40	40			866			
120+21	123+30	Rte 18	EB	22	309	30	30			309			
SUB TOTAL					2091	4360	202	192	22	3013	4360	450	192
SHEET TOTAL					2180	4360	202	214		7823		192	

**DELINEATORS AND MARKERS**

SHEET	DELINEATOR CLASS I		STRIPING MARKER
	(TYPE F)	(TYPE E)	
	EA	EA	
PD-1	1	3	4
PD-2	1		3
SUBTOTAL		5	7
TOTAL		5	7

**PAVEMENT DELINEATION PLAN**  
 SCALE: 1"=50'  
**PD-2**

APPROVED FOR PAVEMENT DELINEATION WORK ONLY

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	13	20

<i>Tran Hoang</i>	2-8-12
REGISTERED CIVIL ENGINEER	DATE
2-13-12	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
TRAN HOANG
No. 54996
Exp. 6-30-12
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.

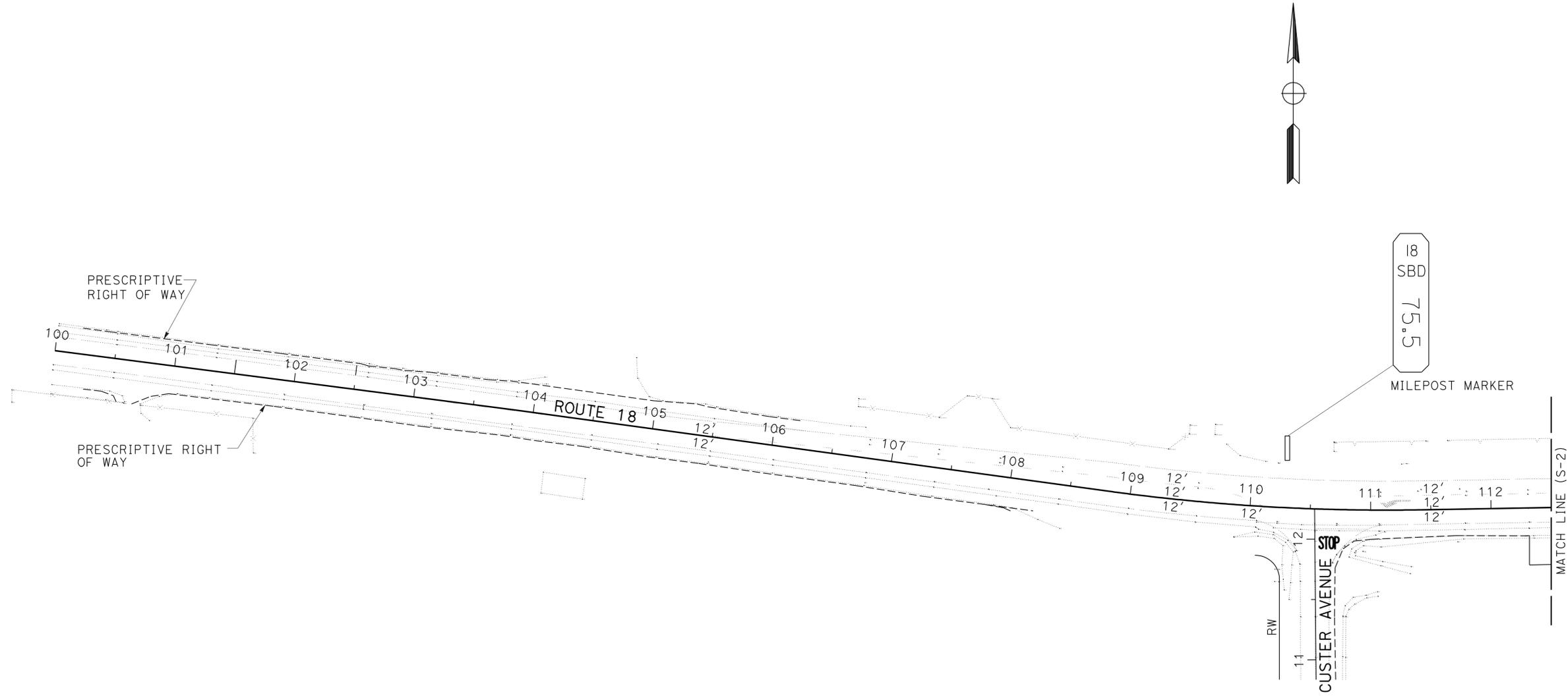
**NOTE:**

- REFER TO STANDARD PLAN SHEETS A73A, A73B, AND A73C FOR MARKER AND DELINEATOR INFORMATION
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LEGEND:**

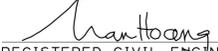
▭ DELINEATOR CLASS I

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
<b>Caltrans</b> TRAFFIC DESIGN B
FUNCTIONAL SUPERVISOR LARRY SARTORI
CALCULATED/DESIGNED BY CHECKED BY
DARYUSH NAMI TRAN HOANG
REVISED BY DATE REVISED



