EXHIBIT 2-A

Quality Manual Template

This exhibit is posted as a standalone file.

EXHIBIT 3-A

Public Information Plan

District 7 Office of Public Information Communication Plan

STAKEHOLDER AND MEDIA OUTREACH ACTION PLAN

OVERVIEW

Caltrans understands the vital importance of keeping stakeholders impacted by construction projects informed about the work occurring in their communities. Our outreach team makes every effort to provide timely, useful project information to residents, commuters, the business community, cities, elected officials and media outlets.

This report outlines and monitors the status of the outreach elements Caltrans plans to implement to inform stakeholder agencies and the public on transportation project related activities. Our outreach goals include the following:

- Raise awareness and understanding of freeway improvements and benefits.
- Inform the community of construction activities in a timely manner to minimize complaints and inconvenience. Special attention will be given to providing advance notification of closures and details.
- Maintain a constant flow of communication for all project activities.
- Provide multiple channels of direct contact with Caltrans. Residents, businesses and commuters will receive timely responses to all questions and concerns.

STAKEHOLDERS

Legislative/Congressional

- Congressman/Congresswoman
- Senator
- Assemblyman/Assemblyman

Local Agencies

- Director of Public Works
- Chair, County Board of Supervisors
- County Board of Supervisors
- Director of Public Works
- City Council
- Executive Director, City/County Association of Governments
- California Highway Patrol
- Sheriff's Department
- Metropolitan Transportation Authority (Metro)

Caltrans Project Team

The following members of the Project Development Team will take the lead in accomplishing this action plan:

- Project Manager
- Project Development/Design Engineer
- External/Public Affairs
- Construction
- Maintenance
- Environmental Planning
- Other Caltrans Services

SECTION ONE
COMMUNITY OUTREACH

1.1 Community, Local Agency (ies) and Legislative Outreach Meetings

Caltrans will inform local agencies and legislative offices regarding the project scope and construction activities through a series of conference calls, meetings and visits.

Meetings with Elected Officials

- Meetings will be held with federal and state elected officials and city council members to provide project updates, receive feedback, and to discuss any issues of concern.

Community Meetings

- Community meetings will be held at a facility in the project area to provide project information and answer questions. Such meetings consist of a presentation by Caltrans staff followed by a question and answer session. Attendees will have the opportunity to request notification about project developments.

Business Meetings

- Meetings with businesses will be held to provide project updates and to discuss any construction-related issues. Staff will also meet with local Chamber of Commerce groups to discuss outreach efforts and to solicit recommendations.

SECTION TWO
MEDIA OUTREACH

2.1 Media Outreach Events

Local media will be provided with project information and regular updates. Caltrans staff will be available to answer questions and provide in-depth interviews. Media outreach events such as a groundbreaking ceremony and a project completion ceremony will be scheduled.

2.2 Press Releases

Caltrans will send both general and specific press releases concerning the project construction impacts.

- Alternating Route closures
- Extended Closures
- Caltrans Construction Status/Progress
- Construction Activity/Commuter Alerts
- Construction Completion/Road Opening date
- Ribbon Cutting Ceremony Information

SECTION THREE
PUBLIC OUTREACH

Caltrans will keep all interested stakeholders informed through a broad outreach campaign.

3.1 Commuter/Construction Bulletins

Project notices will be distributed to inform the public about closures, detours and other construction-related activities. Notices will be disseminated via e-mail using a stakeholder database or when appropriate, hand-delivered in the form of a flyer to residents and businesses within the impacted area.

3.2 Information by Phone/E-Mail

Caltrans staff will be available to answer project-related questions by phone and e-mail during business hours. All queries will receive a prompt response.

3.3 Electronic Communication

The Caltrans website will feature a dedicated project page where project information and timely construction updates will be featured. Maps of the project boundaries and photographs of construction work will be posted. Informational videos of the project will be updated on a quarterly basis. Additionally, content will be provided to elected officials and businesses for electronic distribution of information to their constituents.

3.4 Fact Sheets, Mailers and Flyers

Caltrans will develop an informational fact sheet for distribution through the mail and at public locations near the construction project location. The document will include dates and times of work along with maps and graphics that will highlight the potential impacts

3.5 Advertising

Advertising space will be purchased in print publications to inform impacted communities about major closures and other significant construction activities. Radio spots will also be purchased to notify the public about major closures.

3.6 Language Services

Collateral material will be produced in other languages, as needed, for non-English speakers. Interpreters will be available at community meetings and other events, as needed. Additionally, interpreters are available to assist non-English speakers by phone during normal business hours.

3.7 Traffic Management Center (TMC) Coordination

Caltrans will inform TMC staff responsible for the Travel Information and Changeable Message Sign system on the construction related activities and lane closures.

3.8 Changeable Message Signs (CMS)/ETC.

Caltrans will use its electronic changeable message signs network to help guide motorists during lane closures (when applicable).

3.9 Business Support

In collaboration with local Chambers of Commerce, small business groups and various local television and radio stations this office will be promoting safety through construction zones.

EXHIBIT 4-A

Mitigated Negative Declaration/Finding of No Significant Impact

This exhibit is posted as a standalone file.

EXHIBIT 4-B

Hazardous materials Disclosure Document - Acquisition

HAZARDOUS MATERIALS DISCLOSURE DOCUMENT - ACQUISITION

ENV-0001-A (REV 03/2009)

This document provides written disclosure that the referenced property, as shown on the map(s) attached, has been reviewed by the District Hazardous Waste Technical Specialist (located in Environmental or Environmental Engineering) and provides direction regarding property acquisition based upon that review.

July 26, 2010
DATE

07/LA/10, 605/ PM 31.2-32.5 & R20.2-20.6
DIST/CO/RTE/PM (KP)

F-1860C-2C, -3C, -4C, & F-1970-1
APPRAISAL MAP NO.

07-245401
EA

12-08-09, 12-09-09, 12-15-09, & 6-21-65
MAP DATE

I-10/SR-605 Direct Connector Project
PROJECT NAME OR DESCRIPTION

ACTION SUMMARY

These Parcels Can Be Acquired:
RW PARCEL NUMBER(S)
79791, 79792, 79794, 79795, 79796, 79797, 79798, 79799, 79800, 79801, 79802, 79803, 79189, 79181, 79804, 79805, 79176, 79806, 00427, 980097, 00431, and 79790

These Parcels Can Be Acquired But Property Is Impacted by Contamination:
RW PARCEL NUMBER(S)

These Parcels Can **NOT** Currently be Acquired:
RW PARCEL NUMBER(S)

See subsequent pages for detailed information regarding property condition and status.

Form prepared By: STEVE CHAN, STE

Approved by District Hazardous Waste Supervisor

July 26, 2010
Date

HAZARDOUS MATERIALS DISCLOSURE DOCUMENT- ACQUISITION DETAIL

Parcel #s

(see attached) **1.** Based upon an initial Site Assessment, the referenced parcel(s) are considered free of significant hazardous materials for purposes of this project (describe potential sources of minor contamination in the Comments section). Subject parcel(s) can be acquired.

( ) **2.** The referenced parcel(s) do not require cleanup cost estimates, but have been identified as having:

(a) minor soil contamination. A hazardous waste Site Investigation [☐ has / ☐ has not] been performed on the referenced parcel(s) (if not performed explain source of knowledge in the Comments section). Subject parcel(s) can be acquired;

( ) (b) contaminated groundwater under the property. A hazardous waste Site Investigation [☐ has / ☐ has not] been performed on the referenced parcel(s) (if not performed explain the source of knowledge in the Comments section). The source of contamination has been determined not to be attributed to the property (an indemnification letter from the local, state or federal regulatory authority [☐ is / ☐ is not] attached). Subject parcel(s)[☐ can / ☐ can not] be acquired without completing and acquiring approval of a *Request for Acquisition of Contaminated Property* (ENV-002).;

( ) (c) contaminated groundwater under the property. A hazardous waste Site Investigation [☐ has / ☐ has not] been performed on the referenced parcel(s) (if not performed explain the source of knowledge in the Comments section). However, the source of contamination has been removed or remediated to regulatory cleanup levels (attach closure letter). Subject parcel(s) can be acquired.;

( ) (d) lead soil contamination, probably as a result of aerial deposition of vehicular gasoline emissions. A project specific hazardous waste Site Investigation[☐ has / ☐ has not] been performed on the referenced parcel(s) (if not performed explain the source of knowledge in the Comments section). Subject parcel(s) can be acquired.;

( ) (e) hazardous materials previously present on the subject parcel(s) that have been sufficiently remediated so that significant hazardous materials, for the purposes of this project, are no longer present. A hazardous waste Site Investigation [☐ has / ☐ has not] been performed on the subject parcel(s) (if not performed explain the source of knowledge in the Comments section). A regulatory closure letter, if appropriate, is attached. Subject parcel(s) can be acquired.

HAZARDOUS MATERIALS DISCLOSURE DOCUMENT - ACQUISITION

ENV-0001-A (REV 03/2009)

Parcel #s

3. This document includes as an attachment, a hazardous waste Site Investigation report stating the nature and extent of contamination and cleanup cost estimates for the referenced parcel(s). In addition:

( ) (a) Subject parcel(s) can only be acquired with approval of the Chief Engineer. Property value is impacted by contamination. For acquisition, a completed and approved *Request for Acquisition of Contaminated Property* (ENV-0002) is necessary. Authorization from the Chief Engineer to proceed with acquisition [☐ is / ☐ is not] attached (if authorization is not attached, explain status in the Comments section).;

( ) (b) Subject parcel(s) is impacted by contamination but can be acquired with approval of a District exception to acquire contaminated property.

4. This document includes the hazardous waste Site Investigation work schedule for additional work and/ or cleanup plans, schedule, and current status for the referenced parcel(s), as an attachment. The work will be completed by [☐ Caltrans / ☐ a private owner or responsible party]. In addition:

( ) (a) Subject parcel(s) **can not be acquired** until Site Investigation and/or remediation is complete. The *Hazardous Materials Disclosure Document - Acquisition* will be updated when appropriate. Work is expected to be completed by _____ (date).;

( ) (b) Subject parcel(s) can be acquired with proper approvals. Property is impacted by contamination. For acquisition, a completed and approved *Request for Acquisition of Contaminated Property* (ENV-0002) [☐ is / ☐ is not] necessary. Authorization from the Chief Engineer to proceed with acquisition [☐ is / ☐ is not] attached (if Chief Engineer authorization is required for acquisition but not attached, explain status in the Comments section.)

5. The referenced parcel(s) have been identified as containing or potentially containing, hazardous materials and **can not be acquired**. The *Hazardous Materials Disclosure Document - Acquisition* will be updated when appropriate. In addition:

( ) (a) an appropriate hazardous waste Site Investigation must be performed to determine the nature and extent of contamination, and remedial cost estimates. Site Investigation is anticipated to be completed by _____ (date).

( ) (b) a hazardous waste Site Investigation will be scheduled by the District Hazardous Waste Technical Specialist when a permit to enter is obtained by the District/Region Right of Way Office.The permit request was submitted on _____ (date) and the Site Investigation is anticipated to be completed by _____ (date).;

( ) (c) hazardous waste Site Investigation studies are complete but there are unresolved regulatory issues (e.g.,regulatory case closure is being pursued by the responsible party, site requires cleanup and approach and responsibility has not been resolved, site requires long-term monitoring that would conflict with the project, etc,). Resolution is expected by _____ (date).

HAZARDOUS MATERIALS DISCLOSURE DOCUMENT - ACQUISITION

ENV-0001-A (REV 03/2009)

( ) 6. Other: Explain in the Comments section below. (NOTE: Acquisition of property without adequate investigation is an unacceptable risk. If adequate investigation has not been completed, use #4(a) or #5 above).

Comments

See attached Parcel Hazardous Waste Assessment issued July 26, 2010

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: Refugio Dominguez, STE
Office of Design D

Date: July 26, 2010

File: 07-LA-10 PM 31.2/32.5
LA 605 PM R20.2/20.6
Direct Connector Project
Design/Built Oversight

Attn: Aaron Foong, P.E.
Project Engineer

Project Number: 0700000431-1
(07-1856-245401)

From: **DEPARTMENT OF TRANSPORTATION**
OEECS-HAZARDOUS WASTE BRANCH, SOUTH REGION, MS-16

Subject: *Hazardous Waste Assessment for Right-of-Way Acquisition*

The Office of Environmental Engineering and Corridor Studies (OEECS) evaluated the proposed parcels for acquisition and temporary construction easements (TCE) to construct a direct connector for southbound State Route 605 (SR-605) to eastbound Interstate 10 (I-10). The Caltrans parcel numbers evaluated for the presence of hazardous substances or petroleum products include: 79791-1, 79792 (-1 & -2), 79794 (-1 & -2), 79795 (-1 & -2), 79796 (-1 & -2), 79797 (-1 & -2), 79798 (-1 & -2), 79799 (-1 & -2) 79800 (-1 & -2), 79801 (-1 & -2), 79802 (-1 & -2), 79803 (-1 & -2), 79189 (-1 & -2), 79181 (-1 & -2), 79804-1, 79805 (-1 & -2), 79176 (-1 & -2), 79806 (-1 & -2), 00427 (-1, -2, & -3), 980097 (-1 & -2), 00431 (-1 & -2), and 79790. The parcels are shown on the following right-of-way maps with an April 26, 2010 issue date:

- Map No. F 1970-1 Sheet 2 of 7, 07-LA-605-20.3
- Appraisal Map No. F-1860C-2C, Sheet 2 of 4, 07-LA-10-PM 31.3
- Appraisal Map No. F-1860C-3C, Sheet 3 of 4, 07-LA-10-PM 31.5
- Appraisal Map No. F-1860C-4C, Sheet 4 of 4, 07-LA-10-PM 31.7

OEECS reviewed two previous site assessment reports that include the proposed project area:

- *Initial Site Assessment Report, Route 10 High Occupancy Vehicle (HOV) lanes widening project (From Route 605 to Puente Avenue), Los Angeles County, California*, Task Order No. 07-117070-PO, EA No. 117070, Geocon Geotechnical, and Environmental Consultants, July 2002, and
- Environmental Data Resources, Inc. (EDR) Report prepared for the evaluation of the *Draft Project Study Report for a Southbound (SB) I-605 to Eastbound (EB) I-10 Fly-over Connector, LA-10 KP 50.2, LA-605 KP 32.3*, Task Order No. 07-186-24540K, September 17, 2002.

These reports include historical research data conducted in 2002 to identify sites of potential environmental concern (REC) within and adjacent to the proposed Caltrans take-areas. OEECS also reviewed the environmental databases maintained by the California Department of Toxic Substances Control (Envirostor database) and State Water Resources Board (Geotracker database) to determine if any new hazardous waste sites have been identified within the proposed project area. Additionally, a site reconnaissance was conducted to ensure that no changes in land use adjacent to the Caltrans right-of way have occurred since the 2002 historical research reports were prepared.

The historical research reports did not identify any business operations having environmental concerns in the proposed project area. A review of environmental databases also did not identify any new hazardous waste sites undergoing environmental investigation or remediation. The historical reports did indicate that the proposed project area is within the area of the San Gabriel Valley groundwater contamination plume designated on the United States Environmental Protection Agency National Priority List (San Gabriel Valley Area 2, Baldwin Park Operable Unit). The primary contaminants of concern in the groundwater include perchloroethylene (PCE), trichloroethylene (TCE), 1,2 dichlorethane (1,2 DCA), carbon tetrachloride (CTC), perchlorate, 1,4-dioxane, and N-nitrosodimethylamine (NDMA).

A *Final Report, Remedial Investigation San Gabriel Valley Area 3 Superfund Site*, prepared by CH2M HILL for the United States Environmental Protection Agency (USEPA), Region 9, includes a figure showing the boundary of the Baldwin Park Operable Unit and the lateral extent of the groundwater contamination plume (See attached figure). The figure shows that the proposed project area is located over the groundwater contamination plume. A groundwater extraction system has been installed to extraction and remediates contaminated groundwater. Based on information in the *2008 Annual Performance Evaluation Report, Baldwin Park Operable Unit of the San Gabriel Valley Superfund Sites*, the estimated depth to groundwater under the project area is around 60 feet below ground surface (bgs). The groundwater contamination plume is sinking in the aquifer and cross-sections in the report shows approximately 200 feet of uncontaminated groundwater above the top of the contamination plume in the vicinity of the project area. The groundwater data presented in the reports indicate that the groundwater contamination is not associated with any of the parcels within the project area.

<u>OEECS Assessment:</u>

Based on our review, it is OEECS assessment that there is a low potential of encountering hazardous substances, petroleum products or other recognizable environmental concerns in soil. OEECS staff has not conducted inspections inside residential buildings and there is a potential of encountering hazardous substances or petroleum products on parcels that include acquisition of buildings. Demolition of these structures could reveal that occupants of the buildings have containers of consumer products (e.g., pesticides, cleaning solvents, gasoline, etc.) or the building could contain hazardous material (e.g., asbestos-containing material, lead-based paint, etc.). It is recommended that Caltrans Demolition Contractor shall conduct lead-based paint and asbestos survey for the buildings. Proper management and disposal of this material should be conducted prior to demolition/construction.

The potential of encountering groundwater contamination is low if dewatering is not anticipated for the project and construction depth does not exceed 150 feet below ground surface (bgs). Project specific groundwater investigation to evaluate the potential for impacting groundwater or the current treatment system should be conducted by the Design-Built contractor prior to construction if dewatering or deep borings are planned for the project.

If you have any question, I can be reached at steve.chan@dot.ca.gov (213) 897-3646, or contact Ronald Okuda of my staff at ronald.okuda@dot.ca.gov (213) 897-7695.

Steve Chan

Steve Chan, P.E., STE
District Hazardous Waste Branch (South Region)
Office of Environmental Engineering and Corridor Studies

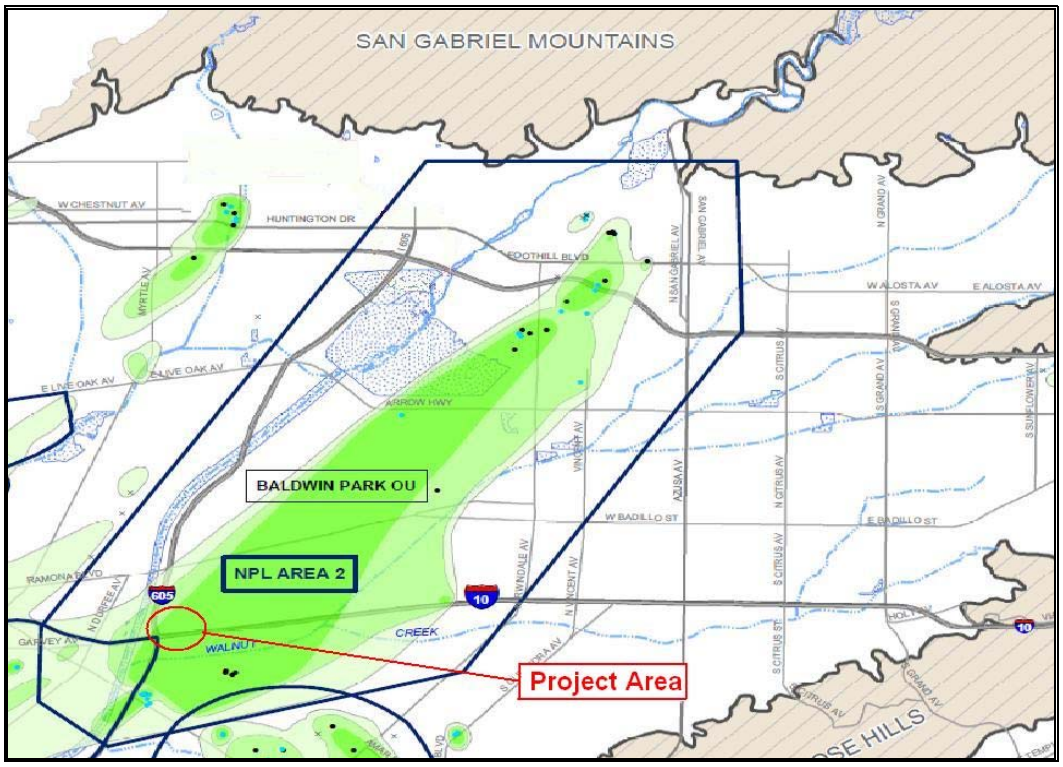
cc: File
John Njoroge, Division of Right of Way
Wayne Lee, Division of Right of Way
Karen Fong, Office of Design D
Jerrel Kam, Office of Design A
Sam Alameddine, OEECS

References: *Initial Site Assessment Report, Route 10 High Occupancy Vehicle (HOV) lanes widening project (From Route 605 to Puente Avenue), Los Angeles County, California*, Task Order No. 07-117070-PO, EA No. 117070, Geocon Geotechnical, and Environmental Consultants, July 2002

Draft Project Study Report for a Southbound (SB) I-605 to Eastbound (EB) I-10 Fly-over Connector, LA-10 KP 50.2, LA-605 KP 32.3, Task Order No. 07-186-24540K, September 17, 2002

2008 Annual Performance Evaluation Report, Baldwin Park Operable Unit of the San Gabriel Valley Superfund Sites. Los Angeles County, California, AMEC Geomatrics, Inc. and ERM – West, Inc., April 10, 2009.

Final Report, Remedial Investigation Report, San Gabriel Valley Area 3, Superfund Site, CH2Mhill, June 2009.

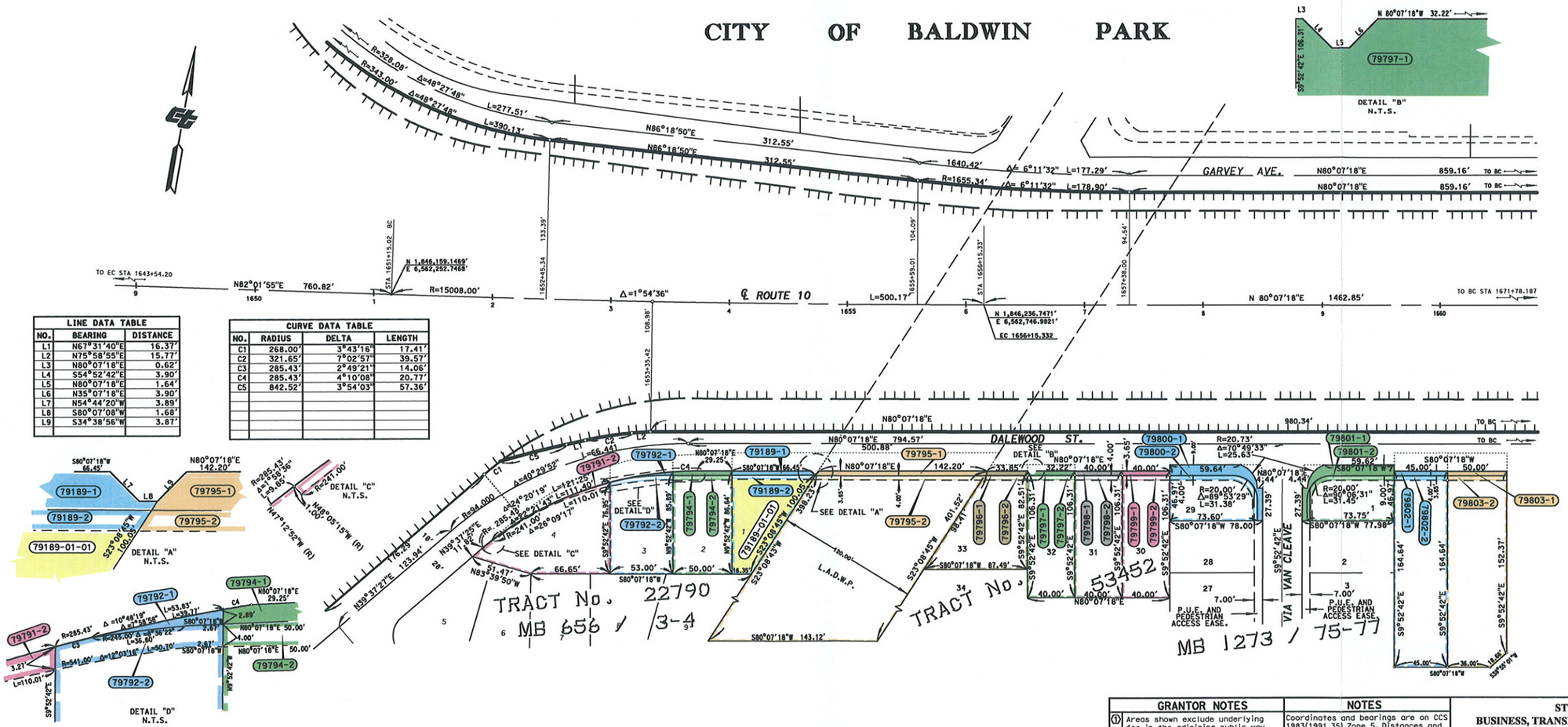


Location of USEPA San Gabriel Valley National Priority List Site, Area 2
Shaded area in green indicates the lateral extent of the groundwater contamination plume.

PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS
79791-01	TCE	TORRICO	5,625	160			EXPIRE 4-1-2014
79792-01	F	GONZALES	4,361	54		4306	
79792-02	TCE	GONZALES	4,361	208			EXPIRE 4-1-2014
79794-01	F	DIAZ	4,327	177		4150	
79794-02	TCE	DIAZ	4,327	200			EXPIRE 4-1-2014
79795-01	F	L.A. CITY WATER & POWER	48,180	521		47659	
79795-02	TCE	L.A. CITY WATER & POWER	48,180	572			EXPIRE 4-1-2014
79796-01	F	NGUYEN	5,006	128		4878	
79796-02	TCE	NGUYEN	5,006	150			EXPIRE 4-1-2014
79797-01	F	RAMOS	4,240	134		4107	
79797-02	TCE	RAMOS	4,240	160			EXPIRE 4-1-2014
79798-01	F	HERNANDEZ	4,253	146		4107	
79798-02	TCE	HERNANDEZ	4,253	160			EXPIRE 4-1-2014
79799-01	F	DAU	4,253	146		4107	
79799-02	TCE	DAU	4,253	160			EXPIRE 4-1-2014

NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

CITY OF BALDWIN PARK



NO.	BEARING	DISTANCE
L1	N67°31'40"E	16.37'
L2	N75°58'55"E	15.77'
L3	N80°07'18"E	0.62'
L4	S54°52'42"E	3.90'
L5	N80°07'18"E	1.64'
L6	N35°07'18"E	3.90'
L7	N54°44'20"W	3.89'
L8	S80°07'08"W	1.68'
L9	S34°38'56"W	3.67'

LINE DATA TABLE

NO.	RADIUS	DELTA	LENGTH
C1	268.00'	3°43'16"	17.41'
C2	321.65'	7°02'57"	39.57'
C3	285.43'	2°49'21"	14.06'
C4	285.43'	4°10'08"	20.77'
C5	842.52'	3°54'03"	57.36'

CURVE DATA TABLE

PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS
79800-01	F	GARCIA	3,503	795		2708	
79800-02	TCE	GARCIA	3,503	399			EXPIRE 4-1-2014
79801-01	F	NGUYEN	3,502	788		2714	
79801-02	TCE	NGUYEN	3,502	400			EXPIRE 4-1-2014
79802-01	F	NIJJAR	7,409	164		7245	
79802-02	TCE	NIJJAR	7,409	180			EXPIRE 4-1-2014
79803-01	F	GROUP POMONA PROP LTD IV	8,146	182		7964	
79803-02	TCE	GROUP POMONA PROP LTD IV	8,146	200			EXPIRE 4-1-2014
79189-01	F	STATE OF CALIFORNIA	3846	250	3596		
79189-02	TCE	STATE OF CALIFORNIA	3846	276			EXPIRE 4-1-2014
-							
-							
-							
-							
-							

GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way.
Ac=acres
[ ] Indicates Underlying Fee (UF) Area
(Y) Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 5. Distances and stationing are grid distances. Divide by 0.9999723 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

Access Prohibited
Access Superseded
Existing R/W Superseded
Access Opening (Private)
(R) Indicates Radial Bearing
Indicates Found Monument as noted
o Indicates calculated point. (Does not imply monument set)
Title to State
Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY APPRAISAL MAP MAP NO. F-1860C-2C

FOR PREVIOUS R/W INFORMATION SEE MAP(S) F-1969,F-1860,F-1860-2A

FEET 0 25 50 100 150

TO DESIGN: 4/26/10 EA(s): 24540 FA#:

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
07	LA	10	31.3	2	4

PROJECT SUPERVISOR: OTTO JARQUIN DATE: 12-08-09
CALCULATED BY: R. GAVER DATE: -
CHECKED BY: DATE -

REVISIONS BY DATE

PARCEL#	TITLE CODE ②	GRANTOR/GRANTEE	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS	RECORDATION TYPE ③	DATE	DOC.# ④
-									- -	
-									- -	
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-									- -	
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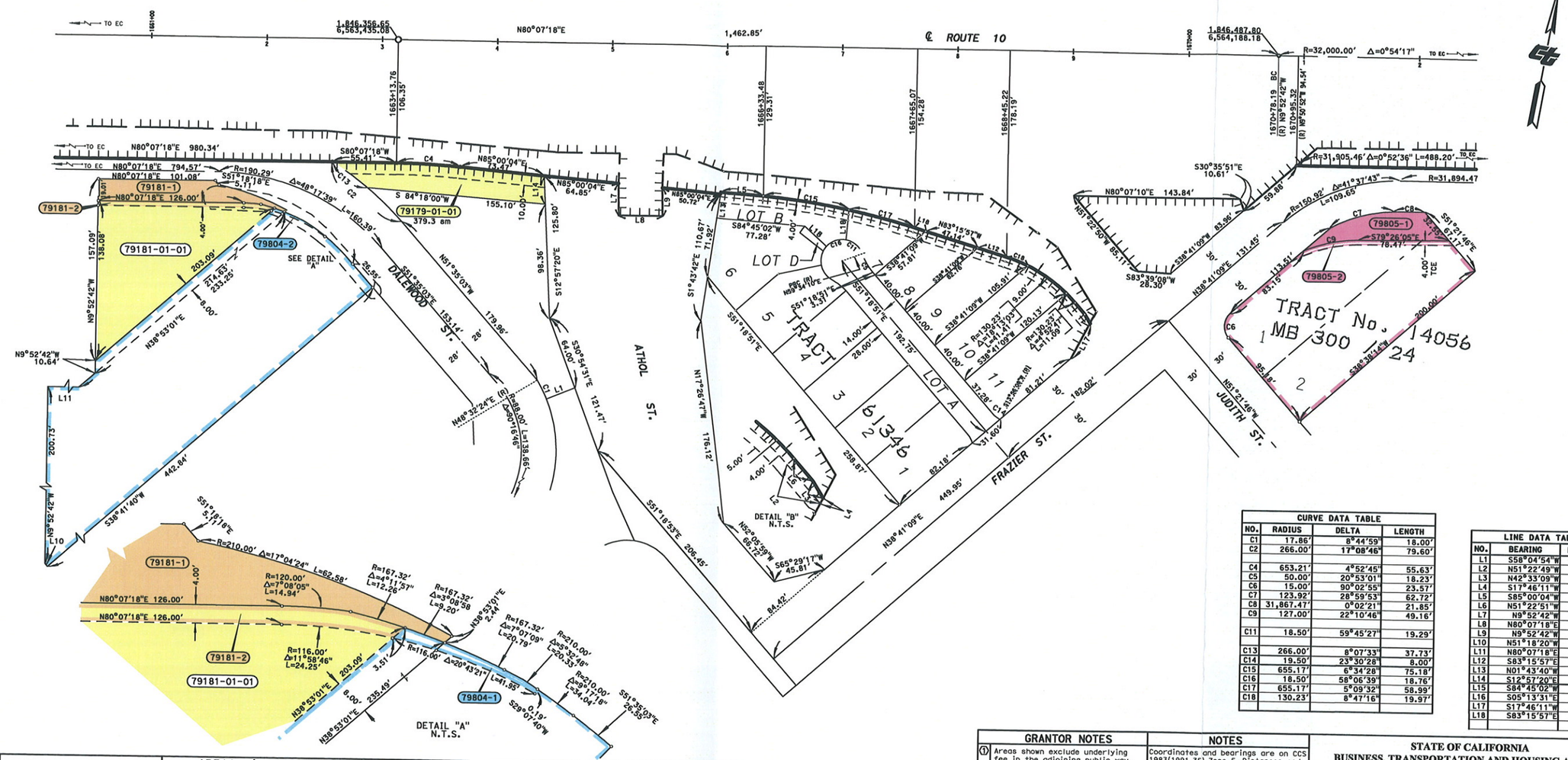
CITY OF BALDWIN PARK



CURVE DATA TABLE NO.	RADIUS	DELTA	LENGTH
C1	17.86'	8°44'59"	18.00'
C2	266.00'	17°08'46"	79.60'
C4	653.21'	4°52'45"	55.63'
C5	50.00'	20°53'01"	18.23'
C6	15.00'	90°02'55"	23.57'
C7	123.92'	28°59'53"	62.72'
C8	31,867.47'	0°02'21"	21.85'
C9	127.00'	22°10'46"	49.16'
C11	18.50'	59°45'27"	19.29'
C13	266.00'	8°07'33"	37.73'
C14	19.50'	23°30'28"	8.00'
C15	655.17'	6°34'28"	75.18'
C16	18.50'	58°06'39"	18.76'
C17	655.17'	5°09'32"	58.99'
C18	130.23'	8°47'16"	19.97'

LINE DATA TABLE NO.	BEARING	DISTANCE
L1	S58°04'54"W	26.74'
L2	N51°22'49"W	22.69'
L3	N42°33'09"W	8.79'
L4	S17°46'11"W	2.84'
L5	S85°00'04"W	37.73'
L6	N51°22'51"W	13.00'
L7	N9°52'42"W	27.84'
L8	N80°07'18"E	38.00'
L9	N9°52'42"W	24.60'
L10	N51°18'20"W	3.23'
L11	N80°07'18"E	81.00'
L12	S83°15'57"E	26.29'
L13	N01°43'40"W	22.62'
L14	S12°57'20"E	27.44'
L15	S84°45'02"W	25.52'
L16	S05°13'31"E	25.81'
L17	S17°46'11"W	34.35'
L18	S83°15'57"E	10.21'

PARCEL#	TITLE CODE ②	GRANTOR/GRANTEE	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS	RECORDATION TYPE ③	DATE	DOC.# ④
79181-1	F		13,283	2,452	10,831				- -	
79181-2	TCE		13,283	601			EXPIRES 4-1-2014		- -	
79804-01	TCE		43,912	76			EXPIRES 4-1-2014		- -	
79805-01	F		20,777	2,197		18580			- -	
79805-02	TCE		20,777	541			EXPIRES 4-1-2014		- -	
-									- -	
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-									- -	

GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way. Ac=acres
[ ] Indicates Underlying Fee (UF) Area
{Y} Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)
③ TYPE:
GD=Grant deed
ED=Easement deed
QC=Quitclaim
DD=Director's deed
DE=Director's easement deed
DK=Director's quitclaim deed
FOC=Final Order of Condemnation
HE=Highway easement deed
REL=Relinquishment
VAC=Vacation
JUA=Joint use agreement
CCUA=Consent to common use agreement
④ Document or Instrument number

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 5. Distances and stationing are grid distances. Divide by 0.9999723 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

- Access Prohibited
- Access Superseded
- Existing R/W Superseded
- Access Opening (Private)
- (R) Indicates Radial Bearing
- Indicates Found Monument as noted
- Indicates calculated point. (Does not imply monument set)
- Title to State Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY RECORD MAP MAP NO. F-1860C-3C

FOR PREVIOUS R/W INFORMATION SEE MAP(S) F-1860 and F1860-4A

FEET 0 25 50 100 150

TO DESIGN: 4/26/10 EA(s): 24540 FA#:

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
07	LA	10	31.5	3	4

PROJECT SUPERVISOR: OTTO JARQUIN DATE: 12-09-09
CALCULATED BY: R. GAVER DATE: - -
CHECKED BY: DATE: - -

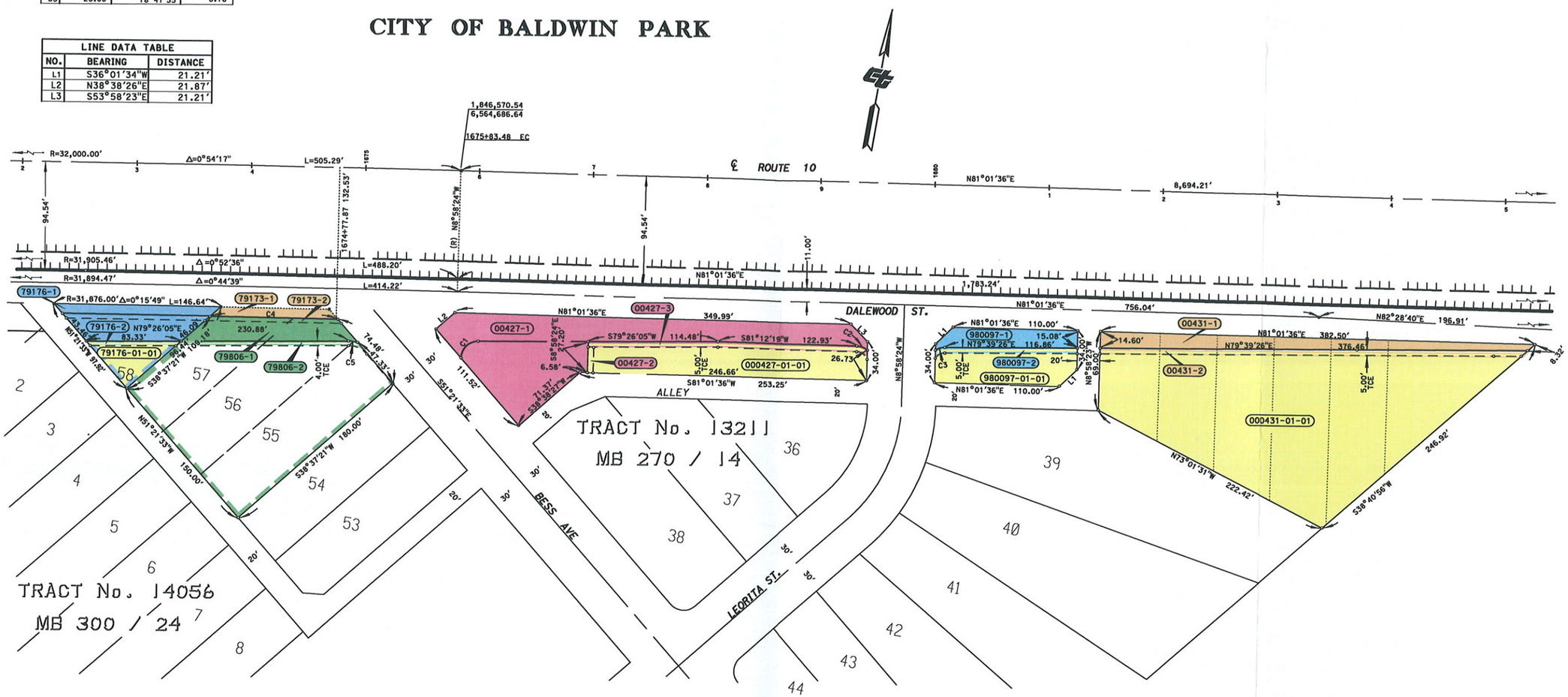
DATE	REVISIONS	BY
- -		
- -		
- -		
- -		
- -		
- -		

NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

CURVE DATA TABLE			
NO.	RADIUS	DELTA	LENGTH
C1	15.00'	88°43'40"	23.23'
C2	15.00'	38°22'10"	10.05'
C3	15.00'	33°18'03"	8.72'
C4	31,867.47'	0°12'09"	112.61'
C5	25.00'	18°41'55"	8.16'

LINE DATA TABLE		
NO.	BEARING	DISTANCE
L1	S36°01'34"W	21.21'
L2	N38°38'26"E	21.87'
L3	S53°58'23"E	21.21'

CITY OF BALDWIN PARK



PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS
79176-1	F	STATE OF CALIFORNIA	5,354	3,636	1718		
79176-2	TCE	STATE OF CALIFORNIA	5,354	317			EXPIRES 4-1-2014
79806-1	F	SAN GABRIEL WATER CO.	23,848	2,751		21,097	
79806-2	TCE	SAN GABRIEL WATER CO.	23,848	669			EXPIRES 4-1-2014
00427-1	F	STATE OF CALIFORNIA	20,233	12,958	7,275		
00427-2	TCE	STATE OF CALIFORNIA	20,233	136			EXPIRES 1-1-2011
00427-3	TCE	STATE OF CALIFORNIA	20,233	1,240			EXPIRES 4-1-2014
980097-1	F	STATE OF CALIFORNIA	5,900	1,966	3,934		
980097-2	TCE	STATE OF CALIFORNIA	5,900	630			EXPIRES 4-1-2014
00431-1	F	STATE OF CALIFORNIA	38,709	3,820	34,889		
00431-2	TCE	STATE OF CALIFORNIA	38,709	1,868			EXPIRES 4-1-2014
-							
-							
-							
-							

GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way. Ac=acres
( ) Indicates Underlying Fee (UF) Area
(Y) Indicates Indeterminate UF
② TITLE CODES:
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TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 5. Distances and stationing are grid distances. Divide by 0.9999723 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

Access Prohibited
Access Superseded
Existing R/W Superseded
Access Opening (Private)
(R) Indicates Radial Bearing
Indicates Found Monument as noted
Indicates calculated point. (Does not imply monument set)
Title to State
Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY APPRAISAL MAP MAP NO. F-1860C-4C

FOR PREVIOUS R/W INFORMATION SEE MAP(S) F-1860 AND F-1860-6A

FEET 0 25 50 100 150

TO DESIGN: 4/26/10 EA(s): 24540 FA#:

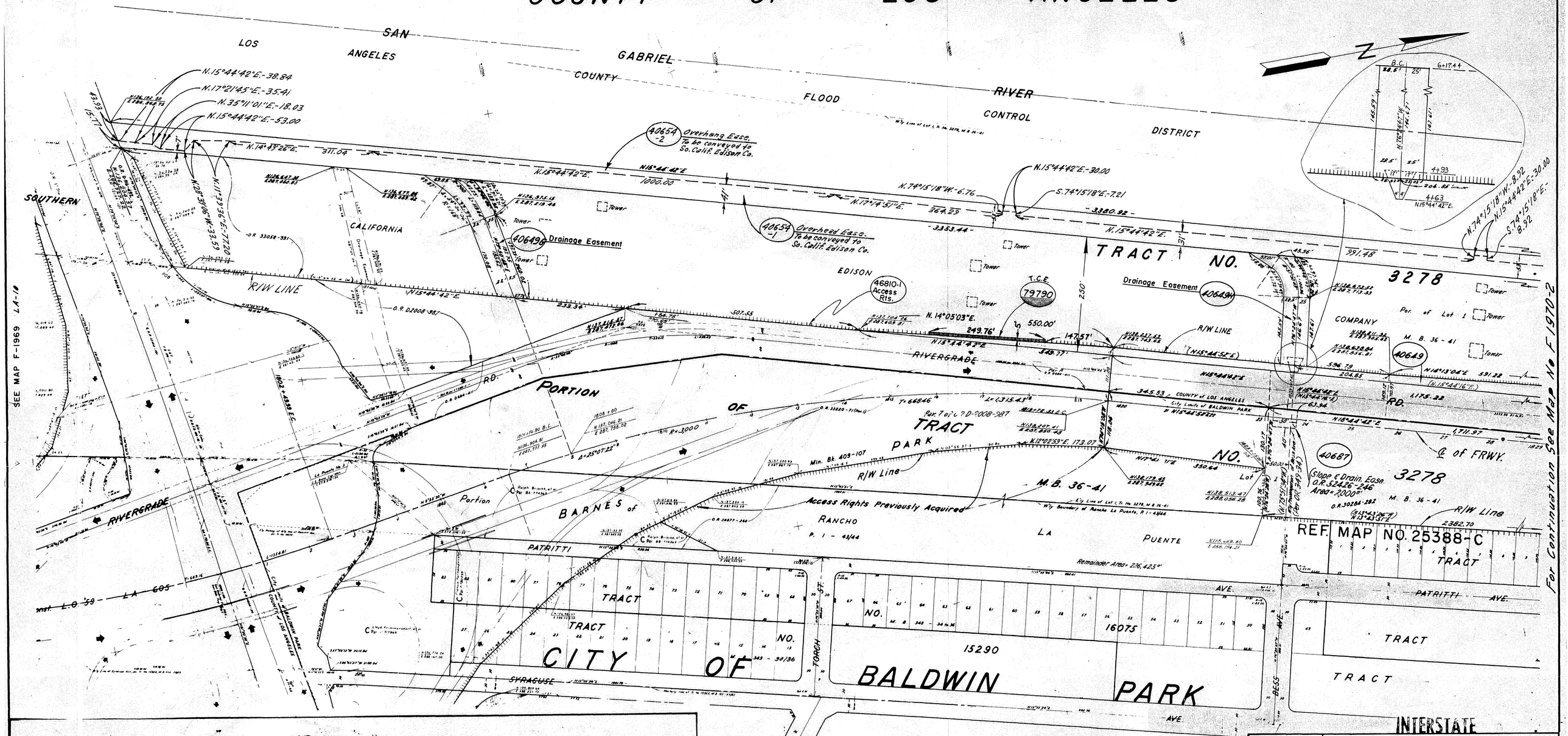
DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
07	LA	10	31.7	4	4

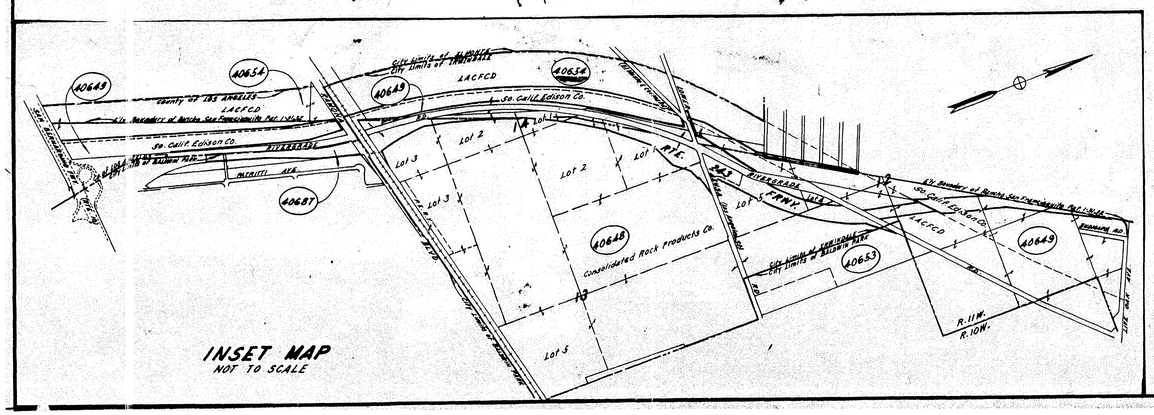
PROJECT SUPERVISOR: OTTO JARQUIN DATE: 12-15-09
CALCULATED BY: R. GAVER DATE: -
CHECKED BY: DATE: -

REVISIONS BY DATE

COUNTY OF LOS ANGELES

DISTRICT R/W AGENT | BUREAU OF PUBLIC ROADS | DATE





INSET MAP
NOT TO SCALE

✦ Excluding Street Area

PARCEL NO.	GRANTOR OR GRANTEE	AREA* TO BE ACQUIRED	EXCESS	TOTAL	INST	RECORDING DATA DATE	O.R.
40687	Assoc. So. Inv. Co. ✦	460,561		460,561	Fee	7-27-70	04783-636
40649	So. Cal. Edison Co.	122,911			Fee	8-29-02	2034404
40649G	So. Cal. Edison Co.	17,247			Ease	8-29-02	"
40649H	So. Cal. Edison Co.	13,860			Ease	8-29-02	"
40654-1	LACFCD	144,583		22.59 Ac.			
40654-2	LACFCD	96,898		22.59 Ac.	Ease.		
79790	So. Cal. Edison Co.	1,245			TCE		

ISSUE DATE
3-20-75
2-28-78

STATE OF CALIFORNIA
BUSINESS & TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

R/W MAP

NO. F 1970-1 SHT 2 OF 7

07-LA-605-20.3

100 0 100

DATE 6-21-65

R.W.P.E. SCHNEIDER | SR. FOLKINS

LEGEND: ACCESS DENIED ✦ EXCLUDES STREET AREA
* AREA IN SQUARE FEET UNLESS OTHERWISE NOTED
( ) PREVIOUS RECORD DATA

16122-C

EXHIBIT 4-C

NEPA –CEQA Re-Validation

NEPA/CEQA RE-VALIDATION FORM

DIST./CO./RTE.	07/Los Angeles/Interstate Route 10 and 605 Interchange
PM/PM	(10 PM 31.1/31.2) (605 PM 20.2/20.6)
E.A. or Fed-Aid Project No.	24540
Other Project No. (specify)	EFIS: 0700000431
PROJECT TITLE	I-10/605 Direct Connector Project
ENVIRONMENTAL APPROVAL TYPE	Mitigated Negative Declaration/Finding of No Significant Impact
DATE APPROVED	10/2009
REASON FOR CONSULTATION (23 CFR 771.129)	*Check reason for consultation:* ☐ *Project proceeding to next major federal approval* ☒ *Change in scope, setting, effects, mitigation measures, requirements* ☐ *3-year timeline (EIS only)* ☐ ***NA** (Re-Validation for CEQA only)*
DESCRIPTION OF CHANGED CONDITIONS	Update to ensure compliance with Public Utilities Commission General Order 131-D and update language pertaining to Cultural Resource minimization measures.

NEPA CONCLUSION - VALIDITY

Based on an examination of the changed conditions and supporting information: [*Check ONE of the three statements below, regarding the validity of the original document/determination (23 CFR 771.129). If document is no longer valid, indicate whether additional public review is warranted and whether the type of environmental document will be elevated.]*

☐ **The original environmental document or CE remains valid. No further documentation will be prepared.**

☒ **The original environmental document or CE is in need of updating; further documentation has been prepared and ☒ is included on the continuation sheet(s) or ☐ is attached.**

Additional public review is warranted (23 CFR 771.111(h)(3)) Yes ☐ No ☐

☐ **The original document or CE is no longer valid.**

Additional public review is warranted (23 CFR 771.111(h)(3)) Yes ☐ No ☐

Supplemental environmental document is needed. Yes ☐ No ☐

New environmental document is needed. Yes ☐ No ☐ **(If "Yes," specify type: _____)**

CONCURRENCE WITH NEPA CONCLUSION

I concur with the NEPA conclusion above.

