

#### http://dap3.dot.ca.gov/shake stable/

The information on this graphic representation has been compiled from a variety of sources and is subjet to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness or rights to the use of such infrormation. This document is not inteded for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this representation is at the sole risk of the party using or misusing the information.

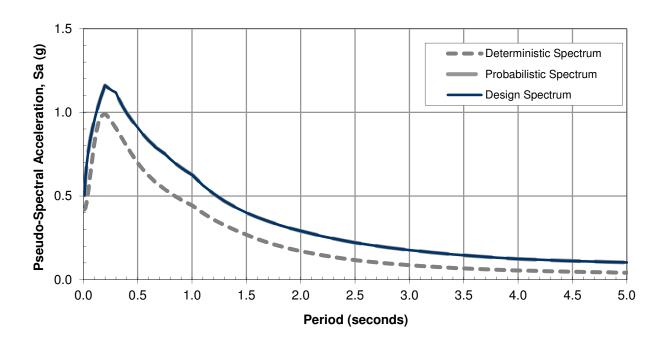


PROJECT NO.	106226
DRAWN:	12-15-10
DRAWN BY:	ASW
CHECKED BY:	SGL
FILE NAME: /	ARSFLTMAP

## **REGIONAL FAULT MAP** (CALTRANS ARS ONLINE)

PALO COMADO CANYON ROAD INTERCHANGE CITY OF AGOURA HILLS, CALIFORNIA

**PLATE** 



## **SITE DATA**

Latitude (degrees):	34.1431	Shear Wave Velocity, V <sub>s30</sub> :	440 m/s
Longitude (degrees):	-118.7381	Depth to Vs = 1.0 km/s, $Z_{1.0}$ :	168 m
		Depth to Vs = $2.5 \text{ km/s}$ , $Z_{2.5}$ :	2 km



PROJECT NO	106226
DRAWN:	2/8/11
DRAWN BY:	SGL
CHECKED BY:	EZ
FILE NAME:	KA_US101 Palo Comado

# PRELIMINARY DESIGN 2009 CALTRANS ARS CURVES

US101 Palo Comado Canyon Road OC Bridge No. 53-1678 City of Agoura Hills, CA PLATE

4a

#### **DESIGN ARS CURVE ORDINATES**

Period (s)	Sa (g)	Period (s)	Sa (g)
0.010	0.504	0.360	1.038
0.020	0.609	0.380	1.016
0.022	0.625	0.400	0.995
0.025	0.648	0.420	0.976
0.029	0.674	0.440	0.958
0.030	0.681	0.450	0.949
0.032	0.693	0.460	0.941
0.035	0.710	0.480	0.925
0.036	0.715	0.500	0.910
0.040	0.736	0.550	0.868
0.042	0.746	0.600	0.832
0.044	0.756	0.650	0.802
0.045	0.760	0.667	0.792
0.046	0.765	0.700	0.775
0.048	0.774	0.750	0.752
0.050	0.783	0.800	0.721
0.055	0.803	0.850	0.693
0.060	0.823	0.900	0.669
0.065	0.841	0.950	0.647
0.067	0.848	1.000	0.627
0.070	0.858	1.100	0.564
0.075	0.874	1.200	0.513
0.080	0.890	1.300	0.469
0.085	0.905	1.400	0.432
0.090	0.919	1.500	0.400
0.095	0.933	1.600	0.373
0.100	0.946	1.700	0.349
0.110	0.973	1.800	0.327
0.120	0.998	1.900	0.308
0.130	1.022	2.000	0.291
0.133	1.028	2.200	0.259
0.140	1.044	2.400	0.233
0.150	1.066	2.500	0.221
0.160	1.086	2.600	0.211
0.170	1.105	2.800	0.192
0.180	1.124	3.000	0.177
0.190	1.142	3.200	0.163
0.200	1.160	3.400	0.151
0.220	1.150	3.500	0.146
0.240	1.140	3.600	0.141
0.250	1.136	3.800	0.132
0.260	1.132	4.000	0.124
0.280	1.125	4.200	0.119
0.290	1.121	4.400	0.114
0.300	1.117	4.600	0.110
0.320	1.089	4.800	0.106
0.340	1.063	5.000	0.103



