

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-3	TYPICAL CROSS SECTIONS
4	LAYOUT
5	PROFILE AND SUPERELEVATION DIAGRAMS
6	CONSTRUCTION DETAILS
7	TEMPORARY WATER POLLUTION CONTROL PLAN, DETAILS AND QUANTITIES
8	CONSTRUCTION AREA SIGNS
9	TRAFFIC HANDLING PLAN, DETAILS AND QUANTITIES
10	SUMMARY OF QUANTITIES
11-14	REVISED STANDARD PLANS

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SAN BERNARDINO COUNTY
IN BARSTOW
AT MONTARA ROAD/EAST MAIN STREET
WESTBOUND EXIT RAMP

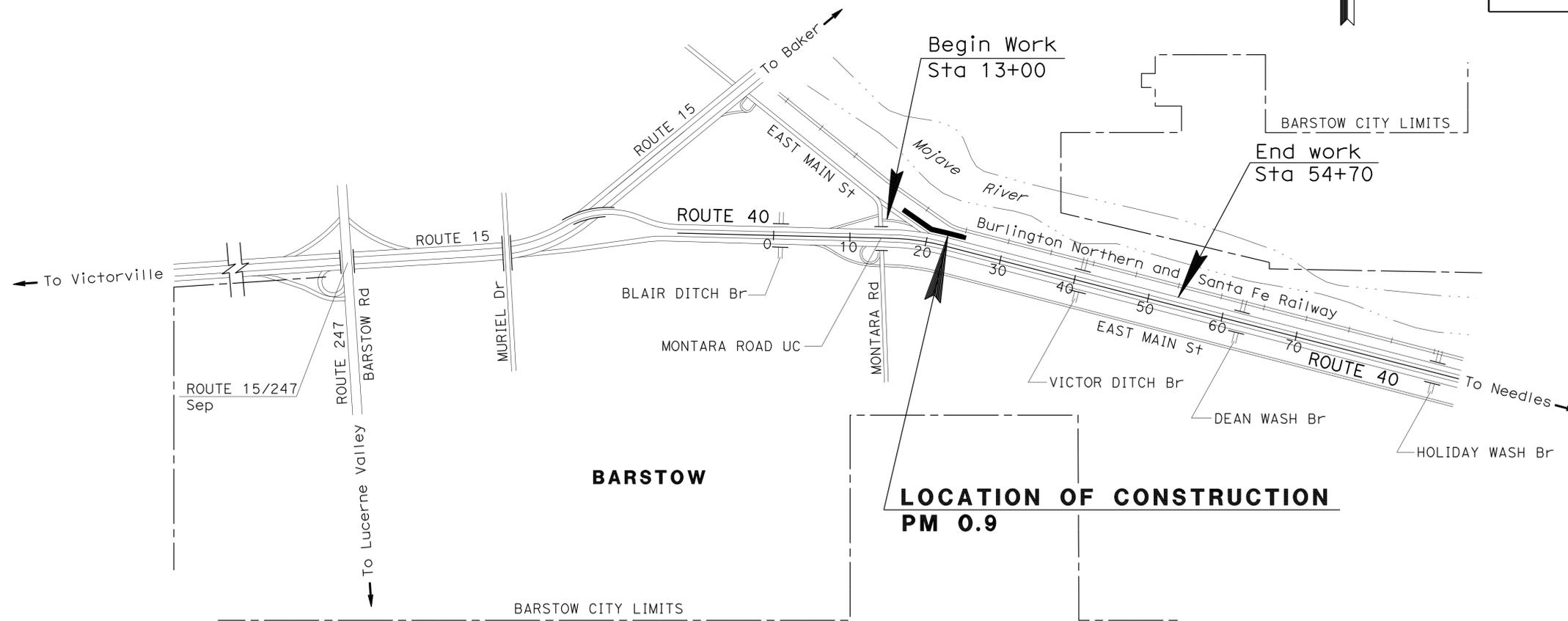
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBD	40	0.9	1	14





LOCATION MAP



LOCATION OF CONSTRUCTION
PM 0.9

NO SCALE

PROJECT MANAGER
MUSTAPHA IAALI
 DESIGN ENGINEER
HANNAH NGUYEN


 10-16-08
 PROJECT ENGINEER DATE
 REGISTERED CIVIL ENGINEER
April 20, 2009
 PLANS APPROVAL DATE
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

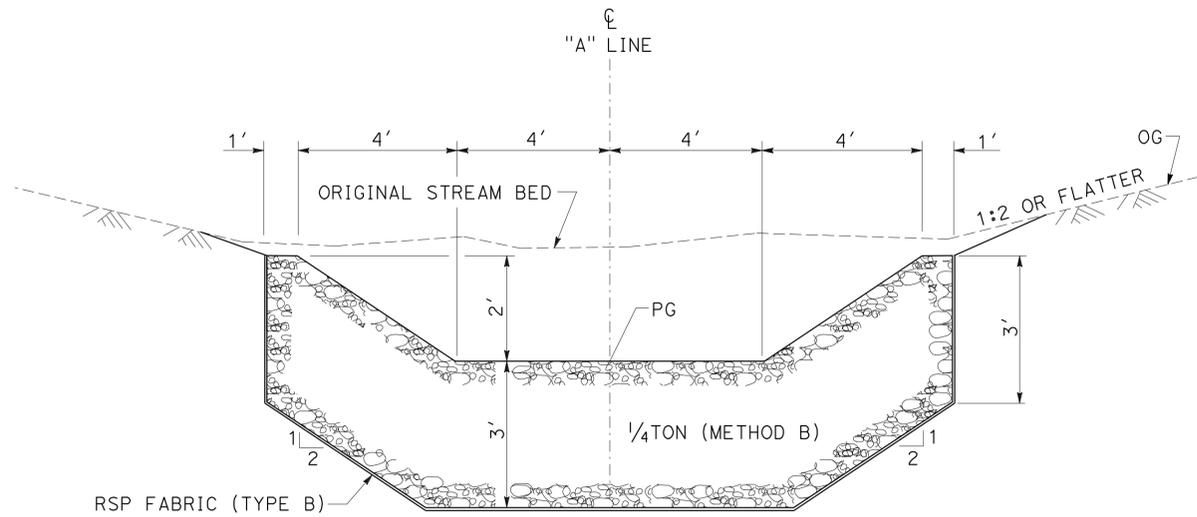
REGISTERED PROFESSIONAL ENGINEER
SERGIO EDUARDO AVILA
 No. 60951
 Exp. 12-31-10
 CIVIL
 STATE OF CALIFORNIA

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

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	0.9	3	14
			REGISTERED CIVIL ENGINEER	DATE	
			10-16-08		
			PLANS APPROVAL DATE		
			4-20-09		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

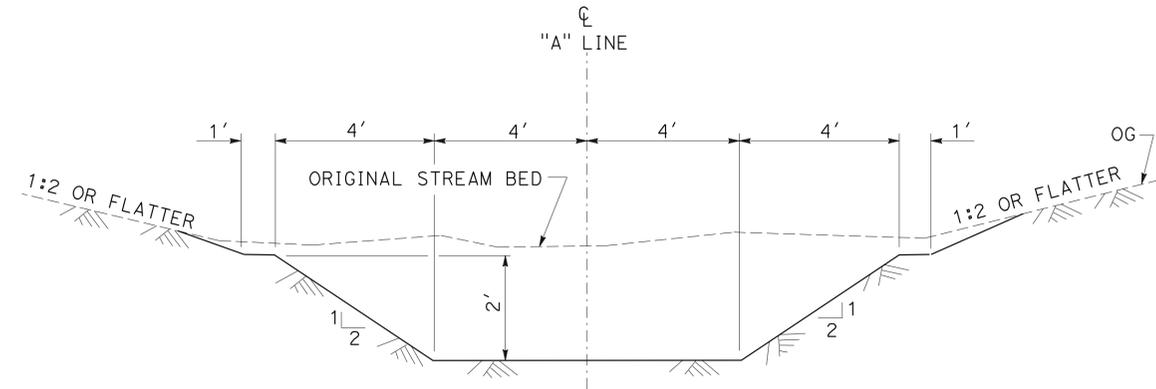
NOTE:

