# EXHIBIT 2-A

Quality Manual Template

This exhibit is posted as a standalone file.

# EXHIBIT 3-A

Department Media Policies

# *Deputy Directive*

*Number:* DD-19-R2

*Refer to Director's Policy*: DP-02 Ethics
DP-10 Departmental Commitments

*Effective Date:* June 2005

*Supersedes*: DD-19-R1 (06-05-00)

*TITLE* Media Relations/Public Information

*POLICY*

The California Department of Transportation (Department) attempts to have a good relationship with the media which, in turn, will lead to greater and more positive coverage of what we do.

All Department employees are encouraged to look for opportunities to promote achievements. There are countless good news stories that could be shared with viewers, listeners and readers. Also, employees should look for opportunities to correct inaccuracies. If we are to gain the goodwill, confidence and support of the public we serve, we need to engage with the media and take every opportunity to be more proactive in communicating with the public.

Like any large organization, the Department has a process in place for interacting with the media. Interaction with the media is always deferred first to Department Public Information Officers (PIOs) and handled by them in accordance with journalistic principles, the California Public Records Act, and Department policies.

Employees may speak to the media, on a case-by-case basis, when given delegated authority to do so by the Deputy Director of External Affairs, District Director or District Chief PIO. Employees who are delegated authority to speak with the media should ask that a PIO accompany them.

The Department's policy is to be open and honest in dealing with the media and respond to their inquiries within their deadlines, as far as possible. The Department has a duty to let the media know about issues that should be in the public domain. We will inform the media about issues which:

- Are in the public interest;
- help to show the public how the Department goes about its work; and
- build public confidence in the Department.

*DEFINITION/BACKGROUND*

Public Information Officers are employees who have delegated authority to speak directly to media representatives. The Deputy Director of External Affairs, District Directors and District Chief PIOs designate these employees.

Mass public distribution includes any internally developed information for use outside of the Department, regardless of the distribution method.

Headquarters External Affairs provides information about statewide and policy concerns, while District Public Information Offices answer questions related to local and/or internal district operations.

Headquarters External Affairs or District Public Information Offices review and approve all media materials intended for mass public distribution to ensure organizational consistency and coordination. Materials subject to review and approval include newsletters, brochures, pamphlets, video scripts, press releases, and fact sheets.

Employees who are contacted by the media, or wish to correct media inaccuracies or promote good news stories must first be cleared by the Deputy Director of External Affairs, District Director, or Chief PIO.

*RESPONSIBILITIES*

Employees:

- Refer media inquiries to Headquarters External Affairs Office and/or District Public Information Office.
- May be called upon to respond to media inquiries or participate in media interviews when given delegated authority, on a case-by-case basis, by either Headquarters External Affairs Office, District Director and/or District Public Information Office.
- May respond in writing to correct media inaccuracies or promote good news stories, but the information must first gain clearance from either Headquarters External Affairs, District Director, or Chief PIO.
- Treat the job as a public trust and refrain from expressing their personal opinions or feelings while conducting business for the Department.

Deputy Director of External Affairs:

- Sets the Department's overall public affairs policy, including direction and oversight of the Districts' public information operations.
- Acts as the chief spokesperson, or delegates, for the Department.
- Approves Headquarters and District public information programs.
- Develops media training program.

District Directors:

- Conduct media interviews or delegate to District Chief PIO, or other staff as needed. The Deputy Director of External Affairs must be notified of such interviews that day, and sensitive issues should be discussed beforehand.

Deputy Directors, District Directors, Division Chiefs, Managers and Supervisors:

- Ensure subordinates are informed of and comply with this policy.
- Require that External Affairs be notified of all public events planned in their respective areas that may attract media attention.

District Chief Public Information Officers:

- Act as chief spokesperson for their respective district areas.
- Obtain departmental standing on sensitive issues and carry out the appropriate distribution of such information to other Headquarters/District Public Information Officers.
- Provide Department employees with clearance/denial to give interviews, on a case-by-case basis, as official Department representatives.
- Develop and coordinate their public information program, including training District staff.

*APPLICABILITY*

All Department employees.

*Original Signed By* — *June 20, 2005*
RANDELL H. IWASAKI — Date
Chief Deputy Director

# *DEPUTY DIRECTIVE*

*Number:* DD-20

*Refer to Director's Policy:* 06-Caltrans' Partnerships
12-Optimizing Departmental Resources

*Effective Date:* 4-15-94

*Supersedes:* New

*Title:* Public/Private Partnerships to Provide Public-Use Infrastructure

*POLICY*

Caltrans strongly supports the development of public/private partnerships to invest private capital in public-use infrastructure as a means of supplementing our limited public financial resources and providing the people of California with a safe, efficient and effective intermodal transportation system. Caltrans, at all levels, identifies potential public/private partnership opportunities; provides prompt and efficient legal, administrative and technical support to public/private infrastructure projects; and ensures State government is not a cause of unnecessary delay in the project process, while maintaining its primary goal of providing the most efficient transportation system to the people of California.

*DEFINITION/ BACKGROUND*

In an effort to leverage public funds to maximize public transportation benefits, Caltrans maximizes the use of private capital on its infrastructure projects through the use of public/private partnerships. Caltrans accomplishes this by encouraging the private sector to apply traditional private-sector business practices and entrepreneurial approaches to Caltrans' infrastructure projects, where allowed by statute, while ensuring that public interests are protected.

*RESPONSIBILITIES*

Executive Management takes the lead in clearly setting forth Caltrans' commitment to aggressively seek opportunities and additional authority to attract private capital into Caltrans' projects.

Deputy Director, External Affairs establishes and oversees implementation of the Department's policy on public/private partnerships; and serves as the Director's advisor on all matters relating to public/private partnerships.

Assistant Deputy Director, Federal Fiscal Planning oversees the Department's efforts to seek opportunities and additional authority to utilize public/private partnerships in Caltrans' infrastructure projects; and serves as advisor to the Deputy Director, External Affairs, on all matters relating to public/private partnerships.

Deputy Directors, District Directors and Division Chiefs develop relationships with Caltrans' private-sector partners based on mutual trust,

respect, fairness and honesty; and ensure implementation of this Policy by their staffs.

Director's Office of Public/Private Partnerships Staff identify, coordinate implement and monitor the Department's public/private partnership efforts including identification of problems related to program implementation.

Managers and Supervisors provide the direct leadership and support required to ensure that Caltrans maximizes its opportunities to utilize private capital through the formation of public/private partnerships.

Employees directly involved in public/private partnerships are decisive, resourceful and cooperative in carrying out this Policy; and at all times adhere to the Director's Policy on Ethics (DP-02) and the Deputy Directive on Incompatible Activities and Conflict of Interest (DD-09).

*APPLICABILITY*

All employees.

J. MICHAEL BRENNAN
Deputy Director
External Affairs

# *DEPUTY DIRECTIVE*

*Number:* DD-27 Revised

*Refer to Director's Policy:* 02-Ethics
12-Optimizing Departmental Assets and Resources

*Effective Date:* 1-2-01

*Supersedes:* DD-27 11-14-94

*Title:* Caltrans Publications

POLICY

Caltrans intends its publications to inform and educate its work force, partners and customers about plans, activities and accomplishments. The Department distributes publications in an efficient, cost-effective manner that is appropriate for the audience. Publications should be professional in quality and consistent with the Administration's objectives.

Headquarters and Districts should limit themselves to one newsletter apiece. Deputy Directors should publish only one technical or educational publication.

*BACKGROUND/ DEFINITIONS*

This policy is intended to ensure that Caltrans publications are effective and consistent with Department objectives.

Caltrans publications include both print and electronic distribution, such as audio, video and computers. Examples include regular newsletters, brochures, calendars, instructional videos, and publications on the World Wide Web.

*RESPONSIBILITIES*

The Deputy Director for External Affairs:

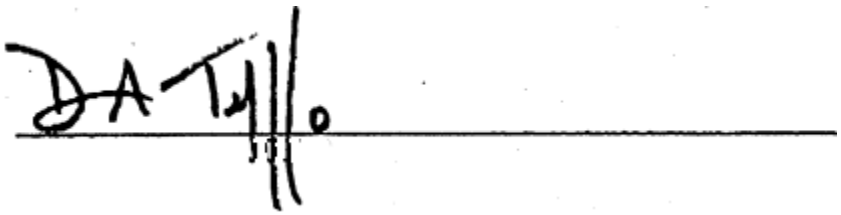
- Develops and establishes the Department's overall communication policies, program guidance and performance measures. This includes Caltrans Publications Guidelines and Caltrans Web Publishing Guidelines.
- Acts as the Department's chief policy maker for internal and external communications and oversees the development of the Department's Communication Plan
- Monitors Department publications to ensure compliance with policy.
- Gives final approval on all Caltrans publications.
- Publishes the Heaquarters newsletter and other statewide publications.
- Acts as a consultant to all Caltrans publications.

Deputy Directors, District Directors, Service Center Directors and Program Managers:

- Ensure that their staffs comply with Caltrans policy and guidelines.
- Are responsible for content and review of technical and educational publications.
- Ensure that District newsletters are consistent in style and content with the Headquarters newsletter.

*APPLICABILITY*

All Caltrans employees who are involved in the preparation, publication and distribution of Caltrans publications.



DENNIS A. TRUJILLO
Deputy Director
External Affairs

# *DEPUTY DIRECTIVE*

*Number:* DD-33

*Refer to Director's Policy:* 10 - Departmental Commitments
14 - Quality in Caltrans

*Effective Date:* 12-21-95

*Supersedes:* P&P 79-28

*Title:* Departmental Signature

*POLICY*

Caltrans is proud of its image in the transportation field and uses the Departmental signature to provide easy identification of all Caltrans' activities, goods and services by employees, clients and the public. The Departmental signature is presented in a uniform and consistent manner whenever it is displayed and is used to identify Caltrans' activities, goods and services.

*DEFINITION/ BACKGROUND*

Departmental signature includes a "CT" design and the word "Caltrans" appearing in conjunction with each other in a Department-approved format.

*RESPONSIBILITIES*

Caltrans Management:

- Ensures that only approved versions of the Departmental signature are displayed and/or used as outlined in the "Caltrans Departmental Signature Guidelines".
- Ensures Caltrans' activities, goods and services are identified with the appropriate Caltrans Departmental Signature and applies appropriate corrective action where deficiencies are found.

The Administrative Services Program Manager:

- Ensures development and dissemination of the "Caltrans Departmental Signature Guidelines".
- Ensures development and availability of approved versions of Caltrans' Departmental signature.
- Ensure and monitors the usage of the Departmental signature throughout Caltrans as outlined in the "Caltrans Departmental Signature Guidelines".

Employees:

- Use only approved versions of the Departmental signature whenever it is displayed to identify Caltrans' activities, goods and services as outlined in the "Caltrans Departmental Signature Guidelines".

*APPLICABILITY*

All employees.

JUDY GUERRERO
Deputy Director
Administration

CALTRANS DEPARTMENTAL SIGNATURE GUIDELINES

Number: 01
Date: March 15, 1994

INTRODUCTION:
Private corporations spend millions of dollars to have the public and their business associates identify an image left by their signature which is their logo. The Department of Transportation developed a Departmental Signature in 1972. The Caltrans "CT" is our identity, and it's a good one. We need to do everything we can to project the professional, singularly positive identity that we have created and developed over the years.

The advent of the computer and it's many graphic software programs, has led to a proliferation of newsletters and other graphics products throughout the Department. Divisions and Districts have begun developing and distributing printed material with a modified Caltrans logo or an entirely new design representing their unit. These new designs have been used in conjunction with the Caltrans logo or on their own. Some of the decisions to proceed in this direction have come from upper management. Deputy Directive number ___ is intended to clarify the importance of having a singular identity and to preserve it's integrity.

GUIDELINES
Please refer to the attached two pages of guidlines.

ROLE OF THE AUDIO-VISUAL COMMUNICATIONS BRANCH
The Division of Procurement and Services Audio-Visual Communications Branch will assist in the designing of printed or video products either by producing them entirely or assisting in part whenever needed. If the Unit producing a product that represents the Department feels comfortable with their understanding of the above guidelines it still would be advisable to send a copy or fax a copy to this Branch for comment <u>before</u> going into final production.

The contact person for the Headquarters Audio-Visual Communications Branch is David Douglas, 8 464-5485, Fax 8 657-4092.

Other recommended sources for printed or video products that represent the Department include the Graphic Services Units located in the following districts:

District 02, Persons name, Phone number, Fax number
District 04, John Vassalo, Phone number, Fax number
District 07, Duncan McIntosh, Phone number, Fax number
District 11, Vince Meneses, Phone number, Fax number
District 12, Albert Miranda, Phone number, Fax number

GUIDELINES

The Departmental Signature consists of the "CT" symbol and the logotype "Caltrans" appearing in conjunction with each other.

- Use of the symbol by itself is acceptable. Use of the logotype by itself is not acceptable. When both the symbol and logotype are used, they are to be combined only in the relative size and placement as shown on the following "Standard Configurations".

- The legal name, (California Department of Transportation) may be shown separately and removed from the signature if desired (this is the preferred way). Use of the legal name with any of the combinations other than the one shown is not permissible.

- When reproduced, the symbol and/or logotype should always appear clear, crisp, and undistorted in form. Reproduction should be made only from reproduction proofs and not redrawn or traced.

- The symbol and logotype may be reproduced in either positive or negative form. They are to be displayed against a clear and uniform background, free from visual distraction or confusion created by the presence of other graphic elements. Screen tones are to be avoided. Creative adaptions such as outline or shadow treatments are not permissible. Containing shapes, encircling borders and other graphic elements are to be avoided.

- When displaying the signature in color form, the "C" is to be Turquoise PMS (Pantone Matching System) #326, the "t" is to be Blue PMS #299, the logotype is to be black. The color form is to be used only against a background of white.

- For situations where the correct colors are not available or are not economically justified, or the background is not white, the entire signature must appear in a single color. This may be blue, green, red, black or any other single color of strong visual contrast with the background and compatible with the color(s) of the particular application.

- Careful consideration should be given that the symbol and/or logotype appear only on items that in other visual aspects reflect quality, professionalism, and a contemporary appearance.

- Use should be discontinued of any previously produced items where the appearance of the signature is inconsistent with these guidelines.

- In order that the strongest and most effective Departmental identification may be conveyed, no other divisional, branch, etc., symbols are to be used.

- Display of the signature on vehicles is to be accomplished by using decals that are available with specific instructions on application.

## STANDARD CONFIGURATIONS

Shown here are the three authorized configurations for displaying the Departmental Signature.

The symbol, logotype and legal title when used together are to retain this same relative size and placement.

Repro proofs in a variety of sizes are available from Headquarters Graphic Services.

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# *DEPUTY DIRECTIVE*

Number: DD-46

Refer to: Director's Policy 06
Caltrans Partnerships

*Effective Date:* 10-10-95

*Supersedes:* New

*Title:* External Advisory Committees

*POLICY*

Caltrans supports participation by its employees on external advisory committees. Caltrans uses external advisory committees to develop solutions to the State's transportation problems, to disseminate information regarding specific Caltrans projects and programs, and to provide a forum for interactive discussions with interested parties. Caltrans establishes external advisory committees whenever it is necessary to meet stated objectives of programs or projects. External advisory committees do not adopt policies that conflict with Caltrans' policies or that could be construed as representing Caltrans' policies.

Committees required by statute or regulation do not specifically fall within the purview of this policy.

*DEFINITION/S*
*BACKGROUND*

External advisory committees established by Caltrans have sound, stated objectives and fall within one of two categories:

External Task Force Committees provide assistance to the Department regarding specific issues (e.g., design reviews, system walk-throughs, peer reviews, etc.). Committees are typically short-term and are discontinued upon delivery of solicited review, evaluation or comments. Committee members may be entitled to reimbursement pursuant to applicable rules and regulations (such as travel and related expenses and not payment for time).

External Relations Committees disseminate information regarding the Department's activities and provide a forum for discussions regarding issues of mutual interest to the Department and external entities. Examples of such issues may include major Caltrans projects or specific Caltrans programs. Committees may exist for a short-term (e.g., until the end of a project) or may be long-term in existence. No reimbursement to committee members is provided.

*RESPONSIBILITIES*

The Deputy Director, External Affairs, in addition to the responsibilities listed for Deputy Directors, has an oversight role of departmental external advisory committees which includes maintaining a list of external advisory committees and their members and periodically reviewing the Department's use of external advisory committees to evaluate compliance with departmental policies and also to test the adequacy of these policies.

Deputy Directors, District Directors and Service Center Directors:

- Review and approve recommendations for the establishment of new external advisory committees.

- Annually review accomplishments of existing external advisory committees established within their areas of responsibility and approve continuance of those from which the Department continues to benefit and discontinues those that no longer serve the Department.

- Recommend establishment of new external advisory committees when, for instance, seeking assistance from experts outside of the Department regarding specific departmental concerns or developing external relationships with parties regarding a specific Caltrans project or Program. Recommendations are justified based on sound, written objectives and cost/benefit analysis.

Program Managers:

- Ensure the propriety of external advisory committees established within their scope of responsibility.

- Ensure staff participation is consistent with departmental policies.

- Recommend establishment of new external advisory committees when, for instance, seeking assistance from experts outside of the Department regarding specific departmental concerns or developing external relationships with parties regarding a specific Caltrans project or Program. Recommendations are justified based on sound, written objectives and cost/benefit analysis.

- Determine appropriate level of staff support, if any, to be assigned to advisory committee from within the Program, taking into consideration existing Program workload, amount of support required and nature and relative importance of advisory committee.

- Recommend abolishment of committees which are no longer relevant (e.g., upon completion of a project) or no longer serve their stated objectives, recognizing the commitment in resources necessary to sustain an external advisory committee.

- Ensure allocations are available for those external advisory committee subject to reimbursement.

Caltrans employees who serve as external advisory committee members represent Caltrans at all time and act appropriately.

***APPLICABILITY***

**All Caltrans employees involved in establishing, managing and serving as members of external advisory committees.**

J. MICHAEL BRENNAN
Deputy Director
External Affairs

# *Deputy Directive*

| | |
|---|---|
| *Number:* | DD-79 |
| *Refer to Director's Policy*: | DP-02-R2<br>Ethics<br><br>DP-06<br>Caltrans' Partnerships |
| *Effective Date:* | March 2004 |
| *Supersedes*: | NEW |

*TITLE* California Public Records Act Compliance

*POLICY*

The California Department of Transportation (Department) acknowledges the public's right to know about departmental operations. The Department has a positive program to disseminate information needed by the public to evaluate departmental performance from an informed perspective. Inquiries from the media and public are answered fully and as quickly as circumstances permit within statutory timelines.

*DEFINITION/BACKGROUND*

The Legislature has declared that access to information concerning the conduct of the people's business is a fundamental and necessary right for every person in the State. Therefore, the public has been given the right to inspect or obtain a copy of any public record, except those records that are legally exempt from public disclosure [The California Public Records Act (CPRA); Government Code Sections 6250 – 6276.48 *http://www.leginfo.ca.gov/calaw.html*]. The Department, pursuant to the CPRA, is mandated to establish guidelines *[CPRA Guidelines]* for public access to departmental records.

Public records include any written communication containing information pertaining to the conduct of the Department's business that is prepared, owned, used, or retained by the Department regardless of physical form or characteristics [Government Code Section 6252(e)].

Written Response is required to respond to a CPRA request within ten calendar days following receipt of the request. The ten-day period is the time within which the Department must notify the requestor of its determination of how the request will be handled. Under limited circumstances this time may be extended for up to another 14 days. The public is also entitled to copies of this Deputy Directive. *[CPRA Guidelines Section VIII]*

Requests for public records must accurately and sufficiently describe the records sought so that identification and retrieval can be accomplished. If the request insufficiently describes the records being sought, the Department has an obligation to

seek clarification from and assist the requestor to define the request in order for the Department to be responsive. *[CPRA Guidelines Section VII]*

Fees may not be charged for providing access to records. The Department may charge for the actual costs of duplication, including any necessary staff or billable machine time directly involved in making the copies. The Department cannot charge for the time necessary to locate records or prepare them for inspection or copying. *[CPRA Guidelines Section X]*

Exemptions from Disclosure include materials such as personnel records, investigative records, drafts and working papers, and other materials deemed private or confidential by other State or federal statutes. *[CPRA Guidelines Section XI]*

Limitation on Public Disclosure of Structure's Documents for Reasons of National Security - Department documents depicting existing State of California highway structures shall only be released according to the Department's Document Request Guidelines and Confidentiality Agreement. *[CPRA Guidelines Section V]*

Limitation on Public Disclosure of Personal Information - The Information Practices Act (IPA, Civil Code Sections 1798-1798.83) declares that the right to privacy is a personal and fundamental right protected by the California and U.S. Constitutions.

Department documents containing 'personal information' shall only be disclosed as permitted by the Information Practices Act. 'Personal Information' is any record that identifies or describes an individual employee or member of the public including, but not limited to, his or her social security number, medical or employment history, education, payroll deductions, financial transactions, or similar information.

Public Records Officer - The Public Records Officer (PRO) is that officer or employee designated by the Department as having principal statewide responsibility for developing, implementing, and overseeing guidelines and procedures concerning compliance with the CPRA and compliance with related laws and departmental policies concerning disclosure of information, confidentiality and privacy.

Public Records Coordinators - Public Records Coordinators (PRCs) are those employees designated by each district, division, program, or other functional unit of the Department as having primary responsibility for processing CPRA requests concerning records created or maintained by that functional unit or for which that functional unit has been deemed to be the records custodian.

*RESPONSIBILITIES*

Deputy Director, External Affairs:

- Responsible for developing, implementing, and overseeing statewide policy and guidelines for accessing departmental records in compliance with the CPRA and with related laws and departmental policies concerning disclosure of information and privacy.
- Establishes and maintains communication with the districts and divisions to ensure departmentwide consistency in processing access to departmental records.
- Provides technical assistance for deputy directors, district directors, division chiefs, other management, and departmental personnel regarding public access to departmental records.
- Coordinates requests that cross district or divisional boundaries.
- Creates and maintains statewide PRA tracking database capturing incoming requests and departmental responses.
- Coordinates and collects completed Public Records Act Request Forms (ADM-3003), a copy of public requests, and departmental responses for all departmental CPRA requests.

Deputy Directors, District Directors, Division Chiefs, District Deputy Directors, and other Functional Managers:

Ensure that departmental records within their areas of jurisdiction or custody are disclosed, or protected, consistent with the Department's CPRA policies and guidelines as well as any relevant statutes, regulations, or departmental policies concerning disclosure, confidentiality or privacy.

- Responsible to appoint a PRC within their area of stewardship.
- Ensure that managers and supervisors are knowledgeable about accessing departmental records and ensure there is a current and accurate accounting of all records.
- Maintain a log of incoming requests and a file of the district, division, program, or functional unit response and ensure timely and appropriate processing of all requests.
- Ensure that PRC enters CPRA information into the statewide database upon receipt of request, and keeps the system updated as appropriate.
- Ensure that a copy of each original request, a copy of Form ADM-3003, and a copy of departmental responses are provided to the PRO at the time of closure.

District/Division Public Records Coordinators:

- Responsible for processing CPRA requests concerning records created or maintained by their functional area or for which their functional unit has been deemed to be the records custodian.
- Monitor and retain the accurate status of requests in their functional areas, ensure their portion of the statewide database is kept current, and forward closure status reports to statewide PRO.
- Serve as liaison in their functional area and for communicating with the Department's PRO.
- Ensure that all requests from the media are immediately coordinated with the District Public Information Office/External Affairs Office.
- Notify Legal Division and PRO of any CPRA requests that could be related to pending or anticipated litigation or claims.

Legal Division:

- Serves in a legal advisory role on any legal issues concerning public records, exempt records, litigation, and/or claims.
- Monitors changes in statutes, regulations, and case law concerning disclosure of information, confidentiality, and privacy, and reports changes to the PRO.
- Assists with developing responses to CPRA requests that involve pending or potential litigation or claims.

Division of Accounting: Determines and collects the fees for copies of departmental records.

Managers and Supervisors: Ensure accurate accountability for the management, security, maintenance, confidentiality, integrity, and availability of departmental records within their areas of jurisdiction.

All Employees: Responsible for promptly informing their supervisors and managers of any requests.85

*APPLICABILITY*

All Department personnel.

*Original Signed By* *3/15/2004*

TONY V. HARRIS
Acting Director

Date Signed

# *Deputy Directive*

*Number:* DD-83

*Refer to Director's Policy*: DP-04 Environmental Policy

DP-07 Project Delivery

DP-16 Program Management

*Effective Date:* March 2004

*Supersedes*: NEW

*TITLE* Project Purpose and Need

*POLICY*

The California Department of Transportation (Department) ensures consistency in project purpose and need from a comprehensive planning process through project construction, at the appropriate level of detail commensurate with the stage of project development. The Department develops a concise, well-defined Purpose and Need Statement for its projects through: outreach to customers, coordination with local and regional planning agencies, early formation of multi-functional project development teams, and retention and transmission of relevant supporting data. A project's Purpose and Need Statement exhibits continuity from planning through project approval and beyond; the designed and constructed project reflects its intended purpose and need. Ultimately, the project's purpose and need reflects the customers' needs.

*DEFINITION/BACKGROUND*

A project's "Need" is an identified transportation deficiency or problem, and its "Purpose" is the set of objectives that will be met to address the transportation deficiency. A reasonable solution or range of solutions is developed and evaluated based on these objectives.

A clear, concise, well justified Purpose and Need Statement is the foundation of every transportation project. It is critical for identifying a reasonable range of project alternatives; it expedites project delivery; and, it leads to more precisely defined project cost, scope, and schedule. Just as importantly, it explains to the public, stakeholders and decision makers that the expenditure of funds is necessary and worthwhile, and that the project's priority relative to

other transportation projects is warranted. It ensures that the right project is built.

A quality Purpose and Need Statement also meets the requirements of federal and State regulations: an environmental impact statement shall "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action" (40 CFR §1502.13); an environmental impact report shall "contain a statement of objectives sought by the proposed project" and it "should include the underlying purpose of the project" [14 CCR §15124(b)].

A project's basic purpose and need must be founded in a transportation planning document and will remain consistent throughout project development. As supporting data and input are assembled during the project approval process, these can be used to refine the solutions being considered, thereby permitting a more focused analysis of those solutions that truly address the problem to be solved. All subsequent project activities must reflect this final project purpose and need. Key factors in the successful development and refinement of a sound Purpose and Need Statement include broad participation from functional units and stakeholders. It is also crucial that project data are transmitted and retained for each phase of the project development process.

*RESPONSIBILITIES*

Chief Deputy Director:

- Establishes policy for Purpose and Need Statements.
- Utilizes established incentive and award programs to recognize those departmental individuals, teams, and projects that advance the goals of this policy.

Deputy Directors, Planning and Modal Programs and Project Delivery:

- Ensure development of strategies to facilitate early development of quality Purpose and Need Statements.
- Require training of staff in the development of Purpose and Need Statements.
- Ensure that manuals, guidance, and procedures reflect this policy.
- Ensure development of strategies for retention and transmission of project documentation from planning through maintenance.

Deputy Director, Maintenance and Operations:

- Ensures that manuals, guidance and procedures reflect this policy.
- Encourages identification of purpose and need in the 10-Year State Highway Operation and Protection Program (SHOPP) Plan.

Chiefs, Division of Transportation Planning, Local Assistance, Rail, Aeronautics, Mass Transportation, Environmental Analysis, and Design:

- Encourage identification of purpose and need in Regional Transportation Plans (RTPs); rail, aviation, and transit plans; and System Planning documents.
- Develop strategies to facilitate development of quality Purpose and Need Statements for Project Initiation Documents (PIDs), project approval documents, and environmental documents.
- Develop and implement training in the development of Purpose and Need Statements.
- Ensure that manuals, guidance, and procedures reflect this policy.
- Recommend strategies for retention of project documentation and transmission to subsequent project stages.

Chiefs, Division of Project Management, Traffic Operations, Engineering Services, Right of Way, Construction, and Maintenance:

- Require staff training in the development of Purpose and Need Statements.
- Ensure that manuals, guidance, and procedures reflect this policy.
- Recommend strategies for retention of project documentation and transmission to subsequent project stages.

District Directors:

- Ensure development of quality Purpose and Need Statements from planning through project approval.
- Ensure that projects are designed and constructed to meet approved project purpose and need.
- Ensure dissemination of guidance and tools for preparing quality Purpose and Need Statements.

- Encourage retention of project documentation and transmission to subsequent project stages.

Deputy District Directors, Planning, Project Management, Design, Environmental Planning, Right of Way, Traffic Operations, Construction, and Maintenance:

- Encourage identification of purpose and need in RTPs, System Planning documents, PIDs, Project Reports, environmental documents, and other pertinent documents and plans.
- Train staff in preparation of quality Purpose and Need Statements.
- Develop and implement strategies for development of quality Purpose and Need Statements based on the foundation laid in planning documents.
- Ensure that functional areas and stakeholders participate in the evaluation and refinement of Purpose and Need Statements in Project Development Teams.
- Develop and implement strategies to ensure the continuity and quality of Purpose and Need Statements throughout each project's life cycle.
- Implement procedures to assure retention of project documentation and transmission to subsequent project stages.
- Ensure that project scope changes and design changes at any stage are evaluated against the project's approved purpose and need.
- Evaluate completed projects to see if they meet the intended purpose and need and use the results to inform the planning process.

Employees:

- Ensure the continuity and quality of Purpose and Need Statements throughout each project's life cycle.
- Participate actively in multi-functional Project Development Teams to evaluate and refine Purpose and Need Statements.
- Follow procedures to retain project documentation and transmit to subsequent project stages.
- Follow procedures to transmit project purpose and need from planning stages through project completion.

*APPLICABILITY*

All employees involved in the planning and delivery of capital projects.

*Original Signed By Bruce Behrens for* *03/4/2004*

TONY V. HARRIS
Acting Director

Date Signed

# EXHIBIT 3-B

Department California Public Records Act Guidelines

**Back to Deputy Directive**

# CPRA GUIDELINES

## I Introduction

The California Department of Transportation's (Department) employees create millions of documents each month. With some exceptions, each of these documents is a "public record" that State law permits any member of the public to inspect or copy on demand. This applies to paper documents and electronic records such as email. 'Public' includes individuals and organizations such as the media, law firms, contractors doing business with the Department, consumer organizations, etc. Therefore, it is important that every Department employee understands his or her responsibilities concerning the records he or she creates and retains.

The two most significant laws governing the disclosure of public records are the California Public Records Act (CPRA; Government Code Sections 6250 et seq.) and the Information Practices Act (IPA; Civil Code Sections 1798 et seq.). The CPRA applies only to "identifiable records" created, owned, used, or retained by a public agency. The IPA applies to any "personal information" retained by the Department about individual employees or members of the public, such as home addresses, phone numbers, employment information, financial data, etc. These statutes are available online at: http://www.leginfo.ca.gov/calaw.html

These guidelines provide general direction for handling CPRA requests for access to or copies of departmental records. Requests that would require disclosure of 'personal information' about employees or the public raise added concerns for personal privacy. More detailed procedures applicable to such requests are contained in the publication "IPA Guidelines, Chapter 3, Caltrans Records Management Manual."

Records sought via a subpoena or a "Notice to Produce Documents" are not CPRA requests. They require special processing and shall be referred to the Legal Division immediately.

## II. Definitions:

**Records** - All information that is retained in a physical or electronic format, including all correspondence, reports, memos, or other paper documents including plans and maps; emails; automated information which can be viewed, printed or downloaded; photographs; recordings; computer tapes and discs, microfilm.

**Public Records** - Any written record containing information pertaining to the conduct of the Department's business that is prepared, owned, used, or retained by the Department, its officers or its employees [Gov. Code Section 6252 (e)]. This includes, but is not limited to, correspondence, memos, reports, manuals, plans, maps, photographs, recordings, emails, and automated information that can be viewed, printed or downloaded.

Excluded are documents created or retained by employees for their own personal use that are unrelated to the Department's business. However, employees should adhere to DD-54-R1, and

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presume that any records maintained on Department computers or other equipment or otherwise stored in Department files are potentially disclosible under the CPRA.

**Exempt Records** - The Department need not disclose records for which disclosure is exempted or prohibited by the CPRA or other State or Federal law, including provisions of the California Evidence Code related to privilege; or records that the Department determines to be exempt based upon applicable case law or, pursuant to Government Code Section 6255, because the public interest in withholding the records clearly outweighs the public interest in disclosure (commonly referred to as "the balancing test." Asserting this balancing test as a basis for exemption requires the approval of the Governor's Office of Legal Affairs.

**Confidential Records** - Information for which confidentiality is either required by statute or mandated by public policy considerations. Confidential records are still 'public records' but the fact that a record is deemed confidential may exempt it from public disclosure for so long as there is a need to preserve the confidentiality.

**Personal Information** - Information in any record that identifies or describes an individual. Including, but not limited to, his or her social security number, home address, home phone number, medical or employment history, education, financial transactions, or similar information. It includes statements made by, or attributed to, the individual (such as those that may be obtained during an interview or investigation). The IPA (IPA; Civil Code Section 1798.1) declares that the right to privacy is a personal and fundamental right protected by the California and U.S. Constitutions. The IPA places restrictions on the disclosure of personal information. However, the IPA specifically exempts CPRA requests from its provisions in certain instances. Therefore, any apparent conflicts between the CPRA and the IPA should be reviewed by the Legal Division.

**Freedom of Information Act** - The public may ask for copies of records and cite the federal Freedom of Information Act as their authority for the request (FOIA; 5 United States Code Section 552). The FOIA does not apply to states or state agencies. If a request is received that cites the FOIA as authority for the request, the Department will treat the request as if it had been submitted under the CPRA.

**Public Records Officer** - The Public Records Officer (PRO) is that officer or employee designated by the Department as having principal statewide responsibility for developing, implementing and overseeing guidelines and procedures concerning compliance with the CPRA and compliance with related laws and departmental policies concerning disclosure of information, confidentiality and privacy.

**Public Records Coordinators** - Public Records Coordinators (PRCs) are those employees designated by each district, division, program, or other functional unit of the Department as having primary responsibility for processing CPRA requests concerning records created or maintained by that functional unit or for which that functional unit has been deemed to be the records custodian.

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## III. Some General Considerations About Inspection of Public Records

In enacting the CPRA, the Legislature declared that access to information concerning the conduct of the people's business is a fundamental and necessary right for every person in the State (Gov. Code Section 6250). This right was reinforced in 2004 with the passage of Proposition 59, which elevated the public's right to know to a constitutional right.

Therefore, the public has been given the right to inspect or obtain a copy of any public record, except those records that are legally exempt from public disclosure (Gov. Code Section 6253; see Section XI herein for some common exemptions). Cases interpreting the CPRA have emphasized that the law's primary purpose is to give the public an opportunity to monitor the functioning of their government. As a result, many requests for public records come from the media, public interest groups, and citizen activists. Other requests come from companies doing business with the Department, law firms contemplating litigation, researchers, and members of the public looking for information about a project in their area.

Most requests for public records are received via mail, fax, email or telephone with the requestor expecting the records to be made available for inspection at some later time or for copies to be mailed to them. However, this is not a requirement of the CPRA and the law requires the Department's records to be open to inspection at all times during the Department's regular office hours - provided the request is reasonably specific and can be accommodated without undue business disruption.

Every office with a public entrance must have a sign posted in a conspicuous place directing the public to the appropriate person or office for inquiries about inspection or copying of public records (Appendix A). Each office must also have a copy of these CPRA guidelines, which must be provided to the public upon request, free of charge.

Some requests for records are simple and can be complied with immediately. For others, a detailed search for responsive records is necessary and immediate compliance is not possible, especially if the records are located in diverse locations throughout the Department.

Sometimes, the records may be readily available but it is first necessary to determine whether they contain confidential or other information that is exempt from disclosure.

If a request cannot be accommodated immediately, the Department has up to ten (10) calendar days after receipt of a request to determine how it will respond, to notify the requestor of its determination that records will or will not be provided, and to explain the reasons for any exemptions claimed. When the tenth day falls on a weekend or holiday, the deadline automatically rolls over to the next business day. In limited circumstances, the Department may extend this period for up to an additional 14 calendar days (see Section VIII).

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The above time limits are the time within which the Department must notify the requestor of its determination that records will or will not be provided. Providing the records will sometimes take longer (the statutory requirement is that access to the records must be provided "promptly"), depending upon the size and complexity of the request. If records are not provided with the response itself, the response must include an estimate of when they will be provided.

Some requests for records are vague or overly broad. Although a request can sometimes be denied if it is too vague or would be unreasonably burdensome, the Department is obligated by the CPRA to assist the requestor in identifying and locating specific records or narrowing the scope of the request in a manner in which compliance is possible (Gov. Code Section 6253.1).

## IV. Responsibility for Processing CPRA Requests: Overview

The Department's PRO has statewide delegation authority and exercises statewide policy responsibility for the Department's compliance with the CPRA. In addition to issuing these guidelines and establishing and monitoring a statewide tracking database, the PRO is responsible for routing received requests to appropriate districts, divisions or programs for a response and for ensuring that requests are processed timely and appropriately within the parameters of the CPRA and related laws and departmental policies. This includes responses to complex requests that may involve multiple districts or divisions. To assist the PRO in performing these functions, each district, division and, if appropriate, program has designated a PRC to be a principle point of contact and to assist its own managers and employees in responding to requests for records that are in their possession or control. Although the PRO and PRCs have principal responsibilities for handling CPRA requests, because nearly every employee creates or maintains records that could be the subject of a request, compliance with the CPRA creates responsibilities for every employee.

The Legal Division maintains expertise in public records law and is available to assist others in the Department with any legal questions concerning the Department's proposed response, including advice about applicable exemptions, time extensions, or other matters not treated in these general guidelines. The Legal Division also has a direct role in any CPRA request which involves pending or anticipated claims or litigation.

Requests from the media and requests involving records belonging to, or exchanged with, other State and Federal Agencies and Departments, including the Legislature or Office of the Governor, may require special processing and should always be reviewed by the Headquarters (HQ) Division of External Affairs. The PRO in the HQ Division of Public Affairs should also be notified if a request is related to Departmental activities that have attracted, or may attract, substantial media or legislative interest.

See **Deputy Directive DD-79-R1,** "California Public Records Act Compliance" for further information about roles and responsibilities.

## V. General Guidelines for Access to Departmental Public Records

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1. Public records maintained by the Department are available for inspection by members of the public during regular business hours. If the records are not readily accessible, the Department will estimate the amount of time necessary to locate the records and schedule an appointment for viewing at a mutually agreeable date and time. If portions of the records must be deleted in order to protect personal information, confidential data or other material that is exempt from disclosure (see Section XI), the Department may take the necessary time to do so before making the records available.

2. The Department may impose conditions necessary to preserve the security of the Department's employees or property; to protect records against theft, mutilation or damage; to avoid improper disclosure of confidential or privileged information; and to avoid unnecessary interference with the orderly functioning of the Department's work activities. If a request requires review of numerous records, a mutually agreeable time will normally be established for their inspection.

3. Members of the public inquiring about how to inspect or obtain copies of departmental records are to be provided with a copy of the Department's Public Records Act Request Form ADM-3003 (Appendix B). This form is available on the Caltrans Electronic Forms System (CEFS), and on the Caltrans Internet website at http://www.dot.ca.gov/cpra. Any further questions should be referred to the PRO or the district or division PRC.

4. Although submittal of a Public Records Act Request (Form ADM-3003) is preferred, the Department cannot require completion by the requestor. The Department's duty to respond to a request is triggered by any written or verbal request for records that indicates it is being made pursuant to the CPRA. However, if the requestor does not complete a Form ADM-3003, the local PRC shall complete the form to the best of their ability and submit it to the PRO along with the departmental response(s) to the requestor at the time that the request is closed out. Also attached should be a copy of the original written request, if one exists.

    a. Any employee receiving a written CPRA request, including e-mail, should immediately provide a copy to the PRO or the PRC for his/her district, division or program. The PRO or PRC will then assume responsibility for ensuring completion of the ADM-3003, coordinating and tracking the response, including any appropriate re-delegation(s) to the original recipient or other district, division or program staff.

    b. Any employee receiving a verbal CPRA request should ask the requestor to confirm the request in writing. If the requestor refuses to do so, the employee is to prepare an ADM-3003 memorializing the request as accurately as possible. The requestor should be asked to confirm the accuracy of the transcription. The employee should always clearly document his or her conversation(s) with the requestor, including specific date(s) and time(s), and attach that documentation to the ADM-3003. Once the request has been transcribed, the ADM-3003 should be immediately forwarded to the PRO or appropriate PRC who will then take

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responsibility for coordinating, logging and tracking the response, including any appropriate re-delegation(s).

5. Some of the Department's documents are intended for public distribution. Routine requests for such documents may be responded to without reference to these guidelines unless the request expressly states that it has been submitted pursuant to the CPRA. Examples include requests for documents such as brochures and newsletters; project development documents intended for use at public hearings; Requests For Proposals, Invitations For Qualifications, and similar contract proposals or bidder documentation; manuals, reports, or other publications intended for public distribution, sale, or posting on the Internet.

6. Due to concerns relating to public security, safety, welfare, and the public interest, disclosure of certain documents depicting existing State of California highway structures are restricted to permissible parties for specific purposes identified by the Department. The Department has established specific procedures for handling all departmental structure information requests including, but not limited to, bridges, overcrossings, undercrossings, overheads, underpasses, separations, tunnels, tubes, and viaducts. A policy memorandum titled, "Limitation on Public Disclosure of Structures Documents" (Appendix C) provides guidance pertaining to structure requests.

## VI. Responsibilities for Identifying and Locating Documents

1. Within their respective areas of authority, the PRO and PRCs have primary responsibility for:

   a. Receiving, logging, and tracking all requests for public records. This includes entering the request into the statewide CPRA tracking database (located on the External Affairs Intranet web site: http://onramp.dot.ca.gov/hq/paffairs) immediately upon receipt of the request, updating the database as appropriate. Only authorized users will have access to the database and the ability to enter information into the database. The PRC should forward the ADM-3003 (completed either by the requestor or the employee receiving the request**)**, a copy of the original request, and a copy of the departmental response to the Headquarters PRO upon closure of the request.

   b. Determining the possible location of the records, and routing copies of requests to the appropriate organizational sub-unit(s) for handling.

   c. For requests that involve multiple organizational units, determining the office(s) that will be responsible for coordinating compliance with the request and following through with those entities.

   d. Assisting the public in understanding what information is available, and what must be done to obtain access to, or copies of, public records.

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e. Ensuring that the Legal Division reviews any requests known or believed to be related to pending or anticipated litigation.

f. Ensuring that requests from the media are coordinated with External or Public Affairs personnel, and that the media box is checked off in the database immediately upon receipt of the request.

h. Ensuring that an appropriate response is provided within the statutory deadlines (see Section VIII).

i. Ensuring that all originals of records are returned to the appropriate organizational units as soon as possible.

2. Districts, divisions, programs and other functional units of the Department are custodians of their own records. They are responsible for identifying, retrieving, and copying the records requested of them and making them available for inspection or for delivery to the PRO or PRC for transmittal. They are responsible for the primary review of potentially responsive records to determine if any records or parts thereof are subject to exemption or redaction. After that primary review, they should refer any remaining issues to External Affairs and the Legal Division.

   Exempt records or confidential or privileged information, if any, should be deleted or separated from non-confidential documents and explained in a cover memorandum for use by the PRO, PRC or other employee who is preparing the official response.

## VII. Vague or Overly Broad and Burdensome Requests

Requests for public records must accurately and sufficiently describe the records sought so that identification, location, and retrieval can be accomplished efficiently. Frequently, the requestor has a perceived need but has no clear definition of the documents he or she is requesting. When a request does not reasonably describe identifiable record(s), the receiving employee, PRO or PRC is to contact the requestor to clarify the request. If attempts to clarify a request fail to result in a clear inquiry, the request may be rejected if any of the following circumstances apply:

1. The request does not reasonably describe identifiable records, after reasonable efforts to elicit additional clarifying information have been made. The test of whether records are identifiable is not the volume of the records requested, but whether the records can be located with reasonable efforts.

2. Even after clarification, the magnitude of the request is such that compliance would be unreasonably burdensome of Departmental resources. The key word here is "unreasonably;" the CPRA presumes that the need to respond to a CPRA request will require a diversion of effort from other duties and will therefore impose some burden on the Department.

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3. The request is for records that do not exist in a retrievable format and would require the Department to compile new data, perform research or create new records not already in existence.

Sample language is provided (Appendix D) for responding to vague or overly broad and burdensome requests. Each request should be handled on a case-by-case basis and the language should be modified as appropriate.

## VIII. The Department's Written Response

1. The Department is required to respond to a CPRA request within 10 (ten) calendar days following receipt of the request. Therefore, to verify the Department's date of receipt, it is important that any written request is date-stamped when initially received by the Department. If received through the U.S. Mail, the original date-stamped envelope should be retained as well. If a request is received via email, fax or verbally after 5:00 p.m., the date of receipt automatically rolls over to the next calendar day. When the tenth day falls on a weekend or holiday, the deadline automatically rolls over to the next business day. The 10-day period is the time within which the Department must notify the requestor of its determination of how the request will be handled. Providing the records may sometimes take longer, depending upon the size and complexity of the request. Typical responses include:

   - The records requested will be made available for inspection on a certain date, or copies provided upon payment of the actual copying costs.
   - The Department will comply with the request, or portions of it, but the records are not yet available. An estimate of the time needed for production and estimated duplicating costs must be included.
   - The request, or portions of it, cannot be complied with because the request is unduly vague or unreasonably burdensome and attempts to clarify the request or narrow its scope have failed.
   - The Department denies the request, or portions of it, including the specific reasons (exemptions) supporting that decision.

Any rejection or denial must state the names and titles or positions of each person responsible for the denial (Gov. Code Sections 6253 and 6255).

2. If required by the size or complexity of the request, the Department may notify the requestor of the need for an extension of time to respond and the reasons for the extension. The notice must state the date on which a further response is expected, which cannot be more than an additional 14-calendar days. Acceptable reasons for an extension are:

- The need to search for and collect records from diverse offices or facilities that are separate from the office processing the request; or,

- The need to search for, collect, and examine a voluminous amount of records;

- The need for consultation with another agency and/or between different units within the Department having a substantial interest in the records;

- The need to compile data or to construct a computer report to extract data.

**Extensions of time may only be taken for the above purposes and may not be taken solely for purposes of delay.**

Sample language is provided (Appendix E) for identifying cause for an extension. Each request should be handled on a case-by-case basis and the language should be modified as appropriate.

3. Program staff will be responsible for taking the lead in identifying and gathering appropriate information and data. Ordinarily, preparation of the written response will be the responsibility of the PRO or PRC, but program staff may be delegated this responsibility when appropriate. Except where a response is being rejected solely because it is unduly vague or overly broad and burdensome, the response should indicate which records requested are being disclosed, which are being withheld, and the specific reasons why they are being withheld.

   Sample language is provided (Appendix F) for exemption responses. Each request should be handled on a case-by-case basis and the language should be modified as appropriate.

## IX. Computerized Information

1. If the Department is asked to provide records in electronic format, it must do so if the information is available in that format. For example: if a requestor wants records to be e-mailed, or provided on a diskette or CD, the Department must do so if the records are already available in electronic format.

2. The requestor must pay for any necessary programming or production costs, if:

   a. The request would require a special run of a report that is typically produced only at scheduled intervals; or

   b. The fulfillment of the request would require data extraction, compilation, or programming.

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3. A request for electronic format may be denied if producing it in that format would compromise the security or integrity of the original record(s) or of any proprietary software in which it is maintained.

4. Computer software, including source code, is not a public record and need not be disclosed (Gov. Code Section 6253.9).

## X. Fees

The Department may not charge for providing access to records. It may charge for the cost of making copies. Copying charges may not exceed the actual costs of duplication. The Department cannot charge for the time necessary to locate the records or prepare them for inspection.

For records provided in electronic format, the cost for production is limited to the direct cost of producing the copy in electronic format, which may be nominal unless the request is quite large. For requests seeking voluminous documents or requiring computer programming, the Department may demand a reasonable deposit for the estimated costs before incurring any time or expense to comply with the request. A cashier exists in each of the statewide districts. Upon payment to the cashier, the requestor will receive a receipt as proof of payment. The PRC should attach this receipt to the file and the amount should be entered on the statewide database.

| **DESCRIPTION** | **COST PER UNIT** | |
|---|---|---|
| Personal Records (Any Size) | $.25/page | |
| Public Records 8.5” x 11” or 11”x 17” | $.25/page | |
| Color Copies (Sizes Above) | $.59/page | |
| Computer Diskette | $1.00 per disk | |
| Audio/Videos/Photos | Vendor cost, plus $7.00 shipping | |
| Microfilm Aperture card copies | $.63 each card | |
| 11” x 17” copies made from Microfilm | $2.50 | |
| 24” x 36” copies made from Microfilm | $7.50 | |
| | | |
| **Engineering (C-E Size)** | | |
| 20# Bond | $.13 Square Foot | |
| Vellum | $.20 Square Foot | |
| Blue Lines | $.13 Square Foot | |
| | | |
| | | |
| Publications and Contractor’s Payroll Records | Special Rates | |

## XI. Exemptions from Disclosures

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The CPRA contains a wide variety of exemptions that limit or prohibit the disclosure of some records. These include materials such as personnel records, investigative records, drafts and working papers, and other materials deemed private or confidential by other State or Federal statutes. Many of these exemptions are predicated upon concerns for personal privacy; some are grounded on other public policy concerns. The CPRA also has a 'general exemption' that allows a record to be withheld if the public interest served by nondisclosure outweighs the public interest in disclosure (Gov. Code Section 6255). Again, asserting this balancing test as a basis for exemption requires the approval of the Governor's Office of Legal Affairs, and must be submitted through the HQ Legal Division.

1. **Personnel, Medical or Similar Records** [Gov. Code Section 6254(c)]

   This exemption is generally used to preserve the confidentiality of personnel records or medical records concerning the Department's employees, but it may also apply to similar information the Department maintains about others such as consultants, contractors and their employees, or tenants of right-of-way rental housing.

   The fact that information is in a personnel file does not necessarily make it exempt information. Information such as an employee's or consultant's salary, general qualifications, training, or employment background, is not exempt. Home addresses, medical information, and social security numbers are exempt.

2. **Preliminary Notes, Drafts, and Memoranda** [Gov. Code Section 6254(a)]

   Preliminary notes, drafts, and intra-agency or interagency memoranda that are not retained in the ordinary course of business are exempt, provided the public interest in non-disclosure clearly outweighs the public interest in disclosure. Every employee should be aware that any drafts or notes they retain, including e-mail, could be determined to be a matter of public record and may need to be disclosed to the public on request.

   Because this exemption requires a balancing of interests, proposed responses which utilize this exemption must be reviewed by the PRO prior to transmittal.

3. **Pending Claims and Litigation** [Gov. Code Section 6254(b), (k); 6254.25; Evidence Code Sections 952-962, Code of Civil Procedure Section 2018]

   Records prepared in connection with litigation or claims against the Department are exempt. This includes accident investigation reports, and insurance and risk analysis information on open claims. This exemption also includes confidential communications between the Department and its attorneys (attorney-client privilege) and materials prepared by the attorneys and other employees or consultants working at the attorney's direction (work-product).

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This exemption applies only to records prepared for, or in anticipation of, litigation and at the direction of an attorney for the Department. Records prepared for other purposes that later become relevant to a claim or lawsuit must be disclosed unless another exemption applies.

4. **Real Estate Appraisals** [Gov. Code Section 6254 (h)]

   Most Right of Way information is not exempt since it comes from other public records or is prepared to become part of a public record. However, real estate appraisals or other records that could affect the Department's ability to negotiate for property are exempt so long as the property, or closely related property, has not yet been obtained.

5. **Engineering Estimates and Bids** [Gov Code Section 6254 (h), Public Contract Code Section 10304]

   Engineering estimates are exempt until the contract has been awarded; afterwards, they then become public information. Bids are confidential until opening. After opening, they become public information.

6. **Correspondence to or of the Governor's Office** [Gov. Code Section 6254 subd. (l)]

   Correspondence between the Department and the Governor's office is exempt.

7. **Disadvantaged Business Lists, Data and Evaluations** [Gov. Code Sections 6254(h), 6255]

   The Disadvantaged Business Enterprise (DBE)/Disabled Veteran Business Enterprise (DVBE) listing form and any accompanying "good faith efforts" submittal is part of the bid and is available for "public inspection" once the bids are opened (Public Contract Code Sections 10180, 10304, 10305). Similarly, any "good faith effort" submittals furnished to the Department within the prescribed four-day period following a bid opening per Special Provision Section 2-1.02B are "public records."

   The Department's evaluations of "good faith efforts" submittals are exempt until after award of the contract, at which time they become available.

   The 'personal net worth statement' and any supporting data submitted by the applicant are exempt (49 Code of Federal Regulations Section 26.67). Also exempt, is any information that the DBE applicant designates on its application form as proprietary information [Public Contract Code Section 2054 subd. (d)].

8. **Trade Secrets and Proprietary Information** (Gov. Code Sections 6254.2, 6254.7, 6254.15, 6255)

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Some information provided by those doing business with the Department may qualify for protection as a trade secret or proprietary data.

This typically involves information concerning patents, manufacturing processes, ingredients, and similar information that would have value to business competitors.

Not all such information qualifies as a trade secret. Generally, responses to the Department's contract proposals must be disclosed once the bids have been opened or the contract has been awarded. Only information legitimately claimed to be a trade secret or other proprietary information at the time of submittal to the Department need be treated as confidential. Similarly, written material prepared for the Department is usually a matter of public record, unless another exemption applies.

If this exemption is thought to apply, the Legal Division should be consulted before taking action on the request. The entity making the trade secret or proprietary claim should be consulted before the information is disclosed. If the entity continues to make such a claim, that entity must agree to cooperate with the Department in any actions regarding the assertion of this exemption.

9. **Audits and Investigations** [Gov. Code Sections 6254 subd. (a), 6255]

The final report of a completed audit or investigation is public information.

Drafts and working papers are exempt until the audit or investigation is completed.

Once completed, drafts and working papers become a public record unless a specific exemption to disclosure is applicable. Other working papers remain confidential, if the audit or investigation is one that involves an individual's constitutional rights of privacy.

10. **Labor Compliance Documents** (Labor Code Section 1776)

Labor compliance documents and payroll records must be disclosed (see Section 7-1. 01A of Caltrans' Standard Specifications). However, personal information related to the contractor's employees such as social security numbers and home addresses are exempt and must be deleted.

11. **Other Confidential Information** [Gov. Code Section 6254(k), Evidence Code Sections 1040, 1041]

Information gathered by the Department under assurances of confidentiality may be withheld. Examples would be documents obtained during an official investigation or during the audits of contractors or grantees. The Legal Division should always be consulted before asserting this privilege.

12. **Public Interest Balancing Test** (Gov. Code Section 6255)

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The CPRA recognizes that there are some records, not easily categorized, for which public disclosure would be inappropriate. Under a balancing test provided by Gov. Code Section 6255, the Department may refuse to disclose a record if it determines that the public interest in non-disclosure clearly outweighs the public interest in disclosure (it is this same public policy consideration that underlies many of the specific exemptions discussed above). This determination depends upon the nature of the document and its relationship to the public interest generally; the purpose for which the requestor seeks the record is usually immaterial. In other words, this test may not be used to withhold records that would otherwise be public merely because the Department disagrees with the requestor's intended use of the records.

Again, asserting this balancing test as a basis for exemption requires the approval of the Governor's Office of Legal Affairs, which must be sought through the HQ Legal Division.

Examples:

a. Public records, which would otherwise be public, cannot be withheld simply because the requestor intends to use them in litigation against the Department or to use the information for commercial purposes. Therefore, unless a specific exemption applies, they must be provided.

b. The final report of a departmental audit is a matter of public record. There may be a public interest in work-papers that support the audit findings because they provided the context for the audit report and document the work that substantiates the findings. However, the public interest in work-papers related to assumptions or allegations that were unproven may be outweighed by the privacy interests of the person or entity being audited - especially if public disclosure of such matters could damage a person's professional reputation and expose the department to liability.

c. A request asks for the home addresses of people who purchased surplus property. The records would ordinarily not be disclosed because the public interest in this information is probably slight compared to the individuals' Constitutional rights of privacy. If the request is for the names and addresses of people who attended a public hearing, the individual's privacy interest is probably much less. If the information is sought by a public health agency because attendees may have been exposed to a contagious disease, the public interest would be very high.

**It is difficult to make concrete rules for the application of this test; every CPRA request is unique and must be analyzed on its own. Because this exemption requires a balancing of interests, proposed responses which utilize this exemption must be reviewed by the Legal Division and PRO prior to transmittal, and must be approved by the Governor's Office of Legal Affairs.**

13. **Deliberative Process Privilege** [Gov. Code Sections 6254(a), 6255]

The 'deliberative process' privilege is a variation of the above balancing test intended to permit the Department's officers and employees to engage in discussions about policies, legislation, appointments, and similar matters without the risk that premature disclosure will affect the quality of their decisions. It also is intended to promote the candid exchange of opinions and recommendations from employees who are participating in, or preparing material for such decision-making.