Gary Iverson 5/25/11 — Signature: Environmental Branch Chief — Date

[signature] 5/25/11 — Signature: Project Manager/DLAE — Date

CEQA CONCLUSION : *(Only mandated for projects on the State Highway System.)*

Based on an examination of the changed conditions and supporting information, the following conclusion has been reached regarding appropriate CEQA documentation: *(Check ONE of the five statements below, indicating whether any additional documentation will be prepared, and if so, what kind. If additional documentation is prepared, attach a copy of this signed form and any continuation sheets.)*

☐ **Original document remains valid. No further documentation is necessary.**

☒ **Only minor technical changes or additions to the previous document are necessary. An addendum has been or will be ☒ prepared and is ☒ included on the continuation sheets or ☐ will be attached. It need not be circulated for public review.** ***(CEQA Guidelines, §15164)***

☐ **Changes are substantial, but only minor additions or changes are necessary to make the previous document adequate. A Supplemental environmental document will be prepared, and it will be circulated for public review.** ***(CEQA Guidelines, §15163)***

☐ **Changes are substantial, and major revisions to the current document are necessary. A Subsequent environmental document will be prepared, and it will be circulated for public review.** ***(CEQA Guidelines, §15162)***
(Specify type of subsequent document, e.g., Subsequent FEIR:)

_____

☐ **The CE is no longer valid. New CE is needed. Yes ☐ No ☐**

CONCURRENCE WITH CEQA CONCLUSION

I concur with the CEQA conclusion above.

Gary Iverson 5/25/11 — Signature: Environmental Branch Chief — Date

[signature] 5/25/11 — Signature: Project Manager — Date

PUC General Order 131-D Compliance

In compliance with the Public Utilities Commission (PUC) General Order 131-D and CEQA, Caltrans has reviewed if the work involved with modifying three electrical transmission towers operated by the Los Angeles Department of Water and Power (LADWP) needs permitting or can receive an exception. The power lines operate at a voltage of 288 kilo volts, which exceeds the 50 kilo volts minimum requirement for review under the General Order. The project would involve replacing three towers with three pairs of steel poles to raise the transmission lines by approximately 40 feet for a length of 1,700 feet. The modification would raise the transmission lines, but maintain the same alignment. This modification is needed to allow sufficient height space for the fly-over direct connector proposed for the I-10/605 Direct Connector Project. All work to the transmission lines would be completed by and under the guidance of the utility owner (LADWP).

Under the PUC General Order 131-D, the project qualifies for exception *C. the minor relocation of existing power line facilities up to 2,000 feet in length, or the intersetting of additional support structures between existing support structures.* The modified transmission lines would not be brought closer to any human habitable areas or sensitive biological resources identified in the project's Mitigated Negative Declaration/Finding of No Significant Impact (MND/FONSI). The project's MND/FONSI also evaluated cumulative effects and effect from any unusual circumstances. No cumulative effects or unusual circumstances resulted from the review. In conclusion, no significant impacts would result from the modification of the three transmission towers and lines.

Cultural Resources Update Regarding Modifying the Boulder Dam-Los Angeles 287.5 Transmission Line Historic District

The MND/FONSI documented the modification of the up to four towers to raise the transmission lines 40 feet with two options; a replica transmission tower or a single steel pole with cross arms depending on the design needs. Under the current design, it was determined that two steel poles per transmission tower replaced would be more adequate. A total of 8 steel poles would replace 3 transmission towers. This creates a slight change in the two options that were analyzed in the Historic Property Survey Report (HPSR). The modification would still be minor and in accordance with the conclusion of the HPSR analysis based on considering the historic property as a whole system and not its individual components or features. The impact to the Boulder Dam-Los Angeles Transmission Line would be minor because only a minor part (four towers at a maximum) of a system extending 270-miles would be modified. This amended determination is also anticipated to be supported by SHPO's letter of concurrence for the resource modification. A letter advising SHPO on the slight change will be sent to their office and the anticipated response filed to confirm the concurrence.

EXHIBIT 6-A

LADWP Standard Conditions for Construction

STANDARD CONDITIONS FOR CONSTRUCTION

1. Energized transmission lines can produce electrical effects including, but not limited to, induced voltages and currents in persons and objects. Permittee hereby acknowledges a duty to conduct activities in such manner that will not expose persons to injury or property to damage from such effects.

2. The Los Angeles Department of Water and Power (LADWP) personnel shall have access to the right of way at all times.

3. Unauthorized parking of vehicles or equipment shall not be allowed on the right of way at any time.

4. Unauthorized storage of equipment or material shall not be allowed on the right of way at any time.

5. Fueling of vehicles or equipment shall not be allowed on the right of way at any time.

6. Patrol roads and/or the ground surfaces of the right of way shall be restored by the Permittee to original conditions, or better.

7. All trash, debris, waste, and excess earth shall be removed from the right of way upon completion of the project, or the LADWP may do so at the sole risk and expense of the Permittee.

8. All cut and fill slopes within the right of way shall contain adequate berms, benches, and interceptor terraces. Revegetation measures shall also be provided for dust and erosion control protection of the right of way.

9. All paving, driveways, bridges, crossings, and substructures located within the right of way shall be designed to withstand a combined weight of 40,000 pounds in accordance with the American Association of State Highway and Transportation Officials H20-44 (M18) wheel loadings.

10. The location of underground pipelines and conduits shall be marked at all points where they cross the boundaries of the right of way and at all locations where they change direction within the right of way. The markings shall be visible and identifiable metal post markers for underground pipelines. Utility markers flush with surface may be used on pavement.

11A. General Grounding Condition

All aboveground metal structures including, but not limited to, pipes, drainage devices, fences, and bridge structures located within or adjoining the right of way shall be properly grounded, and shall be insulated from any fencing or other conductive materials located outside of the right of way. For safety of personnel and equipment, all equipment and structures shall be grounded in accordance with State of California Code of Regulations, Title 8, Section 2941, and National Electric Code, Article 250.

11B. Grounding Condition for Cellular Facilities on Towers

All aboveground metal structures including, but not limited to, pipes, drainage devices, fences, and bridge structures located within or adjoining the right of way shall be properly grounded, and shall be insulated from any fencing or other conductive materials located outside of the right of way. For safety of personnel and equipment, all equipment and structures shall be grounded in accordance with American National Standards Institute of Electrical and Electronics Engineers Standard 487-latest edition, IEEE Guide for Safety in AC Substation Grounding.

12. Permittee shall neither hold the LADWP liable for nor seek indemnity from the LADWP for any damage to the Permittee's project due to future construction or reconstruction by the LADWP within the right of way.

13. Fires and burning of materials is not allowed on the right of way.

14. Permittee shall control dust by dust-abatement procedures approved by the LADWP, such as the application of a dust palliative or water.

15. The right of way contains high-voltage electrical conductors; therefore, the Permittee shall utilize only such equipment, material, and construction techniques that are permitted under applicable safety ordinances and statutes, including the following: State of California Code of Regulations, Title 8, Industrial Relations, Chapter 4, Division of Industrial Safety, Subchapter 5, Electrical Safety Orders; and California Public Utilities Commission, General Order No. 95, Rules for Overhead Electric Line Construction.

16. Permittee is hereby notified that grounding wires may be buried in the right of way; therefore, the permittee shall notify the LADWP's Transmission Construction and Maintenance Business Group at (818) 771-5018, or (818) 771-5076, at least 48 hours prior to the start of any construction activities in the right of way.

17A. Vehicle Parking

An area within 50 feet on one side of each tower measured along the longitudinal direction of the right of way, 25 feet on the opposite side of each tower, and ten feet on the remaining two sides of each tower, shall remain open and unobstructed for maintenance and emergencies, including periodic washing of insulators by high-pressure water spray.

17B. Trucking Operations and Storage Operations

An area within 50 feet on one side of each tower measured along the longitudinal direction of the right of way, and 25 feet on the remaining three sides of each tower, shall remain open and unobstructed for maintenance and emergencies, including periodic washing of insulators by high-pressure water spray.

17C. Permanent Structures

An area within 100 feet on all sides of each tower shall remain open and unobstructed for maintenance and emergencies, including periodic washing of insulators by high-pressure water spray.

18. Detailed plans for any grading, paving, and construction work within the right of way

shall be submitted for approval to the Real Estate Business Group, Department of Water and Power, P.O. Box 51111, Room 1031, Los Angeles, California 90051-0100, no later than 45 days prior to the start of any grading, paving, or construction work. Notwithstanding any other notices given by Permittee required herein, Permittee shall notify the LADWP's Transmission Construction and Maintenance Business Group at (818) 771-5018, or (818) 771-5076, no earlier than 14 days and no later than two days prior to the start of any grading, paving, or construction work.

19. "As Constructed" drawings showing all plans and profiles of the Permittee's project shall be furnished to the Real Estate Business Group, Los Angeles Department of Water and Power, P. O. Box 51111, Room 1031, Los Angeles, California 90051-0100, within five days after completion of Permittee's project.

20. In the event that construction within the right of way is determined upon inspection by the LADWP to be unsafe or hazardous to the LADWP facilities, the LADWP may assign a line patrol mechanic at the Permittee's expense.

21. If the LADWP determines at any time during construction that the Permittee's efforts are hazardous or detrimental to the LADWP facilities, the LADWP shall have the right to immediately terminate said construction.

22A. All concentrated surface water which is draining away from the permitted activity shall be directed to an approved storm drain system where accessible, or otherwise restored to sheet flow before being released within or from the right of way.

22B. Drainage from the paved portions of the right of way shall not enter the unpaved area under the towers. Drainage diversions such as curbs shall be used on three sides of each tower. The open side of each tower shall be the lowest elevation side to allow storm water which falls under the tower to drain. The area under the towers shall be manually graded to sheet flow out from under the towers.

22C. Ponding or flooding conditions within the right of way shall not be allowed, especially around the transmission towers. All drainage shall flow off of the right of way.

22D. Permittee shall comply with all Los Angeles County Municipal Storm Water Permit and Standard Urban Storm Water Mitigation Plan requirements.

23A. Fills, including backfills, shall be in horizontal, uniform layers not to exceed six inches in thickness before compaction, then compacted to 90 percent relative compaction in accordance with the American Society for Testing and Materials D1557.

23B. The top two inches to six inches of the concrete footings of the towers shall remain exposed and not covered over by any fill from grading operations.

23C. Permittee shall provide the LADWP with one copy each of the compaction report and a Certificate of Compacted Fill, for clean fill compaction within the LADWP's right of way in accordance with the American Society for Testing and Materials D1557, approved by a geotechnical engineer licensed in the State of California.

24. A surety bond in the amount to be determined by the LADWP shall be supplied by the Permittee to assure restoration of the LADWP's right of way and facilities, and compliance with all conditions herein.

25. The Permittee shall obtain and pay for all permits and licenses required for performance

of the work and shall comply with all laws, ordinances, rules, orders, or regulations including, but not limited to, those of any agencies, departments, districts, or commissions of the State, County, or City having jurisdiction thereover.

26. The term "construction", as used herein, refers only to that construction incidental to the maintenance or repair of the existing (requested facility) and shall not be construed to mean permission to construct any additional (requested facility).

27. Signs shall not exceed four feet wide by eight feet long, shall not exceed a height of 14 feet, shall be constructed of noncombustible materials, and shall be installed manually at, and parallel with, the right of way boundary.

28. Remote-controlled gates, or lock boxes containing the device or key for opening the remote-controlled gates, shall be capable of being interlocked with an LADWP padlock to allow access to the right of way by the LADWP. Permittee shall contact the Right of Way Supervisor at (818) 771-5048 to coordinate the installation of an LADWP padlock.

29. Permittee's cathodic protection system, if any, shall have a design that does not cause corrosion to LADWP facilities. A detailed design of the Permittee's cathodic protection system shall be submitted for approval to the Real Estate Business Group, Department of Water and Power, P. O. Box 51111, Room 1031, Los Angeles, California 90051-0100, no later than 45 days prior to the start of construction or installation of the cathodic protection system.

30A. Permittee shall install K-rails at a distance of ten feet from each side of the tower base for protection of towers. A distance of five feet from the tower base may be acceptable in locations where the patrol roads would be obstructed.

30B. Permittee shall install removable pipe bollards, spaced four feet apart, and at a distance of ten feet from each side of the tower base for protection of towers. A distance of five feet from the tower base may be acceptable in locations where the patrol roads would be obstructed.

31A Permittee shall provide and maintain a minimum 20-foot wide transition ramp for the patrol roads from the pavement to the ground surface. The ramp shall not exceed a slope of ten percent.

31B. Permittee shall provide and maintain a minimum 20-foot wide driveway and gate at all locations where the (road/street) crosses the LADWP's patrol roads. The designed gates must be capable of being interlocked with an LADWP padlock to allow access to the right of way by the LADWP.

32. Permittee shall post a sign on the entrance gate to the right of way, or in a visible location inside the entrance gate, identifying the contact person's name and telephone number for the prompt moving of (vehicles/trucks/trailers/containers) at times of LADWP maintenance or emergency activities, or any other event that (vehicles/trucks/trailers/containers) must be moved. In emergency conditions, the LADWP reserves all rights at any time to move or tow (vehicles/trucks/trailers/ containers) out of specific areas for any transmission operation or maintenance purposes.

EXHIBIT 6-B

Utility Agency Contact List

UTILITY AGENCY CONTACT LIST

Southern California Edison Attn: David Sandoval 1440 S. California Ave. Monrovia, CA 91016 Office: 626.303.8447 Email: David.Sandoval@sce.com	Verizon Attn: Phil Olivas 5010 Azusa Canyon Rd. Irwindale, CA 91706 Office:626.813.4503	Time Warner Communications Attn: Jeff Flaco 15255 Salt Lake Ave. City of Industry, CA 91744 Office: 626.855.3349 Email: Jeff.Flaco@twcable.com
San Gabriel Valley Water Attn: Paul Garavito 15966 Arrow Route Fontana, CA 92335 Office: 909.201.7359	Southern California Gas Company Attn: Micheal C. Duenas 1919 S. State College Blvd. Anaheim, CA. 92806-6114 Office: 714.634.7287 Email: MDuenas@semprautilities.com	Los Angeles County Dept. of Public Works - East Attn: Hu Yi 900 South Fremont Ave. Alhambra, CA 91803 Office: 626.300.3374 Email: Hyi@ladpw.org

EXHIBIT 6-C

Utility Tracking Report

I-10-EA 122401-Utilities Conflict Status

NOTE: ON SS - ON SOUTH SIDE OF ROUTE 10 FREEWAY

date of last revision May 30, 2000
this document was prepared by

Conflict No.	Utility Sheet No.	Pothole No. *(On U-sheets)*	Owner	Utility Description	Pothole/Manhole Location	Conflict Location	Utility Conflict/ Work Description	Investigation			Depth	Impact?		Action			***Util. Reloc.*** ***A*** - Abandon ***RB-*** Reloc.Before ***RD-*** Reloc.During ***P-*** Protect in place ***NC-*** No conflict	***Resp. Party*** ***U-*** Utility Co ***C-*** Contractor	***Required Completion Date***	Comments
								Pothole	Manhole	Overhead	**(M)**	Y	N	Remove	Relocate	Other				
1	U-1		SCE	#4659406E ELECTROLIER		APPROX AT STA. 503+48.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
2	U-1		SCG	50 MM GAS LINE		RUNS ALONG DALEWOOD AVE.	CONFLICT WITH NEW COLUMNS					Y			X					
3	U-1		SGVW	150 MM WATER LINE		APPROX. AT STA. 503+73 ON SS	CONFLICT WITH NEW COLUMNS					Y			X					
4	U-1		SCE	NO # ELECTROLIER		APPROX. AT STA. 503+82 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
5	U-1		SGVW	150 MM WATER LINE		RUNS ALONG DALEWOOD AVE.	CONFLICT WITH NEW COLUMNS					Y			X					
6	U-1		SCE	#4659415E ELECTROLIER		APPROX. AT STA. 504+23 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
7	U-1		SCE	#4681251E WOOD POLE W/GUY		APPROX. AT STA. 504+36.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
8	U-1		SGVW	FH		APPROX. AT STA. 504+41.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
9	U-1		SCE	#4659416E ELECTROLIER		APPROX. AT STA. 504+59 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
10	U-1		SCE	#4681252E WOOD POLE W/QUEENS ARM		APPROX. AT STA. 504+76.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
11	U-1		SCE	#4659417E ELECTROLIER		APPROX. AT STA. 505+01 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
12	U-1		SCE	#4681254E WOOD POLE		APPROX. AT STA. 505+32.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
13	U-1		SCE	#4659418E ELECTROLIER		APPROX. AT STA. 505+43 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
14	U-1		SGVW	200 MM WATER LINE		APPROX. AT STA. 505+78.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
15	U-1		SCE	#4681254E WOOD POLE		APPROX. AT STA. 505+85 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
16	U-1		SCE	#4659419E ELECTROLIER		APPROX. AT STA. 505+90 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
17	U-1		SCE	#4681255E WOOD POLE		APPROX. AT STA. 506+15 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
18	U-1		SCE	NO # CUT OF POLE		APPROX. AT STA. 506+18.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
19	U-1		SCE	NO # ELECTROLIER		APPROX. AT STA. 506+28 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
20	U-1		SCE	NO # WOOD POLE		APPROX. AT STA. 506+32.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
21	U-1		SCE	#4681256E WOOD POLE W/GUY		APPROX. AT STA. 506+33.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
22	U-1		SGVW	FH		APPROX. AT STA. 506+43 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
23	U-1		SCE	NO # WOOD POLE		APPROX. AT STA. 506+59 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
24	U-1		SCE	NO # ELECTROLIER		APPROX. AT STA. 506+61 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					

I-10-EA 122401-Utilities Conflict Status

NOTE: ON SS - ON SOUTH SIDE OF ROUTE 10 FREEWAY

date of last revision May 30, 2000
this document was prepared by

Conflict No.	Utility Sheet No.	Pothole No. *(On U-sheets)*	Owner	Utility Description	Pothole/Manhole Location	Conflict Location	Utility Conflict/ Work Description	Investigation			Depth (M)	Impact?		Action			***Util. Reloc.*** ***A*** - Abandon ***RB-*** Reloc.Before ***RD-*** Reloc.During ***P-*** Protect in place ***NC-*** No conflict	***Resp. Party*** ***U-*** Utility Co ***C-*** Contractor	***Required Completion Date***	Comments
								Pothole	Manhole	Overhead		Y	N	Remove	Relocate	Other				
1	U-2		SCG	75 MM GAS LINE		RUNS ALONG DALEWOOD AVE.	CONFLICT WITH NEW SIDEWALK					Y			X					
2	U-2		SCE	#4681271E WOOD POLE W/QUEENS ARM		APPROX. AT STA. 509+38 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
3	U-2		SCE	#4681272E WOOD POLE W/QUEENS ARM		APPROX. AT STA. 509+53 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
4	U-2		SCE	NO # WOOD POLE		APPROX. AT STA. 509+61 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
5	U-2		SCE	#4681273E WOOD POLE		APPROX. AT STA 509+97 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
6	U-2		SCE	#646567D WOOD POLE		APPROX. AT STA. 510+04 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
7	U-2		SCG	50 MM GAS LINE		RUNS ALONG DALEWOOD AVE.	CONFLICT WITH NEW SIDEWALK					Y			X					
8	U-2		SGVW	320 MM WATER LINE		RUNS ALONG DALEWOOD AVE.	CONFLICT WITH NEW SIDEWALK					Y			X					
9	U-2		SCE	#4681278E WOOD POLE		APPROX. AT STA. 504+37 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
10	U-2		SCG	50 MM GAS LINE		CROSS AT STA. 509+47	CONFLICT WITH NEW SIDEWALK	X			1.353	Y			X					

I-10/605-EA 245401-Utilities Conflict Status

NOTE: ON SS - ON SOUTH SIDE OF ROUTE 10 FREEWAY

Conflict No.	Utility Sheet No.	Pothole No. *(On U-sheets)*	Owner	Utility Description	Pothole/Manhole Location	Conflict Location	Utility Conflict/ Work Description	Investigation			Depth	Impact?		Action			***Util. Reloc.*** ***A*** - Abandon ***RB-*** Reloc.Before ***RD-*** Reloc.During ***P-*** Protect in place ***NC-*** No conflict	***Resp. Party*** ***U-*** Utility Co ***C-*** Contractor	***Required Completion Date***	Comments
								Pothole	Manhole	Overhead	**(M)**	Y	N	Remove	Relocate	Other				
1	U-3		SCE	NO # WOOD POLE		APPROX AT STA. 510+43 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
2	U-3		SGVW	FH		APPROX. AT STA. 510+44 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
3	U-3		SCE	#4156407E WOOD POLE		APPROX. AT STA. 510+51.5 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
4	U-3		SCE	#4681278E WOOD POLE		APPROX. AT STA. 510+80 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
5	U-3		SCE	NO # WOOD POLE		APPROX. AT STA 510+92 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
6	U-3		SCE	NO # WOOD POLE		APPROX. AT STA. 511+33 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
7	U-3		SCE	#4681280E WOOD POLE		APPROX. AT STA. 511+36 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
8	U-3		SCE	NO # WOOD POLE		APPROX. AT STA. 511+82 ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
9	U-3		SCE	#4681281E WOOD POLE		APPROX. AT STA. 511+89ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
10	U-3		SCE	#4659443E ELECTROLIER		APPROX. AT STA. 512+10ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
11	U-3		SCE	#4681282E WOOD POLE		APPROX. AT STA. 512+18ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
12	U-3		SCE	#4659444E ELECTROLIER		APPROX. AT STA. 512+50ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
13	U-3		SCE	#4681283E WOOD POLE		APPROX. AT STA. 512+53ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
14	U-3		VZN	NO # MH		APPROX. AT STA. 512+71ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
15	U-3		SCE	#4659563E ELECTROLIER		APPROX. AT STA. 512+75ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
16	U-3		SCE	#4681284E WOOD POLE		APPROX. AT STA. 512+95ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
17	U-3		SCE	#4776790E ELECTROLIER		APPROX. AT STA. 513+17ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
18	U-3		SCE	#4776798E ELECTROLIER		APPROX. AT STA. 513+51.5ON SS	CONFLICT WITH NEW SIDEWALK					Y			X					
19	U-3		SGVW	660 MM WATER LINE		RUNS ALONG DALEWOOD AVE.	CONFLICT WITH NEW SIDEWALK					Y			X					

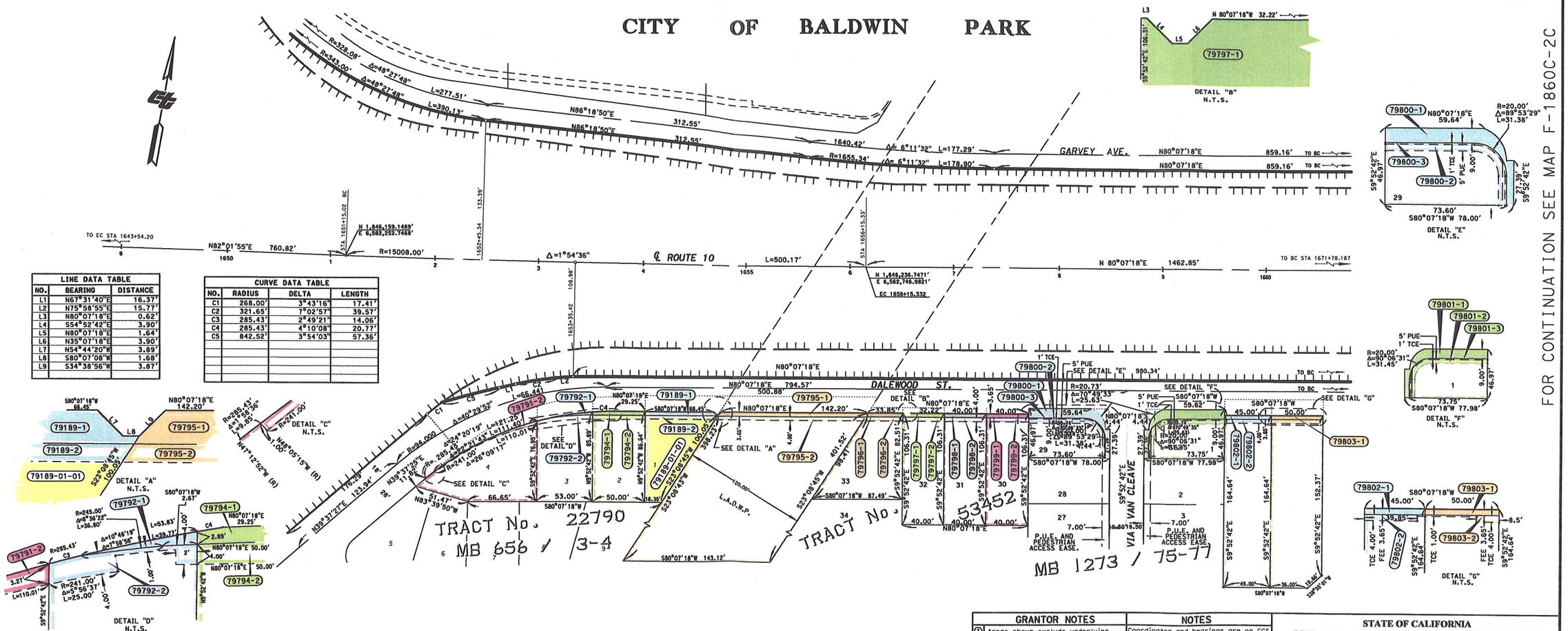
EXHIBIT 7-A

Right Of Way Appraisal and Right Of Way Maps

PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS	RECORDATION TYPE ③	DATE	DOC.# ④
79791-01	TCE	TORRICO	5,625	160			EXPIRE 10-1-2014		- -	
79792-01	F	GONZALES	4,361	54		4306			- -	
79792-02	TCE	GONZALES	4,361	128			EXPIRE 10-1-2014		- -	
79794-01	F	DIAZ	4,327	177		4150			- -	
79794-02	TCE	DIAZ	4,327	200			EXPIRE 10-1-2014		- -	
79795-01	F	L.A. CITY WATER & POWER	48,180	521		47659			- -	
79795-02	TCE	L.A. CITY WATER & POWER	48,180	572			EXPIRE 10-1-2014		- -	
79796-01	F	NGUYEN	5,006	128		4878			- -	
79796-02	TCE	NGUYEN	5,006	150			EXPIRE 10-1-2014		- -	
79797-01	F	RAMOS	4,240	134		4107			- -	
79797-02	TCE	RAMOS	4,240	160			EXPIRE 10-1-2014		- -	
79798-01	F	HERNANDEZ	4,253	146		4107			- -	
79798-02	TCE	HERNANDEZ	4,253	160			EXPIRE 10-1-2014		- -	
79799-01	F	DAU	4,253	146		4107			- -	
79799-02	TCE	DAU	4,253	160			EXPIRE 10-1-2014		- -	

NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

CITY OF BALDWIN PARK



LINE DATA TABLE		
NO.	BEARING	DISTANCE
L1	N67°31'40"E	16.37'
L2	N75°58'55"E	15.77'
L3	N80°07'18"E	0.62'
L4	S54°52'42"E	3.90'
L5	N80°07'18"E	1.64'
L6	N35°07'18"E	3.90'
L7	N54°44'20"W	3.89'
L8	S80°07'08"W	1.68'
L9	S34°38'56"W	3.87'

CURVE DATA TABLE			
NO.	RADIUS	DELTA	LENGTH
C1	268.00'	3°43'16"	17.41'
C2	321.65'	7°02'57"	39.57'
C3	285.43'	2°49'21"	14.06'
C4	285.43'	4°10'08"	20.77'
C5	842.52'	3°54'03"	57.36'

PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS
79800-1	F	GARCIA	3,503	795		2708	
79800-2	E	GARCIA	3,503	495			5' UTILITY EASEMENT
79800-3	TCE	GARCIA	3,503	102			EXPIRE 10-1-2014
79801-1	F	NGUYEN	3,502	788		2714	
79801-2	E	NGUYEN	3,502	496			5' UTILITY EASEMENT
79801-3	TCE	NGUYEN	3,502	102			EXPIRE 10-1-2014
79802-1	F	NIJJAR	7,409	164		7245	
79802-2	TCE	NIJJAR	7,409	165			EXPIRE 10-1-2014
79803-1	F	GROUP POMONA PROP LTD IV	8,146	182		7964	
79803-2	TCE	GROUP POMONA PROP LTD IV	8,146	75			EXPIRE 10-1-2014
79189-1	F	STATE OF CALIFORNIA	3846	250	3596		
79189-2	TCE	STATE OF CALIFORNIA	3846	276			EXPIRE 10-1-2014
-							
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-							

REVISIONS	BY	DATE
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REVISIONS	BY	DATE
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REVISIONS	BY	DATE
PARCELS 79802, 79803		5-9 -11
PARCELS 79802, 79803		05-17-11

REVISIONS	BY	DATE
TCE EXPIRE ON 10-1-2014	R. GAVER	04-18-11
PARCELS 79792, 79800	R. GAVER	04-18-11
PARCELS 79801, 79802	R. GAVER	04-18-11

PROJECT SUPERVISOR: OTTO JARQUIN
CALCULATED BY: R. GAVER DATE: 12-09-09
CHECKED BY: DATE: -

GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way.
Ac=acres
[ ] Indicates Underlying Fee (UF) Area
{ } Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 5. Distances and stationing are grid distances. Divide by 0.9999723 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

Access Prohibited
Access Superseded
Existing R/W Superseded
Access Opening (Private)
(R) Indicates Radial Bearing
Indicates Found Monument as noted
Indicates calculated point. (Does not imply monument set)
Title to State Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY APPRAISAL MAP
MAP NO. F-1860C-2C

FOR PREVIOUS R/W INFORMATION SEE MAP(S) F-1860,F-1860-2A

FEET 0 25 50 100 150

TO DESIGN: 4/26/10 EA(s): 24540 FA#:

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
07	LA	10	31.3	2	4

PARCEL#	TITLE CODE ②	GRANTOR/GRANTEE	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS	RECORDATION TYPE ③	DATE	DOC.# ④
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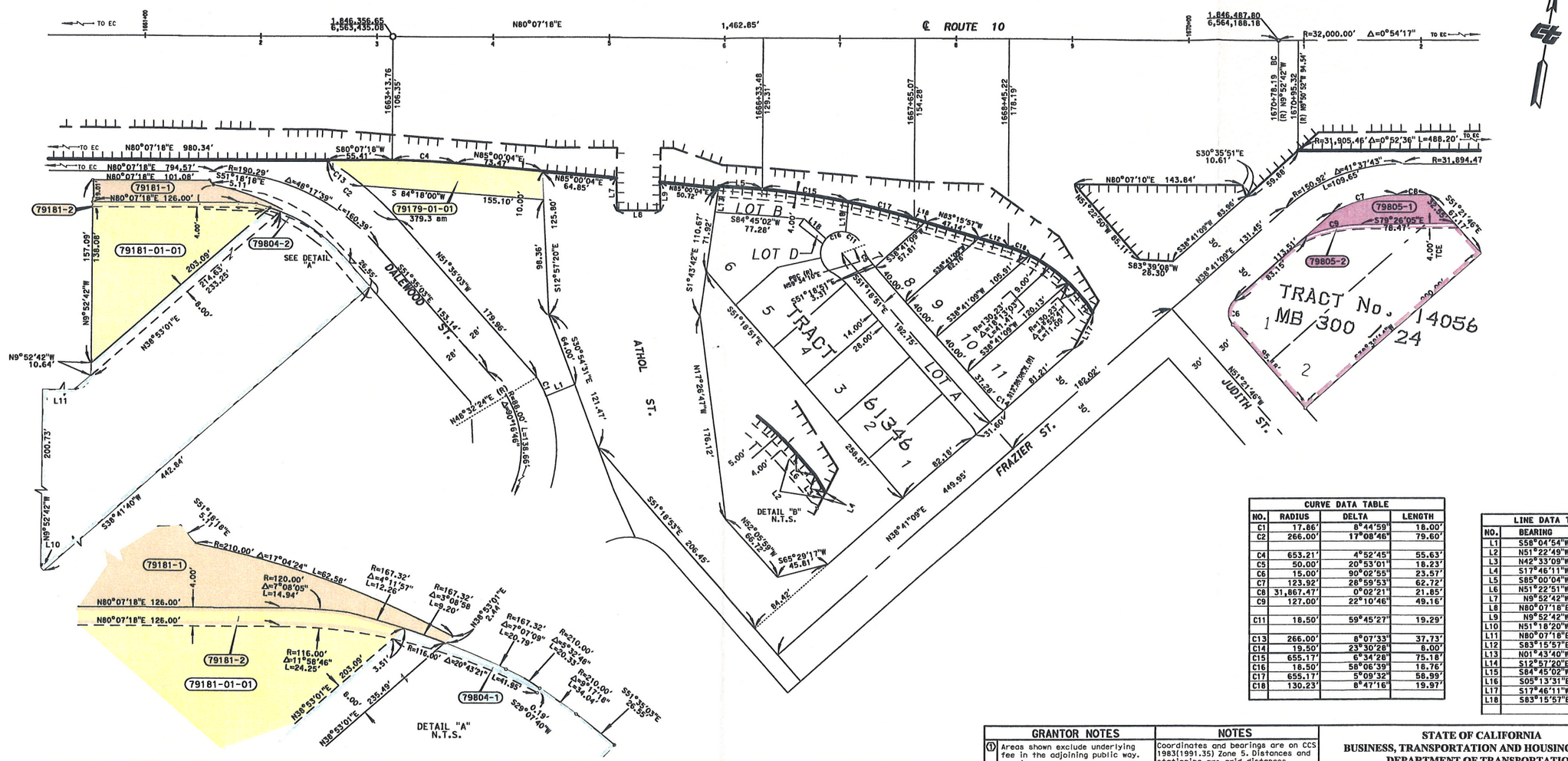
NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

CITY OF BALDWIN PARK



CURVE DATA TABLE NO.	RADIUS	DELTA	LENGTH
C1	17.86'	8°44'59"	18.00'
C2	266.00'	17°08'46"	79.60'
C4	653.21'	4°52'45"	55.63'
C5	50.00'	20°53'01"	18.23'
C6	15.00'	90°02'55"	23.57'
C7	123.92'	28°59'53"	62.72'
C8	31,867.47'	0°02'21"	21.85'
C9	127.00'	22°10'46"	49.16'
C11	18.50'	59°45'27"	19.29'
C13	266.00'	8°07'33"	37.73'
C14	19.50'	23°30'28"	8.00'
C15	655.17'	6°34'28"	75.18'
C16	18.50'	58°06'39"	18.76'
C17	655.17'	5°09'32"	58.99'
C18	130.23'	8°47'16"	19.97'

LINE DATA TABLE NO.	BEARING	DISTANCE
L1	S58°04'54"W	26.74'
L2	N51°22'49"W	22.69'
L3	N42°33'09"W	8.79'
L4	S17°46'11"W	2.84'
L5	S85°00'04"W	37.73'
L6	N51°22'51"W	13.00'
L7	N9°52'42"W	27.84'
L8	N80°07'18"E	38.00'
L9	N9°52'42"W	24.60'
L10	N51°18'20"W	3.23'
L11	N80°07'18"E	81.00'
L12	S83°15'57"E	26.29'
L13	N01°43'40"W	22.62'
L14	S12°57'20"E	27.44'
L15	S84°45'02"W	25.52'
L16	S05°13'31"E	25.81'
L17	S17°46'11"W	34.35'
L18	S83°15'57"E	10.21'

PARCEL#	TITLE CODE ②	GRANTOR/GRANTEE	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS	RECORDATION TYPE ③	DATE	DOC.# ④
79181-1	F	GROUP X PROPERTIES	13,283	2,452	10,831				- -	
79181-2	TCE	GROUP X PROPERTIES	13,283	601			EXPIRES 10-1-2014		- -	
79804-01	TCE	GROUP IX BP PROPERTIES	43,912	76			EXPIRES 10-1-2014		- -	
79805-01	F	VALENCIA	20,777	2,197		18580			- -	
79805-02	TCE	VALENCIA	20,777	541			EXPIRES 10-1-2014		- -	
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GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way.
Ac=acres
[ ] Indicates Underlying Fee (UF) Area
(Y) Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)
③ TYPE:
GD=Grant deed
ED=Easement deed
QC=Quitclaim
DD=Director's deed
DE=Director's easement deed
DK=Director's quitclaim deed
FOC=Final Order of Condemnation
HE=Highway easement deed
REL=Relinquishment
VAC=Vacation
JUA=Joint use agreement
CCUA=Consent to common use agreement
④ Document or Instrument number

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 5. Distances and stationing are grid distances. Divide by 0.9999723 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

- Access Prohibited
- Access Superseded
- Existing R/W Superseded
- Access Opening (Private)
- (R) Indicates Radial Bearing
- Indicates Found Monument as noted
- Indicates calculated point. (Does not imply monument set)
- Title to State
- Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY RECORD MAP MAP NO. F-1860C-3C

FOR PREVIOUS R/W INFORMATION SEE MAP(S) F-1860 and F1860-4A

FEET 0 25 50 100 150

TO DESIGN: 4/26/10 EA(s): 24540 FA#:

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
07	LA	10	31.5	3	4

BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY

DATE	REVISIONS	BY

PROJECT SUPERVISOR: OTTO JARQUIN
CALCULATED BY: R. GAVER DATE: 12-09-09
CHECKED BY: - DATE: -

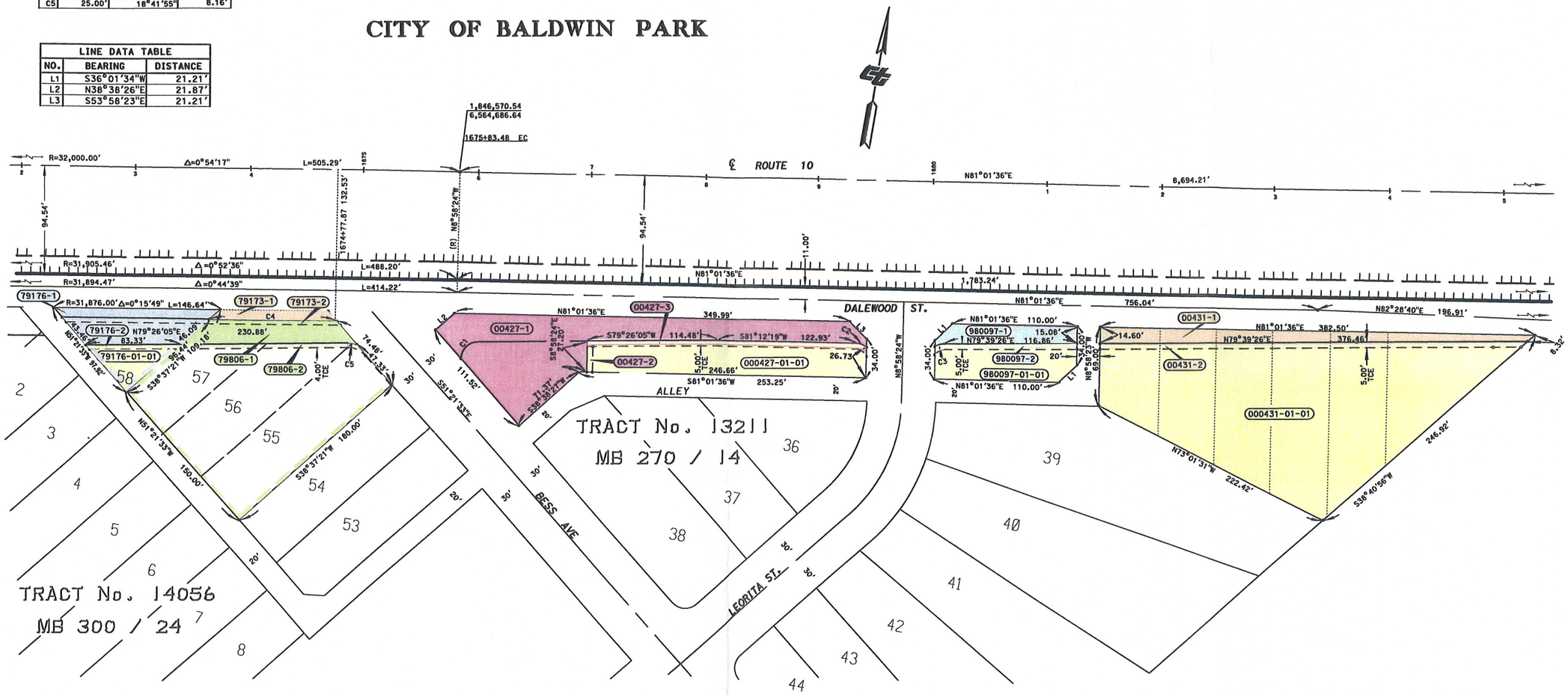
DATE	REVISIONS	BY
04-18-11	TCE EXPIRE ON 10-1-2014	R. GAVER

NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

CURVE DATA TABLE			
NO.	RADIUS	DELTA	LENGTH
C1	15.00'	88°43'40"	23.23'
C2	15.00'	38°22'10"	10.05'
C3	15.00'	33°18'03"	8.72'
C4	31,867.47'	0°12'09"	112.61'
C5	25.00'	18°41'55"	8.16'

LINE DATA TABLE		
NO.	BEARING	DISTANCE
L1	S36°01'34"W	21.21'
L2	N38°38'26"E	21.87'
L3	S53°58'23"E	21.21'

CITY OF BALDWIN PARK



PARCEL#	TITLE CODE ②	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED ① [UF]	EXCESS ① [UF]	REMAINDER	REMARKS
79176-1	F	STATE OF CALIFORNIA	5,354	3,636	1718		
79176-2	TCE	STATE OF CALIFORNIA	5,354	317			EXPIRES 10-1-2014
79806-1	F	SAN GABRIEL WATER CO.	23,848	2,751		21,097	
79806-2	TCE	SAN GABRIEL WATER CO.	23,848	669			EXPIRES 10-1-2014
00427-1	F	STATE OF CALIFORNIA	20,233	12,958	7,275		
00427-2	TCE	STATE OF CALIFORNIA	20,233	136			EXPIRES 10-1-2014
00427-3	TCE	STATE OF CALIFORNIA	20,233	1,240			EXPIRES 10-1-2014
980097-1	F	STATE OF CALIFORNIA	5,900	1,966	3,934		
980097-2	TCE	STATE OF CALIFORNIA	5,900	630			EXPIRES 10-1-2014
00431-1	F	STATE OF CALIFORNIA	38,709	3,820	34,889		
00431-2	TCE	STATE OF CALIFORNIA	38,709	1,868			EXPIRES 10-1-2014
-							
-							
-							
-							

GRANTOR NOTES

① Areas shown exclude underlying fee in the adjoining public way. Ac=acres
[ ] Indicates Underlying Fee (UF) Area
{Y} Indicates Indeterminate UF
② TITLE CODES:
A=Access Rights Only
F=Fee
E=Easement (Ease)
TCE=Temp Construction Ease
T=Other Temp Ease (see Remarks)
O=Other (see Remarks)

NOTES

Coordinates and bearings are on CCS 1983(1991.35) Zone 5. Distances and stationing are grid distances. Divide by 0.9999723 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

Access Prohibited
Access Superseded
Existing R/W Superseded
Access Opening (Private)
(R) Indicates Radial Bearing
Indicates Found Monument as noted
Indicates calculated point. (Does not imply monument set)
Title to State
Required for Others

STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY APPRAISAL MAP MAP NO. F-1860C-4C

FOR PREVIOUS R/W INFORMATION SEE MAP(S) F-1860 AND F-1860-6A

FEET 0 25 50 100 150

TO DESIGN: 4/26/10 EA(s): 24540 FA#:

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
07	LA	10	31.7	4	4

FOR CONTINUATION SEE MAP F-1860C-3C

PROJECT SUPERVISOR: OTTO JARQUIN
CALCULATED BY: R. GAVER DATE: 12-15-09
CHECKED BY: DATE: -

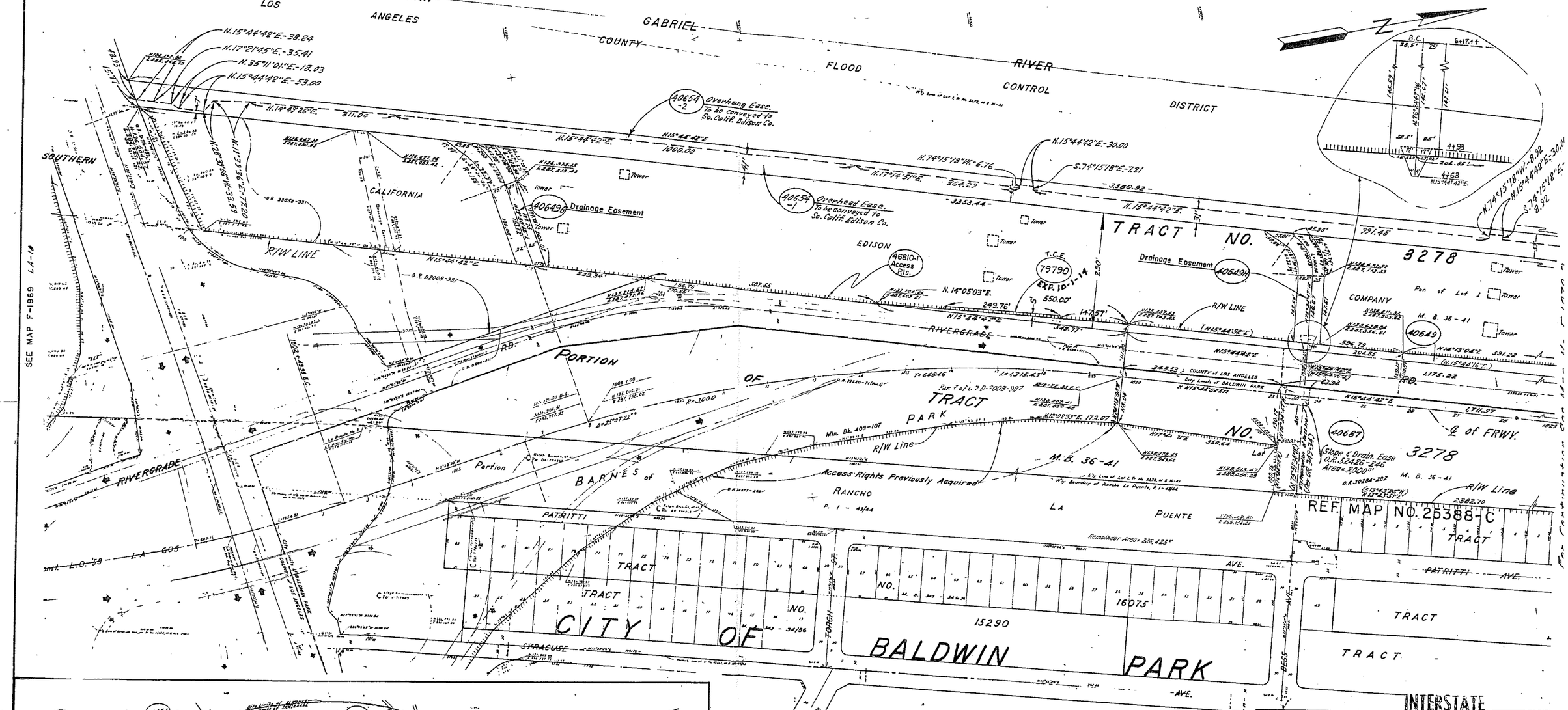
DATE	REVISIONS	BY
04-18-11	TCE EXPIRE ON 10-1-2014	R. GAVER

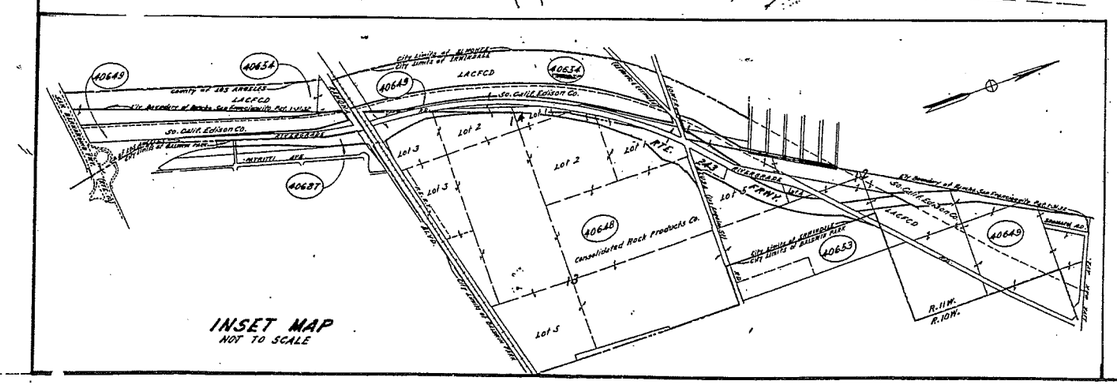
DATE	REVISIONS	BY

I-605-2(191) 139 3-7-69 3

DISTRICT R/W AGENT BUREAU OF PUBLIC ROADS DATE

COUNTY OF LOS ANGELES





PARCEL NO.	GRANTOR OR GRANTEE	AREA* TO BE ACQUIRED	EXCESS	TOTAL	INST	RECORDING DATA DATE	O.R.
40687	Assoc. So. Inv. Co. ✦	460,561		460,561	Fee	7-27-70	04783-636
40649	So. Cal. Edison Co.	122,911			Fee	8-29-02	2034404
40649G	So. Cal. Edison Co.	17,247			Ease	8-29-02	"
40649H	So. Cal. Edison Co.	13,860			Ease	8-29-02	"
40654-1	LACFCD	144,583		22.59 Ac.			
40654-2	LACFCD	96,898		22.59 Ac.	Ease		
79790	So. Cal. Edison Co.	1,248			TCE		

ISSUE DATE
3-20-75
2-28-78
4-26-10

STATE OF CALIFORNIA
BUSINESS & TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

R/W MAP

NO. F 1970-1 SHT 2 OF 7

07-LA-605-20.3

100 0 100

DATE 6-21-65

R.W.P.E. SCHNEIDER SR. FOLKINS

LEGEND: ACCESS DENIED ✦ EXCLUDES STREET AREA
* AREA IN SQUARE FEET UNLESS OTHERWISE NOTED
( ) PREVIOUS RECORD DATA

16133-C

EXHIBIT 7-B

Right Of Way Status

10-1.__ RIGHT OF WAY OBSTRUCTIONS

Attention is directed to the occupied improvements located within the right of way at:

79790	Work Around Parcel	9/1/2013
79791	Work Around Parcel	9/1/2012
79792	Work Around Parcel	9/1/2012
79794	Work Around Parcel	9/1/2012
79795	Work Around Parcel	9/1/2012
79796	Work Around Parcel	9/1/2012
79797	Work Around Parcel	9/1/2012
79798	Work Around Parcel	9/1/2012
79799	Work Around Parcel	9/1/2012
79800	Work Around Parcel	9/1/2012
79801	Work Around Parcel	9/1/2012
79802	Work Around Parcel	9/1/2012
79803	Work Around Parcel	9/1/2013
79804	Work Around Parcel	9/1/2013
79805	Work Around Parcel	9/1/2013
79806	Work Around Parcel	9/1/2012
79808	Work Around Parcel	9/1/2013

It is anticipated that the State will have legal possession and control of these Parcels by September 1st. 2013. If control is obtained sooner, the Engineer will release the work-around parcel by notifying the Contractor in writing that the State has legal right and possession of the required right of way.

