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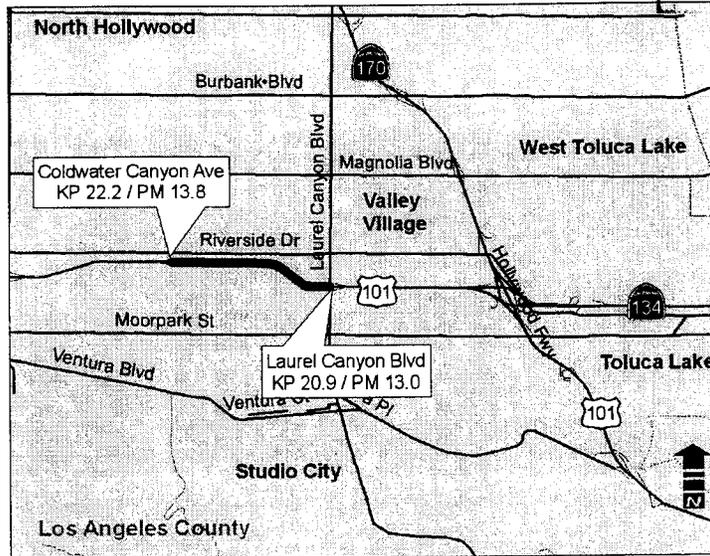
Enclosed is a copy of approved PID prepared for the project noted above for your file. Should you have any questions, please call Kelvin Yuen of my staff at (213) 897-7945.


Melvin Hodges,
Chief, Office of Project Studies

C: File



**PROJECT STUDY REPORT
(PSR)**



I have reviewed the Right of Way information contained in this Project Study Report and the Right of Way Data Sheet attached hereto, and find the data to be in conformance with current applicable State standards and practices.

Andrew P. Nierenberg

 ANDREW P. NIERENBERG, Right-of-Way Project Delivery Manager

On Route US 101
 Between Laurel Canyon Blvd Northbound On-ramp, KP 20.9 (PM 13.0)
 And Coldwater Canyon Ave. Northbound Off-Ramp, KP 22.2 (PM 13.8)

APPROVAL RECOMMENDED BY: *Ravi Chate*
 RAVI CHATE, Project Manager

CONCURRED BY: *Rose A. Casey* 9/29/05
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APPROVED: *Douglas R. Failing*
 DOUGLAS R. FAILING, District Director

9/30/05
 DATE

*pmcs updated
 10/24/05
 not program
 10/24/05*

This Project Study Report has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer attests to the technical information contained herein and has judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.



JAMES WEI, P.E.
REGISTERED CIVIL ENGINEER

9-23-05
Date



Prepared by: Parsons Brinckerhoff

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1.0 PROPOSAL

The Los Angeles County Metropolitan Transportation Authority, in conjunction with Caltrans District 7 and City of Los Angeles, is proposing to add a northbound auxiliary lane on the US 101 freeway between Laurel Canyon Boulevard and Coldwater Canyon Avenue (Attachment A). Based on the US 101 Freeway Corridor Improvement Study (2003), it was determined that near-term operational improvements such as the addition of auxiliary lanes are needed to improve corridor traffic operations.

There is only one alternative studied. The proposed widening will be within the existing Caltrans right-of-way (R/W) and includes the following:

- partial realignment of both entrance and exit ramps at the gore areas
- providing 1150 meters of continuous auxiliary lane
- sound wall relocation
- retaining walls to accommodate the improvements within the available right-of-way
- widening of Tujunga Wash bridge and Whitsett Avenue UC
- approach and departure slabs for Tujunga Wash Bridge and Whitsett Avenue UC with pavement transitions
- standard lane widths and right shoulder widths along the proposed auxiliary lane
- replace the existing glazed screen on concrete barrier

The geometric layouts are presented in Attachment B. These improvements are part of upgrades to the existing US 101 freeway to improve traffic flow between the two interchanges. Within the study area, the design of the retaining wall and sound wall has taken in special considerations due to its close proximity to residential properties. Consequently, a temporary construction easement is assumed adjacent to the wall to minimize impacts to the properties during construction.

The total cost of this project is estimated to be \$15,300,000 (Attachment C). Construction is estimated to be completed in January 2011.

2.0 EXISTING FACILITY

US 101 in this project area is also known as the Ventura Freeway. It is classified as an Urban Primary route in the Transportation Concept Report (TCR). The freeway (US 101) begins at Interstate 5 (I-5) in the Los Angeles Central Business District (CBD), extending northwesterly and traversing the Hollywood Hills and the San Fernando Valley and on to the Los Angeles/Ventura County Line. The freeway was designed and constructed in the late 1940's and early 1950's. The US 101 freeway is designated as a Lifeline Route, part of the Federal Aid Primary (FAP) system and is functionally classified as an Urban Principal Arterial. Currently, this segment of northbound US 101

has five 3.35-meter width lanes, a 0.6-meter width left shoulder and a 2.44-meter width right shoulder with a 100 meters long acceleration lane after the Laurel Canyon Boulevard on-ramp. The properties immediately adjacent to the northbound freeway are mainly residential between Laurel Canyon Boulevard and Tujunga Wash and a sound wall is provided. The elevations of the adjacent properties are generally lower than the roadway by 4 to 6 meters. From the Tujunga Wash to Coldwater Canyon Avenue, the adjacent properties are generally commercial and a metal beam guard railing is provided at the edge of shoulder.

3.0 DEFICIENCIES

Due to the heavy congestion occurring on northbound US 101 between Laurel Canyon Boulevard and Coldwater Canyon Avenue, the proposed project improvements will help alleviate the current congestion and improve mobility. The addition of the northbound auxiliary lane would provide an adequate weaving section so that merge and diverge movements between the Laurel Canyon Boulevard on-ramp and Coldwater Canyon Avenue off-ramp can occur away from the mainline traffic flow and help improve the weaving maneuver. The proposed improvements will also help minimize certain types of congestion-related accidents, such as sideswipe and rear-end collisions, and thus reduce future accident rates.

4.0 ENVIRONMENTAL STATUS

4.1 Environmental Clearance

A Preliminary Environmental Assessment Report (PEAR) was completed for this project and is included as Attachment D. Based on the PEAR, the appropriate environmental document for this project would be a Categorical Exempt (CE) project under the California Environmental Quality Act (CEQA) and a Programmatic Categorical Exclusion (PCE) under the National Environmental Policy Act (NEPA). Based on CEQA Guidelines (Article 19, Section 21084), the project falls within Class 1 of the list of classes of projects that would not have a significant effect on the environment. The proposed project includes minor improvements to an existing transportation facility that would not result in expansion of current uses. The proposed improvements are anticipated to have no impacts based on the small scale nature of the project and limited localized effects. Because the project is anticipated to have no significant effect on the environment, it is exempt from the requirement for preparation of an environmental document.

4.2 Cultural Resources

No eligible paleontological, historical or archaeological resources were identified within or adjacent to the project Area of Potential Effect (APE). A Historic Property Survey

Report (HPSR) was completed for this project to review archeological, paleontological, cultural, and historic resources within the project area. The HPSR should be reviewed during PA/ED for project consistency and updated as needed. The HPSR did not identify any resources in the project study area; however, the proposed project would require some demolition, grading, or excavation activities that could have potential impacts on known or as yet unidentified resources along the corridor. Refer to the Historic Property Survey Report (on file) for a detailed discussion of the cultural resources evaluation.

4.3 Wetlands and Floodplains

The project does not impact either wetlands or floodplains.

4.4 Noise

Based on the Traffic Noise Impact Technical Report (Parsons Brinckerhoff, 2005), it has been determined that the sensitive receptors within the limits of the project are potentially impacted due to the freeway improvement project. Feasible and reasonable noise attenuation measures in the form of soundwalls have been identified as a part of this project. Potential soundwall locations are shown in the Traffic Noise Impact Technical Report on file.

The Traffic Noise Analysis Protocol requires that a detailed impact analysis be performed when there are potentially impacted receivers in the vicinity, when the project has the potential to increase noise levels at adjacent receivers, and when the existing worst-hourly noise levels are less than 5 dBA below the applicable Noise Abatement Criterion. This project meets the above criteria and will therefore require a detailed analysis in order to determine the appropriate reasonable and feasible traffic noise abatement measures.

For all impacted receptors, noise abatement must be evaluated for acoustical feasibility and overall reasonableness. Only the feasible and reasonable noise barriers may be recommended as a part of the freeway improvement project. The recommended lengths, heights, and locations of soundwalls will be determined during the detailed noise study for the project.

Review of the Traffic Noise Impact Technical Report is needed during the PA/ED phase to determine project consistency and identify if additional detailed noise studies and modeling is needed to determine the extent to which properties will be affected and the level and type of measures to minimize harm that would be warranted to mitigate any significant noise impacts.

4.5 Biology

A Natural Environment Study (Minimal Impacts) [NES(MI)] has been conducted for this project (Parsons Brinckerhoff, 2005). The NES(MI) should be reviewed during PA/ED for project consistency and updated as needed.

Two bridge structures (Whitsett Avenue and Tujunga Wash) are located within the project area and will be widened as part of this project. Weep holes exist on the Whitsett Avenue UC structure, and it appears that there is a low potential for bats to use this structure. If bats are found, appropriate measures should be taken to avoid/minimize impacts to the bats, such as exclusionary devices (e.g., netting) or timing of work to avoid impacting bat roosts (February to September). To ensure that there will not be auditory impacts to adjacent birds that may be using the trees adjacent to the mainline, clearing and grubbing of vegetation should be conducted outside of bird nesting season to the greatest extent possible. If work needs to be conducted during this time period, the Caltrans Division of Environmental Planning should be contacted during final design (PS&E) for an additional assessment and evaluation.

Some mature vegetation is located adjacent to the edge of shoulder and within the Caltrans right-of-way which will need to be removed. The vegetation to be removed is ornamental landscaping. As no native trees will be impacted, there will not be any conflicts with local ordinances.

The proposed project would be contained within the existing freeway and roadway right-of-way and would not require acquisition of additional right-of-way; therefore, impacts to sensitive biological resources are not anticipated. In addition, in areas where existing landscaping is disturbed, the area will be replaced with similar species as currently present. Aesthetic treatments to the noise barriers and replacement landscaping in front of the noise barriers would be incorporated into final design plans to the greatest extent possible. Refer to the Natural Environment Study (Minimal Impacts) for a detailed discussion of biology (on file).

4.6 Air Quality Conformity

This project is not listed in the RTIP (FY 2004/05 – 2009/10) that was adopted in April 2004 by Southern California Association of Governments (SCAG) Regional Council and approved on October 4, 2004. Once the funds are committed to the project, it will be submitted for the project's inclusion in the 2006 RTIP. The deadline to submit the project to MTA is mid October 2005.

The study area is located in Los Angeles County. Los Angeles County is located within the South Coast Air Basin (SCAB), which is governed by the South Coast Air Quality Management District (SCAQMD). The Los Angeles County portion of the South Coast Air Basin does not attain state AAQS for carbon monoxide (CO), PM₁₀, PM_{2.5} and ozone.

Furthermore, the Los Angeles county portion of the South Coast Air Basin does not attain federal AAQS for CO, PM₁₀ and ozone.

The project is not expected to increase VMT or affect regional VHT. The project will be added to the regional emissions analysis supporting SCAG's 2006 RTIP. Potential local impacts of the project may include increases in particulate matter (PM₁₀, PM_{2.5} and DPM) during construction and in carbon monoxide levels and particulate matter during operation.

A microscale analysis and air quality report is needed to support the environmental document to insure that the project will not cause or exacerbate a violation of the ambient air quality standards. The microscale analysis will be conducted using the following:

- Transportation Project-Level Carbon Monoxide Protocol (UC Davis ITS, December 1997)
- Guidance for Qualitative Project Level "Hot Spot" Analysis in PM₁₀ Nonattainment and Maintenance Areas (FHWA, September 2001).

The air quality report cannot commence until the project is in the 2006 RTIP as a funded itemized project.

4.7 Title VI Considerations

This project complies with Title VI of the Civil Rights Act of 1964 and the 1994 Presidential Executive Order 12898 on Environmental Justice. As part of the environmental process, the impact of the project on "minority and low-income populations" will be analyzed.

4.8 Involvement with a Navigable Waterway

A flood control channel, the Tujunga Wash, is located east of Whitsett Avenue and crosses under the US 101. Although the freeway will be widened over the Tujunga Wash, there will be no direct impacts to the Tujunga Wash. The Tujunga Wash, a 303(d) listed impaired water body, crosses under the US 101 in the study area. The proposed project would be required to comply with all Regional Water Quality Control Board (RWQCB) water quality standards and waste discharge requirements, and Caltrans and statewide National Pollutant Discharge Elimination System (NPDES) permit including construction site Best Management Practices (BMPs). Proposed improvements on the bridge structure over the wash would not impact the channel. New construction associated with the proposed project would be limited to areas within the existing right-of-way. Changes to drainage patterns within these areas would be limited to modification of the existing freeway storm drain systems to carry runoff from the additional paved surfaces. A Gross Solids Removal Device will be included as part of the proposed project to negate adverse impacts to water quality.

There is also a concrete drainage channel at the cul-de-sac off Kling Street, which is devoid of vegetation and ephemeral flow, that may be impacted during the construction of this project. At this time, it is anticipated that permits from the biological resource agencies will be required for impacts to this drainage channel, which will include the replacement of drainage capacity of this drainage channel. It is possible that during final design, elements associated with the proposed improvements may negate the need to directly impact the Kling Street drainage channel, and if so, then permits would not be required.

Best Management Practices (BMPs) will be incorporated so that water quality in these waterways will not be adversely impacted during construction. Impacts to the concrete ditch adjacent to Kling Street will require permits from the Army Corps of Engineers (Section 404 of the Clean Water Act), Regional Water Quality Control Board (Section 401 of the Clean Water Act) and the California Department of Fish and Game (Section 1600 *et seq.* of the Fish and Game Code). Permits from these agencies in addition to the Los Angeles County Flood Control District may also be required if during final design impacts to the Tujunga Wash are anticipated. Early coordination with the Caltrans Division of Environmental Planning would be prudent in order to obtain the permits in a timely fashion. Refer to the Storm Water Data Report (Attachment L) for a detailed discussion of hydrology and water quality.

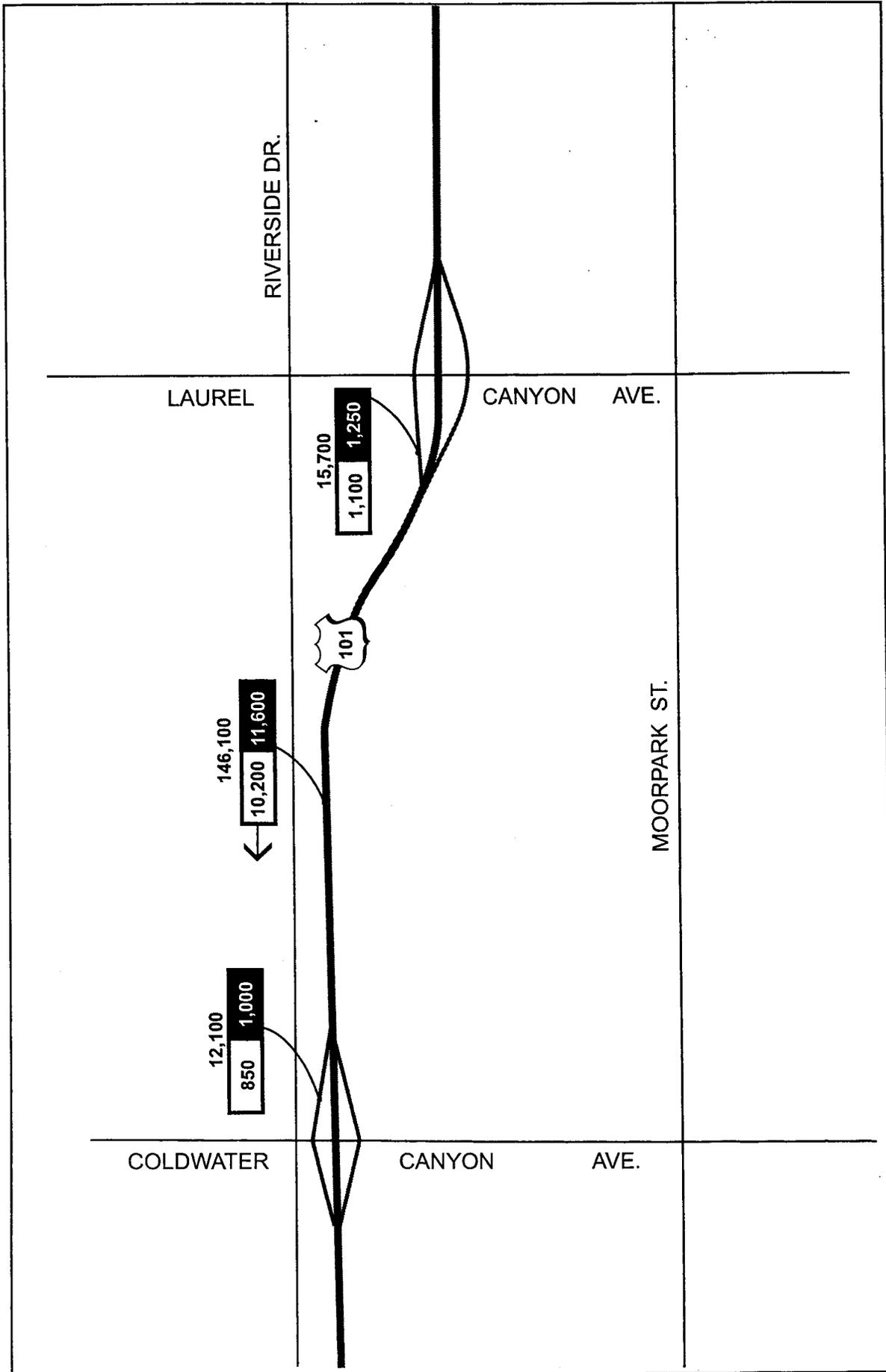
4.9 Other Environmental Issues

No other environmental issues are expected to influence the project design or cost.

5.0 TRAFFIC AND ACCIDENT DATA

5.1 Traffic Conditions

The year 2003 Average Daily Traffic (ADT) volume for US 101 in the segment of this project is approximately 296,000 vehicles per day (vpd). The percentage of trucks traveling along this freeway segment is approximately four percent. Year 2003-2004 peak hour traffic volumes were provided by Caltrans. The freeway mainline volumes along the study segment are approximately 10,200 vehicles per hour (vph) in the AM peak hour and 11,600 vph in the PM peak hour. The mainline peak hour volumes are illustrated in Figure 5-1 and shown in Table 5-1.



US 101 Combined PSR/PR

Existing Peak Hour Traffic Volumes
 NB BETWEEN LAUREL CANYON BLVD. AND COLDWATER CANYON AVE.

Figure 5-1

Table 5-1 Year 2003 Traffic Volumes – Northbound US 101		
Location	AM Peak Hour Volumes (vph)	PM Peak Hour Volumes (vph)
Between Laurel Canyon Boulevard and Coldwater Canyon Avenue	10,200	11,600

Source: Caltrans Volumes Database, 2003-2004.

Caltrans congestion maps were used to identify freeway mainline operating conditions. These maps show the duration of congestion during peak hours on incident-free days. Generally, freeway operating conditions are directly influenced by the freeway's capacity. Under normal operating conditions, the freeway capacity is about 2,000 vehicles per hour per lane (vphpl). When the traffic demand on the freeway exceeds capacity, vehicle speeds are reduced to below 60 km/h (35 mph) and last until traffic demand returns back to a level below freeway capacity.

The congestion maps presented in the Caltrans Transportation Concept Report (TCR) show that AM peak operating conditions on the segment of US 101 between Laurel Canyon Boulevard and Coldwater Canyon Avenue, in the northbound direction, are associated with an F (jammed flow) level of service. Congested conditions for the AM peak period last for one hour or less in the northbound direction. Over the duration of this peak period, the northbound average travel speed is reduced to below 60 km/h (35 mph).

The PM peak operating conditions, for the northbound direction of this segment, are also associated with an F level of service. Congested conditions for the PM peak period last for two to three hours on the northbound freeway mainline segment. Over the duration of this peak period, the northbound average travel speed is reduced to below 60 km/h (35 mph). The peak period traffic operating conditions are summarized in Table 5-2.

Table 5-2 Peak Period Traffic Operating Conditions - Northbound US 101		
Location	AM Peak Period	PM Peak Period
Between Laurel Canyon Boulevard and Coldwater Canyon Avenue	Peak Duration: 15 min. to 1 hour ATS: Below 60 km/h (35 mph)	Peak Duration: 2 to 3 hours ATS: Below 60 km/h (35 mph)

Source: Caltrans Transportation Concept Report
 ATS = Average Travel Speed

Caltrans uses the duration of congestion as a measure to classify the level of service F conditions experienced on the freeway. Table 5-3 presents the level of service F designations used by Caltrans. During the AM peak period, the duration of congestion is one hour or less of delay in the northbound direction, which correspond to an F₀ level of service. The duration of congestion in the northbound direction during the PM peak period is two to three hours of delay, which corresponds to an F₂ level of service.

Table 5-3 Caltrans Level of Service F Designations	
Level of Service Designation	Duration of Congestion
F ₀	15 minutes to 1 hour
F ₁	1 hour to 2 hours
F ₂	2 hours to 3 hours
F ₃	More than 3 hours

Source: Caltrans Transportation Concept Report

The average daily traffic (ADT) volumes for the northbound US 101 on-ramp from Laurel Canyon Boulevard is 15,700 vehicles per day. The ADT volumes for the northbound US 101 off-ramp to Coldwater Canyon Avenue is 12,100 vehicles per day. The AM and PM peak hour volumes for both ramps are listed in Table 5-4 and shown in Figure 5-1.

Table 5-4 Existing NB US 101 Ramp Volumes			
Ramp Location	ADT (vpd)	AM Peak Hour Volume (vph)	PM Peak Hour Volume (vph)
Laurel Canyon On-Ramp	15,700	1,100	1,250
Coldwater Canyon Off-Ramp	12,100	850	1,000

Source: Caltrans Volumes Database, 2004.

A weaving analysis was performed to evaluate existing conditions and determine the effect of adding a northbound auxiliary lane within the study segment. The analysis utilized the nomograph shown in Figure 504.7A of the Caltrans Highway Design Manual (HDM). Using the existing volumes between the Laurel Canyon Boulevard on-ramp and the Coldwater Canyon Avenue off-ramp it was determined that the weaving maneuver currently operates at LOS F during both AM and PM peak hours. The study segment was re-evaluated with the inclusion of an auxiliary lane and it was determined that providing this additional lane would improve the weaving maneuver from current LOS F conditions to LOS E in the AM peak hour, while LOS F conditions would remain during the PM peak hour. The nomographs are presented in Attachment E.

5.2 Traffic Accident Data

Accident rates for a three-year period were compared to the statewide average for a similar type of facility, using the Traffic Accident Surveillance and Analysis System (TASAS) Table B data. The three-year period provided by Caltrans extended from October 1, 2000 to September 30, 2003. The actual accident rate on northbound US 101 within the project segment was 1.15 accidents per million vehicle (MVM) which is lower than the average accident rate of 1.23 accidents per MVM for similar facilities. These accident rates are summarized in Table 5-5. In addition, Table C was examined to determine if high accident frequency locations exist. A short 300 meter segment of the US 101 mainline between KP 21.9 and KP 22.2 was identified, however, the accident concentration within the 3, 6, 12-month period were not significant. Consequently, further investigation is not required and the proposed project is expected to help reduce the current accident rates.

Location (KP 20.9 to KP 22.2)	Total No. of Accidents	Actual Rates (per million vehicles or million vehicle kilometers)			Average Rates (per million vehicles or million vehicle kilometers)		
		F*	F + I **	Total***	F*	F + I **	Total***
Mainline	147	0.000	0.37	1.15	0.006	0.38	1.23
Laurel Canyon On-Ramp	11	0.000	0.24	0.66	0.002	0.32	0.80
Coldwater Canyon Off-Ramp	11	0.000	0.58	0.91	0.005	0.61	1.50

Source: Caltrans TASAS Table B data.

Notes:

1. Mainline data are based on the three-year period between October 1, 2000 and September 30, 2003.
2. Ramp data are based on the three-year period between January 1, 2001 and December 31, 2003.
3. Rates for ramps are shown as per million vehicles (MV).

* Fatalities, ** Fatalities plus Injuries, *** All reported accidents

Accident data was provided by Caltrans for the section of US 101 between KP 20.9 and KP 22.2. This mainline section of US 101 had a total of 147 accidents in the northbound direction. During the three-year period analyzed, 54 percent of the northbound accidents were rear-end collisions, 21 percent were sideswipe accidents, 15 percent were due to hitting an object, 5 percent were broadside accidents, and the remaining were other types of accidents. The sideswipe and rear-end accidents are considered to be congestion-related accidents and account for 75 percent of the mainline accidents in the northbound direction of the study segment.

The proposed addition of northbound auxiliary lanes would not contribute to any increase in accident rates. Sideswipe and rear-end accidents are generally associated with queues, sudden slowing, stop-and-go and erratic traffic flow conditions. These types of accidents typically occurred on the interior mainline lanes due to the higher operating speeds. On reviewing the location of collisions, it was found that 76 of the total took place in the interior lanes and 50 took place in the right lane. The right lane accidents are generally associated with increased friction between vehicles traveling on the mainline and vehicles merging from the on-ramp with vehicles destined for the off-ramp. This project would help alleviate these weave/merge operational problems by providing a full standard auxiliary lane width and widening the right lane to a full standard width. An additional weaving area for merge and diverge movements between the Laurel Canyon Boulevard on-ramp and Coldwater Canyon Avenue off-ramp will be created, thus minimizing sideswipe and rear-end accidents and resulting in the reduction of current accident rates.

The northbound US 101 on-ramp from Laurel Canyon Boulevard had an accident rate of 0.66 accidents per million vehicles (MV) during the period January 1, 2001 through December 31, 2003. The number of accidents and rates are summarized in Table 5-5. This is lower than the average accident rate of 0.80 accidents per MV for similar ramp facilities. The northbound US 101 off-ramp to Coldwater Canyon Avenue had an accident rate of 0.91 accidents per MV during the same period. This rate is below the state average of 1.5 accidents per MV for similar ramp facilities. Detailed information is presented in Attachment F, which shows the Caltrans accident data and TASAS Table B printouts.

6.0 NONSTANDARD DESIGN FEATURES

Table 6-1 provides a summary of the nonstandard mandatory design features that require exceptions. A Mandatory Fact Sheet was prepared and approved on June 28, 2005.

Feature No.	Description	Existing	Proposed	Standard
1	Non-Standard Left Shoulder Width & Horizontal Clearance (Mainline)	0.9 meters	0.9 meters	HDM Topic 302.1 & 309.1(3)(a) Table 302.1 3.0 & 3.0meters.
2	Non-Standard Lane Widths (Mainline)	3.35 meters	3.35 meters	HDM Topic 301.1 3.6 meters
3	Non-Standard Median Width (Mainline)	2.4 meters	2.4 meters	HDM topic 305.1(3)(a) 6.6 meters
4	Non-Standard Horizontal Stopping Sight Distance (Mainline)	118.72 meters	118.72 meters	HDM Topic 201.1 Table 201.1 220 meters

7.0 IMPACT ON RAILROADS

There is no impact on railroads for this project within this segment of the US 101 freeway between Laurel Canyon Boulevard and Coldwater Canyon Avenue.

8.0 IMPACT ON UTILITIES

Typical utilities located in the project area includes gas, electric, telephone, cable TV, water, public drainage/irrigation, and fiber optics. Not all of these are impacted by the proposed northbound auxiliary lane improvement. During construction, it will be required that the contractor maintains all essential services. Brief interruptions of some utilities (several hours) may be required during the utility relocation phases. The following utility relocations are anticipated:

- Gas (Southern California Gas Company)
- Telephone (SBC)
- Electric (Los Angeles Department of Water and Power)
- Water (Los Angeles Department of Water and Power)

The total cost of potential utility relocation is estimated to be \$200,000. Details cost estimates are presented in Attachment G.

9.0 STRUCTURES

There are two structures, Tujunga Wash Bridge and Whitsett Avenue Undercrossing that are impacted by this project. These two structures need to be widened to accommodate the addition of the northbound auxiliary lane. An Advance Planning Study (APS) was prepared for each bridge, and is presented in Attachment H. The total estimated cost for the Tujunga Wash Bridge is \$1,998,000, and the estimate for the Whitsett Avenue Undercrossing is \$1,044,000. Part of the cost also includes replacement of the approach slabs. There are currently existing sections of approach slab, but they are not continuous across the width of the structure. Per Caltrans policy, new approach slabs will be incorporated throughout the entire width of the structure. Overnight construction can occur by closing the lane designated for approach slab replacement according to a lane closure chart provided by the Caltrans traffic unit. Rapid hardening cement concrete allows for this minimally-disruptive type of operation.

10.0 HIGHWAY PLANTING

The northbound widening will impact the existing slopes and existing landscaping. During the PS&E phase of the project, new landscaping will be implemented. This project will remove existing full grown landscaping. Replacement planting will be implemented. However, standard highway planting will plant mostly one gallon and five gallon size plants. It will take several years before the standard highway becomes mature. The cost of replacing the existing landscaping is included in the cost estimate.

11.0 PERMITS

All entities other than Caltrans working within the State right of way must obtain a Caltrans Encroachment Permit(s) prior to commencement of work.

In addition, the project must conform to the requirements of the Department's Statewide National Pollutant Discharge Elimination System (NPDES) Storm Water Permit, Order No. 99-06-DWQ, NPDES No. CAS000003 in addition to the BMPs specified in the Department's Statewide Storm Water Management Plan (SWMP). The project must also conform to the requirements of the General NPDES Permit for Construction Activities, Order No. 99-08-DWQ, NPDES No. CAS000002, and any subsequent General Permit in effect at the time of project activity.

Other permits that may be required include the following:

- Los Angeles County Flood Control District (LACFCD) Permit (required to modify the Tujunga Wash Box Culvert)
- Regional Water Quality Control Board 401 Certification
- U.S. Army Corps of Engineers 404 Permit
- California Department of Fish and Game 1601 Agreement
- National Pollutant Discharge Elimination System (NPDES) Permit

12.0 RIGHT-OF-WAY REQUIRED

There is no additional permanent right-of-way needed for this project. The widening occurs within the existing Caltrans right-of-way. However, Temporary Construction Easement (TCE) is needed for the retaining wall and sound wall construction. The estimated cost for the TCE is \$425,000. Details of this requirement are presented in Attachment G which also shows the estimated cost.

13.0 HAZARDOUS MATERIALS

An Initial Site Assessment (ISA) has been conducted for this project (Group Delta Consultants, 2005), and is presented in Attachment I. A preliminary review of

environmental databases concluded that there is no significant potential hazardous waste contamination that will impact the project. However, any contamination found within the project area will be remediated at the onset of the construction phase.

An Aerial Deposited Lead (ADL) investigation will be performed during the PS&E stage, as necessary, to allow proper excavated soil management including onsite placement or offsite disposal. Lead contamination from vehicle emission may be encountered during excavation in unpaved areas next to traffic lanes or shoulders. Soil samples will be collected, tested and analyzed for lead contamination during the PS&E stage. If lead contamination is found, the results/conclusions will be included in the Standard Special Provisions (SSP) and the Resident Engineer's File. The SSP will be incorporated in the Project PS&E.

In general it is assumed that the DTSC variance will expire before construction of this project. Consequently, it is anticipated that soil removal and disposal will be necessary at the project site. The cost of disposal to a Class I disposal site has been included in the cost estimate. However, if the DTSC extends Caltrans variance prior to construction of this project, then any portion of the upper 0.6 meters of soil excavated from the site may be used as fill on-site, provided that the soil containing ADL is placed a minimum of 1.5 meters above the maximum water table elevation and covered with at least 0.3 meters of non-hazardous soil in accordance with the DTSC variance. As noted earlier, a more detailed site investigation will be performed during the PS&E phase of the project.

14.0 REMARKS

14.1 Stage Construction and Transportation Management Plan (TMP)

The importance of US 101 as a local and regional roadway link between the Los Angeles Central Business District and the San Fernando Valley, Ventura County, and other parts of California creates a challenge to find ways to accommodate project construction with minimal disruption of traffic. Construction is to be completed in 6 stages. Stage I will provide for the initial outside widening construction. Five lanes of mixed flow traffic will be maintained during construction through restriping. The outside lane width will be 3.65 meters to accommodate truck traffic, the number 1 lane will also be 3.65 meters and the remaining three interior mixed flow lanes will be restriped at a reduced width of 3.15 meters. Stages II-VI will be night time closure periods to construct the approach slabs across exiting traffic lanes. One lane at a time will be constructed for night time construction. The mixed flow travel lanes adjacent to the construction will be closed for contractor mobility and access during the construction. Due to the elimination of shoulder width during the night time construction, lanes adjacent to the construction and the mainline median barrier will be 3.65 meters in width. The interior mixed flow lanes will be reduced to 3.15 meters based upon the recommendation of the Office of DTM. The southbound approach slabs construction will be accomplished in a similar fashion.

The PS&E phase of this project will include the development of a Transportation Management Plan (TMP). A TMP data sheet is provided in Attachment J.

