Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5, 37.7/41.5	1	12

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2	TYPICAL CROSS SECTIONS
3	CONSTRUCTION DETAILS
4	CONSTRUCTION AREA SIGN
5	PAVEMENT DELINEATION AND SIGN QUANTITIES
6	SUMMARY OF QUANTITIES
7-12	REVISED STANDARD PLANS

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

STATE OF CALIFORNIA

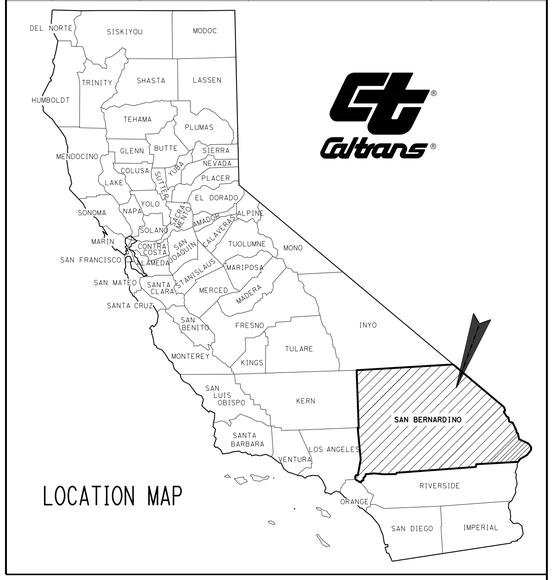
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

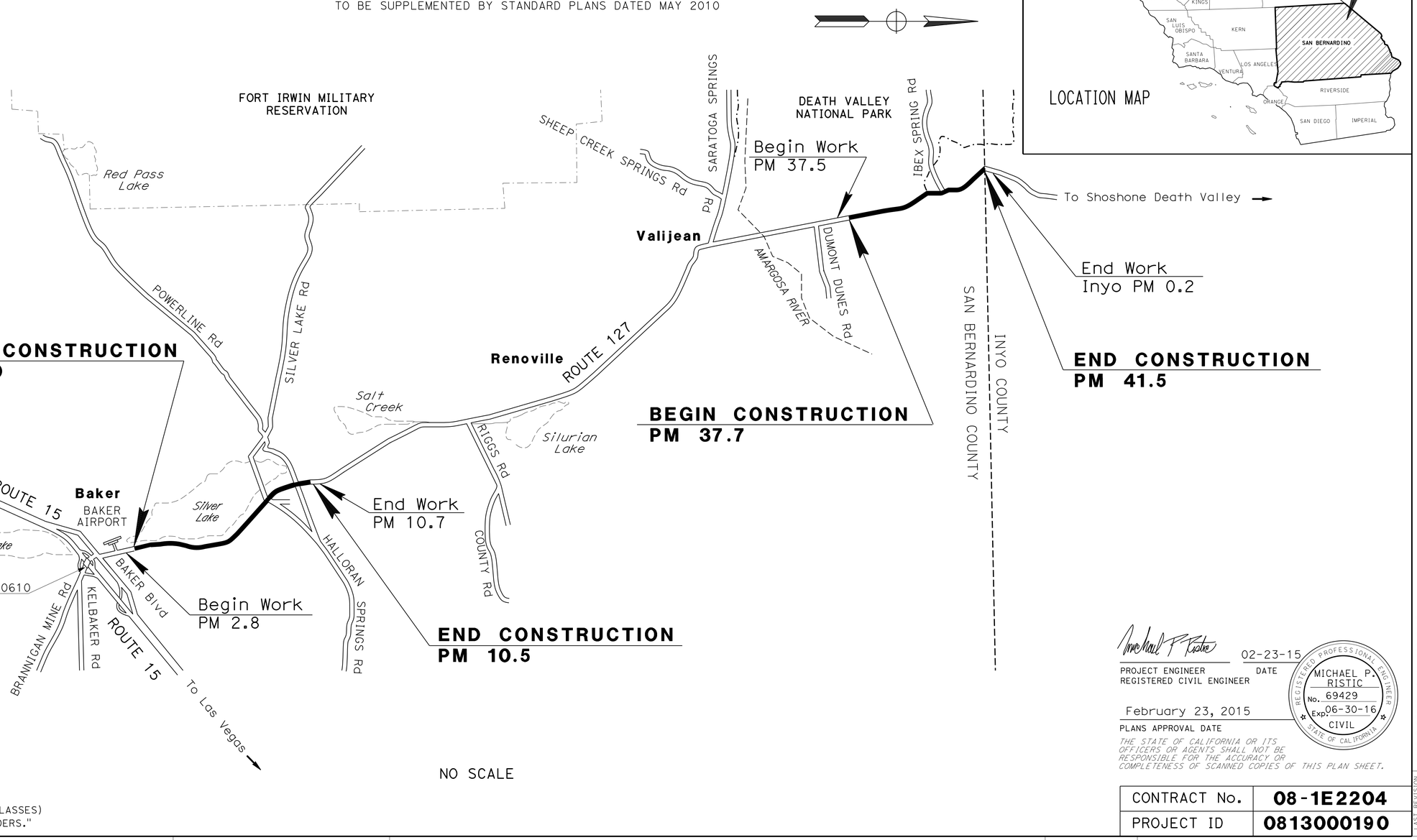
STATE HIGHWAY

IN SAN BERNARDINO COUNTY
ON ROUTE 127
FROM 3.0 MILES NORTH OF ROUTE 15/127 SEPARATION
TO 2.3 MILES NORTH OF SILVER LAKE ROAD AND
8.0 MILES NORTH OF SARATOGA SPRINGS ROAD
TO SAN BERNARDINO/INYO COUNTY LINE

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2010



LOCATION MAP



NO SCALE

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

PROJECT MANAGER: CATALINO PINING

DESIGN ENGINEER: RHEA VILLARAMA

02-23-15
PROJECT ENGINEER REGISTERED CIVIL ENGINEER — DATE

MICHAEL P. RISTIC
No. 69429
Exp. 06-30-16
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

February 23, 2015
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.	08-1E2204
PROJECT ID	0813000190

LAST REVISION 10-30-14
DATE PLOTTED => 26-FEB-2015
TIME PLOTTED => 11:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5, 37.7/41.5	2	12

