PRELIMINARY FOUNDATION REPORT
PALO COMADO OC a.k.a. CHESEBRO RD OC (WIDEN)
BRIDGE NO. 53-1678
07-LA-101-PM 33.69
AGOURA HILLS, CALIFORNIA

Prepared for

Parsons Transportation Group, Inc.
2201 Dupont Dr # 200
Irvine, CA 92612

Prepared by

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GDC Project No. L-783
January 2, 2008
(Revised February 5, 2009)

GROUP DELTA CONSULTANTS

Certified MBE

Geotechnical Engineering
Geology
Hydrogeology
Earthquake Engineering
Materials Testing & Inspection
Forensic Services

January 2, 2008 (Revised February 5, 2009)

Parsons Transportation Group
2201 Dupont Drive Suite 200
Irvine, CA 92612

Attention: Mr. Thomas E. Sardo

Subject: Preliminary Foundation Report
Palo Comado OC a.k.a. Chesebro Rd OC (Widen)
Bridge No. 53-1678
07-LA-101-PM 33.69
Agoura Hills, California
GDC Project No. L-783

Dear Mr. Sardo:

Group Delta Consultants is pleased to submit our Preliminary Foundation Report for the subject bridge improvements. The report is based on review of existing information, and is to be included as part of the Advance Planning Study and Type Selection submittal. This report was prepared in general accordance with Caltrans Guidelines for Foundation Investigations and Reports (v. 1.2, June 2002). We have updated our report based on Caltrans Geotechnical Review Comments (see Appendix C).

We appreciate the opportunity to provide our services on this project and look forward to working with during the design and construction of the project.

If you have any questions, please call.

Sincerely,

GROUP DELTA CONSULTANTS, INC.

Curt Scheyhing

REGISTERED PROFESSIONAL ENGINEER
CURT SCHEYHING
No. 2766
Exp. 6-30-09
GEOTECHNICAL
STATE OF CALIFORNIA

Curt Scheyhing, P.E.
Senior Engineer

Kul Bhushan

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KUL BHUSHAN
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Exp. 12-31-09
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STATE OF CALIFORNIA

Kul Bhushan, Ph.D., G.E
Sr. Consulting Principal

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BRIDGE NO. 53-1678
07-LA-101-PM33.69
AGOURA HILLS, CALIFORNIA

1.0 INTRODUCTION

1.1 Project Description

Based on review of the Request for Proposals (RFP), we understand that the City of Agoura Hills in cooperation with Caltrans proposes to widen the Palo Comado OC (a.k.a. Chesebro Road OC) over the U.S. Route 101 in Los Angeles County (see Figures 1 and 2). The existing bridge constructed in 1963 is a 4-span structure that will be widened as part of this project. The as-built General Plan and Foundation Plan are shown in Figures 3 and 4, respectively. The overcrossing currently contains one lane of traffic in each direction, and has a sidewalk on the west side of the bridge. No plans showing the extent or location of the widened structure are currently available, nor was the information included in the RFP; therefore we assume that widening may take place on one or both sides of the existing bridge. Ancillary improvements also include minor ramp and traffic modifications, possible future integration into a roundabout north of the bridge, and other related changes.

1.2 Project Location

The site coordinates are approximately:

- Latitude: 34.1433^{O}
- Longitude: -118.7379^{O}

A vicinity map is included in Figure 1.

2.0 SITE AND SUBSURFACE CONDITIONS

2.1 Topography and Drainage

The ground surface elevation on Chesebro Rd / Palo Comado Rd is between El. 933.5 and 934.0 feet at the abutments. The elevation at the freeway level ranges from about El. +910 feet below the south abutment to about El. 914 feet below the north abutment. Freeway drainage flows to the west. Slopes below the abutments are inclined at 1.5h: 1v and abutment approach side slopes range from 1.5h: 1v to 2h: 1v.

2.2 Site Geology

Based on the "Preliminary Geologic Map of the Los Angeles 30'x60' Quadrangle," (Yerkes and Campbell, 2005) the natural site geology at the bridge site consists of relatively young shallow alluvial deposits originating from Palo Comado and Cheseboro Canyons, overlying bedrock of the Calabasas Formation (Tcb). The site is shown on the geologic map in Figure 5, which shows Tcb exposed at the surface to the northeast of the bridge. Calabasas Formation undivided (early late Miocene and late middle Miocene) is generally interbedded clayey to silty sandstone and silty shale, containing local beds of sedimentary breccia (probable Conejo Volcanics) clasts. Many sandstone beds are lithologically similar to those in overlying, less-deformed Modelo Formation. Approach fills have been placed at the abutments over alluvial and bedrock materials.

2.3 Soil and Bedrock Conditions

One rotary boring and two penetration borings were performed at the site in June 1961, as shown on the as-built Log of Test Borings (LOTB) in Figure 6. The rotary boring was drilled to a depth of about 40 feet. The penetration borings reached refusal at depths of about 20 to 25 feet. Logs from Cast-in-Drilled-Hole (CIDH) piles installed in 1962 are also shown in the LOTB. ***Note: It appears that the pile logs may be shown at the wrong supports, since the bottom of footing elevations shown on the LOTB pile logs are reversed from those shown on the foundation plan. For example, the LOTB shows bottom of footing at Bent 2 to be at El. 907, while the Foundation Plan shows El. 900 feet for Bent 2.***

The LOTB indicates the sites is underlain by shallow alluvial soils or fill to depths of up to about 10 feet below freeway grade, which are in turn underlain by clay-silt shale materials. Approach fills up to about 25 feet high overlie the alluvium / shale at the abutments. The alluvial soils are generally clayey / silty materials and range from about 1 to 10 feet in depth below freeway grades. Bedrock underlying the alluvial materials is described as tan and gray clay-siltstone shale, which is considered a soft rock or hard clayey soil. The top of the shale appears to range

between El. 900 and 910 feet. No soils information is provided on the abutment fills.

2.4 Groundwater

Borings performed at the site in June 1961 did not encounter groundwater to depths of roughly 40 feet. Pile logs performed during original pile construction in 1962 encountered perched groundwater within the shale at a depth of roughly 25 feet below freeway grade (approximately El. +887 feet).

Based on California Geological Survey Seismic Hazard Evaluation of the Calabasas 7.5-Minute Quadrangle (2001), the highest historical groundwater at the subject bridge is approximately 20 foot deep (see Figure 7). Reference depth is unknown, but assuming freeway grade as reference depth the high historical groundwater depth appears similar to the groundwater conditions shown on the As-Built LOTB. Perched groundwater may be encountered in the shale at 20 to 25 feet below freeway grades.

2.5 Seismicity

The site location is shown on the Caltrans 1996 Seismic Hazard Map in Figure 8. Using Caltrans deterministic methodology, design accelerations are based on the rated Magnitudes of the Faults, the fault to site distances, and the type of faulting (reverse, thrust, strike-slip, etc.). As indicted in Figure 8, the parameters for the closest contributing faults to the site are:

Fault Name[1]	Fault Type[1]	Magnitude[1]	Distance[2] (km)
Chatsworth South (CWS)	Unclassified	6.25	7
Chatsworth North (CWN)	Unclassified	6.5	10
Malibu Coast-Santa Monica-Hollywood-Raymond (MMR)	Reverse-Oblique	7.5	12

1. From Caltrans "A Technical Report to Accompany the Caltrans California Seismic Hazard Map 1996 (Based on Maximum Credible Earthquakes)."

2. Scaled from Caltrans "Caltrans California Seismic Hazard Map 1996."

3.0 AS-BUILT DATA

3.1 General

GDC evaluated foundation systems for the subject bridge based on the original 1962 As-Built plans (see Appendix A). The As-Built General Plan is shown in Figure 3, the As-Built Foundation Plan is shown in Figure 4, and the As-Built Log of Test Boring (LOTB) is shown in Figure 6.

It appears that the footing elevations for Bent 2 and 4 are reversed on the LOTB relative to the As-Built Foundation Plan. For purposes of this report, it has been assumed that the footing elevations on the As-Built Foundation Plan are correct. Due to the discrepancy between the LOTB and the Foundation Plan, tip elevations may have been transposed between Bents 2 and 4. Therefore, in our summary of existing pile tip elevations in Table 1, we have given a range to account for the differences between Bents 2 and 4.

3.2 Existing Bridge and Foundations

A brief summary of the existing bridge and foundations is presented below:

- The bridge structure is a four-span bridge with pre-stressed pre-cast "I" girders built in 1963 (see Figure 3). One I-girder was replaced on span 3 in 2006 (see Appendix B);
- All foundations are supported on 45-ton (90 kip) design capacity Cast In Drilled Hole (CIDH) piles (pile diameter = 16 inches);
- The bottom of footing elevation at both abutments is El. 924.5 feet. Average tip elevation at the abutments is El. +886.5 feet. The average pile penetration length at the abutments is 38 feet (see Figure 6);
- Based on the Foundation Plan (Figure 4) the bottom of footing elevation at Bent 2 is El. 900 feet. Average tip elevation at Bent 2 is about El. 884 to 887 feet. The average pile penetration length is about 13 to 16 feet;
- Bottom of footing elevation at Bent 3 is 903 feet. The average tip elevation at Bent 3 is El. 881 feet. The average pile penetration length is 22 feet;
- Bottom of footing elevation at Bent 4 is 907 feet. The average tip elevation at Bent 4 is at El. 884 to 887 feet. The average pile penetration length is 20 to 23 feet;

A summary of each existing foundation support is presented in Table 1.

4.0 SEISMIC EVALUATION

4.1 Potential Seismic Hazards

The project is located in a seismically active area. Potential geologic and seismic hazards for the site include ground rupture, seismic shaking, slope instability, lateral spreading, subsidence, liquefaction, seismic compaction and settlement, and tsunamis / flooding. The site is located in a state liquefaction hazard zone as shown in Figure 9. The site location on Caltrans 1996 Seismic Hazard Map is illustrated in Figure 8.

4.2 Ground Surface Rupture

The site is not located in an Alquist-Priolo Earthquake Fault Zone. No active faults are known to cross the site or project toward the site. The closest fault is at a distance of 7 km. Due to the distance from the closest faults ground rupture due to faulting is not considered a significant hazard at the site, and a fault rupture investigation is not needed. However, ground shaking due to nearby and distant earthquakes should be anticipated during the life of the bridge.

4.3 Ground Motion

GDC evaluated seismic data from the Caltrans California Seismic Hazard Map (Figure 8) and accompanying Report (1996). The bridge site is located between the 0.4 and 0.5g Peak Bedrock Acceleration (PBA) contours, which is rounded up to a design PBA of 0.5g. The closest potentially controlling faults to the site are the Chatsworth South Fault at a distance of 7 km with a rated maximum credible magnitude (MCE) of 6.25, the Chatsworth North Fault at a distance of 10 km with a rated magnitude of 6.5, and the Malibu Coast-Santa Monica-Hollywood-Raymond Fault with Magnitude 7.5 at a distance of 12 km from the site.

Caltrans Guidelines for Foundation Investigations and Reports requires verification of the PBA determined above using the attenuation relationships presented by Sadigh et. al. (1997) and Geomatrix, which considers the type of controlling faults and gives 10% higher accelerations for Reverse/Oblique and 20% higher accelerations for Reverse/Thrust type of faulting. A summary of site to closest mapped fault distance, and PBA from Caltrans Map and Sadigh 1997 / Geomatrix for the bridge extents is presented in the following table:

Fault Name Abbreviation (Type)	Fault Name	Fault to Site Distance (km)	Magnitude M_w	Deterministic PBA (g's)	
				Rounded Up Caltrans 1996 Map	Sadigh (1997)
CWS (Unclassified)	Chatsworth South	7	6.25	0.5	0.41
CWN (Unclassified)	Chatsworth North	10	6.5	-	0.38
MMR (Reverse/ Oblique)	Malibu Coast, Santa Monica, Hollywood, Raymond	12	7.5	0.5	0.43

The unclassified faults have been assumed to be reverse/thrust faults. The largest site acceleration or design PBA is 0.5g.

4.4 ARS Curve

Since the site is underlain at shallow depth by shale bedrock, and the bridge is supported on piles within the bedrock, we recommend Soil Type C for selection of ARS curves. The controlling Caltrans Seismic Design Criteria (SDC) ARS Curve at the site is for Peak Bedrock Acceleration of 0.5g, Soil Profile Type C, and MCE magnitude of 7.25+/-0.25. In addition, to account for near-source effect (site less than 15 km from fault), the following adjustments on the spectral acceleration values are recommended on the Caltrans SDC response spectra:

- 20% increase for periods equal to or greater than 1.0 second.
- No changes for periods less than 0.5 second.
- Linear interpolation for periods between 0.5 second and 1.0 second.

The recommended ARS curve is presented in Figure 10.

4.5 Liquefaction Evalauation

Liquefaction involves a sudden loss in strength of a saturated, cohesionless soil (predominantly sands, silty sands, and non-plastic silts) caused by cyclic loading such as an earthquake. This results in temporary transformation of the soil to a fluid mass. Typically, liquefaction occurs in areas where groundwater is less than 50 feet from the surface and where the soils contain zones of saturated loose to medium dense cohesionless materials. The site is located in a mapped liquefaction hazard zone in accordance with California Geological Survey (CGS) Seismic Hazard Zone Report for the Calabasas 7.5 Minute Quadrangle as shown in Figure 9, due to its location in an alluvial canyon.

Groundwater encountered during original pile construction in 1962 was at roughly El. +887 feet or at a depth of about 25 ft below the freeway grade. Highest historical groundwater in this area based on Figure 7 is approximately 20 feet deep, or near El. 890 feet. Based upon the 1962 As-Built LOTB data sheet (Figure 6) earth materials below the highest historical groundwater are shale bedrock not subject to liquefaction. Therefore, potential for liquefaction at the site is low.

4.6 Other Seismic Hazards

The site has no known history of subsidence. The site is generally level, the embankment slopes are only about 25 feet high, were engineered during bridge construction, and the subsurface consists of materials not subject to liquefaction. Therefore, seismic slope stability is not expected to be a major issue. Stability of abutment slopes will be evaluated in the SFR.

All low-lying areas along California's coast are subject to potentially dangerous tsunamis. Tsunamis are long period waves generated primarily from distant and local offshore earthquakes, landslides, or volcanic eruptions. Due to the distance of the site from the coast and site elevations of more than 900 feet above mean sea level (MSL), tsunamis are not considered a significant hazard at the site.

5.0 PRELIMINARY FOUNDATION RECOMMENDATIONS

5.1 Existing Foundations

The bridge is supported on 16-inch diameter CIDH piles penetrating into shale bedrock. A summary of as-built foundations is presented in Table 1.

5.1.1 Axial Pile Capacities

GDC evaluated the ultimate axial compressive and uplift capacities of the existing piles. Shale bedrock would likely have ultimate compressive skin friction ranging from 2 to 3 ksf, and fill or alluvial materials may have ultimate compressive skin friction of 0.5 to 1 ksf. We neglected end bearing capacity (Caltrans does not allow use of end bearing for CIDH piles less than 2 feet diameter). Based on our evaluation and reported penetration through soils and into shale bedrock, nominal compression of 180 kips and nominal tension of 90 kips appear to be reasonable design values. The recommended ultimate compressive and uplift capacities of the original piles are shown in Table 1.

5.1.2 Lateral Pile Capacities

Resistance to lateral loads may be developed by passive soil pressures acting on the side of the pile caps, where present, and by the lateral capacity of the piles. The Caltrans Bridge Design Specifications Manual, Section 4.5.6.5.1, recommends a standard lateral capacity of 13 kips for 16 inch diameter CIDH concrete piles at ¼ inch deflection. These values require a minimum SPT N value of 10. Based on the as-built LOTB, this site should satisfy that requirement, and these preliminary lateral capacities may be used for design. Site specific lateral pile capacity at the site should be determined after site-specific borings are performed during the PS&E stage of the project.

5.1.3 Abutment Passive Resistance

The ultimate lateral capacity of an abutment wall is a function of the height of the abutment wall that is acted on by the passive soil pressure on the backfill. The Caltrans Seismic Design Criteria (SDC), Section 7.8, dated February 2004 recommends a passive pressure of 5 ksf for a wall height of 5.5 feet based on full-scale abutment testing conducted at UC Davis. For wall heights other than 5.5 feet, the passive pressure may be determined by multiplying the 5-ksf value with the ratio (H/5.5) where H is wall height in feet in accordance with SDC. For higher walls the maximum value of the passive resistance should be limited to 7.3 ksf corresponding to an abutment height of 8 feet.

5.2 New Foundations

Similar 16-inch CIDH piles may be used for the proposed widening.

5.2.1 Axial Pile Capacities

Assuming the same bottom of footing elevations as the existing bridge, for 45 ton (90 kip) design capacity, pile lengths at abutments of 35 to 40 feet are anticipated, and for nominal compression at bents of 180 kips (2 times design load), pile lengths on the order of 20 to 25 feet are expected. About 10 kips nominal capacity is available for each additional foot of penetration. If higher capacity is required at the bents, 70 ton (140 kip) piles with nominal resistance of 280 kips could be used, with lengths on the order of 30 to 35 feet. Note that Caltrans guidelines do not allow drilled piles in excess of 30 times the diameter, or about 40 feet for the 16 inch piles. Caltrans does not allow use of battered CIDH piles. Caltrans does not allow use of end bearing for piles less than 2 feet diameter.

We recommend that all the piles be installed at a minimum spacing of 2½ pile diameters center-to-center. Since the CIDH Piles will be drilled into bedrock, end bearing is neglected in design, and friction in bedrock is likely higher than estimated, it is our opinion that piles with this minimum spacing will not require a reduction in vertical capacity for group action.

5.2.2 Lateral Pile Capacities

Preliminary lateral capacity of 16 inch CIDH concrete piles at abutments and bents may be based on the Caltrans Bridge Design Specifications Manual, Section 4.5.6.5.1. This is 13 kips for the 16 inch CIDH concrete piles at ¼ inch deflection. These values assume a minimum SPT N value of 10. Actual capacity will likely be higher. Group effects on lateral capacity should be considered based on pile spacing and number of rows of piles, in accordance with Caltrans Geo-Research Group, Research Notes, "Lateral Load Tests of Pile Groups Lead to Improved Design Recommendations," GRG Vol. 1, No. 6. Site specific lateral pile capacity at the site should be determined after site-specific borings are performed and foundation layouts are available during the PS&E stage of the project.

5.3 Pile Installation

Based on review of the LOTBs, drilling into the shale bedrock can be accomplished with moderate to heavy effort using heavy duty drilling equipment. Soils at the site do not appear to have high caving potential, groundwater is limited to seeps in the bedrock, and therefore open-hole construction is likely to be possible. Detailed recommendations for pile constructability will be provided at the PS&E stage in the Foundation Report, once additional borings are performed.

5.4 Scour Potential

The site is not located within an existing channel. As such, scour is not considered a significant hazard at the site.

5.5 Soil Corrosion Potential

Corrosion data for the site is unavailable. As such, corrosion potential of existing site soils will need to be evaluated. Site specific corrosion evaluation for the project should be based upon corrosion sampling and testing per Caltrans Corrosion Guidelines and Bridge Design Specifications.

6.0 ADDITIONAL INVESTIGATIONS

To develop site specific data for foundation design, we propose a total of five hollow stem auger borings at the site (one per support). Borings would extend below the anticipated pile tips. The results of the borings will be correlated with the existing LOTBs and used to develop final recommendations for the foundation design of the new addition, and retrofit or replacement of the existing bridge. Log of the Test Boring Sheets will be provided in the Foundation Report at the PS&E stage for the proposed widening.

7.0 LIMITATIONS

GDC's recommendations and evaluations were performed using generally accepted engineering approaches and principles available at this time, and the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical engineers practicing in this area. No other representation, either expressed or implied, is included in our report.

8.0 REFERENCES

California Department of Conservation, Division of Mines and Geology, "Seismic Hazard Zone Report for the Calabasas 7.5-Minute Quadrangle, Los Angeles and Ventura Counties, California" 1997.

California Department of Conservation, Division of Mines and Geology, "State of California Seismic Hazard Zones, Calabasas Quadrangle," Official Map, February 1, 1998.

Caltrans, "Bridge Design Specifications," April, 2000.

Caltrans, "Corrosion Guidelines," Version 1.0, September 2003.

Caltrans Geo-Research Group, Research Notes, "Lateral Load Tests of Pile Groups Lead to Improved Design Recommendations," GRG Vol. 1, No. 6.

Caltrans, "Guidelines for Foundation Investigations and Reports," Version 1.2, June 2002.

Mualchin, L., and Jones, A. L., "Peak Acceleration From Maximum Credible Earthquake in California (Rock and Stiff Soil Sites)", OFR 92-1, California Division of Mines and Geology, 1996.

Mualchin, L., 1996, "A Technical Report to Accompany the Caltrans California Seismic Hazard Map 1996," A report prepared by the California Department of Transportation, Engineering Service Center, Office of Earthquake Engineering, Sacramento, California, dated July 1996.

Ziony, J.I., Editor, "Evaluating Earthquake in the Los Angeles Region--An Earth Science Perspective", United States Geological Survey Professional Paper 1360, 1985.