Some of the more common records falling within this privilege are Budget Change Proposals (BCPs), Governor's Office Action Requests (GOARs), Enrolled Bill Reports, Legislative Proposals and Bill Analyses. However, there are no firm rules and the privilege has also been used to protect executive's appointment calendars, telephone records, and other documents. The key question in each instance is whether the candor that is required for the decision-making process involved would be chilled by premature disclosure of the records.

As a general rule, this privilege does not protect underlying facts from disclosure but only the analyses that lead to the decisions being made, although there can be exceptions. Therefore, in some cases a document must still be produced, but any discussion of alternatives or recommendations may be deleted.

Once a decision has been reached, the records relied upon to support the final decision may lose the exemption. It is difficult to make concrete rules for the application of this test; every CPRA request is unique and must be analyzed on its own. Because this exemption requires experienced analysis, proposed responses that utilize this exemption must be reviewed by the Legal Division prior to transmittal.

14. **Other Exemptions**

Listed below are examples of other State laws that govern the disclosure of common Departmental records. Inclusion in this list does not mean that all records related to the subject area are exempt; it only means that the referenced statute is relevant to issues of disclosure and non-disclosure and should therefore be reviewed whenever applicable. Questions concerning the application of these exemptions to specific documents may be addressed to the PRO, PRC or to the Legal Division. A more extensive list of such statutes is provided in California Government Code Sections 6254 and 6276.

- Airport and heliport investigations and reports (Public Utilities Code Section 21693)
- Archeological site information (Gov. Code Section 6254.10)
- Collective bargaining research data [Gov. Code Section 6254 (p)]
- Civil Service examination applications, application data and appeals (Gov. Code Sections 18952, 18573, 18934)

**Back to Deputy Directive**

- Contractor Evaluations (Public Contract Code Section 10370)
- Contractor pre-qualification financial and safety records (Public Contract Code Section 10165)
- Other financial responsibility information, such as rental applications and files (Gov. Code Sections 7470, 7471, 7473; Public Contract Code 10165)
- Employee home addresses and phone numbers (Gov. Code Section 6254.3)
- Highway Safety Improvement Program data and reports such as HT-65 Traffic Investigations, Median Barrier Monitoring System reports, TASAS data and reports; [Gov. Code Section 6254(k); 23 United States Code Sections 402, 409]
- Workplace safety investigation Reports (Gov. Code Section 11183; Labor Code Section 6309)
- Library circulation records (Gov. Code Section 6254)
- Tenant Information and applications (Health & Safety Code Sections 34283, 34332)
- Traffic Collision Reports (Vehicle Code, Sections 16005, 20012, 20014; 23 United States Code Section 409)
- Workers' Compensation data, Occupational injury reports (Labor Code Section 6412)

15. **Waiver of Exemptions**

Employees must exercise caution before releasing a record that may be exempt, since this may constitute a waiver of the exemption for any future requests. In other words, once a record has been publicly disclosed, the record may then be available to any other member of the public making a CPRA request. Confidential disclosures to another governmental agency in connection with the performance of its official duties (provided that entity provides adequate assurance of its promise to keep the information confidential), or disclosures in a legal proceeding do not constitute a waiver.

16. **Segregation of Exempt Material**

If a record contains confidential or other exempt material, it does not necessarily mean that the entire record may be withheld from disclosure.

The general rule is that the exempt material may be deleted but the remainder of the record must be disclosed unless the record does not reasonably lend itself to segregation. The fact that it is time consuming to segregate exempt material does not obviate the requirement to do it.

However, the difficulty in segregating exempt from nonexempt information is relevant in determining the amount of time that is reasonable for producing the records in question. If the information that would remain after exempt material has been deleted would be of little or no value to the requestor, the Department may refuse to disclose the record on the grounds that the segregation process is unduly burdensome.

**APPENDICES:**

A. Sample Sign for Public Entrance Locations
B. Public Records Act Request Form (ADM-3003)
C. Guidance on Release of Structure Information
D. Sample Language for Vague or Overly Broad and Burdensome Requests
E. Sample Language for Extending Time for a Response
F. Sample Language for Exemption Letter

# General Guidelines for Access to Public Records

(To Be Posted in all California Department of Transportation Public Entrances)

Public records maintained by the California Department of Transportation are available for inspection by members of the public pursuant to the following procedures:

1. Public records maintained by the Department are available for inspection during the regular business hours of the department. The Department is entitled to a reasonable period of time to locate the records if not readily accessible and to determine whether they must first be reviewed, and possibly redacted, in order to protect confidential or other exempt material from improper disclosure.

2. _____is the Public Records Coordinator for the handling of Public Records Act requests. For further information you may contact him/her at (telephone) or (e-mail address).

3. Requests for inspection or copying of public records:

    a. Should be specific, focused and not interfere with the ordinary business operations of the department. The operational functions of the Department will not be suspended to permit inspection of records during periods in which the records are required by Department personnel for the performance of their duties. If the request requires review of numerous records, a mutually agreeable time should be established for the inspection of the records.

    b. Should sufficiently describe records so that identification, location and retrieval of the records can be achieved without undue burden. Reasonable assistance shall be given to the requestor to help him or her satisfy this requirement.

    c. Should be reduced to writing unless the request involves records that are readily available for immediate public inspection. (The requestor may be asked, but cannot be required, to submit the request in writing. If the requestor refuses, the person handling the request should record the information for record keeping purposes.)

4. The Department may refuse to disclose any records that are exempt from disclosure under the Public Records Act. It may also delay responding to a request when necessary to determine whether any such exemptions apply.

5. Physical inspection of the records shall be permitted within the Department's offices and under the conditions determined by the Department. Upon either the completion of the inspection or at the request of Department personnel, the person conducting the inspection shall relinquish physical possession of the records. Persons inspecting Department records shall not destroy, mutilate, deface, alter, or remove any such records from the Department. The Department reserves the right to have departmental personnel

present during the inspection of records in order to prevent the loss or destruction of records.

6. Upon any request for a physical copy of records, Department personnel shall provide copies of the records only upon payment of a fee covering the costs of duplication, including reimbursement for the cost of any staff directly involved in the effort to duplicate the records. This requirement may be waived where the cost is minimal. There is no charge for the mere inspection of records

7. Persons found guilty of stealing, willfully destroying, mutilating, defacing, altering or falsifying, removing or secreting the whole or any part of a document, map, book, paper or other record, or who permits any other person to do so, is punishable by imprisonment in State prison, or in a county jail, not exceeding one year, or by a fine not exceeding $1,000, or by both fine and imprisonment (Government Code sections 6200-6201).

8. A copy of these guidelines shall be posted in a conspicuous public place in each office of the Department of Transportation. Copies shall also be made available free of charge to any person requesting a copy.

STATE OF CALIFORNIA. DEPARTMENT OF TRANSPORTATION

# PUBLIC RECORDS ACT REQUEST

ADM-3003 (REV 3/2004)

**SAMPLE FORM ONLY - click here to go to actual form:**
ftp://cefs.dot.ca.gov/forms/diroff/diroff/adm3003.frl

Instructions:

1. This form is used only for those requests for public records which are made pursuant to the California Public Records Act (Government Code sec. 6250 et seq.). Requests for personal information concerning employees, agents, or customers of the Department are subject to the Information Practices Act (Civil Code sec. 1798 et seq.) and should be submitted on Form ADM-0028 (Record Disclosure Request).

2. Use of this form by public individuals is voluntary. Public Records Act Requests may be submitted 'in person, by letter, email, fax or telephone. If such an alternate method has been used, this form should be completed by the person responding to the request and the original request attached.

3. Copies of records may be provided to the requestor after reproduction costs have been paid. Instructions for determining cost and for making payment are on the reverse.

REQUESTED BY

NAME (typed or printed) TELEPHONE

ADDRESS CITY STATE ZIP CODE

REQUESTOR'S SIGNATURE DATE

DESCRIPTION OF MATERIAL REQUESTED *(Please be* as *specific* as *possible. General descriptions and broad requests such* as *"all documents relating to Interstate* 5" *will cause uncertainty and delay the processing of your request. Please indicate dates and location of material if known. Attach extra sheet if necessary).*

For Department Use Only:
Office/Employee Responding

☐ WRITTEN REQUEST
☐ ORAL REQUEST'

If an oral request, employee completing this form should document the conversation, including the date and time, and attach it to the form.

Name Office Phone

| Date Received | Date of Response | Date Completed | Log No. |
|---|---|---|---|
| | | | |

**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.

# PUBLIC RECORDS ACT REQUEST

**Appendix B**

ADM-3003 (REV 10/2001)

**FOR DEPARTMENT USE ONLY**

*(If requestor wants copies. use the space below for charges)*

| RECORD SERIES | DATE OF DISCLOSURE |
|---|---|
| BUSINESS ADDRESS | BUSINESS PHONE |
| INFORMATION DISCLOSED | |
| PURPOSE OF DISCLOSURE | |
| NAME *(Authorized Person Releasing Information) (Please Print)* | DISTRICT/DIVIISION/OFFICE |
| AUTHORIZED PERSON *(Signature)* | DATE |

## RETENTION OF DISCLOSURE

According to State law, each agency shall retain this form for at least three (3) years after disclosure for which the accounting is made, or until the record is destroyed, whichever is shorter. California Civil Code (IPA § 1798.27).

## DEFINITIONS AS USED ON THIS FORM

**Disclose** - means to disclose, release, transfer, disseminate, or otherwise communicate all or any part of any record orally, in writing, or by electronic or any other means to any person or entity.

**Public Records** - includes any writing containing information relating to the conduct of the public's business prepared, owned, used or retained by any state or local agency regardless of physical form or characteristics.

**Personal Information** - means any information that is maintained by an agency that identified or describes an individual.

**NOTE:** There are exemptions to disclosures in Public & Personal Records. If you are not sure, check with Legal.

## COPY COST AND COLLECTION.

The requestor should pay the appropriate fee, if any, to the Cashier's Unit. Records can be released upon proof of receipt of payment. Prices are subject to change without notice.

*The Cashiers Unit in Headquarters (counter) is located at 1820 Alhambra Blvd., 2nd floor. A cashier is also available in each of the twelve districts.*

| DESCRIPTION OF PUBLIC RECORDS | | QUANTITY | COST PER UNIT | SUBTOTAL |
|---|---|---|---|---|
| PERSONAL RECORDS (Any Size Paper) | | | $ .25 Per Page | $ |
| 8.5" X 14" OR SMALLER, 20# COPIES | | | $ .25 Per Page | $ |
| COLOR COPIES (Any size Paper) | | | $ .59 Per Page | $ |
| 11" x 17" REDUCED DRAWINGS (C Size) | | | $ .25 Per Page | $ |
| Size: | | | $ | $ |
| COMPUTER DISK | | | $ $1.00 Per Disk | $ |
| AUDIO / VIDEO / PHOTO | | | Cost of outside vendor + $7.00 shipping | $ |
| **ENGINEERING (C-E SIZE)** | | | | |
| 20# BOND | Size: | | $ .13 Square Foot | $ |
| VELLUM | Size: | | $ .20 Square Foot | $ |
| BLUELINES | Size: | | $ .13 Square Foot | $ |
| | Size: | | | $ |
| **MICROFILM** | | | | |
| APERTURE CARDS COPIES | | | $ .63 Each Card | $ |
| COPIES MADE FROM MICROFILM | Size: 11" x 17" | | $ 2.50 Per Sheet | $ |
| | Size: 24" x 36" | | $ 7.50 Per Sheet | $ |
| **PUBLICATIONS & CONTRACTOR'S PAYROLL RECORDS** | | **SPECIAL RATES** | **CHECK THE GUIDELINES** | $ |
| | | | **PLEASE PAY TOTAL** | $ |

| CHECK/RECEIPT NUMBER: | AMOUNT PAID: |
|---|---|

**Appendix C**

# M e m o r a n d u m

*Flex your power!*
*Be energy efficient!*

**To:** CHIEF DEPUTY DIRECTOR
DEPUTY DIRECTORS
DISTRICT DIRECTORS
DIVISION CHIEFS

## UPDATED WEBLINK AND CONTACT INFO NOVEMBER, 2008

**Subject:** Limitation on Public Disclosure of Structures Documents

In consultation with our transportation partners, the Guidelines for release of confidential structures documents have been revised. The list of those structures which are deemed confidential have been substantially reduced.

The previous Guidelines dated May 2002 are hereby superceded. Districts and/or divisions with existing Confidentiality Agreements should revisit them with their respective parties and if necessary, update them.

The new Guidelines cover existing State of California bridges, overcrossings, undercrossings, overheads, underpasses, separations, tunnels, tubes, and viaducts, and apply to all requests for records including requests made under the Public Records Act. A copy of the Guidelines is posted on the DES Internet website at:

http://www.dot.ca.gov/hq/esc/Structure_Design/

The Confidentiality Agreement and sample Rejection Letter have also been revised, and may also be found at the above-listed website.

Should you have questions, please contact:

Kevin Thompson
Deputy Division Chief
(916) 227-8115

**DEPARTMENT OF TRANSPORTATION**
DISTRICT/DIVISION
ADDRESS
PHONE
FAX
TTY

*Flex your power!*
*Be energy efficient!*

[The telephone and fax numbers must be those of the signature block regardless of who signs the letter. REMOVE THIS NOTE BEFORE PREPARING THE LETTER.]

## Appendix D - SAMPLE LANGUAGE FOR VAGUE OR OVERLY BROAD AND BURDENSOME REQUESTS (Delete this heading before sending letter)

Date

Name
Company Log Number:
Address
City, State Zip

Dear Mr./Ms.:

This letter is to advise you that the California Department of Transportation (Department) is unable to comply with your request received by the Department on_____, and dated_____. Your request, pursuant to the California Public Records Act (CPRA; Government Code Sections 6250-6276), is vague and/or overly broad and burdensome.

**DELETE THIS INSTRUCTION BEFORE SENDING THIS LETTER – (*Note to PRCs - Requests can be either vague or overly broad and burdensome, or both. Use only the appropriate and fitting sample language offered below.)***

You have indicated that you would like to obtain _____. Requests for public records must accurately and sufficiently describe the records sought so that identification, location and retrieval can be accomplished. Your request does not reasonably describe identifiable records. The request is unduly vague and needs to be refined. We believe the magnitude of your request would be oppressive and unreasonably burdensome of departmental resources to require compliance with the request as submitted.

The courts have not looked favorably upon burdensome, unfocused and unspecific demands for voluminous information (Rogers v. Superior Court (1993) 19 Cal.App.4$^{th}$ 469. The courts have also respected the right of State agencies to avoid "entering the printing business" by imposing reasonable guidelines and restricting requests to copies of specific "identifiable" records. [Rosenthal v. Hansen (1973) 34 Cal. App. 3d754; Govt. Code SS6253 subd. (b)].

If you can be more specific in identifying the documents you are looking for, the Department will reevaluate your request as expeditiously as circumstances permit. Otherwise, please consider this to be a denial of the request for reasons set forth above. Please note that a more

focused request may also reduce the potentially substantial cost to you for duplication of records once they have been identified and reviewed.

**DELETE THIS PARAGRAPH BEFORE SENDING LETTER** - ***(Note to PRCs – If you do not hear back from the requestor within 30 days of sending this response, the file should be considered closed. At that time, the original request (if provided in writing), the Form ADM-3003 and this memo should be sent to the statewide PRO.)***

*Sincerely,*

_____
*District Director OR*
*Deputy Director*

**DEPARTMENT OF TRANSPORTATION**
DISTRICT/DIVISION
ADDRESS
PHONE
FAX
TTY

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*Be energy efficient!*

[The telephone and fax numbers must be those of the signature block regardless of who signs the letter. REMOVE THIS NOTE BEFORE PREPARING THE LETTER.]

**Appendix E - SAMPLE LANGUAGE FOR 14-DAY EXTENSION**
**(aka: THE 10-DAY LETTER - Delete this heading before sending letter)**

Date

Name
Company Log Number:
Address
City, State Zip

Dear Mr./Ms.:

This letter is in response to your request dated _____, and received on_____, to the California Department of Transportation (Department) pursuant to the California Public Records Act (CPRA; Government Code Sections 6250-6276).

The Department is in the process of locating the relevant documents but they are located in several offices in different locations within the State and/or require consultation with another agency having a substantial interest in the records. Although the CPRA ordinarily requires the Department to respond to a request for records within ten days, under these circumstances it is permitted to extend that time for up to an additional 14 days [Government Code Section 6253, subdivision (c)].

**DELETE THIS PARAGRAPH BEFORE SENDING THE LETTER – (Insert the specific justification(s) for the extension from Government Code Section 6253, subd. c):**

(1) The need to search for and collect the requested records from field facilities or other establishments that are separate from the office processing the request.

(2) The need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records that are demanded in a single request.

(3) The need for consultation, which shall be conducted with all practicable speed, with another agency having substantial interest in the determination of the request, or among two or more components of the agency having substantial subject matter interest therein.

(4) The need to compile data , to write programming language or a computer program, or to construct a computer report to extract data.

You will receive a further, more complete response to your request no later than _____.

**DELETE THIS PARAGRAPH BEFORE SENDING THE LETTER - (Note to PRC - In your follow-up letter, inform requestor that records will be made available for inspection on _____, or copies will be provided upon payment of the actual copying costs. A cashier is available in each district.)**

*Sincerely,*

_____
*District Director OR*
*Deputy Director*

**DEPARTMENT OF TRANSPORTATION**
DISTRICT/DIVISION
ADDRESS
PHONE
FAX
TTY

*Flex your power!*
*Be energy efficient!*

[The telephone and fax numbers must be those of the signature block regardless of who signs the letter. REMOVE THIS NOTE BEFORE PREPARING THE LETTER.]

## Appendix F - SAMPLE LANGUAGE FOR EXEMPTION RESPONSE LETTER (Delete this heading before sending letter)

Date

Name
Company
Address
City, State Zip

Log Number:

Dear Mr./Ms.:

This letter is to advise you that the California Department of Transportation (Department) is unable to comply with your request dated_____, and received on_____, at this time for public records in accordance with the California Public Records Act (CPRA; Government Code Sections 6250-6276). It has been determined that the following issues apply to your request:

**(Delete the exemptions that do not apply to this request)**

- The request involves Personnel, Medical or Similar Records [Govt. Code Section 6254(c)].
- The request involves Preliminary Notes, Drafts and Memoranda [Govt. Code Section 6254(a)].
- The request is related to Pending Claims and/or Litigation [Govt. Code Section 6254(b), (k); 6254.25; Evidence Code Sections 952-962, Code of Civil Procedure Section 2018].
- The request involves Real Estate Appraisals [Govt. Code Section 6254 (h)].
- The request involves Engineering Estimates and Bids [Gov. Code Section 6254 (h), Public Contract Code Section 10304].
- The request involves Correspondence between the Department and the Governor's Office [Gov. Code Section 6254 subd. (1)].
- The request involves Disadvantaged Business Lists, Data and Evaluations [Gov. Code Sections 6254(h), 6255].
- The request pertains to Trade Secrets and Proprietary Information (Gov. Code Sections 6254.2, 6254.7, 6254.15, 6255).
- The request is related to Audits and Investigations [Gov. Code Sections 6254 subd. (a), 6255].
- The request is related to Labor Compliance Documents (Labor Code Section 1776)

- The request involves Other Confidential Information [Gov. Code Section 6254(k), Evidence Code Sections 1040, 1041].
- The request does not meet the Public Interest Balancing Test (Gov. Code Section 6255)
- The request does not comply with the Deliberative Process Privilege [Gov. Code Sections 6254(a), 6255].

**Personnel, Medical or Similar Records [Gov. Code Section 6254 (c)]**
You have indicated that you would like access to or a copy of_____. Government Code Section 6254(c) creates an exemption from the general CPRA disclosure requirements for "personnel, medical or similar files, the disclosure of which would constitute an unwarranted invasion of personal privacy."

**Preliminary Notes, Drafts and Memoranda [Gov. Code Section 6254 (a)]**
You have indicated that you would like access to or a copy of_____. It has been determined that the preliminary notes, drafts, and intra-agency or inter-agency memoranda are not retained in the ordinary course of business and are exempt from disclosure because public interest in non-disclosure clearly outweighs the public interest in disclosure**. DELETE THIS INSTRUCTION PRIOR TO SENDING *(Note to PRO or PRC: Because this exemption requires a balancing of interests, proposed responses which utilize this exemption, must be reviewed by the Legal Division prior to transmittal.)***

**Pending Claims and/or Litigation [Gov. Code Section 6254(b), (k); 6254.25; Evidence Code Sections 952-962, Code of Civil Procedure Section 2018]**
You have indicated that you would like access to or a copy of_____. However, records prepared for, or in anticipation of, litigation or claims against the Department are exempt from disclosure. This includes accident investigation reports, and insurance and risk analysis information on open claims. It also includes confidential communications between the Department and its attorneys (attorney-client privilege) and materials prepared by the attorneys and other employees or consultants working at the attorney's direction (work-product).

**Real Estate Appraisals [Gov. Code Section 6254 (h)]**
You have indicated that you would like access to or a copy of_____. The real estate appraisal(s) you have requested is/are exempt from disclosure because the property, or closely related property, has not yet been obtained and releasing the information could affect the Department's ability to negotiate for property.

**Engineering Estimates and Bids [Gov. Code Section 6254 (h), Public Contract Code Section 10304]**
**DELETE THIS INSTRUCTION PRIOR TO SENDING (Note to PRCs – Sample language is provide for two different scenarios below. Only select the appropriate language for your situation.)**
You have indicated that you would like access to or a copy of_____. Your request cannot be complied with at this time because engineering estimates are exempt from public disclosure until the contract has been awarded.

**AND/OR**

You have indicated that you would like access to or a copy of_____. Your request cannot be complied with at this time because bids are confidential until opening. After bid opening, we would be happy to provide you with the requested information upon your new request.

**Correspondence to the Governor's Office [Gov. Code Section 6254 subd. (1)]**
Your request for _____cannot be granted because this is considered correspondence between the Department and the Governor's Office which is exempt from public disclosure.

**Disadvantaged Business Lists, Data and Evaluations [Gov. Code Sections 6254(h), 6255]**
**DELETE THIS INSTRUCTION PRIOR TO SENDING LETTER – *(Note to PRCs – Sample language is provided for three different scenarios below. Only select the appropriate language for your situation.)***

You have indicated that you would like access to or a copy of_____. Your request cannot be complied with at this time because the DBE/DVBE listing form and any accompanying "good faith effort" submittals are part of the contract bid and are not available for public inspection until after the bids are opened (Public Contract Code Sections 10180, 10304, 10305).

**AND/OR**

You have indicated that you would like access to or a copy of_____. The Department's evaluations of "good faith effort" submittals are exempt from public disclosure until after award of the contract. At that time, we would be happy to assist you upon your new request.

**AND/OR**

You have indicated that you would like access to or a copy of _____. The "Personal Net Worth Statement" and any supporting data submitted by the applicant are exempt (49 Code of Federal Regulations, Section 26.67). Also exempt is any information that the DBE applicant designates on its application form as proprietary information [Public Contract Code Section 2054 subd. (d)].

**Trade Secrets and Proprietary Information (Gov. Code Sections 6254.2, 6254.7, 6254.15, 6255)**
You have indicated that you would like access to or a copy of _____. However, this information is protected as a trade secret or proprietary data because it may involve information concerning patents, manufacturing processes, cooking ingredients or other similar information that may have value to business competitors. **DELETE THIS INSTRUCTION PRIOR TO SENDING LETTER - *(Note to PRCs: If this exemption is thought to apply, the Legal Division should be consulted before taking action on the request).***

**Audits and Investigations [Gov. Code Sections 6254 subd. (a), 6255]**
You have indicated that you would like access to or a copy of _____.

Although the final report of a completed audit or investigation is public information, drafts and working papers are exempt until the audit or investigation is complete. Once completed, drafts and working papers that support the final recommendations become a public record unless another specific exemption to disclosure is applicable. Other working papers remain confidential, especially if the audit or investigation is one that involves an individual's constitutional rights of privacy and the allegations were found to be unsubstantiated.

**Labor Compliance Documents (Labor Code Section 1776)**
You have indicated that you would like access to or a copy of _____. The labor compliance documents and payroll records you have requested have been disclosed in accordance with Section 7-1.01A of Caltrans' Standard Specifications. However, please note that the personal information related to the contractor's employees, such as social security numbers and home addresses are exempt and have been deleted.

**Other Confidential Information [Gov. Code Section 6254(k), Evidence Code Sections 1040, 1041]**
You have indicated that you would like access to or a copy of _____. These records are exempt from disclosure under the Public Records Act because they contain confidential information that cannot be released publicly at this time. **DELETE THIS INSTRUCTION PRIOR TO SENDING LETTER** - ***(Note to PRCs: The Legal Division should always be consulted before asserting this privilege. Additional explanation may be appropriate depending upon the nature of the records sought)***

**Public Interest Balancing Test (Gov. Code Section 6255)**
You have indicated that you would like access to or a copy of _____. Pursuant to Gov. Code Section 6255, the Department has determined that these records are exempt from disclosure because the public interest in non-disclosure clearly outweighs the public interest in disclosure. **DELETE THIS INSTRUCTION PRIOR TO SENDING** ***(Note to PRCs: The Legal Division should always be consulted before asserting this privilege. Additional explanation may be appropriate depending upon the nature of the records sought)***

**Deliberative Process Privilege [Gov. Code Sections 6254(a), 6255]**
You have indicated that you would like access to or a copy of _____. Pursuant to Gov. Code Section 6254 subd. (a) and/or section 6255, the Department has determined that these records are exempt from disclosure because they reveal agency deliberations for which the public interest in non-disclosure clearly outweighs the public interest in disclosure. **DELETE THIS INSTRUCTION PRIOR TO SENDING** - ***(Note to PRCs: The Legal Division should always be consulted before asserting this privilege. Additional explanation may be appropriate depending upon the nature of the records sought)***

*Sincerely,*

_____
District Director OR
Deputy Director

# EXHIBIT 4-A

Mitigated Negative Declaration/Finding of No Significant Impact

This exhibit is posted as a standalone file.

# EXHIBIT 4-B

Department Provided Permits

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-SDG-09B0274-10F0485

Ms. Kim Smith, Chief
Environmental Resource Studies
California Department of Transportation - District 11
4050 Taylor Street
San Diego, California 92110

DEC 16 2010

Attention: Susan Scatolini, Associate Environmental Planner

Subject: Formal Section 7 Consultation for the Interstate 805 North Managed Lanes Project in the City of San Diego, San Diego County, California

Dear Ms. Smith:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the Interstate 805 (I-805) North Managed Lanes Project and its effects on the federally endangered San Diego fairy shrimp (*Branchinecta sandiegonensis*), the federally threatened coastal California gnatcatcher (*Polioptila californica californica*, "gnatcatcher"), and designated critical habitat for the federally threatened spreading navarretia (*Navarretia fossalis*, "navarretia") in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). The project is receiving Federal funding through the Federal Highway Administration (FHWA), and the California Department of Transportation (Caltrans) has assumed FHWA's responsibilities under the Act for this consultation in accordance with Section 6005 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) 2005, as described in the National Environmental Policy Act (NEPA) Delegation Pilot Program Memorandum of Understanding between FHWA and Caltrans (effective July 1, 2007) and codified in 23USC327(a)(2)(A).

Based on conservation measures committed to by Caltrans and identified in our letter dated March 23, 2010, we concurred with your determination that the proposed project is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*, "vireo") and concluded section 7 consultation for this species informally. Therefore, the vireo is not addressed by this formal consultation. Because the proposed project will affect habitat types that are used by the vireo, and project activities are not scheduled to commence until 2014, protocol surveys should be conducted for the vireo within 1 year prior to the commencement of vegetation clearing and construction activities for the proposed project. If vireos are observed within or

adjacent to the project impact area, this consultation should be reinitiated to address potential direct and/or indirect effects to this species.

Navarretia was documented in a vernal pool that is over 67 meters (m) [220 feet (ft)] southwest of the proposed park and ride/Bus Rapid Transit Station at the southwest quadrant of Nobel Drive and I-805 (Nobel Station). Caltrans will implement conservation measures identified in this biological opinion to minimize impacts to adjacent habitats occupied by gnatcatcher and San Diego fairy shrimp (i.e., install temporary construction fencing, implement dust control measures, shield and direct Nobel Station lighting away from adjacent habitats, permanently fence the Nobel Station to minimize unauthorized access of adjacent habitats, direct drainage away from adjacent habitats, and use non-invasive plants in landscaping). These conservation measures are also expected to avoid and minimize impacts to the vernal pool supporting the navarretia occurrence southwest of Nobel Station.

Navarretia seed will be collected in conjunction with restoration and enhancement efforts. Focused surveys for navarretia will be conducted on the Zamudio Parcel, and any adjacent habitat on Del Mar Mesa to which access can be obtained, during the spring of 2011 to determine the seed source closest to the proposed Zamudio Parcel restoration and enhancement site. Navarretia seed may also be collected from within conserved Multi-Habitat Planning Area (MHPA) lands associated with the City of San Diego's Multiple Species Conservation Program (MSCP), south of the Nobel Station (Nobel MHPA lands) and introduced into proposed restoration areas on these same lands. No more that 5 percent of the projected annual seed production of any individual plant or discrete population of plants will be collected. Collections will be made in such a manner to capture the majority of the genetic variation found in the sampled populations. Habitat restoration/enhancement plans will use seed collected from the seed source closest to the habitat restoration/enhancement site where access can be obtained and will be coordinated with the Carlsbad Fish and Wildlife Office (CFWO).

With incorporation of these proposed conservation measures, potential impacts to source populations resulting from seed collection or restoration/enhancement activities will be minimized to the point where such effects are insignificant. Based on the current survey information and the conservation measures proposed by Caltrans, the Service concurs with Caltrans' determination that the project, as proposed, is not likely to adversely affect navarretia, and with the exception of an analysis of project impacts to designated critical habitat for the species, navarretia is not addressed further in this formal consultation.

This biological opinion is based on information provided in: 1) *Biological Assessment, I-805 North Managed Lanes, City of San Diego, CA* (February 2010 "BA"); 2) *I-805 Managed Lanes North Project Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment* (February 2010); 3) a field meeting on March 18, 2010; and 4) other sources of information including survey reports and email correspondence. A complete project file of this consultation is maintained at the CFWO.

CONSULTATION HISTORY

On February 23, 2010, we received a letter from Caltrans requesting initiation of formal consultation on the proposed action, together with the BA. On March 18, 2010, representatives from Caltrans and the CFWO attended an onsite meeting to discuss the proposed project. We acknowledged the initiation of formal consultation in our response letter (FWS-SDG-09B0274-10TA0484) dated March 23, 2010. In our initiation letter, we included a list of information necessary to facilitate completion of the biological opinion. This information was provided between June 2, 2010, and November 5, 2010.

## BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Using Federal funds provided through the FHWA, Caltrans proposes to widen the existing I-805 freeway in the City of San Diego, San Diego County (Figure 1). The communities of Clairemont Mesa, Kearny Mesa, University, Mira Mesa, and Torrey Pines, as well as U.S. Marine Corps Air Station Miramar, are adjacent to the project. The project also crosses Rose Canyon and Carroll Canyon (Figure 2). The total project length is approximately 7.1 kilometers (km) [4.4 miles (mi)]. Construction is proposed to begin in 2014 and is anticipated to take 5 years. The project includes the following design features and elements:

- four managed lanes (two lanes in each direction) will be constructed in the existing freeway median from State Route 52 (SR-52) to just north of La Jolla Village Drive;

- two high occupancy vehicle (HOV) lanes (one in each direction) will be constructed from just north of La Jolla Village Drive to just north of Mira Mesa Boulevard;

- main lanes will be shifted to the outside of the freeway corridor to provide the needed 3.7-m (12-ft) lane width for the new managed and HOV lanes, which will result in the realignment of existing ramps and connectors within the project limits;

- auxiliary lanes are lanes that extend from the on-ramp of one interchange to the off-ramp of the next without continuing through the interchange. Auxiliary lanes will be added to I-805 at the following locations:
    - SR-52 / I-805 Junction to Governor Drive (northbound and southbound)
    - Governor Drive to Nobel Drive (northbound and southbound)
    - La Jolla Village Drive to Mira Mesa Boulevard (northbound and southbound);

- bridges will be widened at the following locations:
    - Rose Canyon Bridge will be widened up to 8.5 m (28 ft) in the median, up to 16.5 m (54 ft) on the northbound side, and up to 16.5 m (54 ft) on the southbound side, with 6 additional columns being added.

  - Carroll Canyon Bridge will be widened up to 16.2 m (53 ft) in the southbound direction and up to 13.4 m (44 ft) in the northbound direction with 22 additional columns added at the Carroll Canyon Bridge and Carroll Canyon DAR locations;

- a direct connector ramp will be constructed to connect SR-52 to the proposed I-805 managed lanes. The direct connector will be a two-lane structure, with one lane in each direction, separated by a concrete barrier;

- a Direct Access Ramp (DAR) will be constructed at Carroll Canyon Road;

- a DAR, park and ride, and Bus Rapid Transit Station will be constructed at the southwest quadrant of Nobel Drive and I-805 (Nobel Station); and

- cut slopes, retaining walls, utility relocations, right-of-way easements, placement of biofiltration strips and swales, and surface runoff treatment best management practices (BMPs).

The project will permanently impact approximately 91.5 hectares (ha) [226 acres (ac)] and temporarily impact approximately 53.57 ha (132.38 ac) of land supporting the vegetation communities summarized in Table 1, below.

**Table 1. Vegetation Community Impacts and Conservation (in acres unless otherwise specified)**

| Vegetation Community | Permanent | Conservation | Location | Temporary | Conservation** | Location |
|---|---|---|---|---|---|---|
| Bare Ground* | 3.94* | 1,052 ft$^2$ | Zamudio/Nobel MHPA Lands | 5.12 | 0 | |
| Broom Baccharis | 0.35 | 0.7 | Sage Hill | 0.27 | 0 | |
| Chamise Chaparral | 0.80 | 0.80 | Zamudio | 2.33 | 0 | |
| Coast Live Oak Woodland | 0.03 | 0.06 | Pardee | 0.26 | 0 | |
| Coastal Sage Scrub (CSS) | 8.90 | 17.80 | Sage Hill/ Zamudio*** | 6.69 | 2.86 | Sage Hill/ Zamudio*** |
| CSS/Chaparral | 1.48 | 2.96 | Sage Hill/ Zamudio*** | 3.29 | 0 | |
| Developed | 119.77 | 0 | | 36.16 | 0 | |
| Disturbed Chamise Chaparral | 0.76 | 0.76 | Zamudio | 0 | 0 | |
| Disturbed CSS | 10.90 | 21.80 | Sage Hill/ Zamudio*** | 8.72 | 0 | |
| Disturbed Habitat | 37.15 | 0 | | 19.37 | 0 | |
| Disturbed Native Grassland | 0.37 | 0.37 | Pardee | 0.01 | 0 | |
| Disturbed Southern Mixed | 1.25 | 1.25 | Zamudio | 1.28 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Chaparral | | | | | | |
| Disturbed Southern Willow Scrub | 0.12 | 0.24 | Pardee | 0.33 | 0.33 | Pardee |
| Native Grassland | 0.08 | 0.16 | Pardee | 0.58 | 0 | |
| Non-Native Grassland | 0.15 | 0.08 | Pardee | 0.99 | 0 | |
| Oak**** | 0.12 | 0.24 | Pardee | 0.01 | 0 | |
| Ornamental | 32.32 | 0 | | 42.28 | 0 | |
| Riparian Woodland | 0.41 | 1.23 | Pardee | 0.16 | 0.16 | Pardee |
| Southern Mixed Chaparral | 6.17 | 12.34 | Zamudio | 3.55 | 0 | |
| Southern Willow Scrub | 0.84 | 2.52 | Pardee | 0.55 | 0.55 | Pardee |
| Sycamore | 0 | 0 | | 0.14 | 0.14 | Pardee |
| Unvegetated Channel | 0.09 | 0.09 | Pardee | 0.20 | 0.20 | Pardee |
| Total | 226.00 | | | 132.38 | | |

* Bare Ground includes 263 $ft^2$ road-rut vernal pool habitat to be offset with 1,052 $ft^2$ vernal pool conservation and restoration/enhancement.
** Offsite conservation to offset temporary impacts in addition to revegetation of temporary impacts onsite.
*** 46.12 ac of impacts to sage scrub habitats will be offset with 17.25 ac of conservation at Zamudio and 28.87 ac of conservation at Sage Hill.
**** Oak impacts will be mitigated with oaks planted in the riparian.

The project will result in the permanent loss of one road-rut vernal pool, occupied by San Diego fairy shrimp, that is 24.4 square meters ($m^2$) [263 square feet ($ft^2$)] in size (included in Table 1 within the bare ground habitat category). The project will result in the loss of an additional road-rut vernal pool, occupied by San Diego fairy shrimp, at Carroll Canyon. However, formal consultation has already been completed to address impacts to the Carroll Canyon pool (FWS-SDG-08B0218-09F0555); therefore the impacts to this pool are not addressed in this biological opinion. The project will result in the permanent loss of 2.34 ha (5.78 ac) of designated critical habitat for navarretia and remove coastal sage scrub, chaparral, grassland, and other habitat types being used by gnatcatchers.

*Conservation Measures*

Caltrans has agreed to implement the following conservation measures as part of the proposed action to avoid, minimize, and offset impacts to fairy shrimp, gnatcatchers, and designated critical habitat for navarretia:

1. Permanent and temporary impacts to gnatcatcher, San Diego fairy shrimp, and navarretia critical habitat will be offset as documented in Table 1 and summarized by location in Table 2 below.

**Table 2. Conservation and Restoration by Location**

| Location | Conservation |
|---|---|
| Zamudio | 32.4 ac: conservation of chaparral and CSS habitats with some enhancement.<br>526 $ft^2$: vernal pool conservation and enhancement. |
| Pardee (Deer Canyon) | 5.53 ac: conservation and creation of riparian habitats.<br>0.61 ac: conservation and creation of grassland habitats.<br>0.3 ac: conservation and creation of oaks in riparian. |
| Sage Hill | 28.87 ac: conservation of CSS and CSS / chaparral habitats. |
| Nobel MHPA lands | 526 $ft^2$ vernal pool restoration. |

2. Caltrans will enhance 48.9 $m^2$ (526 $ft^2$) of vernal pool habitat and associated watershed within 13.11 ha (32.4 ac) of chaparral and CSS habitats on the Zamudio Parcel. Caltrans will also restore 48.9 $m^2$ (526 $ft^2$) of vernal pool habitat within conserved Nobel MHPA lands. Draft restoration and enhancement plans for the two areas will be submitted to the Service's CFWO for review and approval prior to initiating project impacts. The draft plans will be revised in coordination with the CFWO, the revised plans will be submitted to the CFWO for final review and approval, and a copy of the final plans will be provided to the CFWO. The plans will include the following information and conditions:

   a. Implementation of the restoration and enhancement will be conducted under the direction of a biologist with at least 3 years of vernal pool restoration experience; Caltrans will submit, in writing, the name, any relevant permit number, resume, and at least three references for the vernal pool restoration biologist to the CFWO for review and approval;

   b. All restoration and enhancement activities will commence in the summer-fall season prior to or concurrently with the initiation of project impacts;

   c. The restoration plan will include a textual description of proposed recontouring methods, as well as planting and watering plans;

   d. Plant palettes (species, size and number/acre) and seed mix (species and pounds/acre) will be included in the restoration/enhancement plans. All plantings will be installed in a way that mimics natural plant distribution, and not in rows. The plant palette will include native species specifically associated with the on-site habitat type(s). If native plant species cannot be obtained from the site-specific location (Del Mar Mesa for Zamudio restoration/enhancement and Mira Mesa at Nobel for Nobel MHPA restoration), the CFWO must approve the donor site. The source and proof of local origin of all plant material and seed will be provided;

   e. Native plants and animals will be established within the restored/enhanced pools, their watersheds and surrounding uplands. This can be accomplished by redistributing topsoil containing seeds, spores, bulbs, eggs, and other propagules from affected pools

and adjacent vernal pool and upland habitats; by the translocation of propagules of individual species from offsite habitats; and by the use of commercially available native plant species. Any vernal pool inoculum or plant material from an offsite source will be approved by the CFWO. Topsoil and plant materials from the native habitats to be affected on-site will be applied to the watersheds of the enhanced and restored pools to the maximum extent practicable. Exotic weed control will be implemented within the restoration/enhancement areas to protect and enhance habitat remaining on site;

f. Introduction of San Diego fairy shrimp into the restored/enhanced pools will be coordinated with the CFWO. Restoration at the Nobel MHPA lands will occur within basins that do not currently support San Diego fairy shrimp, and salvaged shrimp will be introduced into the restored habitat (following iii. and v. below). Focused surveys for San Diego fairy shrimp will be conducted on the Zamudio Parcel during the 2011 or 2012 wet season. If San Diego fairy shrimp are extant within the basins, no introduction will be necessary. If San Diego fairy shrimp are not present in the Zamudio basins, they will be collected and introduced using the below guidelines:

   i. Habitat restoration/enhancement plans will use inoculum or adult shrimp collected from the source closest to the habitat restoration/enhancement site where access can be obtained, within Del Mar Mesa for the Zamudio Parcel and Mira Mesa for the Nobel MHPA lands, and will be coordinated with the CFWO;

   ii. Protocol surveys will be conducted in the proposed donor pools where inoculum or adult shrimp may be collected for restoration purposes. Inoculum and adult fairy shrimp will not be introduced into restored pools from pools where versatile fairy shrimp (*Branchinecta lindahli*) are documented during protocol surveys;

   iii. Inoculum and/or adult shrimp will be collected in limited quantity, coordinated with the CFWO, from source pools, such that no appreciable damage occurs to source pools. No more than 10 percent of the basin area of any donor pool and/or no more than 20 adult shrimp per donor pool will be collected for restoration purposes;

   iv. Inoculum will be collected when it is dry to avoid damaging or destroying fairy shrimp cysts which are fragile when wet. Use a hand trowel or similar instrument to collect the inoculum. Whenever possible, collect soil and cysts in chunks. Use the trowel to pry up intact chunks of soil rather than loosening the soil by raking and shoveling, which can damage cysts. Store the inoculum in labeled bags or boxes that are adequately ventilated and kept out of direct sunlight in order to prevent the occurrence of fungus or excessive heating of the soil, or transport them directly to the restored/enhanced pools;

v. Inoculum and/or adult fairy shrimp will not be introduced into the restored/ enhanced pools until after the pools have been demonstrated to retain water for the appropriate amount of time to support San Diego fairy shrimp [i.e., at least 30 days (Hathaway and Simovich 1996, Ripley et. al. 2004)]. Inoculum will be placed in a manner that preserves, to the maximum extent possible, the orientation of the fairy shrimp cysts within the surface layer of soil (e.g., collected inoculum will be shallowly distributed within the pond so that cysts have the potential to be brought into solution upon inundation);

g. Any artificial watering of the restored/enhanced pool watersheds will be done in a manner that prevents water from entering into the pools. Any water to be used will be identified and documented to be free of contaminants that could harm the pools;

h. All weeding within and immediately adjacent to the restored/enhanced pools will be performed by hand. If the use of herbicides is necessary in uplands adjacent to restored and preserved vernal pools, such usage will be limited to those products that are the least toxic to non-target organisms while providing sufficient efficacy to control the weeds and will be coordinated with the CFWO. All workers conducting weed removal activities will be educated to distinguish between native and non-native species so that local native plants are not inadvertently damaged or destroyed by weed removal activities;

i. A final implementation schedule that indicates when all vernal pool impacts and vernal pool restoration/enhancement grading and planting will begin and end;

j. Five years of monitoring and success criteria for vernal pool and upland habitat restoration/enhancement areas that include quantitative measurements of vernal pool hydrology, vegetation transects, and visual estimates of hatched fairy shrimp and gravid females (e.g., 10's, 100's, 1000's), complete floral and faunal inventories, and photographic documentation;

k. The restored/enhanced vernal pools will support San Diego fairy shrimp. Restoration success for San Diego fairy shrimp will be determined by measuring the ponding of water and producing visual estimates of hatched fairy shrimp and gravid females (e.g., 10's, 100's, 1000's), within the restored pools. Water measurements will be taken in the restored pools to determine the depth, duration and quality (e.g., pH, temperature, total dissolved solids, and salinity) of ponding. The pools must pond for a period of time similar to reference vernal pools during an average rainfall year and at an appropriate depth and quality to support San Diego fairy shrimp. Approximated average densities of hatched San Diego fairy shrimp and gravid females in restored pools must not differ significantly (as confirmed by the CFWO based on visual estimates provided for source and reference pools) from reference pools for at least three wet seasons before a determination of success can be made. Vernal pools selected

as reference or control pools for evaluating restoration success will be identified and described in the restoration plan. Alternate methods of determining success may be used upon approval by the CFWO;

l. Monitoring and success criteria for vernal pool and upland restoration/enhancement areas will include: upland species richness and cover criteria for all 5 years of monitoring; 0 percent cover for weed species categorized as High or Moderate in the Cal-IPC Invasive Plant Inventory, and relative cover of all other weed species is no more than 5 percent coverage for other exotic/weed species for all 5 years of the monitoring period. Container plant survival will be 80 percent of the initial plantings for the first 5 years. At the first and second anniversary of plant installation, all dead plants will be replaced unless their function has been replaced by natural recruitment. The method used for monitoring will be described and a map of proposed sampling locations will be included. Photo points will be used for qualitative monitoring;

m. Verification that restoration/enhancement of San Diego fairy shrimp habitat is complete will require written sign-off by the CFWO. If a performance criterion is not met for any of the restored/enhanced vernal pools or upland habitat in any year, or if the final success criteria are not met, Caltrans will prepare an analysis of the cause(s) of failure and, if deemed necessary by the CFWO, propose remedial actions for approval. If any of the restored/enhanced vernal pools or upland habitat have not met a performance criterion during the initial 5-year period, Caltrans' maintenance and monitoring obligations will continue until the Service deems the restoration/enhancement successful, or contingency measures must be implemented. Restoration/enhancement will not be deemed successful until at least 2 years after any significant contingency measures are implemented, as determined by the CFWO;

n. Annual reports will be submitted to the CFWO by December 1 of each year that assess both the attainment of yearly success criteria and progress toward the final success criteria. The reports will also summarize implementation of all conservation measures integral to the project as identified in the biological opinion addressing the project and compliance with any additional reasonable and prudent measures and associated terms and conditions provided in the incidental take statement of the biological opinion.

3. The Sage Hill conservation parcel is owned and managed by the County of San Diego and has a conservation easement in place in favor of SANDAG, as well as a management endowment, which has been paid to the County. The City of San Diego has agreed to own and manage the Zamudio and Pardee conservation parcels with management endowments that will be paid by Caltrans in accordance with the endowment costs identified in the Transnet MOU. A perpetual biological conservation easement or other conservation mechanism acceptable to the Service will be recorded over the areas preserved, restored, and/or enhanced by the project at the Zamudio and Pardee conservation parcels. The conservation mechanism will specify that no easements or activities (e.g., fuel modification

zones, public trails, drainage facilities, walls, maintenance access roads) that will result in soil disturbance and/or vegetation removal will be allowed within the biological conservation easement areas, with the exception of limited public trails within the Zamudio Parcel, which will be delimited in the restoration and management plans in coordination with the CFWO. Caltrans anticipates that they will not be able to place the conservation easements or other conservation mechanisms, or transfer management endowments for the Zamudio and Pardee conservation parcels prior to initiating project impacts; however, annual reports will be provided on their status until the conservation mechanisms have been placed and the endowment funds have been transferred.

4. Caltrans will prepare perpetual long-term management, maintenance and monitoring plans (e.g., HMPs) for the Zamudio and Pardee conservation parcels. The HMPs will include, but not be limited to, the following: method of protecting the resources in perpetuity (e.g., conservation easement), monitoring schedule, measures to prevent human and exotic species encroachment, funding mechanism, and contingency measures should problems occur. Caltrans anticipates that they will not be able to prepare the HMPs prior to initiating project impacts; however, annual reports will be provided on their status until final HMPs have been provided.

5. The clearing and grubbing of native habitats will occur from September 1 to February 14 to avoid the gnatcatcher breeding season [or sooner than September 1 if a biologist approved by the CFWO ("Project Biologist") demonstrates to the satisfaction of the CFWO that all nesting is complete]. Caltrans will submit the biologist's name, address, telephone number, and work schedule on the project to the CFWO at least 5 working days prior to initiating project impacts.

6. All pile driving for the project that will occur near habitats that support gnatcatchers will be conducted between September 1 and February 14 to avoid the gnatcatcher breeding season (or sooner than September 1 if the Gnatcatcher Biologist demonstrates to the satisfaction of the CFWO that all nesting is complete) and to minimize construction noise impacts to nesting gnatcatchers.

7. A biologist approved by the CFWO ("Project Biologist") will be on site during: a) initial clearing and grubbing; and b) weekly during project construction within 152.4 m (500 ft) of offsite gnatcatcher habitat, vernal pool habitat, or navarretia critical habitat to ensure compliance with all conservation measures. The Project Biologist will be familiar with the habitats, plants, and wildlife in the project area to ensure that issues relating to biological resources are appropriately and lawfully managed[1]. Caltrans will submit the biologist's name, address, telephone number, and work schedule on the project to the CFWO at least 5 working days prior to initiating project impacts. The biologist will perform the following duties:

[1] The designated project biologist for this measure should be experienced in gnatcatcher, San Diego fairy shrimp, and navarretia biology and ecology.

a. Perform a minimum of three focused surveys, on separate days, to determine the presence of gnatcatchers in the project impact footprint. Surveys will begin a maximum of 30 days prior to performing vegetation clearing/grubbing and one survey will be conducted the day immediately prior to the initiation of remaining work. If any gnatcatchers are found within the project impact footprint, the Project Biologist will direct construction personnel to begin vegetation clearing/grubbing in an area away from the gnatcatchers. In addition, the Project Biologist will walk ahead of clearing/grubbing equipment to flush birds towards areas of coastal sage scrub to be avoided. It will be the responsibility of the Project Biologist to ensure that gnatcatchers will not be injured or killed by vegetation clearing/grubbing. The Project Biologist will also record the number and location of gnatcatchers disturbed by vegetation clearing/grubbing. Caltrans will notify the CFWO at least 7 days prior to vegetation clearing/grubbing to allow the CFWO to coordinate with the Project Biologist on bird flushing activities;

b. Oversee installation of and inspect the construction fencing and erosion control measures within or up-slope of adjacent native habitat areas a minimum of once per week to ensure that any breaks in the fence or erosion control measures are repaired immediately;

c. Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust;

d. Train all contractors and construction personnel on the biological resources associated with the projects and ensure that training is implemented by construction personnel. At a minimum, training will include: 1) the purpose for resource protection; 2) a description of the sensitive resources and their habitats; 3) the conservation measures that should be implemented during project construction to conserve the sensitive resources, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced project footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing); 4) environmentally responsible construction practices; 5) the protocol to resolve conflicts that may arise at any time during the construction process; and 6) the general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act;

e. Halt work, if necessary, and confer with the CFWO to ensure the proper implementation of species and habitat protection measures. The Project Biologist will report any violation to the CFWO within 24 hours of its occurrence;

f. Submit monthly email reports (including photographs of impact areas) to Caltrans and the CFWO during clearing of gnatcatcher habitat and project construction. The

monthly reports will document that authorized impacts were not exceeded and general compliance with all conditions. The reports will also outline the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers, locations, and sex of gnatcatchers (if observed), observed gnatcatcher behavior (especially in relation to construction activities), and remedial measures employed to avoid and minimize impacts to gnatcatchers. Raw field notes should be available upon request by the CFWO; and

g. Submit a final report to the CFWO within 120 days of project completion that includes: photographs of habitat areas that were to be avoided, and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conservation measures was achieved. As-built construction drawings with an overlay of habitat that was impacted and avoided will be provided as well once they have been completed.

8. Caltrans will ensure that the following conditions will be implemented with regard to the Nobel Station:

a. Lighting for the Nobel Station will be shielded and directed away from adjacent native habitats. Caltrans will submit lighting plans to the CFWO for review and approval at least 30 days prior to initiating project impacts;

b. The proposed Nobel Station is at an elevation below adjacent vernal pool avoidance areas and conserved MHPA lands to the south; therefore, grading activities for the Nobel Station should not result in impacts (e.g. siltation) to the avoided pools. All drainage for the Nobel Station will be directed away from the avoided pools and conserved MHPA lands;

c. Permanent protective fencing will be installed along the interface between the Nobel Station and the adjacent vernal pool avoidance areas and conserved MHPA lands to deter human and domestic animal entrance into these adjacent habitat areas. Fencing should have no gates (with the exception of secured gates to allow access for maintenance and monitoring of the adjacent habitat areas). Signage will be posted and maintained at conspicuous locations to inform people that the adjacent lands are protected and are restricted to public access. Plans for fencing will be submitted to the CFWO for approval at least 5 days prior to initiating project impacts. Fencing will be installed prior to completion of project construction;

d. No invasive plants will be used in Nobel Station landscaping. Any nonnative non-invasive plants used in Nobel Station landscaping will be limited to small islands within the Nobel Station and will not be planted directly adjacent to native habitat.

9. Erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.

10. Caltrans will temporarily fence (with silt barriers at Nobel Station and with orange plastic snow fence for the rest of the project) the limits of project impacts (including construction staging areas and access routes) to prevent additional habitat impacts. Fencing will be installed in a manner that does not impact habitats to be avoided and such that it is clearly visible to personnel on foot and operating heavy equipment. Caltrans will submit to the CFWO for approval, at least 5 days prior to initiating project impacts (except for impacts resulting from clearing to install temporary fencing), the final plans for initial clearing and grubbing of habitat and project construction. These final plans will include photographs that show the fenced limits of impact and all areas to be impacted or avoided. If work occurs beyond the fenced or demarcated limits of impact, all work will cease until the problem has been remedied to the satisfaction of the CFWO. Any impacts that occur beyond the approved fenced area will be offset in consultation with the CFWO. Temporary construction fencing will be removed upon project completion.

11. Appropriate best management practices (BMPs) will be used to control erosion and sedimentation. No sediment or debris will be allowed to enter vernal pools, creeks, rivers, or other drainages. All debris from the expansion of bridges will be contained so that it does not fall into rivers and creeks.

12. The project will construct detention basins in some of the loop ramps, and bioswales will be placed on many of the slopes to treat runoff from the freeway.

13. Caltrans will ensure that the following conditions will be implemented with regard to project landscaping:

    a. Caltrans will ensure that project landscaping does not include exotic plant species listed on the California Invasive Plant Council's (Cal-IPC) "Invasive Plant Inventory" list. A copy of the complete list can be obtained from Cal-IPC's web site at http://www.cal-ipc.org;

    b. There are several invasive weed species already growing within the right-of-way along I-805. Special care will be taken during transport, use, and disposal of soils containing invasive weed seeds to ensure that invasive weeds are not spread into new areas by the project. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds;

    c. Cut slopes will be revegetated with native upland habitats with similar composition to those within the project study area. Fill slopes and areas adjacent to wetlands and drainages will be revegetated with appropriate native upland and wetland non-invasive

species. The revegetated areas will have temporary irrigation and will be planted with native container plants and seeds selected by the Project Biologist. There will be at least 3 years of plant establishment / maintenance on these slopes to control invasive weeds. Bioswales and detention basins will be planted with appropriate species as determined by the Project Biologist and storm water pollution prevention professional. Slopes adjacent to developed urban areas will be vegetated with native and drought tolerant non-invasive species selected by the Project Biologist and landscape architect. Interchanges located in urban areas will be landscaped with native or ornamental non-invasive species;

d. Duff from areas with coastal sage scrub and chaparral will be saved to aid in revegetating slopes with native species;

e. Rare plants will be salvaged where practicable for use in revegetation efforts;

f. All temporary impact areas will be revegetated and restored to pre-existing conditions. Prior to initiating project impacts, a restoration plan will be developed for the temporary impact areas. The plan will be submitted to the CFWO for review and approval. This plan will include a detailed description of restoration methods, slope stabilization, and erosion control, criteria for restoration to be considered successful, and monitoring protocol(s). Following the completion of construction activities, the restoration plan will be implemented for a minimum of 5 years, unless success criteria are met earlier and all artificial water has been off for at least 2 years;

g. Landscaping should not use plants that require intensive irrigation, fertilizers, or pesticides adjacent to preserve areas, and water runoff from landscaped areas should be directed away from adjacent native habitats and contained and/or treated within the development footprint;

h. Caltrans will submit a draft list of species to be included in the landscaping to the CFWO for approval. Caltrans will submit to the CFWO the final list of species to be included in the landscaping within 30 days of receiving approval of the draft list of species.

14. Caltrans will ensure that the following conditions will be implemented to maintain wildlife connectivity at San Clemente Canyon, Rose Canyon, and Soledad/Carroll Canyon, the three main east/west wildlife corridors in the project area (to help to maintain ecosystem functions for the benefit of listed species):

a. Night work under the bridges is anticipated to be limited. Lighting for night work will be focused on the work area and shielded from the corridors;

b. Wildlife fencing will be placed around bridges to direct wildlife to the crossings and away from I-805;

c. Wildlife fencing will tie in to a logical location to the greatest extent feasible, such as steep, impassable terrain, a property fence, or developed land that may not be attractive to animals;

d. Wildlife fencing plans will be submitted to the CFWO for approval at least 5 days prior to initiating project impacts. Fencing will be installed prior to completion of project construction.