02-23-15
REGISTERED CIVIL ENGINEER DATE

MICHAEL P. RISTIC
No. 69429
Exp 06-30-16
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

02-23-15
PLANS APPROVAL DATE

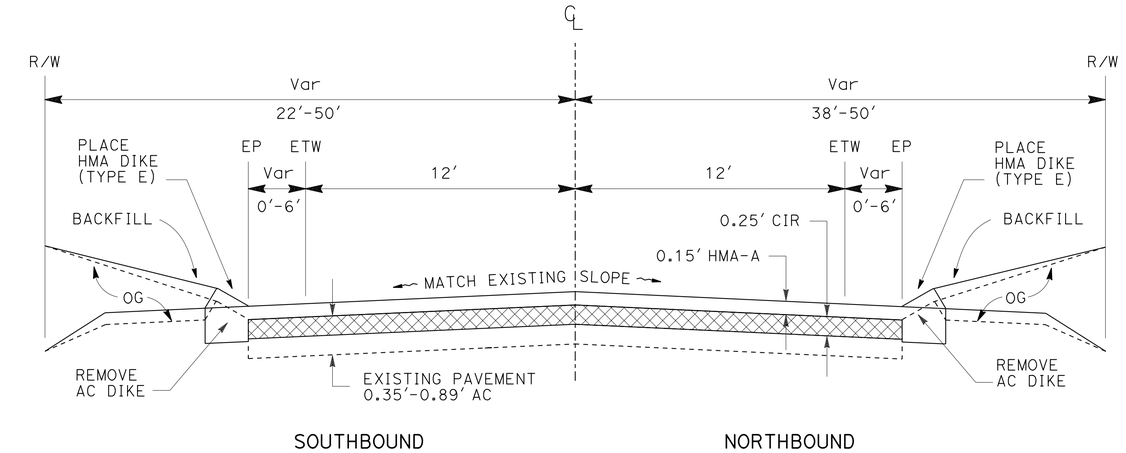
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. DIMENSIONS OF THE PAVEMENT STURCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.
3. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
4. CONSTRUCT SAFETY EDGE PER STANDARD PLANS RSP P74 AND RSP P75.
5. LOCATIONS OF DIKES ARE IN THE SUMMARY OF QUANTITIES SHEET.
6. CONSTRUCT HMA DIKE AND PLACE BACKFILL PER STANDARD PLAN RSP A87B.

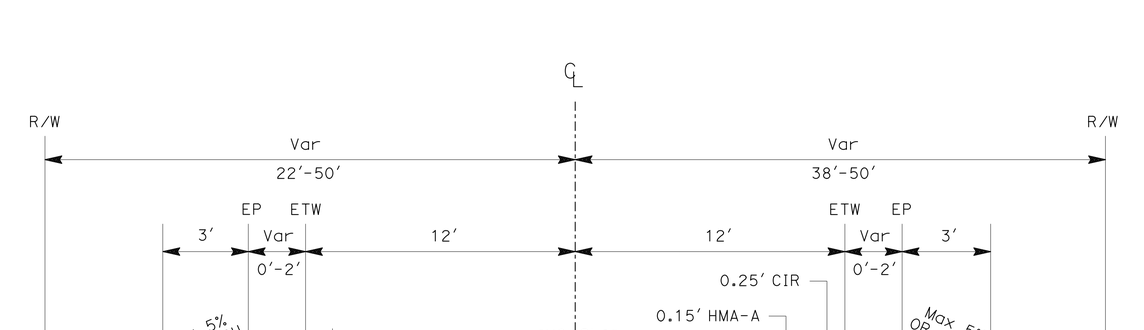
LEGEND:

CIR	COLD IN-PLACE RECYCLING
HMA-A	HOT MIX ASPHALT (TYPE A)
	HMA-A
	CIR



SOUTHBOUND NORTHBOUND

PM 40.3 TO 41.3



SOUTHBOUND NORTHBOUND

PM 3.0 TO PM 10.5
PM 37.7 TO PM 40.3
PM 41.3 TO 41.5

TYPICAL CROSS SECTION

NO SCALE **X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE DESIGN

FUNCTIONAL SUPERVISOR: MICHAEL P. RISTIC
CALCULATED-DESIGNED BY: RHEA VILLARAMA
CHECKED BY: MICHAEL P. RISTIC
REVISED BY
DATE REVISED

LAST REVISION 10-30-14
DATE PLOTTED => 26-FEB-2015
TIME PLOTTED => 11:44

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 0813000190ca001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2343
PROJECT NUMBER & PHASE 08130001901

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5, 37.7/41.5	3	12

REGISTERED CIVIL ENGINEER — 02-23-15 DATE

02-23-15
PLANS APPROVAL DATE

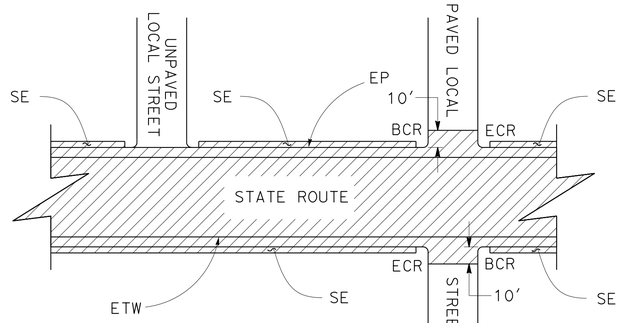
MICHAEL P. RISTIC No. 69429 Exp 06-30-16 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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.