TABLES

TABLE 1:SUMMARY OF AS-BUILT FOUNDATION CHARACTERISTICS
Palo Comado OC a.k.a Chesebro Road OC, Bridge No. 53-1678
07-LA-101 PM 33.69

Support Location	Foundation Type	Number of Piles	Capacity			Average Bottom of Pile Cap Elevation	Average Pile Tip Elevation	Average Length of Pile
			Design Compression	Ultimate Compressive	Ultimate Uplift			
			Kips	Kips	Kips	ft	ft	ft
Abut. 1	Cast In Drilled Hole (CIDH)	5	90	180	90	924.5	886	38.5
Bent 2*	Cast In Drilled Hole (CIDH)	14	90	180	90	900	884 - 887	13 - 16
Bent 3	Cast In Drilled Hole (CIDH)	24	90	180	90	903	881	22.0
Bent 4*	Cast In Drilled Hole (CIDH)	14	90	180	90	907	884 - 887	20 - 23
Abut. 5	Cast In Drilled Hole (CIDH)	5	90	180	90	924.1	887	37.5

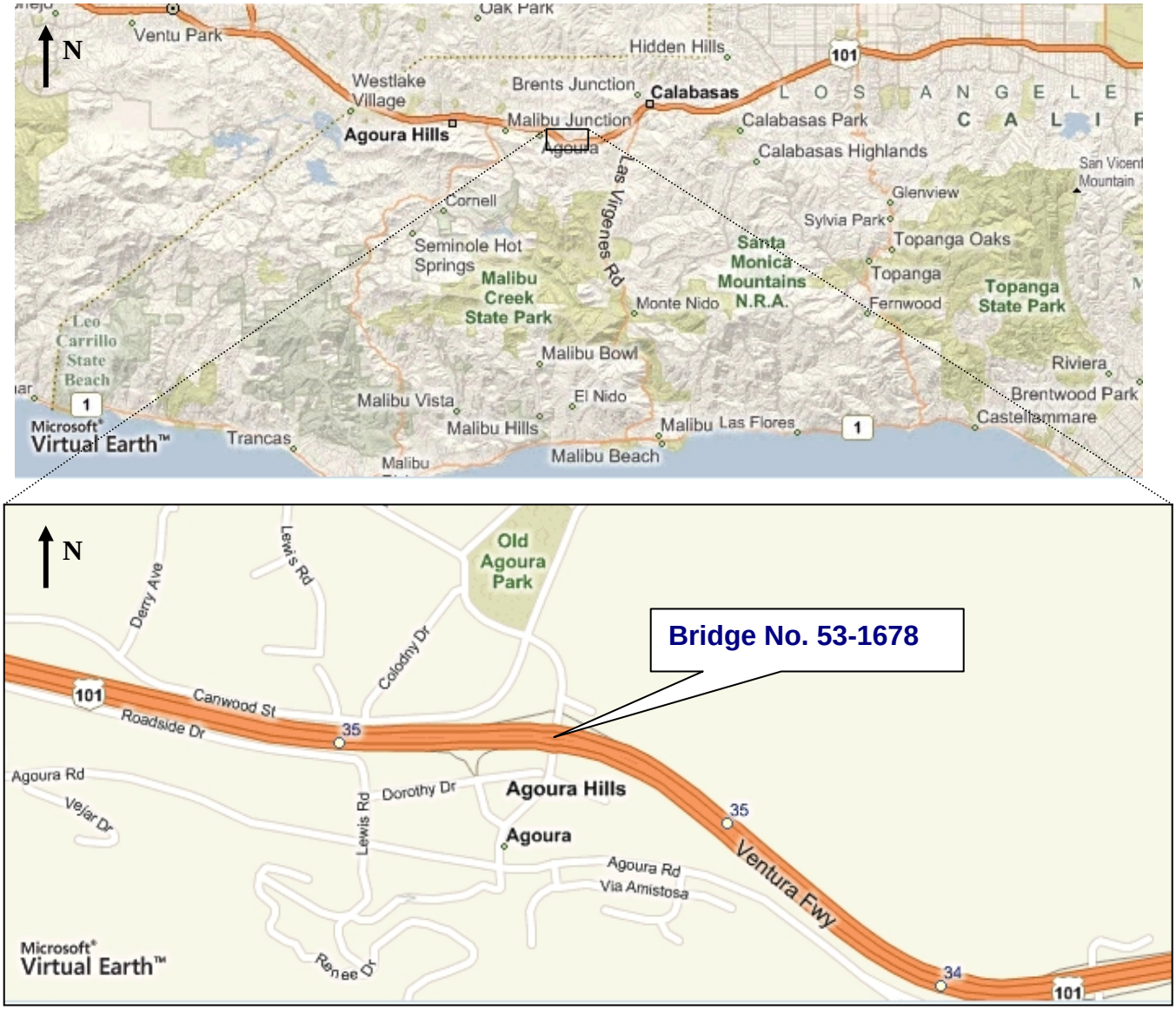
Reference: ***1962 As-Built Log of Test Borings (LOTB)as-built sheet***

Notes:

*Pile data recorded on 1962 As-Built LOTB for Bent 2 and Bent 4 are reversed relative to the As-Built Foundation Plan. For purposes of this report it was assumed that the footing elevation in the Foundation Plan is correct, and that the tip elevations may have been transposed between Bent 2 and Bent 4. Therefore, a range of tip elvations is reported..

1. All piles are vertical (no batter piles).
2. Specified tip elevations are El. +888.0 feet for Abut 1, Abut 5, and Bent 4. Specified tip elevations are El. +882.0 and El. +885.0 feet for Bent 2 and Bent 3, respectively.
3. CIDH pile diameter = 16.0 inches.
4. Recommended axial pile load capacity values for seismic design assuming the piles are in good condition and the connection can transmit the uplift loads. The recommended values are limited to twice the reported design values.

FIGURES



The base maps are from Microsoft's Virtual Earth

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GDC Project No. L-783

Palo Comado OC (a.k.a. Chesebro Road OC) Improvements

Vicinity Map

Figure 1

The base maps are from Microsoft's Virtual Earth and Google Earth

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GDC Project No. L-783

Palo Comado OC (a.k.a. Chesebro Road OC) Improvements

Aerial Photographs

Figure 2

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.			57	77

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
7	LA	101		57	77

VII | LA | 5

P.M. 33.7

18+50
El 953.33

+ 0.370 %

20+50.00 B.V.C.
El. 934.27

50' V.C. - Plc = 3.64 % / 1% / 2

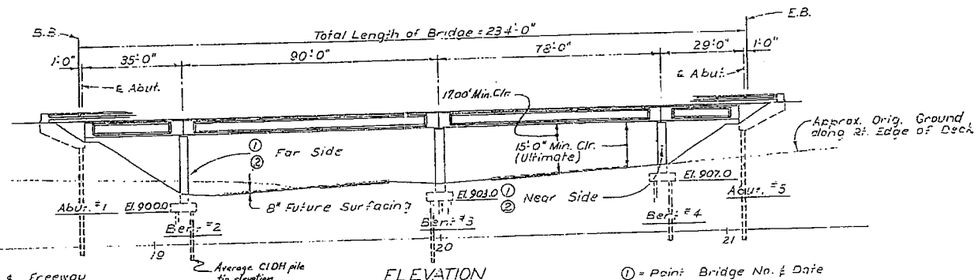
21+00.00 E.V.C.
El. 934.01

-1.10 %

PROFILE GRADE

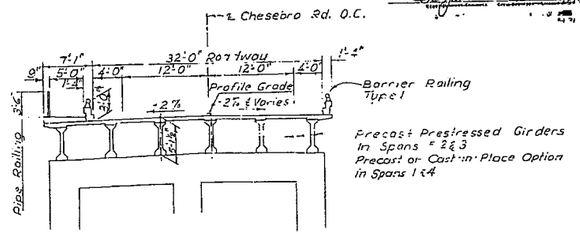
Concrete
Cast-in-Drilled Hole Piles

Location	Specified Tip Elev.
Abut. No. 1	886.0
Bent " 2	885.0
Bent " 3	882.0
Bent " 4	888.0
Abut. " 5	886.0



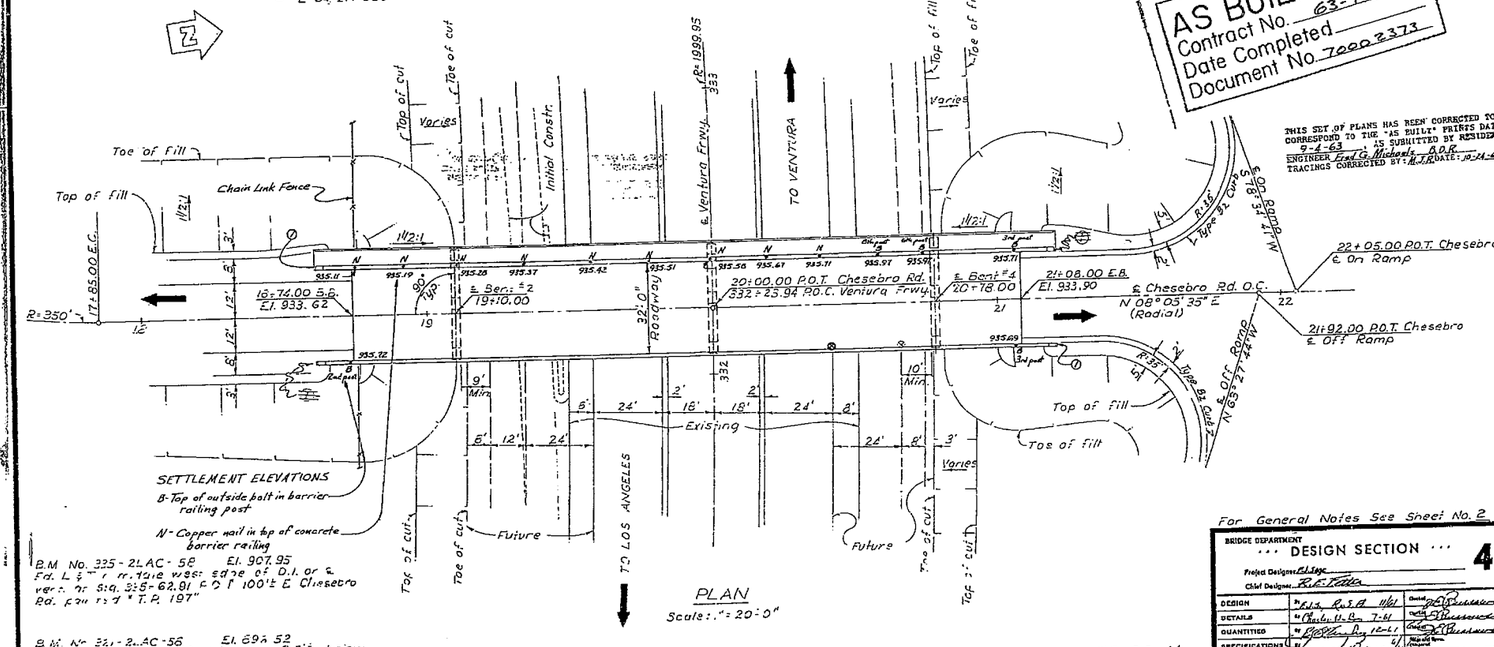
ELEVATION
Scale: 1" = 20'-0"

① = Point Bridge No. & Date
② = Point Chesebro Rd. O.C.
⊗ Indicates point of minimum vertical clearance.



TYPICAL SECTION
Scale: 1/8" = 1'-0"

Z



SETTLEMENT ELEVATIONS
B-Top of outside bolt in barrier railing post
N-Copper nail in top of concrete barrier railing

B.M. No. 335-2LAC-58 El. 907.95
Fd. L.S. "T" in rim at the west edge of D.I. or ℄ vert. at Sta. 335-62.81 P.O.T. 100'± E. Chesebro Rd. Sta. 1+51 "T.P. 197"

B.M. No. 321-2LAC-56 El. 894.52
Fd. drill hole on "T" in conc. 0.2'± below FL. Median strip or ℄ Vert. at Sta. 321+39.63 B.C.

PLAN
Scale: 1" = 20'-0"

L.L. = H20-S6-44
& Alternative

AS BUILT PLANS
Contract No. 63-7V13C5S
Date Completed
Document No. 7000 2373

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 9-1-63 AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels
TRACINGS CORRECTED BY: A.J. DATE: 10-21-63

INDEX TO PLANS

APPROXIMATE QUANTITIES

*STRUCTURE EXCAVATION (BRIDGE)	310 C.Y.
*STRUCTURE BACKFILL (BRIDGE)	180 C.Y.
16" C.I.D.H. CONCRETE PILING	1,210 L.F.
FURNISHING PC/PS CONCRETE GIRDERS (90'-0")	6 EA.
FURNISHING PC/PS CONCRETE GIRDERS (78'-0")	6 EA.
ERECTING PC/PS CONCRETE GIRDERS	12 EA.
*CLASS "A" CONCRETE (BRIDGE)	540 C.Y.
RUBBER WATERSTOPS	128 L.F.
JOINT SEALER	128 L.F.
*BAR REINFORCING STEEL (BRIDGE)	109,000 LBS.
MISCELLANEOUS METAL (BRIDGE)	400 LBS.
BARRIER RAILING (TYPE 1)	528 L.F.
PIPE BRIDGE RAILING (3'-6")	262 L.F.

*FINAL QUANTITIES

Contract No. 63-7V13C5S
Note: Route Change (VII-LA-101/5)

For General Notes See Sheet No. 2

BRIDGE DEPARTMENT
DESIGN SECTION 4
Project Designed: J.J. Sze
Chief Designer: Rich Cotton

DESIGN	By R.J.S. R.S.A. 11/61	Checked	
DETAILS	By C.L.B. W.B. 7-61	Checked	
QUANTITIES	By [illegible] 12-61	Checked	
SPECIFICATIONS	By [illegible] 4/	Checked	

Approval Recommended by: [illegible] Chief Engr. Manager
Approved: [illegible] Director of Public Works

VENTURA FREEWAY

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING
LOCATED ABOUT 400 FEET EAST OF THE INTERSECTION OF EXISTING CHESEBRO RD. AND VENTURA FRWY. IN LOS ANGELES COUNTY

GENERAL PLAN

SCALE AS NOTED | BRIDGE 53-1878 | FILE | DRAWING C-531676-1

Disregard prints bearing earlier numbers

PREL. DRAWING No. P-531676-1

I HEREBY CERTIFY 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.

DATE 1/11/72 SIGNATURE [illegible] TITLE [illegible]

Figure 3

FED. ROAD DIST. NO.	STATE	F. A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.		63	91

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5	C	3	75

VII LA 5

J. Johnston
DESIGN ENGINEER
October 8, 1962

335+37.72 E.C. ℄ Ventura Frwy
N 164,753.718
E 64,186.391
S89° 08' 12"W
TO VENTURA
Tank
908
910
912
914
916
918
920
922
924
926
928
930
932
934
℄ ON-RAMP
S78° 34' 41"W
Shoulder
2' Shoulder
85
24' Rdwy
16' Median
16'
2' Shoulder
24' Rdwy
Shoulder
A.C.
Dirt
A.C.
20+00.00 P.O.T. ℄ Chesebro Rd. O.C.
332+23.93 P.O.C. ℄ Ventura Frwy.
N 164,734.045
E 64,499.240
22+05.00 P.O.T. ℄ Chesebro Rd O.C.
℄ ON-Ramp
R=1999.95
333
17+85.00 E.C. ℄ Chesebro Rd. O.C.
℄ Chesebro
Δ = 39° 14' 25"
R = 350
T = 124.77
L = 239.71
℄ Abut. #1
18+75.00
℄ Bent #2
19+10.00
℄ Bent #3
℄ Bent #4
20+78.00
℄ Abut. #5
21+07.00
Bent #4 similar to Bent #2
Abut. #5 is similar to Abut #1
R=350'
℄ CHESEBRO RD. O.C.
N 08° 05' 35" E
18
19
21
22
902.0
903.0
9000
Notes:
Bottom of footing Elev. shown thus: 000.0
Abuts & Bents are normal to ℄ Chesebro Rd. O.C.
For Pile Layout See Sheets No. 4 & 5
℄ Frwy
Δ = 40° 19' 26"
R = 1999.95
T = 734.33
L = 1407.55
N 162,754.015
E 64,217.686
℄ VENTURA FRWY
TO LOS ANGELES
Exist E.P.
Exist E.P.
Exist E.P.
Exist E.P.
℄ OFF-RAMP
N63° 27' 44"W
4 wire fence
4 wire fence
321+30.19 B.C. ℄ Ventura Frwy
N164,298.839
E 65,487.850
21+92.00 P.O.T. ℄ Chesebro Rd. O.C.
℄ OFF-Ramp

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 7-16-63 AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels - B.O.R.
TRACINGS CORRECTED BY: M.V.K. DATE: 10-15-63

BENCH MARKS

B.M. No. 335-2LAC-58 Elev 907.95
Fd. L.E.T. in middle west edge of D.I. on ℄ vent. at sta. 335+62.91 P.O.T. 100'± E. Chesebro Rd. painted T.P. 197"

B.M. No 321-2 LAC-58 Elev. 896.52
Fd. plum. cap on T Bar in conc., 0.2'± below Fl. Median strip on ℄ vent at sta. 321+39.63 B.C.

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 7000 2373

CONTOURS CHECKED & VERIFIED IN FIELD
Date: June 1961
By: J.E.B.

Drawn By H R Mariscal 6-26-61
Checked By E.G. Nichols 6-27-61

BRIDGE DEPARTMENT
DESIGN SECTION

Section Supervisor	R.A. Foster
DESIGN	F.H.S. F.S.B. W.H.
DETAILS	W.H. 11-61
QUANTITIES	W.H. 11-61
	R.A.F. 12-61

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING

FOUNDATION PLAN

SCALE 1"=20' | BRIDGE 53-1676 | FILE 8-53 | DRAWING C-531678-3

Diagonal prefix bearing earlier numbers → PREL. DRAWING NO. P- 531678

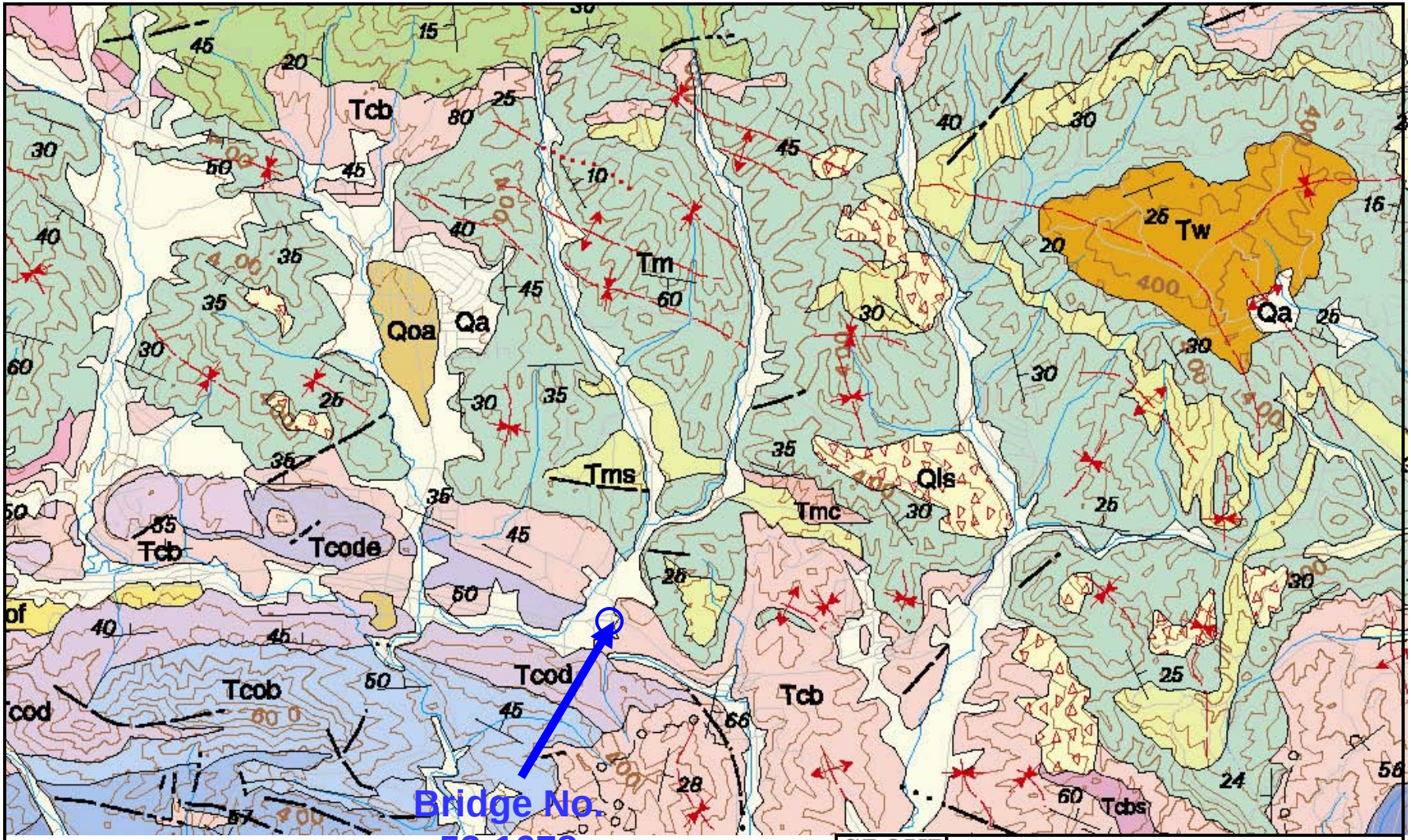
I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF PUBLIC WORKS.