1. ALL DOWELS AT JOINTS BETWEEN EXISTING AND NEW CONCRETE SHALL BE #4-18" LONG, 12" ON CENTERS AND GROUTED. (SEE CONSTRUCTION DETAIL SHEET C-1)



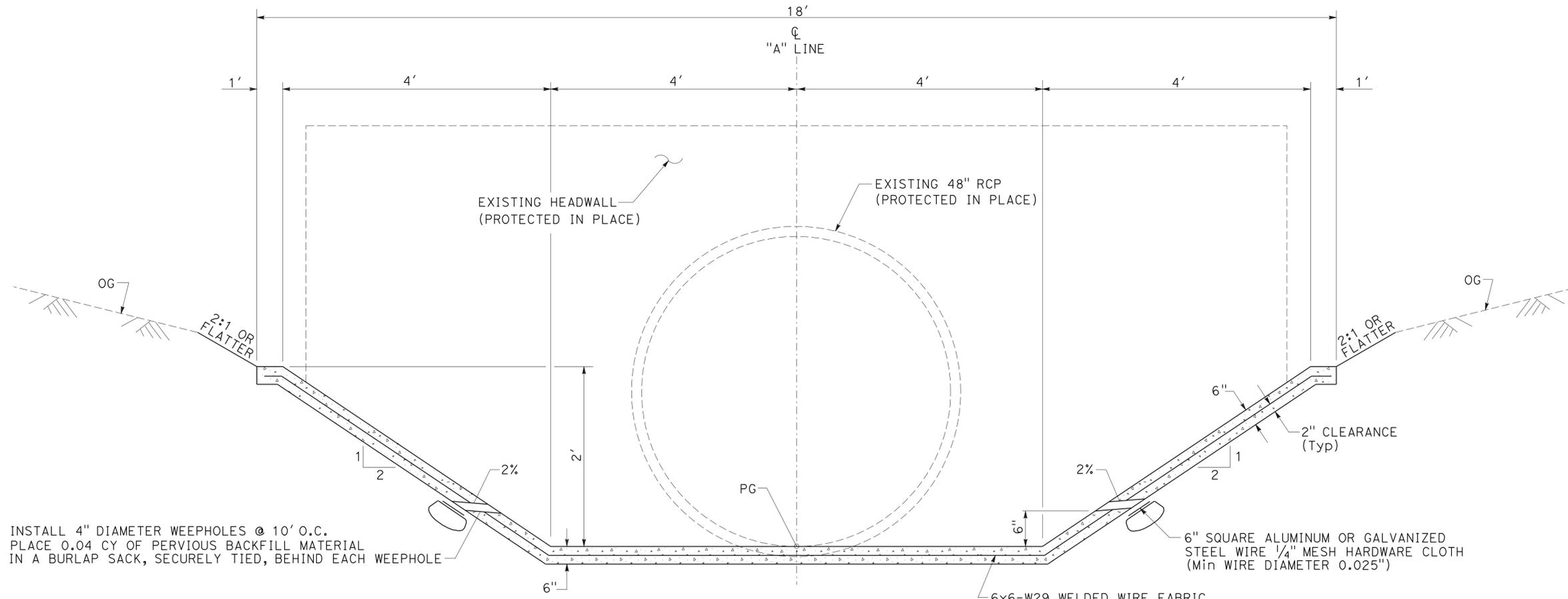
ROCK SLOPE PROTECTION

Sta 8+00 TO Sta 8+20



EARTH CHANNEL

Sta 8+20 TO Sta 9+50



TRAPEZOIDAL CONCRETE LINED CHANNEL

Sta 0+00 TO Sta 8+00

INSTALL 4" DIAMETER WEEPHOLES @ 10' O.C.
PLACE 0.04 CY OF PERVIOUS BACKFILL MATERIAL
IN A BURLAP SACK, SECURELY TIED, BEHIND EACH WEEPHOLE

6" SQUARE ALUMINUM OR GALVANIZED
STEEL WIRE 1/4" MESH HARDWARE CLOTH
(Min WIRE DIAMETER 0.025")

TYPICAL CROSS SECTIONS

NO SCALE

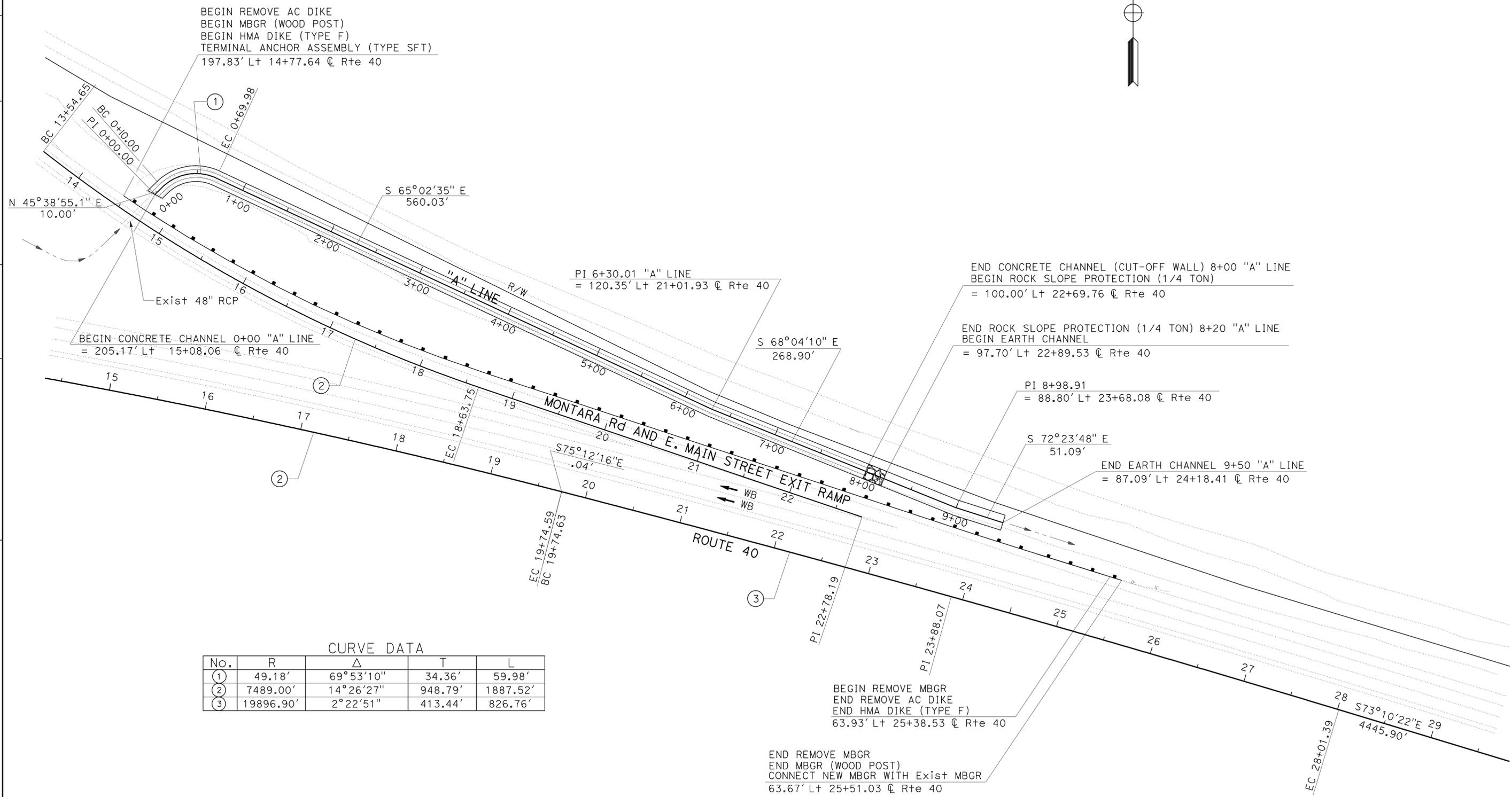
X-2

NOTE:

FOR COMPLETE RIGHT OF WAY SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.