APPROVED FOR SIGN WORK ONLY

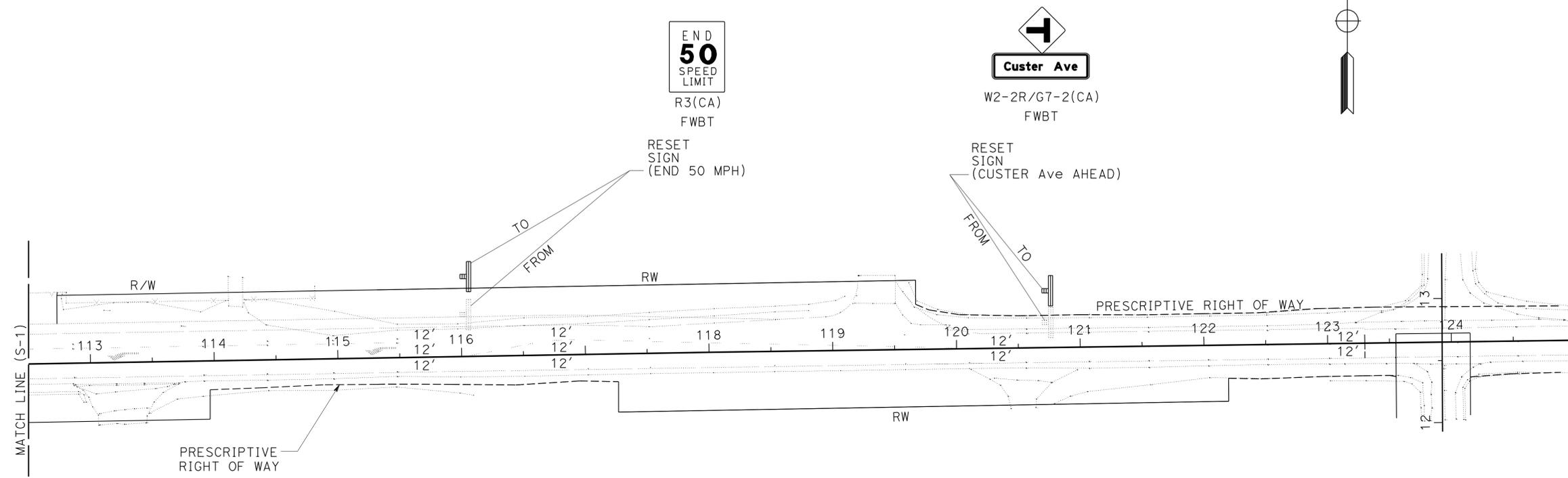
**SIGN PLAN**  
NO SCALE **S-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	14	20
			2-8-12	DATE	
REGISTERED CIVIL ENGINEER			DATE		
PLANS APPROVAL DATE			2-13-12		
<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>					



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

**LEGEND:**  
 ROADSIDE SIGN (ONE POST)



**SIGN QUANTITIES**

SHEET	RESET ROADSIDE SIGN	MILEPOST MARKER
	EA	EA
S-1		1
S-2	2	
TOTAL	2	1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN B  
 FUNCTIONAL SUPERVISOR: LARRY SARTORI  
 CALCULATED/DESIGNED BY: TRAN HOANG  
 CHECKED BY: DARYUSH NAMI  
 REVISED BY: DATE REVISIONS  
 REVISIONS:

APPROVED FOR SIGN WORK ONLY

**SIGN PLAN**  
NO SCALE **S-2**

LAST REVISION DATE PLOTTED => 08-FEB-2012  
 02-08-12 TIME PLOTTED => 08:50

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**® TRAFFIC OPERATIONS

FUNCTIONAL SUPERVISOR  
 BEHZAD SEDIGHI

CALCULATED/DESIGNED BY  
 CHECKED BY

MICHAEL LEE CHEN  
 AWAIS SHEIKH

REVISED BY  
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	15	20

 2-8-12  
 REGISTERED CIVIL ENGINEER DATE

2-13-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
**AWAIS SHEIKH**  
 No. 65531  
 Exp. 9-30-13  
 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.

### ROADWAY QUANTITIES

LOCATION ROUTE 18	ROADWAY EXCAVATION	HOT MIX ASPHALT (HMA) (TYPE C)	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED) (RHMA) (O)	LIQUID ASPHALT (PRIME COAT)	TACK COAT	RELOCATE MAILBOX	MONUMENT
	CY	TON	TON	TON	TON	EA	EA
Sta 105+11.61 TO Sta 120+21.03	1820	2500	300	2	2	5	1
TOTAL	1820	2500	300	2	2	5	1

