Request Programming in 2012 SHOPP

PROJECT LOCATION: On Route 13 at PM 4.32/9.70, on Route 24 at PM 1.93/5.78, on Route 80 at PM 2.06/7.35, on Route 84 PM 0.73/5.98, on Route 92 at PM 5.11/14.47, on Route 238 at PM 14.47, on Route 880 at PM 0.18/34.1, and on Route 980 at PM 0.35/1.98, all in Alameda County

APPROVAL RECOMMENDED: _____
ROLAND AU-YEUNG, DISTRICT PROGRAM MANAGER

APPROVAL RECOMMENDED: _____
PATRICK K. PANG, PROJECT MANAGER

APPROVED: _____ 9-29-11
BIJAN SARTIPI, DISTRICT DIRECTOR *DATE*

This PID has been prepared under the direction of the following Registered Civil Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

_____ 9/14/11
ALBERT Y. TAN, REGISTERED CIVIL ENGINEER *DATE*

REGISTERED PROFESSIONAL ENGINEER
ALBERTO Y. TAN
No. 53686
Exp. 06-30-13
CIVIL
STATE OF CALIFORNIA

1. INITIATING OFFICE/INITIATOR

The District 4 Program Manager for the Collision Severity Reduction Program has established that a project is needed that meets the qualification as a Collision Severity Reduction Project (201.015) for the State Highway Operation and Protection Program (SHOPP).

This small capital value project (SCVP) project initiation document (PID) provides conceptual approval of the proposal and a recommendation to program the project into the 2012 SHOPP. A project report will serve as final approval of the proposal.

2. PURPOSE AND NEED

Purpose:

The purpose of the project is to improve the safety of motorists by reducing the potential and severity of run-off-road type accidents by upgrading existing nonstandard metal beam guard rail (MBGR) to meet the current Caltrans standard.

Need:

Almost all existing MBGR connections to a structure such as bridge rail, concrete barrier, sound wall, retaining wall, or bridge abutment do not meet current State Standards and need to be upgraded.

3. DEFICIENCY SUMMARY

District 4 has identified locations in Contra Costa County where existing MBGRs do not meet the current Caltrans standard. The project proposed in this SCVP PID covers 170 locations where transition railing and some of the end terminals will be upgraded. These locations are listed in Attachment B (Summary of Quantities) including the work item description per location.

4. PROJECT PROPOSAL

This project will install Type W Beam (WB) or Single Thrie Beam (STB) transition railing at various locations on State Routes 13, 24, 84, 238, and 92, and Interstate 80, 880, and 980, all in Alameda County. The project will also install the current standard terminal system end treatments as needed. See 2010 Standard Plans for details.

The capital cost estimate provided in this SCVP PID is included in Attachment C (Preliminary Project Cost Estimate) and is intended for programming purposes only.

The current estimated total capital outlay cost of $4,240,400 includes the right of way capital cost. The mid-construction year capital cost estimate at 4% per year escalation is $4,948,000. The proposed funding fiscal year for this project is 2014/15.

Right of Way:
The proposed project will upgrade MBGRs to meet Caltrans most recent standard. All construction work including traffic control operations will be performed within the State right of way.

Disposal Site:
As the amount of material to be disposed of is expected to be minimal the need for disposal site is not anticipated.

Utilities:
Utilities verification will be performed in the next project phase.

Environmental:
Environmental impacts associated with this upgrade MBGR project are expected to be minimal and a Categorical Exemption is the anticipated environmental clearance for this project. The Office of Advance Planning will consult with and provide information to the Division of Environmental Planning and Engineering to obtain concurrence. The appropriate environmental clearance will be determined during the next project phase.

5. PROGRAMMING

Project capital and support cost estimates, including key assumption used to prepare the estimates, are shown below:

PROJECT CAPITAL COST and ESCALATION COST/FY		
Fiscal Year	**Right of Way Capital**	**Construction Capital**
FY 11/12	$11 K	$4,240 K
FY 12/13	$11 K	$4,399 K
FY 13/14	$11 K	$ 4,575 K
FY 14/15	$11 K	$ 4,757 K
FY 15/16 (mid const yr cost)	$11 K	$ 4,948 K

Key assumptions for the preliminary project cost estimate as percentage of total construction capital:

Contingency	30%	Environmental	1%
TMP	6.6%	R/W	1/4%
SWDR	2%		

	PROJECT SUPPORT COMPONENTS								
	PA&ED 0 Phase		Design 1 Phase		Right of Way 2 Phase		Construction 3 Phase		Total
	Dist	DES	Dist	DES	Dist	DES	Dist	DES	
Estimated PY's	1.88	0	2.83	0.71	0.24	0	3.02	0.75	9.42

Key assumption(s) for the preliminary project cost estimate as percentage of total construction capital:

- Support cost 40%

6. SCHEDULE

HQ Milestones	Delivery Date (Month, Year)
PA & ED	July 2013
Project PS&E	July 2014
Right of Way Certification	July 2014
Ready to List	October 2014
Approve Contract (Beg Const)	February 2015
Contract Acceptance (End Const)	February 2016
End Project	August 2016