LEGEND:

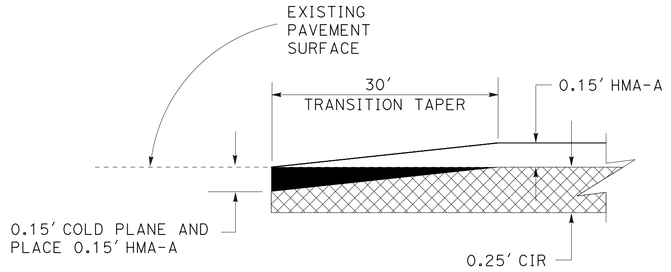
- LIMIT OF PAVING WORK
- HMA-A
- COLD PLANE AND PLACE HMA-A
- CIR

SE	SAFETY EDGE
CIR	COLD IN-PLACE RECYCLING
HMA-A	HOT MIX ASPHALT (TYPE A)



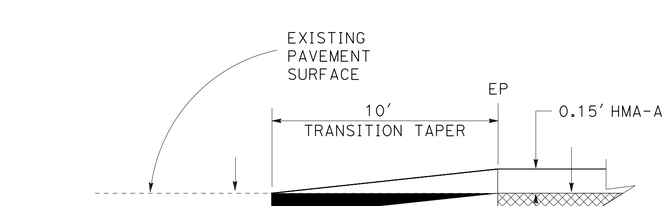
LIMIT OF PAVING WORK

LOCAL STREET



PAVEMENT CONFORM (TRANSVERSE)

BEGIN AND END OF CONSTRUCTION



PAVEMENT CONFORM

PAVED LOCAL ROADS

CONSTRUCTION DETAILS

NO SCALE — **C-1**

RHEA VILLARAMA — CALCULATED-DESIGNED BY
MICHAEL P. RISTIC — CHECKED BY
REVISED BY — DATE REVISED
MICHAEL P. RISTIC — FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE DESIGN

LAST REVISION 10-30-14 — DATE PLOTTED => 26-FEB-2015 — TIME PLOTTED => 11:44

BORDER LAST REVISED 7/2/2010 — USERNAME => s110420 — DGN FILE => 0813000190ga001.dgn — RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 — UNIT 2343 — PROJECT NUMBER & PHASE 08130001901

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5, 37.7/41.5	4	12

Mario L. Amancio 02-23-15
REGISTERED CIVIL ENGINEER DATE

02-23-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MARIO AMANCIO
No. 65908
Exp. 6-30-16
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 - THE LOCATION OF CONSTRUCTION AREA SIGNS ON THE PLAN IS APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER.

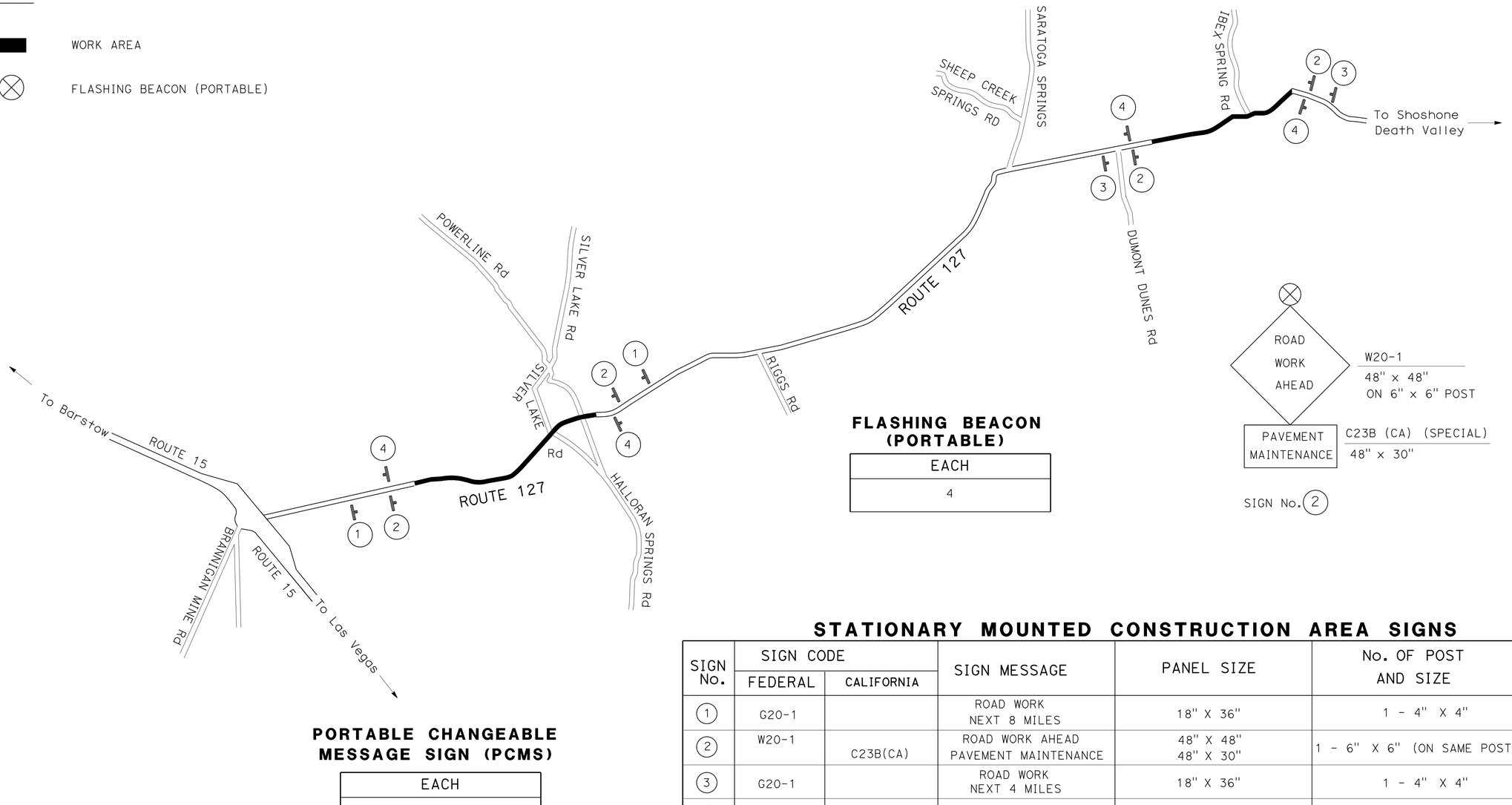
2 - ALL CONSTRUCTION AREA SIGNS MUST BE ACCORDING TO CALIFORNIA MUTCD.

