

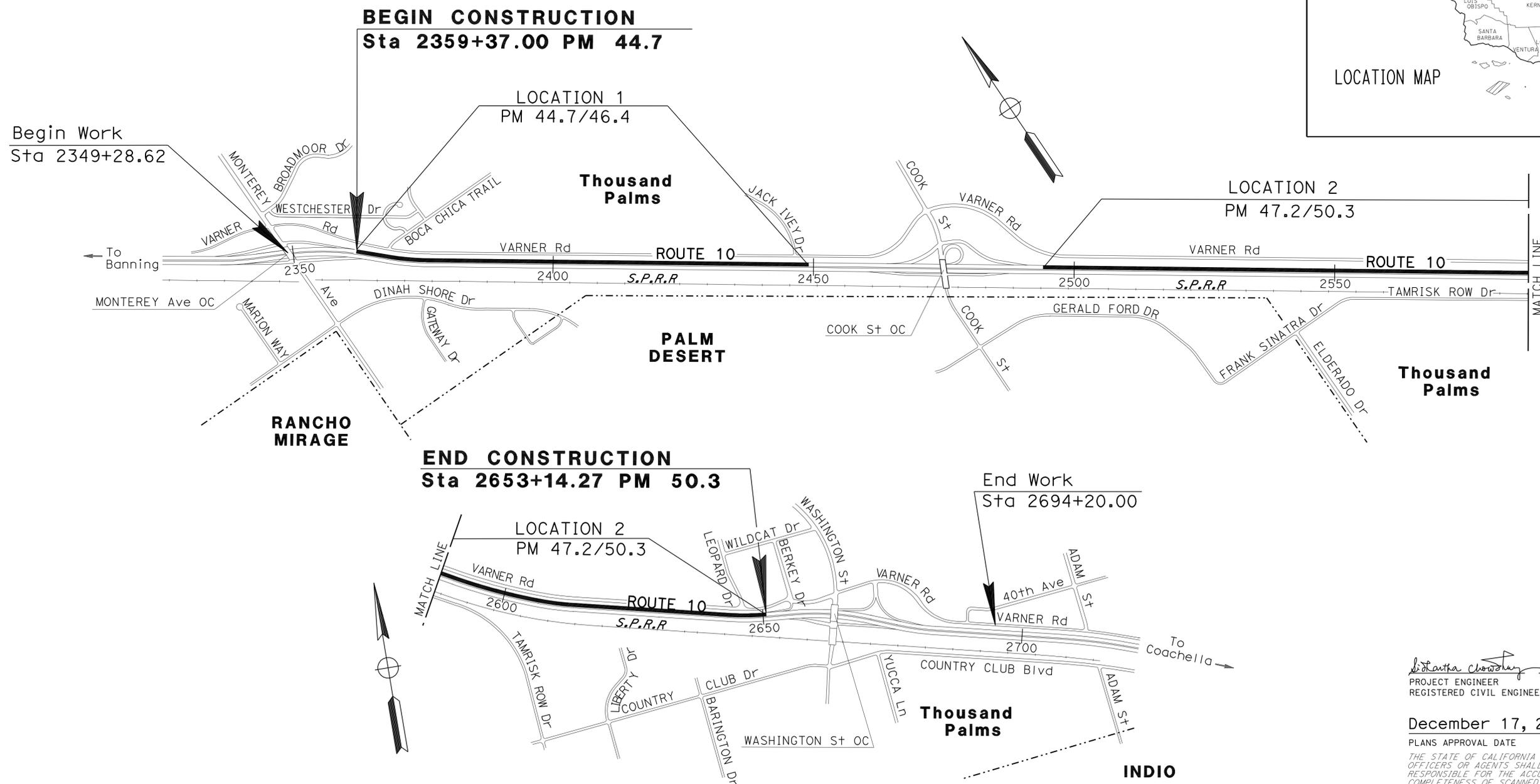
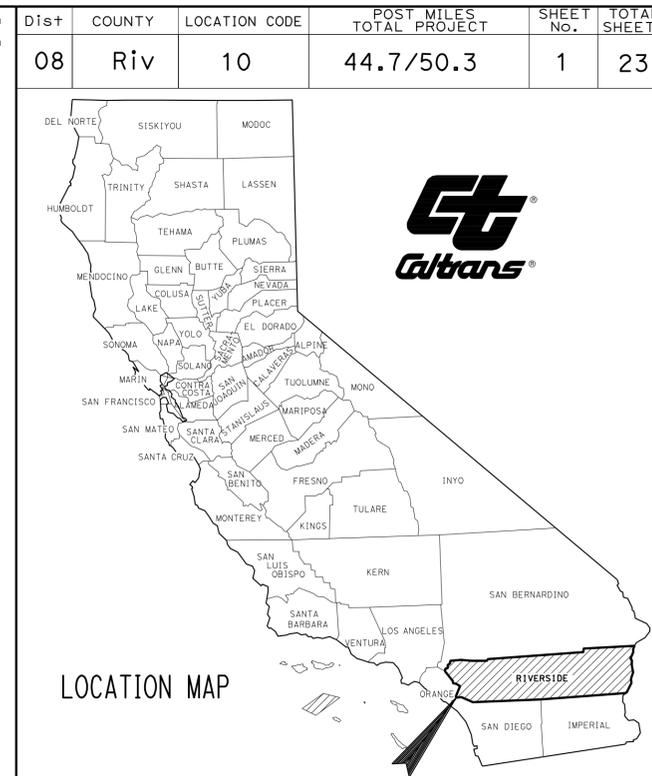
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3	KEY MAP AND LINE INDEX
4-12	LAYOUTS
13-17	CONSTRUCTION DETAILS
18	TEMPORARY WATER POLLUTION CONTROL QUANTITIES
19	EROSION CONTROL QUANTITIES
20	CONSTRUCTION AREA SIGNS
21	SIGN QUANTITIES
22	SUMMARY OF QUANTITIES
23	TRAFFIC CONTROL SYSTEM

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

**STATE OF CALIFORNIA ACHSIMG-010-4(063)131E**  
**DEPARTMENT OF TRANSPORTATION**

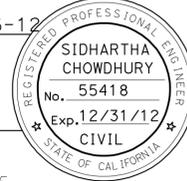
**PROJECT PLANS ON  
 STATE HIGHWAY  
 IN RIVERSIDE COUNTY  
 NEAR THOUSAND PALMS  
 FROM 0.1 MILE EAST OF MONTEREY AVENUE  
 OVERCROSSING TO 0.2 MILE WEST OF  
 WASHINGTON STREET OVERCROSSING**

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2010



PROJECT MANAGER  
**NADER NAGUIB**  
 DESIGN ENGINEER  
**THAO HOANG**

*Sidhartha Chowdhury* 10-16-12  
 PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER  
**December 17, 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>08-0Q1104</b>
PROJECT ID	<b>0800020211</b>

LAST REVISION DATE PLOTTED => 30-JAN-2013  
 10-15-12 TIME PLOTTED => 06:01

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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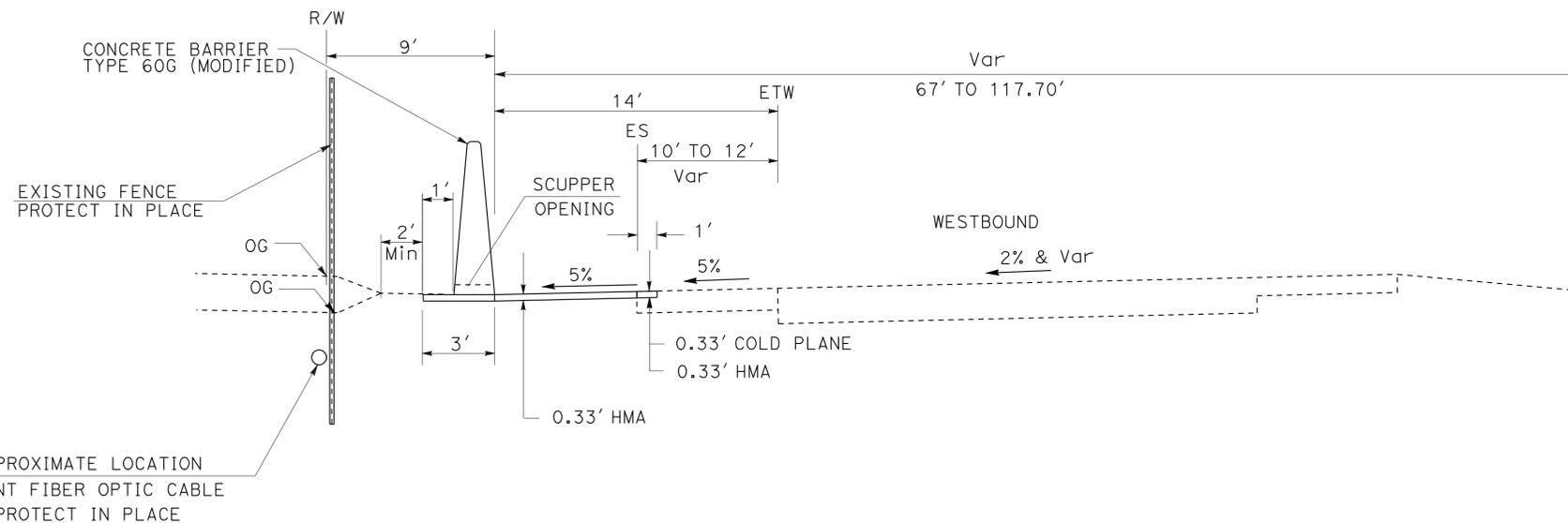
<i>Sidhartha Chowdhury</i>	10-10-12
REGISTERED CIVIL ENGINEER	DATE
REGISTERED PROFESSIONAL ENGINEER SIDHARTHA CHOWDHURY No. 55418 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA	
12-17-12	
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

**NOTES:**

- FOR CONCRETE BARRIER TYPE 60G, END ANCHORAGE DETAILS AND NOTES, SEE CONSTRUCTION DETAILS AND STANDARD PLANS A76D AND A76E.
- USE ALL EXCESS EXCAVATED MATERIAL TO BACK FILL AREAS WITHIN THE PROJECT LIMITS.
- THE EXISTING WIDTH OF THE WESTBOUND SHOULDER VARIES BETWEEN 10' TO 12'. CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT BY CUTTING OFF THE AREA WHERE SHOULDER WIDTH EXCEEDS 10' AS SHOWN ON THE PLAN.
- PLACE ASPHALTIC EMULSION (FOG SEAL COAT) ON HMA.

**DESIGN DESIGNATION:**

ADT (2012)	92,600	D	55%
ADT (2034)	198,700	T	32%
DHV	8,850	V	70 mph
ESAL	21,462,915	TI <sub>20</sub>	14.5



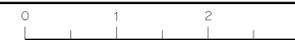
**WESTBOUND ROUTE 10**

STA 2359+37.00 TO STA 2448+03.13 (LOCATION 1)  
 STA 2493+40.00 TO STA 2653+14.27 (LOCATION 2)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED/DESIGNED BY	CHECKED BY
THAO HOANG	SIDHARTHA CHOWDHURY
REVISOR	DATE
REVISOR	DATE

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THE PLANS

**TYPICAL CROSS SECTIONS**  
 NO SCALE  
**X-1**



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

FUNCTIONAL SUPERVISOR  
 SERGIO E. AVILA

CALCULATED/DESIGNED BY  
 CHECKED BY

THAO HOANG  
 SIDHARTHA CHOWDHURY

REVISED BY  
 DATE

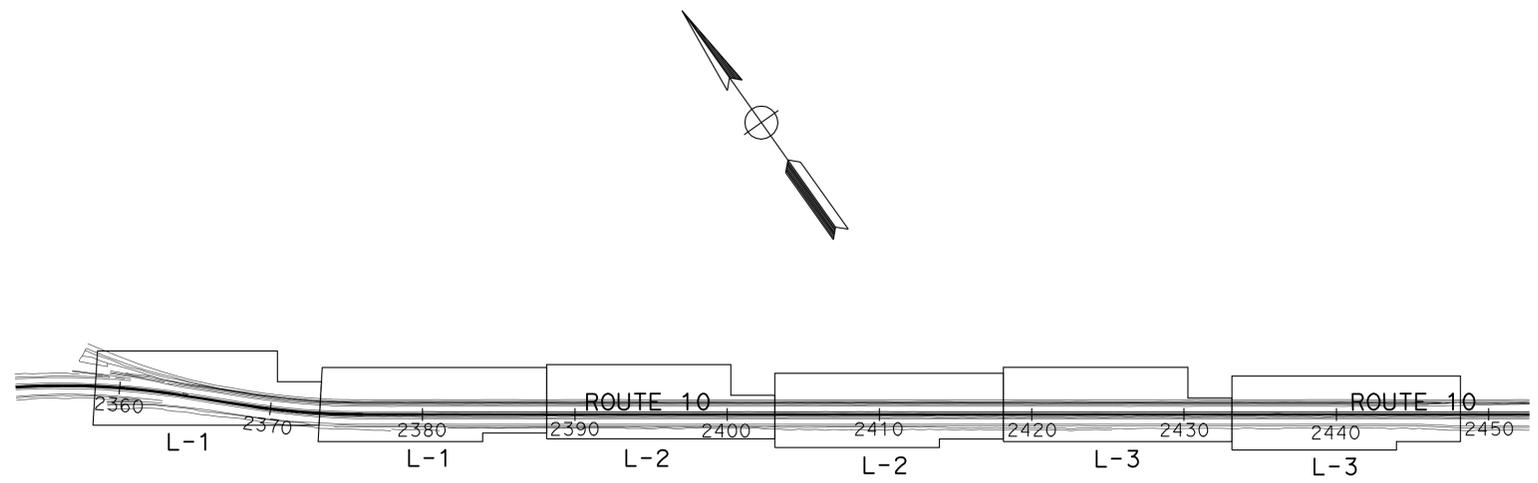
REVISED BY  
 DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	3	23