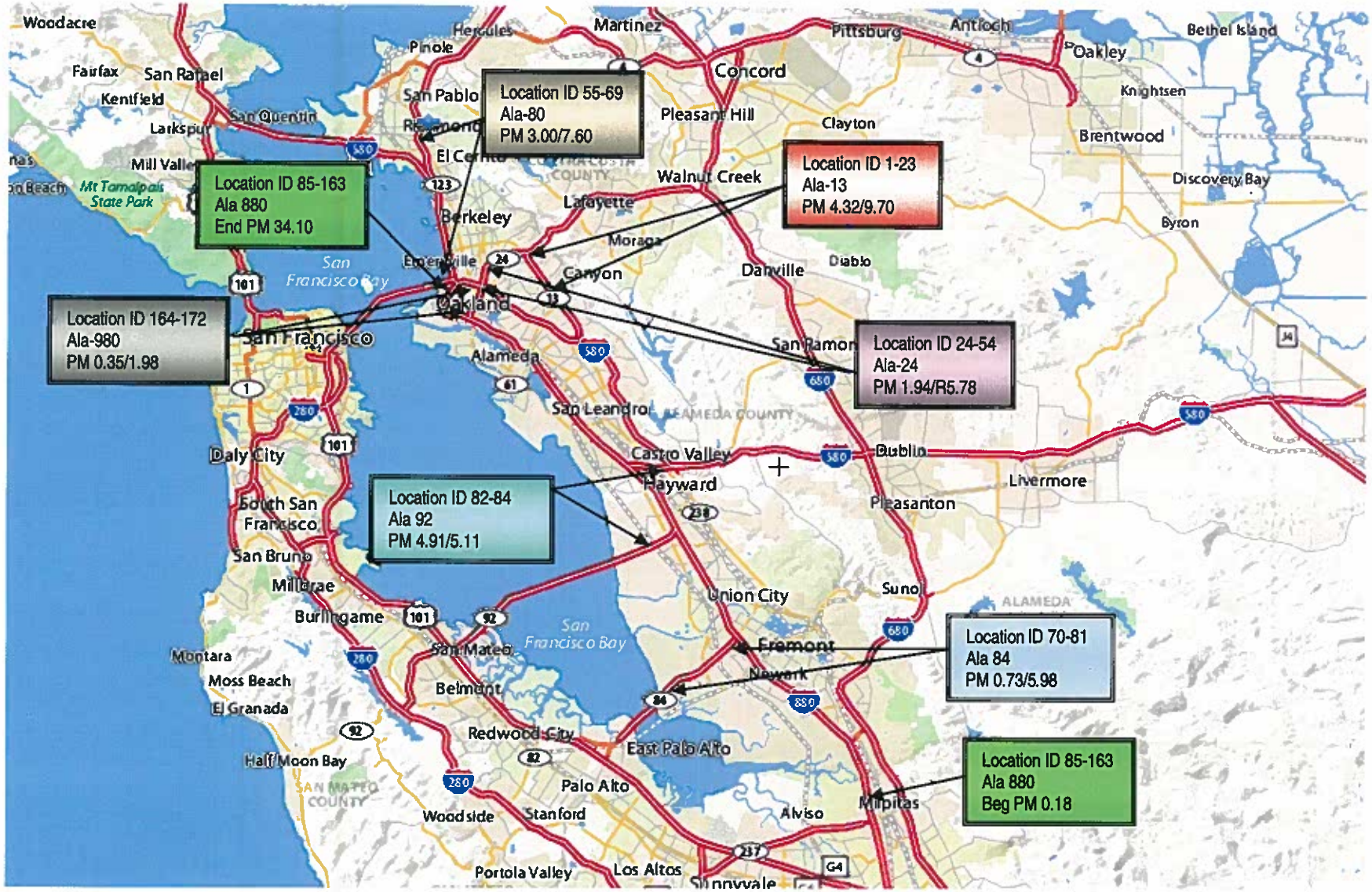
7. CONTACTS

Roland Au-Yeung	Program Manager	(510) 286-4560
Patrick K. Pang	Project Manager	(510) 286-5566
Robert Blanco	Branch Chief	(510) 286-5676
Albert Tan	Project Engineer	(510) 622-1665

8. ATTACHMENTS

A. Location Map
B. Summary of Quantities
C. Preliminary Project Cost Estimate
D. 2010 Standard Plans A77J4 and A78G

ATTACHMENT A
Location Map



ATTACHMENT B
SUMMARY OF QUANTITIES

Location						Description	Connecting Structure				Transition Railing Type (EA)		Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	MBGR (LF)		Terminal Sys Treatment (EA)
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
1	13	4.32	SB	m	R	MOUNTAIN BLVD UC RT				Y	1		9	17	37.5	4	1
2	13	4.47	SB	r	R	OFF TO MOUNTAIN BLVD		Y			1		4	17	37.5	9	1
3	13	4.48	NB	r	R	ON FROM MOUNTAIN BVD		Y			1		4	17	37.5	9	1
4	13	5.01	NB	m	R/L	CARSON ST UC 33-0105				Y	1	1	18	33	75	8	1
5	13	5.39	SB	m	R	REDWOOD OC 33-0147					1		9	17	37.5	4	1
6	13	5.48	NB	r	R	ON FROM REDWOOD RD		Y			1		4	17	37.5	9	1
7	13	6.47	NB/SB	r	R	LINCOLN AVE OC 33-0247		Y			2		8	33	75	18	2
8	13	7.39	NB	r	R	ON FROM PARK BLVD		Y			1		4	17	37.5	9	1
9	13	7.40	SB	m	R	PARK BLVD OC 33-0159		Y			1		4	17	37.5	9	1
10	13	7.76	SB	m	R	LA SALLE AVE OC (BR 33-0160)		Y			1		4	17	37.5	9	1
11	13	7.91	SB	m	R	BRUNS DR PED OC 33-0244		Y			1		4	17	37.5	9	1
12	13	8.18	NB	m	R	100' SOUTH OF MORAGA AVE UC				Y	1		9	17	37.5	4	1
13	13	8.26	NB	r	R	ON FROM MORAGA AVE				Y	1		9	17	37.5	4	1
14	13	8.27	NB	m	L	MORAGA AVE UC (BR 33-0227R)				Y	1		9	17	37.5	4	1
15	13	8.33	NB	m	L	END OF MORAGA AVE UC				Y	1		9	100	0	50	1
16	13	9.07	NB/SB	m	R	BROADWAY TERRACE UC				Y	2		18	33	75	8	2
17	13	R9.18	NB	r	R	ON FR BROADWAY TERR					1		9	17	37.5	4	1
18	13	R9.20	SB	m	R	OFF TO BROADWAY TERR			Y		1		4	17	37.5	9	0
19	13	R9.40	NB	m	R	700' SOUTH OF BROADWAY OC (BR 33-0376)		Y			1		4	17	37.5	9	0
20	13	R9.52	NB	r	L	OFF TO EB RTE 24				Y	1		9	17	37.5	4	1
21	13	R9.58	NB	m	R	BENEATH BROADWAY OC		Y			1		4	17	37.5	9	1
22	13	R9.59	SB	m	L	JUST SOUTH OF BROADWAY OC			Y		1		4	17	37.5	9	
23	13	R9.70	SB	m	R/L	N of JCT ST 24 SEP 33-0378				Y	1	1	18	33	75	8	0