15. Caltrans will ensure that the following conditions will be implemented during project construction.

a. Contractors and construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint;

b. The project site will be kept as clean of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site;

c. Pets of project personnel will not be allowed on the project site;

d. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur within the fenced project impacts limits;

e. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures;

f. If night work is necessary, night lighting will be of the lowest illumination necessary for human safety, selectively placed, shielded and directed away from natural habitats;

g. Cut and fill will be balanced within the project or the construction contractor will identify the source or disposal location. All spoils and material disposal will be disposed of properly.

*Action Area*

According to 50 CFR § 402.02 pursuant to section 7 of the Act, the "action area" means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area. For this project, we have defined the action area to include the 91.46-ha (226.00-ac) permanent and 53.57-ha (132.38-ac) temporary impact areas, and the surrounding habitat within about 500 ft (150 m), which may be exposed to

project-related effects such as increased noise, light, and dust levels and human activity during project construction and operation of the facilities. In addition, the action area includes the Zamudio (Figure 3), Pardee (Figure 4), and Sage Hill (Figure 5) conservation areas and the Nobel MHPA lands where restoration will occur, all in San Diego County, California.

STATUS OF THE SPECIES/CRITICAL HABITAT

The status of the San Diego fairy shrimp is described in detail in the 5-year review for this species (Service 2008). Additional information for this species can be found in the *Recovery Plan for Vernal Pools of Southern California* ("vernal pool recovery plan") (Service 1998). The status of the gnatcatcher was described in detail in a biological opinion for the Caltrans-sponsored State Route 76 Melrose Drive to South Mission Highway Improvement Project, San Diego County, California (FWS-SDG-08B0136-08F0900, dated October 1, 2008); new information since that time is provided in the 5-year review for gnatcatcher (Service 2010). Please refer to these documents for detailed information on the life history requirements of these species, threats to the species, and conservation needs of the species.

Summary of Species' Distribution and Numbers Rangewide

**San Diego Fairy Shrimp**

San Diego fairy shrimp occur in an estimated 137 complexes (series of vernal pool groups that are hydrologically connected with similar species compositions) throughout the species range from southern Orange County to northern Baja California, Mexico (Service 2008). A total of 23 complexes are reported from Kearny Mesa, including the pools on the Nobel MHPA lands adjacent to the project site (Service 2008). Within the City of San Diego on the Nobel MHPA lands, seven basins totaling approximately 344 m2 (3,702 ft2) were inventoried in 2002-2003, and six of these basins were reported to be occupied by San Diego fairy shrimp (City of San Diego 2004). This inventory did not include the 24.4 m2 (263 ft2) road-rut pool within the project footprint. The road-rut pool and the occupied basins on the Nobel MHPA lands are considered within the same complex.

**Coastal California Gnatcatcher**

The gnatcatcher occurs in CSS and associated habitats from southern Ventura County to Baja California, Mexico. In 1993, the Service estimated that about 2,562 gnatcatcher pairs remained in the United States, with the highest densities occurring in Orange and San Diego counties (Service 1993). In a recent study using more rigorous sampling techniques, Winchell and Doherty (2008) estimated there were 1,324 (95 percent confidence interval: 976–1,673) gnatcatcher pairs over a 44,923-hectare (111,006-acre) area on public and quasi-public lands of Orange and San Diego Counties. Their sampling frame covered only a portion of the U.S. range, focusing on the coast, and was limited to 1 year. Although it is not valid to extrapolate beyond the sampling frame, especially in light of known differences in population densities across the

range of the gnatcatcher (Atwood 1992, p. 2), it is likely there are more gnatcatchers in the U.S. portion of the range than was suggested by earlier estimates; Winchell and Doherty (2008) estimated nearly as many gnatcatchers in the portion of the U.S. range sampled in their study as was originally estimated for the entire U.S. range. We are not aware of any recent estimates of gnatcatcher populations in Baja California.

Navarretia Critical Habitat

Six critical habitat units have been designated for navarretia on 2,720 ha (6,720 ac) in Los Angeles, San Diego, and Riverside counties, California (75 FR 62192). Primary Constituent Elements (PCEs) are the physical and biological features essential to the conservation of the species that may require special management considerations or protection. PCEs of navarretia critical habitat are: (1) PCE 1—Ephemeral wetland habitat. Vernal pools [up to 4 ha (10 ac)] and seasonally flooded alkali vernal plains that become inundated by winter rains and hold water or have saturated soils for 2 weeks to 6 months during a year with average rainfall [i.e., years where average rainfall amounts for a particular area are reached during the rainy season (between October and May)]. This period of inundation is long enough to promote germination, flowering, and seed production for navarretia and other native species typical of vernal pool and seasonally flooded alkali vernal plain habitat, but not so long that true wetland species inhabit the areas; (2) PCE 2—Intermixed wetland and upland habitats that act as the local watershed. Areas characterized by mounds, swales, and depressions within a matrix of upland habitat that result in intermittently flowing surface and subsurface water in swales, drainages, and pools described in PCE 1; (3) PCE 3—Soils that support ponding during winter and spring. Soils found in areas characterized in PCEs 1 and 2 that have a clay component or other property that creates an impermeable surface or subsurface layer. These soil types include, but are not limited to: Cieneba- Pismo-Caperton soils in Los Angeles County; Domino, Traver, Waukena, Chino, and Willows soils in Riverside County; and Huerhuero, Placentia, Olivenhain, Stockpen, and Redding soils in San Diego County. Please refer to the recent final critical habitat rule (75 FR 62192) for detailed information on the units, including their sizes, locations, and special management considerations.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation and the impacts of State and private actions that are contemporaneous with the consultation in progress.

The vegetation types within the boundaries of the project are shown above in Table 1. Additional explanation regarding the amount of occupied habitat and number of individuals within the project footprint is provided in the text below.

**San Diego Fairy Shrimp**

Wet season protocol surveys were conducted for fairy shrimp during the 2005/2006, 2006/2007, and 2007/2008 wet seasons (URS 2006a, URS 2007, URS 2008) with negative results (with the exception of the pool at Carroll Canyon for which consultation has already been conducted). Dry season surveys were conducted in 2006 (URS 2006b) with positive results for San Diego fairy shrimp in a single road-rut pool within the project footprint of the proposed Nobel Station. The occupied pool is a disturbed road-rut pool 24.4 $m^2$ (263 $ft^2$) in size (Figure 6). Additional occupied pools are located south of the proposed Nobel Station.

The proposed restoration of 48.9 $m^2$ (526 $ft^2$) of San Diego fairy shrimp habitat will occur within Nobel MHPA lands (i.e., within MHPA lands south of the Nobel Station). The project will restore disturbed vernal pools at this location that are currently not occupied by San Diego fairy shrimp.

The Zamudio Parcel includes 404 $m^2$ (4,350 $ft^2$) of vernal pool habitat for which protocol fairy shrimp surveys have not yet been completed. On December 6, 2010, Caltrans biologists documented San Diego fairy shrimp at three locations on the Zamudio Parcel. Surveys are ongoing to determine the extent of the habitat occupied by San Diego fairy shrimp on the Zamudio Parcel.

**Coastal California Gnatcatcher**

The proposed project area contains areas of native upland habitat, including habitats that are suitable for the gnatcatcher. Twenty gnatcatcher territories were documented within the Biological Study Area for the project during protocol surveys conducted by URS in 2006 (URS 2006c). Portions of two gnatcatcher territories are located within the permanent impact area of the proposed project, and portions of two additional territories are located within the project's temporary impact area.

**Spreading Navarretia Critical Habitat**

Spreading navarretia critical habitat Subunit 3C is 15 ha (37 ac) in size, and most of the proposed Nobel Station project footprint is located within the subunit. The project will result in the permanent loss of 2.34 ha (5.78 ac) of designated critical habitat for navarretia; however, only 1.20 ha (2.96 ac) of the site contain PCEs of navarretia critical habitat. This subunit encompasses a group of vernal pools on a mesa-top north of Rose Canyon and is loosely bounded by I-805 on the northeast, train tracks on the south, and Nobel Drive on the northwest. Much of the critical habitat within this subunit is conserved within MHPA lands associated with the City of San Diego's MSCP (Figure 6). The function of Subunit 3C is to support a stable occurrence of navarretia and provide potential connectivity between occurrences in Subunit 3B (Carroll Canyon) and Subunit 3D (Montgomery Field).

Special status plant surveys were conducted within the proposed project site of the Nobel Station in 2006 and 2007 with negative results (Caltrans 2010); although surveys were conducted during appropriate blooming periods, 2006 and 2007 were relatively dry years. Surveys in 2009 documented 87 navarretia plants in a vernal pool located approximately 220 ft (67 m) southwest of the proposed Nobel Station site, and at the same vernal pool location, approximately 60 navarretia individuals were documented during surveys conducted in the spring of 2010.

In consideration of the past survey results in relatively dry years, the presence of navarretia just southwest and in proximity to the project site, and the presence of a road-rut pool within the Nobel Station project footprint, we requested additional surveys of the Nobel Station project site. Caltrans complied with this request, and the surveys, which were conducted in 2010, were negative. Based on this information, we consider the navarretia designated critical habitat within the Nobel Station project footprint to be unoccupied.

Restoration actions have been conducted within designated critical habitat south of the Nobel Station, including dethatching, weeding, recontouring of pools, seeding, and access control, with funding from a grant from the Transnet Environmental Mitigation Program (EMP) (AECOM 2010) (EMP Management Polygons, Figure 6).

The proposed vernal pool restoration site within Nobel MHPA lands is located southwest of the Nobel Station footprint within Subunit 3C of navarretia designated critical habitat. There is a historic record for navarretia on the Del Mar Mesa/Zamudio Parcel from 1986 (CNDDB 2010), and this parcel is located in proximity to Subunit Unit 3C. However, the parcel is outside of designated critical habitat for navarretia.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action, are later in time, and still reasonably certain to occur.

**San Diego Fairy Shrimp**

*Habitat Loss and Destruction of Cysts*

Construction of the Nobel Station will destroy one road-rut pool occupied by San Diego fairy shrimp with about 24.4 $m^2$ (263 $ft^2$) of basin surface area[2]. This disturbed basin lacks the

[2] The Nobel Station was redesigned and minimized in size to avoid impacts to additional occupied habitat on the mesa-top north of Rose Canyon by Nobel Drive within the Nobel MHPA lands. A second vernal pool occupied by

biodiversity that is typically associated with vernal pool habitat. Ongoing vehicle travel and disturbance occurring on the dirt road may be responsible for compacting soils to the point where they pond water long enough to support San Diego fairy shrimp; however, this continuing disturbance produces poor quality habitat that is lacking in biodiversity and functions to some degree as a sink, where cysts and shrimp may be crushed by vehicles and habitat quality may continue to degrade over time. Due to continuing disturbance, the onsite basin is not expected to contribute to the long-term viability of San Diego fairy shrimp within the Kearny Mesa area or rangewide. Loss of the road-rut pool will reduce the number of occupied basins within only 1 of the 23 complexes in the Kearny Mesa area and represents a relatively small portion of the occupied San Diego fairy shrimp habitat in this area and a fraction of the habitat rangewide.

San Diego fairy shrimp cysts will be salvaged from the road-rut pool within the Nobel Station impact area and will be used to "seed" 48.9 $m^2$ (526 $ft^2$) of pools selected for restoration within the Nobel MHPA lands. The precise location of the pools to be restored is not known but will be specified in the restoration plan submitted to the CFWO for review and approval. Inoculum will be collected when it is dry to avoid damaging or destroying fairy shrimp cysts which are fragile when wet. Inoculum will be collected with a hand trowel or similar instrument to pry up intact chunks of soil rather than loosening the soil by raking and shoveling, which can damage cysts. Inoculum will be stored in labeled bags or boxes that are adequately ventilated and kept out of direct sunlight in order to prevent the occurrence of fungus or excessive heating of the soil. Despite these efforts, we expect at least some cysts to be destroyed during the collection, translocation, and seeding process. Any cysts not salvaged for use in the restoration effort will be destroyed during project clearing, grading, and construction activities.

In addition to the restoration efforts on the Nobel MHPA lands, Caltrans will enhance 48.9 $m^2$ (526 $ft^2$) of vernal pool habitat on the Zamudio Parcel. This enhancement is part of a larger restoration and enhancement effort on the Zamudio Parcel that will result in the restoration and enhancement of a total of 404 $m^2$ (4,350 $ft^2$) of vernal pool basin surface area of which 48.9 $m^2$ (526 $ft^2$) will be acknowledged as conservation to offset the impacts of the proposed project, and the remainder will be reserved for a local transportation bank. Some restoration and enhancement actions may occur on adjacent parcels to improve the success of the restoration/ enhancement on the Zamudio Parcel. Introduction of San Diego fairy shrimp into the restored/ enhanced pools will be coordinated with theCFWO. Focused surveys for San Diego fairy shrimp will be conducted on the Zamudio Parcel during the 2011 or 2012 wet season. If San Diego fairy shrimp are extant within the basins, no introduction will be necessary. If San Diego fairy shrimp are not present in the Zamudio basins, they will be collected and introduced using inoculum or adult shrimp collected from the source closest to the habitat restoration/enhancement site where access can be obtained, within Del Mar Mesa. Inoculum for the Zamudio restoration/ enhancement will be collected when it is dry, in limited quantity, such that no appreciable

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San Diego fairy shrimp would have been impacted by the Nobel Station, but the project redesign avoids impacts to this pool.

damage occurs to source pools. Despite these efforts, we expect at least some cysts to be destroyed during the collection, translocation, and seeding process.

The restored habitat will be vegetated and represent higher quality habitat for San Diego fairy shrimp by providing the soils and hydrology necessary to support viable San Diego fairy shrimp occurrences. In addition, the restored habitat will be located on the Nobel MHPA lands and Zamudio Parcel in areas that are, or will be, permanently conserved and managed. Since Caltrans has had success within recent years in restoring highly degraded pools on the Johnson Canyon restoration area, we believe the restoration proposed as a part of this project has a high likelihood of success and that the restored pools will support viable occurrences of San Diego fairy shrimp.

In summary, project construction will result in the loss of one occupied San Diego fairy shrimp basin within only one of the 23 complexes supporting San Diego fairy shrimp in the Kearney Mesa area. The impacted basins represent poor quality habitat that lacks biodiversity and has limited potential to contribute to the survival of the species. Cysts will be salvaged from the impacted pool and used in a restoration effort that will provide four times as much high quality San Diego fairy shrimp habitat than was impacted. Overall, we expect the occurrence of San Diego fairy shrimp impacted to be fully offset by newly established occurrences within the restored/enhanced habitat. The newly established occurrences within the restored/enhanced habitat are expected to have greater long-term viability than the impacted occurrences. Thus, we do not expect the habitat loss and destruction of cysts associated with the project to appreciably reduce the number of individuals, reproduction, or distribution of San Diego fairy shrimp in the action area or across its range.

*Indirect Effects*

The construction of the Nobel Station adjacent to the vernal pool habitat on the mesa-top north of Rose Canyon by Nobel Drive has the potential to result in indirect effects to San Diego fairy shrimp. Adjacent occupied pools could be subject to siltation, non-seasonal irrigation flows, contaminated run-off, an increased presence of human and domesticated animals, and the introduction of invasive plants from landscaping areas. Avoidance and minimization measures have been incorporated into the proposed project to reduce the indirect effects of the project on San Diego fairy shrimp.

The proposed Nobel Station is at an elevation below adjacent vernal pool avoidance areas and conserved MHPA lands to the south, therefore grading activities for the Nobel Station should not result in siltation impacts to the adjacent habitat, and all drainage for the Nobel Station will be directed away from the avoided pools and conserved MHPA lands. Permanent protective fencing will be installed, prior to completion of project construction, along the interface between the Nobel Station and the adjacent vernal pool avoidance areas and conserved MHPA lands to deter human and domestic animal entrance into these adjacent habitat areas. Signage will be posted and maintained at conspicuous locations to inform people that the adjacent lands are protected

and are restricted to public access. No invasive plants will be used in Nobel Station landscaping. Any nonnative non-invasive plants used in Nobel Station landscaping will be limited to small islands within the Nobel Station and will not be planted directly adjacent to native habitat. These measures will reduce the potential for indirect effects to San Diego fairy shrimp and their habitat to a level of insignificance.

*Effect on Recovery*

To support the recovery of the San Diego fairy shrimp, the vernal pool recovery plan calls for the conservation of vernal pools in the project area to be secured from further loss and degradation in a configuration that maintains habitat functions and species viability. The road-rut pool on the site was not known when the vernal pool recovery plan was written, and the site is north of areas proposed for conservation in the MHPA of the City of San Diego's MSCP Subarea Plan. Due to continuing disturbance, the onsite basin is not expected to contribute to the long-term viability of the San Diego fairy shrimp or its habitat in the Kearny Mesa area or rangewide.

Caltrans will offset the loss of the basin through the restoration/enhancement of four times as much San Diego fairy shrimp occupied vernal pool habitat within the Nobel MHPA lands and Zamudio Parcel; we expect the restored habitat to be higher quality than the habitat destroyed. In addition, some of this restoration will occur in the adjacent conserved lands and will contribute to regional planning efforts that support the conservation of vernal pool species, including the San Diego fairy shrimp. For these reasons, we do not expect the project to impede recovery of the San Diego fairy shrimp.

**Coastal California Gnatcatcher**

*Habitat Loss*

Construction activities are not anticipated to result in the death or injury of any gnatcatchers or nests. A Project Biologist will be present to ensure that gnatcatchers are not directly killed or injured during vegetation removal and other construction activities. The clearing and grubbing of coastal sage scrub will be conducted outside of the breeding season (February 15 to August 31).

The project footprint will result in the permanent removal of coastal sage scrub, chaparral, grassland, and other habitat types (Table 1) used by gnatcatchers. To summarize impacts to the habitat types favored most by the gnatcatcher, the project footprint will result in the permanent removal of about 3.60 ha (8.90 ac) of coastal sage scrub, 4.41 ha (10.90 ac) of disturbed coastal sage scrub, and 0.60 ha (1.48 ac) of coastal sage scrub/chaparral [a total of 8.61 ha (21.28 ac)]; however, gnatcatchers were not observed to be using this entire habitat area. The permanent impact area includes two gnatcatcher territories (Caltrans 2010).

Additionally, the project will result in temporary impacts to about 2.70 ha (6.69 ac) of coastal sage scrub, 3.53 ha (8.72 ac) of disturbed coastal sage scrub, and 1.33 ha (3.29 ac) of coastal sage

scrub/chaparral [a total of 7.57 ha (18.7 ac)]; however, gnatcatchers were observed to be using only approximately 1.16 ha (2.86 ac) of the temporary impact area. The project will result in temporary impacts to two additional gnatcatcher territories (Caltrans 2010).

Although habitat removal will be conducted outside the gnatcatcher nesting season, gnatcatchers are non-migratory territorial birds, and so removal of a substantial portion of a gnatcatcher pairs breeding territory will force the pair to expand their existing territory or establish a new territory, particularly during the breeding season, when territorial boundaries are better defined (Preston et al. 1998). Gnatcatchers are distributed throughout much of the suitable habitat in the project area (Caltrans 2010); therefore, it is likely that displaced gnatcatchers will be forced to compete with resident gnatcatchers when attempting to expand an existing territory or establish a new territory.

If displaced birds cannot find suitable habitat to forage and shelter in, we anticipate they will be more vulnerable to predation and otherwise may die or be injured. Gnatcatchers that successfully establish territories in adjacent habitat are expected to experience reduced productivity (e.g., delayed initiation or prevention of nest building, fewer nesting attempts per season, and/or overall reduction in reproductive output) due to reduced availability of foraging and breeding habitat and increased territorial interactions.

Two gnatcatcher territories are within habitat that will be permanently impacted by the project and two additional territories are within habitat that will be temporarily impacted by the project. Over the short term, the effects to pairs will be similar (i.e., they will be displaced and experience increased mortality and/or reduced reproductive output). Over the longer term, however, the temporarily impacted habitat will be restored and expected to be re-occupied by gnatcatchers, as described below.

Following construction, all temporarily impacted habitats, including coastal sage scrub, will be restored. Since restored coastal sage scrub usually takes a minimum of 4 to 5 years of growth before it is suitable for occupation by gnatcatchers (O'Connell and Erickson 1998, Miner et al. 1998), there will be a temporal loss of coastal sage scrub available to gnatcatchers in the project area, which will reduce the number and reproductive fitness of gnatcatchers in the project area. However, because large numbers of gnatcatcher pairs will be breeding in the intact habitat adjacent to the impact area, we do not anticipate that the temporary impacts will increase the risk of gnatcatcher extirpation in the area, and we expect that the temporarily impacted habitat will be re-occupied as soon as it is mature enough to support gnatcatcher breeding.

Overall, the loss of habitat for four gnatcatcher pairs over the short-term and the permanent loss of habitat for two of these pairs will reduce the number of gnatcatchers that can be supported in the general project area. Impacts to four gnatcatcher pairs represents less than 1 percent of the rangewide estimate of gnatcatcher pairs, and gnatcatcher will continue to occupy the general project area; thus, the project is not expected to result in an appreciable reduction in the numbers, reproduction, or distribution of the species rangewide.

Caltrans will offset the permanent loss of gnatcatcher habitat [8.61 ha (21.28 ac)], as well as additional upland habitats such as grassland (as summarized in Table 1) that may be used to some degree by gnatcatchers, through the preservation of 11.68 ha (28.87 ac) of occupied coastal sage scrub and coastal sage scrub/chaparral at the Sage Hill conservation parcel, and through the preservation of 13.11 ha (32.4 ac) of chaparral and coastal sage scrub at the Zamudio Parcel. While the Zamudio Parcel is not occupied by gnatcatchers, and consists primarily of chaparral, some enhancement actions will occur on the parcel, which may make the habitat more desirable to gnatcatchers.

Although conservation of gnatcatcher and upland habitat offsite will not avoid or minimize impacts to the individual gnatcatchers impacted at the project site, it will permanently protect a total of 24.80 ha (61.27 ac) of coastal sage scrub and chaparral and contribute to the conservation and recovery of the species.

*Indirect Effects*

Indirect effects include lighting associated with the project that will impact the adjacent gnatcatcher habitat. Light that alters natural light patterns in ecosystems can lead to increased predation, disorientation, and disruption of inter-specific interactions (Longcore and Rich 2004). If night work is necessary, night lighting will be of the lowest illumination necessary for human safety, selectively placed, shielded and directed away from natural habitats. The permanent lighting associated with the proposed Nobel Station will be shielded and directed away from adjacent open space. These actions will minimize the impact of lighting on gnatcatcher behavior in adjacent habitat to the point where such effects are insignificant.

Noise and vibrations associated with the use of heavy equipment during construction and operations of the proposed facilities have the potential to disrupt gnatcatcher behaviors in adjacent habitat by masking intraspecific communication and startling birds (e.g., see Dooling and Popper 2007 for a discussion of observed effects of highway noise on birds). However, gnatcatchers that occupy habitats adjacent to the existing I-805 freeway are subjected to existing noise and vibration and continue to occupy the habitat. Pile driving for the project that will occur near habitats that support gnatcatchers will be conducted outside of the gnatcatcher breeding season to minimize construction noise impacts to nesting gnatcatchers.

Additional indirect effects include an increase of erosion and sedimentation, introduction of invasive species, wildfire, and human encroachment. I-805 is an existing facility, so with the proposed conservation measures, any increase in habitat degradation associated with these factors is likely to be insignificant.

*Effect on Recovery*

The project is not anticipated to impede recovery of the gnatcatcher. As described above, the project will result in impacts to gnatcatchers and their habitats. However, the impacts are small

relative to the amount of habitat and gnatcatcher territories rangewide (roughly 2,562 pairs). Furthermore, because substantial areas of occupied habitat will remain adjacent to the impact areas, and habitat restoration will be initiated immediately following construction, there will be little risk that the project will extirpate any gnatcatcher populations in the project area. Permanent impacts to gnatcatchers and their habitat will be offset through the conservation of a total of 61.27 ac (24.80 ha) of CSS and chaparral habitats that will support the recovery of the species.

**Spreading Navarretia Critical Habitat**

The project will result in the permanent loss of 2.34 ha (5.78 ac) of unoccupied designated critical habitat for navarretia. The area of critical habitat that will be impacted is located in the northern corner of designated navarretia critical habitat Subunit 3C and is within the proposed Nobel Station development footprint. Critical habitat Subunit 3C consists of 15 ha (37 ac) of land.

The permanent loss of 2.34 ha (5.78 ac) of designated critical habitat along the northern edge of Subunit 3C represents 15.6 percent of the designated critical habitat within Subunit 3C and 0.08 percent of the critical habitat designated for this species. The function of Subunit 3C is to support a stable occurrence of navarretia and provide potential connectivity between occurrences in Subunit 3B (Carroll Canyon) and Subunit 3D (Montgomery Field).

Only 1.20 ha (2.96 ac) of the navarretia critical habitat that will be impacted contain the PCEs essential to the conservation of the species (Figure 7). The PCEs within the proposed impact area do not support an occurrence of navarretia and represent degraded habitat that would require restoration to support a navarretia occurrence. The loss of this small amount of critical habitat supporting only a limited amount of degraded PCEs will not affect the function of Subunit 3C to support a stable occurrence of navarretia or to provide potential connectivity between occurrences in Subunit 3B (Carroll Canyon) and Subunit 3D (Montgomery Field). Within the subunit, navarretia was documented in a vernal pool that is over 67 m (220 ft) southwest of the Nobel Station, and at an elevation above the Nobel Station; therefore, the project will not affect the function of this unit to support the existing occurrence of navarretia.

Conservation and enhancement actions for navarretia will occur at the Zamudio Parcel on the Del Mar Mesa, which is not within designated critical habitat for navarretia, and on the Nobel MHPA lands, which are within Subunit 3C of navarretia designated critical habitat. While not within navarretia designated critical habitat, the Zamudio Parcel is in proximity to Subunit 3C, supports PCEs of navarretia critical habitat, and has a historic record for navarretia. Pools on the Zamudio Parcel will be enhanced for navarretia through actions that will be defined in the restoration and enhancement plan for the parcel, such as weeding, minor recontouring, and reducing trampling impacts by reducing the number of trails on the parcel. Navarretia seeds will be introduced into the enhanced habitat.

In addition, 48.9 $m^2$ (526 $ft^2$) of degraded habitat within navarretia critical habitat Subunit 3C within the conserved Nobel MHPA lands will be restored to high-quality navarretia occupied habitat. This restoration is expected to increase the amount of high-quality ephemeral wetland habitat within the subunit. Ephemeral wetland habitat is one of the PCEs of navarretia critical habitat, and the restoration of high-quality ephemeral wetland habitat within the existing subunit will benefit the function of the subunit and the designation as a whole.

*Indirect Effects*

According to the final critical habitat rule (75 *Federal Register* 62192), the physical and biological features essential to the conservation of the species in Subunit 3C may require special management considerations or protection to address threats from nonnative plant species and activities (such as unauthorized recreational use) that occur in the vernal pool basins.

The construction of the Nobel Station adjacent to designated critical habitat on the mesa-top north of Rose Canyon by Nobel Drive has the potential to result in indirect effects to the PCEs within the Subunit 3C. Adjacent habitat could be subject to siltation, non-seasonal irrigation flows, and contaminated run-off, which could affect the duration of ponding and water quality within ephemeral wetlands. Development of the station could also increase the presence of human and domesticated animals and introduce invasive plants from landscaped areas into the adjacent habitat.

However, the following avoidance and minimization measures have been incorporated into the proposed project to reduce the potential for degradation of the adjacent areas of designated critical habitat for navarretia to a level where such effects are insignificant. The proposed Nobel Station is at an elevation below adjacent critical habitat avoidance areas and designated critical habitat within conserved MHPA lands to the south; therefore, grading activities for the Nobel Station should not result in siltation impacts to critical habitat adjacent and to the south of these activities. In addition, all drainage for the Nobel Station will be directed away from the avoided and conserved critical habitat areas. Permanent protective fencing will be installed, prior to completion of project construction, along the interface between the Nobel Station and the adjacent and conserved critical habitat areas to deter human and domestic animal entrance into these areas. Signage will be posted and maintained at conspicuous locations to inform people that the adjacent and conserved lands are protected and are restricted to public access. No invasive plants will be used in Nobel Station landscaping. Any nonnative non-invasive plants used in Nobel Station landscaping will be limited to small islands within the Nobel Station and will not be planted directly adjacent to native habitat.

## CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section

because they require separate consultation pursuant to section 7 of the Act. We are unaware of any future non-Federal actions that are reasonably certain to occur within the action area and may affect San Diego fairy shrimp, gnatcatchers, or designated critical habitat for navarretia.

CONCLUSION

After reviewing the current status of the San Diego fairy shrimp, gnatcatcher, and navarretia critical habitat, the environmental baseline for the action area, effects of the proposed action, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the San Diego fairy shrimp or the gnatcatcher and is not likely to result in the destruction or adverse modification of designated critical habitat for navarretia. We reached these conclusions by considering the following:

**All Species**

- Adverse effects to all federally listed species will be reduced by implementation of the avoidance and minimization measures identified in the "Project Description" of this biological opinion.

**San Diego Fairy Shrimp**

- The project will permanently impact one road-rut pool occupied by San Diego fairy shrimp totaling about 24.4 $m^2$ (263 $ft^2$) of basin surface area in association with the construction of the Nobel Station. This road-rut pool is considered to be relatively degraded and is only one of several occupied basins within one of the 23 complexes supporting San Diego fairy shrimp within the Kearney Mesa area. The impact represents only a fraction of the number and surface area of the basins occupied by San Diego fairy shrimp with the 137 known complexes rangewide.

- The project was redesigned to avoid impacts to additional occupied habitat on the mesa-top north of Rose Canyon by Nobel Drive within the Nobel MHPA lands.

- Impacts to San Diego fairy shrimp habitat will be offset through the restoration of 48.9 $m^2$ (526 $ft^2$) of high quality San Diego fairy shrimp habitat within the Nobel MHPA lands, and the enhancement and conservation of 48.9 $m^2$ (526 $ft^2$) of high quality San Diego fairy shrimp occupied habitat on the Zamudio Parcel, restoring/enhancing four times the amount of habitat than will be destroyed.

- Cysts from the impacted basin will be collected to establish new occurrences of San Diego fairy shrimp within the adjacent conserved lands to offset the loss of the impacted occurrence at the project site.

- With the proposed conservation measures, the project will have a minor effect on the species and its habitat within the Kearney Mesa area and rangewide and is not anticipated to impede recovery of the species.

**Coastal California Gnatcatcher**

- The project will permanently impact only 8.61 ha (21.28 ac) of coastal sage scrub out of the tens of thousands of hectares (acres) of gnatcatcher habitat rangewide.

- The project will result in the temporary impact to only 7.57 ha (18.7 ac) of coastal sage scrub, but this habitat will be restored, and within 4 to 5 years will again be suitable for gnatcatcher breeding and foraging.

- Permanent and temporary project-related habitat loss will impact up to four gnatcatcher pairs, which represents less than 1 percent of the roughly 2,562 pairs rangewide.

- Impacts to occupied gnatcatcher habitat will be offset by conserving 11.68 ha (28.87 ac) of occupied coastal sage scrub and coastal sage scrub/chaparral at Sage Hill and 13.11 ha (32.4 ac) of chaparral and coastal sage scrub with some enhancement at the Zamudio Parcel. Enhancement within the Zamudio Parcel may improve the unoccupied habitat for gnatcatchers.

- With the proposed conservation measures, the project is not expected to a have a long-term effect on the gnatcatcher or its habitat in the project area or rangewide and is not anticipated to impede recovery of the species.

**Spreading Navarretia Critical Habitat**

- The project will not affect the function of Subunit 3C to support a stable occurrence of navarretia and provide potential connectivity between occurrences in Subunits 3B (Carroll Canyon) and Subunit 3D (Montgomery Field). The occupied portion of the subunit is over 67 m (220 ft) away from the Nobel Station, and at an elevation above the Nobel Station. Measures have been incorporated into the project to reduce indirect effects of the project to a level of insignificance. The project includes restoration within Subunit 3C, which will increase the amount of occupied habitat within the subunit, thereby enhancing the stability of the occurrence.

- The project will result in the restoration of 48.9 $m^2$ (526 $ft^2$) of degraded vernal pool habitat within navarretia critical habitat Subunit 3C. This restoration will increase the amount of high-quality ephemeral wetland habitat within the subunit. Ephemeral wetland habitat is one of the PCEs of spreading navarretia critical habitat. This will benefit the function of the subunit and the designation as a whole.

- The project will result in the conservation, with some enhancement, of 13.11 (32.4 ac) of chaparral and coastal sage scrub upland habitats adjacent to vernal pools, and the conservation and enhancement of 48.9 $m^2$ (526 $ft^2$) of vernal pool habitat at the Zamudio Parcel on the Del Mar Mesa. While the Zamudio Parcel is located outside of the designated critical habitat polygons, it is in proximity to Unit 3 of navarretia critical habitat, supports PCEs of navarretia critical habitat, and has a historic record for navarretia. Further, navarretia will be introduced into the restored/enhanced habitat at the Zamudio Parcel, which will increase the amount of occupied habitat with PCEs for navarretia in the Unit 3 area.

## INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the proposed action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by Caltrans for the exemption in section 7(o)(2) to apply. If Caltrans fails to implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of the incidental take, Caltrans must report the progress of the action and its impact on the species to the CFWO as specified in the incidental take statement [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

**San Diego Fairy Shrimp**

We anticipate that San Diego fairy shrimp cysts will be killed or otherwise harmed during grading and construction work that destroys the basins (i.e., habitat) they occupy. However, it is not possible to determine the number of San Diego fairy shrimp cysts that will be impacted by the project because populations of fairy shrimp vary dramatically over time depending on environmental conditions, and it is impractical to count the number of cysts directly.

Because the precise number of individual San Diego fairy shrimp cysts that will be taken cannot be determined, we have established take thresholds based on the area of habitat impacted. If any take threshold is exceeded, it will trigger reinitiation of consultation.

Take of San Diego fairy shrimp is authorized as follows:

- Destruction of one road-rut pool occupied by San Diego fairy shrimp totaling about 24.4 $m^2$ (263 $ft^2$) of basin surface area in association with the construction of the Nobel Station. The take threshold will be exceed if more than one road-rut-pool occupied by San Diego fairy shrimp is impacted; the take threshold will also be exceeded if more than 24.4 $m^2$ (263 $ft^2$) of basin surface area is impacted in association the construction of the Nobel Station.

- Collection and translocation of San Diego fairy shrimp cysts in one-road-rut pool to "seed" restored pools on the Nobel MHPA lands. We anticipate that some of the translocated cysts will survive in the restored pools, but many will be destroyed during the process of collecting and transferring them to the restored pools. The pools from which cysts will be collected will be in proximity to the restored pools and will be identified in the vernal pool restoration plan submitted to the CFWO for review and approval. The take threshold will be met if cysts from more than one road-rut pool are required to meet the expected restoration and enhancement commitments.

**Coastal California Gnatcatcher**

The take threshold for gnatcatchers is based on the number of gnatcatcher pairs and the amount of occupied habitat impacted. If the take threshold is exceeded, it will trigger reinitiation of consultation. Take of gnatcatcher is authorized as follows:

- Take in the form of harm of up to 4 gnatcatcher pairs is authorized due to the permanent removal of 8.61 ha (21.28 ac) of coastal sage scrub and the temporary removal of 7.57 ha (18.7 ac) of coastal sage scrub. The take threshold will be met if more than the specified amount of habitat or more than four gnatcatcher territories are impacted.

EFFECT OF TAKE

In the accompanying biological opinion, we determined that these levels of anticipated take are not likely to result in jeopardy to the San Diego fairy shrimp and gnatcatcher.

## REASONABLE AND PRUDENT MEASURES

Caltrans will implement conservation measures as part of the proposed action to minimize the incidental take of San Diego fairy shrimp and gnatcatchers. In addition to these conservation

measures, the following reasonable and prudent measures are necessary to monitor and report the effects of the incidental take on San Diego fairy shrimp and gnatcatchers:

1. Caltrans will monitor and report on compliance with established take thresholds for San Diego fairy shrimp associated with the proposed action.

2. Caltrans will monitor and report on compliance with established take thresholds for gnatcatchers associated with the proposed action.

## TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Caltrans must comply with the following terms and conditions which implement the reasonable and prudent measures described above.

### San Diego Fairy Shrimp

1.1 Caltrans will notify the CFWO in writing within 30 days of completing construction-related impacts to San Diego fairy shrimp habitat associated with the proposed project. This notification will include the number and area of San Diego fairy shrimp basins that were impacted by the project and whether San Diego fairy shrimp cysts were collected from the basins prior to impacts.

1.2 Prior to initiating restoration/enhancement of San Diego fairy shrimp habitat, Caltrans will submit to the CFWO a map showing the area that will be restored/enhanced. This submittal will include the number and basin surface area of San Diego fairy shrimp pools that will be restored/enhanced.

1.3 Consistent with the future restoration/enhancement plan, Caltrans will submit annual reports to the CFWO documenting restoration/enhancement activities until the restored/ enhanced habitat has met success criteria and been approved by the CFWO.

### Coastal California Gnatcatcher

2.1 Prior to initiating the proposed project, the Project Biologist will conduct a single-pass survey of the project site to verify that no more than four gnatcatcher territories (total) will be substantially impacted by the project. Three preconstruction surveys will be conducted within all suitable gnatcatcher habitat within the footprint for the project, within 30 days prior to initiation of vegetation removal activities. Prior to initiating the project, Caltrans will provide to the CFWO a map showing the distribution of gnatcatchers relative to the project footprint, an estimate of the number of gnatcatchers territories that will be impacted by the project, and the cumulative total of gnatcatcher territories impacted by the project, or confirm in writing that maps, distribution

information, and the number of territories that will be impacted by the project as shown in the BA remain correct.

2.2 Caltrans will notify the CFWO within 30 days of completing removal of gnatcatcher occupied habitat. The purpose of this notification is to ensure that impacts to gnatcatcher-occupied habitat from the proposed project do not exceed the take thresholds.

DISPOSITION OF SICK, INJURED, OR DEAD SPECIMENS

Upon locating dead, injured, or sick individuals of threatened or endangered species, initial notification must be made to our Division of Law Enforcement in either San Diego, California, at (619) 557-5063 or in Torrance, California, at (310) 328-6307 within 3 working days. Notification should also be sent by telephone and writing to this office in Carlsbad, California, at 6010 Hidden Valley Road, Suite 101, Carlsbad, California 92011, (760) 431-9440. Written notification must be made within 5 calendar days and include the collection date and time, the location of the animal, and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The remains of intact specimens shall be placed with educational or research institutions holding the appropriate State and Federal permits. Remains shall be placed with the San Diego Natural History Museum, San Diego. Arrangements regarding proper disposition of potential museum specimens shall be made with the institution by the authorized biologist prior to implementation of the action.

## CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

It has come to our attention that numerous Park and Ride facilities are proposed within areas of existing and proposed conservation associated with regional habitat conservation plans within San Diego County. We recommend that Caltrans avoid and minimize these impacts to the greatest extent feasible. We recommend that conservation be provided to offset unavoidable impacts of Park and Rides to areas of existing and proposed conservation associated with regional habitat conservation plans. In addition to the loss of habitat that results from paving reserve areas, these facilities can result in an increase in edge effects that are not compatible with reserve design, such as night lighting, siltation, non-seasonal irrigation flows, contaminated run-off, an increased presence of human and domesticated animals, and the introduction of invasive plants from landscaping areas.

**REINITIATION NOTICE**

This concludes formal consultation regarding the I-805 North Managed Lanes Project as outlined in materials submitted to us. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; and (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this biological opinion, please contact Sally Brown of this office at (760) 431-9440, extension 278.

Sincerely,

Karen A. Goebel

Jim A. Bartel
for Field Supervisor

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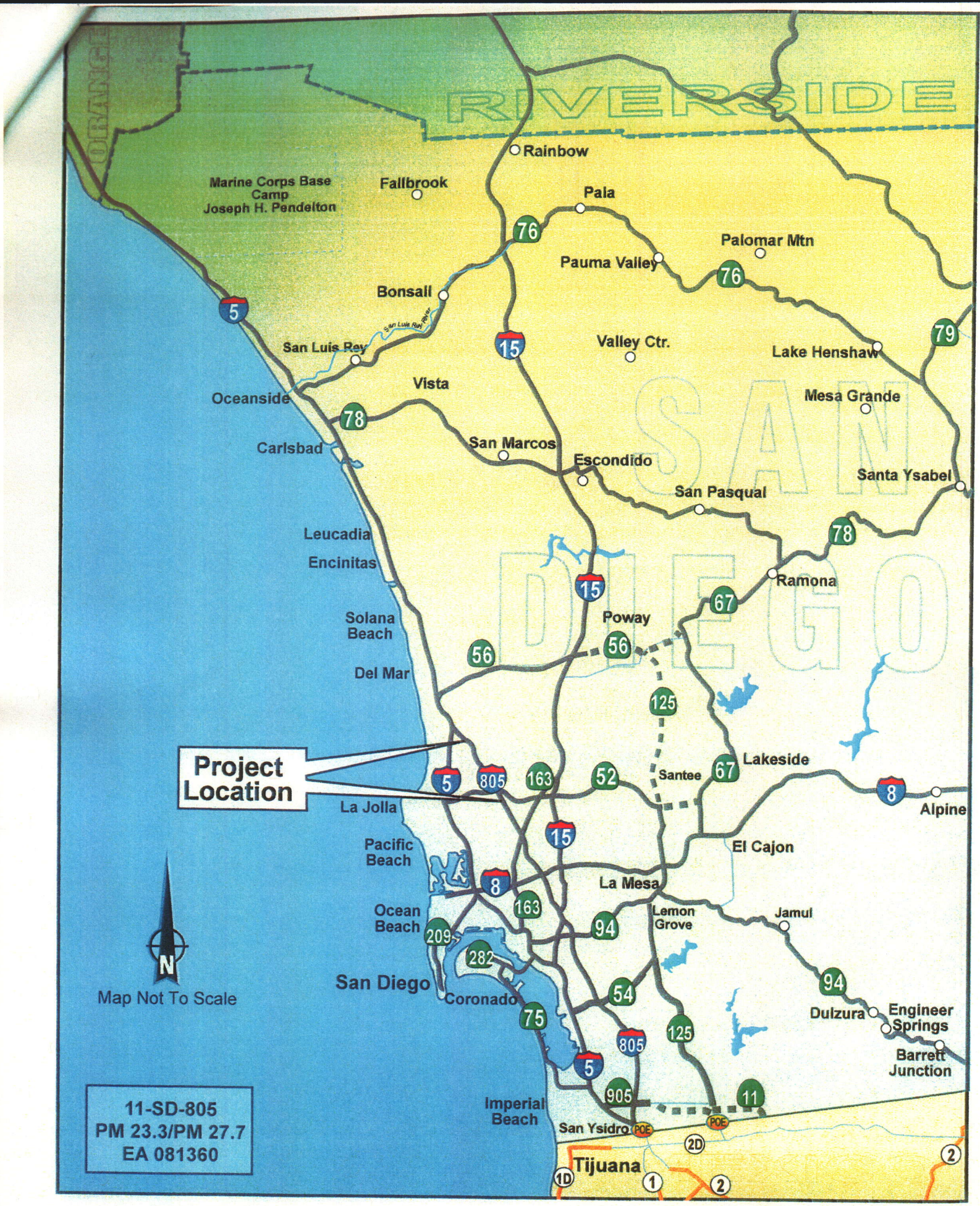



**Figure 1**
**Project Location Map**

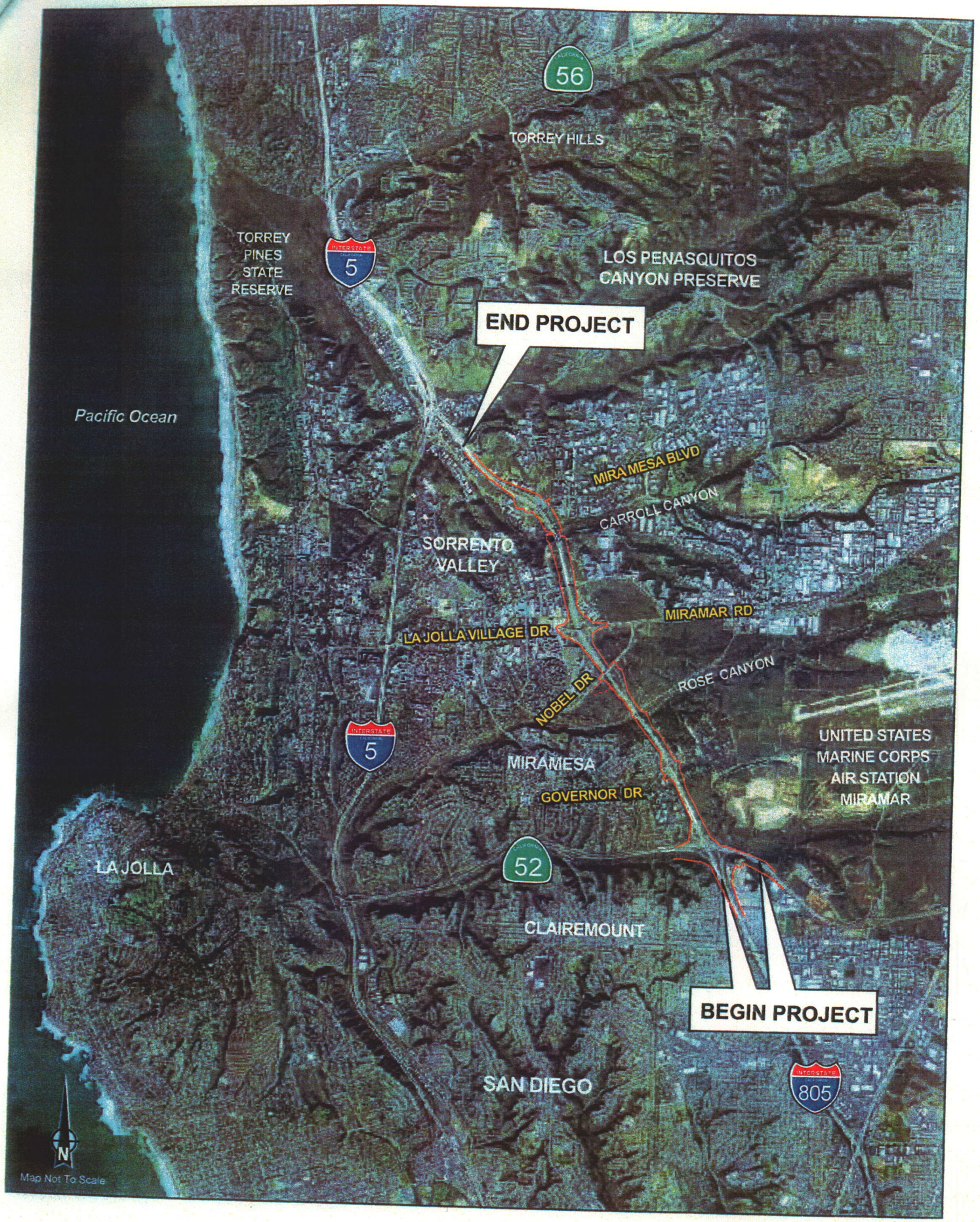


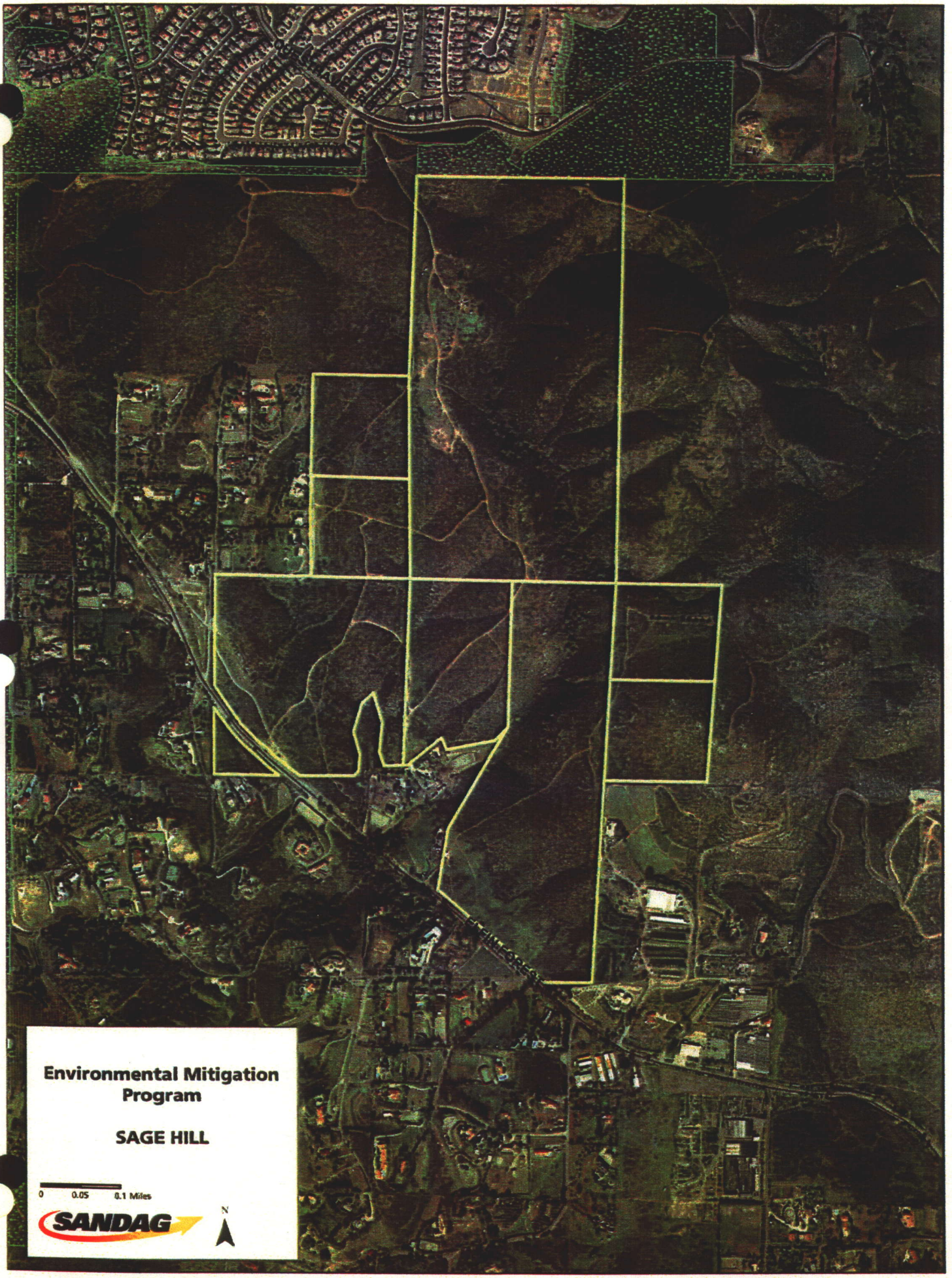

**Figure 2**
**Project Vicinity Map**


Figure 3

**Ownership and Parcels Used for Mitigation on Del Mar Mesa Preserve**


Pardee Parcel

Figure 4


Environmental Mitigation Program
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N

Figure 5

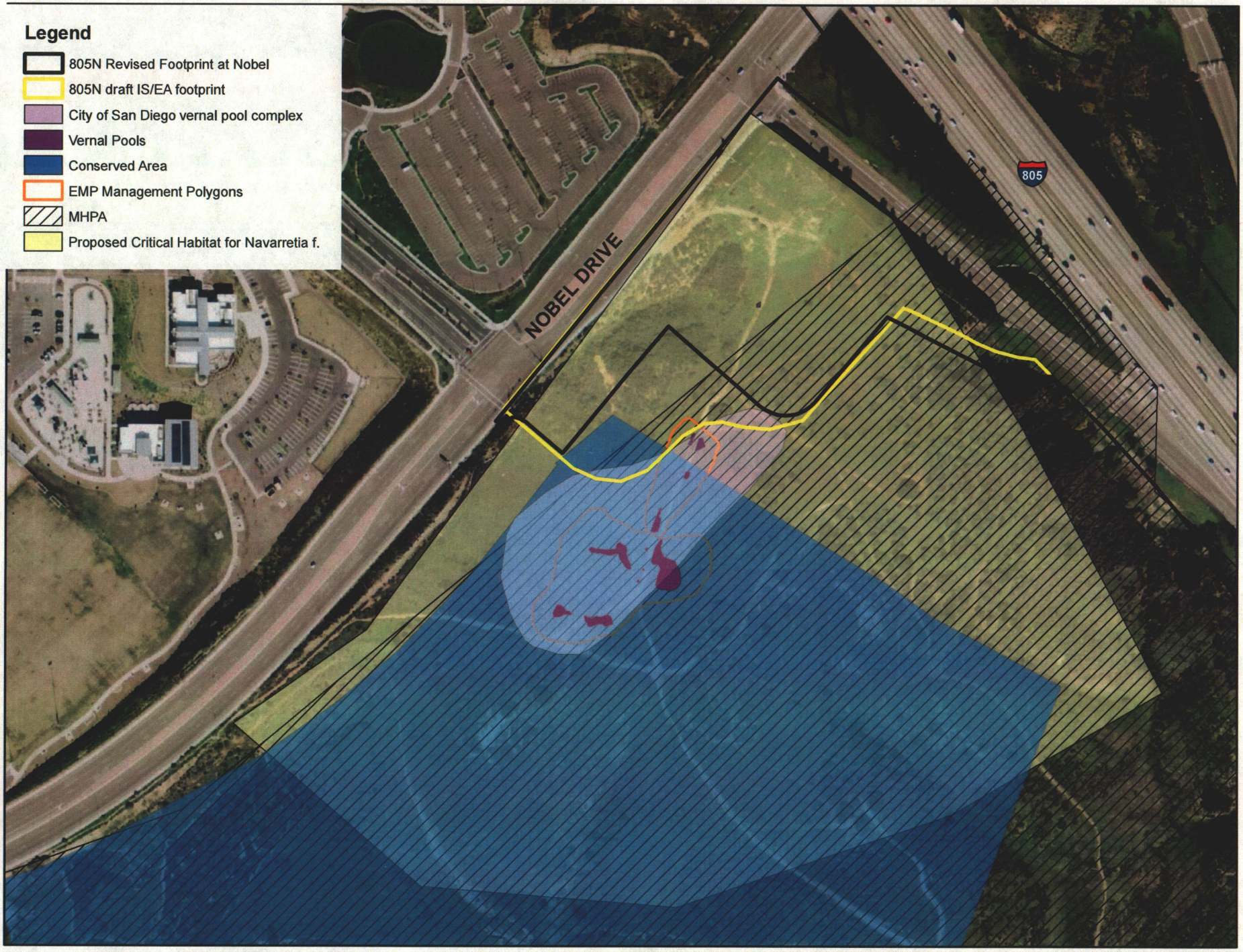



Figure 6 I-805 N Revised Footprint at Nobel and draft IS/EA footprint at Nobel

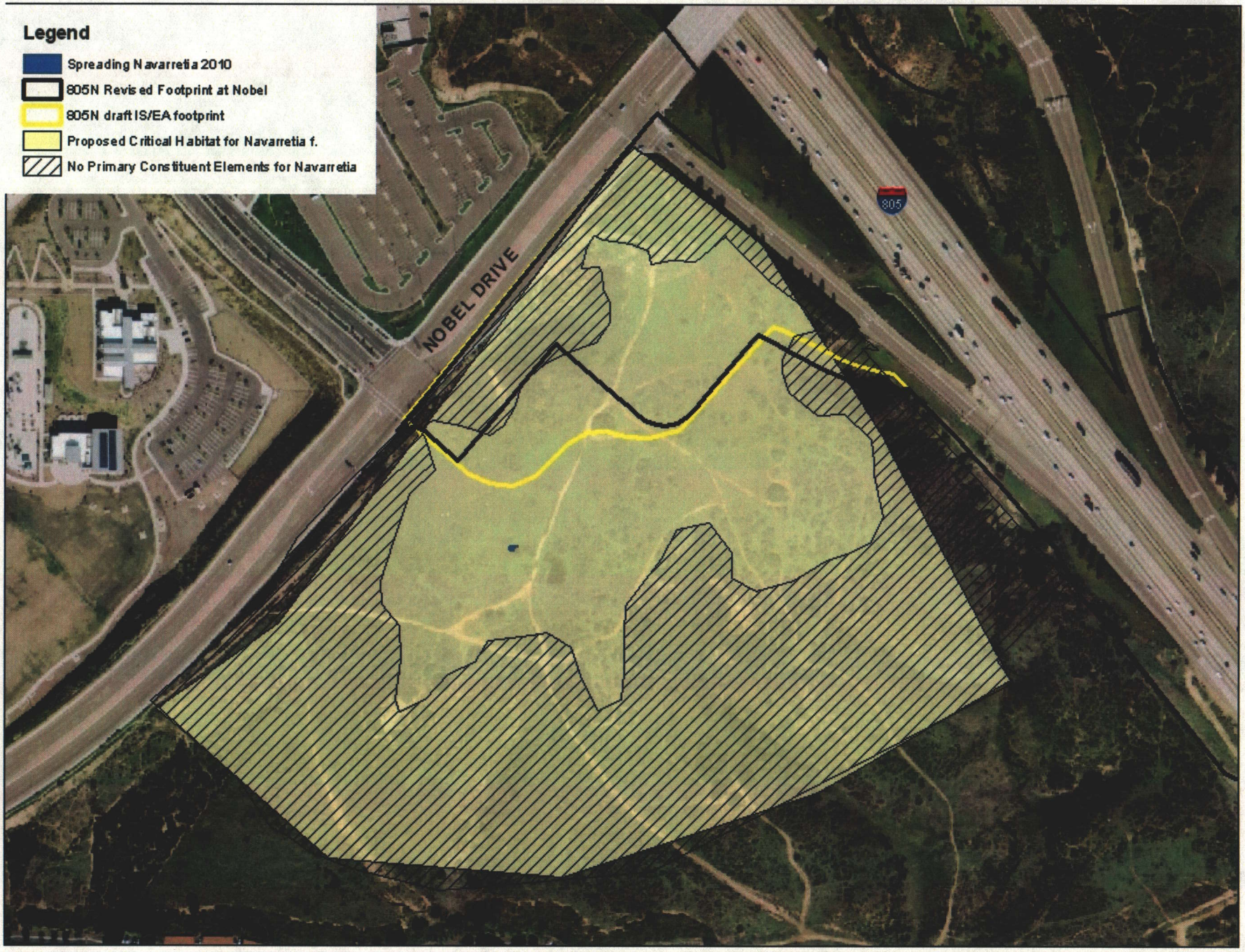



Figure 7 I-805 N Revised Footprint at Nobel and draft IS/EA footprint with the Proposed Critical Habitat for Navarretia and Area with no Primary Constituent Elements

RECORDING REQUESTED BY
CITY OF SAN DIEGO
DEVELOPMENT SERVICES
PERMIT INTAKE, MAIL STATION 501

WHEN RECORDED MAIL TO
PROJECT MANAGEMENT
PERMIT CLERK
MAIL STATION 501

SPACE ABOVE THIS LINE FOR RECORDER'S USE

JOB ORDER NUMBER: 523920

COASTAL DEVELOPMENT PERMIT NO. 631853
**CARROLL CANYON ROAD EXTENSION PROJECT NO. 175786**
**DEVELOPMENT SERVICES DEPARTMENT**

This Coastal Development Permit No. 631853 is granted by the Development Services Department of the City of San Diego to California Department of Transportation, Permittee, pursuant to San Diego Municipal Code [SDMC] section 126.0501. The site is located within the public right-of-way of Carroll Canyon Road, Mira Mesa Boulevard and Interstate 805 from just east of Scranton Road west to Sorrento Valley Road of the Mira Mesa and Torrey Pines Community Plan areas. The project site is legally described as public right-of-way.

