

INDEX OF PLANS

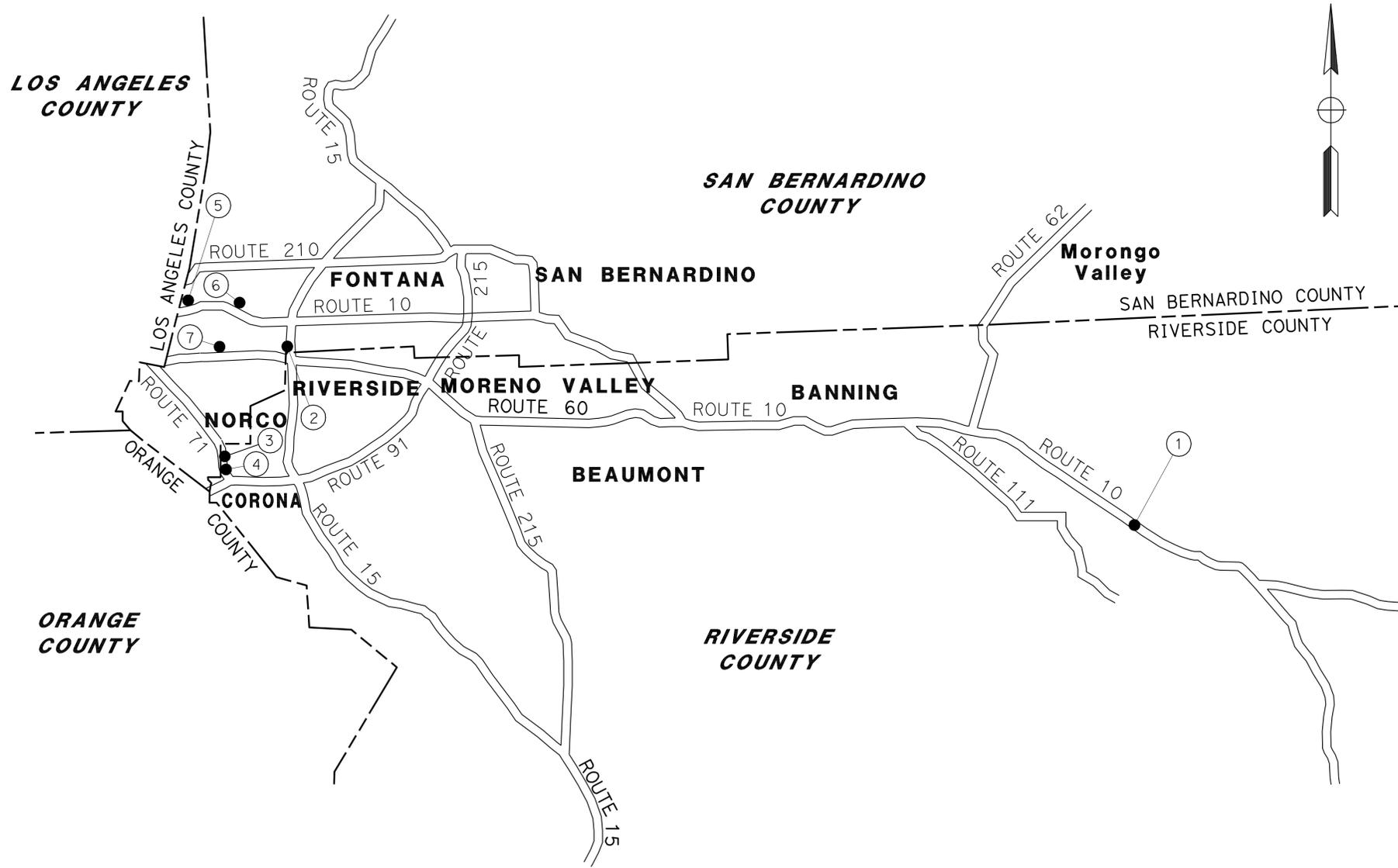
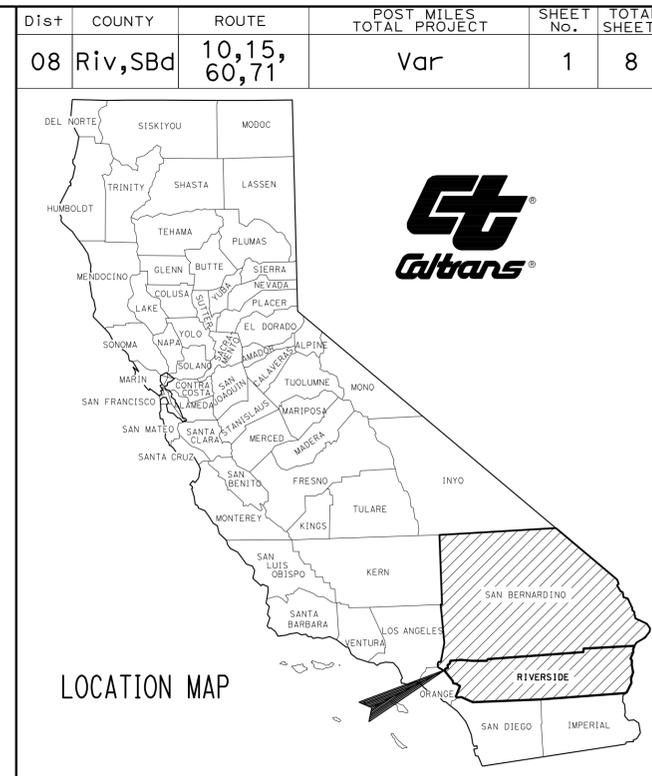
SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	CONSTRUCTION DETAILS
4	CONSTRUCTION AREA SIGNS
5	TRAFFIC HANDLING QUANTITIES
6	SUMMARY OF QUANTITIES
7-8	TRAFFIC CONTROL SYSTEM