PROJECT NO	106226
DRAWN:	2/8/11
DRAWN BY:	SGL
CHECKED BY:	EZ
FILE NAME:	KA_US101 Palo

### PRELIMINARY DESIGN 2009 CALTRANS ARS CURVES

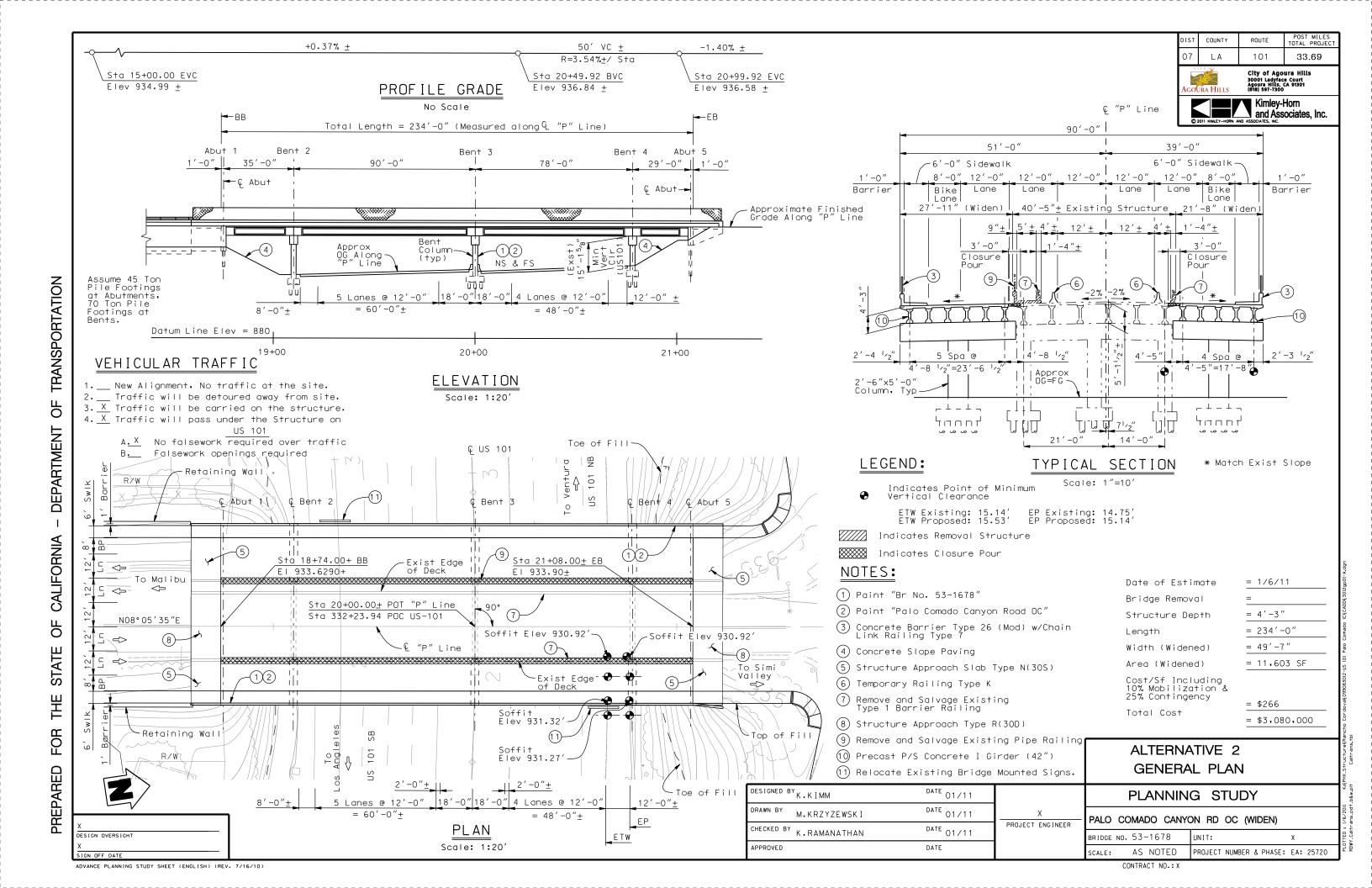
US101 Palo Comado Canyon Road OC Bridge No. 53-1678 City of Agoura Hills, CA PLATE

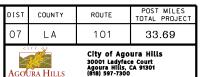
4b



## **APPENDIX A**

ADVANCED PLANNING STUDY DRAWING AND PROPOSED BUILD EXHIBITS





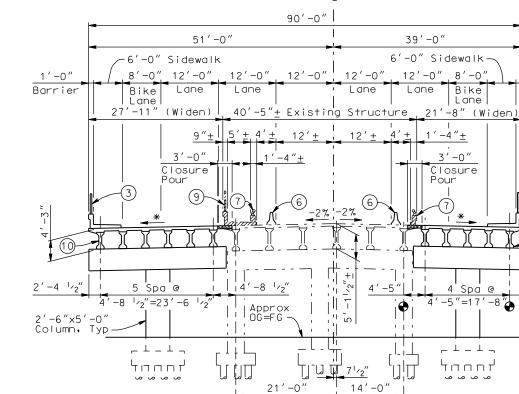
Kimley-Horn and Associates, Inc.

1'-0"

Barrier

2'-3 1/2"

ပို့ "P" Line



## TYPICAL SECTION - SPAN 2

Scale: 1:10'

\* Match Exist Slope

## NOTES:

- (1) Paint "Br No. 53-1678"
- (2) Paint "Palo Comado Canyon Road OC"
- 3 Concrete Barrier Type 26 (Mod) w/Chain Link Railing Type 7
- 6) Temporary Railing Type K
- Remove and Salvage Existing
  Type 1 Barrier Railing
- (9) Remove and Salvage Existing Pipe Railing
- (10) Precast P/S Concrete I Girder (42")

Date of Estimate = 1/6/11

Bridge Removal =

Structure Depth = 4'-3''Length = 234'-0''

Width (Widened) = 49'-7''

Area (Widened) = 11,603 SF

Cost/Sf Including 10% Mobilization & 25% Contingency

Total Cost = \$255

= \$2,950,000

ALTERNATIVE 2A
TYPICAL SECTIONS

DESIGNED BY K . K I MM	DATE 01/11		
DRAWN BY M.KRZYZEWSKI	DATE 01/11	X	P
CHECKED BY K.RAMANATHAN	DATE 01/11	PROJECT ENGINEER	BR
APPROVED	DATE		sr

PLANNING STUDY

PALO COMADO CANYON RD OC (WIDEN)

BRIDGE NO. 53-1678 UNIT: X

SCALE: AS NOTED PROJECT NUMBER & PHASE: EA: 25720

CONTRACT NO.: X

X
DESIGN OVERSIGHT
X
SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 7/16/10)

Ç "P" Line

12'-0"

14′-0″

1. General Plan & Elevation for Alternative 2A similar to Alternative 2.

TYPICAL SECTION - SPANS 1.3 AND 4

39'-0"

Lane

6'-0" Sidewalk

12'-0" 8'-0"

Bike

\_21'-8" (Widen)

Spa @

5'-6"=16'-6"

누ㅋ ㅇ ㄷ ㅏ

\* Match Exist Slope

3'-0"

Closure

Pour

1 ′ -0 ″

Barrier

90'-0"

12'-0"

40'-5" + Existing Structure

51'-0"

12'-0"

Approx OG=FG-

21'-0"

-6'-0" Sidewalk

8'-0" 12'-0"

27'-11" (Widen)

4 Spa @

\_ \_ \_ \_ \_ \_

누ㅋㅁㄷ٢

GENERAL NOTES:

5'-8"=22'-8

Lane

3'-0"

Closure

Bike

1'-0"