Subject to the terms and conditions set forth in this Permit, permission is granted to Permittee to extend Carroll Canyon Road from just east of Scranton Road west to Sorrento Valley Road, improve Mira Mesa Boulevard and the on and off-ramps from Interstate 805 to Mira Mesa Boulevard and work within the Interstate 805 right-of-way to construct north and southbound high-occupancy vehicle lanes on Interstate 805 from Interstate 5 to Carroll Canyon Road, including construction of north-facing direct access ramps in the City of San Diego, San Diego County, described and identified by size, dimension, quantity, type, and location on the approved exhibits [Exhibit "A"] dated April 3, 2009, on file in the Development Services Department.

The project shall include:

a. The extension of Carroll Canyon Road from just east of Scranton Road west to Sorrento Valley Road, improve Mira Mesa Boulevard and the on and off-ramps from Interstate 805 to Mira Mesa Boulevard and work within the Interstate 805 right-of-way to construct north and southbound high-occupancy vehicle lanes on Interstate 805 from Interstate 5 to Carroll Canyon Road, including construction of north-facing direct access ramps in the City of San Diego, San Diego County;

b. Landscaping (planting, irrigation and landscape related improvements); and

c. Accessory improvements determined by the Development Services Department to be consistent with the land use and development standards in effect for this site per the adopted community plan, California Environmental Quality Act Guidelines, public and private improvement requirements of the City Engineer, the underlying zone(s), conditions of this Permit, and any other applicable regulations of the SDMC in effect for this site.

**STANDARD REQUIREMENTS:**

1. This permit must be utilized within thirty-six (36) months after the date on which all rights of appeal have expired. Failure to utilize and maintain utilization of this permit as described in the SDMC will automatically void the permit unless an Extension of Time has been granted. Any such Extension of Time must meet all SDMC requirements and applicable guidelines in affect at the time the extension is considered by the appropriate decision maker.

2. No permit for the construction or operation of any facility or improvement described herein shall be granted, nor shall any activity authorized by this Permit be conducted on the premises until:

a. The Permittee signs and returns the Permit to the Development Services Department.

3. Prior to the initiation of construction authorized by this Permit, an enhancement fee shall be deposited with the Development Services Department for the Los Peñasquitos Watershed Restoration and Enhancement Program. The enhancement fee shall be computed on the basis of site grading at a rate of $0.005 per square foot for all areas graded, with an additional rate of $0.03 per square foot for all impervious surfaces created by the development. The enhancement fee shall be computed by the Permittee and verified by the Development Services Department.

4. Unless this Permit has been revoked by the City of San Diego the property included by reference within this Permit shall be used only for the purposes and under the terms and conditions set forth in this Permit unless otherwise authorized by the Development Services Department.

5. This Permit is a covenant running with the subject right-of-way and shall be binding upon the Permittee and any successor or successors, and the interests of any successor shall be subject to each and every condition set out in this Permit and all referenced documents.

6. The continued use of this Permit shall be subject to the regulations of this and any other applicable governmental agency.

7. Issuance of this Permit by the City of San Diego does not authorize the Permittee for this permit to violate any Federal, State or City laws, ordinances, regulations or policies including, but not limited to, the Endangered Species Act of 1973 [ESA] and any amendments thereto (16 U.S.C. § 1531 et seq.).

8. The Permittee shall secure all necessary building permits. The Permittee is informed that to secure these permits, substantial modifications to the improvements to comply with applicable building, fire, mechanical and plumbing codes and State law requiring access for disabled people may be required.

9. Construction plans shall be in substantial conformity to Exhibit "A." No changes, modifications or alterations shall be made unless appropriate application(s) or amendment(s) to this Permit have been granted.

10. All of the conditions contained in this Permit have been considered and have been determined to be necessary in order to make the findings required for this Permit. It is the intent of the City that the holder of this Permit be required to comply with each and every condition in order to be afforded the special rights which the holder of the Permit is entitled as a result of obtaining this Permit.

In the event that any condition of this Permit, on a legal challenge by the Permittee of this Permit, is found or held by a court of competent jurisdiction to be invalid, unenforceable, or unreasonable, this Permit shall be void. However, in such an event, the Permittee shall have the right, by paying applicable processing fees, to bring a request for a new permit without the "invalid" conditions(s) back to the discretionary body which approved the Permit for a determination by that body as to whether all of the findings necessary for the issuance of the proposed permit can still be made in the absence of the "invalid" condition(s). Such hearing shall be a hearing de novo and the discretionary body shall have the absolute right to approve, disapprove, or modify the proposed permit and the condition(s) contained therein.

11. The Permittee shall defend, indemnify, and hold harmless the City, its agents, officers, and employees from any and all claims, actions, proceedings, damages, judgments, or costs, including attorney's fees, against the City or its agents, officers, or employees, relating to the issuance of this permit including, but not limited to, any action to attack, set aside, void, challenge, or annul this development approval and any environmental document or decision. The City will promptly notify applicant of any claim, action, or proceeding and, if the City should fail to cooperate fully in the defense, the Permittee shall not thereafter be responsible to defend, indemnify, and hold harmless the City or its agents, officers, and employees. The City may elect to conduct its own defense, participate in its own defense, or obtain independent legal counsel in defense of any claim related to this indemnification. In the event of such election, Permittee shall pay all of the costs related thereto, including without limitation reasonable attorney's fees and costs. In the event of a disagreement between the City and Permittee regarding litigation issues, the City shall have the authority to control the litigation and make litigation related decisions, including, but not limited to, settlement or other disposition of the matter. However, the Permittee shall not be required to pay or perform any settlement unless such settlement is approved by Permittee.

12. This Permit may be developed in phases.

**INFORMATION ONLY:**

- Any party on whom fees, dedications, reservations, or other exactions have been imposed as conditions of approval of this development permit, may protest the imposition within ninety days of the approval of this development permit by filing a written protest with the City Clerk pursuant to California Government Code §66020.

- This development may be subject to impact fees at the time of construction permit issuance.

APPROVED by the Development Services Department of the City of San Diego on April 3, 2009.

Permit Type/PTS Approval No.: CDP No. 631853
Date of Approval: April 3, 2009

AUTHENTICATED BY THE DEVELOPMENT SERVICES DEPARTMENT
CITY OF SAN DIEGO

John S. Fisher
Development Project Manager

**NOTE: Notary acknowledgment must be attached per Civil Code section 1189 et seq.**

---

**The undersigned Permittee**, by execution hereof, agrees to each and every condition of this Permit and promises to perform each and every obligation of Permittee hereunder.

California Department of Transportation
Permittee

By _____
Arturo Jacobo
Project Manager
California Department of Transportation

**NOTE: Notary acknowledgments must be attached per Civil Code section 1189 et seq.**

## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of San Diego

On May 18, 2009 (Date) before me, Raquel Herrera, Notary Public (Here Insert Name and Title of the Officer)

personally appeared ---------- John S. Fisher---------- (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(~~ies~~), and that by his/her/their signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Raquel Herrera (Signature of Notary Public)

RAQUEL HERRERA
Commission # 1779596
Notary Public - California
San Diego County
My Comm. Expires Nov 12, 2011

Place Notary Seal Above

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

**Description of Attached Document**

Title or Type of Document: CDP No. 631853, Carroll Canyon Road Extension; Project No. 175786

Document Date: April 3, 2009 Number of Pages: 7

Signer(s) Other Than Named Above: _____

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: _____
- ☐ Individual
- ☐ Corporate Officer — Title(s): _____
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: _____

Signer is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____
- ☐ Individual
- ☐ Corporate Officer — Title(s): _____
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: _____

Signer is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of San Diego }

On May 5, 2009 (Date) before me, Lorna G. Timog (Here Insert Name and Title of the Officer),

personally appeared Arturo Gonzalez Jacobo (Name(s) of Signer(s))

who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity~~(ies)~~, and that by his/~~her/their~~ signature~~(s)~~ on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Lorna G. Timog (Signature of Notary Public)

LORNA G. TIMOG
Commission # 1837268
Notary Public - California
San Diego County
My Comm. Expires Feb 20, 2013

Place Notary Seal Above

## OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

**Description of Attached Document**

Title or Type of Document: Coastal Development Permit No. 631853

Document Date: April 3, 2009 Number of Pages: 5

Signer(s) Other Than Named Above:

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: Arturo G. Jacobo
- ☐ Individual
- ☐ Corporate Officer — Title(s):
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☑ Other: Project Manager

Signer Is Representing: Department of Transportation

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name:
- ☐ Individual
- ☐ Corporate Officer — Title(s):
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other:

Signer Is Representing:

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

DEVELOPMNT SERVICES RESOLUTION NO. CM-6041
COASTAL DEVELOPMENT PERMIT NO. 631853
**CARROLL CANYON ROAD EXTENSION PROJECT NO. 175786**

WHEREAS, California Department of Transportation, Owner/Permittee, filed an application with the City of San Diego for a permit to extend Carroll Canyon Road from just east of Scranton Road west to Sorrento Valley Road, improve Mira Mesa Boulevard and the on and off-ramps from Interstate 805 to Mira Mesa Boulevard and work within the Interstate 805 right-of-way to construct north and southbound high-occupancy vehicle lanes on Interstate 805 from Interstate 5 to Carroll Canyon Road, including construction of north-facing direct access ramps in the City of San Diego, San Diego County (as described in and by reference to the approved Exhibits "A" and corresponding conditions of approval for the associated Permit No. 631853), on portions of a public right-of-way;

WHEREAS, the project site is located within the public right-of-way of Carroll Canyon Road, Mira Mesa Boulevard and Interstate 805 from just east of Scranton Road west to Sorrento Valley Road of the Mira Mesa and Torrey Pines Community Plan areas;

WHEREAS, the project site is legally described as public right-of-way;

WHEREAS, on April 3, 2009, the Development Services Department of the City of San Diego considered Coastal Development Permit No. 631853 pursuant to the Land Development Code of the City of San Diego;

BE IT RESOLVED by the Development Services Department of the City of San Diego as follows:

That the Development Services Department adopts the following written Findings, dated April 3, 2009.

FINDINGS:

**Coastal Development Permit - Section 126.0708**

A.

1. **The proposed coastal development will not encroach upon any existing physical access way that is legally used by the public or any proposed public accessway identified in a Local Coastal Program land use plan; and the proposed coastal development will enhance and protect public views to and along the ocean and other scenic coastal areas as specified in the Local Coastal Program land use plan.** The improvement of public right-of-way will not encroach upon existing physical access ways legally used by the public or any proposed access ways identified in a Local Coastal Program land use plan due to the nature of the project the public access in and through the project area, which is public right-of-way, will improve public access not encroach upon it. The improvement of public right-of-way will have no effect upon public views to and along the ocean and other scenic coastal areas which are specified in the Local Coastal Program land use plan.

2. **The proposed coastal development will not adversely affect environmentally**

**sensitive lands.** The improvement of public right-of-way authorized by the Coastal Development Permit contains no environmentally sensitive lands. As such the coastal development will not adversely affect environmentally sensitive lands.

3. **The proposed coastal development is in conformity with the certified Local Coastal Program land use plan and complies with all regulations of the certified Implementation Program.** The improvement of public right-of-way authorized by the Coastal Development Permit conforms to the Mira Mesa and Torrey Pines Community Plan Land Use Maps which identify the public right-of-ways as circulation element roadways. The improvement of public right-of-way authorized by the Coastal Development Permit will comply with all regulations of the certified Implementation Program.

4. **For every Coastal Development Permit issued for any coastal development between the nearest public road and the sea or the shoreline of any body of water located within the Coastal Overlay Zone the coastal development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act.** The improvement of public right-of-way authorized by the Coastal Development Permit is not between the nearest public road and the sea or the shoreline of any body of water located within the Coastal Overlay Zone. Further, improvement of public right-of-way authorized by the Coastal Development Permit will conform to the public access and public recreation policies of Chapter 3 of the California Coastal Act as the project approved by the Coastal Development Permit is the improvement of existing public right-of-way.

BE IT FURTHER RESOLVED that, based on the findings hereinbefore adopted by the Development Services Department, Coastal Development Permit No. 631853 is hereby GRANTED by the Development Services Department to the referenced Owner/Permittee, in the form, exhibits, terms and conditions as set forth in Permit No. 631853, a copy of which is attached hereto and made a part hereof.

John S. Fisher
Development Project Manager
Development Services

Adopted on: April 3, 2009

Job Order No. 523920

cc: Legislative Recorder, Development Services Department

# EXHIBIT 6-A

Master Utility Agreement

# FREEWAY MASTER CONTRACT

BETWEEN
CALIFORNIA DEPARTMENT OF TRANSPORTATION
AND
Pacific Bell Telephone Company doing Business as SBC

PARTIES:

The State of California, acting by and through its Department of Transportation ("Department"), which term "Department" includes its officers, agents, contractors, successors, assigns and other public agencies performing projects in connection with Department's freeway system, and Pacific Bell Telephone Company doing business as SBC ("Owner"), which term "Owner" includes its officers, agents, contractors, successors and assigns,

hereby agree effective this 15th day of November, 2004, as follows:

RECITALS:

A. Owner owns, operates or maintains, in the State of California, Utility Facilities as defined in Section 700 of the Streets and Highways Code. Certain of Owner's Utility Facilities may be operated under regulations of the California Public Utilities Commission.

B. Department has various Freeway Projects throughout the State of California and from time to time these projects require the Relocation of Owner's Utility Facilities.

C. The cost of such Relocation is presently apportioned between Department and Owner as provided for in the statutes of the State of California and/or existing Master Agreements.

D. Pursuant to Section 707.5 of the Streets and Highways Code, Department and Owner desire to enter into a contract apportioning the obligations and costs of the above-referenced Relocations to be borne by each party.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements contained in this Freeway Master Contract and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Department and Owner agree as follows:

1. This Freeway Master Contract ("Master Contract"), in accordance with the provisions of Section 707.5 of the Streets and Highways Code ("S&H Code") shall govern exclusively the determination of the obligations and costs to be borne by Department and Owner in regard to Utility Facility work described herein in lieu of determination under the current provisions of Sections 702 to 707, inclusive, of the S&H Code and all other laws, and prior contracts and agreements which would be applicable to the determination of liability or the obligation for costs incurred in connection with this work. This Master Contract shall apply throughout the State of California to all of Department's Freeway Projects.

2. As used in this Master Contract, the following terms have the following meanings:

(A) "Freeway" means:

1. a highway, together with any designated frontage roads, under the jurisdiction of the Department in respect to which, and along the right-of-way of which, the owners of abutting lands have no right or easement of access to or from their abutting lands or only limited or restricted right or easement of such access; or

2. a like contemplated highway together with any designated frontage roads, where the California Transportation Commission has selected, adopted and determined the location of the same and declared the same to be a State freeway, and Department has approved a right-of-way map in conjunction with its property appraisal, which map delineates the limited or restricted right or easement of access. Said maps shall be available for inspection by Owner.

(B) "Freeway Project" means a project in connection with Department's freeway system by Department or others which includes, but is not limited to, work occasioned by and of benefit to the construction, improvement, maintenance, operation or use of a freeway, and which may include such work within the right-of-way of a freeway or any other public road or on other real property.

(C) "Notice to Owner" means a formal written demand as required by law and as defined in Section 673 of the S&H Code.

(D) "Relocation" means removal, relocation, protection or any other rearrangement of Owner's Utility Facility as ordered and approved by Department to accommodate Department's Freeway Project. Relocation shall include, but not be limited to: preparation and submission by Owner and approval by Department of relocation plans or drawings sufficiently engineered to allow construction of the ordered Relocation, and a detailed estimate by Owner of the actual and necessary cost of the ordered Relocation.

(E) "Wasted Work" means design or construction work performed by Owner, upon written direction from the Department, for a Relocation rendered useless or unnecessary as a result of the Department's cancellation and/or scope of changes as agreed by both parties of the specific Freeway Project.

(F) "Betterment" means the difference in cost between the intended Relocation of Owner's Utility Facility proposed and submitted by Owner for Department's approval and a Relocation which would provide the Owner with equivalent substitute Utility Facilities for those Utility Facilities requiring Relocation to accommodate Department's project. As employed herein, betterment does not include those differences in cost caused by changes in manufacturing standards, availability of materials, or regulatory requirement.

(G) "Private Right-of-Way of Owner" means a property right held by Owner in the form of either a recorded or fully executed deed in the usual form or other valid instrument recorded or fully executed and conveying a permanent property right for the Utility Facility in a defined area of real property, or a defined area within the State highway right-of-way that is subject to a recorded Joint Use Agreement (JUA) or Consent To Common Use Agreement (CCUA)

(H) "Hazardous Material(s)" means any hazardous substance, hazardous material, or hazardous waste as defined under state or federal law.

3. The work to be performed under this Master Contract shall be all work necessary to accomplish Relocation of Owner's existing Utility Facilities as necessitated by Department's Freeway Project.

4. All work under this Master Contract shall be preceded by the issuance of a written Notice to Owner by Department.

5. The cost of all work to complete the Relocation of Owner's existing Utility Facilities necessitated by Department's Freeway Project shall be calculated pursuant to the provisions of Paragraph 6 and shall be allocated as follows:

   (A) Department shall pay one hundred percent (100%) of the cost of Relocation of Owner's existing facilities located in a Private Right-of-Way of Owner, upon delivery by Owner to Department a copy of such Private Right-of-Way concurrent with timely submission of Owner's relocation plan to Department.

   (B) Owner shall pay one hundred percent (100%) of the cost of Relocation of Owner's Utility Facilities originally installed within State Right-of-Way pursuant to Department's Encroachment Permit and without benefit of a valid franchise.

   (C) In all other circumstances, including but not limited to Owner's existing Utility Facilities in place pursuant to a valid franchise, statute, or non-perfected claim of prescription, the cost of Relocation of Owner's existing Utility Facilities shall be borne equally by Department and Owner.

6. Cost of Relocation includes the actual and reasonable cost of all necessary engineering, labor and transportation, and all necessary materials exclusive of any dismantled Utility Facilities used in any Relocation, together with reasonable and usual indirect and overhead charges attributable to that work, and any necessary new private Utility Facility right-of-way involved in the Relocation, except:

   (A) In any case in which Department is required under the provisions of this Master Contract to pay its share of the cost of Relocation of any Utility Facility, the Department shall be entitled to credits as follows:

      1. The amount of any betterment to the Utility Facility resulting from such Relocation.

2. The salvage value of any materials or parts salvaged and retained by Owner.

3. If a new Utility Facility or portion thereof is constructed to accomplish such Relocation, an amount bearing the same proportion to the original cost of the displaced facility or portion thereof as its age bears to its normal expected life.

$$\text{Credit} = \frac{\text{Age of facility}}{\text{Normal expected life}} \times \text{Original cost}$$

(B) A credit shall not be allowed against any portion of the cost that is otherwise chargeable to Owner.

(C) A credit allowance for age shall not be applied to publicly-owned sewers.

7. This Master Contract does not apply to:

(A) The positive location of underground Utility Facilities.

(B) Buildings or any Utility Facilities located therein or thereon, whether or not devoted to public use.

(C) Telecommunications facilities, including, but not limited to, wireless antennae and related equipment and/or fiber optic lines, installed pursuant to an agreement with specific provisions relating to the removal or relocation of the telecommunication facilities. Such an agreement includes, but is not limited to, the Master License Agreement for Cellular and PCS Carriers and any agreement or permit for the longitudinal use of controlled access right-of-way facilities such as freeways, expressways and bridges.

(D) "Service" utility facilities for which Department is the regularly billed sole customer for the commodity provided, or as defined by California Public Utilities Commission.

8. Where Owner is the owner of a part of, or of a present undivided part interest in, any Utility Facility, this Master Contract shall apply to the extent of such interest.

9. For each Relocation, Department and Owner shall enter into a project specific Utility Agreement setting forth, among other things, the Relocation arrangements between the parties regarding cost apportionment, billing, payment, documentation, documentation retention, and accounting, generally using the standard clauses and form published in Department's current Right-of-Way and Contracts manuals.

10. Upon the issuance of a Notice to Owner, or as otherwise agreed upon in the specific Utility Agreement, the Owner shall diligently undertake, or cause to be undertaken, the Relocation of its Utility Facilities in accordance with Department's reasonable schedule.

11. Department will pay, in its entirety, that portion of the cost of the Relocation constituting Wasted Work. The remainder of the cost of that Relocation shall be borne pursuant to the cost allocation provisions defined in Paragraph 5.

12. If Department requires the Relocation within its right-of-way of any Utility Facility more than once during a four-year period, Department shall pay the cost of that second Relocation, and any subsequent additional Relocations of that Utility Facility within such four-year period on any subsequent or additional project.

13. Upon discovery of Hazardous Material in connection with the Relocation, both Owner and Department shall immediately confer to explore all reasonable alternatives and agree on a course of action, and Owner shall immediately reschedule the work to complete the Relocation in accordance with Department's reasonable schedule and in compliance with existing statutes or regulations concerning the disposition of Hazardous Material.

    (A) Department will pay, in its entirety, those costs for additional necessary effort undertaken within State's right-of-way to comply with existing statutes or regulations concerning the disposition of Hazardous Material found as a consequence of that Relocation, unless such conditions are attributable to Owner's existing installation or operation.

    (B) Those costs for additional necessary efforts undertaken within the area of the replacement property right located outside State's right-of-way which are required to comply with existing statutes or regulations concerning the disposition of Hazardous Material shall be allocated between the parties pursuant to the hereinabove provisions of Paragraph 5.

    (C) Each party to this Master Contract retains the right to pursue recovery of its share of any such Hazardous Material related costs from the other party or third parties in accordance with existing law.

14. Whenever Owner's affected Utility Facilities will remain within the existing Private Right-of-Way of Owner, and these Utility Facilities will fall within the right-of-way of a public road under the jurisdiction of the Department, Department and Owner shall jointly execute an agreement for common use of the subject area which agreement shall also confirm any prior rights held by Owner in said Private Right-of-Way of Owner.

15. Whenever Owner's affected Utility Facilities will be relocated from the existing Private Right-of-Way of Owner to a new location that falls outside such existing Private Right-of-Way of Owner, the Department shall convey or cause to be conveyed a new right-of-way for such relocated Utility Facilities as will correspond to the existing Private Right-of-Way of Owner. For such Relocations, the Department shall issue, or cause to be issued, to Owner, without charge to Owner or credit to Department, appropriate replacement rights in the new location mutually acceptable to both Department and Owner for those rights previously held by Owner in its existing Private Right-of-Way. In discharge of Department's obligations under this Paragraph, in the event that the new location falls within the right-of-way of a public road under the jurisdiction of Department, Department and Owner shall jointly execute an agreement for joint use of said new area which agreement shall also confirm any prior rights held by Owner in said Private Right-of-Way of Owner. In consideration for these replacement rights being issued by Department, Owner shall subsequently convey to Department, or its nominee, within Department's Right-of-Way, all of its corresponding right, title and interest within Owner's existing Private Right-of-Way so vacated.

16. If the existing Private Right-of-Way of Owner includes fee title, Department shall acquire from Owner, for just compensation under State law, those property rights required by Department for the public roadway by separate transaction, leaving to Owner those remaining property rights appropriate for the placement and operation of Owner's Utility Facilities in the Private Right-of-Way of Owner.

17. This Master Contract shall inure to the benefit of, and shall be binding upon, the successors and assigns of the parties.

18. This Master Contract may be amended, changed or altered by mutual consent of the parties in writing.

19. Either party, upon one year's written notice, may terminate this Master Contract, except that, notwithstanding that termination, the provisions of this Master Contract shall remain in full force and effect with respect to any Relocation of Utility Facilities required under a Notice to Owner issued prior to the Master Contract termination.

20. Time shall be of the essence of this Master Contract.

21. This Master Contract supersedes any previous Master Agreement entered into between the parties under Section 707.5 of the S&H Code. This Master Contract does not supersede any Notices to Owner or Utility Agreements issued or executed pursuant to any previous valid Master Agreement.

22. This Master Contract shall become effective when executed by the last of the two parties.

23. No state funds or resources are allocated or encumbered as against this Master Contract and Department's obligations and duties expressed herein are conditioned upon the passage of the annual State Budget Act and the allocation of funds by the California Transportation Commission and the encumbrance of funds under a project specific Utility Agreement.

Owner

By J. Bryon McDaniel Date 11/1/04

VICE PRESIDENT, CONSTRUCTION & ENGINEERING
SBC WEST

State of California
Department of Transportation

By [signature] Date 11-1-04

Chief
Division of Right of Way and Land Surveys

Approved as to form and procedure

By [signature] Date 11-5-04
Attorney for California Department of Transportation

# FREEWAY MASTER CONTRACT

BETWEEN
CALIFORNIA DEPARTMENT OF TRANSPORTATION
AND
San Diego Gas & Electric

PARTIES:

The State of California, acting by and through its Department of Transportation ("Department"), which term "Department" includes its officers, agents, contractors, successors, assigns and other public agencies performing projects in connection with Department's freeway system, and San Diego Gas & Electric

("Owner"), which term "Owner" includes its officers, agents, contractors, successors and assigns,

hereby agree effective this 1st day of November, 2004, as follows:

RECITALS:

A. Owner owns, operates or maintains, in the State of California, Utility Facilities as defined in Section 700 of the Streets and Highways Code. Certain of Owner's Utility Facilities may be operated under regulations of the California Public Utilities Commission.

B. Department has various Freeway Projects throughout the State of California and from time to time these projects require the Relocation of Owner's Utility Facilities.

C. The cost of such Relocation is presently apportioned between Department and Owner as provided for in the statutes of the State of California and/or existing Master Agreements.

D. Pursuant to Section 707.5 of the Streets and Highways Code, Department and Owner desire to enter into a contract apportioning the obligations and costs of the above-referenced Relocations to be borne by each party.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements contained in this Freeway Master Contract and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Department and Owner agree as follows:

1. This Freeway Master Contract ("Master Contract"), in accordance with the provisions of Section 707.5 of the Streets and Highways Code ("S&H Code") shall govern exclusively the determination of the obligations and costs to be borne by Department and Owner in regard to Utility Facility work described herein in lieu of determination under the current provisions of Sections 702 to 707, inclusive, of the S&H Code and all other laws, and prior contracts and agreements which would be applicable to the determination of liability or the obligation for costs incurred in connection with this work. This Master Contract shall apply throughout the State of California to all of Department's Freeway Projects.

2. As used in this Master Contract, the following terms have the following meanings:

(A) "Freeway" means:

1. a highway, together with any designated frontage roads, under the jurisdiction of the Department in respect to which, and along the right-of-way of which, the owners of abutting lands have no right or easement of access to or from their abutting lands or only limited or restricted right or easement of such access; or

2. a like contemplated highway together with any designated frontage roads, where the California Transportation Commission has selected, adopted and determined the location of the same and declared the same to be a State freeway, and Department has approved a right-of-way map in conjunction with its property appraisal, which map delineates the limited or restricted right or easement of access. Said maps shall be available for inspection by Owner.

(B) "Freeway Project" means a project in connection with Department's freeway system by Department or others which includes, but is not limited to, work occasioned by and of benefit to the construction, improvement, maintenance, operation or use of a freeway, and which may include such work within the right-of-way of a freeway or any other public road or on other real property.

(C) "Notice to Owner" means a formal written demand as required by law and as defined in Section 673 of the S&H Code.

(D) "Relocation" means removal, relocation, protection or any other rearrangement of Owner's Utility Facility as ordered and approved by Department to accommodate Department's Freeway Project. Relocation shall include, but not be limited to: preparation and submission by Owner and approval by Department of relocation plans or drawings sufficiently engineered to allow construction of the ordered Relocation, and a detailed estimate by Owner of the actual and necessary cost of the ordered Relocation.

(E) "Wasted Work" means design or construction work performed by Owner, upon written direction from the Department, for a Relocation rendered useless or unnecessary as a result of the Department's cancellation and/or scope of changes as agreed by both parties of the specific Freeway Project.

(F) "Betterment" means the difference in cost between the intended Relocation of Owner's Utility Facility proposed and submitted by Owner for Department's approval and a Relocation which would provide the Owner with equivalent substitute Utility Facilities for those Utility Facilities requiring Relocation to accommodate Department's project. As employed herein, betterment does not include those differences in cost caused by changes in manufacturing standards, availability of materials, or regulatory requirement.

(G) "Private Right-of-Way of Owner" means a property right held by Owner in the form of either a recorded or fully executed deed in the usual form or other valid instrument recorded or fully executed and conveying a permanent property right for the Utility Facility in a defined area of real property, or a defined area within the State highway right-of-way that is subject to a recorded Joint Use Agreement (JUA) or Consent To Common Use Agreement (CCUA)

(H) "Hazardous Material(s)" means any hazardous substance, hazardous material, or hazardous waste as defined under state or federal law.

3. The work to be performed under this Master Contract shall be all work necessary to accomplish Relocation of Owner's existing Utility Facilities as necessitated by Department's Freeway Project.

4. All work under this Master Contract shall be preceded by the issuance of a written Notice to Owner by Department.

5. The cost of all work to complete the Relocation of Owner's existing Utility Facilities necessitated by Department's Freeway Project shall be calculated pursuant to the provisions of Paragraph 6 and shall be allocated as follows:

   (A) Department shall pay one hundred percent (100%) of the cost of Relocation of Owner's existing facilities located in a Private Right-of-Way of Owner, upon delivery by Owner to Department a copy of such Private Right-of-Way concurrent with timely submission of Owner's relocation plan to Department.

   (B) Owner shall pay one hundred percent (100%) of the cost of Relocation of Owner's Utility Facilities originally installed within State Right-of-Way pursuant to Department's Encroachment Permit and without benefit of a valid franchise.

   (C) In all other circumstances, including but not limited to Owner's existing Utility Facilities in place pursuant to a valid franchise, statute, or non-perfected claim of prescription, the cost of Relocation of Owner's existing Utility Facilities shall be borne equally by Department and Owner.

6. Cost of Relocation includes the actual and reasonable cost of all necessary engineering, labor and transportation, and all necessary materials exclusive of any dismantled Utility Facilities used in any Relocation, together with reasonable and usual indirect and overhead charges attributable to that work, and any necessary new private Utility Facility right-of-way involved in the Relocation, except:

   (A) In any case in which Department is required under the provisions of this Master Contract to pay its share of the cost of Relocation of any Utility Facility, the Department shall be entitled to credits as follows:

      1. The amount of any betterment to the Utility Facility resulting from such Relocation.

2. The salvage value of any materials or parts salvaged and retained by Owner.

3. If a new Utility Facility or portion thereof is constructed to accomplish such Relocation, an amount bearing the same proportion to the original cost of the displaced facility or portion thereof as its age bears to its normal expected life.

$$\textbf{Credit} = \frac{\textbf{Age of facility}}{\textbf{Normal expected life}} \times \textbf{Original cost}$$

(B) A credit shall not be allowed against any portion of the cost that is otherwise chargeable to Owner.

(C) A credit allowance for age shall not be applied to publicly-owned sewers.

7. This Master Contract does not apply to:

(A) The positive location of underground Utility Facilities.

(B) Buildings or any Utility Facilities located therein or thereon, whether or not devoted to public use.

(C) Telecommunications facilities, including, but not limited to, wireless antennae and related equipment and/or fiber optic lines, installed pursuant to an agreement with specific provisions relating to the removal or relocation of the telecommunication facilities. Such an agreement includes, but is not limited to, the Master License Agreement for Cellular and PCS Carriers and any agreement or permit for the longitudinal use of controlled access right-of-way facilities such as freeways, expressways and bridges.

(D) "Service" utility facilities for which Department is the regularly billed sole customer for the commodity provided, or as defined by California Public Utilities Commission.

8. Where Owner is the owner of a part of, or of a present undivided part interest in, any Utility Facility, this Master Contract shall apply to the extent of such interest.

9. For each Relocation, Department and Owner shall enter into a project specific Utility Agreement setting forth, among other things, the Relocation arrangements between the parties regarding cost apportionment, billing, payment, documentation, documentation retention, and accounting, generally using the standard clauses and form published in Department's current Right-of-Way and Contracts manuals.

10. Upon the issuance of a Notice to Owner, or as otherwise agreed upon in the specific Utility Agreement, the Owner shall diligently undertake, or cause to be undertaken, the Relocation of its Utility Facilities in accordance with Department's reasonable schedule.

11. Department will pay, in its entirety, that portion of the cost of the Relocation constituting Wasted Work. The remainder of the cost of that Relocation shall be borne pursuant to the cost allocation provisions defined in Paragraph 5.

12. If Department requires the Relocation within its right-of-way of any Utility Facility more than once during a four-year period, Department shall pay the cost of that second Relocation, and any subsequent additional Relocations of that Utility Facility within such four-year period on any subsequent or additional project.

13. Upon discovery of Hazardous Material in connection with the Relocation, both Owner and Department shall immediately confer to explore all reasonable alternatives and agree on a course of action, and Owner shall immediately reschedule the work to complete the Relocation in accordance with Department's reasonable schedule and in compliance with existing statutes or regulations concerning the disposition of Hazardous Material.

    (A) Department will pay, in its entirety, those costs for additional necessary effort undertaken within State's right-of-way to comply with existing statutes or regulations concerning the disposition of Hazardous Material found as a consequence of that Relocation, unless such conditions are attributable to Owner's existing installation or operation.

    (B) Those costs for additional necessary efforts undertaken within the area of the replacement property right located outside State's right-of-way which are required to comply with existing statutes or regulations concerning the disposition of Hazardous Material shall be allocated between the parties pursuant to the hereinabove provisions of Paragraph 5.

    (C) Each party to this Master Contract retains the right to pursue recovery of its share of any such Hazardous Material related costs from the other party or third parties in accordance with existing law.

14. Whenever Owner's affected Utility Facilities will remain within the existing Private Right-of-Way of Owner, and these Utility Facilities will fall within the right-of-way of a public road under the jurisdiction of the Department, Department and Owner shall jointly execute an agreement for common use of the subject area which agreement shall also confirm any prior rights held by Owner in said Private Right-of-Way of Owner.

15. Whenever Owner's affected Utility Facilities will be relocated from the existing Private Right-of-Way of Owner to a new location that falls outside such existing Private Right-of-Way of Owner, the Department shall convey or cause to be conveyed a new right-of-way for such relocated Utility Facilities as will correspond to the existing Private Right-of-Way of Owner. For such Relocations, the Department shall issue, or cause to be issued, to Owner, without charge to Owner or credit to Department, appropriate replacement rights in the new location mutually acceptable to both Department and Owner for those rights previously held by Owner in its existing Private Right-of-Way. In discharge of Department's obligations under this Paragraph, in the event that the new location falls within the right-of-way of a public road under the jurisdiction of Department, Department and Owner shall jointly execute an agreement for joint use of said new area which agreement shall also confirm any prior rights held by Owner in said Private Right-of-Way of Owner. In consideration for these replacement rights being issued by Department, Owner shall subsequently convey to Department, or its nominee, within Department's Right-of-Way, all of its corresponding right, title and interest within Owner's existing Private Right-of-Way so vacated.

16. If the existing Private Right-of-Way of Owner includes fee title, Department shall acquire from Owner, for just compensation under State law, those property rights required by Department for the public roadway by separate transaction, leaving to Owner those remaining property rights appropriate for the placement and operation of Owner's Utility Facilities in the Private Right-of-Way of Owner.

17. This Master Contract shall inure to the benefit of, and shall be binding upon, the successors and assigns of the parties.

18. This Master Contract may be amended, changed or altered by mutual consent of the parties in writing.

19. Either party, upon one year's written notice, may terminate this Master Contract, except that, notwithstanding that termination, the provisions of this Master Contract shall remain in full force and effect with respect to any Relocation of Utility Facilities required under a Notice to Owner issued prior to the Master Contract termination.

20. Time shall be of the essence of this Master Contract.

21. This Master Contract supersedes any previous Master Agreement entered into between the parties under Section 707.5 of the S&H Code. This Master Contract does not supersede any Notices to Owner or Utility Agreements issued or executed pursuant to any previous valid Master Agreement.

22. This Master Contract shall become effective when executed by the last of the two parties.

23. No state funds or resources are allocated or encumbered as against this Master Contract and Department's obligations and duties expressed herein are conditioned upon the passage of the annual State Budget Act and the allocation of funds by the California Transportation Commission and the encumbrance of funds under a project specific Utility Agreement.

San Diego Gas & Electric

Owner

By Debra R. Reed Date 2/7/05

State of California
Department of Transportation

By _____ Date 2-22-05

Chief
Division of Right of Way and Land Surveys

Approved as to form and procedure

By _____ Date 2/22/05
Attorney for California Department of Transportation

# FREEWAY MASTER CONTRACT

BETWEEN THE
CALIFORNIA DEPARTMENT OF TRANSPORTATION
AND THE
NAME OF COMPANY

PARTIES:

The State of California, acting by and through its Department of Transportation ("Department"), which term "Department" includes its officers, agents, contractors, successors, assigns and other public agencies performing projects in connection with Department's freeway system, and

Verizon California Inc., ("Owner"), which term "Owner" includes its officers, agents, contractors, successors and assigns,

hereby agree effective this 8th day of Jan. '04 as follows:

RECITALS:

A. Owner owns, operates or maintains, in the State of California, Utility Facilities as defined in Section 700 of the Streets and Highways Code. Certain of Owner's Utility Facilities may be operated under regulations of the California Public Utilities Commission (CPUC).

B. Department has various Freeway projects throughout the State of California and from time to time these projects require the Relocation of Owner's Utility Facilities.

C. The cost of such Relocation is presently apportioned between Department and Owner as provided for in the statutes of the State of California and/or existing Master Agreements.

D. Pursuant to Section 707.5 of the Streets and Highways Code, Department and Owner desire to enter into a contract apportioning the obligations and costs of the above-referenced Relocations to be borne by each party.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements contained in this Master Contract and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Department and Owner agree as follows:

1. This Freeway Master Contract ("Master Contract"), in accordance with the provisions of Section 707.5 of the Streets and Highways Code ("S&H Code") shall govern exclusively the determination of the obligations and costs to be borne by Department and Owner in regard to Utility Facility work described herein in lieu of determination under the current provisions of Sections 702 to 707, inclusive, of the S&H Code and all other laws, and prior contracts and agreements which would be applicable to the determination of liability or the obligation for costs incurred in connection with this

work. This Master Contract shall apply throughout the State of California to all of Department's Freeway projects.

2. As used in this Master Contract, the following terms have the following meanings:

(A) "Freeway" means:

1. a highway under the jurisdiction of the Department in respect to which, and along the right-of-way of which, the owners of abutting lands have no right or easement of access to or from their abutting lands or only limited or restricted right or easement of such access; or

2. a like contemplated highway where the California Transportation Commission has selected, adopted and determined the location of the same and declared the same to be a State freeway, and Department has approved a right-of-way map in conjunction with its property appraisal, which map delineates the limited or restricted right or easement of access. Said maps shall be available for inspection by Owner.

(B) "Notice to Owner" means a formal written demand as required by law and as defined in Section 673 of the S&H Code.

(C) "Relocation" means removal, relocation, protection or any other rearrangement of Owner's Utility Facility as ordered and approved by Department to accommodate Department's freeway project.

(D) "Wasted Work" means design or construction work performed by Owner, upon written direction from the Department, for a Relocation rendered useless or unnecessary as a result of the Department's cancellation or substantial revision of the specific Freeway project.

(E) "Betterment" means the difference in cost between the intended relocation of Owner's facility proposed and submitted by Owner for Department's approval and a relocation which would provide the Owner with equivalent substitute utility facilities for those facilities requiring relocation to accommodate Department's project. As employed herein, betterment does not include those differences in cost caused by changes in manufacturing standards, availability of materials, or regulatory requirements.

(F) "Temporary Relocation" means any relocation caused by construction of a traffic detour.

3. The work to be performed under this Master Contract shall be all work necessary to accomplish Relocation of Owner's existing utility facilities as necessitated by Department's Freeway project.

4. All work under this Master Contract shall be preceded by the issuance of a written Notice to Owner by Department.

5. The cost of all work to complete the Relocation of Owner's existing Utility Facilities necessitated by Department's Freeway project shall be borne equally by Department and Owner.

6. Cost of Relocation includes the actual and reasonable cost of:

(A) All necessary engineering, labor and transportation, and all necessary materials exclusive of any dismantled Utility Facilities used in any Relocation, together with reasonable and usual indirect and overhead charges attributable to that work, and any necessary new private utility facility right-of-way involved in the Relocation, except:

1. In any case in which Department is required under the provisions of this Master Contract to pay its share of the cost of Relocation of any Utility Facility, the Department shall be entitled to credits as follows:

(a) The amount of any betterment to the Utility Facility resulting from such Relocation.

(b) The salvage value of any materials or parts salvaged and retained by Utility.

(c) If a new Utility Facility or portion thereof is constructed to accomplish such Relocation, an amount bearing the same proportion to the original cost of the displaced facility or portion thereof as its age bears to its normal expected life.

$$\text{Credit} = \frac{\text{Age of facility}}{\text{Normal expected life}} \times \text{Original cost}$$

2. A credit shall not be allowed against any portion of the cost that is otherwise chargeable to Owner.

3. A credit allowance for age shall not be applied to publicly owned sewers.

(B) Additional necessary efforts undertaken outside State's right-of-way to comply with existing statutes or regulations concerning the disposition of hazardous material pursuant to the relocation. Either party to this Master Contract retains the option to pursue recovery of its share of such costs from a third party generator, or from the other party if that party is the generator, in accordance with existing law.

7. This Master Contract does not apply to:

(A) The positive location of underground utility facilities.

(B) Buildings or any Utility Facilities located therein or thereon, whether or not devoted to public use.

(C) Telecommunications facilities, including, but not limited to, wireless antennae and related equipment and/or fiber optic lines, installed pursuant to an agreement with specific provisions relating to the removal or relocation of the telecommunication facilities. Such an agreement includes, but is not limited to, the Master License Agreement for Cellular and PCS Carriers and any agreement or permit for the longitudinal use of controlled access right-of-way facilities such as freeways, expressways and bridges.

(D) "Service" utility facilities for which Department is the regularly billed sole customer for the commodity provided, or as defined by California Public Utilities Commission.

8. Where Owner is the owner of a part of, or of a present undivided part interest in, any Utility Facility, this Master Contract shall apply to the extent of such interest.

9. For each Relocation, Department and Owner shall enter into a project specific Utility Agreement setting forth, among other things, the Relocation arrangements between the parties regarding cost apportionment, billing, payment, documentation, documentation retention, and accounting, generally using the standard clauses and form published in Department's current Right of Way and Contracts manuals.

10. Upon the issuance of a Notice to Owner, or as otherwise agreed upon in the specific Utility Agreement, the Owner shall diligently undertake, or cause to be undertaken, the Relocation of its Utility Facilities in accordance with Department's schedule.

11. Department will pay, in its entirety, that portion of the cost of the Relocation constituting Wasted Work. The remainder of the cost of that Relocation shall be borne equally by Department and Owner.

12. If Department requires the relocation within its right-of-way of any utility facility more than once during a four-year period, Department shall pay the cost of that second relocation, and any subsequent additional relocations of that utility facility within such four-year period on any subsequent or additional project.

13. Department will pay, in its entirety, those costs for additional necessary effort undertaken within State's right-of-way to comply with existing statutes or regulations concerning the disposition of hazardous material occurring by reason of State's actions and found as a consequence of that relocation, except for such conditions attributable to Owner's existing installation or operation. Department retains the right to pursue recovery of its costs from the Owner as generator, or from a third party generator, in accordance with existing law.

14. Whenever Owner's affected Utility Facilities will remain within Owner's existing private right-of-way, and these Utility Facilities will fall within the right-of-way of a public road under the jurisdiction of the Department, Department and Owner shall jointly execute an agreement for common use of the subject area which agreement shall also confirm any prior rights held by Owner in said private right-of-way.

15. Whenever Owner's affected Utility Facilities will be Relocated from Owner's private right-of-way to a new location that falls outside Owner's private right-of-way, and the new location falls within the right-of-way of a public road under the jurisdiction of Department, Department and Owner shall jointly execute an agreement for joint use of said new area and as a part of which Department shall issue, or cause to be issued, to Owner, without charge to Owner or credit to Department, appropriate replacement rights mutually acceptable to both Department and Owner for those rights previously held by Owner in its private right-of-way. In consideration for these replacement rights being issued by Department, Owner shall concurrently convey to Department, or its nominee, all of its corresponding right, title and interest within Owner's vacated right-of-way.

16. If Owner's existing private right-of-way includes fee title, Department shall acquire from Owner, for just compensation under State law, those fee title rights required for the public road by separate transaction, leaving to Owner those remaining property rights appropriate for the placement and operation of Owner's facilities.

17. This Master Contract shall inure to the benefit of, and shall be binding upon, the successors and assigns of the parties.

18. This Master Contract may be amended, changed or altered by mutual consent of the parties in writing.

19. Either party, upon one year's written notice, may terminate this Master Contract, except that, notwithstanding that termination, the provisions of this Master Contract shall remain in full force and effect with respect to any Relocation of Utility Facilities required under a Notice to Owner issued prior to the Master Contract termination.

20. Time shall be of the essence of this Master Contract.

21. This Master Contract supersedes any previous Master Agreement entered into between the parties under section 707.5 of the S&H Code. This Master Contract does not supersede any Notices to Owner or project specific Utility Agreements issued or executed pursuant to any previous valid Master Agreement.

22. This Master Contract shall become effective when executed by the last of the two parties.

23. No State funds or resources are allocated or encumbered as against this Master Contract and State's obligations and duties expressed herein are conditioned upon the passage of the annual State Budget Act and the allocation of funds by the California Transportation Commission and the encumbrance of funds under a project specific Utility Agreement.

Owner VERIZON CALIFORNIA INC.

By D Anders : Date 12.24.03

NAME, Office and Authority
DEBORAH ANDERS
REGION PRESIDENT - OFFICER

State of California
Department of Transportation

By _____ Date 1-6-04

NAME, Chief
Division of Right of Way

By Lorri L. Wilson Date 1-8-04

NAME, Chief, Utilities
Division of Right of Way

# EXHIBIT 6-B

Department Utility Permits

# 600 UTILITIES PERMITS

This chapter addresses the initial placement, adjustment, relocation, and replacement of utility facilities in all State highways. It also describes specific requirements associated with these permit codes:

| Sect. | | | Sect. | | |
|---|---|---|---|---|---|
| 606.4C | **BB** | Broadband | 620 | **UL** | Underground Longitudinal (Minor) |
| 628 | **UB** | Utilities in or on a Bridge | 617.1 | **UM** | Utility Maintenance |
| 618 | **UC** | Conventional Aerial | 621 | **UR** | State Required Relocation |
| 617.2 | **UE** | Utility Maintenance (Expanded) | 622 | **US** | Service Connections |
| 619 | **UF** | Freeway Aerial | 624 | **UT** | Open Cut Road |
| 623 | **UJ** | Transverse Bore & Jack | 629 | **UX** | Trenching & Shoring |
| 620 | **UK** | Underground Longitudinal (Major) | | | |

All Engineering reports or plans for the design and construction of a proposed project, submitted for permit are required to be signed and stamped by a Registered Engineer.

In accordance with CPUC requirements, utility plans are not required to be signed or stamped by a Registered Engineer. (Rev. 02/06)

## 601 INTRODUCTION

The most common utility facilities are:

- Water
- Sewer
- Electrical
- Telephone
- Cable Television
- Cellular Telephone
- Natural Gas
- Common-carrier petroleum pipelines

Services, products, and commodities, such as those mentioned above, that are provided as a service to the public are called public utilities. Public corporations and private companies may own and operate facilities for the transmission and distribution of utilities. Public corporations are owned by the local governing body, e.g., the Sacramento Municipal Utility District (SMUD) and are governed by State law. Privately owned companies providing service to the public, such as, Pacific Gas and Electric (PG&E) and Southern California Edison are regulated by the California Public Utilities Commission (CPUC). Also, privately owned companies that do not generally provide utility service to the public and are not regulated by the CPUC, may service the public under a franchise by the local governing body (e.g., city or county).

Before a privately owned utility company can offer its services to the public it must, in most cases, first obtain a Certificate of Public Convenience and Necessity (CPCN) from the CPUC. After the CPCN is granted, the utility company must file its tariffs (rates) with the CPUC. Upon

approval and under CPUC regulation, the utility company can sell its services to the public. Qualifying utility companies are issued a User Fee Number by the CPUC.
In some cases, only certain segments of a company's facilities may be public utilities, while other segments are used exclusively by the company. If there is any question regarding the status of a permit applicant or a specific facility segment as to a public utility, contact the appropriate Branch (Energy, Telecommunication, or Water Utilities) of the CPUC's Advisory and Compliance Division. They will verify the status of the company or facility.

The Streets and Highways Code (Section 117) allows utility owners to use public property--including State highway right-of-way (with approval from the Department)--for transmitting and distributing products and services. Procedures differ for approving utility placement within controlled and non-controlled access right-of-way (see Sections 302, 606, and 607). To protect public investment in the State highway system and promote the safety of highway users, Caltrans has developed minimum standards for the occupancy and use of the State highway right-of-way for utility facilities.

Procedures for determining and collecting permit fees for utility facility encroachments owned by utility companies differ from those encroachments owned by private companies or developers. Usually, utility companies providing utility facility service to the public are billed for application and inspection fees whereas other companies pay fees at the time of application. For example, cable television systems holding city or county franchises are eligible for the same encroachment privileges that are available to public utility corporations, but must pay fees at the time applications are submitted. Cable television companies are not regulated by the CPUC.

Cellular telephone companies are communication-type public utilities that are regulated by the California Public Utilities Commission (CPUC). They are entitled to the same considerations granted to all communication utility companies for use of State right-of-way.

A permit must be issued to the owner of the encroachment. A utility facility encroachment may be constructed or installed by someone other than the owner. Double-permitting is **not** regularly encouraged for utility facility encroachments placed by the utility owner's contractors. Usually, they are agents of the utility company. Inspection fees are charged directly to the utility company (permittee) and therefore a double permit is not necessary unless circumstances dictate otherwise.

The installer or contractor may be required to apply for and secure an encroachment permit (double permit) if prior contractor performance was poor. In this situation, the double permit provides Caltrans with direct control over the authorized work. Double permits, when required, are issued at a one-hour minimum fee, but inspection costs are billed directly to the utility owner.

### 601.1 Utility Owner Prior Rights

Utility encroachment activities involving utility work wherein the utility owner has prior rights (utility facility in place before highway right-of-way purchase), i.e., a Consent to Common Use Agreement (CCUA) or a Joint Use Agreement (JUA), shall take place as a fee exempt permit for

all the purposes for which the owner's original easement was acquired. These activities could include: modification, relocation, replacement, upgrade, and maintenance.

Utility owners with prior rights shall submit an encroachment permit application package that includes prior rights identified for verification (CCUA or JUA number if available). If a number is not available, the application should be reviewed by district Right of Way Engineering and Right of Way Utilities to ensure that the proposed work is authorized under a prior property right.

The District Right of Way Utilities Branch shall determine when the encroachment permit will be stamped "For Record Purposes Only." These types of encroachment permits shall contain the following clause:

> "It is understood that the Owner's easement(s) within the area of common use within the highway or at a new location within the highway may be used for the purpose for which the original easement(s) was acquired subject to Permittee providing advance notification of planned work and adherence to traffic safety and highway integrity requirements as contained elsewhere in this permit."

When a contractor's double permit is required, it shall also be a fee exempt permit.

## 602 CONDITIONS OF OCCUPANCY IN RIGHT-OF-WAY (Rev 05/07)

All utility encroachments in the State highway right-of-way shall be designed, installed, and maintained so that traffic disruption and other hazards to highway users are minimized. The design shall be in compliance with Section 309 of the Highway Design Manual. Encroachments shall not be constructed or installed if they adversely affect the safety, design, construction, operation, maintenance, or stability of the highway or any proposed or existing highway appurtenance.

Damaged plants or landscaped areas shall be replaced or restored, and surface structures shall be consistent with aesthetic values of the highway and with engineering standards and economic feasibility. Access to utility facilities on conventional highways is permitted from the right-of-way or roadway.

Access to utility facilities located within the freeway and expressway right-of-way normally is permitted only from frontage roads, public roads and streets, trails, or auxiliary roads. In some situations, the installation of a locked gate by a utility company in a freeway fence is permitted only when approved by the Division of Design, Chief. An exception to this policy pertains to sites within the right-of-way leased for wireless telecommunications facilities. The District Airspace Review Committee (DARC) rather than the Division of Design, Chief approves gate installation under the air space lease agreement (Section 501.6F).

The Division of Design, Chief must approve utility support structures, manholes, or other appurtenances that are located in interchanges, median areas, or within any other controlled access area when access for servicing is not possible by the means described above. To ensure

safety, terms and conditions may be imposed on the utility company limiting access to such facilities from ramps or through traffic lanes.

**602.1 Temporary Steel Plate Bridging--With a Non-Skid Surface** (Rev 07/09)

Highway encroachment work involving excavations shall be identified during the review process of the permit application package. To accommodate excavation work, steel plate bridging may be necessary. All permit conditions for use of steel plate bridging should be set forth in the special provisions of the permit.

Consideration of steel plate bridging in the review process should take into account the following factors:

1. Traffic speed.
2. Traffic Volume and Composition.
3. Duration and dimensions (width & daily estimated lengths) of the proposed excavation.
4. Weather conditions.

When it is determined in the review process that shoring will be a part of the permitted operation, the shoring shall conform to Section 629 of this Manual.

When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plate bridging on freeways is not allowed.
2. Steel plates used for bridging must extend a minimum of 12" beyond the edges of the trench.
3. Steel plate bridging shall be installed to operate with minimum noise.
4. The trench shall be adequately shored, as mentioned in Section 629, to support the bridging and traffic loads.
5. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.
6. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

As required by the district, steel plate bridging and shoring shall be installed using either Method (1) or (2):

**Method 1** For speeds of 45 MPH or greater:

The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" into the pavement. Subsequent plates are to be butted and tack welded to each other.

**Method 2** For speeds less than 45 MPH:

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" into the pavement. Subsequent plates are to be butted and tack welded to each other. Fine graded asphalt concrete shall be compacted to form ramps, maximum slope 8.5 % with a minimum 12" taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt concrete mix, concrete slurry, epoxy or an equivalent that is satisfactory to the Caltrans' representative.

The permittee is responsible for maintenance of the steel plates, shoring, asphalt concrete ramps, and ensuring that they meet minimum specifications.

Unless specifically noted or granted in the provisions of the permit, or approved by the State representative, steel plate bridging SHALL not exceed 4 consecutive working days in any given week. Backfilling of excavations shall be covered with a minimum 3" temporary layer of cold asphalt concrete.

The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual).

| Trench Width | Minimum Plate Thickness |
|---|---|
| 10" | 1/2" |
| 1'-11" | 3/4" |
| 2'-7" | 7/8" |
| 3'-5" | 1" |
| 5'-3" | 1 3/4" |

NOTE: For spans greater than 5'-3", a structural design shall be prepared by a California Registered Civil Engineer.