The Contractor shall take no action that will result in unnecessary inconvenience, disproportionate injury or any action coercive in nature to the occupants of these improvements who have not yet moved from the improvements.

In the event that the improvements in the right of way secured for the project mentioned on the parcel above are not removed by the date specified and, if in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of the improvements not being removed by the date specified, the State will compensate the Contractor for the delays to the extent provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

EXHIBIT 8-A

Log Of test Borings

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

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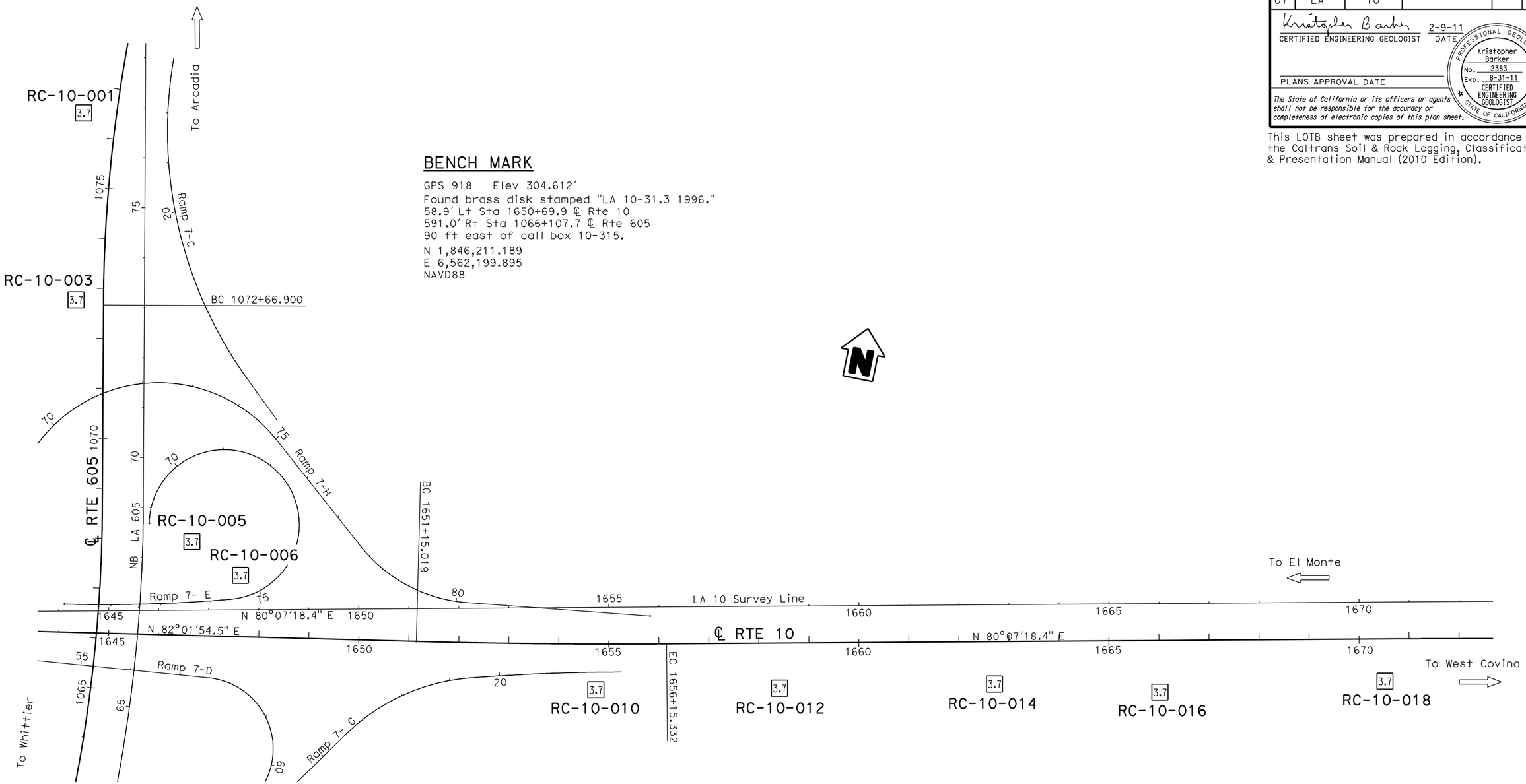
BENCH MARK

GPS 918 Elev 304.612′
Found brass disk stamped "LA 10-31.3 1996."
58.9′ Lt Sta 1650+69.9 ℄ Rte 10
591.0′ Rt Sta 1066+107.7 ℄ Rte 605
90 ft east of call box 10-315.

N 1,846,211.189
E 6,562,199.895
NAVD88



PLAN
1" = 100′

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	SOUTH 605 TO EAST 10 CONNECTOR
FUNCTIONAL SUPERVISOR	DRAWN BY: I.G-Remmen, 2/2011	FIELD INVESTIGATION BY:	DESIGN BRANCH X	POST MILE 31.3/32.3	LOG OF TEST BORINGS 1 OF 7
NAME: S. Sukiasian	CHECKED BY: M. Ahmed	K. Barker			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311 CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
02-02-11	02-07-11			X	X

FILE => 605to10conn1of7.dgn

USERNAME => s131071 DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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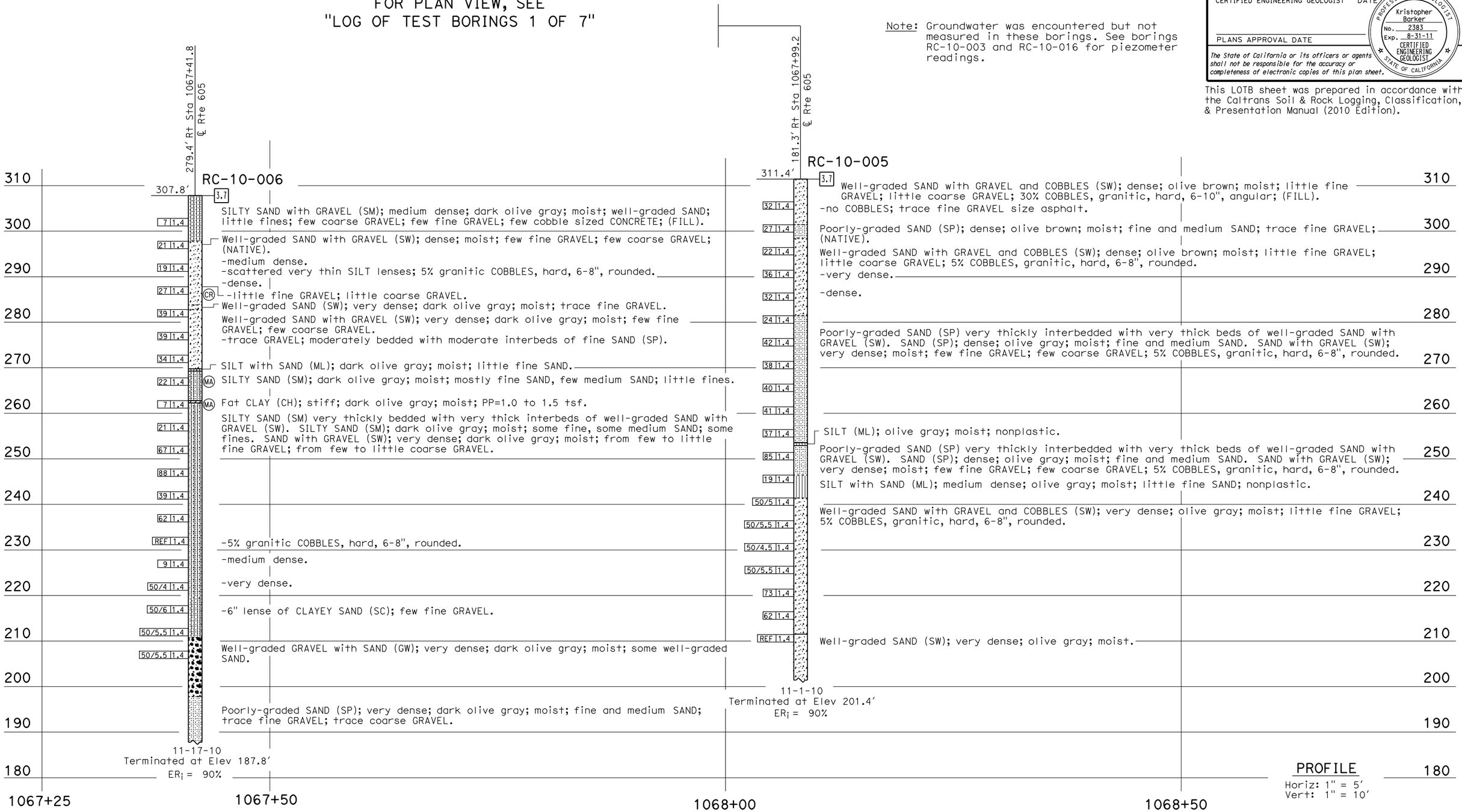
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 7"

Note: Groundwater was encountered but not measured in these borings. See borings RC-10-003 and RC-10-016 for piezometer readings.



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X	BRIDGE NO. / POST MILE 31.3/32.3	SOUTH 605 TO EAST 10 CONNECTOR LOG OF TEST BORINGS 2 OF 7
FUNCTIONAL SUPERVISOR NAME: S. Sukiasian	DRAWN BY: C. Christian, I.G-Remmen 2/2011 CHECKED BY: M. Ahmed	FIELD INVESTIGATION BY: K. Barker			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311 CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES ~~02-02-11~~ 02-07-11 SHEET X OF X

FILE => 605to10conn2of7.dgn

USERNAME => s131071 DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

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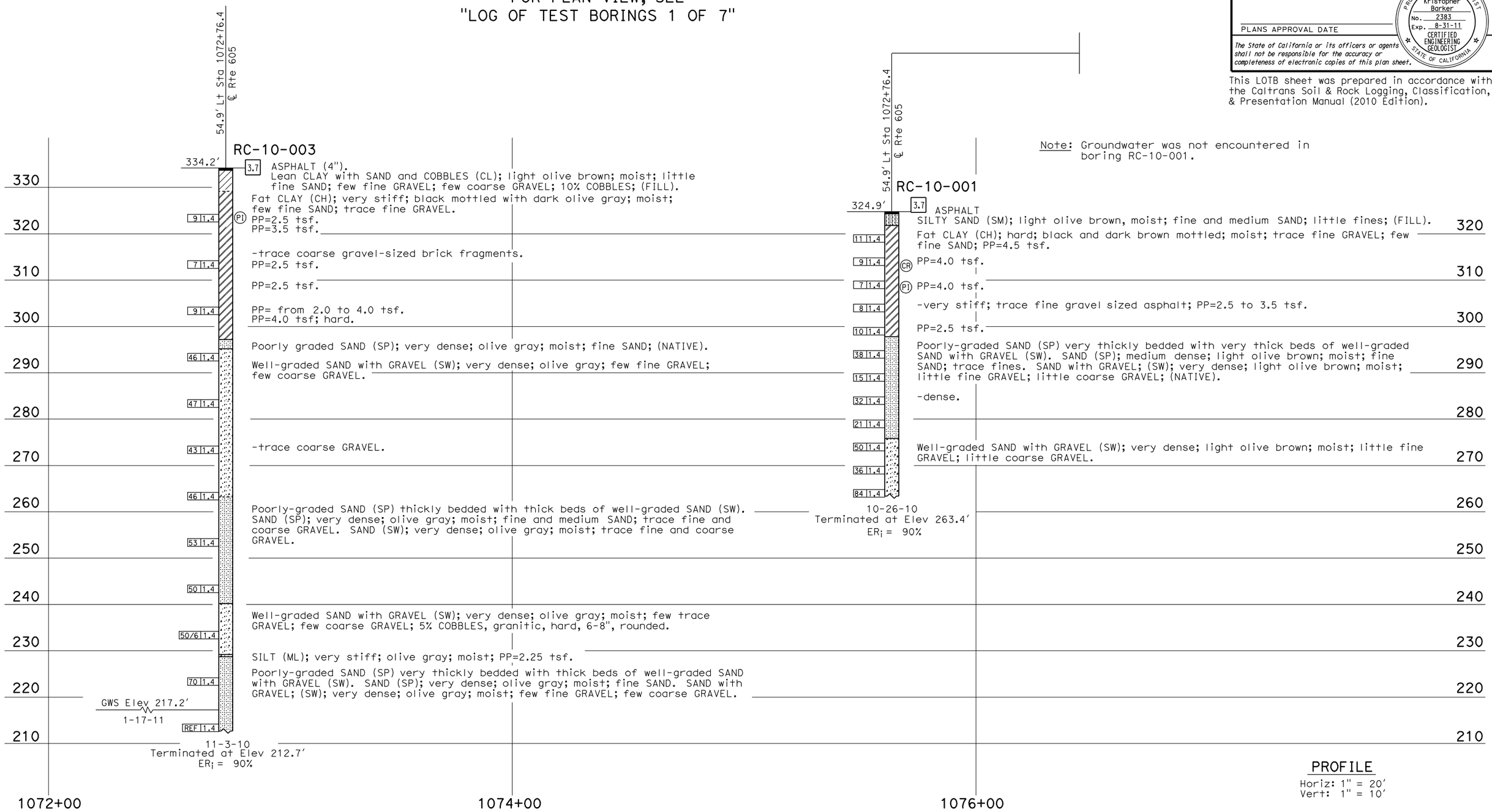
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 7"



Note: Groundwater was not encountered in boring RC-10-001.

PROFILE
Horiz: 1" = 20'
Vert: 1" = 10'

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X	BRIDGE NO. / POST MILE 31.3/32.3	SOUTH 605 TO EAST 10 CONNECTOR LOG OF TEST BORINGS 3 OF 7
FUNCTIONAL SUPERVISOR NAME: S. Sukiasian	DRAWN BY: C. Christian, I.G-Remmen, 2/2011 CHECKED BY: M. Ahmed	FIELD INVESTIGATION BY: K. Barker			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311 CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
02-02-11	02-07-11			X	X

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USERNAME => s13107l DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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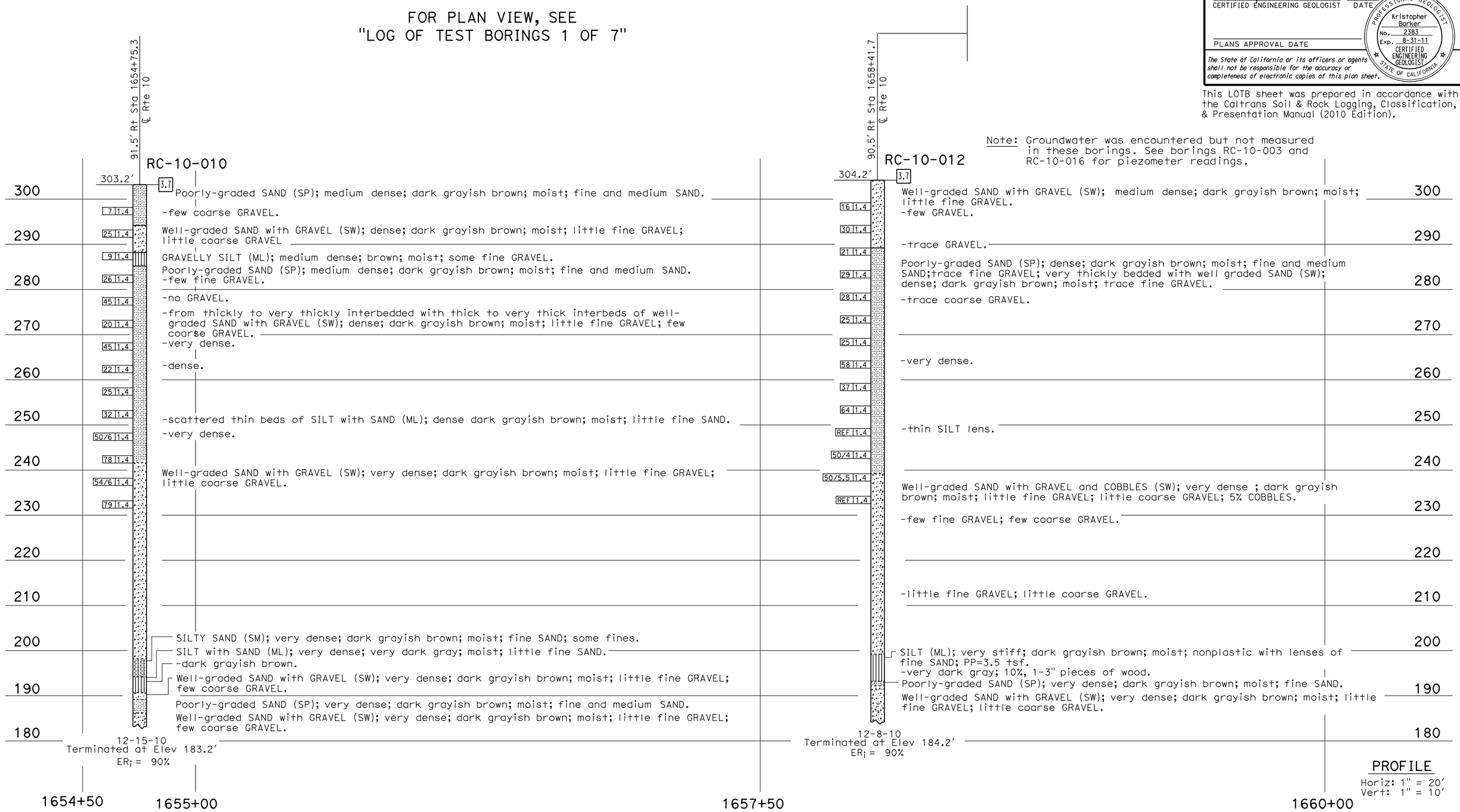
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 7"



Note: Groundwater was encountered but not measured in these borings. See borings RC-10-003 and RC-10-016 for piezometer readings.

PROFILE
Horiz: 1" = 20'
Vert: 1" = 10'

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X	BRIDGE NO. / POST MILE 31.3/32.3	SOUTH 605 TO EAST 10 CONNECTOR LOG OF TEST BORINGS 4 OF 7
FUNCTIONAL SUPERVISOR NAME: S. Sukiasian	DRAWN BY: C. Christian, I.G-Remmen 2/2011 CHECKED BY: M. Ahmed	FIELD INVESTIGATION BY: K. Barker			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311 CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES → 02-02-11 02-07-11

REVISION DATES			SHEET	OF
02-02-11	02-07-11		X	X

FILE => 605to10conn4of7.dgn

USERNAME => s131071 DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

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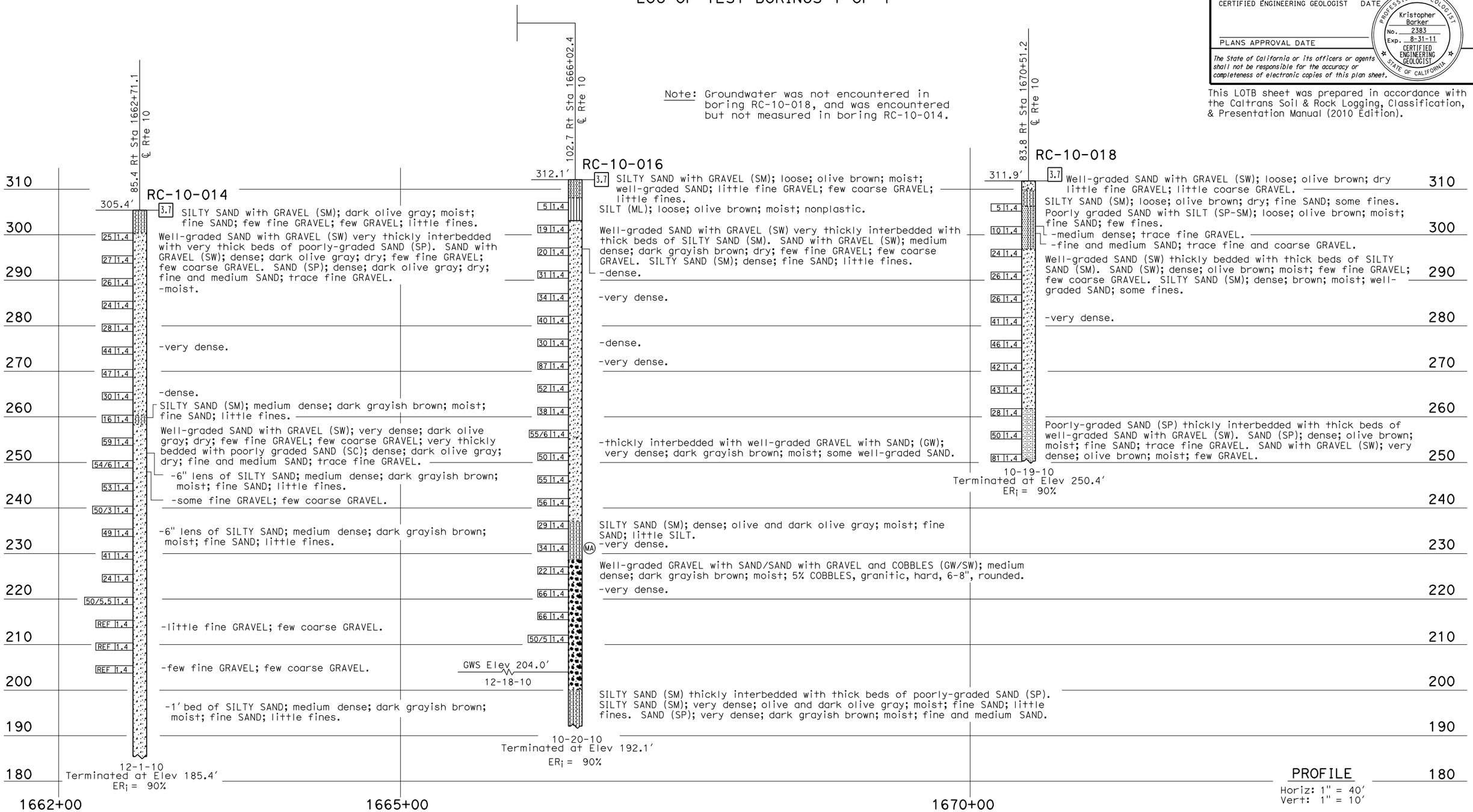
FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 7"

Note: Groundwater was not encountered in boring RC-10-018, and was encountered but not measured in boring RC-10-014.



ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X	BRIDGE NO. / POST MILE 31.3/32.3	SOUTH 605 TO EAST 10 CONNECTOR LOG OF TEST BORINGS 5 OF 7
FUNCTIONAL SUPERVISOR NAME: S. Sukiasian	DRAWN BY: C. Christian, I.G-Remmen 2/2011 CHECKED BY: M. Ahmed	FIELD INVESTIGATION BY: K. Barker			

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311 CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES ~~02-02-11~~ 02-07-11 SHEET X OF X

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USERNAME => s131071 DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:22

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

PLANS APPROVAL DATE

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REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

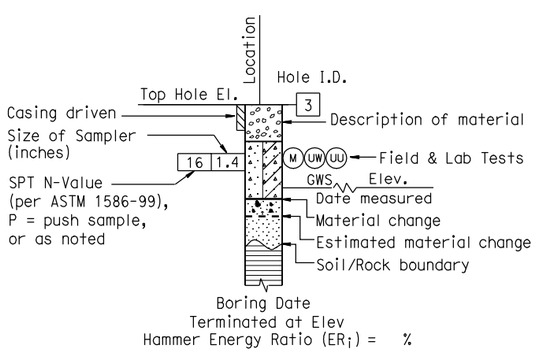
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R RW RC P	Rotary drilled boring (conventional) Rotary drilled with self-casing wire-line Rotary core with continuously-sampled, self-casing wire-line Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
[ ]	O	Other (note on LOTB)

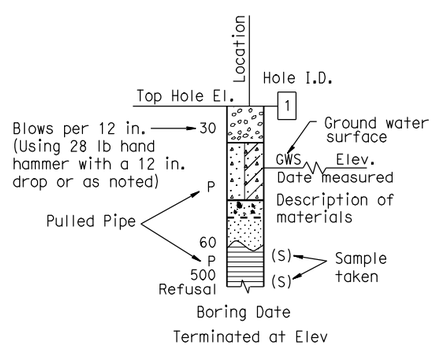
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

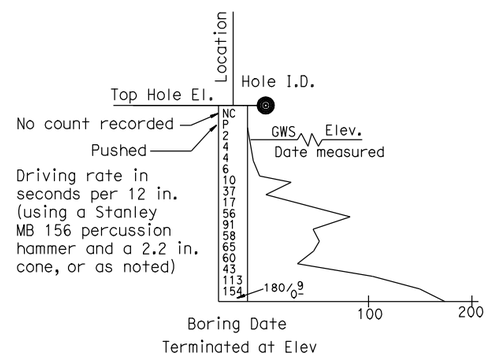
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



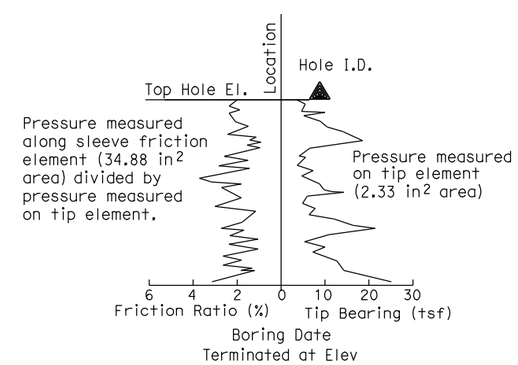
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X	BRIDGE NO. / POST MILE 31.3/32.3	SOUTH 605 TO EAST 10 CONNECTOR LOG OF TEST BORINGS 6 OF 7
	PREPARED BY: I.G-Remmen, 2/2011				

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311 CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES | SHEET X | OF X

FILE => 605to10conn6of7.dgn

USERNAME => s131071 DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:23

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10			

Kristopher Barker 2-9-11
CERTIFIED ENGINEERING GEOLOGIST DATE

PROFESSIONAL GEOLOGIST Kristopher Barker No. 2383 Exp. 8-31-11 CERTIFIED ENGINEERING GEOLOGIST STATE OF CALIFORNIA

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GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

ENGINEERING SERVICES

GEOTECHNICAL SERVICES

PREPARED BY: I.G-Remmen, 2/2011

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN DESIGN BRANCH X

BRIDGE NO.

POST MILE 31.3/32.3

SOUTH 605 TO EAST 10 CONNECTOR
LOG OF TEST BORINGS 7 OF 7

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 07000004311
CONTRACT NO.: 07-245401

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES | SHEET X | OF X

FILE => 605to10conn7of7.dgn

USERNAME => s131071 DATE PLOTTED => 11-MAR-2011 TIME PLOTTED => 11:23

EXHIBIT 11-A

Fact Sheet Exception to Mandatory Design Standards

07-LA-10 KP 50.1/51.9 (PM 31.1/32.3)
07-LA-605 KP R32.5/33.1 (PM R20.2/20.6)
07186-24540K
HB 4N Program
Cost: $ 55,000,000
August 2006

Fact Sheet
Exceptions To Mandatory Design Standards

Prepared By:

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Project Engineer

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1. PROPOSED PROJECT

A. Project Description

The weaving conflict on a joint segment, I-605 KP R32.5 (PM R20.2), of westbound (W/B) I-10 to southbound (S/B) I-605- and S/B I-605 to eastbound (E/B) I-10 connectors (see Exhibit 2, L-3) have resulted in queuing on the outer lane of the W/B I-10 and weaving related accidents. The proposed elevated direct connector (S/B I-605 to E/B I-10) would replace the existing S/B I-605 to E/B I-10 at-grade ramp and result in the elimination of the weaving conflict. The benefits of the proposed fly-over connector (S/B I-605 to E/B I-10) are that it will provide a direct connection between freeways (I-10 and I-605); eliminate weave movements on this joint segment; reduce the queuing of westbound traffic on I-10; provide for improved goods movement; and enhance the safety and operation of I-10 & I-605 interchange.

It is anticipated that the primary source of funding of the project will be determined by MTA through its call for project process and programmed as HB4N.

B. Existing Highway

The limits of the project are within the vicinity of the I-10 & I-605 Interchange, and both routes are part of the Interstate subset of the National Highway System (NHS) and the Rural and Single Urban Interstate Routing System. A project to add HOV lanes to the I-10 is now in the PS&E phase; after the completion of that project the existing E/B I-10 mainline, just east of the interchange, will consist of a 3.6 m HOV lane with a 0.6 m buffer, four 3.6 m mixed flow lanes, and two 3.6 m auxiliary lanes with nonstandard 2.4 m left shoulder and 3.0 m right shoulder. The existing W/B I-10 mainline, just east of the interchange, will consist of a 3.6 m HOV lane with a 0.6 m buffer, four 3.6 m mixed flow lanes, and one 3.6 m auxiliary lanes with nonstandard 2.4 m left shoulder and 3.0 m right shoulder. The I-10 HOV project (assuming it is built) will be used as a baseline to identify nonstandard features related to the proposed improvements.

The San Gabriel River Freeway (I-605) is a major route that provides access to the San Gabriel Valley and the City of Long Beach. It functions as a major collector distributor route feeding Routes 91, 405, 10, 60, 210, and 105. The existing HOV lanes along I-605 have greatly improved the efficiency of the route. The existing S/B I-605 mainline, within the limits of the interchange, consists of three 3.3-3.6 m mixed flow lanes and one 3.3-3.6 m HOV lane with 0.9 m left shoulder and 3.0 m right shoulder. The existing N/B 605 mainline, within the limits of the interchange, consists of three 3.3-3.6 m mixed flow lanes with 2.7-4.6 m left shoulder and 3.0 m right shoulder.

The existing W/B I-10 to S/B I-605 connector has two 3.6 m lanes with 0.6-0.8 m left and right shoulders. The existing S/B I-605 to E/B I-10 connector contains a 3.6 m lane with type B-2 curbs. These two connectors join together at a tangent segment 98 m in length, which contains three 3.6 m lanes and 0.6-0.8 m left and right shoulders. The existing directional connector (N/B I-605 to E/B I-10) contains two 3.6 m lanes with 0.6-1.5 m

left shoulder and 2.4-3.0 m right shoulder. An on-going HOV lane project proposes to realign the existing E/B I-10 to N/B I-605 loop connector to consist of a 1.5 m left shoulder with a concrete barrier (type 736B), a 3.0 m right shoulder, and a 5.3 m lane. The routes within the project limits traverse flat terrain with an average grade of 3.0% on I-10 and 2.5% on I-605.

C. Safety Improvements

The proposed elevated connector (S/B I-605 to E/B I-10) will replace the at-grade connector ramp of the joint weaving segment. It will completely eliminate the weaving conflicts on the joint segment, and reduce the merging movements into the N/B I-605 to E/B I-10 connector.
As a result of the reduction of the queuing on the mainlines I-10 & I-605, it will enhance the operation and safety of the following segments:

- W/B I-10 mainline before the interchange
- W/B I-10 to S/B I-605 connector
- S/B I-605 to E/B I-10 connector
- N/B I-605 to E/B I-10 connector
- N/B I-605 mainline before the interchange
- S/B I-605 mainline before the interchange

The proposed S/B I-605 to E/B I-10 connector standard shoulder width (1.5 m left shoulder and 3.0 m right shoulder) with concrete barrier (type 732) not only improves the existing non-standard shoulder width but also provides standard "concrete barrier". The proposed Stopping Sight Distance (SSD) on the S/B I-605 to E/B I-10 connector is upgraded to provide a 105 m SSD for a design speed of 72 km/h, which would enhance the safety and operation of this connector as well.

D. Total cost for project

The total cost for this project is estimated to be $ 55,000,000. The following table illustrates the components of the total cost.

DESCRIPTION	COST
ROADWAY	$ 12,800,000
STRUCTURES	$ 39,000,000
RIGHT-OF-WAY	$ 3,200,000
TOTAL COST	**$ 55,000,000**

2. FEATURES REQUIRING A DESIGN EXCEPTION

Nonstandard # 1

A. Nonstandard Features (M 1)

E/B & W/B I-10 mainline (A)				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
302.1 309.1(3)(a), & Table302.1	Left Shoulder Width & Min. Horizontal Clearances (E/B and W/B)			
	Sta.501+00 – Sta.502+30	2.4 m *	2.4 m	3.0 m
	Sta.502+30 – Sta.502+90	2.4 m *	1.3-2.4 m	3.0 m
	Sta.502+90 – Sta.514+00	2.4 m *	2.4 m	3.0 m

* Conditions after the completion of the HOV project

N/B I-605 mainline (B)				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
302.1 309.1(3)(a), & Table302.1	Left Shoulder Width & Min. Horizontal Clearances			
	Sta.324+00 – Sta325+57	2.4 m	2.4 m	3.0 m
	Sta.325+57 – Sta.325+78.6	2.4-2.5 m	2.4-2.5 m	3.0 m
	Sta.325+78.6 – Sta.326+57.4	2.5-2.7 m	0.7-2.7 m	3.0 m
	Sta.326+57.4 – Sta.327+46	2.7-3.0 m	2.7-3.0 m	3.0 m

S/B I-605 mainline (C)				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
302.1 309.1(3)(a), & Table302.1	Left Shoulder Width & Min. Horizontal Clearances Sta.323+60 – Sta.333+25	0-0.5 m	0-0.5 m	3.0 m

B. Standard for which exception is requested

Shoulder Width

(HDM Index 302.1), "*Width. – The shoulder widths given in Table 302.1 shall be the minimum continuous usable width of paved shoulder.*" *(See above table for value of standard.)*

Minimum Horizontal Clearances

(HDM 309.1(3)(a)), "minimum Clearances. – The minimum horizontal clearances to fixed objects, such as bridge rails and safety-shaped concrete barriers, on all freeway and expressway facilities, including auxiliary lanes, ramps, and collector roads, shall be equal to the standard shoulder width of the highway facility as stated in Table 302.1" *(See above table for value of standard.)*

C. Reason for exception

The variable 1.3-2.4 m inside shoulders of I-10 mainline between Sta. 502+30 and 502+90 are requested for the proposed bridge column located at the centerline of I-10 at Sta. 502+60. The variable 0.7-2.7 m left shoulder widths of N/B I-605 mainline between Sta. 325+78.6 and 326+57.4 are requested for the proposed bridge column located at the left shoulder of the N/B I-605 Sta. 326+18.

To make inside shoulders standard for existing nonstandard shoulders beyond the new column (I-605 Sta. 324+00 – 327+46) would require the widening of the existing roadway and I-10/605 separation. As a result, it would decrease the curve radii of the existing N/B I-605 to W/B I-10 loop connector and have a negative impact to the safety and operation of the ramp.

To make nonstandard inside shoulders standard in the portion beyond the new column (I-10 Sta. 501+00 – 514+00) would require roadway and bridge widening, which includes realignments of the E/B I-10 to N/B I-605- and N/B I-605 to W/B I-10 loop connectors and the N/B I-605 to E/B I-10 directional connector. To maintain the continuity of the nonstandard 2.4 m inside shoulders to the west (Baldwin Avenue) and to the east (Puente Avenue (assuming the I-10 HOV project is built), nonstandard 2.4 m inside shoulders within project limits would need to be retained.

These realignments would have impacts as follows:

- Decrease curve radii of E/B I-10 to N/B I-605- and N/B I-605 to W/B I-10 loop connectors
- Require additional right-of-way from adjacent frontage roads (the Dalewood Street)
- The replacement of the I-10/605 Separation, which would result in adverse impacts to the existing operation during the construction and increase the project cost.

The nonstandard shoulder widths at mentioned locations would not reduce existing sight distances on mainlines (I-10 & I-605). Accidents within limits of the project were primarily congestion-related and not directly related to nonstandard shoulder widths. This project will enhance the overall safety and operation of this interchange and reduce congestion-related and weaving related accidents as well.

D. Added costs to make standard

To provide standard left shoulders at locations shown in the above table would require widening roadways (I-10 & I-605), bridge widening (I-605), and the acquisition of additional right-of-way on I-10. The additional cost to make it standard is estimated at $ 21 million for the segment on I-10 and $ 7.8 million for the segment on I-605.

Estimated Additional Construction Cost

I-10 mainline	
Roadway Items	$ 4,500,000
Structure Items	$ 6,500,000
Right of Way	$ 10,000,000
Total Construction Cost	$ 21,000,000

I-605 mainline	
Roadway Items	$ 2,800,000
Structure Items	$ 5,000,000
Right of Way	$ 0
Total Construction Cost	$ 7,800,000

<u>Nonstandard # 2</u>

A. Nonstandard Features (M 2)

W/B Dalewood Street S/O I-10				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
309.1(3)(C)	<u>Minimum Horizontal Clearance</u>			
	Rt. of I-10 Sta.504+48-504+72	2.44 m *	0–1.2 m	1.2 m
	Rt. of I-10 Sta.505+18-505+42	2.44 m *	0–1.2 m	1.2 m
	Rt. of I-10 Sta.505+88-506+12	2.44 m *	0–1.2 m	1.2 m

* Condition after the completion of the HOV project

B. Standard for which exception is requested

<u>Minimum Clearances</u>

(HDM Index 309.1(3)(C), *"Minimum Clearances. – On two-lane highways, frontage roads, city streets and county roads (all without curbs), the minimum horizontal clearance shall be the standard shoulder width as listed in Tables 302.1 and 307.2, except that a minimum clearance of 1.2 m shall be provided where the standard shoulder width is less than 1.2 m." (See above table for value of standard)*

C. Reason for exception

Due to proposed columns spaced at 70 m along the right shoulder of W/B Dalewood Street, providing the standard minimum clearance of 1.2 m throughout the Dalewood Street (Sta.504+48 - 506+12) will require the acquisition of additional right-of-way, which impacts local residences and increases the project cost. Also, Dalewood Street is a minor street with a speed limit of 25 mph, providing access for the local residential area. To balance needs for the context of this project and the local community, the installation of concrete barrier (10:1 taper ratio) or a metal beam guard railing to shield proposed columns will be a cost effective measurement to eliminate the right-of-way acquisition and enhance the safety of this segment.

D. Added costs to make standard

To provide a minimum horizontal clearance of 1.2 m throughout the Dalewood Street (Sta.504+48 – 506+12) would require additional right-of-way from properties adjoining the street. The additional cost to make it standard is estimated at $ 4.65 million.

Estimated Additional Construction Cost

Roadway Items	$ 650,000
Structure Items	$ 0
Right of Way	$ 4,000,000
Total Construction Cost	$ 4,650,000

Nonstandard # 3

A. Nonstandard Features (M 3)

E/B I-10 mainline ("freeway-to-freeway" and "local" interchanges)				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
(A) 501.3 DIB 77	Spacing I-10/605 Interchange to Athol St. OC Sta. 501+32–507+57	0.6 km±*	0.6 km±	3.0 km
	Weaving Length N/B I-605 to E/B I-10 Connector entering E/B I-10 to Judith-Frazier St. off-ramp Sta. 503+65–507+70	405 m *	405 m	1500 m
(B) 501.3 DIB 77	Spacing I-10/605 Interchange to Baldwin Park Blvd. OC Sta. 501+32–518+50	1.8 km±*	1.8 km±	3.0 km
	Weaving Length N/B I-605 to E/B I-10 Connector entering E/B I-10 to Baldwin Park Blvd. off-ramp connecting to Dalewood St. Sta. 503+65–517+20	1355 m *		1500 m
	S/B I-605 to E/B I-10 new connector entering E/B I-10 to Baldwin Park Blvd. off-ramp connecting to Dalewood St. Sta. 511+22–517+20		598 m	1500 m
(C) 501.3 DIB 77	Spacing I-10/605 Interchange to Francisquito Ave. UC Sta. 501+32–525+69	2.4 km±*	2.4 km±	3.0 km

* Condition after the completion of the HOV project

S/B I-605 mainline				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
(D) 501.3 DIB 77	Spacing I-10/605 Interchange to Ramona Blvd. OC Sta. 324+95–339+20 Weaving Length Ramona on-ramp entering S/B 605 to S/B 605 to E/B / W/B 10 connector Sta. 331+32–336+35	1.4 km± 580 m	1.4 km± 503 m	3.0 km 1500 m

B. Standard for which exception is requested

Spacing

(HDM Index 501.3), *"The minimum interchange spacing shall be 1.5 km in urban areas, 3.0 km in rural areas, and 3.0 km between freeway-to-freeway interchanges and local street interchanges." See above table for standard spacing distances.*

Weaving length

DIB 77 also says weaving length shall be 600m between local interchanges and 1.5 km between freeway-to-freeway and local interchanges. See above table for standard weaving distances.

C. Reason for exception

Providing the standard minimum interchange spacing for E/B I-10 from I-10/605 Interchange to the Francisquito Ave. UC would eliminate access points at following interchanges:

- Judith-Frazier St. off-ramp (E/B I-10)
- Baldwin Park Blvd. on/off- ramps (W/B I-10) & Baldwin Park Blvd. off-ramp connecting to Dalewood St. (E/B I-10)
- Dalewood St. off-ramp connecting to Francisquito Ave. (E/B I-10) & Garvey Ave. W/B on/off- ramps connecting Francisquito Ave. (W/B I-10)

The closure of mentioned on/off- ramps would result in the reduction of freeway access for public transportation system (Foothill Transit Bus Lines & MTA Bus Lines). Redirecting local traffic to the alternative access at Puente Ave. would result in substantial delay on service streets due to much longer travel distances and create a congestion problem on Puente Avenue due to concentrating traffic volumes. Local businesses (UPS distribution Center, In/Out Burger Distribution Center, Wal-Mart, etc.) within this area would be impacted due to the closure of nearby access to the I-10 freeway.

To reduce the delay time and improve the operation of local streets would require:

- Operational improvements for collector roads (Dalewood St., Frazier St., Athol St., etc.) and arterial roads (Baldwin Park Blvd., Francisquito Ave., Amar Road, & Puente Ave.)
- The modification of the Puente interchange to accommodate additional traffic volumes from adjacent service streets

To make space standard between freeway-to-freeway interchange and local interchanges within project limits would require closure of the Athol St. OC, Baldwin Park Blvd. OC, and Francisquito Ave. UC, which would have a negative impact to the freeway operation and safety due to the increased traffic volume at the Puente Avenue on/off- ramps (I-10).

To make the interchange spacing and weaving length standard between I-10/605 interchange and Ramona Blvd. OC would result in the elimination of the access point at Ramona Blvd. interchange. The closure of these ramps would direct more traffic to nearby collector streets (Cogswell Rd., Durfee Ave., Merced Rd., Francisquito Ave.) and congest the arterial streets (Ramona Blvd., Baldwin Park Blvd., Peck Rd.) during peak commute hours, which would have adverse impacts to the existing traffic patterns.

Retaining these local interchanges will benefit local businesses and residents with quick access to the freeway and have no negative impacts to the operation of the I-10 & I-605 mainline. The new connector (S/B I-605 to E/B I-10) will eliminate two conflict areas (joint segment of W/B I-10 to S/B I-605 & S/B I-605 to E/B I-10 – connectors and S/B I-605 to E/B I-10 connector merging into N/B I-605 to E/B I-10 connector), which would alleviate weaving movements on E/B I-10 mainlines within project limits and reduce accidents on I-10 mainlines and connectors within the I-10/605 interchange.

Based upon the Traffic Analysis Report (see exhibit 5), the proposed project would not improve LOS of segments within the project limits. Assuming the construction of the I-10 HOV project is completed, the Level of Service (LOS) for the new weaving segment (from the S/B I-605 to E/B I-10 connector merging into the E/B I-10 mainline to the Baldwin Blvd. off-ramp) and the I-10 E/B mainline will be E and D, respectively. However, the LOS for mentioned segments will be higher than the current condition.

To achieve higher LOS for the new weaving segment would require the additional 900 m in length to meet the standard requirement. As a result, it would require the closure of the Baldwin Blvd. interchange, which would have similar impacts to making interchange spacing standard.

D. Added costs to make standard

To provide the standard interchange spacing within the project limits would require the closure of following access points:

- Judith-Frazier St. off-ramp (E/B I-10)
- Baldwin Park Blvd. on/off- ramps (W/B I-10) & Baldwin Park Blvd. off-ramp connecting to Dalewood St. (E/B I-10)

- Dalewood St. off-ramp connecting to Francisquito Ave. (E/B I-10) & Garvey Ave. W/B on/off- ramps connecting to Francisquito Ave. (W/B I-10)
- Ramona Blvd. on/off- ramps (I-605)

Modification to the Puente Ave. interchange would be required to accommodate the additional traffic and improve operation at this location.
The closure of mentioned access points would require the removal of existing roadways and/or structures and landscaping. The operational improvement for the Puente Ave. interchange would require roadway and structure work. The added cost to make it standard is estimated at $ 0.54 million, $ 1.15 million, & 0.85 million, $ 6.4 million, and $ 1.1 million, respectively, totaling $ 10.04 million.

Estimated Additional Construction Cost

E/B I-10 @ Judith-Frazier St. off-ramp	
Roadway Items	$ 540,000
Structure Items	$ 0
Right of Way	$ 0
Total Construction Cost	$ 540,000

E/B I-10 @ Baldwin Park Blvd. on/off- ramps	
Roadway Items	$ 1,150,000
Structure Items	$ 0
Right of Way	$ 0
Total Construction Cost	$ 1,150,000

E/B I-10 @ Dalewood St off-ramp & Garvey Ave. on/off- ramps	
Roadway Items	$ 850,000
Structure Items	$ 0
Right of Way	$ 0
Total Construction Cost	$ 850,000

E/B I-10 @ the Puente Interchange	
Roadway Items	$ 1,200,000
Structure Items	$ 0
Right of Way	$ 5,200,000
Total Construction Cost	$ 6,400,000

S/B I-605 @ Ramona Blvd. on/off- ramps	
Roadway Items	$ 1,100,000
Structure Items	$ 0
Right of Way	$ 0
Total Construction Cost	$ 1,100,000

Nonstandard # 4

A. Nonstandard Features (M 4)

I-605 mainline				
HDM / Section	Features	Existing	Proposed Nonstandard	Standard
301.1	**Lane Width** S/B I-605 (4 through lanes) N/B I-605 (2-4 through lanes) Sta.323+60 – Sta.335+70	3.3 m	3.3 m	3.6 m

B. Standard for which exception is requested

Lane Width

(HDM Index 301.1), "*Width. – The basic lane width for new construction on two lane and multilane highways, ramps, collector roads and other appurtenant roadways shall be 3.6 m." (See above table for value of standard)*

C. Reason for exception

The widening of a short segment to achieve the standard lane width would be inconsistent with the segment of the corridor to the south of the project limits. The existing nonstandard width for this segment has not been a safety problem. To provide the standard lane width for S/B I-605 mainlines within project limits would require the widening of the existing roadway and structures, which would be beyond scope of the project. Also the widening of I-10 /I-605 separation would involve complicated bridge replacement work and increase the project cost. Accidents on N/B or S/B mainlines were primarily congestion-related, which is not directly related to nonstandard lane widths

D. Added costs to make standard

To provide standard lane width as shown in the above table would require roadway (I-605) and bridge widening and the acquisition of additional right-of-way. The additional cost to make it standard is estimated at $ 10 million.

Estimated Additional Construction Cost

I-605 mainline	
Roadway Items	$ 5,500,000
Structure Items	$ 4,500,000
Right of Way	$ 0
Total Construction Cost	$ 10,000,000

Nonstandard # 5

A. Nonstandard Features (M 5)

I-605 S/B mainline				
(A) HDM / Section	Features	Existing	Proposed Nonstandard	Standard
		(Corresponding Speed – km/h)		
201.1	**SSD on a Horizontal Curve** Sta.327+80 – Sta.332+60	160 m (90)	160 m (90)	205 m (105)

S/B I-605 to E/B I-10 connector				
(B) HDM / Section	Features	Existing	Proposed Nonstandard	Standard
		(Corresponding Speed – km/h)		
201.1	**SSD on a Horizontal Curve** I-605 Sta.327+00 – I-10 Sta.504+00	50 m (40)	105 m (72)	130 m (80)

B. Standard for which exception is requested

Stopping Sight Distance (SSD) on a Horizontal Curve

(HDM Index 201.1), "*The following table (201.1) shows the standard for passing and stopping sight distance related to design speed, and these shall be the minimum valves used in design." (See above table for value of standard)*

C. Reason for exception

The realignment of I-605 mainline within the project limits to achieve the standard Stopping Sight Distance (SSD) would be inconsistent with the segment of the corridor to the north and south of project limits. To provide the standard SSD for S/B I-605 mainlines within project limits would require the realignment of the existing freeway (I-605) and the widening of the I-10/I-605 separation, which would be beyond scope of the project. The additional right-of-way acquisition from the park, east of the I-605 and north of the I-10, would have a negative impact to the local residential area. Also Accidents on the S/B I-605 mainline within limits of the project are congestion-related, not directly related to the existing SSD. The existing nonstandard SSD on this segment has not been a safety problem.

To provide the standard Stopping Sight Distance (SSD) for the proposed connector would require a minimum curve radius of 450 m to obtain a standard Stopping Sight Distance (SSD) of 130 m. Based upon this required curve radius, the existing S/B I-605 to W/B I-10 connector will need to be realigned to accommodate 450 m curve radius for the proposed connector. As a result, the widening of the San Gabriel River Bridge to provide a new auxiliary lane connecting to the W/B I-10 Durfee Avenue off-ramp would be

required. Since the San Gabriel Bridge is a very old structure, it would need to be replaced for the structure integrity and safety. To replace this bridge would be beyond the scope of the project due to higher construction cost.

D. Added costs to make standard

To provide the standard SSD for the mentioned segment on the S/B I-605 mainline would require roadway (I-605) and bridge widening and the acquisition of additional right-of-way. The additional cost to make it standard is estimated at $ 21 million. To make the proposed S/B I-605 to E/B I-10 connector standard would require replacing the existing San Gabriel River Bridge & roadway widening. The additional cost to make it standard is estimated at $ 56 million.

Estimated Additional Construction Cost

I-605 S/B mainline	
Roadway Items	$ 3,500,000
Structure Items	$ 5,500,000
Right of Way	$ 12,000,000
Total Construction Cost	$ 21,000,000

S/B I-605 to E/B I-10 connector	
Roadway Items	$ 6,000,000
Structure Items	$ 50,000,000
Right of Way	$ 0
Total Construction Cost	$ 56,000,000

3. TRAFFIC DATA

Table 1						
Mainline						
Location	*2005 Volumes **			*2030 Forecast ***		
	AM	PM	ADT	AM	PM	ADT
E/B I-10 Mainline (PM 30.3)	5950	7616	114119	7735	9902	148355
W/B I-10 Mainline (PM 30.3)	7644	6544	115727	9085	8830	150445
N/B I-605 Mainline (PM 19.5)	5645	5724	86784	9920	10460	154300
S/B I-605 Mainline (PM 22.0)	4282	4022	61477	8530	7635	111850

* Reflect volumes prior to HOV lanes being constructed
** Reflect projected volumes with HOV lanes

Connectors						
Location	*2005 Volumes*			*2030 Forecast*		
	AM	PM	ADT	AM	PM	ADT
S/B I-605 to E/B I-10	795	867	12873	975	1185	16100
W/B I-10 to S/B I-605	2533	2185	17418	3275	2960	44500
N/B I-605 to E/B I-10	2256	2918	40334	2960	3275	69300

4. ACCIDENT ANALYSIS

The accident history for the existing interchange was reviewed based on data from Caltrans Traffic Accident Surveillance and Analysis System (TASAS, see Exhibit 4) for the 36-month period (7/1/02 – 6/30/05). A comparison of actual versus average accident data including fatal, fatal plus injury, and total accident rates are summarized in the Table 2.

