INDEX OF PLANS

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1	TITLE AND LOCATION MAP
2-3	TYPICAL CROSS SECTIONS
4-8	CONSTRUCTION DETAILS
9	TEMPORARY WATER POLLUTION CONTROL DETAILS
10	DRAINAGE DETAILS
11	DRAINAGE QUANTITIES
12	CONSTRUCTION AREA SIGNS
13	PAVEMENT DELINEATION QUANTITIES
14	SUMMARY OF QUANTITIES
15-19	TRAFFIC CONTROL SYSTEM
20-21	REVISED AND NEW STANDARD PLANS

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

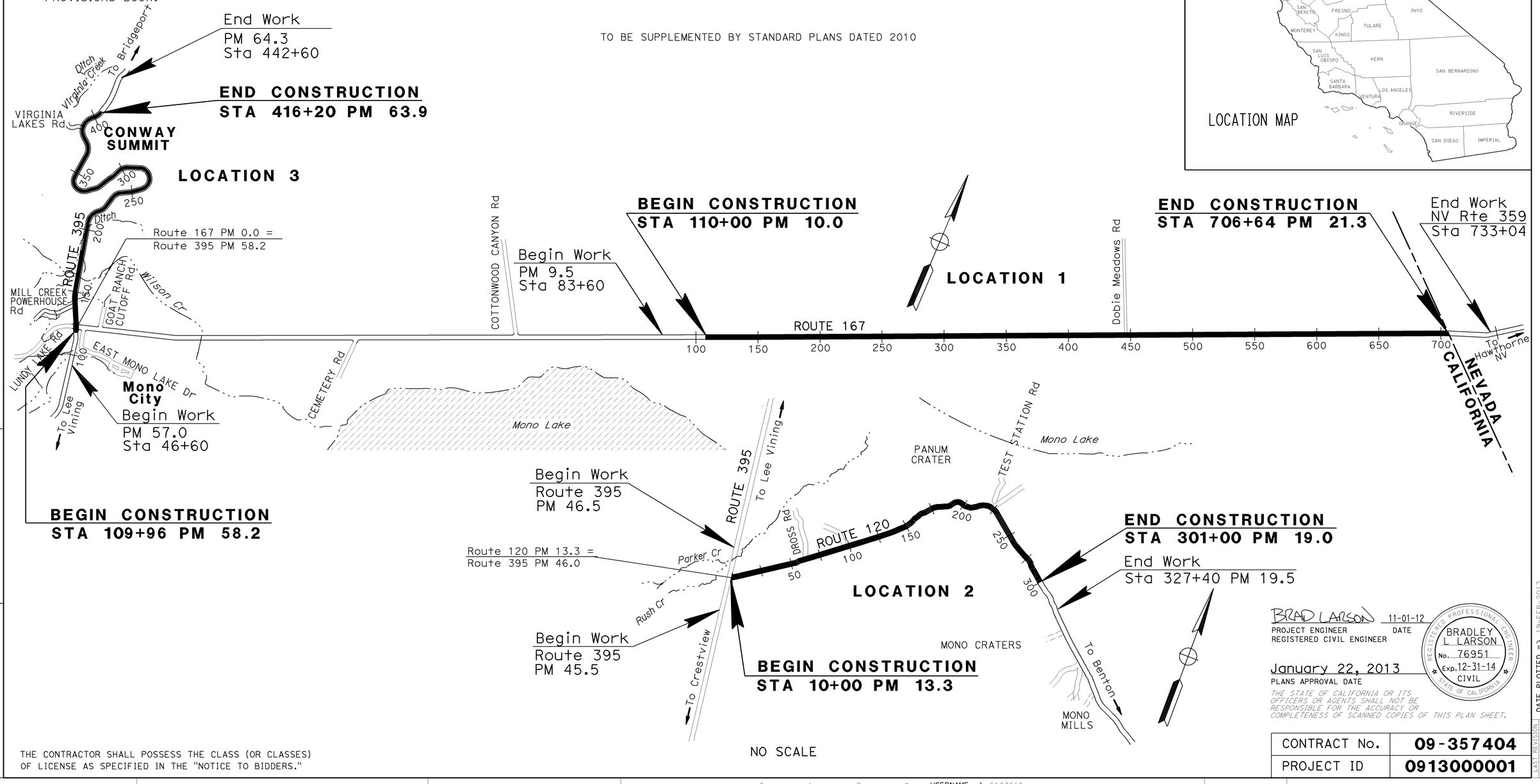
ACSTP-X051(027)E

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120,167 395	Var	1	21

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN MONO COUNTY NEAR LEE VINING AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2010



NO SCALE

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

PROJECT MANAGER: JOHN FOX

DESIGN ENGINEER: JOHN FOX

BRAD LARSON 11-01-12
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L LARSON
No. 76951
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

January 22, 2013
PLANS APPROVAL DATE

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

CONTRACT No.	09-357404
PROJECT ID	0913000001

LAST REVISION 01-22-13 DATE PLOTTED => 19-FEB-2013 TIME PLOTTED => 15:48

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	2	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

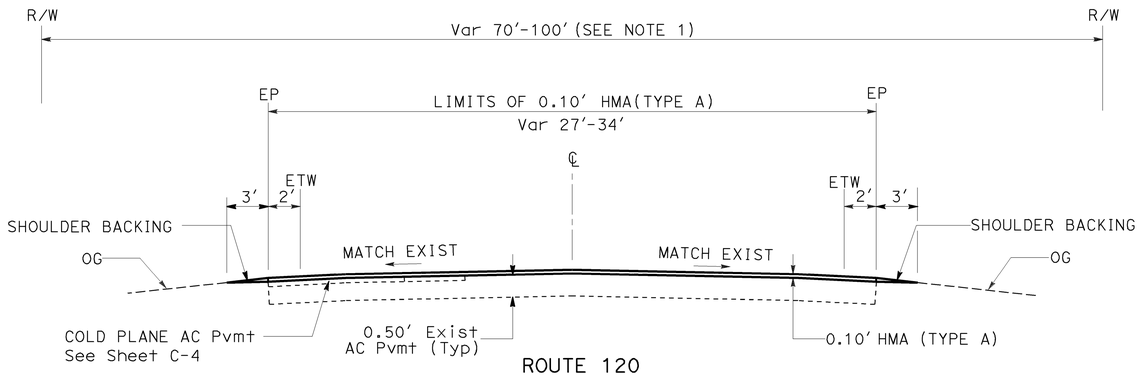
1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRADLEY L. LARSON No. 76951 Exp.12-31-14 CIVIL — STATE OF CALIFORNIA

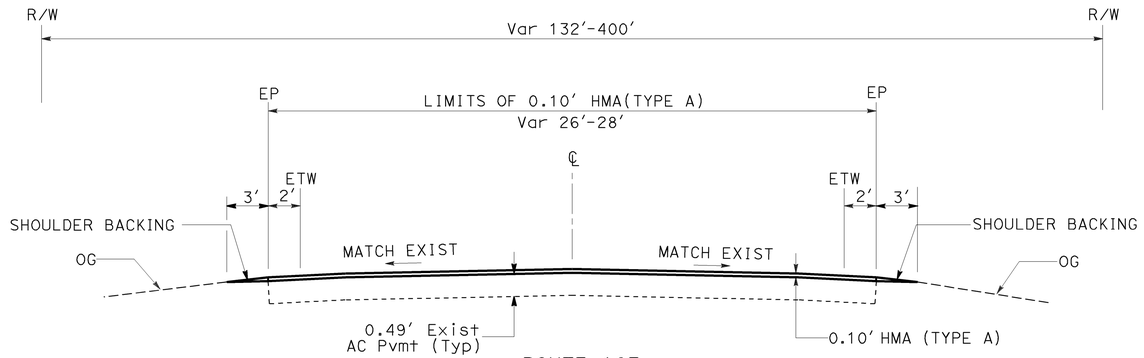
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. ON ROUTE 120 FROM STATION 10+00 TO STATION 152+56, RIGHT OF WAY LIMITS ARE INDETERMINATE, AND ARE NOT SHOWN. THE CONTRACTOR MUST CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE FOR CONDITIONS OF USE PRIOR TO COMMENCING WORK.
2. STATIONING SHOWN IS FOR CONSTRUCTION PURPOSES ONLY.



ROUTE 120
LOCATION 2
Sta 10+00 TO Sta 301+00
(PM 13.3 TO PM 19.0)



ROUTE 167
LOCATION 1
Sta 110+00 TO Sta 706+64
(PM 10.0 TO PM 21.3)

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

TYPICAL CROSS SECTIONS

NO SCALE

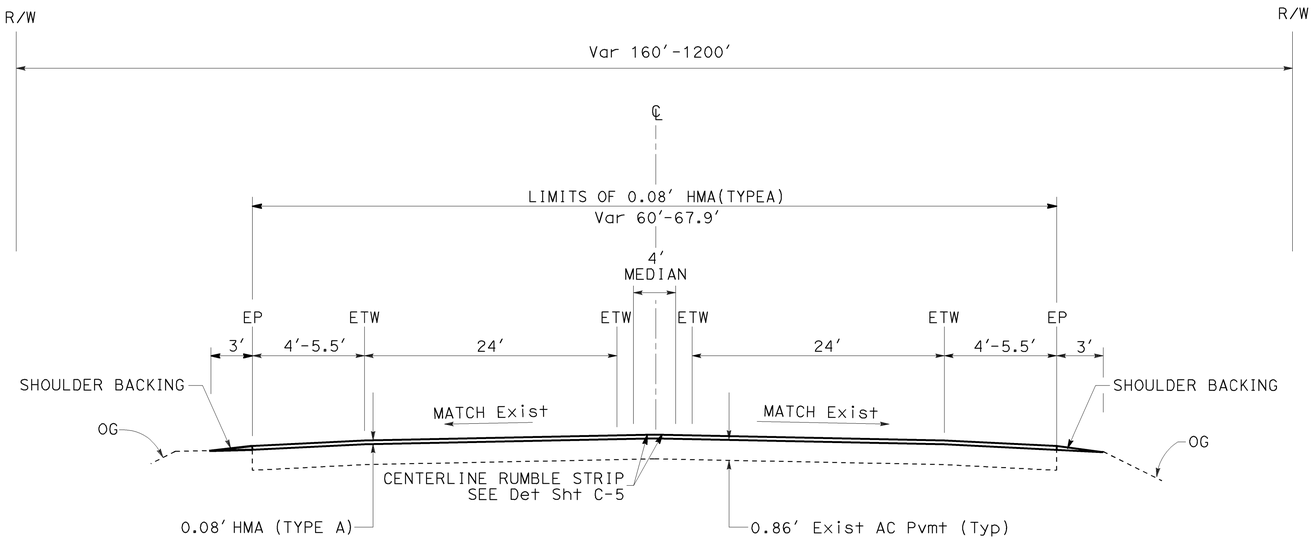
X-1

REVISED BY	DATE REVISED
MR	11-28-12
BL	11-01-12

CALCULATED-DESIGNED BY: BRADLEY LARSON
CHECKED BY: DAN FROILAND
FUNCTIONAL SUPERVISOR: JOHN FOX

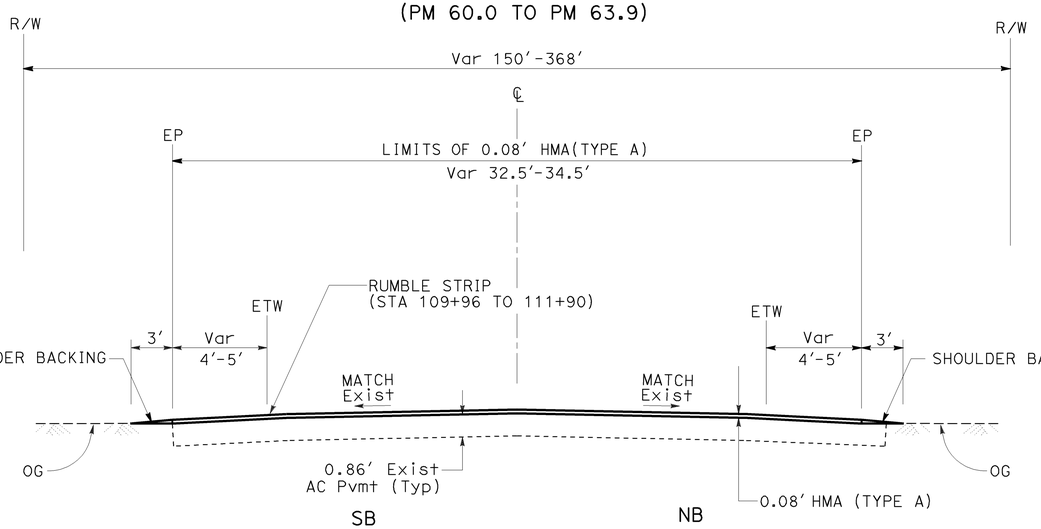
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION 01-22-13 | DATE PLOTTED => 31-JAN-2013 | TIME PLOTTED => 09:35



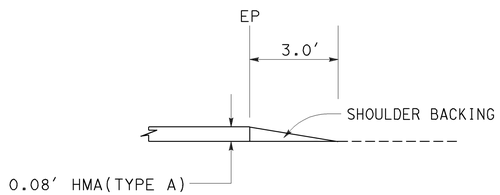
SB NB

ROUTE 395
LOCATION 3
Sta 205+50 TO Sta 416+20
(PM 60.0 TO PM 63.9)

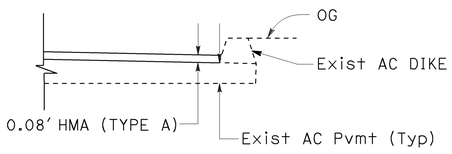


SB NB

ROUTE 395
LOCATION 3
Sta 109+96 TO Sta 205+50
(PM 58.2 TO PM 60.0)



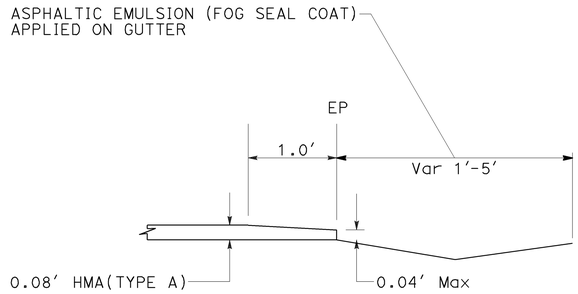
SHOULDER BACKING DETAIL



Loc 3 LIMITS AT EXISTING AC DIKE

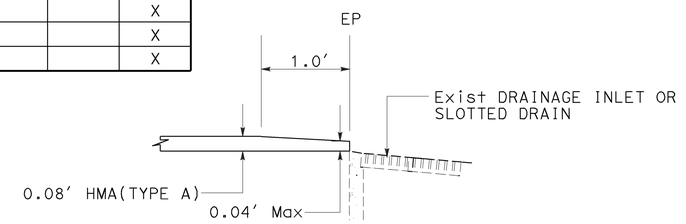
EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