LEGEND:

-  ROCK SLOPE PROTECTION
-  DIRECTION OF TRAVEL
-  FLOW LINE



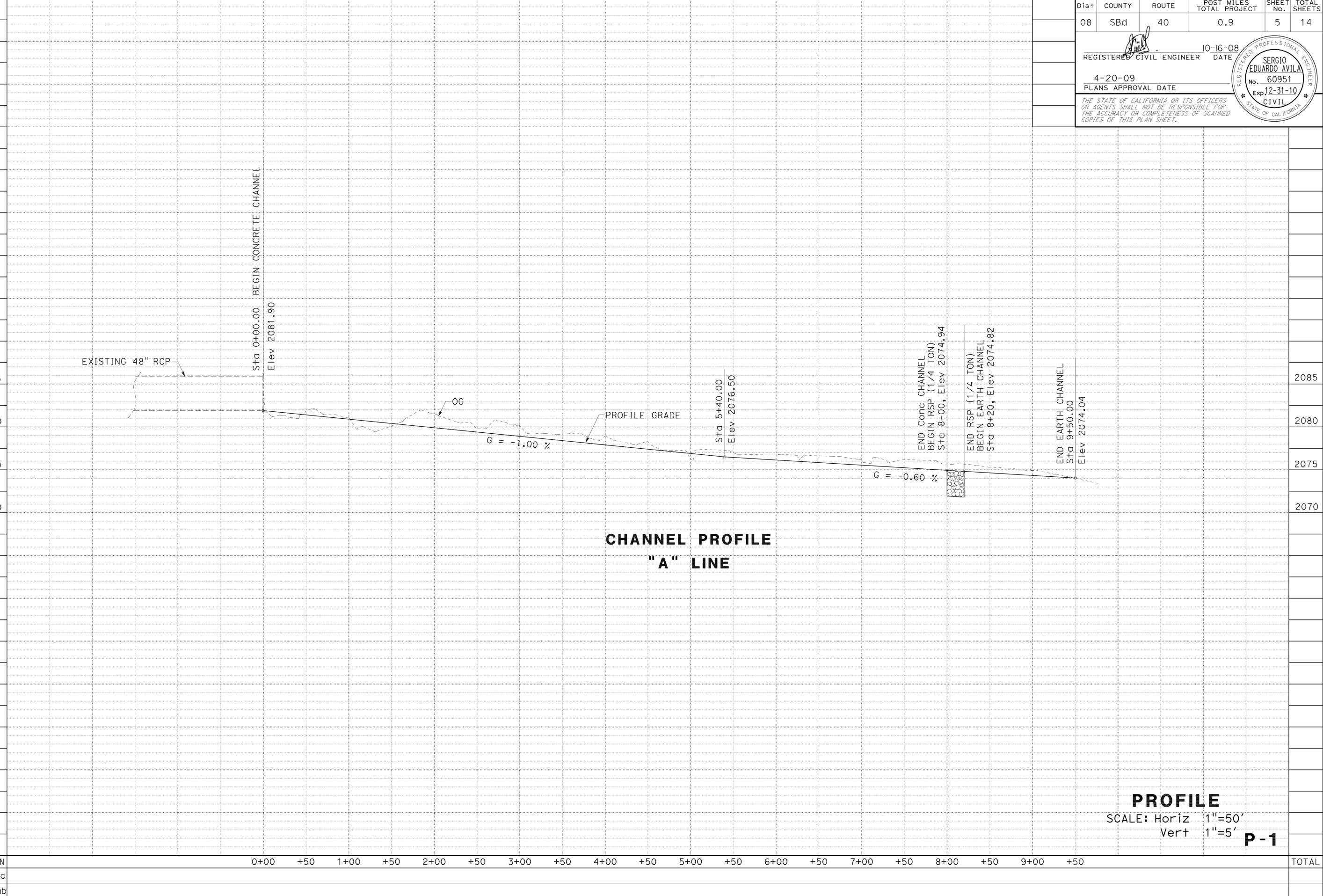
CURVE DATA

No.	R	Δ	T	L
①	49.18'	69°53'10"	34.36'	59.98'
②	7489.00'	14°26'27"	948.79'	1887.52'
③	19896.90'	2°22'51"	413.44'	826.76'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: SERGIO E. AVILA
 CALCULATED/DESIGNED BY: SERGIO E. AVILA
 CHECKED BY:
 HANNAH NGUYEN
 REVISED BY: SERGIO E. AVILA
 DATE REVISED:

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans DESIGN DIVISION

FUNCTIONAL SUPERVISOR: SERGIO E. AVILA
 CHECKED BY: SERGIO E. AVILA
 CALCULATED-DESIGNED BY: 2085
 DESIGNED BY: 2080
 HANNAH NGUYEN
 REVISED BY: 2085
 DATE REVISED: 2080



**CHANNEL PROFILE
 "A" LINE**

PROFILE
 SCALE: Horiz 1"=50'
 Vert 1"=5' **P-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	0.9	5	14
REGISTERED CIVIL ENGINEER			DATE	10-16-08	
4-20-09			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.					