14.2 Funding and Scheduling

The construction of this project is expected to be performed under the Caltrans SHOPP program. The tentative project schedule is expected to be as listed below:

Tentative Project Schedule	
Milestone	Completion Date
PA & ED	July 2007
PS&E	February 2009
Right-of-Way Certification Date	July 2009
Ready to List (RTL)	July 2009
Construction Begin	November 2009
Construction Completion	January 2011 (14 months)

Caltrans Project Support Cost are estimated to be as shown in the table below:

Proposed program FY	District PY's						Engineering Service Center PY's						FY Total PY's			
	Design	R/W	Construction	Project Management	Traffic	Environment	Structures			METS and Others				Office Engr.		
							Design	Construction	Design	Construction	Design	Construction				
05 - 06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	\$0	
06 - 07	2.30	0.25	0.00	0.40	0.50	0.50	1.10	0.00	0.30	0.00	0.00	0.00	0.00	0.00	5.35	\$567
07 - 08	2.10	0.25	0.00	0.40	0.40	0.50	1.30	0.00	0.30	0.00	0.00	0.00	0.00	0.00	5.25	\$557
08 - 09	2.60	0.10	2.80	0.40	0.30	0.20	1.20	0.90	0.00	0.00	0.00	0.00	0.50	9.00	9.00	\$954
01 - 10	0.50	0.00	4.30	0.25	0.20	0.10	0.50	2.30	0.00	0.00	0.50	0.00	0.00	8.65	8.65	\$917
10 - 11	0.30	0.00	2.40	0.25	0.10	0.00	0.00	0.50	0.00	0.00	0.20	0.00	0.00	3.75	3.75	\$398
TOTAL ESTIMATED PROJECT PY'S AND OTHER SUPPORT COSTS														32.00	\$3,392	

14.3 Federal Involvement

US 101 within the limits of this project is part of the National Highway System (NHS). The proposed auxiliary lane project is exempt from FHWA review and oversight under Title 23 USC Sec. 106 (c) (1). However, FHWA will be involved in the NEPA process should federal funds be anticipated.

14.4 Value Analysis

The cost of this project is less than \$25 million. Value Analysis is not mandated for federal fund under the National Highway System Act of 1995 and the final ruling 23 CFR Part 627.

15.0 DISTRICT CONTACTS

The following individuals may be contacted for information or questions pertaining to this Project Study Report document.

Name	Unit	Phone Number
Mel Hodges	Project Studies	(213) 897-4637
Kelvin Yuen	Project Studies	(213) 897-7945
Barkef Karapetian	Project Studies	(213) 897-5876
Ravi Ghate	Project Manager	(213) 897-5593
Jim Deluca	HQ, Design	(213) 897-1912
Aziz Elattar	Environmental Planning	(213) 897-0686
Dan Murdoch	Right of Way	(213) 897-1816
Masoud Esnaashari	HQ, Department of Structures	(916) 227-8341
Kirk Patel	Division of Operations	(213) 897-1825

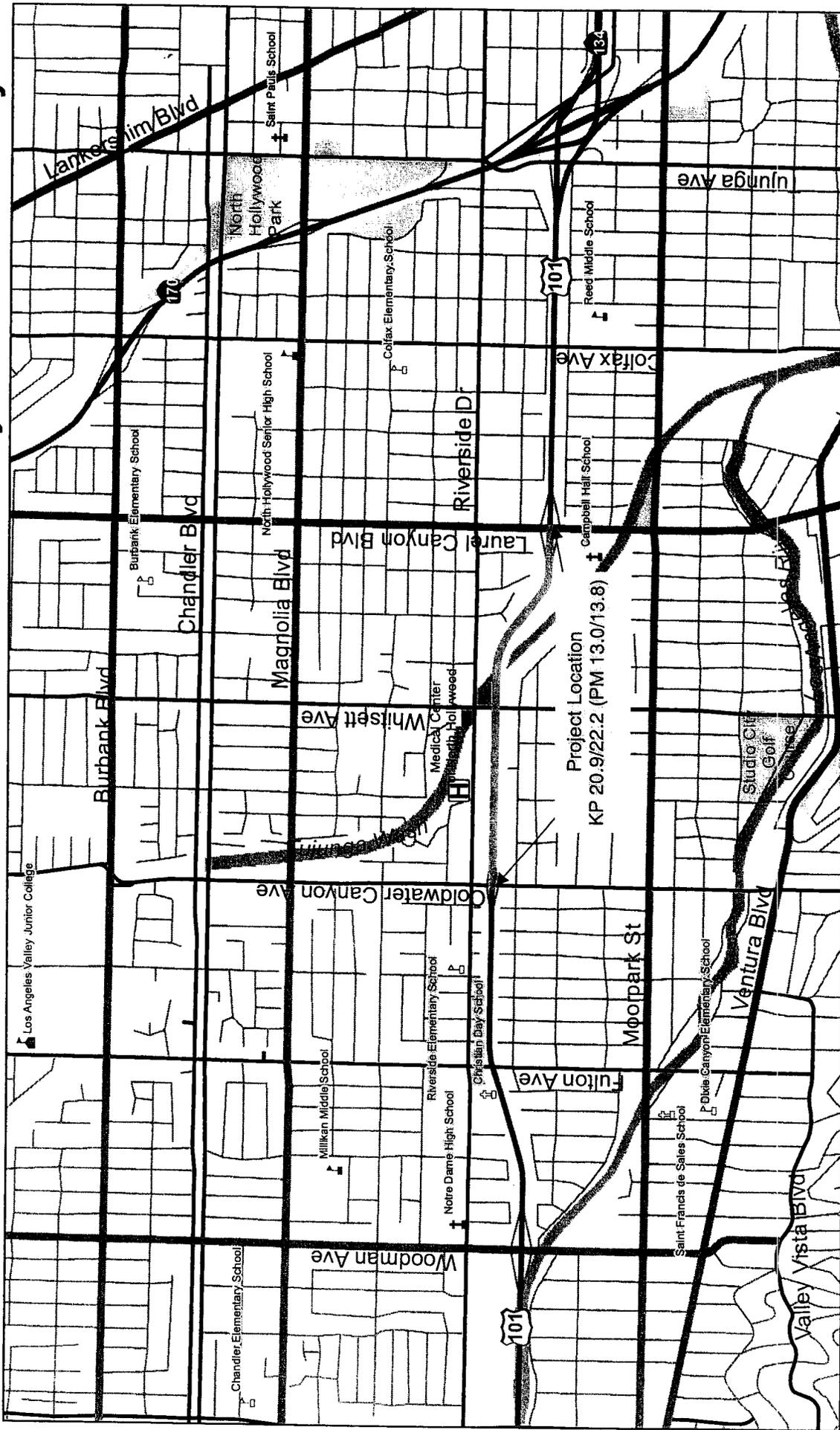
16.0 ATTACHMENTS

- A. Location Map
- B. Typical Sections and Layouts
- C. Cost Estimates
- D. Environmental Documentation
- E. Weave Analysis
- F. Accident Data
- G. Right-of-Way Data Sheet
- H. Advance Planning Study (APS)
- I. Initial Site Assessment (ISA) Checklist
- J. Transportation Management Plan (TMP) Data Sheet
- K. Preliminary Geotechnical Report
- L. Storm Water Data Report (SWDR)
- M. Division of Engineering Services (DES) Scoping Checklist
- N. Request for DES Workload Estimate
- O. Project Work Plan
- P. Structural Section Memo
- Q. Risk Management Plan

ATTACHMENT A

Location Map

US-101 Improvement Project: NB Aux. Lane Laurel Cyn. to Coldwater Cyn.



Private Elementary School

 Public Elementary School

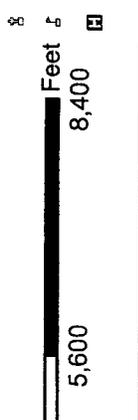
 Private High School

 Public High School

 City College

 Project Limits

 Hospitals

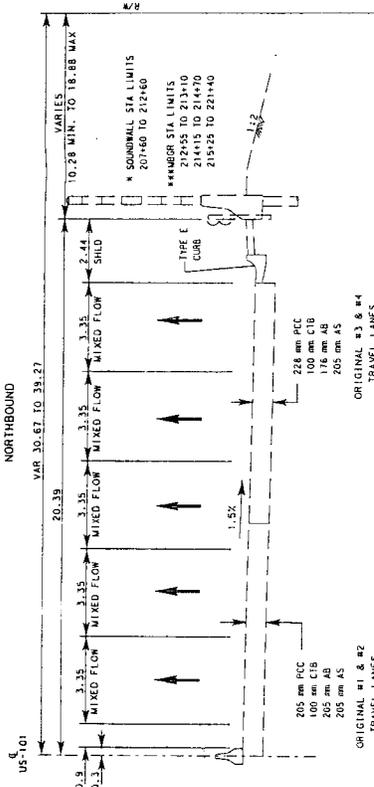


1 inch equals 2,000 feet

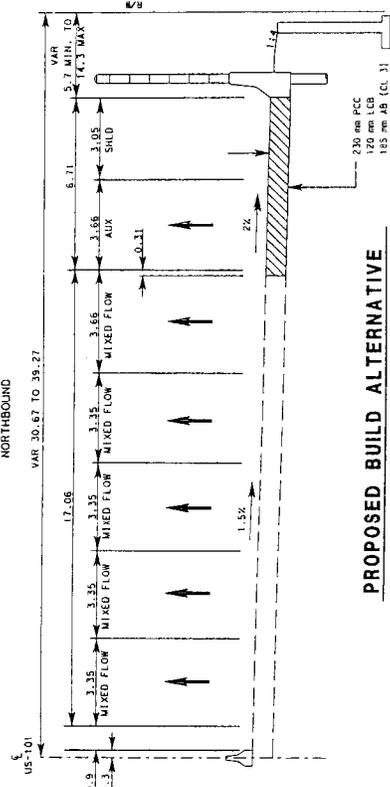
ATTACHMENT B

Typical Sections and Layouts

DIST. COUNTY	ROUTE	KILOMETER POST MILE	SHEET NO.	TOTAL SHEETS
07 LA	101	XP 20+92.2	1	1
REGISTERED CIVIL ENGINEER				
PLANS APPROVAL DATE				
Metrix 1841 BUSINESS CENTER DRIVE SUITE 208 SAN BERNARDINO, CALIFORNIA 92408				



EXISTING CONDITION
STA 207+45 TO STA 220+95



PROPOSED BUILD ALTERNATIVE
STA 207+45 TO STA 220+95

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	OVERSIGHT ENGINEER	DATE	REVISOR
Metrix		DATE	REVISOR

TYPICAL CROSS SECTIONS
LAUREL CYN TO COLDWATER CYN

NO SCALE

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
SCALE 1" = 10' (1:304.8)

CU

EA 24940K

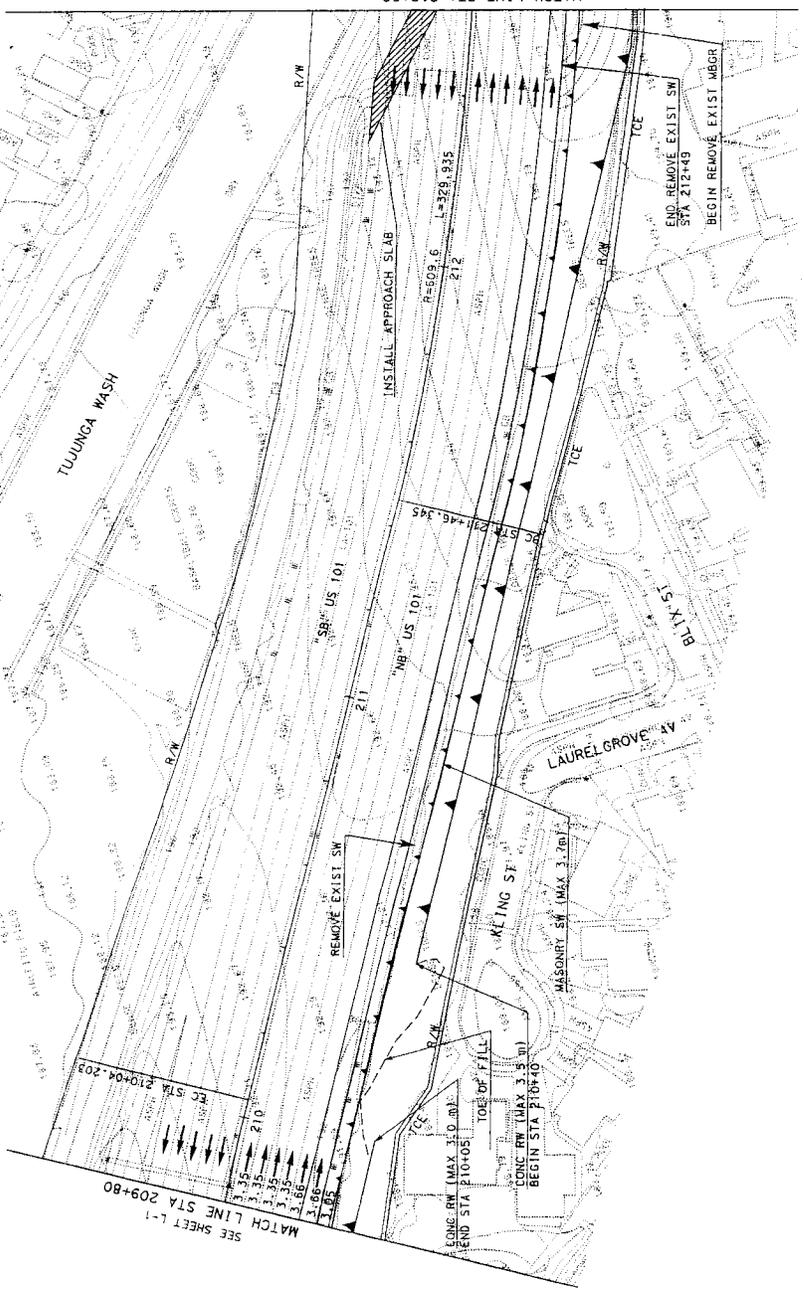
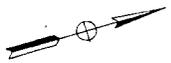
DIST	COUNTY	ROUTE	KILOMETERS POST MILE SHEET TOTAL
07	LA	101	13.9725 (P.M. 13.147/13.1)

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

Metro
One Gateway Plaza
LOS ANGELES, CA 90012-2952

Metrolink
BUSINESS CENTER DRIVE
SAN BERNARDINO, CALIFORNIA 92408
The State of California in its official capacity and in its representative capacity as the Department of Transportation of said State.



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	OVERSIGHT ENGINEER	CALCULATED/	DATE	DESIGNED BY	DATE	REVISOR	DATE	CHECKED BY	DATE
				JDH	2/05			SAH	2/05

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
FOR REDUCED PLANS ORIGINAL
SCALE IS IN MILLIMETERS

USERNAME: SAHMH/BR/SGN

CU

FA 24940K

L-2

LAYOUT
SCALE: 1:500

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		OVERSIGHT ENGINEER	
DATE	DESIGNED BY	CHECKED BY	DATE
2/05	JDH	SAH	2/05
DATE	REVISOR	DATE	REVISION

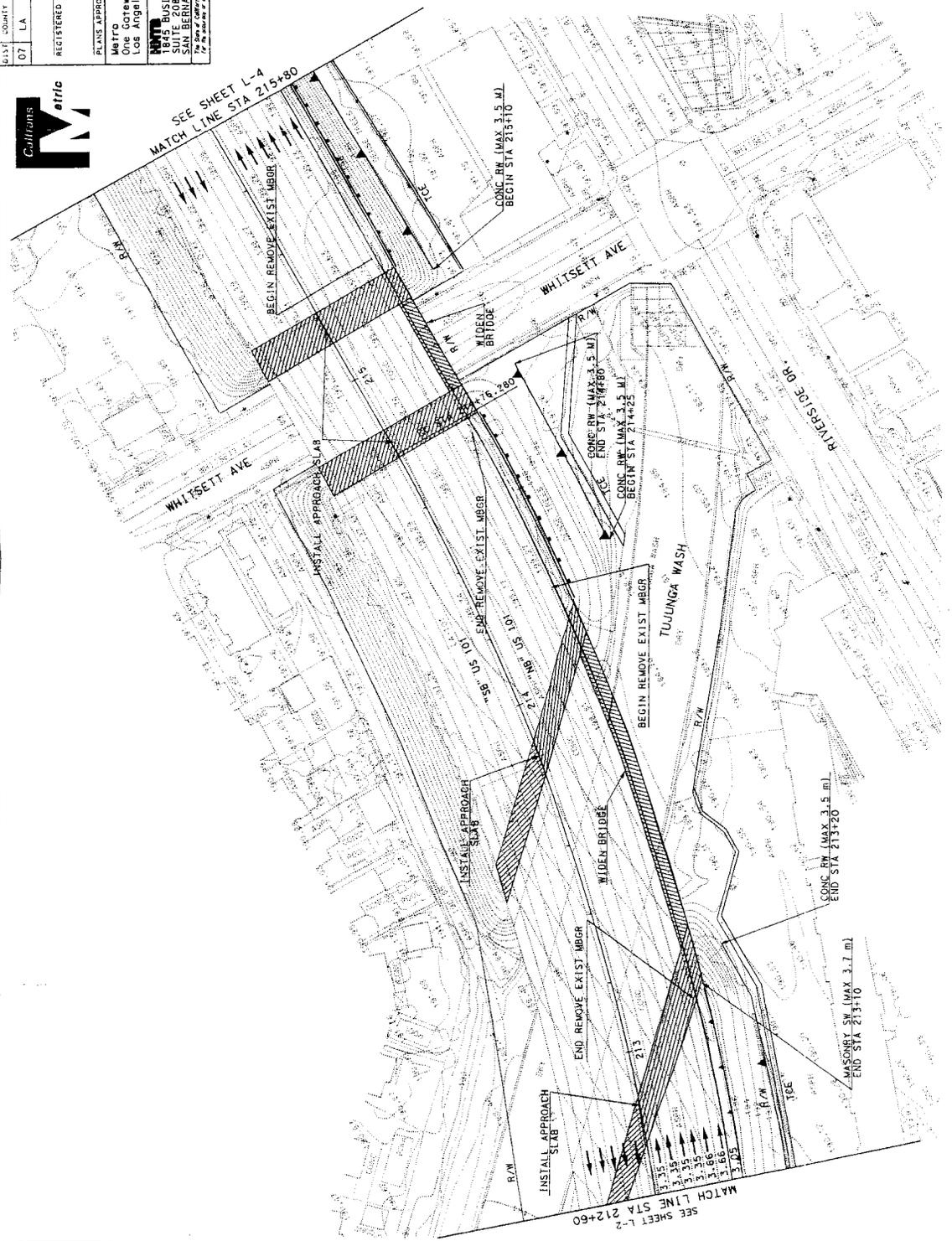
COUNTY	ROUTE	ALICHAFFER POST MILE	TOTAL SHEETS
07 LA	101	20.9772	2
		PM 13.0713	8

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

MAFPC
One Gateway Plaza
Los Angeles, CA 90012-2852

1845 BUSINESS CENTER DRIVE
SUITE 208
SAN BERNARDINO, CALIFORNIA 92408

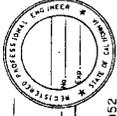


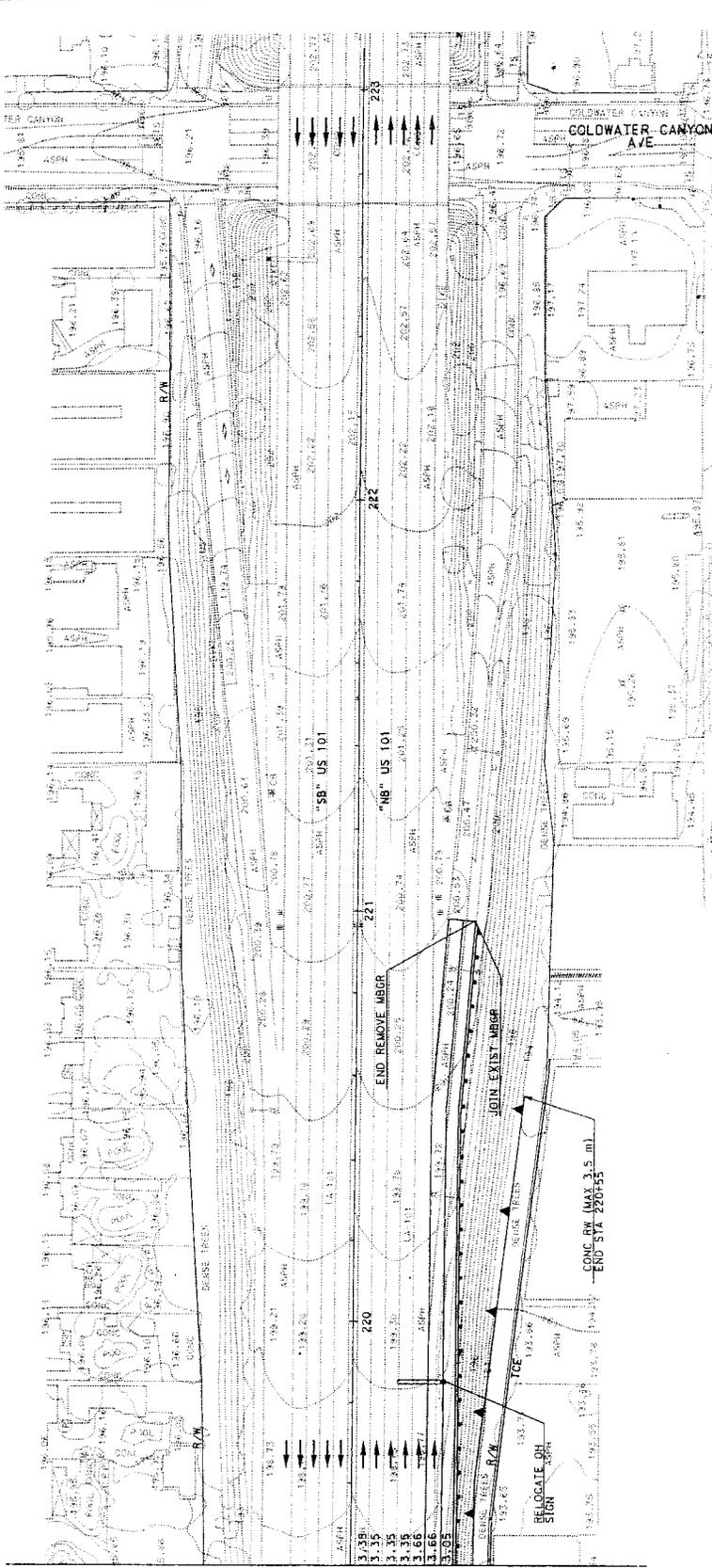
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
FOR REDUCED PLANS ORIGINAL SCALE IS 1/4" = 1'-0"

USER NAME: S. Saterberg
DATE: 2/05

LAYOUT
SCALE: 1:500

L-3
EA 24940K

DIST	COUNTY	ROUTE	PROJECT SHEET NO.	TOTAL SHEETS
07	L.A.	101	MP 20.37422	13
REGISTERED CIVIL ENGINEER 				
PLANS APPROVAL DATE METRO One Gateway Plaza Los Angeles, CA 90012-2952				
1844 BUSINESS CENTER DRIVE SUITE 208 BEVERLY HILLS, CALIFORNIA 92408 FOR THE CITY OF LOS ANGELES FOR THE COUNTY OF LOS ANGELES				



MATCH LINE STA 219+40
SEE SHEET L-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	OVERSIGHT ENGINEER	CHECKED BY SAH 2/05	DATE REVISIED BY
Caltions	DESIGNED BY JQH 2/05	DATE REVISIED BY	

LAYOUT
SCALE: 1:500

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN
FOR REVISIONS IN ORIGINAL
SCALE IS IN MILLIMETERS

USERNAME: SHARON@CALTRANS
1441143.mxd

CU

EA 24940K

L-5

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT C

Cost Estimates

**PRELIMINARY
PROJECT COST ESTIMATE SUMMARY**

Type of Estimate	<u>PSR/PR</u>		DIST-CO-RTE <u>07-LA-101</u>
Program Code	<u>20.xx.201.310</u>	KP	<u>20.9/22.2</u>
		EA	<u>24940K</u>
		PP No.	<u>3595</u>

Project Description: **NORTHBOUND AUXILIARY LANE ADDITION TO US 101**

Limits

**NORTHBOUND FROM LAUREL CANYON BOULEVARD TO COLDWATER
CANYON AVENUE**

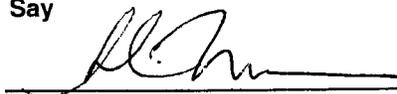
Proposed Improvement (Scope)

Add an auxiliary lane to the existing 5 lanes on US 101 within existing right-of-way (ROW).

Alternative 1

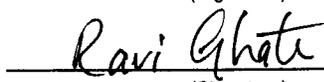
ROADWAY ITEMS	<u>\$11,440,000</u>
STRUCTURE ITEMS	<u>\$3,042,000</u>
SUBTOTAL CONSTRUCTION	<u>\$14,482,000</u>
RIGHT OF WAY	<u>\$814,000</u>
TOTAL PROJECT COST	<u>\$15,296,000</u>
Say	<u>\$15,300,000</u>

Reviewed by Program Manager



(Signature)

Approved by Project Manager



(Signature)

Phone No. (213) 897-5593

Date 9/28/05

**PRELIMINARY
PROJECT COST ESTIMATE SUMMARY**

	DIST-CO-RTE
	07-LA-101
KP	20.9/22.2
EA	24940K
PP No.	3595
Program code	20.xx.201.310

I. ROADWAY ITEMS

<u>Section 1 Earthwork</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit cost</u>	<u>Section cost</u>
Excavation/Prep Soil	312	M3	\$20.00	\$6,240	
Imported Borrow	19750	M3	\$12.00	\$237,000	
Excavation Shoring	4150	M2	\$45.00	\$186,750	
Clearing & Grubbing	2	HA	\$15,000.00	\$30,000	
Develop Water Supply	1	LS	\$5,000.00	\$5,000	
Obliterate Roadway	5500	M2	\$8.00	\$44,000	
					\$509,000

Section 2 Structural Section

PCC Ramp Termini (___ Depth)	0	M3	\$0.00	\$0	
PCC Pavement (230 Depth)	2190	M3	\$310.00	\$678,900	
Asphalt Concrete (Type A)	1030	TONNE	\$110.00	\$113,300	
Lean Concrete Base	1142	M3	\$150.00	\$171,300	
Asphalt Treated Perm. Base	0	M3	\$0.00	\$0	
Aggregate Base(CI 3)	1760	M3	\$100.00	\$176,000	
Aggregate Subbase (CI 2)	0	M3	\$0.00	\$0	
Permeable Material	0	M3	\$0.00	\$0	
Blanket & Edge Drains	0	LS	\$0.00	\$0	
Grind AC Pavement (30 mm)	2195	M2	\$6.00	\$13,170	
					\$1,153,000

Section 3 Drainage

Radial GSRD's	16	HA	\$37,500.00	\$600,000	
Relocate 450 mm RCP(Var Locations)	230	M	\$450.00	\$103,500	
Reconstruct Concrete Ditch	80	M3	\$150.00	\$12,000	
Biofiltration Swale	59	M3	\$750.00	\$44,250	
Inclined Screen GSRD's	1	LS	\$22,500.00	\$22,500	
Reconstruct G2 Inlets	12	ea	\$3,500.00	\$42,000	
Modify Irrigation Systems	1	LS	\$25,000.00	\$25,000	
					\$850,000

**PRELIMINARY
PROJECT COST ESTIMATE SUMMARY**

	DIST-CO-RTE
	07-LA-101
KP	<u>20.9/22.2</u>
EA	<u>24940K</u>
PP No.	<u>3595</u>
Program code	<u>20.xx.201.310</u>

<u>Section 4 Specialty Items</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit cost</u>	<u>Section cost</u>
Retaining Walls (w/ Ex & BF)	3520	M2	\$265.00	\$932,800	
Soundwalls	2540	M2	\$190.00	\$482,600	
Type K Barrier	1395	M	\$50.00	\$69,750	
RE Office	1	LS	\$160,000.00	\$160,000	
Erosion Control	13600	M2	\$4.00	\$54,400	
Slope Protection	13600	M2	\$6.00	\$81,600	
Metal Beam Guardrail	650	M	\$100.00	\$65,000	
Aerially Dep. Lead Testing	1	LS	\$8,000.00	\$8,000	
Aerially Dep. Lead Removal	7800	M3	\$130.00	\$1,014,000	
Landscaping & Irrigation	2	HA	\$170,000.00	\$340,000	
Remove MBGR	650	M	\$35.00	\$22,750	
Silt Fencing	1300	M	\$13.00	\$16,900	
Fiber Rolls	1300	M	\$14.00	\$18,200	
Concrete Washout Facility	1	LS	\$3,000.00	\$3,000	
Stabilized Const. Entrance	1	LS	\$2,500.00	\$2,500	
SWPPP	1	LS	\$10,000.00	\$10,000	
					<u>\$3,282,000</u>

Section 5 Traffic Items

Ramp Metering System	1	LS	\$24,000.00	\$24,000	
Temporary Traffic Stripe	1	LS	\$45,000.00	\$45,000	
Traffic Striping & Signing	1	LS	\$60,000.00	\$60,000	
Permanent Signing (Reloc OH Signs)	1	LS	\$82,000.00	\$82,000	
Traffic Control Systems	1	LS	\$125,000.00	\$125,000	
Transportation Management Plan	1	LS	\$278,000.00	\$278,000	
Modify Lighting & Illumination	6	EA	\$48,000.00	\$288,000	
Potential Glare Screen Installation	1	LS	\$175,000.00	\$175,000	
Relocate Fiberoptic Backbone	1	LS	\$300,000.00	\$300,000	
					<u>\$1,377,000</u>

SUBTOTAL SECTIONS 1-5 **\$7,171,000**

**PRELIMINARY
PROJECT COST ESTIMATE SUMMARY**

	DIST-CO-RTE
	07-LA-101
KP	20.9/22.2
EA	24940K
PP No.	3595
Program code	20.xx.201.310

<u>Section 6 Minor Items</u>	<u>Unit cost</u>	<u>Section cost</u>
Subtotal Sections 1-5	\$7,171,000 x (10%)	\$718,000
	Total Minor Items	\$718,000

<u>Section 7 Roadway Mobilization</u>		
Subtotal Sections 1-5	\$7,171,000	
Minor Items	\$718,000	
Sum	\$7,889,000 x (10%)	\$789,000
	Total Roadway Mobilization	\$789,000

<u>Section 8 Roadway Additions</u>		
Supplemental		
Subtotal Sections 1-5	\$7,171,000	
Minor Items	\$718,000	
Sum	\$7,889,000 x (10%)	\$789,000
Contingencies		
Subtotal Sections 1-5	\$7,171,000	
Minor Items	\$718,000	
Sum	\$7,889,000 x (25%)	\$1,973,000
	Total Roadway Additions	\$2,762,000
	Total Roadway Items (Total of sections 1-8)	\$11,440,000

Estimate Prepared by <u>HNTB Corp.</u>	Phone # <u>(909) 890-0622</u>	Date <u>8/5/2005</u>
(Print Name)		

**PRELIMINARY
PROJECT COST ESTIMATE SUMMARY**

	DIST-CO-RTE
	07-LA-101
KP	20.9/22.2
EA	24940K
PP No.	3595
Program code	20.xx.201.310

II. STRUCTURES ITEMS

Bridge Name	WHITSETT AVE UNDERCROSSING	
Structure Type	CAST-IN-PLACE,PRESTRESSED CONCRETE BOX GIRDER	
Width (out to out)	4.37	M
Span Lengths	27.74	M
Area	121.22	M2
Subtotal Structure	\$758,192.00	
Mobilization 10%	\$75,819.20	
Subtotal Bridge Items	\$834,011.20	
Contingencies	\$208,503	
BridgeTotal	\$1,042,514	
Bridge Removal	\$1,925	
Total Cost for Structure	\$1,044,000	
Total Cost Per Sq.Meter.	\$8,612.17	

Bridge Name	TUJUNGA WASH BRIDGE	
Structure Type	STEEL I-GIRDER WITH CAST-IN-PLACE CONCRETE DECK	
Width (out to out)	4.37	M
Span Lengths	93.67	M
Area	409.34	M2
Subtotal Structure	\$1,444,247.50	
Mobilization 10%	\$144,424.75	
Subtotal Bridge Items	\$1,588,672.25	
Contingencies	\$397,168	
BridgeTotal	\$1,985,840	
Bridge Removal	\$12,616	
Total Cost for Structure	\$1,998,000	
Total Cost Per Sq.Meter.	\$4,881.05	

	Subtotal Structures Items	\$3,042,000
Railroad Related Costs		\$0
	Total Structures Items	\$3,042,000

Comments:

Estimate Prepared by <u>HNTB Corp.</u>	Phone # <u>(909) 890-0622</u>	Date <u>8/5/2005</u>
(Print Name)		

**PRELIMINARY
PROJECT COST ESTIMATE SUMMARY**

	DIST-CO-RTE
	<u>07-LA-101</u>
KP	<u>20.9/22.2</u>
EA	<u>24940K</u>
PP No.	<u>3595</u>
Program code	<u>20.xx.201.310</u>

III. RIGHT OF WAY	Current Value	Escalation Rate	Escalated Value
Acquisition, including excess lands and damages to remainder(s).	\$112,500	8.00%	\$153,100
Utility Relocation (Mainly Elec.)	\$200,000	8.00%	\$272,100
Clearance/Demolition	\$250,000	8.00%	\$340,200
RAP	\$0	0.00%	\$0
Title and Escrow Fees	\$35,000	8.00%	\$47,700
			<u><u>\$813,100</u></u>
			Total Right of Way
			Construction Contract Work

Comments

Estimate Prepared by HNTB Corp. Phone # (909) 890-0622
(Print Name)

Date 8/5/2005

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT D

Environmental Documentation

US 101 Northbound Auxiliary Lane Between Laurel Canyon Boulevard and Coldwater Canyon Avenue

07-LA-101 KP 20.9/22.2 (PM 13.0/13.8)

EA 24940K

Preliminary Environmental Assessment Report (PEAR)

Prepared For:

Metropolitan Transportation Authority

In Conjunction With:

California Department of Transportation

Prepared By:

Parsons Brinckerhoff

505 S. Main Street
Orange, CA 92868

September 2005



Preliminary Environmental Analysis Report

Project Information

District: 7 County: LA Route: 101 Kilometer Post (Post Mile): 20.9/22.2 (13.0/13.8) EA: 24940K

Project Title: US 101 Northbound Auxiliary Lane between Laurel Canyon Boulevard and Coldwater Canyon Avenue

Caltrans Project Manager	<u>Ravi Ghate</u>	Phone #	<u>(213) 897-5593</u>
Consultant Project Manager	<u>Farid Naguib</u>	Phone #	<u>(213) 362-9483</u>
Consultant Environmental Manager	<u>Steven Wolf</u>	Phone #	<u>(714) 973-4880</u>
Consultant Environmental Planner	<u>Stephanie Oslick</u>	Phone #	<u>(714) 973-4880</u>

Project Description

Purpose and Need: Due to the heavy congestion occurring on northbound US 101 between Laurel Canyon Boulevard and Coldwater Canyon Avenue, the proposed project improvements will help alleviate the current congestion and improve mobility. The addition of the northbound auxiliary lane would provide an adequate weaving section so that merge and diverge movements between the Laurel Canyon Boulevard on-ramp and Coldwater Canyon Avenue off-ramp can occur away from the mainline traffic flow and help improve the weaving maneuver. The proposed improvements will also help minimize certain types of congestion-related accidents, such as sideswipe and rear-end collisions, and thus reduce future accident rates.