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN RIVERSIDE AND SAN BERNARDINO COUNTIES
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



CONSTRUCTION LOCATIONS

No.	COUNTY	ROUTE	POST MILE	DIRECTION	DESCRIPTION
①	Riv	10	46.67	EASTBOUND	AT COOK St EXIT RAMP
②	Riv	15	51.9	SOUTHBOUND	AT MISSION Blvd
③	Riv	71	2.32	NORTHBOUND	0.48 MILE NORTH OF SANTA ANA RIVER
④	Riv	71	2.58	SOUTHBOUND	0.22 MILE NORTH OF SANTA ANA RIVER
⑤	SBd	10	0.83	WESTBOUND	AT MONTE VISTA Ave EXIT RAMP
⑥	SBd	10	5.39	WESTBOUND	AT 4th St EXIT RAMP
⑦	SBd	60	R3.8	WESTBOUND	AT MOUNTAIN Ave EXIT RAMP

PROJECT MANAGER
CATALINO PINING

DESIGN ENGINEER
HENRY LEE

Henry Lee 2-19-13
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

March 11, 2013
PLANS APPROVAL DATE

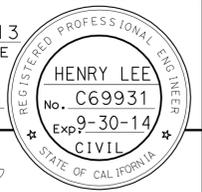
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THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

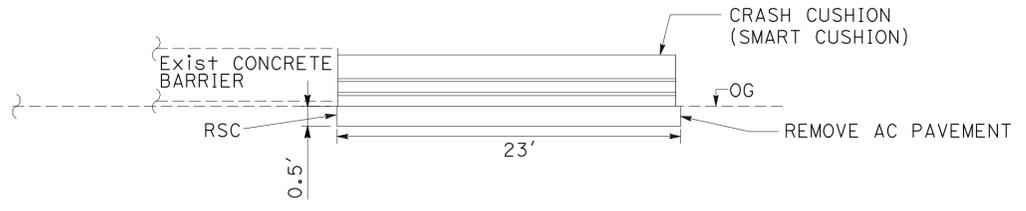
CONTRACT No.	08-1C8104
PROJECT ID	0813000039

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv,SBd	10,15,60,71	Var	2	8
Henry Lee			3-8-13	DATE	
REGISTERED CIVIL ENGINEER			DATE		
3-11-13			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>					