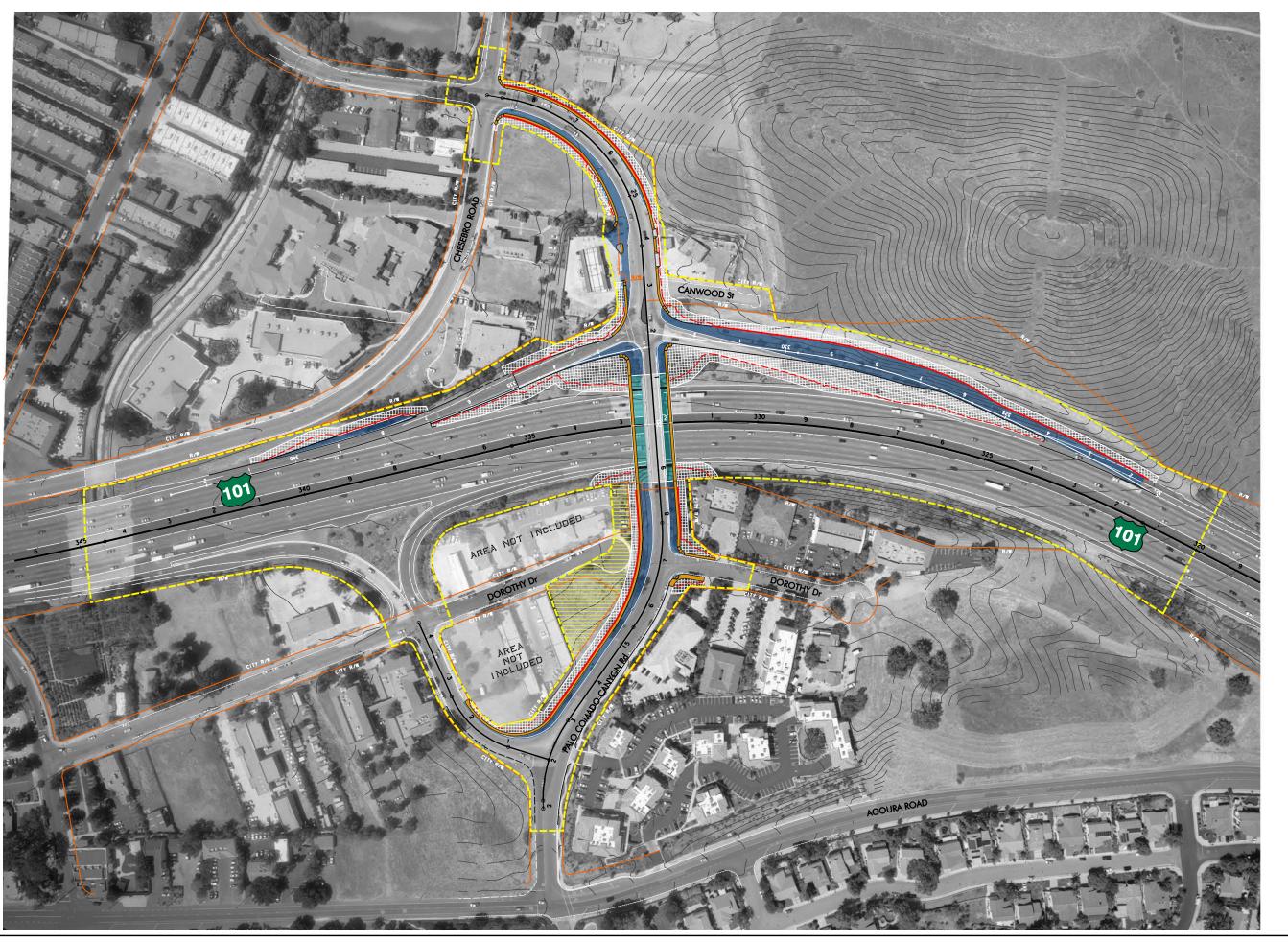
Barrier

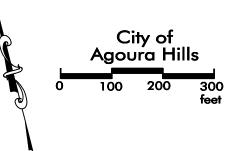
2'-4 1/2

2'-6"x5'-0"