Description of work: The proposed project will widen US 101 in the northbound direction by adding an auxiliary lane between Laurel Canyon Boulevard and Coldwater Canyon Avenue.

Alternatives: Two alternatives including the “No Build” Alternative are being considered to address this problem. Alternative 1 is the No Build Alternative. This alternative would involve no action other than routine highway maintenance activities. Alternative 2 is the Build Alternative and includes:

- partial realignment of both entrance and exit ramps at the gore areas
- 1150 meters of continuous auxiliary lane
- sound wall relocation
- retaining walls to accommodate the improvements within the available right-of-way
- widening of Tujunga Wash bridge and Whitsett Avenue UC
- approach and departure slabs for Tujunga Wash Bridge and Whitsett Avenue UC with pavement transitions
- standard lane widths and right shoulder widths along the proposed auxiliary lane
- replaced the existing glazed screen on concrete barrier

The Build Alternative improvements are part of planned upgrades to the existing US 101 and aim to improve traffic operation between the two interchanges. No additional right-of-way is anticipated for the proposed project. The Build Alternative will help alleviate traffic congestion and improve mobility on northbound US 101 between Laurel Canyon Boulevard and Coldwater Canyon Avenue. The addition of the northbound auxiliary lane would provide adequate weaving area so that merge and diverge movements between the Laurel Canyon Boulevard on-ramp and Coldwater Canyon Avenue off-ramp can occur away from the mainline traffic flow.

Anticipated Environmental Approval

CEQA

- Categorical/Statutory Exemption
- Negative Declaration / focused ND
- Environmental Impact Report

NEPA

- Programmatic Categorical Exclusion
- Finding of No Significant Impact
- Environmental Impact Statement

During the PA/ED phase of the project, a CE/PCE is anticipated to be the appropriate environmental document for compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). However, this determination is subject to change during the PA/ED phase due to design changes and results of technical studies.

Caltrans will be the lead agency under CEQA and FHWA (or Caltrans acting on behalf of FHWA) will be the lead agency under NEPA. It is anticipated that the required environmental approval will be a CE/PCE (although the environmental document may change during the PA/ED phase as noted above) and that the environmental review will take approximately one month; however, the technical environmental studies may take two to three months.

PSR Summary Statement

For the Build Alternative, it is anticipated that the required environmental approval will be a CE/PCE (subject to change during PA/ED) and that environmental review will take approximately one month; however, the technical environmental studies may take two to three months.

Likely impacts include the following:

Hazardous materials, noise impacts to adjacent residential and commercial uses, aesthetics, biological resources, hydrology/water quality, transportation/traffic, air quality, and geology and soils

Biological resource agency permits will be needed from the Army Corps of Engineers (404 Permit), Regional Water Quality Control Board (401 Certification), and the California Department of Fish and Game (1602 Agreement). The applications for these permits and agreements will take approximately 6 to 12 months to obtain.

Impacts requiring additional investigation include:

Noise, aesthetics, biological resources, transportation/traffic, hydrology/water quality, cultural resources, wetlands, hazardous wastes/materials, air quality, utilities, seismic and geologic hazards

No impacts are anticipated to the following:

Agriculture, paleontology, mineral resources, land use planning, population/housing, relocation, recreation, and public resources

Project measures to minimize harm are anticipated for the following:

Hydrology/water quality, aesthetics, biological resources, traffic, air quality, hazardous materials, and cultural resources. The cost for the construction of soundwalls is not included in the environmental mitigation. It is included in the construction costs. The total estimate for environmental mitigation and compliance (permits and agreements) for the Build Alternative would be approximately \$48,000. See section on "Anticipated Project Measures to Minimize harm" for further discussion.

The following technical studies are recommended to address the impacts of the proposed project on the US 101 study area:

- Noise (Traffic Noise Impact Report)
- Biological Report [Natural Environment Study/Minimal Impacts (NES/MI)]
- Air Quality Report [conformity with carbon monoxide (CO), ozone, oxides of nitrogen, and particulate matter less than 10 microns in diameter (PM₁₀) standards]
- Cultural Resources Studies [Historical Property Survey Report (HPSR), Historic Resource Evaluation Report (HRER), and Archaeological Survey Report (ASR)] for Section 106 compliance
- Traffic Study Report
- Preliminary Geotechnical Report (PGR) and Preliminary Foundation Reports (PFRs)
- Aerially Deposited Lead (ADL) Study

Special Considerations

For the Build Alternative, special processes that may affect project delivery include obtaining permits from the biological resource agencies (can take 6-12 months). There is a low potential for bats to inhabit the Whitsett Avenue Bridge, and if construction has not begun within three years, an additional survey should be completed. In addition, to minimize impacts to migratory birds per the Migratory Bird Treaty Act, construction activities such as clearing and grubbing, site preparation, staging and storage, and access routes may need to be restricted from February 15 to September 1 to avoid biological impacts (e.g., nesting season). Also, depending on the breeding activities of other species, specific construction activities may be restricted to certain months of the year.

To include the project in the 2006 RTIP, the application deadline is mid-October 2005.

Anticipated Project Measures to Minimize Harm

Water Quality and Hydrology, Wetlands: The Tujunga Wash crosses under the US 101 in the study area. A 100-year floodplain is associated with the Tujunga Wash. Proposed improvements on the bridge structure over the wash would not impact the channel. In addition, the proposed improvements do not include new structures which would impede or redirect flood flows. New construction associated with the proposed project would be limited to areas within the existing right-of-way. Realignment of the concrete ditch adjacent to Kling Street would require permits from the Army Corps of Engineers (Section 404 of the Clean Water Act), Regional Water Quality Control Board (Section 401 of the Clean Water Act) and the California Department of Fish and Game (Section 1600 *et seq.* of the Fish and Game Code). Permits from these agencies in addition to the Los Angeles County Flood Control District may also be required if during final design impacts to the Tujunga Wash are anticipated.

Upon completion, paved surfaces associated with the proposed improvements would represent only an incremental increase in pollution runoff that could potentially enter the storm drain system. A Gross Solids Removal Device will be included as part of the project to negate adverse impacts to water quality. This project is subject to the Caltrans Statewide NPDES Storm Water Permit (Order No. 99-06-DWQ, NPDES No. CAS000003) in addition to the BMP requirements of the Caltrans Storm Water Management Plan (SWMP). Anticipated cost for implementation of water quality mitigation and best management practices (BMPs) is approximately \$695,000 for the Build Alternative to implement design pollution prevention BMPs and permanent treatment control BMPs. The cost of the water pollution controls is not included in the environmental mitigation and has been included in the Preliminary Cost Estimates Summary (Attachment C of the PSR).

Noise: Based on the Traffic Noise Impact Technical Report (Parsons Brinckerhoff, 2005), it has been determined that the sensitive receptors within the limits of the project are potentially impacted due to the freeway improvement project. Feasible and reasonable noise attenuation measures in the form of

soundwalls have been identified as a part of this project. Potential soundwall locations are shown in the Traffic Noise Impact Technical Report on file.

The Traffic Noise Analysis Protocol requires that a detailed impact analysis be performed when there are potentially impacted receivers in the vicinity, when the project has the potential to increase noise levels at adjacent receivers, and when the existing worst-hourly noise levels are less than 5 dBA below the applicable Noise Abatement Criterion. This project meets the above criteria and will therefore require a detailed analysis in order to determine the appropriate reasonable and feasible traffic noise abatement measures.

For all impacted receptors, noise abatement must be evaluated for acoustical feasibility and overall reasonableness. Only the feasible and reasonable noise barriers may be recommended as a part of the freeway improvement project. The recommended lengths, heights, and locations of soundwalls will be determined during the detailed noise study for the project.

Review of the Traffic Noise Impact Technical Report is needed during PA/ED to determine project consistency and determine if additional detailed noise studies and modeling is needed to determine the extent to which properties will be affected and the level and type of measures to minimize harm that would be warranted to mitigate any significant noise impacts.

The proposed project includes construction of a new soundwall before removal of the existing soundwall to avoid impacts to nearby residences. The soundwall cost is included in the construction costs, not in the environmental mitigation (Attachment C of the PSR).

Aesthetics: Measures to minimize harm for aesthetic impacts can include project design features such as structural enhancement of walls and columns, decorative architectural features such as light standards and bridge railing details, or softscape treatments such as revegetation or other landscape treatments. The long-term effect of the proposed project changes would result in a similar visual environment to that which currently exists and is considered characteristic of the aesthetics associated with a major freeway corridor. Anticipated cost for the Build Alternative is approximately \$340,000. The cost of the aesthetic measures to minimize harm is not included in the environmental mitigation and has been included in the landscaping costs in Preliminary Cost Estimates Summary (Attachment C of the PSR). Since the engineering designs have only been developed to conceptual levels for the PSR, specific measures to minimize harm measures cannot be identified at this time.

Biological Assessment: A Natural Environment Study (Minimal Impacts) [NES(MI)] has been conducted for this project (Parsons Brinckerhoff, 2005). The NES(MI) should be reviewed during PA/ED for project consistency and updated as needed. Two bridge structures (Whitsett Avenue and Tujung Wash) are located within the project area and will be widened as part of this project. Weep holes exist on the Whitsett Avenue UC structure, and it appears that there is a low potential for bats to use this structure. If bats are found, appropriate measures should be taken to avoid/minimize impacts to the bats, such as exclusionary devices (e.g., netting) or timing of work to avoid impacting bat roosts (February to September). To ensure that there will not be auditory impacts to adjacent birds that may be using the trees adjacent to the mainline, clearing and grubbing of vegetation should be conducted outside of bird nesting season to the greatest extent possible. If work needs to be conducted during this time period, the Caltrans Division of Environmental Planning should be contacted during final design (PS&E) for an additional assessment and evaluation. The Build Alternative would require \$3,000 in additional biological costs for impacts to jurisdictional Waters of the US. Since the engineering designs have only been developed to conceptual levels for the PSR, specific measures to minimize harm measures cannot be identified at this time.

Traffic: Existing traffic volumes indicate peak period congestion along the northbound US 101 at the project study area. A Traffic Management Plan (TMP) is in place as Attachment J of the PSR to propose traffic measures during construction.

Air Quality: This project is not listed in the RTIP (FY 2004/05 – 2009/10) that was adopted in April 2004 by Southern California Association of Governments (SCAG) Regional Council and approved on October 4, 2004. Once the funds are committed to the project, it will be submitted for the project's inclusion in the 2006 RTIP. The deadline to submit the project to MTA is mid October 2005.

A microscale analysis using the most current versions of CALINE4 and EMFAC will be needed to insure that the project would not cause or exacerbate a violation of the ambient air quality standards. Until such time as EPA provides an approved analysis for PM_{10/2.5} levels a qualitative PM₁₀ assessment will be conducted using the technical report *Particulate Matter and Transportation Projects, An analysis Protocol* developed by UC-Davis and Caltrans (2/2005), recommended for use by Caltrans.

Construction emissions analysis will also be required to determine the levels of PM₁₀ from earth moving activities and the CO, NO_x, reactive organic compounds (ROC) and PM₁₀ levels from construction equipment (Air Quality Technical Memorandum, 2005).

The residences along the corridor are considered would have the potential to be affected by short-term construction emissions, including fugitive dust during grading and emissions from construction equipment. However, dust control measures, such as daily watering, will be incorporated into the project to reduce fugitive dust. The procedures detailed in the SCAQMD's Rule 403 (Fugitive Dust Control) will be implemented to control emissions during construction. These procedures include: stabilizing soil, watering, washing trucks, fencing, construction phasing, etc. Impacts are expected to be considered negligible with the implementation of dust control measures. Once the freeway improvements are constructed no long-term impacts are expected. Anticipated control measures would cost approximately \$15,000 for the Build Alternative.

Geotechnical: Preliminary studies indicate that the proposed project traverses areas of high liquefaction potential and groundwater 10 feet below the ground surface. In order to identify specific concerns regarding the local geology and project components, a Structure Foundation Report should be prepared in accordance with the latest Caltrans guidelines. Potential project impacts could be mitigated by designing structures to withstand the maximum ground accelerations anticipated to occur beneath the proposed improvements. In addition, all critical structural elements will be designed and built to resist strong ground motions approximating the Maximum Credible Earthquake (MCE) and the associated ground accelerations expected to occur in the vicinity of the proposed alignments. The effect of slope instability, ground shaking, and liquefaction on the proposed project can be reduced with proper engineering design and construction, and conformance with current building code requirements. Since the engineering designs have only been developed to conceptual levels for the PSR, specific measures to minimize harm measures cannot be identified at this time.

Hazardous Materials: Group Delta, Inc. (Group Delta) performed an Initial Site Assessment (ISA) for the proposed project (August 2005). There is a potential for Aerially Deposited Lead (ADL) on this project, and the ADL investigation will be completed during PS&E. Groundwater is approximately 10 to 20 feet below the ground surface. Dewatering may be needed when widening the Tujunga Wash and Whitsett Avenue bridges. Groundwater shall be tested for contamination during the PS&E phase. Anticipated mitigation cost for the Build Alternative is approximately \$1.02 million. This estimated cost includes costs for ADL testing and remediation for potential soil or groundwater contamination from on-site sources.

Cultural Resources: A Historic Property Survey Report (HPSR) was completed for this project to review archeological, paleontological, cultural, and historic resources within the project area. The HPSR should be reviewed during PA/ED for project consistency and updated as needed. The HPSR did not identify any resources in the project study area; however, the proposed project would require some demolition, grading, or excavation activities that could have potential impacts on known or as yet unidentified resources along the corridor. Measures to minimize harm for potential archeological, paleontological, cultural, or historic resources would be approximately \$30,000 for the Build Alternative.

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Study Report. Changes in project scope, alternatives, or environmental laws will require a re-evaluation of this report.

Reviewed by:



Aziz Elattar
Environmental Office Chief

Date: 9-28-05



Ravi Ghate
Project Manager

Date: 9-28-05

Environmental Technical Reports or Studies Required

	Study	Document	N/A
Community Impact Study	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Farmland	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Visual Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Floodplain Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Noise Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Quality Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paleontology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cumulative Impacts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cultural			
ASR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HSR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HASR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HPSR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 106 / SHPO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Native American Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other			
Finding of Effect _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Data Recovery Plan _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hazardous Waste			
ISA (Additional)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PSI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other			
<u>ADL Study</u> _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biological			
Endangered Species (Federal)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Endangered Species (State)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Biological Assessment (USFWS, NMFS, State)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural Environment Study	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other			
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permits			
401 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1602 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NPDES Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion of Technical Review

Socio-economic and Community Effects. Below is a comparison of the land use adjacent to the US 101 in the study area by the City of Los Angeles *General Plan Land Use Element* designation and the existing land uses that were noted during a windshield survey conducted by Parsons Brinckerhoff on February 9, 2005.

	General Plan Land Use designation	Existing Land Use
North side 101		
Coldwater Cyn to Whitsett Ave	Commercial	Commercial
Whitsett Ave to Laurel Cyn	single family residential, multiple family residential, commercial, open space	single family residential, multiple family residential, commercial, Tujunga Wash Channel
South side 101		
Coldwater Cyn to Whitsett Ave	single family residential, multiple family residential	single family residential, multiple family residential
Whitsett Ave to Laurel Cyn	single family residential, open space	single family residential, Tujunga Wash Channel, Campbell Hall High School

The proposed project is along an existing transportation corridor, and would not divide any existing communities. The proposed project includes the addition of an auxiliary lane on the US 101 from Laurel Canyon Boulevard to Coldwater Canyon Avenue. The addition of the auxiliary lane requires relocation of the existing soundwalls; however, the project improvements are anticipated to be contained within the existing freeway and would not require acquisition of additional right-of-way. No socio-economic or community impacts are anticipated.

Farmlands. There are no prime, unique, state, or local important farmland within or adjacent to the proposed project area since it is primarily an urban region. The proposed site has no agricultural uses and would not conflict with zoning or the Williamson Act Contract. The proposed improvements are anticipated to be contained within the existing right-of-way and would not require acquisition of additional right-of-way. Therefore no impacts to Agricultural Resources are anticipated.

Section 4(f) Impacts. There are no recreational facilities within or adjacent to the proposed improvements. The proposed improvements would not generate a greater need for local recreation facilities nor would they expand any existing facilities. No impacts to recreational facilities are anticipated.

Visual Effects. The conservation element of the Los Angeles City General Plan indicates that the Santa Monica Mountains are the most visible scenic feature within the project area. Views of the Santa Monica Mountains would not be affected by the proposed changes, which include the addition of retaining walls and sound barriers. Mature vegetation and existing sound barriers within the project area partially obscure distant vistas. Changes in existing views of distant vistas would vary at various points throughout the alignment. Removal of existing mature vegetation without construction of a noise barrier would provide new views of surrounding areas in the short-term. Once replacement landscaping, which is incorporated into the proposed project design features, has matured, the long-term views will be similar to what currently exists. The addition of sound barriers and retaining walls will have the same visual effect on distant vistas as what currently exists. Likewise, modification of the existing slope and construction of retaining walls would not change the visibility of distant vistas from current conditions.

US 101 within the proposed project corridor is not a designated scenic highway. In addition, the project site is urbanized with no scenic resources identified within the project corridor. Removal of existing

mature vegetation within the northbound US 101 right-of-way is anticipated as part of this project in order to allow for access to the freeway during construction of the auxiliary lane and shoulder. Construction staging areas and large construction vehicles will be visible from US 101 and adjacent areas during construction. Changes to the existing visual environment as a result of construction activities would be temporary and would not result in significant long-term impacts.

Removal of existing mature vegetation and replacement of those features with man-made structures has the potential to increase reflective light and glare. Upon project completion, aesthetic treatments to the retaining walls and noise barriers, as incorporated into the project design features, as well as replacement landscaping to buffer these elements, would enhance the overall aesthetics of the project changes. The long-term effect of the proposed project changes would result in a similar visual environment to that which currently exists and is considered characteristic of the aesthetics associated with a major freeway corridor.

Water Quality and Erosion. The Tujunga Wash, a 303(d) listed impaired water body, crosses under the US 101 in the study area. Proposed improvements on the bridge structure over the wash would not impact the channel. New construction associated with the proposed project would be limited to areas within the existing right-of-way. Realignment of the concrete ditch adjacent to Kling Street would require permits from the Army Corps of Engineers (Section 404 of the Clean Water Act), Regional Water Quality Control Board (Section 401 of the Clean Water Act) and the California Department of Fish and Game (Section 1600 *et seq.* of the Fish and Game Code). Permits from these agencies in addition to the Los Angeles County Flood Control District may also be required if during final design impacts to the Tujunga Wash are anticipated. Changes to drainage patterns associated with the new construction would not alter existing drainage patterns and would not result in substantial erosion or siltation on- or off-site.

The proposed project would require the removal of existing vegetation, surface grading, and construction of a paved roadway. During construction, surface grading may cause an increase in soil erosion. Upon completion, paved surfaces associated with the proposed improvements would represent only an incremental increase in pollution runoff that could potentially enter the storm drain system. A Gross Solids Removal Device will be included as part of the project to negate adverse impacts to water quality.

During construction, best management practices would be implemented for stormwater pollution control, in accordance with the NPDES. The proposed project would be required to comply with all RWQCB water quality standards and waste discharge requirements. This project is subject to the Caltrans Statewide NPDES Storm Water Permit (Order No. 99-06-DWQ, NPDES No. CAS000003) in addition to the BMP requirements of the Caltrans Storm Water Management Plan (SWMP). In addition, in areas where existing landscaping is disturbed, the area will be replaced with similar species as currently present. The proposed project would have no long-term demand for water and demand for water during construction would be limited. The proposed project would not include any activities that would have long-term effects on local water sources. Therefore, the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, provide substantial additional sources of polluted runoff, or degrade water quality. If site dewatering is required for new construction, a dewatering plan is required.

Floodplain. A 100-year floodplain is associated with the Tujunga Wash. Proposed improvements on the bridge structure over the wash would not impact the channel or levee. Proposed improvements on the bridge structure over the wash would not impact the channel. In addition, the proposed improvements do not include new structures which would impede or redirect flood flows.

Noise. A Traffic Noise Impact Technical Report (Parsons Brinckerhoff, 2005) has been prepared to comply with Title 23, Part 772 (22 CFR 772) of the Code of Federal Regulations, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, and Caltrans noise analysis policy and

procedures described in the Caltrans Traffic Noise Analysis Protocol (TNAP) (California Department of Transportation 1998a). The proposed project is defined in 23 CFR 772 as a Type I project.

The existing noise-sensitive land uses within the project limits includes large areas of single and multi-family residences, as well as a school near the freeway. There are also areas of commercial buildings and open space within the project limits. Based on the results of the noise analysis, future noise levels are predicted to be the same or lower at all sensitive receivers compared to existing and No Build Alternative levels. Noise levels approach or exceed the FHWA and Caltrans Traffic Noise Analysis Protocol (TNAP) noise abatement criteria (NAC) at four sites. The proposed project includes relocating the existing 3.7 m (12 ft) high soundwall (EX-1) on the northbound on-ramp from Laurel Canyon to Tujunga Wash to the proposed edge of shoulder.

A new soundwall (NB-1) was found to be feasible on the southbound EOS, 4.3 m (14 ft) high and 330 m (1082 ft) in length. Because the cost of the NB-1 soundwall exceeds the total reasonable allowance for the Build Alternative, it will not be included in the project.

Preliminary information on the physical characteristics of the recommended abatement measures (e.g., physical location, length, and height of noise barrier walls) is provided in the technical report. If pertinent parameters change substantially during the final project design, the preliminary noise abatement design may be changed or eliminated from the final project design

Construction activity would be conducted in accordance with Caltrans standard specifications and would be short term, intermittent, and dominated by local traffic noise. Implementation of construction noise measures would minimize temporary construction noise impacts. Refer to the Traffic Noise Technical Report (under separate cover) for a detailed discussion of the noise evaluation.

Air Quality. The study area is located in Los Angeles County. Los Angeles County is located within the South Coast Air Basin (SCAB), which is governed by the South Coast Air Quality Management District (SCAQMD). The Los Angeles County portion of the South Coast Air Basin does not attain state AAQS for carbon monoxide (CO), PM₁₀, PM_{2.5} and ozone. Furthermore, the Los Angeles county portion of the South Coast Air Basin does not attain federal AAQS for CO, PM₁₀ and ozone. Once the funds are committed to the project, it will be submitted for the project's inclusion in the 2006 RTIP. The deadline to submit the project to MTA is mid October 2005.

A field survey conducted on February 7, 2005 identified residences and commercial uses on the northbound side of the US 101 between Laurel Canyon Boulevard and Coldwater Canyon Avenue. These land uses would have the potential to be affected by short-term construction emissions, including fugitive dust during grading and emissions from construction equipment. However, dust control measures, such as daily watering, have been incorporated into the project to reduce fugitive dust. The procedures detailed in the SCAQMD's Rule 403 must be implemented to control emissions during construction. These procedures include: stabilizing soil, watering, washing trucks, fencing, construction phasing, etc. Impacts are expected to be considered negligible with the implementation of dust control measures. Once the freeway improvements are constructed no long-term impacts are expected.

This project should not increase traffic volumes, as it is an operational improvement. The project is not expected to increase VMT or affect regional VHT. The project will be added to the regional emissions analysis supporting SCAG's 2006 RTIP. Potential local impacts of the project may include increases in particulate matter (PM₁₀, PM_{2.5} and DPM) during construction and in carbon monoxide levels and particulate matter during operation.

A project-level analysis will occur at the environmental document phase, and at that time, the air quality impacts will be analyzed for the project. A microscale analysis and air quality report is needed to support

the environmental document to insure that the project will not cause or exacerbate a violation of the ambient air quality standards. The microscale analysis will be conducted using the following:

- Transportation Project –Level Carbon Monoxide Protocol (UC Davis ITS, December 1997)
- Guidance for Qualitative Project Level “Hot Spot” Analysis in PM₁₀ Nonattainment and Maintenance Areas (FHWA, September 2001).

The air quality report cannot commence until the project is in the 2006 RTIP as a funded itemized project. (Air Quality Technical Memorandum, 2005).

Wild and Scenic River. There are no designated wild and scenic rivers located within the proposed project corridor.

Cultural Resources. A HPSR to review paleontological, prehistoric or historic archaeological records was completed by Cogstone Resource Management, Inc and Andrea Galvin & Associates for the proposed project. No eligible paleontological, historical or archaeological resources were identified within or adjacent to the project APE (Historic Property Survey Report, 2005).

In addition, no residential structures should be impacted since all construction activity would occur entirely within existing Caltrans right-of-way. There were two underpasses located within the project study area that were constructed in 1949, but did not require reevaluation due to the fact that they had been recently evaluated as part of the Caltrans Bridge Inventory update. Additionally, Andrea Galvin of G&A, who meets the Professionally Qualified Staff Standards (PQS) of the Section 106 Programmatic Agreement as an architectural historian has determined that all the other properties within the APE, including state-owned resources, meet the criteria for Section 106 Programmatic Agreement Attachment 4 (Properties Exempt from Evaluation).

Should subsurface impacts occur between Laurel Canyon Boulevard and Coldwater Canyon Avenue, Older Quaternary alluvial known to produce Ice Aged fossils including giant ground sloth, horse, camel, bison, and a rare peccary may be impacted. In the area, known fossil localities have been recovered from 14 feet- 100 feet below ground surface. Additional survey will be required if project plans change and include previously unsurveyed areas. If construction activities should encounter potentially significant or important paleontological, archaeological, or historical resources, work shall be stopped until a qualified archaeologist can be formally evaluate the nature and significance of the find, and/or mitigated. Should human remains be encountered during the course of the proposed project, work at the discovery site shall be stopped and the appropriate authorities shall be contacted.

During PA/ED, the HPSR should be reviewed for project consistency and updated if needed to identify potential impacts to historic, archeological, and paleontological resources, unique geological features, and human remains.

Native American Coordination. The Native American people described as inhabiting the region surrounding the project area were the Tongva (Gabrielino and/or Fernandeno). These people occupied Los Angeles County south of the Sierra Madre, portions of Orange County, as well as San Clemente and Santa Catalina (Kroeber 1953; McCawley 1996). Populations of the Tongva associated with Mission San Gabriel Archangel and San Fernando were known as Gabrielino and Fernandeno Indians historically.

The area’s mild climate, water resources, and abundant flora and fauna supplied a wide variety of food and building materials for Native Americans, who were the area’s first inhabitants. Remnants of various Native American cultures continue to be unearthed and documented. Coordination with the Native American Heritage Commission was initiated by Cogstone and G&A for the proposed project to identify tribal representatives in the area and to request a report of any known sacred grounds. Subsequently,

coordination with individual tribal representatives was also initiated, but no replies were received. The Native American Heritage Commission conducted a record search of the sacred land file and concluded no indication of the presence of Native American cultural resources in the immediate project area.

Hazardous Waste/Materials. Group Delta, Inc. (Group Delta) performed an Initial Site Assessment (ISA) for the proposed project (August 2005, under separate cover). Both Federal and State of California databases were searched to identify sites within the American Society for Testing and Materials (ASTM) standards. Based on the results of their review of available information, review of an environmental and regulatory database search, and a site visit consisting of a windshield survey, the findings and recommendations of the assessment are as follows:

- There are unpaved areas along the US 101 alignment where project improvements are proposed. These are mostly sloped embankments away from the freeway, cut embankments or adjacent graded areas of the freeway. It is possible that these areas may contain aerially-deposited lead (ADL) in the near surface soil. It is recommended that once the location of the lane addition improvements are finalized, shallow soil samples should be taken for analyses in unpaved areas where excavations are planned. The samples should be analyzed for total and soluble lead, as necessary to allow proper excavated soil management including on-site placement or offsite disposal.
- Groundwater is approximately 10 to 20 feet below the ground surface. Dewatering may be needed when widening the Tujunga Wash and Whitsett Avenue bridges. Groundwater shall be tested for contamination.

Hazardous and potentially hazardous materials used in construction would be handled, transported and disposed in accordance with applicable federal, state, and local requirements so that potential risks are reduced. Measures to minimize harm would be developed as needed in consultation with regulatory agencies. An ADL investigation will be performed during the PS&E stage, as necessary, to allow proper excavated soil management including onsite placement or offsite disposal. Aerially deposited lead (ADL) contamination from vehicle emission may be encountered during excavation in unpaved areas next to traffic lanes or shoulders. An ADL Study will be performed to collect, test, and analyze soil samples for lead contamination. If lead contamination is found, the results/conclusions will be included in the Standard Special Provisions (SSP) and the Resident Engineer's File. The SSP will be incorporated in the Project PS&E. Groundwater and soil samples should be tested for contamination in the geotechnical report to determine if additional remedial action is required.

Biological Resources. A Natural Environment Study (Minimal Impacts) [NES(MI)] has been prepared for this project (Parsons Brinckerhoff, 2005). The *Dudleya multicaulis* (Many-Stemmed Dudleya) has been identified within the project area; however, this species was not found and is not expected to be found, as the project area is disturbed with non-native vegetation, and typical habitats where Dudleya are found is not found in the project area. Two bridge structures (Whitsett Avenue and Tujunga Wash) are located within the project area and will be widened as part of this project. Weep holes exist on the Whitsett Avenue UC structure and it appears that there is a low potential for bats to use this structure at three of the 38 weep holes along the northern portion of the structure. Upon further investigation, it did not appear that bats were using this bridge structure for roosting or nesting activities at this time as there were no other signs of bat presence. If this project has not begun construction within three years, then an additional biological survey should be completed to determine the presence of bats. If bats are found, appropriate measures should be taken to avoid/minimize impacts to the bats, such as exclusionary devices (e.g., netting) or timing of work to avoid impacting bat roosts (February to September). No evidence of swallows was present and no nesting materials were present within the project vicinity; therefore, swallows are not expected to be present at this location.

Some mature vegetation is located adjacent to the edge of shoulder and within the Caltrans right-of-way which will need to be removed. The vegetation to be removed is ornamental landscaping. As no native

trees will be impacted, there will not be any conflicts with local ordinances. To ensure that there will not be auditory impacts to adjacent birds that may be using the trees adjacent to the mainline, clearing and grubbing of vegetation should be conducted outside of bird nesting season to the greatest extent possible. If work needs to be conducted during this time period, the Caltrans Division of Environmental Planning should be contacted during final design (PS&E) for an additional assessment and evaluation.

There is no Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan within the project area. In addition, the proposed project would be contained within the existing freeway and roadway right-of-way and would not require acquisition of additional right-of-way; therefore, impacts to sensitive biological resources are not anticipated. In addition, in areas where existing landscaping is disturbed, the area will be replaced with similar species as currently present. Aesthetic treatments to the noise barriers and replacement landscaping in front of the noise barriers would be incorporated into final design plans to the greatest extent possible.

During PA/ED, the NES(MI) should be reviewed for project consistency and updated as needed.

Wetlands. A search of the National Wetlands Inventory (NWI) database indicated that wetlands can be found within the project corridor study area. A delineation of Army Corps of Engineers (ACOE) and CDFG jurisdictional wetlands and waters of the United States is required for the proposed project. It is anticipated that ACOE Section 404 permit (Clean Water Act) would be required for the modification of the small rectangular concrete channel adjacent to Kling Street. Therefore, a Section 401 Water Qualification Certification will also be required from the RWQCB. Also, it is anticipated that a CDFG Section 1602 Streambed Alteration Agreement would be required.

Invasive Pest Plant Species. Executive Order 13112 requires that any Federal action may not cause or promote the spread or introduction of invasive species. In areas where existing landscaping is disturbed, it is anticipated that those areas will be re-landscaped with similar species as are currently present. The NES (MI) addresses project compliance with Executive Order 13112 regarding Invasive Species.

Right of Way Relocation or Staging Areas. The proposed project includes the addition of an auxiliary lane on the US 101 from Laurel Canyon Boulevard to Coldwater Canyon Avenue. These improvements are anticipated to be contained within the existing freeway and would not require acquisition of additional right-of-way. Construction staging areas are anticipated to be contained within the existing right-of-way.

Mitigation (For standard PSR only). See Anticipated Project Measures to Minimize Harm section of this report.

Permits. Permits from the California Department of Fish and Game (1602), U. S. Army Corps of Engineers Section 404 Permit for the Build Alternative will be required if there are impacts to wetland/jurisdictional waters on the concrete ditch adjacent to Kling Street. A permit from the Regional Water Quality Control Board (401) will be required if a Section 404 Permit is required. Permits are anticipated to take six to twelve months to obtain from the biological resource agencies. This proposed project is also subject to the Caltrans Statewide NPDES Storm Water Permit (Order No. 99-06-DWQ, NPDES No. CAS000003)

Coastal Zone. This project is not located within the coastal zone as defined by the 1976 California Coastal Act.