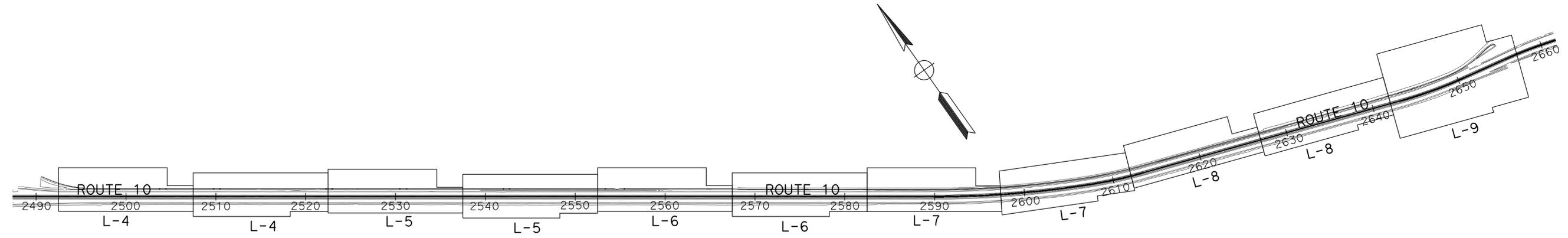
10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA

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**LOCATION 1**



**LOCATION 2**

**KEY MAP AND LINE INDEX**  
 NO SCALE  
**K-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED/DESIGNED BY	CHECKED BY
THAO HOANG	SIDHARTHA CHOWDHURY
REVISED BY	DATE REVISED

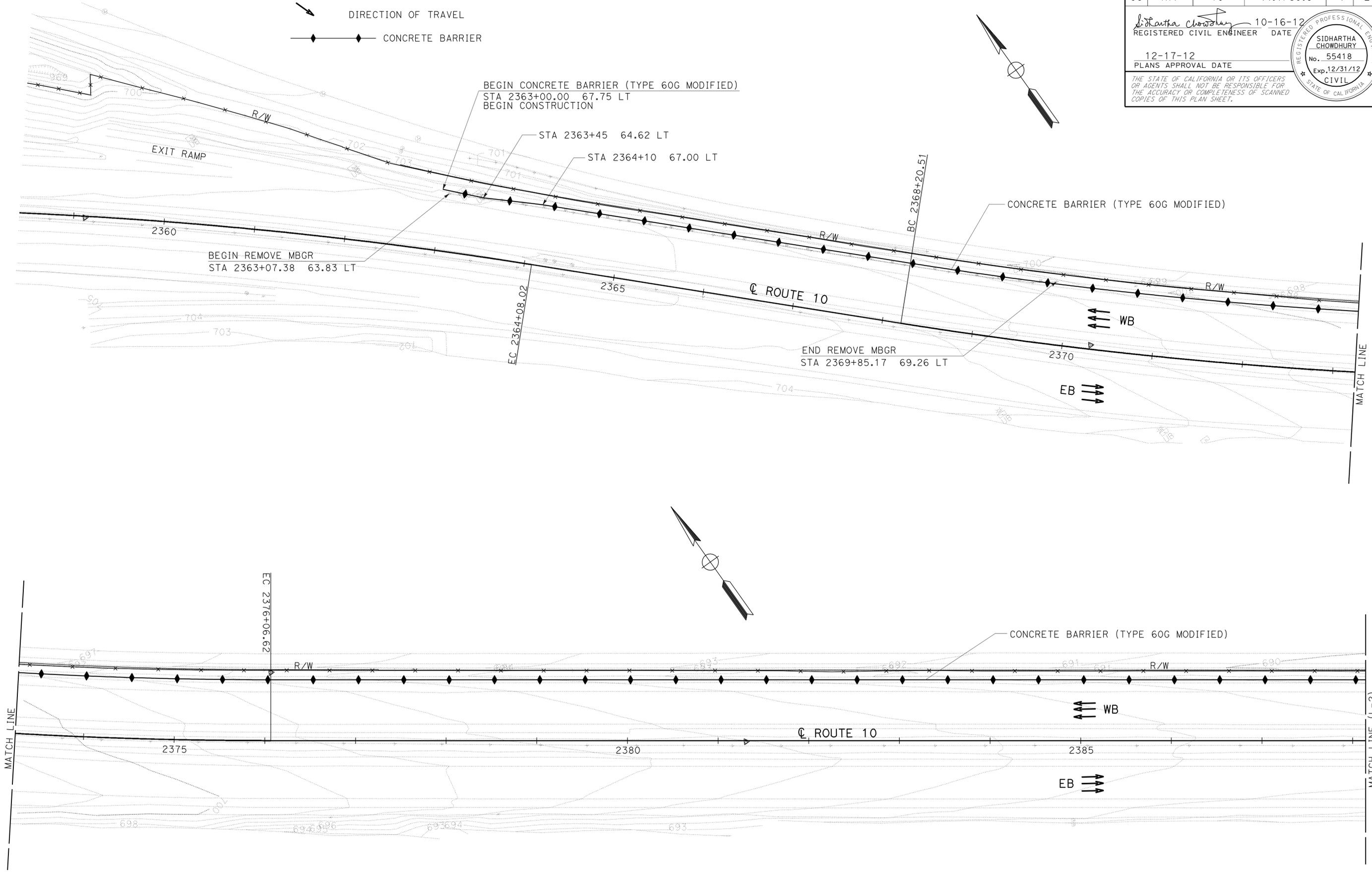
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	4	23

10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
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REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA

**LEGEND:**

-  DIRECTION OF TRAVEL
-  CONCRETE BARRIER



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

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THE PLANS

**LAYOUT**  
 SCALE: 1" = 50'  
**L-1**

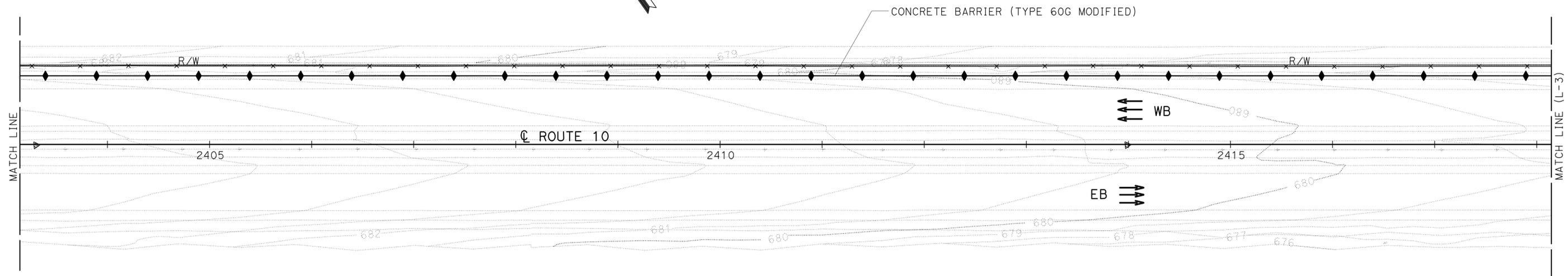
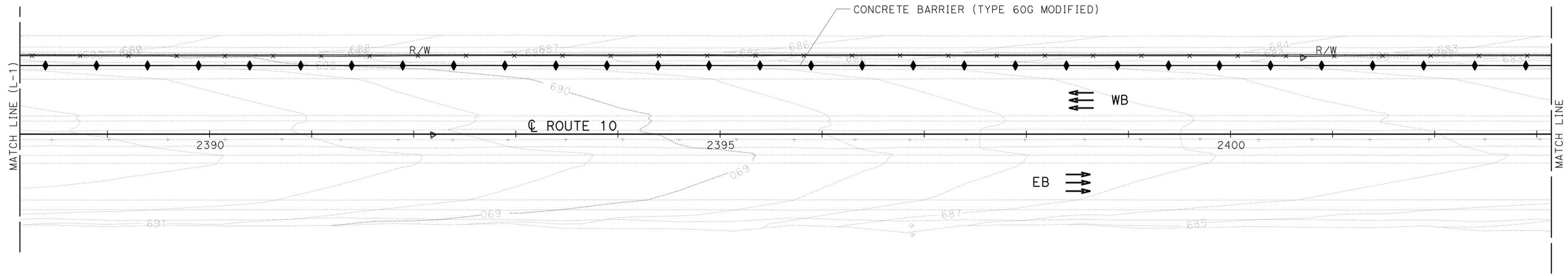


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	5	23

*Sidhartha Chowdhury* 10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
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 CIVIL  
 STATE OF CALIFORNIA

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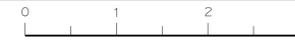


**NOTE:**  
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**LAYOUT**  
 SCALE: 1" = 50'  
**L-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED/DESIGNED BY	CHECKED BY
THAO HOANG	SIDHARTHA CHOWDHURY
REVISED BY	DATE REVISED



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	6	23

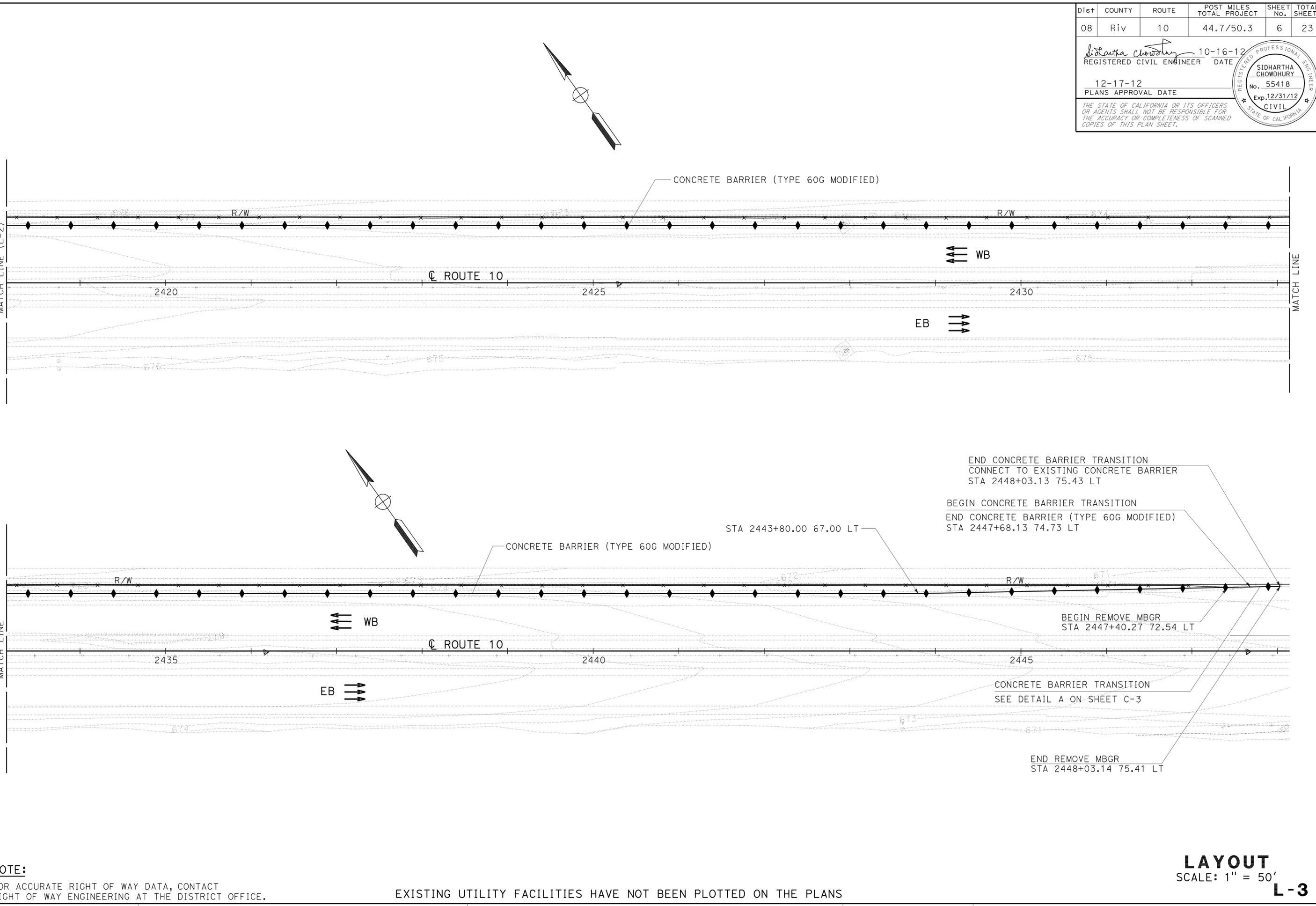
10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**DESIGN**