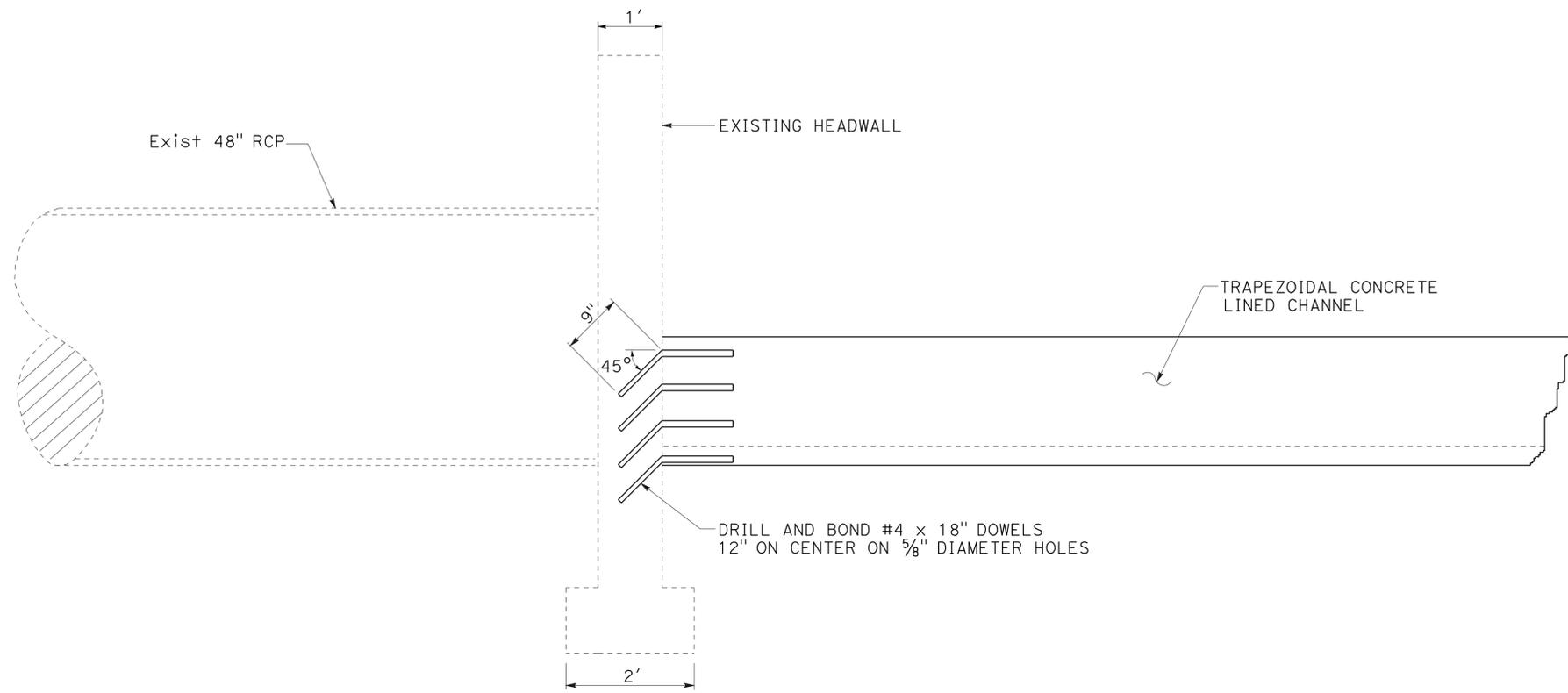


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	0.9	6	14

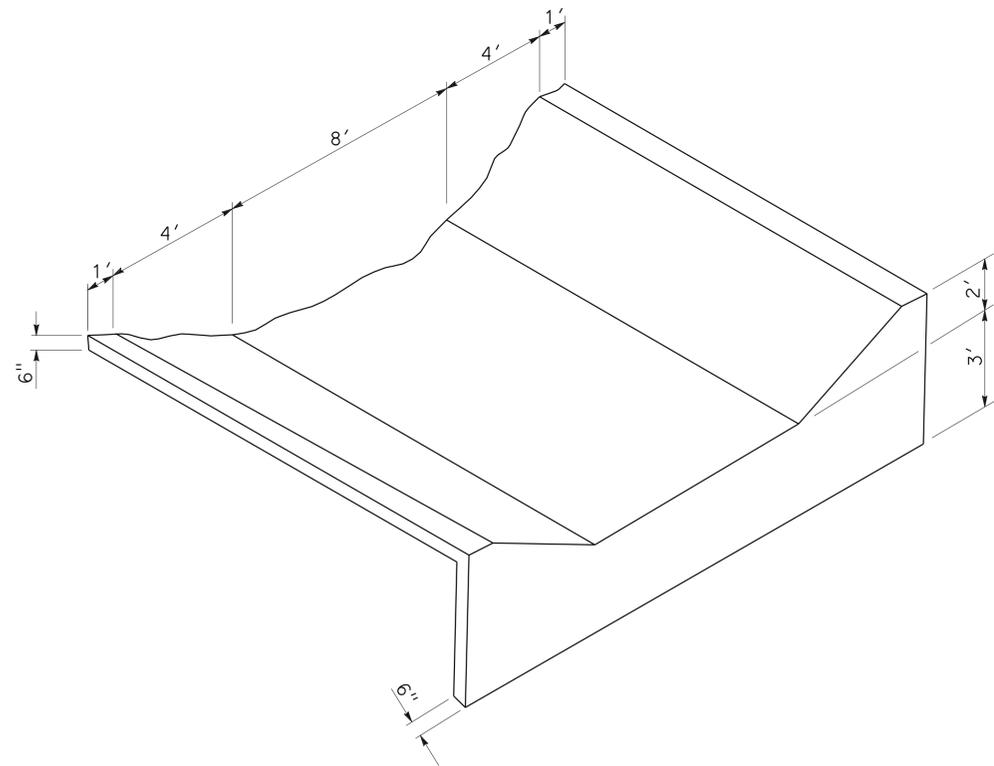
REGISTERED CIVIL ENGINEER	DATE	10-16-08
PLANS APPROVAL DATE		4-20-09

REGISTERED PROFESSIONAL ENGINEER	SERGIO EDUARDO AVILA
No.	60951
Exp.	12-31-10
CIVIL	

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



CONCRETE LINED CHANNEL CONNECTION TO HEADWALL



CUT-OFF WALL

CONSTRUCTION DETAILS
NO SCALE

C-1

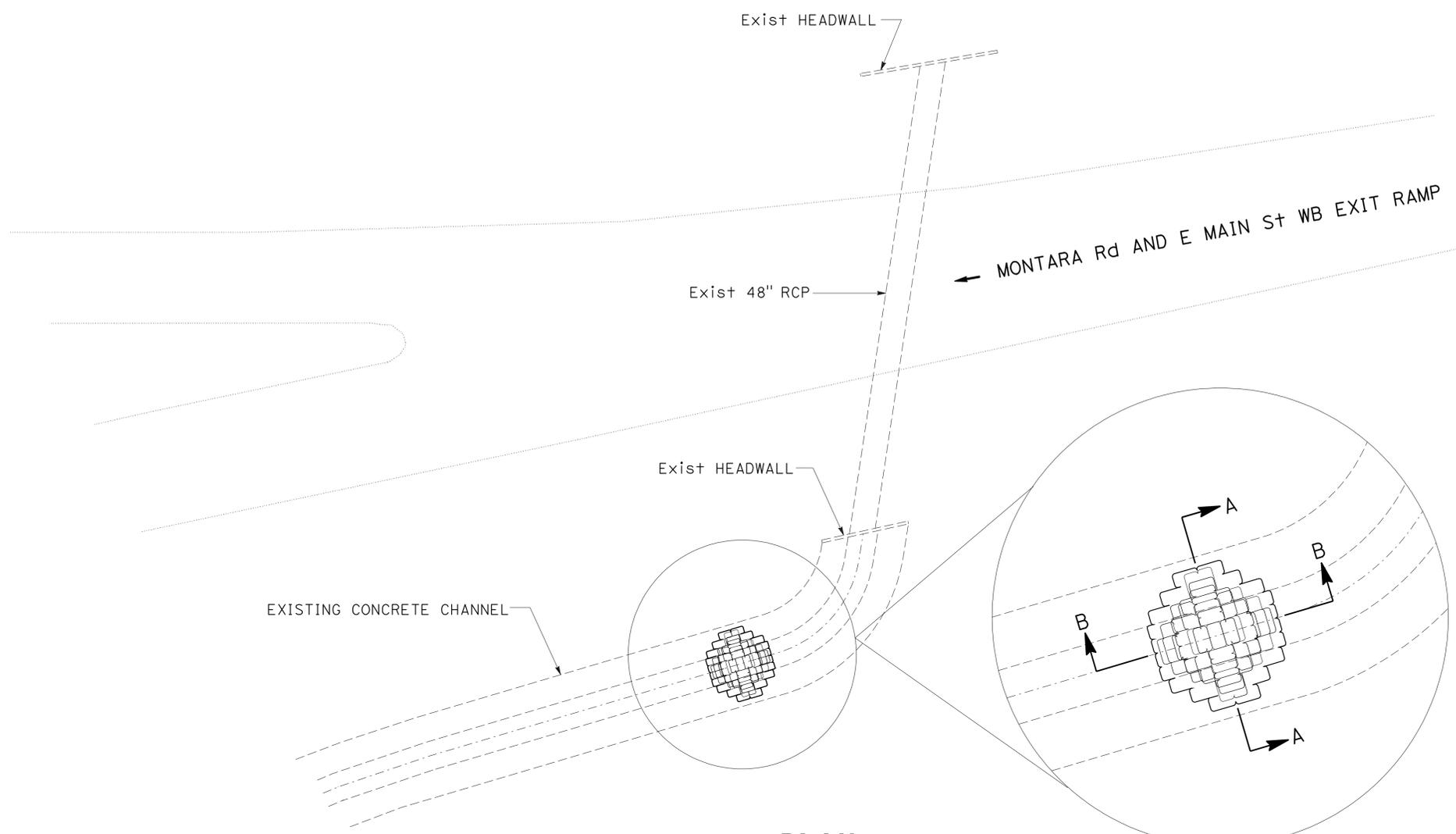
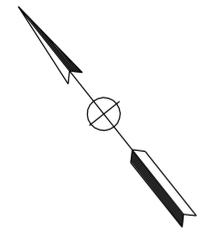
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN DIVISION
Caltrans	
FUNCTIONAL SUPERVISOR	SERGIO E. AVILA
CALCULATED-DESIGNED BY	CHECKED BY
HANNAH NGUYEN	SERGIO E. AVILA
REVISED BY	DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	0.9	7	14