Geology and Soils. A Preliminary Geotechnical Data Report (2005) was prepared by Group Delta for this project. The project site is within an alluvial fan of Tujunga Wash, and the area is covered by younger alluvial and fan deposits consisting mainly of sand, and silty sand with lesser quantities of silt and gravel.

Artificial fill is present along the US 101 freeway alignment where the highway has been elevated above the surrounding grades in the study area.

The proposed alignment is not located in the Alquist-Priolo Fault Zone and no active faults are mapped as crossing or projecting towards the US 101 alignment. However, the alignment is in close proximity to active and potentially active fault zones and is subject to significant hazards from moderate to large earthquakes. According to Caltrans 1996 Seismic Hazard Map (Mualchin, 1996), the following faults are located within the project vicinity; the Malibu Coast-Santa Monica-Hollywood Raymond Fault located approximately 5 miles southeast of the proposed project. The North Hollywood Fault is located approximately 2 miles from the alignment, the Verdugo Fault located approximately 5 miles northeast of the project study area, the Upper Elysian Park Blind Thrust Fault located approximately 7 miles, and the Puente Hills Blind Thrust Fault located approximately 10 miles from the project study area. The peak bedrock acceleration (PBA) at the site is 0.6 g. Design and construction of the proposed improvements would meet all Caltrans and federal standards for withstanding seismically induced ground shaking. A Final Preliminary Geotechnical Report (PGR) and Preliminary Foundation Reports (PFRs) are recommended for the bridges along the alignment. The preliminary and final Geotechnical Design Reports and Structure Foundation reports should be prepared in accordance with the latest version of Caltrans Guidelines for Foundation Investigations and Reports.

The site is not located within a landslide or tsunami hazard zone. Liquefaction involves a sudden loss in strength of a saturated, cohesionless soil (predominantly sand) 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 depth is less than 15 m to 20 m from the surface and where the soils are composed of predominantly poorly-consolidated sands and silty sands. Based on published liquefaction map of the area (CDM, 1998) the site is located in the potentially liquefiable areas. Based on the presence of loose to medium dense sands to depths of 6 to 11 m and highest historical groundwater level of 10 feet below the ground surface, liquefaction potential at this site is likely to be high. However, both the 1958 Caltrans borings and 2002 boring for the widening indicate that groundwater was deeper than 11 m to 26 m at the Whitsett Avenue undercrossing and the Tujunga Wash Bridge locations. Actual liquefaction potential shall be determined during the PS&E stage when soil borings / CPTs, additional groundwater readings, and laboratory testing are performed at the bridge sites.

Grading and construction activities can result in high levels of topsoil erosion by removing vegetation and exposing the slopes to precipitation during the wet season. The project would be designed so that the slope would not become unstable and would include storm water BMPs that would reduce the risk of soil erosion. There are no large open bodies of water near the site, so there is no potential for hazards associated with seiches.

Transportation and Traffic. Northbound US 101 currently experiences peak period traffic congestion in both the AM and PM Peak periods. Future traffic projections indicate an approximate 30 percent increase in traffic demand between 2005 and 2030. The addition of the northbound auxiliary lane would provide an adequate weaving section so that merge and diverge movements between the Laurel Canyon Boulevard on-ramp and Coldwater Canyon Avenue off-ramp can occur away from the mainline traffic flow and help improve the weaving maneuver. The proposed improvements will also help minimize certain types of congestion-related accidents, such as sideswipe and rear-end collisions, and thus reduce future accident rates.

Cumulative Impacts. The cumulative impacts on the environment will be discussed in the environmental document to address the projects within the surrounding area and their cumulative impact on the environment.

List of Preparers

Hazardous Waste Review by Group Delta, Inc.	Date: August 2005
Biological Review by Stephanie Oslick (PBQ&D)	Date: 9/2/2005
Cultural Scoping by Sherri Gust and Andrea Galvin (Cogstone Resource Management, Inc/Galvin & Associates)	Date: 9/2/2005
Community Impact Scoping by Veronica Chan (PBQ&D)	Date: 9/2/2005
Visual Scoping by Theresa Dickerson (PBQ&D)	Date: 9/2/2005

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT E

Weave Analysis

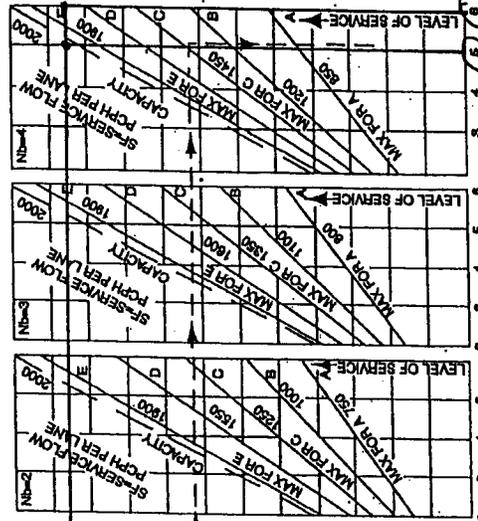
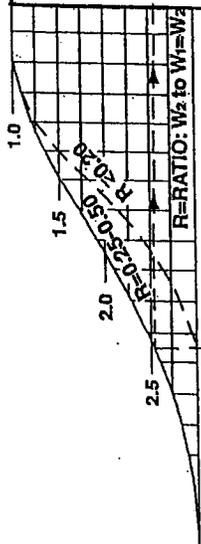
Figure 504.7A
Design Curve for Freeway and Collector Weaving

ANALYSIS NOMOGRAPH FOR DESIGN AND OPERATION OF ONE-SIDED WEAVING SECTIONS



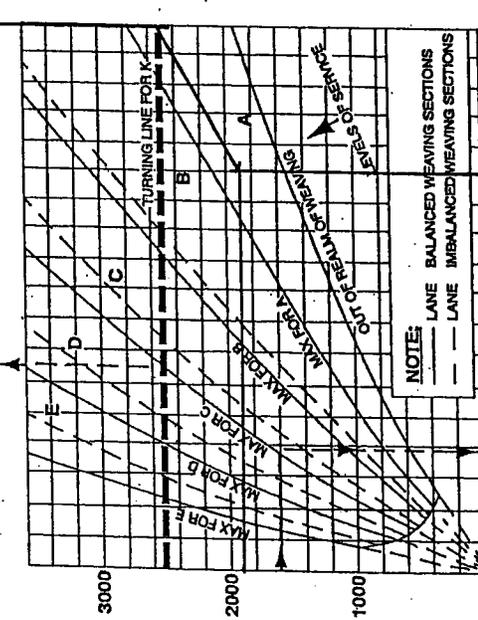
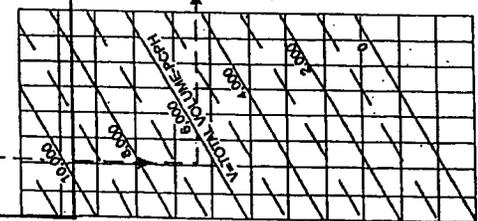
Nb = NUMBER OF BASIC LANES ON APPROACH
SEE CHART FOR DEFINITION OF TERMS

W2 = SMALLER WEAVING VOLUME-PCPH



N = NUMBER OF LANE IN WEAVING SECTION

Existing = LOS F
W/AUX Lane = LOS E



W = TOTAL WEAVING VOLUME-PCPH

L = LENGTH OF WEAVING SECTION-METERS (See Figure 504.7A)
LANE-BALANCED-OPTIONAL LANE AT EXIT, I.e, ONE MORE LANE GOING AWAY

NOTE: EXTRAPOLATION OF CHART BEYOND THE BOUNDARIES GIVEN IS NOT ADVISED.

Example: The nomograph is entered on the left (see dashed line and arrows) with weaving volume, $W_1 + W_2$ (or V_w) followed by projection to the right, intersecting the desired weaving LOS; a vertical drop from this point provides weaving distance $L = 400$ m. Returning to first intersection point of V_w with LOS line, an upward projection along the LOS line intersects with the horizontal, heavy dashed, turning line for 'K' from here the solution line is extended vertically to intersect the K value curve, from which a horizontal extension meets the desired V_w volume. The K value curve, from which a horizontal extension meets the desired V_w volume, is projected to the right, intersection (in this case) the desired LOS = C curve yielding an SF of 1450 (representing the overall or composite operation of the weaving section), from which a downward extension yields a N of 5.2; this would be rounded to N = 5 lanes.

$$R = W_2 / (W_1 + W_2) = 827 / (1087 + 827) = 827 / 1914 = 0.43$$

$$N_b = 5$$

$$W_1 = 1087$$

$$W_2 = 827$$

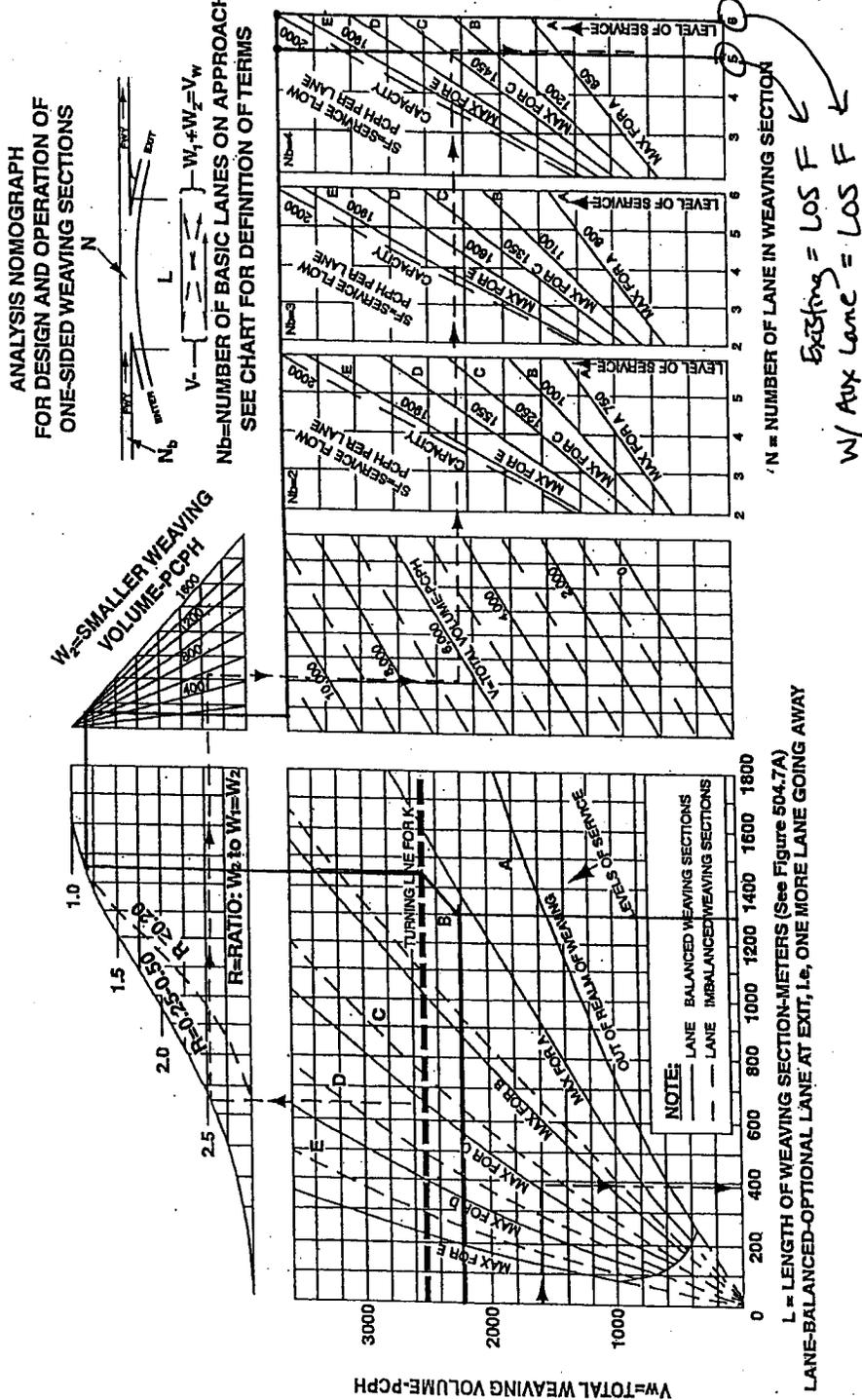
$$V_w = W_1 + W_2 = 1087 + 827$$

$$V_w = 1914$$

$$V_{total} = 19,608$$

EXISTING CONDITIONS - AM PEAK
NB WEAVE
LAUREL CYN ON TO COLDWATER CYN OFF

Figure 504.7A
Design Curve for Freeway and Collector Weaving



Existing = LOS F
W/ Aux Lane = LOS F

W₁ = 1235
W₂ = 975
V_w = W₁ + W₂ = 1235 + 975
V_w = 2210

R = W₂ / (W₁ + W₂)
= 975 / (1235 + 975)
= 975 / 2210
= 0.44

N_b = 5

V_{total} = 12,064

EXISTING CONDITIONS - PM PEAK
NB WEAVE
LAUREL CYN ON TO COLDWATER CYN OFF

CALCULATION SHEET

Project US 101 Combined PSR/PR
 Title: Weaving Analysis

Project No.: 27863

Made by: TMD

Date: 2/22/2005

Checked by: FN

Date: 2/23/2005

Subject: Existing Conditions AM Peak

Revised by:

Date:

NB US 101: Laurel Canyon on to Coldwater Canyon off

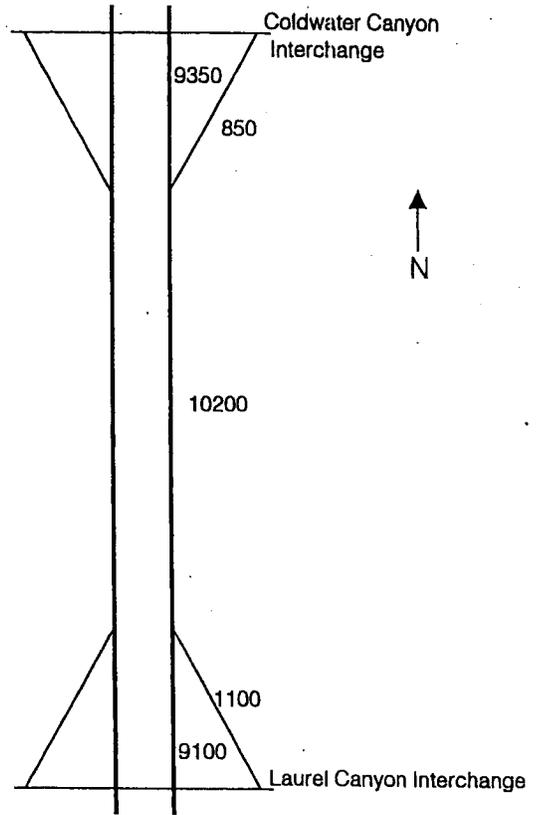
Trucks&Buses factor: 1.04

- Volume 1: Non-weaving vehicles on freeway
- Volume 2: Down weaving vehicles
- Volume 3: Up weaving vehicles
- Volume 4: Ramp to ramp non-weaving vehicles

Northbound Volumes

Volume 1:	9100	-	795	=	8,305	V A-C	<i>Adjusted for HV</i> 8,637
Volume 2:	850	-	55	=	795	V A-D	827
Volume 3:	1100	*	0.95	=	1,045	V B-C	1,087
Volume 4:	1100	*	0.05	=	55	V B-D	57

Total Volume 10,608



CALCULATION SHEET

Project US 101 Combined PSR/PR
 Title: Weaving Analysis

Project No.: 27863
 Made by: TMD
 Checked by: FN
 Revised by:

Date: 2/22/2005
 Date: 2/23/2005
 Date:

Subject: Existing Conditions PM Peak
 NB US 101: Laurel Canyon on to Coldwater Canyon off

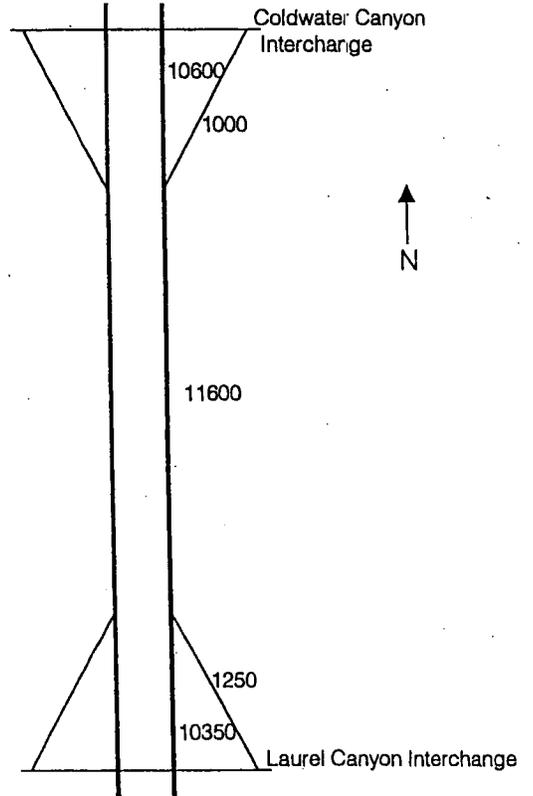
Trucks&Buses factor: 1.04

- Volume 1: Non-weaving vehicles on freeway
- Volume 2: Down weaving vehicles
- Volume 3: Up weaving vehicles
- Volume 4: Ramp to ramp non-weaving vehicles

Northbound Volumes

Volume 1:	10350	-	938	=	9,413	V A-C	<i>Adjusted for HV</i>	9,789
Volume 2:	1000	-	63	=	938	V A-D		975
Volume 3:	1250	*	0.95	=	1,188	V B-C		1,235
Volume 4:	1250	*	0.05	=	63	V B-D		65

Total Volume 12,064



NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT F

Accident Data

Mainline

TASAS TABLE B DISTRICT 07
SELECTIVE ACCIDENT RATE CALCULATION
ROUTE SEQUENCE

AXR253-A 11-23-04

LOCATION	DESCRIPTION	RA	*-NUMBER OF ACCIDENTS/SIGNIFICANCE*	PER	*ADT	* TOTAL	*-ACCIDENT RATE	ACCS/MV+	OR	MVM+*		
		GRP	MULTI	KLD	MAIN	MV+ OR	ACTUAL	AVERAGE				
		(RUS)	F+I	VEH	WET	DARK	INJ	X-ST	MVM	FAT	F+I	TOT
			TOT	FAT	INJ	F+I	TOT	FAT	F+I	TOT	FAT	F+I
101 LA	13.000 THRU LA	H66	47	47	130	8	43	0	146.1	127.89	.000	.37
07-0001	0.800M 00-10-01											1.15
												.006
												.38
												1.23

66

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
7	4.4	0	0.0	0	0.0
4	2.5	33	21.1	0	0.0
1	0.6	85	54.4	2	1.2
25	16.0	8	5.1	2	1.2
77	49.3	22	14.1	0	0.0
34	21.7	2	1.2	0	0.0
0	0.0	2	1.2	0	0.0
5	3.2	3	1.9	152	97.4
3	1.9	1	0.6	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
127	81.4	109	69.8	147	94.2
26	16.6	6	3.8	8	5.1
2	1.2	21	13.4	0	0.0
0	0.0	20	12.8	0	0.0
0	0.0	0	0.0	1	0.6
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
1	0.6	0	0.0	0	0.0

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
8	5.1	0	0.0	2	1.2
0	0.0	0	0.0	0	0.0
0	0.0	156	100.0	0	0.0
148	94.8	0	0.0	9	5.7
0	0.0	0	0.0	0	0.0
				0	0.0
				145	92.9

--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR		
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT # 2	PCT CODE
151	96.7 A-PASNGR CAR/STA WAGON	57	36.5 A-STOPPED	0	0.0	0.0 1-INFLUENCE ALCOHOL
0	0.0 B-PASNGR CAR W/TRALR	133	85.2 B-PROCEEDED STRAIGHT	0	0.0	0.0 2-FOLLOW TOO CLOSE
2	1.2 C-MOTORCYCLE	0	0.0 C-RAN OFF ROAD	0	0.0	0.0 3-FAILURE TO YIELD
39	25.0 D-PICKUP/PANEL TRUCK	2	1.2 D-MAKING RIGHT TURN	7	4.4	0.0 4-IMPROPER TURN
1	0.6 E-PICKUP/PANEL W/TRALR	6	3.8 E-MAKING LEFT TURN	11	7.0	0.0 5-SPEEDING
8	5.1 F-TRUCK/TRUCK TRACTOR	0	0.0 F-MAKING U TURN	4	2.5	0.0 6-OTHER VIOLATIONS
13	8.3 G-TRK/TRACTOR & 1 TRALR	0	0.0 G-BACKING	0	0.0	0.0 A-CELL PHONE* (INATTN)
0	0.0 2-TRK/TRACTOR & 2 TRALR	19	12.1 H-SLOWING, STOPPING	0	0.0	0.0 B-ELECTRONIC EQUIP* (INATTN)
0	0.0 3-TRK/TRACTOR & 3 TRALR	0	0.0 I-PASS OTHER VEHICLE	0	0.0	0.0 C-RADIO/CD/HEADPHN* (INATTN)
0	0.0 4-SINGLE UNIT TANKER	27	17.3 J-CHANGING LANES	0	0.0	0.0 D-SMOKING* (INATTN)
0	0.0 5-TRK/TRA & 1 TANK TRLR	0	0.0 K-PARKING	1	0.6	0.0 E-VISION OBSCUREMENT
0	0.0 6-TRK/TRA & 2 TANK TRLR	0	0.0 L-ENTER FROM SHLDR	7	4.4	0.0 F-INATTENTION - OTHER
1	0.6 H-SCHOOL BUS	0	0.0 M-OTHER UNSAFE TURN	20	12.8	1.2 G-STOP & GO TRAFFIC
0	0.0 I-OTHER BUS	0	0.0 N-CROSS INTO OPP LN	1	0.6	0.0 H-ENTER/LEAVE RAMP
0	0.0 J-EMERGENCY VEHICLE	0	0.0 O-PARKED	6	3.8	0.0 I-PREVIOUS COLLISION
0	0.0 K-HIGHWAY CONST EQUIP	0	0.0 P-MERGING	0	0.0	0.0 J-UNFAMILIAR WITH ROAD
0	0.0 L-BICYCLE	0	0.0 Q-TRVL WRONG WAY	2	1.2	0.0 K-DEFECT VEHICLE EQUIP
9	5.7 M-OTHER-MOTOR VEH	32	20.5 R-OTHER	2	1.2	0.6 L-UNINVOLVED VEHICLE
0	0.0 N-OTHER-NON-MOTOR VEH	1	0.6 <-NOT STATED	0	0.0	0.0 M-OTHER
3	1.9 O-SPILLED LOADS	125	80.1	3	1.9	1.9 N-NONE APPARENT
0	0.0 P-DISENGAGED TOW	0	0.0	0	0.0	0.0 P-WIND
0	0.0 Q-UNINVOLVED VEHICLE	1	0.6 2-KING XWALK-INTRST	0	0.0	0.0 R-RAMP ACCIDENT
0	0.0 R-MOPED	0	0.0 3-KING XWALK-NOT INTR	1	0.6	0.0 S-RUNAWAY VEHICLE
0	0.0 T-TRAIN	0	0.0 4-KING NOT XWALK	0	0.0	0.0 T-EATING* (INATTN)
2	1.2 U-PEDESTRIAN	2	1.2 5-ROADWAY-INCL SHLDR	0	0.0	0.0 U-CHILDREN* (INATTN)
1	0.6 V-DISMOUNT PEDESTRIAN	0	0.0 6-NOT IN ROADWAY	0	0.0	0.0 V-ANIMALS* (INATTN)
0	0.0 W-ANIMAL - LIVESTOCK	0	0.0 7-APRH-LEAVE SCHL BUS	0	0.0	0.0 W-PERSONAL HYGIENE* (INATTN)
0	0.0 X-ANIMAL - DEER	0	0.0 -INVALID CODES	0	0.0	0.0 X-READING* (INATTN)
0	0.0 Z-ANIMAL - OTHER	0		8	5.1	99.3 <-NOT STATED
				0	0.0	0.0 --DOES NOT APPLY

DIRECTION OF TRAVEL		SPECIAL INFORMATION	
NUMBER	PCT CODE	NUMBER	PCT CODE
149	95.5 N-N, NE, NW BOUND	0	0.0 A-HAZARDOUS MATERIALS
4	2.5 S-S, SE, SW BOUND	4	2.5 B-CELL PHONE IN USE*
0	0.0 E-EASTBOUND	72	46.1 C-CELL PHONE NOT IN USE*
8	5.1 W-WESTBOUND	82	52.5 D-CELL PHONE NONE/UNKNOWN*
6	3.8 <-NOT STATED	44	28.2 <-NOT STATED
0	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY
		0	0.0 -INVALID CODES

*SPECIAL INFORMATION CODES EFF. 04-01-01

*INATTENTION CODES EFF. 01-01-01

Ramps

TASAS TABLE B DISTRICT 07
SELECTIVE ACCIDENT RATE CALCULATION
ROUTE SEQUENCE

AXR253-A 12-17-04

PAGE 1

LOCATION	DESCRIPTION	RA	*-NUMBER OF ACCIDENTS/SIGNIFICANCE*	PER	*ADT	*TOTAL	*-ACCIDENT RATE	ACCS/MV+	OR	MVM-*								
		GRP	MULTI	KLD	MAIN	MV+	OR	ACTUAL	AVERAGE	TOT								
		(RUS)	TOT	FAT	INJ	F+I	VER	WET	DARK	INJ	X-ST	MVM	FAT	F+I	TOT			
101 LA 07-0001	12.987 NB ON LAUREL CANYON BL 01-01-01 03-12-31 36 MO (U)	R12	11	0	4	4	10	0	5	0	15.2	16.64+	.000	.24	.66	.002	.32	.80
101 LA 07-0002	13.765 NB OFF COLDWATER CANYON 01-01-01 03-12-31 36 MO (U)	R10	11	0	7	7	10	0	4	0	11.0	12.05+	.000	.58	.91	.005	.61	1.50

+ DENOTES MV USED IN RATES

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT G

Right-of-Way Data Sheet

State of California Department of Transportation
RIGHT OF WAY DATA SHEET

EXHIBIT
 4-EX-1 (REV 3/2004)
 Page 1 of 4

To: Caltrans District 7 Date: 8/5/05
 100 Main Street
 Los Angeles, CA
 Dist 07 Co LA Rte 101 KP(PM) 20.9/22.2
 Attention: Andrew P. EA 24940K
 Nierenberg
 Project Description Northbound widening for the construction of an auxiliary lane.

Subject: Right of Way Data Sheet

This Alternate meets the criteria for a Design/Build project: Yes No

1. Right of Way Cost Estimate:

		Current Value Future Use	Escalation Rate	Escalated Value
A	Total Acquisition Cost Acquisition, including Excess Lands, Damages, and Goodwill. Project Permit Fees	\$312,300 (TCE)	8.00%	\$425,000
B	Utility Relocation	\$200,000	8.00%	\$272,100
C	Relocation Assistance	\$0	%	\$
D	Clearance/Demolition	\$ 50,200	8.00%	\$ 68,300
E	Title and Escrow	\$ 35,000	8.00%	\$ 47,700
F	Total Estimated Cost	\$597,500		\$813,100
G	Construction Contract Work	\$		

2. Current Date of Right of Way Certification 7/09

3. Parcel Data: To be entered into PMCS EVNT RW Screen.

Type	Dual/Appr	Utiliti es		RR Involvements:	
X		U4-1	_____	None	<u>X</u>
A -2		-2	_____	C&M Agrmt	_____
B -3		-3	<u>\$200K</u>	Svc Contract	_____
C -4		-4	_____	Design	_____
D U5-7		U5-7	_____	Const.	_____
E XXXX		-8	_____	Lic/RE/Clauses	_____
F XXXX		-9	_____		_____
Total <u>\$250,000</u>				Misc. R/W Work RAP Displ Clear/Demo Const Permits	<u>\$50K</u>
Areas:R/W <u>1500 M2(TCE)</u> No .Exc Parcels <u>N/A</u>				Condemnation	_____
Entered PMCS Screens ___/___/___ by ___/___/___ Entered AGRE Screen (Railroad data only)				Excess _____	

4. Are there any major items of construction contract work Yes No **X**

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.) No right of way required.

Landuse adjacent to the project site is a mixture of commercial and residential within the project limits. No acquisitions are proposed for this project improvement. The Temporary Construction Easement is for construction of a retaining wall at the R/W line.

6. Is there an effect on assessed valuation? Yes Not Significant No **X** (If "Yes", explain)

7. Are utility facilities or rights of way affected?

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	(If "Yes," attach Utility Information Sheet, Exhibit 4-EX-5.)
The following checked items may seriously impact lead time for utility relocation:				
<input type="checkbox"/>	Longitudinal policy conflict(s)			
<input type="checkbox"/>	Environmental concerns impacting acquisition of potential easements			
<input type="checkbox"/>	Power lines operating in excess of 50KV and substations			
(See attached Exhibit 4-EX-5 for explanation.)				

8. Are Railroad facilities or rights of way affected?
Yes No **X** (If "Yes", attach Railroad Information Sheet, Exhibit 4-EX-6.)

9. Were any previously unidentified sites with hazardous waste and/or material found?
Yes None Evident (If "Yes", attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

Based upon an initial site assessment the area adjacent to the proposed improvements was not found to have sites of concern. Due to the existing exposed slopes there is the potential of ADL. The need for further investigation will be addressed in the PS&E phase.

10. Are RAP displacements required? Yes No (If "Yes", provide the Following Information.)

No. of Single Family	_____	No. of Business/nonprofit	_____
No. of Multi-Family	_____	No. of Farms	_____

Based on Draft/Final Relocation Impact Statement/Study dated _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

11. Are there Material Barrow and/or Disposal Sites Required? Yes No (If "Yes", explain)

During construction embankment material will be required since there is not enough excavation generated on this project. Special provisions should be provided to instruct Contractor of the availability of material at District pre-approved borrow site.

12. Are there potential relinquishments and/or abandonments? Yes No (If "Yes", explain)

13. Are there any existing and/or potential airspace sites? Yes No (If "Yes", explain)

14. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if district proposes less than PMCS lead time and/or if significant pressures for project advancement are anticipated.)

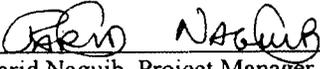
Based on the R/W requirements on Page 1 of this Data Sheet, R/W will require a lead time 12 months from the date regular appraisals can begin to project certification.

In any event R/W Maps will require _____ months from Final Maps to project certification.

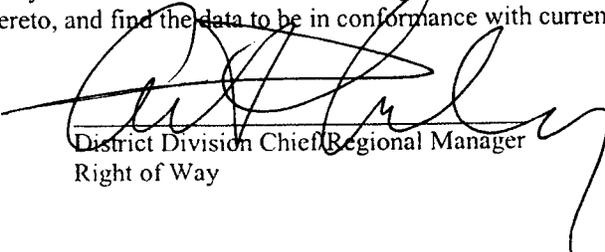
Delineation of the existing right of way maps is not required, due to no permanent acquisitions. However, valuation for TCE's will be required and should be completed in advance of construction R/W maps will be required for the valuation and acquisition of the TCE in PS&E phase..

15. Is it anticipated that Caltrans staff will perform all Right of Way work? Yes No (If "No" discuss.)

Evaluation Prepared By:

Right of Way:	Name	<u>James Wei, P.E. (PB)</u>	Date:	<u>9/14/05</u>
Railroad:	Name	<u>James Wei, P.E. (PB)</u>	Date:	<u>9/14/05</u>
Utilities:	Name	<u>James Wei, P.E. (PB)</u>	Date:	<u>9/14/05</u>
		Recommended for Approval:  <u>Farid Naguib, Project Manager (PB)</u>		

I have reviewed the Right of Way information contained in this Project Study Report and the Right of Way Data Sheet attached hereto, and find the data to be in conformance with current applicable State standards and practices.


 District Division Chief/Regional Manager
 Right of Way

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION EXHIBIT
UTILITY INFORMATION SHEET 4-EX-5 (REV 3/2004)
 (Form #)

1. Name of utility companies involved in project:

LADWP, City of LA DPW, So. Cal Gas Company, SBC Telephone

2. Types of facilities and agreements required:

Gas Lines(Non High Risk), Water Line, Overhead Electrical/Telephone

3. Is any facility a longitudinal encroachment in existing or proposed access controlled right of way? Explain.

No longitudinal encroachments exist within the project limits. However lateral relocations in the vicinity of proposed retaining wall construction is anticipated.

Disposition of longitudinal encroachment(s):

- Relocation required.
- Exception to policy needed.
- Other. Explain.

4. Additional information concerning utility involvements on this project, i.e., long lead time materials, growing or species seasons, customer service seasons (no transmission tower relocations in summer).

Seasonal constraints do not apply. Existing poles are wood, may need to coordinate order time in upgrade to steel is desired.

5. PMCS Input Information Total estimated cost of State's obligation for utility relocation on this project: \$

Note: Total estimated cost to include any Department obligation to relocate longitudinal encroachments in access controlled right of way and acquire any necessary utility easements.

<u>Utility Involvements</u>		
	U4-1	U5-7
	-2	-8
	-3	\$200,000 -9
	-4	

Prepared By:

S. Henderson, P.E. (HNTB) Date 2/25/04

**R/W UTILITY ESTIMATE WORKSHEET
AND R/W DATA SHEET INTSTRUCTIONS**

EXHIBIT
13-EX-6

04/05

Date

20.9/22.2(13.0/13.8)
KP(PM)

24940K
Exp Auth

Description of Project:

Northbound widening of US 101 between the Laurel Canyon Boulevard and Coldwater Canyon Boulevard Interchanges for the construction of an auxiliary lane and standard width right shoulder.