All steel plates within the right-of-way whether used in or out of the traveled way shall be without deformation. Inspectors can determine the trueness of steel plates by using a straight edge and should reject any plate that is permanently deformed.

Steel plates used in the traveled portion of the highway shall have a surface that was manufactured with a nominal Coefficient Of Friction (COF) of 0.35 as determined by California Test Method 342 (See Appendix H). If a different test method is used, the permittee may utilize standard test plates with known coefficients of friction available from each Caltrans District

Materials Engineer to correlate skid resistance results to California Test Method 342. Based on the test data, the permittee shall determine what amount of surface wear is acceptable, and independently ascertain when to remove, test, or resurface an individual plate.

Caltrans' Permit Inspectors should not enforce plate removal unless it is permanently deformed or delivered without the required surfacing. The utility owners and contractors are responsible for maintaining plates and ensuring that they meet minimum specifications. They will also independently determine when to accept, test or reject a plate. However, an inspector should document in a diary all contacts with the utility owners and contractors.

A Rough Road sign (W8-8) with black lettering on an orange background may be used in advance of steel plate bridging. This sign is used along with any other required construction signing.

Surfacing requirements are not necessary for steel plates used in parking strips, on shoulders not used for turning movements, or on connecting driveways, etc., not open to the public.

## 603 INSTALLATION AND MAINTENANCE OF UTILITIES

A permit must be issued to the owner of the encroaching facility. When more than one owner uses a common duct structure, e.g., several separate utilities lines in a common casing, each owner must obtain a separate permit for its facility. Double permitting is not normally required (Section 601).

Permits are required for a utility owner and for a developer installing facilities that will be owned, operated, and maintained by the utility owner. The permit for installation of the utility facility is issued to the developer, but only after the utility owner submits an application for operation and maintenance of the facility. The developer is responsible for coordinating submission of the utility owner's application, and the utility owner is not charged for the permit. The permit issued to the utility owner states, "operate and maintain utility facility 'X' installed under Caltrans Encroachment Permit No. ____ issued to 'XYZ Developers, Inc.'"

Utility companies are allowed to place underground electric transformer vaults with grated covers within the right-of-way. Placement is permissible only after every reasonable effort is made to use alternate locations. The following conditions are required for approval of this type of installation:

1. The utility company shall assume responsibility for the design, installation, and maintenance of its facilities' equipment. They shall also assume responsibility for any damages that may result from this installation.

2. The utility company shall indemnify and defend the Department against all actions resulting from the design, installation, or maintenance of its equipment or facilities.

3. When vaults are installed in pedestrian areas, the utility company shall be responsible to design, locate and construct them in a manner that will minimize any interference with pedestrian traffic.

When replacing existing above ground facilities (e.g., poles, etc.) as part of maintenance, they should be relocated as close as possible to the right-of-way line to allow expansion of the Clear Recovery Zone.

### 603.1 Minimum Depth of Cover Requirements Rev (10/03)

New installations of utilities and utility facilities require a minimum depth of cover of 36", and utility service connections require a minimum depth of cover of 30" within State highway right-of-way.

Signalization conduits require a minimum depth of cover of 18" when placed behind the curbface.

Policies on "High and Low Risk facilities" are discussed in section 605.

## 604 UTILITY RELOCATIONS FOR STATE HIGHWAY CONTRACTS

When highway construction occurs either by a State contract or an Oversight Project in lieu of a State contract (e.g., projects programmed in STIP or SHOPP) that requires relocation of an existing utility facility encroachment, arrangements for relocation are initiated by the State. All relocated installations shall be covered by an encroachment permit regardless of who finances or constructs the highway project. The utility relocation permit is fee exempt.

All permits for local agency projects constructed by encroachment permit without a cooperative agreement shall contain this clause:

> "If existing public or private utilities conflict with the construction PROJECT, PERMITTEE will make necessary arrangements with the owners of such utilities for their protection, relocation, or removal. PERMITTEE shall inspect the protection, relocation, or removal of such facilities. Total costs of such protection, relocation, or removal which STATE or PERMITTEE must legally pay, will be borne by PERMITTEE. If any protection, relocation, or removal of utilities is required, including determination of liability for cost, such work shall be performed in accordance with STATE policy and procedure. PERMITTEE shall require any utility company performing relocation work in the STATE's right-of-way to obtain a State Encroachment Permit before the performance of said relocation work. Any relocated utilities shall be correctly located and identified on the as-built plans."

Encroachment permits for developer projects being constructed without a highway improvement agreement shall contain the following clause:

"If existing public or private utilities conflict with the construction PROJECT, PERMITTEE will make necessary arrangements with the owners of such utilities for their protection, relocation, or removal. PERMITTEE shall inspect the protection, relocation, or removal of such facilities. Total costs of such protection, relocation, or removal shall be borne by PERMITTEE in compliance with the terms of the Highway Encroachment Permits, Case Law, Public Utility Regulations, and Property Rights. PERMITTEE shall require any utility company performing relocation work in the STATE's right-of-way to obtain a State Encroachment Permit before the performance of said relocation work. Any relocated utilities shall be correctly located and identified on the as-built plans."

State highway projects constructed under cooperative or highway improvement agreements do not require the above clauses in the permit provisions because similar provisions must be included in the respective agreements.

## 605 HIGH AND LOW RISK UNDERGROUND FACILITIES (Rev 05/07)

The policies on high and low risk underground facilities are governed by the Caltrans' publication titled, "Project Development Procedures Manual," Appendix LL—Utilities. Any exceptions to these policies require approval from the Division of Design, Chief.

### High Risk Facilities

Facilities transporting the following materials, whether encased or not, are considered to be High Risk facilities:

1. Petroleum products,
2. Oxygen,
3. Chlorine,
4. Toxic or flammable gases,
5. Natural gas in pipelines greater than 6 inches nominal pipe diameter, or pipelines with normal operating pressures greater than 60 p.s.i.g. ,
6. Underground electric supply lines, conductors or cables having a potential to ground of more than 300 volts, either directly buried or in duct or conduit, which do not have concentric grounded or other effectively grounded metal shields or sheaths.

### Low Risk Facilities

Facilities transporting the following materials are considered to be Low Risk facilities:

1. Natural gas in pipelines 6 inches or smaller (nominal pipe diameter) with normal operating pressures of 60 p.s.i.g. or less.

2. Underground electric supply lines, conductors or cables with a potential to ground of more than 300 volts, either directly buried or in duct or conduit, which do have concentric grounded or other effectively grounded metal shields or sheaths, and for

which the utility owner furnished location information in conformance with the requirements of Article 17.7, "Location Information" of General Order No. 128 of the California Public Utility Commission, or electrical underground conductors with a potential to ground of 300 volts or less.

**Exempt Facilities**

Facilities exempt from the requirements of this policy are listed as follows:

1. Natural gas service lines of 2 inches or less (nominal pipe diameter) and with normal operating pressures of 60 p.s.i.g. or less.

2. Underground electrical service conductors with a potential to ground of 300 volts or less.
3. Any electrical facility with a potential to ground of 50 volts or less.

4. State-owned electrical facilities operating at 300 volts or less potential to ground.

**New Installations Under Encroachment Permit**

The new installation of High and Low Risk facilities within existing or ultimate State highway right-of-way must be not less than 42 inches below existing ground level. New installations in proposed projects must meet the following minimum clearances along the location of the utility facility:

1. 42" below finished grade or 18" below grading plane of a currently planned project, whichever is greater.

2. 12" below existing or future drainage structures, but not less than the requirement in number "1" above.

3. 30" below flow line of unlined ditches.

4. 24" horizontally from face of pile or side of excavation for a currently planned project.

5. 36" below concrete sidewalks, where future street widening in the sidewalk area is not contemplated. This minimum may be reduced at the discretion of the utility owner, with the permission of the Permit Engineer.

NOTE: All highway related facilities, such as signal and lighting conduits, that meet the definition of High and Low Risk facilities must meet these standards.

New installations within streets or frontage roads to be turned over to a local agency may be installed at lesser depths, as allowed by Public Utility Commission General Orders or normal procedures.

Existing high and low risk facilities may remain in place until replacement at the end of their useful lives providing they comply with requirements governed by Caltrans' publication titled, "Project Development Procedures Manual," Appendix LL, Section 3.

Applications for installation of high and low risk underground facilities shall include a plan by the owner showing location and construction details.

## 606 ENCROACHMENTS ON FREEWAYS AND EXPRESSWAYS

This section describes requirements for transverse and longitudinal utility encroachments on freeways and expressways.

### 606.1 General Requirements for Encroachment Location (Rev 05/07)

Departmental policy prohibits the placement of longitudinal encroachments within controlled access rights-of-way. Requests for placement of longitudinal encroachments are permitted only when approved through the departmental exception process, by the Division of Design, Chief, when no other reasonable alternative is available, and it has been determined that there is available space.

When prior rights are stipulated regarding the location within controlled access rights-of-way, encroachment permits shall be stamped "For Record Purposes Only" or "Freeway Permit," when determined by substantiation that is provided by the utility owner (see Section 601.1).

Under specific conditions, when the Department is responsible for the transmission and distribution of reclaimed water for its sole use, local public agencies and public water companies may be allowed to place transmission lines for reclaimed water within access controlled rights-of-way. When there is a proposed shared use of the reclaimed water, upon approval through the exception process, the utility facility owner shall be responsible for all initial and relocation costs, liability, maintenance of and other required conditions as specified.

Issuance of permits shall conform to policy on the "A Policy on the Accommodation of Utilities Within Freeway Right-of-Way" (AASHTO, 2005; see Appendix A).

### 606.2 Access Requirements (Rev 05/07)

If normal means of access to an encroachment inside State access control right-of-way is impossible, inordinately difficult, or unreasonably costly, a locked gate in the fence may be installed by a public or privately owned utility company at a suitable location upon approval by the Division of Design, Chief.

Planned emergency access from freeways and expressways for new or expanded development is prohibited. Emergency access shall be provided from local streets or conventional highways outside the access control limits of freeways and expressways. Existing emergency access granted previously is allowed to remain.

Utility support structures, manholes, or other at-surface appurtenances may be allowed in interchange or median areas only if placement outside access control is not possible and approved by the Division of Design, Chief.

Access from through traffic lanes or ramps should not be permitted except as approved by the Division of Design, Chief. Terms and conditions may be imposed to ensure safety.

Fire, law enforcement, and other emergency agencies may breach access controls, if necessary, to respond to specific emergencies. However, they must restore the State right-of-way, at their expense, and must obtain an encroachment permit to do so. The Division of Design, Chief must approve or deny any exceptions to this policy after district review and recommendation.

### 606.3 Transverse Encroachments

Public utility facilities shall be granted permission to cross State highways, as well as facilities that are not dedicated to public use but are used for the same purposes as public utility facilities. Table 6.1 indicates the restrictions that apply to transverse encroachments within **freeways** and **expressways**. **Privately owned water, power, or communication facilities that are used for private purposes are allowed transverse crossings only when property or easements are under the same ownership on both sides of the highway.**

### 606.4 Longitudinal Encroachments (Rev 05/07)

Placement of longitudinal utility encroachments within freeway and expressway right-of-way is prohibited under Department policy. However, should unusual circumstances warrant consideration of such placement, requests shall be reviewed under the exception process by the Division of Design, Chief. The Division of Design, Chief must approve any exceptions to Statewide policies and standards governing encroachments within the State highway right-of-way (See Sections 301, 302, and 303).

Longitudinal encroachments and encroachments requiring facility maintenance within access control lines should be avoided. New public utility facilities may be placed within the right-of-way of frontage roads or parallel roads outside the access control of the freeway and expressway right-of-way. Installations within access control lines are extreme cases and are considered only when alternative placement is not reasonably available, and are approved as exceptions by the Division of Design, Chief.

An existing facility in place at the time of freeway construction or reconstruction shall be removed or relocated unless any other location would be inordinately difficult or unreasonably costly. Approval is given by the Division of Design, Chief and (for federal-aid freeways) the FHWA. Remaining facilities shall be as close to the right-of-way line as possible and serviced from outside the access control lines.

The FHWA has delegated authority to Caltrans to approve **public** (utility companies regulated by the CPUC) utility longitudinal installations. FHWA's approval of Caltrans' Utility Accommodation Plan, "A Policy on the Accommodation of Utilities Within Freeway Right-of-Way" (AASHTO, 2005; see Appendix A) gives Caltrans limited authority. The following

longitudinal encroachments may require approval by FHWA and are processed through Division of Design, Chief:

1. Longitudinal encroachments within the median area of freeways.
2. Longitudinal installations of any **privately** owned (companies not under CPUC regulations) pipeline or other type of utility-like facility.

Utilities shall not be located in median areas. Any exceptions to this policy require full justification, and approval by the Division of Design, Chief. Transmission lines for reclaimed water in freeway rights-of-way are treated as a variance to policy, and must be approved by the Division of Design, Chief.

Freeway and expressway utility service connections for State facilities on freeways and expressways should have all disconnects, meters, or shut-offs outside access control lines. The utility is required to obtain a NUS (No fee Utility Service) permit for the connection.

### 606.4A Telecommunications (Rev 05/07)

The Department may accommodate longitudinal telecommunications encroachments within controlled access right-of-way. Telecommunications are defined as any facility used to transmit voice, data, and/or video signals that are not transmitted through the air, including conduits, and cabling.

Accommodation shall be in accordance with Federal and State laws and shall not adversely impact the safety of motorists, highway workers or the aesthetic quality of the highway.

Underground longitudinal telecommunications encroachments within controlled access right-of-way may be approved at the District level subject to all of the requirements shown in Table 6.0. Requests submitted for the replacement of telecommunications (regardless of capacity or upgrade issues) shall adhere to policy as a new submittal.

The Division of Design, Chief may approve exceptions to mandatory design standards in accordance with Departmental policy on encroachment exceptions.

### 606.4B CPUC Mandate: (Rev 10/04)
**New telecommunication wiring within existing facilities**

In conjunction with the California Public Utility Commission (CPUC) imposed mandate, existing telecommunications franchises must now share their unused conduits with competitors.

The Department may allow new telecommunication franchises to place their **"cabling only"** (fiber optics or wire) into an existing facility that falls under the parameters of "prior rights" or an "exception to policy", belonging to another telecommunications franchise within controlled access right-of-way.

The requesting telecommunications franchise shall submit proof of concurrence from the owning telecommunications franchise by means of an agreement, letter or contract when submitting their encroachment permit application.

**Table 6.0** (Rev 11/06)

**Requirements for Longitudinal Telecommunication Encroachments on controlled access right-of-way**

1) All installations shall be **underground** and subject to Department policy on encroachment permits including all applicable local, state and federal laws and regulations.

2) The Department may consider accommodation under master agreements, airspace leases, Request For Proposals (RFP) or any other legally acceptable method.

3) The Department may request that: conduits, fibers, access points, cabinets, vaults and/or stations dedicated for public use be placed at certain locations.

4) Telecommunications shall be placed outside the Clear Recovery Zone (CRZ, see Highway Design Manual), while telecommunications related facilities such as access points, cabinets, vaults and/or stations shall be placed outside controlled access right-of-way limits.

5) Telecommunications may be allowed within existing conduits if such conduits are outside the CRZ, while telecommunications related facilities such as access points, cabinets, vaults, and/or stations shall be placed outside controlled access right-of-way limits.

6) Telecommunications shall be placed as far from the traveled way as feasible.

7) The minimum underground depth of cover of telecommunications shall be 42".

8) Telecommunications shall not be permitted in the median.

9) Telecommunications shall not be permitted in existing or planned traveled lanes.

10) Routine maintenance of telecommunications and telecommunications related facilities shall be conducted under individual encroachment permits and not allowed under “blanket permits”.

11) The Department may request that applicants place adequate conduit space at the time of initial installation to provide access for all reasonably foreseeable users (including itself), for the fifteen year period after installation as determined by applicant and approved by Department.

12) District may also limit construction activities (the number of trenching, plowing or boring) to once every five years if any of the following conditions apply:
    a) Longitudinal telecommunications installation is fully or partially proposed within the CRZ and an encroachment exception is granted.
    b) Installation exceeds one mile in length.
    c) District determines that the future installation of telecommunication facilities will be limited because of physical constraints, limited right of way width, safety or other relevant factors.

13) If construction activities are limited as provided in 12), applicants will be required to provide public notice informing interested parties of the limitations and providing them an opportunity to respond and/or participate in the project (joint build). The notice process shall be as follows:
    a) Applicant publishes a notice in one newspaper of general circulation in the county/counties where the project is proposed. The notice must provide a public response period of no less than 30 days from the date of publication; and
    b) Applicant must provide notice to all telecommunication companies (obtain list from California Public Utilities Commission - CPUC) including a response period of no less than 30 days from the day they are notified. A copy of this notice shall be attached to the encroachment permit application.

### 606.4C Broadband (New 07/08)
**Permit Code BB**

"Broadband" is a data transmission, with speeds exceeding 200,000 bits per second, in at least one direction; downstream or upstream.

### 606.4C-1 Broadband Application (New 07/08)

In compliance with Executive Order S-23-06, Twenty-First Century Government, to enhance access and adoption of Broadband in California, the Department will attempt to expedite the processing of these submittals.

The Department shall continue to accept submittals on the Standard Encroachment Permit Application in addition to the Statewide Application, entitled "BROADBAND FACILITIES INSTALLATION AND USE REQUEST APPLICATION," which can be downloaded from the following web-site:

http://www.calink.ca.gov/statepermitting/application.asp

The District Encroachment Permits Office is responsible for the review process of all Broadband submittals. Applicants are responsible for all departmental costs associated with these submittals.

Broadband proposals should be processed for a detailed plan review through Environmental, Design, Structures and Traffic.

## Table BB (New 07/08)
## Broadband Encroachments within Controlled Access right-of-way

1) All broadband installations shall be subject to Department policy on encroachment permits including all applicable local, state and federal laws and regulations. If broadband facilities are required to be relocated, all costs shall be borne by the permittee.

2) The Department shall stipulate location for the placement of broadband conduits, fibers, access points, cabinets, vaults and/or stations dedicated for public use.

3) Broadband facilities shall be located outside the Clear Recovery Zone (CRZ, see Highway Design Manual), broadband may be allowed within existing conduits if such conduits are outside the CRZ, and all other related broadband facilities such as access points, cabinets, vaults and/or stations shall be placed outside controlled access right-of-way limits.

4) Broadband shall be placed as far from the traveled way as feasible.

5) The minimum underground depth of cover of broadband shall be 42".

6) Broadband shall not be permitted in the median.

7) Broadband shall not be permitted in existing or planned traveled lanes.

8) Routine maintenance of broadband related facilities shall be conducted under individual encroachment permits and not allowed under “blanket permits”.

9) The Department may negotiate that the broadband applicant place adequate conduit space at the time of the initial installation to provide and/or include access for all foreseeable users.

10) District may also limit construction activities (the number of trenching, plowing or boring) to once every five years if any of the following conditions apply:
    a) The broadband installation is fully or partially proposed within the CRZ, and a longitudinal encroachment permit exception has been granted.
    b) The installation exceeds one mile in length.
    c) The District determines that the future installation of broadband facilities will be limited because of physical constraints, limited right of way width, safety or other relevant factors.

11) If construction activities are limited as provided above, applicants will be required to provide public notice informing interested parties of the limitations and providing them an opportunity to respond and/or participate in the project (joint build). The notice process shall be as follows:
    a) Applicant publishes a notice in one newspaper of general circulation in the county/counties where the project is proposed. The notice must provide a public response period of no less than 30 days from the date of publication; and
    b) Applicant must provide notice to broadband and all telecommunication companies (obtain list from California Public Utilities Commission - CPUC) including a response period of no less than 30 days from the day they are notified. A copy of this notice shall be attached to the encroachment permit application.

### 606.4C-2 State Scenic Highway Installations (New 07/08)

When a request is submitted for placement along and/or within a State Scenic Highway, the approval process entails the submittal of additional documentation, and the additional review of the proposal by Right-of-Way Utilities and the Landscape Architect's Office.

A letter of concurrence from the local entity responsible for the Corridor Protection Plan established for that scenic corridor, and an approved waiver from the CPUC granting permission to place those facilities within a State Scenic Highway should have the appropriate design review and District Landscape Architect concurrence for compliance with Corridor Protection Programs (reference Section 627, of the Encroachment Permits Manual).

The permittee shall not make additions to existing site facilities, change access locations, place attachments or modifications to their equipment that would result in use by other broadband providers.

### 606.4C-3 Preliminary Site Survey Permits (Pre-Design) (New 07/08)

Districts may issue an annual survey, "SV" permit, to each Broadband service carrier for all conventional highways within the district. Survey permit requests for Controlled Access rights-of-way shall be issued on a one-time basis.

A deposit equivalent to six (6) hours of the encroachment permit standard hourly rate shall be collected upon submittal. If the surveying is contracted to a surveying company, a double permit ("DP") shall be required.

Work within or from adjacent property owners' land, U.S. Forest Service property, other leased or prescriptive right-of-way are not authorized under the department's encroachment permit, approval shall be obtained from that specific property owner by means of written permission or permit. A copy of that authorization or issued permit shall also be included in the submittal to the District Encroachment Permits Office.

### 606.4C-4 Conditions of Occupancy and Future Maintenance of Facilities (New 07/08)

Broadband facilities proposed for placement in the State highway right-of-way shall be designed, installed, and maintained so that traffic disruption and other hazards to highway users are minimized. The design shall be in compliance with Section 309 of the Highway Design Manual. Encroachments shall not be constructed or installed if they adversely affect the safety, design, construction, operation, maintenance, or stability of the highway or any proposed or existing highway appurtenance.

Damaged plants or landscaped areas shall be replaced or restored, and surface structures shall be consistent with aesthetic values of the highway and with engineering standards and economic feasibility. Access to broadband facilities on conventional highways is permitted from the right-of-way or roadway.

Access to broadband facilities located within Controlled Access rights-of-way normally is permitted only from frontage roads, public roads and streets, trails, or auxiliary roads. In some situations, the installation of a locked gate by a broadband company in a Controlled Access fence may be permitted only when approved by the Division of Design, Chief, through the exception process.

The Division of Design, Chief, must approve placement of broadband support structures, or other appurtenances that are proposed to be located within interchanges or within any other controlled access area when access for servicing is not possible by the means described above. To ensure safety, terms and conditions may be imposed on the broadband company limiting access to such facilities from ramps or through traffic lanes.

The following table provides guidance on the requirements of Broadband Application submittals.

## Table 6.1 Rev (05/07)
## Transverse Encroachments on Freeways and Expressways

The following restrictions apply to transverse encroachments within controlled access rights of way:

1. The number of crossings shall be minimized.
2. Service connections generally are not allowed to cross.
3. When feasible, any multiple installations should cross in a single conduit or structure.
4. Crossings should be normal (90 degrees) to the highway alignment where practical. Districts may only allow skews up to 30 degrees from normal.
5. Clearances of overhead crossings shall conform to regulations of the California PUC.
6. New installations under an existing roadbed and median shall be made by boring and jacking, directional drilling or other methods approved by the district.
7. Underground encroachments in a depressed section should be avoided. When possible, they shall cross at street overcrossings (See bridge encroachment requirements Sections 608 and 609).
8. Sag pipes (inverted siphons) should be avoided whenever there is a possibility of sedimentation in the sag. Air vents and provisions for draining the sag shall be required when sag pipes are unavoidable.
9. Overhead pipeline crossings in a depressed section shall be made at street overcrossings or by a separate structure of suitable appearance. Except for pipelines in box girders, the pipeline shall be placed in a watertight sleeve. A common structure should be used for multiple pipes.
10. Tunneling under freeways and expressways is considered under the following conditions:
    - Studies establish that the soil structure is sufficiently stable.
    - Permanent tunnel portals usually shall be located outside the right-of-way line or the access control line (if those do not coincide). Consideration may be given to a location within the access control line provided that it will not adversely affect highway operation, it is beyond the toe of slope of embankments, and prior approval is given by the Division of Design, Chief.
11. Open canals and ditches shall not be permitted unless no other alternative is available.
12. Underground facilities normally should be encased between right-of-way lines.
13. Supports for **overhead** lines crossing freeways:
    - Should be placed near the right of way line with a minimum lateral clearance of 30' from the edge of an ultimate through lane.
    - Shall be located outside the controlled access right-of-way. Any other placement must be approved by the Division of Design, Chief.
    - Should not be permitted in median areas except for temporary guard poles to support netting for overhead line installation.
    - Should not be permitted on cut or fill slopes.
    - Shall not impair sight distances.

    Consideration should be given to underground facilities when spanning roadways is not feasible.
14. Traffic always must be protected, and barriers or protective devices are required as necessary.

### 606.5 New Longitudinal Encroachments Only--Waiver of Rights

The statutory right conferred by Section 703 of the Streets and Highways Code for **publicly** owned sewers, fire hydrants, and any street lighting structure whether publicly or privately owned is a waiveable right under the provisions of Civil Code Section 3513. A prior right is established when a publicly owned utility existed before the location became a freeway. In this case utility relocation will occur at State expense. The following provision should be included in all encroachment permits issued for new longitudinal encroachments of publicly owned sewers and fire hydrants, and street lighting structures whether publicly or privately owned in a freeway:

> [Name of person or entity waiving right, with full knowledge of the provisions and his (their) rights thereunder, expressly waives all rights whatsoever under Section 703 of the Streets and Highway Code which provides that publicly owned sewers and fire hydrants and any street lighting structure whether publicly or privately owned in any freeway shall be relocated when necessary at the expense of the Department].

## 607 ENCROACHMENTS ON CONVENTIONAL HIGHWAYS

This section describes requirements for transverse and longitudinal encroachments on conventional highways.

### 607.1 General Requirements Rev (05/07)

Districts are delegated authority to issue permits for the placement and maintenance of utility facilities within the conventional highway right-of-way. Applications for encroachments by publicly or privately owned utility companies (regulated by the CPUC) dedicated for public use are reviewed and approved at the district level. The districts may also approve encroachments by privately-owned utility companies dedicated for public use and franchised by the local governing body. Privately-owned utility companies that use the utility for their sole purpose may be granted an encroachment permit for reasonable transverse crossing of conventional highways, but longitudinal encroachments are not approved. Requests by companies for placement of longitudinal encroachment utilities for their sole purpose that are not dedicated for public use and franchised by the local governing body are subject to approval by the Division of Design, Chief (see Section 302).

### 607.2 Transverse Encroachments

Table 6.2 lists the restrictions that apply to transverse encroachments on conventional highways. The Reclamation Board, in maintaining the integrity of the State's levee system, issues permits for construction of facilities within the levee prism. Caltrans and the Reclamation Board cooperatively agreed to authorize Reclamation Board construction methods provided that Caltrans' minimum depth requirements are met. Encroachment permits to install underground facilities where a State highway is on or crosses a levee must indicate approval and inspection by the Reclamation Board.

## Table 6.2
## Restrictions upon Transverse Encroachments on Conventional Highways

The following restrictions apply to transverse encroachments within the right-of-way of any conventional highway:

1. The number of crossings shall be minimized.
2. Underground distribution facilities on each side of the highway should be considered to avoid numerous crossings by service connections.
3. Crossings should be normal (90 degrees) to the highway alignment where practical.
4. Clearances of overhead crossings shall conform to regulations of the California Public Utilities Commission.
5. An existing authorized encroachment that will not affect new highway construction may be left in place at the district's discretion, provided the district determines that it will not constitute a safety hazard or obstruction to construction.
6. New installations under an existing roadbed shall be made by boring and jacking, directional drilling or other methods approved by the district.
7. Sag pipes (inverted siphons) shall be avoided whenever sedimentation in the sag is a possibility. Air vents and provisions for draining the sag shall be required when sag pipes are unavoidable.
8. Tunneling under conventional highways shall conform to the requirements for freeways.
9. Bore pits or manholes at street intersections should be located behind the State highway curb line where possible.
10. Open canals and ditches shall not be permitted unless no other alternative is available.
11. Supports for overhead lines in conventional highway right-of-way must be as close to the right-of-way line as possible, with a desirable minimum clear recovery zone of 20', and never closer than 1.5' back of the curb face.
12. Traffic must always be protected, and barriers or protective devices are required as necessary.

### 607.3 Longitudinal Encroachments (Rev 05/07)

New publicly owned utility facilities and privately owned utility facilities that are regulated by the CPUC and dedicated to public use may be placed within the right-of-way of conventional highways when approved by the district. Generally, such encroachments shall be located as close as possible to the right-of-way line and outside slope limits or behind curbs. The minimum desirable setback from the clear zone of a conventional highway is 20'. In no case is a pole allowed closer than 1.5' behind a curb face or less than 2' from the edge of a slope catch point or a driveway, or within a drainage ditch. Requests for longitudinal encroachments by privately owned companies for their own use shall be denied by the district. However, if a longitudinal encroachment warrants addition consideration, review is required by the Division of Design, Chief (see Section 607.1).

When highways are widened, existing and new installations should adhere to setback limits or should be protected. Consideration should be given to allow utility owners to place such encroachments underground in shoulder or parking areas.

In urban areas, manholes should not be located where there is a break in grade between the pavement and gutter or in major traffic lanes of a cross street. In areas where snow removal equipment is used, consideration should be given to slightly depressing the manhole.

Any existing underground facility located under the roadbed of a new unconstructed highway is permitted to remain in place during its useful life provided its depth complies with current standards and does not require relocation (as determined by the district Right of Way Utility Coordinator and Project Development) resulting from highway construction. If the encroachment is a public utility facility, consideration shall be given to the likelihood and extent of future service connections that will require cutting the pavement. Rules governing new installations will determine whether existing facilities must be relocated, or may be replaced in the same location, after expiration of their useful life.

High risk pipelines conveying gas, oil or other flammable fluid are not permitted in the right-of-way unless they are dedicated to public use (for example, the pipeline carries products of more than one owner and is under CPUC jurisdiction). Companies having franchise rights from local agencies may place their facilities within the right-of-way with approval from the Division of Design, Chief.

Encroachment permits are required for utility companies to operate and maintain services to State-installed facilities. Conventional highway service connections are to be installed in compliance with a utility company's annual permit. A No fee Utility Service (NUS) permit must be obtained by the utility company if the service connection does not qualify under the annual permit.

Existing legally-placed service facilities may be permitted to remain in place if they do not interfere with highway construction or use.

Utility poles should be located as close to the right-of-way line as possible. However, an overhang onto private property should not be allowed unless the impacted property owner provides an easement.

Underground facilities on conventional highways should be located as close to the right-of-way line as possible. Permissible locations are shown in Table 6.3.

**Table 6.3**
**Permissible Locations for Underground Longitudinal Encroachments on Conventional Highways**

| | | |
|---|---|---|
| **URBAN AREAS** | 1. | As close to the right-of-way line as possible. |
| (in order of preference) | 2. | Back of sidewalk. |
| | 3. | Under sidewalk. |
| | 4. | Under parking lane. |
| | 5. | Under the outermost lane of a multi-lane highway. |
| **RURAL AREAS** | 1. | As close to right-of-way line as possible. |
| (in order of preference) | 2. | Under unimproved shoulder. |
| | 3. | Under paved shoulder. |
| | 4. | Under the outer most lane of a multi-lane highway. |

### 607.4 Relocation or Removal of Encroachment

Encroachment permits issued to publicly or privately owned utilities contain a statement in the General Provisions that in the event future improvements to the highway necessitates the relocation or removal of such encroachment, the permittee will relocate or remove the same at its sole expense. District Right of Way Utilities initiates a Notice to Relocate.

## 608 ENCROACHMENTS ON STRUCTURES

Proposed encroachments on existing bridges and other existing structures must be reviewed by the Office of Structures Maintenance. One copy of the encroachment permit and completed plans authorizing work on structures is sent to the Office of Structures Maintenance and to headquarters Structures Construction.

Requests to place planting and landscape service facilities on existing structures, including outside surfaces, must be approved by Office of Structures Maintenance.

When a utility conduit, pipeline, or encasement for a pipeline crosses a structure and has cathodic protection, that installation must be electrically isolated from the structure. Any cathodic protection anode bed or deep anode well shall not be placed near any structure or culvert.

Specific stray current and cathodic protection mitigation issues should be directed to headquarters Structures Design, Electrical, Mechanical, Water and Waste Water Branch.

### 608.1 State Contract Plans

Installation plans for each utility that encroaches on a new structure must be approved by Structures Design before an encroachment permit is issued. This review is coordinated through the district project engineer. After award of the contract, utility plans not reviewed previously by Structures Design should be sent to Structures Maintenance for review and approval. Installation of utility facilities in new structures is coordinated by the permit engineer through the district project engineer and solely by the permit engineer for existing structures. Installation of all relocated utility facilities is coordinated by district Right of Way.

### 608.2 Requirements for Installing Utilities on Bridges

Utility facilities on bridges must meet both the standard utility requirements and the additional requirements shown in Table 6.4 and Table 6.5.

## Table 6.4
## Additional Requirements for Utility Facilities Located on Bridges

Utility facilities located on bridges must comply with the standard requirements and the following additional requirements:

1. Location:
   - A. Permitted encroachments preferably shall be located between girders.
   - B. Encroachments should not be exposed to view, and shall not be permitted on the exterior of a bridge unless they are enclosed and appear as an integral part of the bridge.
     Structures Maintenance may approve exceptions for unusual circumstances.
   - C. On very wide structures having an expansion joint in the median, installation normally can occur between the two interior girders in the median.
2. Encroachment applications must include adequate plans of installation and pertinent details showing:
   - A. Bridge number
   - B. Location of encroachment on bridge
   - C. Method of attachment to bridge
   - D. Type of material transported
   - E. Weight per foot of facility including load, encasement, etc.
   - F. Maximum operating pressure
   - G. Maximum flow rate of high pressure water lines in the event of a full rupture
   - H. Wall thickness of pipe
3. Gas pipelines require additional information according to CPUC General Orders.
4. Pipelines carrying highly volatile fluids must show the location of the nearest automatic shut-off valves on each side of the structure. Shut-off valves are required to be within a reasonable distance of the structure.
5. Pipelines conveying water, sewage, and low volatile fluids shall include evidence of compliance with corrosion control requirements of the Federal Department of Transportation and the California PUC.
6. Electrical and communication conduits must indicate maximum voltage and description of carrier conduit. Additional information may be required by Structures (e.g. “Data for High Voltage Cables on Bridges” form see Appendix D).
7. Access to utility facilities on undercrossing structures or bridges over waterways is prohibited from the surface of the traveled way of the State highway. Manholes in the shoulder area or sidewalk area may be authorized. Access to utility facilities on overcrossing structures, by means of manholes, may be authorized where necessary and feasible.
8. Basic Specifications
   - A. Exposed pipes or sleeves shall be painted or covered with an approved coating that shall match the color of the structure and be maintained to the satisfaction of Caltrans. The permittee shall pay the costs of repainting or protecting the encroachment.
   - B. High pressure systems:
     1) Shall conform to API specifications and to ASTM specifications covering sizes and types not covered by API.
     2) If operating pressures are over 200 psi:
        - Wall thickness shall conform to CPUC General Orders.
        - Maximum allowable hoop stresses for gas shall be 40 percent of the specified minimum yield strength.
        - Maximum allowable hoop stresses for other high volatile fluids shall conform to ANSI, except that the maximum hoop stress under the “test pressure” shall not exceed 90 percent of the yield strength.
        - A pressure test at 1.5 times maximum operating pressure shall be conducted for 24 hours.
        - Radiographic inspection of all field welds shall be made.
   - C. Sewer lines will not be steel pipe unless corrosion protective measures are provided.
   - D. Other pipelines may be steel, cast iron, ductile iron or approved material.
   - E. Electrical and communication conduits shall conform to CPUC General Orders. High voltage lines are not permitted where the traveling public could be endangered.

**Table 6.5**
**Additional Encasement Requirements for Utility Facilities Located on Bridges**

Encasement of utility facilities located on bridges must comply with the standard requirements and the following additional requirements:

1. High risk utility facilities must be encased throughout the structure in a steel sleeve.
   a) The sleeve must have a diameter sufficiently larger than the largest outside diameter of pipe (but not less than 4") to facilitate removal and replacement of the pipe. The sleeve should extend at least 20' beyond the back face of the abutment and 5' beyond the approach slab and wingwalls.
   b) The space between the pipe and encasement must be vented effectively at each end of the structure so that no pressure buildup is possible. It is not permissible to vent into the earth or backfill material because of explosion possibilities.
   c) In unusual instances, it may be impractical to provide encasement because of curvature, space limitations, etc. Subject to approval by Office of Structures Maintenance, the wall thickness of the carrier pipe must be increased in such instances.
2. Pipelines conveying water, sewage, and low volatile fluids:
   a) The pipeline must be encased if it passes over a freeway, primary road or railroad. Other locations where encasement is required are determined by Office of Structures Maintenance.
   b) A box girder cell may be considered as the encasement for water and non-corrosive material if access is available on the structure for the full length of the pipeline and the carrier is metal pipe.
   c) To prevent leakage in the pipe from flowing under or around the bridge abutments, the encasement shall extend at least 20' beyond the back face of the abutment and a minimum of 5' beyond the wingwalls and approach slab whichever is greater.
   d) It may be impractical to provide encasement in unusual instances because of curvature, space limitations, etc., and other safeguards may be required.
3. Electrical and communication lines shall be encased in rigid metallic conduit or other approved material. All electrical conduits shall be grounded according to the General Orders of the California PUC and the Electrical Safety Orders of Cal-OSHA.
4. When not required, encasement should be considered if clearance is impaired or the utility facility is near such hazards as high tension power lines, flood channels, subsiding ground, etc.

## 609 INSTALLING UTILITIES ON TOLL BRIDGES (Rev 05/07)

Utility encroachments on toll bridges may be approved by the Division of Design, Chief if costs of alternatives are unreasonably excessive and if the proposed encroachment satisfies these conditions:

1. The utility facility is not high risk (such as gas, oil, electrical, chemical, etc.).
2. The utility is lightweight.
3. Regular routine maintenance of the utility is not required.
4. Construction and maintenance of the utility facility is done only during hours approved by Caltrans.
5. The utility facility has a backup system that avoids emergency maintenance and repairs.

6. Granting the utility owner permission to use the bridge does not obligate the Division of Design, Chief to grant permission separately to all other similar utility owners requesting use of the bridge.
7. The utility is governed by the California Public Utilities Commission or is publicly owned, is dedicated to public use, and provides a service to the public.
8. The utility facility provides capacity for other utility owners of the same type of service.
9. An adequate location on the bridge is available to allow proper placement of the utility.

Requests for permits should be sent to the Division of Design, Chief for approval before issuing a permit.

### 609.1 Limited Space Highway Facility (Rev 05/07)

A limited space highway facility is defined as a State Facility that the Department has determined to have a limited amount of space available for the installation of Communication Facilities, e.g., toll bridges. The determination of which highway facilities are limited capacity shall be made by Structures, if a bridge, and the Division of Design, Chief, if a highway. Once a State highway facility is determined to be a limited space facility the following conditions will apply:

1. The first applicant requesting an encroachment permit for the installation of a communication facility will be required to enter into a Master Agreement for Longitudinal Encroachment on Limited Facilities.

2. The Master Agreement shall contain all of the conditions that govern the installation, operation, use, and maintenance of said communication facility.

3. Each Master Agreement shall be reviewed and approved by Caltrans legal.

## 610 VEHICULAR TUNNELS AND TUBES (Rev 05/07)

A public utility facility or other encroachment shall not be permitted within a vehicular tunnel or tube. An encroachment occupying an existing tunnel or tube that is incorporated in a new highway improvement may be allowed to remain under special circumstances with the approval of the Division of Design, Chief. Whenever feasible, the encroachment should be relocated.

## 611 CABLE TELEVISION

Privately-owned cable television systems holding city or county franchises may be granted aerial or underground encroachment privileges the same as public utilities, provided that Sections 682-695 of the Streets and Highways Code are met. They may be granted biennial maintenance permits.

Other privately-owned cable television system facilities not covered by city or county franchises may only be attached to existing utility poles or placed in existing underground ducts subject to the owner's consent as set forth in CPUC General Orders.

In any case, use of highway structures is subject to Structures Maintenance approval.

## 612 TELEPHONES

As a public convenience, Caltrans allows telephones in the right-of-way. An encroachment permit is required for their installation, operation, and maintenance. They are placed only at locations authorized by statutes.

### 612.1 Coin and Credit Card Operated Phones

Districts may permit coin or credit card-operated telephones in the right-of-way only at rest areas, vista points, park-and-ride lots, truck inspection facilities, and in bus passenger waiting shelters that are located on conventional highways and are equipped to hold the telephones. State statutes and Caltrans policies do not permit coin-operated telephones at other State highway right-of-way locations because telephones are a form of vending that is prohibited by Section 731 of the Streets and Highways Code.

Caltrans, law enforcement, or local agencies may request telephone installations in roadside rest areas, vista points, park-and-ride lots, or truck inspection facilities. Permits are issued to the requesting authority (if not Caltrans) and the installing telephone company at no charge. Local public transit agencies must request permits for telephones in existing and proposed bus passenger waiting shelters.

The maximum number of telephones to be installed at roadside rests, vista points, and park-and-ride lots is determined by the District Landscape Architect in cooperation with Maintenance and Traffic Operations. The California Highway Patrol and Caltrans will agree to the number of telephones needed in truck inspection stations.

Local agencies and law enforcement may request telephones along rural conventional highways when existing facilities and suitable installation locations are not available outside the right-of-way. These telephones must **not** be coin or credit card operated. Permits are issued to the local agency, and an additional permit is issued to the installing telephone company for operation and maintenance.

When a telephone owner requests a permit to maintain existing telephones that were installed without a permit, districts should review the facility for conformance to current policy. When appropriate, the telephones can remain in place and a permit can be issued.

All telephones must provide telephone company operator assistance.

### 612.2 SAFE Telephones

Streets and Highways Code Section 2550, enacted in 1985, authorizes county and regional government bodies to establish Service Authority for Freeway Emergencies (SAFE) agencies. SAFE agencies are ratified by a majority of the cities encompassed by the SAFE jurisdiction. They function as the administrative body to develop, implement, operate, and fund freeway and expressway emergency telephone systems. Systems are installed by locally administered contract under encroachment permit. SAFE funding comes from a one-dollar assessment by the Department of Motor Vehicles on each registered vehicle in the jurisdiction.

SAFE telephones are acceptable on highways included in the freeway and expressway system and connecting highways under jurisdiction of the California Highway Patrol (see Streets and Highways Code 131.1). They also are acceptable in park-and-ride lots as provided in SAFE guidelines. SAFE systems shall connect directly to CHP dispatch.

Only local authorities may propose SAFE systems. Site selection and design are determined by SAFE and the District SAFE Coordinator. After the District SAFE Coordinator accepts the plans as complete, a copy of the plans and the cooperative agreement are sent to the permit engineer for permit issuance. No additional review is required by the permit engineer. Any Caltrans' costs attributed to the project are reimbursed according to the SAFE/Caltrans cooperative agreement.

The encroachment permits issued to SAFE for construction and subsequent maintenance of the project are fee exempt. However, SAFE's contractor shall be charged permit issuance and inspection fees under the double permit process. For additional information on SAFE call boxes see the Publication Titled, "CHP/Caltrans Call Box and Motorist Aid Guidelines."

## 613 ENCROACHMENTS NO LONGER IN USE

Generally, facilities that are no longer in use should be removed from the right-of-way. However, with the approval of the Department, certain underground encroachments may be allowed to remain when: the highway segment is to be abandoned, removal would involve cutting the pavement, removal would seriously disrupt traffic and create a hazard, or when cost of removal exceeds the salvage value and the abandoned facility will not create a significant conflict with future highway improvements.

Facilities made of hazardous materials (such as asbestos) should be removed whenever possible.

Filling abandoned pipes with sand, two-sack slurry cement, or Controlled Low Strength Material (see Appendix H) may be required to protect the highway when pipes are abandoned in place. This requirement is mandatory for metal pipes 12" or larger in diameter and for all other pipes 24" or larger in diameter.

## 614 EXCEPTIONS TO POLICY AND STANDARDS (Rev 05/07)

The Division of Design, Chief, shall approve any exceptions to Statewide policies and standards governing encroachments within the State highway right-of-way. Table 6.6 lists encroachments that require approval of the Division of Design, Chief. Procedures and requirements for seeking variances and exceptions are discussed in Chapter 3.

**Table 6.6**
**Utility Facilities Requiring Approval of**
**the Division of Design, Chief**

These utility facility encroachments require approval of the Division of Design, Chief:

| | |
|---|---|
| **Freeways and Expressways** | • Exceptions to the policy on accommodation of utilities within freeway right-of-way.<br>• Longitudinal encroachments, including underground pipelines, utilities, and utility poles along highways.<br>• Utility support structures, manholes or other appurtenances within access control lines.<br>• All encroachments involving locked gates in access control fences.<br>• Any access to utility facilities from through lanes or ramps. |
| **Conventional Highways** | • Longitudinal placement of private facilities |

## 615 FHWA APPROVAL

Requests for installations on all federal-aid highway systems are handled at the district level if they conform to the Code of Federal Regulations, 23 CFR 645, Subpart B. FHWA approvals for utility installations that conform to 23 CFR 645, Subpart B (Appendix C) are approved by Caltrans. FHWA must approve installations not conforming to Caltrans' utility accommodation policy as approved by FHWA.

## 616 FRANCHISES (STREETS AND HIGHWAYS CODE 680)

All proposed city and county franchises and ordinances affecting State highways are processed for review by the district Right of Way Utility Coordinator.

## 617 ANNUAL MAINTENANCE (Rev 12/07)

Annual maintenance of utility facilities (e.g. installation of service connections, routine maintenance, pole maintenance and treatment, etc.) is authorized by UM or UE permits.

Maintenance work on utility facilities within the right-of-way shall be authorized under an encroachment permit, and a copy present at the work site. In absence of the original permit, a current annual UE or UM maintenance permit, will allow maintenance work in compliance with the General Provisions and current Utility Maintenance Provisions issued with the original permit.

Utility Companies can provide pole maintenance & chemical treatment under their annual UE permit, see Section 617.2.

Encroachment permits are required for utility companies to operate and maintain services to State-installed facilities within the right-of-way. Service connections installed within a conventional highway must comply with the utility company's annual permit. A no fee Utility Service (NUS) permit must be obtained by the utility company if the service connection does not qualify under the annual permit. Freeway and expressway service connections having service disconnects, meters, or shut-off valves or switches within the access control lines require the utility owner to obtain a NUS permit for the connections.

Permit inspectors should note the following information on the Encroachment Permit Report regarding work performed under an annual utility maintenance encroachment permit:

- Name of caller and telephone number.
- Permit number.
- Date and time of proposed work.
- Location of work (county and route).
- Type of work to be performed.
- Company work order.

UE Permits allow utility owners to install service connections, additional capacity aerial facilities and perform ordinary maintenance of its facilities located within State highway right-of-way. The UM Permits are more restrictive allowing routine maintenance activities but prohibiting service connection and aerial work. These permits are issued for one or two year periods.

### 617.1 Utility Maintenance Provisions
**Permit Code UM**

The UM annual permit is a restrictive maintenance permit that allows emergency and routine maintenance of existing utility facilities on conventional highways without the privilege of service connection installations as allowed under the UE permit. Detailed permissible activities under the UM permit are shown in Appendix K.

When a developer submits a permit application to construct a new utility, a one-time fee exempt, "UM" permit is issued to the owner of that utility. This process requires that the utility owner must also apply for an Encroachment Permit, otherwise no permit shall be issued to the developer for any utility installation.

A developer may be required by a city or county to construct service connections that later will be maintained by the utility company. Caltrans' policy for developer installed public utility facilities is discussed in Section 622.

An exception to this policy would be in the case of a service installation only, where the utility owner has a valid "UE" permit for placement of service installations, ownership, and maintenance.

### 617.2 Encroachment Permit Annual Utility Provisions (Rev 12/07)

**Permit Code UE**

"UE" permits authorize utility companies and communication utility companies to inspect, maintain, repair utility facilities, to make service connections under specified conditions, pole and chemical treatment, and to make emergency repairs to remedy any interruption of service to a customer.

Utility Companies are to provide a list with the pole identification, location(s), type of chemical(s) and quantities used for their pole treatment maintenance operations.

This information shall be provided upon expiration of their UE annual permit or upon request of the Department during the annual/biennial permit life as needed.

*Utility Companies shall submit copies of the MSDS sheets for all chemical compounds to be used in their pole treatment maintenance operations, in conjunction with the permit application submittal.*

Utility Companies are to notify the District Landscape Specialist or their designee and the District Encroachment Permits Office when there is any change or modification in the type(s) of chemical(s) used in their pole treatment maintenance operations.

Prior to any application or use of Tree Growth Regulators (TGR), prior approval shall be obtained from the District Landscape Specialist or their designee, and the products used must be on the Caltrans approved chemical list.

Public utilities and public corporations that lawfully maintain a utility facility in State's right-of-way, may perform routine maintenance and may perform emergency repairs of their facility under the original encroachment permit. Such maintenance must be in compliance with the Special Provisions and the General Provisions incorporated into the encroachment permit, and with Caltrans' current Utility Maintenance Provisions.

"UE" permits authorize communication utility companies to install additional capacity in existing ducts by placing additional cable or replacing an existing cable with a greater cable pair or fiber optics. Authorized work also includes interconnect splicing of existing cable pairs, placement of air flow monitoring transducers and air piping facilities in existing conduits, replacing pull boxes, and reconnection of existing service. Increasing the capacity of existing aerial facilities is also allowed along conventional highways. Utility owners may place new cable or replace existing cable provided the highway is not part of the State Scenic Highway System.

Annual or biennial "UE" utility permits may be issued to public and private utility owners.

Communication utility owners are **not** authorized, under a "UE" Permit, to place conduit or utility vaults in highway rights-of-way, or to make any excavations other than for potholing or service connections under specified conditions.

Utility owners must apply for an encroachment permit to identify their ownership and establish maintenance responsibilities of a utility service lateral within the State right-of-way. The utility company should apply before the property owner is issued an encroachment permit for the installation. Exceptions are allowed only when UE permits have been issued to the utility owner for service installations, ownership, and maintenance.

A developer may be required by a city or county to construct service connections that later will be maintained by the utility company. Caltrans' policy for developer installed public utility facilities is discussed in Section 622.

### 618 CONVENTIONAL AERIAL
**Permit Code UC**

UC permits authorize aerial facilities on conventional highways. Utility companies may use conventional highway right-of-way when adjacent utility easements or corridors do not exist on private or public property. Pole line cross-arm members or conductors may not overhang private property without an easement, so pole lines generally must be located on public property.

Maintenance of aerial facilities is authorized by UE annual permits. These annual permits allow capacity increases when the carrying pole lines are designed and constructed to accept additional cable or a larger replacement cable and new permits are not required.

Permit inspectors should ensure that aerial cables have the minimum vertical clearance required by the California Public Utilities Commission. CPUC Rule 84-4-A6 indicates communication cables installed longitudinally on conventional highways may have a minimum 16' clearance when they do not overhang the thoroughfare or they are behind established curbs, ditches, or berms. This new clearance applies even when there are connecting driveways, but does not affect the 18' minimum clearance required for public connecting roads.

Supports for overhead lines in conventional highway right-of-way must be as close to the right-of-way line as possible, and in no case closer than 1.5' in back of a curb face. Appendix F

provides tables and details showing minimum clearances for aerial utility facilities (For additional information see Highway Design Manual, Topic 309 Clearances).

### 619 FREEWAY AERIAL (Rev 05/07)
**Permit Code UF**

UF permits authorize aerial facilities that cross freeways and expressways. Utility facilities affecting controlled access rights-of-way generally are direct crossings, but they may include existing longitudinal installations approved to remain during construction or by prior permit. These aerial utility facilities may be allowed for their useful life with relocation performed at that time.

When existing facilities are covered by a Joint Use or Consent to Common Use agreement with a utility company, the agreement specifies the utility's right to remain in the freeway and fees associated with the permit. A request for new longitudinal encroachments requires approval by the Division of Design, Chief and normally is not permitted.

Installation or removal of overhead conductors crossing a freeway require traffic control by the California Highway Patrol (CHP) and usually occur on weekend mornings. The CHP can perform a rolling break in traffic on most highways to allow up to a five-minute clearing. These breaks are adequate for simple cable installation. Utility personnel carry the conductors across the freeway lanes and hoist them into place on the opposite side of the freeway.

On larger conductor crossings such as transmission lines, districts may determine that safety nets are needed to prevent transmission lines from falling on traffic during cabling installations. Temporary safety-net support poles are placed at protected locations outside shoulders and in medians. If locations for temporary supports are not available, the utility company may use K-rail and sand barrel crash cushions. After rope nets are strung during CHP traffic breaks other work is then allowed to proceed.

Requirements that apply to transmission line supports for overhead lines crossing freeways are shown in Table 6.7. Consideration should be given to underground facilities when spanning roadways with aerial facilities is not feasible.

**Table 6.7** (Rev 05/07)
**Requirements for Line Supports for Overhead Lines Crossing Freeways**

Line supports for overhead lines crossing freeways must comply with these requirements, they:

1. Should have a minimum lateral clearance of 30' from the edge of a through lane and 30' from the edge of a ramp lane, when possible.

2. Shall be located outside the right-of-way or between the right-of-way line and access control line if different. Any other placement must be approved by the Division of Design, Chief.

3. Should not be permitted in medians.

4. Should not be permitted on cut or fill slopes.

5. Shall not impair sight distances.

6. Shall be compatible with access requirements.

## 620 UNDERGROUND LONGITUDINAL
## Permit Code UK and Permit Code UL

Districts should classify longitudinal trenching for ducts, mains, directly-buried cable, and multiple service lines as underground longitudinal work. Major underground longitudinal work is authorized under the permit code UK and inspection fees are determined by the AX method (see Encroachment Permit Fee Schedule). UL permits authorize minor projects with cost for inspection determined by the same method. Individual service installations that require short longitudinal trenching are placed under UE permits. However, when a number of parallel services are proposed, it is preferable to place a distribution facility.

For very large installations (UK Permits), districts may need to require extensive traffic control or detours. Permittees should prepare traffic control plans for Caltrans approval and obtain local approval for detours. Additionally, these large facilities can have extensive shoring. If shoring failures could damage State facilities or if the permit inspector must enter an excavation deeper than 5', permittees should submit shoring plans and calculations signed by the design engineer for Structures Maintenance approval.

Caltrans' policy for developer installed public utility facilities is discussed in Section 622.

## 621 STATE-REQUIRED RELOCATION (Rev 12/06)
**Permit Code UR**

UR permits authorize the relocation of utility facilities when such relocation is required by State highway improvement projects.

For State highway contracts, district Right of Way utilities staff will have the utility owner prepare plans during the design phase for review and approval by the project engineer. Right of Way then prepares a Notice to Owner and sends this notice to Permits along with a copy of the approved plans. The Office of Encroachment Permits has no involvement, except to issue the "UR" permit to the Right of Way Utility Coordinator for issuance to the Utility Owner along with the Notice to Relocate.

The permit should contain:

- General Provisions,
- A reference to the State contract,
- A brief description of the work,
- The construction inspector's name, address, and telephone number.

This information is provided on the face of the notice, and the issued permit may mimic the notice to simplify procedures and avoid conflicting statements. Permits sends copies to Maintenance, Construction, and the area permit inspector for information. Construction is responsible for inspection and permit completion (TR-0129).

Section 604 addresses several requirements for utility facility relocations within the State highway right-of-way.

The law governing liability for the cost of relocating utility facilities encroachments is complex and must be interpreted uniformly and fairly. District permits personnel involved with relocation proposals are cautioned not to try to interpret the law.

### 621.1 Determining Liability for Permit Fees

District Right of Way is responsible for determining liability for the cost of relocation. Utility work that is ordered under a Notice to Owner is exempt from encroachment permit fees. Utility owners requesting permits for work to be done in prior property rights' areas, shall also be exempt from all permit fees.

### 621.2 Septic Tanks

Caltrans' policy does not allow any installation of septic tank leach pipes within the State right-of-way.

### 621.3 Performing Relocation Work

Whenever possible, utility facility relocation or protection work that is required by highway improvement or construction shall be performed by the owner before the highway work begins. Arrangements for such work shall be made with the owners by the district Right of Way Utility Coordinator.

## 622 SERVICE, POTHOLE, MODIFICATIONS, AND CONNECTIONS
**Permit Code US**

Separate permits for service connections and potholing are issued only when annual "UE" permits are not issued to the owning utility company or in special cases where property owners perform the work. Separate permits are needed for authorized connections in controlled access rights-of-way and when owning utility companies only have "UM" maintenance permits.

Potholing, to determine utility depth before State highway contract work, is handled through a right-of-way issued utility notice and UR permit.

Service connection permits are issued to the utility owner. Caltrans' policy does not allow the installation and maintenance of public utility facilities by private individuals or non-public utility corporations (except for sewer services) because of potential liability.

**The use of State right-of-way by private individuals or non-public utility-corporations that is not authorized by law would be a gift of public funds and therefore prohibited.**

When Caltrans issues a permit for installation of public utility facilities, it does not inspect the installation for compliance with the utility or public corporation standard. Compliance with industry standards is the responsibility of the public utility or public corporation.