EXISTING GUTTER				
Loc	STATION FROM	STATION TO	L†	R†
3	244+26	253+77		X
	255+77	258+00		X
	273+90	275+78		X
	291+15	296+87		X
	311+80	315+04		X
	371+09	380+00		X
	201+06	206+05	X	
	229+04	236+80	X	
	241+05	243+20	X	
	306+75	311+25	X	
	318+77	325+30	X	
	341+90	350+12	X	



Loc 3 GUTTER CONFORM DETAIL

EXISTING DRAINAGE INLETS AND SLOTTED DRAINS			
Loc	STATION	L†	R†
3	230+60	X	
	253+80	X	
	339+68	X	
	196+00		X
	326+98		X
	340+70		X
	363+47		X



DRAINAGE INLET AND SLOTTED DRAIN CONFORM DETAIL

TYPICAL CROSS SECTIONS

NO SCALE

X-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	3	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRADLEY L. LARSON No. 76951 Exp.12-31-14 CIVIL — STATE OF CALIFORNIA

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

REVISED BY	DATE REVISED
MR	11-28-12
BL	11-01-12

CALCULATED-DESIGNED BY: BRADLEY LARSON
CHECKED BY: DAN FROILAND
FUNCTIONAL SUPERVISOR: JOHN FOX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION: DATE PLOTTED => 31-JAN-2013 TIME PLOTTED => 09:35

BORDER LAST REVISED 7/2/2010 | USERNAME => S123915 | DGN FILE => 935740ca002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2480 | PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	4	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

BRADLEY L. LARSON No. 76951 Exp.12-31-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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LEGEND:

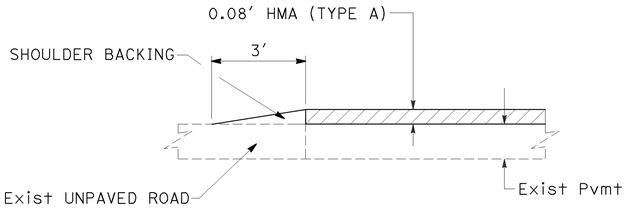
Var 0.08' TO 0.10' HMA (TYPE A)

Var 0.08' TO 0.10' HMA (TYPE A)
Var 0.08' TO 0.10' COLD PLANE AC Pvmt

TABLE B

HMA(TYPE A) LIMITS AT UNPAVED ROAD CONNECTION

Loc	Sta	Lt	Rt	"X"	"Y"	"Z"	DESCRIPTION
3	130+90	X		334'	182'	21'	MILL CREEK POWERHOUSE Rd
	207+75		X	128'	138'	19'	CONWAY RANCH Rd



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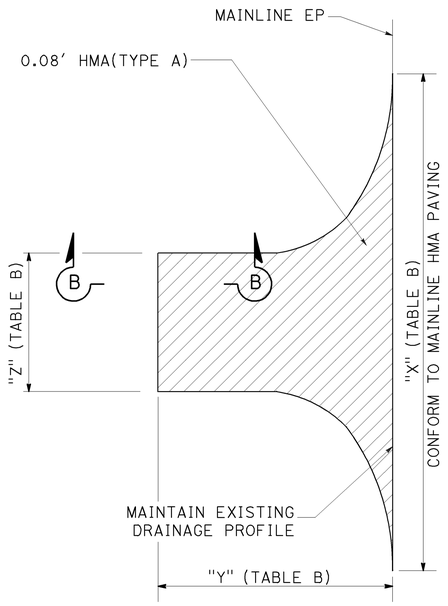
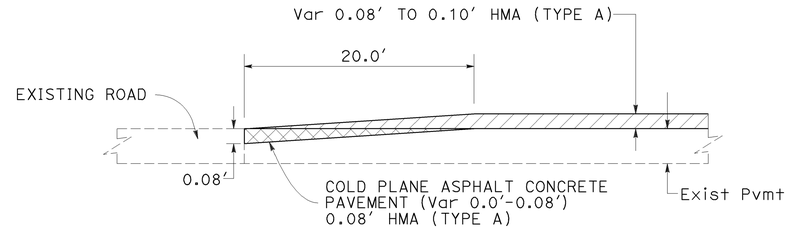
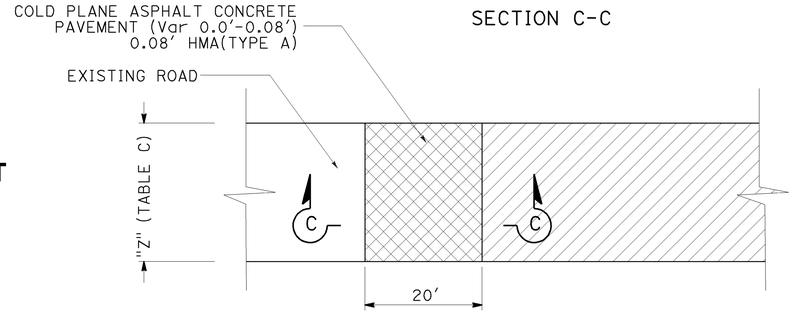


TYPICAL HMA(TYPE A) LIMITS AT UNPAVED ROAD CONNECTIONS



SECTION C-C

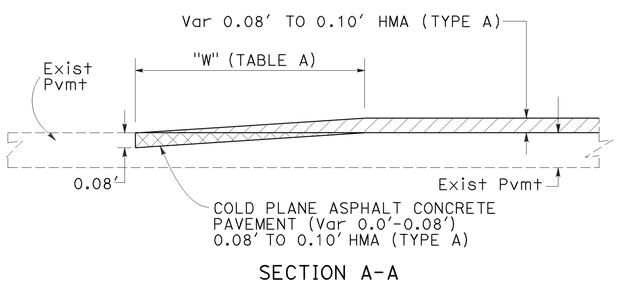


TYPICAL HMA(TYPE A) AND COLD PLANE AC Pvmt LIMITS AT Exist Rdwy

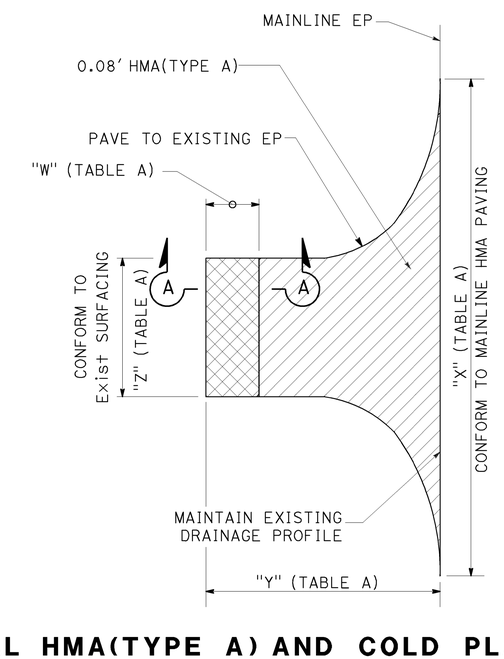
TABLE A

HMA(TYPE A) AND COLD PLANE AC Pvmt LIMITS AT PAVED ROAD CONNECTION

Loc	Sta	Lt	Rt	"W"	"X"	"Y"	"Z"	DESCRIPTION
2	77+50	X		3'	122'	45'	26'	GRANITE CONSTRUCTION ENTRANCE
	113+15	X		3'	315'	51'	32'	DROSS Rd
	255+50	X		3'	228'	44'	32'	TEST STATION Rd
3	113+10	X		25'	200'	184'	23'	LUNDY LAKE Rd
	207+75	X		3'	100'	84'	12'	CONWAY RANCH Rd
	396+35	X		20'	193'	110'	46'	VIRGINIA LAKES Rd
	396+35		X	3'	448'	85'	64'	CONWAY CALTRANS Hwy Maint Sta



SECTION A-A



TYPICAL HMA(TYPE A) AND COLD PLANE AC Pvmt LIMITS AT PAVED ROAD CONNECTION

TABLE C

HMA(TYPE A) AND COLD PLANE AC Pvmt LIMITS AT Exist Rdwy

Loc	Sta	"Z"	DESCRIPTION
1	110+00	26.6'	BEGIN WORK
	706+64	26.1'	END WORK
2	10+00	36.0'	BEGIN WORK
	301+00	28.0'	END WORK
3	109+96	54.5'	BEGIN WORK
	416+20	61.0'	END WORK

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

CONSTRUCTION DETAILS

NO SCALE **C-1**

CALCULATED-DESIGNED BY	BL	11-01-12	
CHECKED BY	MR	11-28-12	
DAN FROILAND	REVISED BY	DATE REVISED	
BRADLEY LARSON			
FUNCTIONAL SUPERVISOR: JOHN FOX			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION DATE PLOTTED => 31-JAN-2013
TIME PLOTTED => 09:35
01-22-13

BORDER LAST REVISED 7/2/2010 | USERNAME => S123915 | DGN FILE => 935740ga001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2480 | PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	5	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp.12-31-14
CIVIL
STATE OF CALIFORNIA

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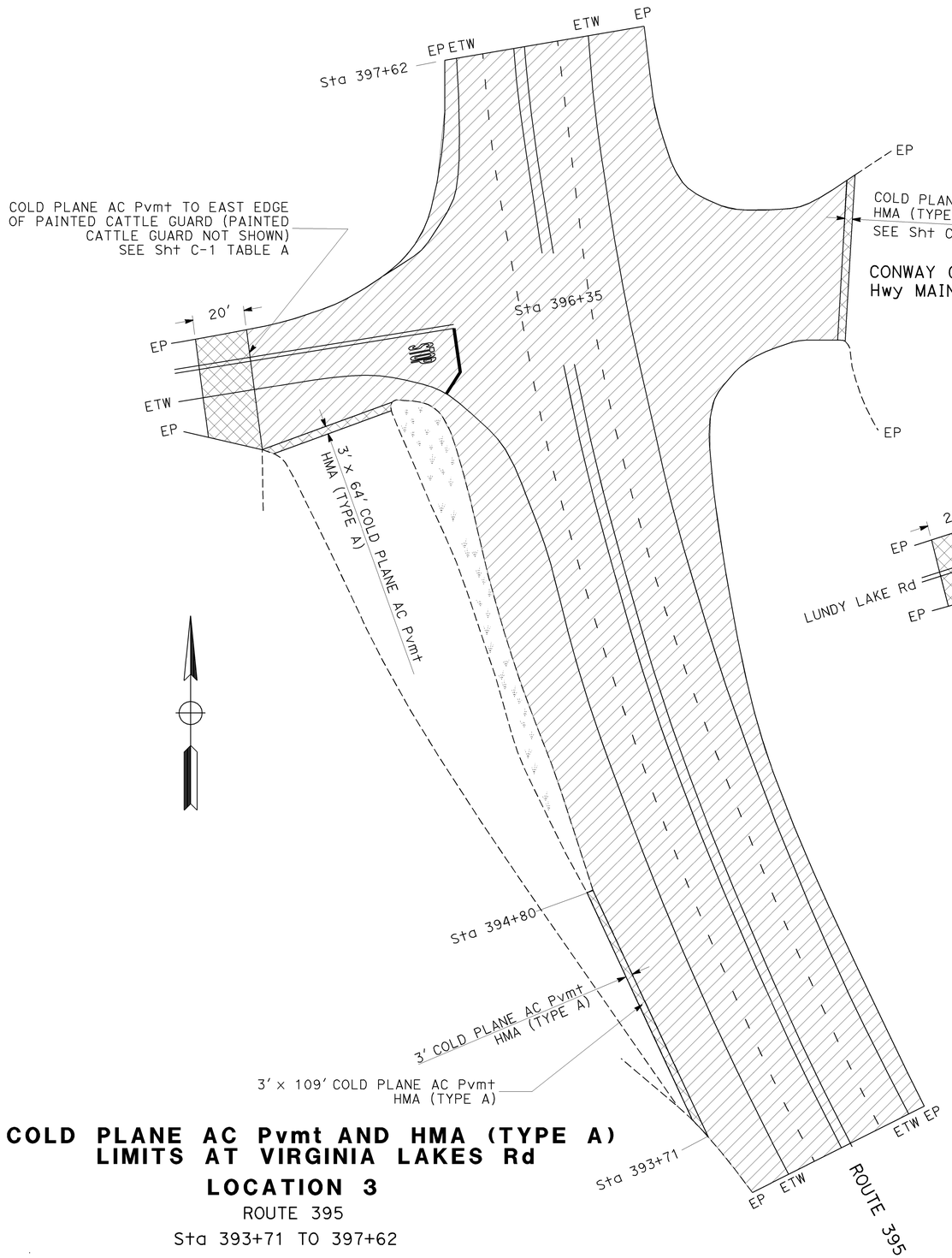
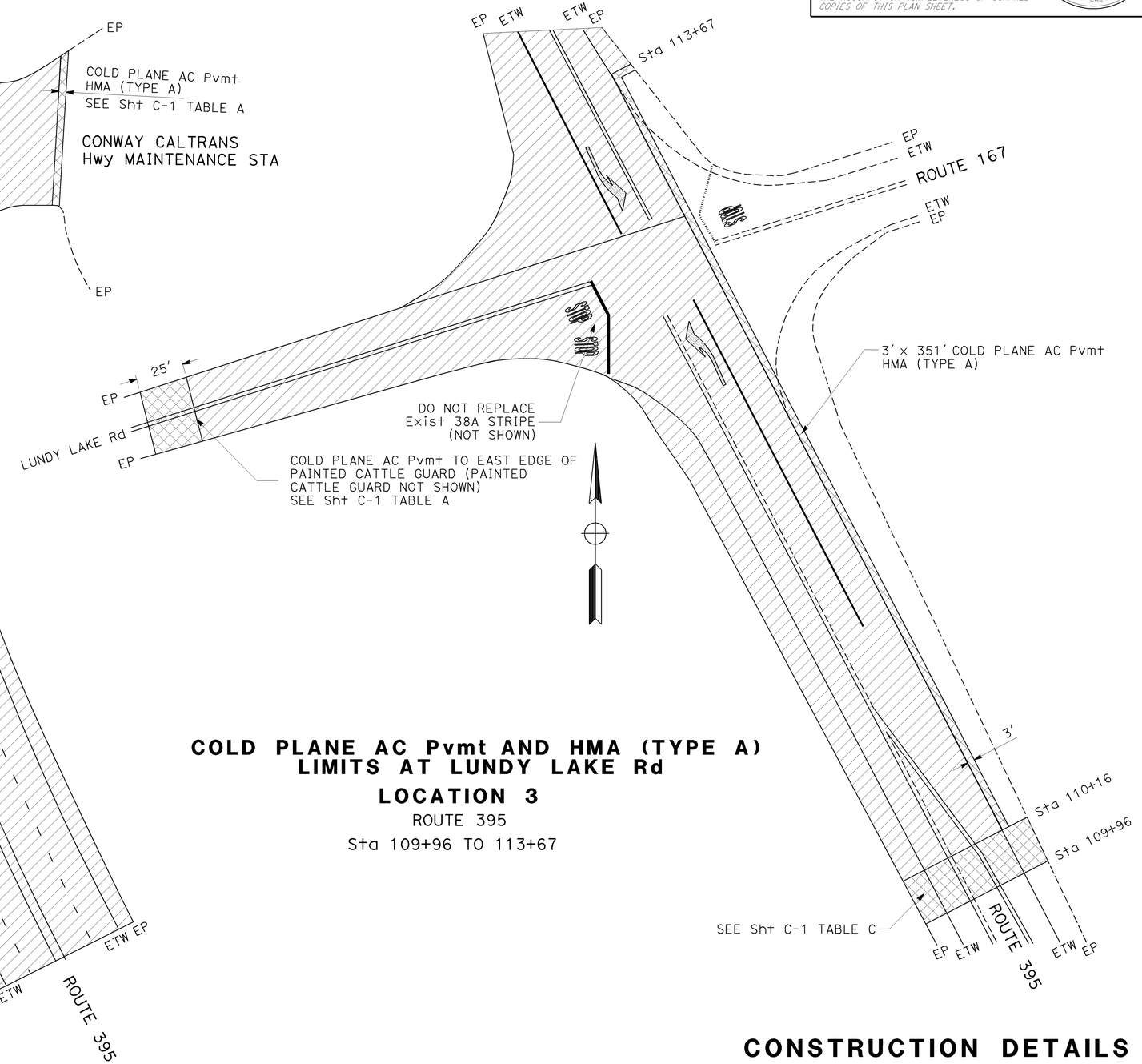