## SUMMARY OF QUANTITIES

### Q-1

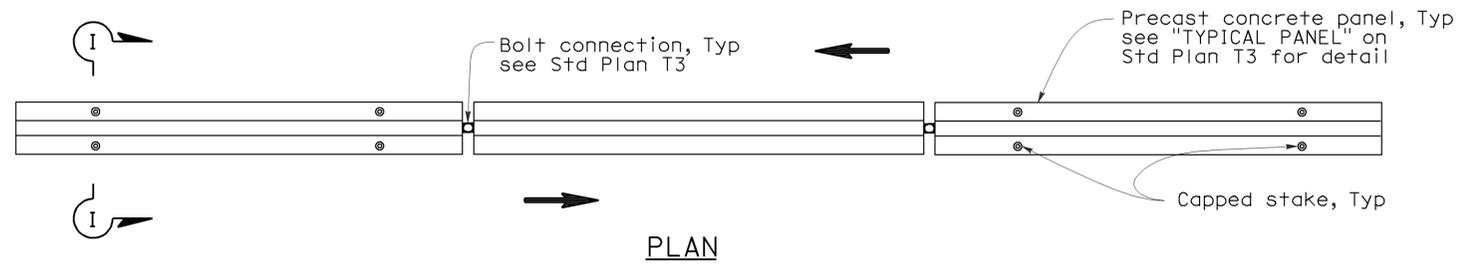
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	18	75.3/75.7	16	20

Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

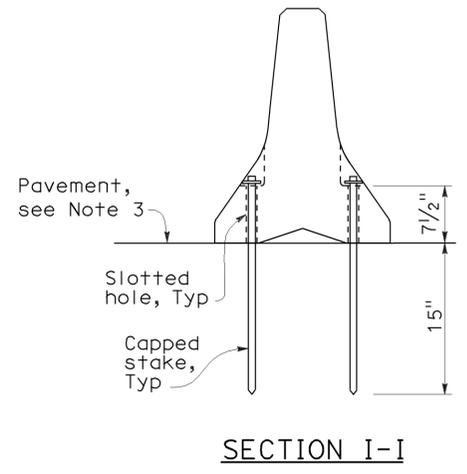
May 20, 2011  
PLANS APPROVAL DATE

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To accompany plans dated 2-13-12

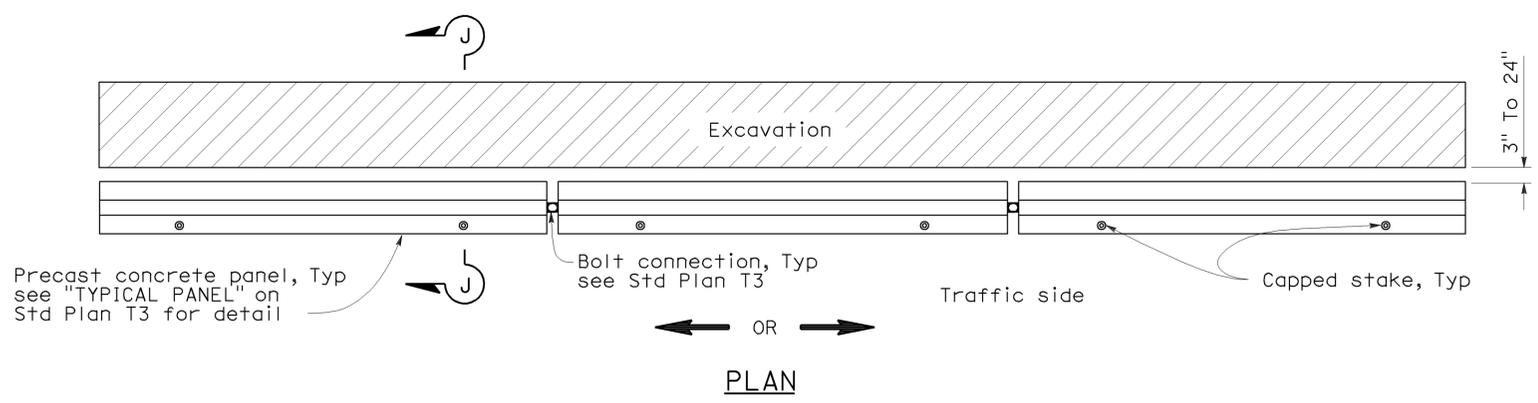


**RAILING STAKING CONFIGURATION FOR TWO-WAY TRAFFIC**  
See Note 1

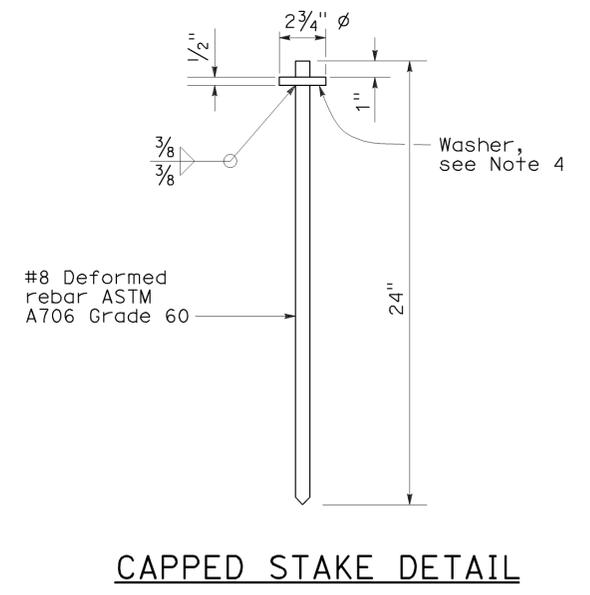
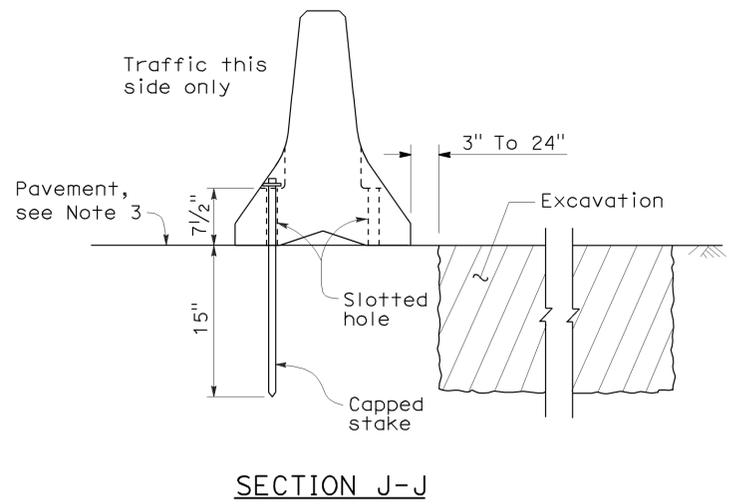