REGISTERED CIVIL ENGINEER *Ragaei Ayoub* DATE 10-16-08
 4-20-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 RAGAEI AYOUB
 No. 53909
 Exp. 12-31-09
 CIVIL
 STATE OF CALIFORNIA

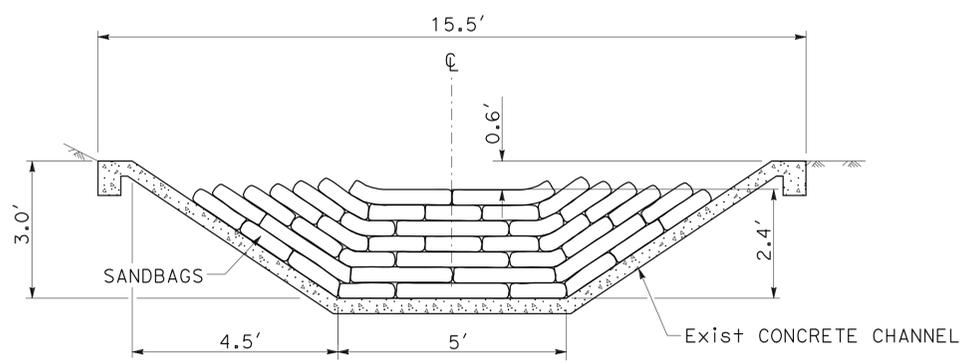
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



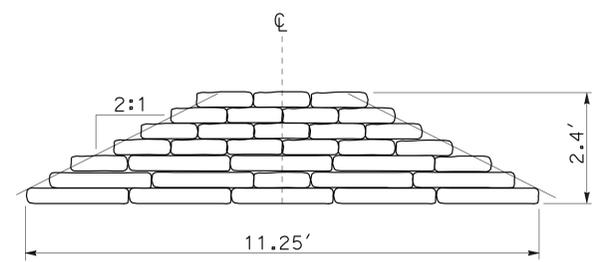
PLAN
LOCATION LAYOUT

TEMPORARY CONSTRUCTION BMPs

TEMPORARY CONSTRUCTION SITE BMPs	UNITS	QUANTITIES	BEGIN STATION	END STATION
TEMPORARY CHECK DAM	LF	13	24+00 ROUTE 40	24+50 ROUTE 40
TEMPORARY SAND BAG CHECK DAM	CF	150	13+50 ROUTE 40	15+00 ROUTE 40



SECTION A-A



SECTION B-B

TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY SAND BAG CHECK DAM)

NO SCALE

WPCD-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 DESIGN DIVISION
 FUNCTIONAL SUPERVISOR: PAUL LAMBERT
 CALCULATED/DESIGNED BY: RAGAEI AYOUB
 CHECKED BY: TOM MILES
 REVISED BY: DATE REVISD:

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	0.9	9	14

REGISTERED CIVIL ENGINEER DATE 10-16-08
 4-20-09
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 CHRIS HARDIMON
 No. 66092
 Exp. 6-30-10
 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.

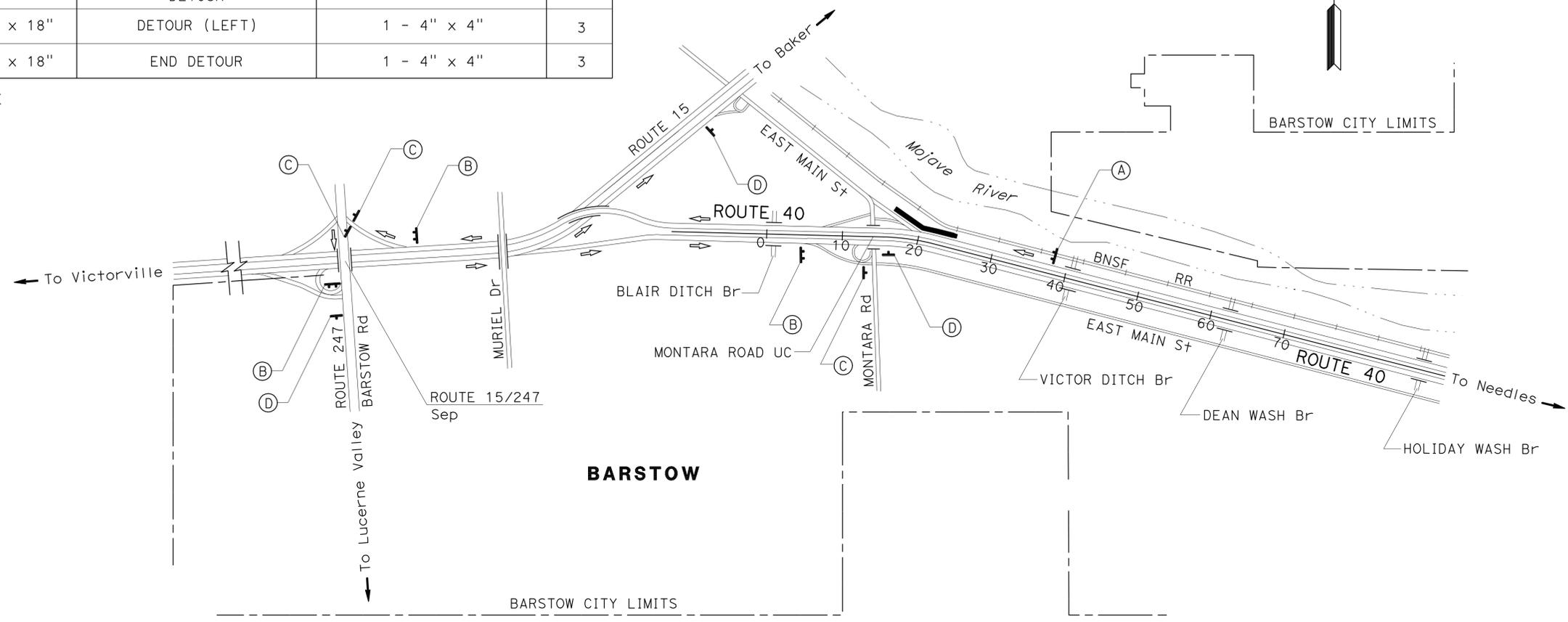
CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
(A)	C-SPECIAL	108" x 54"	EAST MAIN STREET RAMP CLOSED USE DETOUR	2 - 6" x 8"	1
(B)	C-SPECIAL	108" x 42"	EAST MAIN STREET (ARROW) DETOUR	2 - 6" x 8"	3
(C)*	M4-10(LT)	48" x 18"	DETOUR (LEFT)	1 - 4" x 4"	3
(D)*	M4-8a	24" x 18"	END DETOUR	1 - 4" x 4"	3