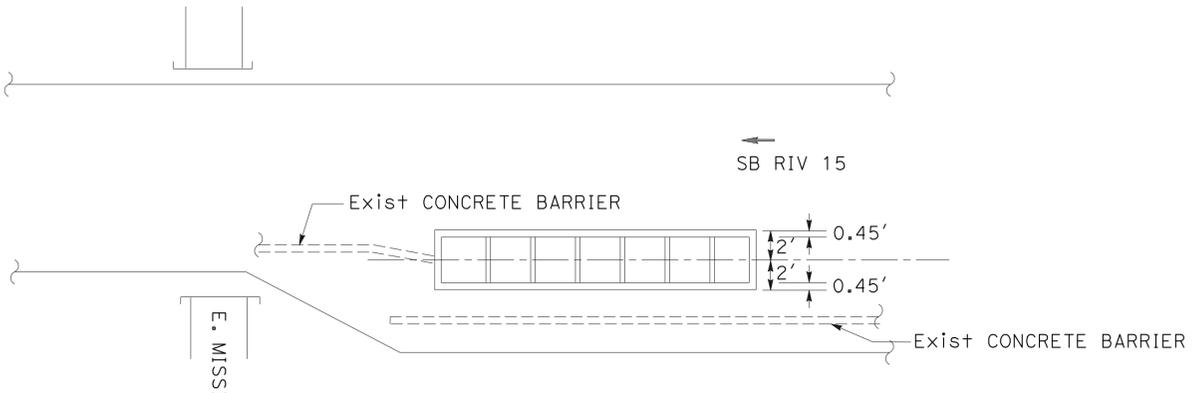


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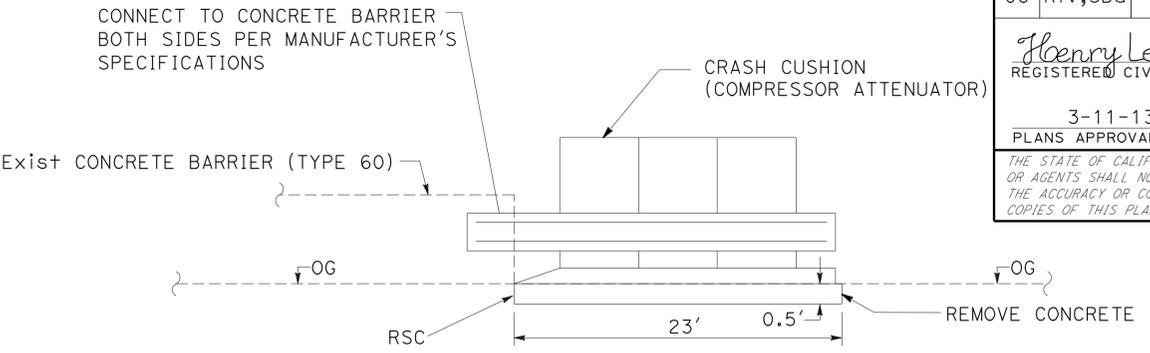
RSC - RAPID STRENGTH CONCRETE