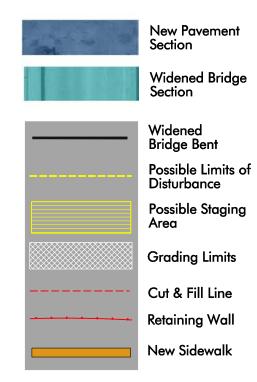
Column, Typ-

TED : 1/6/2011 K:0. Caltrans\_pdf\_b&w.plf

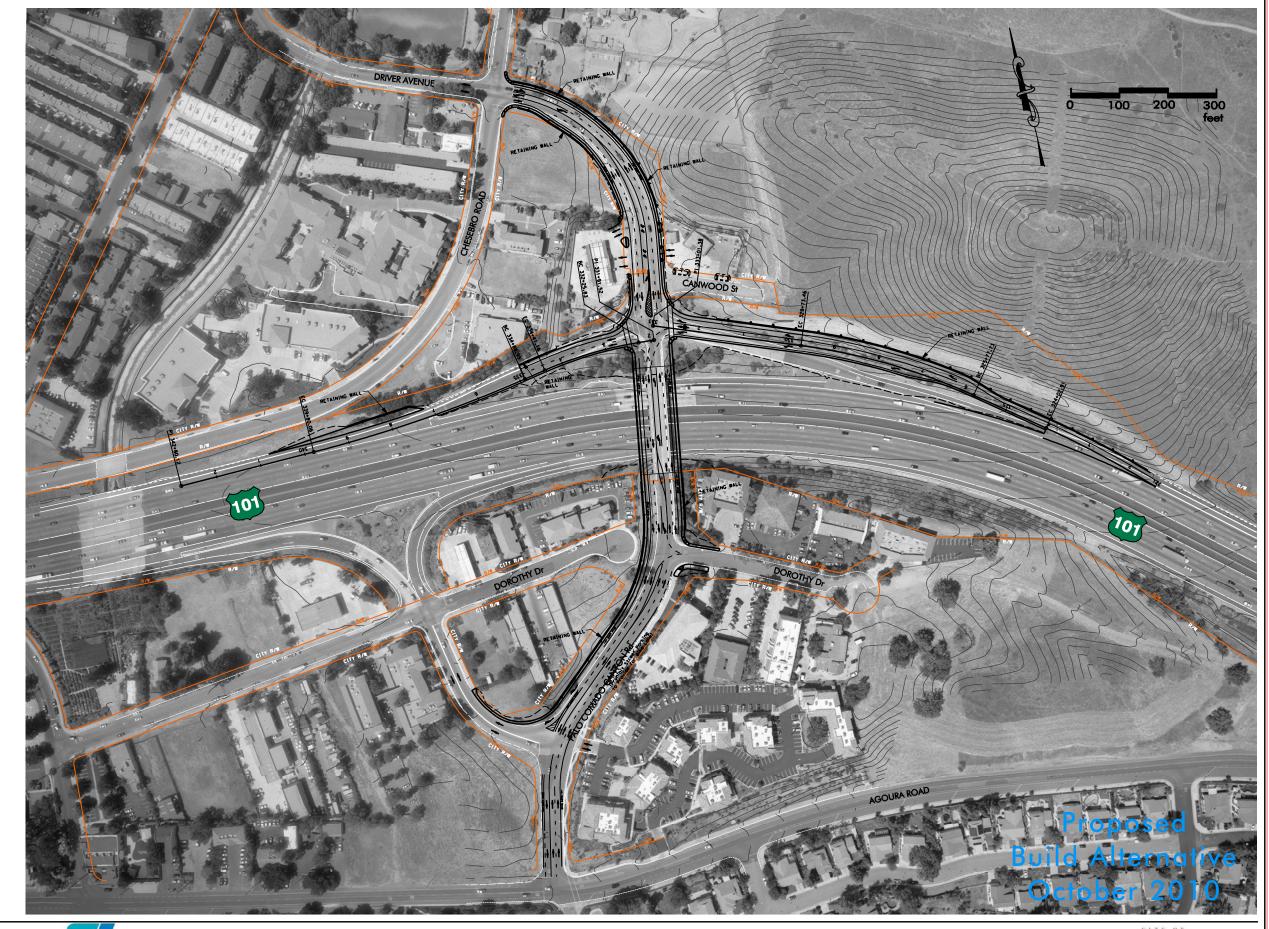




## Legend:



Proposed Build Alternative





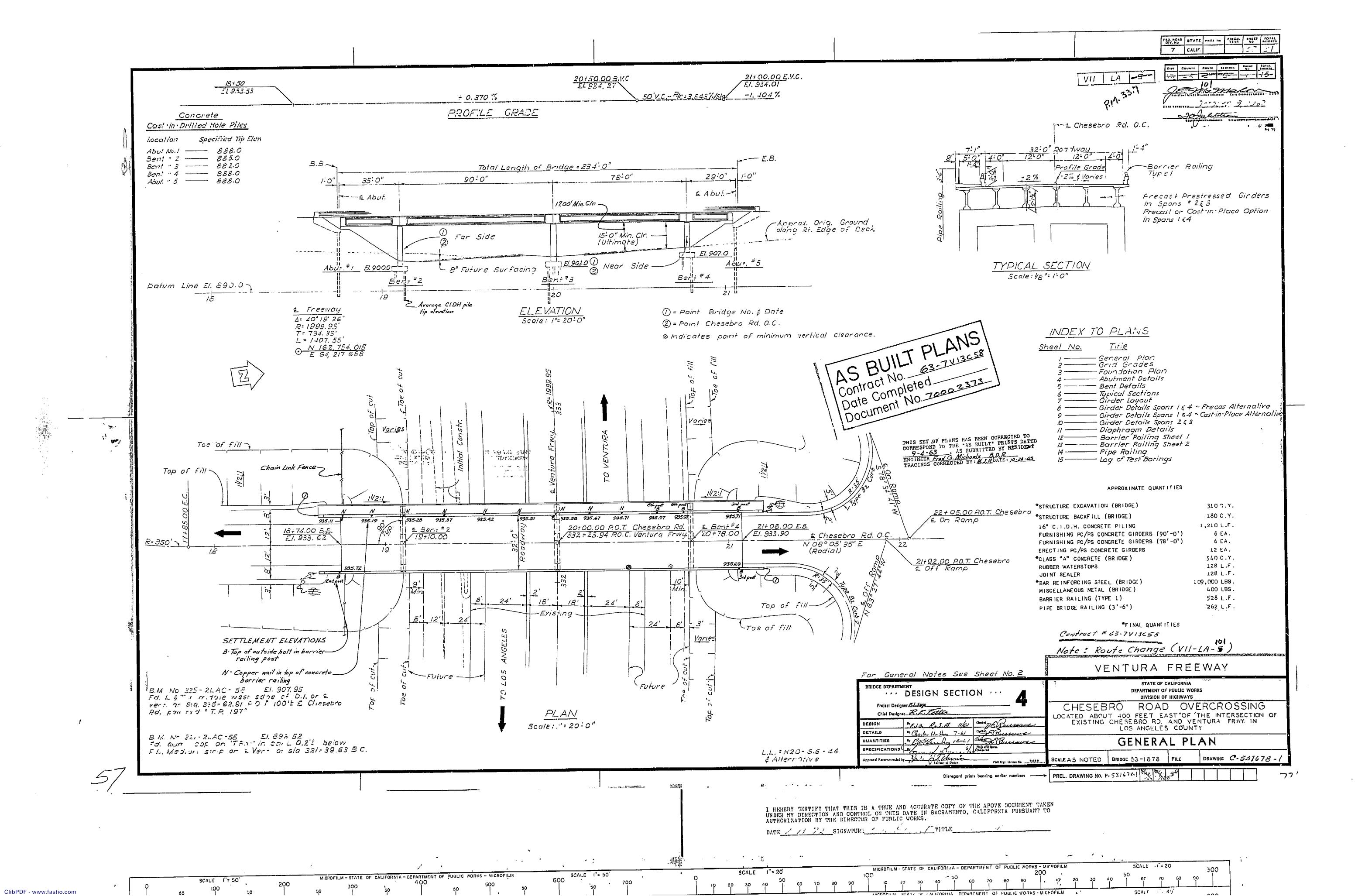