Estimate for: _____ Preliminary Route Estimate (Alternate No. _____)
 R/W Data Sheet (Preferred Alternate)

Evidence of utilities:

Gas Electric Telephone _____ Cable TV Water Public Drainage/Irrigation
 _____ Fiber
 Sewer Optics _____ Other (explain in remarks)

Anticipated Utility Relocations:

Gas Electric Telephone _____ Cable TV _____ Water Public Drainage/Irrigation
 _____ Fiber
 _____ Sewer _____ Optics _____ Other (explain in remarks)

Estimated Cost of Utility Relocations:

75	LF of Gas Line	@	\$75	/LF=	\$5625	Extend Casing
	LF of UG Electric Line	@		/LF=		
	LF of UG Telephone Line	@		/LF=		
7	Wood Poles (Telephone)	@	\$13,500	/Pole=	\$94,500	
7	Wood Poles (Electric)	@	\$13,500	/Pole=	\$94,500	
	Steel Poles	@		/Pole=		
	Steel Towers	@		/Twr=		
75	LF of Water Line	@	\$75	/LF=	\$5625	Extend Casing
	Fire Hydrants	@		/FH=		
	LF of Sewer Line	@		/LF=		
	LF of Fiber Optic Line	@		/LF=		
	Other (Explain)	@				

Total Estimate= \$200,250 (say \$200,000)

Remarks:(Known utility owners names, etc.)

Los Angeles Department of Water & Power (LADWP), So Cal Gas Company, SBC

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT H

Advance Planning Study (APS)

**US-101 CORRIDOR
AUXILIARY LANE WIDENING
WHITSETT AVENUE UNDERCROSSING – BR 53-1340**

ADVANCE PLANNING STUDY
Memorandum of Assumptions and Remarks

- Existing Structure is a single span reinforced concrete box girder with 19 cells, constructed in 1959. The substructure consists of closed end rigid frame abutments supported on concrete piles. No seismic retrofit has been performed to date.
- There is currently a widening project in progress at the southerly side of the structure. The recent southerly widening, does not decrease the existing minimum clearance.
- The minimum clearance is 15.17' (4.62m). Widening the bridge on the northerly side does not reduce the existing clearance, nor does the required falsework for new construction infringe upon the minimum vertical clearance. Whitsett Avenue elevation decreases as it travels north under the structure and the structure itself slopes upward to the North.
- There are discontinuous sections of approach slabs, type R(30D), on the existing structure. Per Caltrans policy, we recommend, that new approach slabs be incorporated throughout the whole width of the existing structure. Type R 9D along the existing, and Type N 9D along the widened portion. Discussions with Structure Maintenance, and Caltrans PM confirmed this direction.
- Approach slab rehab could take place overnight by closing the lane designated for approach slab replacement according to a lane closure chart provided by the Caltrans traffic unit. Rapid hardening cement concrete allows this non-disruptive type of setup.
- 526 m³ of Structure Excavation, Type Z-2 (Aerially deposited lead) was removed during the southerly widening. Based on this, the northerly widening, will have a similar excavation type.
- Existing barriers railing and overhangs will be removed before construction of the widening.
- The seismic longitudinal demand on the bridge structure is resisted by the passive pressure of the soil at the abutments. The seismic transverse demand of the bridge structure is resisted by the shear keys located under the closure pour at the abutments.
- This section of the US-101 is on a designated lifeline route. Lifeline issues have been considered and the current structure is capable of carrying emergency vehicles across the recently constructed south end widening. This portion is wide enough for one lane of traffic to pass through and it was designed based on the latest Caltrans Seismic Design Criteria (SDC).

BRIDGE GENERAL PLAN ESTIMATE _____ **OR** _____ **PLANNING ESTIMATE** X

DPD-DSD-DIS (Rev 8/92)

Cost Data is based on the Caltrans Cost Data Book 2003 and does not include escalation to year of project delivery

STRUCTURE WHITSETT AVENUE UNDERCROSSING		BR. NO. 53-1340	RCVD BY		ESTIMATING GROUP	
TYPE R/C Box Girder		DISTRICT 7	CO LA	RTE US-101	PM 13.4	IN OUT
LENGTH <u>27.74 M</u> x WIDTH <u>4.37 M</u> = AREA <u>121 M2</u>						
DESIGN SECTION PB-LA	QUANTITIES BY EFO	DATE 1/25/2005	ESTIMATE NO			
PROJECT INCLUDES 1 STRUCTURE	QUANTITIES CHK BY SPD	DATE 1/25/2005	PRICED BY SPD			
AND \$	ROADWORK	CHG UNIT AND EA 24940K	COST INDEX 2003			

	CONTRACT ITEMS	UNIT	QUANTITY	PRICE	AMOUNT
1	STRUCTURE EXCAVATION, BRIDGE	M3	526	\$60.00	\$31,560.00
2	STRUCTURE BACKFILL, BRIDGE	M3	70	\$40.00	\$2,800.00
3	STRUCTURE BACKFILL, RETAINING WALL	M3	398	\$40.00	\$15,920.00
4	STRUCTURAL CONCRETE, BRIDGE	M3	110	\$550.00	\$60,500.00
5	BAR REINFORCING STEEL, BRIDGE	KG	34655	\$1.40	\$48,517.00
6	BAR REINFORCING STEEL, RETAINING WALL	KG	13500	\$1.45	\$19,575.00
7	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	24	\$550.00	\$13,200.00
8	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)*	M3	239	\$750.00	\$179,250.00
9	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	25	\$400.00	\$10,000.00
10	STRUCTURAL CONCRETE, RETAINING WALL	M3	116	\$400.00	\$46,400.00
11	CONCRETE BARRIER (TYPE 742)	M	46	\$160.00	\$7,360.00
12	JOINT SEAL	M	101	\$120.00	\$12,120.00
13	DRILL AND BOND DOWEL	M	26	\$60.00	\$1,560.00
14	FURNISH STEEL PILING	M	942	\$85.00	\$80,070.00
15	DRIVE STEEL PILE	EA	56	\$2,200.00	\$123,200.00
16	TEMPORARY K-RAIL	M	112	\$55.00	\$6,160.00
17	JACKING SUPERSTRUCTURE	LS	1	\$100,000.00	\$100,000.00
18					
19	REMOVE BARRIER	M	28	\$50.00	\$1,400.00
20	REMOVE CONCRETE (BRIDGE)	M3	35	\$75.00	\$2,625.00
21					
22					

- ROUTING**
- DESIGN SECTION _____
 - DESIGN A SUPERVISOR _____
 - DESIGN B SUPERVISOR _____
 - PLANNING _____

SUB TOTAL		\$758,192.00
MOBILIZATION 10 %		\$75,819.20
SUB TOTAL BRIDGE ITEMS		\$834,011.20
CONTINGENCIES 25 %		\$208,502.80
BRIDGE TOTAL (\$600 per M ²)		\$1,042,514.00
BRIDGE REMOVAL (10% MOB, 25% CONTINGENCY INCLUDED)		\$1,925.00
WORK BY RAILROAD OR UTILITY FORCES		\$0.00
GRAND TOTAL		\$1,044,439.00
FOR BUDGET PURPOSES - SAY (\$8,612 per M ²)		\$1,044,000.00

ESTIMATING - LAST

NOTE: * INDICATES ITEMS FOR RETROFIT /REHABILITATION OF EXISTING STRUCTURE

\$801/FT2 INCLUDING ITEMS WITH *
\$612/FT2 EXCLUDING ITEMS WITH *

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 1 of 2

Date: 7/18/05	Consultant Firm (for structures): Parsons Brinckerhoff	Phone No: (213) 362-9470
Designed by: Beth Overstreet		Phone No: (213) 896-5632
EA: 24940K	County: LA	Rte: 101
Project Description: Westbound bridge widening on the outside edges to accommodate the addition of one auxiliary lane.		
Bridge No(s): 53-1340	Bridge Name(s): Whitsett Avenue Undercrossing	
Total number of bridges in project: 1		APS Alternative Letter or Number (if more than one):
Purpose of this APS: Initial APS Cost & Feasibility <input checked="" type="checkbox"/> Revised scope <input type="checkbox"/> Update cost <input type="checkbox"/>		

Part A Items to collect and considerations prior to beginning the APS

All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark **N/A** if not applicable)

- Preliminary profile grade of proposed structure.
- Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)
- Grades or spot elevations of roadway below the structure.
- N/A Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)
- N/A Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.
- Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)
- Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)
- "As Built" plans for existing structures.
- Future widening plans of upper and lower roadway (verify with Route Concept Report).
- Site aerial photograph (at the proposed structure).
- Environmental and/or permit requirements (areas of potential impact, construction windows, etc.)
- Overhead and underground utility plans
- Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 2 of 2

Part B Considerations during the APS design and cost estimate preparation

- | | | | | |
|-------|---|--|---|--|
| 1. | Has this project been discussed with: | the OSFP Liaison Engineer? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | | the Caltrans District Project Manager? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | | the roadway consultant? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 2. | Have the Caltrans Structures Maintenance records been reviewed? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | If the records recommend any work for the structure, is it included in the APS? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 3. | Are there special aesthetic considerations? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 4. | (Widenings and Modifications) | | | |
| | Has this project been reviewed for seismic retrofit requirements? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | Are seismic retrofit requirements included in the APS? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 5. | Any special Railroad requirements? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Shoofly required? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Cost of shoofly included as a separate item in the project cost estimate? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 6. | Any special foundation requirements, including scour critical work, special excavation such as Type A, Type D, and/or hazardous or contaminated material? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 7. | Any special construction requirements, including limited site accessibility or seasonal work? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 8. | Other items to be included in the cost such as slope paving, approach slabs, and/or adjacent retaining walls? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 9. | Remove existing bridge? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | Total Deck Area: 0 m ² | | | |
| <hr/> | | | | |
| 10. | Any other unusual or special requirements? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 11. | Provide and attach a consultant prepared Design Memo to summarize and document any important assumptions, discussions, decisions, unusual items, local agency requirements such as aesthetics, improvements in vicinity of the structure, airspace usage, other obstructions, or any items noted above. | Summary attached? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Designer: (Printed Name) Beth Overstreet	Designer's Signature: 	Date: 7/18/05
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**US-101 CORRIDOR
AUXILIARY LANE WIDENING
TUJUNGA WASH – BR 53-1337**

ADVANCE PLANNING STUDY
Memorandum of Assumptions and Remarks

- Existing Structure is a three span welded steel girder, center span hinged, with 10 girders constructed in 1959. The substructure consists of 2 open end seat abutments on spread footings, 9 and 10 rectangular shaped columns at bents 2 and 3 respectively. Although the bridge inspection report states that a widening occurred in 1992, the history of the structure, clarifies that in 1992, it was a girder strengthening and rail modification. In 1994, a seismic retrofit occurred and the following tasks were performed: Construction of cast-in-place end blocks at the abutments, restrainers at both hinges, replacement of joint seals, removal of unsound concrete and patching of spalls at damaged deck joints, reconstruction of the diaphragm connection at the cantilever side of the hinge, straightening or replacement of the damaged knee brace, replacement of bottom gusset plates, and addition of new bottom chord member.
- There is currently a widening project in progress at the southerly side of the structure. The new structure will exhibit similar seismic design features. Transverse seat extenders could be added to the end of the existing bent caps for a nominal cost to prevent collapse of the existing girders should the bearings fail.
- The current existing minimum clearance is unimpaired for this concrete lined channel. So there will be no clearance problem as a result of the widening.
- A small area of the channel footing (approximately 15m²) will need to be removed and replaced to construct the support located near the northwest side of the channel. This is similar to the construction technique used for the south end widening.
- There are discontinuous sections of approach slabs, type R(30D), on the existing structure. Per Caltrans policy, we recommend, that new approach slabs be incorporated throughout the whole width of the existing structure. Type R 9D along the existing and Type N 9D along the widening's abutment. Discussions with Structure Maintenance, and Caltrans PM confirmed this direction.
- Approach slab rehab could take place overnight by closing the lane designated for approach slab replacement according to a lane closure chart provided by the Caltrans traffic unit. Rapid hardening cement concrete allows this minimally disruptive type of operation.
- 111m³ of Structure Excavation, Type D, and 310 m³ of Structure Excavation, Type Z-2 (Aerially deposited lead) was removed during the southerly widening. Based on this, the northerly widening will have similar excavation types.
- Existing barriers railing and overhangs will be removed before construction of the widening.
- This section of the US-101 is on a designated lifeline route. Lifeline issues have been considered and the current structure is capable of carrying emergency vehicles across the recently constructed south end widening. It is wide enough for one lane of traffic to pass through and it was designed based on the latest Caltrans Seismic Design Criteria (SDC).

BRIDGE GENERAL PLAN ESTIMATE _____ **OR** **PLANNING ESTIMATE** X

DPD-DSD-DIS (Rev 8/92)

Cost Data is based on the Caltrans Cost Data Book 2003 and does not include escalation to year of project delivery

STRUCTURE Tujunga Wash Bridge		BR. NO. 53-1337	RCVD BY		ESTIMATING GROUP	
TYPE Welded Steel Girder		DISTRICT 7	CO LA	RTE US-101	PM 13.3	IN OUT
LENGTH <u>93.67 M</u> x WIDTH <u>4.37 M</u> = AREA <u>409 M2</u>						
DESIGN SECTION	<u>PB-LA</u>	QUANTITIES BY	<u>EFO</u>	DATE	<u>1/25/2005</u>	ESTIMATE NO
PROJECT INCLUDES	<u>1</u> STRUCTURE	QUANTITIES CHK BY	<u>SPD</u>	DATE	<u>1/25/2005</u>	PRICED BY <u>SPD</u>
AND \$	ROADWORK	CHG UNIT AND EA	<u>24940K</u>	COST INDEX		<u>2003</u>

	CONTRACT ITEMS	UNIT	QUANTITY	PRICE	AMOUNT
1	STRUCTURE EXCAVATION, BRIDGE	M3	421	\$60.00	\$25,260.00
2	STRUCTURE BACKFILL, BRIDGE	M3	76	\$40.00	\$3,040.00
3	STRUCTURE BACKFILL, COLUMN ISOLATION CASING	M3	67	\$45.00	\$3,015.00
4	STRUCTURE BACKFILL, RETAINING WALL	M3	297	\$40.00	\$11,880.00
5	STRUCTURAL CONCRETE, BRIDGE	M3	260	\$550.00	\$143,000.00
6	BAR REINFORCING STEEL, BRIDGE	KG	76600	\$1.40	\$107,240.00
7	BAR REINFORCING STEEL, RETAINING WALL	KG	10650	\$1.45	\$15,442.50
7	FURNISH STRUCTURAL STEEL, BRIDGE	KG	162500	\$2.90	\$471,250.00
8	ERECT STRUCTURAL STEEL, BRIDGE	KG	162500	\$1.10	\$178,750.00
9	CLEAN AND PAINT STRUCTURAL STEEL	LS	1	\$16,400.00	\$16,400.00
10	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	24	\$550.00	\$13,200.00
11	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)*	M3	408	\$750.00	\$306,000.00
12	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	36	\$400.00	\$14,400.00
13	STRUCTURAL CONCRETE, RETAINING WALL	M3	104	\$790.00	\$82,160.00
14	CONCRETE BARRIER (TYPE 742)	M	112	\$160.00	\$17,920.00
15	JOINT SEAL	M	192	\$120.00	\$23,040.00
16	DRILL AND BOND DOWEL	M	5	\$60.00	\$300.00
17	CAST-IN-DRILLED HOLE CONCRETE PILING	M	36	\$60.00	\$2,160.00
18	TEMPORARY K-RAIL	M	178	\$55.00	\$3,790.00
19					
20	REMOVE BARRIER	M	92	\$50.00	\$4,600.00
21	REMOVE CONCRETE (BRIDGE)	M3	61	\$75.00	\$4,575.00

ROUTING

1. DESIGN SECTION _____

2. DESIGN A SUPERVISOR _____

3. DESIGN B SUPERVISOR _____

4. PLANNING _____

SUB TOTAL	\$1,444,247.50
MOBILIZATION 10 %	\$144,424.75
SUB TOTAL BRIDGE ITEMS	\$1,588,672.25
CONTINGENCIES 25 %	\$397,168.06
BRIDGE TOTAL (4851 per M ²)	\$1,985,840.31
BRIDGE REMOVAL (10% MOB 25% CONTINGENCY INCLUDED)	\$12,615.63
WORK BY RAILROAD OR UTILITY FORCES	\$0.00
GRAND TOTAL	\$1,998,455.94
FOR BUDGET PURPOSES - SAY (\$4,881 per M ²)	\$1,998,000.00

ESTIMATING - LAST

NOTE: * INDICATES ITEMS FOR RETROFIT /REHABILITATION OF EXISTING STRUCTURE

\$454/FT² INCLUDING ITEMS WITH *

\$353/FT² EXCLUDING ITEMS WITH *

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 1 of 2

Date: 7/18/05	Consultant Firm (for structures): Parsons Brinckerhoff	Phone No: ~ (213) 362-9470
Designed by: Beth Overstreet		Phone No: (213) 896-5632
EA: 24940K	County: LA	Rte: 101
Project Description: Westbound bridge widening on the outside edges to accommodate the addition of one auxiliary lane.		
Bridge No(s): 53-1337	Bridge Name(s): Tujunga Wash	
Total number of bridges in project: 1		APS Alternative Letter or Number (if more than one):
Purpose of this APS: Initial APS Cost & Feasibility <input checked="" type="checkbox"/> Revised scope <input type="checkbox"/> Update cost <input type="checkbox"/>		

Part A Items to collect and considerations prior to beginning the APS

All items listed in Part A are to be made available and submitted if requested by the Liaison Engineer.
(Mark N/A if not applicable)

- Preliminary profile grade of proposed structure.
- Typical section of the proposed structure. (Including barrier type, sidewalks, cross slope %, etc.)
- Grades or spot elevations of roadway below the structure.
- N/A Typical section of roadway below the structure. (Including shoulders, gutters, embankment slope.)
- N/A Site map: including horizontal alignment of new structure and the roadway below, topo, contours, etc.
- Stage construction or detour plan for traffic on the structure.
(number of lanes to remain open, Temp Railing, etc.)
- Stage construction or detour plan for the roadway below the structure.
(falsework openings for each stage and any restrictions.)
- "As Built" plans for existing structures.
- Future widening plans of upper and lower roadway (verify with Route Concept Report).
- Site aerial photograph (at the proposed structure).
- Environmental and/or permit requirements (areas of potential impact, construction windows, etc.)
- Overhead and underground utility plans
- Any other information that you feel is necessary to complete the study. (Other concerns that may affect the APS: local agency requirements such as aesthetics, improvements in vicinity of structure, airspace usage, other obstructions, etc.)

Consultant Prepared Advance Planning Study (APS) Checklist

Sheet 2 of 2

Part B Considerations during the APS design and cost estimate preparation

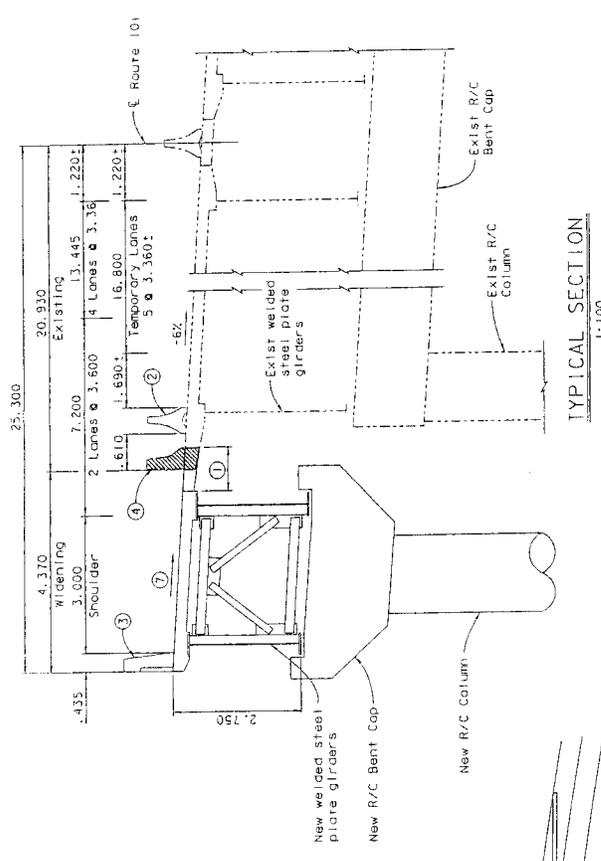
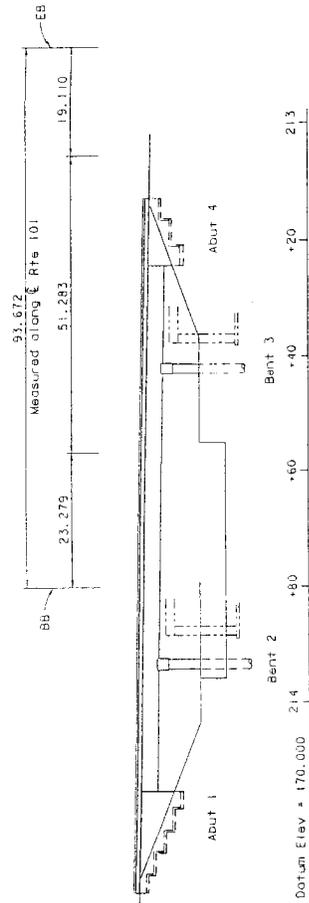
- | | | | | |
|-------|---|--|---|--|
| 1. | Has this project been discussed with: | the OSFP Liaison Engineer? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | | the Caltrans District Project Manager? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | | the roadway consultant? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 2. | Have the Caltrans Structures Maintenance records been reviewed? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | If the records recommend any work for the structure, is it included in the APS? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 3. | Are there special aesthetic considerations? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 4. | (Widenings and Modifications) | | | |
| | Has this project been reviewed for seismic retrofit requirements? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | Are seismic retrofit requirements included in the APS? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 5. | Any special Railroad requirements? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Shoofly required? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Cost of shoofly included as a separate item in the project cost estimate? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 6. | Any special foundation requirements, including scour critical work, special excavation such as Type A, Type D, and/or hazardous or contaminated material? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 7. | Any special construction requirements, including limited site accessibility or seasonal work? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| <hr/> | | | | |
| 8. | Other items to be included in the cost such as slope paving, approach slabs, and/or adjacent retaining walls? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 9. | Remove existing bridge? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| | Total Deck Area: 53.7 m ² | | | |
| <hr/> | | | | |
| 10. | Any other unusual or special requirements? | | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| <hr/> | | | | |
| 11. | Provide and attach a consultant prepared Design Memo to summarize and document any important assumptions, discussions, decisions, unusual items, local agency requirements such as aesthetics, improvements in vicinity of the structure, airspace usage, other obstructions, or any items noted above. | Summary attached? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |

Designer: (Printed Name) Beth Overstreet	Designer's Signature: <i>Beth Overstreet</i>	Date: 7/18/05
---	---	------------------

Caltrans **M** **etric**

The Gateway Project
 PREPARED BY: M. J. BRINCKENHOFF
 PARSONS BRINCKENHOFF
 444 S. Flower Street, Suite 2100
 Los Angeles, CA 90012

DATE	07/13/05
PROJECT NO.	53-1-337
SCALE	AS SHOWN
DATE	01/05/05
PROJECT ENGINEER	J. Richardson
DATE	01/05/05
APPROVED	S. Dular
DATE	01/05/05



- LEGEND**
- ① 0.910 m closure pour
 - ② Temporary Railing, Type K
 - ③ New Conc Barrier (Type 742)
 - ④ Remove existing Conc Barrier (Type 274) and portion of bridge deck under barrier
 - ⑤ Structure Approach Slab Type N(9S)
 - ⑥ Structure Approach Slab Type R(9S)
 - ⑦ Match existing cross slope and profile grade
- Indicates direction of traffic
 - - - - Denotes existing structure

BRIDGE COST:

DATE OF ESTIMATE	04-01-05
BRIDGE REMOVAL	\$12,615
STRUCTURE DEPTH	2.750m
WIDTH	4.370m
LENGTH	93.672m
AREA	409m ²
COST PER SQ INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	\$4,881/m ²
TOTAL COST	\$1,986,000

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

PLANNING STUDY

TUJUNGA WASH BRIDGE (WIDEN)

BRIDGE NO.	53-1-337
SCALE	AS SHOWN
DATE	01/05/05
PROJECT ENGINEER	J. Richardson
DATE	01/05/05
APPROVED	S. Dular
DATE	01/05/05

PLAN
1:400

SECTION OVERVIEW
 ELEV. OFF. DATE

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT I

Initial Site Assessment (ISA) Checklist

(Report under separate cover)



Initial Site Assessment (ISA) Checklist

Project Information

District 7 County LA Route 101 Kilometer Post (Post Mile) 20.9/22.2(3.9/4.3)EA 24940K

Description Add a Northbound auxiliary lane between Laurel Canyon Boulevard and Coldwater Canyon Avenue including the widening of bridges on Tujunga Wash and Whitsett Avenue.

Is the project on the HW Study Minimal-Risk Projects List (HWI)? _____

Project Manager _____ phone # _____

Consultant Project Manager Farid Naguib phone # 213-362-9470

Project Engineer O S Ghuman phone # 949-609-1020

Project Screening

Attach the project location map to this checklist to show location of all know and/or potential HW sites identified.

1. Project Features: New R/W? No Excavation? Yes Railroad involvement? No
Structure demolition/modification? Yes Subsurface utility relocation? Possible
2. Project Setting Vacant area adjacent to freeway right-of-way
Rural or Urban Urban
Current land uses Landscaped Freeway ROW
Adjacent land uses Commercial and single-family residential
(industrial, light industry, commercial, agricultural, residential, etc.)
3. Check federal, State, and local environmental and health regulatory agency records as necessary, to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets, as needed, to provide pertinent information for the proposed project.
4. Conduct Field Inspection. Date 02/08/05 Use the attached map to locate potential or known HW sites.

STORAGE STRUCTURES / PIPELINES:

Underground tanks No Surface tanks No
Sumps No Ponds No
Drums No Basins No
Transformers Not Identified Landfill No
Other _____

Initial Site Assessment (ISA) Checklist (continued)

CONTAMINATION: (spills, leaks, illegal dumping, etc.)

Surface staining No Oil sheen No
Odors No Vegetation damage No
Other _____

HAZARDOUS MATERIALS: (asbestos, lead, etc.)

Buildings No Spray-on fireproofing No
Pipe wrap No Friable tile No
Acoustical plaster No Serpentine No
Paint No Other Some materials possible on existing bridges.

5. Additional record search, as necessary, of subsequent land uses that could have resulted in a hazardous waste site. Use the attached map to show the location of potential hazardous waste sites.

6. Other comments and/or observations: _____

ISA Determination

Does the project have potential hazardous waste involvement? Maybe If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the investigation? Yes If "YES," explain; then give an estimate of additional time required: _____

Following is recommended: 1) Conduct ADL study where excavation proposed in unpaved ROW areas. _____

A brief memo should be prepared to transmit the ISA conclusions to the Project Manager and Project Engineer.

ISA Conducted by Prith S. Ghuman Date 02/11/05

OPJIT S. GHUMAN, P.E.
Group Delta Consultants

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT J

Transportation Management Plan Data Sheet

TRANSPORTATION MANAGEMENT PLAN DATA SHEET (Preliminary TMP Elements and Costs)

Co/Rte/PM LA/101/KP20.9/22.2 EA 24940K Alternative No. _____

Project Limit City of Los Angeles

Project Description Adding a northbound Auxiliary lane between Laurel Canyon Blvd. and Coldwater Canyon Avenue.

1) Public Information

- a. Brochures and Mailers \$ 10,000.00
- b. Press Release
- c. Paid Advertising \$ 0
- d. Public Information Center/Kiosk \$
- e. Public Meeting/Speakers Bureau \$ 2,000
- f. Telephone Hotline
- g. Internet
- h. Others _____ \$

2) Motorists Information Strategies

- a. Changeable Message Signs (Fixed) \$ 0
- b. Changeable Message Signs (Portable) \$
- c. Ground Mounted Signs \$
- d. Highway Advisory Radio \$
- e. Caltrans Highway Information Network (CHIN)
- f. Others _____ \$

3) Incident Management

- a. Construction Zone Enhanced Enforcement Program (COZEEP) \$ 100,000
- b. Freeway Service Patrol \$ 168,000
- c. Traffic Management Team
- d. Helicopter Surveillance \$
- e. Traffic Surveillance Stations (Loop Detector and CCTV) \$
- f. Others _____ \$

4) Construction Strategies

- a. Lane Closure Chart
- b. Reversible Lanes
- c. Total Facility Closure
- d. Contra Flow
- e. Truck Traffic Restrictions \$ _____
- f. Reduced Speed Zone \$ _____
- g. Connector and Ramp Closures
- h. Incentive and Disincentive \$ _____
- i. Moveable Barrier \$ _____
- j. Others _____ \$ _____

5) Demand Management

- a. HOV Lanes/Ramps (New or Convert) \$ _____
- b. Park and Ride Lots \$ _____
- c. Rideshare Incentives \$ _____
- d. Variable Work Hours
- e. Telecommute
- f. Ramp Metering (Temporary Installation) \$ _____
- g. Ramp Metering (Modify Existing) \$ _____
- h. Others _____ \$ _____

6) Alternative Route Strategies

- a. Add Capacity to Freeway Connector \$ _____
- b. Street Improvement (widening, traffic signal... etc) \$ _____
- c. Traffic Control Officers \$ _____
- d. Parking Restrictions
- e. Others _____ \$ _____

7) Other Strategies

- a. Application of New Technology \$ _____
- e. Others _____ \$ _____

TOTAL ESTIMATED COST OF TMP ELEMENTS = \$280,000.00

Project Notes:

The project will implement one northbound auxiliary lane through widening along the outside edge of traveled way between the Laurel Canyon Blvd and Coldwater Canyon Avenue interchanges along US 101. New approach slabs will be constructed across northbound and southbound travel lanes at the Tujunga Wash and the Whitsett Undercrossings.

CHANGEABLE MESSAGE SIGN (FIXED)

The following existing fixed Changeable Message Signs (CMS) have been identified for use during construction.

CMS Sign Number	Location
CMS #78	Rte 134 WB (w/o Pass Ave.)
CMS #56	Rte 170 SB (Burbank Blvd.)
CMS #89	Rte 101 NB (Barham Blvd.)
CMS #12	Rte 101 SB (White Oak Ave.)
CMS #29	Rte 405 SB (Van Owen St.)
CMS #19	Rte 405 NB (Bel Air Crest Rd.)

STAGE CONSTRUCTION:

Construction is to be completed in 6 stages. Stage I will provide for the initial outside widening construction. Five lanes of mixed flow traffic will be maintained through the implementation of reduced lane widths at 3.3 meters. Stages II-VI will be night time closure periods to construct the approach slabs across exiting traffic lanes. One lane at a time will be constructed for night time construction. The mixed flow travel lanes adjacent to the construction will be closed for contractor mobility and access during the construction. Due to the elimination of shoulder width during the night time construction, lanes adjacent to the construction and the mainline median barrier will be 3.35 meters in width. The interior mixed flow lanes will be reduced to 3.15 meters based upon the recommendation of the Office of DTM. The traffic handling for the construction of the bridge approach slabs across the southbound lanes will be accomplished in a similar fashion.

LONG TERM CLOSURES:

Through the use of reduced width travel lanes and night closures, no long term lane closures are required. There will be long term shoulder closures during construction within the project limits. Thus, we have included Freeway Service Patrol as part of the TMP.

FREEWAY SERVICE PATROL (FSP):

Freeway Service Patrol (FSP) cost were determined as follows:

FSP Truck Service 6hours/day during peak hour work week.

(This equates to 30 hrs./week and 120 hrs/month for a 14 month construction period.)

\$50 hr/truck the total cost during construction =\$84,000.

Dispatch Service 6 hrs./day during peak hour work week.

(This equates to 30 hrs./week and 120 hrs/month for a 14 month construction period.)
\$35 hr/truck the total cost during construction = \$58,800.

MTA Administration 5% of FSP & Dispatch Totals
.05 X \$142,800 = \$6720.00

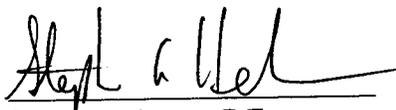
CHP Safety Inspection 8 hrs/month at \$60/Hour
\$60 x 8 hrs x 14 months = \$6720.00

Subtotal= \$156,660

Contingency @ 7% = 10,996.20 say \$11,000.00

Grand Total= \$167,630.00 say \$168,000.00

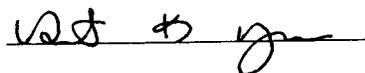
PREPARED BY



Steve Henderson, P.E.
Project Engineer
HNTB

8/1/05
DATE

APPROVAL RECOMMENDED BY



8/29/05
DATE

APPROVED BY



8/30/05
DATE

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT K

Preliminary Geotechnical Report

(Submitted under separate cover)

**PRELIMINARY GEOTECHNICAL REPORT
US 101 NORTHBOUND AUXILIARY LANE
BETWEEN LAUREL CANYON BOULEVARD
AND COLDWATER CANYON AVENUE
LOS ANGELES COUNTY, CALIFORNIA
07-LA-101 KP 20.9/22.2 (PM 13.0/13.8)
EA 24940K**

Prepared for

**Parsons Brinckerhoff
444 South Flower Street, Suite 3700
Los Angeles, California 90071**

Prepared by

**Group Delta Consultants, Inc.
92 Argonaut, Suite 120
Aliso Viejo, California 92656**



**GDC Project No. I-362
February 24, 2005
Revised May 5, 2005**



February 24, 2005
Revised May 5, 2005

Parsons Brinckerhoff
444 South Flower Street, Suite 3700
Los Angeles, California 90071

Attention: Mr. Farid Naguib, P.E.
Project Manager

Subject: Preliminary Geotechnical Report
US 101 Northbound Auxiliary Lane Between Laurel Canyon Boulevard
and Coldwater Canyon Avenue
Los Angeles County, California
07-LA-101 KP 20.9/22.2 (PM 13.0/13.8). EA 24940K
GDC Project No. I-362

Certified MBE

Geotechnical Engineering

Geology

Hydrogeology

Earthquake Engineering

Materials Testing &
Inspection

Forensic Services

Dear Farid:

Group Delta Consultants, Inc. (GDC) is pleased to submit the results of this Preliminary Geotechnical Report on the subject project. This geotechnical investigation was performed in general accordance with our proposal dated January 6, 2005 and your E-mail authorization dated January 26, 2005.