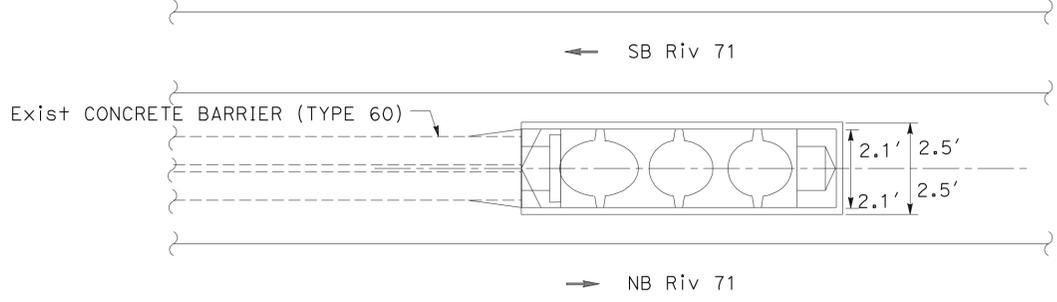
ELEVATION



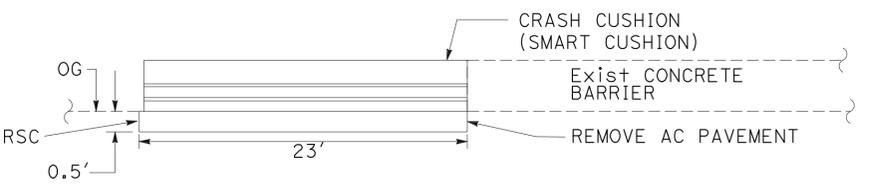
PLAN LOCATION 2



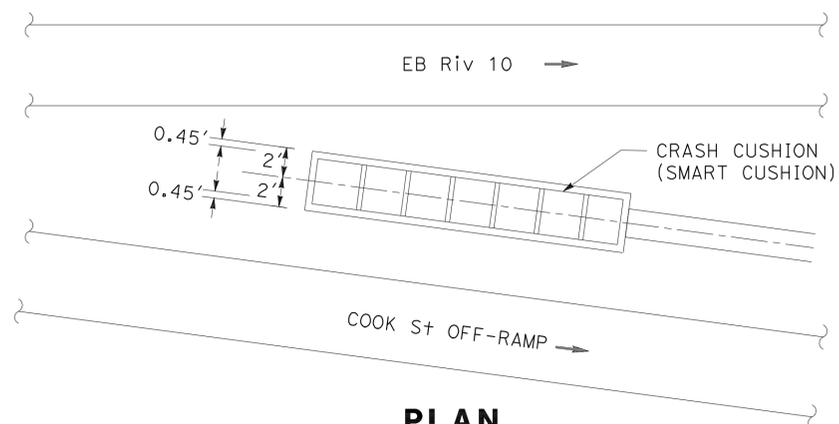
ELEVATION



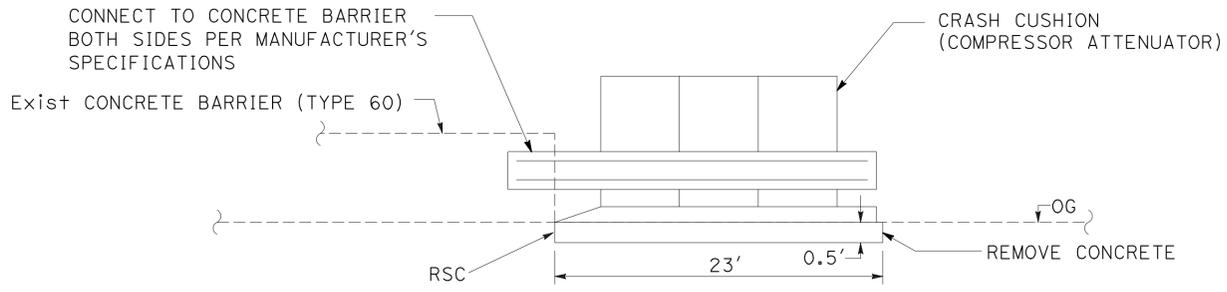
PLAN LOCATION 4



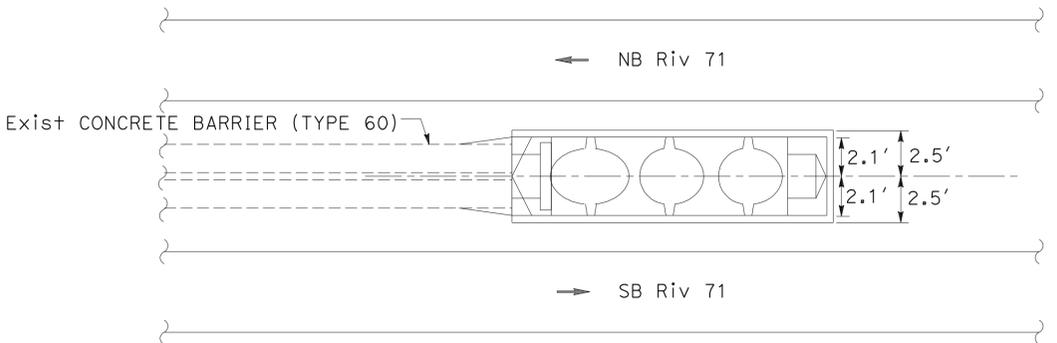
ELEVATION



PLAN LOCATION 1



ELEVATION



PLAN LOCATION 3

CONSTRUCTION DETAILS
NO SCALE
C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	DESIGNED BY	CHECKED BY	REVISOR	DATE
Caltrans	KEVIN CHEN	HENRY LEE	KUANG H. CHEN	HENRY LEE	3-11-13

USERNAME => s121614
DGN FILE => 0813000039ga001.dgn

RELATIVE BORDER SCALE IS IN INCHES
0 1 2 3

UNIT 2343

PROJECT NUMBER & PHASE

08130000391

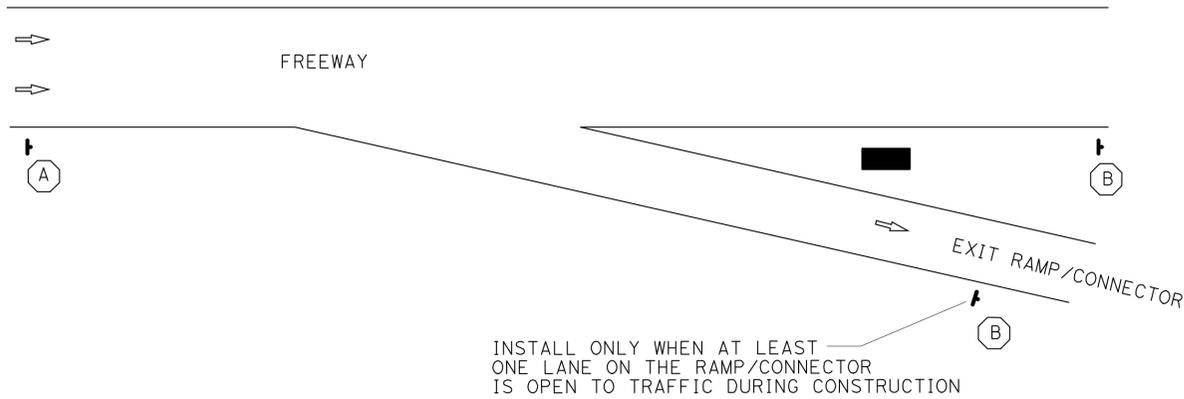
LAST REVISION DATE PLOTTED => 15-MAR-2013
03-08-13 TIME PLOTTED => 05:42

NOTE:

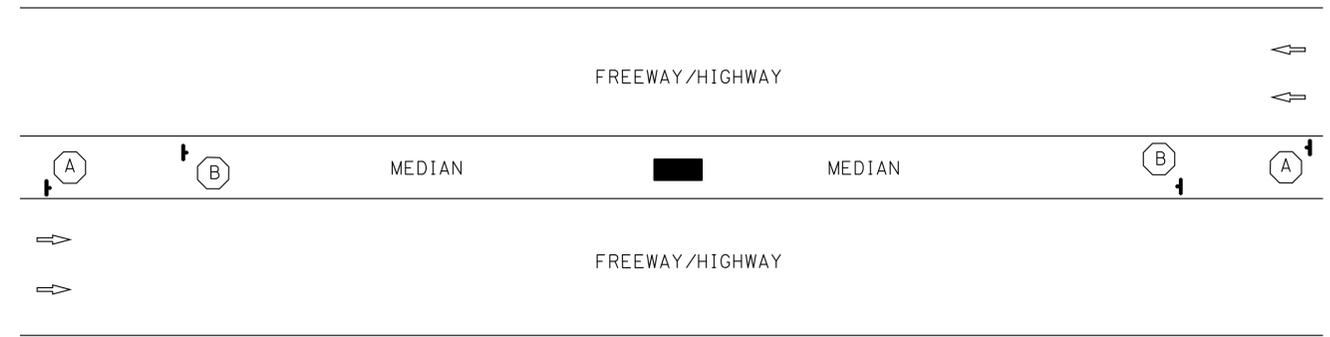
1. LOCATIONS OF THE CONSTRUCTION AREA SIGNS ARE APPROXIMATE. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