3 - REFER TO REVISED STANDARD PLANS RSP T9 AND RSP T13 FOR TRAFFIC CONTROL REQUIREMENTS DURING CONSTRUCTIONS

LEGEND:

WORK AREA

FLASHING BEACON (PORTABLE)



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

EACH
2

LOCATION TO BE DETERMINED BY ENGINEER

FLASHING BEACON (PORTABLE)

EACH
4

ROAD WORK AHEAD — W20-1, 48" x 48", ON 6" x 6" POST

PAVEMENT MAINTENANCE — C23B (CA) (SPECIAL), 48" x 30"

SIGN No. (2)

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE FEDERAL	SIGN CODE CALIFORNIA	SIGN MESSAGE	PANEL SIZE	No. OF POST AND SIZE	No. OF SIGNS
(1)	G20-1		ROAD WORK NEXT 8 MILES	18" X 36"	1 - 4" X 4"	2
(2)	W20-1	C23B(CA)	ROAD WORK AHEAD PAVEMENT MAINTENANCE	48" X 48" 48" X 30"	1 - 6" X 6" (ON SAME POST)	4 4
(3)	G20-1		ROAD WORK NEXT 4 MILES	18" X 36"	1 - 4" X 4"	2
(4)	G20-2		END ROAD WORK	18" X 36"	1 - 4" X 4"	4

(N) - NOT A SEPERATE PAY ITEM; FOR INFORMATION ONLY

CONSTRUCTION AREA SIGNS

APPROVED FOR CONSTRUCTION AREA SIGN WORK ONLY

NO SCALE

CS-1

REVISED BY | DATE REVISED

SHAHRAM MOKHTARI | MARIO AMANCIO — CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: MARIO AMANCIO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC DESIGN

LAST REVISION | DATE PLOTTED => 26-FEB-2015
11-04-14 | TIME PLOTTED => 11:44

BORDER LAST REVISED 7/2/2010 | USERNAME => s110420 | DGN FILE => 08130001901a001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2284 | PROJECT NUMBER & PHASE 08130001901

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5, 37.7/41.5	5	12

Mario L. Amancio 02-23-15
REGISTERED CIVIL ENGINEER DATE

02-23-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MARIO AMANCIO
No. 65908
Exp. 6-30-16
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.

TEMPORARY TRAFFIC STRIPE (PAINT) QUANTITIES

DETAIL No.	TEMPORARY TRAFFIC STRIPE (PAINT)	
	WHITE	YELLOW
	LF	
27B	120000	
5		25000
18		7000
21		28000
SUB-TOTAL	120000	60000
TOTAL	180000	

PAVEMENT DELINEATION QUANTITIES

DETAIL No.	PAINT TRAFFIC STRIPE (2-COAT)	
	WHITE	YELLOW
	LF	
27B	120000	
5		25000
18		7000
21		28000
SUB-TOTAL	120000	60000
TOTAL	180000	

PAVEMENT DELINEATION QUANTITIES

PDQ-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MARIO AMANCIO
CALCULATED-DESIGNED BY: SHAHRAM MOKHTARI
CHECKED BY: MARIO AMANCIO
REVISED BY
DATE REVISED

LAST REVISION 10-30-14
DATE PLOTTED => 26-FEB-2015
TIME PLOTTED => 11:44

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5, 37.7/41.47	6	12

02-23-15
REGISTERED CIVIL ENGINEER DATE

02-23-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL P. RISTIC
No. 69429
Exp 06-30-16
CIVIL
STATE OF CALIFORNIA

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PAVEMENT QUANTITIES

BEGIN PM	END PM	WIDTH (FT)	COLD IN-PLACE RECYCLING (SQYD)	EMULSIFIED COLD IN-PLACE RECYCLING AGENT (TON)	COLD IN-PLACE RECYCLING CEMENT (TON)	ASPHALTIC EMULSION COLD IN-PLACE RECYCLING (TON)	SAND COVER COLD IN-PLACE RECYCLING (TON)	HOT MIX ASPHALT (TYPE A) (TON)	SHOULDER BACKING (TON)	TACK COAT (TON)	COLD PLANE ASPHALT CONCRETE (SQYD)
3.0	10.5	28	123,200	832	208	67	370	12,474	1,841	31	311
37.7	41.47	36	79,622	537	134	43	239	8,062	1,543	20	302
TOTAL			202,822	1,369	342	110	608	20,536	3,384	51	613

ASPHALT CONCRETE DIKE QUANTITIES

ROUTE DIRECTION	BEGIN PM	END PM	REMOVE AND REPLACE AC DIKE TYPE E (LF)	MINOR HMA (TON)
NB	40.44	40.50	317	8.3
	40.62	40.65	158	4.2
	40.69	40.87	950	25.0
	41.05	41.21	845	22.2
	41.25	41.27	106	2.8
	41.31	41.33	106	2.8
SB	40.30	40.43	686	18.1
	40.43	40.71	1,478	38.9
	40.72	40.75	158	4.2
	40.85	41.04	1,003	26.4
	41.06	41.18	634	16.7
TOTAL			6,441	169.6

SAFETY EDGE

BEGIN PM	END PM	DIRECTION	TOTAL THICKNESS OF SAFETY EDGE (FT)	LENGTH SAFETY EDGE (LF)	HOT MIX ASPHALT (TYPE A) (TON)
3.0	10.5	NB/SB	0.15	79,200	891
37.7	41.47	NB/SB	0.15	39,812	448
SUBTOTAL					1,339
PAVEMENT QUANTITIES					20,536
GRAND TOTAL					21.875

SUMMARY OF QUANTITIES

NO SCALE **Q-1**

RHEA VILLARAMA — CALCULATED-DESIGNED BY
MICHAEL P. RISTIC — CHECKED BY
REVISED BY — DATE REVISED
FUNCTIONAL SUPERVISOR: MICHAEL P. RISTIC
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE DESIGN

LAST REVISION 11-02-14
DATE PLOTTED => 26-FEB-2015
TIME PLOTTED => 11:44

BORDER LAST REVISED 7/2/2010
USERNAME => s110420
DGN FILE => 0813000190pa001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2343
PROJECT NUMBER & PHASE 08130001901

M

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

N

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

O

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

P

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

P continued

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

Q

Qty	QUANTITY

R

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

S

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

T

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

T continued

TS	TRANSVERSE, TRAFFIC SIGNAL, TUBULAR STEEL
Typ	TYPICAL

U

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

V

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

W

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

X

X Sec	CROSS SECTION
Xing	CROSSING

Y

Yr	YEAR
Yrs	YEARS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5 37.7/41.47	7	12

Grace M. Tsushima
REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Grace M. Tsushima — No. C49814 — Exp. 9-30-14 — CIVIL — STATE OF CALIFORNIA

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

TO ACCOMPANY PLANS DATED 2-23-15

UNIT OF MEASUREMENT SYMBOLS:

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

TABLE A

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

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

TABLE B

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

* For use on a sign panel only

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ABBREVIATIONS (SHEET 2 OF 2)

NO SCALE

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

REVISED STANDARD PLAN RSP A10B

2010 REVISED STANDARD PLAN RSP A10B

6-7-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5 37.7/41.47	8	12

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Michael Janzen
No. 44788
Exp. 03-31-14
CIVIL
STATE OF CALIFORNIA

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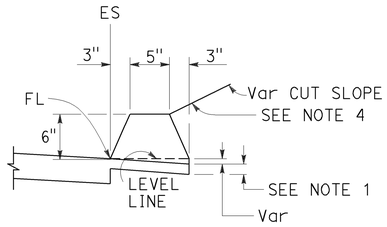
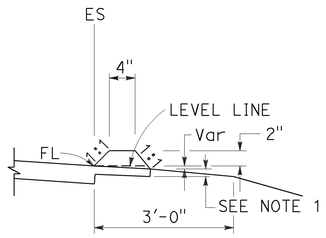
TO ACCOMPANY PLANS DATED 2-23-15

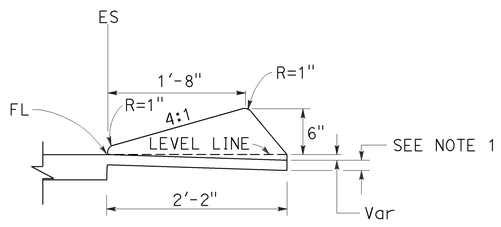
2010 REVISED STANDARD PLAN RSP A87B



TYPE A
See Note 3



TYPE C



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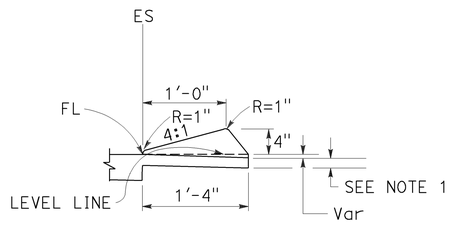
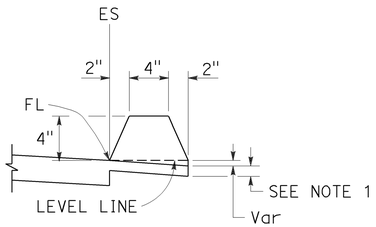
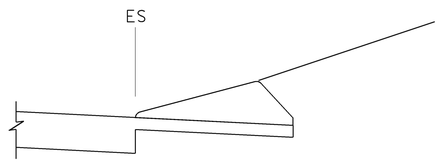


TYPE E

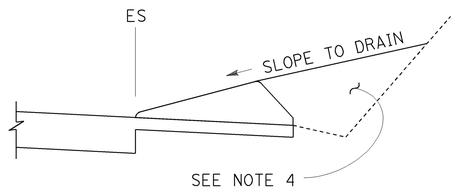


TYPE F
See Note 5

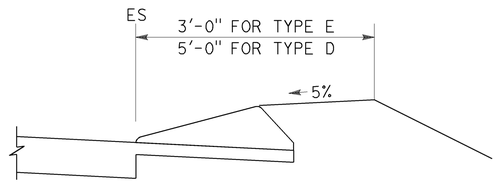
DIKES



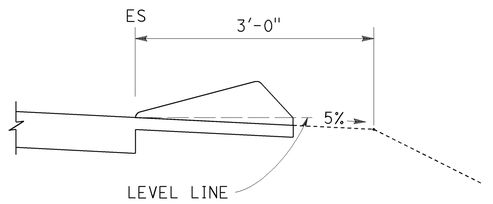
CASE C-1
Cut Slope



CASE C-2
Cut Slope



CASE F



CASE R
See Note 2

TYPE D AND E BACKFILL DETAILS

NOTES:

1. For HMA shoulders only, extend top layer of HMA placed on the shoulder under dike with no joint at the ES. For projects with OGFC shoulders, do not extend OGFC under dike. See project plans for modified dike detail.
2. Case R applies to retrofit only projects where restrictive conditions do not provide enough width for Case F backfill.
3. Type A dike only to be used where restrictive slope conditions do not provide enough width to use Type D or Type E dike.
4. Fill and compact with excavated material to top of dike.
5. Use Type F dike, where dike is required with guard railing installations. See Revised Standard Plan RSP A77N4 for dike positioning details.

DIKE QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A	0.0135
C	0.0038
D	0.0293
E	0.0130
F	0.0066

Quantities based on 5% cross slope.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT DIKES

NO SCALE

RSP A87B DATED JULY 19, 2013 SUPERSEDES STANDARD PLAN A87B
DATED MAY 20, 2011 - PAGE 120 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP A87B

6-27-13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5 37.7/41.47	9	12

REGISTERED CIVIL ENGINEER

Cornelis M. Hakim
No. C55610
Exp. 12-31-14
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

November 15, 2013
PLANS APPROVAL DATE

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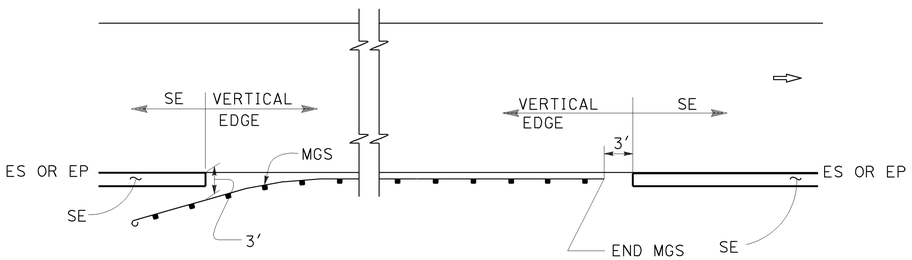
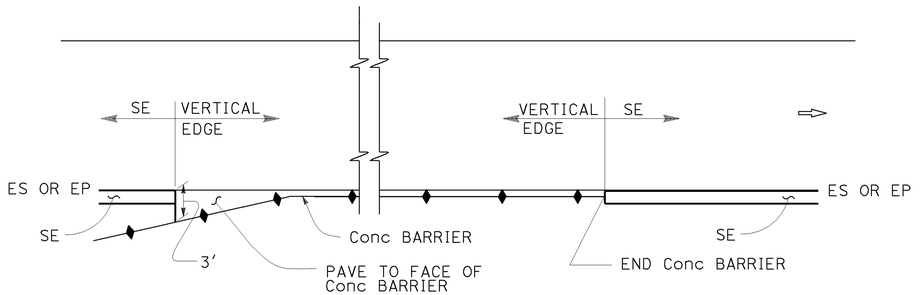
TO ACCOMPANY PLANS DATED 2-23-15