THAO HOANG  
 SIDHARTHA CHOWDHURY  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 FUNCTIONAL SUPERVISOR  
 SERGIO E. AVILA



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

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**LAYOUT**  
 SCALE: 1" = 50'  
**L-3**

LAST REVISION DATE PLOTTED => 14-DEC-2012  
 TIME PLOTTED => 14:06



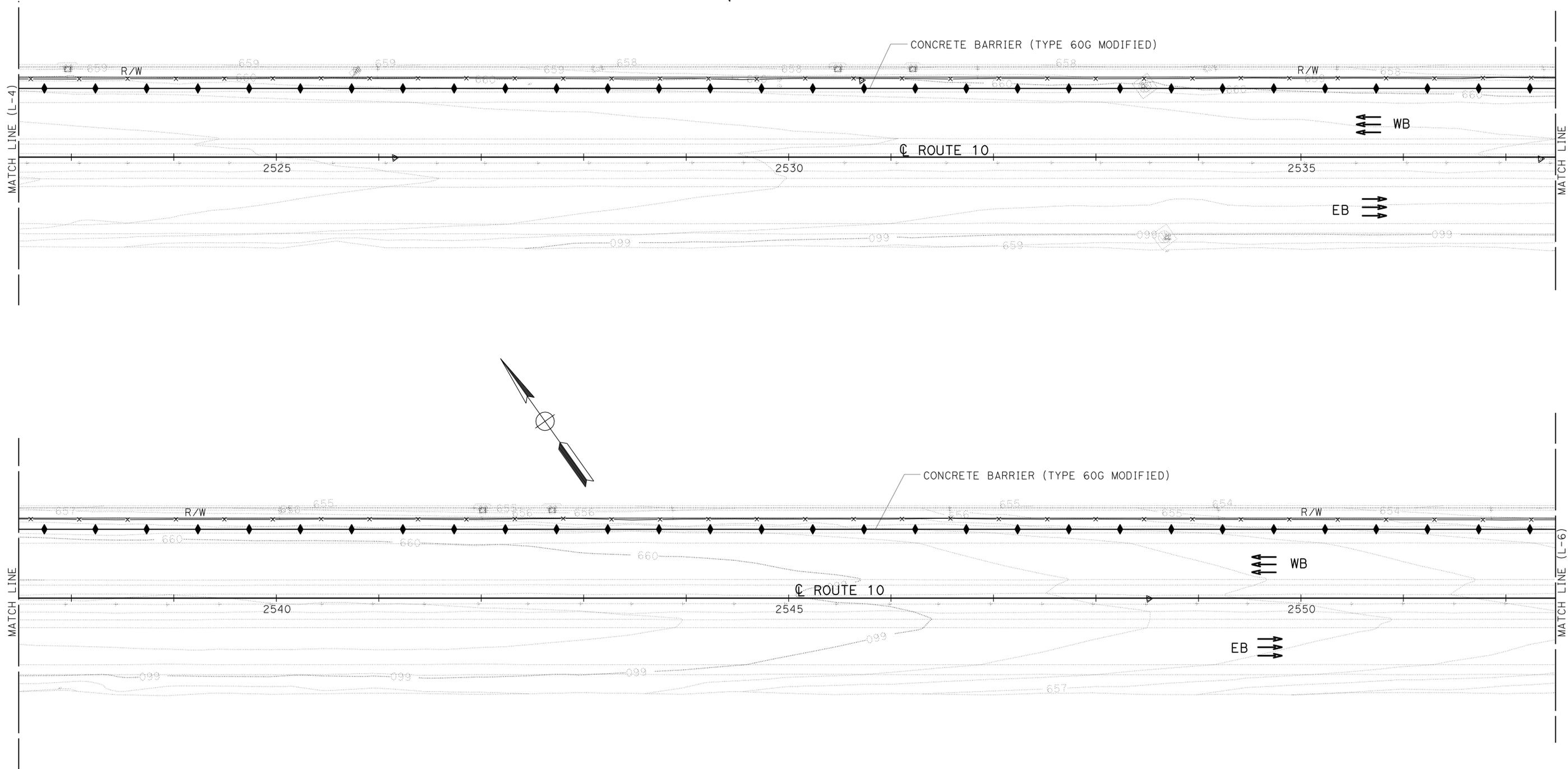
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	8	23

*Sidhartha Chowdhury* 10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED/DESIGNED BY	CHECKED BY
THAO HOANG	SIDHARTHA CHOWDHURY
REVISED BY	DATE REVISED



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

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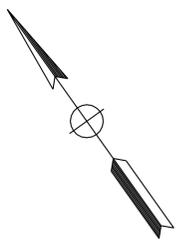
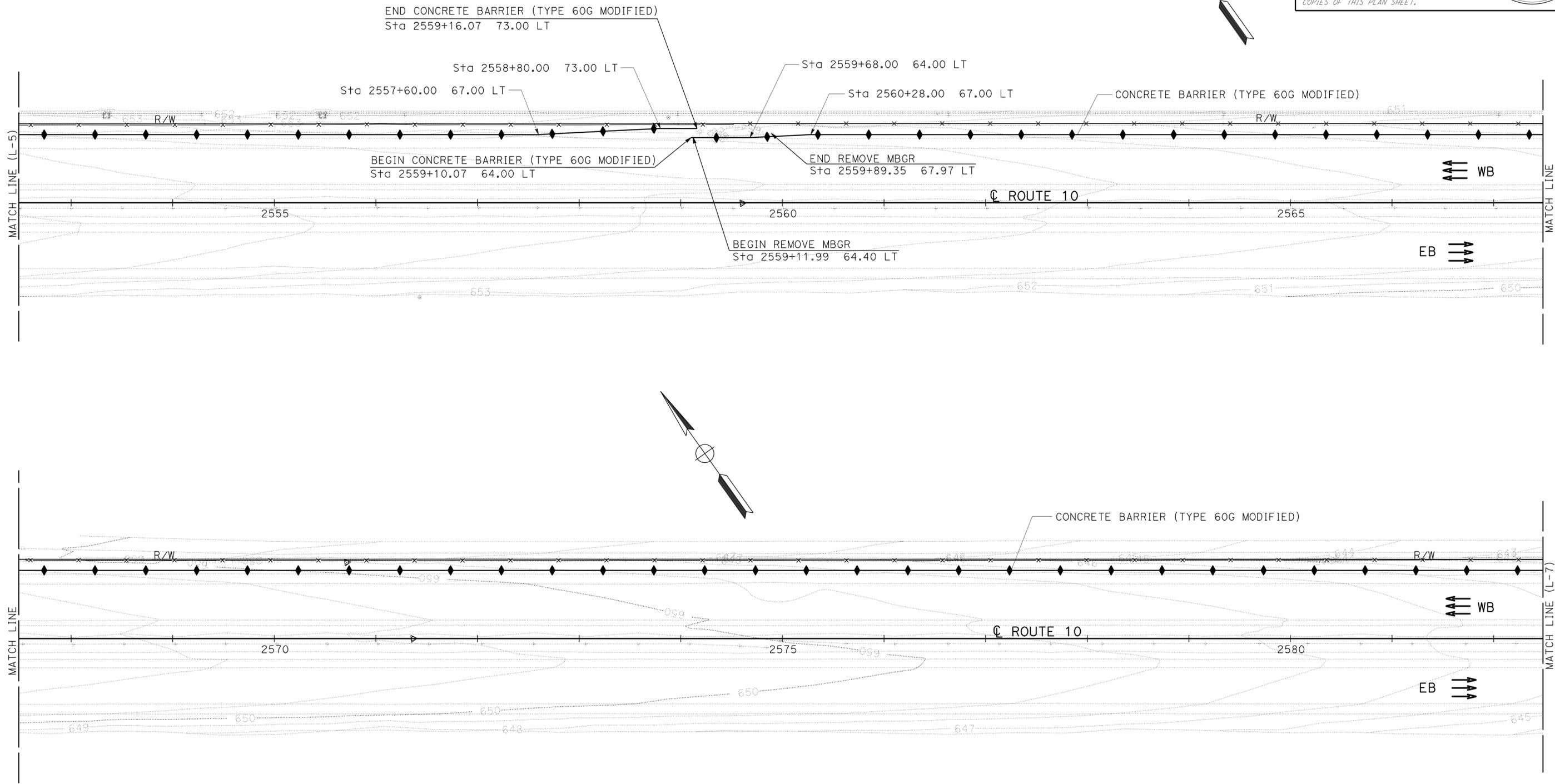
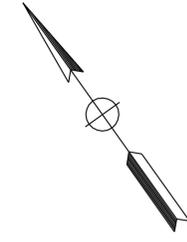
**LAYOUT**  
 SCALE: 1" = 50' **L-5**

LAST REVISION DATE PLOTTED => 14-DEC-2012  
 10-16-12 TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	9	23

10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE  
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REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
**DESIGN**  
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA  
 THAO HOANG  
 SIDHARTHA CHOWDHURY  
 CALCULATED/DESIGNED BY: [Blank]  
 CHECKED BY: [Blank]  
 REVISED BY: [Blank]  
 DATE REVISED: [Blank]

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

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THE PLANS

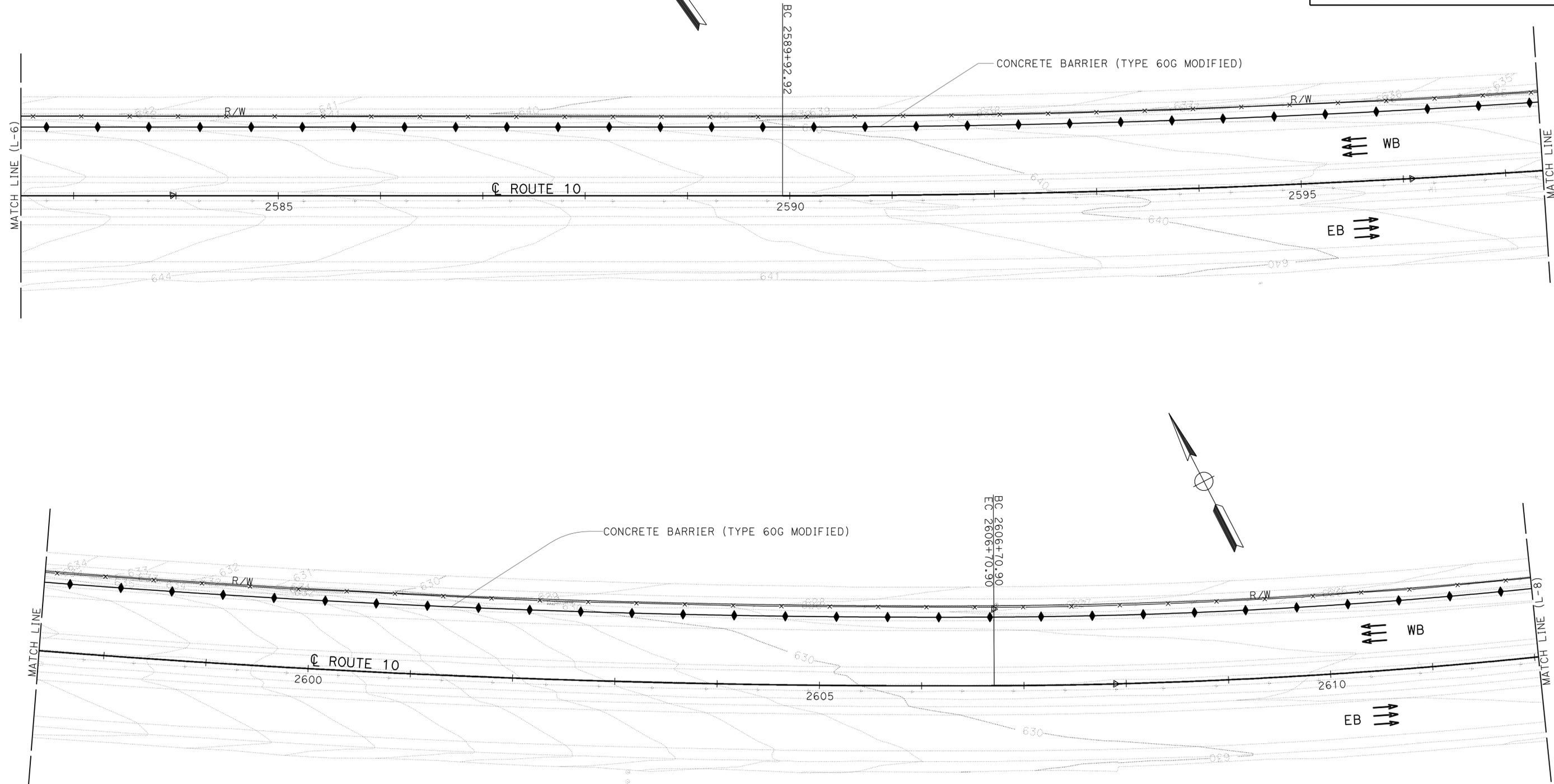
**LAYOUT**  
 SCALE: 1" = 50'

**L-6**

LAST REVISION: 10-16-12    DATE PLOTTED => 14-DEC-2012    TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	10	23
<i>Sidhartha Chowdhury</i> REGISTERED CIVIL ENGINEER			10-16-12	DATE	
12-17-12 PLANS APPROVAL DATE			REGISTERED PROFESSIONAL ENGINEER SIDHARTHA CHOWDHURY No. 55418 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA		
<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>					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED/DESIGNED BY	CHECKED BY
THAO HOANG	SIDHARTHA CHOWDHURY
REVISED BY	DATE REVISED