DATE 1/11/72 SIGNATURE [illegible] TITLE

SCALE 1"=50' 0 50 100 200 300 400 500 600 700
SCALE 1"=20' 0 10 20 30 40 50 60 70 80 90 100 200 300
MICROFILM - STATE OF CALIFORNIA - DEPARTMENT OF PUBLIC WORKS - MICROFILM

59

Figure 4



GDC Project No. L-783

Palo Comado OC (a.k.a. Chesebro Rd. OC)
Improvements
Agoura Hills, CA

GEOLOGY MAP

Figure 5

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CAL.			1	1

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5		15	15

VII LA 5

John Gabbertson
BRIDGE ENGINEER — CIVIL ENGINEER — LICENSED 24793
DATE APPROVED 12-15-61

BENCH MARK #335-2LAC-56

Fd L & T in middle West edge of D.I. on ℄ Ven. at Sta 335+62.91 P.O.T. 100'± E. Chesebro Rd. painted "T.P. 197"

ELEV. 907.95

5 = NO. PILES IN FOOTING OF ABUTMENT NO. 1
ACTUAL LENGTH OF PILES:
AV. 38.0 MAX. 38.0 MIN. 38.0
PILE TIP ELEVATION:
AV. 886.4 MAX. 886.5 MIN. 886.1
SPECIFIED TIP ELEV. 888.0

14 = NO. OF PILES IN FOOTING OF BENT NO. 2
ACTUAL LENGTH OF PILES:
AV. 16.1 MAX. 17.0 MIN. 15.5
PILE TIP ELEVATION:
AV. 883.9 MAX. 884.5 MIN. 883.0
SPECIFIED TIP ELEV. 885.0

14 = NO. OF PILES IN FOOTING OF BENT NO. 4
ACTUAL LENGTH OF PILES:
AV. 20.0 MAX. 20.0 MIN. 20.0
PILE TIP ELEVATION:
AV. 887.0 MAX. 887.0 MIN. 887.0
SPECIFIED TIP ELEVATION 888.0

5 = NO. PILES IN FOOTING OF ABUTMENT NO. 5
ACTUAL LENGTH OF PILES:
AV. 37.9 MAX. 38.1 MIN. 37.6
PILE TIP ELEVATION:
AV. 886.6 MAX. 887.1 MIN. 886.4
SPECIFIED TIP ELEV. 888.0

24 = NO. OF PILES IN FOOTING OF BENT NO. 3 (INCLUDING CCO #8)
ACTUAL LENGTH OF PILES
AV. 22.0 MAX. 22.0 MIN. 22.0
PILE TIP ELEVATION:
AV. 881.0 MAX. 881.0 MIN. 881.0
SPECIFIED TIP ELEVATION 882.0

Abut #1 · B-2 · B-1 · B-3 · Abut #5 · Logged pile · ℄ PROPOSED STRUCTURE · ℄ RETRACEMENT (RTE. 2) · TO VENTURA · TO L.A. · 332 · 18 · 19 · 21 · 22

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 70002373

PILE DATA

TYPE OF PILE - C.I.D.H.
HAMMER DATA -
PILE DIAMETER: TIP 16" BUTT 15"
PILE DESIGN LOAD = 45 TONS
FOR THE STRUCTURE:
NUMBER OF PILES = 55 + 7 IN CCO #8
EST. LENGTH OF PILING = 1,210 L.F.
ACTUAL LENGTH OF PILING = 1,259.2 + 154.0 L.F. CCO #8

Approximate existing ground line along ℄ Proposed Structure · Sta. 19+38 ℄ Prop. Structure · Sta. 20+69 ℄ Prop. Structure · Sta. 20+71 ℄ Prop. Structure · Bottom Ftg. El.+924.5 · Fill Material · B-1 · B-2 · B-3 · Soft & loose dark brown-black clayey silt. · Bottom Ftg. El.+907.0 · tan shale · gray shale · ground water · Slightly compact to compact tan-reddish brn. mottled clay-siltstone-shale. sandy clay · Bottom Ftg. El.+903.0 · Bottom Ftg. El.+900.0 · tan shale · gray shale · Dense to very dense blue grey clay-siltstone-shale. · 6-26-61 · 910 · 900 · 890 · 880 · 870

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 3-22-63, AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels, B.D.R.
TRACINGS CORRECTED BY: M.J.R. DATE: 10-29-63

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE June, 1961

FIELD STUDY	By: E.M.F. Curry 6.26.61
DRAWN	By: K. Tochino 7-7-61
CHECKED	By: Ole Bauman Jr. 7-24-61

Approval Recommended by: [illegible] Bridge Engineer
[illegible] Bridge Engineer
Approved: [illegible] Bridge Engineer
Senior Bridge Engineer

BRIDGE DEPARTMENT

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

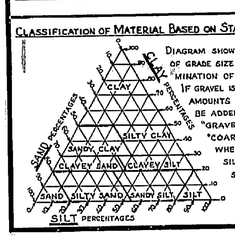


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND". THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

GRAVEL · SAND · SILT · CLAY · SANDY CLAY OR CLAYEY SAND · SANDY SILT OR SILTY SAND · SILTY CLAY OR CLAYEY SILT · PEAT AND/OR ORGANIC MATTER · FILL MATERIAL · IGNEOUS ROCK · SEDIMENTARY ROCK · METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

PENETROMETER · 2½" CONE PENETROMETER · SAMPLER BORING (DRY) · ROTARY BORING (WET) · AUGER BORING (DRY) · JET BORING · CORE BORING · TEST PIT

Top Hole El. · Location · B-N# · Groundwater surface G.W.S. · Date measured · Description of material · Blows per foot (Using ___ lb. hammer with a 12" Free fall) · Pulled pipe · Sample taken · Refusal · Date of boring
1" SOIL TUBE

Top Hole El. · Location · B-N# · Casing driven · Size of sampler (inches) · Blows per foot (Using a 140 lb. hammer with a 30" drop, or as noted) · Unconfined compressive strength (T/sq. ft.) · Vane shear · Shear strength (#/sq. ft.) · Description of material · Unit weight (#/cu. ft.) · % Moisture · Consolidation Test · G.W.S. · Elev. · Date measured · Conformable material change · Estimated material change · Unconformable material change · Date of boring
ROTARY BORING

Top Hole El. · Location · B-N# · Pushed · No. count · Seconds per foot (Using a N-2, Mt. Kiernan-Terry Air hammer @ 115 psi or as noted) · Average skin Friction above this point (#/sq. ft.) · Natural boring · G.W.S. · Date · Elev. · Date measured · Graphic representation of driving rate · Seconds per foot
PENETRATION BORING

NOTES

~~The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.~~
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO RD. OVERCROSSING

LOG OF TEST BORINGS

SCALE Horiz. 1"=20' Vert. 1"=10' | BRIDGE 53-1678 | FILE | DRAWING C-531678-15

PREL. DRAWING P-531678-15

I HEREBY CERTIFY 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.

DATE _____ SIGNATURE _____ TITLE _____

Figure 6

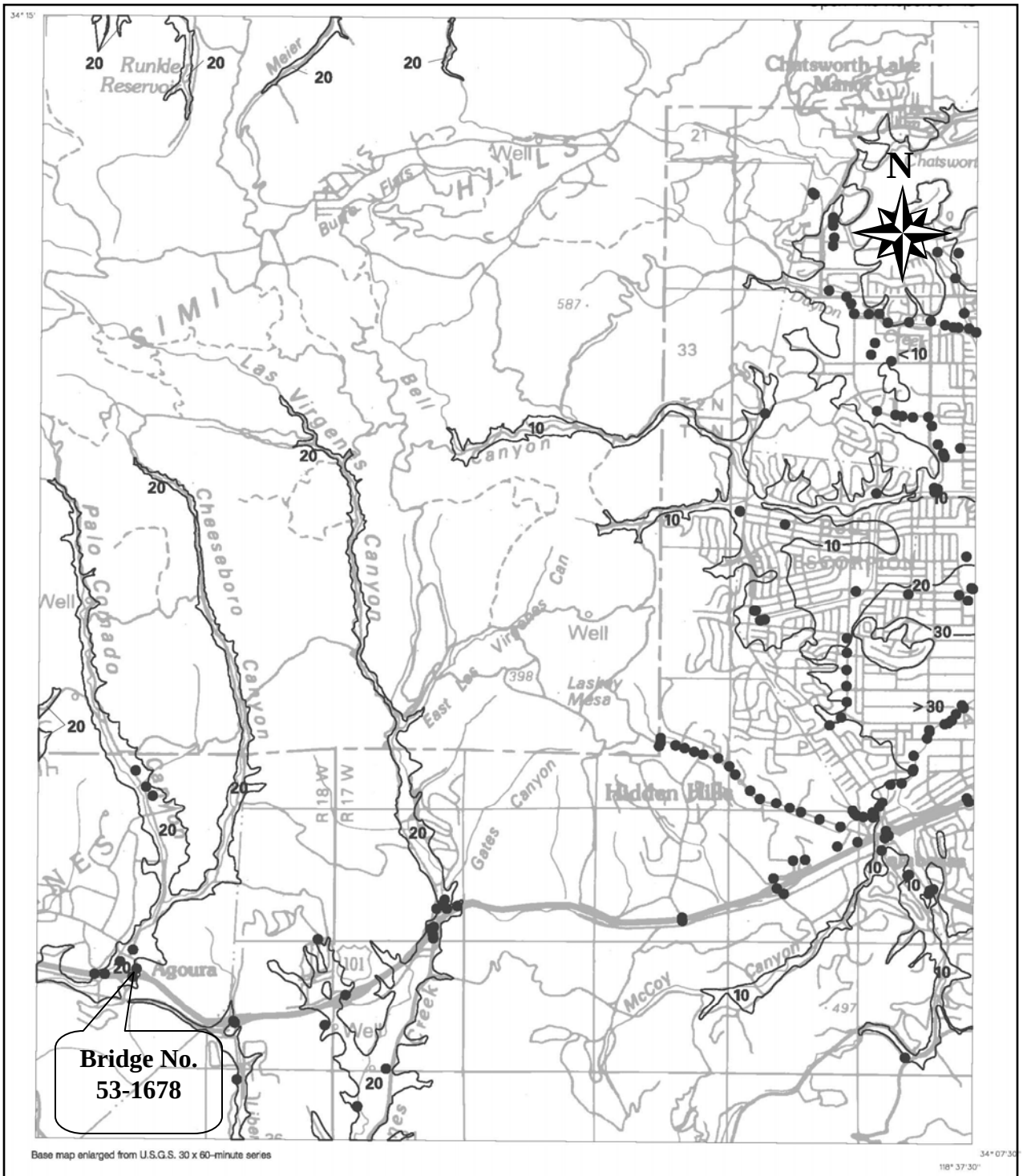
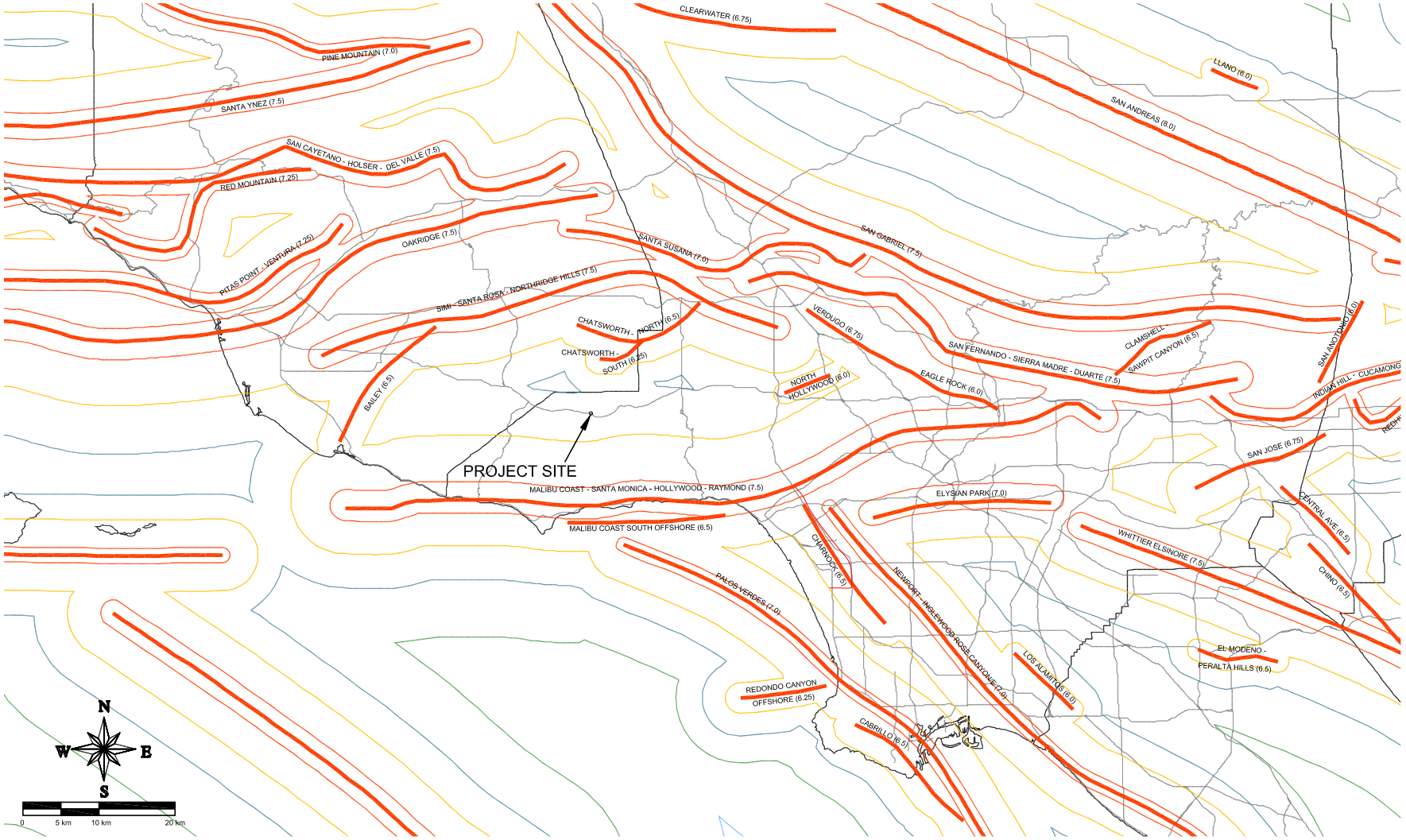


Plate 1.2 Depth to historically high ground water, and locations of boreholes used in this study, Calabasas 7.5-minute Quadrangle, California

● Borehole Site — 30 — Depth to ground water in feet — ONE MILE SCALE

NOTE: GRAPHIC SCALE AS SHOWN

GROUP DELTA CONSULTANTS	**Palo Comado OC** **a.k.a. Chesebro Road OC (Widen)** **Agoura Hills, CA** **GDC PROJECT NO. L-783**	**FIGURE 7** **HISTORICALLY HIGHEST GROUNDWATER MAP**



LEGEND

- 0.7g Peak Acceleration Contour
- 0.6g Peak Acceleration Contour
- 0.5g Peak Acceleration Contour
- 0.4g Peak Acceleration Contour
- 0.3g Peak Acceleration Contour
- 0.2g Peak Acceleration Contour
- 0.1g Peak Acceleration Contour

REF. : MUALCHIN, L. 1996, "CALIFORNIA SEISMIC HAZARD MAP 1996" CALIFORNIA DEPARTMENT OF TRANSPORTATION

GROUP DELTA

GDC PROJECT NO. L783

Palo Comado OC
a.k.a. Cheseboro Road OC
Improvements

Caltrans Fault and PBA Map

Figure 8

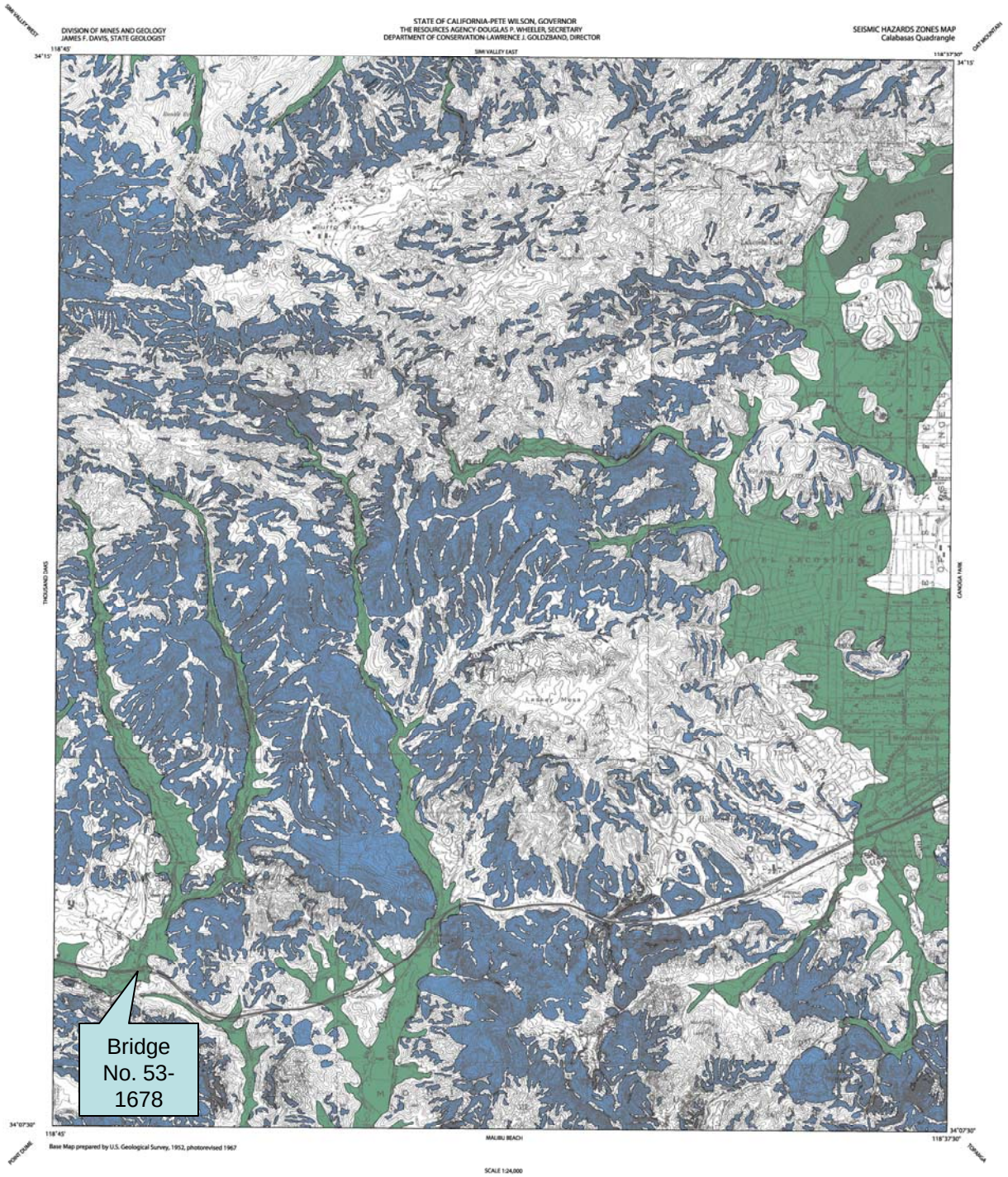
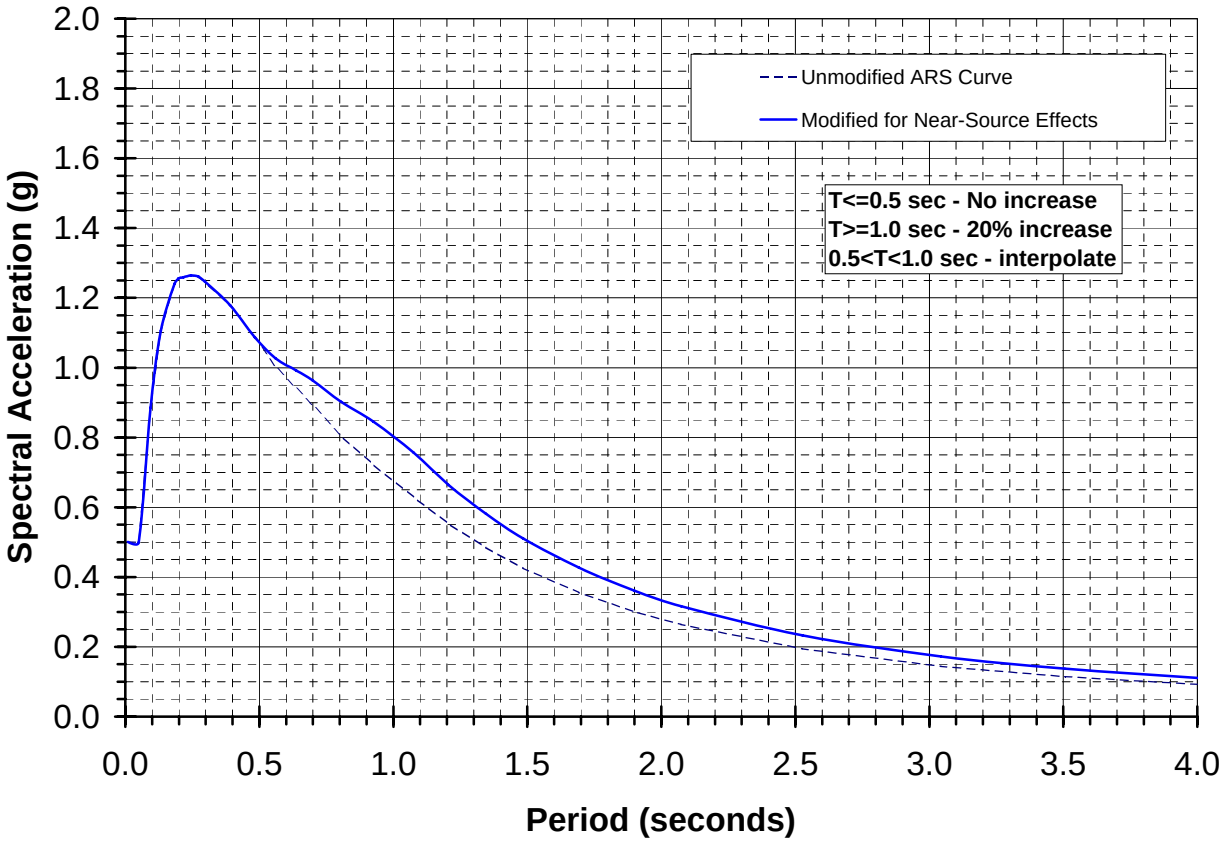