Table 2 - TASAS Accident Rates Summary (7/1/2002 - 6/30/2005)

Table 2 **TASAS Accident Rates Summary** **San Bernardino Freeway (I-10) & San Gabriel Freeway (I-605)**							
Location	**Total No. of Acc.**	**Actual Accident Rates** (ACCS/MVM)			**Average Accident Rate** (ACCS/MVM)		
		FAT*	F+I**	TOT***	FAT*	F+I**	TOT***
E/B I-10 Mainline KP49.6/50.5 (PM 30.8/31.4)	172	0.000	0.46	2.16	0.005	0.33	1.06
W/B I-10 Mainline KP49.6/50.5 (PM 30.8/31.4)	126	0.025	0.41	1.58	0.005	0.33	1.06
S/B I-605 Mainline KP R31.7/R33.4 (PM R19.7/R20.8)	155	0.000	0.35	1.26	0.005	0.33	1.04
I-10 & I-605 Interchange							
Location	**Total No. of Acc.**	**Actual Accident Rates** (ACCS/MV)			**Average Accident Rate** (ACCS/MV)		
		FAT*	F+I**	TOT***	FAT*	F+I**	TOT***
SEG WB 10 to SB Rte 605 KP50.2 (PM 31.2)	22	0.000	0.08	0.46	0.002	0.08	0.25
SEG S/B to/from Rte 10 KP R32.2 (PM R20.0)	62	0.000	0.17	1.16	0.002	0.10	0.35
SEG S/B off to EB Rte 10 KP R32.2 (PM R20.0)	11	0.000	0.37	0.81	0.006	0.21	0.60
E/B ON from N/B/S/B I-605 to EB I-10 KP 50.3 (PM 31.3)	56	0.000	0.14	1.11	0.002	0.08	0.25

* Fatalities ** Fatalities plus Injuries *** All recorded accidents

A total of 172 accidents occurred on E/B I-10 KP49.6 (PM 30.8) to KP50.5 (PM 31.4). These accidents included 0 fatality, 37 injuries and 135 property damage. Of the total of 172 accidents, 111 (64.5%) were rear end, 36 (20.9%) were sideswipe, 12 (7.0%) were hit object, 5 (2.9%) were broadside, 1 (0.6%) was other, 4 (2.3%) was overturn, and 3 (1.7%) was head on. Most of accidents occurred on the mainline of E/B I-10 were rear-end collisions, which are also indicative of stop and go traffic due to congestion. The actual total accident rate within this segment was two times the total State average

accident rate. The HOV project currently proposed for construction prior to this project should improve the safety and the operation of this segment.

A total of 126 accidents occurred on W/B I-10 KP49.6 (PM 30.8) to KP50.5 (PM 31.4). These accidents included 2 fatality, 31 injuries and 93 property damage. Of the total of 126 accidents, 83 (65.9%) were rear end, 25 (19.8%) were sideswipe, 11 (8.7%) were hit object, 4 (3.2%) were broadside, 1 (0.8%) was others, and 2 (1.6%) was overturn. Most of accidents occurred on the mainline of W/B I-10 were rear-end collisions, which are also indicative of stop and go traffic due to congestion. The actual total accident rate within this segment was one and a half times the total State average accident rate. The HOV project currently proposed for construction prior to this project should improve the safety and the operation of this segment as well.

A total of 155 accidents occurred on S/B I-605 KP R31.7 (PM R19.7) to KP R20.8 (PM R20.8). These accidents included 0 fatality, 43 injuries and 112 property damage. Of the total of 155 accidents, 71 (45.8%) were rear end, 55 (35.5%) were sideswipe, 19 (12.3%) were hit object, 5 (3.2%) were broadside, and 5 (3.2%) were overturn. The actual total accident rate within this segment was above the total State average accident rate by 0.22. Most accidents occurred on the mainline of S/B I-605 were rear-end and sideswipe collisions, which are also indicative of stop and go traffic due to congestion. A future project to widen the existing I-605 between I-10 and I-5 would reduce accidents and enhance the safety and operation of this segment.

A total of 22 accidents occurred at the W/B I-10 to S/B I-605 connector ramp KP 50.2 (PM 31.2). These accidents included 0 fatality, 4 injuries and 18 property damage. Of the total of 22 accidents, 5 (22.7%) were rear end, 7 (31.8%) were sideswipe, 1 (4.5%) was broadside, 6 (27.3%) were hit object, and 3 (13.6%) were overturn. The actual total accident rate within this segment was about two times the total State average accident rate. Most accidents occurred on this ramp were sideswipe and rear-end collisions during the PM peak commute hour, which are congested-related accidents. The proposed improvement should reduce accidents on this connector ramp due to the elimination of the weaving conflict on the existing joint segment of the S/B I-605 to E/B I-10- and the W/B I-10 to S/B I-605 connector ramps.

A total of 62 accidents occurred at the S/B I-605 to E/B I-10- and the W/B I-10 to S/B I-605 connector ramps KP R 32.2 (PM R 20.0). These accidents included 0 fatality, 9 injuries and 53 property damage. Of the total of 62 accidents, 30 (48.4%) were rear end, 32 (51.6%) were sideswipe. The actual total accident rate within this segment was three times the total State average accident rate. Most of accidents were sideswipe and rear-end collisions. Frequent weaving and merging movements of vehicles on this short weaving segment between these two connector ramps resulted in most accidents. The proposed improvement should greatly reduce accidents due to the elimination of the weaving conflict and would enhance the safety of these connector ramps.

There had been a total of 11 accidents reported on the S/B I-605 to E/B I-10 connector ramp KP R32.2 (PM R20.0) during the last 3 years. These accidents included 0 fatality, 5 injuries and 6 property damage. Of the total of 11 accidents, 4 (36.4%) were hit object, 3

(27.3%) were sideswipe, 2 (18.2%) were rear end, 1 (9.1%) was overturn, and 1 (9.1%) was not stated. Most of accidents occurred on this ramp were hit-object and sideswipe collisions. The actual total accident rate within this segment was a little above the total State average accident rate. The nonstandard Stopping Sight Distance (SSD) due to a small curve radius was probably a contributory factor to many of these accidents. This at-grade connector ramp will be replaced with the proposed fly-over directional ramp. It's anticipated that the proposed improvement should reduce accidents and enhance the safety and operation of this interchange.

According to the TASAS during the last 3 years, a total of 56 accidents occurred at the entrance of the N/B 605 to E/B 10 connector ramp KP 50.3 (PM 31.3). These accidents included 0 fatality, 7 injuries and 49 property damage. Of the total of 56 accidents, 13 (23.2%) were rear end, 5 (8.9%) were hit object, 35 (62.5%) were sideswipe, 2 (3.6%) were overturn, and 1 (1.8%) was other. The actual total accident rate within this segment was four times the total State average accident rate. Most accidents that occurred on this ramp were sideswipe collisions during the P.M. peak commute hour, which are congestion-related accidents. The HOV project currently proposed for construction prior to this project should improve the safety and the operation of this connector ramp.

Due to the elimination of the weaving segment, the number of accidents should be reduced for the W/B I-10 to S/B I-605-, the S/B I-605 to E/B I-10-, and the N/B I-605 to E/B I-10 connector ramps. The number of accidents on the W/B I-10 mainline, before the W/B I-10 to S/B I-605 connector ramp, would be reduced as well. The W/B I-10 to the S/B I-605 connector ramp will provide direct connection between the W/B I-10 and the S/B I-605 mainlines without weaving interruption. Overall the proposed improvement will enhance the operation and the safety of the I-10, I-605, and I-10/I-605 interchange.

5. INCREMENTAL IMPROVEMENTS

No additional incremental improvements have been identified which would provide intermediate improvements.

6. FUTURE CONSTRUCTION

Other projects in the vicinity of I-10/605 interchange, which have been planned or programmed, are as follows:

EA	Co-Rte-KP	Location	TYPE OF WORK
117071	LA-10	The I-10/I-605 Interchange to Puente	Adding one HOV lane

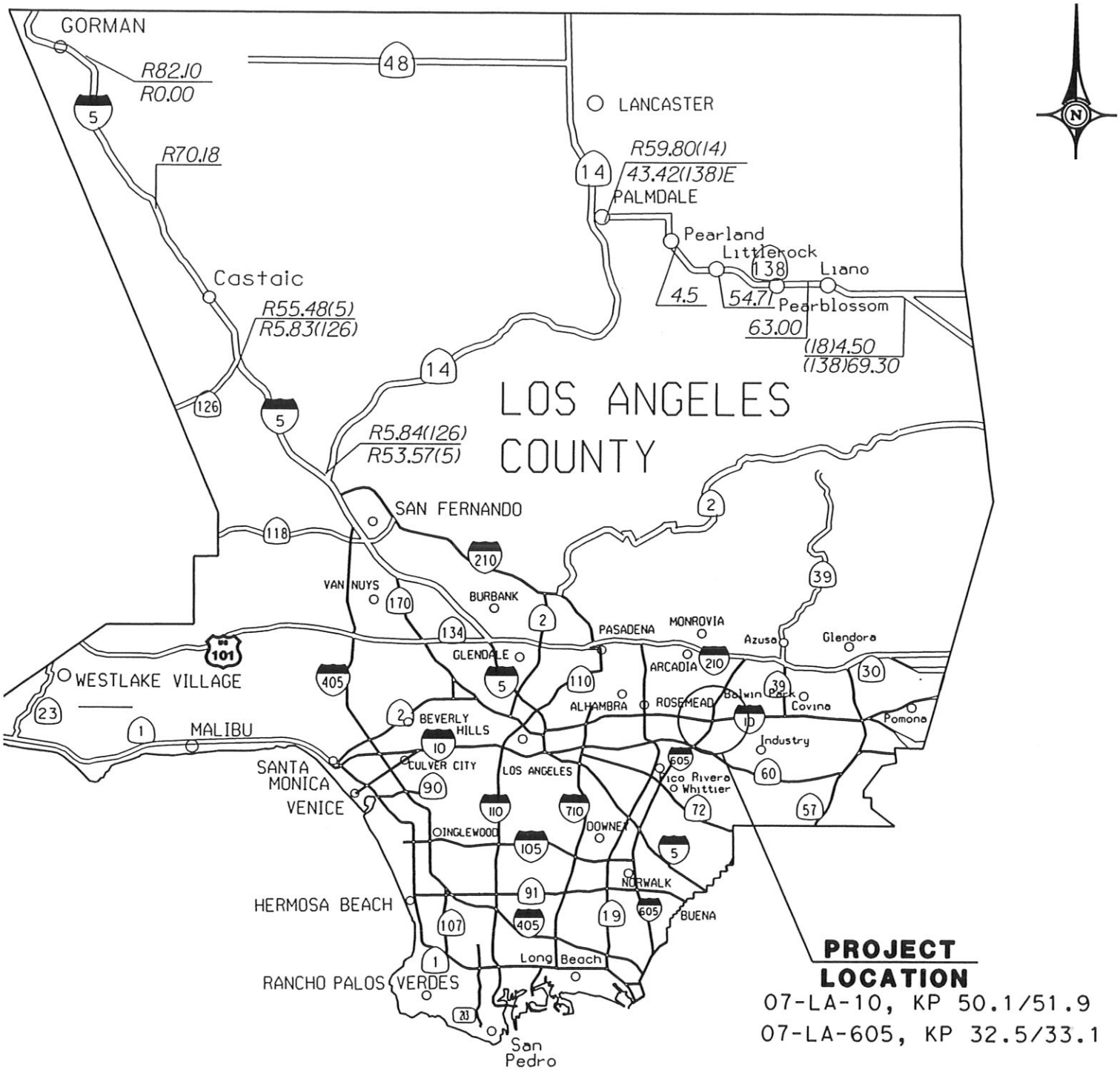
7. PROJECT REVIEWS

The project's non-standard features were discussed during the preparation of the Project Study Report, and they were reviewed in January-August 2006 and concurred with design reviewer Bob Chapman, Caltrans Headquarters Division of Design.

8. ATTACHMENTS

EXHIBIT 1	LOCATION MAP
EXHIBIT 2-A	LAYOUT PLANS
EXHIBIT 2	LAYOUT PLANS
EXHIBIT 3	CROSS SECTIONS
EXHIBIT 4	TASAS (TABLE B)
EXHIBIT 5	LOS FOR PROPOSED AND EXISTING WEAVING SEGMENTS

LOCATION MAP



DISTRICT 07

NO SCALE

EXIHIBIT 1

EXIHIBIT1.dgn 8/30/2006 8:38:24 AM

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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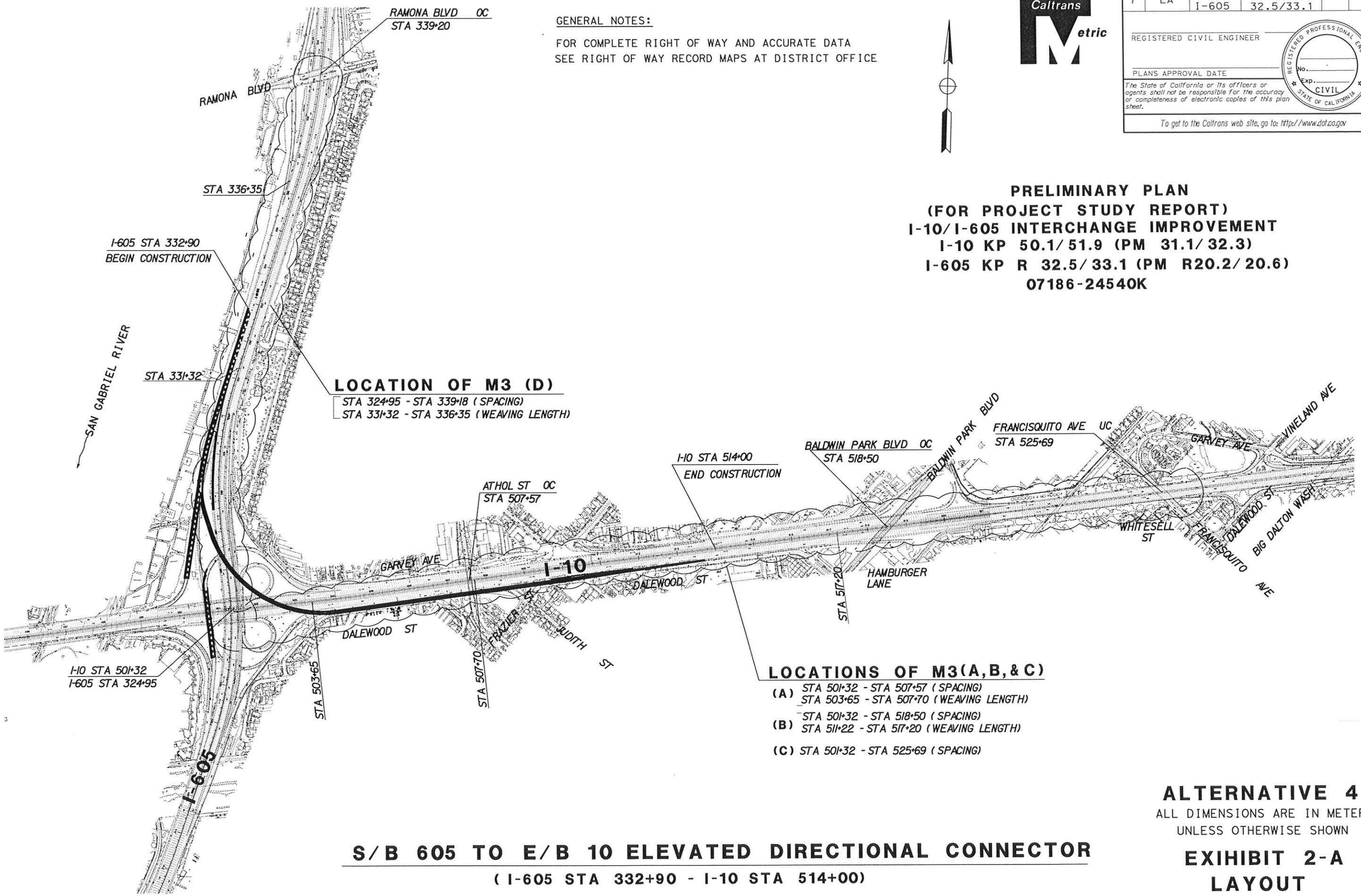
GENERAL NOTES:

FOR COMPLETE RIGHT OF WAY AND ACCURATE DATA
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

PRELIMINARY PLAN
(FOR PROJECT STUDY REPORT)
I-10/I-605 INTERCHANGE IMPROVEMENT
I-10 KP 50.1/51.9 (PM 31.1/32.3)
I-605 KP R 32.5/33.1 (PM R20.2/20.6)
07186-24540K



S/B 605 TO E/B 10 ELEVATED DIRECTIONAL CONNECTOR
(I-605 STA 332+90 - I-10 STA 514+00)

ALTERNATIVE 4
ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

EXIHIBIT 2-A
LAYOUT
NOT TO SCALE

DATE	REVISED BY	DATE REVISED
IC	IC	

I-CHUNG CHU

OFFICE OF PROJECT STUDIES

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LAST REVISION

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	2	6

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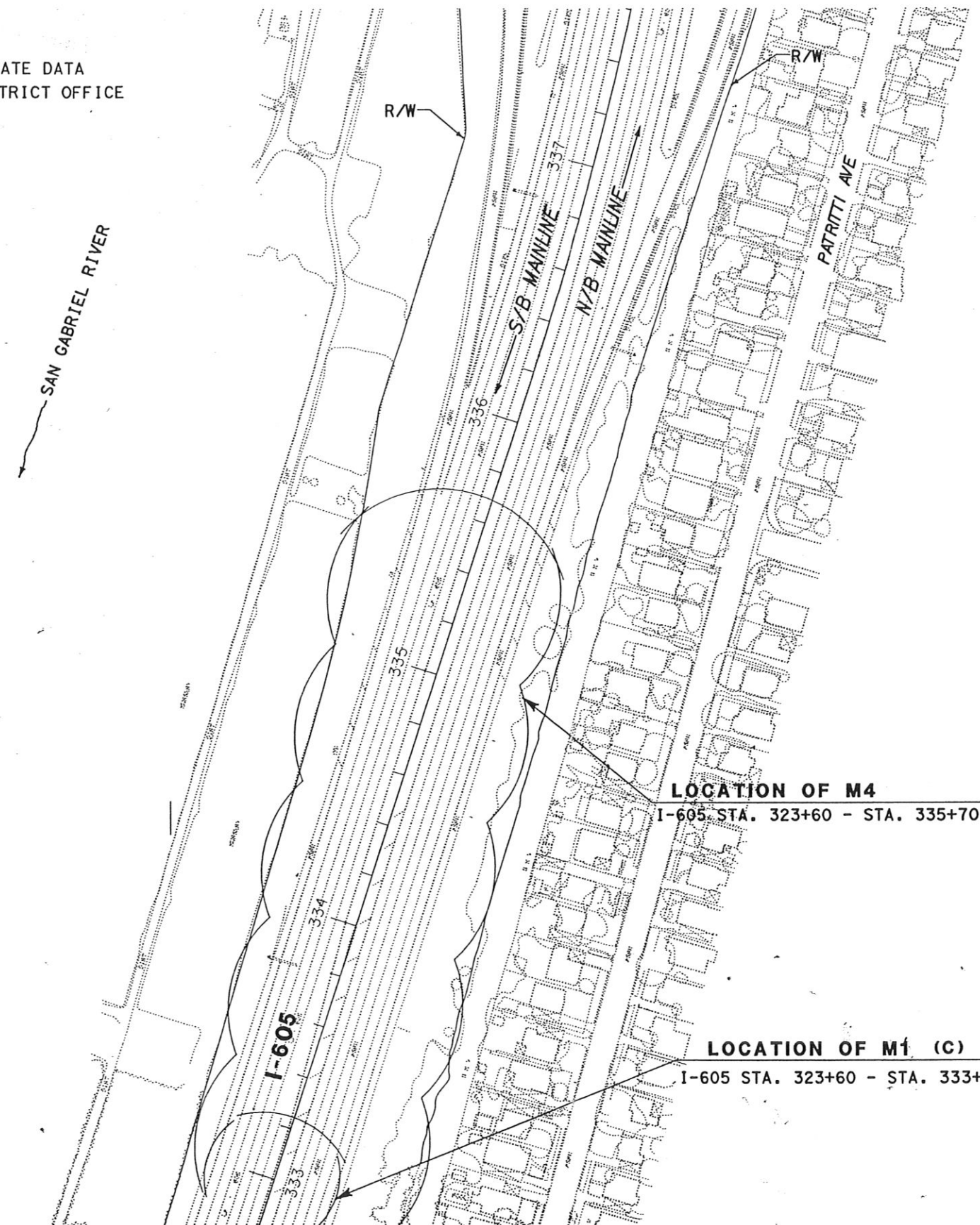

PRELIMINARY PLAN
(FOR PROJECT STUDY REPORT)
I-10/I-605 INTERCHANGE IMPROVEMENT
I-10 KP 50.1/51.9 (PM 31.1/32.3)
I-605 KP R 32.5/33.1 (PM R20.2/20.6)
07186-24540K

SEE SHEET L-2 STA 332+90

S/B 605 TO E/B 10 ELEVATED DIRECTIONAL CONNECTOR

(I-605 STA 332+90 - I-10 STA 514+00)

ALTERNATIVE 4

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

EXIHIBIT 2 LAYOUT

SCALE 1:1000

L-1

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	2	5

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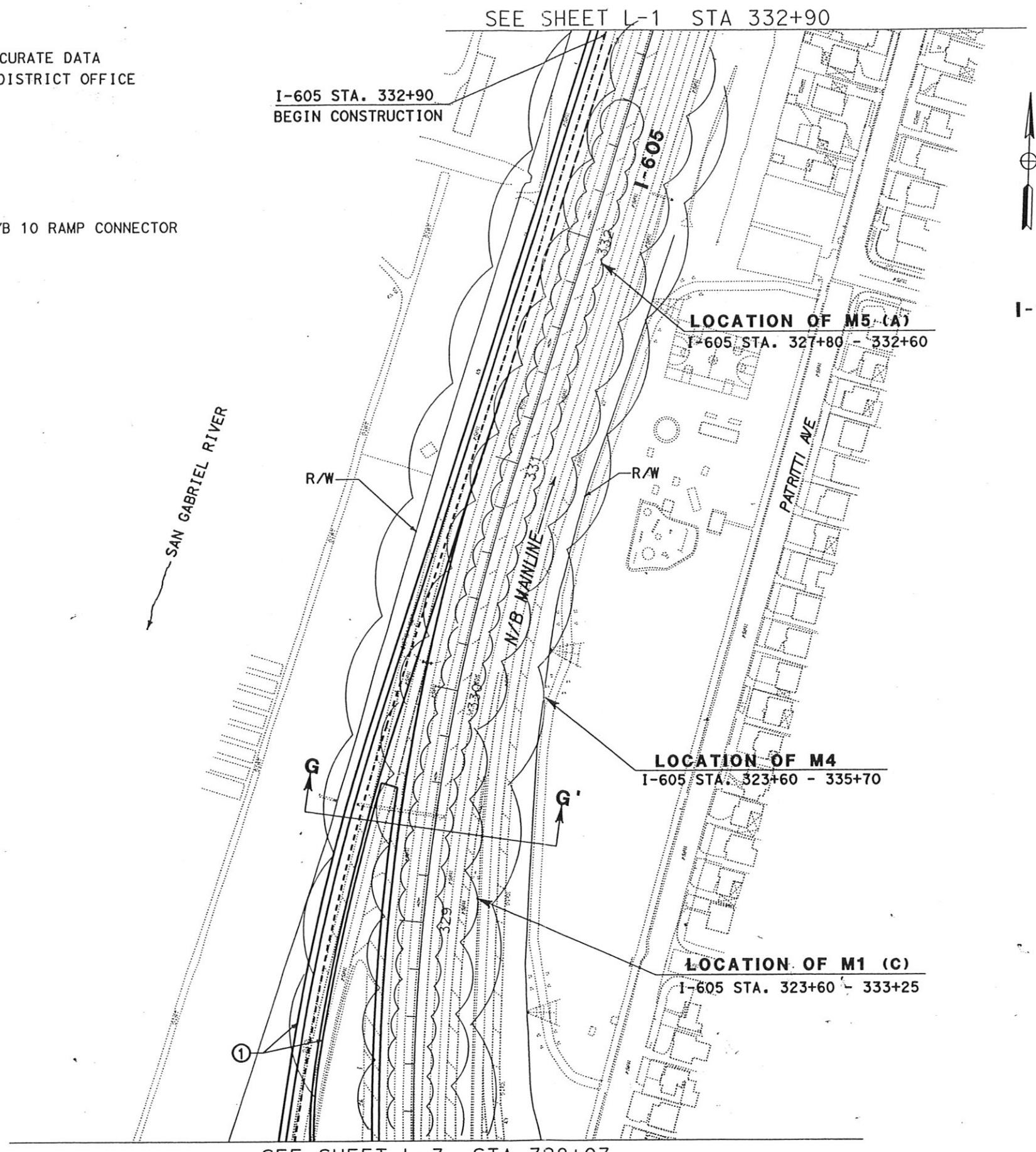
PRELIMINARY PLAN
(FOR PROJECT STUDY REPORT)
I-10/I-605 INTERCHANGE IMPROVEMENT
I-10 KP 50.1/51.9 (PM 31.1/32.3)
I-605 KP R 32.5/33.1 (PM R20.2/20.6)
07186-24540K

GENERAL NOTES:

FOR COMPLETE RIGHT OF WAY AND ACCURATE DATA
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

CONSTRUCTION NOTES:

① REALIGN S/B 605 TO W/B 10 & E/B 10 RAMP CONNECTOR



S/B 605 TO E/B 10 ELEVATED DIRECTIONAL CONNECTOR

(I-605 STA 332+90 - I-10 STA 514+00)

ALTERNATIVE 4

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

EXIHIBIT 2
LAYOUT

SCALE 1:1000

L-2

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	3	5

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PRELIMINARY PLAN (FOR PROJECT STUDY REPORT) I-10/I-605 INTERCHANGE IMPROVEMENTS

I-10 KP 50.1/51.9 (PM 31.1/32.3)
I-605 KP R 32.5/33.1 (PM R20.2/20.6)
07186-24540K

GENERAL NOTES:

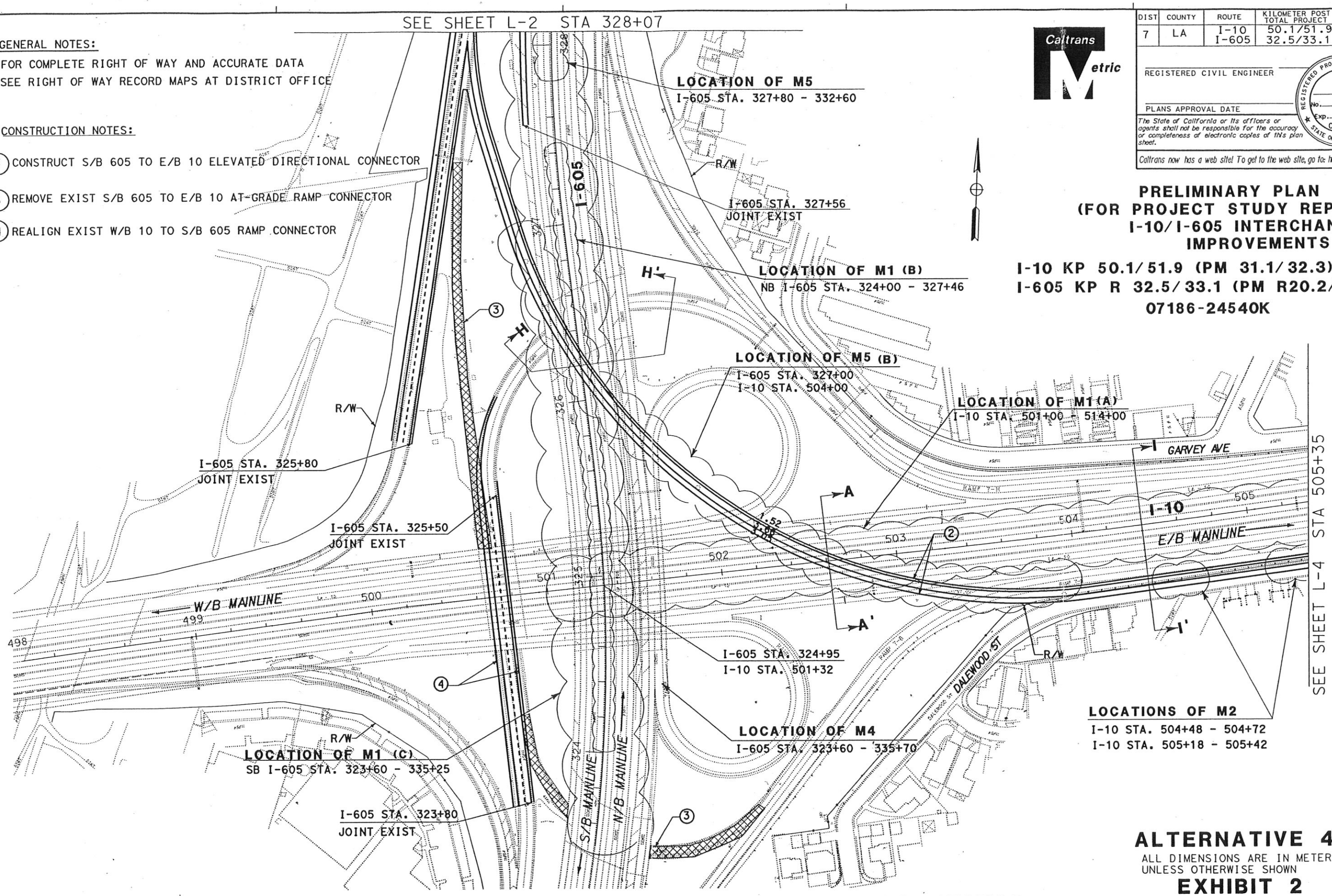
FOR COMPLETE RIGHT OF WAY AND ACCURATE DATA SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

CONSTRUCTION NOTES:

(2) CONSTRUCT S/B 605 TO E/B 10 ELEVATED DIRECTIONAL CONNECTOR

(3) REMOVE EXIST S/B 605 TO E/B 10 AT-GRADE RAMP CONNECTOR

(4) REALIGN EXIST W/B 10 TO S/B 605 RAMP CONNECTOR



S/B 605 TO E/B 10 ELEVATED DIRECTIONAL CONNECTOR

(I-605 STA 332+90 - I-10 STA 514+00)

ALTERNATIVE 4

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EXHIBIT 2 LAYOUT

SCALE 1:1000

L-3

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IC	IC

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	4	5

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GENERAL NOTES:

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SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

CONSTRUCTION NOTES:

(2) CONSTRUCT SB 605 TO EB 10 ELEVATED DIRECTIONAL CONNECTOR

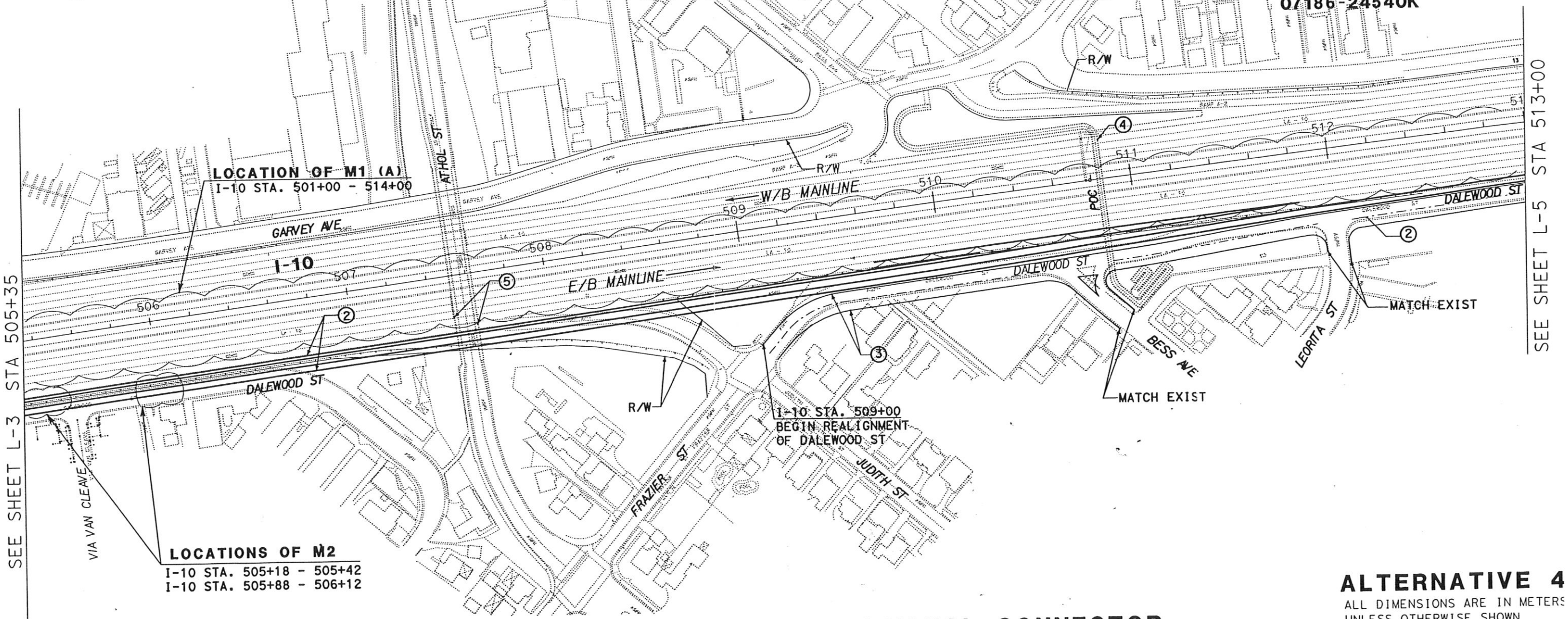
(3) REALIGN DALEWOOD ST (STA 509+00- 513+70)

(4) PROTECT EXIST BESS AVE POC (PEDESTRIAN OVERCROSSING)

(5) PROTECT EXIST ATHOL ST OC (OVERCROSSING)

PRELIMINARY PLAN
(FOR PROJECT STUDY REPORT)
I-10/I-605 INTERCHANGE IMPROVEMENTS

I-10 KP 50.1/51.9 (PM 31.1/32.3)
I-605 KP R 32.5/33.1 (PM R20.2/20.6)
07186-24540K



S/B 605 TO E/B 10 ELEVATED DIRECTIONAL CONNECTOR

(I-605 STA 332+90 - I-10 STA 514+00)

ALTERNATIVE 4

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EXHIBIT 2
LAYOUT

SCALE 1:1000

L-4

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DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOT SHEE
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	5	5

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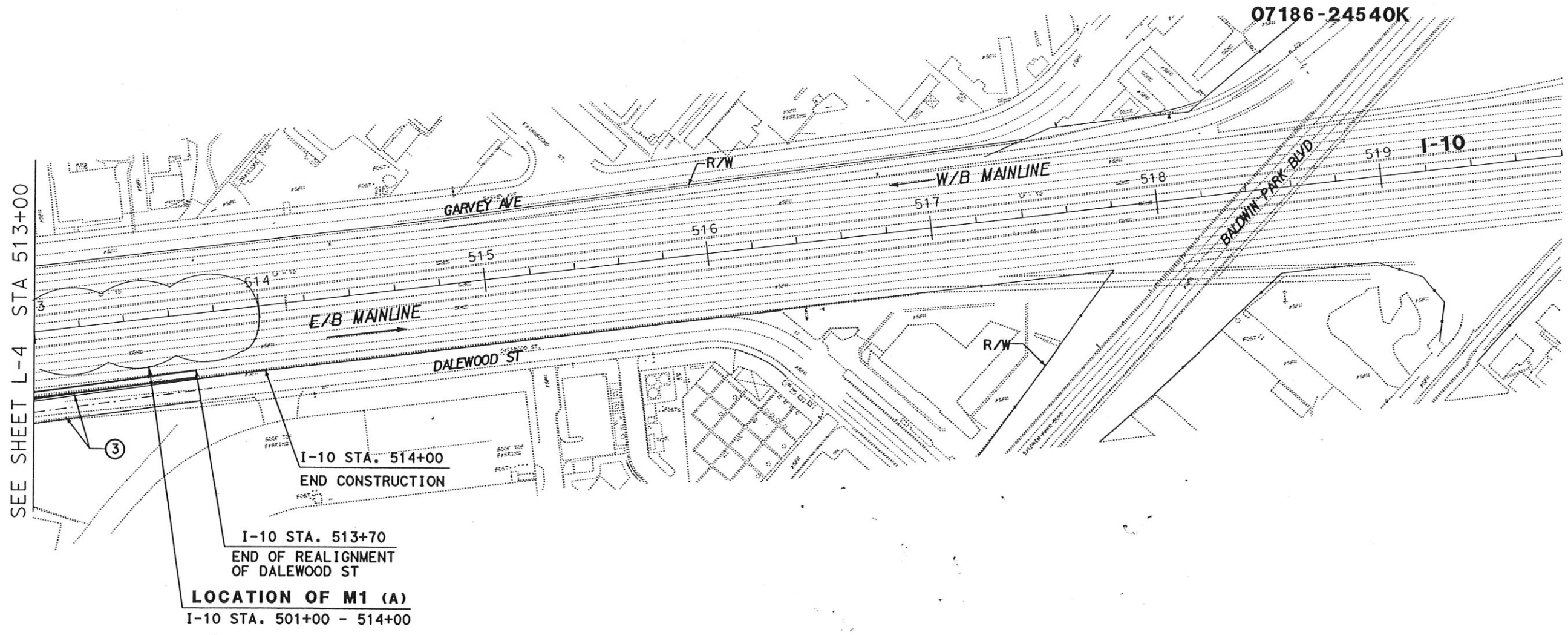
SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE

CONSTRUCTION NOTE:

(3) REALIGN DALEWOOD ST (STA 509+00 - 513+70)

PRELIMINARY PLAN
(FOR PROJECT STUDY REPORT)
I-10/I-605 INTERCHANGE IMPROVEMENTS
I-10 KP 50.1/51.9 (PM 31.1/32.3)
I-605 KP R 32.5/33.1 (PM R20.2/20.6)
07186-24540K



S/B 605 TO E/B 10 ELEAVATED DIRECTIONAL CONNECTOR
(I-605 STA 332+90 - I-10 STA 514+00)

ALTERNATIVE 4

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EXHIBIT 2
LAYOUT

SCALE 1:1000

L-5

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PROJECT ENGINEER I-CHUNG CHU

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
7	LA	10 605	50.1/51.9 32.5/33.1	1	3

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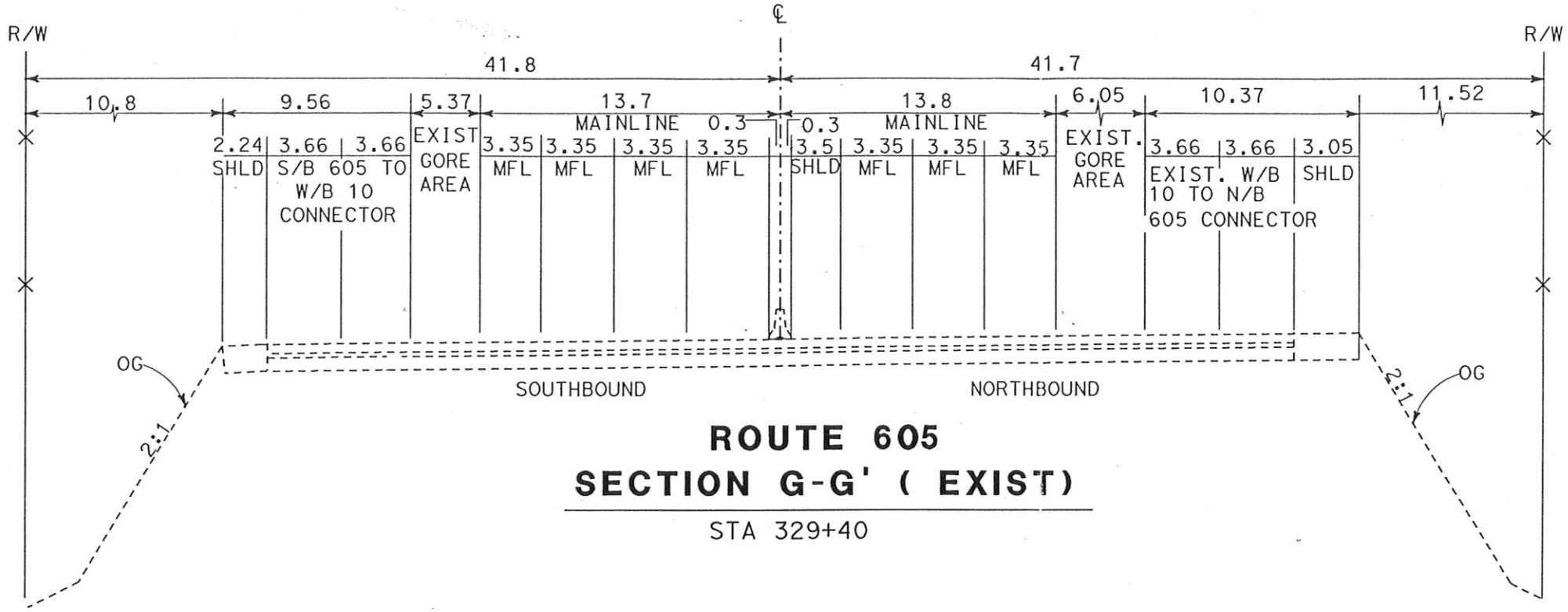
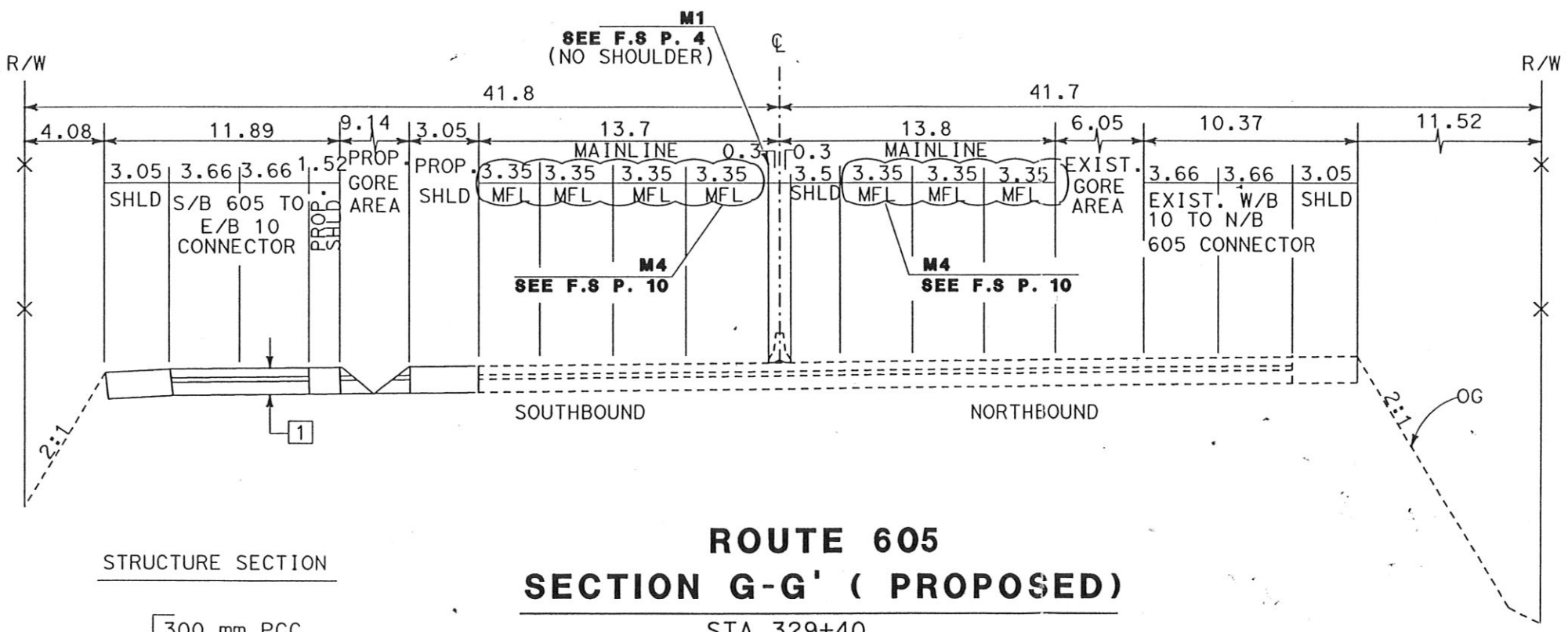


ROUTE 605
SECTION G-G' (EXIST)

STA 329+40



STRUCTURE SECTION

1 — 300 mm PCC
150 mm LCB
215 mm CLASS 3 AB

ROUTE 605
SECTION G-G' (PROPOSED)

STA 329+40

ALTERNATIVE 4

ABBREVIATION:

F.S. : FACTSHEET

ALL DIMENSIONS ARE IN METERS
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EXHIBIT 3
CROSS SECTIONS

NO SCALE

X-1

CALCULATED/ DESIGNED BY	IC	DATE	REVISED BY
CHECKED BY	IC		DATE REVISED

PROJECT ENGINEER: I- CHUNG CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
7	LA	10 605	50.1/51.9 32.5/33.1	2	3

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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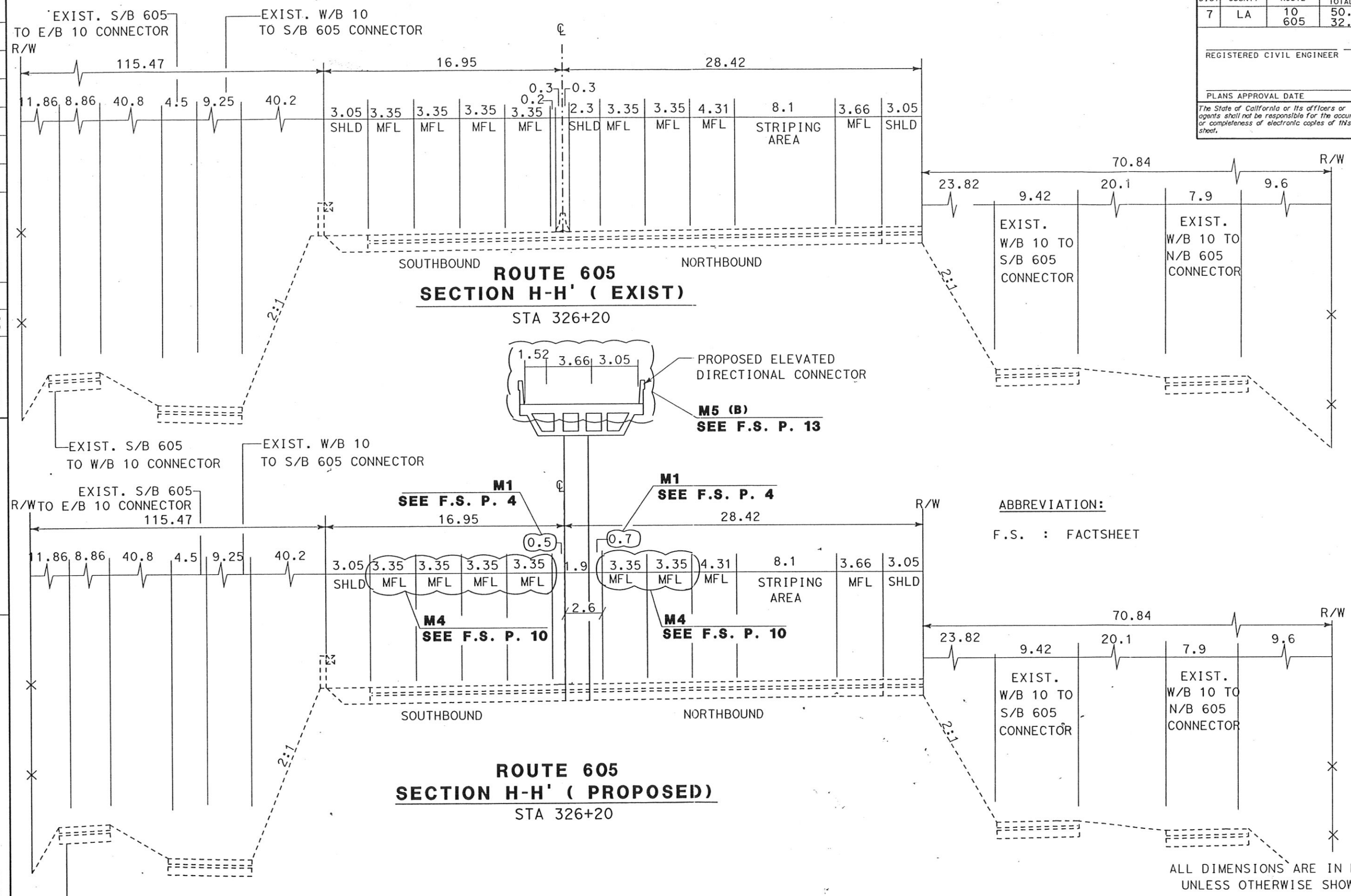

ABBREVIATION:

F.S. : FACTSHEET

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ALTERNATIVE 4

EXHIBIT 3
CROSS SECTIONS

NO SCALE

X-2

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY: IC
CHECKED BY: IC

PROJECT ENGINEER: I-CHUNG CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF PROJECT STUDIES

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	3	3

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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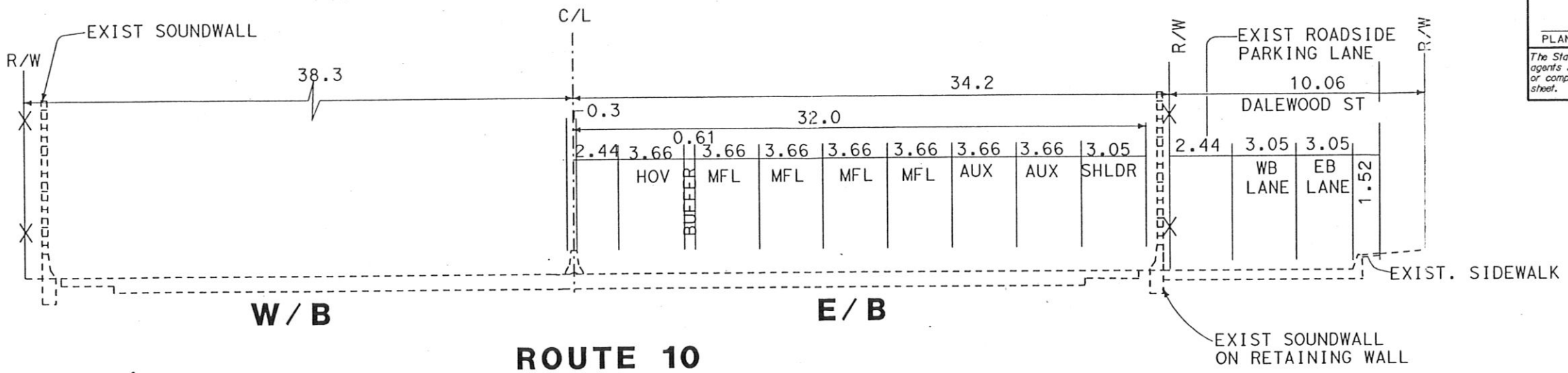
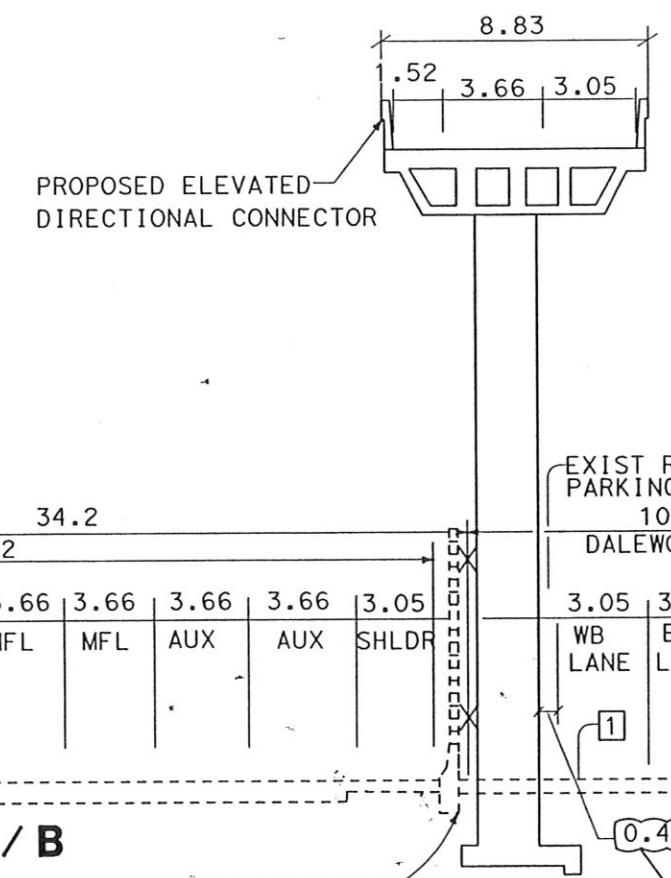


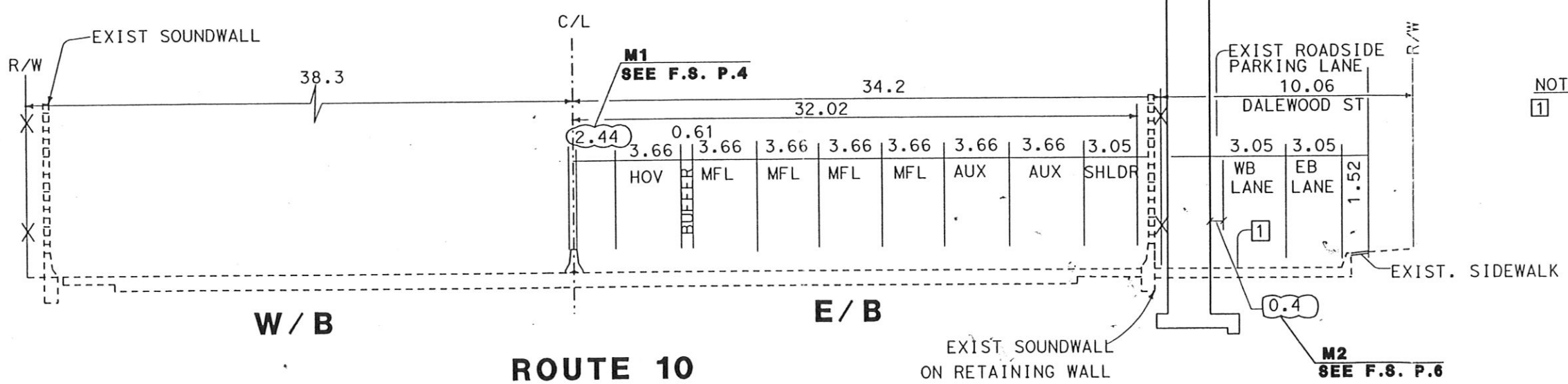
ROUTE 10
SECTION I-I' (EXIST)

STA 504+40



ABBREVIATION

F.S. : FACTSHEET



NOTE:

1 MATCH EXIST. ROADWAY STRUCTURE SECTION

ROUTE 10
SECTION I-I' (PROPOSED)

STA 504+40

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ALTERNATIVE 4

EXHIBIT 3
CROSS SECTIONS

NO SCALE

X-3

DATE	REVISED BY	DATE REVISED

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PROJECT ENGINEER: I-CHUNG CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
7	LA	I-10 I-605	50.1/51.9 32.5/33.1	3	3

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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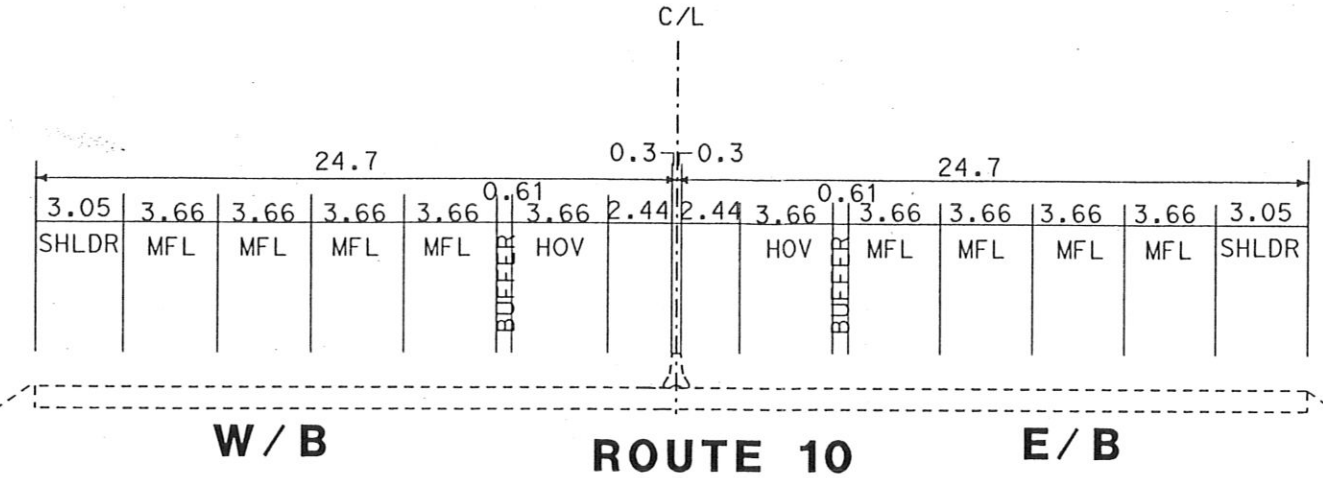
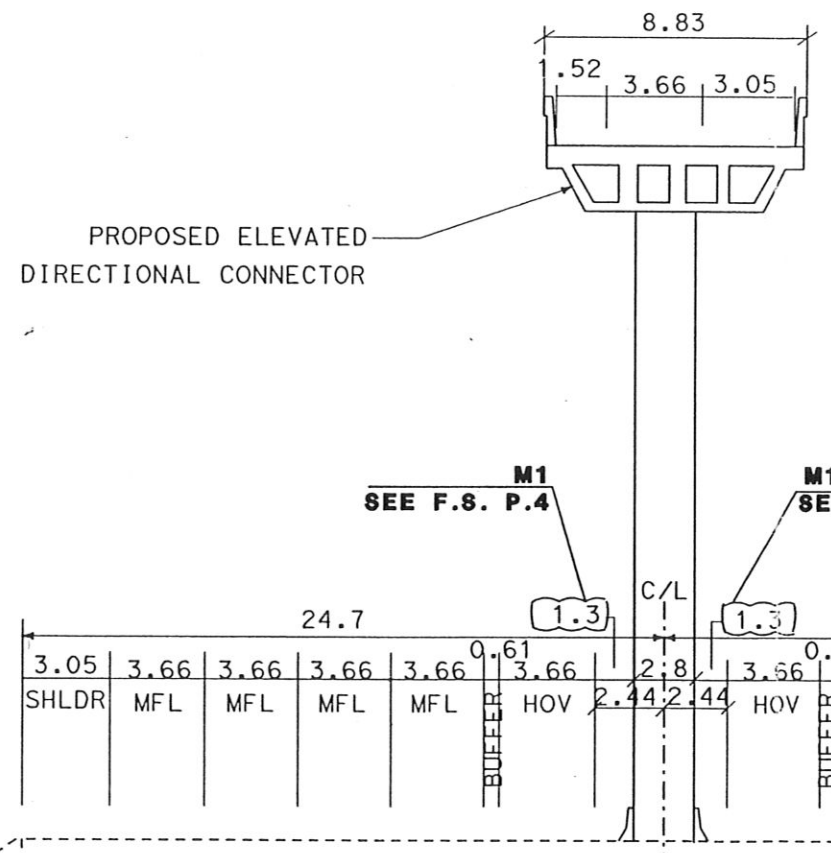


ROUTE 10
SECTION A-A' (EXIST)

STA 502+61



ROUTE 10
SECTION A-A' (PROPOSED)

STA 502+61

ALTERNATIVE 4

ABBREVIATION

F.S. : FACTSHEET

ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SHOWN

EXHIBIT 3
CROSS SECTIONS

NO SCALE

X-4

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY: IC
CHECKED BY: IC

PROJECT ENGINEER: I-CHUNG CHU

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
OFFICE OF PROJECT STUDIES

Table B - Selective Accident Rate Calculation

Location Description				Rate Group (RUS)	No. of Accidents / Significance Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Pers Kid Inj	ADT Main X-St	Total MV+ or MVM	Actual Fat	Actual F+I	Accident Rates Tot	Average Fat	Average F+I	Average Tot
' LA 010 030.800 - 07 LA 010 031.398 001-0001	2002-07-01	2005-06-30	*36 mo.*	.599 MI H EAST U	172 **H99**	0	37 **H97**	37 **H95**	158	11 **H95**	41 **H90**	0 66	121.5	79.8	0.000	.46	2.16	0.005	.33	1.06
' LA 010 030.800 - 07 LA 010 031.398 001-0005	2002-07-01	2005-06-30	*36 mo.*	.599 MI H WEST U	126 **H99**	2 **H90**	31	33	115	7	31	2 44	121.5	79.8	0.025	.41	1.58	0.005	.33	1.06
LA 605 R019.700 - 07 LA 605 020.798)01-0005	2002-07-01	2005-06-30	*36 mo.*	1.099 MI H SOUTH U	155 **H97**	0	43	43	138	19 **H99**	36	0 72	102.4	123.31	0.000	.35	1.26	0.005	.33	1.04
010 031.304 010/WBOFF TO RTE 605 -0005	2002-07-01	2005-06-30	*36 mo.*	R 34 U	22 **H97**	0	4	4	13	2	10 **H97**	0 7	44.0	48.28 +	0.000	.08	.46	0.002	.08	.25
605 R020.041 605/SEG SB TO/FR RTE 10 -0005	2002-07-01	2005-06-30	*36 mo.*	R 04 U	62 **H99**	0	9	9	62	2	10	0 13	48.7	53.38 +	0.000	.17	1.16	0.002	.10	.35
605 R020.042 605/SEG SB OFF TO EB RTE 10 -0001	2002-07-01	2005-06-30	*36 mo.*	R 06 U	11	0	5	5	5	2	6	0 6	12.4	13.59 +	0.000	.37	.81	0.006	.21	.60
)10 031.288 010/EBON FR NB/SB 605 0001	2002-07-01	2005-06-30	*36 mo.*	R 36 U	56 **H99**	0	7	7	50	5 **H97**	22 **H99**	0 8	46.1	50.53 +	0.000	.14	1.11	0.002	.08	.25

EXHIBIT 4

Weaving Analysis Summary

Location	2005								2030							
	Without Project				With Project				Without Project				With Project			
	AM		PM		AM		PM		AM		PM		AM		PM	
	LOS	Speed mph	LOS	Speed mph	LOS	Speed mph	LOS	Speed mph	LOS	Speed mph	LOS	Speed mph	LOS	Speed mph	LOS	Speed mph
Weaving Area #1 E/B I-10 PM 31.29 to 31.579 (From I-605 Collector Merge to Frazier Street off Ramp Seperation)	D	43	F	40	C	47	E	44	D	40	F	39	D	45	F	42
Weaving Area #2 E/B I-10 PM 31.80 to 32.254 (Proposed Connector Merge before Baldwin Park Off-Ramp	N/A	N/A	N/A	N/A	B	59	C	57	N/A	N/A	N/A	N/A	C	55	C	55

EXHIBIT 5

EXHIBIT 11-B

Fact Sheet Exception to Advisory Design Standards

Fact Sheet Exceptions to Advisory Design Standards

REGISTERED PROFESSIONAL ENGINEER
HAI A. FOONG
No. C 050858
Exp. 9-30-09
CIVIL
STATE OF CALIFORNIA

Prepared by: H. A. Foong
Aaron H.A. Foong
Registered Civil Engineer

Submitted by: _____ 3/24/09 (213) 897-5580
Refugio Dominguez — Date — Telephone
Office of Design D

Recommended For Approval: for Sam S. Elame 3/24/09 (213) 897-7195
Mehdi Salehinik, — Date — Telephone
Project Manager

Approval by: _____ 3/25/09
Jerrel Kam — Date
Chief, Office of Design A

1. PROPOSED PROJECT

A. Project Description

This project proposes to construct an elevated direct connector from southbound Interstate 605 (I-605) to eastbound Interstate 10 (I-10) replacing the existing southbound I-605 to eastbound I-10 at grade connector. This improvement will provide a direct connection between the freeways, eliminating weaving movements on the jointly used segment of the existing connector (southbound I-605 to eastbound I-10 and westbound I-10 to southbound I-605) thus reduce weaving related accidents, queuing of traffic at westbound I-10 at the interchange, and improve safety and operation of the Interstate 10/605 (I-10/605) Interchange. Attachment A is a map which shows the interchange location.

This project has been assigned to Project Development Processing Category 4B as it does not require substantial new right of way nor increase traffic capacity. The estimated construction cost for the project is $66.0 million. The funding source of the project is through Grant Anticipated Revenue Vehicle bonds (GARVEE) in the approved 2008 State Highway Operation and Protection Program (SHOPP).

B. Existing Facilities

The existing southbound I-605 to eastbound I-10 connector is a one-lane connector with 2-foot left and right shoulders. The existing westbound I-10 to southbound I-605 connector has two 12-foot through lanes with 2-foot left and right shoulders. These two connectors come together at a tangent segment of 322 feet in length, which contains three 12-foot lanes and 2-foot left and right shoulders.

The existing northbound I-605 to eastbound I-10 connector contains two 12-foot lanes with 2-foot left shoulder and 2-foot right shoulder. The existing eastbound I-10 mainline, just east of the interchange, consists of a 12-foot HOV lane, four 12-foot mixed flow lanes, and two 12-foot auxiliary lanes with 8-foot median shoulder and 10-foot right shoulder.

C. Total Project Cost

The construction cost estimated for this project (construction and right-of-way) is approximately $66.0 million as shown on Table 1.

Table 1- Project Cost Estimate

Item	Cost
Roadway	$ 18,000,000
Structures	$ 37,500,000
R/W Acquisition	$ 10,500,000
TOTAL PROJECT COST	**$ 66,000,000**

2. FEATURES REQUIRING AN EXCEPTION

A. Design Exception Features #1

Nonstandard Feature - **GRADES**

Standard for Which Exception Is Requested:

Highway Design Manual (HDM) Section 504, Index 504.4(3) - "The maximum profile grade on freeway-to-freeway connections should not exceed 6 percent".

Reasons for Requesting the Exception:

The vertical alignment for this connector has existing vertical constraints. These constraints are:

- To provide 16.5 feet minimum vertical clearance over the existing I-605 freeway at Station 101+00 with an elevation of 365.70.
- To provide 15 feet minimum vertical clearance over existing Athol Street Overcrossing (OC) bridge at Station 124+40 with an elevation of 360.35.
- To provide 18.5 feet minimum vertical clearance under existing Bess Avenue Pedestrian Overcrossing (POC) bridge at Station 135+00 with an elevation of 319.34.

The above constraints are fixed points and control the proposed profile grade for the new connector, which has an ascending profile grade of 6.7 % and a descending profile grade of 6.3 %. Due to the 16.5 feet minimum vertical clearance constraint, a maximum profile grade of 6.0% cannot be provided, unless the minimum vertical clearance above the existing I-605 is reduced to 15 feet, which would violate the Mandatory Design Standard requirement for connectors. See Attachment D for Profile details of the connector.

Otherwise, to maintain a standard maximum allowable profile grade for the ascending grade, the connector would have to be lengthened. This will shift the connector gore point towards the existing Ramona Avenue on-ramp to southbound I-605 gore point. As a result, the distance between connector gore point and the existing on-ramp gore point will be reduced to a non-standard. This will violate HDM section 504.7 for weaving section, which would require an Advisory Fact Sheet for design exception.

To maintain a standard maximum allowable profile grade for the descending grade, Bess Avenue POC would need to be raised but such option will require a grade that exceeds the maximum 8.33% grade and violate American Disabilities Act (ADA) requirements since the landings on both sides of the POC are at fixed location due to right of way constraints. In addition, the POC bridge is a complete replacement in another project which in the advertising phase and grade issue was previously encountered as part of the design phase of such structure.

Added Cost to Make Standard:

To provide standard profile grade for the descending grade of the connector, Athol Street OC bridge and Bess Avenue POC bridge would need to be replaced. Athol Street OC would need to be lowered by 4 feet while Bess Avenue POC would need to be raised by 3 feet. However, this would be difficult due to following constraints:

Athol Street OC bridge currently has a standard minimum vertical clearance of 16.5 feet over the existing I-10 freeway. To lower it by 4.0 feet would not be acceptable as it is already at the minimum vertical clearance (16.5 feet) over the existing I-10 freeway and it would violate the mandatory design standard requirement per HDM Index 309.2(1) and would also posed a safety issue. If Athol Street OC is to be lowered by 4.0 feet, the I-10 freeway would need to be lowered by approximately 6.0 feet and it will have impact on underground utilities, drainage systems, city streets, and traffic operations. It will have a significant impact on the traveling public, because extensive detour and delay would be expected to occur during the reconstruction of the I-10 freeway, which is already heavily congested. Due to right of way constraint, it would require an approximately 3000 feet of retaining wall on both side of the I-10 freeway. The replacement of soundwalls along I-10 freeway would also be required with the new profile grade on I-10 freeway.

Bess Avenue OC currently has a standard minimum vertical clearance of 18.5 feet over the existing I-10 freeway. The current profile grade for Bess Avenue POC is 8.33 %, which is maximum allowable recommended by the American with Disabilities Act (ADA). To raise it by 3.0 feet would increase the profile grade greater than 8.33%, which would violate the ADA standard for POC profile grade. In order to maintain a standard maximum allowable profile grade of 8.33%, Bess Avenue POC would needs to be lengthened.

Item	Cost
Roadway (Incl R/W)	$ 50,000,000
Structures	$ 15,000,000
TOTAL PROJECT COST	**$ 65,000,000**

B. Design Exception Features #2

Nonstandard Feature - **DESIGN SPEED**

Standard for Which Exception Is Requested:

Highway Design Manual (HDM) Section 504, Index 504.4(2) - "The design speed for single lane directional and all branch connections should be a minimum of 50 miles per hour. When smaller radius curves, with lower design speeds, are used the vertical sight distance should be consistent with approaching vehicle speeds".

Reasons for Requesting the Exception:

The existing grades mentioned above for nonstandard feature #1 have a joint impact on the design speed. The algebraic grade difference for the first vertical curve is 7.84 % and the second vertical curve is 5.1 % with both vertical curve lengths of 650 feet. From Figure 201.4, the design speed is 43 and 48 miles per hour respectively, which are non-standard.

Restrained by the horizontal, vertical and algebraic grade constraints, the one option to achieve the 50 MPH minimum design speed for connector is to increase the vertical curve length from 650 feet to 1200 feet. Consequently it will reduce the vertical clearance below the Mandatory design standard requirement of 16.5 feet dictated in the HDM.

Another possibility is to push back the beginning of the curve but this would inevitably require the redesign of the exit gore area and thus affect the existing southbound I-605 to westbound I-10 connector. The redesign includes widening the southbound I-605 freeway into Southern California Edison right of way used for high power overhead transmission lines, which coincidently is the flood plain zone along the San Gabriel River. The horizontal clearance between the freeway and the high power overhead transmission lines tower would also be significantly reduced.

In addition, the I-605 gore area would be pushed back closer to Ramona Avenue on- ramp to southbound I-605 freeway thus impacting the distance between successive ramps that would require an Advisory design exception (HDM 504.3 (9)).

A Mandatory Fact Sheet for the non-standard sight distance with this design speed had been approved on September 6, 2006 as part of the Project Study Report.

Added Cost to Make Standard:

Item	Cost
Roadway (Incl R/W)	$ 40,000,000
Structures	$ 60,000,000
TOTAL PROJECT COST	**$ 100,000,000**

C. Design Exception Features #3

Nonstandard Feature – **SINGLE-LANE CONNECTIONS**

Standard for Which Exception Is Requested:

Highway Design Manual (HDM) Section 504, Index 504.4(5) - "Where design year volume is between 900 and 1500 equivalent passenger cars per hour, initial construction should provide a single lane connection with the capability of adding an additional lane. Single lane connectors in excess of 1000 feet in length should be widened to two lanes to provide for passing maneuvers ".

Reasons for Requesting the Exception:

1.) To provide two lanes for passing maneuvers, a wider bridge structure is required. It would require a two-column bridge structure or an outrigger bent with large footings. As a result, it would have severe impact on the existing nonstandard median width of the I-10 and I-605 freeway at the proposed bridge footing locations. The I-10 and I-605 freeway would need to be widened to accommodate for the large bridge columns footings at the median. This would result in greater environment impacts, increased construction costs and significant right-of-way acquisition.

In addition, the profile grade of the connector would need to be raised to provide a minimum vertical clearance of 16.5 feet for the outrigger bent across I-10 and I-605. This will require a profile grade significantly higher than what is requested for the nonstandard feature #1.

The Division of Engineering Services (Structures Design Office) has been consulted and it was confirmed that a two lane bridge structure would require larger columns and the footings.

2.) With an increase in column and footing size for a two-lane connector, the right of way impacts along Dalewood Street would be significant. This would result in acquiring twenty-six (26) full take properties in lieu of two (2) part-take properties. The impact is not just with the acquisition of the properties but the non-standard parcel size left over for future developments. The City of Baldwin Park has requested that such remnants be avoided since the left over parcels do not meet minimum lot sizes requirement for future developments.

3.) The existing two-lane diverging branch connector would need to be replaced with a three-lane diverging branch connector because the existing southbound I-605 to eastbound I-10 connector and the existing southbound I-605 to westbound I-10 connector shares the same exit gore point. The HDM section 504. 4(6) states that a three-lane diverging branch connector would require a minimum of 2750 feet for diverging traffic. As a result, the existing southbound I-605 to westbound I-10 connector gore point needs to be redesign and be relocated closer toward the Ramona Avenue on-ramp to southbound I-605. The distance between the branch connector gore point and existing on-ramp gore point would be reduced to non-standard and not conform to HDM section 504.7 for weaving section for which an advisory design exception would be required.

4.) To have a two-lane connector would require widening the freeway into Southern California Edison right of way used for high power overhead transmission lines and the San Gabriel River flood plain zone. The horizontal clearance between the freeway and the high power overhead transmission tower would also be significantly reduced.

Added Cost to Make Standard:

The cost of providing a two-lane connector will increase the right of way acquisition costs from $10,500,00.00 to $52,500,000.00. This is an increase of $42,000,000.00 due the acquisition of twenty six (26) full takes in lieu of two (2) for a one-lane connector.

The table below is the estimated cost for a two-lane connector to be constructed along with new alignment configuration of Ramona Avenue ramps and I-10/605 Interchange.

Item	Cost
Roadway (Incl R/W)	$ 92,000,000
Structures	$ 100,000,000
TOTAL PROJECT COST	**$ 192,000,000**

3. TRAFFIC DATA

Current and Forecast Traffic

The projected Average Daily Traffic (ADT) volume for 30 years (2035) for mainlines (I-10 & I-605) and connectors within the I-10/605 Interchange are shown below:

Table 2- Traffic Volumes

Mainline						
Location	**2005 Volumes ***			**2035 Forecast ****		
	AM	PM	ADT	AM	PM	ADT
EB I-10 Mainline (*PM 30.3*)	5950	7616	114119	7735	9901	148355
WB I-10 Mainline (*PM 30.3*)	7644	6544	115727	9937	8507	150445
NB I-605 Mainline (*PM 19.5*)	5645	5724	86784	6774	6869	104141
SB I-605 Mainline (*PM 22.0*)	4282	4022	61477	5138	4826	73772

Note: EB=Eastbound WB=Westbound NB=Northbound SB=Southbound *PM*=Post Mile

* Reflect volumes prior to HOV lanes being constructed.

** Reflect projected volumes with HOV lanes.

Table 2- (Cont)

Connectors						
Location	**2005 Volumes**			**2035 Forecast**		
	AM	PM	ADT	AM	PM	ADT
SB I-605 to EB I-10	795	867	12873	1034	945	14032
WB I-10 to SB I-605	2533	2185	17418	3293	2382	41280
NB I-605 to EB I-10	2256	2918	40334	2933	3181	43964

Note: EB=Eastbound WB=Westbound NB=Northbound SB=Southbound

The following tables (**Table 3**) below summarize the existing and projected year of 2035 Level of Service (LOS) within the project limit. Level of service is based upon delay.

Table 3 - Level Of Services (LOS)

Existing (2005) and Future (2035) LOS for Project Alternatives					
		Alternative 1 (No Build)		***Alternatives 4***	
Freeway/ Connector	**Period**	**LOS**		**LOS**	
		Existing	**Future**	**Existing**	**Future**
WB I-10	AM	E	F	E	F
	PM	D	E	D	E
WB I-10 to SB I-605 Connector	AM	C	D	C	D
	PM	C	D	C	D
SB I-605 to EB I-10 Connector	AM	B	C	B	C
	PM	B	B	B	B
NB I-605 to EB I-10 Connector	AM	C	D	C	D
	PM	D	D	D	D

Note: EB=Eastbound WB=Westbound NB=Northbound SB=Southbound

4. ACCIDENT ANALYSIS

The accident data, as shown in Table 4 is based on the summary of traffic accidents occurred during the recent 36-month period between January 1, 2005 and December 31, 2007 from the Traffic Accident Surveillance and Analysis System (TASAS).

Table 4 - TASAS Accident Rates Summary (1/1/2005 - 12/31/2007)

TASAS Accident Rates Summary							
Interstate 10 Freeway (I-10) & Interstate 605 Freeway (I-605)							
Location	**Total No. of Acc.**	Actual Accident Rates (ACCS/MV)			Average Accident Rate (ACCS/MVM)		
		FAT*	F+I**	TOT***	FAT*	F+I**	TOT***
EB I-10 Mainline *PM 30.8/31.4*	197	0	0.65	2.40	0.005	0.33	1.07
WB I-10 Mainline *PM 30.8/31.4*	73	0	0.21	0.89	0.005	0.33	1.07
SB I-605 Mainline *PM R19.7/R20.8*	131	0.008	0.31	1.03	0.005	0.33	1.06
* Fatalities		** Fatalities plus Injuries			*** All recorded accidents		

TASAS Accident Rates Summary							
Interstate 10 Freeway (I-10) & Interstate 605 Freeway (I-605)							
Location	**Total No. of Acc.**	Actual Accident Rates (ACCS/MV)			Average Accident Rate (ACCS/MV)		
		FAT*	F+I**	TOT***	FAT*	F+I**	TOT***
SEG WB 10 to SB I-605 *PM 31.2*	25	0	0.13	0.63	0.006	0.21	0.60
SEG SB to/from I-10 *PM R20.0*	39	0	0.09	0.73	0.002	0.1	0.35
SEG SB off to E/B I-10 *PM R20.0*	13	0	0.07	0.96	0.006	0.21	0.6
EB on from NB/SB I-605 to EB I-10 *PM 31.3*	40	0	0.06	0.79	0.002	0.08	0.25
* Fatalities		** Fatalities plus Injuries			*** All recorded accidents		

Note: EB=Eastbound WB=Westbound NB=Northbound SB=Southbound *PM*=Post Mile

During the three years period, the actual total accident rate for the southbound I-605 to eastbound I-10 connector was about one and a half times the total state average accident rate. Most accidents occurred on this connector were sideswipe and rear-end collisions during the PM peak commute hour, which are congested-related accidents. The proposed improvement will provide a direct connection between the southbound I-605 and the eastbound I-10 mainlines. This would reduce accidents on this connector due to the elimination of the weaving conflict on the existing common segment of the southbound I-605 to eastbound I-10 and the westbound I-10 to southbound I-605 connectors.

5. INCREMENTAL IMPROVEMENTS

The proposed improvements will eliminate weaving movements on the existing common segment of the connector and thus reducing weaving related accidents, queuing of traffic at W/B Route 10 at the interchange, and improve safety and operation of I-10/605 Interchange. There are no feasible intermediate projects in scope and cost due to the three existing constraints limiting the vertical design. Such constraints are the I-605 freeway, Athol Street Overcrossing, and Bess Avenue Pedestrian Overcrossing.

6. FUTURE CONSTRUCTION

There is no future projects planned that would rectify the nonstandard features in this Fact Sheet. It is not feasible and realistic to have future projects due to the existing constraints mentioned above.

7. PROJECT REVIEWS AND CONCURRENCE

The project and the nonstandard features present in this fact sheet were reviewed by Refugio Dominguez, Design Manager (Office of Design D) on February, 24, 2009. Bob Chapman, District 7 Geometric Reviewer also reviewed this fact sheet on February 18, 2009.

Cesar Perez, from Federal Highway Administration (FHWA) is presently reviewing this Fact Sheet.

8. LIST OF ATTACHMENTS

A. Location Map
B. Vicinity Map
C. Typical Cross Sections
D. Layouts
E. Profile and Superelevation

ATTACHMENT A
Location Map

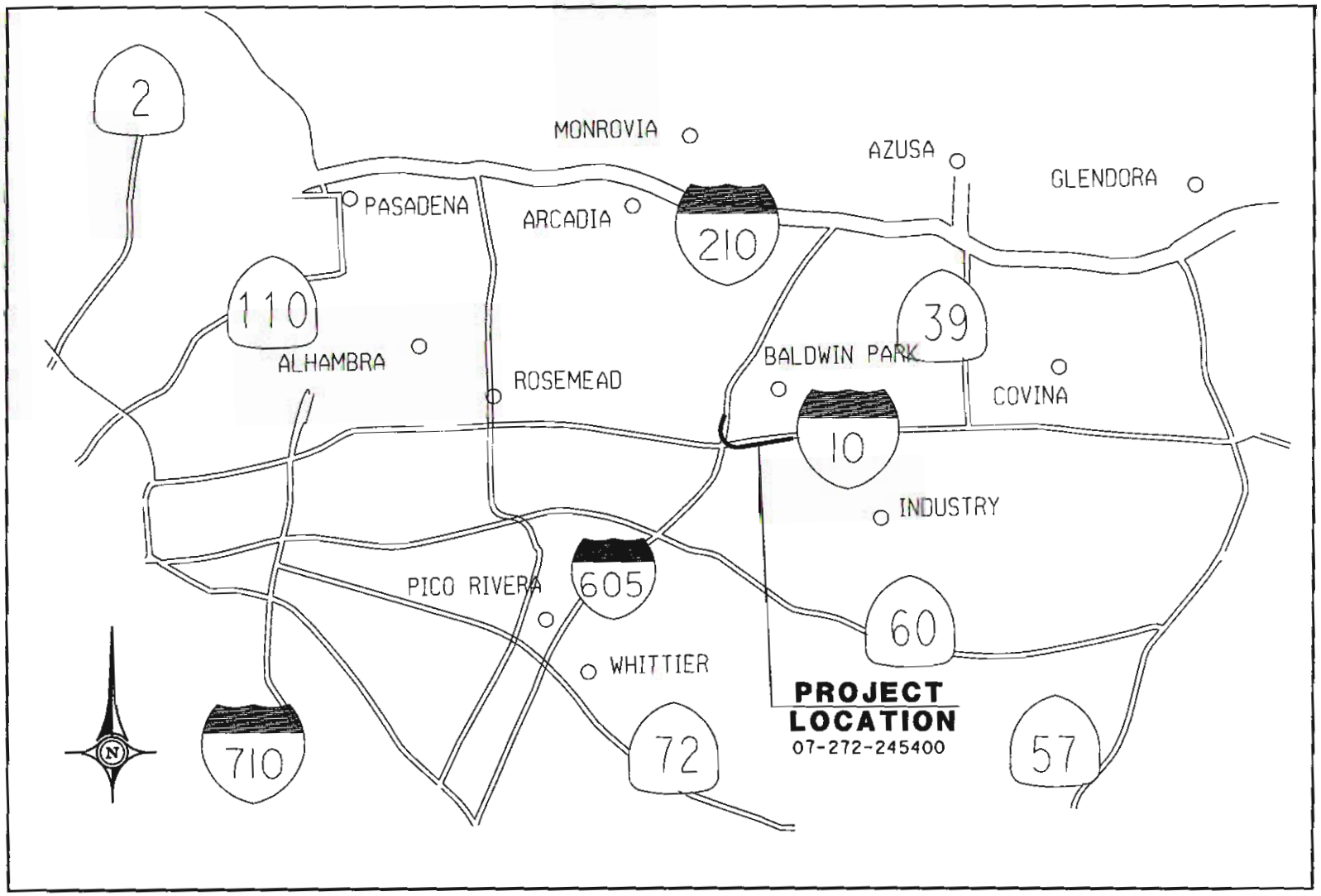
REGIONAL LOCATION MAP

NO SCALE

DISTRICT 07

ATTACHMENT B
Vicinity Map

VICINITY MAP



NO SCALE

DISTRICT 07

ATTACHMENT C
Typical Cross Sections

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TO SHE

REGISTERED CIVIL ENGINEER DATE

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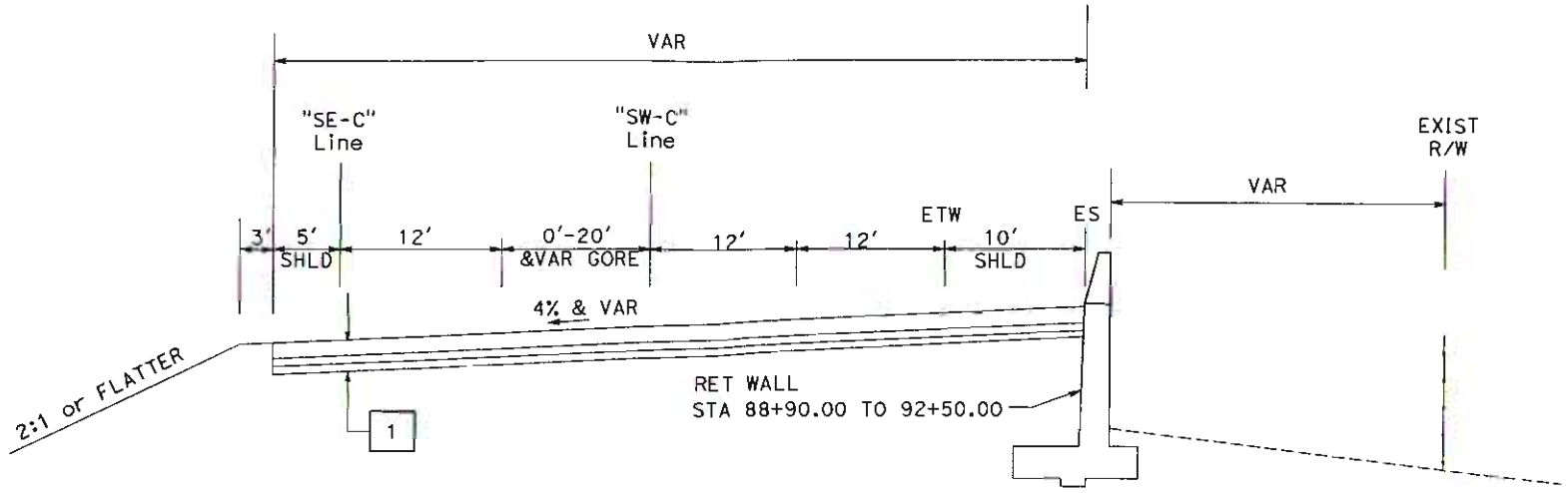


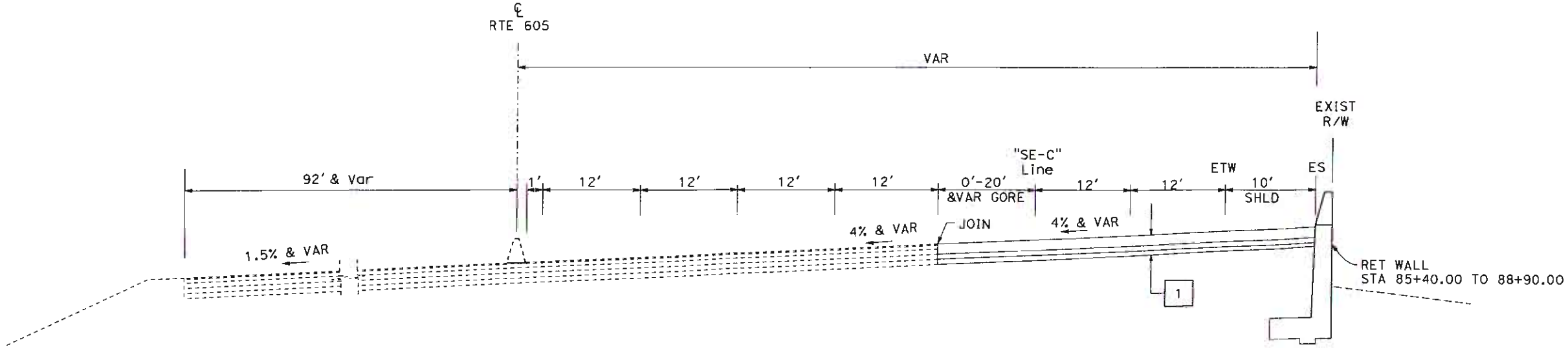
"SE-C" Line

STA 88+90.00 TO 96+00.00

TYPICAL STRUCTURAL SECTION

1 — 12" PCC, 6" LCB, 9" AB CL3

2 — 15" HMA (TYPE B), 12" AB CL3



"SE-C" Line

STA 84+89.76 to 88+90.00

ALTERNATIVE 4

ADVISORY FACT SHEET

TYPICAL CROSS SECTIONS

NOT TO SCALE

X-1

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Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.

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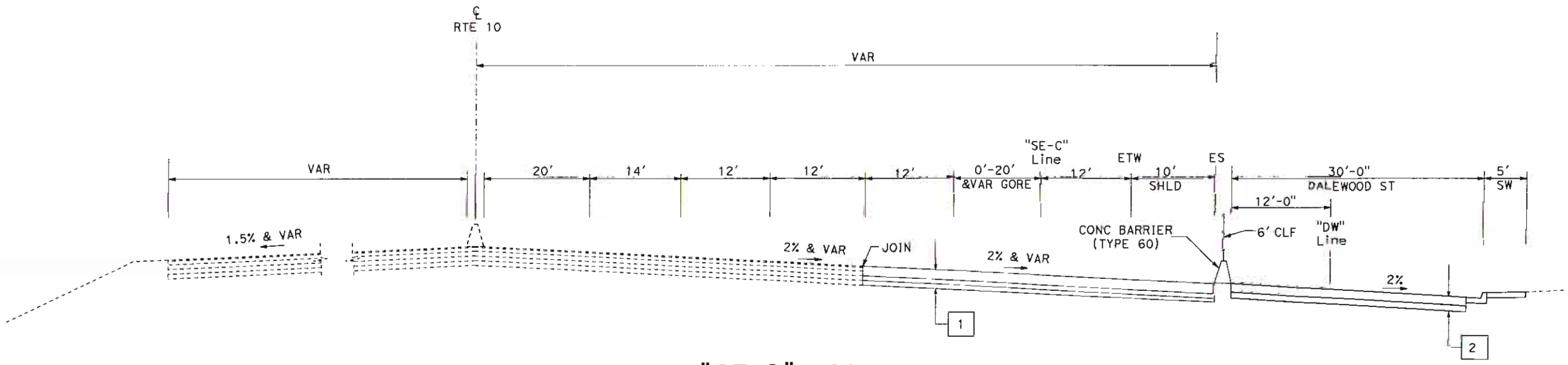

"SE-C" Line

STA 129+80.00 TO 137+16.58

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ALTERNATIVE 4

ADVISORY FACT SHEET

TYPICAL CROSS SECTIONS

NOT TO SCALE

X-2

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TO SHEET

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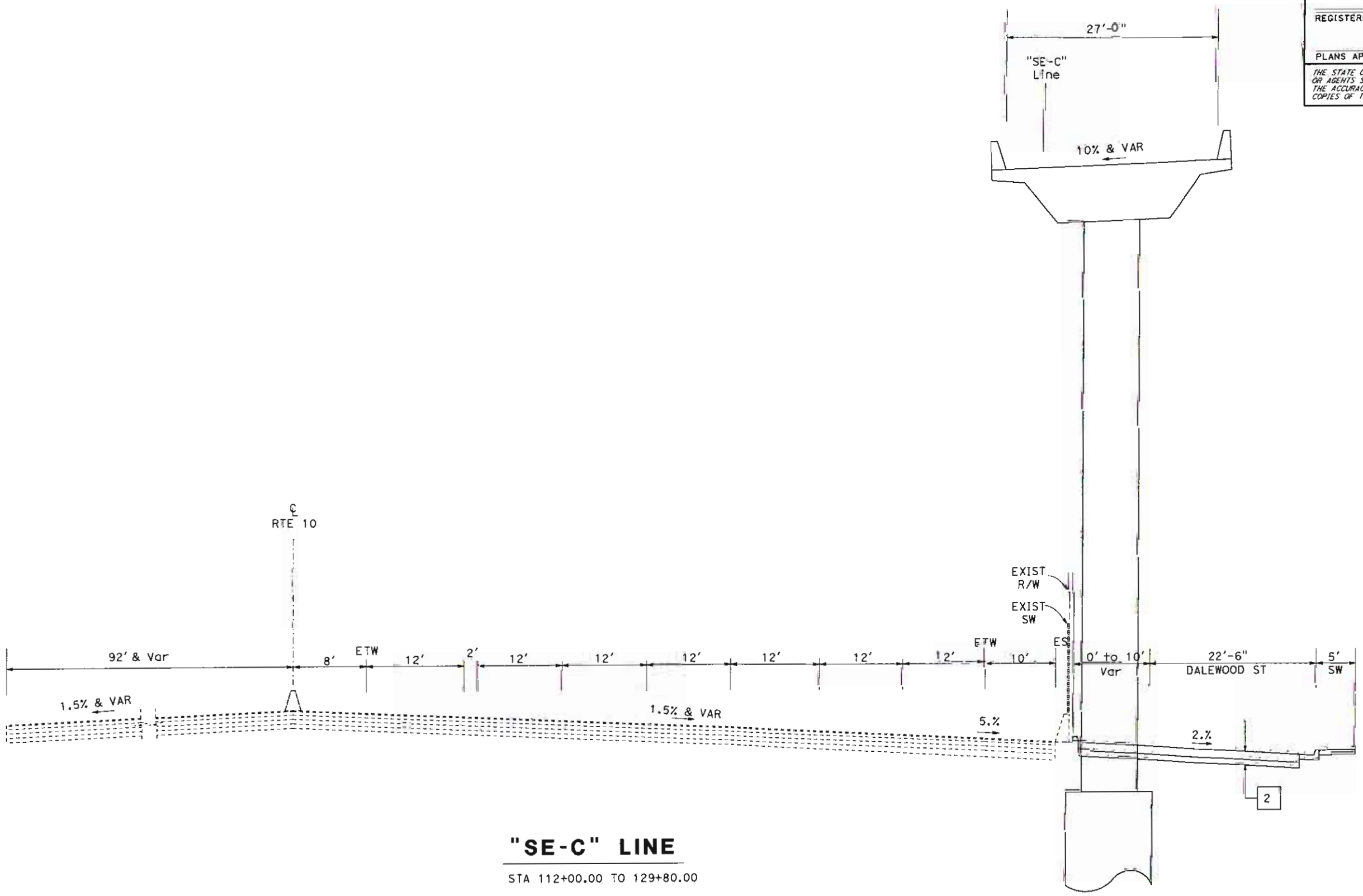

"SE-C" LINE

STA 112+00.00 TO 129+80.00

ALTERNATIVE 4

ADVISORY FACT SHEET

TYPICAL CROSS SECTIONS

NOT TO SCALE

X-3

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CHECKED BY	

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Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TO SHE

REGISTERED CIVIL ENGINEER DATE

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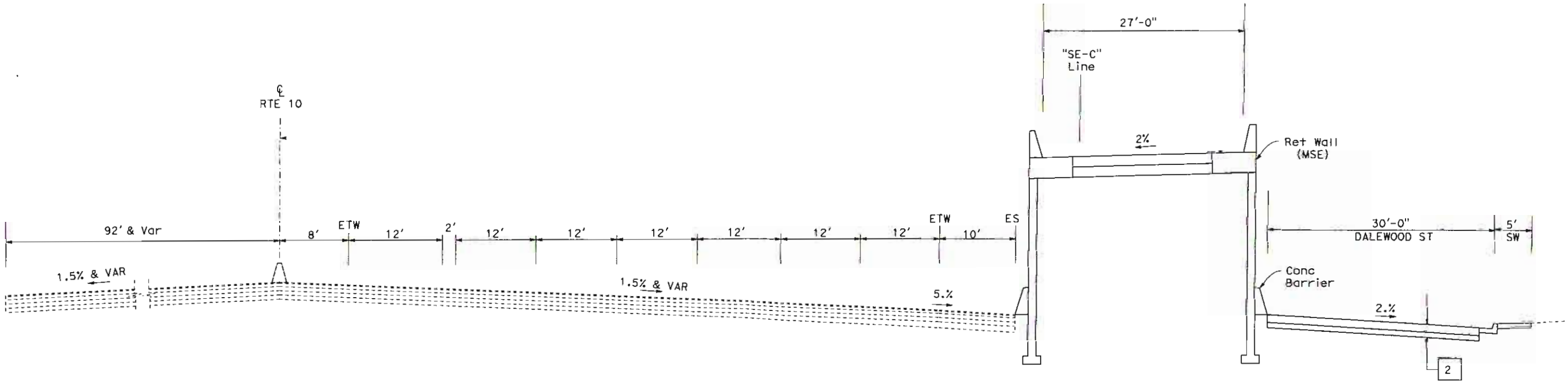

"SE-C" LINE

STA 129+80.00 TO 134+00.00

ALTERNATIVE 4

ADVISORY FACT SHEET

TYPICAL CROSS SECTIONS

NOT TO SCALE

X-4

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ATTACHMENT D
Layouts

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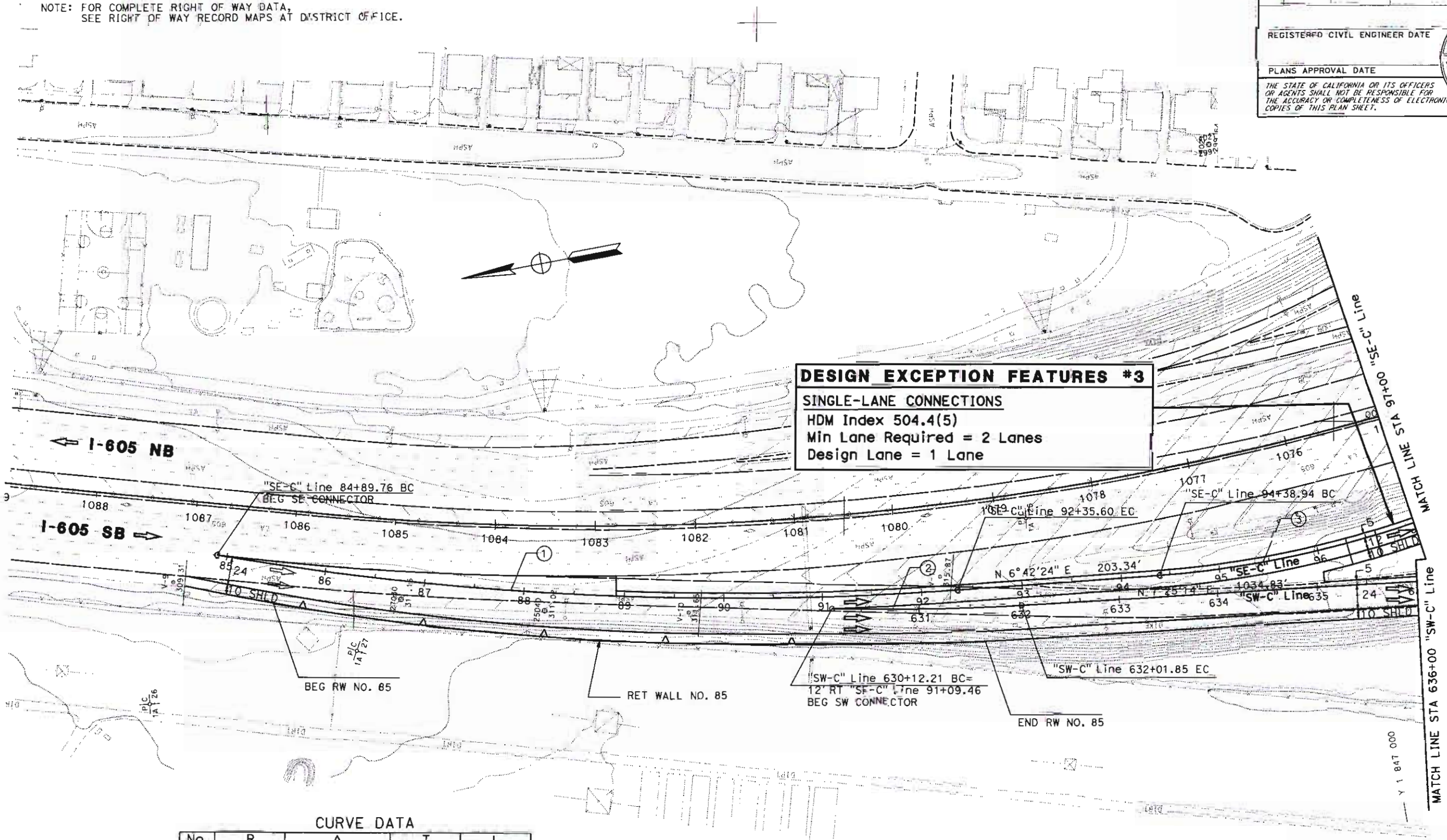