LEGEND:

- ↑ CONSTRUCTION AREA SIGN (1 POST)
- CONSTRUCTION WORK AREA
- ⊗ CONSTRUCTION AREA SIGN CODE



TYPICAL CONFIGURATION AT EXIT RAMP AND CONNECTORS



TYPICAL CONFIGURATION AT MEDIAN LOCATIONS

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. ⊗	SIGN CODE		PANEL SIZE	SIGN MESSAGE	No. OF POST(S) AND SIZE	No. OF SIGNS EA
	FEDERAL	CALIFORNIA				
A	W20-1	C23(CA)	48" x 48"	ROAD WORK AHEAD	1 - 6" x 6"	9
B	G20-2	C14(CA)	48" x 24"	END ROAD WORK	1 - 4" x 6"	10

NUMBER OF CONSTRUCTION AREA SIGNS AT EACH LOCATION

No.	COUNTY	ROUTE	POST MILE	DIRECTION	DESCRIPTION	NUMBER OF W20-1 SIGNS AT EACH LOCATION	NUMBER OF G20-2 SIGNS AT EACH LOCATION
①	Riv	10	46.67	EASTBOUND	AT COOK St	1	2
②	Riv	15	51.9	SOUTHBOUND	AT MISSION Blvd, NEAR ROUTE 60	1	1
③	Riv	71	2.32	NORTHBOUND	AT ROUTE 91 SEPARATION	2	2
④	Riv	71	2.58	SOUTHBOUND	AT ROUTE 91 SEPARATION	2	2
⑤	SBd	10	0.83	WESTBOUND	AT MONTE VISTA Ave EXIT RAMP	1	1
⑥	SBd	10	5.39	WESTBOUND	AT 4th St EXIT RAMP	1	1
⑦	SBd	60	R3.8	WESTBOUND	AT MOUNTAIN Ave EXIT RAMP	1	1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10, 15, 60, 71	Var	5	8

 2-19-13
 REGISTERED CIVIL ENGINEER DATE

3-11-13
 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:

- IF THE PERMANENT CRASH CUSHIONS ARE NOT IN PLACE AT THE END OF WORK SHIFT, INSTALL TEMPORARY CRASH CUSHION ARRAY AS SHOWN IN TABLE.
- ALL WORK TO INSTALL THE NEW CRASH CUSHION SYSTEM AT EACH LOCATION SHALL BE ACCOMPLISHED IN MAXIMUM OF TWO WORK SHIFTS.
- DURING WORK SHIFTS, CONTRACTOR MUST PROVIDE TWO IMPACT ATTENUATOR VEHICLES IN ADVANCE OF THE WORK AREA AS DIRECTED BY THE ENGINEER.

TEMPORARY CRASH CUSHION MODULES QUANTITIES

No.	COUNTY	ROUTE	POST MILE	DIRECTION	DESCRIPTION	TEMPORARY CRASH CUSHION ARRAY	NUMBER OF MODULES FOR EACH ARRAY
①	Riv	10	46.67	EASTBOUND	AT COOK St	TU14	14
②	Riv	15	51.9	SOUTHBOUND	AT MISSION Blvd, NEAR ROUTE 60	TU14	14
③	Riv	71	2.32	NORTHBOUND	AT ROUTE 91 SEPARATION	TB14	14
④	Riv	71	2.58	SOUTHBOUND	AT ROUTE 91 SEPARATION	TB14	14
⑤	SBd	10	0.83	WESTBOUND	AT MONTE VISTA Ave EXIT RAMP	TU14	14
⑥	SBd	10	5.39	WESTBOUND	AT 4th St EXIT RAMP	TU14	14
⑦	SBd	60	R3.8	WESTBOUND	AT MOUNTAIN Ave EXIT RAMP	TU14	14
TOTAL							98

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR
 WILLIAM E. WASSER
 CALCULATED/DESIGNED BY
 CHECKED BY
 HORMUZD SETHNA
 TRAN HOANG
 REVISED BY
 DATE REVISED

**TRAFFIC HANDLING QUANTITIES
THQ-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv,SBd	10,15,60,71	Var	6	8

Henry Lee 2-19-13
 REGISTERED CIVIL ENGINEER DATE

3-11-13
 PLANS APPROVAL DATE

HENRY LEE
 No. C 69931
 Exp. 9-30-14
 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:

1. CONNECT TO CONCRETE BARRIER (BOTH SIDES), LOCATIONS 3, 4, AND 7.

CRASH CUSHIONS QUANTITIES

LOCATION No.	COUNTY	ROUTE	POST MILE	DIRECTION	LOCATION	CRASH CUSHION (COMPRESSOR ATTENUATOR)	(N) RAPID STRENGTH CONCRETE	CRASH CUSHION (SMART CUSHION)	REMOVE CRASH CUSHION (SAND FILLED)	REMOVE MBGR	REMOVE CRASH CUSHION	REMOVE AC PAVEMENT	REMOVE CONCRETE	TREATED WOOD WASTE
						EA	CY	EA	EA	LF	EA	CY	CY	LB
1	Riv	10	46.67	EB	COOK St EXIT RAMP		1.70	1	11			1.70		
2	Riv	15	51.90	SB	MISSION Blvd		1.70	1	14			1.70		
3	Riv	71	2.32	NB	0.48 MILE NORTH OF SANTA ANA RIVER	1	2.13				1		2.13	
4	Riv	71	2.58	SB	0.22 MILE NORTH OF SANTA ANA RIVER	1	2.13		14				2.13	
5	SBd	10	0.83	WB	MONTE VISTA Ave EXIT RAMP		1.70	1	14			1.70		
6	SBd	10	5.39	WB	4TH St EXIT RAMP		1.70	1	11			1.70		
7	SBd	60	R3.80	WB	MOUNTAIN Ave EXIT RAMP	1	2.13		14	100			2.13	1640
TOTAL						3	13.19	4	78	100	1	6.80	6.39	1640

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

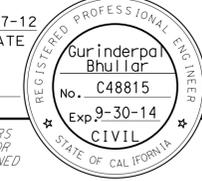
SUMMARY OF QUANTITIES

Q-1

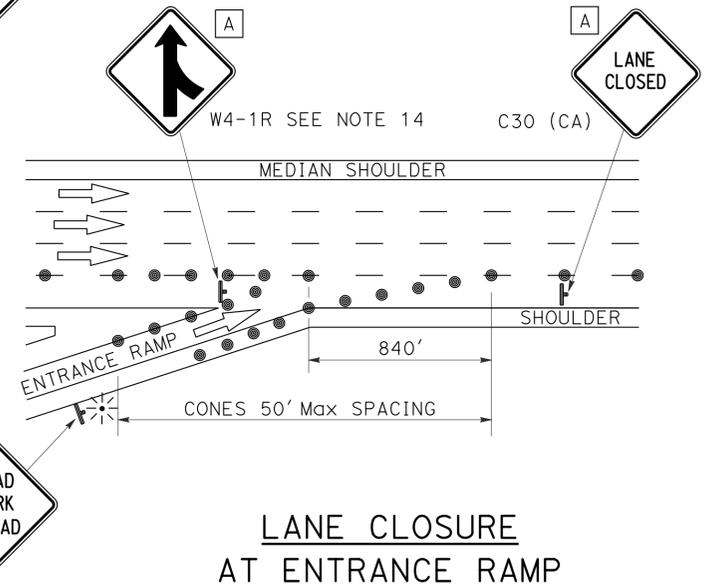
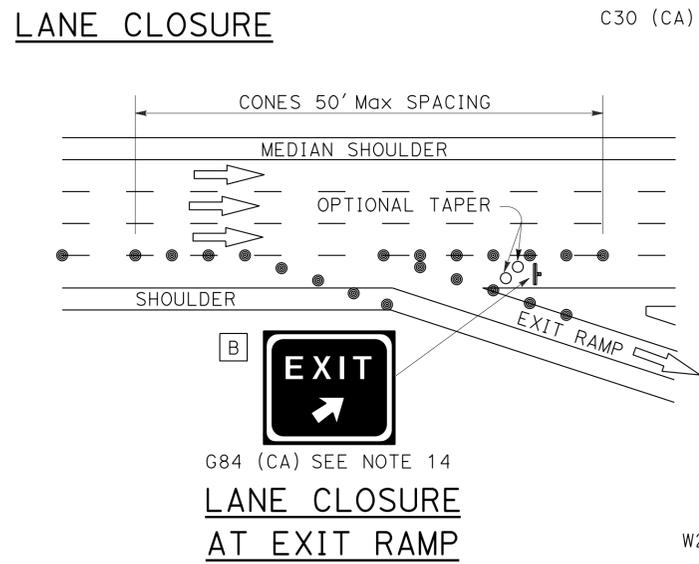
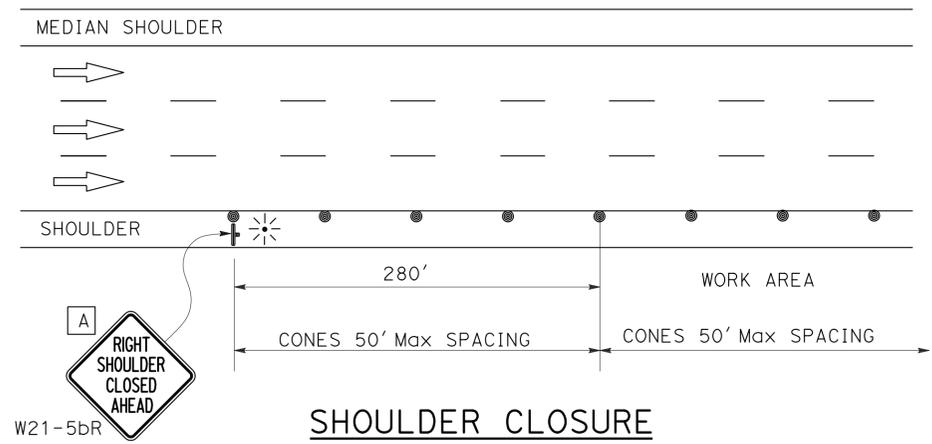
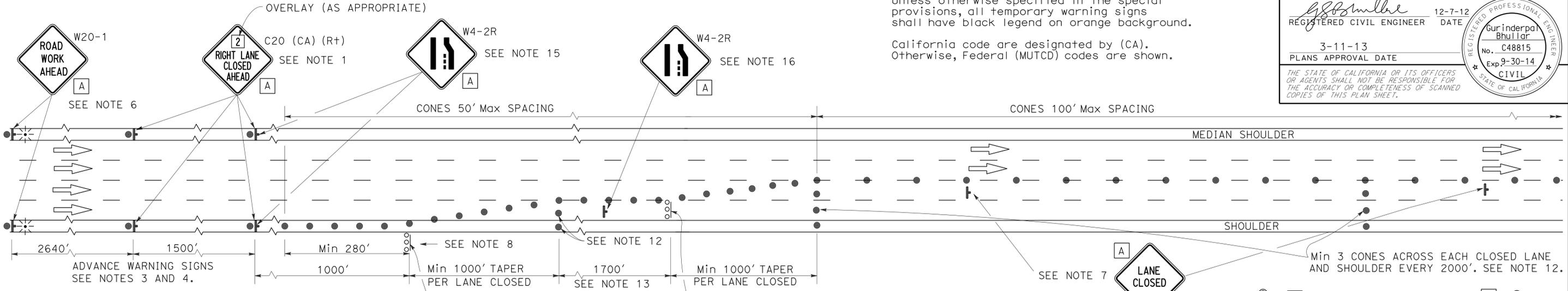
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE DESIGN
 FUNCTIONAL SUPERVISOR KEVIN CHEN
 CALCULATED/DESIGNED BY HENRY LEE
 CHECKED BY KUANG H. CHEN
 REVISED BY HENRY LEE
 DATE REVISED