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ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
						Rte 13 Subtotal					25	2	178	533.3	975	219	21
24	24	R1.94	EB	m	R	440' BEFORE MACARTHUR UC	Y				1		9	17	37.5	4	1
25	24	R2.02	EB	m	R	MACARTHUR UC 33-0358R				Y	1		4	17	37.5	4	0
26	24	R2.09	EB	r	R	OFF TO GROVE-52ND					1		9	17	37.5	4	0
27	24	R2.10	WB	r	L	ON FR GROVE/52ND				Y	1		9	17	37.5	4	0
28	24	R2.17	EB	m	R	40TH ST UC 33-359 RT				Y	1		9	17	37.5	4	1
29	24	R2.20	WB	m	R	40TH ST UC 33-359 LT				Y	1		9	17	37.5	4	0
30	24	R2.30	WB	r	R/L	SEG WB OFF TO RTE 580				Y	2		18	33	75	8	1
31	24	R2.33	WB	m	R	42ND ST UC 33-363 LT				Y	1		9	17	37.5	4	2
32	24	R2.33	EB	m	R	42ND ST UC 33-363 RT				Y	1		9	17	37.5	4	2
33	24	R2.47	WB	m	R	45TH ST UC 33-364 LT				Y	1		9	17	37.5	4	1
34	24	R2.47	EB	m	R	45TH ST UC 33-364 RT				Y	1		9	17	37.5	4	2
35	24	R2.50	WB	r	R/L	SEG WB ON FR 52ND ST				Y	2		18	33	75	8	1
36	24	R2.59	EB	m	R	GROVE ST UC 33-365 RT				Y	1		9	17	37.5	4	0
37	24	R2.59	WB	m	R	GROVE ST UC 33-365 LT				Y	1		9	17	37.5	4	0
38	24	R2.76	WB	m	R	52ND ST UC 33-416 LT				Y	1		9	17	37.5	4	0
39	24	R2.77	EB	m	R	52ND ST UC 33-416 RT				Y	1		9	17	37.5	4	1
40	24	R2.90	EB	m	R	SHATTUCK AVE UC 33411RT				Y	1		9	17	37.5	4	0
41	24	R3.27	WB	r	R	WB ON FR CLAREMONT AVE				Y	1		9	17	37.5	4	0
42	24	R3.30	EB	m	R	CLAREMONT AVE UC 33414R				Y	1		9	17	37.5	4	0
43	24	R3.32	WB	m	R	CLAREMONT AVE UC 33414R				Y	1		9	17	37.5	4	0
44	24	R3.36	WB	r	R/L	WB OFF TO TELEGRAPH AVE				Y	2		18	33	75	8	0
45	24	R3.54	EB	m	R	COLLEGE AVE UC 33417 RT				Y	1		9	17	37.5	4	0

ATTACHMENT B
SUMMARY OF QUANTITIES

Location							Connecting Structure				Transition Railing Type (EA)				MBGR (LF)		
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder	Description	Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB	Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	Remove	Install	Terminal Sys Treatment (EA)
46	24	R3.98	WB	m	R	PRESLEY WAY UC 33-418LT				Y	1		9	17	37.5	4	0
47	24	R4.15	EB	m	R	PATTON ST UC 33-419 RT				Y	1		9	17	37.5	4	0
48	24	R4.17	WB	m	R	PATTON ST UC 33-419 LT				Y	1		9	17	37.5	4	1
49	24	R4.41	WB	r	R/L	WB OFF TO BROADWAY				Y	2		18	33	75	8	1
50	24	R4.44	EB	m	R	GOLDEN GATE AVE UC				Y	1		9	17	37.5	4	1
51	24	R4.45	WB	m	R/L	GOLDEN GATE AVE UC				Y	2		18	33	75	8	1
52	24	R4.83	EB	r	R	OFF TO SB RTE 13				Y	1		9	17	37.5	4	0
53	24	R5.12	WB	m	R	JCT STATE ROUTE 13				Y	1		9	17	37.5	4	1
54	24	R5.78	EB	m	R	EB 24 BEFORE CALDECOTT TUNNEL		Y			1		4	17	37.5	9	1
						Rte 24 Subtotal					36	0	314	600	1350	149	18
55	80	3.00	WB	r	R	TEMESCAL CR 33 278				Y	1		9	17	37.5	4	1
56	80	3.01	EB	m	L	BENEATH RTE 580 WB STRUCTURE			Y		1		4	17	37.5	9	1
57	80	3.79	WB/EB	m	R	POWELL ST OC BR 33-0020				Y	2		18	33	75	8	2
58	80	4.58	WB	m	R	RTE 13/80 SEPARATION NORTH (BR 33-0191G)			Y		1		4	17	37.5	9	1
59	80	4.58	WB	r	R/L	OFF TO ASHBY AVE (RTE 13) SOUTH				Y	2		18	17	37.5	8	2
60	80	5.00	EB	m	R	0.5 MILES EAST OF BR 33-0023			Y		1		4	17	37.5	9	1
61	80	5.82	WB	r	R	OFF TO UNIVERSITY AVE SOUTH	Y				1		9	17	37.5	4	1
62	80	5.82	EB	m	R	JUST EAST OF UNIVERSITY AVE OC (BR 33-0023)		Y			1		4	17	37.5	9	0
63	80	5.82	EB	r	R/L	OFF TO UNIVERSITY AVE SOUTH				Y	2		18	33	75	8	2
64	80	6.62	WB	m	R	GILMAN ST UC 33-0127				Y	1		9	17	37.5	4	1
65	80	6.62	EB	m	R	GILMAN ST UC 33-0127				Y	1		9	17	37.5	4	1
66	80	7.25	WB	r	L	ON FROM BUCHANAN ST	Y				1		9	17	37.5	4	1
67	80	7.30	EB	r	R/L	ON FROM BUCHANAN ST				Y	2		18	33	75	8	1