DIVISION OF MINES AND GEOLOGY
JAMES F. DAVIS, STATE GEOLOGIST
STATE OF CALIFORNIA-PETE WILSON, GOVERNOR
THE RESOURCES AGENCY-DOUGLAS P. WHEELER, SECRETARY
DEPARTMENT OF CONSERVATION-LAWRENCE J. GOLDZBAND, DIRECTOR
SEISMIC HAZARDS ZONES MAP
Calabasas Quadrangle
SIMI VALLEY WEST
SIMI VALLEY EAST
OAT MOUNTAIN
THOUSAND OAKS
CANOGA PARK
POINT DUME
TOPANGA
MALIBU BEACH
118°45'
118°37'30"
34°15'
34°07'30"
Bridge No. 53-1678
Base Map prepared by U.S. Geological Survey, 1952, photorevised 1967
SCALE 1:24,000
STATE OF CALIFORNIA
SEISMIC HAZARD ZONES
Delineated in compliance with
Chapter 7.8, Division 2 of the California Public Resources Code
(Seismic Hazards Mapping Act)
CALABASAS QUADRANGLE
OFFICIAL MAP
Released: February 1, 1998
STATE GEOLOGIST
PURPOSE OF MAP
This map will assist cities and counties in fulfilling their responsibilities for protecting the public safety from the effects of earthquake-triggered ground failure as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6).
For information regarding the scope and recommended methods to be used in conducting the required site investigations, see DMG Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.
For a general description of the Seismic Hazards Mapping Program, the Seismic Hazards Mapping Act and regulations, and related information, please refer to the draft User's Guide (see http://www.consrv.ca.gov/dmg/shezp/userguid.html).
Production of this map was funded by the Federal Emergency Management Agency's Hazard Mitigation Program and the Department of Conservation in cooperation with the Governor's Office of Emergency Services.
IMPORTANT - PLEASE NOTE
1) This map may not show all areas that have the potential for liquefaction, landsliding, strong earthquake ground shaking or other earthquake and geologic hazards. Also, a single earthquake capable of causing liquefaction or triggering landslide failure will not uniformly affect the entire area zoned.
2) Liquefaction zones may also contain areas susceptible to the effects of earthquake-induced landslides. This situation typically exists at or near the toe of existing landslides, downslope from rockfall or debris flow source areas, or adjacent to steep stream banks.
3) This map does not show Alquist-Priolo earthquake fault zones, if any, that may exist in this area. Please refer to the latest official map of earthquake fault zones for disclosures and other actions that are required by the Alquist-Priolo Earthquake Fault Zoning Act. For more information on this subject and and index to available maps, see DMG Special Publication 42.
4) Landslide zones on this map were determined, in part, by adapting methods first developed by the U.S. Geological Survey (USGS). A new generation of landslide hazard maps being prepared by the USGS (Jibson and Harp, in preparation) uses an experimental approach designed to explore new methods to assess earthquake-induced landslide hazards. Although aspects of this new methodology may be incorporated in future seismic hazard zone maps, the experimental USGS maps should not be used as substitutes for these official earthquake-induced landslide zone maps.
5) U.S. Geological Survey base map standards provide that 90 percent of cultural features be located within 40 feet (horizontal accuracy) at the scale of this map. The identification and location of liquefaction and earthquake-induced landslide zones are based on available data. However, the quality of data used is varied. The zone boundaries depicted have been drawn as accurately as possible at this scale.
6) Information on this map is not sufficient to serve as a substitute for the geologic and geotechnical site investigations required under Chapters 7.5 and 7.8 of Division 2 of the Public Resources Code.
7) DISCLAIMER: The State of California and the Department of Conservation make no representations or warranties regarding the accuracy of the data from which these maps were derived. Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.
MAP EXPLANATION
Zones of Required Investigation:
Liquefaction
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.
Earthquake-Induced Landslides
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.
DATA AND METHODOLOGY USED TO DEVELOP THIS MAP ARE PRESENTED IN THE FOLLOWING:
Seismic Hazard Evaluation of the Calabasas 7.5-minute quadrangle, Los Angeles and Ventura Counties, California: California Department of Conservation Division of Mines and Geology Open-File Report 97-13.
For additional information on seismic hazards in this map area, the rationale used for zoning, and additional references consulted, refer to DMG's World Wide Web site (http://www.consrv.ca.gov/dmg/).
Copyright© 1998 by the California Department of Conservation, Division of Mines and Geology. All rights reserved.

Figure 9



Digitized Spectra

PERIOD (Seconds)	Unmodified ARS-G'S	Near-Source Modified ARS-G'S
0.0100	0.5003	0.5003
0.0500	0.5002	0.5002
0.0946	0.8854	0.8854
0.1322	1.1055	1.1055
0.1838	1.2407	1.2407
0.1985	1.2555	1.2555
0.2173	1.2592	1.2592
0.2446	1.2647	1.2647
0.2739	1.2610	1.2610
0.2948	1.2481	1.2481
0.3899	1.1793	1.1793
0.4833	1.0865	1.0865
0.5603	1.0032	1.0274
0.6386	0.9395	0.9916
0.6980	0.8933	0.9640
0.8042	0.8048	0.9027
0.9257	0.7226	0.8456
1.0764	0.6301	0.7561
1.2056	0.5530	0.6636
1.3462	0.4848	0.5818
1.4843	0.4255	0.5106
1.6922	0.3560	0.4272
1.8989	0.3009	0.3611
2.0738	0.2638	0.3166
2.5266	0.1944	0.2333
3.0435	0.1438	0.1726
3.5058	0.1150	0.1380
4.0000	0.0922	0.1106

GROUP DELTA CONSULTANTS

Caltrans SDC ARS Curves
Soil Type C, M=7.5+/-0.25, PBA=0.5g

Figure 10

APPENDIX A
AS-BUILT PLANS (ORIGINAL CONSTRUCTION)

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CAL.			1	1

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5		15	15

VII LA 5

John Gabbertson
BRIDGE ENGINEER — CIVIL ENGINEER — LICENSED 24793
DATE APPROVED 12-25-62

BENCH MARK #335-2LAC-56

Fd L & T in middle West edge of D.I. on ℄ Ven. at Sta 335+62.91 P.O.T. 100'± E. Chesebro Rd. painted "T.P. 197"

ELEV. 907.95

5 = NO. PILES IN FOOTING OF ABUTMENT NO. 1
ACTUAL LENGTH OF PILES:
AV. 38.0 MAX. 38.0 MIN. 38.0
PILE TIP ELEVATION:
AV. 886.4 MAX. 886.5 MIN. 886.1
SPECIFIED TIP ELEV. 888.0

14 = NO. OF PILES IN FOOTING OF BENT NO. 2
ACTUAL LENGTH OF PILES:
AV. 16.1 MAX. 17.0 MIN. 15 5
PILE TIP ELEVATION:
AV. 883.9 MAX. 884.5 MIN. 883.0
SPECIFIED TIP ELEV 885.0

14 = NO. OF PILES IN FOOTING OF BENT NO. 4
ACTUAL LENGTH OF PILES:
AV. 20.0 MAX. 20.0 MIN. 20.0
PILE TIP ELEVATION:
AV. 887.0 MAX. 887.0 MIN. 887.0
SPECIFIED TIP ELEVATION 888.0

5 = NO. PILES IN FOOTING OF ABUTMENT NO. 5
ACTUAL LENGTH OF PILES:
AV. 37.9 MAX. 38.1 MIN. 37.6
PILE TIP ELEVATION:
AV. 886.6 MAX. 887.1 MIN. 886.4
SPECIFIED TIP ELEV. 888.0

24 = NO. OF PILES IN FOOTING OF BENT NO. 3 (INCLUDING CCO #8)
ACTUAL LENGTH OF PILES
AV. 22.0 MAX. 22.0 MIN. 22.0
PILE TIP ELEVATION:
AV. 881.0 MAX. 881.0 MIN. 881.0
SPECIFIED TIP ELEVATION 882.0

Abut #1 · B-2 · B-1 · B-3 · Abut #5 · Logged pile · ℄ PROPOSED STRUCTURE · ℄ RETRACEMENT (RTE. 2) · TO VENTURA · TO L.A. · 18 · 19 · 20 · 21 · 22 · 332 · 32.140

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 70002373

PILE DATA

TYPE OF PILE - C.I.D.H.
HAMMER DATA -
PILE DIAMETER: TIP 16" BUTT 15"
PILE DESIGN LOAD = 45 TONS
FOR THE STRUCTURE:
NUMBER OF PILES = 55 + 7 IN CCO #8
EST. LENGTH OF PILING = 1,210 L.F.
ACTUAL LENGTH OF PILING = 1,259.2 + 154.0 L.F. CCO #8

Approximate existing ground line along ℄ Proposed Structure · Fill Material · Bottom Pfg. El.+924.5 · Sta. 19+38 ℄ Prop. Structure · Sta. 20+69 ℄ Prop. Structure · Sta. 20+71 ℄ Prop. Structure · B-1 · B-2 · B-3 · 911.4 · 909.3 · 912.2 · Soft & loose dark brown-black clayey silt. · Bottom Pfg. El.+907.0 · tan shale · gray shale · ground water · Slightly compact to compact tan-reddish brown mottled clay-siltstone-shale. · Bottom Pfg. El.+903.0 · sandy clay · Bottom Pfg. El.+900.0 · tan shale · gray shale · Dense to very dense blue grey clay-siltstone-shale. · 6-26-61 · 910 · 900 · 890 · 880 · 870

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 3-22-63, AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels, B.D.E.
TRACINGS CORRECTED BY: M.J.R. DATE: 10-29-63

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION
DATE June, 1961

FIELD STUDY	
DRAWN	E. M. Curley 6-26-61
CHECKED	K. Tochino 7-2-61
	M. Zamora 7-25-61

Approval Recommended by: C. L. Hoffman, Chief Bridge Engineer, Office Engineering
Approved: [illegible] Bridge Engineer

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

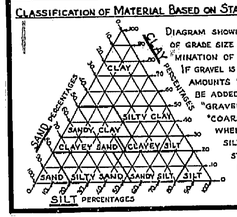


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND". THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

GRAVEL	SILTY CLAY OR CLAYEY SILT
SAND	PEAT AND/OR ORGANIC MATTER
SILT	FILL MATERIAL
CLAY	IGNEOUS ROCK
SANDY CLAY OR CLAYEY SAND	SEDIMENTARY ROCK
SANDY SILT OR SILTY SAND	METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

- PENETROMETER
- 2½" CONE PENETROMETER
- SAMPLER BORING (DRY)
- ROTARY BORING (WET)
- AUGER BORING (DRY)
- JET BORING
- CORE BORING
- TEST PIT

1" SOIL TUBE: Top Hole El. · Location · B-N# · Groundwater surface G.W.S. · Date measured · Blows per foot (Using 140 lb hammer with a 12" Free fall) · Description of material · Pulled pipe · Sample taken · Refusal · Date of boring

ROTARY BORING: Top Hole El. · Location · B-N# · Casing driven · Size of sampler (inches) · Blows per foot (Using a 140 lb hammer with a 30" drop, or as noted) · Unconfined compressive strength (T/sq. ft.) · Vane shear strength (#/sq. ft.) · Description of material · Unit weight (#/cu ft.) · % Moisture · Consolidation Test · Conformable material change · Estimated material change · Unconformable material change · Date of boring

PENETRATION BORING: Top Hole El. · Location · B-N# · Pushed · No. count · Seconds per foot (Using a N-2, Mt. Kiernan-Terry Air hammer @ 115 psi or as noted) · Average skin Friction above this point (#/sq. ft.) · Natural boring · G.W.S. · Date · Elev. measured · Graphic representation of driving rate · Seconds per foot

NOTES

~~The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.~~
Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO RD. OVERCROSSING

LOG OF TEST BORINGS

SCALE	BRIDGE	FILE	DRAWING
Horiz. 1"=20' Vert. 1"=10'	53-1678		C-531678-15

PREL. DRAWING P-531678-15

71

I HEREBY CERTIFY 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.

DATE _____ SIGNATURE _____ TITLE _____

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.			57	77

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5	WB	1	15

101

PM. 33.7

Date approved: 7-22-65

18+50
El. 933.53

+ 0.370 %

20+50.00 B.V.C.
El. 934.27

50' V.C. - Rc = 3,636 ft (1%)

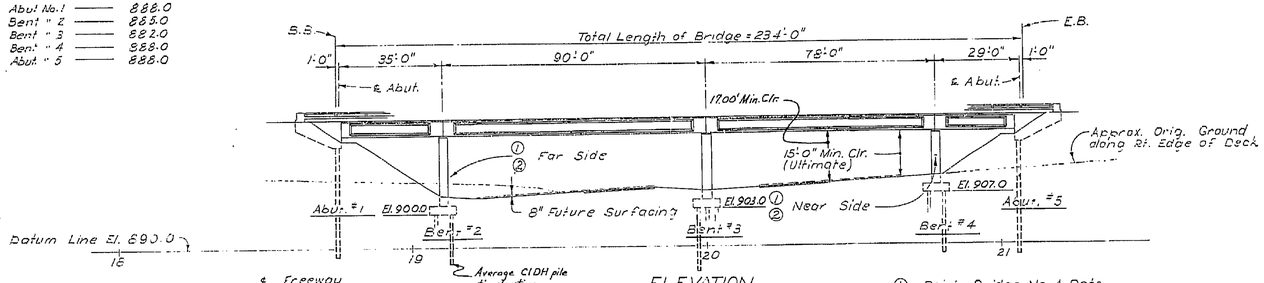
21+00.00 E.V.C.
El. 934.01

-1.404 %

PROFILE GRADE

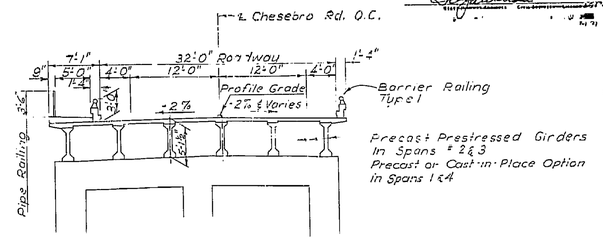
Concrete
Cast-in-Drilled Hole Piles

Location	Specified Tip Elev.
Abut. No. 1	888.0
Bent " 2	885.0
Bent " 3	882.0
Bent " 4	888.0
Abut " 5	888.0



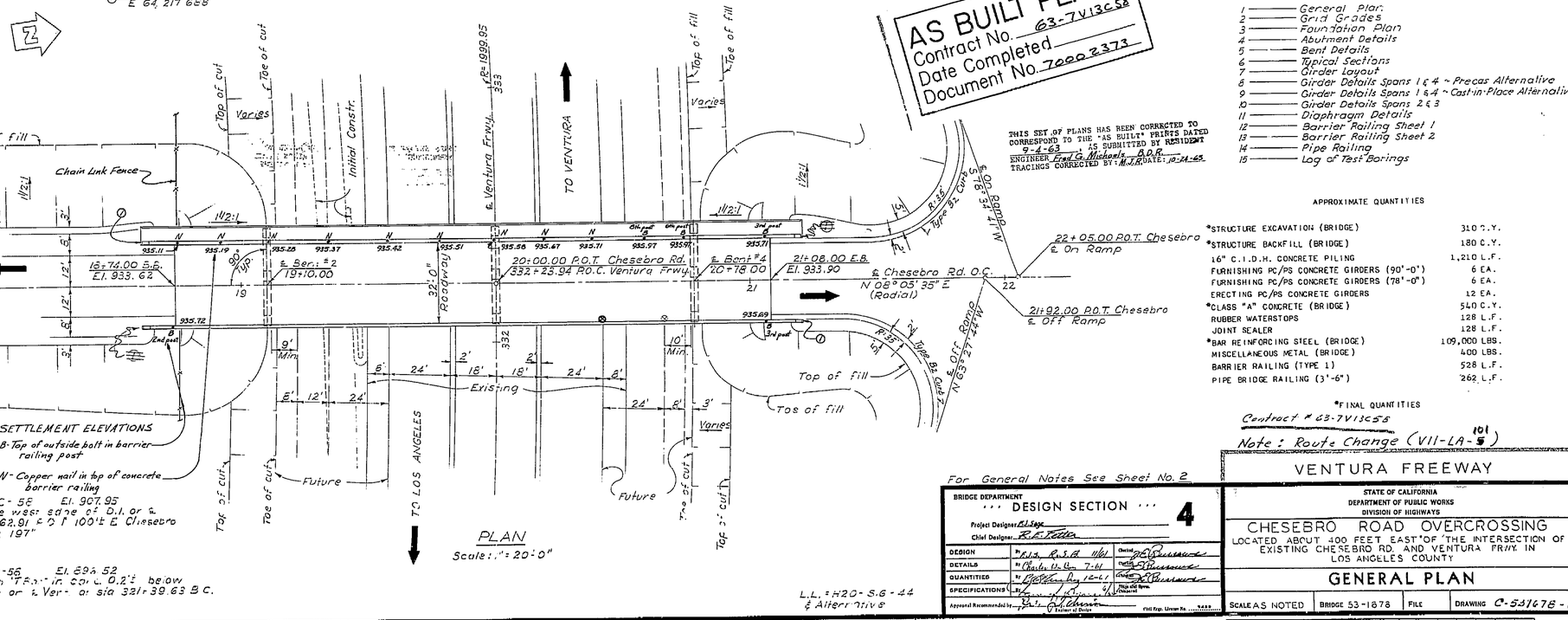
ELEVATION
Scale: 1" = 20'-0"

① = Point Bridge No. & Date
② = Point Chesebro Rd. O.C.
⊗ Indicates point of minimum vertical clearance.



TYPICAL SECTION
Scale: 1/8" = 1'-0"

℄ Freeway
Δ = 40° 19' 26"
R = 1999.95'
T = 734.33'
L = 1407.55'
⊙ N 162,764.015
E 64,217.688



PLAN
Scale: 1" = 20'-0"

SETTLEMENT ELEVATIONS
B-Top of outside bolt in barrier railing post
N-Copper nail in top of concrete barrier railing

B.M. No. 335-21AC-56 El. 907.95
Fd. L & T. in rr. tie west side of D.I. on ℄ vert. nr. Sta. 335+62.91 ℄ of 100'± E Chesebro Rd. painted "T.P. 197"

B.M. No. 321-21AC-56 El. 894.52
Fd. dim. cap on T.P. in conc. 0.2'± below F.L. Median strip on ℄ Ver. at Sta. 321+39.63 B.C.

L.L. = H20-S.6-44
& Alternative

INDEX TO PLANS

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 7000 2373

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 9-1-63, AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels, P.E.
TRACINGS CORRECTED BY M.M.R. DATE: 10-24-65

APPROXIMATE QUANTITIES

*STRUCTURE EXCAVATION (BRIDGE)	310 C.Y.
*STRUCTURE BACKFILL (BRIDGE)	180 C.Y.
16" C.I.D.H. CONCRETE PILING	1,210 L.F.
FURNISHING PC/PS CONCRETE GIRDERS (90'-0")	6 EA.
FURNISHING PC/PS CONCRETE GIRDERS (78'-0")	6 EA.
ERECTING PC/PS CONCRETE GIRDERS	12 EA.
*CLASS "A" CONCRETE (BRIDGE)	540 C.Y.
RUBBER WATERSTOPS	128 L.F.
JOINT SEALER	128 L.F.
*BAR REINFORCING STEEL (BRIDGE)	109,000 LBS.
MISCELLANEOUS METAL (BRIDGE)	400 LBS.
BARRIER RAILING (TYPE 1)	528 L.F.
PIPE BRIDGE RAILING (3'-6")	262 L.F.

*FINAL QUANTITIES

Contract # 63-7V13C56

Note: Route Change (VII-LA-101-5)

For General Notes See Sheet No. 2

BRIDGE DEPARTMENT
··· DESIGN SECTION ···
4

Project Designer: E.J. Sage
Chief Designer: R.A. Fetter

DESIGN	R.W.S., R.S.A. 11/61	Checked	J.C. Buenaventura
DETAILS	C. Chan, W. Yan 7-61	Checked	J.C. Buenaventura
QUANTITIES	G. Gerling, Jay 12-61	Checked	J.C. Buenaventura
SPECIFICATIONS	J. Sage, R. Rivera 6/	Prep. for Contract	

Approval Recommended by: [signature] Chief, Office of Bridges
Civil Engr. License No. 9488

VENTURA FREEWAY

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING
LOCATED ABOUT 400 FEET EAST OF THE INTERSECTION OF EXISTING CHESEBRO RD. AND VENTURA FRWY. IN LOS ANGELES COUNTY

GENERAL PLAN

SCALE AS NOTED	BRIDGE 53-1678	FILE	DRAWING C-531678-1

Disregard prints bearing earlier numbers → PREL. DRAWING No. P-531678-1

I HEREBY CERTIFY 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.