Caltrans' policy for developer installed public utility facilities is listed as follows:

**Longitudinal Installation**

1. Permits for installation of longitudinal public utility facilities in the right-of-way are issued to the developer, private individual, or non-public utility-corporation. The permittee's contractor may install the facility under our General Provisions item 4 (see Appendix K).

   The developer, private individual, or non-public utility-corporation, assumes responsibility to coordinate submission of an application from the public utility or public corporation for a permit to own, operate and maintain the facility. The installation permit shall not be issued until this application has been submitted.

   The public utility or public corporation is not charged a fee for the permit to own, operate, and maintain the facility.

**Service Connection**

2. Permits for installation of public utility service connections' that are transverse in the rights-of-way may be issued to the developer, private individual, or non-public utility-corporation. The permittee's contractor may install the service connection under General Provisions item 4.

   Except for sanitary sewer service connections, the developer, private individual, or non-public utility corporation is responsible for coordinating submission of an application from the public utility or public corporation for a permit to own, operate, and maintain the facility. However, a public utility or public corporation having a UE permit is exempt from applying. The installation permit shall not be issued until this application has been submitted.

   The public utility or public corporation is not charged a fee for the permit to own, operate, and maintain the facility.

**Transverse Sanitary Sewer**

3. Permits for installation of transverse sanitary sewer service connections in the right-of-way are issued to the developer, private individual, or non-public utility-corporation. No application to own, operate, and maintain is required of the public corporation. The permittee's contractor may install the service connection under General Provisions item 4.

## 623 TRENCHLESS TECHNOLOGIES (Rev 07/2008)

**Bore & Jack / Horizontal Directional Drilling / Micro-Tunneling / Pipe Ramming / Pipe Bursting**
**Permit Code UJ**

The establishment of a "Survey Grid Line" is required on installations with proposed "hole-diameters at 30" or greater," and may be required on installations with hole-diameters < 30" if warranted. **All transverse-crossings of State Highway right-of-way require encasement.** (See Table 6.8)

### 623.0 Introduction (Rev 07/2008)

Utility installations and service installations are not permitted to be placed within culverts or drainage structures within State highway right-of-way.

The installation of underground utilities within State highway right-of-way shall be performed by the use of a trenchless technology, in most cases. Open-cut installations will only be allowed as a last resort, by issuance of a "UT" permit. The requirement for encasement of utility installations is for the protection of the traveling public and to minimize the amount of disturbance to the structural integrity of the roadbed.

In specific cases encasement may cause a reduction in cathodic protection to the carrier pipe, which may result in corrosion to the pipeline. In these specific cases when authenticated and warranted, encasement of said facility may be waived. Encasement requirements are shown in Table 6.8.

Encasement may be required for longitudinal utility installations within city or county roadways that cross within State highway right-of-way.

### 623.1 Bore & Jack (Rev 10/03)

Utility installations placed by the bore & jack method shall be monitored to ensure that the integrity of the existing roadway elevations are maintained.

Bore & Jack consists of cutting of the soil, generally 6" to 8" ahead of the pipe being jacked simultaneously, by an auger placed within the encasement. The encasement should generally support the integrity of the hole. When the encasement is also to serve as the carrier facility for hazardous materials, the use of another trenchless installation is recommended. Potential damage could occur during the jacking process, rendering the use of that facility as the carrier pipe useless.

**Table 6.8** (Rev 07/08)
**Encasement Considerations for Transverse Crossings**

| Encasement Requirements based on: Installation Method, Type of Highway Facility, and Material Transported in Carrier | | | | | | |
|---|---|---|---|---|---|---|
| | Bore and Jack | | Directional Drilling | | Trenching | |
| **Facility Type** | **Frwy/Expwy** | **Conventional** | **Frwy/Expwy** | **Conventional** | **Frwy/Expwy** | **Conventional** |
| High Risk (Section 605) | Encase | Encase | Encase | Encase | Encase | Encase |
| Low Risk (Section 605) | Encase | Encase | Encase | Encase | Encase | Optional* |
| Exempt Facilities (Section 605) | Encase | Encase | Optional* | Optional* | Optional* | Optional* |
| Pressurized Fluids | Encase | Encase | Encase | Encase | Encase | Encase |
| Natural Gas Lines Minimum 7.5' Depth (Appendix H) | Optional* | Optional* | Optional* | Optional* | Optional* | Optional* |
| Gravity Flows | Encase | Encase | Encase | Encase | Optional* | Optional* |

*NOTE*:"Optional" means at the discretion of the District Permit Engineer.*

### 623.1A Encasements (Rev 10/03)

Encasements that house carrier pipes under pressure shall be steel pipe with a minimum inside diameter sufficiently larger than the outside diameter of the pipe or duct to accommodate placement and removal and shall conform to Caltrans' Standard Specifications. The steel encasement can be either new or used, or of the approved connector system. Used steel casing shall be pre-approved by a Caltrans' representative prior installation.

When the method of Horizontal Directional Drilling is used to install the encasement, the use of High Density Polyethylene Pipe (HDPE) as the encasement is acceptable. In specific instances the approval of Headquarters Office of Encroachment Permits, may be required.

Reinforced Concrete Pipe (RCP) in compliance of State Standard Specifications is an acceptable carrier for storm drain gravity flow or non-pressure flow. RCP when installed by Bore & Jack shall have rubber gaskets at the joints, and holes for the grouting of voids left by jacking operations (see grouting requirements in # 4 below).

Encasement requirements:

1. All transverse crossings, single ducts or pipes 6" or greater in diameter shall be encased. Installation of multiple ducts or pipes, regardless of diameters, shall require encasement (for exceptions see Appendix H).

2. The minimum wall thickness required for steel encasements is based on lengths and diameters of pipes. See Table 6.9.

3. Encasement ends shall be plugged with un-grouted bricks or other suitable material approved by the Caltrans' representative.

4. The Caltrans' representative may require the permittee to pressure grout, filling any voids generated in the course of the permitted work. Grouting shall be at the expense of the permittee. Grout holes when placed inside the of the pipe, generally on diameters of 36” or greater, shall be on 8' centers, longitudinally and offset 22 degrees from vertical, and staggered to the left and right of the top longitudinal axis of the pipe. Grout pressure shall not exceed 5 psig for a duration sufficient to fill all voids.

5. There is a spacing requirement when placement of multiple encasements is requested. The distance between multiple encasements shall be the greater of either 24” or twice that of the diameter of the larger pipe being installed.

6. Wing cutters when used shall only add a maximum of 1" in diameter to the outside diameter of the encasement pipe. Voids in excess of the Standard Specifications shall be grouted.

7. A band welded to the leading edge of the encasement pipe should be placed square to the alignment and not on the bottom edge of pipe. A flared lead section on bores over 100' shall not be permitted.

8. The length of the auger strand shall be equal to that of the section of encasement pipe.

9. Encasements placed within conventional highway right-of-way shall extend 5' beyond the edge of the paved shoulder, back of curb, or to the highway right-of-way line.

10. Encasements placed across controlled access right-of-way shall extend to the highway right-of-way lines.

**Table 6.9**
**Required Thickness for Steel Pipe Casings**

| | Minimum Wall Thickness | |
|---|---|---|
| **Casing Diameter** | **Up to 150' Length** | **Over 150' Length** |
| 6" to 28" | 1/4" | 1/4" |
| 30" to 38" | 3/8" | 1/2" |
| 40" to 60" | 1/2" | 3/4" |
| 62" to 72" | 3/4" | 3/4" |

### 623.1B Bore and Receiving Pits (Rev 10/03)

Requirements:

1. Shall be located a minimum of 10' from the edge of pavement in rural areas, or at least 5' beyond the concrete curb and gutter or AC dike in urban areas, or at least 5' beyond the toe of slope of embankments.

2. Shall be located outside of controlled access highway right-of-way. EXCEPT, when approved by the district for direct crossings that are excessively long, or there is restricted space available for placement, outside of the right-of-way. Those portions of the installation not placed by Bore & Jack shall be encased by the open trench method.

3. Protected by placement of 6' chain link fence or Type-K barrier around them.

4. Shored in accordance to Cal-OSHA requirements. Shoring of pits located within 15' of lanes within State highway right-of-way shall not extend more than 36" in height above the pavement grade, unless authorized by a Caltrans' representative.

5. Reflectors shall be affixed to the shoring on all sides facing traffic.

6. Pits shall not affect any State facilities, or create a hazard to the traveling public. Damaged State facilities shall be replaced in-kind or repaired to their original state.

7. All pits should have crushed-rock and sump areas to clear groundwater and water used to clean the casings. Pits shall be lined with filter fabric when groundwater is found and pumping is required.

8. Temporary Type-K railing shall be placed at a 20:1 taper or as otherwise directed by the Caltrans' representative to maintain the integrity of the adjacent travel lane.

A tunnel is defined as any installation that is 30" or larger in diameter (see Section 518, and Table 5.24 - Permit Code TN).

### 623.2 Horizontal Directional Drilling (Rev 07/08)

Horizontal Directional Drilling is another trenchless method for the placement of encasement and/or carrier pipe under, across or within existing highway right-of-way.

#### 623.2A BACKREAMER DETECTION

**JANUARY 1, 2000,** sonde detection on the backreamer is required. (See Appendix E, "Guidelines and Specifications for Trenchless Technology Projects")

**623.2B Documentation of Projected Path** (Rev 10/03)

The permittee shall provide a copy of the bore-log showing horizontal and vertical alignment (depth). A bore-log shall be kept for both the pilot bore and the reaming process. These records shall be provided to the Department's representative daily. The bore-log shall depict a plan profile of the actual bore path.

**623.2C Safety Requirements**

Protective safety gear shall be worn by all members of the contractor's crew, (Die-Electric boots are recommended.

**623.2D Permit Application Submittal**

All utilities that are installed by HDD shall provide "As-Builts" upon completion of the job.

The permit application package should contain the following information in support of the permit application; construction plan, site layout plan, project schedule, communication plan, safety procedures, emergency procedures, company experience record, contingency plan and a drilling fluid management plan in support of the permit application.

1. Location of entry and exit point.
2. Equipment and pipe layout areas.
3. Proposed drill path alignment (both plan & profile view).
4. Location, elevations and proposed clearances of all utility crossings and structures.
5. Proposed Depth of cover.
6. Soil analysis **.
7. Product material (HDPE/steel), length, diameter-wall thickness, reamer diameter.
8. Detailed pipe calculations, confirming ability of product pipe to withstand installation loads and long term operational loads including H20.
9. Proposed composition of drilling fluid (based on soil analysis) viscosity and density.
10. Drilling fluid pumping capacity, pressures, and flowrates proposed.
11. State right-of-way lines, property, and other utility right-of-way or easement lines.
12. Elevations.
13. Type of tracking method/system.
14. Survey Grid establishment for monitoring ground surface movement (settlement or heave) due to the drilling operation.

Note: ** *May be waived by the District Permit Engineer on HDD jobs of less than 6" in diameter and on a transverse crossing less than 150' in length.*

**ALL ADDITIONAL PERMIT CONDITIONS SHALL BE SET FORTH IN THE SPECIAL PROVISIONS OF THE PERMIT.**

**The following, outlines recommended depths for various pipe diameters:**

| RECOMMENDED MINIMUM DEPTH OF COVER | |
|---|---|
| | |
| **DIAMETER** | **DEPTH OF COVER** |
| | |
| 2 inches to 6 inches | 4 feet |
| 8 inches to 14 inches | 6 feet |
| 15 inches to 24 inches | 10 feet |
| 25 inches to 48 inches | 15 feet |

The permittee/contractor shall, prior to and upon completion of the directional drill, establish a Survey Grid Line and provide monitoring.

Upon completion of the work, the permittee shall provide an accurate **"As-Built"** drawing of the installed pipe.

**623.2E Soils Investigation**

A soil investigation should be undertaken, suitable for the proposed complexity of the installation to confirm ground conditions.

**Definition: Soil Analysis**

**Common sense must be utilized when requiring the extensiveness of the soil analysis**. A soil analysis is required in order to obtain information on the ground conditions that the contractor will encounter during the HDD operation.

If, the contractor can go to the project site and do an excavation with a backhoe to one foot below the proposed depth of the bore, that is a soil investigation. In all cases when an excavation is made in creating of an entrance and exit pit for a HDD project, that is an example of a soil investigation. The HDD process is in itself a continual and extensive soil analysis as the pilot bore is made and it encounters the varying soils and formations the drilling slurry will change colors, therefore providing the contractor with continual additional information.

The purpose and intent of the soil analysis is to assist the contractor in developing the proper drilling fluid mixture, and to ensure Caltrans that the contractor is aware of the conditions that do exist in the area of the proposed project. This prepares the contractor in the event they should encounter a zone of pre-tectonics, and that they would need additives or preventive measures in dealing with inadvertent returns (frac-outs).

The discretion on the extensiveness of the soil analysis is left to each individual District Permit Engineer (DPE) respectfully, for their respective areas. The inspectors play a large role in assisting the DPE in making decisions on the extensiveness. Each individual inspector has a general knowledge of the soil conditions in their area of responsibility.

In many circumstances the soil information has already been prepared, either by Caltrans or by City and County Entities. This information if existing should be provided to the requesting permittee, if there is a structure within 1/2 mile of the proposed project, then Caltrans has already done an extensive soil analysis and the information is stored in our Maps & Records Branch. As-Builts, on our freeways and highways provide stationing and detailed information regarding soil information, cut and fill areas.

### 623.2F Determination of Soil Investigations

The District Permit Engineer (DPE) should determine the extensiveness of the Soil Investigation to be performed based on the complexity of the HDD operation, the DPE may recommend according to the guidelines listed below, a combination of, or modify the guideline to fit the respective area:

**Projects less than 500' in length, where the product or casing is 8" or less in diameter:**

A field soil sampling investigation to a depth of one foot below the proposed drilling.
a) subsurface strata, fill, debris and material

**Projects less than 800' in length, where the product or casing is 14" or less in diameter:**

A field soil sampling investigation to a depth of one foot below the proposed drilling.
a) subsurface strata, fill, debris and material
b) particle size distribution (particularly percent gravel and cobble)

**Projects where the product or casing is 16" or greater in diameter:**

A geotechnical evaluation by a qualified soil engineer to determine the following.
a) subsurface strata, fill, debris and material,
b) particle size distribution (particularly percent gravel and cobble),
c) cohesion index, internal angle of friction, and soil classification,
d) plastic and liquid limits (clays), expansion index (clays), soil density
e) water table levels, and soil permeability,

**Projects where the product or casing is 24" or greater in diameter:**

A geotechnical evaluation by a qualified soil engineer to determine the following.
a) subsurface strata, fill, debris and material
b) particle size distribution (particularly percent gravel and cobble)
c) cohesion index, internal angle of friction, and soil classification
d) plastic and liquid limits (clays), expansion index (clays), soil density, and penetration tests,
e) rock strength, rock joint fracture and orientation, water table levels, and soil permeability,
f) areas of suspected and known contamination should also be noted and characterized.

Boreholes or test pits should be undertaken at approximately 250 to 410 feet intervals where a proposed installations greater than 1000' feet in length and parallel an existing road. For road crossings a borehole or test pit shall be undertaken on either side with one or more additional boreholes or test pits in the median where conditions permit. Additional boreholes or test pits should be considered if substantial variation in soil conditions are encountered.

Should the soil investigation determine the presence of gravel, cobble, and/or boulders, care should be exercised in the selection of drilling equipment and drilling fluids. In such ground conditions the use of casing pipes or washover pipes may be required or specialized drilling fluids utilized. Fluid jetting methods used as a means of cutting **should only be considered** where soils have a high cohesion such as stiff clays.

Directional drilled gravity sewers shall only be considered where suitable soil conditions are present. Suitable soil conditions include homogenous soils consisting of clays, silts, silty sands, and sands that would allow for good control of the drill head during the pilot hole drilling.

### 623.3 Microtunneling

Microtunneling is a hybrid of the tunneling industry (miniaturization of tunnel boring machines) and the pipeline industry where pipe jacking has been used for more than 100 years. Microtunneling does not require personnel entry into the tunnel.

### 623.3A Introduction

Microtunneling is a special construction method suitable for many conditions where open cut construction methods are not cost effective, too disruptive, or not physically possible.

### 623.3B Microtunneling Permit Application Submittal

The encroachment permit application package submittal, shall consist of two separate submittals. The first submittal shall be by the Owner of the installation (623.3B). The second submittal required shall be by the owner's contractor, when applying for the "DP" (623.3C).

The encroachment permit application package shall contain a construction plan, site layout plan, project schedule, communication plan, safety procedures, emergency procedure, company experience record, in addition to the information listed as follows:

**The first submittal by the owning agency shall contain the following plans and information:**

1. Drive lengths
2. Proposed depth
3. Shaft; jacking and receiving shafts, manhole construction, shaft backfill, and shoring removal;
   - Type of shaft;
     a) Sheet Pile

   b) Beams and Lagging
   c) Trench Box
   d) Auger Drilled and Lined
   e) Caissons
4. Intermediate jacking stations;
   - Number of Stations;
     a) Required by Specifications
     b) On site
5. Geotechnical; including ground water information
   - Geotechnical evaluation by a qualified soil engineer to determine the following;
     a) Boring logs & plan locations of borings and cross sections, Subsurface strata, fill and ground water elevations
     b) Particle size distribution (particularly percent rock and cobble),
     c) Cohesion indexes, internal angle of friction, and soil classification,
     d) Plastic and liquid limits (clays), expansion index (clays), soil density, and penetration tests,
     e) Rock strength; rock joint fracture and orientation, water table levels, and soil permeability,
     f) Areas of suspected and known contamination should also be noted and characterized.
   - Should the soil investigation determine the presence of rock, cobbles, and/or boulders, determination of the following information would be required;
     a) Depth and extent of rock
     b) Rock type
     c) Rock strength
     d) Rock joint/fracture spacing
     e) Hardness
     f) RQD
     g) Estimated range of sizes & frequency of occurrence of cobbles and boulders.

Boreholes or test pits for road crossings shall be undertaken on both sides with one or more additional boreholes or test pits in the median where conditions permit. Additional boreholes or test pits should be considered if substantial variation in soil conditions are encountered. Where a proposed installation parallels an existing road, boreholes or test pits should be undertaken at approximately 250 to 410 feet intervals.

### 623.3C Contractor's Submittal

**The second submittal by the owner's contractor shall contain the following plans and information:**

1. Shaft; soil stability at portals and ground improvement.
2. Dewatering plans for jacking and receiving shafts, if any.
3. Shoring design for jacking and receiving shafts.
4. Survey control plan: lasers, laser mounting, laser checking.
5. Ground surface settlement monuments and subsurface settlement monuments monitoring program plan.
   - Buried points
     a) Rebar points, or
     b) MPBX (Multi-point borehole extensometers)

6. Recycling information; slurry mix and polymer additives, slurry separation plant type, and spoils disposal;
    a) Removal of slurry in dump trucks.
    b) Removal of slurry in tankers.
    c) Settlement ponds.
    d) Muck piles on site.
7. Contingency plan information;
    a) Ground improvement plans when required at portals and/or behind thrust block/reaction wall due to weak and unstable soil conditions.
    b) Obstruction removal through emergency (911) shafts or other means.
    c) Mechanical breakdowns and recovery of the MTBM through 911 shafts or other means.
    d) Control of hydrofracture and slurry loss.
    e) Remediation of loss of ground and excessive ground surface settlement.

### 623.4 Pipe Ramming (Rev 10/03)

**Pipe Ramming pit requirements are identical to those for Bore & Jack.**

**Establishment of a survey-grid line is required.**

Before any project begins, exploration bore-holes and a complete geotechnical investigation shall be conducted to determine possible difficulties in order to determine the drilling trajectory.

The casing shall be rammed open ended, except when the diameter is 6” or smaller. Pipes 6” or smaller may be rammed open ended or closed.

A soil shoe may be installed on the leading edge of the casing, either by fabrication on site or obtained from the manufacturer. A soil shoe shall not be utilized on those installations at depths or 18” or less from the surface.

Lubrication shall only be utilized to reduce friction and increase production. The amount of lubrication directed to the outside of the pipe shall only be of a sufficient amount required to fill the void between the outside of the pipe and soil, as created by the soil shoe.

Lubrication to the inside of the casing shall only be an amount adequate to assist in spoil removal when the ram is completed.

Welding of the casing at joints shall be as per the manufacturer’s recommendations.

The use of straps at each joint on pipe diameters of 12” or larger is required as is the use of the manufacturer’s specified welding wire or rod.

Spoil removal for rammed encasements of 30” in diameter or less, may utilize pressurized air or water.

Air pressure shall not exceed 150 psi and water pressure shall not exceed 300 psi.

Encasements larger than 30" in diameter shall have the spoils removed by other means than by pressurizing of the pipe, such as, manual, auguring, vacuum, washing or other means.

The Receiving Pit shall be steel plated entirely when the spoils are to be removed from within the encasement by means of air or water pressurized methods.

### 623.5 Pipe Bursting (Rev 10/03)

**Pipe Bursting operations generally are only performed by the owning utility when they have exceeded the operating capacity of their existing facilities. In most cases pipe bursting allows the utility owners the advantage of upgrading their existing facilities by up to 50%.**

On installations of diameters 12" or greater it is necessary to establish a survey-grid line and establish the existing elevation points over the existing area of installation.

A soil analysis should be required and review of the information to identify any locations of difficulty, density, water table, changes in soil formation that could present or create greater friction resistance.

Request information of the proposed project as to:

1. the ratio of the proposed upgrade to determine difficulty, generally up to 25% increase in diameter is common. An increase of 25% - 50% is considered challenging, and an increase of 50% or greater is considered experimental.

2. the existing depth of cover, "rule of thumb" depth of cover should be at least 10X the difference in the upgrade of the existing diameter to be burst.

3. whether or not the existing line has been viewed by video, do not allow line to be burst blind.

4. is this proposed line straight or are there bends in the line.

5. if bends are existing in the line, the location of the bend will have to be excavated and new pits re-established at those locations.

6. require that the contractor provide a list of equipment to be on site to handle an emergency, in the event that bypass pumping is required to maintain the existing service in the event of a problem.

7. as to what method will be utilized (static, pneumatic, burst and jack, or hydraulic).

### 623.6 Tunneling - Rib & Lagging (Rev 10/03)

NOTE: All projects will vary in their own characteristics. General similarities are listed below to provide a general understanding of these types of projects.

Establishment of a survey-grid line and existing elevation points shall be over the centerline and wing points of the installation.

Designed plans and specifications, calculations and details (liner plates, rib & lagging, bracing, etc.) shall be stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design of tunnels. Proof of experience shall be submitted on "Certification of Structural Experience," form TR-0133, in conjunction with project package submittal.

A geotechnical investigation and soil analysis by a licensed geotechnical engineer/engineering geologist is required. It shall provide identification of any locations of difficulty, changes in soil formation, or mixed face conditions that could present or create ground loss, exploratory soil corings and logs are required along the tunnel alignment at intervals of twenty-five to one-hundred feet {25' to 100'}.

When the length of the tunnel is greater than four hundred feet (> 400'), alignment holes may be required. Alignment holes shall be drilled at a maximum spacing of two-hundred feet (200') and a casing of four to six inches (4" to 6") in diameter installed vertically, to a depth necessary for the installed casing to extend into the tunnel excavation. When alignment holes fall within the pavement area of the roadway, the pavement shall be saw-cut, a cover shall be placed over the end of the casing at grade, and the space around the casing within the roadway filled with concrete (EXCEPT in controlled access right-of-way).

### 623.6A CAL/OSHA Requirements (Rev 10/03)

The California Code of Regulations (CCR) mandates the following requirements for Tunneling Projects.

The Owner or Local Entity proposing the construction of the tunnel shall make a full submittal to the Department of Industrial Relations, Cal/OSHA, to determine tunnel classification (CCR 8422).

Development of a check-in/check-out procedure to ensure an accurate account of personnel underground in the event of an emergency (CCR 8410).

Development of an Emergency Plan, that outlines duties and responsibilities of all personnel on the project during an emergency. The plan shall include ventilation controls, fire fighting equipment, rescue procedures, evacuation plans and communications (CCR 8426).

Cal/OSHA requires a State of California certified person performing the duties of gas tester or safety representative to be certified by passing a written and an oral examination administered by the Cal/OSHA Mining & Tunneling Unit (CCR 8406(f), (h)).

A certified safety representative shall direct the required safety and health program and must be on-site while employees are engaged in operations during which the Tunnel Safety Orders (TSO) apply (CCR 8406(f)).

The certified safety representative must have knowledge in underground safety, must be able to recognize hazards, and must have the authority to correct unsafe conditions and procedures subject to the TSO (CCR 8406(f)).

A State of California certified gas tester is required for the following operations:
- All classifications other than non-gassy
- Projects during which diesel equipment is used underground
- Hazardous underground gas conditions (CCR 8470).

**623.6B Tunnel** (Rev 10/03)

Tunnel construction is accomplished by the method of Hand-mining, or by Mechanical means, and the use of a protective shield.

Continuous monitoring and observation of the ground surface above the tunnel is required. In some cases it may be required to survey and record elevations along the survey grid line, several times a day, or daily.

Generally, when tunneling in good ground, tunnels with a diameter of less than eight-feet (< 8') and less than three-hundred feet to four-hundred feet (300' to 400') in length may be holed-through (excavated completely) before concreting the interior of the tunnel, when placement of pre-fabricated or pre-cast pipe is to be installed. When this is proposed, hole-through (unsupported length) before concreting of the interior of the tunnel, it shall be justified by the original subsurface geotechnical investigation and design.

Tunnel lining and bracing should consist of steel ribs and steel spreaders (dutchmen) with wood, concrete, or steel lagging, or with bolted steel liner plates.

Fireproof materials should be utilized in all construction of plant structures, above ground, within one hundred feet (100') of the shaft or tunnel. The use of flammable materials or wood shoring would require that adequate fire protection be provided.

Ventilation systems shall be established and provide a minimum of two hundred (200) cfm per worker.

- All equipment shall maintain a minimum clearance of twenty-five feet (25') from opening.
- An established contingency plan in the event of ground loss.

- Cranes utilized in operations shall maintain minimum required clearances.

### 623.6C Tunnel Shield (Rev 10/03)

- The face of the shield shall be provided with a hood or an approved grid system.
- The excavation face shall have a sufficient length to allow for the installation of one (1) complete ring of liner plates, or one (1) complete set of ribs and lagging before advancing.
- The contractor shall submit details and design information of the shield.

### 623.6D Tunnel Lining (Rev 10/03)

Tunnel lining and bracing should consist of steel ribs and steel spreaders with wood lagging and concrete, or steel lagging, or with bolted steel liner plates.

The tunnel liner and bracing shall be designed (calculations provided) of an adequate strength based upon the geotechnical investigation, soil analysis, loading, and the diameter and depth of cover to provide adequate support of the tunnel.

- A ring expander shall be used to expand the rib continuously outward and upward.
- Liner plates shall be designed based on joint strength, minimum stiffness, critical buckling of the liner plate wall, and deflection or flattening of the tunnel section.
- On tunnels with a diameter greater than ten feet (> 10’), the placement of ribs inside of liner plate may be required.
- When the geotechnical investigation has determined that silts and fine sands exist, that may flow under pressure, all liner plates shall include a neoprene gasket adhered to each flange face.

### 623.6E Lagging (Rev 10/03)

Lags are generally started at spring line and continue upwards towards the crown.

Lag spacing consists of three methods:

1. Wedging – done by driving a block of wood between the earth and the lag at each end, or by driving a wedge between the rib and the lag.
2. Stops – by welding small angles to the ribs outer flange to prevent sliding.
3. Clamps – which are applied to wood or steel lags.

If the spacing of lags between ribs is used in tunnel construction, packing between lags with filler may be required.

- Lags are boards of steel plates placed longitudinally against the roof and walls of the tunnel excavation.
- Steel lagging may consist of channel, liner plate or corrugated metal.

- Steel lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, and loading.
- Wood lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, loading. Generally wooden lags common size are three-inches by six-inches (3" x 6"), and the length is cut according to the spacing of the ribs.
- A minimum of one liner plate per ring with a two-inch (2") diameter coupling for grouting is required.

### 623.6F The Construction of Shafts / Pits (Rev 10/03)

Shafts / pits should be constructed of a proper size and shape, and equipped as to allow work to be carried on safely.

- Shafts shall be constructed of driven steel sheet pilings, steel bracing and tight wood, or steel lagging or steel liner plates and ribs.
- The removal of spoils should be accomplished by mechanical means (muck box).
- All shafts shall be provided with guardrail and a toeboard.
- When ladders are utilized within the shaft or pit, cages and/or safety devices shall be provided on depths of fifteen to twenty feet (15' to 20'), platforms shall be provided at depths of greater than twenty feet (20'+).
- Ventilation systems shall be established and provide a minimum of two hundred (200) cfm per worker.
- All equipment shall maintain a minimum clearance of twenty-five feet (25') from openings.
- Upon completion of project all shafts, pits and drifts that are not part of the finished product shall be backfilled.

### 623.6G Placement of Shafts / Pits (Rev 10/03)

Shafts / pits shall be:

- Located a minimum of ten feet (10') measured laterally from the edge of pavement on conventional highways in rural areas.
- Located at least five feet (5') measured laterally beyond the concrete curb or AC dike on conventional highways in urban areas.
- Located at least five feet (5') measured laterally beyond the toe of slope of embankments.
- Located outside of controlled access right-of-way.
- Adequately fenced or have a Type-K barrier placed around them at a 20:1 taper or as otherwise directed.
- Shored according to Cal-OSHA minimum requirements. Located within fifteen feet (15') of traffic lanes on a State highway shall not extend more than thirty-six inches (36") above the pavement grade unless otherwise authorized by the State representative. Reflectors shall be affixed to the sides facing traffic, and placement around the perimeter of a six-foot (6') chain link fence during non-working hours.
- Are only allowed in controlled access right-of-way for direct freeway crossings that are excessively long or that have restricted space available outside the rights-of-way.

- They shall not Affect State facilities or create a hazard to the traveling public. When placement is approved within controlled access rights-of-way, damaged State facilities shall be replaced or repaired according to State Standard Specifications.
- Shall have crushed-rock and sump areas to clear groundwater and water used to clean. They shall be lined with filter fabric when groundwater is found and pumping is required.

### 623.6H Excavation (Rev 10/03)

In some locations Soil Stabilization may be required. It may become necessary at the direction of the Engineer to either pressure grout or freeze the soil area of the project to control water, to prevent loss of ground, to prevent settlement or displacement of an embankment. When required, a Registered Geotechnical Engineer shall prepare and stamp the plans determining the material and method for use.

In some projects masonry sections are installed, the amount of excavation of the tunnel should not exceed the amount needed for placement of a full masonry section after all lining is in place.

All excavated material shall be considered as unclassified material.

- In the event of any ground movement over or adjacent to construction, all work shall be suspended, except that which will assist in making the construction site secure and prevent any further additional movement of the ground.
- Excavation should not be advanced beyond the edge of the shield, except in rock.
- The geotechnical engineer/engineering geologist shall determine the allowable amount of tunnel length unsupported by bracing, based on the geotechnical investigation and design.
- All voids between the excavation and the liner shall be grouted after setting of ribs and lagging, if not expanded to full contact with the surrounding ground, as determined by the Safety Engineer.
- A log shall be maintained of all surrounding utilities and facilities.

### 623.6I Dewatering (Rev 10/03)

When ground water is anticipated, pumps of sufficient capacity to handle the flow shall be maintained at the site. Observation shall be maintained to detect any settlement, displacement or washing of fines into the pit, shaft or tunnel.

### 623.6J Grouting (Rev 10/03)

Grouting should be kept close to the heading (working front of tunnel). It may be required to add pea-gravel and fly ash to the grout. The pea-gravel would assist in consolidation and the filling of the voids, fly-ash works as a lubricant allowing the grout to free-flow.

- The use of grout stops may be utilized if necessary or if required by the Safety Engineer.
- Grouting shall be performed when ordered by the Safety Engineer.

- At no time shall progression of the tunnel exceed six feet (6') beyond the grouting of the exterior void.
- Pressure on the grouting gauge should not exceed the capacity of the lining, sufficient to fill all voids.
- A gauge shall be provided which will accurately indicate working pressure and shall be monitored constantly during grouting procedures.
- Grouting shall start at the lowest point and proceed upwards simultaneously on alternating sides.
- When grouting is complete at that location a threaded plug shall be installed into the coupling.

### 623.6K Materials (Rev 10/03)

The form "Notice of Materials to be used," form CEM-3101 is required.

- The manufacturer shall provide a Certificate of Compliance, to ensure tensile and yield strengths.
- Steel lagging may consist of channel, liner plate or corrugated metal.
- Steel lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, and loading.
- Wood lagging thickness shall be designed on strength based upon the geotechnical investigation, soil analysis, loading. Generally wooden lags common size are three-inches by six-inches (3"x 6"), and the length is cut according to the spacing of the ribs.
- When the geotechnical investigation has determined that silts and fine sands exist, that may flow under pressure, all liner plates shall include a neoprene gasket adhered to each flange face.
- Ensure Manufacturer's Specification Data Sheets (MSDS) are provided stipulating recommended:
  - Specifications of steel spreaders (spacing, tolerances).
  - Specifications of steel rib (section lengths, spacing, etc.)

### 623.6L Project Owner's / Permittee's Responsibilities (Rev 10/03)

The project owner/permittee is responsible for providing:

- A full-time Safety Engineer;

  Shall be a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five years experience in sub-structural design or inspection of tunnels. Proof of experience shall be submitted on "Certification of Structural Experience," form TR-0133,

  **OR**

- A full-time Safety Representative;

State certified by Department of Industrial Relations, Cal/OSHA, proof of certification is required.

Cal/OSHA requires persons performing the duties of gas tester or safety representative to be certified by passing a written and an oral examination administered by the M&T Unit. CCR 8406(f), (h)

- Project drawings and specifications, calculations and details stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design of tunnels.
- An geotechnical investigation by a licensed geotechnical engineer to determine the following;
- Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP).
- De-Watering Plan, if needed.
- Ground water information
- Boring and soil analysis logs, location plan of borings, cross sections, subsurface strata, fill and ground water elevations;
  - Particle size distribution (particularly percent rock and cobble),
  - Cohesion index, internal angle of friction, and soil classification,
  - Plastic and liquid limits (clays), expansion index (clays), soil density, and penetration tests,
  - Rock strength, rock joint fracture and orientation, water table levels, and soil permeability,
  - Areas of suspected and known contamination should also be noted and characterized.
- The soil investigation shall also determine the presence of rock, cobbles, and/or boulders, and the following;
  - Depth and extent of rock
  - Rock type
  - Rock strength
  - Rock joint/fracture spacing
  - Hardness
  - RQD
  - Estimated range of sizes & frequency of occurrence of cobbles and boulders.

### 623.6M Contractor's Responsibilities (Rev 10/03)

The contractor is responsible for providing:

- Tunnel project construction plans and specifications, calculations and details, method of construction, to include the adequacy of the shield and liner material stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design of tunnels.
- "Notice of Materials to be used," form CEM-3101.
- Method of construction plan.
- A Licensed Surveyor.

- Proof of rib expanders and/or liner supports.
- Working schedule of the project.
- Contingency plan for dealing with ground loss work.
- Shaft; soil stability at portals and ground improvement plan.
- Dewatering plans for entry and exit shafts/pits, if needed.
- Installation and monitoring of SWPPP or WPCP facilities and conditions.
- Shoring design for entry and exit shafts/pits.
- Survey control plan: lasers, laser mounting, laser checking.
- Ground surface settlement monuments and subsurface settlement monuments monitoring program plan.
    - Buried points

**623.6N** **Key Points of Inspection** (Rev 10/03)

Meet and confer with the Safety Engineer hired by the Owner/Permittee, explain exactly what is expected and required on a daily report, and any issues of concern.

State Representative and Safety Engineer/Safety Representative, together both should:

1. Review the geotechnical investigation.
2. Review the emergency and contingency plans.
3. Inspect the roadway and shoulder area for existing cracks in the ground and mark them.
4. Inspect the area for all-existing utility facilities and sub-structures.
5. Check and confirm any requirements or concessions requested by any Utility companies with the owner and the contractor.
6. Ensure that a Survey Grid line has been established over proposed alignment of tunnel.
7. Make a determination on the frequency of surface monitoring that will be required, and identify what would constitute additional monitoring and/or surveying.
8. Inspect and ensure there is sufficient space for the staging area, that equipment and workers can work safely.
9. Establish the limits of minimum clearance.

Safety Engineer/Safety Representative – start of project and construction of shafts/pits.

1. Request to see OSHA permit and tunnel classification sheet.
2. Ensure the contractor has equipment on site to handle an emergency, and in the event that ground loss occurs.
3. Inspect installation of SWPPP or WPCP facilities and conditions.
4. Have knowledge of the soil conditions, density and water table (sand, clay, cobble, etc.).
5. Inspect the shafts/pits for Cal OSHA (trenching and shoring) requirements.
6. Ensure that guardrails and toe-boards are secured around shafts.
7. Ensure the flooring of the shaft/pit is lined with gravel or ballast rock.
8. Ensure that the sump pumps setup and that they are adequate for dewatering.
9. Ensure all electrical cords and facilities are properly secured.
10. Inspect materials to be used against list provided by contractor.

11. Obtain receipt of the certificates of compliance from the manufacturer on all materials delivered and to be used for the project.
12. Ensure that ventilation system is adequate and installed.
13. Ensure a location is designated for spoils, that they are adequately stockpiled and removed.

Safety Engineer/Safety Representative – daily inspection

1. Ensure that laser is verified every morning prior to start of work.
2. Inspect SWPPP or WPCP facilities and conditions
3. Check traffic control, signs and delineation.
4. When warranted request line to be re-surveyed to determine heaving or subsidence, if greater than 0.2" take corrective measures.
5. Visually inspect gauge during grouting operations.
6. Inspect ventilation equipment, request copies of contractor's records of maintenance.
7. Ensure safety equipment is worn at all times by everyone.
8. Notify State Representative in the event of an incident or accident.
9. Ensure that all excavations are adequately protected with Type-K barrier and chain link fence around them or covered with steel plates.

State Representative and Safety Engineer/Safety Representative – close of project

1. Upon completion, visually inspect the area of installation, highway and shoulder area to ensure no new cracks, heaving or subsidence have occurred.
2. Require line to be re-surveyed to determine heaving or subsidence.
3. Ensure that all excavations were backfilled.
4. Work site and staging areas are restored to their original condition.
5. Establish a checklist if necessary for completion points (i.e. repairs or corrections).

## 623.7 PROCEDURAL REQUIREMENTS FOR STRUCTURAL AND SUB-STRUCTURAL DESIGN AND CALCULATIONS (Rev 10/03)

All submittals shall be stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five years experience in structural design and preparation of calculations, proof of experience is required by use of Encroachment Permits form "Certification of Structural Experience," TR-0133, to be included within the project package submittal.

Sub-structural projects may consist of, but are not limited to; drainage boxes & systems, tunneling projects (mechanical or manual tunnel excavations for the placement of tunnel supports), and Trenchless Technologies for the installation of utilities when the diameter is 30" or larger (jack & bore, micro-tunneling, horizontal directional drilling, or pipe-ramming).

### 623.7A Structural Design and Calculations (Rev 07/05)

All Structural Project submittals (structures and structural falsework) will require review by Division of Engineering Services (DES), for construction under an encroachment permit and require the following:

- Designed plans and specifications, calculations and details (structural and falsework).
- A geotechnical investigation and soil analysis by a licensed geotechnical engineer is required. It shall provide identification of any locations of difficulty, changes in soil formation, or mixed face conditions that could present or create ground loss, exploratory soil corings and logs are required along the alignment of the project.

Construction or Structures Construction will review falsework and shoring submittals.

Submittals may be routed through Structure Maintenance.

**623.7B Sub-Structural Design and Calculations** (Rev 07/05)

When the distance between a tunnel and an existing structure is less than twenty times the tunnel's diameter, it shall be sent to Division of Engineering Services (DES) for review of the potential lateral loading effects to the pilings and foundation. As in Section 623.7A, submittals may be routed through Structure Maintenance.

Otherwise, Sub-structural Project submittals, listed below and submitted with the "Certification of Experience," TR-0133, **do not** require review by DES.

1. Micro-tunneling projects.
2. Bore & Jack, HDD, or Pipe Ramming (diameter is 30" or larger and requiring structural/sub-structural design, investigations and calculations)
3. Tunneling for the placement of tunnel support systems (rib & lagging, or steel liner plate requiring structural/sub-structural design, investigations and calculations).
4. Drainage boxes and systems.

All Sub-structural Project submittals require the following:

- The District Encroachment Permits Office is responsible for verification of the Registered Engineers stamp, validation of the date of expiration against the dated plan set and calculations. The permit office engineer shall validate the RE's stamp at the web site listed below, by entering the RE's number. A copy of the results shall be printed and included within the permit file. The encroachment permit may be issued, upon completion of the normal review process (Traffic, Environmental, R/W, etc.).

http://www2.dca.ca.gov/pls/wllpub/wllqryna$lcev2.startup?p_qte_code=ENG&p_qte_pgm_code=7500

- Designed plans and specifications, calculations and details (liner plates, rib & lagging, bracing, etc.).
- A geotechnical investigation and soil analysis by a licensed geotechnical engineer is required. It shall provide identification of any locations of difficulty, changes in soil formation, or mixed face conditions that could present or create ground loss, exploratory soil corings and logs are required along the alignment of the project.

- When the length of the tunnel is greater than four hundred feet (> 400'), alignment holes may be required. Alignment holes shall be drilled at a maximum spacing of two-hundred feet (200') and a casing of four to six inches (4" to 6") in diameter installed vertically, to a depth necessary for the installed casing to extend into the tunnel excavation. When alignment holes fall within the pavement area of the roadway, the pavement shall be saw-cut, a cover shall be placed over the end of the casing at grade, and the space around the casing within the roadway filled with concrete (EXCEPT in controlled access right-of-way).

### 623.7C Project Owner's Responsibilities (Rev 10/03)

On projects deemed by the Department as requiring full time inspection, the project owner is responsible for providing a third-party full time inspector.

On projects over 30" in diameter and deemed as requiring full time inspection, the project owner is responsible for providing:

- A full-time Safety Engineer:
  A Registered Structural or Civil Engineer, with a minimum of five years experience in design or inspection of Sub-structural Projects (tunnels). Proof of experience shall be submitted on Encroachment Permits form "Certification of Structural Experience," form TR-0133,

**OR**

- A full-time Safety Representative:
  State certified by Department of Industrial Relations, Cal/OSHA Mining & Tunnel Unit, proof of certification is required. California Code of Regulations 8406(f), (h)

### 623.7D Contractor's Responsibilities (Rev 10/03)

Prior to issuance of the "DP" permit the following shall be submitted:

- Proof of experience, as stipulated by the District Office, in respect to diameter and length of proposed project.
- Tunnel support system construction plans and specifications, calculations and details, method of construction, to include the adequacy of the shield and liner material stamped by a Registered Structural Engineer, or a Registered Civil Engineer, with a minimum of five (5) years experience in sub-structural design and preparation of calculations.
- "Notice of Materials to be used," form CEM-3101.
- Method of construction plan.
- A Licensed Surveyor.
- Proof of rib expanders and/or liner supports.
- Working schedule of the project.
- Contingency plan for dealing with ground loss work.
- Shaft; soil stability at portals and ground improvement plan.

- Dewatering plans for entry and exit shafts/pits, if needed.
- Installation and monitoring of SWPPP or WPCP facilities and conditions.
- Shoring design for entry and exit shafts/pits.
- Survey control plan: lasers, laser mounting, laser checking.
- Ground surface settlement monuments and subsurface settlement monuments monitoring program plan.
    - Buried points

## 624 OPEN-CUT ROAD (Rev 10/03)
**Permit Code UT**

Encroachment Permit policy dictates that underground installations and crossings within State highway right-of-way shall be performed by methods of trenchless technologies, either Bore & Jack, HDD, Micro-Tunneling, Pipe Bursting or Pipe Ramming, unless specified otherwise by permit. Open trenching is authorized only when the applicant demonstrates that all alternatives have been investigated and that installation by a trenchless technology is not feasible. Procedures that shall be followed in evaluating applications for open trenching are shown in Table 6.10.

The Reclamation Board, in maintaining the integrity of the State's levee system, issues permits for construction of facilities within the levee prism. Caltrans and the Reclamation Board cooperatively have developed procedures for controlling installation of underground facilities where a State highway is on or crosses a levee. The Board prefers open cut highway crossings to ensure the integrity of the levee. Caltrans issues permits that conform to Board requirements.

Authorized open trenching must be noted clearly in the encroachment permit or permit rider. Traffic controls must conform to State standards and recommendations of Highway Operations or Permits. Unless otherwise specified in the permit, work must be accomplished one lane-width at a time on conventional two-lane highways. If determined acceptable, two lanes of a multi-lane highway may be used for the work when one full lane width in each direction is available for traffic. Trenching, backfilling, and paving operations shall conform to Caltrans' standards.

Transverse trenching is not authorized on freeways or expressways without headquarters approval as an exemption to policy.

### 624.1 Backfill of Excavations and Trenches

Backfilling of excavations and trenches shall comply with Caltrans Standard Specifications. The specification for Controlled Low Strength Material (CLSM) is shown in Appendix H.

**Table 6.10**
**Procedures for Evaluating Proposals for Open Trenching**

Follow these procedures to evaluate applications for open trenching:

1. The applicant shall supply these items for consideration by the permit engineer:

   Profile plans or cross-sections showing the locations of all existing utilities, culverts, or other permanent installations which restrict the bore.
   Soils information showing that trenchless technologies, such as Bore & Jack or HDD is not feasible.
   Detail plan showing detailed restrictions.
   Any other information indicating that trenchless technologies are not allowable methods in the area.

2. A design change is mandatory when the crossing location can be changed to allow boring and jacking and not affect the function of a facility.

3. Trenched crossings of connecting local streets and public roads where traffic is not adversely affected is acceptable with concurrence of the local agency that owns the public connection.

4. Casing in open trenches may be required for future maintenance or added facilities.

5. The District Permit Engineer will review submitted materials to determine if the request is reasonable. Reviewing units may include:
   Environmental, Field Inspection, Highway Operations--Traffic Operations, Maintenance
   Materials Engineering, Project Development, Right of Way Utilities

## 625 MINIMUM CARRIER PIPELINE SPECIFICATIONS

Caltrans' minimum specifications for pipelines carrying materials are described in Table 6.11. Carrier pipe materials shall conform to industry and California Public Utilities Commission requirements.

## 626 ENCASEMENT AND PROTECTION REQUIREMENTS

Specific requirements for the encasement and protection of utility facilities are shown in Table 6.12, examples of mechanical protection of utility facilities are shown in Figure 6.1.

Table 6.13 indicates when to consider encasement of carriers that are exempt from encasement requirements

**Table 6.11**
**Minimum Carrier Pipeline Specifications**

Pipeline encroachments must comply with these minimum specifications:

1. Metal Pipe
   A. Gas transmission and distribution piping systems shall conform to General Order No. 112D of the California Public Utilities Commission, and applicable provisions of Title 49, Code of Federal Regulations.
   B. Other fluids under pressure shall conform to the American National Standard Code for Pressure Piping.
   C. Cast iron pipes shall conform to Caltrans' Standard Specifications.
   D. Metal underground encasements shall conform to Caltrans' Standard Specifications.
2. Concrete and Asbestos Cement Pipe
   A. Shall not exceed the manufacturer's recommended pressure.
   B. Shall conform to Caltrans' Standard Specifications. Requirements for underground culverts stated in Caltrans' Highway Design Manual shall also apply.
   C. Uncoated sewer pipe that is located under the highway shall be designed to flow full to protect against attack from generated acids.
3. Plastic Pipe (HDPE)
   A. Specifications shall ensure that the type of pipe is adequate for the intended purpose (see CPUC General Orders).
   B. A means for detection of nonmetallic material shall be provided.
4. Pipe Joints
   A. Shall be watertight under pressure and foreseeable conditions of expansion, contraction, and settlement.
   B. Recommended joint sealants include rubber, neoprene and similar synthetic products.
   C. Mortar, grout, or other portland cement materials are not allowed as joint sealants.
5. Water and sewage pipelines shall conform to CPUC General Orders.
6. Markers required under the permit provisions should be placed so they do not interfere with vehicle recovery areas.
7. Pipelines carrying hazardous materials can be required to have corrosion control measures as outlined in the appropriate federal or State CPUC regulations. Evidence of compliance must be submitted before issuance of an encroachment permit.
8. Specifications for pipelines on bridges are discussed in the Sections titled, "Encroachments on Structures" and "Installation on Toll Bridges (Sections 608 & 609).

## Table 6.12
## Encasement and Protection Requirements

Utility facilities must comply with the following encasement and protection requirements:

**1. Types of Encasements and Their Purposes:**

A. A sleeve is an encasement that:
   1) Contains or controls leaks,
   2) Facilitates carrier pipe maintenance and replacement,
   3) Protects carrier pipe from crushing or bending stresses and minimizes coating damage during installation,
   4) Protects the pipe from corrosive elements and aggressive salts,
   5) Protects carrier pipe against highway maintenance and repair activities, and
   6) Isolates cathodically-protected lines and limits stray currents.

B. A reinforced concrete jacket is an encasement that:
   1) Contains or controls leaks,
   2) Protects carrier pipe from crushing or bending stresses and minimizes coating damage during installation,
   3) Provides some protection from corrosive elements and aggressive salts, and
   4) Protects against highway maintenance and repair activities.

C. A reinforced concrete cradle protects a carrier pipe from crushing or bending stresses. However, it is not to be used with asbestos cement pipe.

D. A reinforced concrete slab is placed over an undisturbed facility to distribute and equalize a superimposed load. (Caution: A slab may interfere with other utilities and rock under a load.)

**2. Design Requirements for Encasement or Protection:**

A. A sleeve is preferred to a reinforced concrete jacket when practical. Considerations include soil conditions, height of embankment, and economic conditions.

B. A sleeve under the highway must meet "D-Loading, H20-Loading and culvert requirements regarding strength and service life.

C. A sleeve should have an inside diameter that is 4" larger than the outside diameter of the carrier pipe. A larger clearance may be required under unusual conditions, such as settlement.

D. Encasements required on freeways and expressways shall extend beyond the access control lines unless Caltrans determines that is impractical.

E. Encasements required on conventional highways shall extend at least 5' beyond the existing or future catch point. If a catch point is undefined, encasements should extend at least 5' beyond the shoulder lines.

F. Highway lighting and signal facilities are exempt from these encasement requirements.

**3. Types of Facilities Requiring Encasement or Protection:**

A. Longitudinal Encroachments:
   1) When located on a bridge, by attachment or within a bay.
   2) Longitudinal encroachments under the roadbed (existing or future) may require encasement, and will be placed in accordance to Caltrans' Manual on High and Low Risk Underground Facilities Within Highway Rights of Way.

B. Transverse Crossings: *
   1) All transverse crossings under pressure, multiple ducts, or 6" or greater in diameter shall be encased.
   2) Casings for irrigation pipelines shall extend to the right-of-way line or access control line. * Exception to Policy -- Natural Gas Pipelines (see Section 623, and Appendix H)

C. Sewers:
   1) When crossing any State highway. *
   2) When under embankments of 10' or more. *
   3) When detrimental subsidence of the ground under a fill is anticipated. In such cases, a sleeve 6” larger than the outside diameter of the pipe is recommended.
   4) Within 5' of the natural ground surface or profile grade.
   5) When a new sewer is placed on questionable subgrade. This encasement should be a concrete cradle.

- *District Permit Engineer shall determine the type of encasement or protection required as per Section 623.*

**Table 6.13**
**Additional Encasement Considerations**

Consider encasement of carriers that are exempt from encasement, when these possibilities exist:

1. Appreciable settlement of supporting ground.
2. Damage to protective pipe coatings during jacking.
3. A corrosion protective coating and/or cathodic protection may be required due to corrosive environments or when the CPUC requires cathodic protection. (Corrosive environments can deteriorate steel and cement mortar. Check cathodic protection requirements with headquarters Structures Design, Electrical, Mechanical, Water and Waste Water Branch.)
4. Cracking of mortar coating during jacking or boring operations.
5. Corrosion of field-coated joints.
6. Existing electrical and communication lines under an embankment of 10' or more.
7. When any high risk underground facility crosses the roadway.

## 627 UTILITIES/CONSTRUCTION ON SCENIC HIGHWAYS

### 627.1 Introduction (Rev 11/04)

The intent of the State Scenic Highway Program is to protect and enhance the natural beauty of California. Scenic highway proposals are initiated by local jurisdictions and officially designated by the Director of the Department of Transportation. Local jurisdictions are required to develop and enforce Corridor Protection Programs for each scenic highway corridor, in the form of ordinances, with the concurrence from Caltrans. Corridor Protection Programs contain land use elements that support scenic preservation along the route. A scenic corridor is defined as the area of land generally adjacent to and visible from the highway. The California Public Utilities Code has regulations pertaining to utilities within the scenic highway corridor.

### 627.2 Utility Facilities (Rev 11/04)

The California Public Utility Code Section 320 prohibits new overhead utility distribution installations in scenic highway corridors and requires the California Public Utilities Commission (CPUC) to regulate approved work. Section 320 does not apply to transmission towers, conductors or related facilities designed to operate at high-side voltages of 50 kilovolts (kV) or more, unless the utility designates them as distribution lines.

The CPUC also regulates to what extent repair, replacement and maintenance of existing overhead distribution facilities can take place. Caltrans verifies that proposed construction of utility work complies with the Corridor Protection Program and issues encroachment permits for conforming work. The Encroachment Permits Office does not determine when the placement of facilities underground is required. Determination is made by the CPUC in concert with Section 320.

District Landscape Architecture and Right of Way Utilities are responsible for reviewing applications for proposed utility work in the right-of-way.

When the proposed work is non-complying, the applicant is notified by the Caltrans' Permit Office to provide the Department with the exception approval from the Energy Division Reliability Section of the CPUC.

Encroachment Permits are issued for work within a scenic highway when existing overhead distribution utilities are in need of repair, replacement, upgrade or increased capacity if there is no significant change in appearance. No significant change in appearance means no increase in the diameter of the distribution line.

California Public Utility Code General Order 320 stipulates that utility owners shall not install new overhead distribution facilities on scenic highways without first obtaining an exemption from the CPUC.

*For purposes of Section 320, the following work does not constitute installation of new overhead distribution facilities and does not require a CPUC exemption:*

1. Removing or replacing sections of worn or deteriorated cable with like-size cable or smaller.
2. Removing or replacing worn or damaged equipment, including but not limited to: transformers, connectors, protective devices or repeaters with like-size or smaller equipment.
3. Replacing a deteriorated pole with like-size or smaller pole.
4. Performing any necessary emergency work to continue service, provided any non-complying facility is corrected when the emergency is over.
5. Installing new or relocated overhead transmission facilities (50 kV or greater).
6. Performing reconductoring or an increase in capacity of existing facilities with no significant change in appearance. This includes replacing the existing conductor with a new conductor of a different capacity or changing the voltage of the line.
7. Temporarily relocating poles for other construction purposes provided such poles are removed or returned to their original position within 3 months of the completion of the construction work.
8. Installing new overhead service connections including necessary transformers and protective devices from existing distribution lines.
9. Installing guys as necessary for existing distribution lines.

*With respect to electric and communications overhead distribution facilities (less than 50 kV) within the scenic highway corridor, utility owners may not perform any of the following work without first obtaining an exemption from the CPUC:*

1. Install new facilities.
2. Relocate existing (distribution) facilities to a new permanent location.
3. Temporarily relocate poles for other construction purposes when such poles will not be returned to their original positions within 3 months of completion of the construction work.

All conditions listed above may be subject to exemption upon written confirmation from the CPUC that proposed work is acceptable.

### 627.3 General Construction (Rev 12/07)

Any work performed along a designated scenic highway should comply with the Corridor Protection Program established for that scenic corridor by the local agency. The local agency approves any development and decides if the necessary work in the scenic corridor conforms to the Corridor Protection Program. Permit applications for roadways, driveways, drainage, etc., should have appropriate design review and District Landscape Architect concurrence to assess design compatibility with the scenic corridor (See Project Development Procedures Manual, Chapter 29- Section 10, "Project Development along Scenic Highways", for additional guidance).

When compatibility issues are identified, the applicant and local agency are notified. If design features meet Caltrans standards and compatibility issues are resolved, the District Landscape Architect approves the work and an encroachment permit is issued.

## 628 UTILITIES IN AND ON A BRIDGE
**Permit Code UB**

A UB Permit Code is used when utilities are placed or maintained within or on a bridge (for exception requirements, see Section 303).

## 629 TRENCHING AND SHORING (Rev. 11/06)
**Permit Code UX**

Trenching and shoring must be in conformance to the requirements of the California Department of Safety and Health, Title 8 of the California Administration Code (Construction Safety Orders).

A Registered Civil or Structural Engineer must prepare and sign the shoring plan.

In general, engineered drawings may be accompanied by the engineer's calculations. If railroads are involved, a minimum of three sets of calculations and seven sets of plans must be submitted.

The railroads require a minimum of one set of calculations each from the designer and reviewer and four sets of shoring plans. One additional complete set of calculations and drawings will be needed for the OSC Sacramento Office.

**TECHNICAL DATA**

The technical engineering information below can be used by an Engineer in making a review of shoring plans.