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SUMMARY OF QUANTITIES

Location						Description	Connecting Structure				Transition Railing Type (EA)		Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	MBGR (LF)		Terminal Sys Treatment (EA)
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
68	80	7.30	WB	r	L	ON FROM EB 580				Y	1		9	17	37.5	4	1
69	80	7.60	WB	m	R	EL CERRITO SEPARATION & OH (BR 33-0051L)				Y	1		9	17	37.5	4	1
						Rte 80 Subtotal					19	0	151	300	675	96	17
70	84	0.73	SB	m	R	END OF DUMBARTON BRIDGE			Y		1		0	0.00	0	0	0
71	84	3.21	SB	m	L	AFTER BRIDGE TOLL PLAZA			Y			1	9	17	37.5	4	0
72	84	4.66	SB	m	R	NEWARK OH, BR 33-0509			Y		1		9	17	37.5	4	1
73	84	4.66	SB	m	L	NEWARK OH, BR 33-0509			Y			1	9	17	37.5	4	0
74	84	4.66	NB	m	R	NEWARK OH, BR 33-0509			Y		1		9	17	37.5	4	0
75	84	4.66	NB	m	L	NEWARK OH, BR 33-0509			Y		1		9	17	37.5	4	0
76	84	4.92	SB	m	R	NEWARK BLVD UC, BR 33-510R/L			Y		1		9	17	37.5	4	1
77	84	4.92	NB	m	R	NEWARK BLVD UC, BR 33-510R/L			Y		1		9	17	37.5	4	0
78	84	4.92	NB	m	L	NEWARK BLVD UC, BR 33-510R/L			Y			1	9	17	37.5	4	0
79	84	5.33	NB	m	R	END OF SEAL SLAB, BR 33-512			Y		1		9	17	37.5	4	1
80	84	5.53	SB	m	R	SEAL SLAB 33-512			Y		1		9	17	37.5	4	0
81	84	5.98	SB	m	R	84/880 SEPARATION, BR 33-243R/L			Y		1		9	17	37.5	4	1
						Rte 84 Subtotal					9	3	99	183.3	413	44	4
82	92	5.11	WB	m	R	MT. EDEN OH 33-092			Y		1		9	17	37.5	4	1
83	92	4.91	EB	m	R	EB ON FROM INDUSTRIAL BLVD. 33-370			Y		1		9	17	37.5	4	1
84	92	5.10	WB	m	R	NEAR WB OFF TO INDUSTRIAL BLVD.			Y		1		9	17	37.5	4	1
						Rte 92 Subtotal					3	0	27	50	113	12	3
85	238	14.47	SB	r	L	OFF TO WB 580 LOOP RAMP			y		1		4	17	37.5	9	1
						Rte 238 Subtotal					1		4	17	37.5	9	1
86	880	0.18	SB	m	R	OFF TO DIXON LANDING		Y			1		4	17	37.5	9	1

ATTACHMENT B
SUMMARY OF QUANTITIES

Location						Description	Connecting Structure				Transition Railing Type (EA)		Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	MBGR (LF)		Terminal Sys Treatment (EA)
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
87	880	0.26	SB	m	R	AT SCOTT CREEK, BRIDGE NO.: 33-242				Y	1		9	17	37.5	4	1
88	880	0.26	NB	m	R	AT SCOTT CREEK, BRIDGE NO.: 33-242				Y	1		9	17	37.5	4	1
89	880	3.38	NB	r	R	ON FROM WB FREMONT BLVD, AT BEG OF RAMP			Y		1		4	17	37.5	9	0
90	880	3.38	SB	r	R	ON FROM WB FREMONT BLVD, AT MID OF RAMP			Y		1		4	17	37.5	9	0
91	880	3.67	SB	m	R	AT ARROYO DE LA LAGUNA, BR NO.: 33-291				Y	1		9	17	37.5	4	0
92	880	3.67	NB	m	R	AT ARROYO DE LA LAGUNA, BR NO.: 33-291				Y	1		9	17	37.5	4	0
93	880	4.05	NB	m	R	ON FROM TRUCK SCALES			Y		1		4	17	37.5	9	0
94	880	4.53	NB	m	R	OFF TO AUTO MALL PKWY		Y			1		4	17	37.5	9	0
95	880	10.12	NB	m	R	NB 84 TO SB 880			Y		1		4	17	37.5	9	1
96	880	10.12	SB	m	R	ON FROM EB ROUTE 84			Y		1		4	17	37.5	9	1
97	880	10.32	SB	m	L	SB DECOTO ROAD TO SB 880			Y		1		4	17	37.5	9	0
98	880	10.32	SB	m	L	ON FROM WB DECOTO			Y		1		4	17	37.5	9	1
99	880	10.43	SB	m	R	OFF TO WB 84, AT PEDESTRIAN UC				Y	1		9	17	37.5	4	0
100	880	10.43	SB	m	L	OFF TO WB 84, AT PEDESTRIAN UC				Y	1		9	17	37.5	4	1
101	880	10.44	SB	m	R	OFF TO DECOTO/ROUTE 84		Y			1		4	17	37.5	4	1
102	880	10.66	SB	m	R	AT CRANDALL CREEK BRIDGE, BR 33-0273				Y	1		9	17	37.5	4	0
103	880	10.66	NB	m	R	AT CRANDALL CREEK BRIDGE, BR 33-0273				Y	1		9	17	37.5	4	0
104	880	10.93	SB	m	R	AT PASEO PADRE PKWY OC		Y			1		4	17	37.5	9	0
105	880	11.31	NB	m	R	OFF TO ALVARADO BLVD			Y		1		4	17	37.5	9	0
106	880	11.34	SB	m	R	ON FROM EB ALVARADO BLVD		Y			1		4	17	37.5	9	1
107	880	12.30	SB	m	R	1800' NORTH OF ALAMEDA CREEK BR		Y			1		4	17	37.5	9	0
108	880	12.78	SB	m	R	AT ALAMEDA CREEK BR 33-0250				Y	1		9	17	37.5	4	0
109	880	12.78	NB	m	R	AT ALAMEDA CREEK BR 33-0250				Y	1		9	17	37.5	4	0