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

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THE PLANS

**LAYOUT**  
 SCALE: 1" = 50' **L-7**

LAST REVISION      DATE PLOTTED => 14-DEC-2012      TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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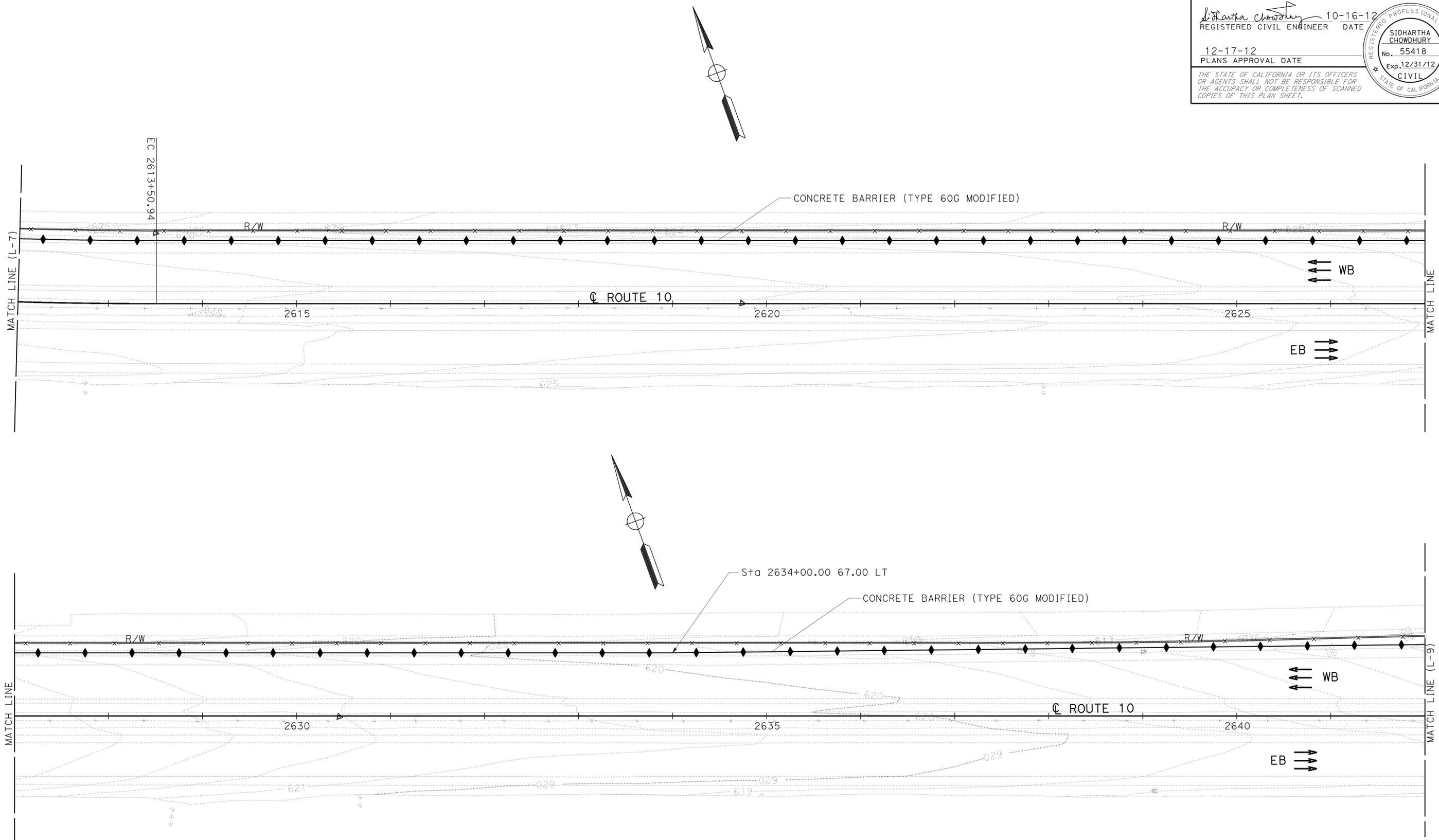
*Sidhartha Chowdhury* 10-16-12  
 REGISTERED CIVIL ENGINEER DATE

12-17-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	THAO HOANG	REVISOR	DATE
<b>Caltrans</b>	SERGIO E. AVILA	SIDHARTHA CHOWDHURY	DATE	REVISOR
<b>DESIGN</b>	CHECKED BY		DATE	REVISOR
	DESIGNED BY		DATE	REVISOR



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

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**LAYOUT**  
 SCALE: 1" = 50' **L-8**

LAST REVISION | DATE PLOTTED => 14-DEC-2012  
 TIME PLOTTED => 14:06

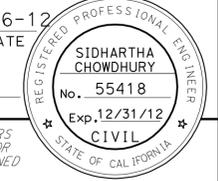
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	12	23

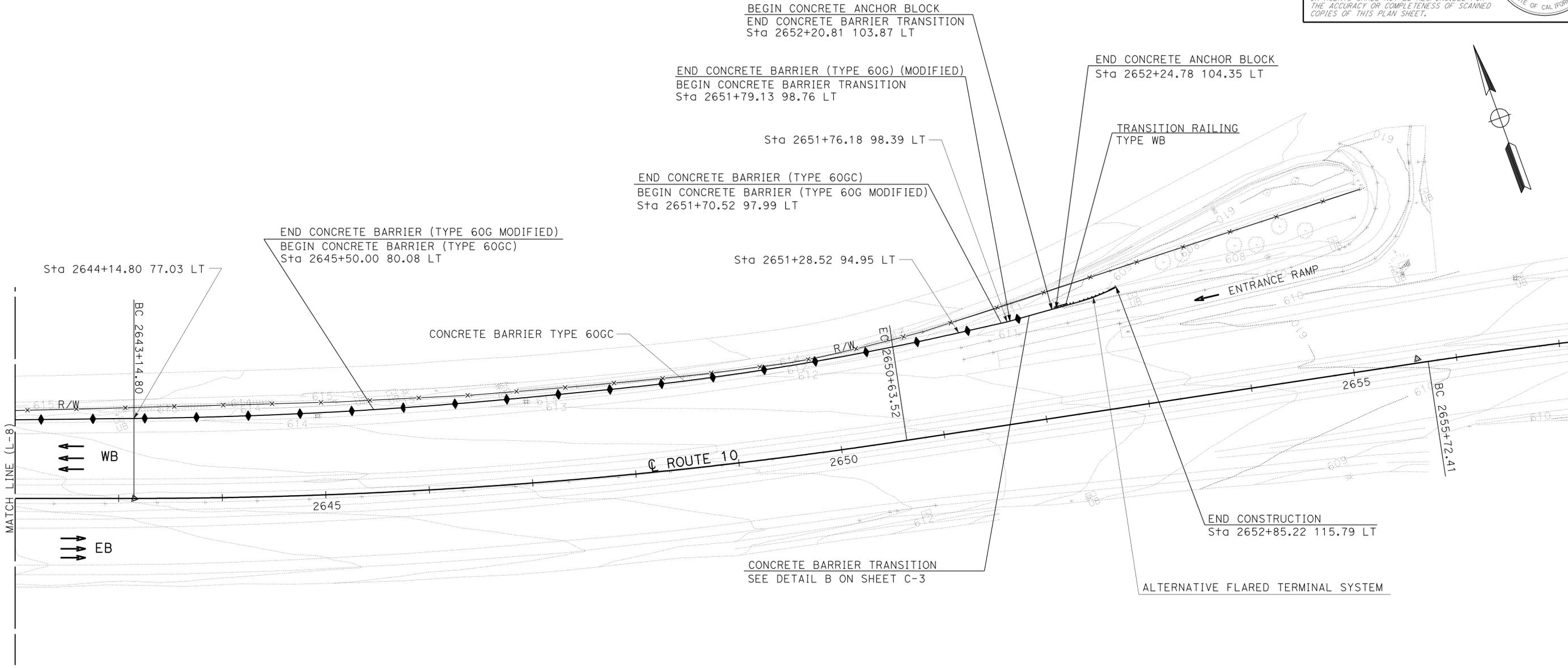
<i>Sidhartha Chowdhury</i>	10-16-12
REGISTERED CIVIL ENGINEER	DATE
12-17-12	
PLANS APPROVAL DATE	

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
<b>Caltrans</b>
<b>DESIGN</b>
FUNCTIONAL SUPERVISOR
SERGIO E. AVILA
CALCULATED/DESIGNED BY
CHECKED BY
THAO HOANG
SIDHARTHA CHOWDHURY
REVISED BY
DATE REVISED



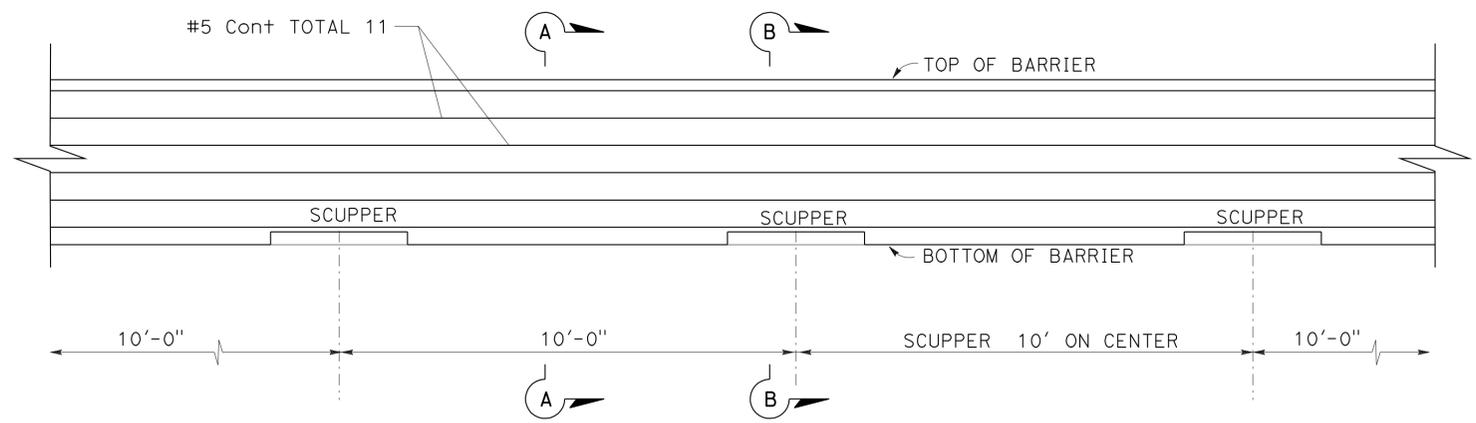
**NOTE:**  
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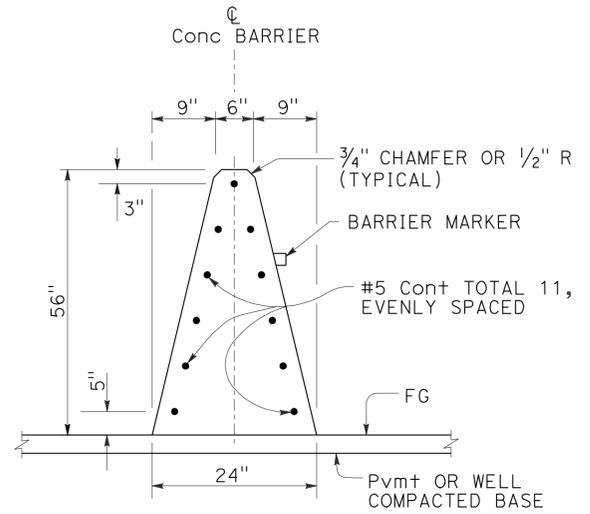
**LAYOUT**  
 SCALE: 1" = 50' **L-9**

LAST REVISION      DATE PLOTTED => 14-DEC-2012      TIME PLOTTED => 14:06

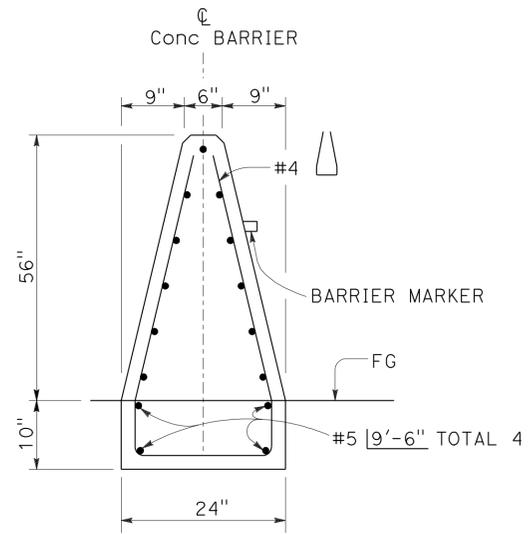
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	13	23
10-10-12 REGISTERED CIVIL ENGINEER DATE					
12-17-12 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