This report discusses general seismic and geotechnical issues for the roadway widening and addition of an auxiliary lane on the northbound side of US 101. This report is intended to provide available geotechnical and seismic data for the roadway widening to support the PSR. The report is based on review of existing geologic and seismic information and includes responses to Caltrans review comments dated April 6, 2005.

We appreciate the opportunity to provide geotechnical services for this important project. If you have any questions pertaining to the report, or if we can be of further service, please do not hesitate to contact us at (949) 609-1020.

Sincerely,
Group Delta Consultants, Inc.

Kul Bhushan, Ph.D., G.E.
President



Curt Scheyhing, P. E.
Senior Project Engineer



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APPENDICES

Appendix A	As-built LOTBs
Appendix B	Caltrans Review Comments and Responses



**PRELIMINARY GEOTECHNICAL REPORT
US 101 NORTHBOUND AUXILIARY LANE BETWEEN
LAUREL CANYON BOULEVARD AND
COLDWATER CANYON AVENUE
LOS ANGELES COUNTY, CALIFORNIA**

1.0 INTRODUCTION

1.1 Background

This Preliminary Geotechnical Report (PGR) presents recommendations for the construction of an auxiliary lane on the northbound side of US 101 between Laurel Canyon Boulevard and Coldwater Canyon Avenue. The segment is about 1,655 m long between Sta. 206+40 near Laurel Canyon Blvd. and Sta. 222+95 near Coldwater Canyon Avenue and is called Segment 2 in this report. This report provides preliminary geotechnical and seismic data based on published sources for use by Parsons Brinckerhoff in preparation of the PSR. This report was prepared in general accordance with the requirements of Caltrans Guidelines. The report is based on review of existing geologic and seismic information. The segment will include widening of two bridges:

- Whitsett Avenue UC, 53-612, and
- Tujunga Wash Bridge, 53-1337

Two separate PFRs for the bridge widening are submitted. The roadway widening will include Standard Plan Type 1 Retaining Walls, and Standard Design (XS Sheet) Soundwalls. This report discusses general soil and seismic conditions along this portion of the alignment. The proposed widening will include a new 3.6 m wide auxiliary lane. The site vicinity map is presented in Figure 1. The proposed construction is shown in Figure 2.

This report includes responses to Caltrans review comments dated April 6, 2005 which are included in Appendix B.

1.2 Purpose and Scope of Work

The scope of this study was to review existing Caltrans 1958 Logs of Test Borings LOTB(s) for the two bridges along the alignment and published data on seismicity and geologic conditions along the alignment. No field investigation was performed at this stage of the investigation. The purpose of this report is to provide preliminary geotechnical and seismic data for the preparation of the PSR.



Specifically, our scope of work includes:

- Reviewing as-built plans and Log of Test Borings for the bridges along the alignment;
- Reviewing Seismic Hazard Evaluation of the Van Nuys 7.5 minute Quadrangles (DMG, 1998) which includes the segment location;
- Reviewing Caltrans 1996 Peak Bedrock Acceleration and Fault Map (Mualchin, 1996);
- Providing preliminary information regarding geology, seismicity, faulting, maximum bedrock acceleration, applicable response spectra, liquefaction potential; site and subsurface conditions, and general comments on fill placement and anticipated types of foundations for the retaining walls, and
- Preparation of this report.

1.3 Pertinent Reports and Investigations

Our understanding of this project is based on discussions with the Parsons Brinckerhoff personnel; review of available as-built plans; and layout sheets showing the proposed widening. The as-built Logs of Test Borings are shown in Appendix A.

We also reviewed the following relevant geologic and seismic information:

- California Department of Conservation, Division of Mines and Geology (DMG), 1997 (Revised 2001), "Seismic Hazard Zone Report for the Van Nuys 7.5-Minute Quadrangle, Los Angeles County, California," Seismic Hazard Zone Report 008.
- California Department of Conservation, Division of Mines and Geology, 1994, "Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps," Special Publication 42.
- Cao, T., Bryant, Rowshandel, B., Branum, D, and Wills, C. J., " The Revised 2002 California Probabilistic Seismic Hazard Maps, June 2003," California Geological Survey, 2003.



- California Department of Conservation, Division of Mines and Geology (DMG), 1998, "State of California, Seismic Hazard Zones, Van Nuys Quadrangle, Official Map," Released February 1, 1998.
- Mualchin, L., 1996, "California Seismic Hazard Map 1996, Based on Maximum Credible Earthquakes (MCE)," Prepared by the California Department of Transportation, Engineering Service Center, Office of Earthquake Engineering, Sacramento, California.
- 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.
- Yerkes, R.F., and Campbell, R.H., 2005, "Preliminary Geologic Map of the Los Angeles 30' x 60' Quadrangle, Southern California," Version 1.0, United States Geologic Survey.

A full list of references is provided in Section 9.0.



2.0 SITE CONDITIONS

2.1 Site Geology

The site is located in the geologic map accompanying the Seismic Hazard Evaluation of Van Nuys Quadrangle (DMG, 2001), see Figure 3. This geologic map shows that the site is within an alluvial fan of Tujunga Wash, and the area is covered by younger alluvial and fan deposits consisting mainly of sand, and silty sand with lesser quantities of silt and gravel. Artificial fill is present along the US 101 freeway alignment where the highway has been elevated above the surrounding grades.

2.2 Surface Conditions

The freeway elevations along the alignment range from about El. 192 to 203 m, and the surrounding grades range from about El. 187 to 197 meters. Two bridges within this section of the alignment are Whitsett Avenue UC and Tujunga Wash Bridge. The US 101 goes over the Whitsett Avenue and Tujunga Wash. The invert of Tujunga Wash Channel where it crosses under US 101 is at about El. 184 to 185 meters. Drainage is primarily by sheet flow to storm drains and the paved Tujunga Wash Channel.

2.3 Subsurface Conditions

The log of test borings for the Tujunga Wash Bridge and Whitsett Avenue UC both for the 1959 original construction and for later retrofit and widening are shown in Appendix A. The borings indicate presence of loose to dense sands and silty sands with variable gravel. The soils are generally loose to depths of 5 to 8 m and medium dense to dense below those depths (Appendix A).

2.4 Groundwater Conditions

No groundwater was recorded in the 1958 borings to El. 168.3 m (El. 552 feet) at the Tujunga Wash Bridge. Groundwater was encountered at El. 166.2 m in the 2002 boring at the same bridge. Groundwater was encountered at depths of 10 to 11 m or El. 181 m at the Whitsett Avenue UC in 1957. Based on published historically highest groundwater contours for the Van Nuys Quadrangle, (DMG, 1997), the groundwater appears to be at a depth of about 3 m (10 ft) below the ground surface, see Figure 4. These historical water levels may have been measured before channelization of Tujunga wash and may not reflect current conditions. Water level may depend on the season.



3.0 SEISMIC DESIGN CONSIDERATIONS

3.1 Ground Surface Fault Rupture

This segment of US 101 is not located in the Alquist-Priolo Fault Zone and no active faults are mapped as crossing the US 101 alignment or projecting towards the alignment in the geologic literature reviewed. Therefore, the possibility of ground surface fault rupture within this segment of US 101 alignment is small.

3.2 Ground Shaking and Seismicity

The alignment is situated in close proximity to several well-known active to potentially active fault zones and is subject to significant hazards from moderate to large earthquakes. Figure 5 presents the Regional Fault and PBA Map (Caltrans, 1996). Based on Caltrans 1996 Seismic Hazard Map, the controlling fault for this project is the Malibu Coast-Santa Monica-Hollywood-Raymond Fault with a magnitude of 7.5 located about 8 km to the southeast of the segment. North Hollywood fault with a magnitude of 6.0 is located within 2.5 km from the segment. Verdugo Fault (M 6.5) is located about 8.5 km to the northeast of the segment. Recently added faults in the area include (Cao, et al., 2002) Upper Elysian Park Blind Thrust fault located at a distance 11.5 km and Puente Hills Blind Thrust fault: at 15.6 km from the segment.

According to the Caltrans 1996 Seismic Hazard Map prepared by Caltrans (Mualchin, 1996), the peak bedrock acceleration (PBA) at the site is 0.5 g (Figure 5).

In accordance with Caltrans guidelines, we performed deterministic analyses using the computer program EQFAULT (Blake, 2004), Sadigh's attenuation relationship, and the latest CGS database (Cao, et al., 2002) included by Blake (2004). These results indicate a maximum credible bedrock acceleration of 0.49 g from Verdugo Fault. This acceleration when rounded up in accordance with Caltrans practice will yield the same result as Caltrans map or 0.5 g PBA. However, the CGS data base has assigned a magnitude of 6.4 to Hollywood fault. Caltrans combines Malibu Coast-Santa Monica-Hollywood-Raymond Fault and assigns a magnitude 7.5 to the combined fault. Assuming a magnitude 7.5 for the combined Malibu Coast-Santa Monica-Hollywood-Raymond Fault and a closest distance of 6.7 km, the maximum bedrock acceleration at the site using Sadigh's relationship for reverse-oblique faulting will be 0.6 g. Based on this, we recommend a peak bedrock acceleration of 0.6 g for this portion of the alignment. The 1993-94 seismic retrofit for Tujunga Wash Bridge used a PBA of 0.6 g.



3.3 Acceleration Response Spectra

We considered the controlling fault as Malibu Coast-Santa Monica-Hollywood-Raymond Fault and developed ARS curves as per Caltrans SDC (Version 1.3, February 2004) Guidelines. Consequently, in accordance with Caltrans current criteria, the ARS curves for faults within 15 km from the site were modified as follows:

- 20% increase in spectral values for periods equal to or greater than 1.0 second;
- no change for periods less than 0.5 seconds; and
- spectral ordinates for periods between 0.5 and 1 second shall be determined by linear interpolation

For this segment of US 101, where the Peak Bedrock Acceleration (PBA) is 0.6 g, we recommend the Soil Type D (Caltrans SDC, 2004) modified for near-field effects. Appropriate ARS curve and ordinates are provided for this segment in Figure 6.

3.4 Liquefaction Potential

Liquefaction involves a sudden loss in strength of a saturated, cohesionless soil (predominantly sand) 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 depth is less than 15 m to 20 m from the surface and where the soils are composed of predominantly poorly-consolidated sands and silty sands. Based on published liquefaction map of the area (CDM, 1998) the site is located in the potentially liquefiable areas (Figure 7). Based on the presence of loose to medium dense sands to depths of 6 to 11 m and highest historical groundwater level of 10 ft (3m) below the ground, liquefaction potential at this site is likely to be high. However, both the 1958 Caltrans borings and 2002 boring for the widening indicate that groundwater was deeper than 11 m to 26 m at the Whitsett Avenue UC and the Tujunga Wash Bridge locations and liquefaction potential will be low if measured groundwater is used. Actual liquefaction potential should be determined during the PS&E stage when soil borings / CPTs, additional groundwater readings, and laboratory testing are performed at the bridge sites.

3.5 Seismic Compaction

Seismic compaction is a phenomenon in which loose, dry to partly-saturated sands tend to settle or densify during earthquake shaking. Loose to medium dense sandy soils above the water table are likely to undergo seismic compaction. This potential should be evaluated during the PS&E stage.



.6 Seismic Slope Stability

The site is not located within a landslide hazard zone (Figure 7). Freeway slopes constructed at a gradient of 1V:2H or flatter are considered to be grossly stable. Based on Caltrans Guidelines for Structure Foundation Reports dated June, 2002, a seismic coefficient, $k_h = 1/3 \times \text{Horizontal}$, Soil Type D PGA = 0.2 g should be used in a pseudo-static slope stability analysis. The required pseudo-static factor of safety using a k_h of 0.2 is 1.1. These analyses should be performed during the PS&E stage.

3.7 Other Seismic Hazard Considerations

Other seismic hazards may include tsunamis. A tsunami is a series of long period waves generated in a body of water by earthquakes. Tsunami is not considered as an issue for US-101 alignment because the alignment is about 17.5 km to the nearest shoreline and at El. 190 m or higher.



4.0 GEOTECHNICAL ANALYSES AND DESIGN

4.1 Dynamic Analysis

Dynamic slope stability and parameter selection are discussed in Section 3.6.

4.2 Cuts and Excavations

No major cuts or excavations are proposed within the project area.

4.3 Embankment

A concrete retaining wall up to a height of 3.5 m is proposed at the toe of the slope of the existing embankment to accommodate the widening. The construction of backfill behind the retaining wall will cause some settlement of foundation soils. The maximum height of the new fill will be limited to the wall height or about 3.5 m. The settlement characteristics of foundation soils should be evaluated during the PS&E stage to estimate the settlement due to placement of fill. Based on the granular sandy soils anticipated along the alignment, we anticipate settlements on the order of 25 mm could occur, and that settlements will occur quickly (less than 30 days).

4.4 Earth Retaining Systems

Caltrans Standard Type I retaining walls are proposed along or near the toe of the existing slope to accommodate the widening. The maximum height of the retaining wall is 3.5 m. The wall will retain sloping fill at a slope of 1:4 or flatter.

Assuming a 3.6 m high Type I Standard Retaining Wall, the required allowable bearing capacity at the toe of the wall is 140 kPa (2.92 ksf). No boring data are available along the wall location. However, based on general soil conditions along the alignment, an allowable bearing capacity of properly compacted native soils may be taken as 3 ksf (143 kPa) for preliminary analyses of retaining wall foundations. It is therefore likely that Caltrans Standard Type I with a maximum wall height of 3.6 m can be supported on shallow foundations. This should be verified during the PS&E stage by actual borings along the wall.

4.5 Culvert Foundations

There are no culvert foundations proposed in this segment.



4.6 Minor Structure Foundations

A new soundwall is proposed along the edge of the new shoulder. The soundwalls not supported on retaining walls may generally be supported on CIDH piles utilizing standardized designs from Caltrans XS Sheets. We anticipate that the soundwalls will be constructed in new or existing compacted fill, and no specific information on the existing fill or proposed borrow sources is available. Therefore, for preliminary assessment of the soundwall foundations, we recommend that the lower values of lateral soil resistance from the XS Sheets be used for sizing the piles.

4.7 Material Sources

It will be necessary to import fill materials, aggregates, asphalt, concrete, Portland cement and fly ash from local commercial sources. No material sources have been identified at this preliminary stage. Prior to import, materials testing should be performed and approved by the Resident Engineer. Properties of any borrow soils should be consistent with the intended use and conform to the design parameters assumed (R-Value, shear strength, etc.) and any requirements of Section 19 of Caltrans Standard Specifications.

4.8 Material Disposal

It is the responsibility of the contractor to make arrangements to dispose of any construction debris and deleterious materials encountered during the clearing operations as well as any excavated materials unsuitable for embankment construction, and follow guidelines set forth in Section 7-1.13 of the Caltrans Standard Specifications.



5.0 CONSTRUCTION CONSIDERATIONS

5.1 Construction Advisories

Embankment construction should be possible using conventional equipment and techniques. The new sliver fill or retaining wall backfill shall be placed and benched into the existing embankment in accordance with Section 19-6 of Caltrans Standard Specifications. Fill soils placed in pavement areas near finished grade should have an R-value consistent with the pavement design. Retaining wall structural backfill should conform to the Sand Equivalent, gradation, and other requirements of Section 19-3.06 of the Standard Specifications. The need for shoring and temporary excavation slope stability should be evaluated in the PS&E Stage and implemented by the contractor as necessary to maintain support of existing facilities.

5.2 Hazardous Waste Considerations

Hazardous waste considerations and lead content of the near-surface soils should be evaluated in ISA and lead studies.



6.0 RECOMMENDATIONS AND SPECIFICATIONS

6.1 Site Preparation

All areas to receive fill should be stripped of existing pavements, cleared of any structures, all existing vegetation, debris, and other unsuitable materials in accordance with Section 16 of Caltrans Standard Specifications. All construction debris and/or deleterious material encountered during the clearing operations should be removed from the site. After clearing and stripping, the surface should be excavated to a minimum of 0.61 m (2 ft) before placement of new fill. The exposed surface should be proof-rolled with loaded heavy equipment. Any areas of loose or yielding soils, should be overexcavated and recompacted. Any soils which cannot be compacted or are otherwise unsuitable for the planned use should be excavated and disposed of. The exposed surface should then be scarified and compacted to the specified density before placement of new fill.

6.2 Subgrade and Foundation Treatment

A minimum relative compaction of 95 percent must be obtained for the subgrade soils to a minimum depth of 150 mm (6 in.) below the grading plane for the width between the outer edges of shoulders, whether in fill or in excavation. In addition, for the width of the traveled way plus a distance of 0.9 m (3 ft) horizontally beyond, the subgrade materials to a depth of 0.76 m (2.5 ft) below the finished grade should also be compacted to at least 95 percent relative compaction, whether in embankment or excavation. Except for structural approach fill, embankment compaction and excavation should conform to Sections 19-5 and 19-6, respectively, of the Caltrans Standard Specifications.

Embankments within 45.7 m (150 ft) of bridge abutments should be considered structural approach fills and should conform to Section 610.4 of the Caltrans Highway Design Manual. An additional specification is that material with a dimension greater than 76 mm (3 in.) should not be used in structural approach fills.

All footings should be placed on a 0.6 m (2 ft) thick blanket of fill with a maximum particle size of 76 mm (3 in.) compacted to 95 % relative compaction. The compacted blanket of fill should be placed on undisturbed native soils which have been scarified, moisture conditioned, and compacted to 95 % relative compaction. Backfill behind abutments and around the side and tops of footings should be compacted to a minimum of 95 % relative compaction. We recommend that the footings be overexcavated a minimum of 0.6 m (2 ft) below the design elevation of



the bottom of the footing. The exposed soils should be scarified to a depth of about 0.3 m (1 ft), brought to optimum moisture, and rolled with heavy compaction equipment.

6.3 Structural Pavement Sections

6.3.1 Existing Pavements

The existing pavements for this segment are:

INSIDE LANES: 0.67' PCC, 0.33' CTB, 0.67' AB, 0.67' AS

OUTSIDE LANES: 0.75' PCC, 0.33' CTB, 0.58' AB, 0.67' AS

Design R-Value and T. I. on existing pavement are not available.

6.3.2 New PCC Pavements

Currently we understand that PCC Pavement is being considered as the preferred option for the widening.

Typical PCC structural section design is specified by District 7 as: Portland Cement Concrete /Lean Concrete Base/Aggregate Base, Class 2 (PCC/LCB/AB/Class 3). Treated Permeable Base CTPB is recommended for use for widening projects only, where the widened structural section layers should conform to the existing structural section layers to provide continuity of the drainage. Treated Permeable base, ATPB and Treated Base, ACB are not recommended for new projects.

Where	PCC	=	Portland Cement Concrete
	TPB	=	Treated Permeable Base
	ATPB	=	Asphalt Treated Permeable Base
	CTPB	=	Cement Treated Permeable Base
	LCB	=	Lean Concrete Base
	ACB	=	Asphalt Concrete Base
	AB	=	Aggregate Base
	Class 3 AS	=	Aggregate Subbase

We recommend that Design R-Value be taken as 10 to 40 for preliminary design. Import subgrade soil must have R-Value of 10 or greater. Based on Traffic Index (TI), design requirements for the options recommended by District 7 are reproduced from Table 603.2 of the Highway Design Manual in the following table.



T. I. = 12
R-value = 15

Pavement Section is as follows:

230 mm Portland Cement Concrete
120 mm Lean Concrete Base
185 mm Aggregate Base, Class 3
535 mm Total

Smooth dowel bars at all transverse joints and deformed tie bars at all longitudinal joints should be installed in new PCC pavement. Please refer further details regarding dowel bars and tie bars to the Standard Plans P Series.

PCC shoulders should be tied to the adjacent lane with tie bars to increase the service life of PCC pavement.

The structural section of the PCC shoulder should match the structural section of the adjacent traffic lane. Cross slope should meet the requirements found in Index 302.2.

The minimum width of PCC panels shall be 1.8 m to preclude cracks.

6.3.3 New AC Pavements

Based on the District 7 practice, AC pavement design is recommended for streets and ramps only. Since the source of new fill is not known, we recommend an R-Value of 15 for preliminary evaluation. Any imported soils used for pavement subgrade should be tested for R-Value in accordance with Caltrans test methods.

Typical AC structural section design for ramp is specified by District 7 as: Asphalt Concrete / Lean Concrete Base / Aggregate Base, Class 3 (AC/LCB/ AB/Class 3).

Typical AC structural section design for streets and roads is specified by District 7 as: Asphalt Concrete / Aggregate Base, Aggregate Subbase (AC/AB/AS).

Asphalt concrete pavements should be designed in accordance with Topic 604 of the Caltrans Highway Design Manual (2004) based on R-Value and Traffic Index. We used the Caltrans computer program NEWCON90 to develop pavement sections for assumed R-Value of 15 and a range of Traffic Index.



We assumed Asphalt Concrete (AC) over Class 2 Aggregate Base (AB) over Aggregate Subbase (AS).

Traffic Index, TI	R-Value = 15		
	AC (mm)	AB (mm)	AS (mm)
8	150	105	290
10	165	140	380
12	200	170	460
14	215	230	550
15	230	245	595

Actual design TI should be evaluated by the Civil Engineer. In general, pavements in outside lane are designed for a TI of 14-15 and shoulders in urban areas with the same section as the traveled way.

6.4 Material Specifications

In general, earthwork should be performed in accordance with Sections 6 and 19 of the Caltrans Standard Specifications. Any soils used within 1.2 m (4 ft) of finished grade in pavement areas should have a minimum R-value consistent with the pavement design. Recommended structural pavement materials should conform to the specified provisions in the Caltrans Standard Specifications. Retaining wall structural backfill should conform to the Sand Equivalent, gradation, and other requirements of Section 19-3.06 of the Standard Specifications.

6.5 Corrosion Investigation

No corrosion data is available. Corrosion testing should be performed during the PS&E level Geotechnical Investigation. Corrosion testing and mitigation requirements should conform to the provisions of Caltrans Corrosion Guidelines (Version 1.0, September 2003).



7.0 ADDITIONAL GEOTECHNICAL TESTING

We recommend a minimum of four borings be drilled along the alignment for pavement and retaining wall design. Alternating Standard Penetration Test (SPT) and California Ring Samplers should be driven at 1.5-meter intervals and the blowcounts should be recorded. Groundwater level should be determined, if present. Laboratory tests should be performed to characterize the relevant engineering properties of the subsurface soils. Testing should be selected based on the conditions encountered, and should include some or all of the following tests:

- Moisture content and dry density
- Grain-size distribution
- Atterberg Limits
- Direct Shear
- Consolidation
- Corrosivity (pH, Sulfate, Chloride, Minimum Resistivity)

The final Geotechnical Design Report should be prepared in accordance with the latest version of Caltrans Guidelines for Foundation Investigations and Reports (currently Version 1.2, June 2002) and draft guidelines for "Geotechnical Design Reports – Purpose, Development, and Application," October 2, 1995..



8.0 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.



9.0 REFERENCES

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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.



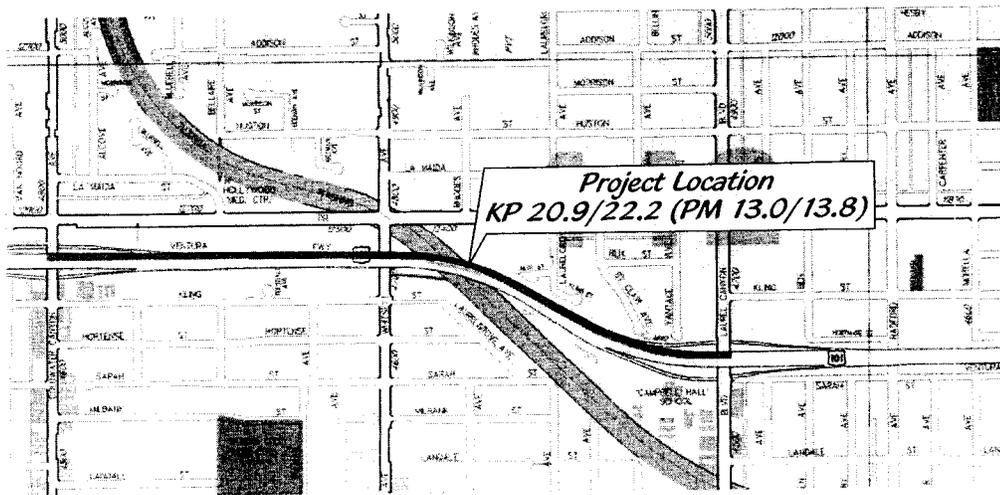
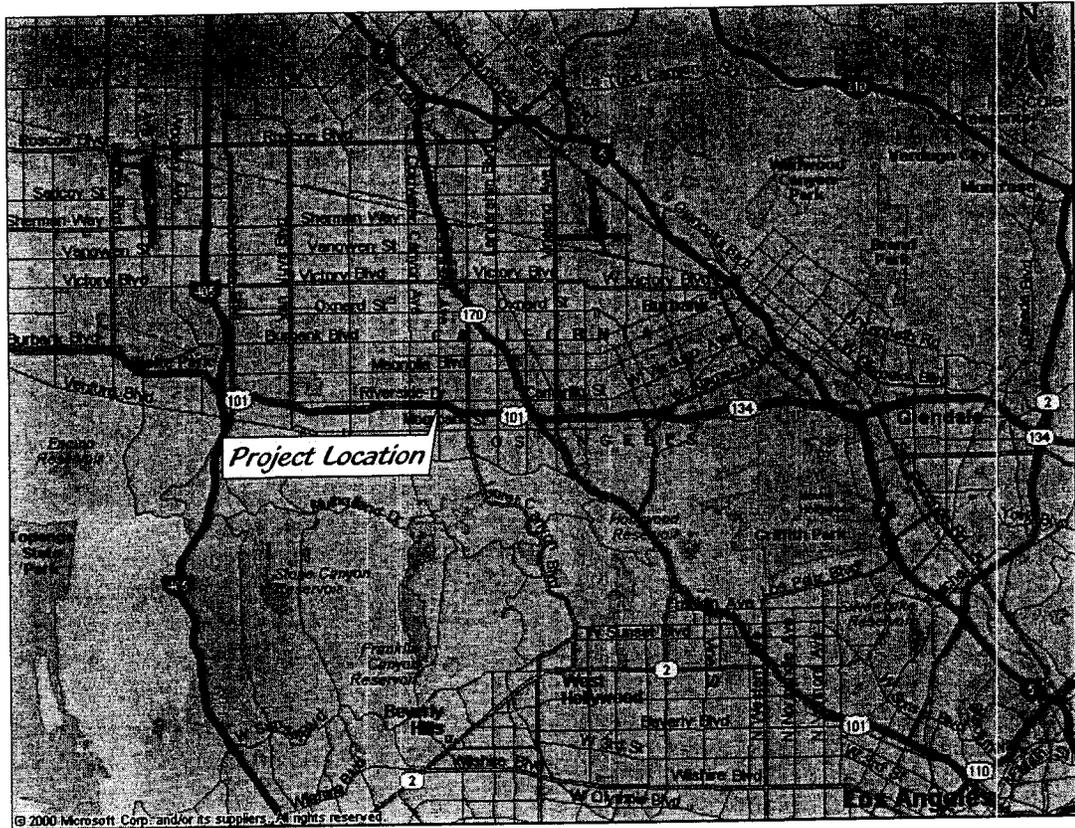
Preliminary Geotechnical Report
US 101 US 101 Northbound Auxiliary Lane Between
Laurel Canyon Boulevard and Coldwater Canyon Avenue
Los Angeles, California
GDC Project No. I-362

May 5, 2005
Page 18

Yerkes, R.F., and Campbell, R.H., 2005, "Preliminary Geologic Map of the Los Angeles 30' x 60' Quadrangle, Southern California," Version 1.0, United States Geologic Survey.

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The base maps are from Microsoft's Streets & Trips and NavigatELA's Double Line Street Maps

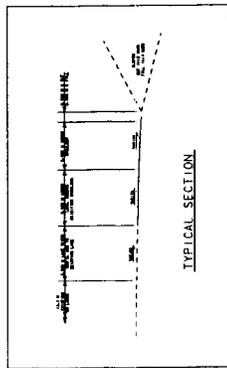
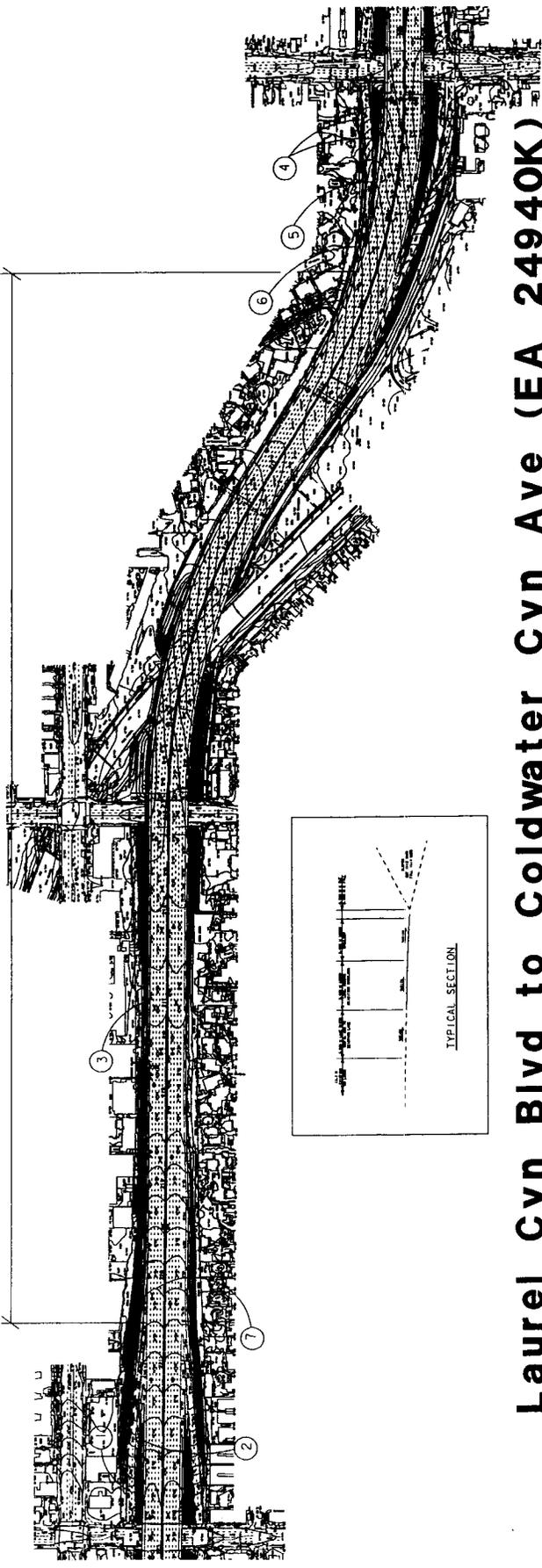


GDC Project No. I-362
 Preliminary Geotechnical Report
 US 101 Northbound Auxiliary Lane
 Between Laurel Canyon Boulevard
 & Coldwater Canyon Avenue

Vicinity Map

Figure 1

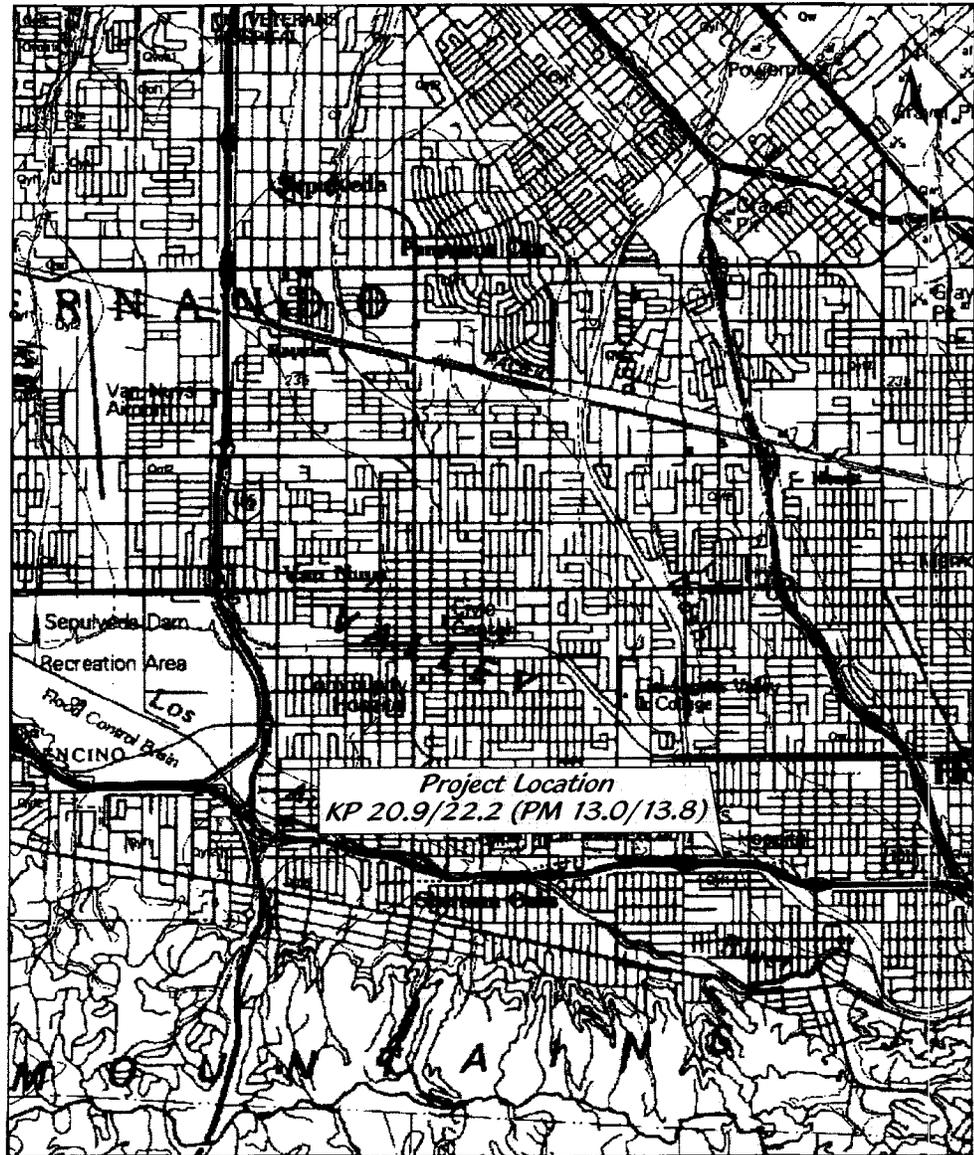
WEAVE DISTANCE = 1210 M ALONG LANE LINE



Laurel Cyn Blvd to Coldwater Cyn Ave (EA 24940K)

118°37'30"
34°15'

Open-File Report 97-15



Base map enlarged from U.S.G.S. 30 x 60 min. map series

118°30'

B = Pre-Quaternary bedrock
See "Bedrock and Surficial Geology" in Section 1 of
the report for descriptions of units.