COLD PLANE AC Pvmt AND HMA (TYPE A) LIMITS AT VIRGINIA LAKES Rd

LOCATION 3

ROUTE 395

Sta 393+71 TO 397+62



COLD PLANE AC Pvmt AND HMA (TYPE A) LIMITS AT LUNDY LAKE Rd

LOCATION 3

ROUTE 395

Sta 109+96 TO 113+67

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

CONSTRUCTION DETAILS

NO SCALE **C-2**

REVISED BY	DATE REVISED
MR	11-28-12
BL	11-01-12

CALCULATED-DESIGNED BY: BRADLEY LARSON
CHECKED BY: DAN FROILAND
FUNCTIONAL SUPERVISOR: JOHN FOX

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION DATE PLOTTED => 31-JAN-2013
TIME PLOTTED => 09:35

BORDER LAST REVISED 7/2/2010
USERNAME => S123915
DGN FILE => 935740ga002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2480
PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	6	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRADLEY L. LARSON No. 76951 Exp.12-31-14 CIVIL — STATE OF CALIFORNIA

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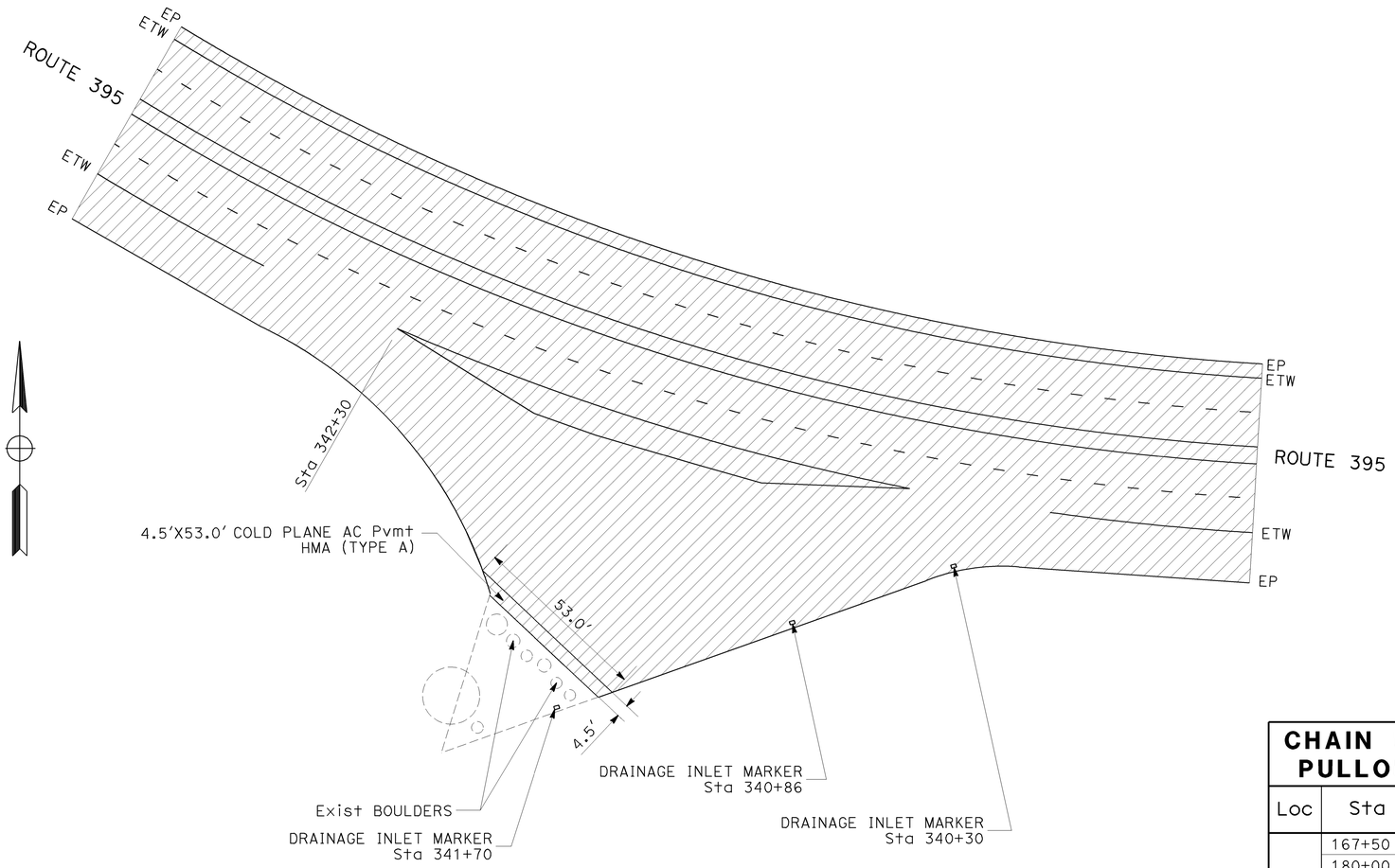
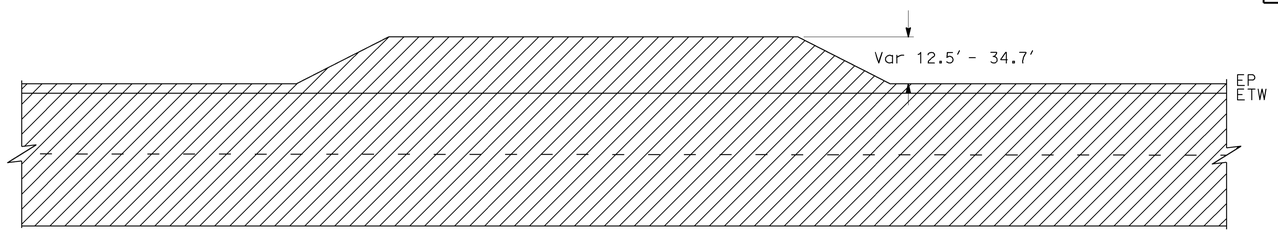


COLD PLANE AC Pvmt AND HMA(TYPE A) LIMITS AT MONO LAKE VIEWPOINT LOCATION 3

ROUTE 395

Sta 342+30 TO 340+30

CHAIN UP AREAS PULLOUTS AND			
Loc	Sta	Lt	Rt
3	167+50		X
	180+00		X
	180+80	X	
	186+90	X	
	196+50		X
	202+65		X
	211+80		X
	211+80	X	
	282+40		X
	282+40	X	
	335+10		X



HMA(TYPE A) LIMITS AT PULL OUTS AND CHAIN UP AREAS (TYPICAL) LOCATION 3

ROUTE 395

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

CONSTRUCTION DETAILS

NO SCALE C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING
FUNCTIONAL SUPERVISOR: JOHN FOX
CALCULATED-DESIGNED BY: BRADLEY LARSON
CHECKED BY: DAN FROILAND
REVISED BY: MR 11-28-12; BL 11-01-12
DATE REVISED

LAST REVISION DATE PLOTTED => 31-JAN-2013
TIME PLOTTED => 09:35
01-22-13

BORDER LAST REVISED 7/2/2010
USERNAME => S123915
DGN FILE => 935740ga003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2480
PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	7	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

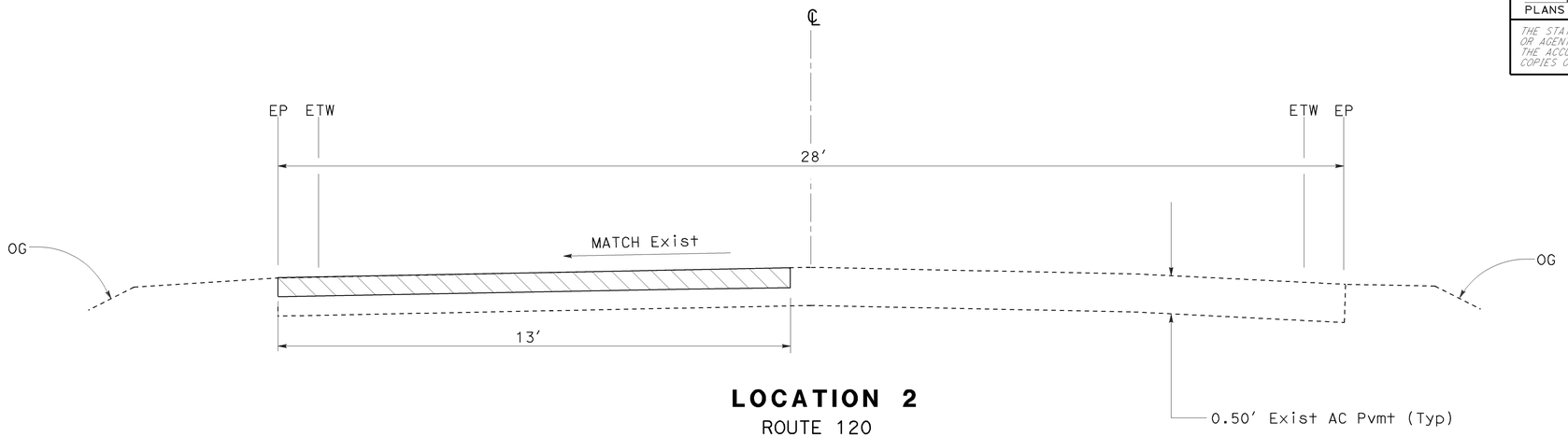
1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp. 12-31-14
CIVIL
STATE OF CALIFORNIA

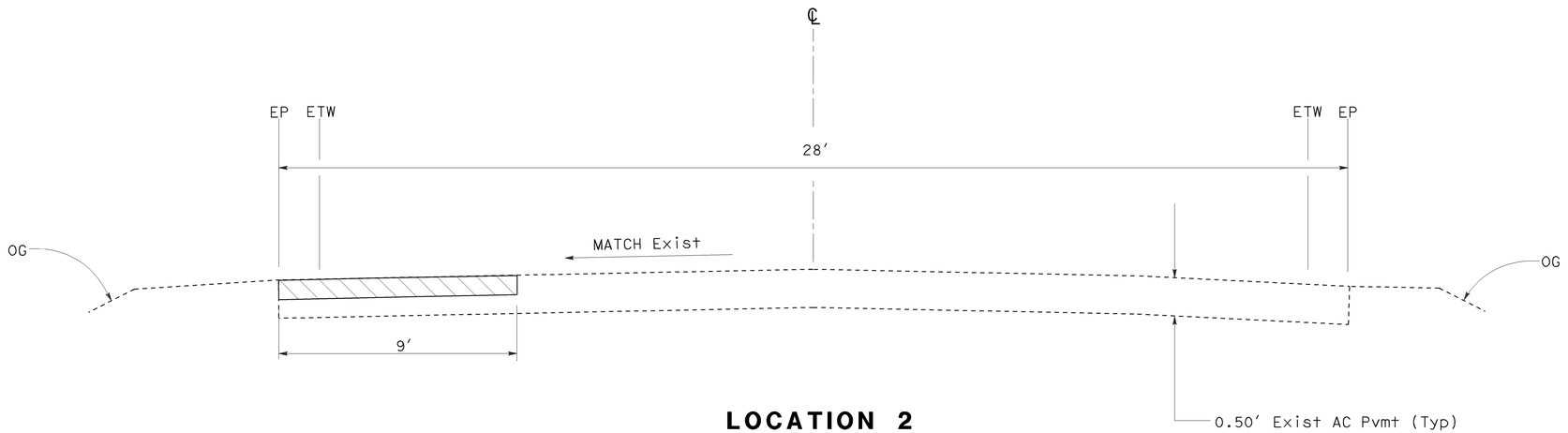
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:
COLD PLANE AC Pvmt AND PLACE HMA (TYPE A) PRIOR TO OVERLAY.