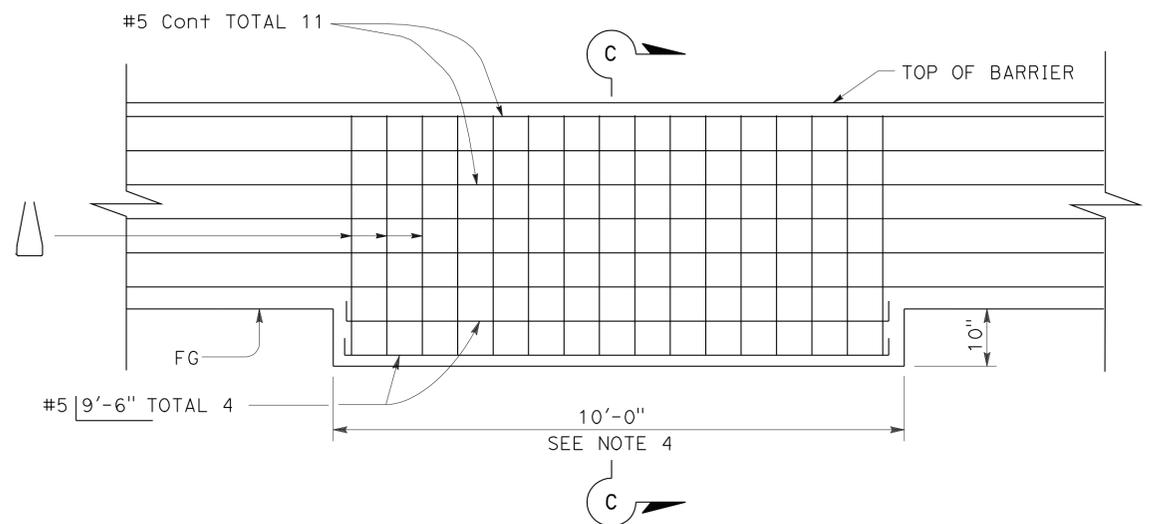
**CONCRETE BARRIER (TYPE 60G MODIFIED)**  
SEE NOTE 1



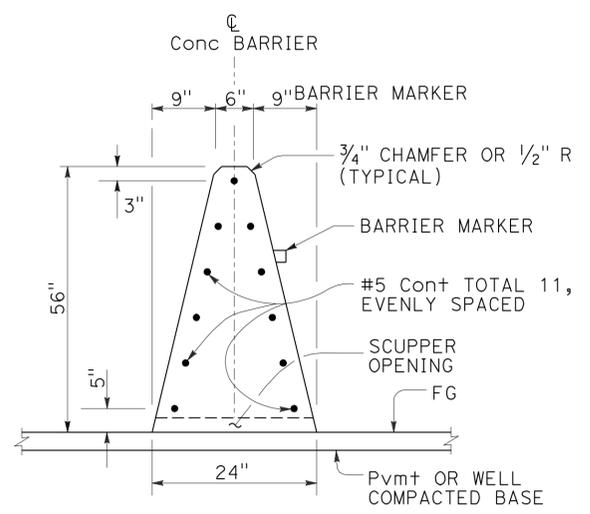
**SECTION A-A**



**SECTION C-C**



**CONCRETE BARRIER (TYPE 60G MODIFIED) FOOTING**  
@ 250 FEET INTERVAL



**SECTION B-B**



**SCUPPER DETAIL**

**NOTES:**

- FOR DETAILS NOT SHOWN, SEE STANDARD PLAN A76D.
- FOOTING MONOLITHIC OR DOWELED WITH 2-#8 X 8" @ 2'-0". THE FOOTING IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER.
- EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, PAVEMENT AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE 1/2" THICK MINIMUM OR SAME SIZE AS THE JOINT.
- BEGIN 10" X 10' CONCRETE BARRIER FOOTING AT STATION 2363+0.00 AND PLACE FOOTING AT 250' INTERVAL.
- CONSTRUCT SCUPPERS AT 10' INTERVAL, NOT INCLUDING LENGTH OF THE CONCRETE BARRIER FOOTING.
- PLACE WHITE BARRIER MARKER AT 48' INTERVAL.
- THE CENTERLINE OF THE FIRST SCUPPER AT STATION 2363+15.00.

**CONSTRUCTION DETAILS**  
**CONCRETE BARRIER (TYPE 60G MODIFIED)**  
NO SCALE

**C-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA  
 CALCULATED/DESIGNED BY: THAO HOANG  
 CHECKED BY: SIDHARTHA CHOWDHURY  
 REVISED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 REVISIONS: \_\_\_\_\_

LAST REVISION: 10-10-12 DATE PLOTTED => 14-DEC-2012 TIME PLOTTED => 14:06

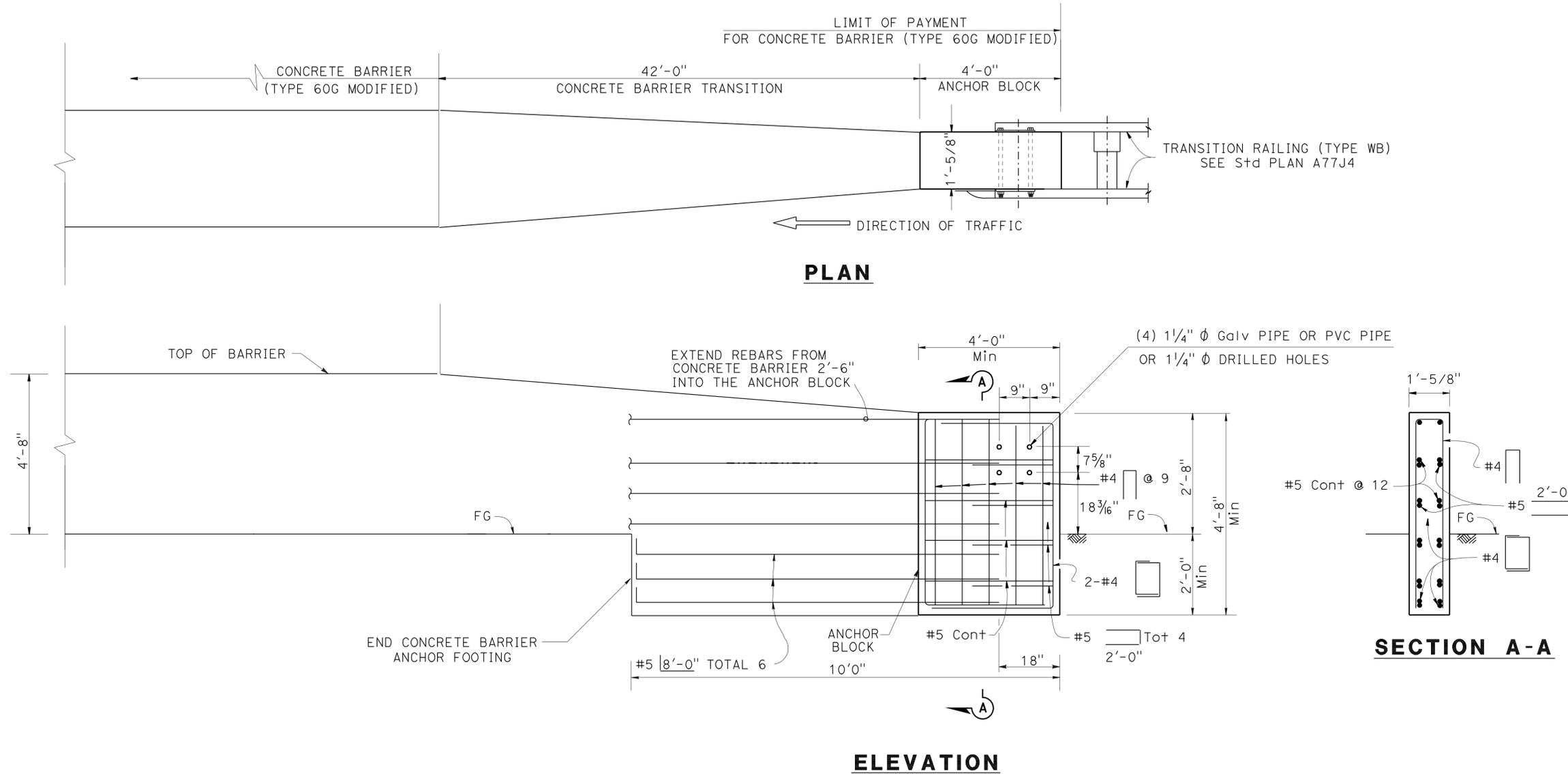
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	14	23

<i>Sidhartha Chowdhury</i>	10-10-12
REGISTERED CIVIL ENGINEER	DATE
REGISTERED PROFESSIONAL ENGINEER <b>SIDHARTHA CHOWDHURY</b> No. 55418 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA	
12-17-12	
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>	

**NOTES:**

1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
2. THE CONCRETE BARRIER TYPE 60G AND THE TRANSITION SHALL HAVE MONOLITHIC FOOTING.



**CONCRETE BARRIER TRANSITION AND ANCHOR BLOCK DETAIL AT LOCATION 2**

**CONSTRUCTION DETAILS**  
**CONCRETE BARRIER TRANSITION**  
 NO SCALE  
**C-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED/DESIGNED BY	CHECKED BY
THAO HOANG	SIDHARTHA CHOWDHURY
REVISED BY	DATE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	15	23

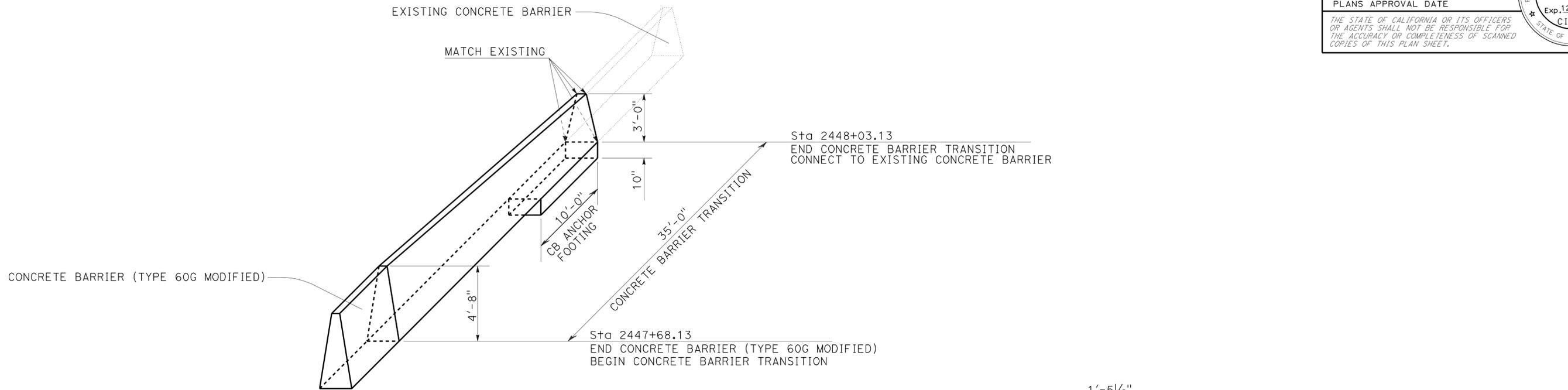
<i>Sidhartha Chowdhury</i>	10-16-12
REGISTERED CIVIL ENGINEER	DATE
12-17-12	
PLANS APPROVAL DATE	

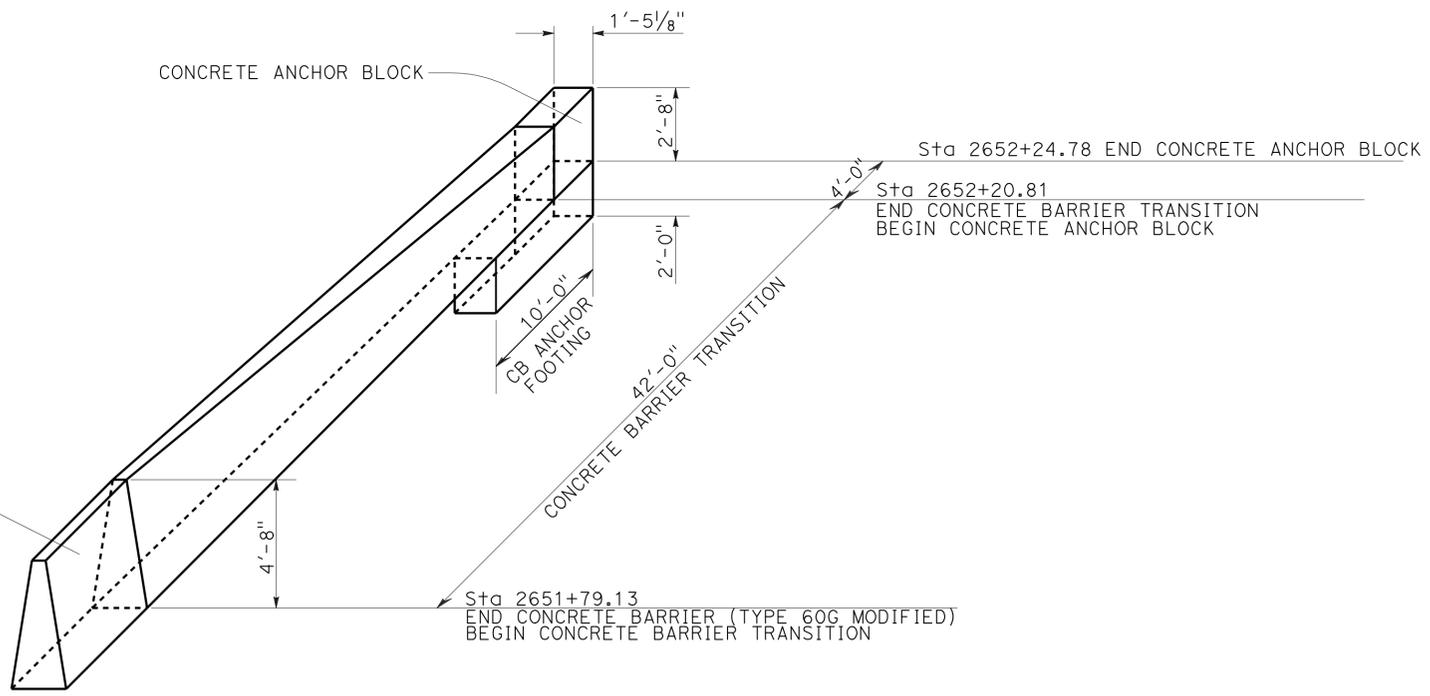
REGISTERED PROFESSIONAL ENGINEER
SIDHARTHA CHOWDHURY
No. 55418
Exp. 12/31/12
CIVIL
STATE OF CALIFORNIA