ABBREVIATIONS:

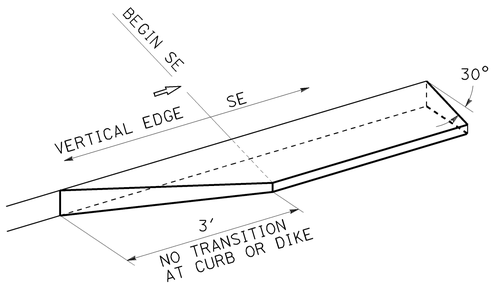
SE SAFETY EDGE



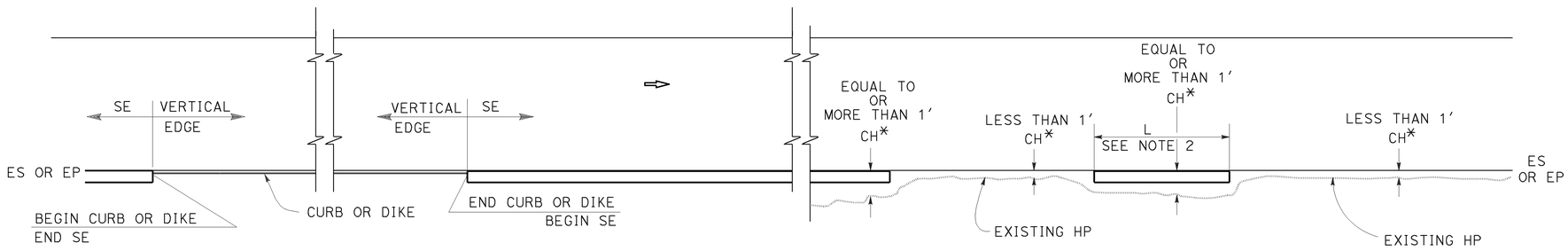
MGS



CONCRETE BARRIER



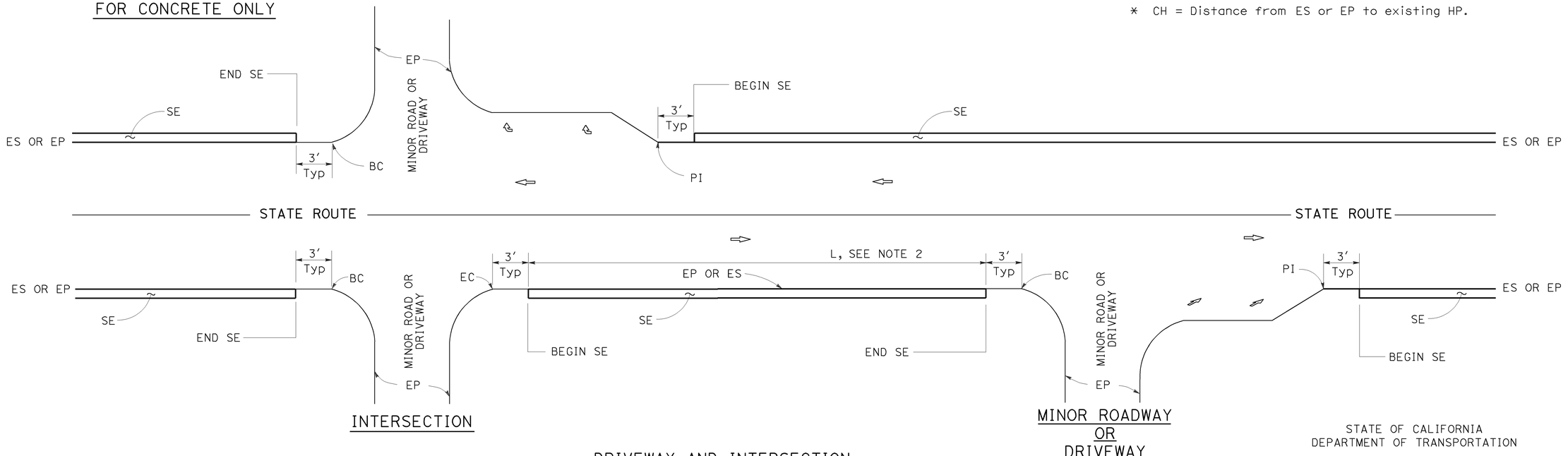
TRANSITION DETAIL
FOR CONCRETE ONLY



CURB OR DIKE

NARROW SIDE SLOPE

* CH = Distance from ES or EP to existing HP.



INTERSECTION

DRIVEWAY AND INTERSECTION

MINOR ROADWAY OR DRIVEWAY

NOTES:

1. For details not shown, see Revised Standard Plans RSP P75 and RSP P76.
2. Safety edge is optional when L is less than 30′.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE TREATMENTS

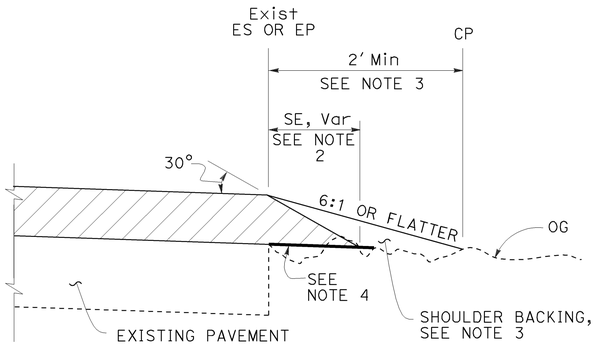
NO SCALE

RSP P74 DATED NOVEMBER 15, 2013 SUPERSEDES RSP P74 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