* SIGNS MAY BE PORTABLE

LEGEND:

- CONSTRUCTION AREA SIGN (ONE POST)
- CONSTRUCTION AREA SIGN (TWO POST)
- (X) CONSTRUCTION AREA SIGN LETTER
- DIRECTION OF DETOUR



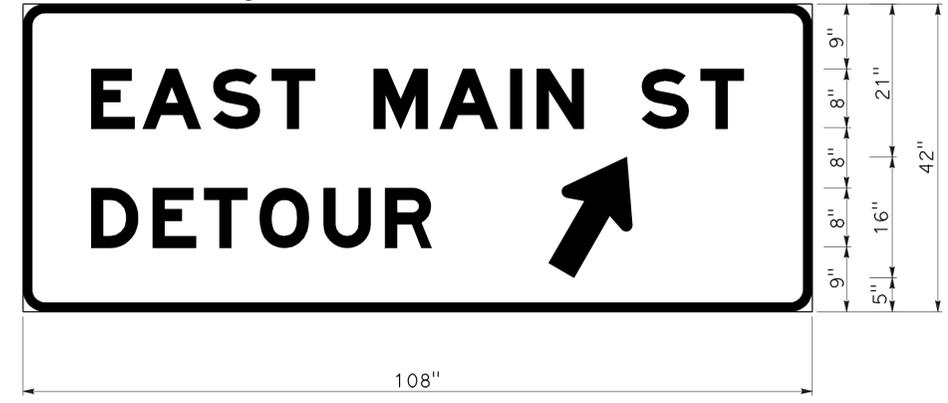
DETOUR DURING CLOSURE OF EAST MAIN STREET EXIT RAMP ON WESTBOUND ROUTE 40

DETAILS SIGN (A)



Black on Orange;
 [EAST MAIN ST] E Mod; [RAMP CLOSED] E Mod;
 [USE DETOUR] E Mod

DETAILS SIGN (B)



Black on Orange;
 [EAST MAIN ST] E Mod; [DETOUR] E Mod;
 Standard Arrow Custom 60

TRAFFIC HANDLING PLAN

NO SCALE TH-1

THIS PLAN ACCURATE FOR DETOUR CONSTRUCTION WORK ONLY



USERNAME => frrmikes1
 DGN FILE => 81a250mg001.dgn

CU 08381

EA 1A2501

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION DESIGN DIVISION
 Et Caltrans®
 FUNCTIONAL SUPERVISOR LARRY SARTORI
 CALCULATED/DESIGNED BY CHECKED BY
 CHRIS HARDIMON LARRY SARTORI
 REVISED BY DATE REVISED
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

LAST REVISION DATE PLOTTED => 14-JUL-2009
 10-16-08 TIME PLOTTED => 11:24

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	40	0.9	10	14

REGISTERED CIVIL ENGINEER DATE: 10-16-08
 4-20-09
 PLANS APPROVAL DATE

SERGIO EDUARDO AVILA
 No. 60951
 Exp. 12-31-10
 CIVIL

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

DRAINAGE QUANTITIES

STATION TO STATION "A" LINE	LOCATION	CONCRETE (CHANNEL LINING)	DITCH EXCAVATION	ROCK SLOPE PROTECTION (1/4 TON, METHOD B)	ROCK SLOPE PROTECTION FABRIC
		CY	CY	CY	SQFT
0+00 - 8+00	L+	282			
0+00 - 9+50	L+		705		
8+00 - 8+20	L+			42	504
TOTAL		282	705	42	504

HOT MIX ASPHALT DIKE

STATION TO STATION (Q ROUTE 40)	LOCATION	REMOVE AC DIKE	PLACE HMA DIKE (TYPE F)	MINOR HOT MIX ASPHALT
		LF	LF	TON
14+77.64 - 25+38.53	L+	1061	1061	14
TOTAL		1061	1061	14

METAL BEAM GUARD RAILING

DIRECTION	STATION TO STATION (Q ROUTE 40)	WORK AREA DESCRIPTION	METAL BEAM GUARD RAILING (WOOD POST)	REMOVE METAL BEAM GUARD RAILING	TERMINAL ANCHOR ASSEMBLY (TYPE SFT)	REMOVE CABLE ANCHOR ASSEMBLY (CAA)	(N)
			LF	LF	EA	EA	
WB	14+77.64 - 25+51.03	MONTARA Rd EXIT RAMP OUTSIDE SHOULDER	1073		1		
	25+38.53 - 25+51.03	MONTARA Rd EXIT RAMP OUTSIDE SHOULDER		12.5			1
TOTAL			1073	12.5	1		

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

SUMMARY OF QUANTITIES

Q-1

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	40	0.9	11	14

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

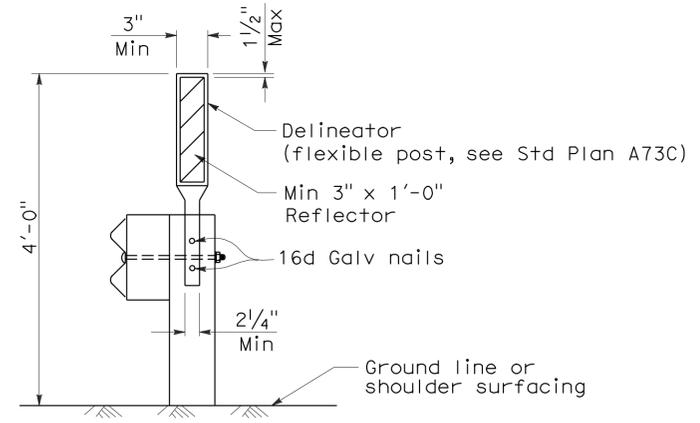
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

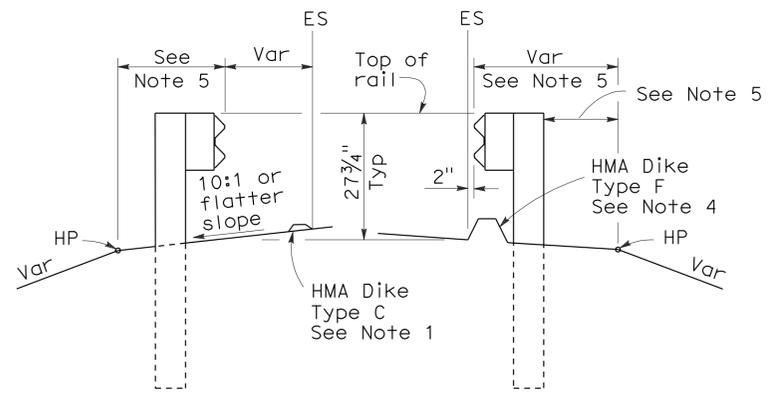
To accompany plans dated 4-20-09

NOTES:

1. When necessary to place dike in front of face of guard railing, only Type C dike may be used. For dike details, see Standard Plan A87B.
2. For standard railing post embedment, see Standard Plans A77C3.
3. Guard railing delineation to be used where shown on the Project Plans.
4. When dike or curb is placed under guard railing, the maximum height of the dike or curb shall be 4". Mountable dike should not be used. For dike and curb details, see Revised Standard Plans RSP A87A and Standard Plan A87B.
5. For details of typical distance between the face of rail and hinge point, see Standard Plan A77C3.