**NOTES:**

1. Where Type K Temporary Railing is placed as a temporary or long term barrier in two-way traffic on highways with less than 24" from the edge of traveled way, use four capped stakes per every other panel with end panels staked.
2. Where Type K Temporary Railing is placed 3" to 24" from the edge of an excavation on highways, use two capped stakes along the traffic side.
3. Staked Type K Temporary Railing must be supported by at least 4" thick concrete, hot mix asphalt or existing asphalt concrete pavement.
4. The minimum yield strength for the washer must be 60,000 psi.
5. Direction of adjacent traffic indicated by  $\Rightarrow$ .



**RAILING STAKING CONFIGURATION ADJACENT TO AN EXCAVATION**  
See Note 2



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY RAILING  
(TYPE K)**

NO SCALE

NSP T3A DATED MAY 20, 2011 SUPPLEMENTS  
THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T3A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	18	75.3/75.7	17	20

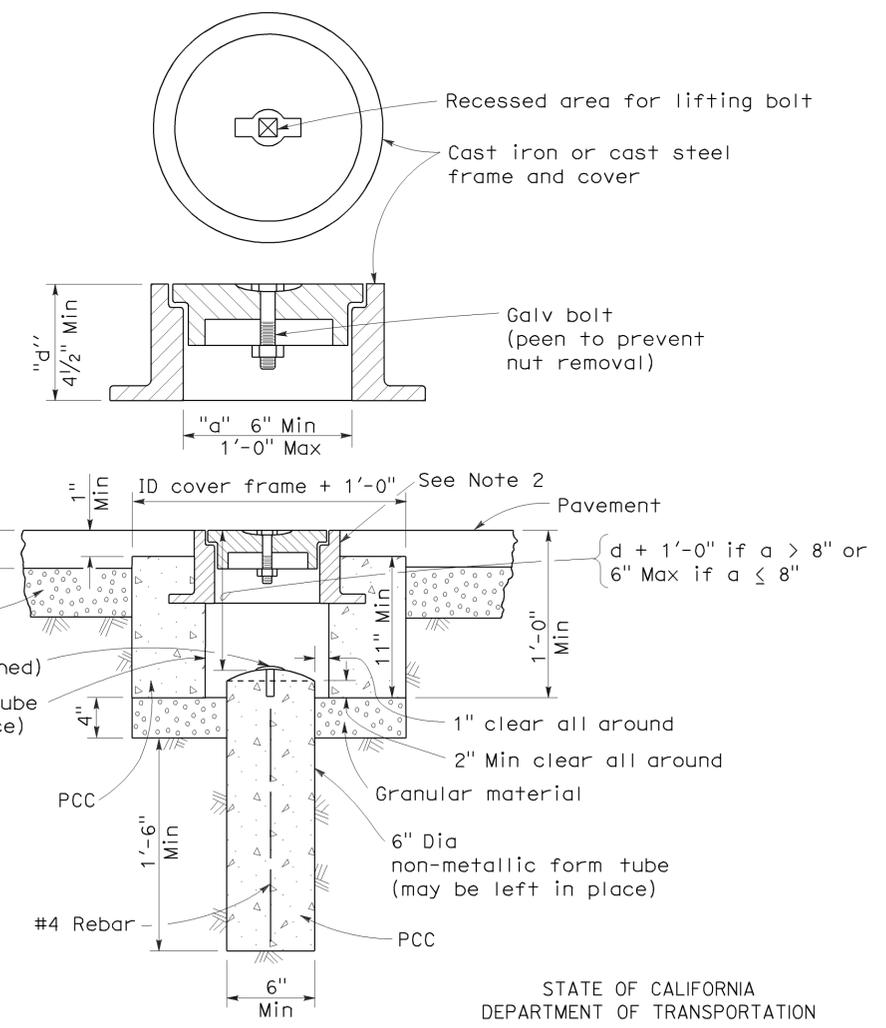
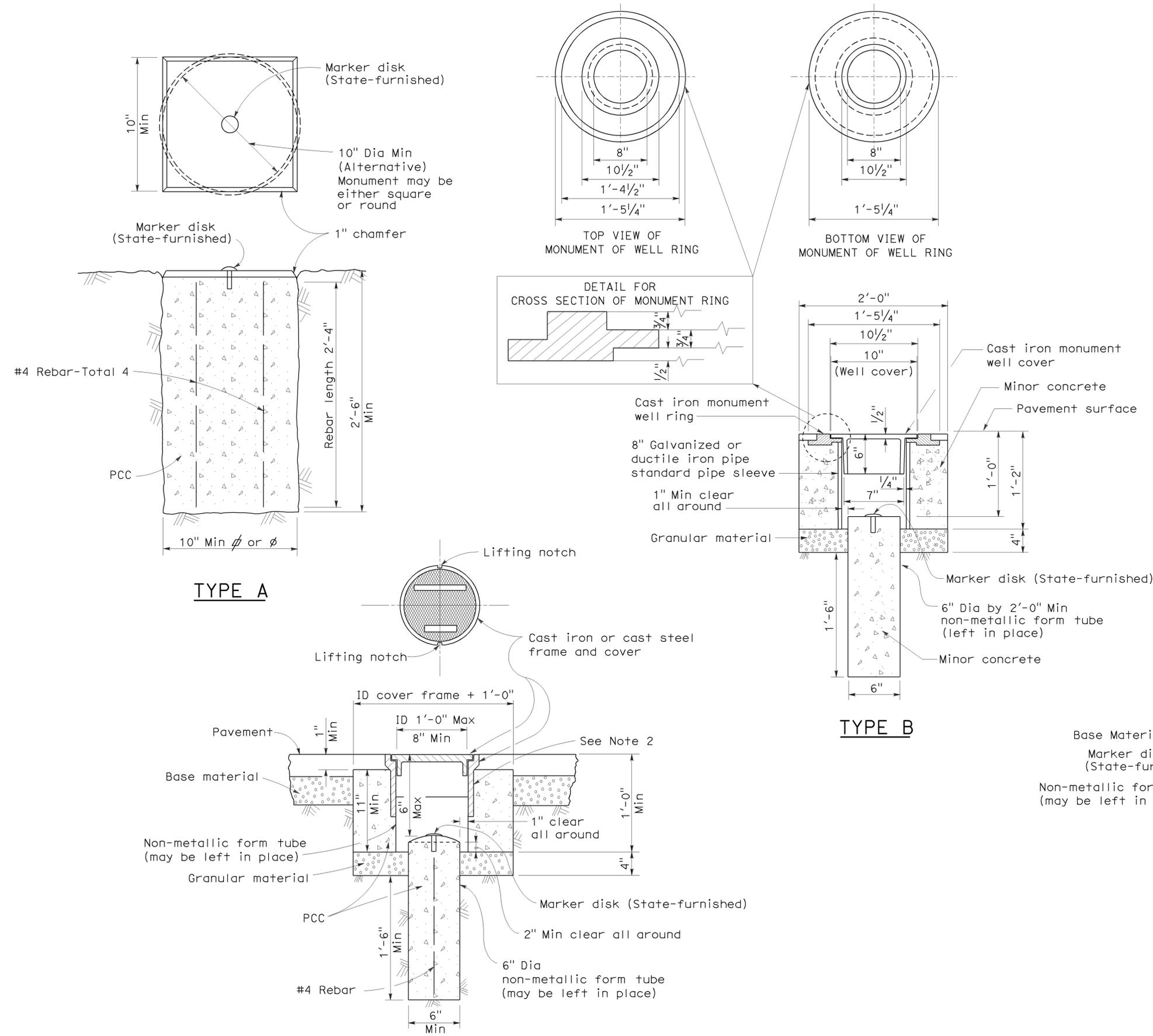
  

<i>Mark S. Turner</i>	
PROFESSIONAL LAND SURVEYOR	
June 30, 2006	
PLANS APPROVAL DATE	
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>	

To accompany plans dated 2-13-12

**NOTES:**

1. The configuration of the cast iron or cast steel frame and cover may vary from that shown.
2. Frame shall be embedded in the concrete a minimum of 3".
3. Type D monument shall be either Alternative No. 1 or Alternative No. 2 at the contractor's option.
4. All portland cement concrete shall be Class 2 or minor concrete with 1" maximum aggregate.