DATE 1/11/72 SIGNATURE [signature] TITLE [illegible]

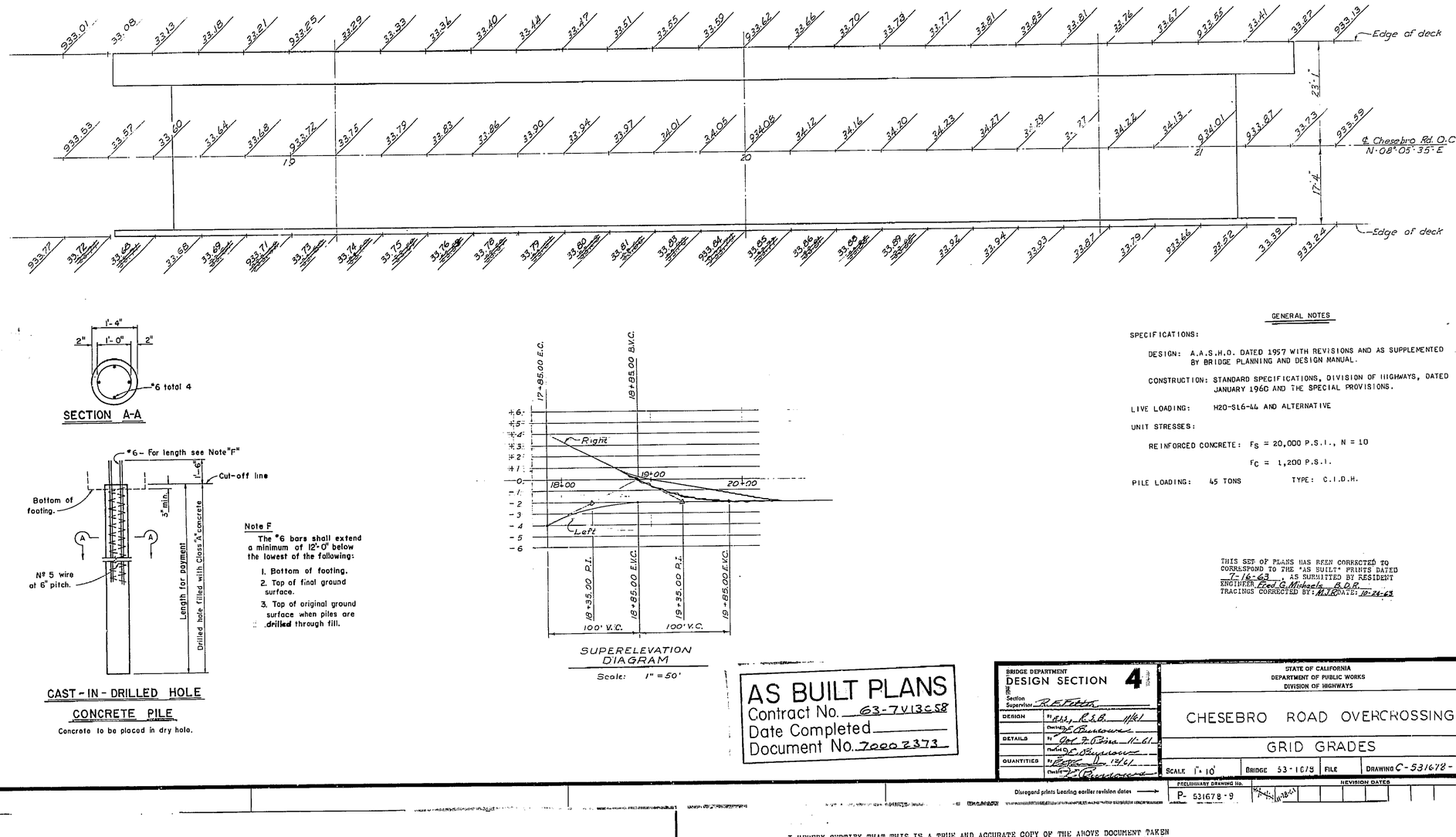
FED. ROAD DIV. NO.	STATE	F. A. PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.		53	71

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
VII	LA	5	C	2	15

VII | LA | 5

Recommended: [signature] STATE BRIDGE ENGINEER — CIVIL ENGINEER — No. 9006 — EXPIRES 3-31-64

Date Approved: Oct 9 1963



SECTION A-A

Note F

The *6 bars shall extend a minimum of 12'-0" below the lowest of the following:

1. Bottom of footing.
2. Top of final ground surface.
3. Top of original ground surface when piles are drilled through fill.

CAST-IN-DRILLED HOLE CONCRETE PILE

Concrete to be placed in dry hole.

SUPERELEVATION DIAGRAM

Scale: 1" = 50'

GENERAL NOTES

SPECIFICATIONS:

DESIGN: A.A.S.H.O. DATED 1957 WITH REVISIONS AND AS SUPPLEMENTED BY BRIDGE PLANNING AND DESIGN MANUAL.

CONSTRUCTION: STANDARD SPECIFICATIONS, DIVISION OF HIGHWAYS, DATED JANUARY 1960 AND THE SPECIAL PROVISIONS.

LIVE LOADING: H20-S16-44 AND ALTERNATIVE

UNIT STRESSES:

REINFORCED CONCRETE: F_S = 20,000 P.S.I., N = 10

F_C = 1,200 P.S.I.

PILE LOADING: 45 TONS TYPE: C.I.D.H.

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 7-16-63, AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels, A.D.E.
TRACINGS CORRECTED BY: M.T.R. DATE: 10-24-63

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 70002373

BRIDGE DEPARTMENT		
DESIGN SECTION 4		
Section Supervisor R.E. Foster		
DESIGN	By R.S.B.	11/61
	Checked J.C. Donovan	
DETAILS	By H. Hot T. Ozma	11-61
	Checked J.C. Donovan	
QUANTITIES	By R.S.B.	11/61
	Checked J.C. Donovan	

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING

GRID GRADES

SCALE	BRIDGE	FILE	DRAWING
1" = 10'	53-1079		C-531678-2

PRELIMINARY DRAWING No. P-531678-9

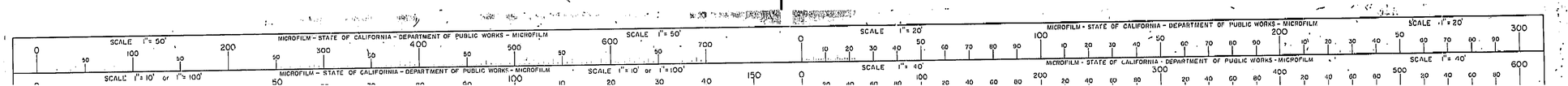
REVISION DATES

Disregard prints bearing earlier revision dates →

58

I HEREBY CERTIFY 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.

DATE 1-15-72 SIGNATURE [signature] TITLE [illegible]



FED. ROAD DIV. NO.	STATE	F. A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.		53	91

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5	C	3	75

VII LA 5

Date Approved: December 9, 1962

335+37.72 E.C. ℄ Ventura Frwy

N 164,753.718
E 64,186.391

Tank

S 85° 08' 12" W

TO VENTURA

908

910

912

914

916

918

920

922

924

926

928

930

932

934

Shoulder 8.5' | 2' Shoulder | 24' Rdwy | 16' Median | 16' | 2' Shoulder | 24' Rdwy | 9' Shoulder

20+00.00 P.O.T. ℄ Chesebro Rd. O.C.
332+23.93 P.O.C. ℄ Ventura Frwy.

N 164,734.045
E 64,499.240

℄ ON-RAMP

S 79° 34' 41" W

22+05.00 P.O.T. ℄ Chesebro Rd O.C.
℄ ON-Ramp

17+85.00 E.C. ℄ Chesebro Rd. O.C.

℄ Chesebro
Δ = 39° 14' 25"
R = 350
T = 124.77
L = 239.71

R = 1999.95

333

Dirt

A.C.

A.C.

℄ Abut. #1
16+75.00

℄ Bent #2
19+10.00

℄ Bent #3

Bent #4 similar to Bent #2

℄ Bent #4
20+78.00

℄ Abut. #5
21+07.00

Abut. #5 is similar to Abut. #1

R = 350'

℄ CHESEBRO RD. O.C.

N 08° 05' 35" E

18 19 21 22

900.0

903.0

907.0

℄ Frwy
Δ = 40° 19' 26"
R = 1999.95
T = 734.33
L = 1,407.55

N 162,754.015
E 64,217.688

℄ Wire Fence

℄ Wire Fence

321+30.19 B.C. ℄ Ventura Frwy

N164,298.839
E 65,487.850

℄ Exist E.P.

℄ Exist E.P.

℄ Exist E.P.

TO LOS ANGELES

℄ VENTURA FRWY

331

N 50° 34' 22" W

N 63° 21' 44" W

℄ OFF-RAMP

21+92.00 P.O.T. ℄ Chesebro Rd O.C.
℄ OFF-Ramp

Notes:
Bottom of footing Elev shown thus: 000.0
Abuts & Bents are normal to ℄ Chesebro Rd. O.C.
For Pile Layout see Sheets No. 4 & 5

BENCH MARKS

B.M. No. 335-2LAC-58 Elev 907.95
Fd. L.E.T. in middle west edge of D.I. on ℄ vent. at sta. 335+62.91 P.O.T. 100' ± E. Chesebro Rd. painted T.P. 197"

B.M. No 321-2LAC-58 Elev. 896.52
Fd. alum. cap on "T Bar" in conc., 0.2' ± below FL. Median strip on ℄ vent at sta. 321+39.63 B.C.

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 7000 2373

CONTOURS CHECKED & VERIFIED IN FIELD
Date: June-1961
by: J.E.B.

Drawn By H R Mariscal 6-26-61
Checked By E.C. Mitchell 6-27-61

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 7-16-63 AS SUBMITTED BY RESIDENT ENGINEER Fred G. Mitchell, A.S.C.E.
TRACINGS CORRECTED BY: M.J.K. DATE: 10-15-63

BRIDGE DEPARTMENT
DESIGN SECTION

Section Supervisor R. E. Foster

DESIGN	By F.I.S.	Date 8-61
	Checked E.C.Bowman	
DETAILS	By Mar 2/Pan	Date 11-61
	Checked E.C.Bowman	
QUANTITIES	By [illegible]	Date 12/6
	Checked E.C.Bowman	

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING

FOUNDATION PLAN

SCALE 1"=20' | BRIDGE 53-1678 | FILE 53 | DRAWING C-531678-3

Disregard prints bearing earlier numbers → PREL. DRAWING No. P- 531678 | No. | DATE

59

I HEREBY CERTIFY 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.

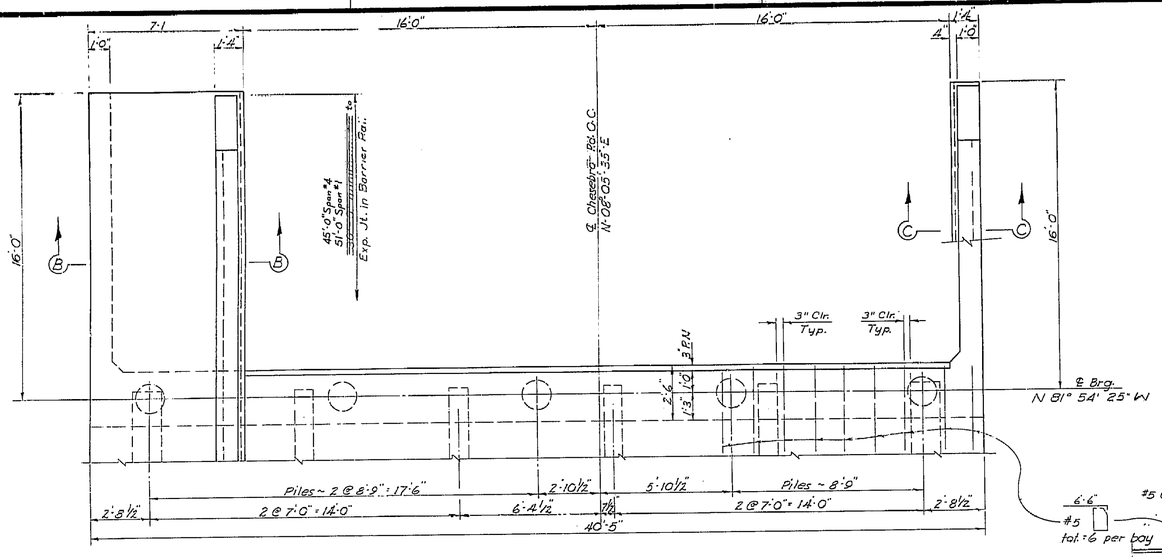
DATE 7-11-72 SIGNATURE [illegible] TITLE [illegible]

FED. ROAD DIV. NO.	STATE	F. A. PROJECT No.	SHEET NO.	TOTAL SHEETS
7	CALIF.		60	131

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5	2	4	15

Chief Engineer — Legend 24129

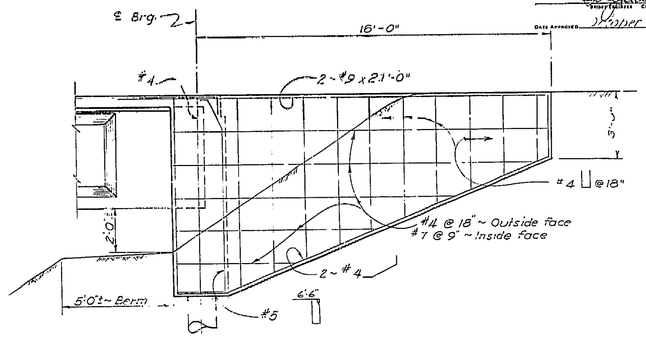
Date Approved October 3, 1962



PLAN

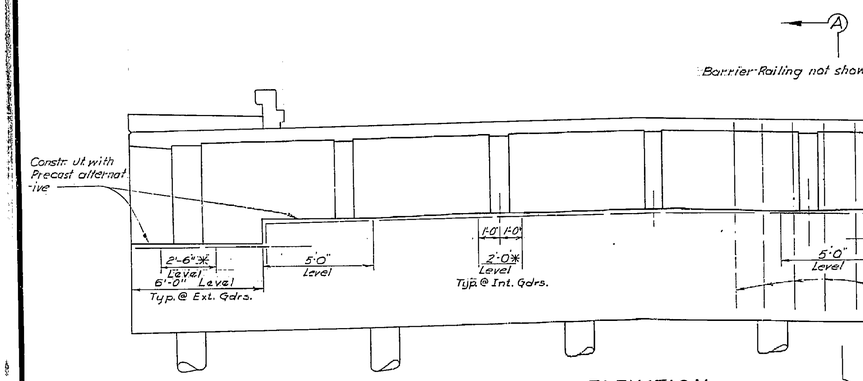
Scale: 3/8" = 1'-0"

Note: Abutment #2 shown, Abutment #1 is similar



WINGWALL ELEVATION

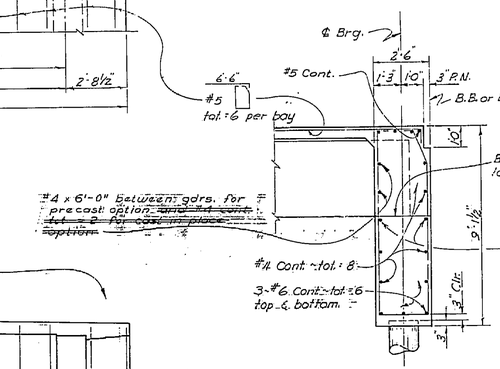
Scale: 3/8" = 1'-0"



ELEVATION

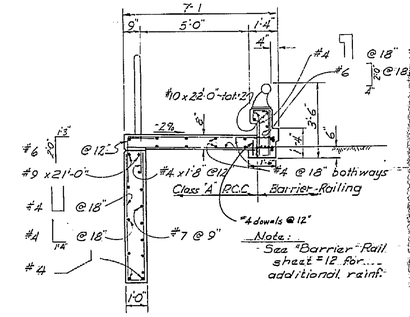
Scale: 3/16" = 1'-0"

* For Precast Option — Finish or grind to a smooth surface, (level normal to ℄ Gdrs, and at slope of gdr. longit. to ℄ gdr.) set girders in a thin layer of neat cement grout.



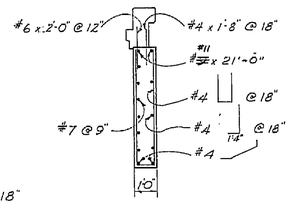
SECTION A-A

Scale: 3/8" = 1'-0"



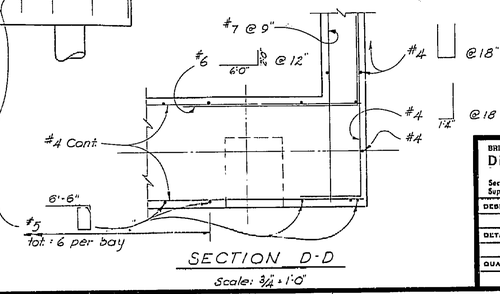
SECTION B-B

Scale: 3/8" = 1'-0"



SECTION C-C

Scale: 3/8" = 1'-0"



SECTION D-D

Scale: 3/4" = 1'-0"

Note:
For Barrier Railing Details not shown See Sheets #12 & 13

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 7-16-63, AS SUBMITTED BY RESIDENT ENGINEER E. J. McAdams, B.P.R.
TRACINGS CORRECTED BY M.J.R. DATE: 10-25-63

AS BUILT PLANS
Contract No. 63-7V13C58
Date Completed
Document No. 7000 2373

BRIDGE DEPARTMENT
DESIGN SECTION 4
Section Supervisor R. E. Fiske

DESIGN	By F.L.S. R.S.B.	11-61
DETAILS	By C.J.P. Correa	11-61
QUANTITIES	By	

Disregard prints bearing earlier revision dates →

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING

ABUTMENT DETAILS

SCALE AS SHOWN	BRIDGE 53-1678	FILE	DRAWING C. 531678-4

PRELIMINARY DRAWING No. P-531678-3

REVISION DATES

I HEREBY CERTIFY 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.

DATE 1-11-72 SIGNATURE [illegible] TITLE [illegible]

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5	C	5	75

FED. ROAD DIV. NO.	STATE	F. A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.		51	71

1" x 8" x 18" Elastomeric Bearing Pad

1" Exp. Jt Filler under diaphragm between Precast Prestr. Gdrs.

1" ϕ x 2'-0" dowel with 2" ϕ x 1'-1½" Std. pipe sleeve (galv.)

℄ Chesebro Rd. O.C.

7'-0" 7'-0" 6'-4½" 7½"

℄ Bent

2'-3" 2'-6" 2'-3" Typical 17'-6" 3'-6" (Typical) 2'-10½"

1'-9" 38'-6"

HALF PLAN
Scale: 3/8" = 1'-0"

℄ Col. #1 — ℄ Col. #2

2-#10 Cont. ⓐ
2-#10 ⓑ
2-#10 ⓒ
2-#10 x 16'-0" ⓑ
2-#10 x 14'-0" ⓒ
2-#10 x 12'-0" ⓓ
2-#10 x 10'-0" ⓔ
2-#5 Cont. ~ tot. = 4

#5 tot. = 3

Level

2-#11 Cont. ⓕ
2-#11 x 15'-0" ⓖ
2-#11 x 12'-0" ⓗ
2-#11 x 10'-0" ⓙ

7@5" 2@6" 2@8" @12"± 2@8" 2@6" 9@4" 2"

#5 #5

#11 Dowels ~ tot. = 12 #11 Dowels ~ tot. = 12

#7 ~ tot. = 13 #7 ~ tot. = 17

#7 ~ tot. = 13 (stagger lengthwise) #5 ~ tot. = 15 + #6 ~ total = 6

Elev. = 903.0

HALF ELEVATION
BENT NO. 3
Scale: 3/8" = 1'-0"

Indicates no pile

Piles in place but not used

℄ Column

1'-6" 3'-0" 2'-2" 1'-6" 8'-2" 3'-9½" 4'-4½"

Column footings #1 & #3 similar but not symmetrical about ℄ column #2

COLUMNS NO. 1 & 3
No Scale

9'-0" 1'-6" 3'-0" 3'-0" 1'-6"

Piles in place but not used.

℄ Column

COLUMN NO. 2

FOOTING PLAN
Scale: 3/8" = 1'-0"

3'-6" 2'-6" 1½" Clr. Typ.

#11 tot. = 12 ~ Interior ℄ Exterior Columns

#4 @12"

COLUMN SECTION
BENT 3
Scale: 3/4" = 1'-0"

#8 x 2'-0" dowels @2'-1"

1" ϕ x 2'-0" smooth galv. dowels

CAST-IN-PLACE OPTION

1'-0" 11½" ½"

#8 x 2'-0" dowels

1" ϕ x 2'-0" dowels

Top of Cap

1" Exp. Jt. Mat'l

#5 1'-1" #5 @12"

PRECAST OPTION

Note:
Number at ends of bars indicate distance in feet from ℄ Col. for top reinf. and from ℄ between Col. for bottom reinf.

CAP SECTION
BENTS NO. 2 & 4
Scale: 3/4" = 1'-0"

2'-6"

a b c c b a
d e e d

5 Bar Designation
Bearing Pads

2" Chamfer

#5 See Elevation

#5 Cont.

4'-0" min.

2¾" Clr.

h f g J J g f h ← Bar Designation

CAP SECTION
BENT NO. 3
Scale: 3/4" = 1'-0"

THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS DATED 7-19-63 AS SUBMITTED BY RESIDENT ENGINEER Fred G. Michaels D.O.T.
TRACINGS CORRECTED BY: M.J.P. DATE: 10-25-63

3'-6" 2'-6" 1½" Clr. Typ.

#11 tot. = 14 @ Exterior Column Bents #2 & 4

#4 @12"

3'-6" 1½" Clr. Typ. 2'-6"

#11 tot. = 10 @ Interior Column Bents #2 & 4

COLUMN SECTION
BENTS 2 & 4
Scale: 3/4" = 1'-0"

1" Exp. Jt filler under diaph. between Precast Prestressed Girders

℄ Chesebro Rd. O.C.