GUARD RAILING DELINEATION
See Note 3



DIKE POSITIONING
See Note 1

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**METAL BEAM GUARD RAILING
TYPICAL RAILING DELINEATION
AND DIKE POSITIONING DETAILS**

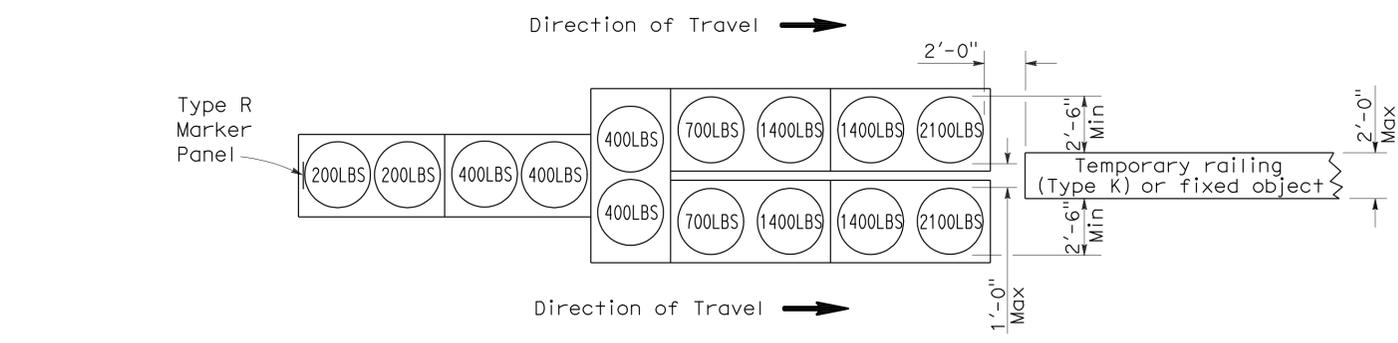
NO SCALE

RSP A77C4 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN A77C4
DATED MAY 1, 2006 - PAGE 47 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A77C4

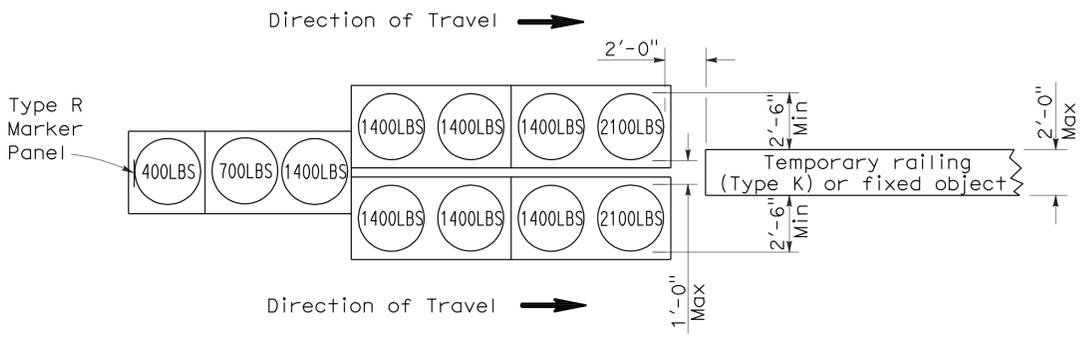
2006 REVISED STANDARD PLAN RSP A77C4

To accompany plans dated 4-20-09



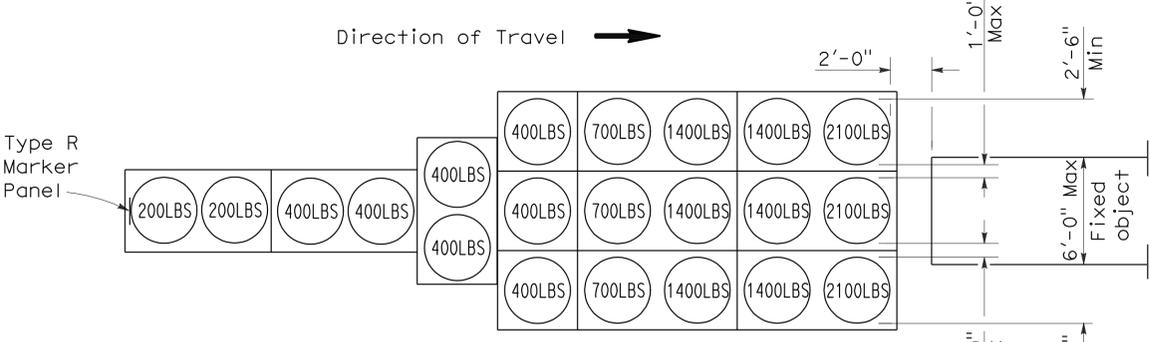
ARRAY 'TU14'

Approach speed 45 mph or more



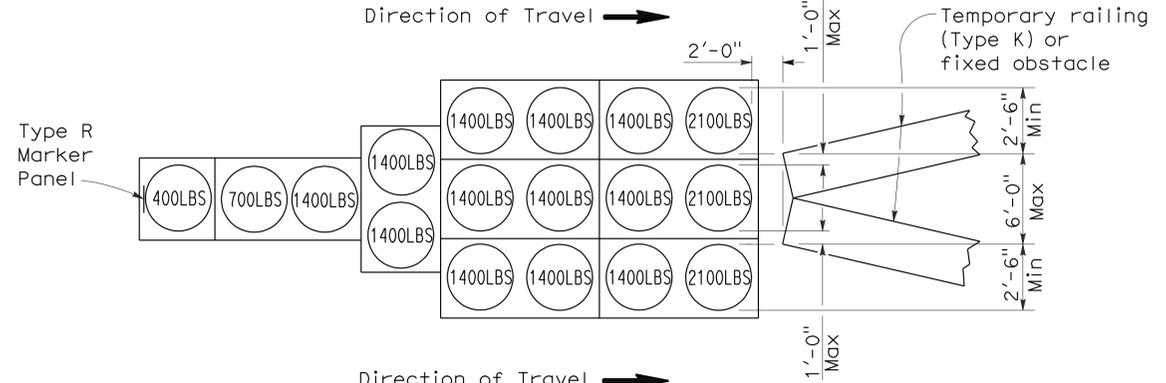
ARRAY 'TU11'

Approach speed less than 45 mph



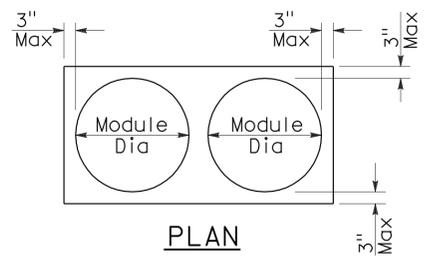
ARRAY 'TU21'

Approach speed 45 mph or more

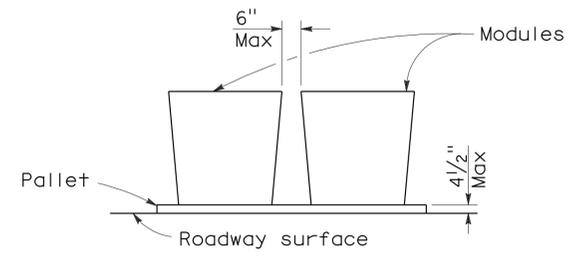


ARRAY 'TU17'