LEGEND:
- 0.33' HMA (TYPE A)
- 0.33' COLD PLANE AC Pvmt



LOCATION 2
ROUTE 120
Sta 261+70 TO 261+79



LOCATION 2
ROUTE 120
Sta 247+19 TO 247+75
Sta 246+05 TO 246+40
Sta 227+22 TO 228+30

CONSTRUCTION DETAILS
NO SCALE **C-4**

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: JOHN FOX
CALCULATED-DESIGNED BY: BRADLEY LARSON
CHECKED BY: DAN FROILAND
REVISED BY: BL
DATE REVISED: 11-01-12
MR: 11-28-12

LAST REVISION 01-22-13
DATE PLOTTED => 31-JAN-2013
TIME PLOTTED => 09:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	8	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp.12-31-14
CIVIL
STATE OF CALIFORNIA

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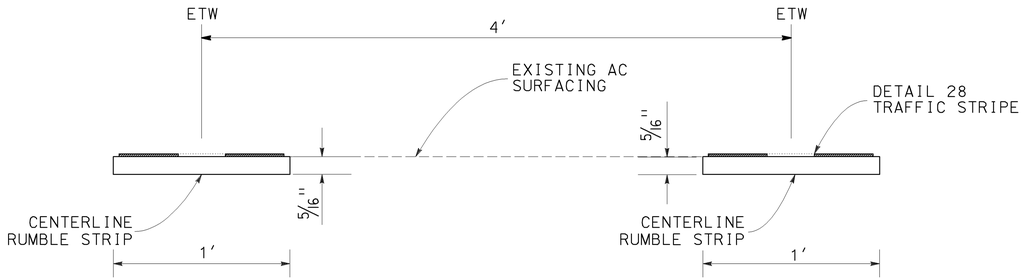
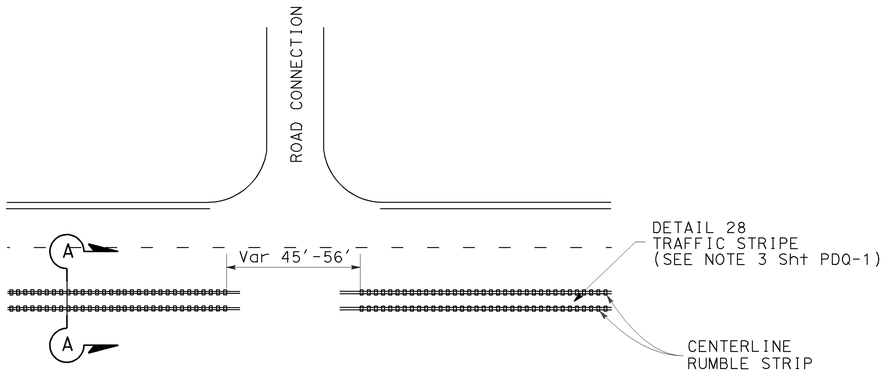
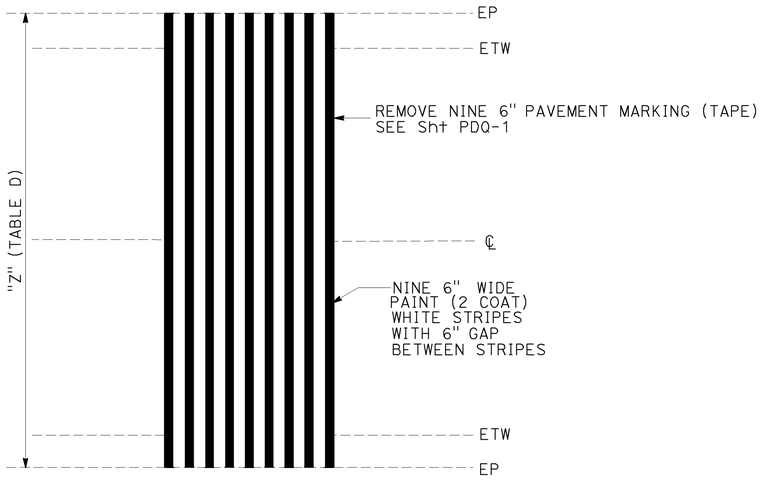


SECTION A-A



CENTERLINE RUMBLE STRIP DETAIL



CATTLE GUARD DETAIL

TABLE D

CATTLE GUARD WIDTH

Loc	Sta	"Z"	DESCRIPTION
1	458+48	27′	PM 16.6
3	113+10, 200′ Lt	23′	LUNDY LAKE RD
	130+90, 72′ Lt	21′	MILL Crk POWERHOUSE RD
	207+75, 138′ Rt	19′	CONWAY RANCH RD
	396+35, 110′ Lt	40′	VIRGINIA LAKE ROAD

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

CONSTRUCTION DETAILS
NO SCALE **C-5**

LAST REVISION DATE PLOTTED => 31-JAN-2013
TIME PLOTTED => 09:35
01-22-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

	CALCULATED-DESIGNED BY	REVISED BY	BL	11-01-12
FUNCTIONAL SUPERVISOR: JOHN FOX	CHECKED BY: DAN FROILAND	DATE REVISED	MR	11-28-12
	BRADLEY LARSON			

BORDER LAST REVISED 7/2/2010 | USERNAME => S123915 | DGN FILE => 935740ga005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2480 | PROJECT NUMBER & PHASE 09130000011

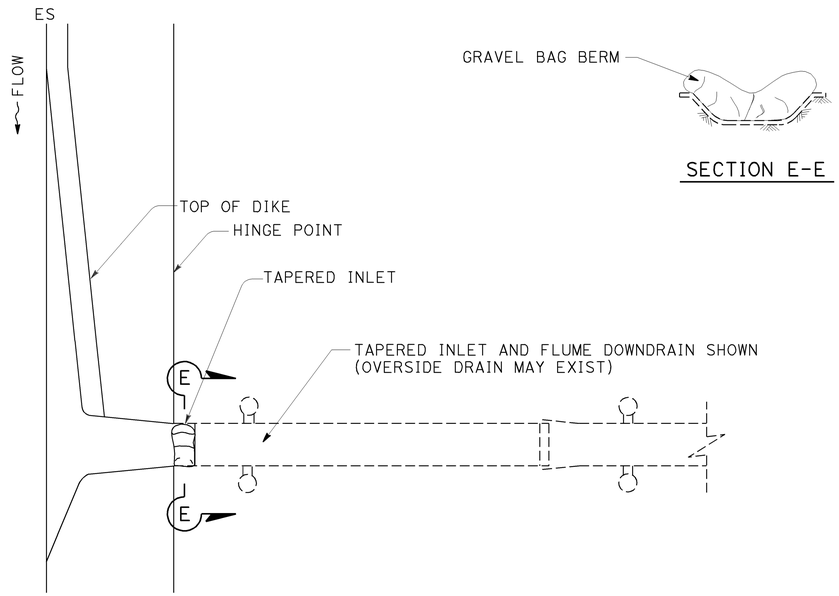
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	9	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp.12-31-14
CIVIL
STATE OF CALIFORNIA

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



SECTION E-E

TEMPORARY GRAVEL BAG BERM AT OVERSIDE DRAIN (Typ)

Temp DRAINAGE INLET PROTECTION

Loc	Sta	Lt	Rt	EA	DESCRIPTION
3	230+60	X		1	DRAINAGE INLET GRATE (24" X 42")
	253+80	X		1	DRAINAGE INLET GRATE (24" X 42")
	339+68	X		1	DRAINAGE INLET GRATE (24" X 42")
	196+00		X	1	DRAINAGE INLET GRATE (24" X 42")
	326+98		X	1	DRAINAGE INLET GRATE (24" X 42")
	340+70		X	1	DRAINAGE INLET GRATE (24" X 42")
	363+47		X	1	DRAINAGE INLET GRATE (24" X 42")
TOTAL				7	

Temp GRAVEL BAG BERM

Loc	Sta	LF	Lt	Rt	DESCRIPTION
3	201+05	2	X		OVERSIDE DRAIN
	216+90	2	X		OVERSIDE DRAIN
	229+15	2	X		OVERSIDE DRAIN
	241+20	2	X		OVERSIDE DRAIN
	260+50	2	X		OVERSIDE DRAIN
	273+93	2	X		OVERSIDE DRAIN
	285+50	2	X		OVERSIDE DRAIN
	294+78	2	X		OVERSIDE DRAIN
	306+40	2	X		OVERSIDE DRAIN
	356+11	5	X		OVERSIDE DRAIN
	377+80	2	X		OVERSIDE DRAIN
	175+00	2		X	OVERSIDE DRAIN
	186+80	2		X	OVERSIDE DRAIN
	191+50	2		X	OVERSIDE DRAIN
	196+20	2		X	OVERSIDE DRAIN
	208+50	2		X	OVERSIDE DRAIN
	225+00	2		X	OVERSIDE DRAIN
	232+50	2		X	OVERSIDE DRAIN
	244+25	2		X	OVERSIDE DRAIN
	253+46	2		X	OVERSIDE DRAIN
	273+80	2		X	OVERSIDE DRAIN
	287+27	2		X	OVERSIDE DRAIN
	305+10	2		X	OVERSIDE DRAIN
	386+50	2		X	OVERSIDE DRAIN
	387+50	2		X	OVERSIDE DRAIN
TOTAL		53			

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

TEMPORARY WATER POLLUTION CONTROL DETAILS

NO SCALE

WPCD-1

CALCULATED-DESIGNED BY	BRADLEY LARSON	REVISED BY	MR
CHECKED BY	DAN FROILAND	DATE REVISED	11-28-12
		BL	11-01-12
FUNCTIONAL SUPERVISOR	JOHN FOX		

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION DATE PLOTTED => 31-JAN-2013
01-22-13 TIME PLOTTED => 09:35

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	10	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

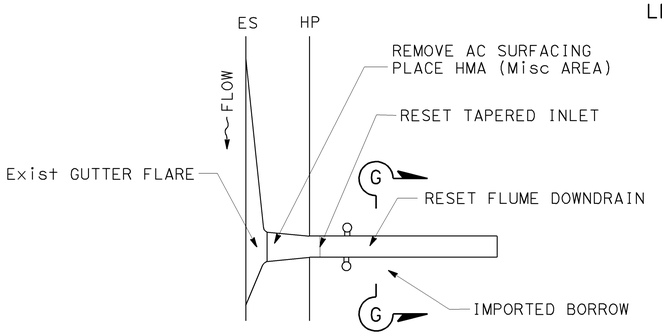
1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRADLEY L. LARSON No. 76951 Exp.12-31-14 CIVIL — STATE OF CALIFORNIA

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

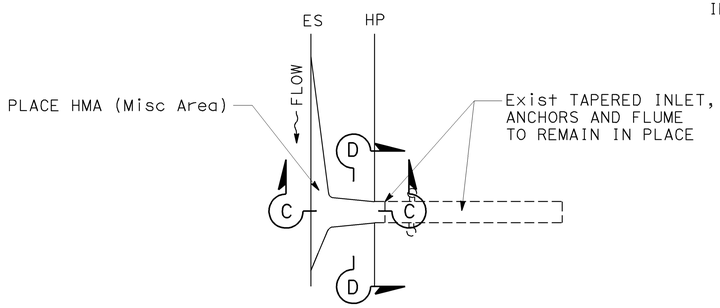
LEGEND:

IMPORTED BORROW



REMOVE AND REPLACE HMA ON TAPERED INLET AND FLUME DOWNDRAIN

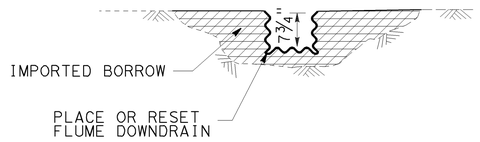
LOCATION 3
ROUTE 395
Sta 186+80, Rt
Sta 260+50, Lt



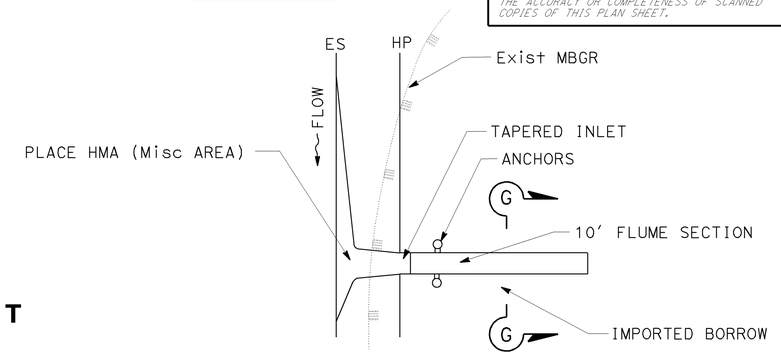
LOCATION 3
ROUTE 395

PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN

Sta 216+90, Lt
Sta 273+93, Lt
Sta 285+50, Lt
Sta 294+78, Lt
Sta 306+40, Lt
Sta 356+11, Lt
Sta 339+68, Lt
Sta 377+80, Lt
Sta 208+50, Rt
Sta 232+50, Rt
Sta 253+46, Rt
Sta 287+27, Rt
Sta 305+10, Rt
Sta 286+50, Rt
Sta 287+50, Rt

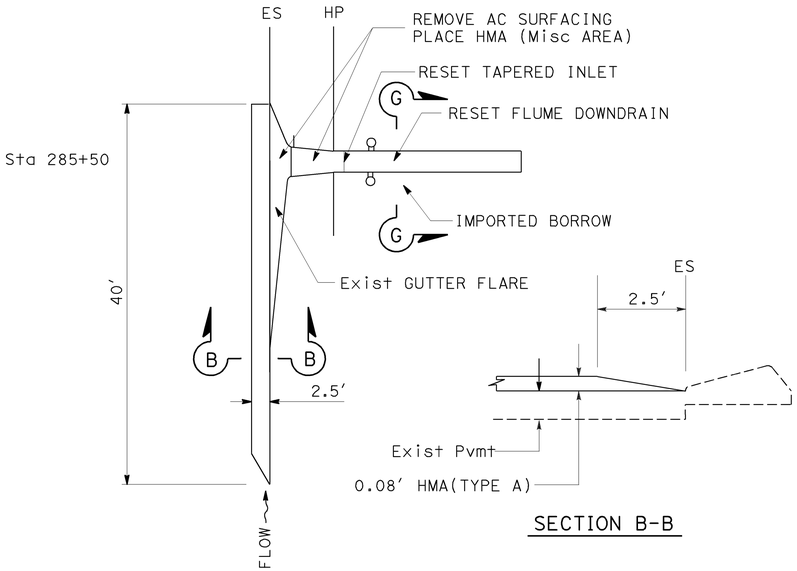


SECTION G-G



TAPERED INLET AND FLUME DOWNDRAIN

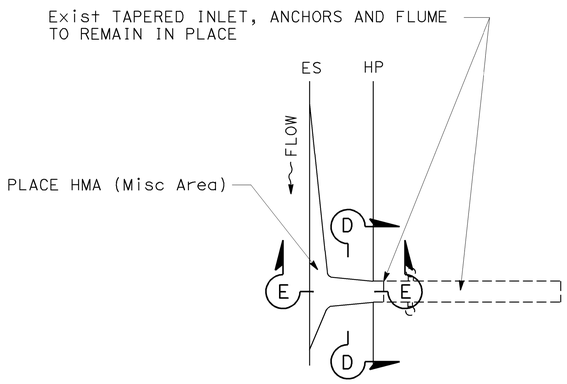
LOCATION 3
ROUTE 395
Sta 319+00, Lt



SECTION B-B

REMOVE AND REPLACE HMA ON TAPERED INLET AND FLUME DOWNDRAIN LOCATION 3

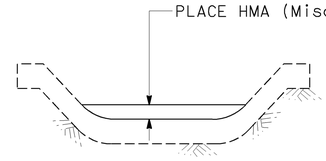
ROUTE 395
STA 285+50, Lt



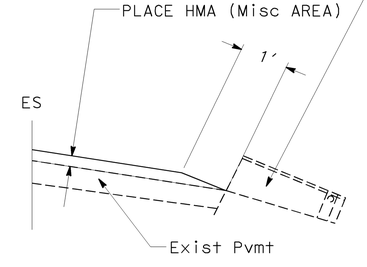
LOCATION 3
ROUTE 395

PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN AT GUTTER

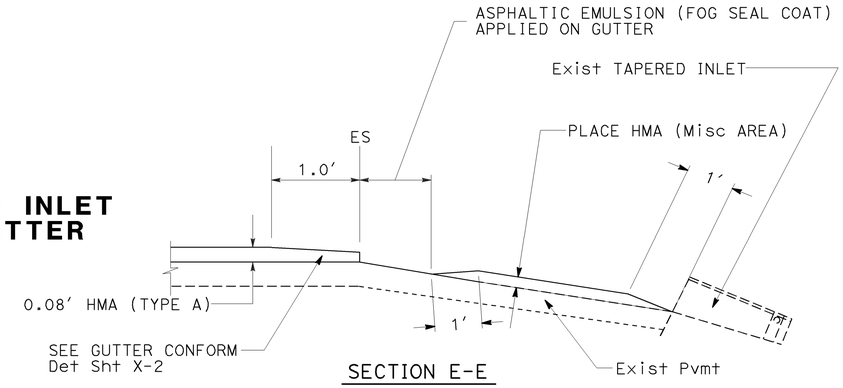
Sta 201+05, Lt
Sta 229+15, Lt
Sta 241+20, Lt
Sta 244+25, Rt
Sta 273+80, Rt