DESIGN EXCEPTION FEATURES #3

SINGLE-LANE CONNECTIONS
HDM Index 504.4(5)
Min Lane Required = 2 Lanes
Design Lane = 1 Lane

CURVE DATA

No.	R	Δ	T	L
1	3217.46'	13°16'54"	374.60'	745.84'
2	2250.28'	4°49'43"	94.88'	189.64'
3	1000.00'	106°34'05"	1341.23'	1860.26'

ALTERNATIVE 4

ADVISORY FACT SHEET

ALL DIMENSION ARE IN ENGLISH UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1" : 50'

L-1

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FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ

CALCULATED-DESIGNED BY: AARON FOONG

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DATE REVISED

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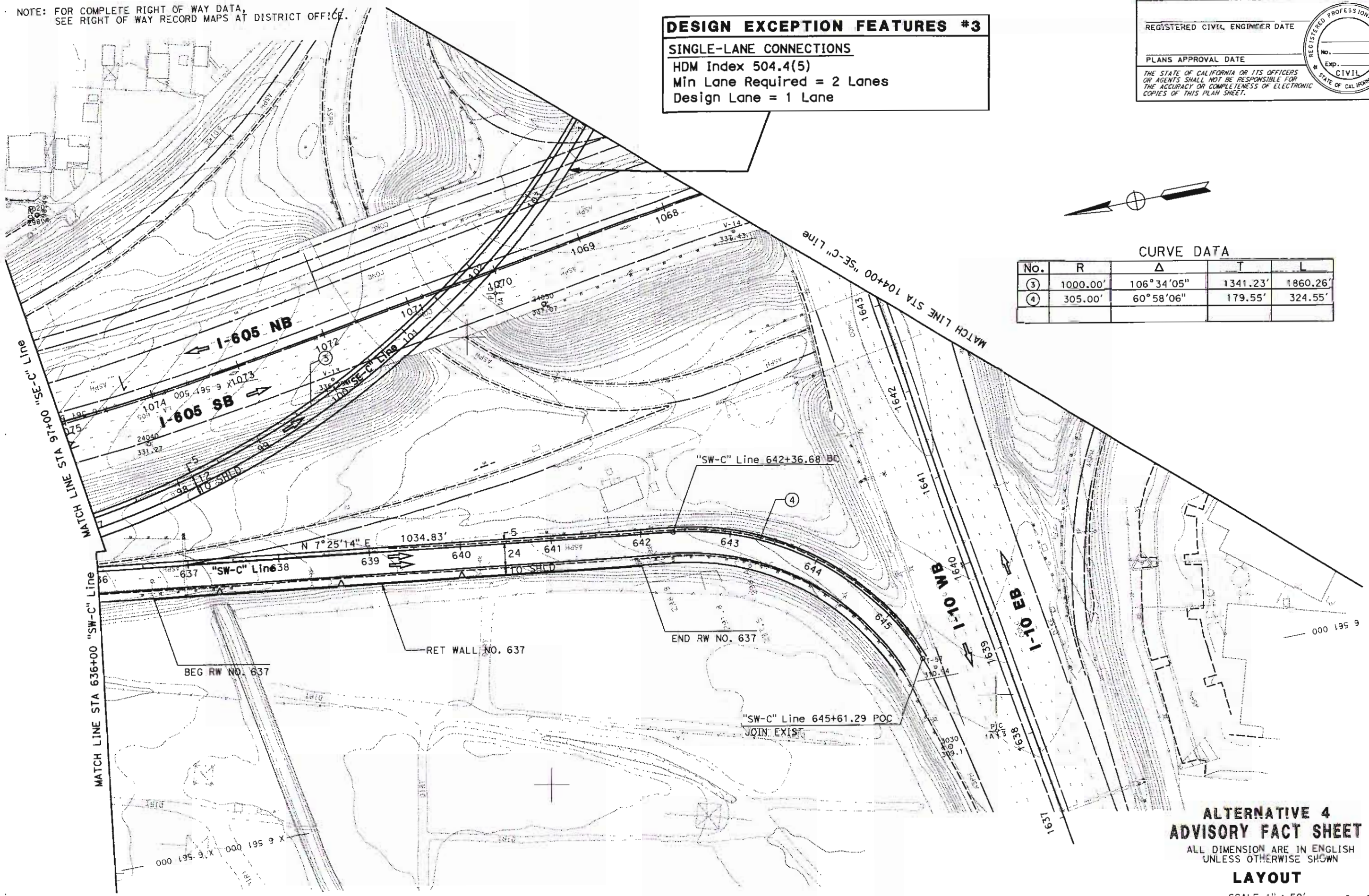

CURVE DATA

No.	R	Δ	T	L
3	1000.00'	106°34'05"	1341.23'	1860.26'
4	305.00'	60°58'06"	179.55'	324.55'

ALTERNATIVE 4
ADVISORY FACT SHEET

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LAYOUT

SCALE 1" : 50'

L-2

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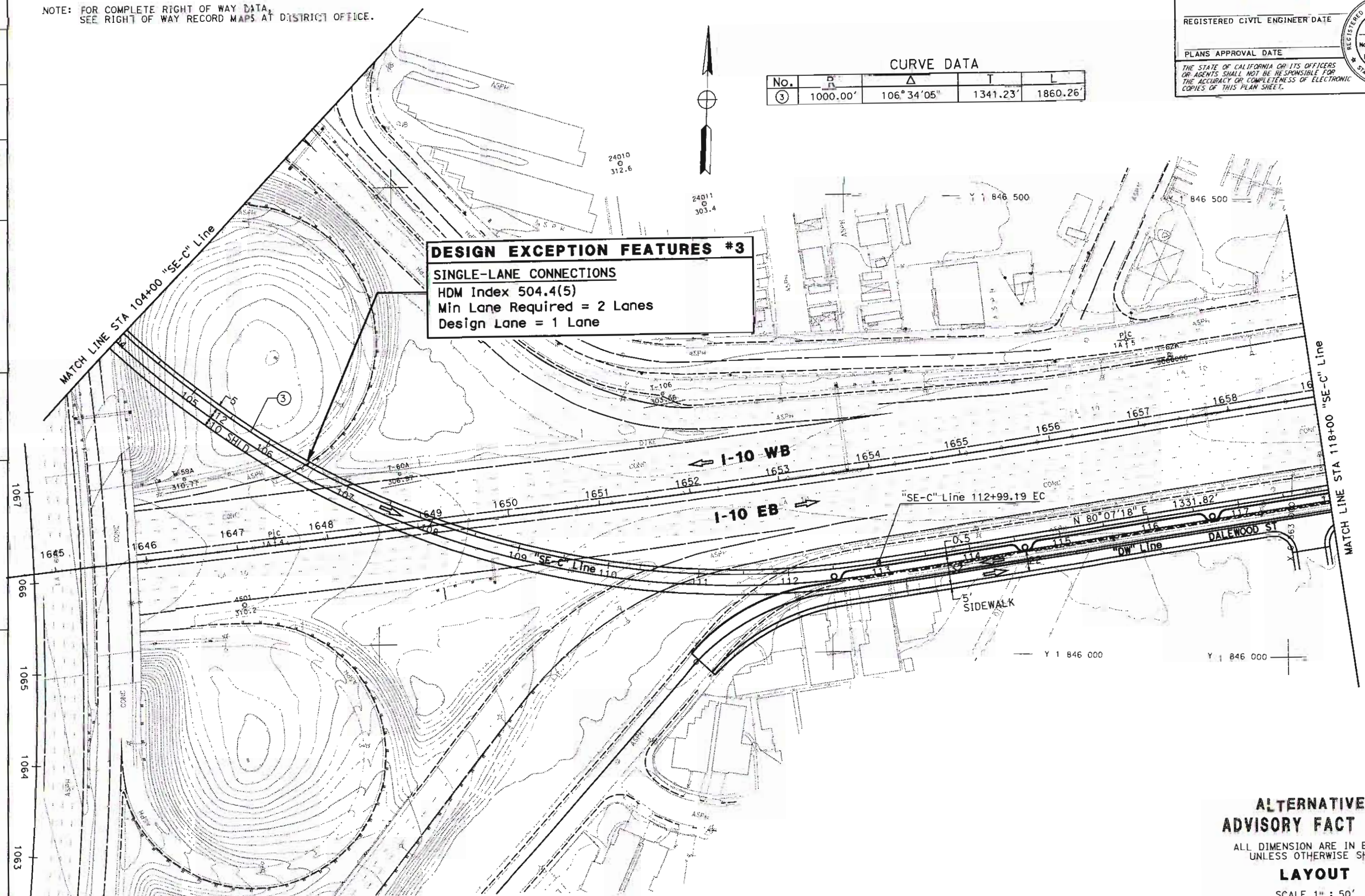
CURVE DATA

No.	R	Δ	T	L
3	1000.00'	106°34'05"	1341.23'	1860.26'



ALTERNATIVE 4
ADVISORY FACT SHEET

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LAYOUT

SCALE 1" : 50'

L-3

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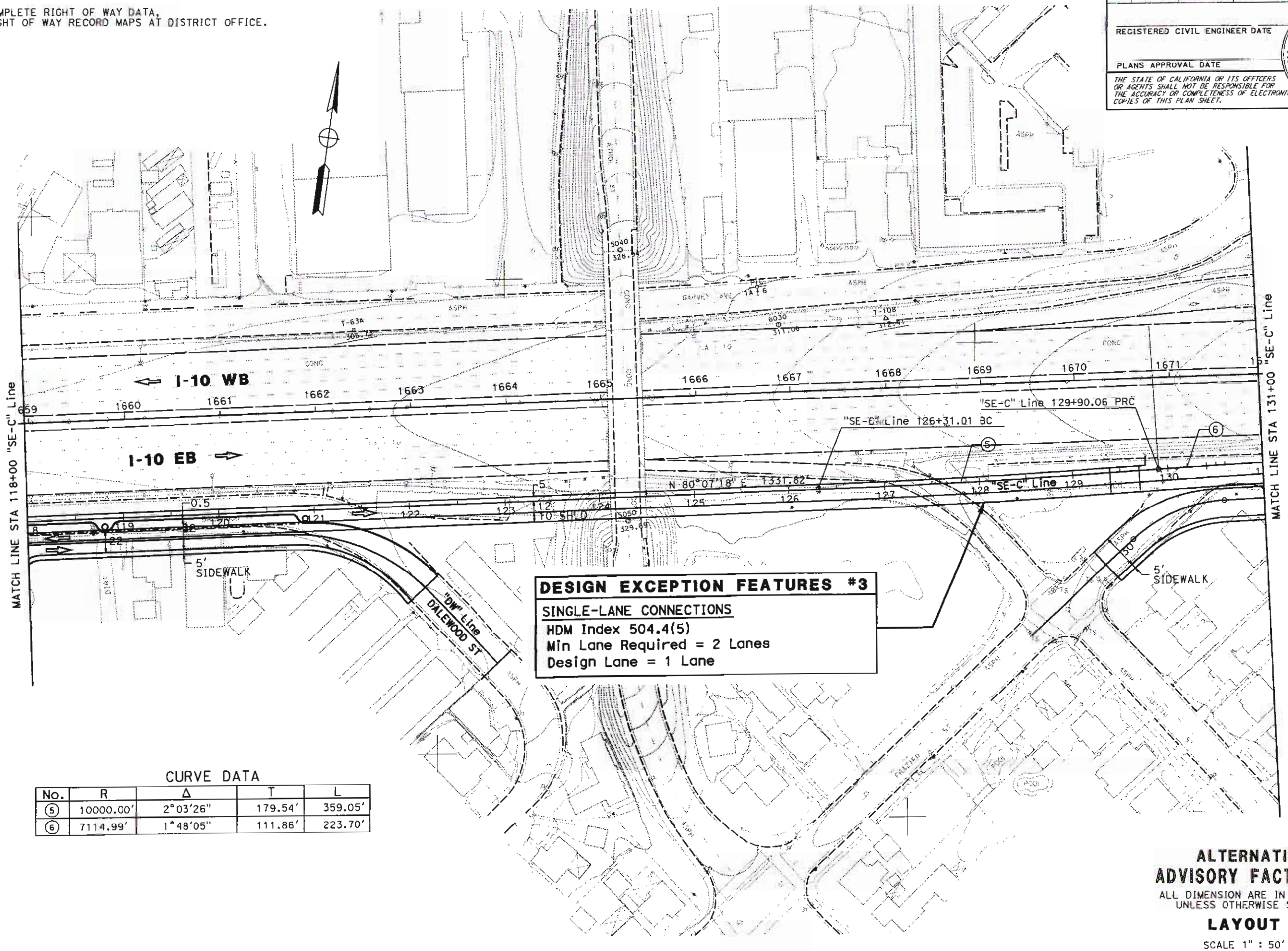

CURVE DATA

No.	R	Δ	T	L
5	10000.00'	2°03'26"	179.54'	359.05'
6	7114.99'	1°48'05"	111.86'	223.70'

ALTERNATIVE 4
ADVISORY FACT SHEET

ALL DIMENSION ARE IN ENGLISH UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1" : 50'

L-4

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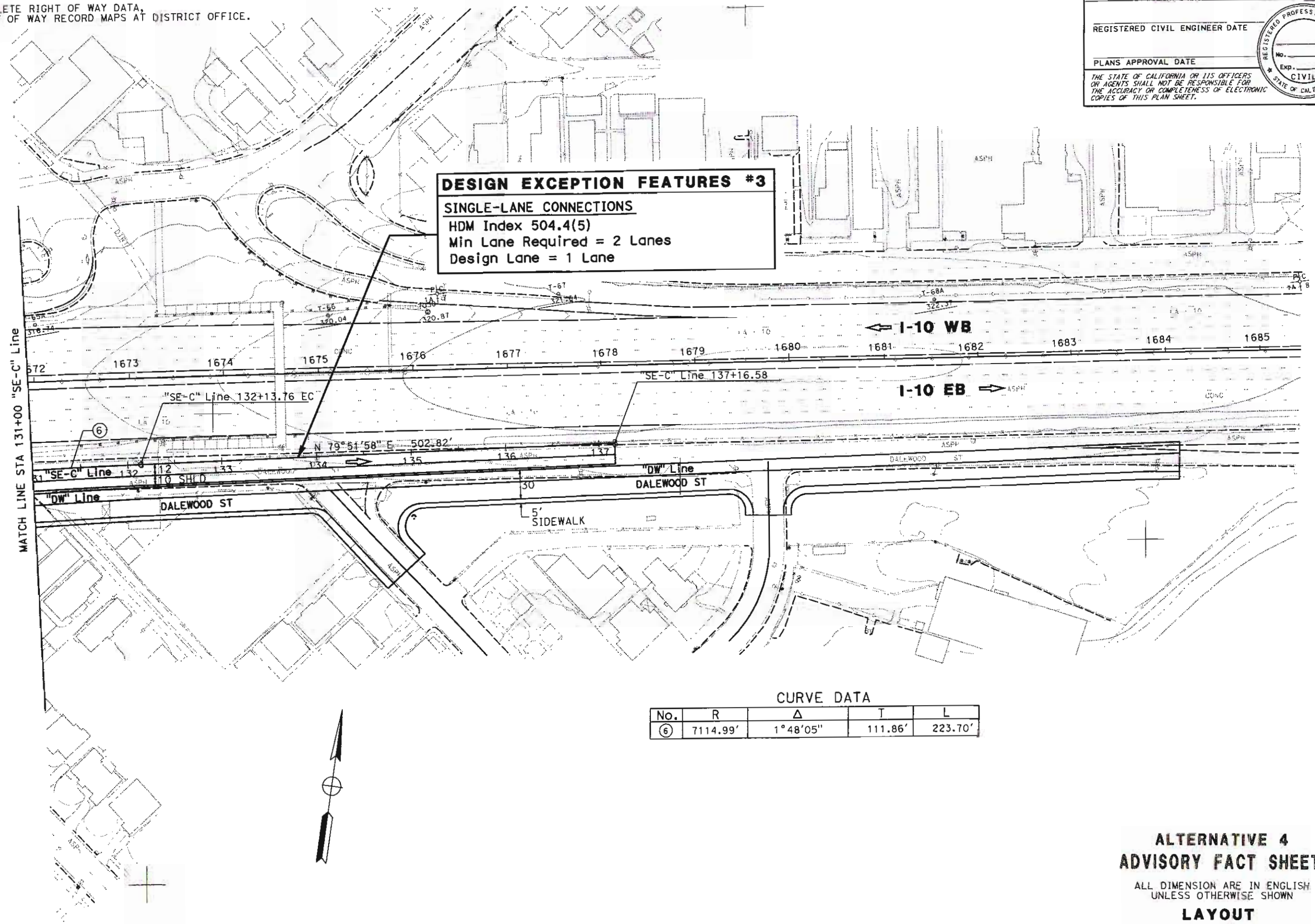

CURVE DATA

No.	R	Δ	T	L
6	7114.99'	1°48'05"	111.86'	223.70'

ALTERNATIVE 4

ADVISORY FACT SHEET

ALL DIMENSION ARE IN ENGLISH UNLESS OTHERWISE SHOWN

LAYOUT

SCALE 1" : 50'

L-5

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Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.

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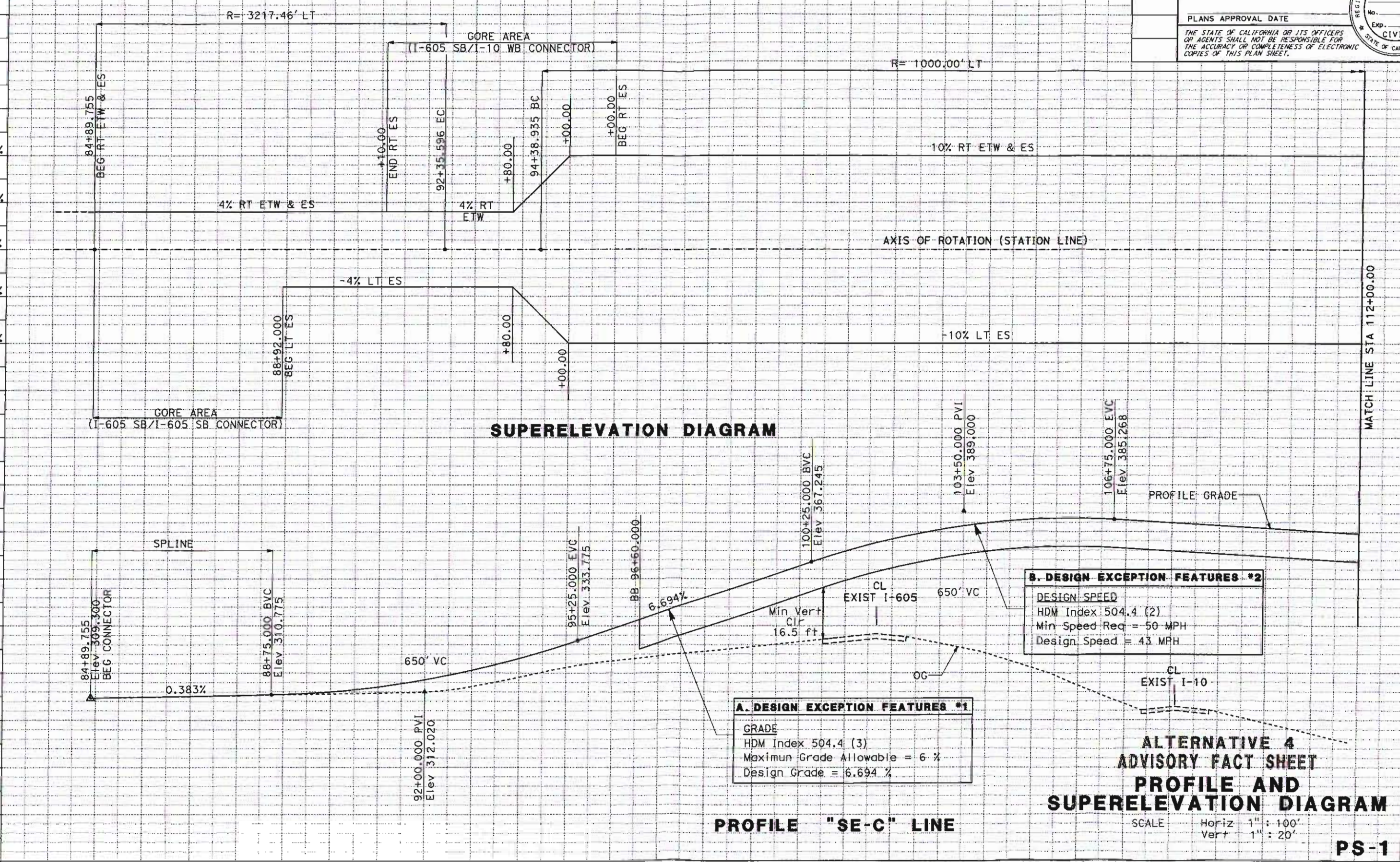

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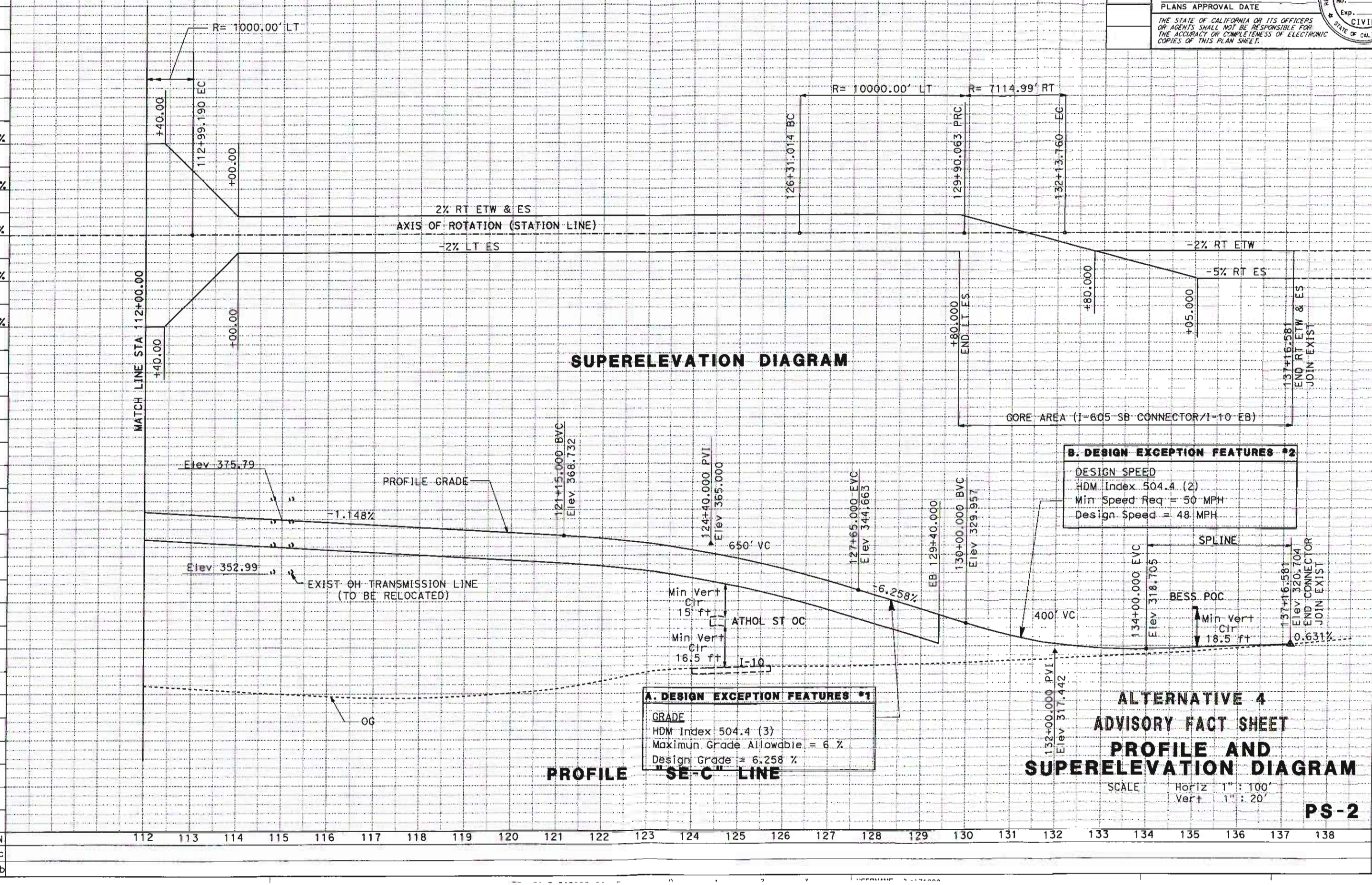

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CALCULATED-DESIGNED BY: AARON FOONG

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Caltrans

EXHIBIT 13-A

Project Specific Bridge Design Criteria – Segmental Structures

Exhibit 13-A

I605/10 Connector

07-245404

Project Specific Bridge Design Criteria-Segmental Structures

Date:

Prepared By:
xxxxx

1. **INTRODUCTION**
   1.1. This *Bridge Design Criteria* applies to the prestressed segmental concrete box girder bridge constructed by the xxxxxxx method.
   1.2. The bridge design shall satisfy the *AASHTO LRFD Bridge Design Specifications*, xxxx Edition (*LRFD*), with Interim Revisions through 2009, and as modified by *Caltrans Amendments v.4.xx.*, collectively referred to herein as "LRFD BDS".
   1.3. In addition to the *LRFD* BDS, pertinent sections of the following documents are to be used unless otherwise noted or revised in this Design Criteria:
   - *Caltrans Seismic Design Criteria*, Version 1.6 (*SDC*)
   - *Caltrans Bridge Memo to Designers* (*MTD*)

   1.4. Platforms, ladders, and accessories inside the box girder shall be designed to the 2007 California Building Code (CBC).
   1.5. Some details included in the *Standard Plans*, *Revised Standard Plans* and Bridge Standard Detail Sheets were created using Load Factor Design or Working Stress Design.
   1.6. Attention is directed to the following project-specific reports:
   -

Note: Numbered sections of this Criteria generally conform to the numbering of the LRFD BDS. Sections noted "unchanged" or not specified have not been modified from the LRFD BDS provisions.

2. GENERAL DESIGN & LOCATION FEATURES

2.1. Scope

The structure shall be a prestressed segmental concrete box girder bridge. The box girder superstructure shall be longitudinally post-tensioned and the bridge deck shall be transversely prestressed.

2.2. Definitions

2.3. Location Features

2.3.1. Operational Importance

2.3.1.1. The Bridge is categorized as an ordinary nonstandard bridge.

2.3.1.2. For all limit states, the Operational Importance Factor (*LRFD* 1.3.5), $\eta_I = 1.0$.

2.3.2. Bridge Site Arrangement

2.3.2.1. Traffic Safety

xxxx carried on the roadway shoulders.

2.4. Foundation Investigation

2.5. Design Objectives

2.5.1. Seismic Performance

2.5.1.1 "No Collapse" performance: significant damage shall be allowed, with a minimum risk of collapse. Damage should be limited to:

- Failed abutment backwall and shear keys.
- Failed expansion joints.
- Bearing offsets requiring recentering.
- Inelastic response resulting in concrete cracking, reinforcement yield, and spalling of cover concrete in columns.

2.5.1.2 Earthquake During Construction

2.5.1.2.1 The ground motion shall be assessed probabilistically as specified in Article 3.10.

2.5.1.2.2 "No Collapse" performance: significant damage shall be allowed, with a minimum risk of collapse.

2.5.2 Serviceability

2.5.2.1 General

2.5.2.1.1 xxxx

2.5.2.2 Durability

The design shall include the following measures to improve durability and minimize the life cycle costs of the bridge:

- High performance concrete with low permeability
- High performance concrete curing methods
- Permanent deck access openings are not permitted.
- Temporary deck access openings (one per cantilever) are permitted near the inflection points.

2.5.2.3 Instrumentation

-

2.5.2.4 Rideability

2.5.2.5 Utilities

2.5.2.5.1 Systems to be carried

- Bridge Interior Lighting
- Instrumentation (Article 2.5.2.3)
- Hoist Trolley
- Future Utilities

2.5.2.5.2 Structural Details for Utilities

2.5.2.5.2.1 xxxx

2.5.2.5.2.2 Anchors for utility hangers shall be cast-in threaded anchors; drilled anchors are not permitted in prestressed elements unless their penetration is less than or equal to 2 inches.

2.5.2.6 Unchanged (Deformations)

2.5.2.7 Consideration of Future Widening

2.5.2.7.1

2.5.3 Constructability

xxxx

2.6 Hydrology & Hydraulics

2.6.1 General

xxx

2.6.2 Site Data

2.6.2.1 xxxx

2.6.2.2 xxxx

2.6.3 Hydrologic Analysis

2.6.4 Hydraulic Analysis

2.6.5 Culvert Location

2.6.6 Roadway Drainage

2.6.6.1 General

Roadway drainage shall discharge through xxxx

2.6.6.2 Design Storm

Drainage systems shall be designed for a peak rainfall intensity of xxxx in/hr.

3 LOADS AND LOAD FACTORS

3.5 Scope- unchanged

3.6 Definitions

3.7 Notation

3.8 Load Factors and Load Combinations

3.8.1 Unchanged

3.8.2 Load Factors for Construction Loads

3.8.2.1 Construction load combinations in *LRFD* Table 5.14.2.3.3-1 shall apply to the superstructure at the service limit state.

3.8.2.2 Construction load factors in *LRFD* Article 3.4.2.1 shall apply to the superstructure and substructure at the strength limit state. The segmental construction loads in *LRFD* Article 5.14.2.3.2 shall be included and factored as follows:

3.8.2.2.1 DIFF shall have the same load factors as DC.

3.8.2.2.2 CE shall have the same load factors as DC, except that γ_{CE}=1.5 for the Strength I combination during cantilever construction.

3.8.2.2.3 CLL shall have the same load factors as LL.

3.8.2.2.4 WE and WUP shall have the same load factors as WS. During cantilever construction, γ_{WS}=1.25.

3.9 Permanent Loads

3.9.1 Dead Loads

3.9.1.1 DC

DC shall be based on a unit weight of concrete (including rebar) of 155 lb/ft^3.

3.9.1.2 DW

DW loads applied to the structure after completion of the segmental construction shall include the following:

- Utilities and Services — xx.xx kips/ft per box girder
- Future wearing surface — xx.xx ksi

3.10 Live Loads

3.10.1.1 xxxx

3.10.1.2 Design Vehicular Live Load

3.10.1.2.1 xxxx.

3.10.1.2.2 The design lane load shall not be decreased for span lengths up to 600 feet.

3.10.1.3 Application of Design Vehicular Live Loads

3.10.1.3.1 The wheel load for transverse deck design shall be increased by 25%, to 20.2 kips (HS-25 loading)

3.10.1.3.2 The Strength II load combination shall not include any HL-93 live load.

3.10.1.3.3 The load factor for live load combined with seismic loading (Extreme Event I) shall be γ_{EQ}=0.0.

3.11 Water Loads

N/A

3.12 Wind Load

3.12.1 Horizontal Wind Pressure

3.12.1.1 The base wind velocity shall be V_B = xxxx

3.13 Ice Loads- unchanged

3.14 Earthquake Effects

3.14.1 General

3.14.1.1 xxxx

3.14.1.2 Attention is directed to Article 2.5.1, Seismic Performance.

3.14.2 Ground Motions

3.14.2.1 The controlling fault is the xxxx fault, as described in the *Seismic Design Recommendations*.

3.14.2.2 Design Ground Motion

The horizontal and vertical design loadings on the completed structure shall be based on a site-specific determination of the xxxx. The associated Acceleration Response Spectrum (ARS) shall be the elastic, 5% damped curve shown below:

Figure 3.10.2.2-1 Design ARS Curve

3.14.2.3 Construction Earthquake

During segmental construction, the horizontal and vertical design loadings on the partially completed structure shall be based on a probabilistic ground motion with a 10% probability of exceedence in 10 years (*MTD* 20-12). The associated Acceleration Response Spectrum (ARS) shall be the elastic, 5% damped curve.

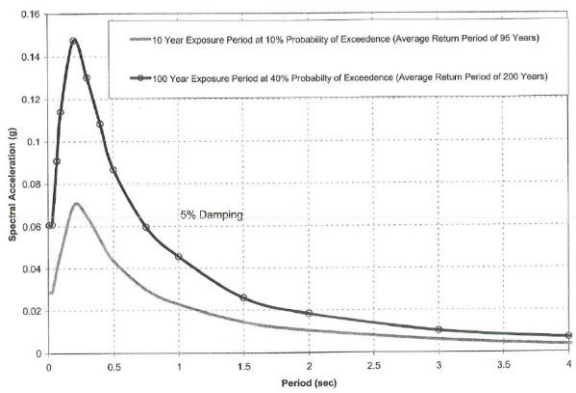


Figure 3.10.2.4-1 Construction ARS Curve

3.14.3 Importance Categories

xxxx

3.14.4 xxxx

3.14.5 xxxx

3.14.6 xxxx

3.14.7 Response Modification Factors

3.14.8 Unchanged

3.14.9 Unchanged

3.14.10 Requirements for Temporary Bridges and Stage Construction

See Article 2.5.1.4.

3.15 Earth Pressure

3.16 Force Effects Due to Superimposed Deformations

3.16.1 Unchanged

3.16.2 Uniform Temperature

The design temperature range for calculating forces in the structure (TU) shall be xx.x°F rise or fall from the assumed construction temperature. The design temperature range accounts for the lag between the air temperature and the interior of massive concrete members or structures.

3.16.3 Temperature Gradient

3.16.4 Unchanged

3.16.5 Creep

Creep and Shrinkage effects (CR&SH) shall be evaluated for all load combinations on both a young and an old structure. The "young structure" shall be at the time when all closures have been made. The "old structure" shall be a minimum of 30 years old.

3.16.6 Unchanged (Settlement)

3.17 Friction Forces

3.18 Vessel Collision- unchanged

3.19 Special Construction Loads

3.19.1 Construction Equipment

The assumed form traveler loading (CE) for the contract plans analysis shall be as follows:

Traveler weight	xxxx kips
Formwork	xxxx kips
Center of gravity	Traveler only: xxxx m in front of the leading edge of supporting segment. Forms only: ½ formed segment in front of the leading edge of supporting segment.

The Contractor shall base the structural analysis on the actual form traveler equipment to be used during construction.

3.19.2 Interior Transport Load

The typical section shall be designed to support a prestress tensioning jack transported inside the box girder by floor dolly or by a ceiling-mounted crane rail. The design load (including IM=33%) shall be assumed to be a xxxx kips concentrated load. As an element of future construction, this load shall be applied as "DC" in combination with the Service I and Strength I limit states.

3.19.3 Closure Forces

The structure shall accommodate erection tolerances of L/1000 (where L is the cantilever length from center of pier to the cantilever tip.) Misalignment correction stresses shall assume uncracked sections and be included as a component of "EL" in *LRFD* Equation 3.4.1-2.

4 STRUCTURAL ANALYSIS & EVALUATION

All construction, live, and permanent load cases shall be analyzed using three-dimensional structural analysis software with time-dependent creep, shrinkage, and relaxation capability.

Columns and pile shafts shall be designed using the p-y method to account for soil-structure interaction.

The bridge shall be designed to meet the displacement ductility requirements of the Caltrans Seismic Design Criteria using three-dimensional elastic dynamic analysis, inelastic time-history dynamic analysis, and inelastic static analysis.

5 CONCRETE STRUCTURES

5.1 Unchanged
5.2 Unchanged
5.3 Unchanged
5.4 Material Properties

5.4.1 Unchanged

5.4.2 Normal Weight Concrete

5.4.2.1 Compressive Strength

The specified 28-day concrete strength shall not exceed f'_{c28} = xxxx ksi unless verified through physical tests on the Contractor's concrete mix design.

5.4.2.2 Shrinkage and Creep

5.4.2.2.1 General

The effects of shrinkage and creep shall be estimated using the provisions of the 1990 CEB-FIP Model Code, using:

- average relative humidity = 65%
- average ambient temperature = 20°C
- Type II Modified Portland Cement
- Medium water/cement ratio

5.4.2.2.2 Creep

5.4.2.2.3 Shrinkage

Shrinkage reducing admixtures may be used to enable the concrete performance predicted by the CEB-FIP Model Code.

5.4.2.3 Modulus of Elasticity

The 28-day modulus of elasticity shall be calculated by *LRFD* Eq. 5.4.2.4-1 with K_1 = 1.0, or as verified by mix-specific physical tests.

5.4.3 Unchanged (Reinforcing Steel)

5.4.4 Unchanged (Prestressing Steel)

5.5 Limit States

5.5.1 Unchanged (General)

5.5.2 Unchanged (Service Limit State)

5.5.3 Unchanged (Fatigue Limit State)

5.5.4 Strength Limit State

The segmental resistance factors in LRFD 5.5.4.2.2 shall not apply to CIP construction where mild reinforcement crosses the joints.

5.5.5 Extreme Event Limit State

The resistance factors shall be those specified for the strength limit state in *LRFD* 5.5.4.2.

5.6 Design Considerations

5.7 Design for Flexural and Axial Force Effects

At the strength and extreme limit states for permanently cased portions of pile shafts, the maximum usable concrete strain may be taken as ε_c = 0.005. The casing shall not be considered as part of the reinforcement, and composite action between the steel casing and the concrete core shall not be used to develop flexural strength.

5.8 Shear and Torsion

5.8.1 Superstructure Girders

The shear design shall be based on *LRFD* 5.8.3, using the Modified Compression Field Theory, without exceptions. The AASHTO Guide Specifications for shear (*LRFD* 5.8.6) shall not apply.

5.8.2 Shear in CIDH shafts and rock sockets

See section 10.5.4 (Extreme Event Limit State)

5.8.3 Girder Stirrups

Stirrups in girder webs shall be designed for the longitudinal shear and torsion (A_v) and the out of plane bending from the transverse box girder analysis (A_f). The minimum area of steel should not be less than the larger of the following combinations of the two effects:

a) $A_v + 0.5A_f$

or b) $0.5A_v + A_f$

or c) $0.7(A_v + A_f)$

(*Construction and Design of Prestressed Concrete Segmental Bridges*, Podolny & Muller, page 203)

5.9 Prestressing and Partial Prestressing

5.9.1 Unchanged (General Design Considerations)

5.9.2 Unchanged (Stresses Due to Imposed Deformation)

5.9.3 Unchanged (Stress Limitations for Prestressing Tendons)

5.9.4 Stress Limits for Concrete

5.9.4.1 For Temporary Stresses Before Losses

5.9.4.2 For Stresses at Service Limit State After Losses

5.9.4.2.1 Compression Stresses- unchanged

5.9.4.2.2 Tension Stresses- unchanged for longitudinal design

- Transversely Prestressed Bridge Deck Design:
  - A. Top of deck- No tension
  - B. Bottom of deck- $3\sqrt{f_c^{'}}$ psi

5.10 Unchanged

5.11 Unchanged

5.12 Durability

5.12.1 The minimum concrete cover at the top surface of the concrete deck shall have 2.25 inch cover to allow deck grinding.

5.13 Unchanged

5.14 Unchanged

5.15 Seismic Design and Detailing

5.15.1 General

5.15.1.1 The Caltrans *Seismic Design Criteria* shall govern design for the design ground motion.

5.15.1.2 Attention is directed to Article 2.5.1, Seismic Performance.

5.15.2 Superstructure Flexural Strength (*MTD* 20-6)

5.15.2.1 The superstructure shall be designed to resist the internal forces generated when the structure has reached its Collapse Limit State in the longitudinal direction. Any prestressing steel used to satisfy *MTD* 20-6 shall be stressed to at least $0.3f'_{su}$ to prevent wedge slip.

5.15.2.2 The *MTD* 20-6 recommended minimum mild steel reinforcement (#8 @ 12-inch top and bottom) shall not apply.

5.15.2.3 The "service splice" requirements for mild steel may be satisfied with a double length lap splice.

5.15.3 Column and Pile Shaft Design

5.19.3.1 Concrete strains shall satisfy the reduced ultimate values of *SDC*

5.15.3.1.1 Reinforcement strains shall satisfy the reduced ultimate values of *SDC* 3.2.3.

5.15.3.1.2 Minimum Local Displacement Ductility Capacity (*SDC* 3.1.4.1)

For this long-period structure on large diameter CIDH extensions, the minimum displacement ductility capacity shall be μ_C = 2.5.

5.15.4 Joint Shear Design

5.15.4.1.1 xxxx.

5.15.4.1.2 xxxx.

5.15.5 Vertical Acceleration

The superstructure shall be designed to resist the effects of vertical acceleration using the vertical ARS curves in Article 3.10.2. Dead load and prestressing (primary and secondary) shall be included to create the combined load. Splices in reinforcement shall satisfy *SDC* 7.2.2.

6 STEEL STRUCTURES- unchanged

7 ALUMINUM STRUCTURES- unchanged

8 WOOD STRUCTURES- unchanged

9 DECK & DECK SYSTEMS- unchanged

10 FOUNDATIONS

10.1 Unchanged
10.2 Unchanged
10.3 Unchanged
10.4 Unchanged
10.5 Limit States and Resistance Factors

10.5.1 General

All foundations shall be designed using the LRFD method.

10.5.2 Service Limit States

10.5.2.1 Unchanged

10.5.2.2 Tolerable Movements and Movement Criteria

10.5.2.2.1 Differential settlement between piers shall be limited to 1 inch.

10.5.2.2.2 Differential settlement between individual piles within a pier shall be limited to 0.25 inches.

10.5.3 Strength Limit State

10.5.4 Extreme Event Limit State

10.5.4.1 To ensure the structural integrity and serviceability of the bridge after the earthquake, permanent vertical settlements shall not exceed 4 inches.

10.5.4.2 The design shear force in CIDH shafts and rock sockets need not be taken as more than two times the seismic overstrength shear force: $V_u \leq 2V_o$.

10.5.5 Resistance Factors

10.5.5.1 Unchanged

10.5.5.2 Unchanged

10.5.5.3 Extreme Limit States

xxxx.

10.6 Spread Footings
10.7 Driven Piles
10.8 Drilled Shafts

10.8.1 Unchanged
10.8.2 Unchanged
10.8.3 Unchanged
10.8.4 Unchanged

10.8.5 Pile Penetration For Lateral Loads

10.8.5.1 General

The minimum pile penetration for lateral loads shall ensure stable load-deflection characteristics at the strength limit state and the extreme event limit state. Attention is directed to the pile shaft design procedure in Caltrans *Bridge Design Aids* Chapter 12.

10.8.5.2 Strength Limit State

10.8.5.2.1 The minimum pile penetration shall be increased 20% beyond that required by the load-deflection analysis.

10.8.5.2.2 Attention is directed to the balanced cantilever overturning requirements of *LRFD* 5.14.2.4.4.

10.8.5.3 Extreme Event Limit State

10.8.5.3.1 The minimum pile penetration shall ensure stable load-deflection characteristics at the collapse limit state (*MTD* 20-1), using expected material properties to calculate M_p and V_p (*SDC* 3.2).

10.8.5.3.2 The factor of safety against overturning shall be greater than 1.0.

11 ABUTMENTS, PIERS & WALLS

Abutments and retaining walls shall be designed by the LRFD method.

12 BURIED STRUCTURES & TUNNEL LINERS

13 RAILINGS

xxxx.

14 JOINTS & BEARINGS

14.1 Bearings

The bearings at the abutments shall be designed according to Caltrans *MTD* 7.1 with the following modifications:

- The "Prestress Shortening" shall be the shortening due to creep and shrinkage effects (CR+SH) for both the young and old structures as defined in Article 3.12.5.
- Thermal effects (movement and reactions) on the bearings shall include both uniform temperature changes and the temperature gradient (Articles 3.12.2, 3.12.3).
- Bridge bearings shall accommodate structure displacements during the Functional-Evaluation Event.

14.2 Expansion Joint Assemblies

The expansion joint assemblies shall be designed according to Caltrans *MTD* 7.10 with the following modifications:

- The "Anticipated Shortening" shall be the shortening due to creep and shrinkage that is anticipated to occur between the casting of the abutment diaphragm and 30 years in the future (Article 3.12.5). Due to the uncertainty of the material model for concrete, creep and shrinkage displacements at the joints shall be increased by 50%.

EXHIBIT 14-A

Landscape Details

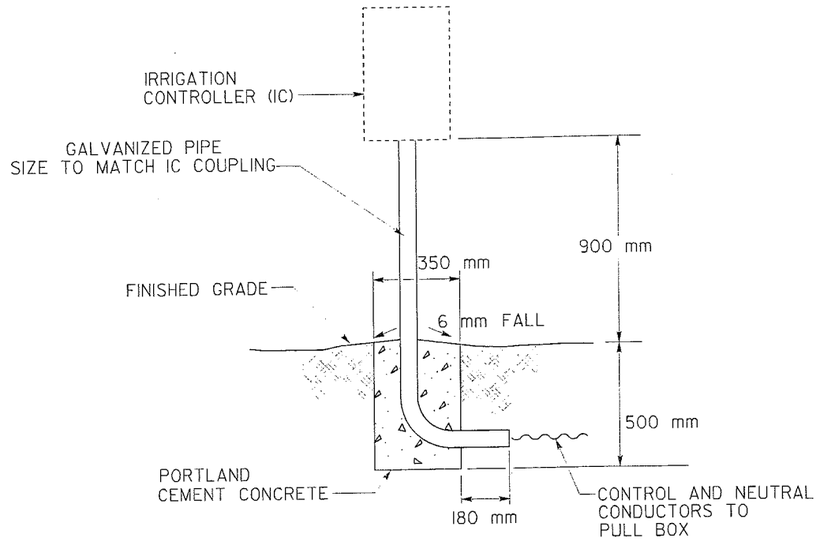
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	50.2/53.4	518	945

LICENSED LANDSCAPE ARCHITECT

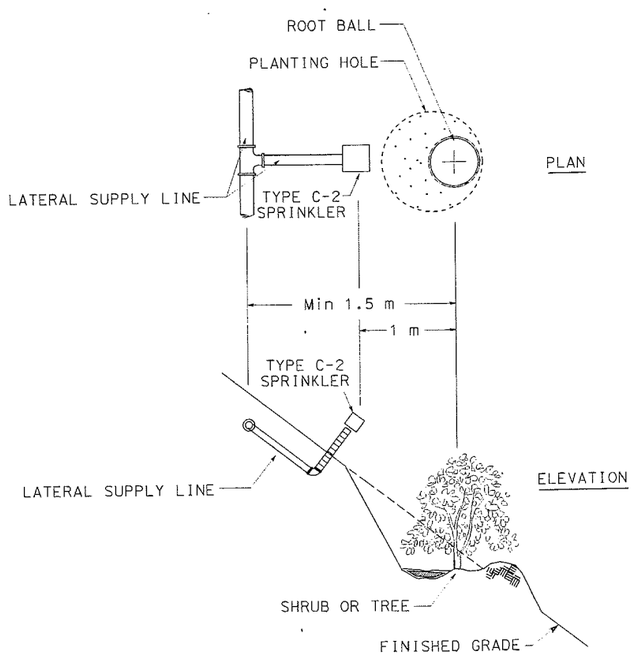
3-17-08
PLANS APPROVAL DATE

10-31-08
Renewal Date

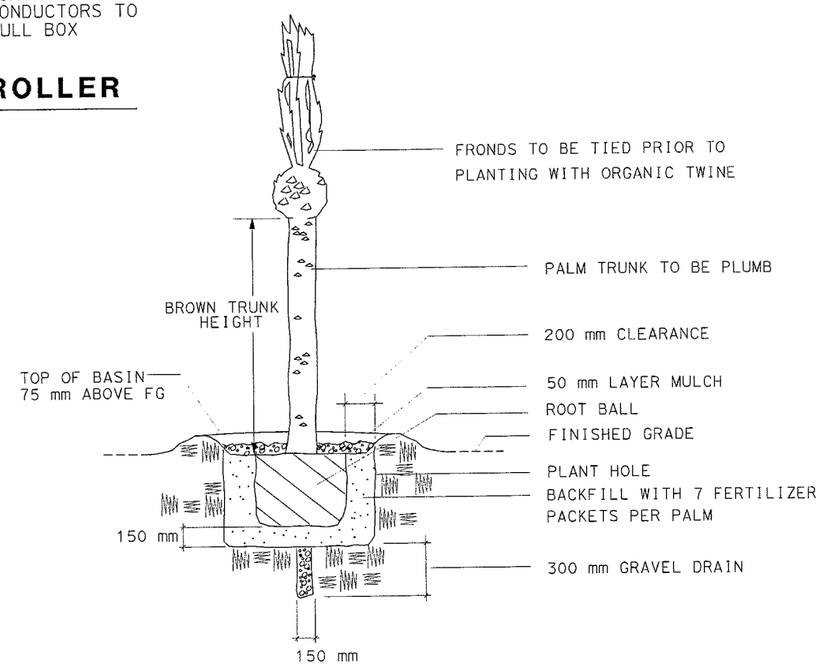
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



SOLAR IRRIGATION CONTROLLER

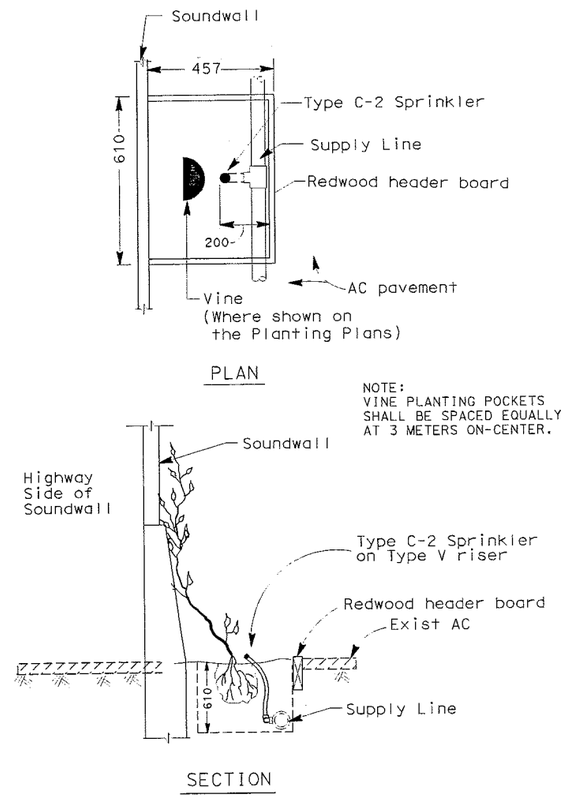


TYPE C-2 SPRINKLER PLACEMENT (SLOPE LOCATION)



TRANSPLANT PALM DETAIL

NO SCALE



VINE PLANTING IN EXIST AC

LANDSCAPE DETAILS
LD-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE
SENIOR LANDSCAPE ARCHITECT JENNIFER TAIRA
CALCULATED-DESIGNED BY R. KESTER
CHECKED BY G. KIMMEL
REVISED BY
DATE REVISED

LAST REVISION 12-20-07
DATE PLOTTED => 20 MAR-2008
TIME PLOTTED => 13:25

BORDER LAST REVISED 3-1-2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trrene
DGN FILE => 717071n002.dgn
CU 07341
EA 117071

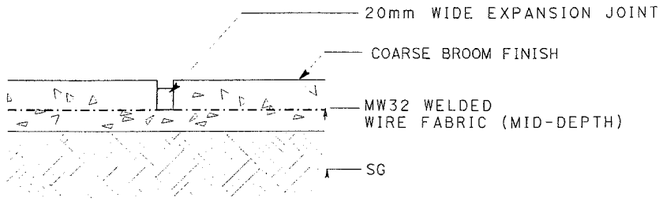
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	50.2/53.4	519	945

LICENSED LANDSCAPE ARCHITECT

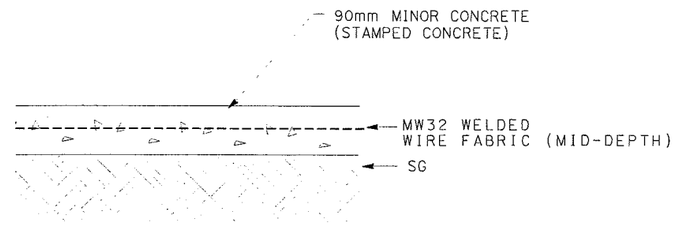
3-17-08
PLANS APPROVAL DATE

10-31-08
Renewal Date

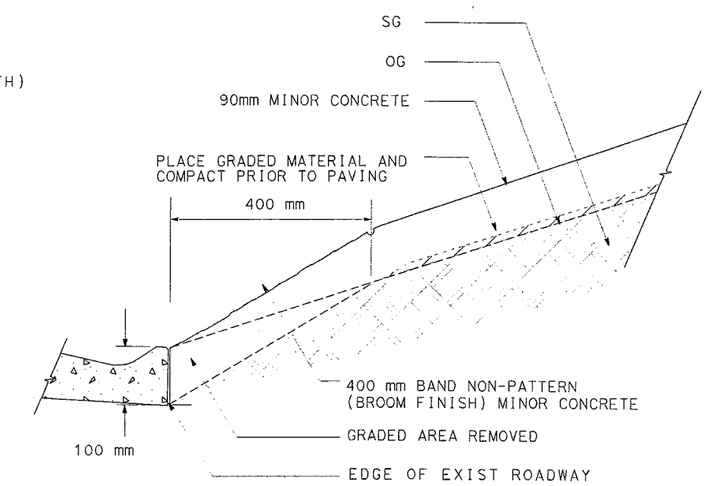
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ELECTRONIC COPIES OF THIS PLAN SHEET.