**TYPE D SURVEY MONUMENTS**  
Alternative No. 2  
NO SCALE

RSP A74 DATED JUNE 30, 2006 SUPERSEDES STANDARD PLAN DATED MAY 1, 2006 - PAGE 28 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP A74**

2006 REVISED STANDARD PLAN RSP A74

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	18	75.3/75.7	18	20

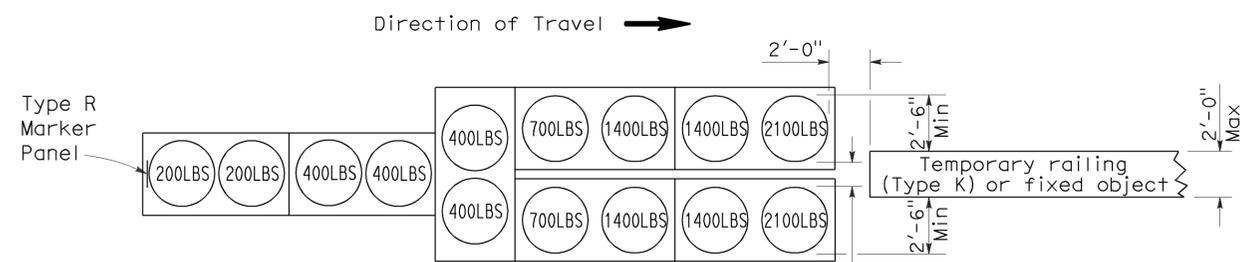
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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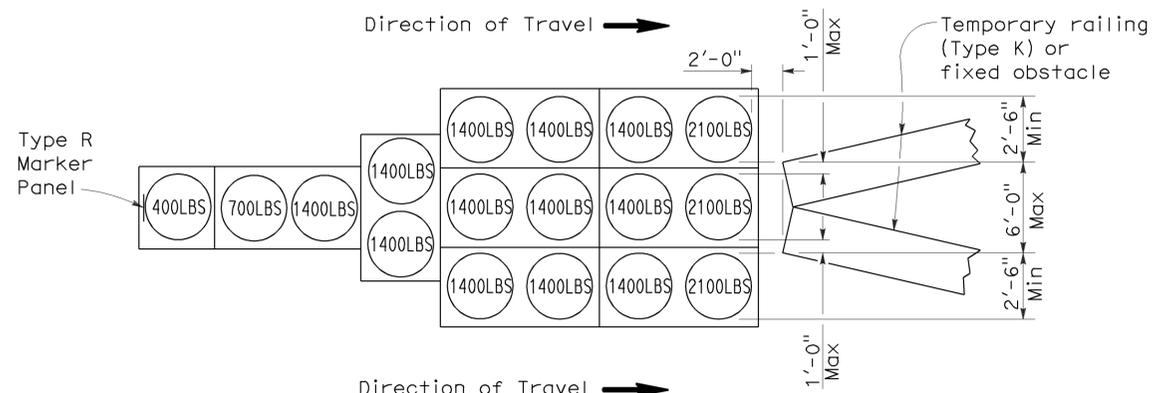
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 2-13-12



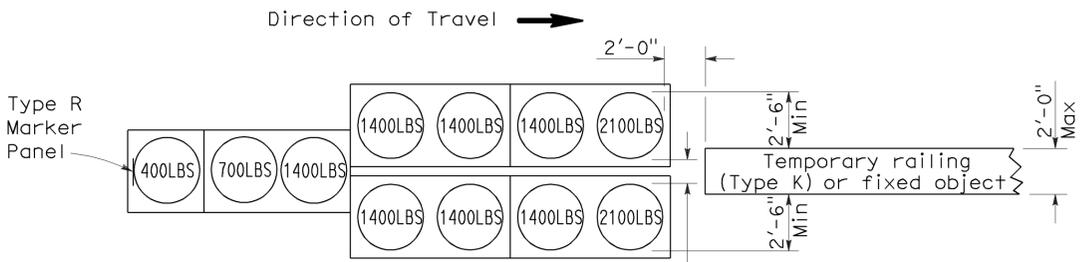
**ARRAY 'TU14'**

Approach speed 45 mph or more



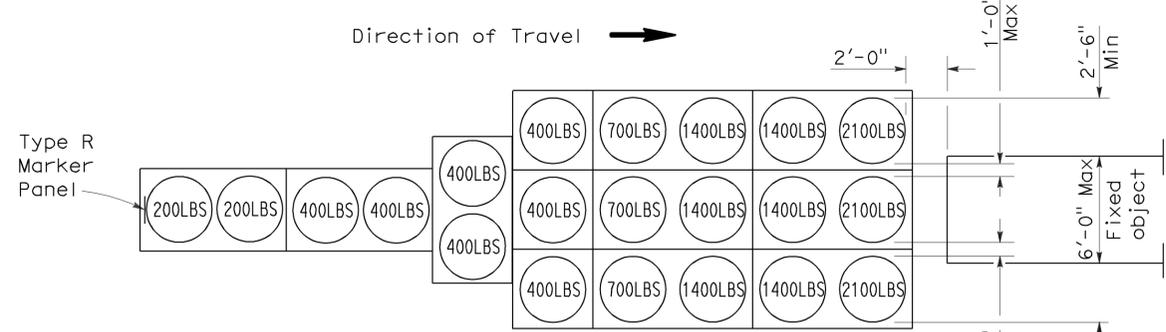
**ARRAY 'TU17'**

Approach speed less than 45 mph



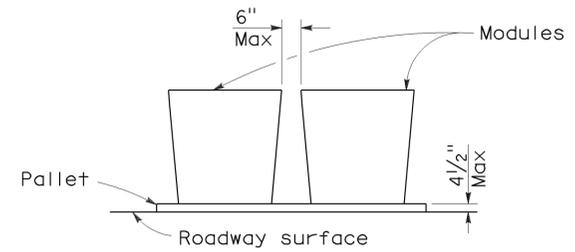
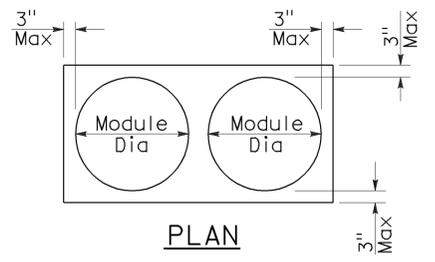
**ARRAY 'TU11'**