SECTION D-D



SECTION C-C



SECTION E-E

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

DRAINAGE DETAILS
NO SCALE **DD-1**

LAST REVISION | DATE PLOTTED => 01-FEB-2013
01-22-13 | TIME PLOTTED => 15:09

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
BRADLEY LARSON	DAN FROILAND	JOHN FOX	MR	11-28-12
			BL	01-31-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	11	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp.12-31-14
CIVIL
STATE OF CALIFORNIA

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

OVERSIDE DRAIN QUANTITIES

Loc	STATION	L†	R†	REMOVE AC SURFACING	PLACE HMA (Misc AREA)	HMA (TYPE A)	IMPORTED BORROW	RESET TAPERED INLET	RESET FLUME DOWNDRAIN	TAPERED INLET	FLUME DOWNDRAIN	DESCRIPTION
				SQYD	SQYD	TON	TON	EA	EA	EA	LF	
	201+05	X			1.4	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN AT GUTTER
	216+90	X			6.7	0.4						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	229+15	X			2.2	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN AT GUTTER
	241+20	X			6.7	0.4						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN AT GUTTER
	260+50	X		7.1	7.1	1.2	1.7	1	1			REMOVE AND REPLACE HMA ON TAPERED INLET AND FLUME DOWNDRAIN
	273+93	X			5.3	0.3						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	285+50	X		7.1	7.1	1.2	1.7	1	1			REMOVE AND REPLACE HMA ON TAPERED INLET AND FLUME DOWNDRAIN
	294+78	X			5.9	0.3						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	306+40	X			0.9	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	319+00	X			7.0	1.2	1.7			1	10.0	TAPERED INLET AND FLUME DOWNDRAIN
	356+11	X			25.0	1.4						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	339+68	X			11.1	0.6						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	377+80	X			0.9	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
3	186+80		X	7.1	7.1	1.2	3.4	1	1			REMOVE AND REPLACE HMA ON TAPERED INLET AND FLUME DOWNDRAIN
	208+50		X		4.4	0.2						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	232+50		X		4.0	0.2						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	244+25		X		3.1	0.2						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN AT GUTTER
	253+46		X		3.1	0.2						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	273+80		X		3.1	0.2						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN AT GUTTER
	287+27		X		2.3	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	305+10		X		1.6	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	386+50		X		4.3	0.2						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
	387+50		X		1.3	0.1						PLACE HMA (TYPE A) ON TAPERED INLET AND FLUME DOWNDRAIN
TOTAL				21.3	121.6	* 10.1	8.5	3	3	1	10.0	

* QUANTITY INCLUDED IN ROADWAY QUANTITIES

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

DRAINAGE QUANTITIES
DQ-1

BRADLEY LARSON — DESIGNED BY
DAN FROILAND — CALCULATED-
CHECKED BY
MR — REVISED BY
11-28-12 — DATE REVISED
BL
02-01-13
JOHN FOX — FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION 01-22-13
DATE PLOTTED => 01-FEB-2013
TIME PLOTTED => 15:09

BORDER LAST REVISED 7/2/2010
USERNAME => S123915
DGN FILE => 935740id001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2480
PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	12	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — BRADLEY L. LARSON No. 76951 Exp.12-31-14 CIVIL — STATE OF CALIFORNIA

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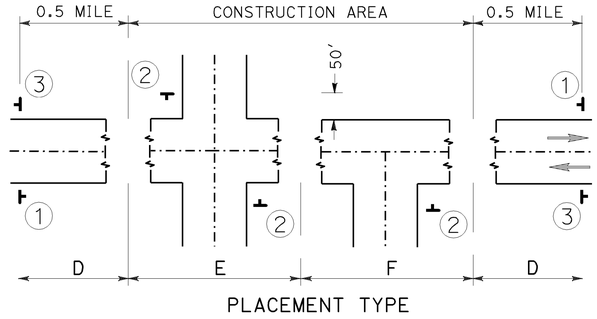
NOTES:

1. FOR SIGN INSTALLATION DETAILS AND DIMENSIONS NOT SHOWN SEE STANDARD PLANS.
2. SEE TABLE FOR PLACEMENT TYPE.
3. THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.
4. SIGNS IN CONFLICT WITH ADJACENT, ON-GOING PROJECTS SHALL BE COVERED UPON INSTALLATION.
5. EXACT SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

Loc	ROUTE	PM	Sta	PLACEMENT	REMARKS
1	167	9.50	83+60	D	BEGIN WORK
	167	16.62	459+54	F	DOBIE MEADOWS Rd, Lt
	167	21.80	733+04	D	END WORK
2	395	45.50	-	G	BEGIN WORK NB ON ROUTE 395
	395	46.00	-	H	BEGIN WORK ON ROUTE 395 MEDIAN CROSS OVER
	395	46.50	-	I	END WORK NB ROUTE 395
	120	15.42	113+15	F	DROSS Rd, Lt
	120	18.14	255+50	F	TEST STATION Rd, Lt
	120	19.50	327+40	D	END WORK
3	395	57.70	83+56	D	BEGIN WORK
	395	58.24	113+10	E	ROUTE 167, Rt/LUNDY LAKE Rd, Lt
	395	58.58	130+90	F	MILL CREEK POWERHOUSE Rd, Lt
	395	59.96	207+75	F	CONWAY RANCH Rd, Rt
	395	64.33	442+60	D	END WORK



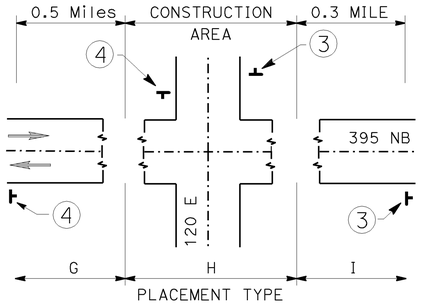
PLACEMENT TYPE

TYPICAL SIGN PLACEMENT FOR UNDIVIDED HIGHWAY

PORTABLE CHANGEABLE MESSAGE SIGNS

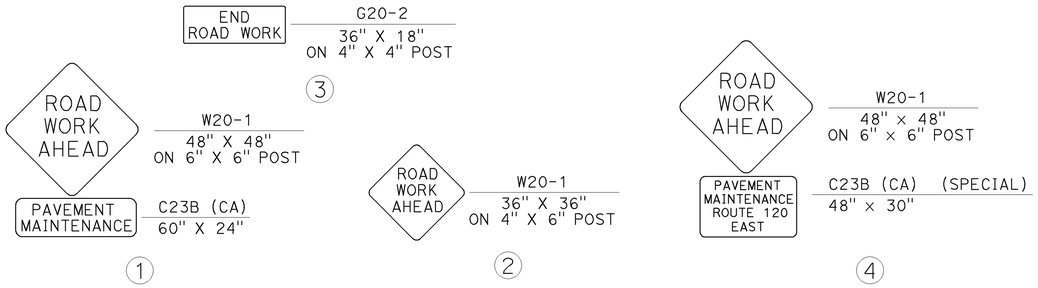
MESSAGE FOR DIVIDED HIGHWAY		
LANE CLOSED AHEAD	REDUCE SPEED	USE CAUTION
MESSAGE FOR UNDIVIDED HIGHWAY		
USE CAUTION	PREPARE TO STOP	EXPECT 20 MINUTE DELAY

1. PORTABLE CHANGEABLE MESSAGE SIGN LOCATIONS TO BE CONFIRMED BY THE ENGINEER BEFORE THE ACTUAL CLOSURE.
2. ALTERNATE MESSAGES MUST BE APPROVED BY THE ENGINEER.
3. MESSAGE MAY BE ALTERED BY THE ENGINEER.
4. WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVELY IN PROGRESS, PORTABLE CHANGEABLE MESSAGE SIGNS SHALL NOT DISPLAY A MESSAGE UNLESS DIRECTED BY THE ENGINEER.



PLACEMENT TYPE

SIGN PLACEMENT LOCATION 2 ROUTE 395 INTERSECTION



TYPICAL SIGN LAYOUT

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

LAYOUT	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF SIGNS	No. OF POST AND SIZE
1	W20-1	48" x 48"	ROAD WORK AHEAD	5	5 - 6" x 6"
	C23B (CA) (SPECIAL)	48" x 30"	PAVEMENT MAINTENANCE	5	
2	W20-1	36" x 36"	ROAD WORK AHEAD	7	7 - 4" x 6"
3	G20-2	36" x 18"	END ROAD WORK	7	7 - 4" x 4"
4	W20-1	48" x 48"	ROAD WORK AHEAD	2	2 - 6" x 6"
	C23B (CA) (SPECIAL)	48" x 30"	PAVEMENT MAINTENANCE ROUTE 120 EAST	2	

EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS

CONSTRUCTION AREA SIGNS CS-1

NO SCALE

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
BRADLEY LARSON	DAN FROILAND	MR	11-28-12
		BL	11-01-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING
FUNCTIONAL SUPERVISOR: JOHN FOX

LAST REVISION DATE PLOTTED => 31-JAN-2013
TIME PLOTTED => 09:35

NOTES:

1. (N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY
2. PAVEMENT MARKINGS (TAPE) ARE PAINT OVER TAPE
3. DETAIL 28 QUANTITY HAS BEEN DOUBLED TO ADJUST FOR CORRECT PAYMENT FOR TWO PAINTED TRAFFIC STRIPES
4. DRAINAGE INLET MARKERS TO BE PREFABRICATED THERMOPLASTIC.
   DRAINAGE INLET MARKERS SHALL HAVE A LEGEND COLOR OF BLUE,WITH WHITE BACKGROUND.
   MARKERS SHALL USE WAVES AND JUMPING TROUT GRAPHICS AS SHOWN.
   MARKERS SHALL USE LETTERING THAT
   READS "NO DUMPING DRAINS TO WATERWAY" AS SHOWN IN D71 OF THE STANDARD PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	13	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp.12-31-14
CIVIL
STATE OF CALIFORNIA

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REMOVE PAINTED PAVEMENT MARKING

Loc	STATION	Lt	Rt	TYPE III ARROW (LEFT)		TYPE VI ARROW		LIMIT LINE (12" WIDE)		"STOP"		"AHEAD"		REMARKS
				EA (N)	SQFT	EA (N)	SQFT	LF (N)	SQFT	EA (N)	SQFT	EA (N)	SQFT	
2	17+30	X										1	31	
	17+95	X								1	22			
	77+50	X						31	31	1	22			GRANITE CONSTRUCTION ENTRANCE
3	112+30	X		1	42									LUNDY LAKE Rd/ROUTE 395
	113+15	X		1	42					1	22			LUNDY LAKE Rd/ROUTE 395
	200+40	X				1	42							
	208+63	X				1	42							
	210+88	X				1	42							
SUBTOTAL				84		126		31		66		31		
TOTAL				338										

REMOVE PAVEMENT MARKING (TAPE)

Loc	STATION	Lt	Rt	LIMIT LINE (12" WIDE)		"STOP"		CATTLE GUARD		REMARKS
				LF (N)	SQFT	EA (N)	SQFT	LF (N)	SQFT	
1	458+48	X	X					27	122	
2	113+15	X		34	34	1	22			DROSS Rd
	255+50	X		27	27	1	22			TEST Sta Rd
3	112+30	X		38	38	1	22			LUNDY LAKE Rd/ROUTE 395, CATTLE GUARD REMOVED WITH COLD PLANE OPERATION
	130+90	X		47	47	1	22			MILL Crk POWERHOUSE Rd, CATTLE GUARD REMOVED WITH COLD PLANE OPERATION
	207+75		X	50	50	1	22	19	86	CONWAY RANCH Rd
	207+75	X		28	28	1	22			VIRGINIA LAKES Rd, CATTLE GUARD REMOVED WITH COLD PLANE OPERATION
SUBTOTAL				224		132		208		
TOTAL				564						

SEE NOTE 2

PAINT PAVEMENT MARKING (2 COAT)