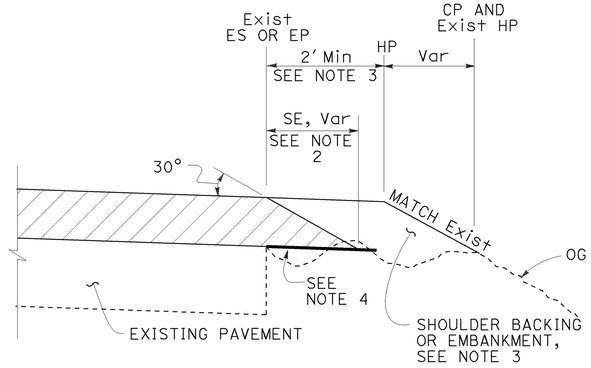
REVISED STANDARD PLAN RSP P74

2010 REVISED STANDARD PLAN RSP P74

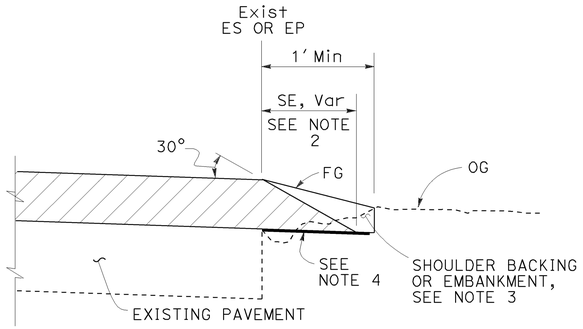
10-11-13



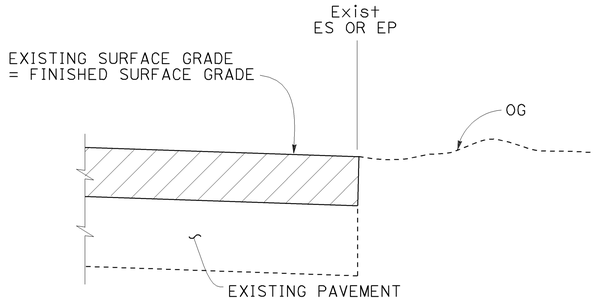
CASE A
Safety Edge



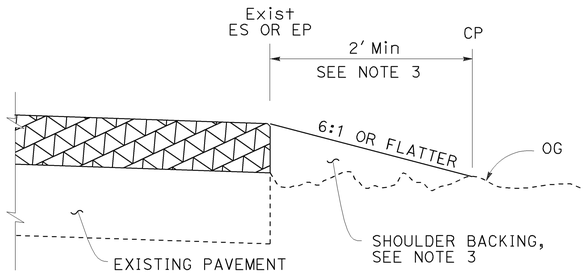
CASE B
Safety Edge



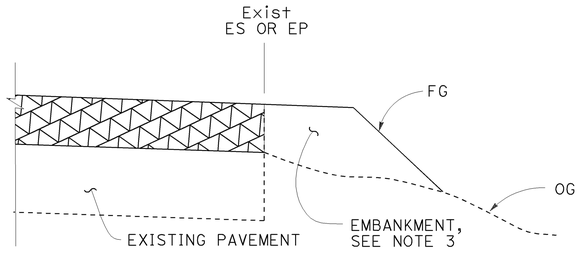
CASE C
Safety Edge



CASE D
Vertical Edge



CASE E
Vertical Edge



CASE F
Vertical Edge
* See Table A and Revised Std Plan RSP P74

NOTES:

1. For limits of safety edge and vertical edge treatments, see Revised Standard Plan RSP P74.
2. Details shown for HMA overlay thickness less than 0.43'. See Detail "A" for HMA overlay thickness more than 0.43' or concrete overlay.
3. For locations and limits of shoulder backing or embankment see project plans.
4. Grade existing ground to place safety edge. 1' minimum width
5. Safety edge transverse joint must match overlay transverse joint. End of #6 longitudinal bar must be 2" ±½" clear from transverse joint.
6. Safety edge is not needed in the area of MGS, barrier, right turn lane and acceleration lane. See Revised Standard Plan RSP P74.

LEGEND:

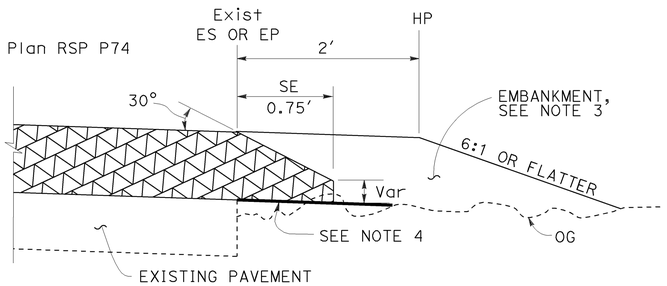
- HMA OVERLAY
- HMA OR CONCRETE OVERLAY
- CONCRETE OVERLAY

ABBREVIATIONS:

SE SAFETY EDGE
TT TOTAL THICKNESS OF SE

TABLE A
EDGE TREATMENT FOR VARIOUS OVERLAY THICKNESS AND CONDITIONS

	OVERLAY THICKNESS	
FIELD CONDITION	LESS THAN 0.15'	0.15' OR MORE
Exist SLOPE 6:1 OR FLATTER	CASE E	CASE A
Exist SLOPE 3:1 TO 6:1	CASE E	CASE B
Exist SLOPE STEEPER THAN 3:1	CASE F	CASE F
CUT SECTION (REPLACE, COLD PLANE, MILL PAVEMENT)	CASE D	CASE C



DETAIL "A"
For HMA overlay thickness more than 0.43' or concrete overlay

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5 37.7/41.47	10	12

REGISTERED CIVIL ENGINEER

Cornelis M. Hakim No. C55610 Exp. 12-31-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

November 15, 2013
PLANS APPROVAL DATE

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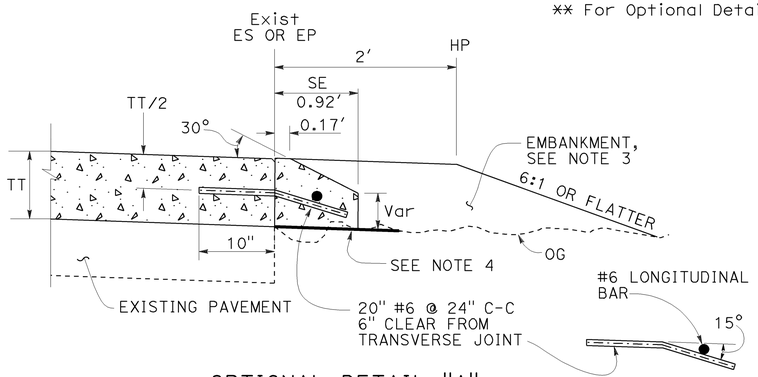
TO ACCOMPANY PLANS DATED 2-23-15