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SUMMARY OF QUANTITIES

Location						Description	Connecting Structure				Transition Railing Type (EA)		Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	MBGR (LF)		Terminal Sys Treatment (EA)
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
110	880	13.67	NB	m	R	AT WHIPPLE ROAD UC, BR 33-245				Y	1		9	17	37.5	4	0
111	880	13.70	SB	m	R	AT WHIPPLE ROAD UC, BR 33-245				Y	1		9	17	37.5	4	0
112	880	13.72	SB	m	L	OFF TO WHIPPLE ROAD, BR 33-245B				Y	1		9	17	37.5	4	0
113	880	13.86	NB	m	R	AT ALQUIRE ROAD OH, BR 33-246				Y	1		9	17	37.5	4	0
114	880	13.86	SB	m	R	AT ALQUIRE ROAD OH, BR 33-246				Y	1		9	17	37.5	4	0
115	880	13.90	NB	m	L	ON FROM WHIPPLE ROAD, AT ALQUIRE ROAD OH				Y	1		9	17	37.5	4	0
116	880	14.18	SB	m	R	AT WARD CREEK BRIDGE, BR 33-251				Y	1		9	17	37.5	4	0
117	880	14.18	NB	m	R	AT WARD CREEK BRIDGE, BR 33-251				Y	1		9	17	37.5	4	0
118	880	14.52	SB	m	R	ON FROM INDUSTRIAL PKWY		Y			1		4	17	37.5	9	0
119	880	14.52	SB	m	R	ON FROM INDUSTRIAL PKWY, AFTER OC			Y		1		4	17	37.5	9	0
120	880	14.54	NB	m	R	AT INDUSTRIAL PWY OC, BR 33-398			Y		1		4	17	37.5	4	0
121	880	18.35	SB	m	R	AT A STREET UC, BR 33-0179				Y	1		9	17	37.5	4	0
122	880	18.35	NB	m	R	AT A STREET UC, BR 33-0179				Y	1		9	17	37.5	4	0
123	880	19.96	SB	m	L	ON FROM HESPERIAN BLVD			Y		1		4	17	37.5	9	1
124	880	20.01	NB	m	R	OFF TO HESPERIAN BLVD, AT SAN LORENZO CREEK				Y	1		9	17	37.5	4	0
125	880	20.01	NB	m	L	OFF TO HESPERIAN BLVD, AT SAN LORENZO CREEK				Y	1		9	17	37.5	4	0
126	880	20.11	NB	m	R	AT SAN LORENZO CREEK OH, BRIDE NO.: 33-175				Y	1		9	17	37.5	4	0
127	880	20.42	NB	m	R	ON FROM WB LEWELLING BLVD		Y			1		4	17	37.5	9	0
128	880	20.42	SB	m	R	AT LEWELLING BLVD UC, BR 33-176				Y	1		9	17	37.5	4	0
129	880	20.69	NB	m	R	OFF TO WASHINGTON AVENUE AT JCT SB 238 UC				Y	1		9	17	37.5	4	0
130	880	20.90	SB	m	R	OFF TO WASHINGTON AVENUE				Y	1		9	17	37.5	4	0
131	880	20.95	NB	m	R	AT ORA LOMA DITCH, BRIDGE NO.: 33-239				Y	1		9	17	37.5	4	0
132	880	20.95	SB	m	R	AT ORA LOMA DITCH (ON WASHINGTON OFF), BR 33-0239				Y	1		9	17	37.5	4	0

ATTACHMENT B
SUMMARY OF QUANTITIES

Location						Description	Connecting Structure				Transition Railing Type (EA)		Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	MBGR (LF)		Terminal Sys Treatment (EA)
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
133	880	24.18	NB	m	R	AT SAN LEANDRO CREEK OH, BR 33-0110				Y	1		9	17	37.5	4	1
134	880	24.72	NB	m	L	ON FROM EB 98TH AVENUE			Y		1		4	17	37.5	9	1
135	880	25.49	SB	m	R	AT HEGENBERGER ROAD OC, BR 33-0502			Y		1		4	17	37.5	9	0
136	880	25.61	NB	m	R	ON FROM SB HEGENBERGER		Y			1		4	17	37.5	9	0
137	880	25.64	SB	m	R	OFF TO HEGENBERGER ROAD			Y		1		4	17	37.5	9	0
138	880	25.97	NB	m	R	AT ELMHURST CREEK, BR 33-0113				Y	1		9	17	37.5	4	0
139	880	25.97	SB	m	R	AT ELMHURST CREEK, BR 33-0113				Y	1		9	17	37.5	4	0
140	880	26.33	SB	m	L	ON FROM OAKPORT-66TH AT DAMON SLOUGH			Y		1		4	17	37.5	9	1
141	880	26.53	NB	m	R	AT DAMON SLOUGH, BR 33-0142				Y	1		9	17	37.5	4	1
142	880	26.53	SB	m	R	AT DAMON SLOUGH, BR 33-0142				Y	1		9	17	37.5	4	0
143	880	27.23	NB	m	R	AT EAST CREEK SLOUGH, BR 33-0143				Y	1		9	17	37.5	4	1
144	880	27.23	SB	m	R	AT EAST CREEK SLOUGH, BR 33-0143				Y	1		9	17	37.5	4	0
145	880	31.07	NB	m	R	AT OAK-MADISON UC, BR 33-0198				Y	1		9	17	37.5	4	1
146	880	31.31	SB	m	R	ON FROM BROADWAY				Y	1		9	17	37.5	4	1
147	880	31.31	SB	m	L	ON FROM BROADWAY				Y	1		9	17	37.5	4	1
148	880	31.42	NB	m	R	ON FROM JACKSON, AT FOLK TO BROADWAY				Y	1		9	17	37.5	4	1
149	880	32.28	SB	m	R	ON FROM ADELINE/5TH STREET				Y	1		9	17	37.5	4	1
150	880	32.28	SB	m	L	ON FROM ADELINE/5TH STREET				Y	1		9	17	37.5	4	1
151	880	32.79	NB	m	R	ON FROM UNION STREET AT BEG OF BRIDGE				Y	1		9	17	37.5	4	1
152	880	32.79	NB	m	L	ON FROM UNION STREET AT BEG OF BRIDGE				Y	1		9	17	37.5	4	1
153	880	32.85	SB	m	R	AT BRIDGE NO.: 33-616L				Y	1		9	17	37.5	4	1
154	880	32.85	SB	m	L	AT BRIDGE NO.: 33-616L				Y	1		9	17	37.5	4	1
155	880	33.20	SB	r	R	BETWEEN 7TH ST ON AND BROADWAY OFF			Y		1		4	17	37.5	9	0