Loc	STATION	Lt	Rt	TYPE III ARROW (LEFT)		TYPE VI ARROW		LIMIT LINE (12" WIDE)		"STOP"		"AHEAD"		CATTLE GUARD		REMARKS
				EA (N)	SQFT	EA (N)	SQFT	LF (N)	SQFT	EA (N)	SQFT	EA (N)	SQFT	LF (N)	SQFT	
1	458+48	X	X											27	122	
2	17+30	X										1	31			
	17+95	X								1	22					
	77+50	X						31	31	1	22					GRANITE CONSTRUCTION ENTRANCE
	113+15	X						34	34	1	22					DROSS Rd
	255+50	X						27	27	1	22					TEST Sta Rd
3	112+30	X		1	42			38	38	1	22					LUNDY LAKE Rd/ROUTE 395
	113+10	X								1	22					LUNDY LAKE Rd/ROUTE 395
	113+10	X												23	104	LUNDY LAKE Rd
	113+15	X		1	42											LUNDY LAKE Rd/ROUTE 395
	130+90	X						47	47	1	22			21	95	MILL Crk POWERHOUSE Rd
	200+40	X				1	42									
	207+75		X					50	50	1	22			19	86	CONWAY RANCH Rd
	208+63	X				1	42									
	210+88	X				1	42									
	207+75	X						28	28	1	22			40	180	VIRGINIA LAKES Rd
SUBTOTAL				84		126		255		198		31		587		
TOTAL				1280												

DRAINAGE INLET MARKER

Loc	STATION	Lt	Rt	EA	REMARKS
3	341+70	X		1	MONO LAKE SCENIC VIEWPOINT
	340+86	X		1	MONO LAKE SCENIC VIEWPOINT
	340+30	X		1	MONO LAKE SCENIC VIEWPOINT
TOTAL				3	

SEE NOTE 4

PAINT TRAFFIC STRIPE (2-COAT)

LOCATION	DETAIL NUMBER						
	5	11	18	21	27B	28	38A
	LF	LF	LF	LF	LF	LF	LF
1	59,004		696		119,400		
2	16,534		2884	9673	58,049		
3	1685	41,080	4205	4047	59,759	41,730	716
TOTAL	419,462						

SEE NOTE 3

PAVEMENT DELINEATION QUANTITIES
PDQ-1

BRADLEY LARSON	MR	11-28-12	
DESIGNED BY	BL	11-01-12	
CALCULATED-	REVISED BY	DATE REVISED	
DAN FROILAND			
CHECKED BY			
JOHN FOX			
FUNCTIONAL SUPERVISOR			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION DATE PLOTTED => 31-JAN-2013
01-22-13 TIME PLOTTED => 09:35

BORDER LAST REVISED 7/2/2010

USERNAME => S123915
DGN FILE => 935740na001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2480

PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	14	21

BRAD LARSON 11-01-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
BRADLEY L. LARSON
No. 76951
Exp.12-31-14
CIVIL
STATE OF CALIFORNIA

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

NOTE:
(N) - NOT A SEPERATE PAY ITEM

HOT MIX ASPHALT DIKE (TYPE F)

Loc	STATION FROM	STATION TO	Lt	Rt	PLACE HMA DIKE (TYPE F)	HMA (TYPE A)
					LF	TON
3	204+25	204+30		X	5	0.07
	211+43	212+19		X	76	1.02
	299+50	299+65	X		15	0.20
	303+30	304+40	X		110	1.47
	304+75	305+25	X		50	0.67
	311+45	311+90	X		45	0.60
	312+25	312+40	X		15	0.20
	312+80	313+50	X		70	0.94
	315+22	315+72	X		50	0.67
	318+00	318+55	X		55	0.74
	326+95	327+80	X		85	1.14
	328+50	329+07	X		57	0.76
	330+07	331+02	X		95	1.27
	357+22	357+65	X		43	0.57
	358+75	359+20	X		45	0.60
	361+45	361+80	X		35	0.47
	382+35	385+16	X		281	3.76
	386+35	386+56	X		21	0.28
	410+80	411+25	X		45	0.60
	412+60	413+20	X		60	0.80
	TOTAL				1258	* 17.81

* QUANTITY INCLUDED IN ROADWAY QUANTITIES

CENTERLINE RUMBLE STRIP (GROUND-IN INDENTATIONS)

Loc	STATION FROM	STATION TO	RUMBLE STRIP CENTERLINE
			Sta
3	203+60	206+84	6.5
	207+40	397+18	379.6
	397+63	416+20	37.1
		TOTAL	423.2

RUMBLE STRIP

Loc	STATION FROM	STATION TO	RUMBLE STRIP Lt	RUMBLE STRIP Rt
			Sta	Sta
3	109+96	111+90	1.9	
		TOTAL	1.9	

MAINTAINING EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS DURING CONSTRUCTION

Loc	Sta	No.	REMARKS
1	693+30	2	TRAFFIC COUNT Sta
2	16+55	2	TRAFFIC COUNT Sta
3	125+72	2	TRAFFIC COUNT Sta

ROADWAY QUANTITIES

	HMA (TYPE A)	ASPHALTIC EMULSION (FOG SEAL COAT)	COLD PLANE AC PAVEMENT	TACK COAT	SHOULDER BACKING
	TON	TON	SQYD	TON	TON
LOCATION 1	12,022.00		117	73	2,327
LOCATION 2	6,082.00		361	39	1,135
LOCATION 3	10,680.00	1	652	85	462
HOT MIX ASPHALT DIKE (TYPE F)	17.81				
OVERSIDE DRAIN QUANTITIES	10.10				
TOTAL	28,811.91	1	1130	197	3,923

SUMMARY OF QUANTITIES
Q-1

CALCULATED-DESIGNED BY		MR	11-28-12
CHECKED BY		BL	02-01-13
BRADLEY LARSON		REVISED BY	DATE REVISED
DAN FROILAND			
FUNCTIONAL SUPERVISOR			
JOHN FOX			

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

LAST REVISION 01-22-13
DATE PLOTTED => 01-FEB-2013
TIME PLOTTED => 15:09

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	15	21

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-22-13 PLANS APPROVAL DATE

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

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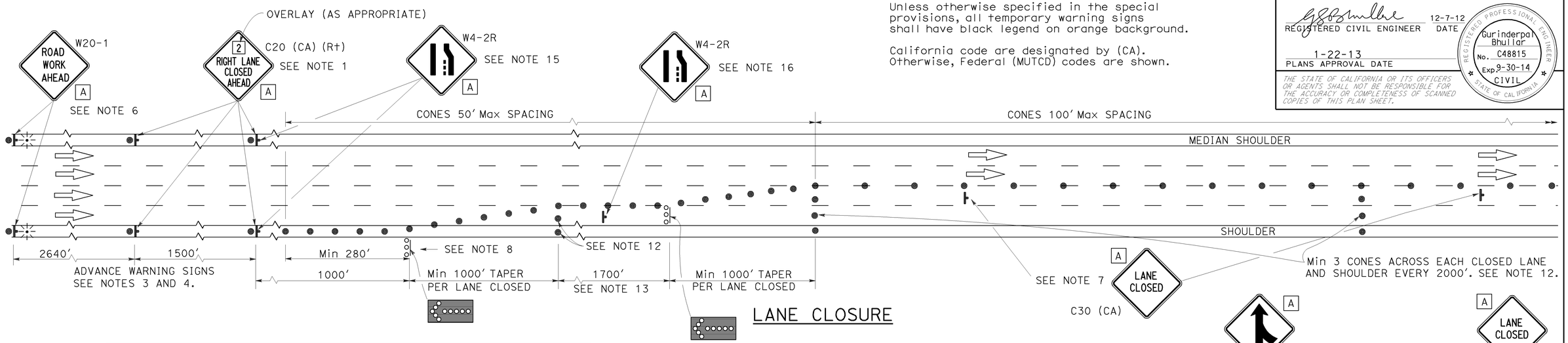
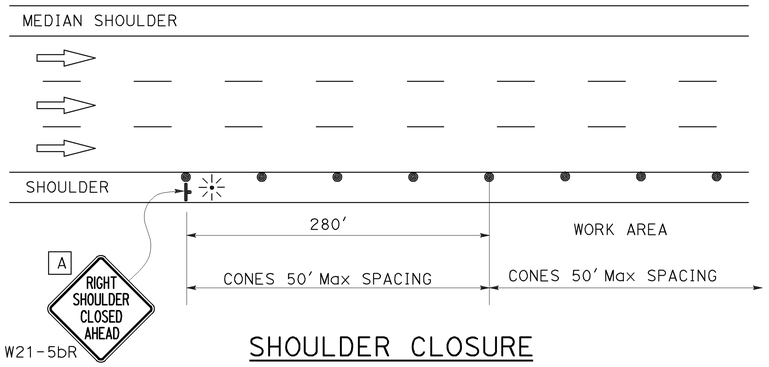
NOTES:

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

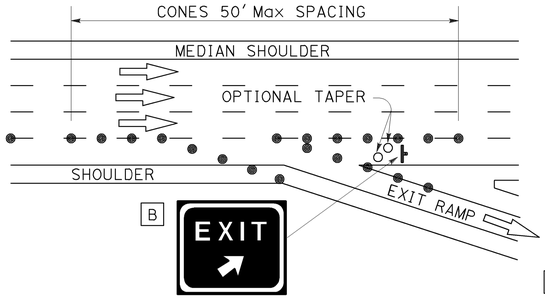
California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.



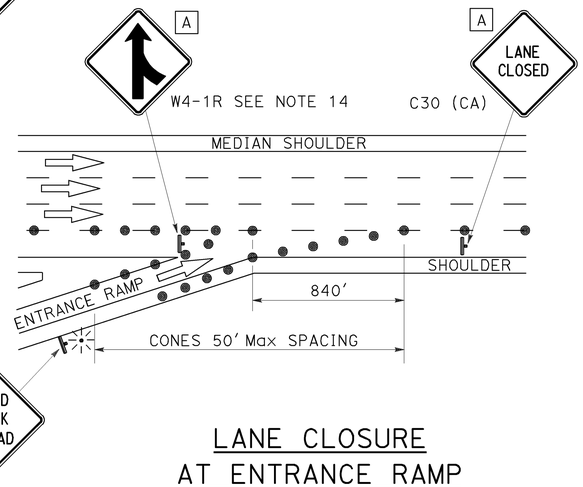
LANE CLOSURE



SHOULDER CLOSURE



LANE CLOSURE AT EXIT RAMP



LANE CLOSURE AT ENTRANCE RAMP

NOTES:

1. Median lane closures shall conform to the details for outside lane closures except that C20 (CA) (Lt) signs shall be used.
2. At least one person shall be assigned to provide full time maintenance of traffic control devices for lane closures.
3. Duplicate sign installations are not required:
   a) On opposite shoulder if at least one-half of the available lanes remain open to traffic.
   b) In the median if the width of the median shoulder is less than 8' and the outside lanes are to be closed.
4. 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.
5. 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.
6. 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.
7. Place a C30 (CA) sign every 2000' throughout length of lane closure.
8. 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.
9. 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.
10. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
11. Portable delineators, placed at one-half the spacing indicated for traffic cones may be used instead of cones for daytime closures only.
12. 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.
13. 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.
14. Unless otherwise specified in the special provisions, the G84 (CA) and W4-1 signs shall be used as shown.
15. 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.
16. 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)
ooo	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

REVISED BY | DATE REVISED
BRADLEY LARSON | DAN FROILAND
CALCULATED- | DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JOHN FOX
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs10.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2480 | PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	16	21

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-22-13 PLANS APPROVAL DATE

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

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TYPICAL LANE CLOSURE

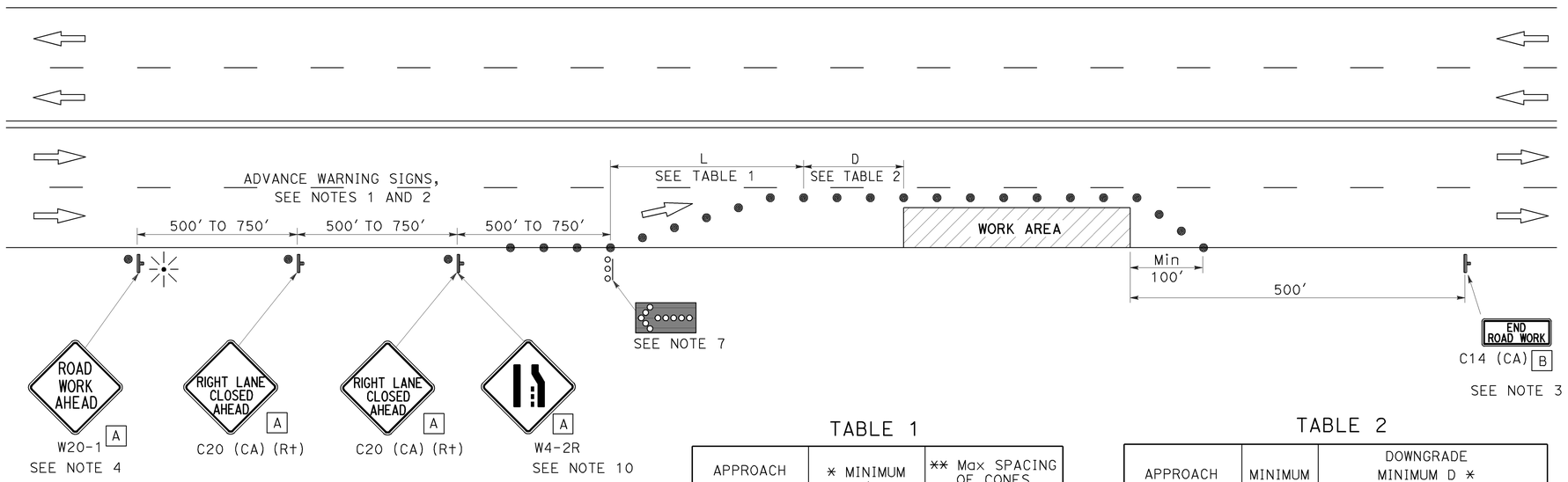

TABLE 1

APPROACH SPEED	* MINIMUM L	** Max SPACING OF CONES ALONG TAPER
mph	ft	ft
20 AND BELOW	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
Over 50	SEE NOTE 9	

* USE L FOR LANE WIDTHS LESS THAN OR EQUAL TO 12′.
** SEE NOTE 8.

TABLE 2

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
OVER 50	SEE NOTE 9			

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

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.