2" ϕ x 1'-1½" Std pipe sleeve ~ See Sht. #

1" x 8" x 18" Elastomeric Bearing Pad

7½" 7'-0" 7'-0"

℄ Bent

2'-6" 2'-3" 2'-6" (Typical) Typical 2'-3" 2'-6" 2'-3" 1'-0"

2'-10½" 38'-6" 14'-7½"

℄ 1" ϕ x 2'-0" dowels ~ See Sht. #11

Bed girder ends (Precast Gdr Alt.) on thin layer of neat cement paste. Four diaph. between precast gdrs. in direct contact with top of cap See notes * Sheet #4

HALF PLAN
Scale: 3/8" = 1'-0"

℄ Col. #2 — ℄ Col. #3

2-#10 Cont. ⓐ
2-#10 x 16'-0" ⓑ
2-#10 x 14'-0" ⓒ
2-#10 x 12'-0" ⓓ
2-#10 x 10'-0" ⓔ
2-#5 Cont. ~ tot. = 4

2-#10 ⓑ
2-#10 ⓒ

#5 tot. = 3

Level

4-#10 Cont. ; 2-ⓐ & 2-ⓖ
2-#10 x 15'-0" ⓗ
2-#10 x 10'-0" ⓙ

2" 6@6" 2@6 2@8" @12"± 2@8" 6@6" 2"

#5 #5

#11 Dowels ~ tot. = 14

#11 Dowels ~ tot. = 10

#6 ~ tot. = 18

#6 ~ tot. = 12

Bent #2 - El. = 900.0
Bent #4 - El. = 907.0

#9 ~ tot. = 12

#5 ~ tot. = 7

HALF ELEVATION
BENTS NO. 2 & 4
Scale: 3/8" = 1'-0"

9'-0" 1'-6" 3'-0" 3'-0" 1'-6"

COLUMN NO. 2

6'-0" 1'-6" 1'-6" 1'-6" 1'-6"

COLUMNS NO. 1 & 3

FOOTING PLAN
Scale: 1/4" = 1'-0"

BRIDGE DEPARTMENT
DESIGN SECTION 4
Section Supervisor: R.F. Fetter

DESIGN	By E.J.S. R.S.B. 11/61	Checked J.F. Buchanan
DETAILS	By Jac Pitzen 11-61	Checked J.F. Buchanan
QUANTITIES	By [illegible] 12/61	Checked J.F. Buchanan

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING

BENT DETAILS

SCALE AS SHOWN | BRIDGE 53-1078 | FILE | DRAWING C-531678-5

PRELIMINARY DRAWING NO. P-531678-9

REVISION DATES

Disregard prints bearing earlier revision dates →

AS BUILT PLANS
Contract No. 63-7V136
Date Completed
Document No. 7000 2373

61

I HEREBY CERTIFY 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.

DATE 1/11/72 SIGNATURE [illegible] TITLE [illegible]

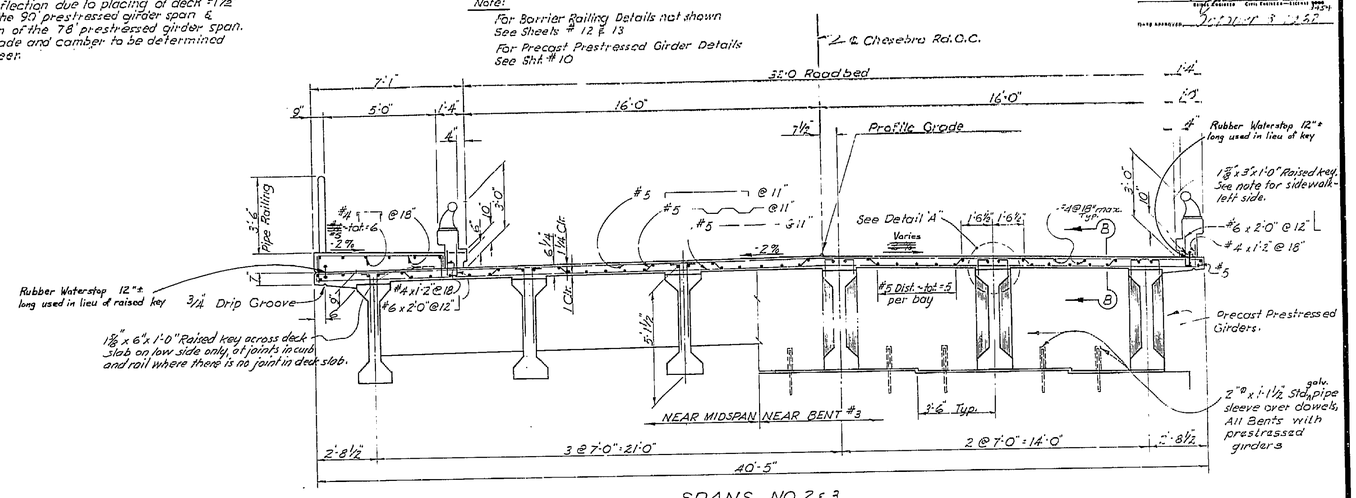
FED. ROAD DIV. NO.	STATE	F. A. PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.		1	11

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
VII	LA	5		6	16

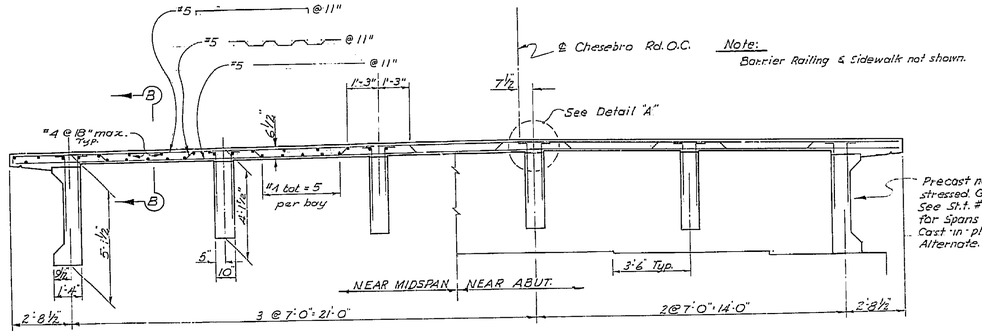
VII | LA | 5

Note:
Anticipated deflection due to placing of deck = 1½" at midspan of the 90' prestressed girder span & ⅞" at midspan of the 78' prestressed girder span. Final deck grade and camber to be determined by the Engineer.

Note:
For Barrier Railing Details not shown See Sheets # 12 & 13
For Precast Prestressed Girder Details See Sht. # 10

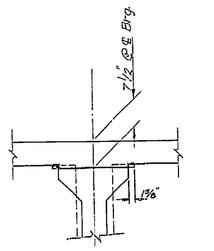


SPANS NO. 2 & 3

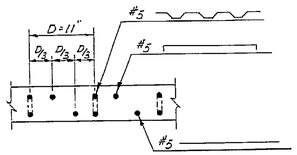


SPANS NO. 1 & 4
(For Details Not Shown See Spans No. 2 & 3)

TYPICAL SECTIONS
Scale: 3/8" = 1'-0"



DETAIL "A"
Scale: 3/4" = 1'-0"



SECTION B-B
No Scale:
Distribution & Temperature steel not shown. Place Transverse Deck Reinf. parallel to Bents

AS BUILT PLANS
Contract No. 63-7V136C58
Date Completed
Document No. 7000 2373

BRIDGE DEPARTMENT
DESIGN SECTION 4
Section Supervisor R. F. Fisher
DESIGN By F.J.S. R.S.B. 4/61 Checked Bascunana
DETAILS By [illegible] 11-61 Checked Bascunana
QUANTITIES By [illegible] 1-1961 Checked Bascunana

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

CHESEBRO ROAD OVERCROSSING

TYPICAL SECTIONS

SCALE AS SHOWN | BRIDGE 53-1678 | FILE | DRAWING C-53 1678-6

PRELIMINARY DRAWING NO. P-53 1678-2

REVISION DATES

Disregard prints bearing earlier revision dates

62

76

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DATE 1-13-72 SIGNATURE [illegible] TITLE [illegible]

APPENDIX B
AS-BUILT PLANS (PRESTRESSED I GIRDER REPLACEMENT)

CONTRACT NO. 07-4K3804
TRANSFER DATE: 07-12-2007
FIELD CORRECTION DATE: 11-15-2006
CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye

NO AS BUILT CORRECTIONS

STANDARD PLANS DATED JULY 2004

SHEET NO.	TITLE
A10A	ABBREVIATIONS (A-L)
A10B	ABBREVIATIONS (M-Z)
B0-5	BRIDGE DETAILS
RSP B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 50 MM)

Standard Plan Sheet Number

Detail Number

NOTES:

1. Remove existing Precast P/S Concrete I Girder and install new Precast I P/S Girder.
2. Remove and install overhead sign and vertical clearance sign.
3. Temporary Railing (Type K), see "ROAD PLANS".
4. Existing Pipe Railing.
5. Existing Barrier Railing Type 1.

INDEX TO PLANS

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	54.2	13	19

Michael J. Lee
REGISTERED CIVIL ENGINEER

3-20-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL J. LEE No. C 42447 Exp. 3-31-08 CIVIL STATE OF CALIFORNIA

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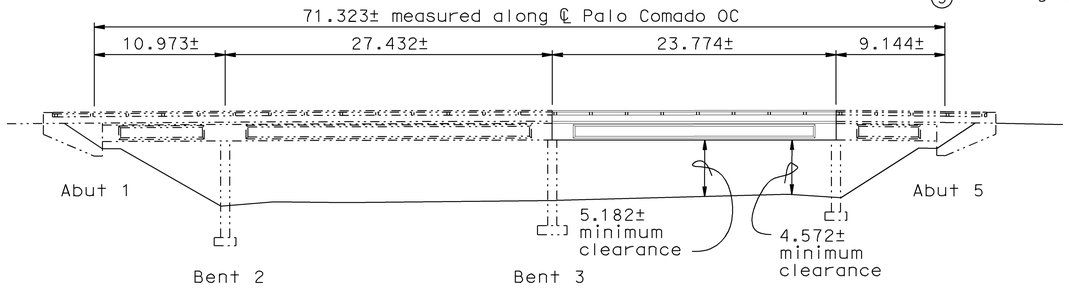
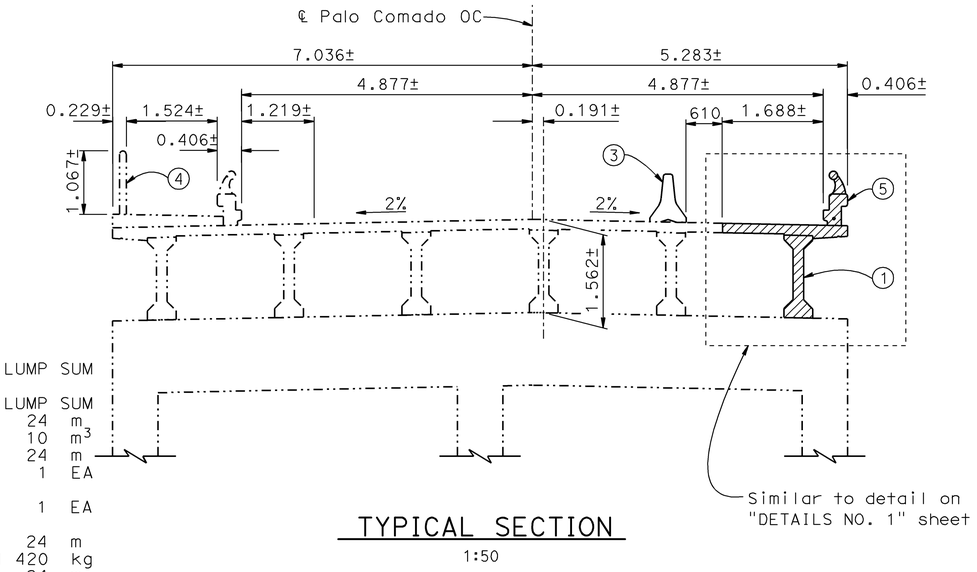


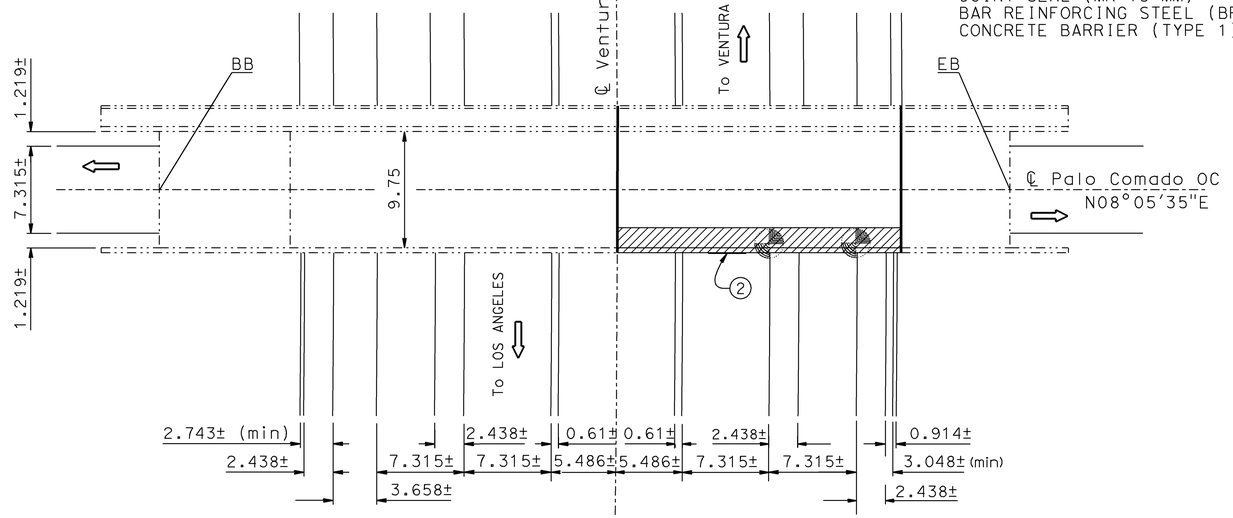
ELEVATION
1:250



TYPICAL SECTION
1:50

QUANTITIES

RECONSTRUCT OVERHEAD SIGN STRUCTURE (BRIDGE MOUNTED)	LUMP	SUM
BRIDGE REMOVAL (PORTION)	LUMP	SUM
RECONSTRUCT METAL RAILING (BRIDGE)	24	m
STRUCTURAL CONCRETE, BRIDGE	10	m^3
CLEAN EXPANSION JOINT	24	m
FURNISH PRECAST PRESTRESSED CONCRETE GIRDER (20 M - 25 M)	1	EA
ERECT PRECAST PRESTRESSED CONCRETE GIRDER	1	EA
JOINT SEAL (MR 15 MM)	24	m
BAR REINFORCING STEEL (BRIDGE)	1 420	kg
CONCRETE BARRIER (TYPE 1)	24	m



PLAN
1:250

LEGEND:

Indicates limits of existing concrete deck, barrier railing and metal tube railing removal and placement of new concrete barrier railing and reinstall existing metal tube railing.

Indicates existing structure.

Indicates removal of existing joint seal, clean expansion joint (depth 150± mm) and place new joint seal. There is a waterstop. For details not shown, see RSP B6-21

Indicates point of Minimum Vertical Clearance.

GENERAL NOTES
LOAD FACTOR DESIGN

DESIGN: CALTRANS BRIDGE DESIGN SPECIFICATIONS LFD Version April 2000 (1996 AASHTO with Interims and Revision by Caltrans)

SEISMIC DESIGN: CALTRANS SEISMIC DESIGN CRITERIA (SDC) Version 1.3, February 2004

DEAD LOAD: Includes 1675 Pa for future wearing surface. The deck dead load between the girders has been increased by a factor of 10 percent to allow for the use of steel deck forms.

LIVE LOAD: HS20-44 and Alternative and Permit Design Load

REINFORCED CONCRETE: f_y = 420 MPa
f'_c = 25 MPa
n = 8

Transverse Deck Slabs (Working Stress):
f_s = 137.9 MPa
f_c = 8.3 MPa
n = 10

PRESTRESSED CONCRETE: See "PRESTRESSED "I" GIRDER DETAILS" sheet.

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Michael J. Lee 3-20-06
DESIGN ENGINEER

DESIGN	BY Rangina Amir	CHECKED Arlene Frank	LAYOUT	BY Roelina Martinez	CHECKED Arlene Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN
DETAILS	BY Roelina Martinez	CHECKED Arlene Frank	SPECIFICATIONS	BY Lien Vu	PLANS AND SPECS COMPARED Lien Vu		
QUANTITIES	BY Rangina Amir	CHECKED Arlene Frank					

BRIDGE NO. 53-1678
KILOMETER POST 54.2

PALO COMADO OC

GENERAL PLAN

CU 07
EA 4K3801

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 7-25-05 | 10-03-05 | 10-05-05

SHEET 1 OF 7

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

FILE => 074k3801gp.dgn

USERNAME => bmiller DATE PLOTTED => 25-JUL-2007 TIME PLOTTED => 16:02

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	54.2	14	19

REGISTERED CIVIL ENGINEER

3-20-06
PLANS APPROVAL DATE

MICHAEL J. LEE No. C 42447 Exp. 3-31-08 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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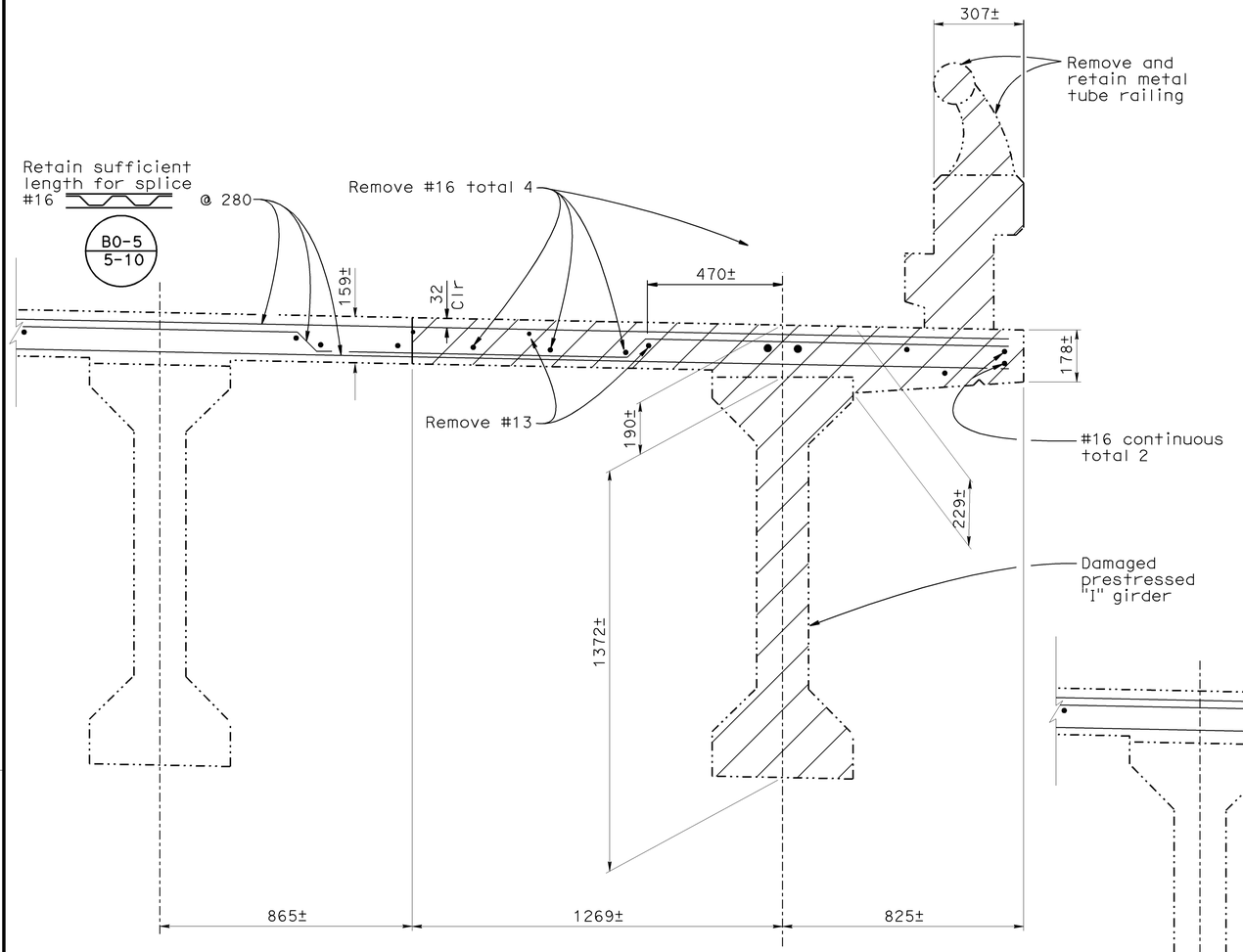
CONTRACT NO: 07-4K3804
TRANSFER DATE: 07-12-2007
FIELD CORRECTION DATE: 11-15-2006
CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye

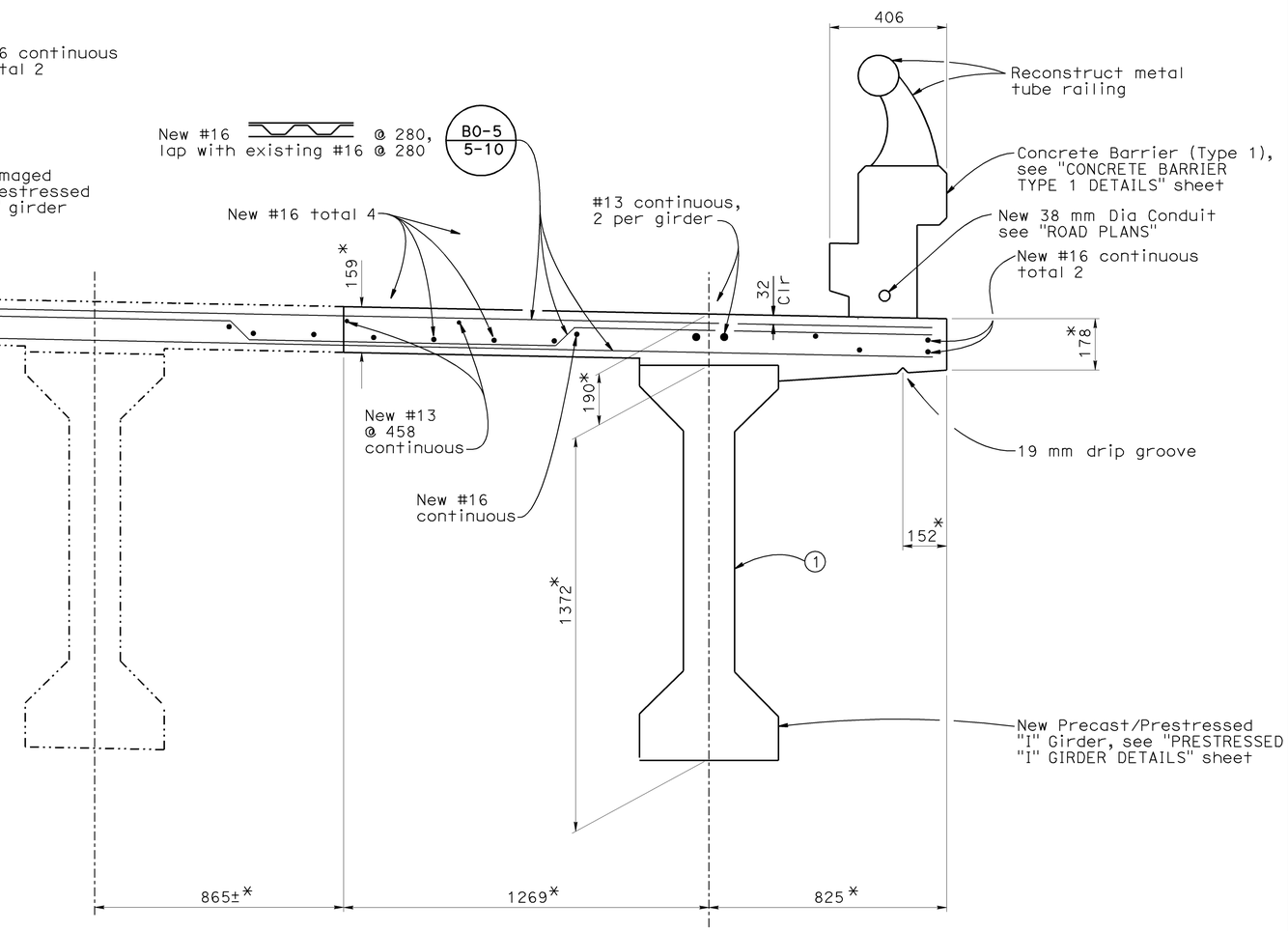
NO AS BUILT CORRECTIONS

NOTE:
① For I Girder reinforcement, see "PRESTRESSED I GIRDER DETAIL" sheet.