----- Concealed Fault

ONE MILE
SCALE

Plate 1.1 Quaternary Geologic Map of the Van Nuys 7.5-minute Quadrangle, California

The base map is from the Seismic Hazard Evaluation
of the 7.5 minute Quadrangle Van Nuys California, 1998



GDC Project No. I-362
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 US 101 Northbound Auxiliary Lane
 Between Laurel Canyon Boulevard
 & Coldwater Canyon Avenue

Geologic Map

Figure 3

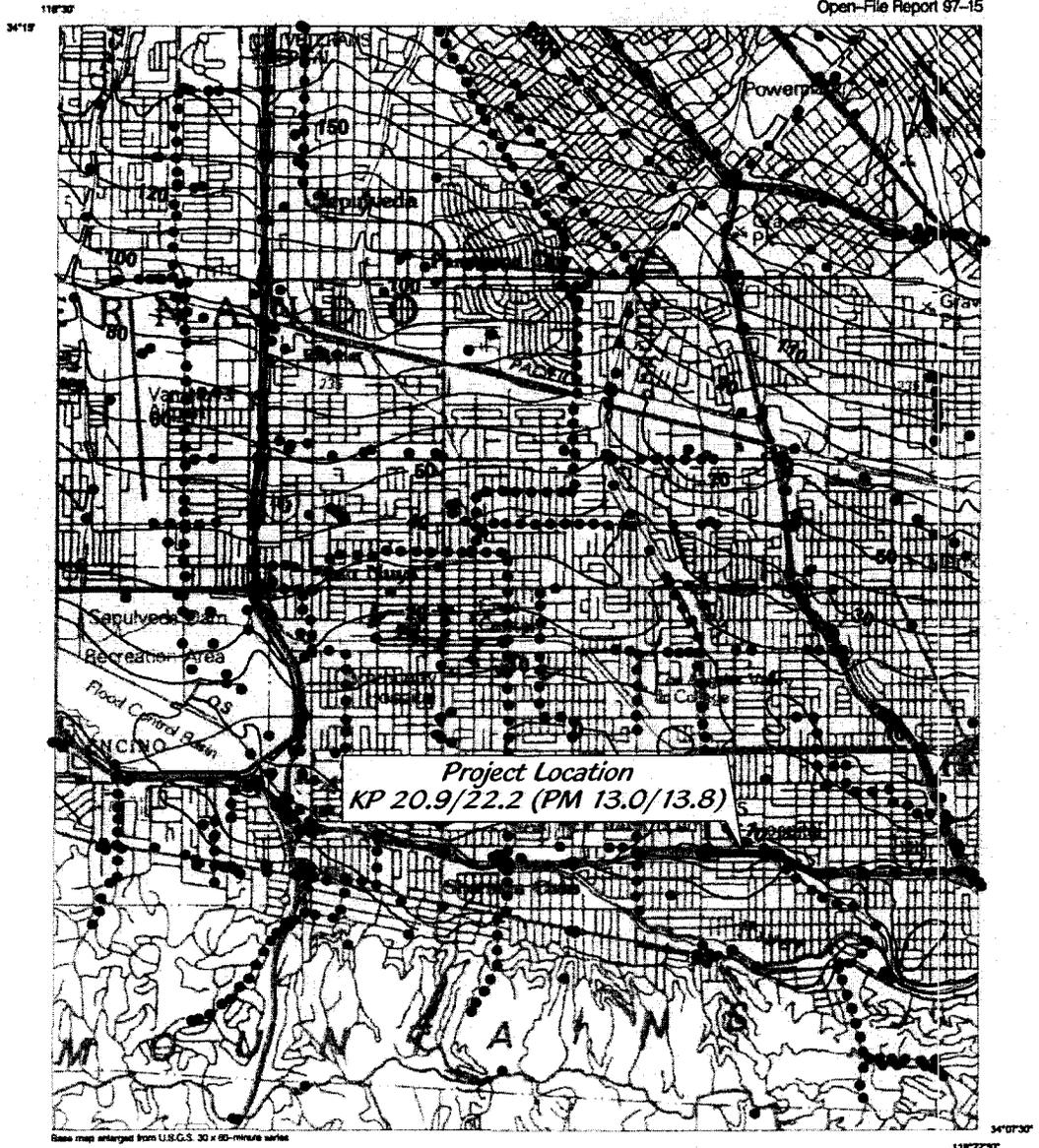


Plate 1.2 Historically Highest Ground Water Contours and Borehole Log Data Locations, Van Nuys 7.5-minute Quadrangle, California.

● Borehole Site — 30 — Depth to ground water in feet

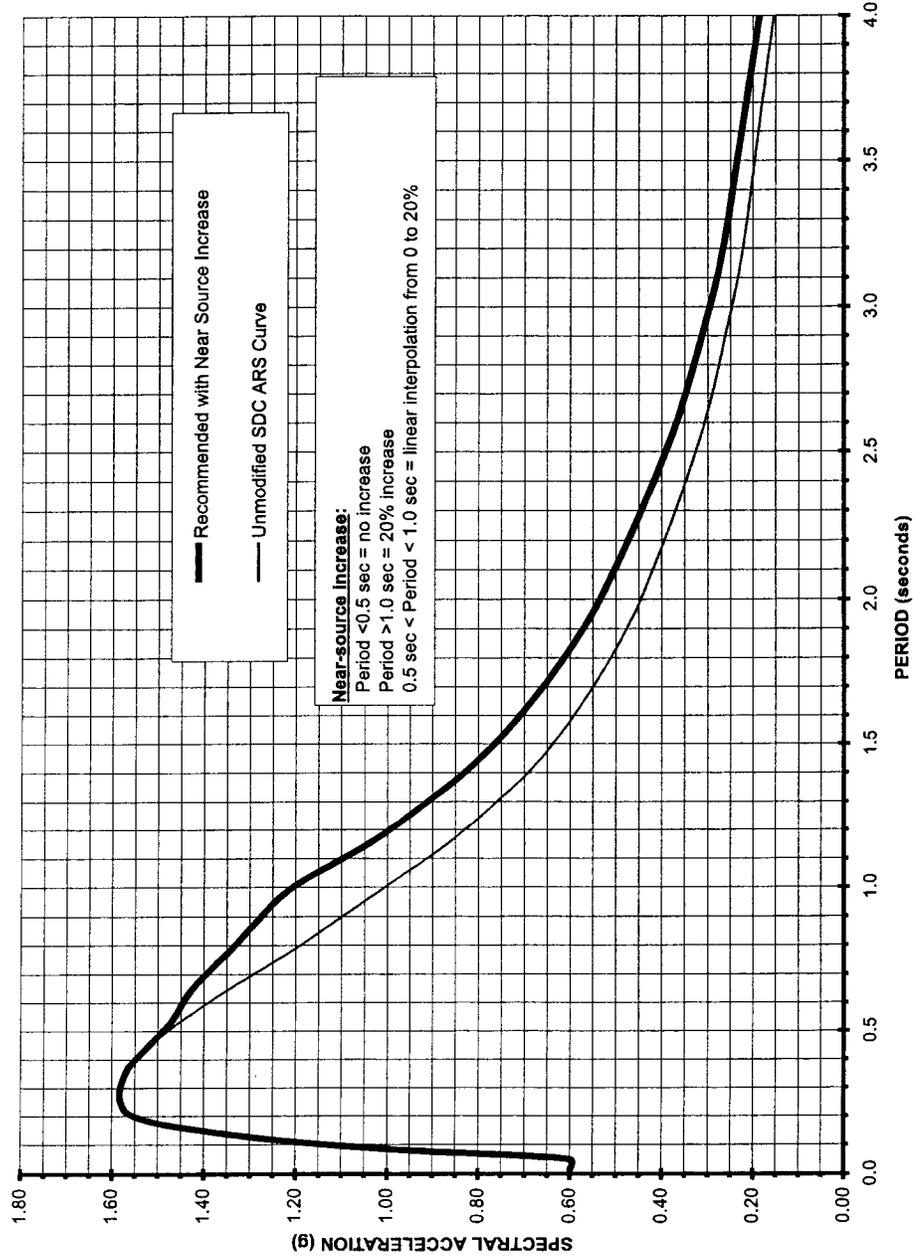
ONE MILE
SCALE



GDC Project No. I-362
 Preliminary Geotechnical Report
 US 101 Northbound Auxiliary Lane
 Between Laurel Canyon Boulevard
 & Coldwater Canyon Avenue
Groundwater Levels

The base map is from the Seismic Hazard Evaluation of the
 Van Nuys 7.5 minute Quadrangle Los Angeles County California, 2001

Figure 4

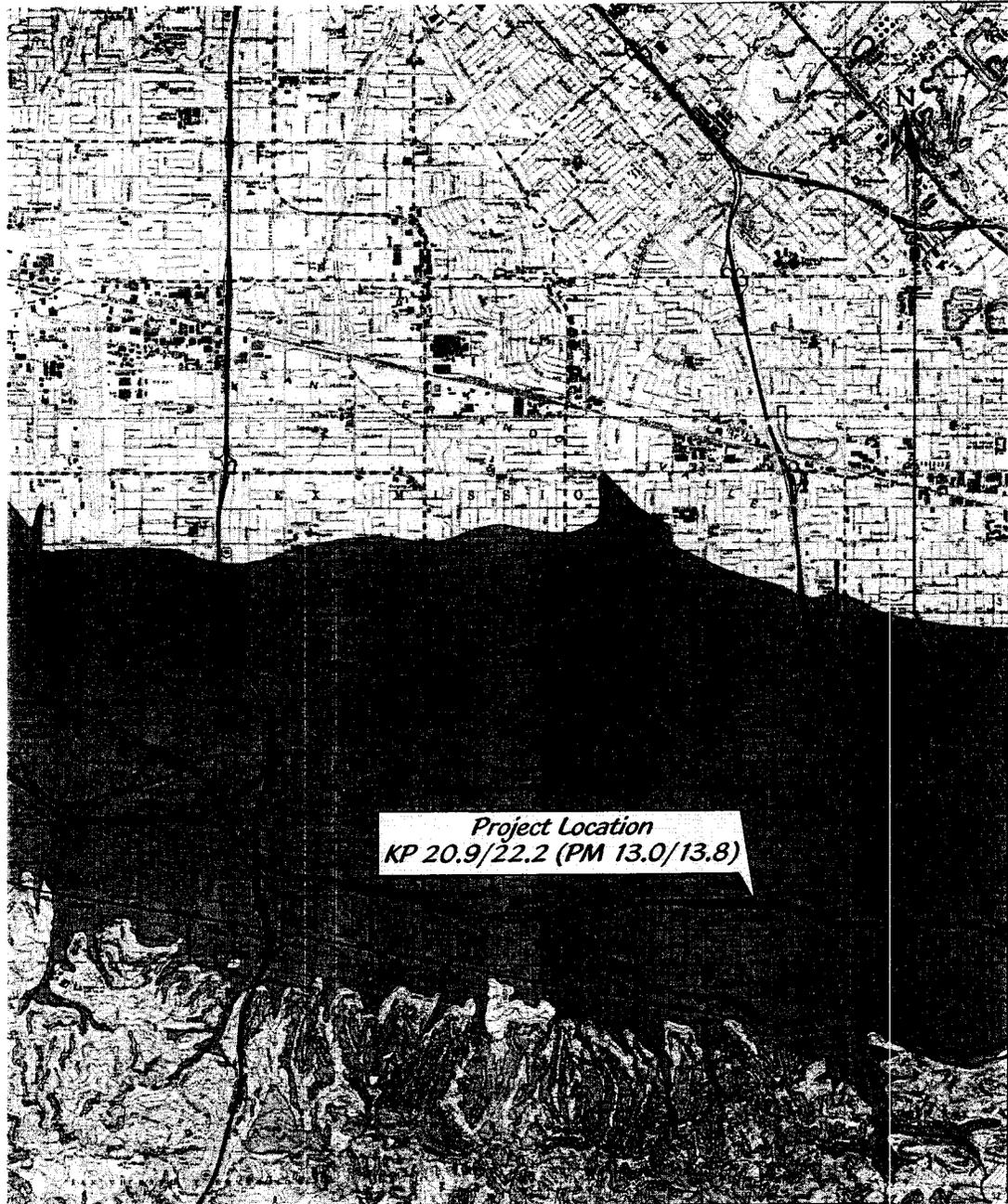


PERIOD (seconds)	ARS-G'S
0.0100	0.6003
0.0500	0.6003
0.0788	0.9378
0.0993	1.1269
0.1240	1.2834
0.1537	1.4194
0.1774	1.5067
0.2078	1.5635
0.2364	1.5777
0.2710	1.5836
0.3092	1.5804
0.3545	1.5697
0.3864	1.5568
0.4421	1.5245
0.5328	1.4717
0.6495	1.4259
0.7866	1.3404
0.8681	1.2940
0.9981	1.2091
1.1617	1.0310
1.3074	0.9056
1.4112	0.8221
1.5747	0.7229
1.8193	0.6050
2.0678	0.5132
2.5369	0.3827
2.9542	0.3041
3.2028	0.2663
3.4628	0.2393
4.0000	0.1855

CALTRANS SDC ARS CURVES
SOIL TYPE D, M=7.25 + 0.25, PBA = 0.6 g



GDC Project No. i-362
 Preliminary Geotechnical Report
 US 101 Northbound Auxiliary Lane
 Between Laurel Canyon Boulevard
 & Coldwater Canyon Avenue
ARS Curve for Whitsett Ave UC
 Figure 6



Project Location
 KP 20.9/22.2 (PM 13.0/13.8)

- 

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 26930(c) would be required.
- 

Earthquake-Induced Landslides
 Areas where potential occurrence of landslides movement, or local geologic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 26930(c) would be required.

The base map is from the Seismic Hazard Zones
 Van Nuys Quadrangle, 1998



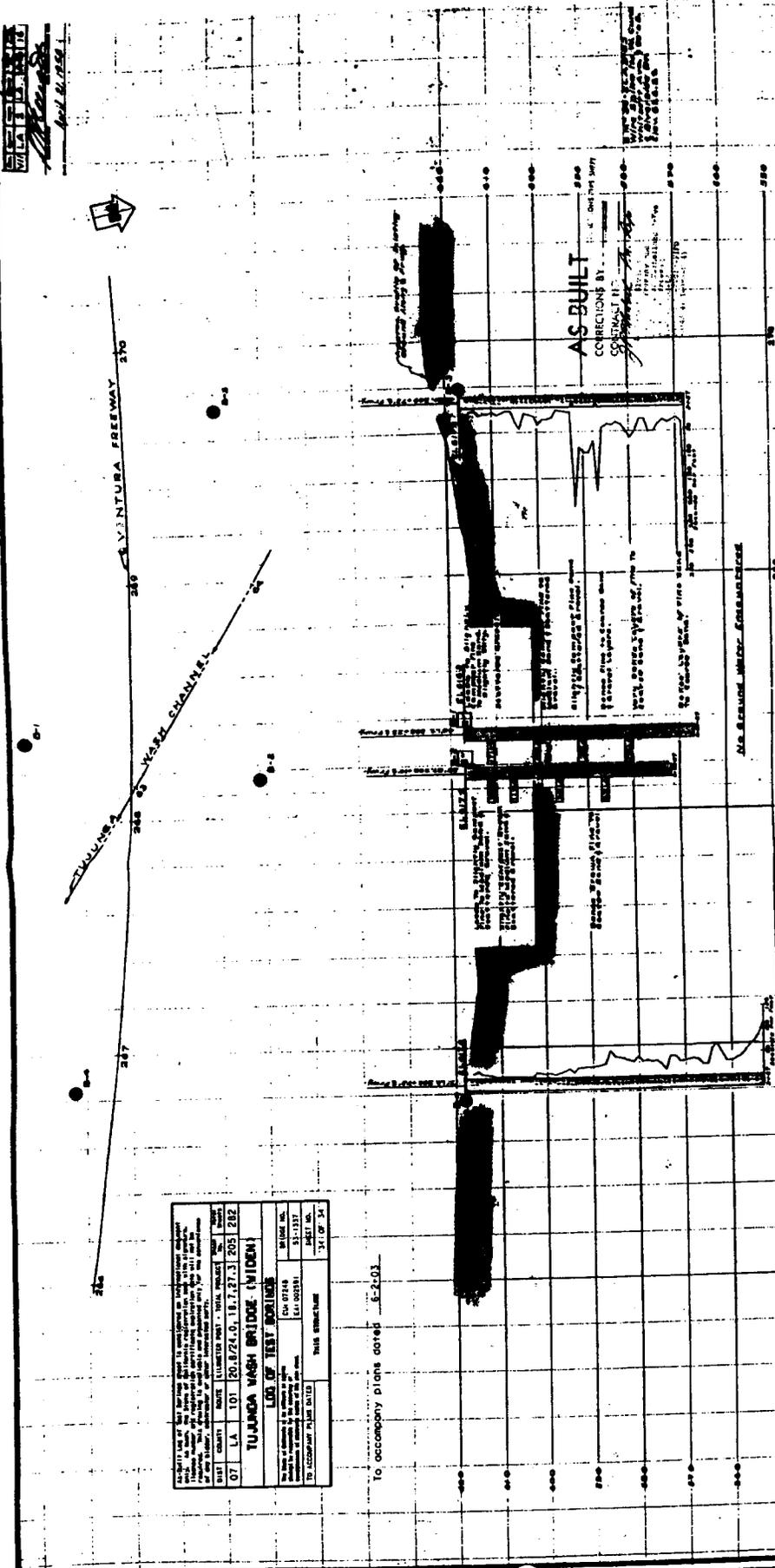
GDC Project No. I-362
 Preliminary Geotechnical Report
 US 101 Northbound Auxiliary Lane
 Between Laurel Canyon Boulevard
 & Coldwater Canyon Avenue
Seismic Hazard Zones

Figure 7

**Appendix A
As-Built LOTBs**



U-0143(N) J-083-2(4)



PROJECT NO. OF THE DRAWING IS 50-1028(1) AND THE DRAWING IS ONE OF SEVERAL DRAWINGS IN THE PROJECT. THE PROJECT IS THE TUNJUNGA WASH BRIDGE WIDENING PROJECT. THE PROJECT IS BEING CONDUCTED BY THE CALIFORNIA HIGHWAY PATROL. THE PROJECT IS BEING CONDUCTED BY THE CALIFORNIA HIGHWAY PATROL. THE PROJECT IS BEING CONDUCTED BY THE CALIFORNIA HIGHWAY PATROL.	
SHEET NO.	205 OF 282
DATE	11/17/73
PROJECT	TUNJUNGA WASH BRIDGE WIDENING
LOCATION	STATE ROUTE 138, TUNJUNGA WASH BRIDGE WIDENING PROJECT
SCALE	AS SHOWN
DESIGNED BY	...
CHECKED BY	...
DATE	...

To accompany plans dated 5-2-03

NOTES

The structure shown is shown in Section 2, Article 10 of the Standard Specifications for Highways and Structures, California Department of Transportation, and shall be constructed in accordance with the details shown on this drawing and in accordance with the details shown on the drawings referred to herein.

TUNJUNGA WASH BRIDGE

LOG OF TEST BORINGS

Sheet No. 205 of 282

Project No. 50-1028(1)

Contract No. 50-1028(1)

Scale: 1" = 20'

DATE: 11/17/73

BY: [Signature]

CHECKED BY: [Signature]

DATE: [Date]

Appendix B
Caltrans Review Comments and Responses



Memorandum

To: **Kelvin Yuen, Sr. P.E.**
Office of Project Studies

Date: March 30, 2005

07-LA-101
KP 20.8/ 22.4 (PM 12.8/13.9)
Widening From Laurel Canyon
Blvd. to Coldwater Canyon Ave.
07186-24940K

From: **Kirsten Stahl, P.E.**
Division of Engineering Services, Materials Investigations
DEPARTMENT OF TRANSPORTATION

Subject: **Project Study Report/Project Report Review**

Materials Investigations has reviewed the above mentioned project and has the following recommendation:

Typical Section Sheet, Auxiliary Lane Widening/New Construction:

T.I. = 12 R-Value = 15

230 mm Portland Cement Concrete
120 mm Lean Concrete Base
185 mm Aggregate Base, Class 3
535 mm Total

Smooth dowel bars at all transverse joints and deformed tie bars at all longitudinal joints should be installed in new PCC pavement. Please refer further details regarding dowel bars and tie bars to the Standard Plans P series.

PCC shoulders should be tied to the adjacent lane with tie bars to increase the service life of PCC pavement.

The structural section for the PCC shoulder should match the structural section of the adjacent traffic lane. Cross slope should meet the requirements found in Index 302.2.

The minimum width of PCC panels shall be 1.8 m to preclude cracks.

If you have any questions, please call me at extension 7-0470 or Min Deng of my staff at extension 7-0452.



Kirsten Stahl, P.E.
Civil Engineering License No. C46857 – Exp. 06/30/03
District Materials Engineer

REVISED
G-1

Memorandum

To: **Kelvin Yuen, Sr. P.E.**
Office of Project Studies

Date: March 30, 2005

07-LA-101
KP 20.8/ 22.4 (PM 12.8/13.9)
Widening From Laurel Canyon
Blvd. to Coldwater Canyon Ave.
07186-24940K

From: **Kirsten Stahl, P.E.**
Division of Engineering Services, Materials Investigations
DEPARTMENT OF TRANSPORTATION

Subject: **Preliminary Geotechnical Report Review**

Materials Investigations has reviewed this geotechnical report and has the following comments:

1. New PCC Pavement Design (Refer to Page 12 and 13, 6.3.2 New PCC Pavements)

Typical PCC structural section design is specified by District 7 as: Portland Cement Concrete/Lean Concrete Base/Aggregate Base, Class 3 (PCC/LCB/AB, Class 3).

Treated Permeable Base, CTPB is recommended to use for widening projects only, where the widened structural section layers should conform to the existing structural section layers to perpetuate existing drainage.

Treated Permeable Base, ATPB and Treated Base, ACB are not recommended to use for the incoming projects.

Please revise all details regarding PCC pavement design per **Topic 603 of the Highway Design Manual, 2004 edition** and the above comments.

2. New AC Pavement Design (Refer to Page 13 and 14, 6.3.3 New AC Pavements)

New AC pavement design is recommended as an option for streets and ramps only.

R-value =15 for the basement soil shall be assumed for preliminary design of any pavement on roadway fill.

Typical AC structural section design for ramp is specified by District 7 as: Asphalt Concrete/Lean Concrete Base/ Aggregate Base, Class 3 (AC/LCB/AB, Class 3).

For streets and roads, the typical AC structural section design are specified by District 7 as: Asphalt Concrete/Aggregate Base/ Aggregate Subbase (AC/AB/AS).

March 30, 2005
07-LA-101
KP 20.8/22.4 (PM 12.8/13.9)
07186-24940K

Please revise "In general, pavements in outside lane are designed for a TI of 14-15 and shoulders for a TI of 9-10." to read: In general, pavement in outside lane are designed for a TI of 14-15 and shoulders in urban areas with the same section as the traveled way.

Please revise all details regarding AC pavement design per **Topic 604 of the Highway Design Manual, 2004 edition**, and the above comments.

If you have any questions, please call me at extension 7-0470 or Min Deng of my staff at extension 7-0452.



Kirsten Stahl, P. E.
District Materials Engineer

State of California

Business, Transportation and Housing Agency

Memorandum

*Flex your power!
Be energy efficient!*

To: MR. KELVIN YEUN
Office of Project Studies

Date: April 6, 2005
File: 07-LA-101-KP20.9/22.2
(PM 13.0/13.8)
07-24940K

Attention: Mr. Barkef Karapetian

Adding 101NB Auxiliary Lane
Between Laurel CYN & Coldwater
CYN, including widenings of:

Tujunga Wash (Right widening)
Bridge No. 53-1337
Whitsett Ave. UC. (Right widening)
Bridge No. 53-1340

From: DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Geotechnical Services
Office of Geotechnical Design – South 1 MS #5

Subject: Combined Review of the Draft Project Study Report/Project Report (PSR/PR), Preliminary Geotechnical Report (PGR) and Preliminary Foundation Reports (PFR)

The following comments were prepared in reference to Caltrans "Guidelines for Foundation Investigations and Reports" current Version 1.2, June 2002, and based on the review of the listed submittals to our office:

1. Draft PSR/PR Geotechnical, dated March 2, 2005, prepared by Parsons Brinckerhoff.
2. Preliminary Geotechnical Report, dated February 24, 2005, prepared by Group Delta Consultants (for Parsons Brinckerhoff).
3. Preliminary Foundation Reports for Whitsett Ave. UC. Bridge No. 53-1340 and Tujunga Wash Bridge No. 53-1337, dated February 23, 2005, prepared by Group Delta Consultants (for Parsons Brinckerhoff).

Comments

PSR/PR

- Why there is a need for retaining wall at the toe of the slope. A footing supported retaining wall with sound wall on top could be built at the widening edge of shoulder.
- Is any plan for future HOV lane at this location.

"Caltrans improves mobility across California"



Mr. Kevin Yeun
April 6, 2005
Page 2

101NB Auxiliary lane and bridge widenings
Bridge Nos. 53-1337 & 53-1340
07-24940K

PGR

- Two borings were completed in 2002 by Ninyo and Moore, each at Tujunga and Whitsett bridges for roadway and bridge widening. Is there any roadway and/or bridge widening reports prepared by them or others, if so we need to review those reports also.

PFR (Whitsett)

- Include 2002 Log of Test Borings in Section 2.3 and Appendix A.
- Based on As Built Log of Test Borings, soils above the existing pile tips are liquefyable, recalculate the existing pile capacities accordingly, foundation retrofitting may be necessary.
- Due to liquefaction potential and shallow groundwater (historical and As Built), 400 mm cast-in-drilled hole piles may not be a viable option.

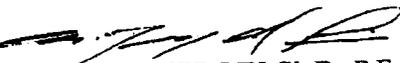
PFR (Tujunga)

- Is there any uplift demands based on current design practices, if so foundation retrofitting may be needed.
- No foundation excavation provisions has been provided for the bent locations.

Any questions regarding the above comments should be directed to Faramarz Gerami at (562) 864-8472 or Ted Liu at (562) 864-0805.

Report by:

FARAMARZ GERAMI, C.E.G.
Engineering Geologist
Office of Geotechnical Design - South 1
Branch C

Reviewed by: Date: 4/16/05

CHI-TSENG TED LIU, Ph.D., P.E., G.E.
Senior Transportation Engineer
Office of Geotechnical Design - South 1
Branch C

c: Nor. File
 Sac. File
 RGES. 11



APPENDIX G-1 Materials Investigation - Kirsten Stahl

Section	No	Comment	Response by	Response
	1	<p>Materials Investigations has reviewed the above mentioned project and has the following recommendation:</p> <p>Typical Section Sheet, Auxiliary Lane Widening/New Construction:</p> <p>T.I. = 12 R-value = 15</p> <p>230 mm Portland Cement Concrete 120 mm Lean Concrete Base 185 mm Aggregate Base, Class 3 535 mm Total.</p>	Group Delta	Included in 2 nd submittal.
<p>Preliminary Geotechnical Report Review - Kirsten Stahl March 30, 2005</p>				
	1	New PCC Pavement Design (Refer to Page 12 and 13, 6.3.2 New PCC Pavements)	GD	Incorporated in 2 nd submittal



Section	No	Comment	Response by	Response
	2	New AC Pavement Design (Refer to Page 13 and 1, 6.3.3 New AC Pavements)	GD	Incorporated in 2 nd submittal
		Comments received from Faramarz Gerami, CEG , Engineering Geologist, office of Geotechnical Design - South 1 Branch C, on 4/6/05		
PSR	1	Why is there a need for retaining wall at the toe of the slope. A footing supported retaining wall and soundwall on top could be built at the widening edge of shoulder	HNTB/ PB	The cost of the combination wall footings in this area could be expensive. A combination wall visually from outside of the Caltrans R/W, adjacent to the residential properties, can be unpleasing if it is high (3 m retaining wall + 3.7 to 4.3 m of sound wall = 7+ m of wall.
	2	Is there any plan for future HOV lane at this location.	PB	No, there is no HOV planned on this freeway in this area
PGR	3	Two borings were completed in 2002 by Ninyo and Moore, each at Tujung and Whitsett bridges for roadway widening. Is there any roadway and /or bridge widening reports prepared by them or others., if so we need to review those reports also.	GD/PB	Need existing geotech reports if any from CT



NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

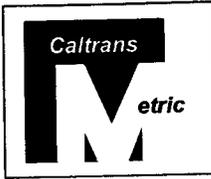
ATTACHMENT L

Storm Water Data Report (SWDR)

(Report under separate cover)

APPENDIX E

Long Form - Storm Water Data Report



Dist-County-Route 07-LA-101
Kilometer Post (Post Mile) Limits
KP20.9/22.2(PM13.0/13.8)
Project Type Auxiliary Lane Addition
EA: 24940K
RU: 07-186
Program Identification: HB4N
Phase: PID PA/ED PS&E

Regional Water Quality Control Board(s): Los Angeles RWQCB

Is the project required to consider incorporating Treatment BMPs? Yes No
If yes, can Treatment BMPs be incorporated into the project? Yes No

If No, a Technical Data Report must be submitted to the RWQCB
at least 30 days prior to Advertisement. List submittal date: _____

Total Disturbed Soil Area: 2.0 Ha

Estimated: Construction Start Date: 11-2009 Construction Completion Date: 03-2011

Notification of Construction (NOC) Date to be submitted: 09-2009

Notification of ADL reuse (if Yes, provide date) Yes Date _____ No

Separate Dewatering Permit (if Yes, permit number) Yes Permit # _____ No

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

James Wei 9/27/05 Kelvin Yuen 9/27/2005
James Wei (Parsons Brinckerhoff) Kelvin Yuen
Registered Project Engineer Caltrans Designated Oversight Representative Date
I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:

Ravi Ghate 9/27/05
Ravi Ghate, Project Manager Date

Richard Gordon 9/27/05
Richard Gordon, Designated Maintenance Representative Date

Ron Russak 9.27.05.
Ron Russak, Designated Landscape Architect Representative Date

Shirley Y. Pak 9/28/2005
Shirley Y. Pak, District/Regional SW Coordinator or Designee Date

STAMP
[Required for PS&E only]

NPDES INFORMATION SUBMITTAL

Project name: Route 101 Auxiliary Lane Project Dist 07 Rte 101
 Description of Work: Widening in the north- KP 20.9/22.2 PM 13.0/13.8
Bound for construction of an Auxiliary Lane. EA: 24940K
 Project Engineer: Ryan Luong Phone: 213-362-9470
 Project Manager: Ravi Ghatge Phone: 213-897-5593
 Dist PS&E date: 08/10 PS&E to HQ date: 06/09
 Target construction beginning and completion date: 11/01 to 3/11

- | | Yes | No |
|--|-------------------------------------|-------------------------------------|
| ▪ Will project impact existing slopes? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ▪ Will project create new slopes? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ▪ Have Federal or State listed aquatic resources been identified in receiving waters on or adjacent to the site? If yes, what? _____ | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ▪ Is soil disturbing activity occurring within 1/4 mile of a perennial surface water or a storm drain that drains directly to a perennial surface water? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ▪ Any requirements regarding water quality identified in the Environmental Document? If yes, what? <u>Mitigation to meet TMDL requirements</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Any Federal or State permit required for this project? If, yes, please list the names of the permits: <u>NPDES, 404, 401, LA County Flood Control Encroachment</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <u>Permit, 1601 required due to project construction.</u> | | |
| ▪ Will the project use lead contaminated soil as backfill? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Total land disturbed: <u>2.0</u> hectares, <u>4.94</u> acres | | |
| - What is the proposed slope gradient (v:h): <u>1:4</u> | | |
| - What is the existing soil type (i.e. sandy, clay, etc.)? <u>Younger alluvial & fan deposits</u> | | |
| - <u>Consisting mainly of sand, and silty sand with lesser quantities of silt and gravel</u> | | |
| - Is it potential for significant sediment discharge? <u>NA</u> | | |
| - Describe condition of existing vegetative coverage on existing slopes: _____ | | |
| <u>Top soil with native vegetation</u> | | |
| - What is the existing drainage pattern? <u>South Easterly to the Los Angeles River</u> | | |
| - Identify receiving waters: <u>Los Angeles River, Reach 4</u> | | |
| - What is their condition? <u>Open concrete channel, and is monitored by the LARWQCB for TMDL's</u> | | |
| - Area exposed for the following work (hectares/acres): | | |
| Area to be cleared <u>2.0</u> , Area to be cut _____, Area to be filled _____ | | |
| Staging <u>VAR</u> , Access road <u>VAR</u> , Utility relocation <u>VAR</u> | | |
| - Estimate the type of areas adjacent to project site, approximately; <u>50%</u> %urban | | |
| - <u>0</u> % undeveloped, <u>50</u> % residential, <u>0</u> % others. | | |
| - Describe the proposed location and condition of access road: <u>Freeway widening, Fully operational</u> | | |
| Additional remarks: _____ | | |

Submit by:  Date: 09/09/05

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT M

Division of Engineering Services (DES) Scoping Checklist



Division of Engineering Services Scoping Checklist

Project Information

District 7 County L.A. Route 101 Kilometer Post (Post Mile) KP 20.9/22.2 (PM 13.0/13.8) EA 24940K

Description: **(Built Alternative)**

There is only one alternative recommended widening of northbound US101 between Laurel Canyon Blvd on-ramp and Coldwater Canyon Avenue off-ramp. The proposed widening will be within the existing Caltrans right-of-way (R/W) and includes the following:

- partial realignment of both entrance and exit ramps at the gore areas
- 1150 meters of continuous auxiliary lane
- sound wall relocation
- retaining walls to accommodate the improvements within the available right-of-way
- widening of Tujunga Wash bridge and Whitsett Avenue UC
- approach and departure slabs for Tujunga Wash Bridge and Whitsett Avenue UC with pavement transitions
- standard lane widths and shoulder widths along the proposed auxiliary lane

Project Manager Ravi Ghate Phone # (213) 897-5593

DES Project Coordination Engineer John Cosmez Phone # (916) 227-8434

Proposed Work-Select number(s) that best match scope of work that applies to overall project:

- | | |
|--|---|
| (1) Construct New Expressway/Freeway on new align. | (11) Median Barrier Retrofit |
| (2) Construct Interchange | X (12) Bridge Widening |
| (3) Modify Interchange | (14) Bridge Replacement (Part of new alignment? <input type="checkbox"/> Yes <input type="checkbox"/> No) |
| (4) Construct Passing Lane | (14) Landslide/Slipout |
| (5) Curve Correction | (15) Rockfall Project |
| X (6) Widen Highway | (16) Building Project |
| (7) Left-turn Pocket | (17) Other Roadway Realignment |
| X (8) Modify Slope | X (18) Construct Soundwall/Retaining Wall |
| (9) Stabilize Subgrade | (19) Bridge Seismic Retrofit |
| (10) Stabilize Roadway | |

Alternative # _____

Project Cost (Range)

Roadway \$ 9.0 Million _____
Structure** \$ 3.0 Million _____
Total \$ 12.0 Million _____

Tentative Schedule

PR or PA/ED* July 2005
DPS & E July 2007
RTL July 2009
Construction Complete January 2011

*Note only PA/ED milestone is to be used for programming commitments. All other milestones are used to indicate relative time frame for planning purposes.