ADDITIONAL HMA OR CONCRETE QUANTITIES FOR SE/SIDE/MILE

TYPICAL CROSS SECTION	TT	TOTAL ADDITIONAL MATERIAL FOR SE/SIDE/MILE		
		HMA (TON)	CONCRETE (CY)*	CONCRETE (CY)**
TT	0.15'	NA	NA	NA
	0.20'	13.7	NA	NA
	0.30'	30.9	NA	NA
	0.40'	54.9	NA	NA
	0.45'	69.4	NA	NA
TT 0.43'	0.50'	84.2	NA	NA
	0.60'	113.9	NA	NA
	0.70'	143.6	70.9	94.2
	0.80'	173.3	85.6	112.2
	0.90'	203.0	100.3	130.2
	1.00'	232.7	114.9	148.2
	1.10'	262.4	129.6	166.2
	1.20'	292.1	144.3	184.2

* For Detail "A"
** For Optional Detail "A"



OPTIONAL DETAIL "A"
For concrete overlay
See Note 5

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE TREATMENTS-OVERLAYS

NO SCALE

RSP P75 DATED NOVEMBER 15, 2013 SUPERSEDES RSP P75 DATED JANUARY 20, 2012 THAT SUPPLEMENTS THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP P75

2010 REVISED STANDARD PLAN RSP P75

10-4-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5 37.7/41.47	11	12

REGISTERED CIVIL ENGINEER

July 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 2-23-15

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING

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

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

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

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

TABLE 2

LONGITUDINAL BUFFER SPACE AND FLAGGER STATION SPACING

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

* - Speed is posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Longitudinal buffer space or flagger station spacing

*** - Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

TABLE 3

ADVANCE WARNING SIGN SPACING

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

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

2010 REVISED STANDARD PLAN RSP T9

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM TABLES FOR LANE AND RAMP CLOSURES

NO SCALE

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

REVISED STANDARD PLAN RSP T9

4-30-13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	127	3.0/10.5 37.7/41.47	12	12

REGISTERED CIVIL ENGINEER

April 19, 2013
PLANS APPROVAL DATE

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

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TO ACCOMPANY PLANS DATED 2-23-15

NOTES:

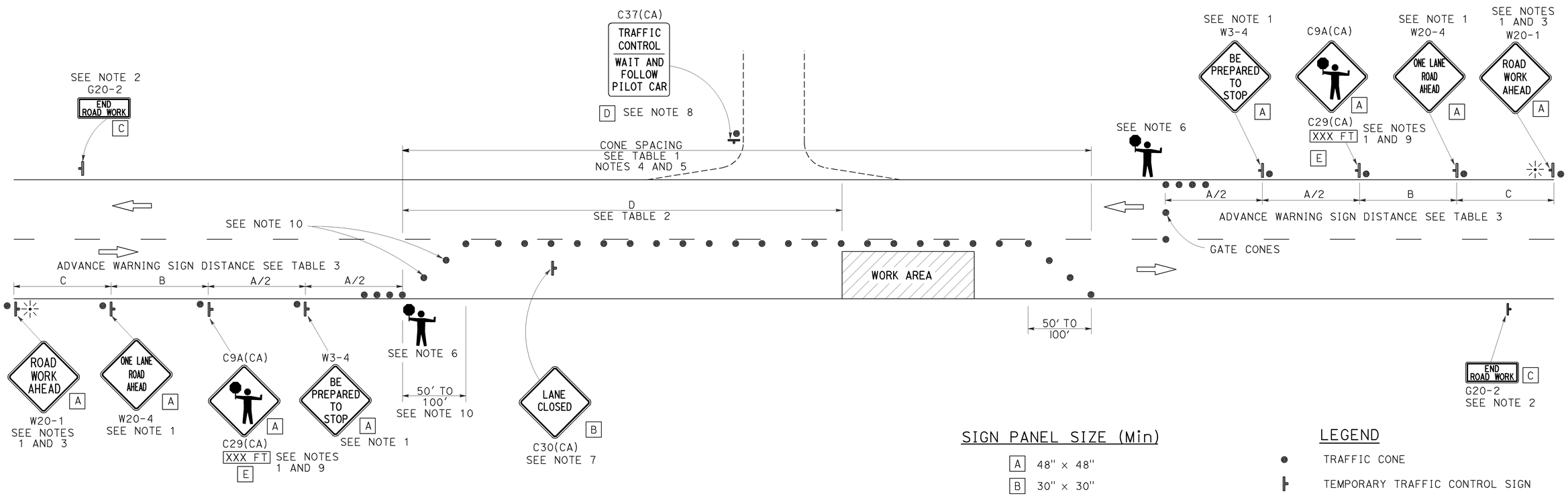
See Revised Standard Plan RSP T9 for tables.

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

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

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

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (Min)

A	48" × 48"
B	30" × 30"
C	36" × 18"
D	36" × 42"
E	20" × 7"

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- PORTABLE FLASHING BEACON
- FLAGGER

NOTES:

1. 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.
2. A G20-2 "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.
3. If the W20-1 sign would follow within 2000' of a stationary W20-1 or G20-1 "ROAD WORK NEXT _____ MILES", use a W20-4 sign for the first advance warning sign.
4. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
5. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
6. 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.
7. 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.
8. When a pilot car is used, place a C37(CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign with black legend on white background at all intersections, driveways and alleys without a flagger within traffic control area. Signs shall be clean and visible at all times. Where traffic can not be effectively self-regulated, at least one flagger shall be used at each intersection within traffic control area.
9. An optional C29(CA) sign may be placed below the C9A(CA) sign.
10. Either traffic cones or barricades shall be placed on the taper. 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

RSP T13 DATED APRIL 19, 2013 SUPERSEDES STANDARD PLAN T13 DATED MAY 20, 2011 - PAGE 241 OF THE STANDARD PLANS BOOK DATED 2010.

REVISED STANDARD PLAN RSP T13

2010 REVISED STANDARD PLAN RSP T13

4-2-13