The design or engineering analysis, of a shoring system is accomplished in the following sequence:

1. The soil or earth that is to be retained and its engineering properties are determined.

2. Soil properties are then used in geotechnical mechanics or procedures to determine the earth pressure force acting on the shoring system. An equivalent fluid, Kw, may be determined.

3. The design lateral force is then distributed, in the form of a pressure diagram. The distribution, or shape, of the diagram is a function of type of shoring system and the soil interaction with the system.

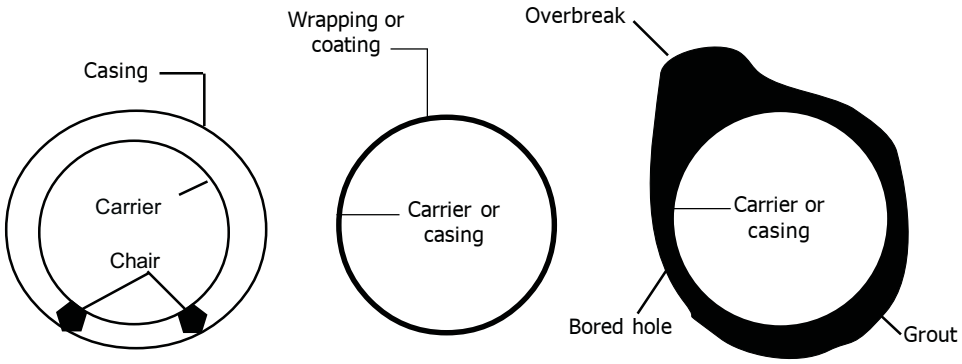
4. Lateral loads due to surcharges and from sources other than basic soil pressure (e.g., ground water) are determined and may be combined with the basic soil pressure diagram, Modified for practicability, the resulting lateral pressures become the design, lateral pressure diagram.

5. The design lateral pressure diagram is applied to the system, and a structural analysis is made. Again, there is a range from simplified to refined or complex procedures that can be used.

The "Trenching and Shoring Manual" is available at the following website:

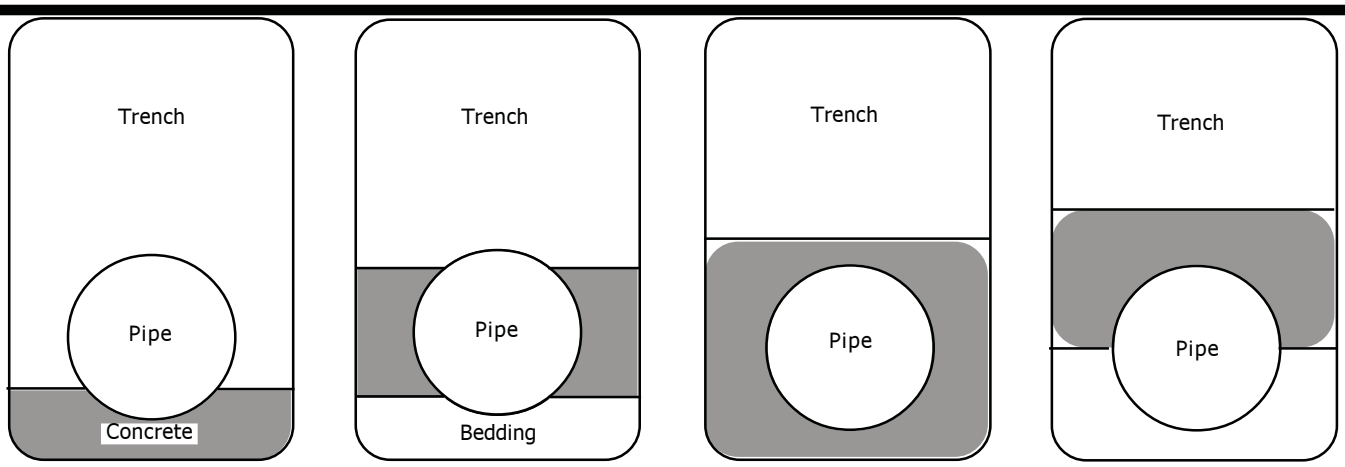
http://www.dot.ca.gov/hq/esc/construction/manuals/

## Figure 6.1 EXAMPLES OF MECHANICAL PROTECTION and UTILITY FACILITY TRENCH PROTECTION

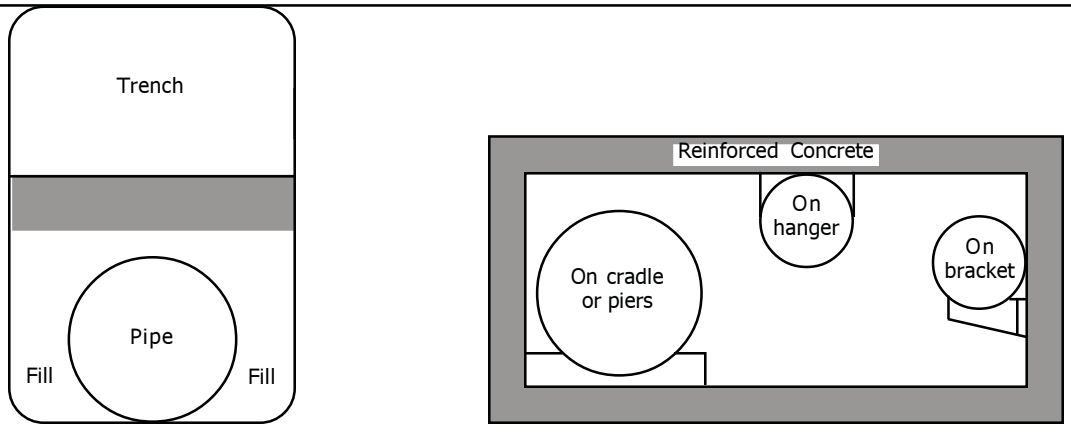



(a) Encased (b) Coated (c) Grouted

**Ground or Roadway**




(d) Cradled (e) Walled (f) Boxed or Jacketed (g) Saddle




(h) Capped

(i) Allied Mechanical Protection by Use of Tunnel, Gallery, or Bridge Cell

# EXHIBIT 6-C

Utility Tracking Report

# Utility Relocation Cost Estimate
## for DESIGN/BUILD

**Route: 11-SD-805**

**Design Manager : Ron Caraet / Roger Carlin**

**PM: 23.1-28.5**

**Service Engineer: Michael Pedersen**

**Description: HOV Lanes (mostly median Widening), DAR and F**

**R/W Utility Coordinator: Carol Vu**

*** Estimate based on Design/Build revised Limits (June 2011).**

**Date:09/20/11**

**EA 11-081630 I-805 from SR 52 to I-5/I805 Merge**

| I.D. | Sheet | OWNER | FACILITY | LOCATION | Potential Utility Conflict | Pothole Required (Y/N) | Conflict Resolution | Unit Cost (m) | Unit Cost (/ft) | Quantity (ft) | TOTAL COST |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | SDGE | Electric - **230 KV** (OH crossing freeway before Governor Dr NB On-ramp) | Transverse Sta. 1312+65 - "805" Alignment | No Conflict (Masts outside RW/Work Limits) | N | - | - | - | - | - |
| 2 | 2 | SDGE | Electric - **138 KV** (OH crossing freeway before Governor Dr NB on-ramp, paralled to and North of 230 KV line) | Transverse Sta. 1313+23 - "805" Alignment | No Conflict (Masts outside RW/Work Limits) | N | - | - | - | - | - |
| 3 | 2 | SDGE | Gas - **36"** (Barrel for Future or Emergency Use) | Transverse @ 60 degree Sta. 1314+05 - "805" Alignment | No Conflict. Area is fill. Structural Section at median to be same as exist adjacent S/Section. | N | - | - | - | - | _ |
| 4 | 2 | SDGE | Gas - **30"** (595 PSI) | Transverse @ 35 degree Sta. 1316+75 - "805" Alignment | No Conflict. Area is fill. Structural Section at median to be same as exist adjacent S/Section. | N | - | - | - | - | - |
| 5 | 3 | City of San Diego | Water - 42" SCRW | Transverse Sta. 1322+00 - "805" Alignment - Governor Drive (UC) | Median HOV lane Construction - Bridge Abutment Construction | N | Protect in Place | - | - | - | - |
| 6 | 3 | City of San Diego | Reclaimed Water - 10" PVC | Transverse Sta. 1322+80 - "805" Alignment - Governor Drive (UC) | Median HOV lane Construction - Bridge Abutment Construction | N | Protect in Place | - | - | - | - |
| 7 | 3 | AT&T | Telephone - 1P2C - UG | Transverse Sta. 1322+80 - "805" Alignment - Governor Drive (UC) | Median HOV lane Construction - Bridge Abutment Construction | N | Protect in Place | - | - | - | - |
| 8 | 4 | City of San Diego | Sewer - 24" VCP | Transverse Sta. 1350+00 - "805" Alignment - Along Rose Canyon | Center Bridge Widening - Pier/Abut construction | N / Locate | Protect in Place | - | - | - | - |
| 9 | 4 | SDGE | Electric - **69 KV** ( OH crossing under freeway, S of RR track) | Transverse Sta. 1350+45 - "805" Alignment - Along Rose Canyon | Center Bridge Widening - Safety OSHA | N | **See Note** | 1,950 | $600 | 480 | **$288,000** |
| 10 | 4 | MCI | Telephone - MFS Local U/G (in Rail Corridor) | Transverse Sta. 1351+50 - "805" Alignment - Along Rose Canyon | Center Bridge Widening | N / Locate | Protect in Place | - | - | - | - |
| 11 | 4 | SDGE | Electric - **69 KV** (OH crossing under freeway, N of RR track) | Transverse Sta. 1352+15 - "805" Alignment - Along Rose Canyon | Center Bridge Widening - Safety OSHA | N | **See Note** | 1,950 | $600 | 480 | **$288,000** |
| 12 | 4 | City of San Diego | Sewer - 10" VCP (Not in Use) | Transverse Sta. 1369+40 - "805" Alignment | HOV lane Construction | N | Protect in Place | - | - | - | - |
| 13 | 5 | SDGE | Electric - 12 KV (bridge deck) | Transverse Sta. 1375+65 - "805" Alignment - Nobel Dr (OC) | No Conflict / No Bridge works | N | - | - | - | - | - |
| 14 | 5 | AT&T | Telephone - 6PC4C (bridge deck) | Transverse Sta. 1375+80 - "805" Alignment - Nobel Dr (OC) | No Conflict / No Bridge works | N | - | - | - | - | - |
| 15 | 6 | City of San Diego | Sewer - 10" VC (Not in Use) | Transverse Sta. 1383+90 - "805" Alignment | Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 16 | 6 | City of San Diego | Sewer - 10" VC | Transverse Sta. 1394+00 - "805" Alignment | Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 17 | 6 | AT&T | Telephone - 4MCD (bridge deck) | Transverse Sta. 1400+00 - "805" Alignment - La Jolla Village Dr (OC) | No Bridge Works & Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 18 | 6 | SDGE | Electric - 12 KV (bridge deck) | Transverse Sta. 1400+00 - "805" Alignment - La Jolla Village Dr (OC) | No Bridge Works & Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 19 | 6 | MCI | Telephone - MFS Local U/G (bridge deck) | Transverse Sta. 1400+90 - "805" Alignment - La Jolla Village Dr (OC) | No Bridge Works & Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 20 | 6 | City of San Diego | Sewer - 10" VC | Transverse Sta. 1409+15 - "805" Alignment | Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 21 | 6 | City of San Diego | Reclaimed Water - 10" PVC | Transverse Sta. 1409+30 - "805" Alignment | Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 22 | 6 | City of San Diego | Sewer - 84"AC Plastic Line RCP | Transverse Sta. 1409+40 - "805" Alignment | Current EA 089754 works w/No Conflict | N | - | - | - | - | - |
| 23 | 7 | TelePacific/M Power | Cable (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 24 | 7 | Qualcomm | Fiber Optic (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 25 | 7 | XO Communication | Fiber Optic (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 26 | 7 | AT&T | Telephone - 18" INVC (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 27 | 7 | Time Warner | Cable - 0.86 QR (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 28 | 7 | Time Warner | Cable - 0.75 STD (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 29 | 7 | Time Warner | Cable - 0.75 STD (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 30 | 7 | SDGE | Electric - 12 KV (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 31 | 7 | SDGE | Electric - 12 KV (bridge deck) | Transverse Sta. 1421+75 - "805" Alignment - Eastgate Mall (OC) | No Conflict - No Bridge works | N | - | - | - | - | - |
| 32 | 7 | City of San Diego | Water - 36" RCSC | Transverse Sta. 1422+88 - "805" Alignment - JNO Eastgate Mall Bridge | Median Lane Widening & DAR Retain Walls | 88" Deep | Relocate/Protect in Place | 10,000 | $3,077 | 450 | **$1,384,615** |
| 33 | 7 | City of San Diego | Fiber Optic ('Tunnel') | Transverse Sta. 1423+01 - "805" Alignment - JNO Eastgate Mall Bridge | Median Lane Widening & DAR Retain Walls | 88" Deep | Relocate/Protect in Place | 1,500 | $462 | 450 | **$207,692** |
| 34 | 7 | SDGE | Gas - 10" (400 PSI) | Transverse Sta. 1423+63 - "805" Alignment - JNO Eastgate Mall Bridge | Median Lane Widening & DAR Retain Walls | 68" Deep | Relocate/Protect in Place | 1,600 | $492 | 450 | **$221,538** |
| 35 | 8 | MCI | Telephone - LD UG (In Rail Corridor) | Transverse Sta. 1445+85 - "805" Alignment - Carroll Canyon | Center Bridge Widening (Column) | N / Locate | Protect in Place | - | - | - | - |
| 36 | 8 | City of San Diego | Sewer - 30" VC | Transverse Sta. 1448+65 - "805" Alignment - Carroll Canyon | Center Bridge Widening (Column) | N / Locate | Relocate/Protect in Place | 8,800 | $2,708 | 400 | $1,083,077 |
| 37 | 9 | Time Warner | Cable - 750 P3 - UG | Transverse Sta. 1460+60 - "805" Alignment - Mira Mesa Blvd (UC) | Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 38 | 9 | City of San Diego | Water - 15" AC | Transverse Sta. 1461+00 - "805" Alignment - Mira Mesa Blvd (UC) | Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 39 | 9 | AT&T | Telephone - 6PC4C - UG | Transverse Sta. 1461+40 - "805" Alignment - Mira Mesa Blvd (UC) | Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 40 | 9 | AT&T Legacy/Cox | Telephone - 6PC4C - UG | Transverse Sta. 1461+50 - "805" Alignment - Mira Mesa Blvd (UC) | Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 41 | 9 | SDGE | Electric - 12 KV - OH | Transverse Sta. 1473+60 @ 90 degree - "805" Alignment | Outside Current Limits. Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 42 | 9 | SDGE | Electric - 12 KV - OH | Transverse Sta. 1481+70 @ 90 degree - "805" Alignment | Outside Current Limits, Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 43 | 10 | Qualcomm | Telephone - OH | Transverse Sta. 1481+70 @ 90 degree - "805" Alignment | Outside Current Limits, Current EA 2T0404 works w/No Conflict | N | - | - | - | - | - |
| 44 | 10 | SDGE | Electric - 12 KV - OH | Transverse Sta. 1493+40 @ 90 degree - "805" Alignment | Outside Current Limits | N | - | - | - | - | - |
| 45 | 10 | Time Warner | Cable 0.75 STD - OH | Transverse Sta. 1493+40 @ 90 degree - "805" Alignment | Outside Current Limits | N | - | - | - | - | - |
| 46 | 10 | Time Warner | Cable 0.75 STD - OH | Transverse Sta. 1493+40 @ 90 degree - "805" Alignment | Outside Current Limits | N | - | - | - | - | - |
| 47 | 10 | Time Warner | Cable 0.75 STD - OH | Transverse Sta. 1493+40 @ 90 degree - "805" Alignment | Outside Current Limits | N | - | - | - | - | - |
| 48 | | | | | | | | | | | |
| 49 | | | | | | | | | | | |
| 50 | | | | | | | | | | | |
| 51 | | | | | | | | | | | |
| 52 | | | | | | | | | | | |
| | | | | | | | | | | *** TOTAL COST FOR ALTERNATIVE 5 :** | $3,472,923 |

* Note
Items 9 & 11
Final Costs better understood once (i) RW Engineering has determined RW designation and (ii) SDGE's outage/denergize windows, approved protection methods and other associated owner costs are known.
Costs do not represent worst case scenario of relocating poles, multiple temporary power relocations etc.
(September 2011 SDGE completed upgrade of two northerly poles (at Rose Canyon) from wood poles to steel poles).

# EXHIBIT 6-D

Utility Information

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

MATCH LINE SEE SHEET U-2 STA 1289+50

R/W

42" RCSC

1285

ASPH DIKE CONC

# UTILITY PLAN

SCALE: 1" = 50'

U-1

| REVISED BY | DATE REVISED |
|---|---|
| ARIEL MARILAO | |
| HANH KHUU | |

CALCULATED-DESIGNED BY

CHECKED BY

FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans®

DESIGN

LAST REVISION 00-00-00

DATE PLOTTED => 27-JUL-2011
TIME PLOTTED => 08:31

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka001

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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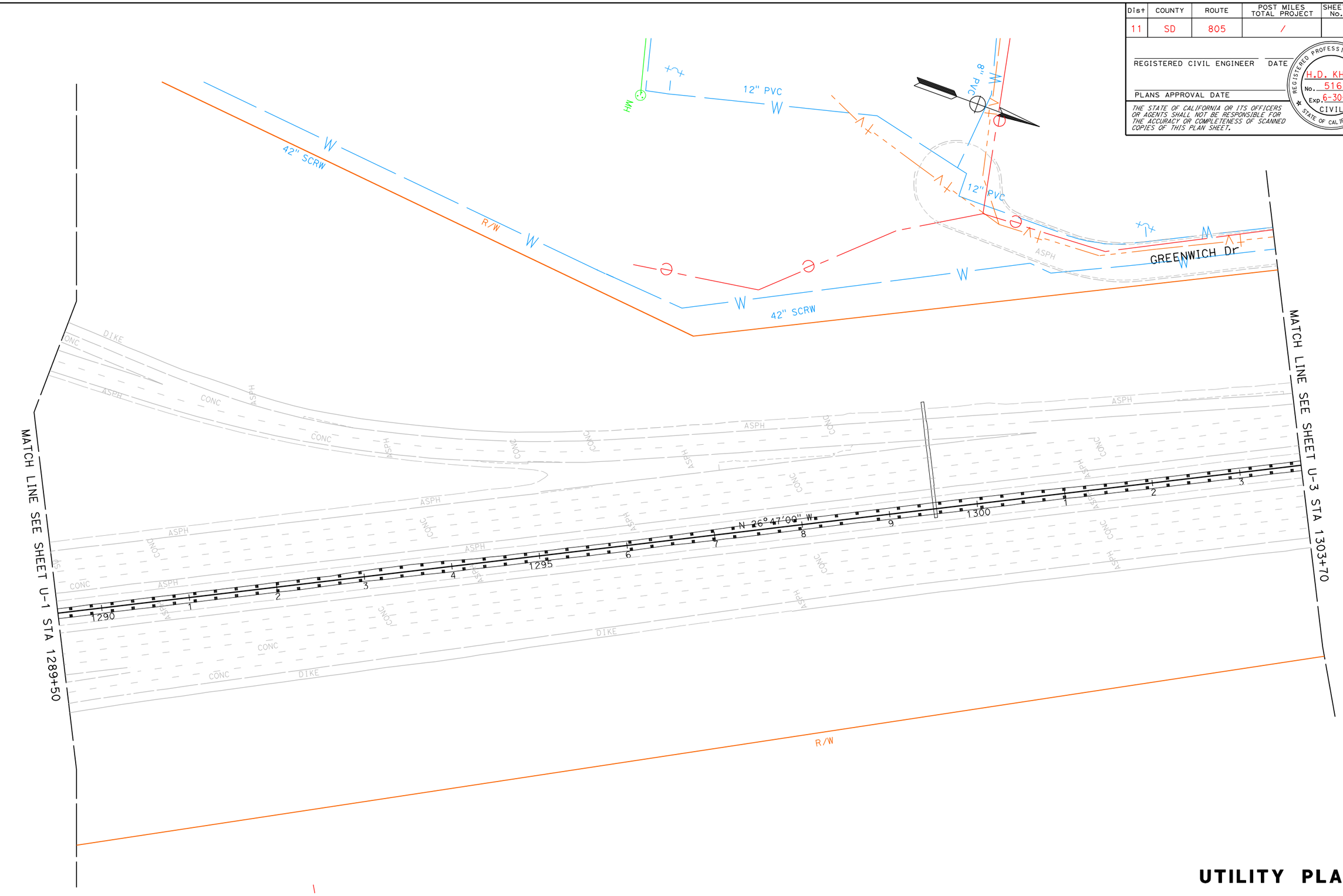


# UTILITY PLAN

SCALE: 1" = 50'

U-2

| REVISED BY | DATE REVISED |
|---|---|
| | |
| | |
| | |
| | |
| | |

CALCULATED-DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU
FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 27-JUL-2011
TIME PLOTTED => 08:31

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka002

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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| REVISED BY | DATE REVISED |
|---|---|
| | |

CALCULATED-DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU
FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

MATCH LINE SEE SHEET U-2 STA 1303+70

MATCH LINE SEE SHEET U-4 STA 1318+50

GREENWICH DR

12" SCRW

24" AC

16" AC

12" STL

42" SCRW

42" SCRW

RXW

R/W

R/W

30" (595 PSI) Gas Main

PADDLE MARKERS

PI 316+82.000

N 27°55'45" W

4239.83'

1305 1310 1315

ASPH DIKE CONC SD - 805

# UTILITY PLAN

SCALE: 1" = 50'

U-3

LAST REVISION 00-00-00
DATE PLOTTED => 27-JUL-2011
TIME PLOTTED => 08:31

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka003

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

MATCH LINE SEE SHEET U-5 STA 1327+70

BC 326+33.260

R/W

N 5°30'34" E 202.399'

BC 323+43.074

EC 324+30.861

BC 322+19.760

EC 328+45.038

BC 1322+40.349

S 49°28'08" E 211.519'

N 49°28'08" W 210.609'

PI 1322+17.18

N 31°07'51" W 193.900'

EC 321+49.174

PI 320+09.154

BC 319+82.060

N 26°47'00" W 506.83'

ENDERS Ave

GOVERNOR Dr

42" SCRW

RECLAIMED WATER

20" PVC

16" AC UNK

6" AC PVC

8" AC

MH

VCP

DIKE

ASPH

CONC

SD - 805

MATCH LINE SEE SHEET U-3 STA 1318+50

# UTILITY PLAN

SCALE: 1" = 50'

U-4

| | | | | | |
|---|---|---|---|---|---|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN | CALCULATED-DESIGNED BY | ARIEL MARILAO | REVISED BY | |
| FUNCTIONAL SUPERVISOR | ROGER CARLIN | CHECKED BY | HANH KHUU | DATE REVISED | |

LAST REVISION 00-00-00 DATE PLOTTED => 27-JUL-2011 TIME PLOTTED => 08:31

BORDER LAST REVISED 7/2/2010 | USERNAME => s127934 DGN FILE => b2t200ka004 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2784 | PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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STEINBECK Ave
8"AC
8"VCP
MH
STEINBECK AVE
BOVET Way
4" AC
ASPH
MATCH LINE SEE SHEET U-4 STA 1328+70
MATCH LINE SEE SHEET U-6 STA 1342+00
BC 331+93.260
EC 331+93.260
BC 1333+55.360
EC 1333+55.360
EC 334+65.000
EC 1337+27.592
EC 1337+26.139
R/W
1335
1330
1340
DIKE
ASPH
CONC
SD - 805
W
42" RCSC
42" SCRW
MCI Local Aerial

**UTILITY PLAN**

SCALE: 1" = 50′ **U-5**

| | | | |
|---|---|---|---|
| CALCULATED-DESIGNED BY | ARIEL MARILAO | REVISED BY | |
| CHECKED BY | HANH KHUU | DATE REVISED | |
| FUNCTIONAL SUPERVISOR | ROGER CARLIN | | |
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN | | |

LAST REVISION 00-00-00 DATE PLOTTED => 27-JUL-2011 TIME PLOTTED => 08:31

BORDER LAST REVISED 7/2/2010 | USERNAME => s127934 DGN FILE => b2t200ka005 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2784 | PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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MATCH LINE SEE SHEET U-5 STA 1342+00

MATCH LINE SEE SHEET U-7 STA 1356+50

R/W

DIKE

CONC

ASPH

SD - 805

1345

1350

1355

24" VCP

21" PVC

42" RCSC

HW

MH

ROSE CANYON

GUY POLE

3x GUY WIRES SPAN P1 TO P4

3x GUY WIRES SPAN P2 TO P4

3x GUY WIRES SPAN P2 TO P3

MCI MFS LOCAL U/G

AT&T U/G

# UTILITY PLAN

SCALE: 1" = 50'

U-6

| | | | | | |
|---|---|---|---|---|---|
| CALCULATED-DESIGNED BY | ARIEL MARILAO | REVISED BY | | | |
| CHECKED BY | HANH KHUU | DATE REVISED | | | |
| FUNCTIONAL SUPERVISOR | ROGER CARLIN | | | | |
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN | | | | |

LAST REVISION 00-00-00 | DATE PLOTTED => 27-JUL-2011 | TIME PLOTTED => 08:32

BORDER LAST REVISED 7/2/2010 | USERNAME => s127934 | DGN FILE => b2t200ka006 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2784 | PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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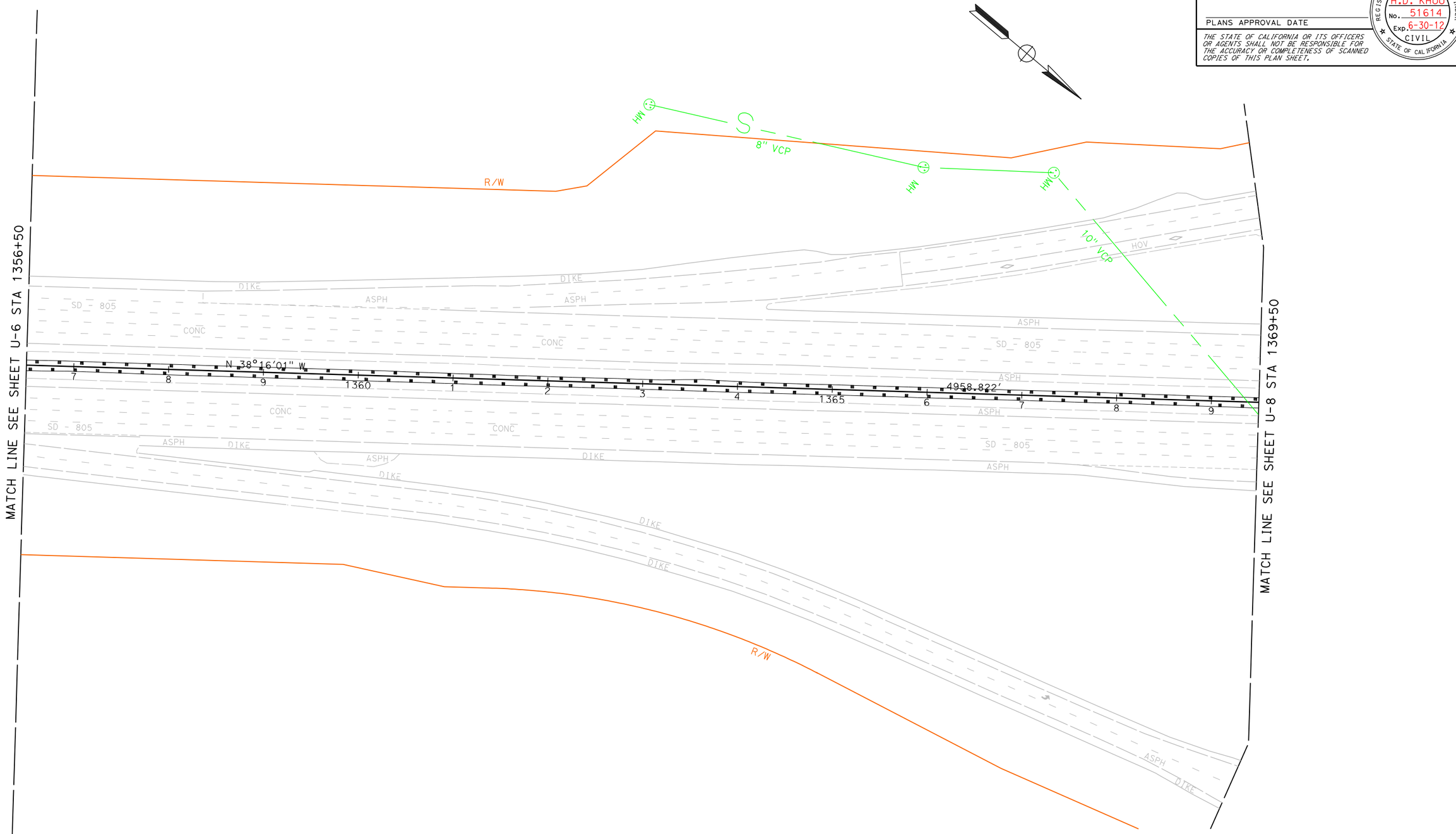


# UTILITY PLAN

SCALE: 1" = 50'

U-7

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU

FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN

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BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka007

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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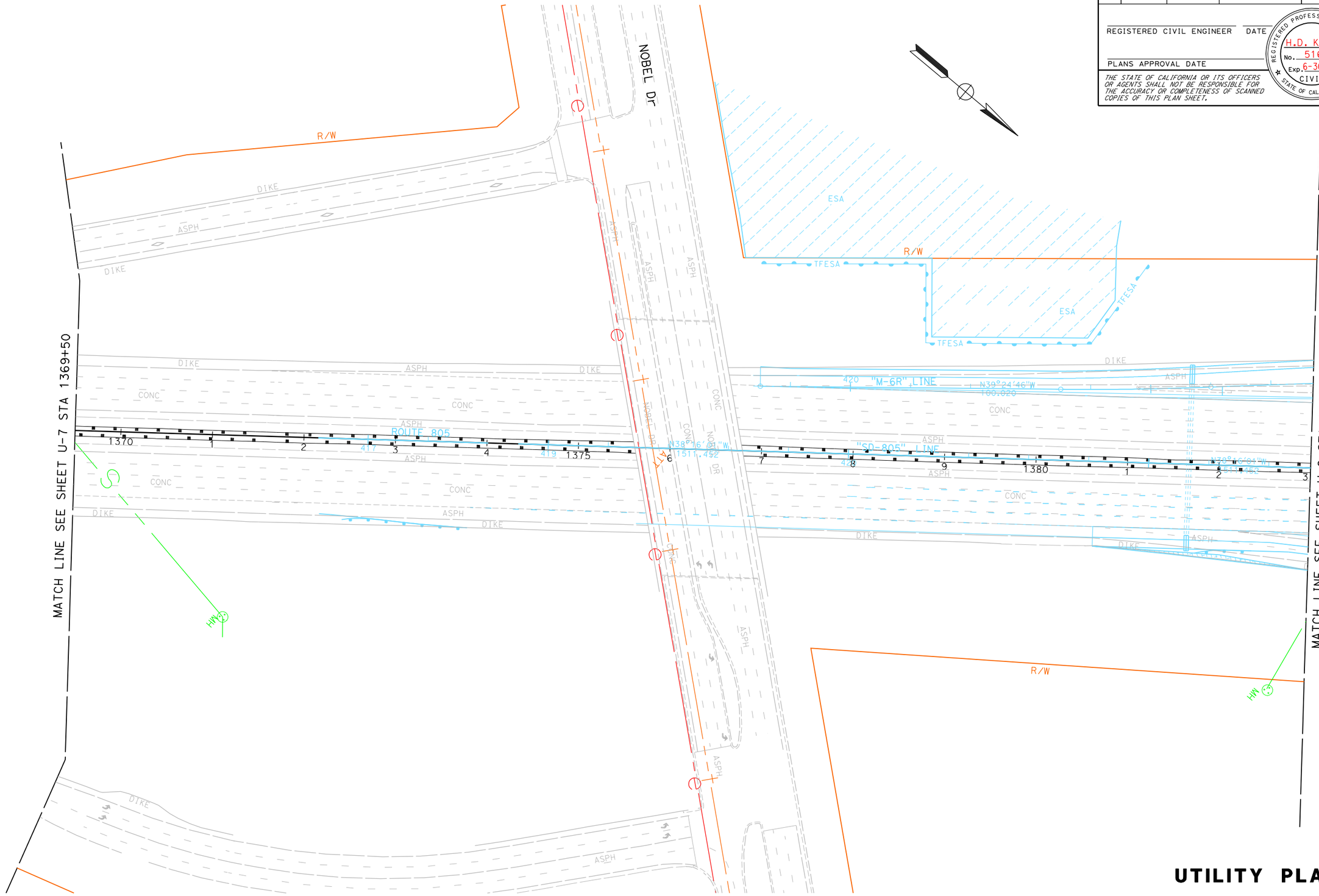


# UTILITY PLAN

SCALE: 1" = 50'

U-8

| CALCULATED-DESIGNED BY | ARIEL MARILAO | REVISED BY | |
|---|---|---|---|
| CHECKED BY | HANH KHUU | DATE REVISED | |
| FUNCTIONAL SUPERVISOR | ROGER CARLIN | | |
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN | | |

LAST REVISION 00-00-00 | DATE PLOTTED => 27-JUL-2011 | TIME PLOTTED => 08:32

BORDER LAST REVISED 7/2/2010 | USERNAME => s127934 | DGN FILE => b2t200ka008 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2784 | PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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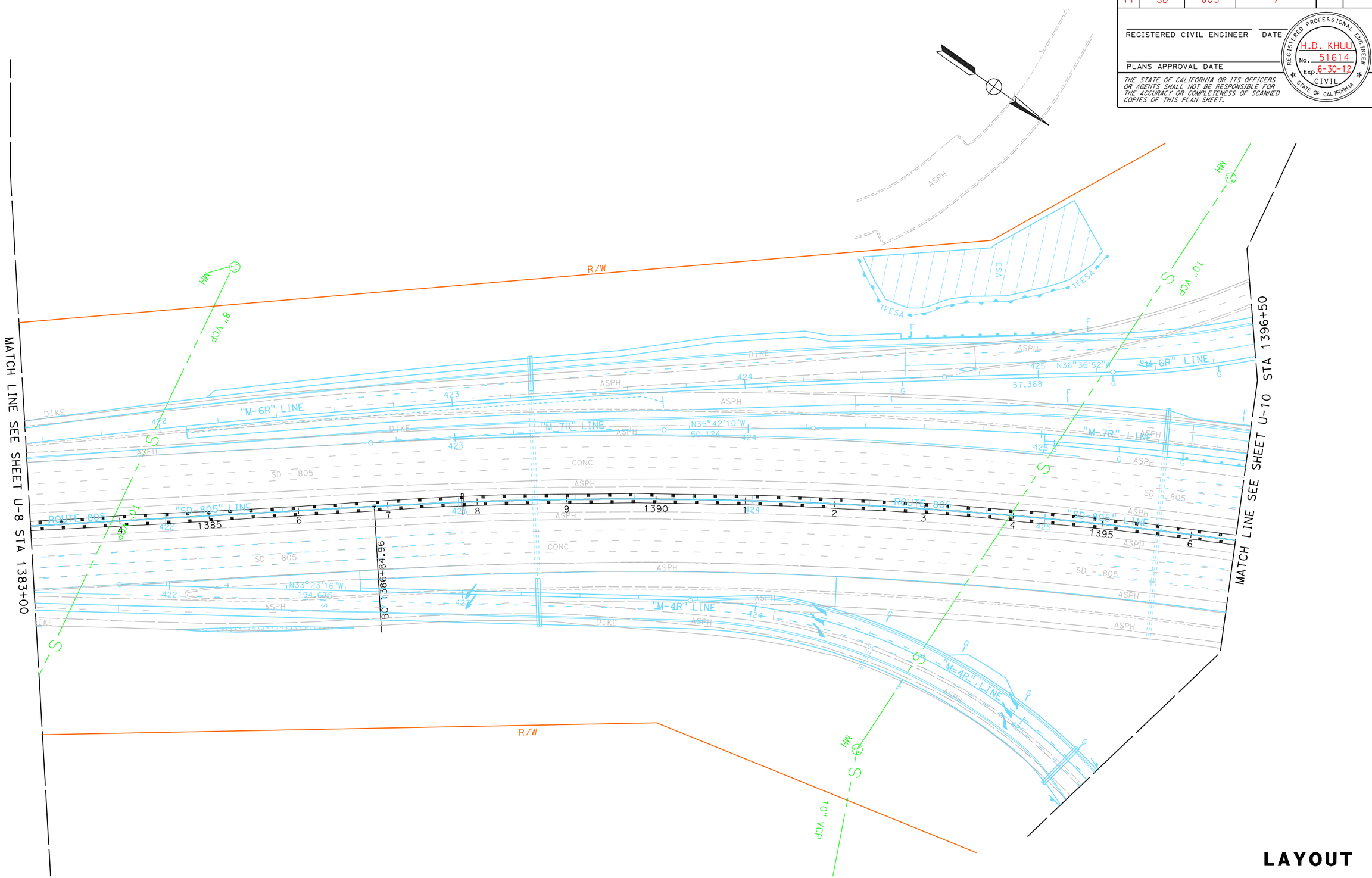


# LAYOUT

SCALE: 1" = 50'

U-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

CALCULATED-DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: ROGER CARLIN

LAST REVISION 00-00-00
DATE PLOTTED => 27-JUL-2011
TIME PLOTTED => 08:32

BORDER LAST REVISED 7/2/2010
USERNAME => s127934
DGN FILE => b2t200ka009
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2784
PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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MATCH LINE SEE SHEET U-11 STA 1404+50

MATCH LINE SEE SHEET U-9 STA 1396+50

LA JOLLA VILLAGE Dr

MIRAMAR RD

"M-LINE"

"M-8R" LINE

"M-6RA" LINE

"M-6R" LINE

"M-2RA" LINE

"M-4R" LINE

"M-3R" LINE

ROUTE 805

SD - 805

DIKE

ASPH

CONC

ATT

TFESA

ESA

MH

R/W

15" VCP

10" VCP

20"

# UTILITY PLAN

SCALE: 1" = 50'

U-10

| CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED |
|---|---|---|---|
| ARIEL MARILAO | HANH KHUU | | |

FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 27-JUL-2011 | TIME PLOTTED => 08:32

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200kq010

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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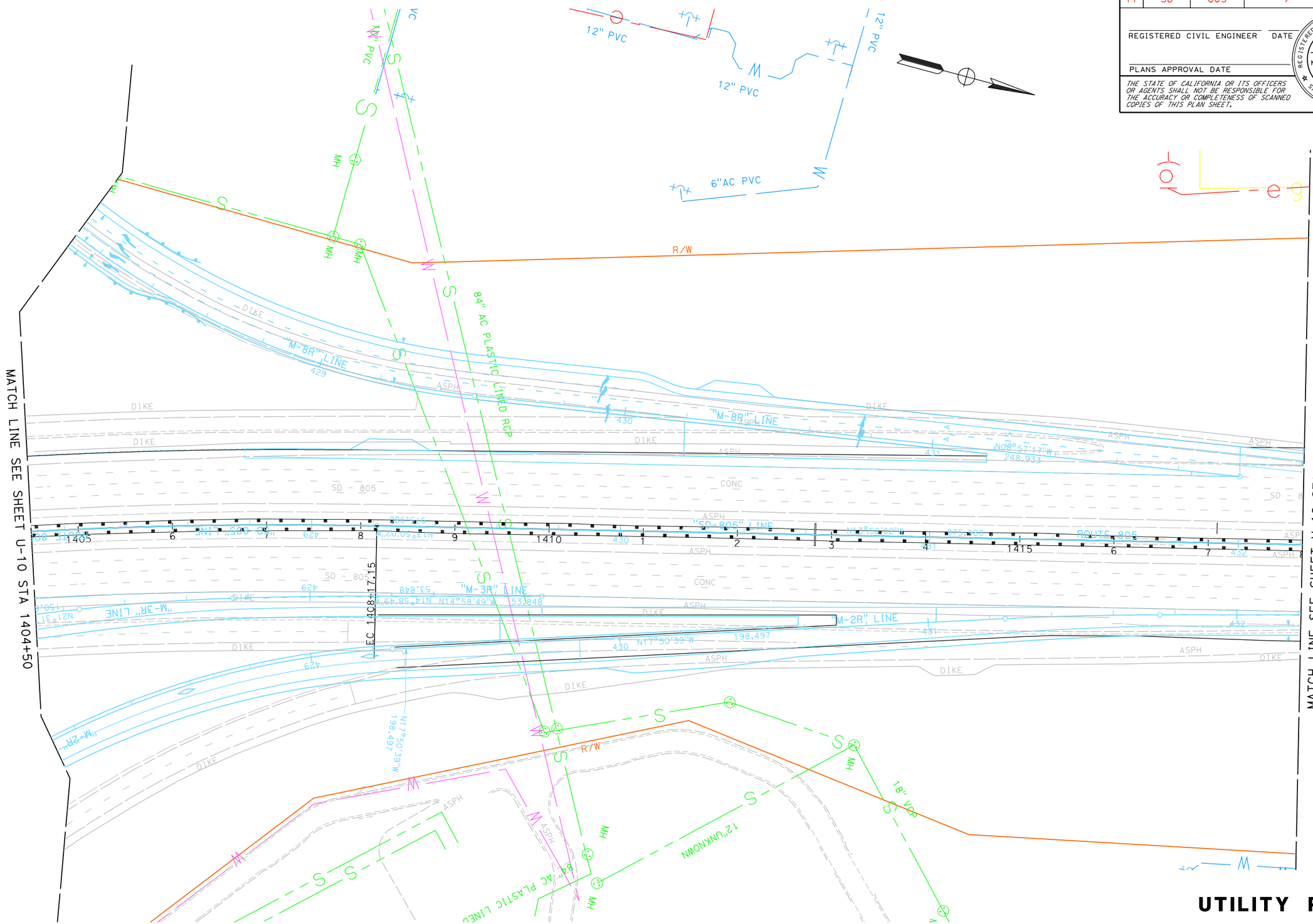


# UTILITY PLAN

SCALE: 1" = 50'

**U-11**

| | | | |
|---|---|---|---|
| STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | CALCULATED-DESIGNED BY | ARIEL MARILAO | REVISED BY |
| DESIGN | CHECKED BY | HANH KHUU | DATE REVISED |
| FUNCTIONAL SUPERVISOR | ROGER CARLIN | | |

LAST REVISION 00-00-00 DATE PLOTTED => 27-JUL-2011 TIME PLOTTED => 08:32

BORDER LAST REVISED 7/2/2010 | USERNAME => s127934 DGN FILE => b2t200ka011 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2784 | PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

EASTGATE MALL Blvd

MATCH LINE SEE SHEET U-11 STA 1418+00

MATCH LINE SEE SHEET U-13 STA 1432+00

ROUTE 805 "SD 805" LINE 3202.03' N13°50'02"W 975.980'

R/W

ASPH CONC DIKE SD - 805

Time Warner

ATT/XO Communications/Qualcomm Power (aka Telepacific) (u/g)

Test bore hole

12"PVC 8"PVC

# UTILITY PLAN

SCALE: 1" = 50'

U-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

FUNCTIONAL SUPERVISOR: ROGER CARLIN

CALCULATED-DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU

| REVISED BY | DATE REVISED |
|---|---|
| | |

LAST REVISION 00-00-00
DATE PLOTTED => 06-SEP-2011
TIME PLOTTED => 14:36

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka012

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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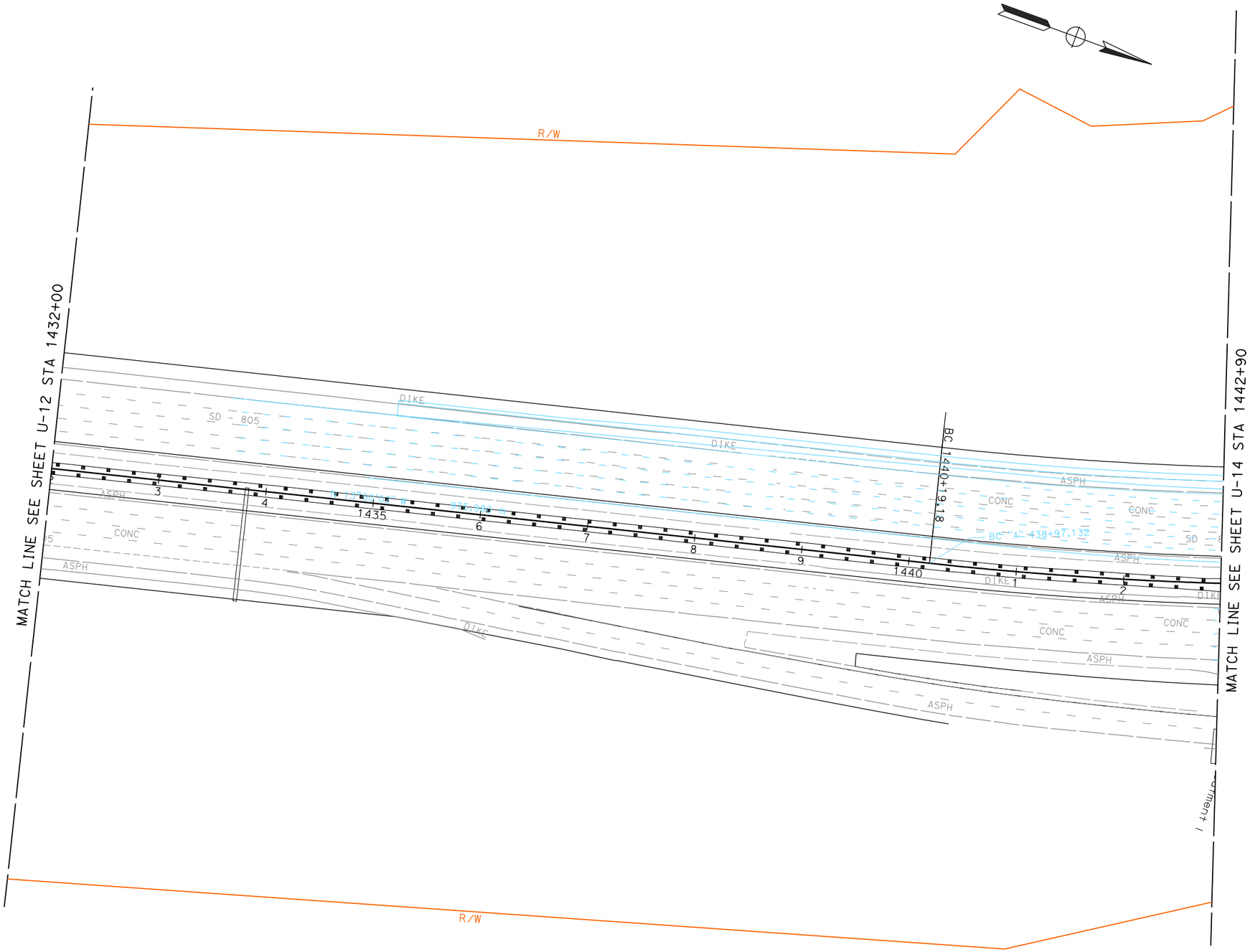



## UTILITY PLAN

SCALE: 1" = 50'

U-13

CALCULATED-DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: ROGER CARLIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 27-JUL-2011
TIME PLOTTED => 08:33

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka013

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

MATCH LINE SEE SHEET U-13 STA 1442+90

MATCH LINE SEE SHEET U-15 STA 1455+90

CARROLL CANYON

SD - 805

ASPH

CONC

DIKE

"CCR" LINE

"A" LINE

R/W

MCI UG

30" VCP

27" VCP

24" RCP

Existing Water

Abutment 9

BC "CCR" 442+77.385

N 52°40'53" E 101.220m

BC "CCR" 443+84.6

N 51°44'55" E 101.229

# UTILITY PLAN

SCALE: 1" = 50'

U-14

LAST REVISION
00-00-00 DATE PLOTTED => 27-JUL-2011
TIME PLOTTED => 08:33

| REVISED BY | DATE REVISED |
|---|---|
| ARIEL MARILAO | |
| CALCULATED-DESIGNED BY | |
| HANH KHUU | |
| CHECKED BY | |
| FUNCTIONAL SUPERVISOR | |
| ROGER CARLIN | |

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka014

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

MATCH LINE SEE SHEET U-16 STA 1464+00

SORRENTO VALLEY Rd

VISTA SORRENTO PKwy

MIRA MESA Blvd

VISTA SORRENTO DR

MATCH LINE SEE SHEET U-14 STA 1455+90

# UTILITY PLAN

SCALE: 1" = 50'

U-15

| REVISED BY | DATE REVISED |
|---|---|
| ARIEL MARILAO | |
| HANH KHUU | |

CALCULATED-DESIGNED BY

CHECKED BY

FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans®

DESIGN

LAST REVISION 00-00-00 DATE PLOTTED => 27-JUL-2011 TIME PLOTTED => 08:33

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka015

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

CALCULATED- DESIGNED BY: ARIEL MARILAO
CHECKED BY: HANH KHUU

FUNCTIONAL SUPERVISOR: ROGER CARLIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

| REVISED BY | DATE REVISED |
|---|---|
| | |

MATCH LINE SEE SHEET U-15 STA 1464+00

MATCH LINE SEE SHEET U-17 STA 1478+00

R/W

DIKE

ASPH

CONC

VISTA SORRENTO Pkwy

EC 1471+34.691

EC "A" 450.00 AC 7.43

BC "A" 450.00 L 57.26

EC 1466+97.18

BC 1464+22.64

PI 1463+88.62

S 33°51'10" W

N 69°24'53" W 528.92'

N 64°50'08" W 559.46'

N 66°13'24" W 300.06'

BC 1472+26.11

EC 1473+93.21

PI 1476+93.27

BC 1476+94.15

# UTILITY PLAN

SCALE: 1" = 50'

U-16

LAST REVISION 00-00-00 DATE PLOTTED => 27-JUL-2011 TIME PLOTTED => 08:33

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka016

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

PROJECT NUMBER & PHASE 00000000001

| Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 11 | SD | 805 | / | | |

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.D. KHUU
No. 51614
Exp. 6-30-12
CIVIL
STATE OF CALIFORNIA

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

MATCH LINE SEE SHEET U-16 STA 1478+00

MATCH Exist

+69.0

+44.0

+69.0

+00.0 MATCH Exist

R/W

DIKE

ASPH

CONC

SD - 805

1480

1485

1490

VISTA SORRENTO Pkwy

DIRECTORS PL

SORRENTO PKWY

12"PVC

10"PVC

MH

# UTILITY PLAN

SCALE: 1" = 50'

U-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: ROGER CARLIN

CALCULATED-DESIGNED BY: ARIEL MARILAO

CHECKED BY: HANH KHUU

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 27-JUL-2011 | TIME PLOTTED => 08:34