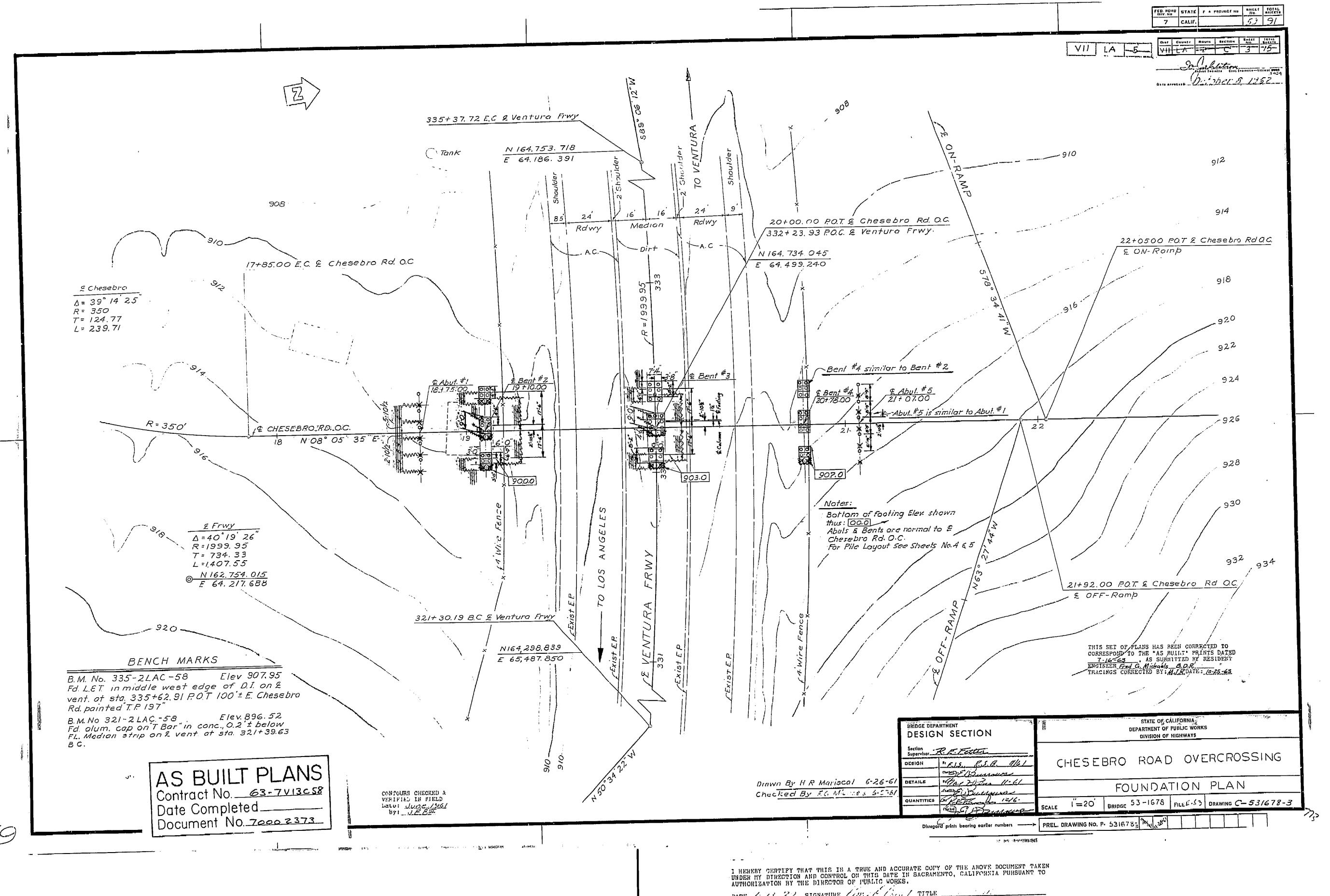




## **APPENDIX B**

AS-BUILT PLANS FOR CHESEBRO ROAD OC BRIDGE NO 53-1678





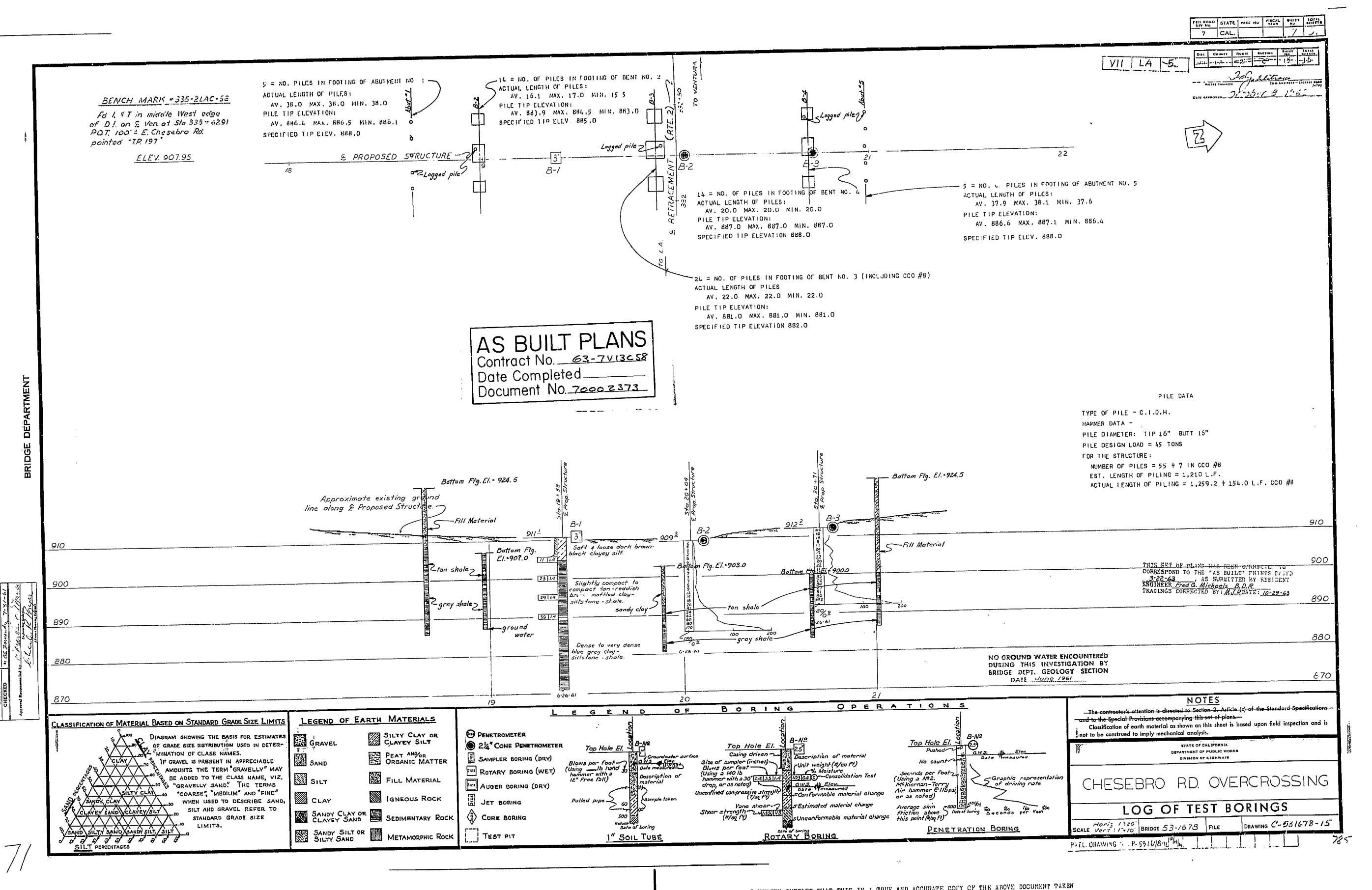
DATE / 13 22 SIGNATURE / Mich China

ClibPDF - www.fastio.com

MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM

30 to 1 SCALE I"= 50

MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM

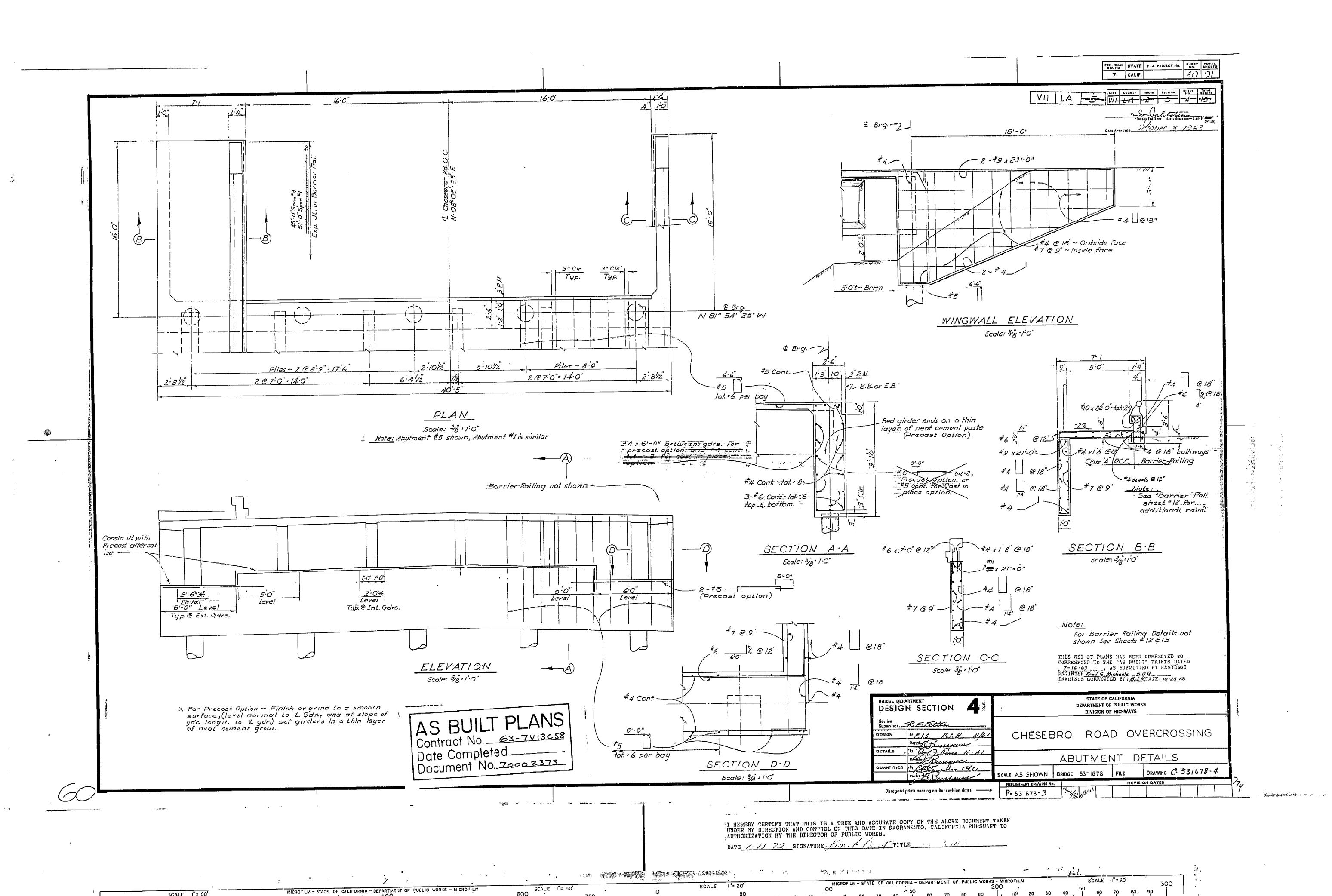


I HEREBY TERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF PUBLIC WORKS.