Approach speed less than 45 mph



**ARRAY 'TU21'**

Approach speed 45 mph or more



**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A  
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1A**

2006 REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	18	75.3/75.7	19	20

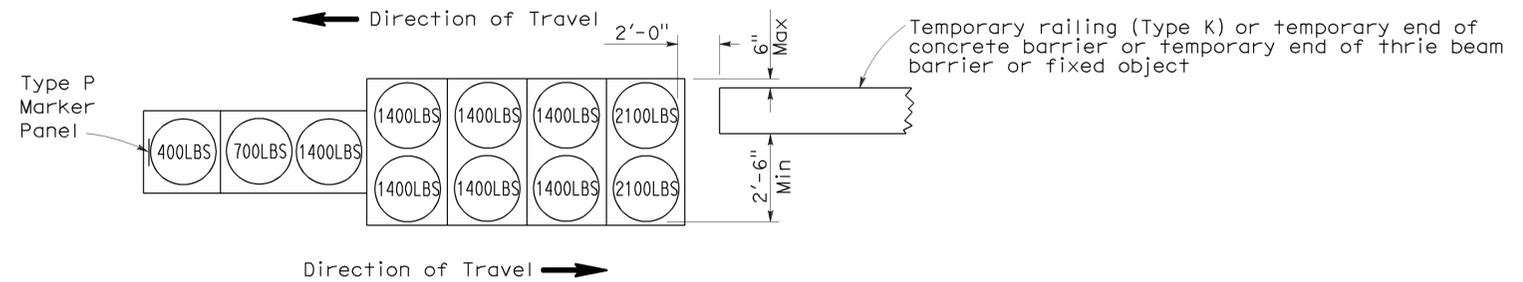
Randell D. Hiatt  
REGISTERED CIVIL ENGINEER

June 6, 2008  
PLANS APPROVAL DATE

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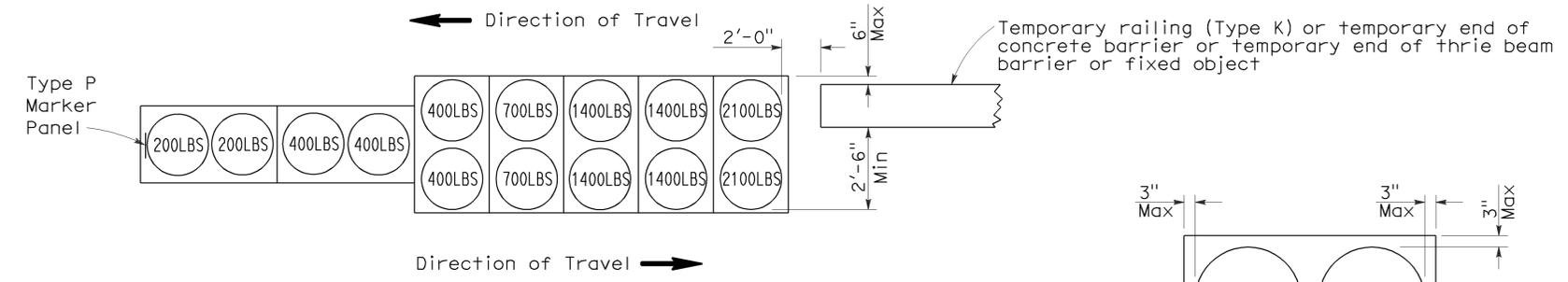
REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. C50200  
Exp. 6-30-09  
CIVIL  
STATE OF CALIFORNIA

To accompany plans dated 2-13-12



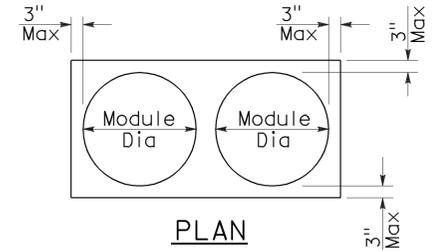
**ARRAY 'TB11'**

Approach speed less than 45 mph

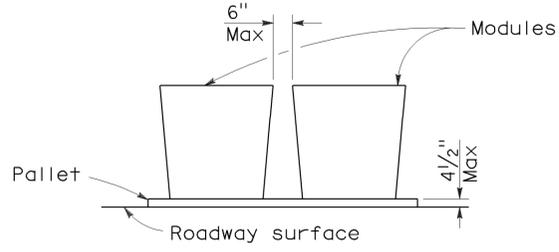


**ARRAY 'TB14'**

Approach speed 45 mph or more



PLAN



ELEVATION

**CRASH CUSHION PALLET DETAIL**

See Note 7

**NOTES:**

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B  
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T1B**