LEGEND:
- Indicates existing.
- Indicates new construction.
- Indicates limits of removal of existing concrete and barrier railing.
- * Indicates match existing dimensions.



EXISTING - PARTIAL TYPICAL SECTION
1:10



RECONSTRUCTION - PARTIAL TYPICAL SECTION
1:10

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY Rangina Amir	CHECKED Arlene Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. 53-1678
DETAILS	BY Roelina Martinez	CHECKED Arlene Frank			KILOMETER POST 54.2
QUANTITIES	BY Rangina Amir	CHECKED Arlene Frank		CU 07 EA 4K3801	DISREGARD PRINTS BEARING EARLIER REVISION DATES →

PALO COMADO OC
DETAILS NO.1

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/01))

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

REVISION DATES (PRELIMINARY STAGE ONLY): 8-1-05 | 8-23-05 | 10-03-05

SHEET 2 OF 7

USERNAME => bmiller DATE PLOTTED => 26-JUL-2007 TIME PLOTTED => 07:31

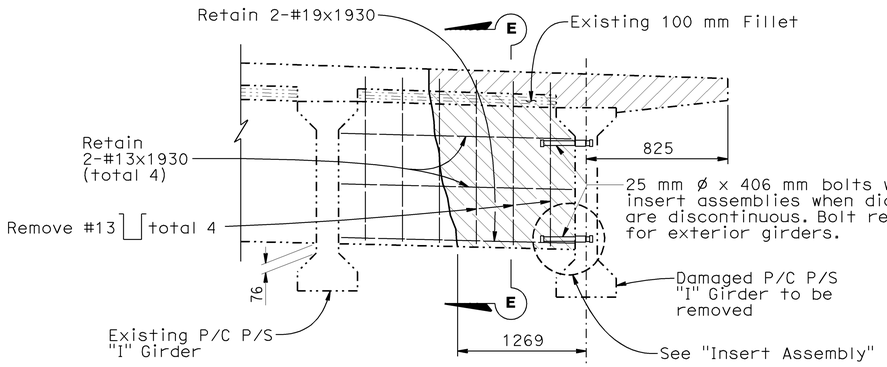
FILE => 074k38002det1.dgn

Caltrans Metric

REGISTERED CIVIL ENGINEER

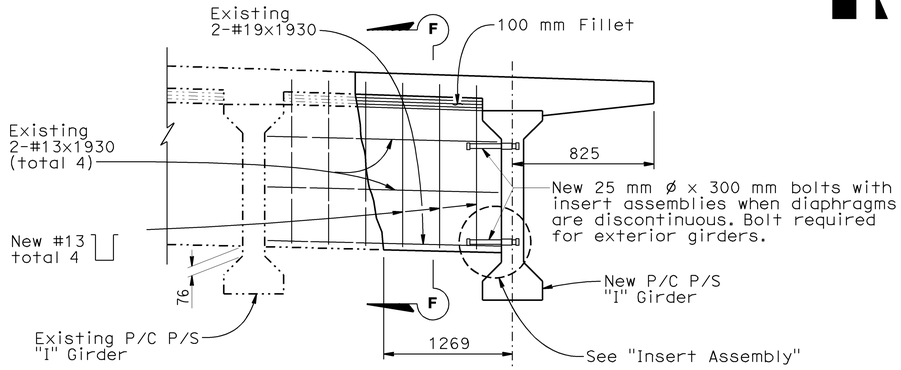
3-20-06
PLANS APPROVAL DATE

MICHAEL J. LEE — REGISTERED PROFESSIONAL ENGINEER — No. C 42447 — Exp. 3-31-08 — CIVIL — STATE OF CALIFORNIA



EXISTING INTERMEDIATE DIAPHRAGM

No Scale



RECONSTRUCTED INTERMEDIATE DIAPHRAGM

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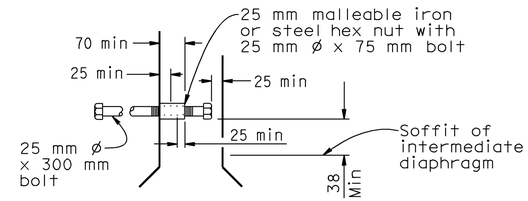
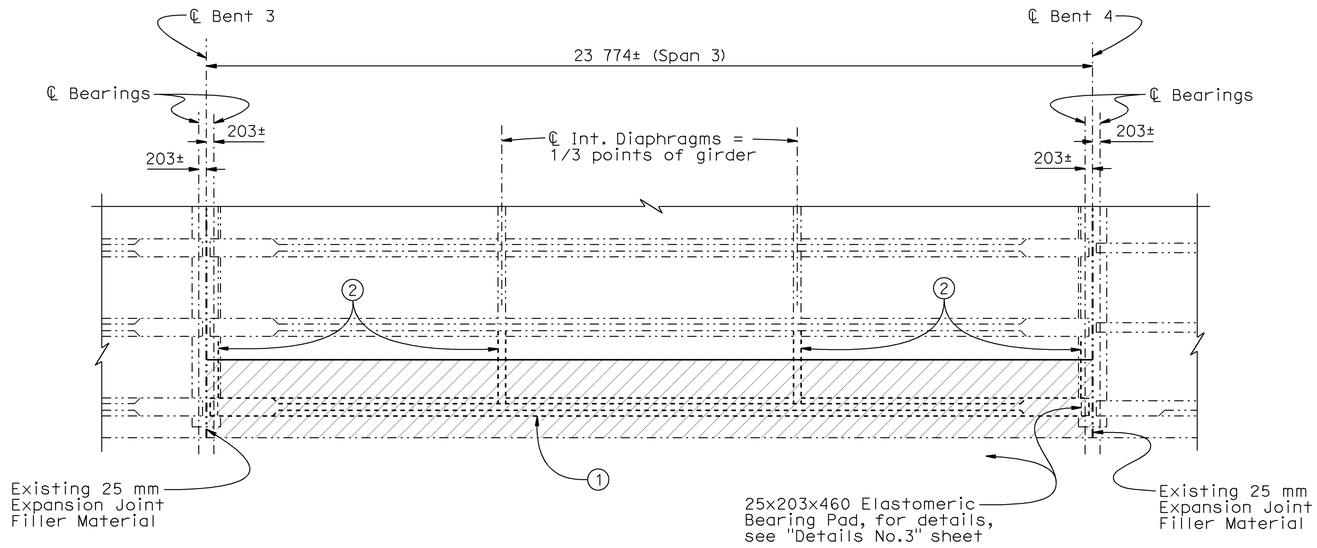


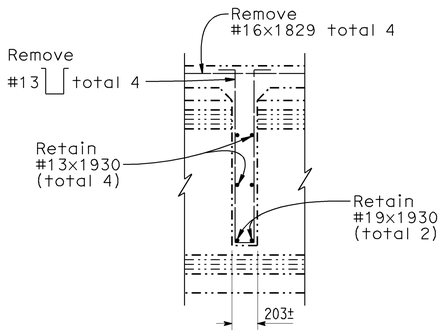
INSERT ASSEMBLY

No Scale



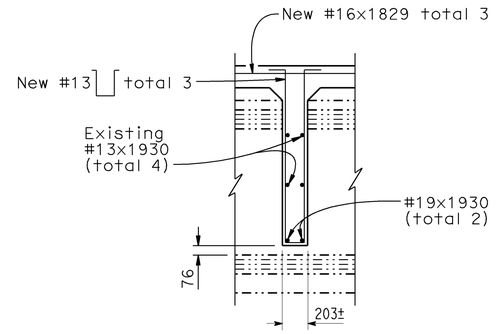
PARTIAL PLAN - GIRDER LAYOUT (SPAN 3)

1:80



SECTION E-E

No Scale



SECTION F-F

No Scale

Notes:

1. Remove existing damaged Precast P/S Concrete "I" Girder and install new Precast P/S Concrete "I" Girder.
2. Remove existing concrete diaphragm prior to removal of existing damaged girder and reconstruct concrete diaphragm after new girder is placed.

▨ - Indicates Limits of Remove Concrete Deck.

▨ - Indicates Limits of Remove Existing Concrete.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY R. Amir	CHECKED A. Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY D. Pato	CHECKED A. Frank	
QUANTITIES	BY R. Amir	CHECKED A. Frank	

DIVISION OF MAINTENANCE
STRUCTURE MAINTENANCE DESIGN

BRIDGE NO. 53-1678
KILOMETER POST 54.2

PALO COMADO OC
DETAILS NO.2

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 07
EA 4K3801

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 7-22-05 | 8-23-05 | 10-03-05

SHEET 3 OF 7

FILE => 074k38003det2.dgn

NO AS BUILT CORRECTIONS

CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye

TRANSFER DATE: 07-12-2007
FIELD CORRECTION DATE: 11-15-2006

CONTRACT NO: 07-4K3804

USERNAME => bmiller DATE PLOTTED => 26-JUL-2007 TIME PLOTTED => 07:35

CONTRACT NO. 07-4K3804
TRANSFER DATE: 07-13-2007
FIELD CORRECTION DATE: 11-15-2006
CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye
NO AS BUILT CORRECTIONS

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	54.2	17	19

Caltrans Metric

Michael J. Lee
REGISTERED CIVIL ENGINEER

3-20-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL J. LEE No. C 42447 Exp. 3-31-08 CIVIL STATE OF CALIFORNIA

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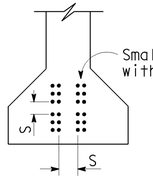
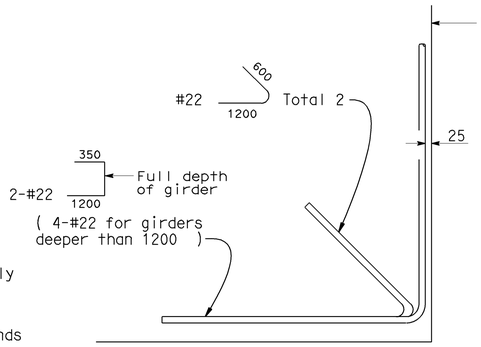
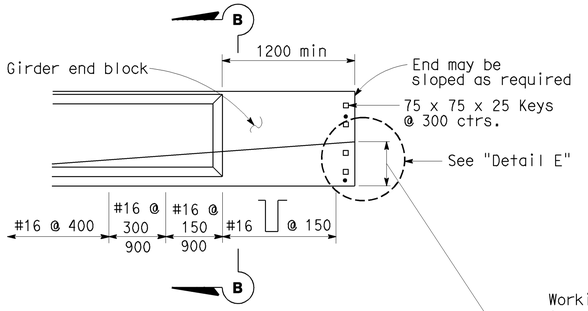
CLEARANCES FOR PRETENSIONED STRANDS

1. Strands may be bundled in groups consisting of 3 vertically 2 horizontally, and separated at the ends.
2. The min distance "S" between groups or individual strands is 40 mm for 9.5 mm strands, 45 mm for 11 and 13 mm strands and 50 mm for 15 mm strands.
3. "S" is measured between centers of adjacent strands.
4. Approval of Engineer is required for deviation.

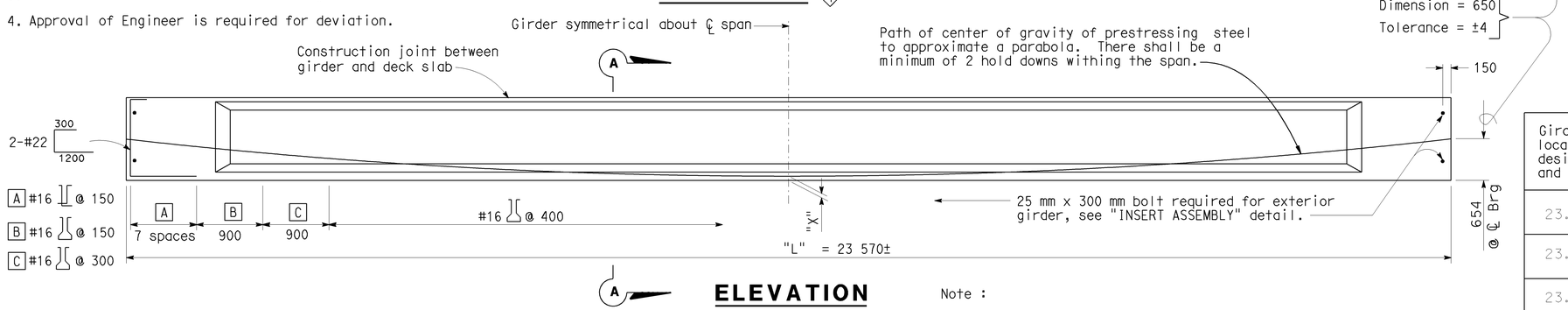




DETAIL E ◇1



END BLOCK



ELEVATION

Note :

Details shown are for pretensioned girders. The Contractor may submit details for post-tensioning which shall meet the approval of the Engineer.

◇2 - Deleted Detail

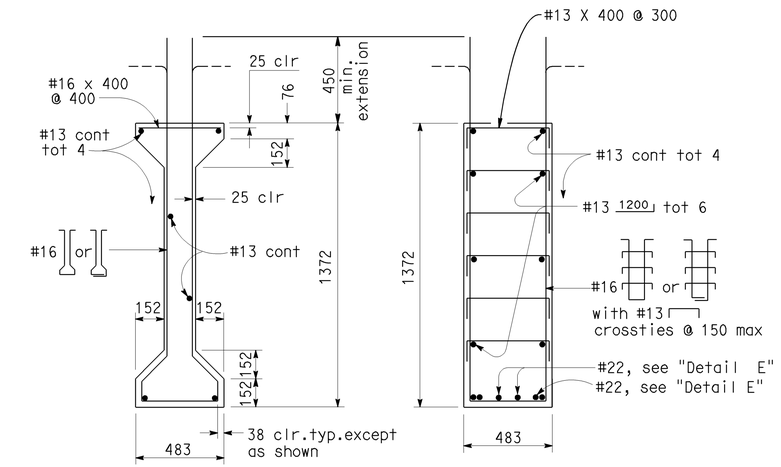
PRESTRESSING NOTES

Working force : The force required at center of span after all losses.
Concrete strength : f'_{ci} is at time of initial stressing,
f'_c is at 28 days, MPa.
Deflection components : Informational - to be used in setting screed line elevations.

Screed line elevations for deck concrete will be determined by the Engineer.

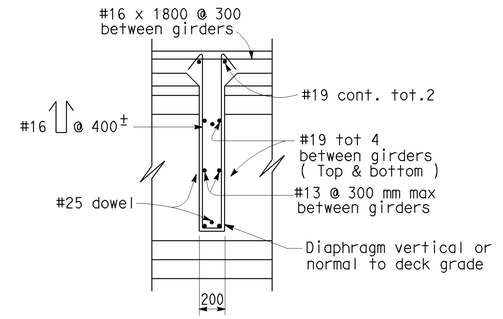
The Contractor may interpolate "P" and "X" values between limits shown, as approved by the Engineer.

Girder location or designation and length	P = Working force in (kN) "X"		Concrete Strength f'_{ci}	Concrete Strength f'_c	Deflection Components (mm) ① Deck DL	Deflection Components (mm) ② Rail DL
23.57± m	76	1973	27.6	27.6	15.0	3.3
23.57± m	114	2060	27.6	27.6	15.0	3.3
23.57± m	152	2155	27.6	27.6	15.0	3.3

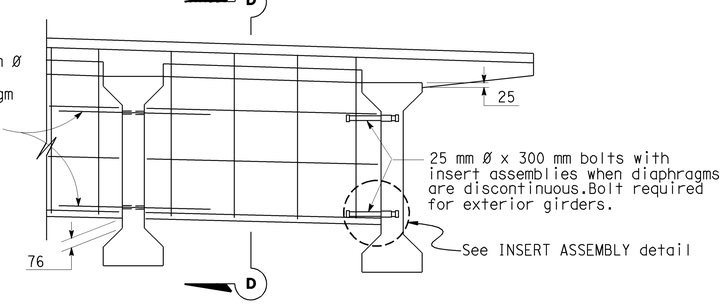


SECTION A-A

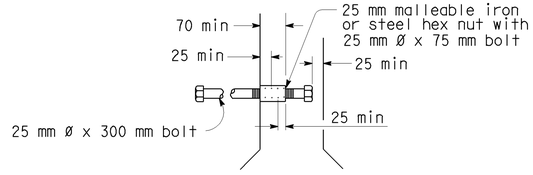
SECTION B-B



SECTION D-D



INTERMEDIATE DIAPHRAGM



INSERT ASSEMBLY

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NO SCALE
ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY Rangina Amir	CHECKED Arlene Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN
DETAILS	BY Roelina Martinez	CHECKED Arlene Frank		
QUANTITIES	BY Rangina Amir	CHECKED Arlene Frank		

BRIDGE NO. 53-1678
KILOMETER POST 54.2

PALO COMADO OC
PRESTRESSED I GIRDER

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 07
EA 4K3801

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

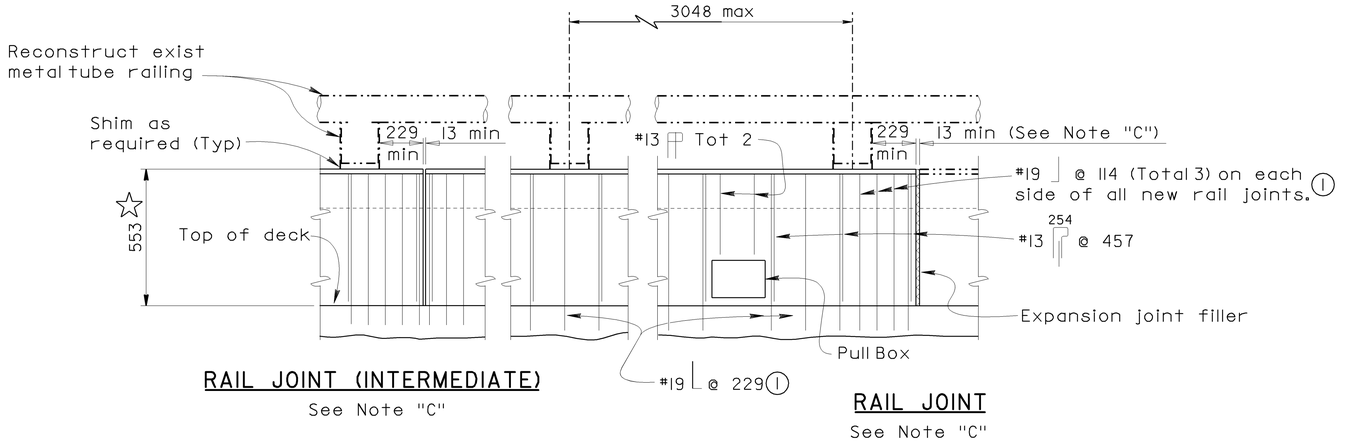
REVISION DATES (PRELIMINARY STAGE ONLY): 8-1-05 | 8-23-05 | 10-03-05 | 10-03-05 | 10-05-05