ATTACHMENT B
SUMMARY OF QUANTITIES

Location						Description	Connecting Structure				Transition Railing Type (EA)		Concrete Anchor Block (LF)	Vegetation Control (Minor Concrete) (SQYD)	MBGR (LF)		Terminal Sys Treatment (EA)
ID #	Alameda Co Rte	PM	Direction	Ramp (r) /Mainline (m)	Left (L) or Right (R) Shoulder		Abutment	Wall	Concrete Barrier	Bridge Rail	WB	STB			Remove	Install	
156	880	33.27	NB	m	R	OFF TO 7TH STREET		Y			1		4	17	37.5	9	1
157	880	33.27	NB	m	L	OFF TO 7TH STREET		Y			1		4	17	37.5	9	1
158	880	33.47	SB	m	R	AT 7TH STREET UC				Y	1		9	17	37.5	4	0
159	880	33.47	SB	m	L	AT 7TH STREET UC				Y		1	9	17	37.5	4	0
160	880	34.10	NB	m	R	BEGINNING CONNECTOR TO EB 80				Y		1	9	17	37.5	4	1
161	880	34.10	NB	m	R	BEGINNING CONNECTOR TO EB 80		Y			1		4	17	37.5	9	1
						Rte 880 Subtotal					74	2	544	1267	2850	434	29
162	980	0.35	WB	m	R	RTE 980 CONN TO SB 880 (BR 33-0483F)			Y		1	1	4	33	75	9	1
163	980	1.11	EB	m	R	SAN PABLO AV UC 33-0440				Y	1		9	17	37.5	4	1
164	980	1.33	EB	m	L/R	27TH ST UC 33-421R				Y	1		9	17	37.5	4	0
165	980	1.40	WB	m	R	27TH ST UC 33-421L				Y	1		9	17	37.5	4	1
166	980	1.63	EB	r	L	OFF TO RTE 580 @ 30TH ST UC				Y	1		9	17	37.5	4	0
167	980	1.68	EB	m	R	30TH ST UC 33-350R/L				Y	1		9	17	37.5	4	0
168	980	1.76	WB	m	R	END BR 33-350R/L				Y	1		9	17	37.5	4	1
169	980	1.86	WB	r	R/L	OFF TO 27TH ST			Y		2		8	33	75	18	0
170	980	1.98	WB	m	R	980 NEAR WB OFF TO 27TH ST					1		9	17	37.5	4	0
						Rte 980 Subtotal					10	1	75	183	413	55	4
						TOTAL UPGRADES					**177**	**8**	**1392**	**3133**	**6825**	**1018**	**97**

ATTACHMENT C
PRELIMINARY PROJECT COST ESTIMATE

04-Ala-Var
PM: Var
EA: 2G500K
Program Code: SHOPP 201.015

Project Description: Upgrade MBGR

Limits: On Route 13 at PM 4.32/9.70, on Route 24 at PM 1.93/5.78, on Route 80 at PM 2.06/7.35, on Route 84 PM 0.73/5.98, on Route 92 at PM 4.91/5.11, on Route 238 at PM 14.47, on Route 880 at PM 0.18/34.1, and on Route 980 at PM 0.35/1.98, all in Alameda County

Proposed Improvement (Scope): Install standard transition railing and end terminal.

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	***$ 3,255,000***
TOTAL STRUCTURE ITEMS	***$ 974,400***
SUBTOTAL CONSTRUCTION COSTS	***$ 4,229,400***
TOTAL RIGHT OF WAY ITEMS	***$ 11,000***
TOTAL PROJECT CAPITAL OUTLAY COSTS	**$ 4,240,400**

Reviewed by District Program Manager: *Roland Au-Yeung* Date: 9/20/2011

Approved by Project Manager: *Patrick K. Pang* Date: 9/20/11

ATTACHMENT C
PRELIMINARY PROJECT COST ESTIMATE

04-Ala-Var
PM: Var
EA: 2G500K
Program Code: SHOPP 201.015

I. ROADWAY ITEMS

Section 1 - Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Clearing & Grubbing	1	LS	$ 44,250	$ 44,250	
				Subtotal Earthwork	***$ 44,250***

Section 2 - Pavement Structural Section	Quantity	Unit	Unit Price	Item Cost	Section Cost
				$ -	
				Subtotal Pavement Structural Items	***$ -***

Section 3 - Drainage	Quantity	Unit	Unit Price	Item Cost	Section Cost
		LS		$ -	
				Subtotal Drainage	***$ -***

Section 4- Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Minor HMA	23	Ton	$ 120	$ 2,736	
Metal Beam Guard Railing	1018	LF	$ 10	$ 10,180	
Remove MBGR	6825	LF	$ 10	$ 68,250	
Place HMA Dike (Type F)	1706	LF	$ 10	$ 17,063	
Transition Railing (Type WB)	177	Ea	$ 3,500	$ 619,500	
Transition Railing (Type STB)	8	Ea	$ 3,500	$ 28,000	
Terminal System End Treatment	97	Ea	$ 2,500	$ 242,500	
Electrical Work	1	LS	$ 17,700	$ 17,700	
Prepare SWPPP	1	LS	$ 3,000	$ 3,000	
Lead Compliance Plan	1	LS	$ 3,000	$ 3,000	
Hazardous Waste Investigation	1	LS	$ 5,000	$ 5,000	
Temporary Construction Site WPC	1	LS	$ 61,950	$ 61,950	
				Subtotal Specialty Items	***$ 1,078,879***

ATTACHMENT C
PRELIMINARY PROJECT COST ESTIMATE

04-Ala-Var
PM: Var
EA: 2G500K
Program Code: SHOPP 201.015

Section 5 - Traffic Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Trans Mgmt Plan (TMP) incl COZEEP	1	LS	$ 280,000	$ 280,000	
Constuction Area Signs	1	LS	$ 10,000	$ 10,000	
Traffic Control Sys (incl Lane Closure)	1	LS	$ 343,700	$ 343,700	
				Subtotal Traffic Items	***$ 633,700***

Section 6 - Planting and Irrigation	Quantity	Unit	Unit Price	Item Cost	Section Cost
				$ -	
				Subtotal Planting & Irrigaton	***$ -***

Section 7 - Roadside Management and Safety	Quantity	Unit	Unit Price	Item Cost	Section Cost
Vegetation Control (Minor Concrete)	3133	Yd2	$ 55	$ 172,333	
Erosion Control	1	LS	$ 44,250	$ 44,250	
				Subtotal Roadside Management & Safety	***$ 216,583***

TOTAL SECTIONS: 1 thru 7 **$ 1,973,412**

Use $ 1,973,000

ATTACHMENT C
PRELIMINARY PROJECT COST ESTIMATE

04-Ala-Var
PM: Var
EA: 2G500K
Program Code: SHOPP 201.015

Section 8 - Minor Items

$ 1,973,000 x 10% = $ 197,300
(Subtotal Section 1-7)