**Structure Cost to be provided by DES Technical Liaison Engineer.

Proposed Scope of DES Design Work

Discuss and identify assumptions made and also identify risks and/or unknowns associated with those assumptions. Include anticipated lead times for development of Draft General Plan, Geotechnical Studies, and Hydraulic studies. See Attachment H – Advanced Planning Study Memorandum of Assumptions and Remarks

Structure Design Services (Check all that are anticipated):

Design by: Office of Structure Design Structure Maintenance Design
 Office of Structure Contract Management (Consultant Design)
 Office of Special Funded Projects (Consultant Design Oversight) State Local Agency

Bridge Design:

New Bridge: How many? _____
List name and Br. Numbers (if existing) _____
 Bridge Replacement: How many? _____
List name and Br. Numbers (if existing) _____
 Bridge Widening: How many? 2 _____
List name and Br. Numbers (if existing) Whitsett Ave UC (53-1340), Tunjunga Wash Bridge (53-1337)
 Br. Rail upgrade: How many? _____
List name and Br. Numbers (if existing) _____

Other DES Functional units required for Structure Work (excluding Bridge Design)

Structure Hydraulics (include if bridge over water)
 Geotechnical Services (Structure Foundations)

Soundwall and/or Retaining Wall Design (non-district designed):

Soundwall(s): How many? ___ Estimated Max. Ht ___ Estimated Total Length (m) _____
 Retaining walls(s): How many? ___ Estimated Max. Ht ___ Estimated Total Length (m) _____
 MSE walls(s): How many? ___ Estimated Max. Ht: ___ Total Length (m) _____

Technical Specialist Design

Anticipated insertable plan sheet(s) check below:

Culvert(s): How many? N/A Barrier(s): How many? N/A
 Sign and Overhead Structure(s)

Other Design: Explain N/A _____

"Proposed Scope of DES Design Work", clarify in detail here.

<u>Division of Engineering Services</u>	<u>PY's</u>
Structure Design	6.31
Geotechnical Services	2.36
Materials Engineering & Testing Services	1.24
Railroad Agreements	0.00
Engineering Technology	0.00
TOTAL	9.91
COST ESTIMATE	

Preliminary Evaluation provided by:

DES Project Coordination Engineer *John K. Cooney* Date 6-21-05

Reviewed by:

Project Manager *Ravi Chate* Date 6-21-05

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT N

Request for DES Workload Estimate

REQUEST FOR DES WORKLOAD ESTIMATE



Type of Workload Estimate

New Workload Estimate Revised Workload Estimate Request Date:

PSR(PDS) Workload Estimate

If revised workload estimate check applicable box(es) below.

Cost Change Other: _____

Scope Change

Schedule Change

Project Information

District 7 County LA Route US 101 Kilometer Post (Post Mile) 20.9/22.2(13.0/13.8)
EA 24940

Project Description: There is only one alternative recommended widening of northbound US101 between Laurel Canyon Blvd on-ramp and Coldwater Canyon Avenue off-ramp. The proposed widening will be within the existing Caltrans right-of-way (R/W) and includes the following:

- partial realignment of both entrance and exit ramps at the gore areas
- 1150 meters of continuous auxiliary lane
- sound wall relocation
- retaining walls to accommodate the improvements within the available right-of-way
- widening of Tujung Wash bridge and Whitsett Avenue UC
- approach and departure slabs for Tujung Wash Bridge and Whitsett Avenue UC with pavement transitions
- standard lane widths and shoulder widths along the proposed auxiliary lane
- replace the existing glazed screen on concrete barrier

Project Manager:

Ravi Ghate

Phone #

(213) 897-5593

DES Project Coordination Engineer:

John Cosmez (916) 227-8434

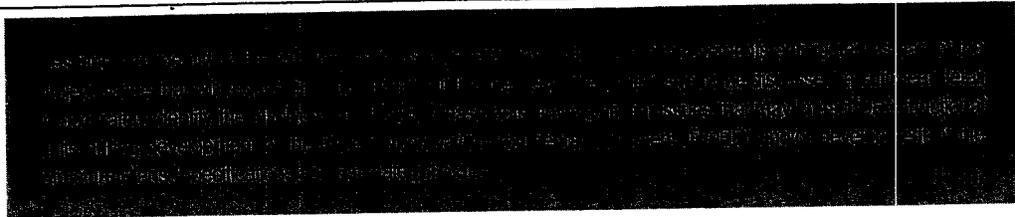
DES Special Funded Projects Liaison Engineer:

Phone #

DES Consultant Management Engineer:

Phone #

Project Scope



Check applicable boxes describing proposed scope of project.

- | | | |
|---|--|---|
| <input type="checkbox"/> New Expressway/Freeway on new alignment | <input type="checkbox"/> Other Roadway Realignment | <input checked="" type="checkbox"/> Widen Highway |
| <input type="checkbox"/> Construct Interchange | <input type="checkbox"/> Emergency/Storm Damage | <input type="checkbox"/> Rockfall Project |
| <input type="checkbox"/> Modify Interchange | <input checked="" type="checkbox"/> Bridge Widening | <input type="checkbox"/> Left-turn Pocket |
| <input type="checkbox"/> Bridge Replacement | <input type="checkbox"/> Curve Correction | <input checked="" type="checkbox"/> Modify Slope |
| (New alignment? <input type="checkbox"/> Yes <input type="checkbox"/> No) | <input type="checkbox"/> Building Project | <input type="checkbox"/> Stabilize Subgrade |
| <input type="checkbox"/> Bridge Rehabilitation | <input type="checkbox"/> Median Barrier Retrofit | <input type="checkbox"/> Stabilize Roadway |
| <input type="checkbox"/> New Bridge | <input type="checkbox"/> Construct Passing Lane | <input type="checkbox"/> Landslide/Slip-out |
| <input type="checkbox"/> Bridge Seismic Retrofit | <input checked="" type="checkbox"/> Soundwall/Retaining Wall | |
| | <input type="checkbox"/> Other Design: Explain: | |

Project Schedule

Product or Milestone	Delivery Date	Work Performed By	
		Caltrans	Consultant or Local Agency
PSR/PSR(PDS)/PSSR	July 2005	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PR(or PA/ED*)	July 2005	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Structure Site Data Submittal		<input type="checkbox"/>	<input type="checkbox"/>
Draft SPS&E (i.e. Activity 240 finish date)	September 2006	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PS&E	July 2007	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RTL	July 2009	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advertise	August 2009	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Approve Contract	November 2009		
Contract Administration	December 2009	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contract Acceptance	January 2011		

Note: Only the PA/ED milestones are used for programming commitments. All other milestones are used to indicate relative time frame for planning purposes.

Project Cost

For PSR (PDS) projects, the following section is to be used for each alternative, provided that the scope is significantly different.

Alternative #

<u>Project Cost Range (\$ 1000's)</u>		<u>Cost of Largest Structure (\$ 1000's)</u>
Roadway	\$11.4	\$2.0
Structure**	\$3.1	
Total	\$14.5	

**Structure Cost Range to be provided by:

- Consultant Structure Design Technical Liaison.

Project Scope Breakdown by DES Function

Bridge Design Services (check applicable boxes)

Design by:

- Office of Structure Design
 Structure Maintenance Design
 Office of Structure Contract Management (Consultant Design Oversight)
 Office of Special Funded Projects (Consultant Design Oversight)

Bridge Information:

<input type="checkbox"/> New Bridge(s)	Number	Bridge Name(s) & No(s).
<input type="checkbox"/> Bridge Replacement(s)	Number	Bridge Name(s) & No(s).
<input checked="" type="checkbox"/> Bridge Widening(s)	Number 2	Bridge Name(s) & No(s). Whitsett Ave UC (53-1340), Tunjunga Wash Bridge (53-1337)
<input type="checkbox"/> Bridge Rail Replacement(s)	Number	Bridge Name(s) & No(s).

Other DES functional units required for Structure Work

- Structure Hydraulics (include if bridge is over or adjacent to water)
 Geotechnical Services (Structure Foundations)

Soundwall and/or Retaining Wall Design (non-district designed)

<input type="checkbox"/> Soundwall(s)	Number	Estimated Max. Ht	Estimated Total Length
<input type="checkbox"/> Retaining walls(s)	Number	Estimated Max. Ht	Estimated Total Length
<input type="checkbox"/> MSE walls(s)	Number	Estimated Max. Ht	Estimated Total Length

Technical Specialist Design

Anticipated insertable plan sheet(s) check below:

<input type="checkbox"/> Culvert(s)	Number
<input type="checkbox"/> Barrier(s)	Number
<input checked="" type="checkbox"/> Signs and Overhead Structures	Number 1
<input type="checkbox"/> Other Design:	Explain:

Transportation Architecture Design

<input type="checkbox"/> Design New Building(s)	Explain:
<input type="checkbox"/> Remodel Existing Buildings(s)	Explain:
<input type="checkbox"/> Bridge Aesthetics Evaluation	Explain:

<input type="checkbox"/> Build scale model	Explain:
<input type="checkbox"/> Other Aesthetics work	Explain:

Electrical, Mechanical, Water & Wastewater Design

<input type="checkbox"/> Pumping Plants	Explain:
<input type="checkbox"/> Movable bridge, drawbridg	Explain:
<input type="checkbox"/> Lighting control system for facilities	Explain:
<input type="checkbox"/> Sanitary Systems	Explain:

Materials Engineering & Testing Services

Pavement

<input checked="" type="checkbox"/> Rigid	<input checked="" type="checkbox"/> Flexible	Average Grade 1-2%	Average Superelevation 3%
<input type="checkbox"/> Deflection Studies Required	No. of Locations	Lane/miles to be tested	

Consultation and Inspection

<input type="checkbox"/> Loop detectors	<input type="checkbox"/> Signal & Lighting Products	<input type="checkbox"/> Changeable Message Signs, Closed Circuit TV
<input checked="" type="checkbox"/> Concrete Bridge	<input type="checkbox"/> Steel Bridge	

Corrosion Tests

<input type="checkbox"/> Soil	<input type="checkbox"/> Concrete	<input type="checkbox"/> Cathodic Protection System
-------------------------------	-----------------------------------	---

Other

<input type="checkbox"/> Special Products:	Explain
--	---------

DES Geotechnical Services

Is Oversight for consultant prepared geotechnical reports required?

Yes No

Has the Geotechnical Design Liaison or other geotechnical person been contacted?

Yes No If yes, who?

Terrain:	<input checked="" type="checkbox"/> Flat	<input type="checkbox"/> Rolling	<input type="checkbox"/> Mountainous
Cuts:	Est. Max Height (m)	Est. Volume (m ³):	<input type="checkbox"/> New <input type="checkbox"/> Widen
Fills:	Est. Max Height (m) 6.2	Est. Volume (m ³): 20000	<input type="checkbox"/> New <input checked="" type="checkbox"/> Widen

Structures

<input checked="" type="checkbox"/> Retaining Walls	Number 4	Est. Max. Height 3.5	Est. length (m) 1025	<input type="checkbox"/> Cut	<input checked="" type="checkbox"/> Fill
<input checked="" type="checkbox"/> Soundwalls	Number 1	Est. Avg. Height 4.3	<input checked="" type="checkbox"/> Standard Plan	<input type="checkbox"/> Non-Standard Plan	
<input checked="" type="checkbox"/> Overhead Sign Foundations			Number 1		
<input type="checkbox"/> Changeable Message Sign Foundations			Number		

Other:

- Special Studies (slope stability, rockfall, erosion, seepage, ground water, settlement, liquefaction, slipout repair, rock slope, etc.) Explain
- Existing Maintenance Problems: Explain:

Engineering Technology*

<input type="checkbox"/> Aerial Photography				
<input type="checkbox"/> Raster Imaging:	Est. Total Length (km)	Est. Avg. Width (m):		
<input type="checkbox"/> DTM Modeling (non-district):	Est. Total Length (km)	Est. Total Width (m):		
<input type="checkbox"/> Mapping:	Est. Total Length (km)	Est. Avg. Width (m)	Scale:	



Structure Construction

Oversight for consultant construction administration required? Yes No

Additional Studies, Investigations or Research from DES

Identify additional studies or investigations that may be required from DES Functional Units.

Reviewed by:

Project Manager

Ravi Ghate

Date

6-21-05

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT O

Work Plan

WBS Code	Activity Description	Task ID	% Comp	Start	End	Duration	Resources	Start	End	Resources
0	PROJECT MANAGEMENT	-	0	1,728	1,530	11/15/04A	09/27/11	11/15/04A	09/27/11	0
0.100	PERF PROJ MGMT	RBG	10	1,728*	1,530*	11/15/04A	09/27/11	11/15/04A	09/27/11	0
0.100.05	PROJ MGMT - PID	RBG	50	218*	20*	11/15/04A	09/29/05	11/15/04A	09/30/05	1
0.100.10	PROJ MGMT - PA&E	RBG	20	200*	200*	07/05/06	04/25/07	09/15/06	07/09/07	51
0.100.15	PROJ MGMT - PS&E	RBG	0	664*	664*	04/26/07	12/07/09	07/10/07	12/07/09	0
0.100.20	PROJ MGMT - CONSTR	RBG	0	480*	460*	12/08/09	09/27/11	12/08/09	09/27/11	0
0.100.25	PROJ MGMT - RW	RBG	0	864*	864*	04/26/07	09/20/10	07/10/07	09/27/11	260
1	PROJECT INITIATION	-	100	218	20	11/15/04A	09/29/05	11/15/04A	09/30/05	1
1.150	DEV PROJ INITIATION DOC	-	80	150	20	11/15/04A	09/29/05	11/15/04A	09/30/05	954
2	PERMITS AND	-	0	576	576	09/01/05	12/31/07	09/15/06	09/27/11	51
2.160	PERF PRELIM ENGRG STUDIES	-	0	100*	100*	07/05/06	11/28/06	09/15/06	02/13/07	51
2.160.05	REV & UPDATE PROJ INFO	-	0	40	40	07/05/06	08/29/06	09/15/06	11/13/06	51
2.160.10	PERF ENGRG STUDIES	-	0	80	80	07/19/06	11/09/06	09/29/06	01/29/07	51
2.160.15	PREP DRAFT PROJ RPT	-	0	50	50	09/14/06	11/28/06	11/30/06	02/13/07	51
2.160.20	PROJ CONTROL	JWW	0	75	75	07/05/06	10/19/06	09/15/06	01/05/07	51
2.165	PERF ENVIRO STUDIES &	-	0	100*	100*	07/05/06	11/28/06	09/15/06	02/13/07	51
2.165.05	PERF ENVIRO SCOPING &	-	0	40	40	07/05/06	08/29/06	09/15/06	11/13/06	51
2.165.10	PERF GENERAL ENVIRO	-	0	40	40	07/05/06	08/29/06	09/15/06	11/13/06	51
2.165.15	PERF BIOLOGICAL STUDIES	-	0	40	40	07/05/06	08/29/06	09/15/06	11/13/06	51
2.165.20	PERF CULT RESOURCES	GMI	0	40	40	07/05/06	08/29/06	09/15/06	11/13/06	51
2.165.25	PREP & APPROVE DED	-	0	100	100	07/05/06	11/28/06	09/15/06	02/13/07	51
2.175	CIRCULATE DED & SELECT	-	0	40*	40*	11/29/06	01/28/07	02/14/07	04/12/07	51
2.175.05	CIRCULATE DED	-	0	36	36	11/29/06	01/19/07	02/14/07	04/06/07	51
2.175.10	PREP FOR & HOLD PUBLIC	-	0	36	36	11/29/06	01/19/07	02/14/07	04/06/07	51
2.175.15	RESPD TO PUBLIC COMMENTS	-	0	6	6	01/12/07	01/19/07	03/28/07	04/06/07	51
2.175.20	SELECT PREFERRED ALT	-	0	4	4	01/23/07	01/26/07	04/09/07	04/12/07	51
2.180	PREP & APPROVE PROJ RPT &	-	0	60*	60*	01/29/07	04/25/07	04/13/07	07/09/07	51
2.180.05	PREP & APPROVE PROJ RPT	-	0	60	60	01/29/07	04/25/07	04/13/07	07/09/07	51
2.180.10	PREP & APPROVE FNL ENVIRO	-	0	60	60	01/29/07	04/25/07	04/13/07	07/09/07	51
2.180.15	COMPLETE ENVIRO	N/A	0	60	60	09/01/05	11/30/05	07/06/11	09/27/11	1,470
2.205	OBT PERMITS/AGREMENTS &	-	0	270	270	11/29/06	12/31/07	02/15/08	03/06/09	301
3	PLANS/ SPECIFICATIONS/ AND	-	0	664	664	04/26/07	12/07/09	07/10/07	09/27/11	460
3.185	PREP BASE MAPS & PLAN	-	0	120*	120*	04/26/07	10/16/07	07/10/07	01/02/08	51
3.185.05	REV & UPDATE PROJ INFO	-	0	6	6	04/26/07	05/03/07	07/10/07	07/17/07	51
3.185.10	PERF DSGN SURVEYS &	-	0	120	120	04/26/07	10/16/07	07/10/07	01/02/08	51

Start Date 01/01/80
 Finish Date 09/27/11
 Data Date 09/01/05
 Run Date 09/20/05 09:53

MODL - 5S00
 Caltrans District 07
 EA 24940K
 Aux Lanes between Laurel Cyn & Coldwater

Sheet 1 of 3

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WBS Code	Activity Description	Task Wg	% Comp.	Orig Dur	Plan Dur	Start	Finish	01/16/07	07/18/07	01/02/08	
3.185.15	PERF PRELIM DSGN	-	0	114	114	05/04/07	10/16/07	07/18/07	07/18/07	01/02/08	51
3.185.20	PREP ENGRG RPTS	-	0	114	114	05/04/07	10/16/07	07/18/07	07/18/07	01/02/08	51
3.185.25	DETER RW REGS	-	0	60	60	04/26/07	07/20/07	10/03/07	10/03/07	01/02/08	111
3.190	PREP STRUC SITE PLANS	-	0	60	60	10/17/07	01/15/08	01/03/08	01/03/08	03/27/08	51
3.210	PREP PRELIM STRUC DSGN	-	0	40	40	01/16/08	03/12/08	03/28/08	03/28/08	05/23/08	51
3.215	PREP STRUC GENERAL PLANS	-	0	40	40	03/13/08	05/08/08	05/26/08	05/26/08	07/21/08	51
3.230	PREP DRAFT PS&E	DTH	0	200	200	10/17/07	08/01/08	01/03/08	01/03/08	10/13/08	51
3.235	MITIGATE ENVIRO IMPACTS &	-	0	100	100	10/17/07	03/12/08	05/10/11	05/10/11	09/27/11	904
3.240	PREP DRAFT STRUC PS&E	-	0	60	60	05/09/08	08/01/08	07/22/08	07/22/08	10/13/08	51
3.250	PREP FNL STRUC PS&E PKG	-	0	40	40	08/04/08	09/28/08	01/09/09	01/09/09	03/08/09	111
3.255	CIRCULATE/REV & PREP FNL	-	0	100	100	08/04/08	12/22/08	10/14/08	10/14/08	03/08/09	51
3.260	PREP CONTRACT DOCS	-	0	98	98	12/23/08	05/13/09	03/09/09	03/09/09	07/24/09	51
3.265	ADVERTISE/OPEN	-	0	95	95	07/27/09	12/07/09	07/27/09	07/27/09	12/07/09	0
4	RIGHT OF WAY	-	0	1,270	1,270	09/01/05	09/20/10	12/02/08	12/02/08	09/27/11	260
4.195	RW PROP MGMT & EXCESS	-	0	1	1	10/17/07	10/17/07	09/27/11	09/27/11	09/27/11	1,003
4.200	COORDINATE UTIL	-	0	100	100	09/01/05	01/30/06	05/10/11	05/10/11	09/27/11	1,430
4.220	PERF RW ENGRG	-	0	75	75	10/17/07	02/05/08	08/31/10	12/14/10	12/14/10	729
4.225	OBT RW INTERESTS FOR	DEM	0	150	150	10/17/07	05/22/08	12/02/08	12/02/08	07/06/09	285
4.245	POST RW CERTIFICATION	-	0	1	1	07/07/09	07/07/09	09/27/11	09/27/11	09/27/11	568
4.300	PERF FNL RW ENGRG	-	0	200	200	12/08/09	09/20/10	12/15/10	12/08/09	09/27/11	260
5	CONSTRUCTION	-	0	460	460	12/08/09	09/27/11	12/08/09	12/08/09	09/27/11	0
5.270	PERF CONSTR ENGRG &	DN	0	280*	280*	12/08/09	01/13/11	12/08/09	12/08/09	01/13/11	0
5.270.15	PERF CONSTR STAKING	DN	0	244	244	12/08/09	11/22/10	01/07/10	12/20/10	12/20/10	20
5.270.20	PERF CONSTR ENGRG WORK	DN	0	264	264	12/08/09	12/20/10	12/08/09	12/20/10	12/20/10	0
5.270.25	PERF CONSTR CONTRACT	DN	0	264	264	12/08/09	12/20/10	12/08/09	12/20/10	12/20/10	0
5.270.30	INSPECT CONTRACT ITEM	DN	0	264	264	12/08/09	12/20/10	12/08/09	12/20/10	12/20/10	0
5.270.35	SAMPLE & TEST CONSTR	DN	0	264	264	12/08/09	12/20/10	12/08/09	12/20/10	12/20/10	0
5.270.40	PERF SAFETY & MAINT REVS	DN	0	10	10	12/21/10	01/05/11	12/21/10	12/21/10	01/05/11	0
5.270.45	PROCESS RELIEF FROM	DN	0	1	1	01/06/11	01/06/11	01/06/11	01/06/11	01/06/11	0
5.270.50	PREP CERT OF COMPL	DN	0	1	1	01/06/11	01/06/11	01/06/11	01/06/11	01/06/11	0
5.270.55	PERF FNL INSPECTION &	DN	0	5	5	01/07/11	01/13/11	01/07/11	01/13/11	01/13/11	0
5.270.60	ADMINISTER PLANT	DN	0	120	120	07/27/10	01/13/11	07/27/10	01/13/11	01/13/11	0
5.270.65	VERIFY IMPLEMENT TMP	DN	0	264	264	12/08/09	12/20/10	12/08/09	12/20/10	12/20/10	0
5.285	PREP & ADMINISTER	DN	0	460*	460*	12/08/09	09/27/11	12/08/09	09/27/11	09/27/11	0
5.290	RESOLVE CONTRACT CLAIMS	-	0	460*	460*	12/08/09	09/27/11	12/08/09	09/27/11	09/27/11	0
5.295	ACPT CONTRACT/PREP FNL	DN	0	180	180	01/14/11	09/27/11	01/14/11	09/27/11	09/27/11	0
M000	ID NEED	-	100	0	0		11/15/04A			11/15/04A	
M010	APPROVE PID	-	0	0	0		09/30/05*			09/30/05*	0
M015	PROG PROJ	-	0	0	0		09/30/05			12/16/05	51
M020	BEGIN ENVIRO	-	0	0	0		09/30/05			12/16/05	51
M040	BEGIN PROJ	-	0	0	0		09/30/05			12/16/05	51
M120	CIRC DED	-	0	0	0		11/28/08			02/13/07	51

WBS Code	Activity Description	Task Mgr	% Comp	Ord Dur	Plan Dur	Early Start	Early Finish	07/09/07
M200	PA&ED	-	0	0	0	04/25/07		51
M221	BRIDGE SITE DATA ACCEPTED	-	0	0	0	01/15/08		51
M222	BEGIN BRIDGE	-	0	0	0	03/12/08		51
M224	RW MAPS	-	0	0	0	08/31/05		577
M225	REGULAR RW	-	0	0	0	08/31/05		811
M275	GENERAL PLANS	-	0	0	0	05/08/08		51
M300	CIRC PLANS IN DIST	-	0	0	0	08/01/08		51
M318-DJ	DESIGN SAFETY REVIEW	-	0	0	0	08/29/08		61
M328-DJ	CONTRACTABILITY REVIEW	-	0	0	0	08/29/08		61
M377	PS&E TO DOE	-	0	0	0	09/26/08		61
M378	DRAFT STRUC PS&E	-	0	0	0	08/01/08		51
M380	PROJ PS&E	JCY	0	0	0	12/22/08		51
M410	RW CERT	-	0	0	0	07/06/09*		0
M460	RTL	-	0	0	0	07/24/09*		0
M480	HQ ADVERT	-	0	0	0	07/24/09		0
M500	APPROVE CONTRACT	-	0	0	0	12/07/09		0
M588-DJ	FINAL SAFETY REVIEW	-	0	0	0	01/13/11		0
M600	CONTRACT ACCEPT	-	0	0	0	01/13/11		0
M700	FINAL REPORT	-	0	0	0	09/27/11		0
M800	END PROJ	-	0	0	0	09/27/11		0

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT P

Structural Section Memo

Memorandum

To: **Kelvin Yuen, Sr. P.E.**
Office of Project Studies

Date: March 30, 2005

07-LA-101
KP 20.8/ 22.4 (PM 12.8/13.9)
Widening From Laurel Canyon
Blvd. to Coldwater Canyon Ave.
07186-24940K

From: **Kirsten Stahl, P.E.**
Division of Engineering Services, Materials Investigations
DEPARTMENT OF TRANSPORTATION

Subject: **Project Study Report/Project Report Review**

Materials Investigations has reviewed the above mentioned project and has the following recommendation:

Typical Section Sheet, Auxiliary Lane Widening/New Construction:

T.I. = 12 R-Value = 15

230 mm Portland Cement Concrete
120 mm Lean Concrete Base
185 mm Aggregate Base, Class 3
535 mm Total

Smooth dowel bars at all transverse joints and deformed tie bars at all longitudinal joints should be installed in new PCC pavement. Please refer further details regarding dowel bars and tie bars to the Standard Plans P series.

PCC shoulders should be tied to the adjacent lane with tie bars to increase the service life of PCC pavement.

The structural section for the PCC shoulder should match the structural section of the adjacent traffic lane. Cross slope should meet the requirements found in Index 302.2.

The minimum width of PCC panels shall be 1.8 m to preclude cracks.

If you have any questions, please call me at extension 7-0470 or Min Deng of my staff at extension 7-0452.



Kirsten Stahl, P.E.
Civil Engineering License No. C46857 – Exp. 06/30/03
District Materials Engineer

REVISED
G-1

NB Auxiliary Lane Between Laurel Canyon Blvd and Coldwater Canyon Ave

ATTACHMENT Q

Risk Management Plan

PROJECT RISK MANAGEMENT PLAN

Dist - EA 07/24/06
 Co Ref PM LK-101-20/9/22 2
 Date 7/13/2006
 Project Mgr Ravi Ghale
 Telephone Number (313) 857-5593 or ATSS 8-647-5993

PROJECT RISK MANAGEMENT PLAN																																										
Priority	ID #	Date Identified	Project Phase	Functional Assignment	Threat/Opportunity Event	Identification			Qualitative Analysis			OPTIONAL Quantitative Analysis			Response Strategy			Monitoring and Control																								
						SMART Column	Risk Trigger	Type	Probability	Impact	Risk Matrix	Probability (%)	Effect (\$ or days)	Mitigation Strategy	Response Actions including advantages and disadvantages	Affected WBS Tasks	Responsibility (Task Manager)		Status or Milestone Check	Date, Status and Review Comments																						
1	Active	8/10/2005	PID	Haz Mat	Local Remediation required	As fully specified lead concentrations exceed DTSC thresholds existing remediation action plan	Cost	Moderate	High	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	Mitigation	Removal/Remediation of the material. Disadvantage is increased cost for disposal if concentrations exceed DTSC thresholds.	WBS 105 Perform Soil Sampling Studies and Prepare Draft Environmental Document	Ankur Rahman	Review test results at earliest available	8/10/2005
V	H																																									
H	M																																									
M	L																																									
L	V																																									
V	H																																									
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H	M																																									
M	L																																									
L	V																																									
2	Active	8/10/2005	PID	Design	Unacceptable storm water infiltration rates	Field testing of soil may reveal infiltration rates that do not comply with current water quality standards for 3005	Cost	High	High	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	Mitigation	Reuse initiation treatment strategy to below grade Detaware Filter or amend basin soil with soil with acceptable infiltration rate. Disadvantage is added cost to the project.	WBS 230 Prepare Draft PCBSE	Shirley Pak	Review field testing results at earliest available	8/10/2005
V	H																																									
H	M																																									
M	L																																									
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H	M																																									
M	L																																									
L	V																																									
3	Active	8/10/2005	PID	RW	Inability to acquire TCE's 14 entitlement stage site licenses or permit construction	Public opposition to Temporary Acquisitions.	Cost	Moderate	Moderate	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	<table border="1"> <tr><td>V</td><td>H</td></tr> <tr><td>H</td><td>M</td></tr> <tr><td>M</td><td>L</td></tr> <tr><td>L</td><td>V</td></tr> </table>	V	H	H	M	M	L	L	V	Avoidance	Modify wall design to avoid the need of TCE by increasing height.	WBS 225 Obtain Right of Way Interests for Project Right of Way Certification	Design Manager/ ROW Manager	At submittal of PD26	
V	H																																									
H	M																																									
M	L																																									
L	V																																									
V	H																																									
H	M																																									
M	L																																									
L	V																																									
V	H																																									
H	M																																									
M	L																																									
L	V																																									

Section	No	Comment	Response by	Response
PFR Whitsett)	4	Include 2002 Log of Test Borings in Section 2.3 and Appendix A.	GD	Will include in the next submittal.
	5	Based on As Built Log of Test Borings, soils above the existing pile tips are liquefiable, recalculate the existing pile capacities accordingly, foundation retrofitting may be necessary.	GD	The historic groundwater published by CDM maps is based on well readings before the nearby Tujung wash channel was lined and should not be applicable for the current and future conditions. The water levels in 1957 borings was at El. 179 to El. 180 m and the groundwater in the 2002 boring is at El. 177 m. The groundwater has not changed more than a 2 m in 45 years. Assuming groundwater at 180 m the groundwater is below the specified tip of the existing CIDH piles. Therefore, it is not justified to reducing the capacity due to liquefaction. We will change the liquefaction section to reflect this in the next version of the report.



Section	No	Comment	Response by	Response
	6	Due to liquefaction potential and shallow groundwater, (historical and as built), 400 mm cast-in-place CIDH piles may not be a viable option.	GD	The existing bridge is supported on CIDH piles with tips at about El. 179 to El. 180 m. The groundwater for the past 45 years has been at about El. 177 to El. 180 m. The most recent groundwater in 2002 borings is at El. 177m. Therefore, the CIDH piles are a viable option. We did provide the option of using driven concrete piles in our report. This should be decided during the PS&E investigation.
PFR (Tujunga)	7	Is there any uplift demands based on current design practices, if so foundation retrofitting may be needed.	PB	This is a constructability issue and should be addressed during the PS&E. We will include a section in the report that excavations adjacent to the existing channel wall for the bent footings may need to shored or alternately other type of foundations such as piles may be considered during the PS&E stage.
	8	No foundation excavation provisions has been provided for the bent locations.	PB/GD	