EXPANSION JOINT DETAIL (TYP)

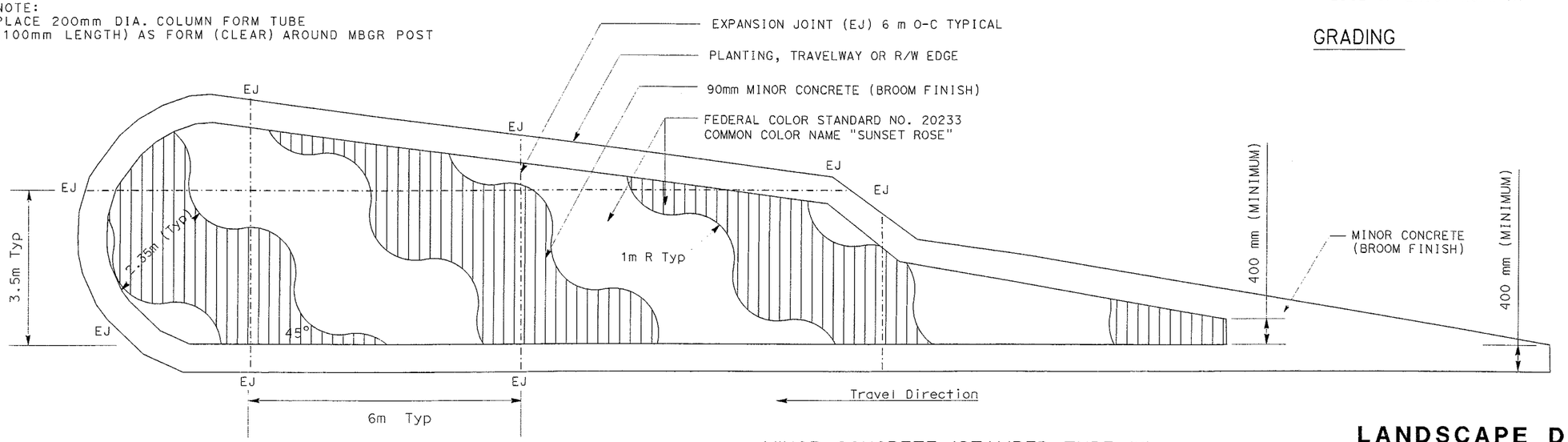


SECTION (TYP)



GRADING

NOTE:
PLACE 200mm DIA. COLUMN FORM TUBE
(100mm LENGTH) AS FORM (CLEAR) AROUND MBGR POST



MINOR CONCRETE (STAMPED TYPE 'I')
LAYOUT

LANDSCAPE DETAILS
LD-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: R. KESTER
CHECKED BY: G. KIMMEL
REVISED BY
DATE REVISED

LAST REVISION 12-20-07
DATE PLOTTED => 20-MAR-2008
TIME PLOTTED => 13:25

BORDER LAST REVISED 3/1/2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trrene
DGN FILE => 7:\707tn003.dgn
CU 07341
EA 117071

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	50.2/53.4	520	945

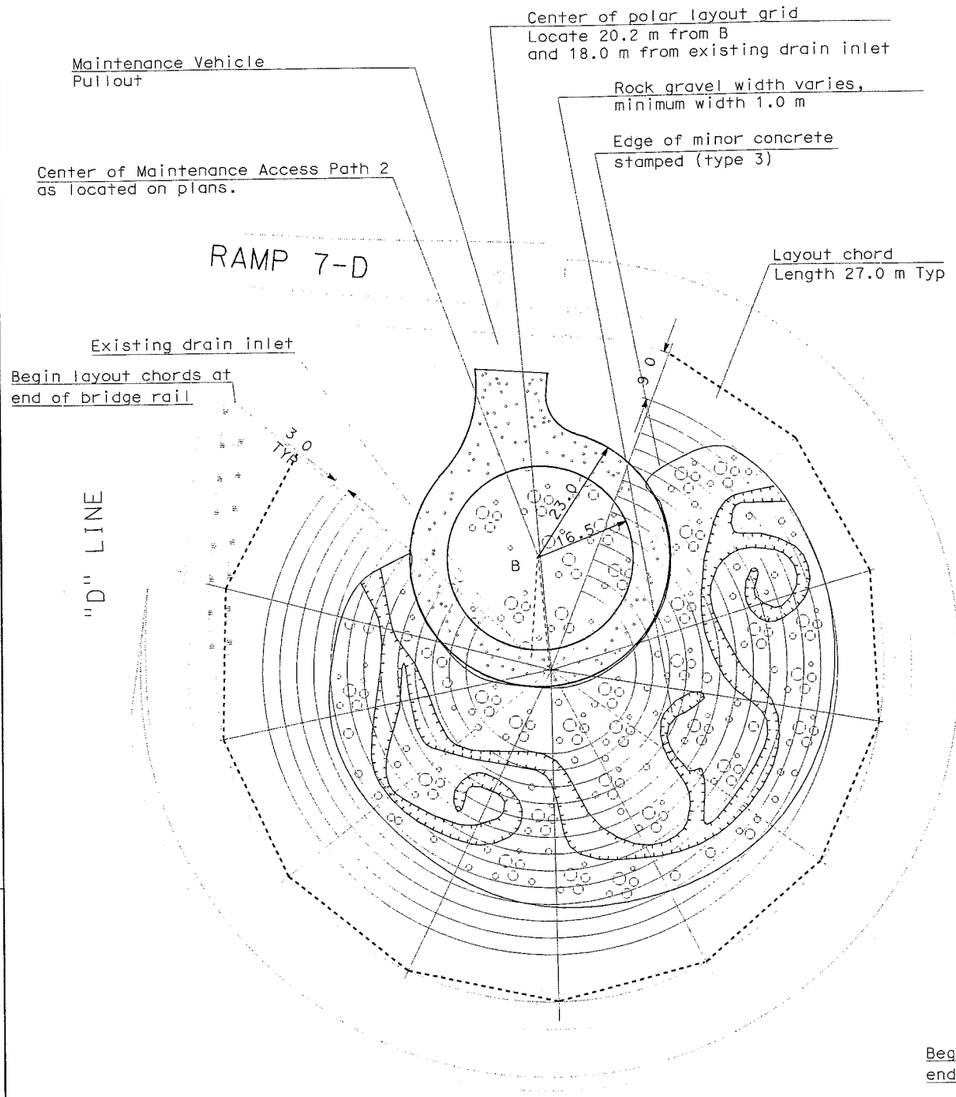
LICENSED LANDSCAPE ARCHITECT

3-17-08

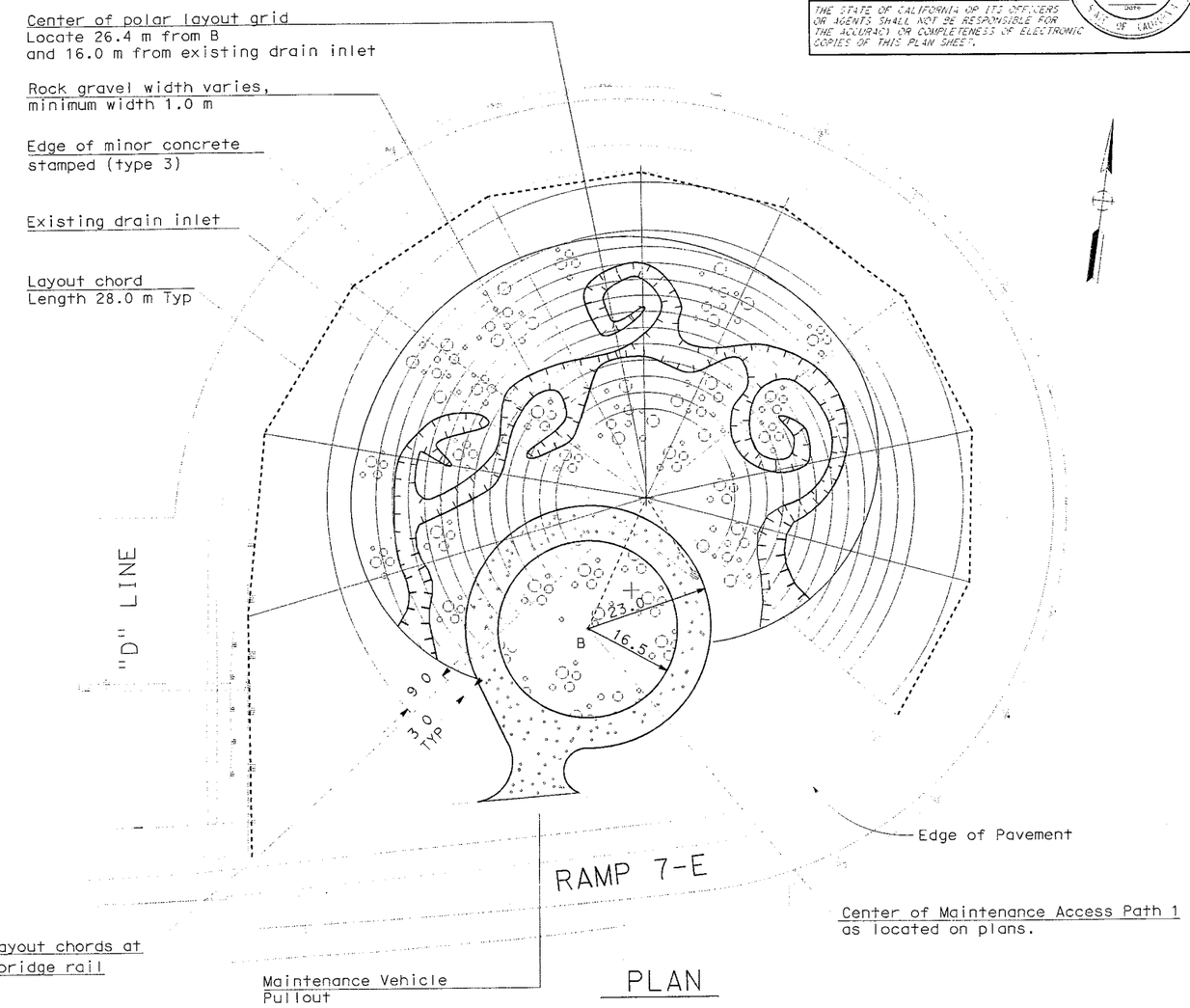
PLANS APPROVAL DATE

10-31-08

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



ROCK GRAVEL AND MINOR CONCRETE (STAMPED TYPE 3) LAYOUT
LOCATION 2



ROCK GRAVEL AND MINOR CONCRETE (STAMPED TYPE 3) LAYOUT
LOCATION 1

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

LANDSCAPE DETAILS
LD-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: R. KESTER
CHECKED BY: G. KIMMEL
REVISED BY
DATE REVISED

LAST REVISION 12-20-07
DATE PLOTTED => 20-MAR-2008
TIME PLOTTED => 13:25

BORDER LAST REVISED 3/ 2007
RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80
USERNAME => trrene
DGN FILE => 71*707tn004.dgn
CU 07341
EA 117071

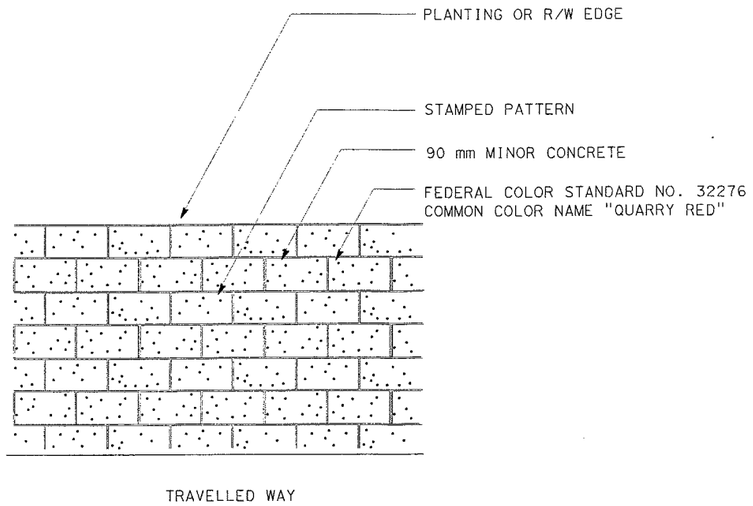
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	50.2/53.4	521	945

LICENSED LANDSCAPE ARCHITECT

3-17-08
PLANS APPROVAL DATE

10-31-08
Renewal Date

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



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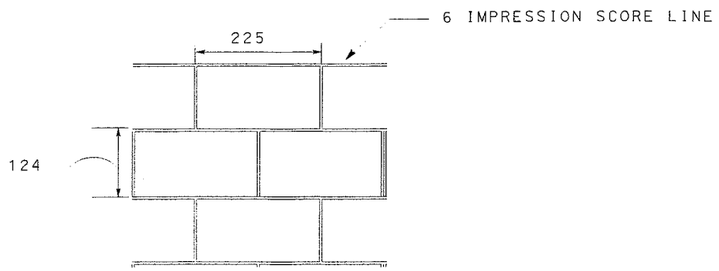

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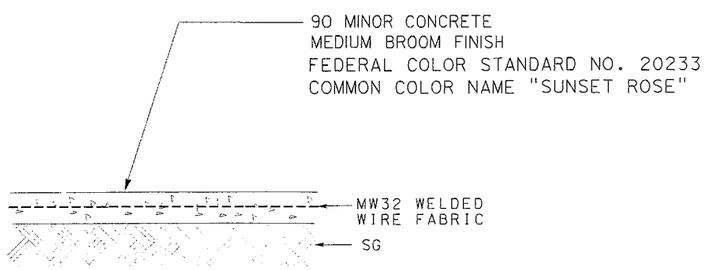
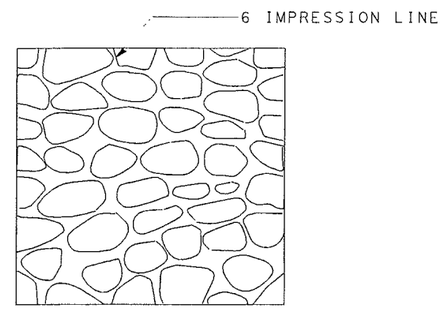


MINOR CONCRETE (COLORED)



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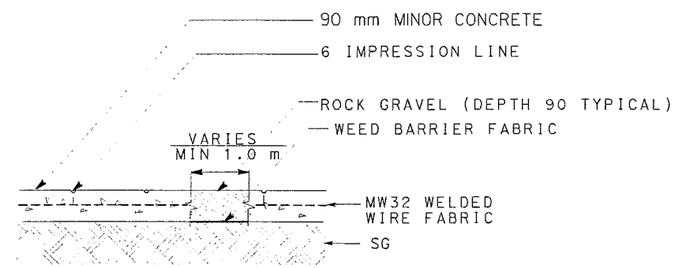
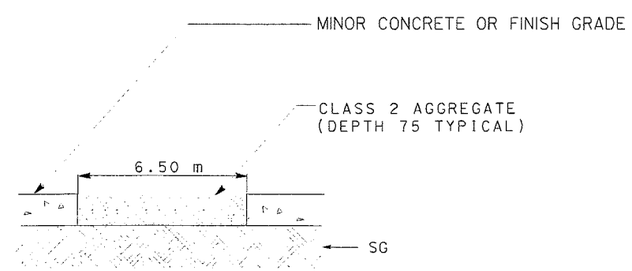


MINOR CONCRETE (STAMPED TYPE '3')
AND ROCK GRAVEL



MAINTENANCE ACCESS PATH

ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS OTHERWISE SHOWN.

LANDSCAPE DETAILS

LD-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
LANDSCAPE ARCHITECTURE

SENIOR LANDSCAPE ARCHITECT: JENNIFER TAIRA
CALCULATED-DESIGNED BY: R. KESTER
CHECKED BY: G. KIMMEL
REVISED BY
DATE REVISED

LAST REVISION 12-20-07
DATE PLOTTED => 25-MAR-2008
TIME PLOTTED => 09:19

EXHIBIT 15-A

I-10 Corridor Aesthetics Details

RETAINING WALL (TYPICAL)

Texture barrier face
type 736 (outside)

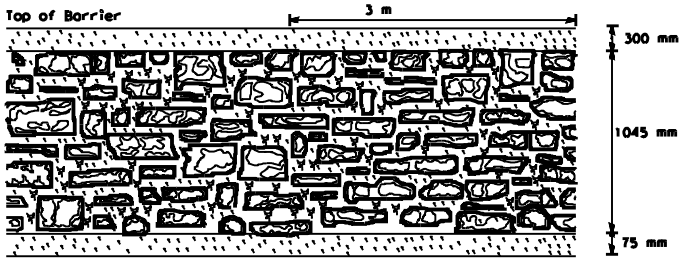
Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	10	50.2/53.4	104A	945

LICENSED LANDSCAPE ARCHITECT George Olguin 3-11-08

3-17-08
PLANS APPROVAL DATE

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

Caltrans Metric



ELEVATION

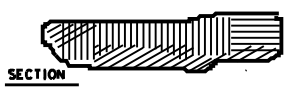
CONCRETE BARRIER

ARCHITECTURAL SURFACE TREATMENT
(RANCHO WALL PATTERN)

NOTES:
1. Pattern repeats every 3 meters O/C.
2. Grout joints are variable random.
3. Rock sizes vary see schedule.
4. Primary barrier color shall be Federal #20372

ROCK SCHEDULE	
# ## ROCK SHAPE	DIMENSIONS (approximate)
	305 x 203
	305 x 114
	381 x 89
	254 x 203
	305 x 203
	75 x 75
	305 x 203
	75 x 203
	100 x 75
	305 x 203

Not all wall pattern rock shapes shown.
Rock shape shown to establish general wall character.



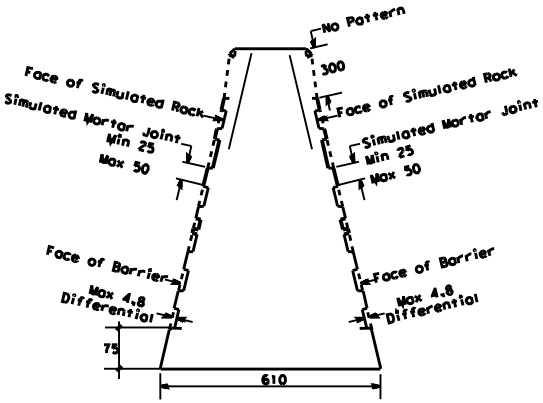
SECTION

ROCK

ARCHITECTURAL SURFACE TREATMENT
(COLOR STAIN)

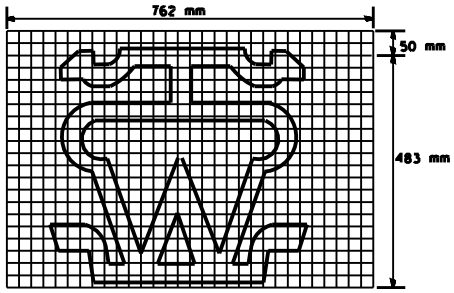
Federal color #30266
Federal color #20227
Federal color #33578
Federal color #10266

NOTES:
1. Rock surface shall be stained (color) to give a natural appearance.
2. Stains (color) may overlap to develop a more natural weather appearance.



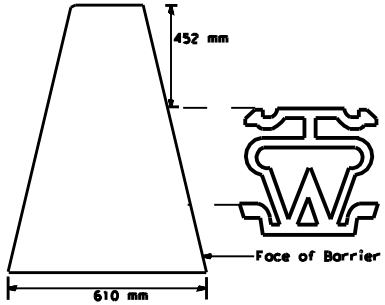
CONCRETE BARRIER (TYPE 60G)

(Rock Face Differential)



CATTLE BRAND PATTERN

ARCHITECTURAL SURFACE
(TEXTURED CONCRETE)



STENCIL PLACEMENT

(TYPE 60G BARRIER)

NOTES:
1. Stencil pattern to be placed @ 126 m O/C both sides of barrier.
2. Pattern to be sand blasted and stained.
3. Stencil staining shall be Federal color 30155.
4. Barrier shape not exact shown for graphic clarity only.

CONCRETE BARRIER ARCHITECTURAL TREATMENT

4 ADDED PER ADDENDUM No. 4 DATED MARCH 13, 2009

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

CONSTRUCTION DETAILS

NO SCALE

C-43

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

SENIOR LANDSCAPE ARCHITECT JENNIFER TAIRA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans LANDSCAPE ARCHITECTURE

LAST REVISION 00-00-00 | DATE PLOTTED => DATE | TIME PLOTTED => TIME

BORDER LAST REVISED 3/1/2007 | RELATIVE BORDER SCALE IS IN MILLIMETERS 0 20 40 60 80 | USERNAME => $USER | DGN FILE => $REQUEST | CU 07341 | EA 117071

EXHIBIT 18-A

Lane Closure Charts

Chart No. 1
Freeway Lane Requirements and Hours of Work

County: LA | Route/Direction: 10/East

Closure Limits: SB Route 605 off-connector to Route 605 on-connectors

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	N	N	N	N	N	N	N	N	N	N	N	N	N	3	3	3	3	2
Fridays	1	1	1	1	1	1	N	N	N	N	N	N	N	N	N	N	N	N	N	3	3	3	2	2
Saturdays	2	2	1	1	1	1	1	2	3	3	3	N	N	N	N	N	N	N	N	3	3	3	3	3
Sundays	2	2	1	1	1	1	1	1	2	2	3	3	3	N	N	N	N	N	N	3	3	3	2	2

Legend:

1	Provide at least one through freeway lane open in direction of travel
2	Provide at least two adjacent through freeway lanes open in direction of travel
3	Provide at least three adjacent through freeway lanes open in direction of travel
N	No work permitted

REMARKS: Number of Through Traffic Lanes - 4

Chart No. 2
Freeway Lane Requirements and Hours of Work

County: LA | Route/Direction: 10/West

Closure Limits: Route 605 off-connectors to SB Route 605 on connector

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3	3	2	2	1	
Fridays	1	1	1	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3	2	2	2	
Saturdays	1	1	1	1	1	1	2	3	3	3	N	N	N	N	N	N	N	N	N	N	3	3	3	2	
Sundays	2	2	1	1	1	1	1	2	2	3	N	N	N	N	N	N	N	N	N	N	3	3	2	2	

Legend:

1	Provide at least one through freeway lane open in direction of travel
2	Provide at least two adjacent through freeway lanes open in direction of travel
3	Provide at least three adjacent through freeway lanes open in direction of travel
N	No work permitted

REMARKS: Number of Through Traffic Lanes - 4

Chart No. 3
Freeway Lane Requirements and Hours of Work

County: LA | Route/Direction: 605/North

Closure Limits: EB Route 10 off-connector to WB Route 10 on-connector

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2	2	2	1	
Fridays	1	1	1	1	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2	2	1	
Saturdays	1	1	1	1	1	1	1	2	2	2	N	N	N	N	N	N	N	N	N	N	2	2	2	2	
Sundays	1	1	1	1	1	1	1	1	1	2	2	N	N	N	N	N	N	N	N	N	2	2	2	1	

Legend:

1	Provide at least one through freeway lane open in direction of travel
2	Provide at least two adjacent through freeway lanes open in direction of travel
N	No work permitted

REMARKS: Number of Through Traffic Lanes – 3 (Does not include HOV Lane)

Chart No. 4
Freeway Lane Requirements and Hours of Work

County: LA | Route/Direction: 605/South

Closure Limits: Route 10 off-connectors to Route 10 on-connectors

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2	2	1	1	
Fridays	1	1	1	1	1	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2	2	2	1	
Saturdays	1	1	1	1	1	1	1	2	2	N	N	N	N	N	N	N	N	N	N	N	N	2	2	2	
Sundays	1	1	1	1	1	1	1	1	1	2	2	N	N	N	N	N	N	N	N	N	N	2	2	1	

Legend:

1	Provide at least one through freeway lane open in direction of travel
2	Provide at least two adjacent through freeway lanes open in direction of travel
N	No work permitted

REMARKS: Number of Through Traffic Lanes – 3 (Does not include HOV Lane)

Chart No. 5
Complete Freeway Closure Hours

County: LA | Route/Direction: 605/North

Closure Limits: Valley Blvd to WB Route 10 on-connector

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C																				
Fridays	C	C	C	C	C																				
Saturdays		C	C	C	C	C																			
Sundays		C	C	C	C	C	C																		

Legend:

C — Freeway or expressway may be closed completely

No complete freeway or expressway closure is permitted

REMARKS:
Detour traffic to exit at Valley Blvd off-ramp; west on Valley Blvd; north on Durfee Ave; east on Ramona Blvd to the on-ramp to northbound Route 605. Place a portable changeable message sign on the right shoulder of northbound Route 605 in advance of Valley Blvd off-ramp with the message: "FREEWAY / CLOSED – VALLEY / TO / RTE 605". A minimum of 10 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 6
Complete Freeway Closure Hours

County: LA | Route/Direction: 605/South

Closure Limits: Route 10 off-connectors to Route 10 on-connectors

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays																									
Fridays																									
Saturdays	C	C	C	C	C																				
Sundays		C	C	C	C	C	C																		

Legend:

C	Freeway or expressway may be closed completely
	No complete freeway or expressway closure is permitted

REMARKS:
Detour traffic to continue on westbound Route 10 and exit at Durfee Ave off-ramp; south on Durfee Ave; east on Valley Blvd to the on-ramp to southbound Route 605. Place a portable changeable message sign on the right shoulder of southbound Route 605 at the Lower Azusa Rd on-ramp gore with the message: "FREEWAY / CLOSED – AT / ROUTE 605". A minimum of 12 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 7
Complete Connector Closure Hours

County: LA | Route/Direction: 10/East

Closure Limits: East 10 to North 605

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Fridays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Saturdays	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Sundays	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:

ALTERNATIVE 1

Detour traffic to continue on eastbound Route 10 and exit at Baldwin Park Blvd off-ramp; west on Dalewood St; north on Baldwin Park Blvd to the on-ramp to westbound Route 10. Place a portable changeable message sign on the right shoulder of eastbound Route 10 at the Stewart St on-ramp gore with the message: "N 605 / EXIT / CLOSED – DETOUR / BALDWIN / PARK BL". A minimum of 6 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

ALTERNATIVE 2

Detour traffic onto southbound Route 605 and exit at Valley Blvd off-ramp; east on Valley Blvd to the on-ramp to northbound Route 605. Place a portable changeable message sign on the right shoulder of eastbound Route 10 at the Stewart St on-ramp gore with the message: "N 605 / EXIT / CLOSED – DETOUR / S605 TO / VALLEY". A minimum of 6 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 8
Complete Connector Closure Hours

County: LA | Route/Direction: 10/East

Closure Limits: East 10 to South 605

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Fridays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	
Saturdays	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	
Sundays	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:
Detour traffic to exit at Peck Rd (north) off-ramp; north on Peck Rd; east on Valley Blvd to the on-ramp to southbound Route 605. Place a portable changeable message sign on the right shoulder of eastbound Route 10 at the Santa Anita Ave off-ramp gore with the message: "S 605 / EXIT / CLOSED – DETOUR / PECK RD / VALLEY". A minimum of 11 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 9
Complete Connector Closure Hours

County: LA | Route/Direction: 10/West

Closure Limits: West 10 to North 605

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Fridays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Saturdays	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Sundays	C	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	C	C	C	C	

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:

ALTERNATIVE 1

Detour traffic to continue on westbound Route 10 and exit at Valley Blvd off-ramp; north on Peck Rd; east on Ramona Blvd to the on-ramp to northbound Route 605. Place a portable changeable message sign on the right shoulder of westbound Route 10 at the southbound Baldwin Park Blvd on-ramp gore with the message: "N 605 / EXIT / CLOSED – DETOUR / USE / VALLEY". A minimum of 12 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

ALTERNATIVE 2

Detour traffic to continue on westbound Route 10 and exit at Durfee Ave off-ramp; south on Durfee Ave; east on Valley Blvd to the on-ramp to northbound Route 605. Place a portable changeable message sign on the right shoulder of westbound Route 10 at the southbound Baldwin Park Blvd on-ramp gore with the message: "N 605 / EXIT / CLOSED – DETOUR / USE / DURFEE". A minimum of 10 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 10
Complete Connector Closure Hours

County: LA | Route/Direction: 10/West

Closure Limits: West 10 to Route 605

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C
Fridays	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Saturdays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sundays	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:

ALTERNATIVE 1

Detour traffic to continue on westbound Route 10 and exit at Valley Blvd off-ramp; north on Peck Rd; east on Ramona Blvd to the on-ramps to Route 605. Place a portable changeable message sign on the right shoulder of westbound Route 10 at the southbound Baldwin Park Blvd on-ramp gore with the message: "RTE 605 / EXITS / CLOSED – DETOUR / USE / VALLEY". A minimum of 12 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

ALTERNATIVE 2

Detour traffic to continue on westbound Route 10 and exit at Durfee Ave off-ramp; south on Durfee Ave; east on Valley Blvd to the on-ramps to Route 605. Place a portable changeable message sign on the right shoulder of westbound Route 10 at the southbound Baldwin Park Blvd on-ramp gore with the message: "N 605 / EXIT / CLOSED – DETOUR / USE / DURFEE". A minimum of 10 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 11
Complete Connector Closure Hours

County: LA | Route/Direction: 605/North

Closure Limits: North 605 to East 10

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C
Fridays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Saturdays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sundays	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:
Detour traffic onto westbound Route 10 and exit at Valley Blvd off-ramp; north on Peck Rd; east on Stewart St to the on-ramp to eastbound Route 10. Place a portable changeable message sign on the right shoulder of northbound Route 605 in advance of Valley Blvd off-ramp with the message: "EAST 10 / EXIT / CLOSED – DETOUR / W10 TO / VALLEY". A minimum of 10 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 12
Complete Connector Closure Hours

County: LA | Route/Direction: 605/North

Closure Limits: North 605 to West 10

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Fridays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Saturdays	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	
Sundays	C	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	C	C	C	

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:
Detour traffic to exit at Valley Blvd off-ramp; west on Valley Blvd to the on-ramp to westbound Route 10. Place a portable changeable message sign on the right shoulder of northbound Route 605 in advance of Valley Blvd off-ramp with the message: "WEST 10 / EXIT / CLOSED – DETOUR / USE / VALLEY". A minimum of 10 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 13
Complete Connector Closure Hours

County: LA | Route/Direction: 605/South

Closure Limits: South 605 to East 10

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Fridays	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Saturdays	C	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Sundays	C	C	C	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	C	C	C	

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:
Detour traffic to exit at Ramona Blvd off-ramp; west on Ramona Blvd; south on Peck Rd; east on Stewart St to the on-ramp to eastbound Route 10. Place a portable changeable message sign on the right shoulder of southbound Route 605 at the Lower Azusa Rd on-ramp gore with the message: "EAST 10 / EXIT / CLOSED – DETOUR / USE / RAMONA". A minimum of 18 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

Chart No. 14
Complete Connector Closure Hours

County: LA | Route/Direction: 605/South

Closure Limits: South 605 to West 10

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Fridays	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Saturdays	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	
Sundays	C	C	C	C	C	C	C	C	C	N	N	N	N	N	N	N	N	N	N	N	N	C	C	C	

Legend:

C — Connector may be closed completely

N — No work permitted

REMARKS:
Detour traffic to exit at Ramona Blvd off-ramp; west on Ramona Blvd; south on Peck Rd to the on-ramp to westbound Route 10. Place a portable changeable message sign on the right shoulder of southbound Route 605 at the Lower Azusa Rd on-ramp gore with the message: "WEST 10 / EXIT / CLOSED – DETOUR / USE / RAMONA". A minimum of 18 special portable freeway detour signs (SP-2), as shown on the plans, shall be posted along the detour route and shall be removed at the end of each closure.

EXHIBIT 21-A

Structural Material Recommendation

Memorandum

To : **Refugio Dominguez, Sr. P.E.**
Senior Transportation Engineer
Office of Design D

Date : March 3, 2010

File No.: 07-LA-10, PM 31.1/32.3
07-LA-605, PM R20.2/20.6
Freeway Widening and Connector Design
EA 07 – 245401

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

Subject: **Structural Section Recommendation for Freeway widening and Connector design**

Per your e-mail request dated February 9th, 2010, Materials Investigations has reviewed the Design – Build Project for Freeway widening and connector design at Freeways 10/605 Interchange. Materials Investigations does not concur with the Proposed Typical Structural Section and offers the following Structural Sections Recommendations instead.

I. **Structural Section Recommendations**

A. Proposed Typical Structural Section **[1]** for Freeway Widening and Connectors

T.I. = 15.5 (40-years Design) R = 15

1.05'	(13")	JPCP (Jointed Plain Concrete Pavement)
0.50'	(6")	LCB (Lean Concrete Base)
0.75'	(9")	CL 3 AB (Class 3 Aggregate Base)
2.30'	(28")	Total

B. Proposed Typical Structural Section **[2]** for Freeway Frontage Road

T.I. = 10 R = 15

0.50'	(6")	HMA-B (Hot Mix Asphalt – Type B)
0.50'	(6")	LCB
0.90'	(11")	CL 3 AB
1.90'	(23")	Total

C. Proposed Typical Structural Section **[3]** for Freeway Slope

0.35' (4") JPCP with WWF (Jointed Plain Concrete Pavement with Welded Wire Fabric)
Please note that concrete pavement is preferred in the slope areas due to the fact that HMA is a lot less durable, higher in maintenance, and proper compaction is hard to achieve.

II. Specifications and Estimates

Please provide Specifications and Estimates for review and comments.

If you have any questions, please call me at 7-0470 or Raimundo Jo-Fung of my staff at 7-2844.

KIRSTEN STAHL, P. E.
Civil Engineering License No. C46857 – Exp. 06/30/11
District Materials Engineer

REGISTERED PROFESSIONAL ENGINEER
KIRSTEN R. STAHL
No. C46857
Exp. 6/30/11
CIVIL
STATE OF CALIFORNIA

EXHIBIT 22-A

Stormwater Data Report

Dist-County-Route: 7-LA-10,605

Post Mile (Kilometer Post) Limits: I-10 31.1/32.3 (50.1/51.9), I-605 R20.2/20.6 (R32.5/33.1)

Project Type: Construct New Connector

EA: 245400

RU: 07-272

Program Identification: HB4N

Phase: ☐PID ☒PA/ED ☐PS&E

Regional Water Quality Control Board(s): Los Angeles

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 60 days prior to PS&E Submittal. List submittal date: _____

Total Disturbed Soil Area: 5.78 acres (2.34 ha)

Estimated Construction Start Date: August 15, 2011 Construction Completion Date: November 18, 2013

Notification of Construction (NOC) Date to be submitted: July 15, 2011

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.

H.A. Foong — March 18, 2009

Aaron Foong, *Registered Project Engineer/Landscape Architect* — Date

for Sam S. Elkamel — 3-19-09

Mehdi Salehinik, *Project Manager* — Date

03-19-09

Roger E. Castillo, *Designated Maintenance Representative* — Date

03·25·09

Ron Russak, *Designated Landscape Architect Representative* — Date

STAMP
[Required for PS&E only]

3/25/2009

Shirley Pak, *District/Regional SW Coordinator or Designee* — Date

STORM WATER DATA INFORMATION

1. Project Description

- This is a Interchange Improvement Project that proposes to construct a fly-over direct connector (S/B I-605, PM R20.2/20.6 to E/B I-10, PM 31.1/32.3) in Los Angeles Country, City of Baldwin Park. The weaving conflict on a joint segment, W/B I-10 to S/B I-605 and S/B I-605 to E/B I-10 connectors have resulted in queuing on the outer lane of the W/B I-10 and weaving related accidents. The fly-over connector will replace the existing S/B I-605 to E/B I-10 at-grade connector, which will eliminate vehicle weaving movement and decrease traffic congestion within the area. The fly-over will require additional right-of-way on Dalewood St.
- Construct a one lane (3.6m) elevated bridge structure with 5ft left shoulder and 10ft right shoulder, branching off the S/B I-605 to W/B I-10 directional connector, flying over I-605 and I-10 Freeways, and joining back into E/B I-10.
- Construct retaining structures before/after the elevated bridge structure.
- Reconstruct the existing sound wall (I-10 Station 508+60-513+70).
- Re-stripe the join segment of the W/B I-10 to S/B I-605 connector.
- Remove the S/B I-605 to I-10 connector, including the closure of the South Connector Undercrossing (UC) (Bridge #53-1631).
- Re-landscape the disturbed area after the removal of the existing S/B I-605 to E/B I-10 connector.
- The total disturbed area is 5.78 acres (2.34 ha). The disturbed soil area was calculated by taking the total area for the construction of local street realignment, connector footing and column locations, freeway widening including slopes and retaining walls and areas affected by soundwall construction activities, and temporary BMPs.
- The existing impervious area within the project limits is approximately 24.6 acres (9.94 ha).
- The impervious surface area will increase by 2.93 acres (1.19 ha) with the construction of the new connector.
- The project boundaries are within the County of Los Angeles and City of Baldwin Park in urban MS4 areas.

2. Define Site Data and Storm Water Quality Design Issues (refer to Checklists SW-1, SW-2, and SW-3)

- The project is under the jurisdiction of Los Angeles (Region 4) Regional Water Quality Control Board. The surface waters of the proposed project lie primarily in the San Gabriel River Watershed. Walnut Creek Wash and the San Gabriel River are the receiving waters with the project limits. The project lies within the Upper San Gabriel Hydrologic Area, Hydrologic Sub-Area 405.20 with an annual average rainfall of 19.6 inches.
- Walnut Creek Wash and the San Gabriel River are the receiving waters and are on the 303(d) List of impaired receiving bodies.
- Pollutants of concern for these two bodies are: pH and Toxicity.
- There are no discharges of dredged or fill material into navigable waters or channels within the project limits; however, a 401 certification will be required as part of the permits required for this project.
- There are no Drinking Water Reservoirs and/or Recharge Facilities within project limits
- The project limits are in the San Gabriel River Watershed. There is one Total Maximum Daily Loads (TMDLs) and one Future TMDL within the project limits. The established TMDL is the "Trash TMDL" and the future TMDL is the "San Gabriel River and Impaired Tributaries Metals and Selenium TMDL" as mentioned below.
- The Trash TMDL for the East Fork of San Gabriel River has been in effect since December 14, 2000. Caltrans is not a responsible party.

- San Gabriel River and Impaired Tributaries Metals and Selenium TMDL:

  The San Gabriel River and Impaired Tributaries Metals and Selenium TMDL are anticipated to become effective in the near future. Caltrans will be working with groups of Responsible Agencies to jointly comply with the TMDL. Targeted pollutants are copper, lead, zinc and selenium.

  Project Engineers shall consider treatment controls for the project and consult with the District NPDES Storm Water Coordinator.
- No local agency requirements and/or concerns.
- There are no seasonal construction restrictions. The rainy season has been defined between October 1st to May 1st. No construction work exclusion dates are required for the project. Groundwater depth is at least 30 feet below ground surface in the project limits. Based on recent borings groundwater was not encountered.
- The project site is located in the San Gabriel Valley at an elevation of 304 feet above sea level at the westerly end. The latitude is 34 degrees with a longitude of –118 degrees. The area is urban within the Los Angeles Metropolitan area which has the average temperature between 75 to 95 degrees Fahrenheit. There are no seasonal construction restrictions. There are no slope stabilization concerns since the work area is relatively flat with the exception of the slope area. The project does require additional right of way acquisition and easement of right of entry during design and construction phases.
- The soil condition is classified as Soil Hydro Group B according to Soil Group Index Map.
- Aerially Deposited Lead (ADL) will be encountered during the construction of this project. If such soil becomes excess and cannot be backfilled and covered, then any excavation of soil will transport to ADL contaminant facility. Such determination can be done as part of the design process in PS&E phase.
- There is not adequate right of way to be acquired to construct permanent treatment BMP's.
- To reduce potential storm water impact, the project will consider minimizing soil-disturbing works, minimizing removal of existing vegetations, containing water usage within the project, and transporting the containments during construction to the proper treatment facilities. These actions will follow the guidance line according to the Storm Water Quality Handbook.
- There are no existing BMPs within the project limits or its vicinity. However, as part of a project that is in the PS&E phase and within the same limits, EA 119341 with a bid opening date of February, 2009, one bioswale will be constructed at E/B LA-10/LA-605 interchange, and two (2) biostrips at: W/B LA-10 east of 605 interchange and E/B LA-10 at Baldwin Park Blvd. interchange gore area.

3. Regional Water Quality Control Board Agreements

- This project will comply with NPDES general permit No. CAS000002 and NPDES permit No. CAS000003.

4. Describe Proposed Design Pollution Prevention BMPs to be used on the Project.

Downstream Effects Related to Potentially Increased Flow, Checklist DPP-1, Parts 1 and 2

- Most of the proposed connector will be elevated and such runoff will be contained on the bridge itself and then taken to proposed drainage systems where it connects to the existing drainage system. The area of the proposed fly-over connector is similar in size than the existing connector area. This project will increase the velocity and volume of run off flow within the project limits due to a slight increase of impervious area (12%). Therefore, it should have a minimum impact on the downstream flow to the Walnut Creek Wash.
- This project will not increase sediment load.

Slope/Surface Protection Systems, Checklist DPP-1, Parts 1 and 3

- The project will modify existing slopes for the new directional connector ramp. An MSE wall will be constructed for approximately 150 feet and the remaining slope will be graded to 1:2 (V:H).
- Construction of the new ramp will require both cut and fill. These total areas are as follows:

Cut	Fill
1.85 acres (0.75 ha)	0.79 acres (0.32 ha)

- Vegetated Surfaces: The roadway slopes within the project limits are currently stabilized and landscaped for erosion control. All existing landscape that is removed or disturbed will be replaced following Caltrans replacement planting policy and procedure.

- Hard Surfaces: Gore areas between the new directional connector ramp and existing S/B I-605 to W/B I-10 roadways will be paved with asphalt concrete.

Concentrated Flow Conveyance Systems, Checklist DPP-1, Parts 1 and 4

- No concentrated flow systems such as berms, dikes, and swales will be constructed as part of this project. However, runoff will be concentrated at discharge points within the structure and then connected to the existing systems. The existing drainage systems are still adequate to handle runoff.

Preservation of Existing Vegetation, Checklist DPP-1, Parts 1 and 5

- The area to receive clearing and grubbing is currently covered with sparce vegetation area at the beginning of the connector along Route 605. This is where the new retaining wall will be constructed.
- The vegetated area mentioned above is not environmentally sensitive. There are no other impacts to the rest of the slopes areas within the project limits.

COST FOR BMPs (Design Pollution Prevention)

Clearing and Grubbing		$30,000.00
Landscaping		$150,000.00
Erosion Control (Type D)		$50,000.00
	Total	$230,000.00

5. Describe Proposed Permanent Treatment BMPs to be used on the Project

Treatment BMP Strategy, Checklist T-1

- The Targeted Design Constituents for the Walnut Creek Wash and the San Gabriel River watersheds are total copper, dissolved copper, total lead, dissolved lead, total zinc, and dissolved zinc.
- The percentage of WQV to be treated will be determined during the design phase. Such number will be very small due to minimal runoff generated by the connector surface.
- All nine approved permanent treatment BMP's have been evaluated and the individual narrative outling their applicability are include below.
- Funding for two (2) biofiltration swales, two (2) detention basins and two (2) gross solid removal devices (GSRD's) has been allocated and will be considered further during the design phase. Due to space constraints, other permanent BMP's are not viable options.
- Proposed bioswales, detention basins and gross solid removal devices are consistent with the recommendations of the Draft Corridor Stormwater Management Study for LA-10.

Biofiltration Swales/Strips, Checklist T-1, Parts 1 and 2

- Two biofiltration swales are feasible and will be considered further during the design phase. There are two small open areas in both northwest and southwest quadrants of the 10/605 Interchange. Funding has been allocated to allow for the construction of these devices.

Dry Weather Diversion, Checklist T-1, Parts 1 and 3

- There is no persistent dry weather flow within the project limits. Dry Weather Diversion is not feasible and is not proposed to be included on this project.

Infiltration Devices – Checklist T-1, Parts 1 and 4

- There are no potential areas available within the project limits to place this device, since the existing frontage road abuts the freeway area. Within the interchange area, there is no open space wide enough to accommodate an infiltration device. Therefore, these devices are not feasible and are not proposed to be placed on this project.

Detention Devices, Checklist T-1, Parts 1 and 5

- There is sufficient surface area to accommodate two detention basins in the northeast and southeast quadrants of the I-10/I-605 Interchange. Limited space does not allow for the incorporation of additional detention devices. Funding has been allocated for the incorporation of two detention devices.

Gross Solids Removal Devices (GSRDs), Checklist T-1, Parts 1 and 6

- Two linear radial GSRD's will be constructed as part of a treatment system in conjunction of the detention devices in the northeast and southeast quadrants of the I-10/I-605 Interchange.

Traction Sand Traps, Checklist T-1, Parts 1 and 7

- Traction sand is not applied to this portion of the 10 Freeway a minimum of twice a year. Therefore, Traction Sand Traps are not considered feasible and not planned to be incorporated on this project.

Media Filters, Checklist T-1, Parts 1 and 8

- There are no potential sites within this project's limits per Draft Corridor Stormwater Management Study. Sites were eliminated since design criteria was not met per Section 5.1 of said report. Two of the main criteria not met were hydraulic head and minimum surface area. Three (3) to six (6) feet are needed to operate by gravity but less than one (1) foot is available within the project limits. Regarding surface area, a minimum of 1,000 square feet are needed but the only potential sites (loop areas) will be used for permanent detention devices and GSRD's.

Multi-Chambered Treatment Trains (MCTTs), Checklist T-1, Parts 1 and 9

- The MCTT is used for treatment of stormwater at "critical source areas". Critical source areas are defined as vehicle service facilities, parking areas, paved storage areas, and fueling stations are not within the limits of this project. Therefore, MCTTs is not feasible and is not propose to be incorporated on this project.

Wet Basins, Checklist T-1, Parts 1 and 10

- There is no permanent source of water to maintain a permanent pool of water required for this device to function. Therefore, incorporation of this BMP is not feasible and is not propose to be implemented on this project.

Biofiltration Swales/Strips, Checklist T-1, Parts 1 and 2

- Two biofiltration swales are feasible and will be considered further during the design phase. There are two small open areas in both northwest and southwest quadrants of the 10/605 Interchange. Funding has been allocated to allow for the construction of these devices.

Dry Weather Diversion, Checklist T-1, Parts 1 and 3

- There is no persistent dry weather flow within the project limits. Dry Weather Diversion is not feasible and is not proposed to be included on this project.

Infiltration Devices – Checklist T-1, Parts 1 and 4

- There are no potential areas available within the project limits to place this device, since the existing frontage road abuts the freeway area. Within the interchange area, there is no open space wide enough to accommodate an infiltration device. Therefore, these devices are not feasible and are not proposed to be placed on this project.

Detention Devices, Checklist T-1, Parts 1 and 5

- There is sufficient surface area to accommodate two detention basins in the northeast and southeast quadrants of the I-10/I-605 Interchange. Limited space does not allow for the incorporation of additional detention devices. Funding has been allocated for the incorporation of two detention devices.

Gross Solids Removal Devices (GSRDs), Checklist T-1, Parts 1 and 6

- Two linear radial GSRD's will be constructed as part of a treatment system in conjunction of the detention devices in the northeast and southeast quadrants of the I-10/I-605 Interchange.