Total Minor Items $ 197,300

Section 9 - Roadway Mobilization

Subtotal Section (1-7)	$ 1,973,000			
Minor Items (8)	$ 197,300			
Sum (1-8)	$ 2,170,300	x	10% =	$ 217,030

Total Roadway Mobilization $ 217,030

Section 10 - Roadway Additions

Supplemental Work

Subtotal Section (1-7)	$ 1,973,000			
Minor Items (8)	$ 197,300			
Sum (1-8)	$ 2,170,300	x	10% =	$ 217,030

Contingencies

Subtotal Section 1-7	$ 1,973,000			
Minor Items (8)	$ 197,300			
Sum	$ 2,170,300	x	30% =	$ 651,090

Total Roadway Additions $ 868,000

TOTAL ROADWAY ITEMS (Total of Sections 1-8) $ 3,255,000

Estimate Prepared By: Albert Tan Date: 9/8/2011
Phone #: 510-622-1665

Estimate Checked By: Robert Blanco Date: 9/8/2011
Phone #: 510-286-5676

ATTACHMENT C
PRELIMINARY PROJECT COST ESTIMATE

04-Ala-Var
PM: Var
EA: 2G500K
Program Code: SHOPP 201.015

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name			
Structure Type			
Width (out to out) - (ft)			
Span Lengths - (ft)			
Total Area - (ft)			
Footing Type (pile/spread)			
Cost per ft2			
Total Cost for Structure	$0	$0	$0

	Quantity	Unit	Unit Price	Item Cost	Section Cost
Concrete Anchor Block	1392	LF	$ 500	$ 696,000	

Subtotal Structures Items ***$ 696,000***
(Sum of Total Cost for Structures)

Railroad Related Costs:

Subtotal Railroad Items ***$ -***

(Structures 30% Contingency and 10% Mobilization) ***$ 278,400***

TOTAL STRUCTURES ITEMS **$ 974,400**
(Sum of Structures Items & railroad Items)

COMMENTS: *Unit price for the Concrete Anchor Block was provided by Majid Madani, DES Technical Liaison Engineer via e-mail on August 16,*

Estimate Prepared By: N/A

Date:

Phone #:

ATTACHMENT C
PRELIMINARY PROJECT COST ESTIMATE

04-Ala-Var
PM: Var
EA: 2G500K
Program Code: SHOPP 201.015

III. RIGHT OF WAY ITEMS

	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$_____
B. Utility Relocation (State Share)	$_____
C. Relocation Assistance	$_____
D. Clearance/Demolition	$_____
E. Title and Escrow Fees	$_____

TOTAL RIGHT OF WAY ITEMS $ 11,000 **
(Escalated Value)

Anticipated Date of R/W Cert $_____
(Date to which Values are Escalated)

F. Construction Contract Work
Brief Description of Work:

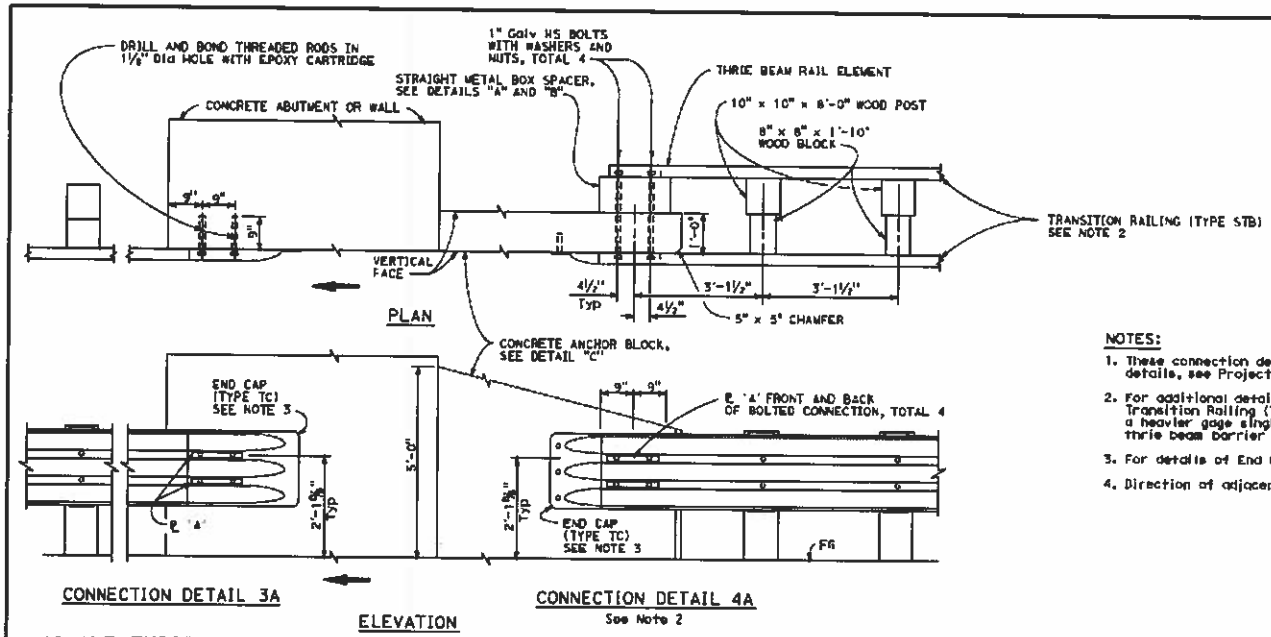
_____
_____
_____

Right of Way Branch Cost Estimate for Work * $_____

** This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.*

COMMENTS: *** R/W Cost assumed as 1/4% of the total Construction Capital Cost for this project only*

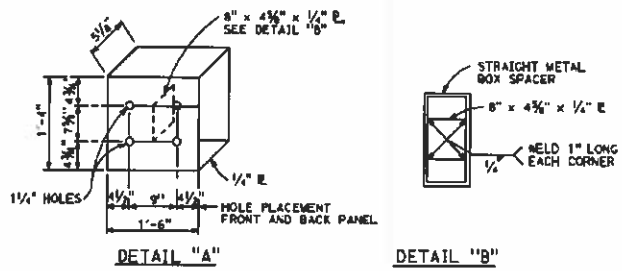
Estimate Prepared By: N/A Date: _____
Phone #: _____