SHEET 5 OF 7

FILE => 074k38005gir1.dgn

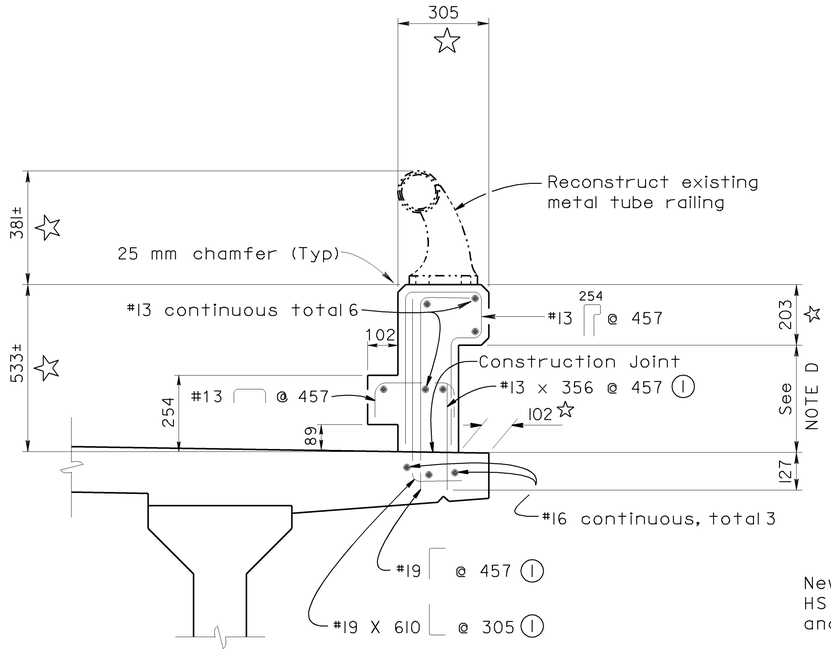
USERNAME => bmiller DATE PLOTTED => 26-JUL-2007 TIME PLOTTED => 07:40

CONTRACT NO: 07-4K3804
TRANSFER DATE: 07-13-2007
FIELD CORRECTION DATE: 11-15-2006
CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye
NO AS BUILT CORRECTIONS



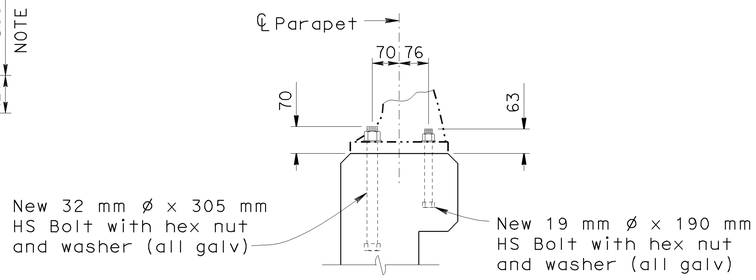
BARRIER RAILING ELEVATION

NO SCALE



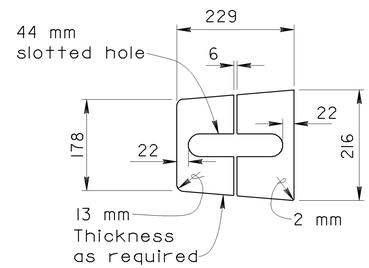
BARRIER RAILING SECTION

NO SCALE



RAIL POST ANCHOR BOLT DETAIL

NO SCALE



SHIM DETAIL

NO SCALE

NOTE:
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ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	54.2	18	19

Michael J. Lee
REGISTERED CIVIL ENGINEER

3-20-06
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — MICHAEL J. LEE — No. C 42447 — Exp. 3-31-08 — 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.

Caltrans now has a web site! To get to this site, go to: http://www.dot.ca.gov

NOTES: (Notes apply to this sheet only)

A. Railing shall conform to horizontal and vertical alignment.

B. Posts shall be normal to railing.

C. New rail joint locations shall be similar to the existing locations (12 m max spacing). Joint size to be 6 mm min and increase to match deck joint + 6mm.

D. Dimension will vary with cross-slope of deck (match existing dimensions).

E. Clearance to reinforcing steel in curb and railing to be 25 mm. Longitudinal railing reinforcement to stop at all joints in the railing.

(1) Reinforcing to be in place before deck concrete is placed.

☆ Indicates match existing dimensions.

DESIGN	BY Rangina Amir	CHECKED Arlene Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY Roelina Martinez	CHECKED Arlene Frank	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN
QUANTITIES	BY Rangina Amir	CHECKED Arlene Frank	CU 07 EA 4K3801

BRIDGE NO. 53-1678
KILOMETER POST 54.2

PALO COMADO OC

CONCRETE BARRIER (TYPE 1) DETAILS

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/01)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 7-27-05 | 10-03-05

SHEET 6 OF 7

FILE => 074k38006brdt.dgn

USERNAME => bmiller DATE PLOTTED => 26-JUL-2007 TIME PLOTTED => 07:41

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	54.2	19	19

REGISTERED CIVIL ENGINEER

3-20-06
PLANS APPROVAL DATE

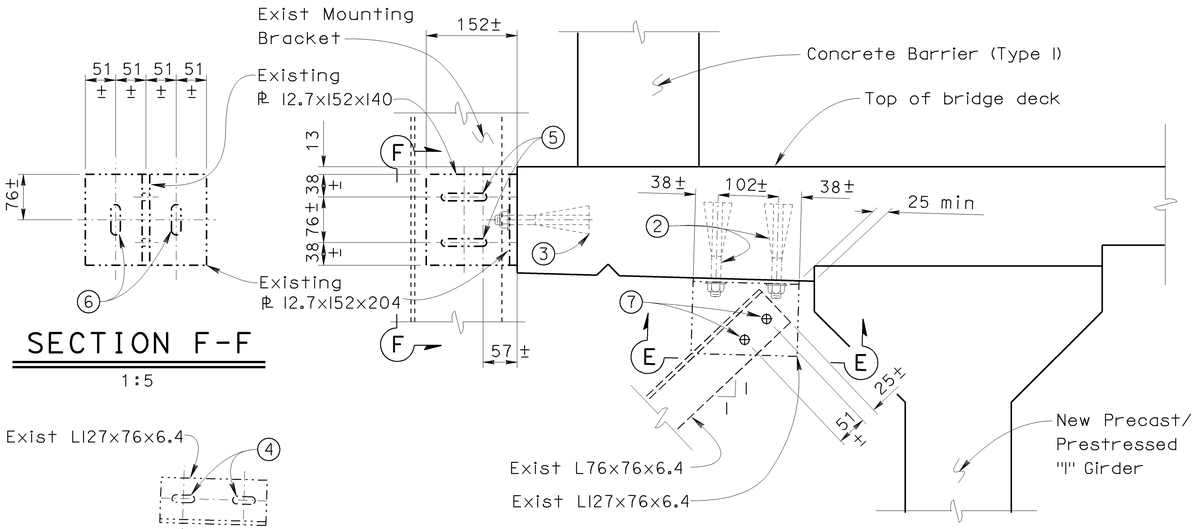
MICHAEL J. LEE No. C 42447 Exp. 3-31-08 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

CONTRACT NO. 07-4K3804

TRANSFER DATE: 07-13-2007
FIELD CORRECTION DATE: 11-15-2006

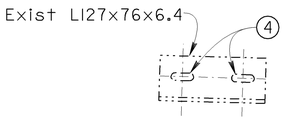
CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye

NO AS BUILT CORRECTIONS



EXISTING STRUCTURE MOUNTED SIGN ANCHORAGE DETAIL

NO SCALE

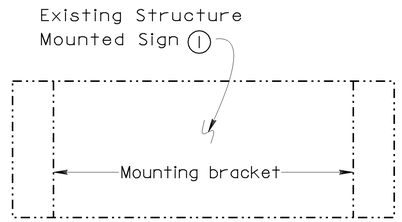


SECTION E-E

1:5

SECTION F-F

1:5



EXISTING STRUCTURE MOUNTED SIGN MOUNTING BRACKET LOCATIONS (TOTAL 2)

NO SCALE

NOTES: (APPLY TO THIS SHEET ONLY)

1. Remove and reinstall existing structure mounted sign and all brackets and hardware except where shown otherwise and as directed by the Engineer.
2. New 15.9 mm ø non-corrodible expansion anchor with hex head nut and washer; with 127 mm embedment. Pull out value 26.7 kN per anchor.
3. New 2 - 15.9 mm ø non- corrodible expansion anchors with hex head nuts and washers; with 127 mm embedment. Pull out value 26.7 kN per anchor.
4. Existing 38 mm x 19 mm slotted hole for new expansion anchor.
5. Existing 76 mm x 15.9 mm slotted hole for existing 12.7 mm ø hex head bolt, nut, flat washer and lock washer.
6. Existing 51 mm x 19 mm slotted hole for new expansion anchor.
7. Existing hole for existing 15.9 mm ø hex head bolt with nut and lockwasher.

For PC/PS I Girder and deck reinforcement placement notes, see B0-5

NOTE:
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ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY Rangina Amir	CHECKED Arlene Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY Roelina Martinez	CHECKED Arlene Frank	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN
QUANTITIES	BY Rangina Amir	CHECKED Arlene Frank	CU 07 EA 4K3801

BRIDGE NO. 53-1678
KILOMETER POST 54.2

PALO COMADO OC
SIGN DETAILS

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/07)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 8-24-05 | 10-05-05

SHEET 7 OF 7

FILE => 074k38007sign.dgn

USERNAME => bmiller DATE PLOTTED => 26-JUL-2007 TIME PLOTTED => 07:42

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	101	54.2	16	19

REGISTERED CIVIL ENGINEER

3-20-06
PLANS APPROVAL DATE

MICHAEL J. LEE No. C 42447 Exp. 3-31-08 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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TRANSFER DATE: 07-12-2007
FIELD CORRECTION DATE: 11-15-2006

CONTRACT NO: 07-4K3804

CORRECTIONS TRANSFERED BY: BEM
FIELD CORRECTIONS BY: A. Amboye

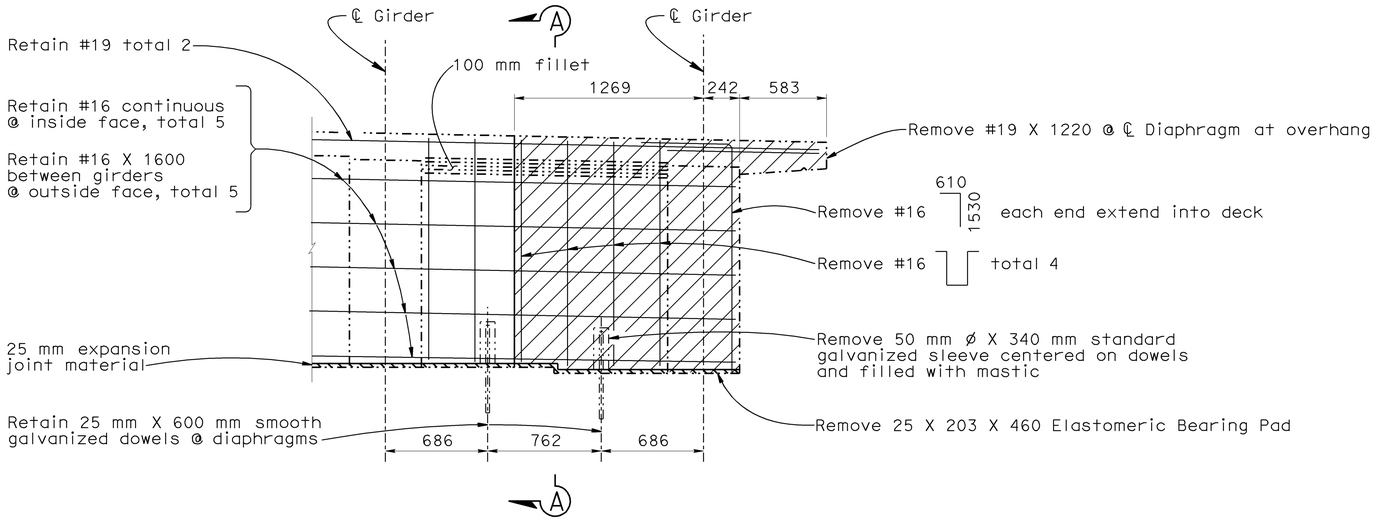
AS BUILT CORRECTIONS

LEGEND:

Indicates existing concrete.

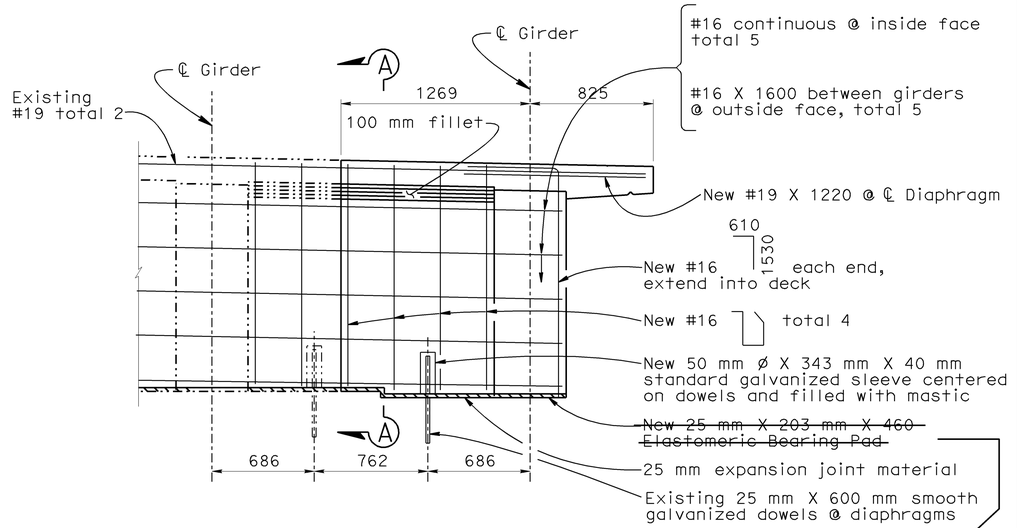
Indicates new construction.

Indicates limits of removal of existing concrete and reinforcement.



EXISTING - PARTIAL TYPICAL SECTION AT BENT

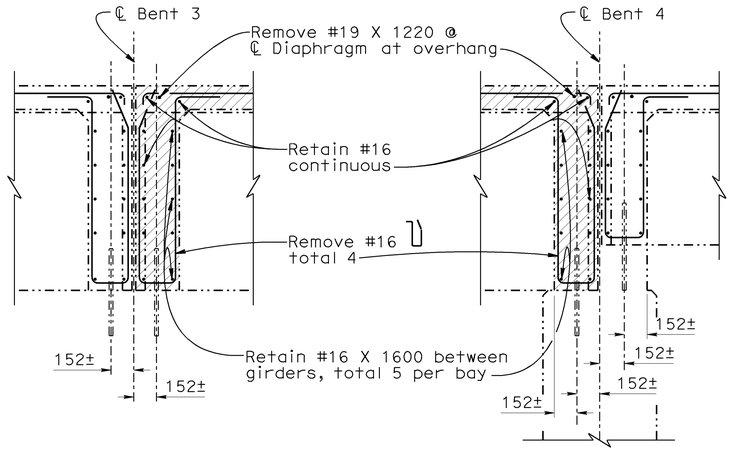
1:20



RECONSTRUCTION - PARTIAL TYPICAL SECTION AT BENT

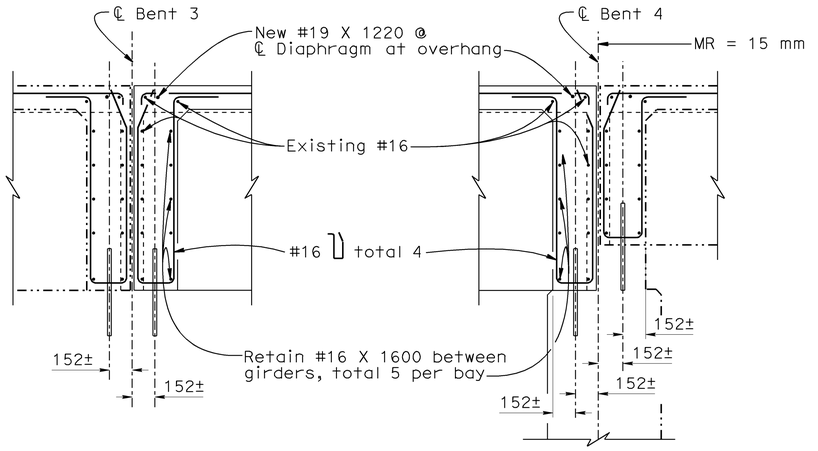
1:20

Replaced with
25mm x 254mm x 380mm



EXISTING - SECTION A-A

1:20



RECONSTRUCTION - SECTION A-A

1:20

NOTE:
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ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

DESIGN	BY Rangina Amir	CHECKED Arlene Frank	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF MAINTENANCE STRUCTURE MAINTENANCE DESIGN	BRIDGE NO. 53-1678
DETAILS	BY Roelina Martinez	CHECKED Arlene Frank			KILOMETER POST 54.2
QUANTITIES	BY Rangina Amir	CHECKED Arlene Frank			

PALO COMADO OC
DETAILS NO.3

STRUCTURE MAINTENANCE DESIGN GENERAL PLAN & DETAIL SHEET (METRIC) (REV. (5/10/03)

ORIGINAL SCALE IN MILLIMETERS FOR REDUCED PLANS 0 10 20 30 40 50 60 70 80 90 100

CU 07
EA 4K3801

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY): 8-1-05 | 8-23-05 | 10-03-05

SHEET 4 OF 7

FILE => 074k38004det3.dgn

USERNAME => bmiller DATE PLOTTED => 31-JUL-2007 TIME PLOTTED => 15:19

APPENDIX C
CALTRANS COMMENTS AND RESPONSES

GROUP DELTA CONSULTANTS

Certified MBE

Geotechnical Engineering
Geology
Hydrogeology
Earthquake Engineering
Materials Testing & Inspection
Forensic Services

February 5, 2008

Parsons Transportation Group
2201 Dupont Drive Suite 200
Irvine, CA 92612

Attention: Mr. Thomas E. Sardo

Subject: Response to Caltrans Review Comments
Preliminary Foundation Report dated 02/02/08
Palo Comado OC a.k.a. Chesebro Rd OC (Widen)
Bridge No. 53-1678
07-LA-101-PM 33.69
Agoura Hills, California
GDC Project No. L-783

Dear Mr. Sardo:

Group Delta Consultants is pleased to submit our responses to Caltrans comments on our Preliminary Foundation Report dated January 2, 2008. The comments are included as Attachment 1, and are addressed in order below.

1. Section 4.3 Ground Motion

• Please verify deterministic PBA value for MMR fault with Reverse/Oblique. The PBA calculated using Sadigh (1997) should be 0.43g instead of 0.47g

We concur with the reviewer. We used Sadigh (1997) relationship for Reverse/Thrust fault which gives 0.47g. We have modified the report using Geomatrix / Sadigh (1997) for Reverse/Oblique, which gives 0.43g. We still recommend the same ARS curve.

2. Section 5.2.1 Axial Pile Capacities

• Please verify the minimum spacing requirement for group action. The spacing may vary depending on pile types such as driven pile or CIDH pile, and soil types.

The CIDH piles are tipped in Bedrock, estimated friction is likely conservative, and end bearing is ignored. Therefore, it is our opinion that no reduction in axial capacity is necessary for group action with minimum 2.5 diameter spacing.

This response is attached to the revised report as Appendix C. The following is attached and completes our response:

Attachment 1 Caltrans Comments dated January 13, 2009

We appreciate the opportunity to be a part of your design team for this project. If you have any questions or require additional information, please give us a call at (949) 609-1020.

Sincerely,
GROUP DELTA CONSULTANTS, INC.

Curt Scheyhing, P.E., G.E.
Senior Geotechnical Engineer

Kul Bhushan, Ph.D., G.E
Sr. Consulting Principal

Distribution: Addressee (1 electronic PDF file via e-mail)

ATTACHMENT 1
CALTRANS COMMENTS DATED JANUARY 13, 2009

GEOTECHNICAL DESIGN REPORT REVIEW

DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES

TO: RICHARD HARTZELL, P.E.
Office of Special Funded Projects

DATE: January 13, 2009

FILE: 07 (District) LA (County) 110 (Route) 33.69 (Post Mile)

FDN REPORT BY: Group Delta Consultants DATED: Jan. 2, 2008

Palo Comado Canyon Rd. OC (Widen) (Structure Name)

GENERAL PLAN DATED: FDN PLAN DATED:

07-25720K (EA Number) 53-1678 (Bridge Number)

Submittal (*Check One*): [x] 1st [ ] 2nd [ ] 3rd [ ] 4th [ ] Other:

This Office has review the following item provided by Group Delta Consultants:

1. Preliminary Foundation Report, Palo Comado OC a.k.a. Chesebro Rd. OC (Widen), Los Angeles County, California, prepared by Group Delta Consultants, dated January 2, 2008.

The following are the review comments:

1. Section 4.3 Ground Motion
   - Please verify deterministic PBA value for MMR fault with **Reversre/Oblique**. The PBA calculated using Sadigh (1997) should be 0.43g instead of 0.47g

2. Section 5.2.1 Axial Pile Capacities
   - Please verify the minimum spacing requirement for group action. The spacing may vary depending on pile types such as driven pile or CIDH pile, and soil types.

The report should be revised based on the Foundation Review Comments and Responses, and all responses to Caltrans Foundation Review Comments should be attached to the final foundation report as an Appendix. The review is limited to the geotechnical engineering aspects of the project. Should you have any question and comment, please contact Seungwoon Han at (916) 227-4533.

Approval: approved with following conditions – OSFD should confirm the corrections to be made by the Consultant

Office of Special Funded Projects

Reviewer's Name Seungwoon Han, Ph.D., P.E.
Office of Geotechnical Design South - 1

cc: OGDS-1 (Sacramento), OGDS-1 (Los Angeles), GS File

Revised 04/01