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.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
<b>Caltrans</b>
<b>DESIGN</b>
FUNCTIONAL SUPERVISOR
SERGIO E. AVILA
CALCULATED/DESIGNED BY
CHECKED BY
THAO HOANG
SIDHARTHA CHOWDHURY
REVISOR
DATE



**DETAIL A**



**DETAIL B**

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-3**

LAST REVISION      DATE PLOTTED => 14-DEC-2012      TIME PLOTTED => 14:06

**TABLE A**

POST OFFSET DIMENSIONS		
Post No.	3'-0" System End Offset	3'-6" System End Offset
1	36"	42"
2	22 1/4"	27 3/4"
3	11 3/4"	16 1/4"
4	6 3/4"	10 5/8"
5	3"	6"
6	3/4"	2 3/4"
7	0"	3/4"
8	0"	0"

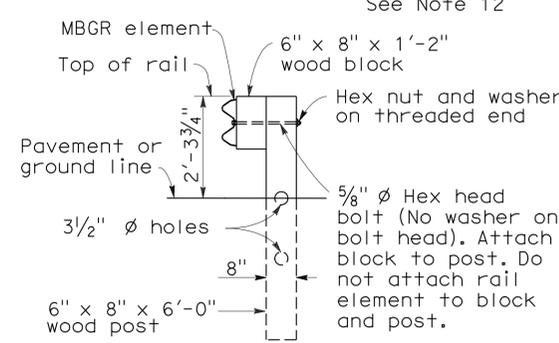
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	Riv	10	44.7/50.3	16	23

10-10-12  
DATE

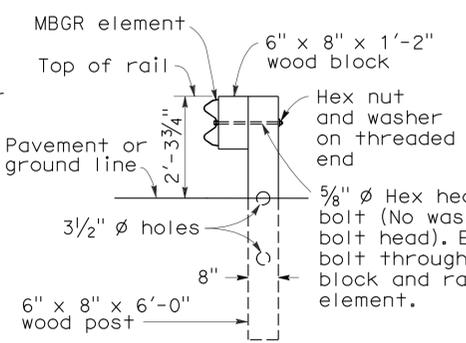
12-17-12  
PLANS APPROVAL DATE

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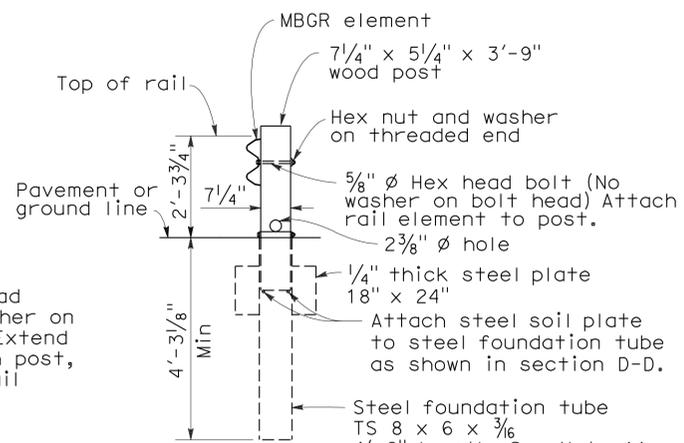
REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA



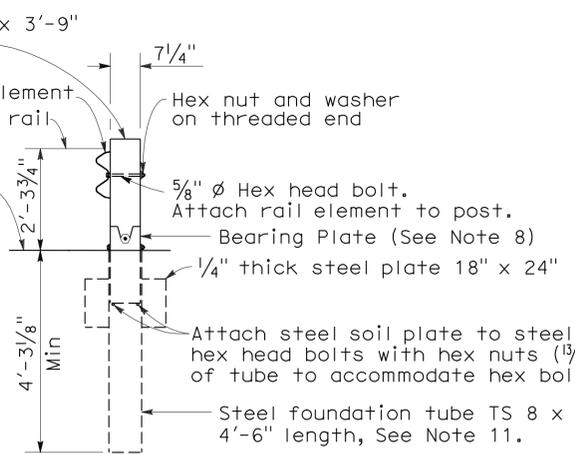
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

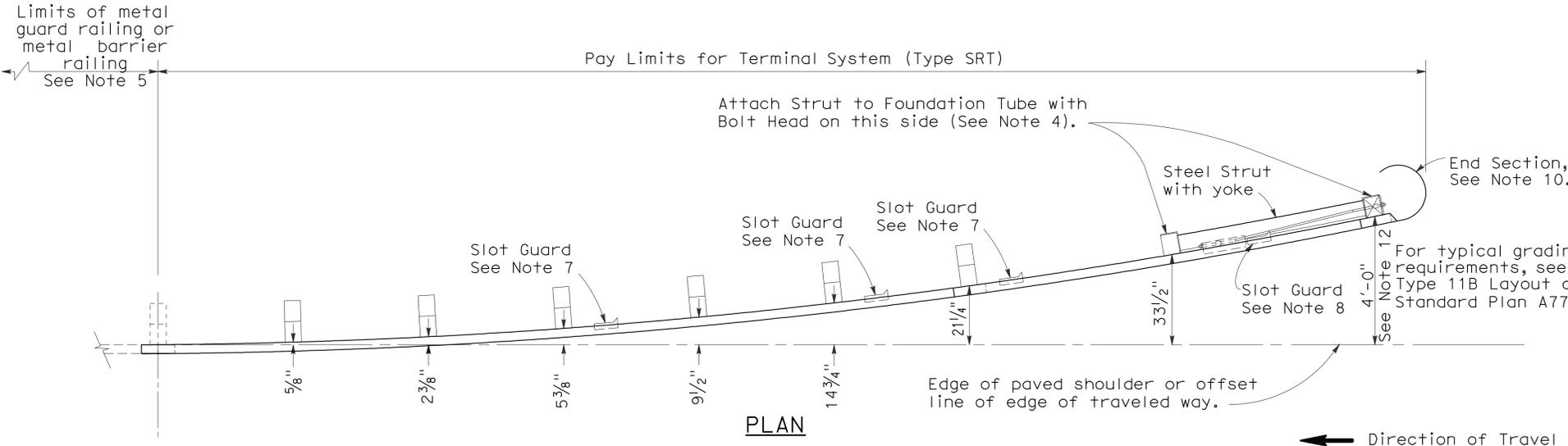


**SECTION D-D**

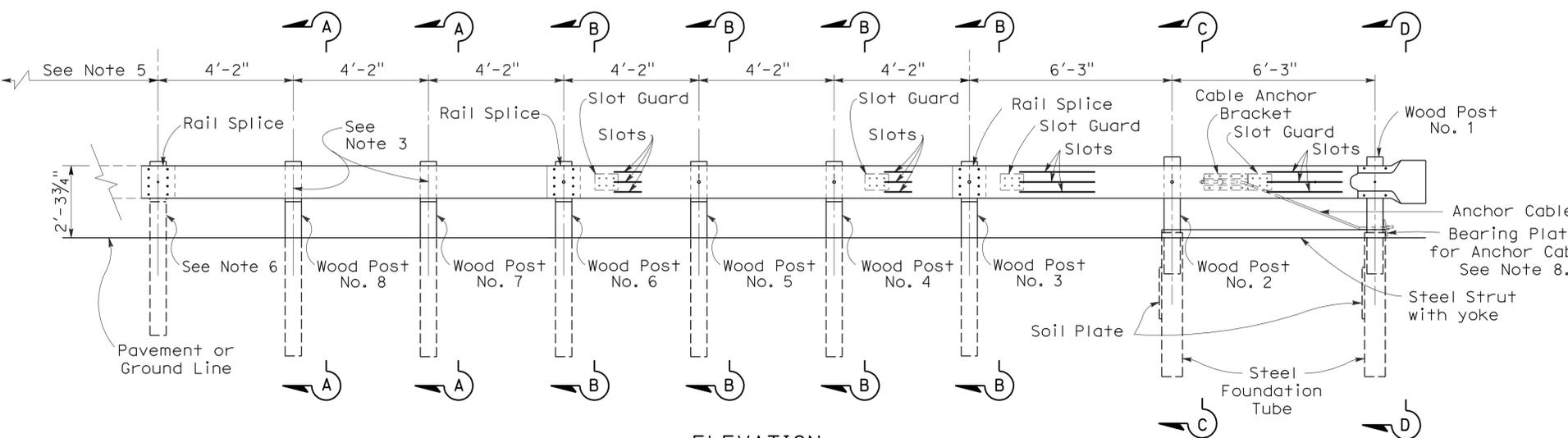
(Terminal Section not shown)

**NOTES:**

- For additional details of Terminal System (Type SRT), refer to the manufacturer's installation instructions.
- The post offset dimensions are given to the center of the traffic face of the block, except at the first two posts, where the dimension is to the center of the traffic face of the post. Offset points are to be located by chord measurements at the back of the rail equal to the nominal post spacings shown. Posts are to be set approximately radial to the railing at each post locations.
- Do not attach rail elements to posts 7 and 8.
- Attach strut to Post Nos. 1 and 2 foundation tubes with 5/8 inch diameter hex head bolts, washers and hex nuts. Bolts extend through the strut, steel foundation tube, and wood posts.
- For the length and type of metal beam guard railing or metal barrier railing the terminal system is attached to, see the Project Plans.
- Attach rail element to this post and block. Payment for this post, block and hardware is included in payment for the type of railing or barrier the terminal system is attached to, not part of payment for Terminal System (Type SRT).
- The deflector angle of the slot guard is to be positioned immediately downstream of the slots.
- For bearing plate orientation, refer to the manufacturer's installation instructions.
- For typical use of this terminal system with guard railing, see the A77E, A77F and A77G Series of Standard Plans.
- A complete wrap around end section may continued to be used in existing installations. New installations shall be constructed with the 3/4 wrap end section shown.
- A 6'-0" length steel foundation tube, TS 8 x 6 x 3/16 without a soil plate, may be furnished and installed in place of the 4'-6" length steel foundation tube and soil plate shown. Minimum embedment of the 6'-0" length tube shall be 5'-9". A 5/8 inch diameter hex head bolt and nut shall be installed in the hole in 6'-0" length tube to keep the wood post from dropping into the tube.
- Where site conditions will not accommodate use of the standard 4'-0" system end offset, 3'-6" or 3'-0" system end offsets, as applicable, may be used. See Table A for post offset dimensions for 3'-6" and 3'-0" system end offsets.