LEGEND

- TRAFFIC CONE
- TEMPORARY SIGN
- FLASHING ARROW SIGN (FAS)
- FAS SUPPORT OR TRAILER
- PORTABLE FLASHING BEACON

SIGN PANEL SIZE (Min)

A 36" × 36"

B 36" × 18"

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300′ spacing and placed closer in urban areas.
2. Each advance warning 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. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. 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.
4. 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.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow sign shall be either Type I or Type II.
8. The maximum spacing between cones along a tangent shall be 50′ and along a taper shall be approximately as shown in Table 1.
9. For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
10. 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.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-2

DATE PLOTTED => 10-DEC-2012
TIME PLOTTED => 09:45
LAST REVISION

REVISED BY | DATE REVISED
BRADLEY LARSON | DAN FROILAND
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | JOHN FOX
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs11.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2480 | PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	17	21

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-22-13 PLANS APPROVAL DATE

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

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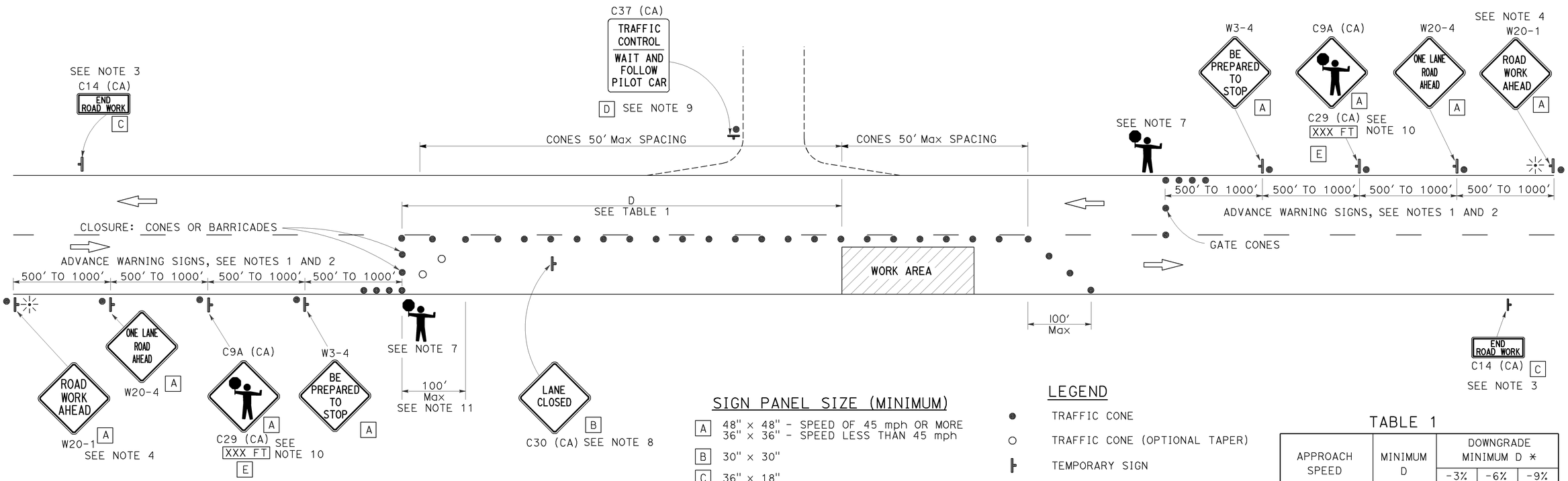
NOTES:

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.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (MINIMUM)

- A — 48" x 48" - SPEED OF 45 mph OR MORE; 36" x 36" - SPEED LESS THAN 45 mph
- B — 30" x 30"
- C — 36" x 18"
- D — 36" x 42"
- E — 36" x 9"

LEGEND

- TRAFFIC CONE
- TRAFFIC CONE (OPTIONAL TAPER)
- TEMPORARY SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

TABLE 1

APPROACH SPEED	MINIMUM D	DOWNGRADE MINIMUM D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 AND BELOW	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785

* USE ON SUSTAINED DOWNGRADE STEEPER THAN -3 PERCENT AND LONGER THAN 1 MILE.

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.
2. Each advance warning sign in each direction of travel 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.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____MILES", use a W20-4 sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
8. Place C30 (CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
9. When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
10. An optional C29 (CA) sign may be placed below the C9A (CA) sign.
11. Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

NO SCALE

TCS-3

REVISED BY | DATE REVISED
BRADLEY LARSON | DAN FROILAND
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: JOHN FOX
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE ENGINEERING

LAST REVISION | DATE PLOTTED => 10-DEC-2012 | TIME PLOTTED => 09:45

BORDER LAST REVISED 7/2/2010 | USERNAME => s114640 | DGN FILE => tcs13.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2480 | PROJECT NUMBER & PHASE 09130000011

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	18	21

REGISTERED CIVIL ENGINEER — 12-7-12 DATE

1-22-13 PLANS APPROVAL DATE

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

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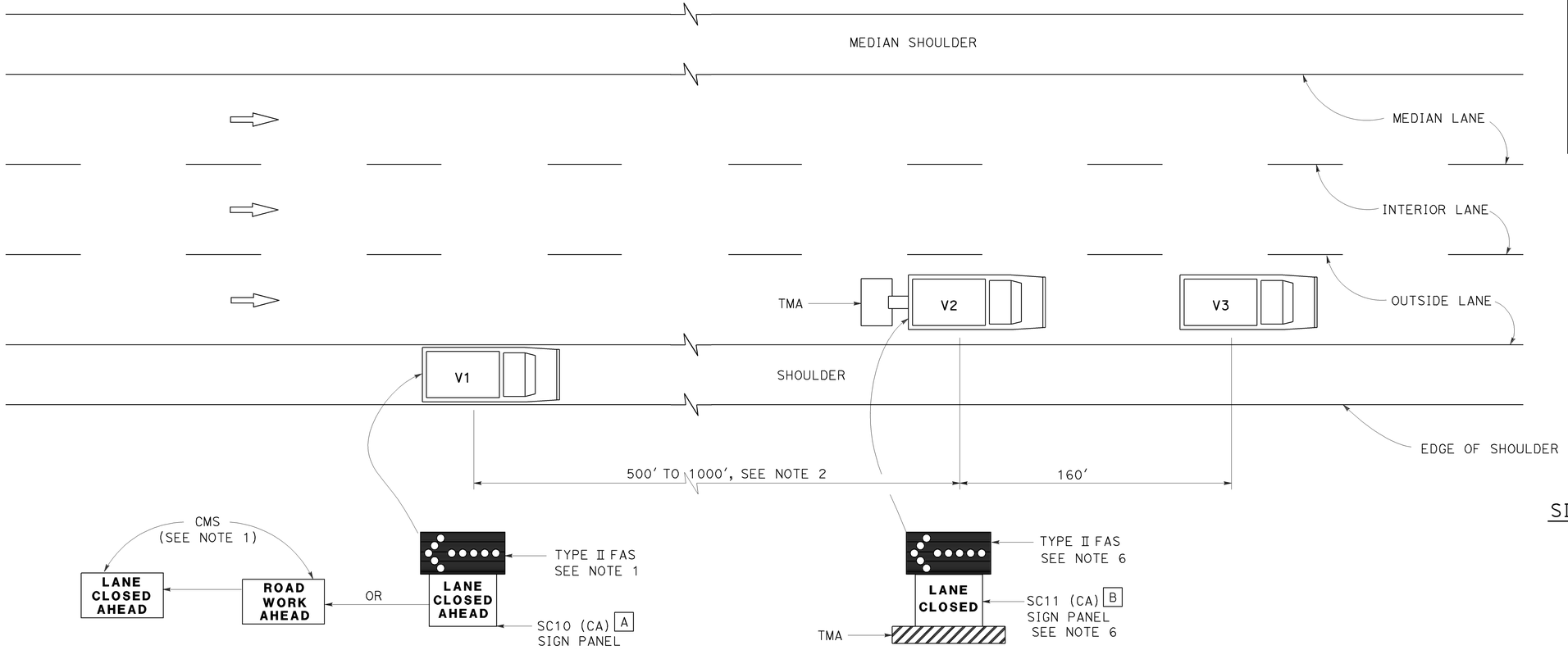

SIGN PANEL SIZE (Min)

A 66" x 36"

B 54" x 42"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
	FLASHING ARROW SIGN (FAS)
CMS	CHANGEABLE MESSAGE SIGN
TMA	TRUCK-MOUNTED ATTENUATOR

MOVING LANE CLOSURE ON MEDIAN LANE OR OUTSIDE LANE OF MULTILANE HIGHWAYS

NOTES:

1. Either a changeable message sign or a SC10 (CA) sign panel and a Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1. A Type II flashing arrow sign shall be mounted on the rear of sign vehicle V1 and used with the SC10 (CA) sign panel. A Type II flashing arrow sign will not be required with the changeable message sign provided the flashing arrow sign symbol is displayed on the changeable message sign board. The changeable message sign shall be sequenced to show the "ROAD WORK AHEAD" message first, followed by the "LANE CLOSED AHEAD" message and then the flashing arrow sign symbol. For median lane closure, the flashing arrow symbol shall be reversed with the arrowhead on the right.
2. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue. Sign vehicle V1 shall be positioned where highly visible when shoulders are not available.
3. A minimum sight distance of 1500′ should be provided in advance of sign vehicle V1.
4. Sign vehicle V1 should remain at the beginning of horizontal or vertical curves until the other vehicles (V2 and V3) are far enough beyond the curve to resume the minimum sight distance of 1500′.
5. Vehicle-mounted sign panels shall be Type III, IV, VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
6. Gross Vehicle Weight of shadow vehicle V2 shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown and a Type II flashing arrow sign shall be mounted on the rear of shadow vehicle V2. For median lane closure the flashing arrow sign symbol shall be displayed with the arrowhead on the right.
7. All vehicles used for lane closures shall be equipped with two-way radios, and the vehicle operators shall maintain communication during the work or application operation.
9. Where sufficient shoulder width is not available, sign vehicle V1 may encroach into the traffic lane staying as close to the edge of shoulder as practicable. Both V1 and V2 shall be equipped with a truck-mounted attenuator. The Gross Vehicle Weight of V1 and V2 shall be at least 20,000 pounds, respectively.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required, and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON MULTILANE HIGHWAYS (OUTSIDE AND MEDIAN LANES)

NO SCALE

TCS-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans® MAINTENANCE ENGINEERING

FUNCTIONAL SUPERVISOR: JOHN FOX

CALCULATED-DESIGNED BY: BRADLEY LARSON

CHECKED BY: DAN FROILAND

REVISED BY / DATE REVISED

LAST REVISION — DATE PLOTTED => 10-DEC-2012 — TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	19	21

G Bhullar 12-7-12
REGISTERED CIVIL ENGINEER DATE

1-22-13
PLANS APPROVAL DATE

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

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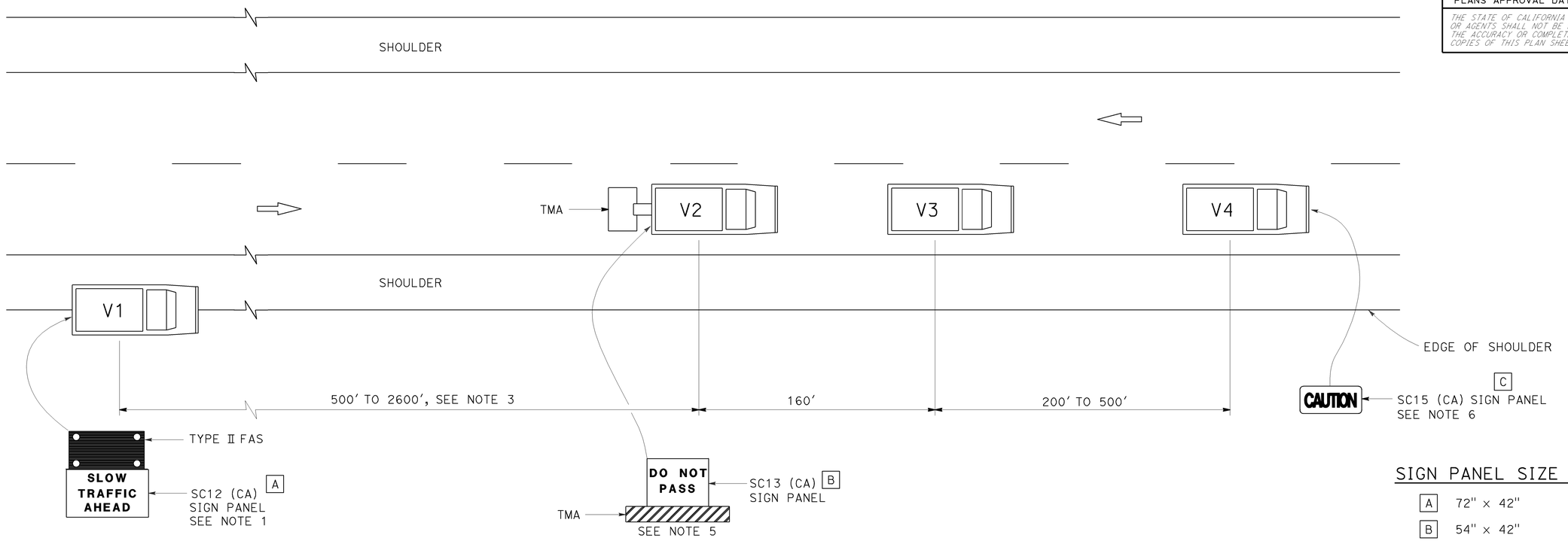


SIGN PANEL SIZE (Min)

A	72" x 42"
B	54" x 42"
C	54" x 24"

LEGEND

V1	SIGN VEHICLE
V2	SHADOW VEHICLE
V3	WORK/APPLICATION VEHICLE
V4	SIGN VEHICLE
TMA	TRUCK-MOUNTED ATTENUATOR
	FLASHING ARROW SIGN (FAS) IN FLASHING CAUTION MODE

NOTES:

1. Either a changeable message sign or a SC12 (CA) "SLOW TRAFFIC AHEAD" sign shall be mounted on the rear of sign vehicle V1. A Type II flashing arrow sign may be used with the SC12 (CA) sign panel.
2. Sign vehicle V1 should be positioned where highly visible when shoulders are not available.
3. If traffic queues develop, sign vehicle V1 should be positioned upstream from the end of queue.
4. Vehicle-mounted sign panels shall be Type III, IV VII, VIII or IX retroreflective sheeting, black on white, black on orange, or black on fluorescent orange, with 6" minimum series D letters per Caltrans sign specifications.
5. Gross Vehicle Weight of shadow vehicle shall be a minimum of 20,000 pounds and shall be equipped with a truck-mounted attenuator. The sign panel shown shall be mounted on the rear of shadow vehicle V2. The message "LANE CLOSED" may be used in place of the "DO NOT PASS" message.
6. The sign panel shown shall be mounted on the front of sign vehicle V4, facing opposing traffic.
7. All vehicles shall be equipped with flashing or rotating amber lights.
8. Sign vehicle V4 will not be required when the work and vehicles V2 and V3 are 2' or more from the centerline of the highway during the work or application operations.
9. All vehicles used for lane closures shall be equipped with two-way radios and the vehicle operators shall maintain communication during the work or application operation.
10. When multiple work vehicles are used in close proximity to each other, only one shadow vehicle is required and spacing between work vehicles shall be minimized in order to deter traffic from entering the closed lane.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR MOVING LANE CLOSURE ON TWO LANE HIGHWAYS