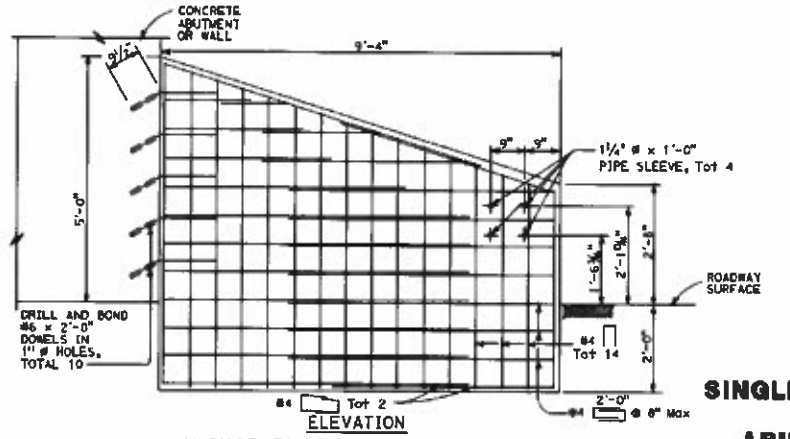
SINGLE THRIE BEAM BARRIER CONNECTION TO ABUTMENT OR WALL

NOTES:

1. These connection details apply to concrete abutments and walls. For additional connections details, see Project Plans.
2. For additional details of Transition Railing (Type STB), see Standard Plan A76J. Transition Railing (Type STB) transitions the standard 12 gage single thrie beam barrier to a heavier gage single thrie beam railing section then to a heavier gage nested double thrie beam barrier section which then is connected to the concrete anchor block.
3. For details of End Cap (Type TC), see Standard Plan A78C1.
4. Direction of adjacent traffic indicated by ⟶.



STRAIGHT METAL BOX SPACER



ANCHOR BLOCK FOR TRANSITION RAILING CONNECTION

DETAIL "C"

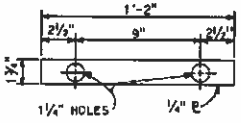


PLATE 'A'

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SINGLE THRIE BEAM BARRIER CONNECTIONS TO ABUTMENTS AND WALLS

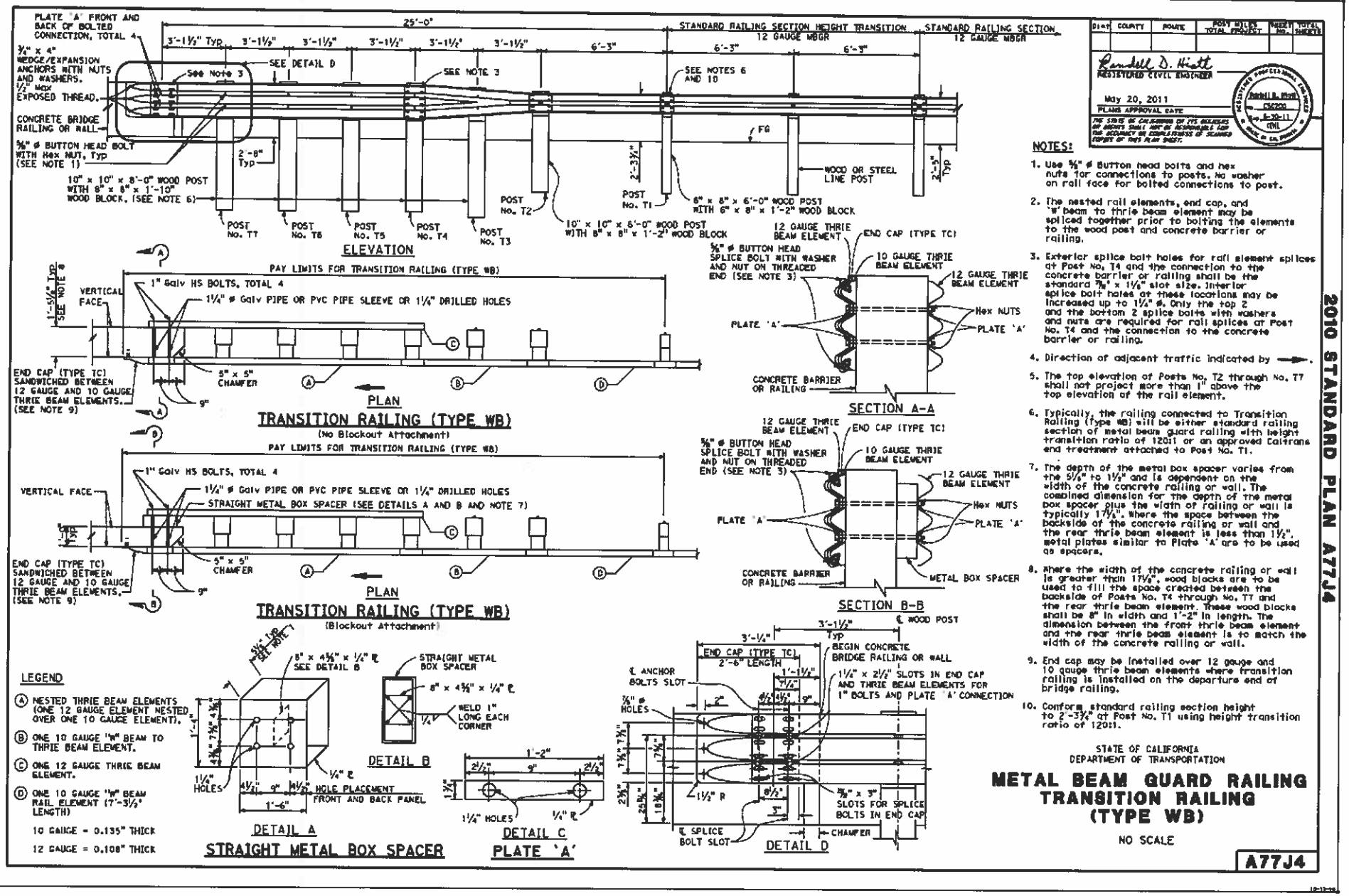
NO SCALE

A78G

2010 STANDARD PLAN A78G

104

ATTACHMENT D



ATTACHMENT D