**PLAN**



**ELEVATION**

**TERMINAL SYSTEM (TYPE SRT)**

(8 Post System)  
See Note 9

**CONSTRUCTION DETAILS**  
**METAL BEAM RAILING TERMINAL SYSTEM**  
**(TYPE SRT)**

NO SCALE

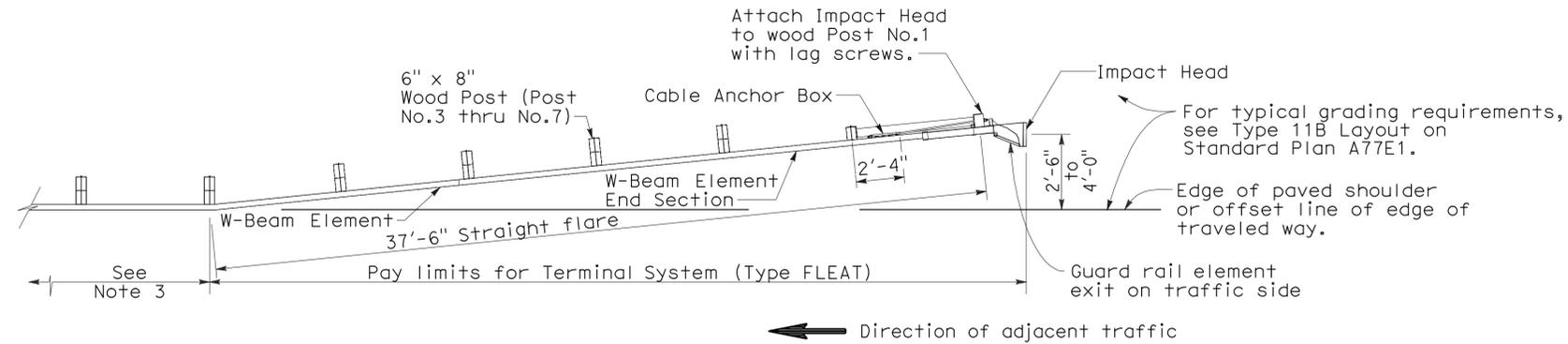
**C-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA  
 CHECKED BY: THAO HOANG  
 DESIGNED BY: SIDHARTHA CHOWDHURY  
 REVISIONS: REVISED BY: DATE REVISIONS:

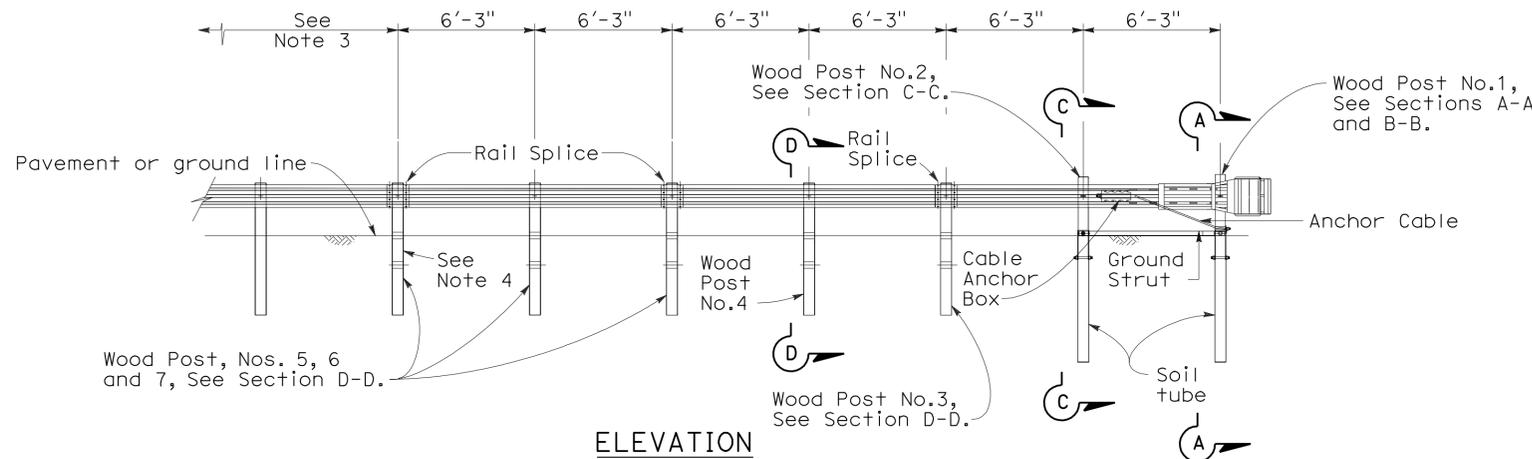
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	17	23

10-10-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 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  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA



**PLAN**

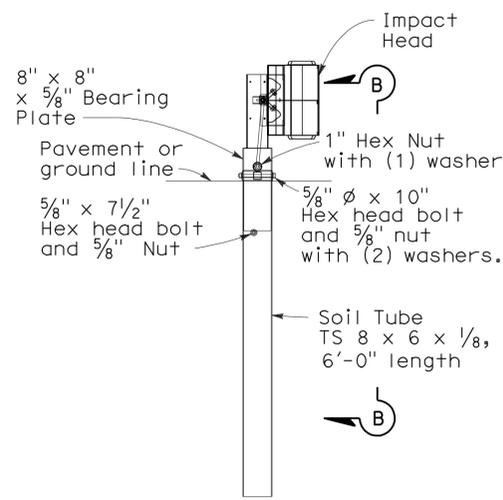


**ELEVATION**

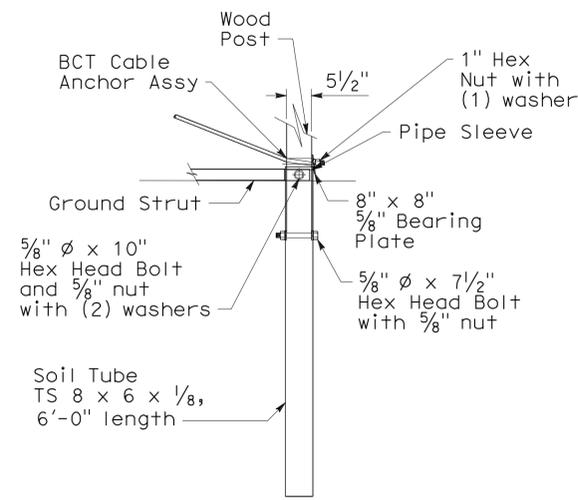
**TERMINAL SYSTEM (TYPE FLEAT)**

**NOTES:**

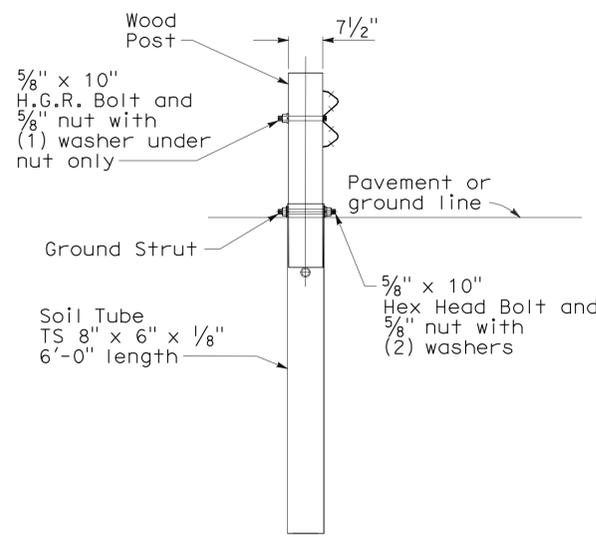
- For additional details of Terminal System (Type FLEAT), refer to the manufacturer's installation instructions.
- Terminal System (Type FLEAT) not to be used where extrusion of the rail on the front side of the installation would be in the path of pedestrian traffic.
- For the length and type of metal beam guard railing or metal barrier railing the terminal system is attached to, see Project Plans. For typical use of this terminal system with guard railing, see the A77E, A77F and A77G Series of the Standard Plans.
- Attach rail element to this post and block. Payment for this post, block and attaching hardware is included in payment for Terminal System (Type FLEAT).



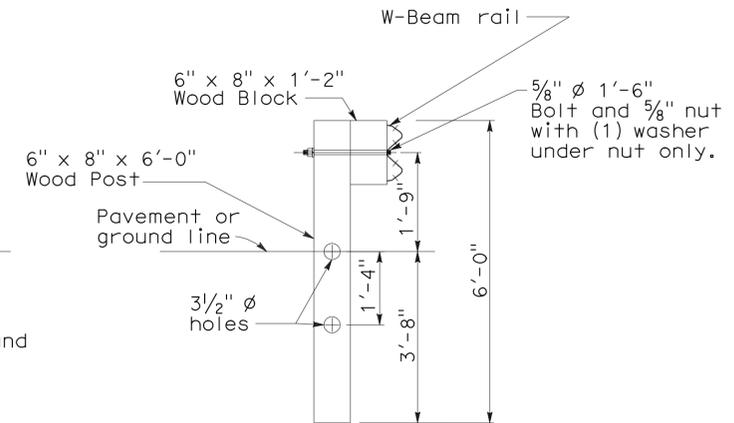
**SECTION A-A**  
Post No.1



**SECTION B-B**  
Partial view Post No.1



**SECTION C-C**  
at Post No.2



**SECTION D-D**  
Post No.3 through No.7.

**CONSTRUCTION DETAILS  
METAL BEAM RAILING TERMINAL SYSTEM  
(TYPE FLEAT)  
NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 DESIGN  
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA  
 THAO HOANG  
 SIDHARTHA CHOWDHURY  
 REVISOR: THAO HOANG  
 DATE: 10-10-12  
 REVISOR: THAO HOANG  
 DATE: 12-17-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	18	23

*Touhida Haider* 10-10-12  
REGISTERED CIVIL ENGINEER DATE

12-17-12  
PLANS APPROVAL DATE

TOUHIDA HAIDER  
No. 74470  
Exp. 12/31/12  
CIVIL  
STATE OF CALIFORNIA

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**NOTES:**

1. THE QUANTITY OF CONSTRUCTION SITE BMPs SHOWN ON THIS QUANTITY SHEET (WPCQ-1) ARE INTENDED TO BE USED AS GUIDELINE ONLY.
2. FIELD CONDITION MAY NECESSITATE MODIFICATION OR RELOCATION OF BMPs AND QUANTITIES AS DIRECTED BY THE ENGINEER.

**TEMPORARY CONSTRUCTION SITE BMPs**

TEMPORARY CONSTRUCTION SITE BMPs	UNIT	QUANTITY
TEMPORARY SOIL BINDER	SQYD	35,913
TEMPORARY FIBER ROLL	LF	24,800
TEMPORARY CONSTRUCTION ENTRANCE	EA	2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
DESIGN

FUNCTIONAL SUPERVISOR  
GEORGE MORHIG

DESIGNED BY  
TOUHIDA HAIDER

CHECKED BY  
GEORGE MORHIG

REVISOR  
DATE

**TEMPORARY WATER POLLUTION  
CONTROL QUANTITIES**

**WPCQ-1**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	19	23

  
 LICENSED LANDSCAPE ARCHITECT

12-17-12  
 PLANS APPROVAL DATE



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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** LANDSCAPE ARCHITECTURE  
 SENIOR LANDSCAPE ARCHITECT  
 BYRON STROUT  
 CALCULATED/DESIGNED BY  
 CHECKED BY  
 TIM WANDS  
 MATTHEW HALL  
 REVISED BY  
 DATE REVISED

**EROSION CONTROL TYPE 1**

SEQUENCE	BID ITEM	MATERIALS		APPLICATION RATE
		DESCRIPTION	TYPE	
1	HYDRO-SEED	SEED	MIX 1	6.00 Lb/ACRE
		FIBER	WOOD	1200 Lb/ACRE
		TACKIFIER	BFM	30 Lb/ACRE

**SEED MIX**

SEED	BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
MIX 1	Distichlis spicata (Saltgrass)	30	4.00
	Phacelia campanularia (Desert Bluebells)	40	2.00
TOTAL			6.00

**EROSION CONTROL QUANTITIES**

STATION	HYDROSEED (SQFT)	LEFT SHOULDER PLACEMENT REMARKS
2359+30 TO 2448+20	51,248	CUT AND FILL SLOPES
2593+00 TO 2653+20	97,728	CUT AND FILL SLOPES
TOTAL	148,976	

**EROSION CONTROL QUANTITIES**

**ECQ-1**

LAST REVISION DATE PLOTTED => 14-DEC-2012  
 10-04-12 TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	20	23

10-16-12  
 REGISTERED CIVIL ENGINEER DATE  
 12-17-12  
 PLANS APPROVAL DATE

OSCAR ALEJANDRE  
 No. C70863  
 Exp. 6/30/13  
 CIVIL  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA

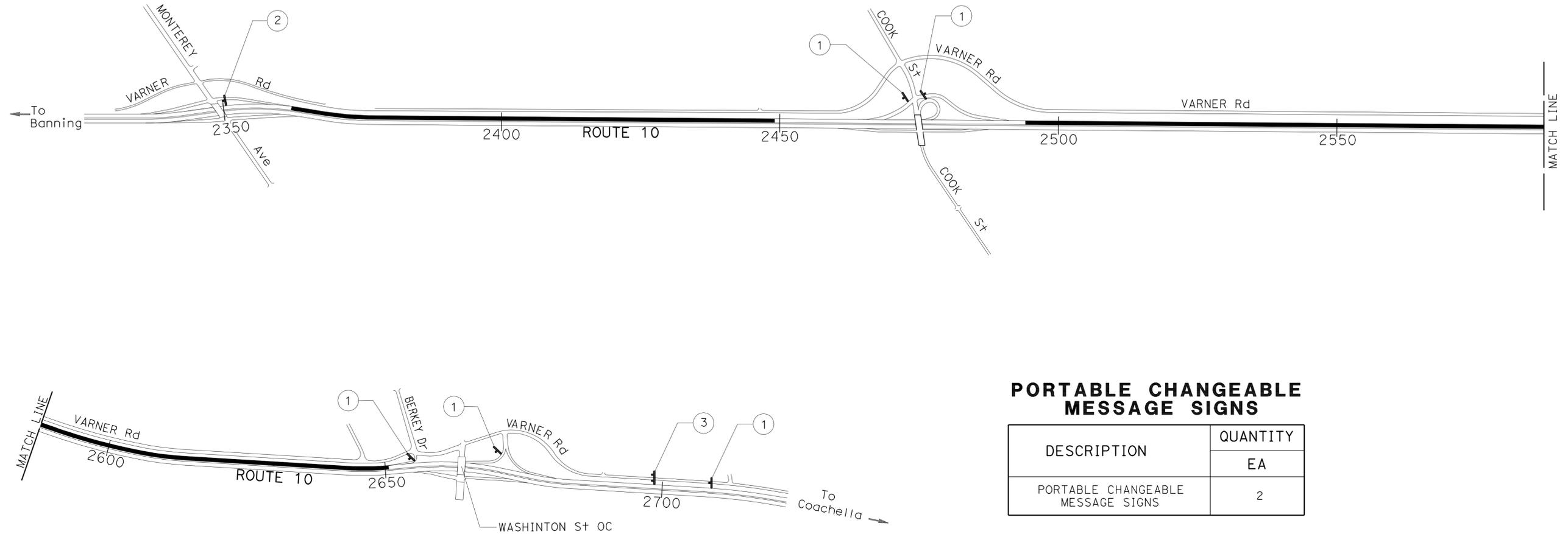
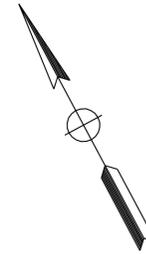
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

**NOTES:**

1. LOCATIONS OF THE CONSTRUCTION AREA SIGNS ARE APPROXIMATE. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. SEE STANDARD PLAN T10 FOR TRAFFIC HANDLING.
3. DISPLAY PCMS MESSAGES AS DIRECTED BY THE ENGINEER.