2006 REVISED STANDARD PLAN RSP T1B

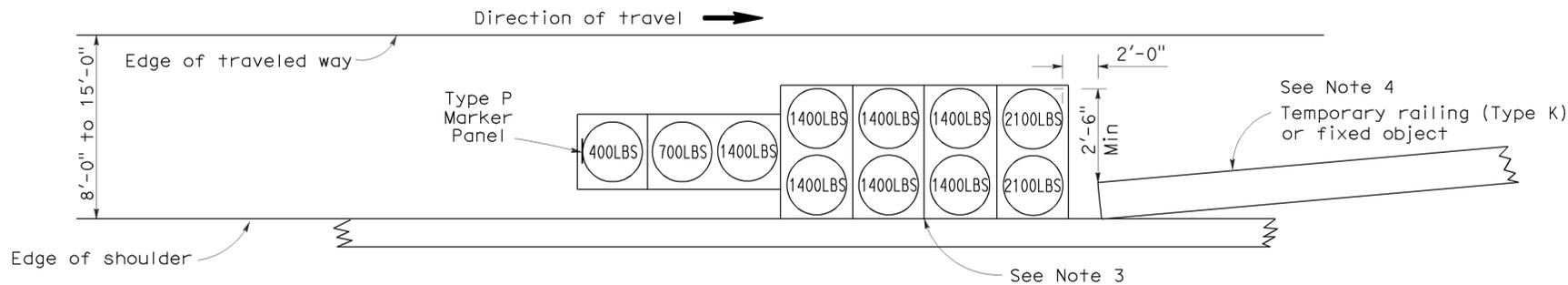
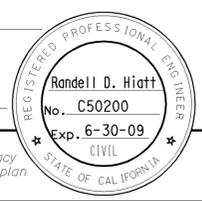
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	18	75.3/75.7	20	20

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

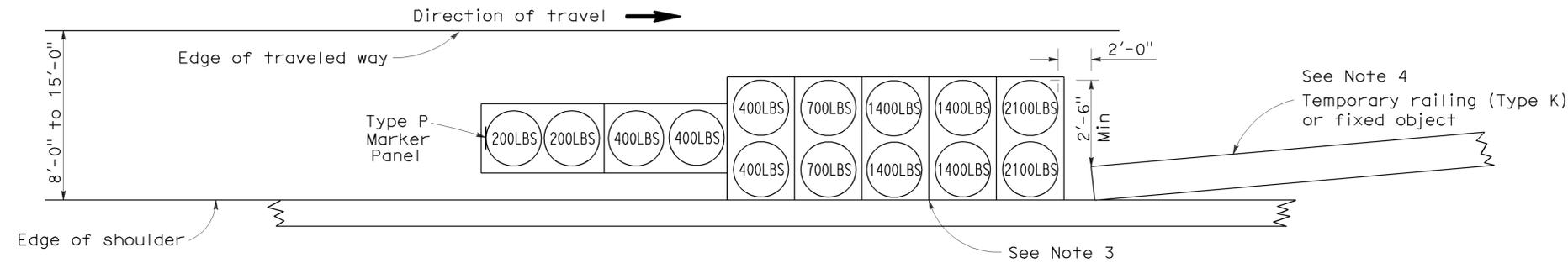
June 6, 2008  
PLANS APPROVAL DATE

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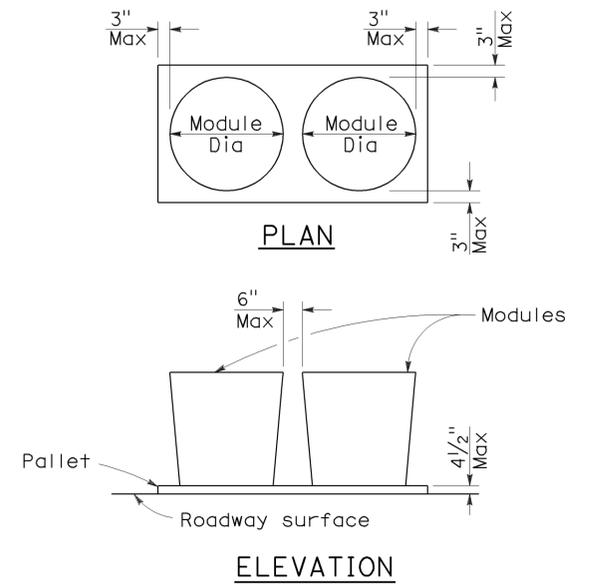
To accompany plans dated 2-13-12



**ARRAY 'TS11'**  
Approach speed less than 45 mph  
See Note 9



**ARRAY 'TS14'**  
Approach speed 45 mph or more  
See Note 9



**CRASH CUSHION PALLET DETAIL**  
See Note 11

**NOTES:**

- (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
- All sand weights are nominal.
- The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
- If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CRASH CUSHION,  
SAND FILLED  
(SHOULDER INSTALLATIONS)**

NO SCALE  
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2  
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

**REVISED STANDARD PLAN RSP T2**

2006 REVISED STANDARD PLAN RSP T2