NO SCALE

TCS-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE ENGINEERING
FUNCTIONAL SUPERVISOR: JOHN FOX
CALCULATED-DESIGNED BY: BRADLEY LARSON
CHECKED BY: DAN FROILAND
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 10-DEC-2012
TIME PLOTTED => 09:45

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	20	21

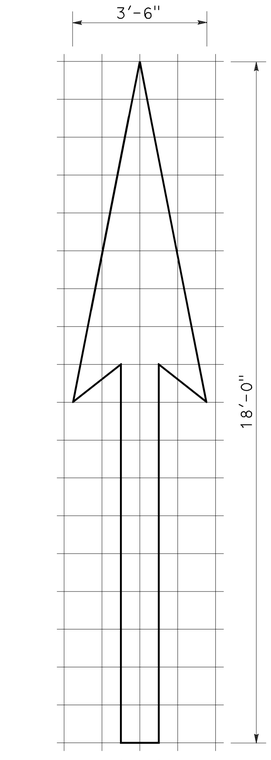
Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

April 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

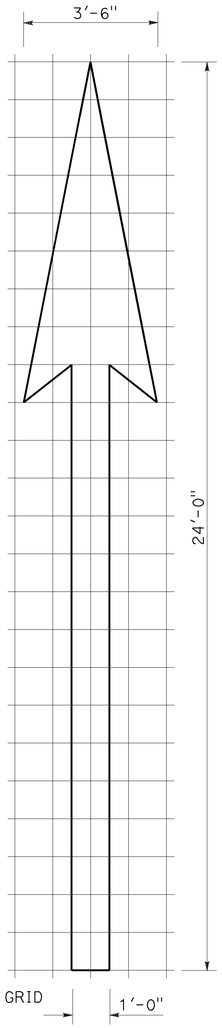
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

TO ACCOMPANY PLANS DATED 1-22-13



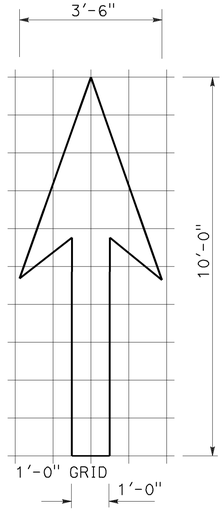
A=25 ft²

TYPE I 18'-0" ARROW



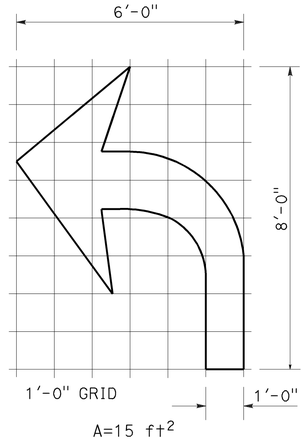
A=31 ft²

TYPE I 24'-0" ARROW



A=14 ft²

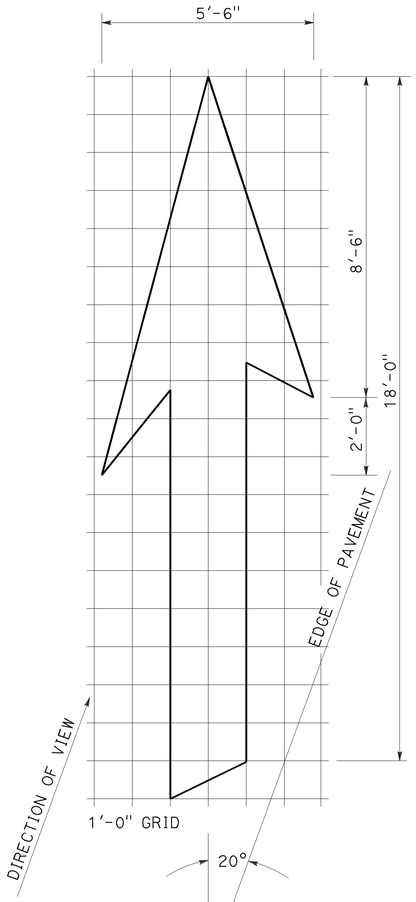
TYPE I 10'-0" ARROW



A=15 ft²

TYPE IV (L) ARROW

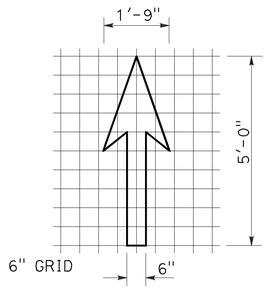
(For Type IV (R) arrow, use mirror image)



A=42 ft²

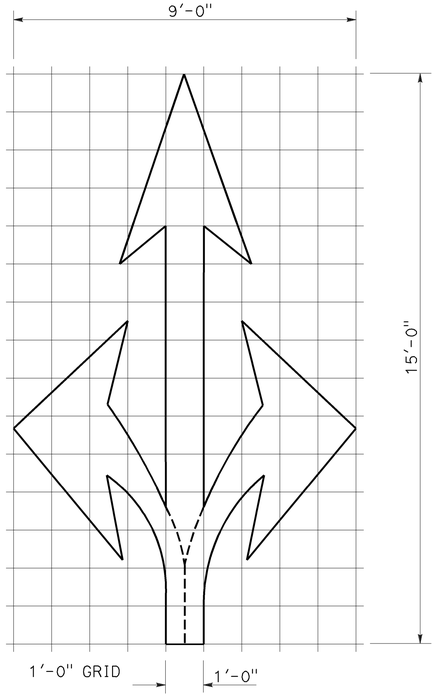
TYPE VI ARROW

Right lane drop arrow (For left lane, use mirror image)



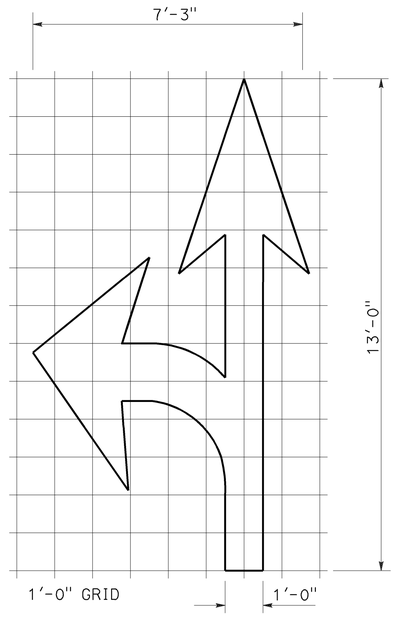
A=3.5 ft²

BIKE LANE ARROW



A=36 ft²

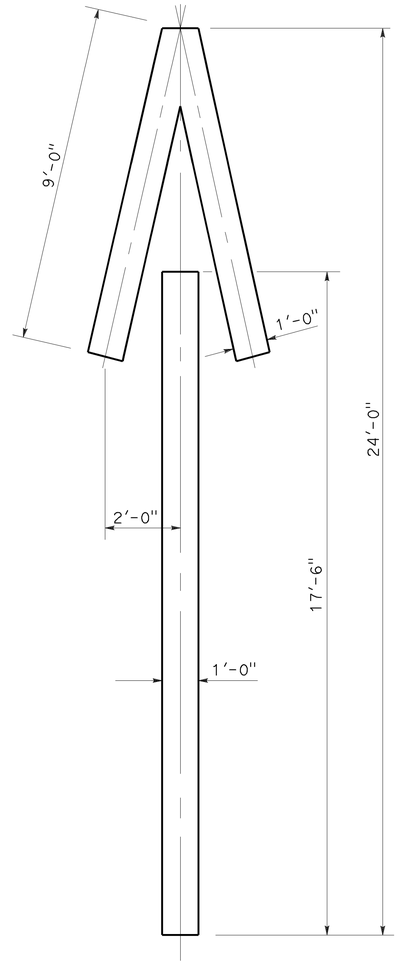
TYPE VIII ARROW



A=27 ft²

TYPE VII (L) ARROW

(For Type VII (R) arrow, use mirror image)



A=33 ft²

TYPE V ARROW

NOTE:
Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS ARROWS

NO SCALE

RSP A24A DATED APRIL 20, 2012 SUPERSEDES STANDARD PLAN A24A DATED MAY 20, 2011 - PAGE 13 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24A

2010 REVISED STANDARD PLAN RSP A24A

3-14-12

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Mno	120, 167, 395	Var	21	21

Roberta L. McLaughlin
REGISTERED CIVIL ENGINEER

July 20, 2012
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Roberta L. McLaughlin
No. C40375
Exp. 3-31-13
CIVIL
STATE OF CALIFORNIA

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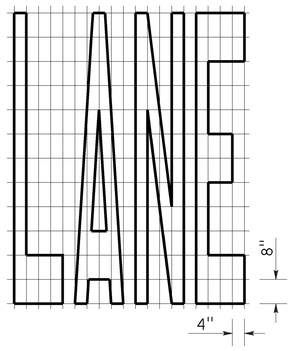
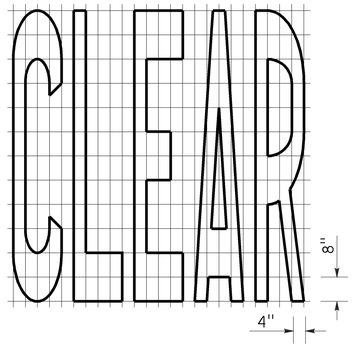
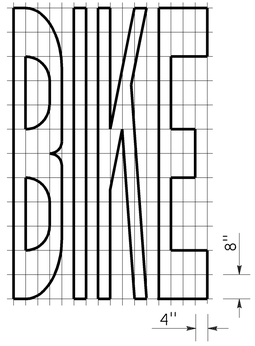
TO ACCOMPANY PLANS DATED 1-22-13



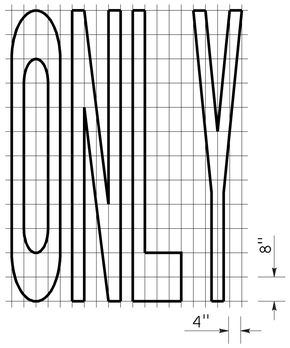
A=24 ft²



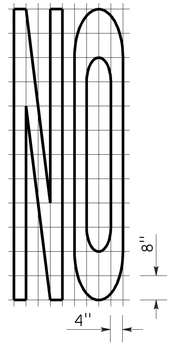
A=27 ft²



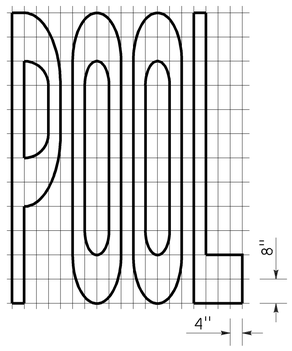
A=21 ft²



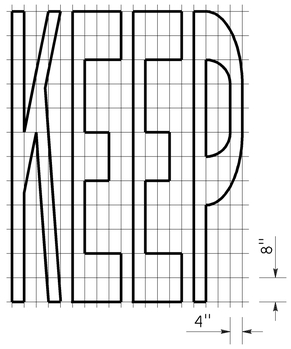
A=22 ft²



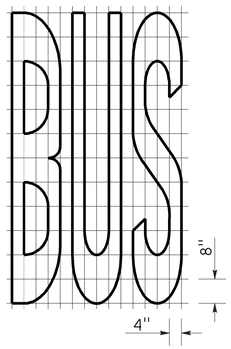
A=14 ft²



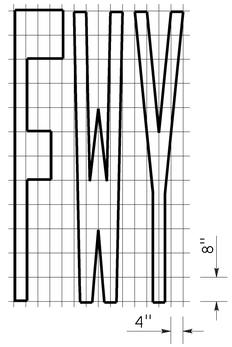
A=23 ft²



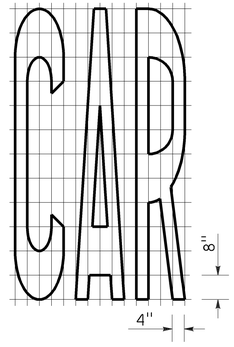
A=24 ft²



A=20 ft²

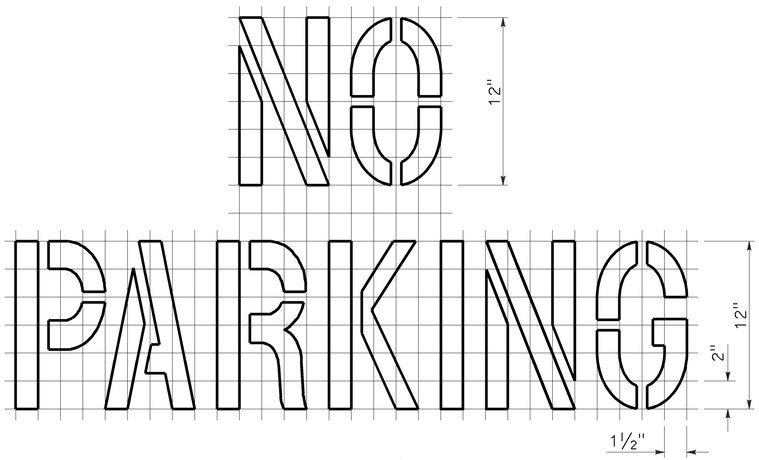


A=16 ft²

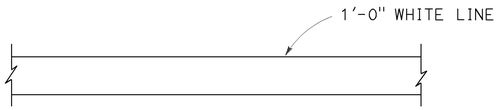


A=17 ft²

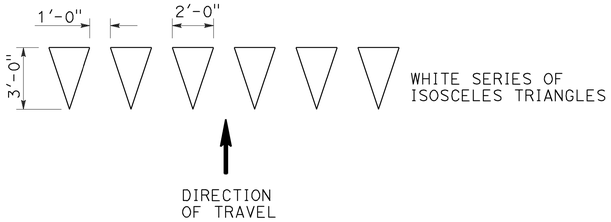
WORD MARKINGS			
ITEM	ft²	ITEM	ft²
LANE	24	NO	14
POOL	23	BIKE	21
CAR	17	BUS	20
CLEAR	27	ONLY	22
KEEP	24	FWY	16



A=2 ft²
See Notes 6 and 7



LIMIT LINE (STOP LINE)



YIELD LINE

NOTES:

1. If a message consists of more than one word, it should read "UP", i.e., the first word should be nearest the driver.
2. The space between words should be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS WORDS, LIMIT AND YIELD LINES

NO SCALE

RSP A24E DATED JULY 20, 2012 SUPERSEDES STANDARD PLAN A24E
DATED MAY 20, 2011 - PAGE 17 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A24E

2010 REVISED STANDARD PLAN RSP A24E

6-12-12