Approach speed less than 45 mph



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	40	0.9	13	14

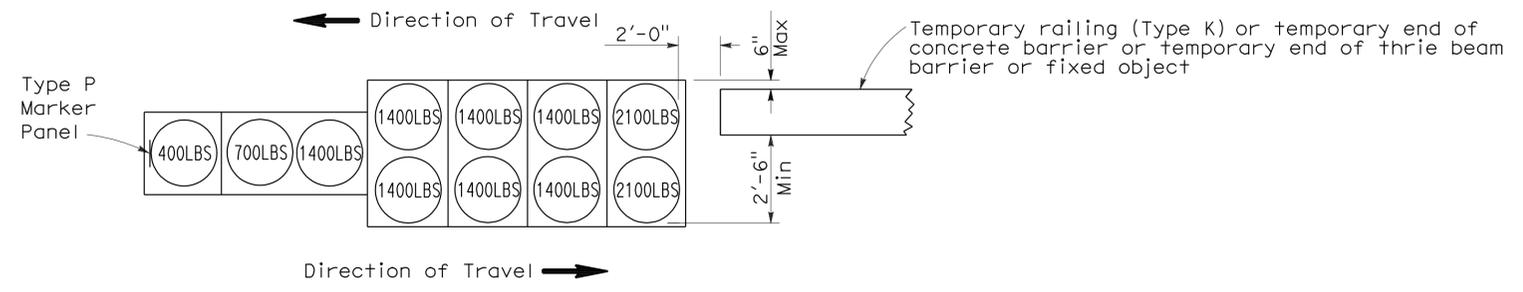
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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

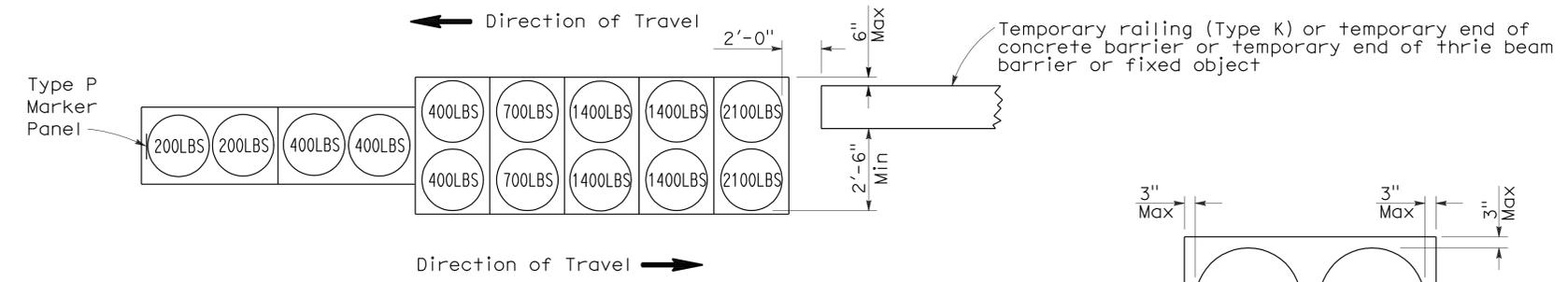
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 4-20-09



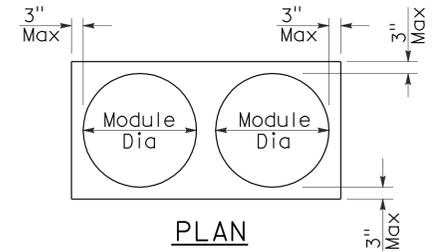
ARRAY 'TB11'

Approach speed less than 45 mph

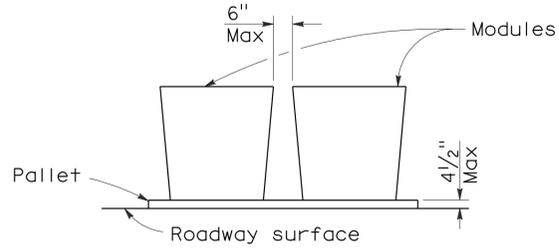


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

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

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

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

NO SCALE

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

REVISED STANDARD PLAN RSP T1B

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	SBd	40	0.9	14	14

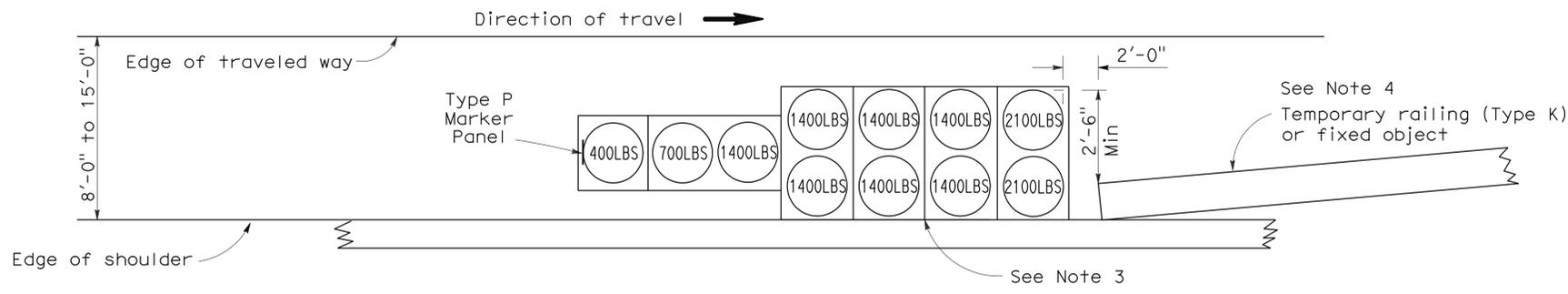
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

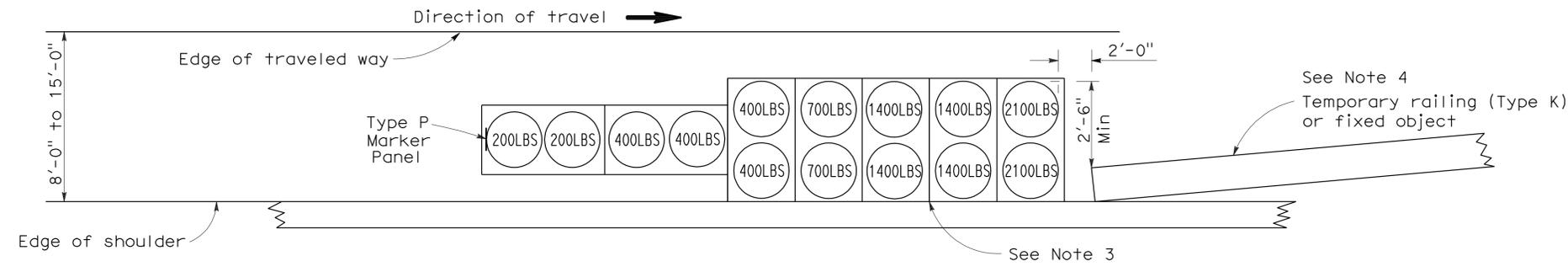
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

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

To accompany plans dated 4-20-09



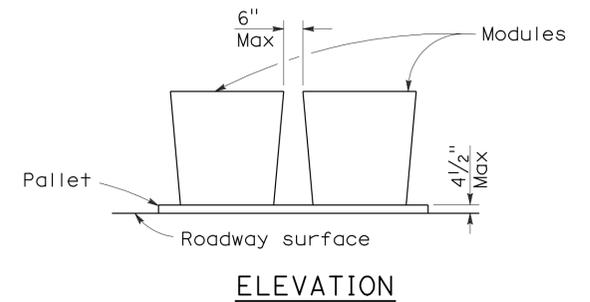
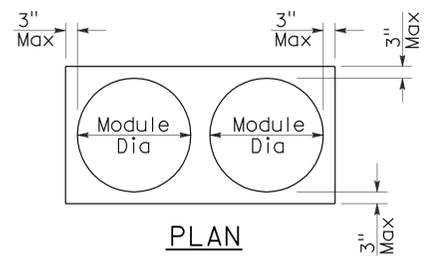
ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



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

NOTES:

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



CRASH CUSHION PALLET DETAIL
See Note 11

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**
NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

213