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv, SBd	10,15, 60,71	Var	7	8

	
 REGISTERED CIVIL ENGINEER	12-7-12 DATE
3-11-13 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:
 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.



- 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

REVISOR BY
 DATE

CALCULATED-DESIGNED BY
 CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION


TYPICAL RAMP CLOSURES

SIGN PANEL SIZE (Min)

- A 48" x 48"
- B 48" x 30"
- C 30" x 30"
- D 48" x 48" - SPEED OF 50 mph OR MORE
36" x 36" - SPEED LESS THAN 50 mph
- E 48" x 36"

LEGEND

- TRAFFIC CONE
- † TEMPORARY SIGN
- ‡ BARRICADES

NOTES:

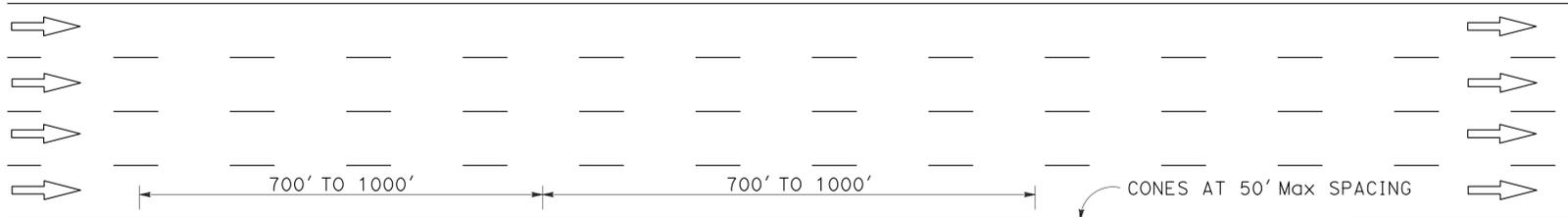
- Barricades shall be Type I, II, or III for closures lasting one week or less and Type III for closures lasting longer than one week.
- In addition to placing the C19 (CA) "RAMP CLOSED AHEAD" and C30 (CA) "RAMP CLOSED" signs, black on orange overlay plates with the word "CLOSED" may be mounted, as directed by the Engineer, on all guide signs that refer to the closed ramp. The letter size on the overlay shall be the same as the guide sign.
- Each advance C19 (CA) "RAMP CLOSED AHEAD" sign 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.
- All cones used for ramp 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 ramp closures only.
- At least one person shall be assigned to provide full time maintenance of traffic control devices, unless otherwise directed by the Engineer.
- The existing "EXIT" sign in the gore area shall be covered during ramp closures.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	Riv,Sbd	10,15,60,71	Var	8	8