**LEGEND:**

- WORK AREA
- ⊙ No. CONSTRUCTION AREA SIGN NUMBER



**PORTABLE CHANGEABLE MESSAGE SIGNS**

DESCRIPTION	QUANTITY
	EA
PORTABLE CHANGEABLE MESSAGE SIGNS	2

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

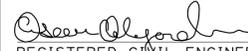
SIGN NUMBER	SIGN CODE		SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	No. OF SIGNS
	FEDERAL	CALIFORNIA				EA
①	W20-1		ROAD WORK AHEAD	48" x 48"	1 - 6" x 6"	5
②	G20-2		END ROAD WORK	48" x 24"	1 - 4" x 6"	1
③		C40(CA)	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	144" x 60"	2 - 6" x 8"	1
TOTAL						7

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

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THE PLANS

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	21	23

 10-10-12  
 REGISTERED CIVIL ENGINEER DATE

12-17-12  
 PLANS APPROVAL DATE

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**NOTE:**

RELOCATION AND RESET LOCATIONS OF SIGNS WILL BE DETERMINED BY THE ENGINEER. PRIMARY SIGNS SUCH AS THE "COOK S+ - 1 MILE" AND "COOK S+ - NEXT EXIT" SIGNS MAY BE RELOCATED IN THE MEDIAN IF SPACE ON THE OUTSIDE SHOULDER IS LIMITED.

**TEMPORARY CRASH CUSHION MODULE**

LOCATION	TYPE	QUANTITY
		EA
L+ Sta 2448+03.13	ARRAY TS14	14
L+ Sta 2653+14.27	ARRAY TS14	14
TOTAL		28

**ROADSIDE SIGN QUANTITIES**

SIGN MESSAGE/DESCRIPTION	POST MILE	ROADSIDE SIGN				
		ONE POST	TWO POST	REMOVE	RESET	RELOCATE
				EA	EA	EA
SLIPPERY WHEN WET	44.91	X			1	
G66-4, G66-11, G66-224	44.94	X			1	
ADOPT A HIGHWAY	45.90	X			1	
COOK S+ - NEXT EXIT	47.55		X			1
CALIFORNIA STATE UNIVERSITY-SAN BERNARDINO-PALM DESERT CAMPUS-NEXT EXIT	47.63		X			1
PALM DESERT-INDIAN WELLS-NEXT EXIT	47.73		X			1
UNIVERSITY OF CALIFORNIA-RIVERSIDE-PALM DESERT CAMPUS-NEXT EXIT	47.82		X			1
ADOPT A HIGHWAY	47.88	X			1	
COOK S+ - 1 MILE	47.93		X			1
SOFT SHOULDER	47.96	X		1		
SOFT SHOULDER	48.59	X		1		
AUTOS W - TRAILERS-55	49.63	X			1	
SPEED LIMIT-70-RADAR ENFORCED	49.76	X			1	
ADOPT A HIGHWAY	50.07	X			1	
TOTAL				2	7	5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans** TRAFFIC DESIGN  
 OSCAR ALEJANDRE  
 BILL WASSER  
 REVISIONS: 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

**SIGN QUANTITIES**  
**SQ-1**

LAST REVISION DATE PLOTTED => 14-DEC-2012  
 09-07-12 TIME PLOTTED => 14:06

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	22	23

*Sidhartha Chowdhury* 10-10-12  
 REGISTERED CIVIL ENGINEER DATE

12-17-12  
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
 SIDHARTHA CHOWDHURY  
 No. 55418  
 Exp. 12/31/12  
 CIVIL  
 STATE OF CALIFORNIA

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**PAVEMENT STRUCTURE QUANTITIES**

STATION	HOT MIX ASPHALT (TYPE A)	ASPHALTIC EMULSION (FOG SEAL COAT)	COLD PLANE ASPHALT CONCRETE PAVEMENT
	TON	TON	SQYD
2363+00.00 TO 2448+03.13	1,519	2.5	985
2493+40.00 TO 2652+24.78	3,076	4.5	1,772
<b>TOTAL</b>	4,595	7.0	2,757

**CONCRETE BARRIER**

STATION	TYPE 60G (MODIFIED)	TYPE 60GC	BARRIER MARKER
	LF	LF	EA
2363+00.00 TO 2448+03.13	8,495		177
2493+40.00 TO 2559+16.07	6,577		137
2559+10.07 TO 2645+50.00	8,619		180
2645+50.00 TO 2651+70.52		621	13
2651+70.52 TO 2652+24.78	55		2
<b>TOTAL</b>	23,746	621	509

**EARTHWORK QUANTITIES**

STATION	ROADWAY EXCAVATION	(N) EMBANKMENT FILL
	CY	CY
2363+00.00 TO 2448+03.13	619	498
2493+40.00 TO 2652+24.78	1,599	1,093
<b>TOTAL</b>	2,218	1,591

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

**REMOVE METAL BEAM GUARD RAILING**

STATION	QUANTITY
	LF
2363+07.38 TO 2369+85.17	678
2447+40.27 TO 2448+03.14	129
2559+11.99 TO 2559+89.35	78
<b>TOTAL</b>	885

**TRANSITION RAILING AND TERMINAL SYSTEM**

STATION	TRANSITION RAILING (TYPE WB)	ALTERNATIVE FLARED TERMINAL SYSTEM
	EA	EA
2652+23.07	1	
2652+48.48		1
<b>TOTAL</b>	1	1

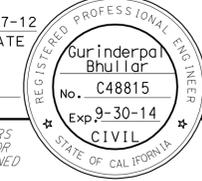
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA  
 THAO HOANG  
 SIDHARTHA CHOWDHURY  
 CALCULATED/DESIGNED BY: CHECKED BY:  
 REVISOR: THAO HOANG  
 DATE: 7/2/2010

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THE PLANS

**SUMMARY OF QUANTITIES**  
**Q-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv	10	44.7/50.3	23	23

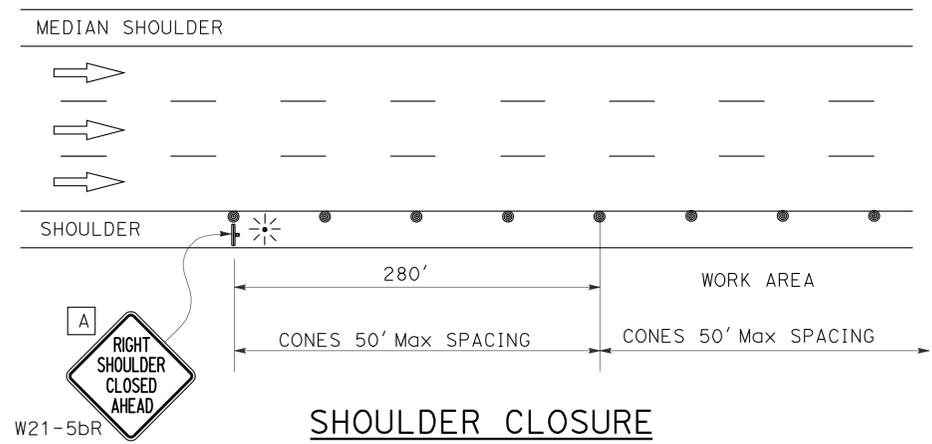
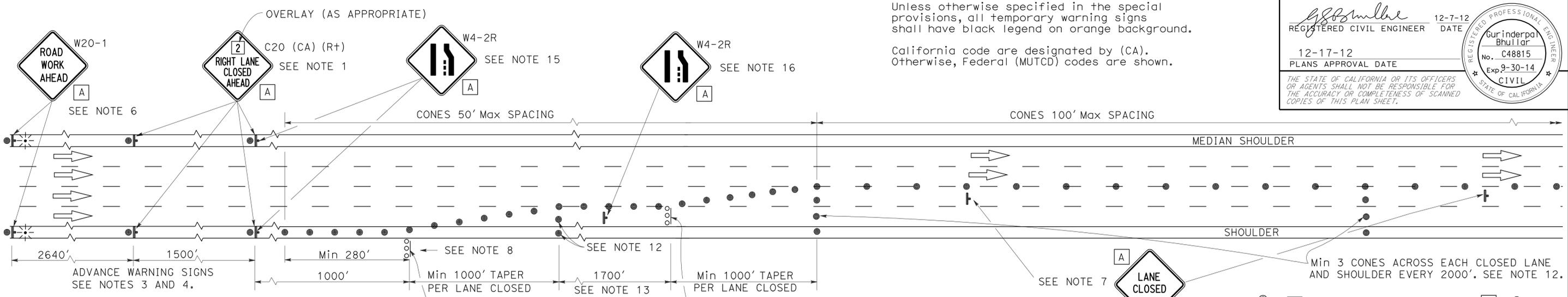
	
12-7-12 REGISTERED CIVIL ENGINEER DATE	12-17-12 PLANS APPROVAL DATE

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.

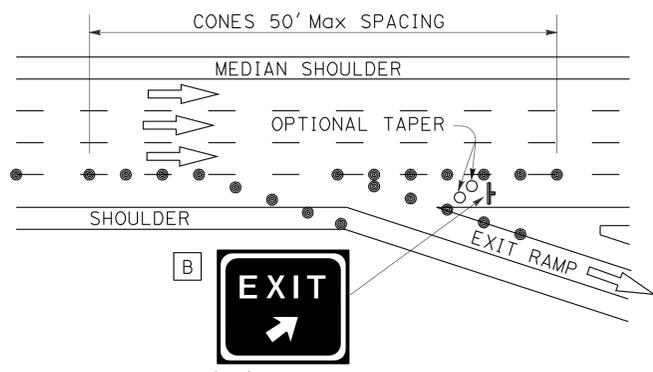
**NOTES:**

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

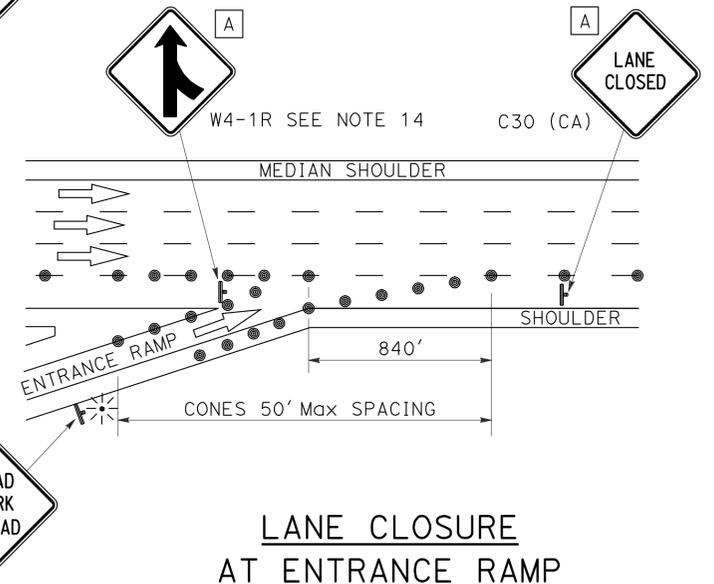
California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



**LANE CLOSURE**



**LANE CLOSURE AT EXIT RAMP**



**LANE CLOSURE AT ENTRANCE RAMP**

**NOTES:**

- Median lane closures shall conform to the details for outside lane closures except that C20 (CA) (Lt) 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 C14 (CA) "END ROAD WORK" sign, 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 C11 (CA) "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 first flashing arrow sign shall be Type I. All others may be either Type I or Type II.
- 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 1700' tangent shown along lane lines shall be used between the 1000' tapers required for each closed traffic lane.
- Unless otherwise specified in the special provisions, the G84 (CA) and W4-1 signs shall be used as shown.
- When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.
- The W4-2 "LANE ENDS" symbol sign shown at this location is to be used where the W4-2 sign is used as advance warning as described in Note 15.

**SIGN PANEL SIZE (Min)**

- A 48" x 48"
- B 54" x 48"

**LEGEND**

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

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

**TCS-1**

REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23  
 REVISION BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CALCULATED/DESIGNED BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 FUNCTIONAL SUPERVISOR: \_\_\_\_\_  
 DEPARTMENT OF TRANSPORTATION  
 STATE OF CALIFORNIA  


LAST REVISION DATE PLOTTED => 14-DEC-2012  
 00-00-00 TIME PLOTTED => 14:04