ClibPDF - www.fastio.com

MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM

MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM



SCALE |"= 40"

SCALE I"= 40"

400

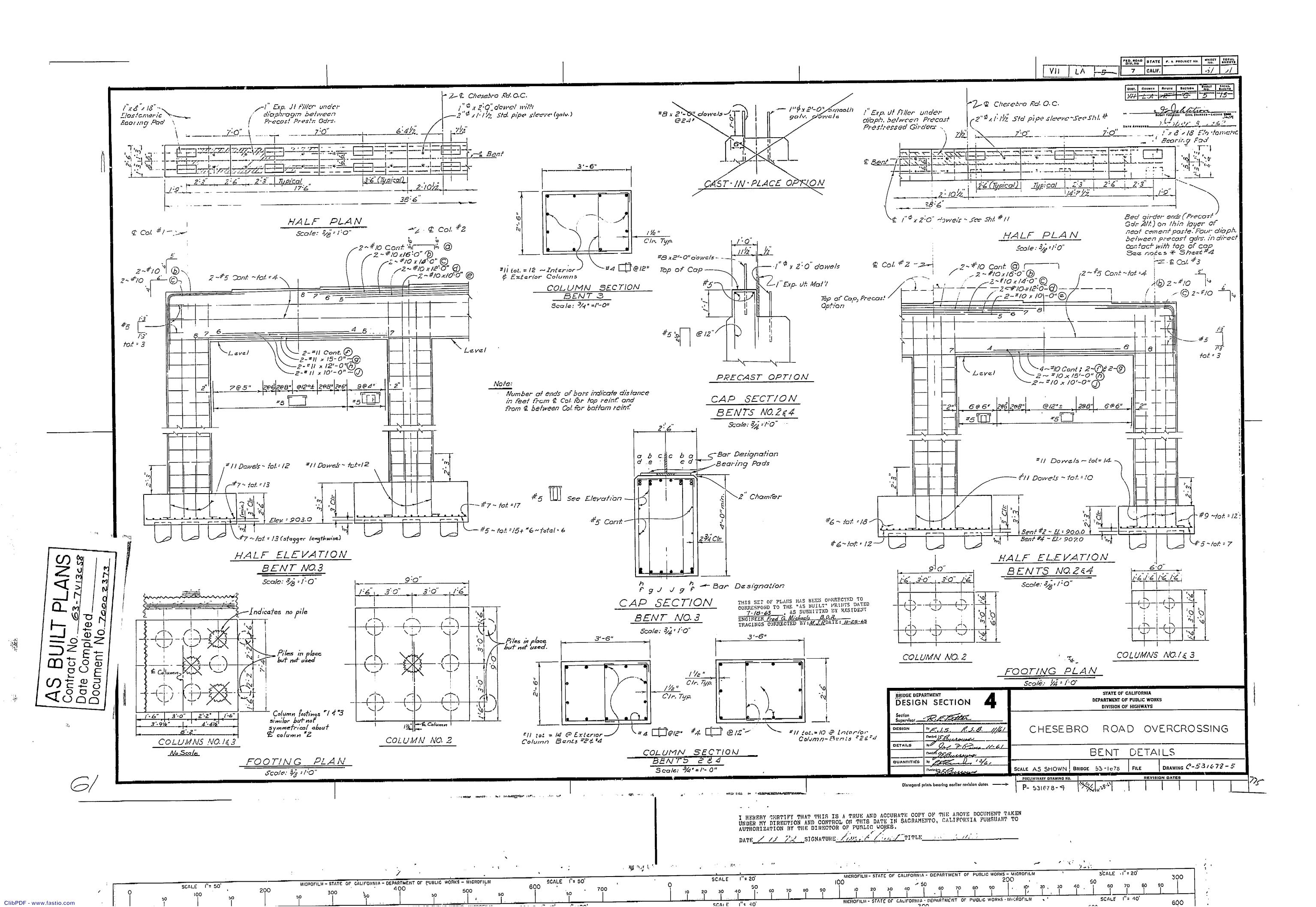
ClibPDF - www.fastio.com

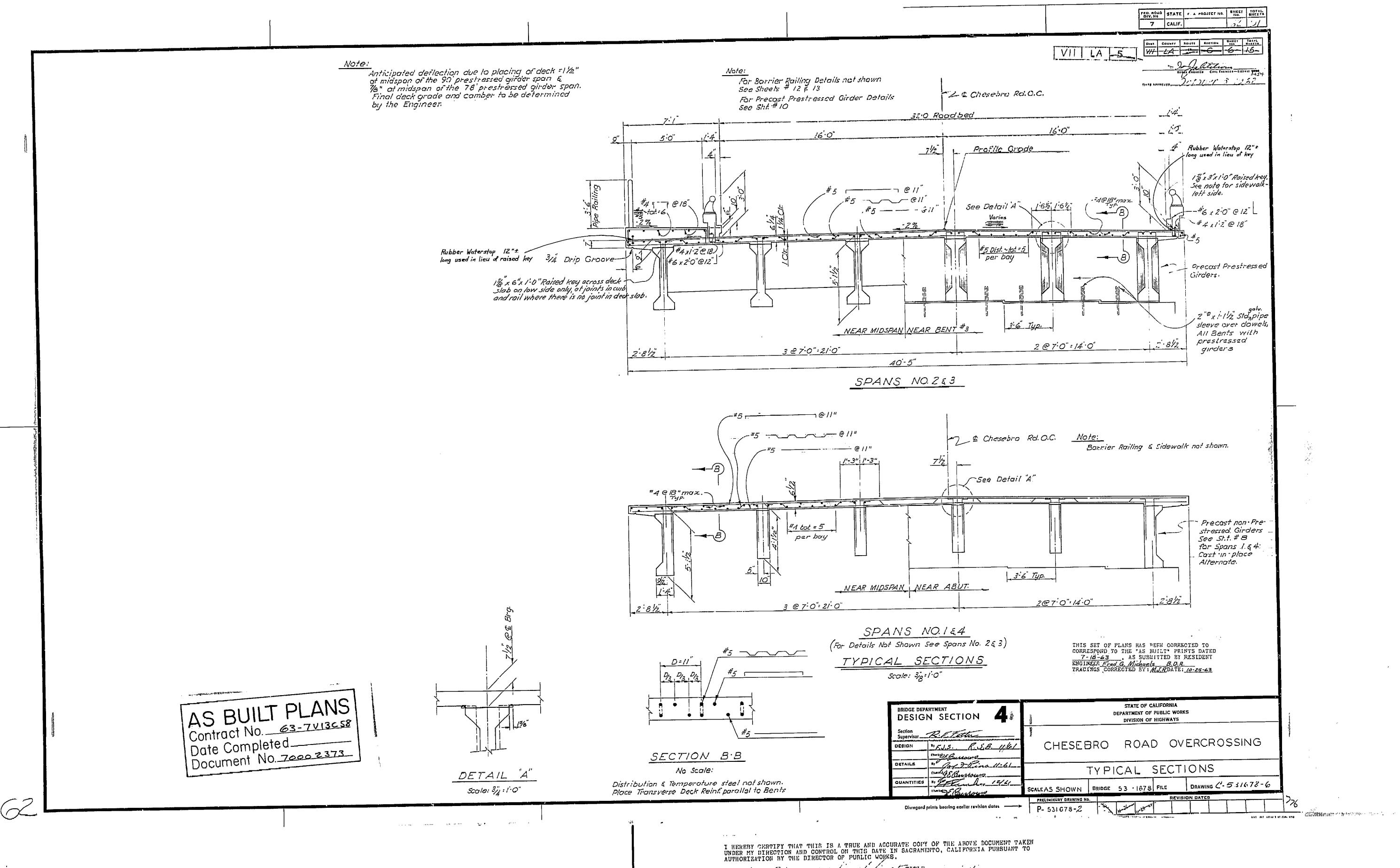
SCALE 1"= 50'

MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS MICROFILM

SCALE I"= 10' or I"= 100'

150





MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM SCALE 1"= 50" SCALE |"= 40" SCALE I"= 40 SCALE ("= 10' or 1"= 100'

ClibPDF - www.fastio.com



# **APPENDIX C**

**RESPONSE TO CALTRANS REVIEW COMMENTS** 



# APPENDIX C RESPONSE TO CALTRANS REVIEW COMMENTS

Kleinfelder submitted this Preliminary Geotechnical Report dated December 22, 2010 to the California Department of Transportation (Caltrans) for review. Kleinfelder subsequently received review comments dated February 2, 2011 on the report from Caltrans Office of Geotechnical Design – South 1. The Caltrans review comments and our responses to the comments are presented below. A copy of the Caltrans comment letter dated February 2, 2011 is included in this Appendix for reference. Our responses to the comments have been incorporated into this revised report as applicable.

<u>Comment No. 1.</u> Table 1 on page 8 of 19:  $F_{norm}$  and  $F_{rev}$  should be revised to 0 and 1, respectively. Also,  $R_{jb}$  should be verified since the  $R_{jb}$  is greater than 3.8 km based on calculation using fault parameters from the 2007 Fault Database.

Response to Comment No. 1. The values of 1 and 0 for  $F_{norm}$  and  $F_{rev}$  were transposed in Table 1 due to a typographical error. The values have been corrected as requested. A value of 4.7 km was calculated graphically for  $R_{jb}$ . A value of 3.8 km was estimated for  $R_{jb}$  by the ARS Online program. Our recommendations are based on an  $R_{jb}$  value of 3.8 km to be conservative. However, it should be noted that this does not affect the design response spectrum since the probabilistic response spectrum was found to govern over the deterministic response spectrum at all periods at this site.

<u>Comment No. 2.</u> Plate 4a: please provide calculation and/or reference backup for Displacement Response Spectral curve, and also describe the use of this curve in seismic analysis. If it is unnecessary information, please remove it.

Response to Comment No. 2. Based on our communication with representatives of Kimley-Horn and Associates, Inc., we understand that the displacement response spectral curve is not required for analysis during this phase of the project. Therefore, it has been removed from our report.



<u>Comment No. 3.</u> Section 10.4 on page 9 of 19: please provide calculation backup for liquefaction analysis if the analysis was conducted.

Response to Comment No. 3. Liquefaction calculations were not performed at this stage of the project. Our evaluation of the liquefaction potential at the site was based on preliminary screening. Based on the fact that the assumed historic shallow groundwater elevation of 890 feet is below the elevation that bedrock is shown on the as-built Log of Test Borings, it is our professional opinion that the potential for liquefaction to impact site is low.

The potential for liquefaction to occur at the project site should be re-evaluated during the PS&E phase of the project after completion of exploratory borings at the site and laboratory testing.

#### Memorandum

Flex your power!
Be energy efficient!

To: MR. KHAN HOSSAIN

Senior Transportation Engineer

Office of Design D

Date: February 2, 2011

File: 07-LA-101-PM33/34.4

07-257200 Oversight

From: DEPARTMENT OF TRANSPORTATION

**DIVISION OF ENGINEERING SERVICES** 

**Geotechnical Services** 

Office of Geotechnical Design – South 1

Subject: Review of Preliminary Geotechnical Report for US 101 Palo Comado Canyon Road Interchange

Improvement Project

Per your request, the Office of Geotechnical Design – South 1 of the Division of Engineering Services has preformed a review of Draft Preliminary Geotechnical Report for the subject project. The review is limited to geotechnical aspect of the project. The information provided and reviewed for this project is listed as follows:

• Draft Preliminary Geotechnical Report for US 101 Palo Comado Canyon Road Interchange improvement in city of Agoura Hills, California, prepared by Kleinfelder West, Inc. for Kimely-Horn and Associates, Inc. on December 22, 2010.

In addition, it is our understanding that a Preliminary Foundation Report prepared by Group Delta was reviewed.

Based on the review of the report, our comments are as follows:

- 1. Table 1 on page 8 of 19:  $F_{norm}$  and  $F_{rev}$  should be revised to 0 and 1, respectively. Also,  $R_{jb}$  should be verified since the  $R_{jb}$  is greater than 3.8 km based on calculation using fault parameters from the 2007 Fault Database.
- 2. Plate 4a: please provide calculation and/or reference backup for Displacement Response Spectral curve, and also describe the use of this curve in seismic analysis. If it is unnecessary information, please remove it.
- 3. Section 10.4 on page 9 of 19: please provide calculation backup for liquefaction analysis if the analysis was conducted.



MR. KHAN HOSSAIN February 2, 2011 Page 2 Oversight EA 07-257200

If you have any questions or comments, please contact me at 916-227-4533.

SEUNGWOON HAN, PH.D, P.E. Transportation Engineer - Civil Office of Geotechnical Design-South 1