Traction Sand Traps, Checklist T-1, Parts 1 and 7

- Traction sand is not applied to this portion of the 10 Freeway a minimum of twice a year. Therefore, Traction Sand Traps are not considered feasible and not planned to be incorporated on this project.

Media Filters, Checklist T-1, Parts 1 and 8

- There are no potential sites within this project's limits per Draft Corridor Stormwater Management Study. Sites were eliminated since design criteria was not met per Section 5.1 of said report. Two of the main criteria not met were hydraulic head and minimum surface area. Three (3) to six (6) feet are needed to operate by gravity but less than one (1) foot is available within the project limits. Regarding surface area, a minimum of 1,000 square feet are needed but the only potential sites (loop areas) will be used for permanent detention devices and GSRD's.

Multi-Chambered Treatment Trains (MCTTs), Checklist T-1, Parts 1 and 9

- The MCTT is used for treatment of stormwater at "critical source areas". Critical source areas are defined as vehicle service facilities, parking areas, paved storage areas, and fueling stations are not within the limits of this project. Therefore, MCTTs is not feasible and is not propose to be incorporated on this project.

Wet Basins, Checklist T-1, Parts 1 and 10

- There is no permanent source of water to maintain a permanent pool of water required for this device to function. Therefore, incorporation of this BMP is not feasible and is not propose to be implemented on this project.

COST FOR BMPs (Permanent Treatment)		
Two Biofiltration Swale		$20,000
Two Detention Basins		$200,000
Two GSRD's		$300,000
	Total	$520,000

6. Describe Proposed Temporary Construction Site BMPs to be used on Project

- The following Temporary Construction Site BMPs will conceptually be used during the construction phase of this project. A confirmation of each of these items and a complete quantity and price will be provided as part of the design phase.
- Construction Site BMPs estimate included as bid line item is as follows:

  Temporary Fiber Roll

  Temporary Drainage Inlet Protection

  Temporary Concrete Washout (Portable)

  Street Sweeping
- The following Construction Site Storm Water Pollution Prevention items will be included as lump sum items:

  Construction Site Management

  Prepare SWPPP

  Additional Water Pollution Control

  Water Pollution Control Maintenance Sharing

  Storm Water Sampling and Analysis

  Total Cost for Temporary Construction Site BMP: $300,000.

Dewatering will not be required as part of the construction activities of this project. A low water table exist at the construction site. CIDH Piles will be driven into the ground; not excavated.

A meeting was held with District 7 Construction Storm Water Coordinator, James Burt, on March 9 and 12, 2009, to review Construction Site BMPs and concurrence was acquired.

7. Maintenance BMPs (Drain Inlet Stenciling)

Drain Inlet Stenciling is not proposes to be implemented on this project. There are no existing catch basins on the frontage road that is affected by this project.

REQUIRED ATTACHMENTS

⇒ **Vicinity Map**

⇒ **Evaluation Documentation Form (EDF)**

SUPPLEMENTAL ATTACHMENTS

Note: Supplement Attachments are to be supplied during the SWDR approval process; where noted, some of these items may only be required on a project-specific basis.

⇒ BMP cost information from: Preliminary Project Cost Estimate (PPCE) during PID and PA/ED project phases; Engineer's Cost Estimate for PS&E project phase

⇒ Checklist SW-1, Site Data Sources

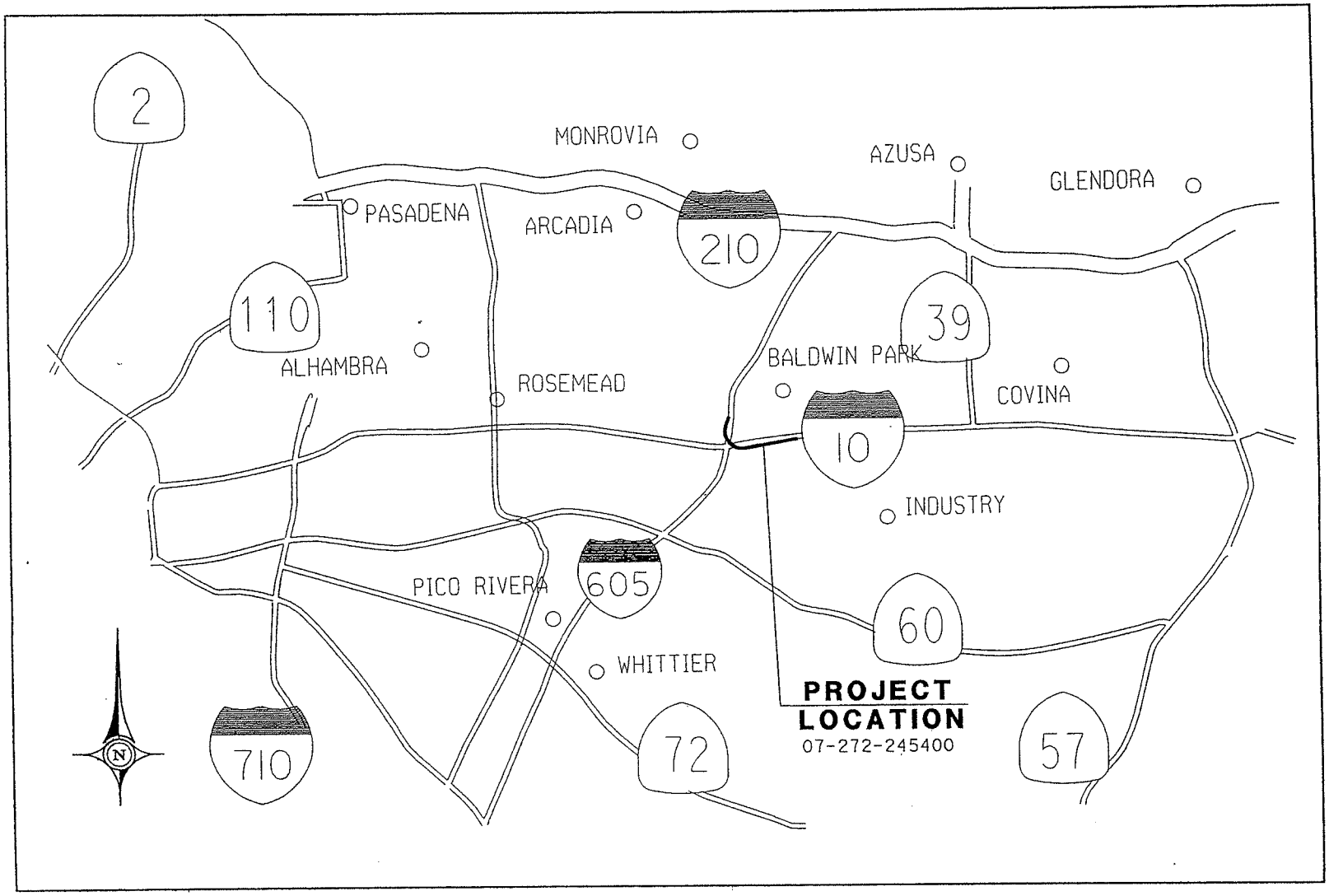
⇒ Checklist SW-2, Storm Water Quality Issues Summary

⇒ Checklist SW-3, Measures for Avoiding or Reducing Potential Storm Water BMPs

⇒ Checklists DPP-1, Parts 1–5 (Design Pollution Prevention BMPs)

⇒ Checklists T-1, Parts 1, 2, 4, 5, 6, 8, 9, and 10

VICINITY MAP



NO SCALE

DISTRICT 07

DATE: 01/08/09

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPS

EA: 245400

NO.	CRITERIA	YES	NO	SUPPLEMENTAL INFORMATION FOR EVALUATION
1.	Begin Project Evaluation regarding requirement for consideration of Treatment BMPs	☒		Go to 2
2.	Is this an emergency project?	☐	☒	If **Yes**, go to 11. If **No**, continue to 3.
3.	Have TMDLs OR OTHER Pollution Control Requirements been established for surface waters within the project limits?	☒	☐	If **Yes**, contact the District/Regional NPDES coordinator to discuss the Department's obligations under the TMDL (if Applicable) or Pollution Control Requirements, go to 10 or 4 (as determined by the NPDES Coordinator). S.P. *(Dist./Reg. SW Coordinator initials)* If **No**, continue to 4.
4.	Is the project within an urban MS4?	☒	☐	If **Yes**, continue to 5. *County of Los Angeles* If **No**, go to 11.
5.	Is the project directly or indirectly discharging to surface waters?	☒	☐	If **Yes**, continue to 6. If **No**, go to 11.
6.	Is this a new facility or major reconstruction?	☒	☐	If **Yes**, continue to 8. If **No**, go to 7.
7.	Will there be a change in line/grade or hydraulic capacity?	☐	☐	If **Yes**, continue to 8. If **No**, go to 11.
8.	Is the Disturbed Soil Area (DSA) created by the project greater than or equal to 3.0 acres or does the project result in a net increase of one acre or more of new impervious surface?	☒	☐	If **Yes**, continue to 10. If **No**, go to 9. *5.78 acres (2.34 ha) Total DSA quantity*
9.	Is the project part of a Common Plan of Development?	☐	☐	If **Yes**, continue to 10. If **No**, go to 11.
10.	Project is required to consider approved Treatment BMPs.	☒	See Sections 2.4 and either Section 5.5 or 6.5 for BMP Evaluation and Selection Process. Complete Checklist T-1 in this Appendix E.	
11.	Project is not required to consider Treatment BMPs. _____*(Dist./Reg. SW Coord. Initials)* _____*(Project Engineer Initials)* _____ *(Date)*	☐	Document for Project Files by completing this form, and attaching it to the SWDR.	

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPs

Checklist SW-1, Site Data Sources

Prepared by: R. Dougherty Date: 01/08/09 District-Co-Route: 07-LA-10/605

PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400

RWQCB: Los Angeles (Region 4)

Information for the following data categories should be obtained, reviewed and referenced as necessary throughout the project planning phase. Collect any available documents pertaining to the category and list them and reference your data source. For specific examples of documents within these categories, refer to Section 5.5 of this document. Example categories have been listed below; add additional categories, as needed. Summarize pertinent information in Section 2 of the SWDR.

DATA CATEGORY/SOURCES	Date
Topographic	
• Topo Microstation files	June 2007
• Aerial Topography-USGS Maps	1981 Revised Edition of the Baldwin Park Quadrangle (1966 Original)
Hydraulic	
• http://10.56.3.22/website/weboutfall/LAOutfallResults.asp	June 2006
• http://www.wrcc.dri.edu/cacon/images/pwdy.gif	November 2007
Soils	
• Type B (Soil Grjoup Index Map) (Caltrans Internet Website)	August 2006
• Geotechnical Design Report	August 2006
Climatic	
• http://www.wrcc.dri.edu/recent_climate.html	November 2007
• http://www.wrcc.dri.edu/narratives/CALIFORNIA.htm	November 2007
• http://www.netstate.com/states/geography/ca_geography.htm	November 2007
Water Quality	
• 303 (d) List – http://www.swrcb.ca.gov (Region 4)	November 2007
• http://www.dot.ca.gov/dist07/divisions/design/watershed/docs/TMDL_summary.htm	October 2004
• http://www.stormwater.water-programs.com/wqpt.htm	October 2007
Other Data Categories	
• Lead Site Investigation Report	September 2006

Checklist SW-2, Storm Water Quality Issues Summary

Prepared by: R. Dougherty Date: 01/08/09 District-Co-Route: 07-LA-I-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

The following questions provide a guide to collecting critical information relevant to project stormwater quality issues. Complete responses to applicable questions, consulting other Caltrans functional units (Environmental, Landscape Architecture, Maintenance, etc.) and the District/Regional Storm Water Coordinator as necessary. Summarize pertinent responses in Section 2 of the SWDR.

1. Determine the receiving waters that may be affected by the project throughout the project life cycle (i.e., construction, maintenance and operation).	☒Complete	☐NA
2. For the project limits, list the 303(d) impaired receiving water bodies and their constituents of concern.	☒Complete	☐NA
3. Determine if there are any municipal or domestic water supply reservoirs or groundwater percolation facilities within the project limits. Consider appropriate spill contamination and spill prevention control measures for these new areas.	☒Complete	☐NA
4. Determine the RWQCB special requirements, including TMDLs, effluent limits, etc.	☒Complete	☐NA
5. Determine regulatory agencies seasonal construction and construction exclusion dates or restrictions required by federal, state, or local agencies.	☒Complete	☐NA
6. Determine if a 401 certification will be required.	☒Complete	☐NA
7. List rainy season dates.	☒Complete	☐NA
8. Determine the general climate of the project area. Identify annual rainfall and rainfall intensity curves.	☒Complete	☐NA
9. If considering Treatment BMPs, determine the soil classification, permeability, erodibility, and depth to groundwater.	☒Complete	☐NA
10. Determine contaminated or hazardous soils within the project area.	☒Complete	☐NA
11. Determine the total disturbed soil area of the project.	☒Complete	☐NA
12. Describe the topography of the project site.	☒Complete	☐NA
13. List any areas outside of the Caltrans right-of-way that will be included in the project (e.g. contractor's staging yard, work from barges, easements for staging, etc.).	☒Complete	☐NA
14. Determine if additional right-of-way acquisition or easements and right-of-entry will be required for design, construction and maintenance of BMPs. If so, how much?	☒Complete	☐NA
15. Determine if a right-of-way certification is required.	☒Complete	☐NA
16. Determine the estimated unit costs for right-of-way should it be needed for Treatment BMPs, stabilized conveyance systems, lay-back slopes, or interception ditches.	☐Complete	☒NA
17. Determine if project area has any slope stabilization concerns.	☒Complete	☐NA
18. Describe the local land use within the project area and adjacent areas.	☒Complete	☐NA
19. Evaluate the presence of dry weather flow.	☒Complete	☐NA

Checklist SW-3, Measures for Avoiding or Reducing Potential Storm Water Impacts

Prepared by: R. Dougherty Date: 01/08/09 District-Co-Route: 07-LA-I-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

The PE must confer with other functional units, such as Landscape Architecture, Hydraulics, Environmental, Materials, Construction and Maintenance, as needed to assess these issues. Summarize pertinent responses in Section 2 of the SWDR.

Options for avoiding or reducing potential impacts during project planning include the following:

1. Can the project be relocated or realigned to avoid/reduce impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions?	☐Yes	☒No	☐NA
2. Can structures and bridges be designed or located to reduce work in live streams and minimize construction impacts?	☐Yes	☐No	☒NA
3. Can any of the following methods be utilized to minimize erosion from slopes:			
a. Disturbing existing slopes only when necessary?	☒Yes	☐No	☐NA
b. Minimizing cut and fill areas to reduce slope lengths?	☒Yes	☐No	☐NA
c. Incorporating retaining walls to reduce steepness of slopes or to shorten slopes?	☒Yes	☐No	☐NA
d. Acquiring right-of-way easements (such as grading easements) to reduce steepness of slopes?	☐Yes	☐No	☒NA
e. Avoiding soils or formations that will be particularly difficult to re-stabilize?	☐Yes	☐No	☒NA
f. Providing cut and fill slopes flat enough to allow re-vegetation and limit erosion to pre-construction rates?	☐Yes	☐No	☒NA
g. Providing benches or terraces on high cut and fill slopes to reduce concentration of flows?	☐Yes	☐No	☒NA
h. Rounding and shaping slopes to reduce concentrated flow?	☐Yes	☐No	☒NA
i. Collecting concentrated flows in stabilized drains and channels?	☒Yes	☐No	☐NA
4. Does the project design allow for the ease of maintaining all BMPs?	☒Yes	☐No	
5. Can the project be scheduled or phased to minimize soil-disturbing work during the rainy season?	☐Yes	☒No	
6. Can permanent storm water pollution controls such as paved slopes, vegetated slopes, basins, and conveyance systems be installed early in the construction process to provide additional protection and to possibly utilize them in addressing construction storm water impacts?	☐Yes	☒No	☐NA

Design Pollution Prevention BMPs
Checklist DPP-1, Part 1

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Consideration of Design Pollution Prevention BMPs

1. Consideration of Downstream Effects Related to Potentially Increased Flow [to streams or channels]?

(a) Will project increase velocity or volume of downstream flow?	☐Yes	☒No	☐NA
(b) Will the project discharge to unlined channels?	☐Yes	☒No	☐NA
(c) Will project increase potential sediment load of downstream flow?	☐Yes	☒No	☐NA
(d) Will project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect downstream channel stability?	☐Yes	☒No	☐NA

If Yes was answered to any of the above questions, consider ***Downstream Effects Related to Potentially Increased Flow***, complete the DPP-1, Part 2 checklist.

2. Slope/Surface Protection Systems

(a) Will project create new slopes or modify existing slopes?	☒Yes	☐No	☐NA

If Yes was answered to the above question, consider ***Slope/Surface Protection Systems***, complete the DPP-1, Part 3 checklist.

3. Concentrated Flow Conveyance Systems

(a) Will the project create or modify ditches, dikes, berms, or swales?	☐Yes	☒No	☐NA
(b) Will project create new slopes or modify existing slopes?	☒Yes	☐No	☐NA
(c) Will it be necessary to direct or intercept surface runoff?	☐Yes	☒No	☐NA
(d) Will cross drains be modified?	☐Yes	☒No	☐NA

If Yes was answered to any of the above questions, consider ***Concentrated Flow Conveyance Systems***; complete the DPP-1, Part 4 checklist.

4. Preservation of Existing Vegetation

a) It is the goal of the Storm Water Program to maximize the protection of desirable existing vegetation to provide erosion and sediment control benefits on all projects. ☒Complete

Consider ***Preservation of Existing Vegetation***, complete the DPP-1, Part 5 checklist.

Design Pollution Prevention BMPs
Checklist DPP-1, Part 2

Prepared by: R. Dougherty Date: 01/08/09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Downstream Effects Related to Potentially Increased Flow

1. Review total paved area and reduce to the maximum extent practicable. ☒Complete
2. Review channel lining materials and design for stream bank erosion control. ☒Complete
   (a) See Chapters 860 and 870 of the HDM. ☒Complete
   (b) Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity. ☒Complete
3. Include, where appropriate, energy dissipation devices at culvert outlets. ☒Complete
4. Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour. ☒Complete
5. Include, if appropriate, peak flow attenuation basins to reduce peak discharges. ☒Complete

Design Pollution Prevention BMPs
Checklist DPP-1, Part 3

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Slope / Surface Protection Systems

What are the proposed areas of cut and fill? (attach plan or map) ☒Complete

Were benches or terraces provided on high cut and fill slopes to reduce concentration of flows? ☐Yes ☒No

Were slopes rounded and/or shaped to reduce concentrated flow? ☒Yes ☐No

Were concentrated flows collected in stabilized drains or channels? ☐Yes ☒No

Are slopes > 1:4 vertical:horizontal (V:H))? ☒Yes ☐No

If Yes, District Landscape Architecture must prepare or approve an erosion control plan.

Are slopes > 1:2 (V:H)? ☐Yes ☒No

If Yes, Geotechnical Services must prepare a Geotechnical Design Report, and the District Landscape Architect should prepare or approve an erosion control plan. Concurrence must be obtained from the District Maintenance Storm Water Coordinator for slopes steeper than 1:2 (V:H).

Estimate the change to the impervious areas that will result from this project. ☒Complete

2.93 acres

VEGETATED SURFACES

1. Identify existing vegetation. ☒Complete
2. Evaluate site to determine soil types, appropriate vegetation and planting strategies. ☒Complete
3. How long will it take for permanent vegetation to establish? ☒Complete
4. Minimize overland and concentrated flow depths and velocities. ☒Complete

HARD SURFACES

1. Are hard surfaces required? ☒Yes ☐No

If Yes, document purpose (safety, maintenance, soil stabilization, etc.), types, and general locations of the installations. ☒Complete

Review appropriate SSPs for Vegetated Surface and Hard Surface Protection Systems. ☐Complete

Design Pollution Prevention BMPs
Checklist DPP-1, Part 4

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605

PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400

RWQCB: Los Angeles (Region 4)

Concentrated Flow Conveyance Systems

Ditches, Berms, Dikes and Swales

1. Consider Ditches, Berms, Dikes, and Swales as per Chapters 813, 836, and 860 of the HDM. ☒Complete
2. Evaluate risks due to erosion, overtopping, flow backups or washout. ☒Complete
3. Consider outlet protection where localized scour is anticipated. ☒Complete
4. Examine the site for run-on from off-site sources. ☒Complete
5. Consider channel lining when velocities exceed scour velocity for soil. ☒Complete

Overside Drains

1. Consider downdrains, as per Index 834.4 of the HDM. ☒Complete
2. Consider paved spillways for side slopes flatter than 1:4 V:H. ☒Complete

Flared Culvert End Sections

1. Consider flared end sections on culvert inlets and outlets as per Chapter 827 of the HDM. ☒Complete

Outlet Protection/Velocity Dissipation Devices

1. Consider outlet protection/velocity dissipation devices at outlets, including cross drains, as per Chapters 827 and 870 of the HDM. ☒Complete

Review appropriate SSPs for Concentrated Flow Conveyance Systems. ☒Complete

Design Pollution Prevention BMPs
Checklist DPP-1, Part 5

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605

PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400

RWQCB: Los Angeles (Region 4)

Preservation of Existing Vegetation

1. Review Preservation of Property, Standard Specifications 16.1.01 and 16-1.02 (Clearing and Grubbing) to reduce clearing and grubbing and maximize preservation of existing vegetation. ☒Complete

2. Has all vegetation to be retained been coordinated with Environmental, and identified and defined in the contract plans? ☐Yes ☒No

3. Have steps been taken to minimize disturbed areas, such as locating temporary roadways to avoid stands of trees and shrubs and to follow existing contours to reduce cutting and filling? ☒Complete

4. Have impacts to preserved vegetation been considered while work is occurring in disturbed areas? ☒Yes ☐No

5. Are all areas to be preserved delineated on the plans? ☐Yes ☒No

Treatment BMPs

Checklist T-1, Part 1

Prepared by: R. Dougherty Date: 01/08/09 District-Co-Route: 07-LA-I-10, 07-LA-I-605

PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400

RWQCB: Los Angeles (Region 4)

Consideration of Treatment BMPs

This checklist is used for projects that require the consideration of Approved Treatment BMPs, as determined from the process described in Section 4 (Project Treatment Consideration) and the Evaluation Documentation Form (EDF). This checklist will be used to determine which Treatment BMPs should be considered for each watershed and sub-watersheds within the project. Supplemental data will be needed to verify siting and design applicability for final incorporation into a project.

Complete this checklist for each phase of the project, when considering Treatment BMPs. Use the responses to the questions as the basis when developing the narrative in Section 5 of the Storm Water Data Report to document that Treatment BMPs have been appropriately considered.

Answer all questions, unless otherwise directed.

1. Dry Weather Flow Diversion

   (a) Are dry weather flows generated by Caltrans anticipated to be persistent? ☐Yes ☒No

   (b) Is a sanitary sewer located on or near the site? ☒Yes ☐No

   (c) Is the connection to the sanitary sewer possible without extraordinary plumbing, features or construction practices? ☐Yes ☒No

   (d) Is the domestic wastewater treatment authority willing to accept flow? ☐Yes ☒No

   If Yes was answered to <u>all</u> of these questions consider Dry Weather Flow Diversion, complete and attach Part 3 of this checklist

2. Is the receiving water on the 303(d) list for litter/trash or has a TMDL been issued for litter/trash? ☒Yes ☐No

   If Yes, consider Gross Solids Removal Devices (GSRDs), complete and attach Part 6 of this checklist. Note: Biofiltration Systems, Infiltration Devices, Detention Devices, Media Filters, MCTTs, and Wet Basins also can capture litter – consult with District/Regional NPDES if these devices should be considered to meet litter/trash TMDL.

3. Is project located in an area (e.g., mountain regions) where traction sand is applied more than twice a year?
   If Yes, consider ***Traction Sand Traps***, complete and attach **Part 7** of this checklist. ☐Yes ☒No

4. (a) Are there local influent limits for infiltration or Basin Plan restrictions or other local agency prohibitions that would restrict the use of the infiltration devices? ☐Yes ☒No

(b) Would infiltration pose a threat to local groundwater quality as determined by the District/Regional Storm Water Coordinator? ☐Yes ☒No

If the answer to either part of Question 4 is Yes, then Infiltration Devices are infeasible and the consideration of Infiltration Devices should not be made when completing Questions 5 through 17.

5. (a) Does the project discharge to any 303(d) listed water body? ☒Yes ☐No
   If No, go to Question 17, General Purpose Pollutant Removal

   (b) If Yes, is the identified pollutant(s) considered a Targeted Design Constituent (TDC) (check all that apply):

   ___phosphorus, ___nitrogen, _x_total copper, _x_dissolved copper,
   _x_total lead, _x_dissolved lead, _x_total zinc, _x_dissolved zinc,
   ___sediments, ___general metals [unspecified metals]

   (c) If only one TDC is checked above, continue to Question 6. ☐Complete

   (d) If more than one TDC is checked, contact your District/Regional NPDES Coordinator to determine priority before continuing with this checklist. ☐Complete

6. Consult with the District/Regional Storm Water Coordinator to determine whether Treatment BMP selection will be affected by any existing or future TMDL requirements. ☐Complete

The following questions show the approved Treatment BMPs in order of preference based on load reduction (performance) for the listed constituent and lifetime costs for the device, excluding right-of-way. Note that a line separates Treatment BMPs into groups of approximately equal effectiveness and within each grouping, any of the Treatment BMPs may be selected for placement if meeting site conditions. In the space provided next to the BMP, use Yes or a check mark to indicate a positive response.

If none of the listed Treatment BMPs for a specific constituent of concern (TDC) can be sited, go to Step #17 (General Purpose Pollutant Removal) to determine whether another Treatment BMP can be incorporated into the project.

***For the SWDRs developed for the PID and PA/ED phases of a project:* Consider all approved Treatment BMPs listed that can be reasonably incorporated into the project for each TDC.**

***For the SWDR developed for the PS&E phase:* Indicate (Yes or check mark) only those BMPs that will be incorporated into the project.**

7. Is phosphorus the TDC? [Use this constituent if "eutrophic" or "nutrients" is the TDC for the water body.] If Yes, consider: ☐Yes ☒No

   _____Infiltration Devices
   _____Austin Sand Filters

8. Is nitrogen the TDC? If Yes, consider: ☐Yes ☒No

____ Infiltration Devices
____ Austin Sand Filters
____ Delaware Filter
____ Detention Device
____ MCTT

9. Is copper (total) the TDC? If Yes for total Copper, consider: ☒Yes ☐No

X Infiltration Devices
X Wet Basins
X Biofiltration Strips
X Detention Device
X Biofiltration Swales
X Austin Sand Filter
X Delaware Filter
X MCTT

10. Is copper (dissolved) the TDC? If Yes for dissolved Copper, consider: ☒Yes ☐No

X Infiltration Devices
X Biofiltration Strips
X Wet Basin
X Biofiltration Swale

x

11. Is lead (total) the TDC? If Yes for total Lead, consider: ☒Yes ☐No

X Infiltration Devices
X Wet Basin
X Biofiltration Strips
X Austin Sand Filter
X **Delaware Filter**
X Detention Device
X Biofiltration Swales
X MCTT

12. Is lead (dissolved) the TDC? If Yes for dissolved Lead, consider: ☒Yes ☐No

X Infiltration Devices
X Biofiltration Strips
X Wet Basin
X Detention Device
X Biofiltration Swales
X Austin Sand Filter

13. Is zinc (total) the TDC? If Yes for total Zinc, consider: ☒Yes ☐No

X Infiltration Devices
X Delaware Filter
X Wet Basin
X Biofiltration Strips
X Biofiltration Swales
X Austin Sand Filter
X MCTT
X Detention Devices

14. Is zinc (dissolved) the TDC? If Yes for dissolved Zinc, consider: ☒Yes ☐No

    X Infiltration Devices
    X Delaware Filter
    X Biofiltration Strip
    X Biofiltration Swale
    X Austin Sand Filter
    X MCTT

15. Is sediment (total suspended solids [TSS]) the TDC? If Yes for TSS, consider: ☐Yes ☒No

    ____ Infiltration Devices
    ____ Austin Sand Filter
    ____ Delaware Filter
    ____ Wet Basin
    ____ Detention Device
    ____ Biofiltration Strip
    ____ MCTT
    ____ Biofiltration Swale

16. Are "General Metals" or (unspecified) "Metals" the TDC? If Yes for General Metals, consider: ☐Yes ☒No

    ____ Infiltration Devices
    ____ Biofiltration Strips
    ____ Wet Basin
    ____ Biofiltration Swale
    ____ Austin Sand Filter
    ____ Delaware Filter
    ____ MCTT

17. General Purpose Pollutant Removal.: When it is determined that there are no TDCs, consider the Treatment BMPs in the order listed below. ☐Yes ☒No

    ____ Infiltration Devices
    ____ Biofiltration Strips
    ____ Wet Basin
    ____ Biofiltration Swale
    ____ Austin Sand Filter
    ____ Detention Device
    ____ Delaware Filter
    ____ MCTT

18. Biofiltration
    (a) Are site conditions and climate favorable to allow suitable vegetation to be established? ☒Yes ☐No

    (b) Have Biofiltration strips and swales been considered to the extent practicable? Note: Biofiltration BMPs should be considered for all projects, even if other Treatment BMPs are placed. ☒Yes ☐No

    If No to (a) or (b), document justification in Section 5 of the SWDR.

19. After completing the above, complete and attach the checklists shown below for every Treatment BMP under consideration ☒Complete

    X Biofiltration Strips and Biofiltration Swales: Checklist T-1, Part 2
    ___ Dry Weather Diversion: Checklist T-1, Part 3
    X Infiltration Devices: Checklist T-1, Part 4
    X Detention Devices: Checklist T-1, Part 5
    X GSRDs: Checklist T-1, Part 6
    ___ Traction Sand Traps: Checklist T-1, Part 7
    X Media Filter [Austin Sand Filter and Delaware Filter]: Checklist T-1, Part 8
    X Multi-Chambered Treatment Train: Checklist T-1, Part 9
    X Wet Basins: Checklist T-1, Part 10

20. (a) Estimate what percentage of WQV/WQF will be treated by the preferred Treatment BMP(s): _____% (to be determined in PS&E phase) ☐Complete

    (b) Have Treatment BMPs been considered for use in parallel or series to increase this percentage? ☒Yes ☐No

21. Prepare cost estimate, including right-of-way, for selected Treatment BMPs and include as supplemental information for SWDR approval. ☒Complete

Treatment BMPs

Checklist T-1, Part 2

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605

PM (KP): 31.1/32.3 (50.1/51.9) R20.2/20.6 (32.5/33.1) EA: 245400

RWQCB: Los Angeles (Region 4)

Biofiltration Swales / Biofiltration Strips

Feasibility

1. Do the climate and site conditions allow vegetation to be established? ☒Yes ☐No

2. Are flow velocities < 4 fps (i.e. low enough to prevent scour of the vegetated bioswale as per HDM Table 873.3E)? ☒Yes ☐No

   If No to either question above, Biofiltration Swales and Biofiltration Strips are not feasible.

3. Are Biofiltration Swales proposed at sites where known hazardous soils or contaminated groundwater plumes exist? ☐Yes ☒No
   If Yes, consult with District/Regional NPDES Coordinator about how to proceed.

4. Does adequate area exist within the right-of-way to place biofiltration device(s)? ☒Yes ☐No
   If Yes, continue to the Design Elements section. If No, continue to Question 5.

5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Biofiltration Devices and how much right-of way would be needed to treat WQF? _____ acres ☐Yes ☒No
   If Yes, continue to Design Elements section. If No, continue to Question 6.

6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of these Treatment BMPs into the project. ☐Complete

Design Elements

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Has the District Landscape Architect provided vegetation mixes appropriate for climate and location? * ☐Yes ☒No

2. Can the bioswale be designed as a conveyance system under any expected flows > the WQF event, as per HDM Chapter 800? * (e.g. freeboard, minimum slope, etc.) ☒Yes ☐No

3. Can the bioswale be designed as a water quality treatment device under the WQF while meeting the required HRT, depth, and velocity criteria? (Reference Appendix B, Section B.2.3.1)* ☒Yes ☐No

4. Is the maximum length of a biostrip ≤300 ft? * ☐Yes ☒No

5. Has the minimum width (in the direction of flow) of the invert of the bioswale received the concurrence of Maintenance? * ☐Yes ☒No

6. Can bioswales be located in natural or low cut sections to reduce maintenance problems caused by animals burrowing through the berm of the swale? ** ☐Yes ☒No

7. Is the biostrip sized as long as possible in the direction of flow? ** ☐Yes ☒No

8. Have Biofiltration Systems been considered for locations upstream of other Treatment BMPs, as part of a treatment train? ** ☐Yes ☒No

Treatment BMPs
Checklist T-1, Part 4

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Infiltration Devices

Feasibility

1. Does local Basin Plan or other local ordinance provide influent limits on quality of water that can be infiltrated, and would infiltration pose a threat to groundwater quality as determined by the District/Regional NPDES Storm Water Coordinator? ☐Yes ☒No
2. Does infiltration at the site compromise the integrity of any slopes in the area? ☐Yes ☒No
3. Per survey data or U.S. Geological Survey (USGS) Quad Map, are existing slopes at the proposed device site >15%? ☐Yes ☒No
4. At the invert, does the soil type classify as NRCS Hydrologic Soil Group (HSG) D, or does the soil have an infiltration rate < 0.5 inches/hr? ☐Yes ☒No
5. Is site located over a previously identified contaminated groundwater plume? ☐Yes ☒No

   If Yes to any question above, Infiltration Devices are not feasible; stop here and consider other approved Treatment BMPs.

6. (a) Does site have groundwater within 10 ft of basin invert? ☐Yes ☒No

   (b) Does site investigation indicate that the infiltration rate is significantly greater than 2.5 inches/hr? ☐Yes ☒No

   If Yes to either part of Question 6, the RWQCB must be consulted, and the RWQCB must conclude that the groundwater quality will not be compromised, before approving the site for infiltration. ☐Yes ☐No

7. Does adequate area exist within the right-of-way to place Infiltration Device(s)? If Yes, continue to Design Elements sections. If No, continue to Question 8. ☒Yes ☐No
8. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Infiltration Devices and how much right-of way would be needed to treat WQV? _____ acres ☐Yes ☐No

   If Yes, continue to Design Elements section.

   If No, continue to Question 9.

9. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐Complete

Design Elements – Infiltration Basin

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1.	Has a detailed investigation been conducted, including subsurface soil investigation, in-hole conductivity testing and groundwater elevation determination? (This report must be completed for PS&E level design.) *	☐Yes	☒No
2.	Has an overflow spillway with scour protection been provided? *	☐Yes	☒No
3.	Is the Infiltration Basin size sufficient to capture the WQV while maintaining a 40-48 hour drawdown time? (Note: the WQV must be ≥4,356 ft^3 [0.1 acre-feet]) *	☒Yes	☐No
4.	Can access be placed to the invert of the Infiltration Basin? *	☒Yes	☐No
5.	Can the Infiltration Basin accommodate the Water Quality freeboard above the WQV elevation (reference Appendix B.1.3.1)? *	☒Yes	☐No
6.	Can the Infiltration Basin be designed with interior side slopes no steeper than 1:4(V:H) (may be 1:3 [V:H] with approval by District Maintenance)? *	☒Yes	☐No
7.	Can vegetation be established in the Infiltration Basin? **	☒Yes	☐No
8.	Can diversion be designed, constructed, and maintained to bypass flows exceeding the WQV? **	☒Yes	☐No
9.	Can a gravity-fed Maintenance/Emergency Drain be placed? **	☒Yes	☐No

Design Elements – Infiltration Trench

* **Required** Design Element – (see definition above)
** **Recommended** Design Element – (see definition above)

1.	Has a detailed investigation been conducted, including subsurface soil investigation, in-hole conductivity testing and groundwater elevation determination? (This report must be completed for PS&E level design.) *	☐Yes	☐No
2.	Is the surrounding soil within Hydrologic Soil Groups (HSG) Types A or B? *	☐Yes	☐No
3.	Is the volume of the Infiltration Trench equal to at least the 2.85x the WQV, while maintaining a drawdown time of ≤72 hours? (Note: the WQV must be ≥4,356 ft^3 [0.1 acre-feet], unless the District/Regional NPDES Coordinator will allow a volume between 2,830 ft^3 and 4,356 ft^3 to be considered.) *	☐Yes	☐No
4.	Is the depth of the Infiltration Trench ≤13 ft, and is the depth < the width? *	☐Yes	☐No
5.	Can an observation well be placed in the trench? *	☐Yes	☐No
6.	Can access be provided to the Infiltration Trench? *	☐Yes	☐No
7.	Can pretreatment be provided to capture sediment in the runoff (such as using Biofiltration)? *	☐Yes	☐No
8.	Can flow diversion be designed, constructed, and maintained to bypass flows exceeding the Water Quality Event? **	☐Yes	☐No
9.	Can a perimeter curb or similar device be provided (to limit wheel loads upon the trench)? **	☐Yes	☐No

Treatment BMPs
Checklist T-1, Part 5

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Detention Devices

Feasibility

1. Is there sufficient head to prevent objectionable backwater conditions in the upstream drainage systems? ☒Yes ☐No

2. 2a) Is the volume of the Detention Device equal to at least the WQV? (Note: the WQV must be ≥4,356 ft^3 [0.1 acre-feet]) ☒Yes ☐No

   Only answer (b) if the Detention Device is being used also to capture traction sand.

   2b) Is the total volume of the Detention Device at least equal to the WQV and the anticipated volume of traction sand, while maintaining a minimum 12 inch freeboard (1 ft)? ☐Yes ☐No

3. Is basin invert ≥10 ft above seasonally high groundwater or can it be designed with an impermeable liner? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 12 inches of the invert.) ☒Yes ☐No

If No to any question above, then Detention Devices are not feasible.

4. Does adequate area exist within the right-of-way to place Detention Device(s)?

   If Yes, continue to the Design Elements section. If No, continue to Question 5. ☒Yes ☐No

5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Detention Device(s) and how much right-of way would be needed to treat WQV? _____ acres ☐Yes ☐No
   If Yes, continue to the Design Elements section. If No, continue to Question 6.

6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐Complete

Design Elements

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Has the geotechnical integrity of the site been evaluated to determine potential impacts to surrounding slopes due to incidental infiltration? If incidental infiltration through the invert of an unlined detention device is a concern, consider using an impermeable liner. *	☒Yes	☐No
2. Has the location of the Detention Device been evaluated for any effects to the adjacent roadway and subgrade? *	☒Yes	☐No
3. Can a minimum freeboard of 12 inches be provided above the WQV? *	☒Yes	☐No
4. Is an overflow outlet provided? *	☒Yes	☐No
5. Is the drawdown time of the Detention Device within 24 to 72 hours? *	☒Yes	☐No
6. Is the Detention Device outlet designed to minimize clogging (minimum outlet orifice diameter of 0.5 inches)? *	☒Yes	☐No
7. Are the inlet and outlet structures designed to prevent scour and re-suspension of settled materials, and to enhance quiescent conditions? *	☒Yes	☐No
8. Can vegetation be established in an earthen basin at the invert and on the side slopes for erosion control and to minimize re-suspension? Note: Detention Basins may be lined, in which case no vegetation would be required for lined areas. *	☒Yes	☐No
9. Has sufficient access for Maintenance been provided? *	☒Yes	☐No
10. Is the side slope 1:4 (V:H) or flatter for interior slopes? ** (Note: Side slopes up to 1:3 (V:H) allowed with approval by District Maintenance.)	☐Yes	☒No
11. If significant sediment is expected from nearby slopes, can the Detention Device be designed with additional volume equal to the expected annual loading? **	☐Yes	☒No
12. Is flow path as long as possible (≥ 2:1 length to width ratio at WQV elevation is recommended)? **	☐Yes	☒No

Treatment BMPs
Checklist T-1, Part 6

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
KP (PM): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Gross Solids Removal Devices (GSRDs)

Feasibility

1. Is the receiving water body downstream of the tributary area to the proposed GSRD on a 303(d) list or has a TMDL for litter been established? ☒Yes ☐No

2. Are the devices sized for flows generated by the peak drainage facility design event or can peak flow be diverted? ☒Yes ☐No

3. Are the devices sized to contain gross solids (litter and vegetation) for a period of one year? ☒Yes ☐No

4. Is there sufficient access for maintenance and large equipment (vacuum truck)? ☒Yes ☐No

   If No to any question above, then Gross Solids Removal Devices are not feasible. Note that Biofiltration Systems, Infiltration Devices, Detention Devices, Dry Weather Flow Diversion, MCTT, Media Filters, and Wet Basins may be considered for litter capture, but consult with District/Regional NPDES if proposed to meet a TMDL for litter.

5. Does adequate area exist within the right-of-way to place Gross Solids Removal Devices? ☒Yes ☐No
   If Yes, continue to Design Elements section. If No, continue to Question 6.

6. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site Gross Solids Removal Devices and how much right-of way would be needed? _____ acres ☐Yes ☐No
   If Yes, continue to the Design Elements section. If No, continue to Question 7.

7. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐Complete

Design Elements – Linear Radial Device

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Does sufficient hydraulic head exist to place the Linear Radial GSRD? * ☐Yes ☐No
2. Was the litter accumulation rate of 10 ft^3/ac/yr (or a different rate recommended by Maintenance) used to size the device? * ☐Yes ☐No
3. Were the standard detail sheets used for the layout of the devices? **
   If No, consult with Headquarters Office of Storm Water Management and District/Regional NPDES. ☐Yes ☐No
4. Is the maximum depth of the storage within 10 ft of the ground surface, or another depth as required by District Maintenance? * ☐Yes ☐No

Design Elements – Inclined Screen

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Does sufficient hydraulic head exist to place the Inclined Screen GSRD? * ☐Yes ☐No
2. Was the litter accumulation rate of 10 ft^3/ac/yr (or a different rate recommended by Maintenance) used to size the device? * ☐Yes ☐No
3. Were the standard details sheets used for the layout of the devices? **
   If No, consult with Headquarters Office of Storm Water Management and District NPDES. ☐Yes ☐No
4. Is the maximum depth of the storage within 10 ft of the ground surface, or another depth as required by District Maintenance? * ☐Yes ☐No

Treatment BMPs
Checklist T-1, Part 8

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Media Filters

Caltrans has approved two types of Media Filter: Austin Sand Filters and Delaware Filters. Austin Sand filters are typically designed for larger drainage areas, while Delaware Filters are typically designed for smaller drainage areas. The Austin Sand Filter is constructed with an open top and may have a concrete or earthen invert, while the Delaware is always constructed as a vault. See Appendix B, Media Filters, for a further description of Media Filters.

Feasibility – Austin Sand Filter

1. Is the volume of the Austin Sand Filter equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be ≥4,356 ft^3 [0.1 acre-feet]) ☒Yes ☐No

2. Is there sufficient hydraulic head to operate the device (minimum 3 ft between the inflow and outflow chambers)? ☐Yes ☒No

3. If initial chamber has an earthen bottom, is initial chamber invert ≥3 ft above seasonally high groundwater? ☒Yes ☐No

4. If a vault is used for either chamber, is the level of the concrete base of the vault above seasonally high groundwater or is a special design provided? ☒Yes ☐No

   If No to any question above, then an Austin Sand Filter is not feasible.

5. Does adequate area exist within the right-of-way to place an Austin Sand Filter(s)? ☐Yes ☒No
   If Yes, continue to Design Elements sections. If No, continue to Question 6.

6. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ acres ☐Yes ☒No
   If Yes, continue to the Design Elements section.

   If No, continue to Question 7.

7. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete

   If an Austin Sand Filter meets these feasibility requirements, continue to the Design Elements – Austin Sand Filter below.

Feasibility- Delaware Filter

1. Is the volume of the Delaware Filter equal to at least the WQV using a 40 to 48 hour drawdown? (Note: the WQV must be ≥4,356 ft^3 [0.1 acre-feet], consult with District/Regional NPDES if a lesser volume is under consideration.) ☐Yes ☐No

2. Is there sufficient hydraulic head to operate the device (minimum 3 ft between the inflow and outflow chambers)? ☐Yes ☐No

3. Would a permanent pool of water be allowed by the local vector control agency? ☐Yes ☐No

If No to any question, then a Delaware Filter is not feasible

4. Does adequate area exist within the right-of-way to place a Delaware Filter (s)? ☐Yes ☐No
   If Yes, continue to Design Elements sections. If No, continue to Question 5.

5. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ acres ☐Yes ☐No
   If Yes, continue to the Design Elements section. If No, continue to Question 6.

6. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

   If a Delaware Filter is still under consideration, continue to the Design Elements – Delaware Filter section.

Design Elements – Austin Sand Filter

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Is the drawdown time of the 2nd chamber 24 hours? * ☐Yes ☐No

2. Is access for Maintenance vehicles provided to the Austin Sand Filter? * ☐Yes ☐No

3. Is a bypass/overflow provided for storms > WQV? * ☐Yes ☐No

4. Is the flow path length to width ratio for the sedimentation chamber of the "full" Austin Sand Filter ≥2:1? ** ☐Yes ☐No

5. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? ** ☐Yes ☐No

6. Can the Austin Sand Filter be placed using an earthen configuration? ** ☐Yes ☐No
   If No, go to Question 9.

7. Is the Austin Sand Filter invert separated from the seasonally high groundwater table by ≥10 ft? * ☐Yes ☐No
   If No, design with an impermeable liner.
8. Are side slopes of the earthen chamber 1:3 (V:H) or flatter? * ☐Yes ☐No
9. Is maximum depth ≤13 ft below ground surface? * ☐Yes ☐No
10. Can the Austin Sand Filter be placed in an offline configuration? ** ☐Yes ☐No

Design Elements – Delaware Filter

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Can the first chamber be sized for the WQV? * ☐Yes ☐No
2. Is the drawdown time of the 2nd chamber between 40 and 48 hours? * ☐Yes ☐No
3. Is access for Maintenance vehicles provided to the Delaware Filter? * ☐Yes ☐No
4. Is a bypass/overflow provided for storms > WQV? ** ☐Yes ☐No
5. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? ** ☐Yes ☐No
6. Can the Delaware Filter be placed in an offline configuration? ** ☐Yes ☐No
7. Is maximum depth ≤13 ft below ground surface? *

Treatment BMPs
Checklist T-1, Part 9

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

MCTT (Multi-chambered Treatment Train)

Feasibility

1. Is the proposed location for the MCTT located to serve a "critical source area" (i.e. vehicle service facility, parking area, paved storage area, or fueling station)? ☐Yes ☒No
2. Is the WQV ≥4,356 ft³ (0.1 acre-foot)? ☐Yes ☒No
3. Is there sufficient hydraulic head (typically ≥6 feet) to operate the device? ☐Yes ☒No
4. Would a permanent pool of water be allowed by the local vector control agency? ☐Yes ☒No
   If No to any question above, then an MCTT is not feasible.
5. Does adequate area exist within the right-of-way to place an MCTT(s)? ☐Yes ☐No
   If Yes, continue to Design Elements sections. If No, continue to Question 6.
6. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ acres ☐Yes ☐No
   If Yes, continue to Design Elements section. If No, continue to Question 7.
7. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐Complete

Design Elements

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Is the maximum depth of the 3rd chamber ≤13 ft below ground surface and has Maintenance accepted this depth? * ☐Yes ☐No
2. Is the drawdown time in the 3rd chamber between 24 and 48 hours? * ☐Yes ☐No
3. Is access for Maintenance vehicles provided to all chambers of the MCTT? * ☐Yes ☐No
4. Is there sufficient hydraulic head to operate the device? * ☐Yes ☐No
5. Has a bypass/overflow been provided for storms > WQV? * ☐Yes ☐No
6. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration)? ** ☐Yes ☐No

Treatment BMPs
Checklist T-1, Part 10

Prepared by: R. Dougherty Date: 01-08-09 District-Co-Route: 07-LA-10/605
PM (KP): 31.1/32.3 (50.1/51.9), R20.2/20.6 (32.5/33.1) EA: 245400
RWQCB: Los Angeles (Region 4)

Wet Basin

Feasibility

1. Is the volume of the Wet Basin above the permanent pool equal to at least the WQV using a 24 to 72 hour drawdown (40 to 48 hour drawdown preferred)? (Note: the WQV must be ≥4,356 ft^3 [0.1 acre-feet] and the permanent pool must be at least 3x the WQV.) ☐Yes ☒No

2. Is a permanent source of water available in sufficient quantities to maintain the permanent pool for the Wet Basin? ☐Yes ☒No

3. Is proposed site in a location where naturally occurring wetlands do not exist? ☐Yes ☒No

Answer either question 4 or question 5:

4. For Wet Basins with a proposed invert above the seasonally high groundwater, are NRCS Hydrologic Soil Groups [HSG] C and D at the proposed invert elevation, or can an impermeable liner be used? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 12 inches of the invert.) ☒Yes ☐No

5. For Wet Basins with a proposed invert below the groundwater table: Can written approval from the local Regional Water Quality Control Board be obtained to place the Wet Basin in direct hydraulic connectivity to the groundwater? ☐Yes ☐No

6. Is Water Quality freeboard provided ≥1 foot? ☒Yes ☐No

7. Is the maximum impoundment volume < 14.75 acre-feet? ☒Yes ☐No

8. Would a permanent pool of water be allowed by the local vector control agency? ☐Yes ☒No
   If No to any question above, then a Wet Basin is not feasible.

9. Is the maximum basin width ≤49 ft as suggested in Section B.10.2? ☐Yes ☐No
   If No, consult with the local vector control agency and District Maintenance.

10. Does adequate area exist within the right-of-way to place a Wet Basin? ☐Yes ☐No
    If Yes, continue to Design Elements sections.
    If No, continue to Question 10.

11. If adequate area does not exist within right-of-way, can suitable, additional right-of-way be acquired to site the device and how much right-of way would be needed to treat WQV? _____ acres ☐Yes ☒No

12. If Yes, continue to Design Elements section.

    If No, continue to Question 8.

13. If adequate area cannot be obtained, document in Section 5 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☒ Complete

Design Elements

* **Required** Design Element – A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 5 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

** **Recommended** Design Element – A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Can a controlled outlet and an overflow structure be designed for storm events larger than the Water Quality event? * ☐Yes ☐No
2. Is access for Maintenance vehicles provided? * ☐Yes ☐No
3. Is the drawdown time for the WQV between 24 and 72 hours? * ☐Yes ☐No
4. Has appropriate vegetation been selected for each hydrologic zone? * ☐Yes ☐No
5. Can all design elements required by the local vector control agency be incorporated? * ☐Yes ☐No
6. Has a minimum flow path length-to-width ration of at least 2:1 been provided? ** ☐Yes ☐No
7. Has an upstream bypass been provided for storms > WQV? ** ☐Yes ☐No
8. Can pretreatment be provided to capture sediment and litter in the runoff (such as using biofiltration, or a forebay)? ** ☐Yes ☐No
9. Can public access be restricted using a fence if proposed at locations accessible on foot by the public? ** ☐Yes ☐No
10. Is the maximum depth ≤10 ft? * ☐Yes ☐No