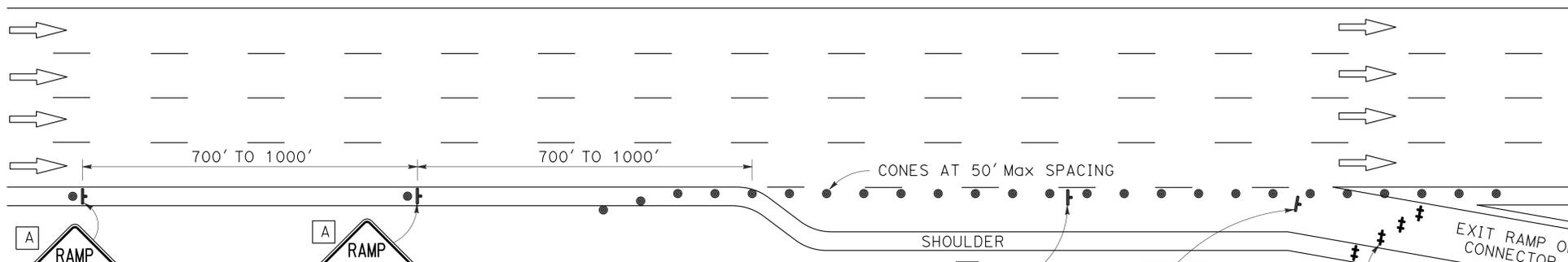
12-7-12
 REGISTERED CIVIL ENGINEER DATE
 3-11-13
 PLANS APPROVAL DATE

Gurinderpal Bhullar
 No. C48815
 Exp. 9-30-14
 CIVIL

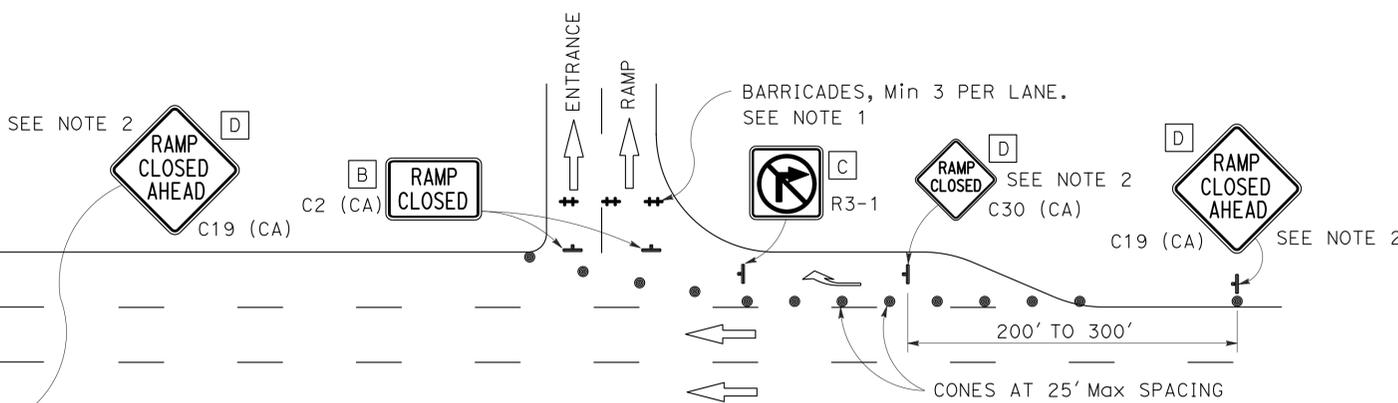
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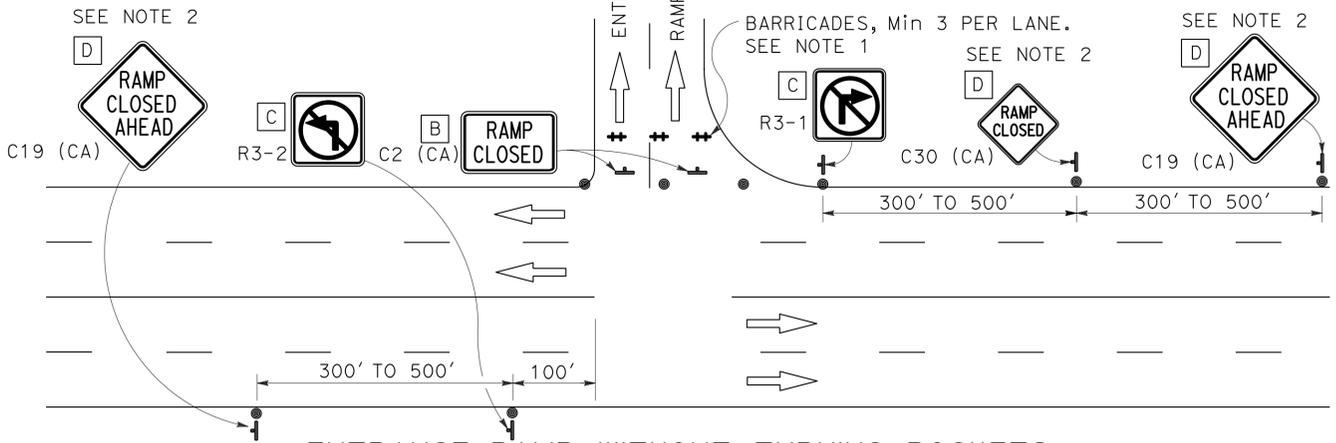
EXIT RAMP OR CONNECTOR



EXIT RAMP OR CONNECTOR WITH ADDITIONAL LANE



ENTRANCE RAMP WITH TURNING POCKETS



ENTRANCE RAMP WITHOUT TURNING POCKETS

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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURE

NO SCALE

TCS-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans

LAST REVISION DATE PLOTTED => 14-MAR-2013
 00-00-00 TIME PLOTTED => 15:19