BORDER LAST REVISED 7/2/2010

USERNAME => s127934
DGN FILE => b2t200ka017

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 2784

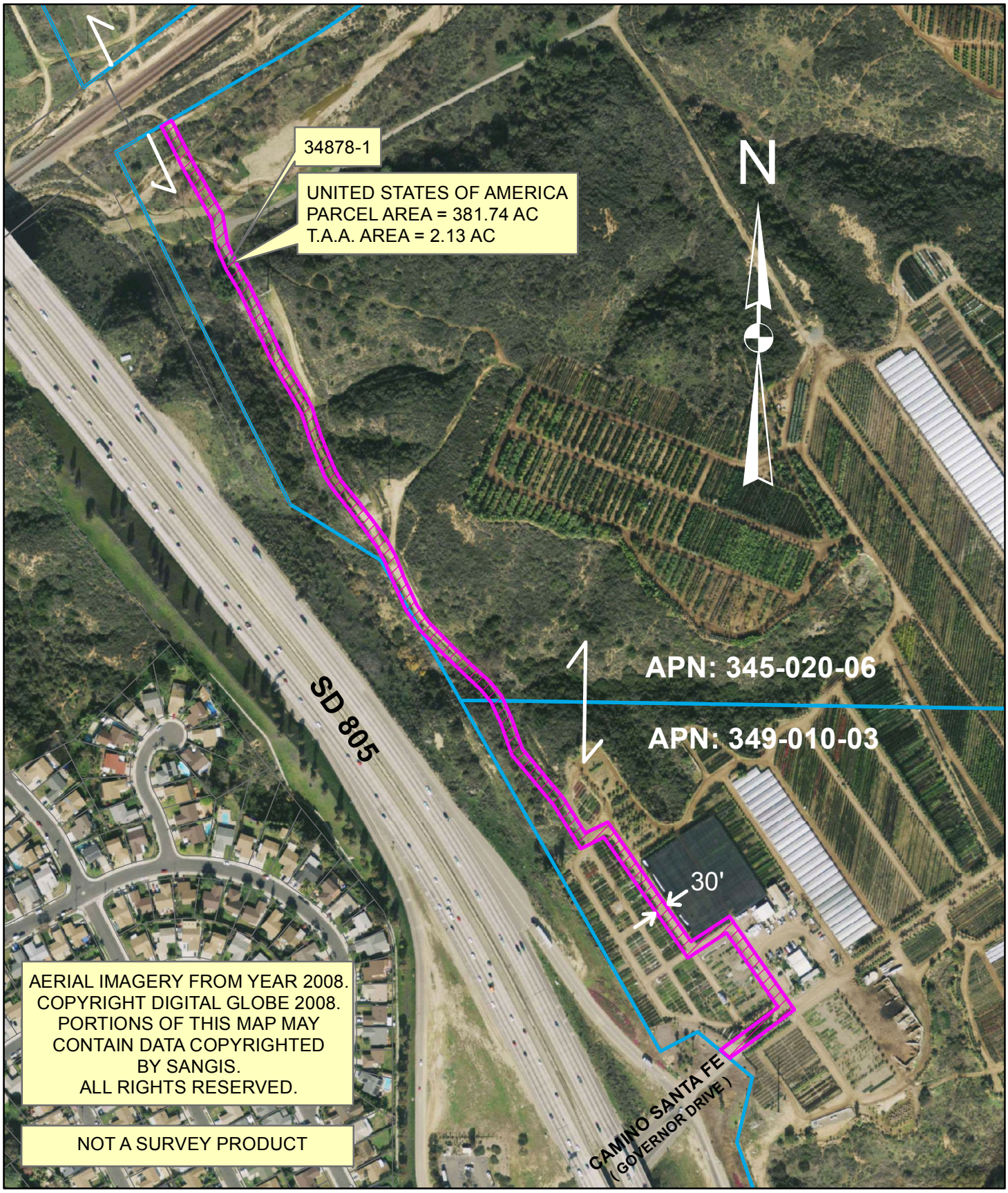
PROJECT NUMBER & PHASE 00000000001

# EXHIBIT 7-A

Right Of Way Maps

# Exhibit A

Right of Way Maps



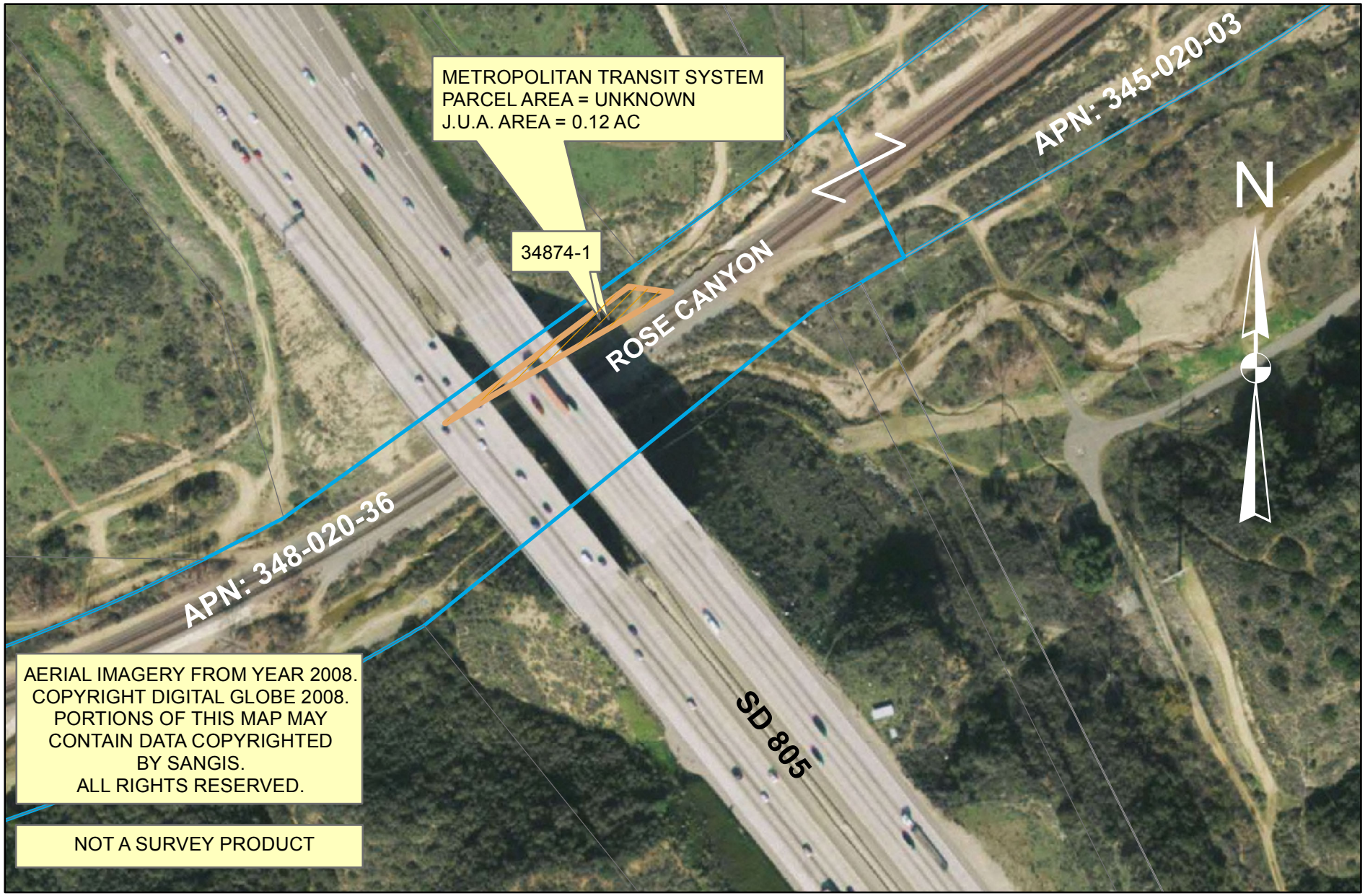

# TEMPORARY ACCESS AGREEMENT

Caltrans

0 135 270 540 810 1,080 Feet

T.A.A. AREA

OFFICE OF LAND SURVEYS



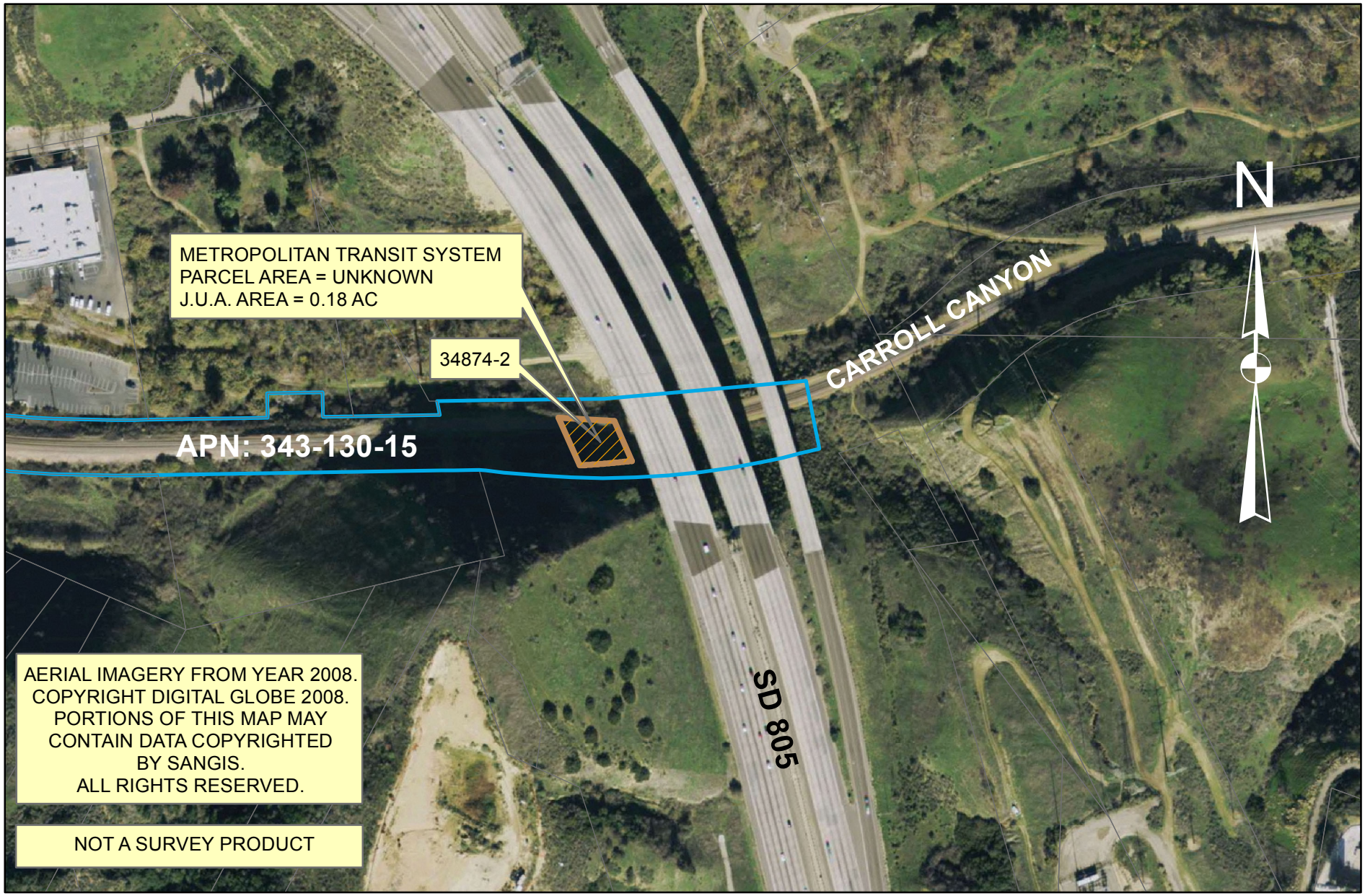

# JOINT USE AGREEMENT

Caltrans

0 70 140 280 420 560 Feet

OFFICE OF LAND SURVEYS

J.U.A. AREA




# JOINT USE AGREEMENT

0 100 200 400 600 800 Feet

J.U.A. AREA

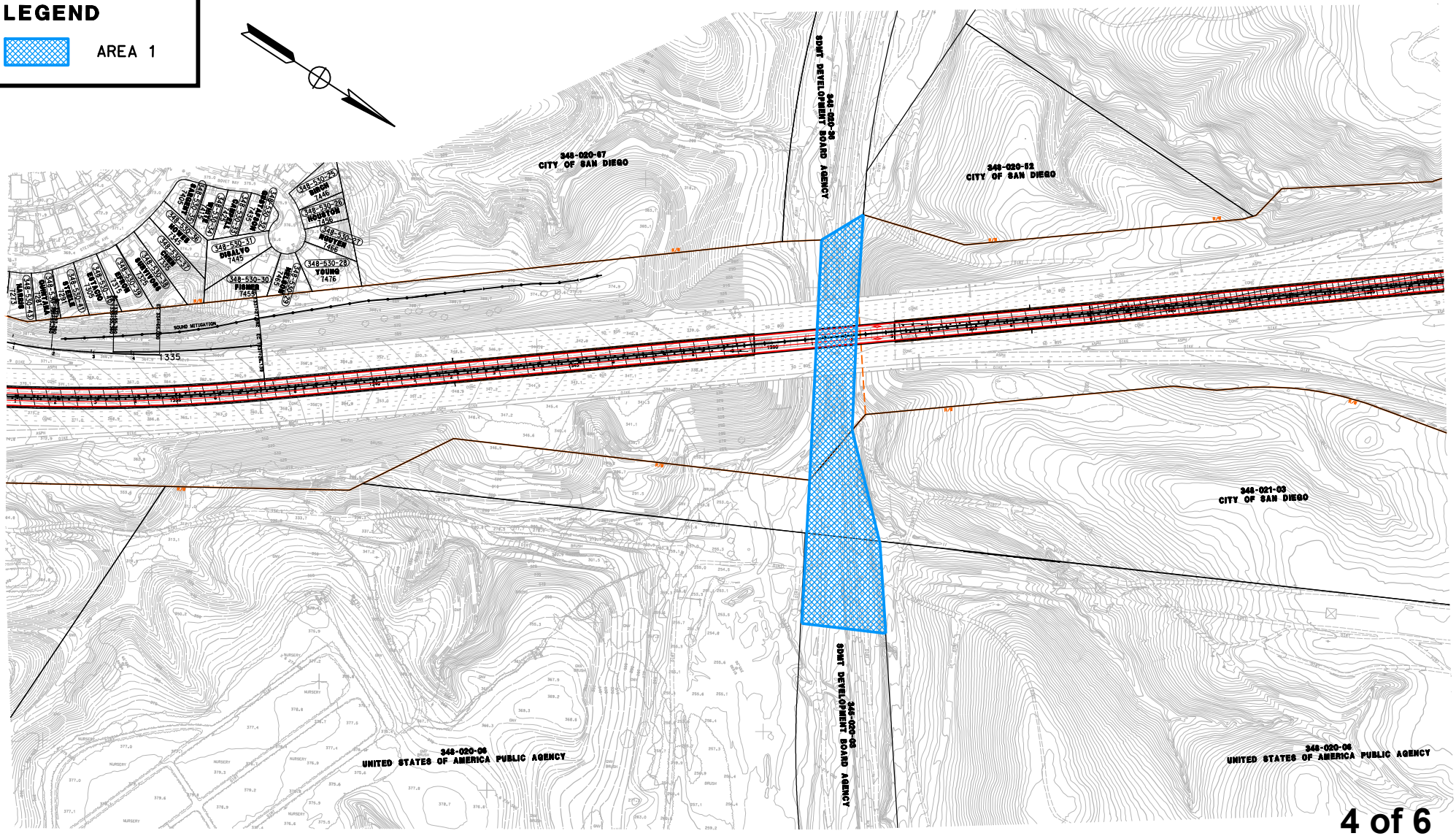
Caltrans

OFFICE OF LAND SURVEYS

# EA: 2T2001
# CONTRACTORS RIGHT OF ENTRY - ROSE CANYON

**LEGEND**

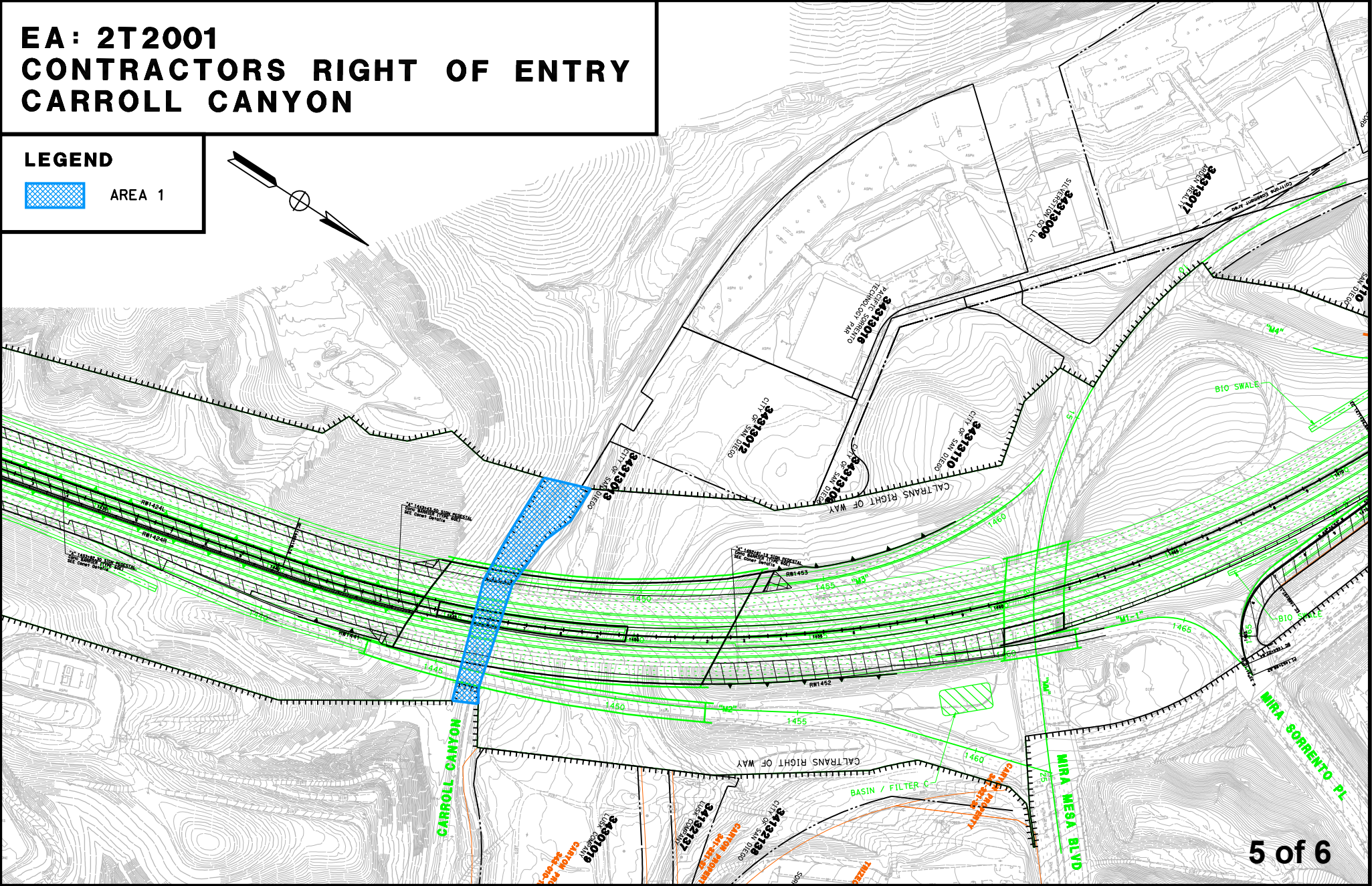
AREA 1



# EA: 2T2001
# CONTRACTORS RIGHT OF ENTRY
# CARROLL CANYON

**LEGEND**

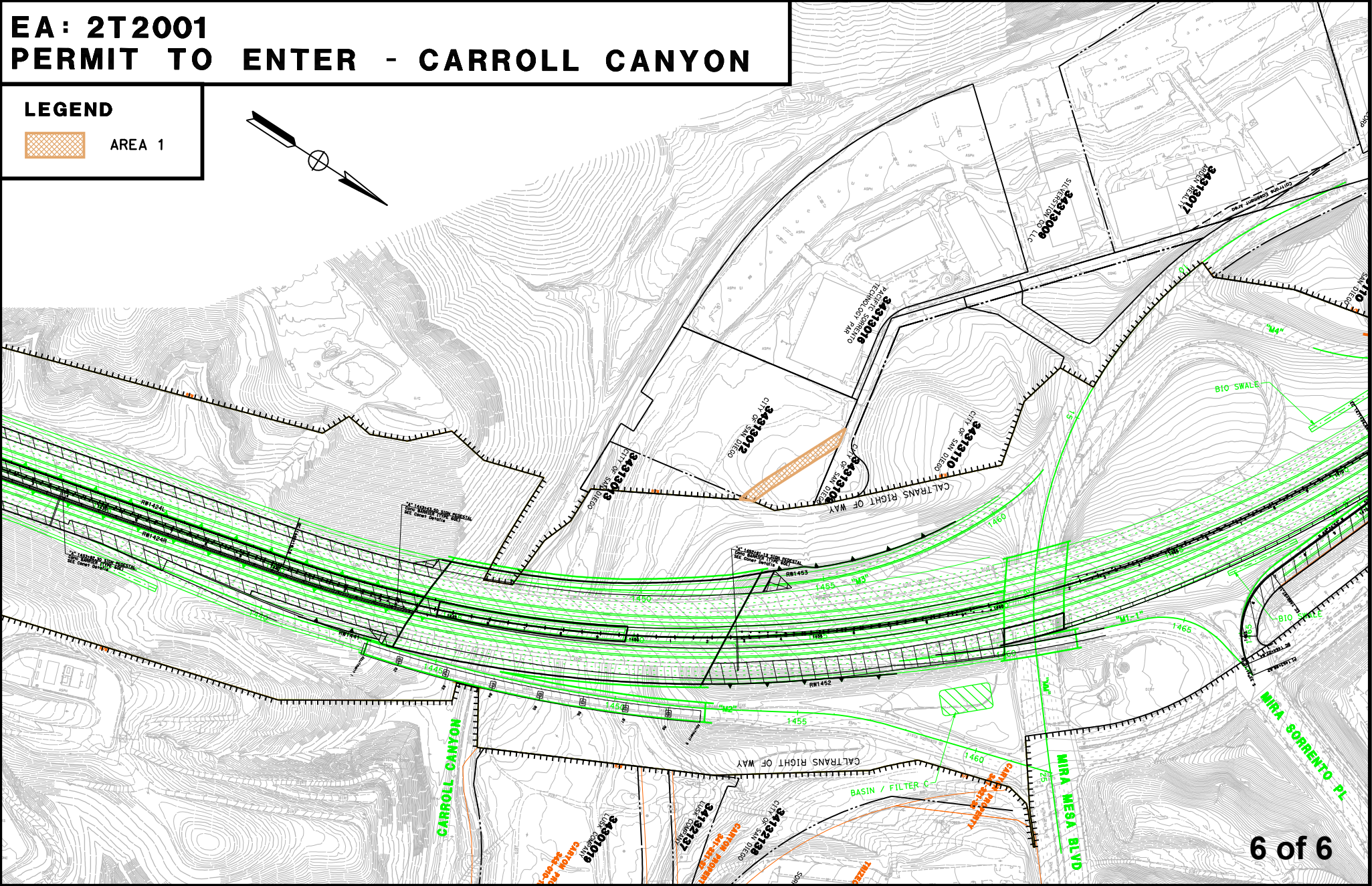
AREA 1



# EA: 2T2001
# PERMIT TO ENTER - CARROLL CANYON

**LEGEND**

AREA 1



# EXHIBIT 7-B

Right Of Way Status Chart

# Exhibit B - R/W Status Chart

**Route 805**

**EA:2T2001**

**PM: R23.3 to R27.7**

| Number | CT Parcel Number | APN | Owner | Acquistion Type | Responsibility | Comments |
|---|---|---|---|---|---|---|
| 1 | 34878-1 | 345-020-06<br>349-010-03 | USA | Temporary Access Agreement | Department | TAA - Governor |
| 2 | 34874-1 | | MTS | Joint Use Agreement (JUA) | Department | JUA - Rose Canyon |
| 3 | 34874-2 | 343-130-15 | MTS | Joint Use Agreement (JUA) | Department | JUA - Carroll Canyon |
| 4 | N/A | 348-020-36<br>345-020-03 | MTS | Contractors Right of Entry | Design Builder | Right of Entry Map -Rose Canyon |
| 5 | N/A | 343-130-15 | MTS | Contractors Right of Entry | Design Builder | Right of Entry Map -Carroll Canyon |
| 6 | N/A | 343-130-12 | City of SD | Permit to Enter | Department | Permit to Enter-Carroll Canyon |

# EXHIBIT 7-C

Right Of Way Access Map Carroll - Canyon

# EA: 2T2001
# R/W ACCESS MAP - CARROLL CANYON

**LEGEND**

- AREA 1 - CONDITION OF NTP1
- AREA 2 - CONDITION OF NTP1
- AREA 3 - CONDITION OF NTP2

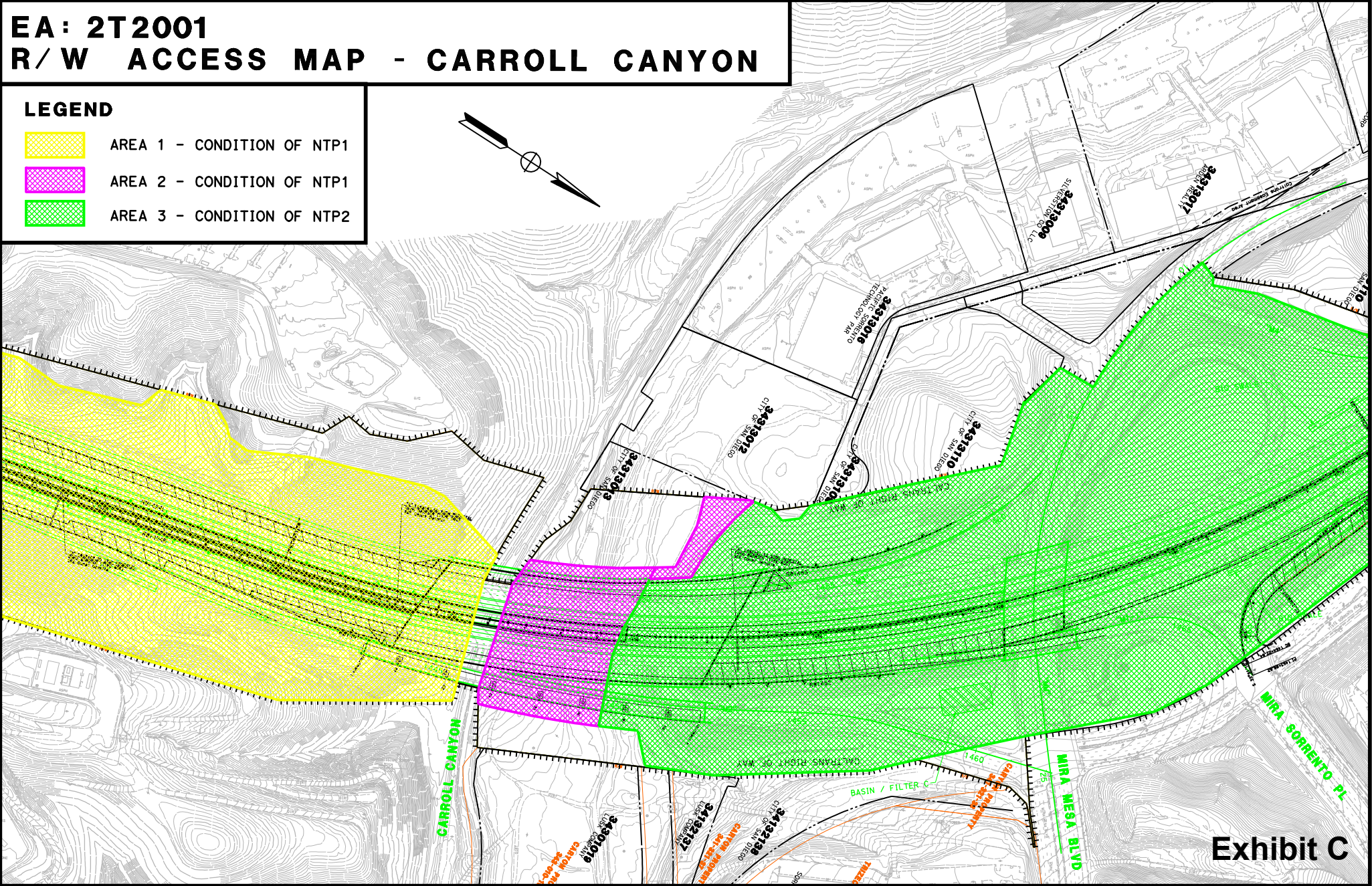



Exhibit C

# EXHIBIT 9-A

Survey Data

# SURVEY NOTES SR 2007-200A

EA. 267600

CO-RTE-PM SD 805 PM 26.8-27.2

PARTY CHIEF D.Sparks RECORDER A. Medellin INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Bridge Sites: Mira Mesa Blvd & Carroll Canyon DATE: May 2007

| | |
|---|---|
| Horizontal: Datum/Epoch/Units | CCS 83 1991.35 Zone 6 Metric |
| Vertical: Datum/Geoid/Units | NGVD 29 Metric |
| CGF of Area: | 0.9999835 |
| Method of Horizontal Survey: | Fast Static / Traverse |
| Method of Vertical Survey: | Differential Leveling |
| Constrained Horizontal Control: | 805-26.6 & 805-27.10 |
| Constrained Vertical Control: | 805-27.10 El: 38.576 (NGVD29 soft converted) |

Positional Accuracy to Constraints: Horizontal: 0.003 rms at 95% Vertical: 0.009 rms at 95%

A Calibration WAS (NOT) used on this survey :tbsf1/archives/calibrations/

Notes: H & V checked by Static GPS: 805-26.6, 805-27.2

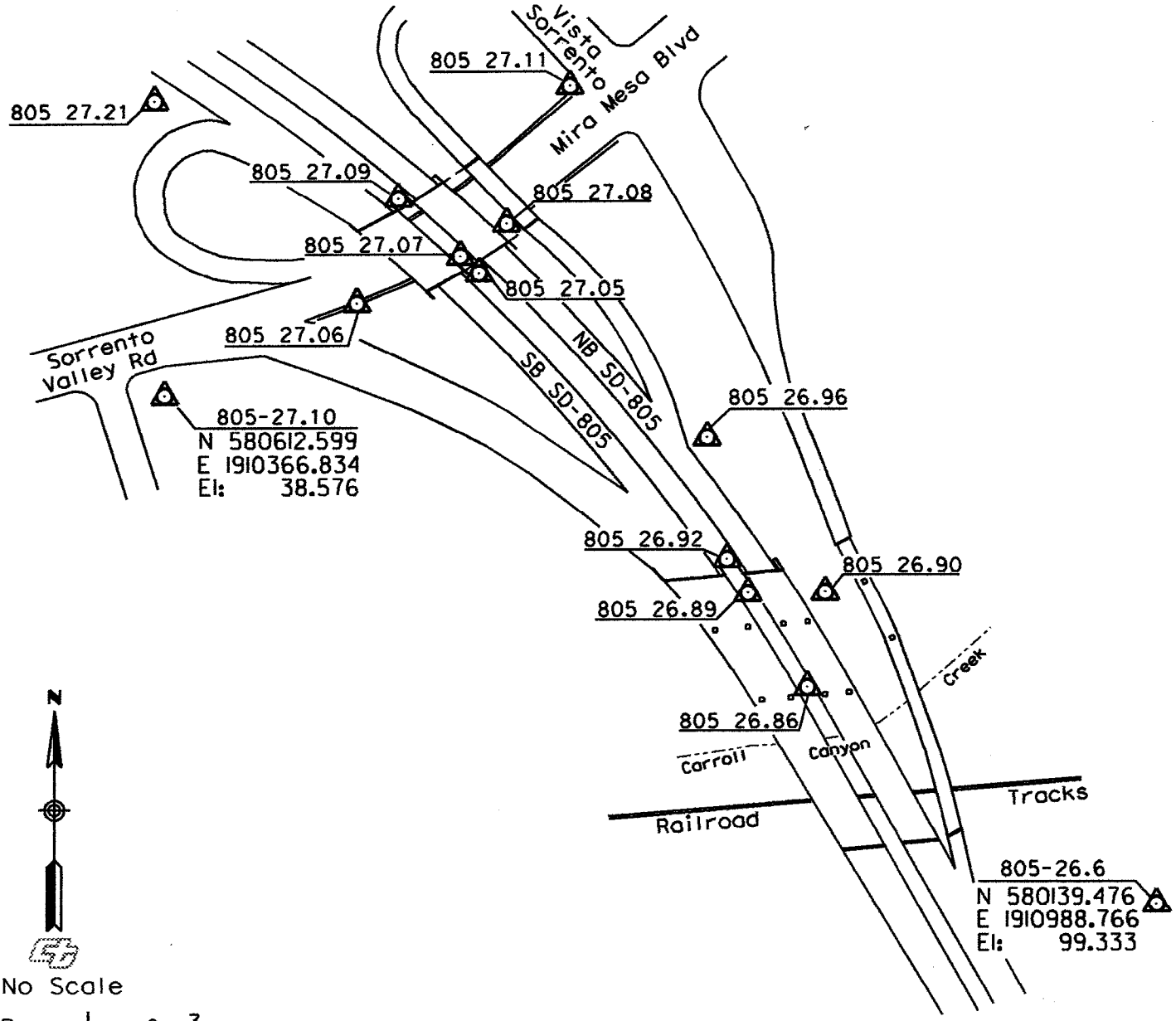
H by Fast Static GPS: 805 27.05, 27.06, 27.09, 27.11 & 27.21

V by Diff Levels: 805 27.05, 27.06, 27.07, 27.08 ,27.09 & 27.11

H & V by Traverse: 805 26.86, 26.89, 26.90, 26.92, 26.96, 27.07, 27.08,

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA




No Scale

Page 1 of 3

...\2007200A Control.DGN 6/5/2007 9:05:21 AM

**Attachment 9**

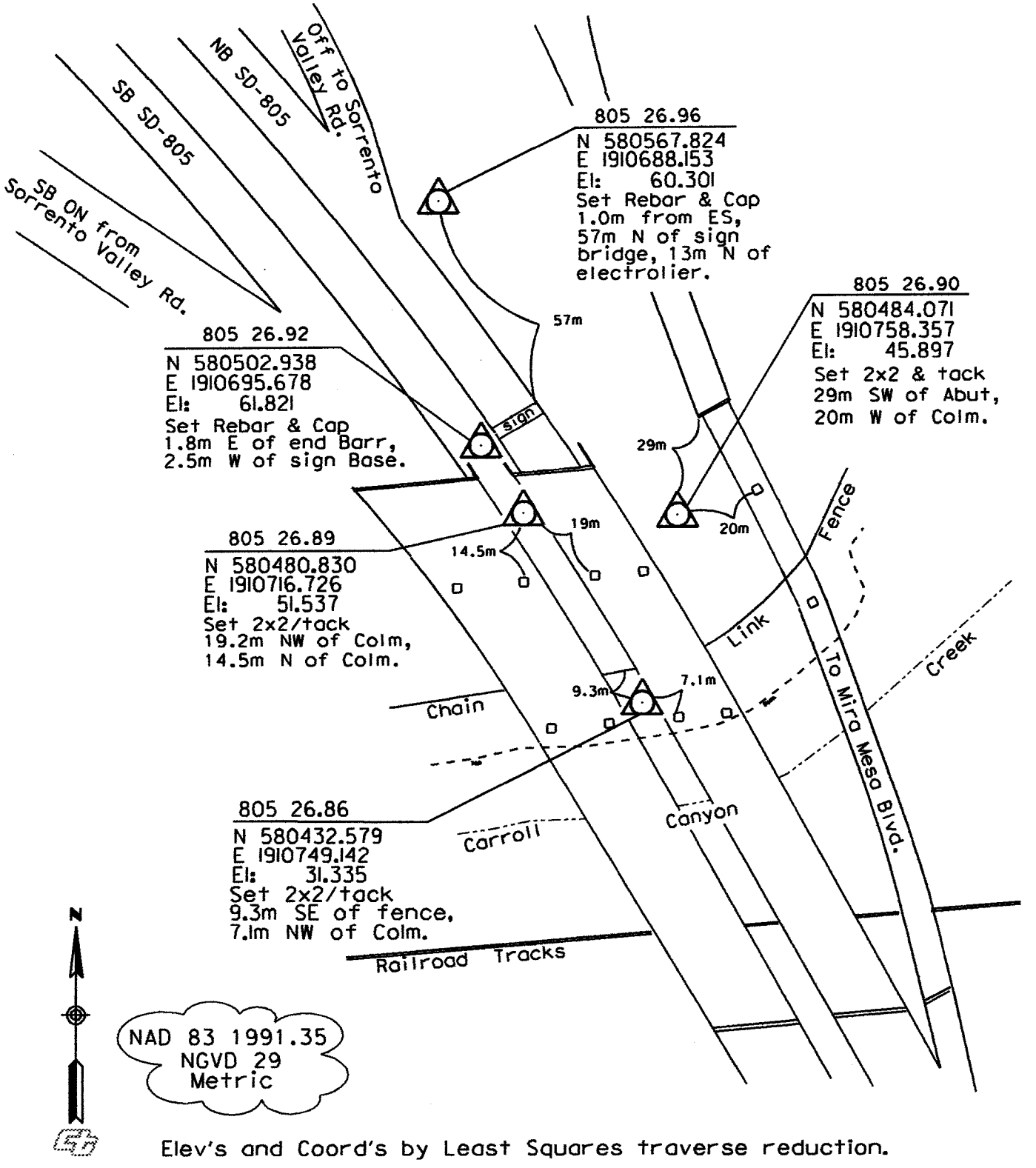
# SURVEY NOTES

| S.R. | EA. | CO-RTE-PM |
|---|---|---|
| 07-200A | 267600 | SD 805 PM 26.9/27.2 |

PARTY CHIEF D. Sparks | RECORDER A. Medellin | INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Carroll Canyon Bridges | DATE OF SURVEY May 2007

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION D-11




Elev's and Coord's by Least Squares traverse reduction.

No Scale



...\2007200A Control.DGN 6/5/2007 9:07:05 AM

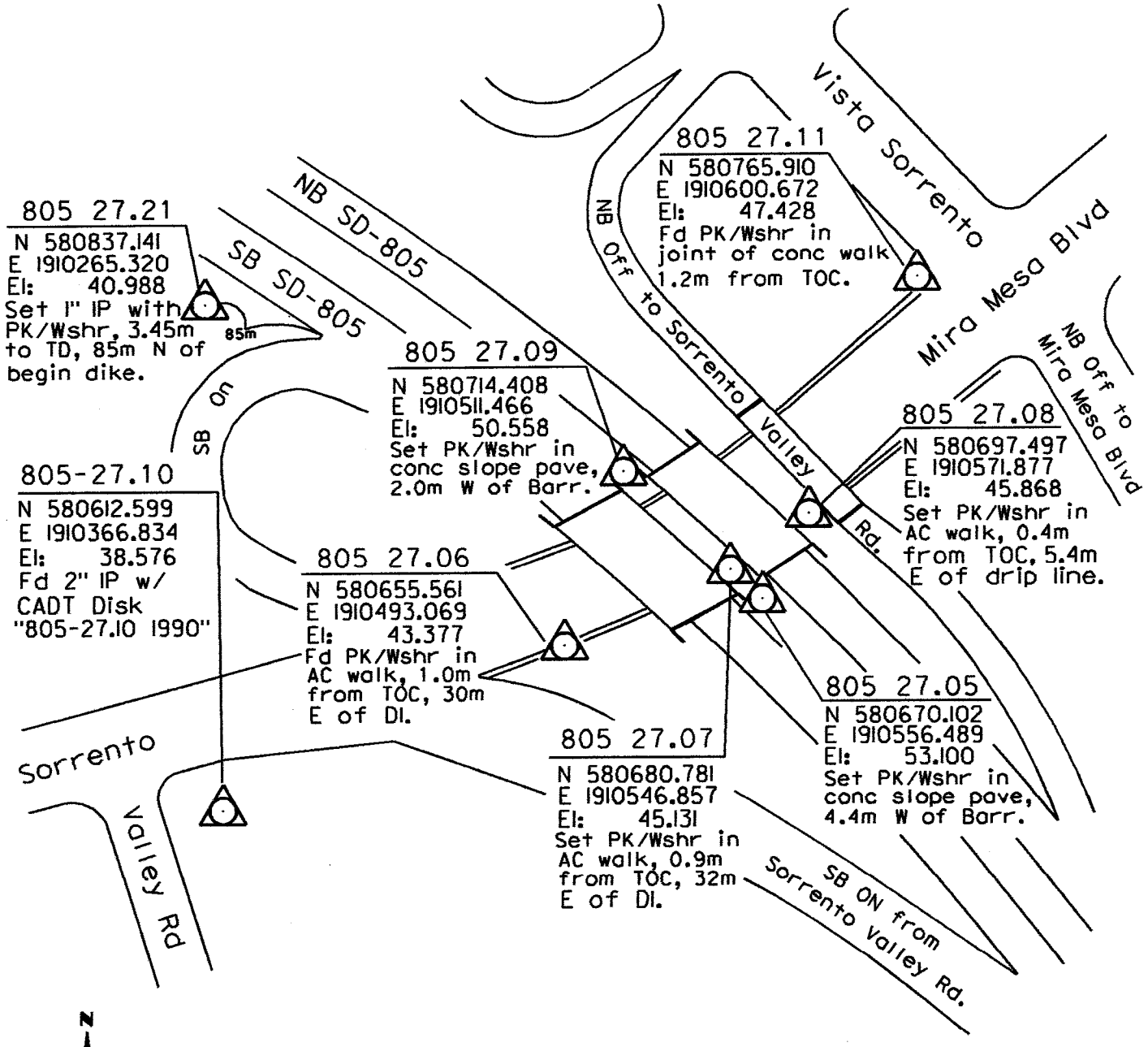
# SURVEY NOTES

| S.R. | EA. | CO-RTE-PM |
|---|---|---|
| 07-200A | 267600 | SD 805 PM 26.9/27.2 |

PARTY CHIEF D. Sparks | RECORDER A. Medellin | INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Carroll Canyon Bridges | DATE OF SURVEY May 2007

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION D-11




NAD 83 1991.35
NGVD 29
Metric

Elev's by Differetial Leveling.

Coord's by Least Squares traverse reduction.

No Scale



...\2007200A Control.DGN 6/5/2007 10:21:14 AM

# SURVEY NOTES SR 2007-200B

EA. 267600

CO-RTE-PM SD 805 PM 28.2-28.4

PARTY CHIEF D.Sparks RECORDER A. Medellin INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Bridge Site Survey: Sorrento Valley Blvd. DATE: June 2007

| | |
|---|---|
| Horizontal: Datum/Epoch/Units | CCS 83 1991.35 Zone 6 Metric |
| Vertical: Datum/Geoid/Units | NGVD 29 Metric |
| CGF of Area: | 0.9999848 |
| Method of Horizontal Survey: | Fast Static / Traverse |
| Method of Vertical Survey: | Static / Differential Leveling |
| Constrained Horizontal Control: | 805-28.21 & 805-28.54 |
| Constrained Vertical Control: | 805-28.21 |

Positional Accuracy to Constraints: Horizontal: 0.003 rms at 95% Vertical: 0.005 rms at 95%

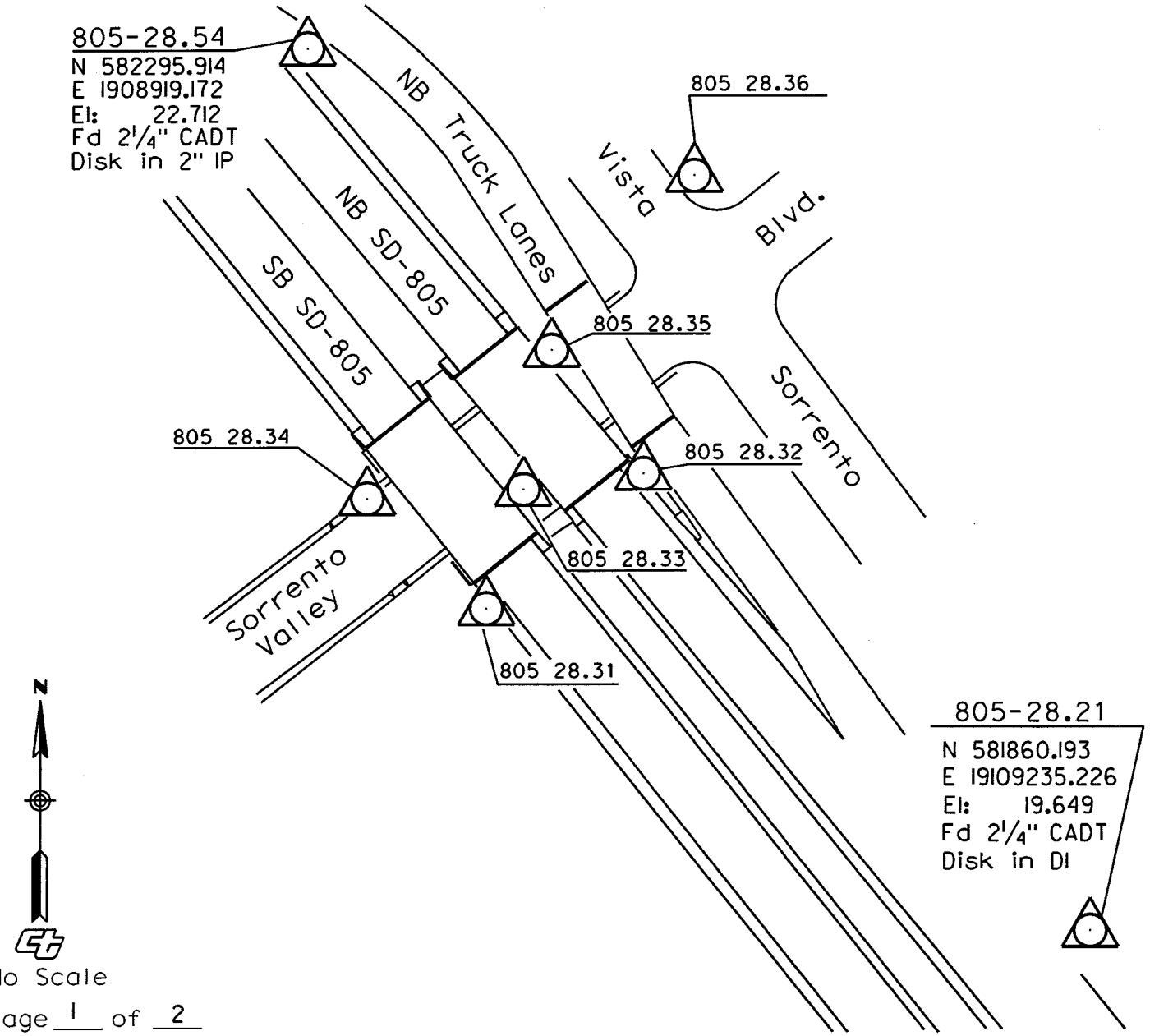
A Calibration WAS (NOT) used on this survey :tbsf1/archives/calibrations/

Notes: H checked by Static GPS: 805-28.21 & 805-28.54

V by Static Survey from 805-27.10 to 805-28.21

H by Fast Static GPS: 805 28.31, 28.32 & 28.36

V by Diff Levels: 805 28.31, 28.32, 28.33, 28.34, 28.35 & 28.36




Page 1 of 2

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA

...\SVB control sketch.DGN 6/15/2007 3:08:18 PM

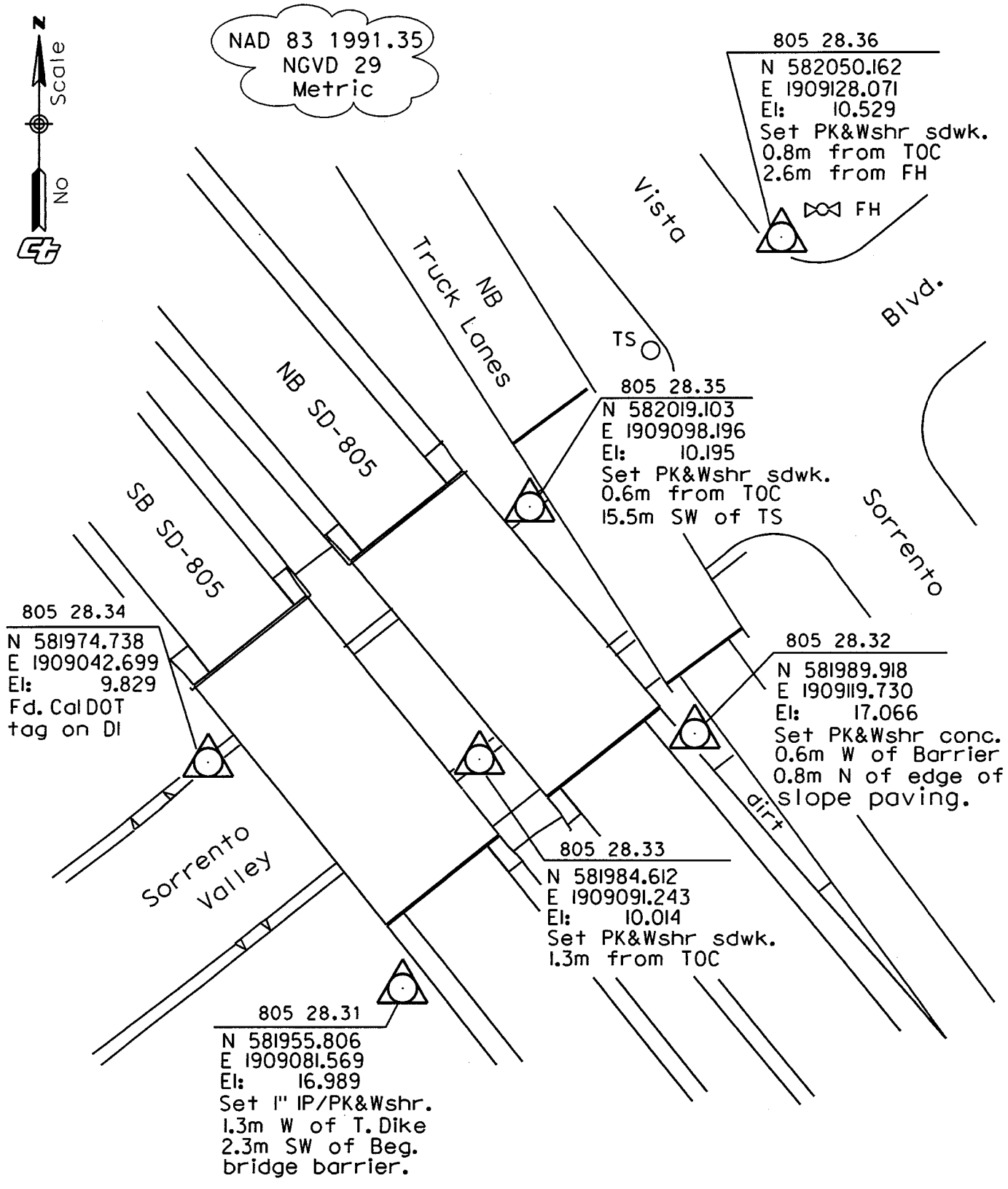
# SURVEY NOTES

| S.R. | EA. | CO-RTE-PM |
|---|---|---|
| 07-200B | 267600 | SD 805 PM 28.2-28.4 |

PARTY CHIEF D. Sparks | RECORDER A. Medellin | INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Sorrento Valley Blvd U/C | DATE OF SURVEY June 2007

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION D-11






...\SVB control sketch.DGN 6/15/2007 3:11:04 PM

# SURVEY NOTES SR 2007-200B

EA. 267600

CO-RTE-PM SD 805 PM 27.2-28.2

PARTY CHIEF D.Sparks RECORDER A. Medellin INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Pavement: Mira Mesa Blvd to Sorrento Valley Blvd DATE: June 2007

| | |
|---|---|
| Horizontal: Datum/Epoch/Units | CCS 83 1991.35 Zone 6 Metric |
| Vertical: Datum/Geoid/Units | NGVD 29 Metric |
| CGF of Area: | 0.9999836 |
| Method of Horizontal Survey: | Fast Static / Traverse |
| Method of Vertical Survey: | Static GPS / Least Squares Traverse reduction |
| Constrained Horizontal Control: | 805-28.21, 805-28.54, 805-27.76, 805-27.41 |
| Constrained Vertical Control: | 805-28.21, 805-27.76, 805-27.41 |

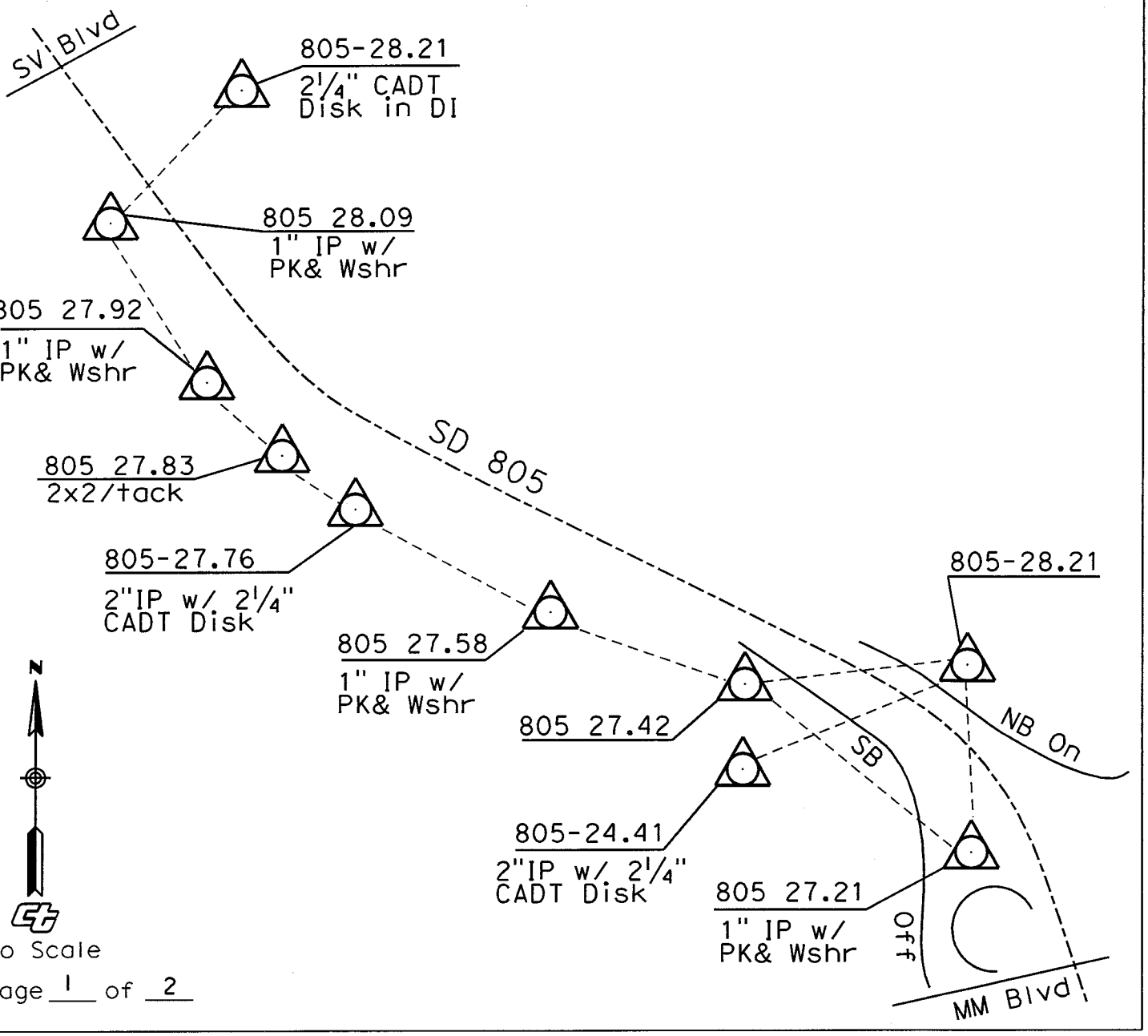
Positional Accuracy to Constraints: Horizontal: 0.003 rms at 95% Vertical: 0.005 rms at 95%

A Calibration WAS (NOT) used on this survey :tbsf1/archives/calibrations/

Notes: _____

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA




No Scale



...\SVB control sketch.DGN 6/15/2007 4:18:53 PM

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

# SURVEY NOTES

SURVEY DESCRIPTION: Supplemental Control @ ~~Sorrento~~ Mira Mesa Blvd.

CO. RTE. PM: 11SD-805-27.1

| PARTY CHIEF | RECORDER | INSTRUMENTMAN | INSTRUMENTS & NOS. | WEATHER |
|---|---|---|---|---|
| D. SParKs | A. Medellin | J. Webb | TCRA 1103+ | Sunny warm |

| STATION | BS | HI | FS | ELEV | Adj Elev. | VP | Description |
|---|---|---|---|---|---|---|---|
| 805-27.10 | | | -3.243 | 38.582 | 38.576 -0.006 | 2" IP | |
| | -3.404 | 41.825 | | | | Turn Point | conc curb EW end both SBON |
| P1 | | | -10.921 | 38.421 | 38.416 -0.005 | | |
| | +1.220 | 49.342 | | | | | |
| 805 27.09 | | | -3.811 | 50.567 | 50.558 -0.004 | PK | |
| | +6.975 | 54.406 | | | | | |
| 805 27.11 | | | +.880 | 47.431 | 47.428 -0.003 | PK | |
| | -.680 | 46.551 | | | | | |
| 805 27.08 | | | -1.239 | 45.871 | 45.868 -0.003 | PK | |
| | +5.992 | 47.11 | | | | | |
| 805 27.05 | | | +6.623 | 53.102 | 53.100 0.002 | PK | |
| | -1.347 | 46.479 | | | | | |
| 805 27.07 | | | -.891 | 45.132 | 45.131 0.001 | PK | |
| | +2.646 | 46.023 | | | | | |
| 805 27.06 | | | +.622 | 43.377 | 43.377 0.000 | PK | |
| | -4.179 | 42.755 | | | | | |
| 805-27.10 | | | | 38.576 | | | |

REMARKS

DATE OF SURVEY: 4-26-07

CHECKED BY / DATE

PAGE OF

FILE NO.: SR 07-200

DD 50 (REV. 10-91)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

# SURVEY NOTES

SURVEY DESCRIPTION: Supplemental Control @ Sorrento Valley Blvd U.C.

UNIT - EXPEND. ACCTG.

CO. RTE. PM: SD 805 28.2

PARTY CHIEF: D. Sparks | RECORDER: A. Medellin | INSTRUMENTMAN: J. Webb | INSTRUMENTS & NOS. - TAPE DATA, ETC: TCRA 1103+ | WEATHER:

| STATION | BS | HI | FS | ELEV | | |
|---|---|---|---|---|---|---|
| 805-28.21 | | | +.036 | 100.002 | 19.651 | MON 2¼" DISK IN DI NB OUT. |
| | -2.626 | 99.966 | | | | |
| 805 28.31 | | | +5.476 | 97.340 | 16.989 | 1" IP |
| | +1.682 | 91.864 | | | | |
| 805 28.34 | | | -1.853 | 90.182 | 9.831 | CAL DOT TAG |
| | +1.670 | 92.035 | | | | |
| 805 28.33 | | | -1.771 | 90.365 | 10.014 | PK |
| | -1.589 | 92.136 | | | | |
| 805 28.35 | | | -1.700 | 90.547 | 10.196 | |
| | -1.367 | 92.247 | | | | PK |
| 805 28.36 | | | -1.388 | 90.880 | 10.529 | |
| | +5.149 | 92.268 | | | | |
| 805 28.32 | | | -2.735 | 97.417 | 17.066 | PK |
| | -0.152 | 100.152 | | (80.351) | | |
| 805-28.21 | | | | 100.00 | 19.649 | MON. 2¼ DISK IN DI |

REMARKS | DATE OF SURVEY: 4-26-07 | CHECKED BY - DATE | PAGE OF | FILE NO.: SR07-200

DCHD GEO 13 Rev 11-81

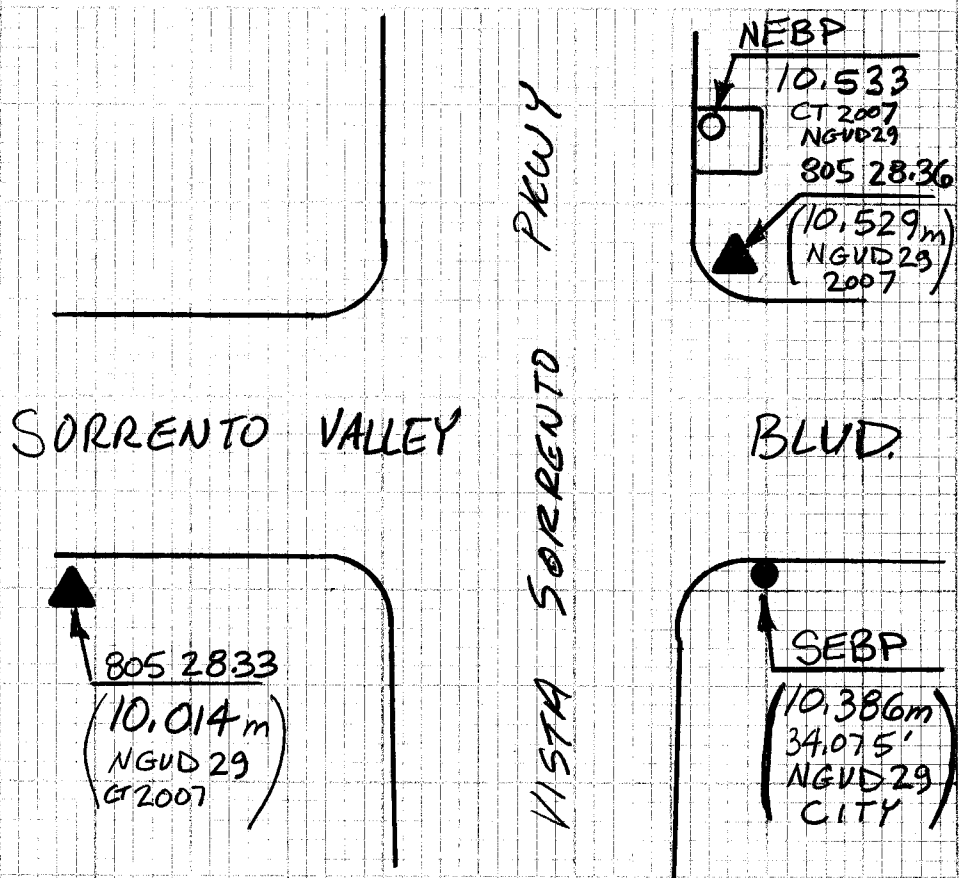
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

# SURVEY NOTES

| SURVEY DESCRIPTION | UNIT - EXPEND. AUTHOR. | CO. RTE. PM |
|---|---|---|
| SR 07-200 | 267600 | SD 805 28.0 |

| PARTY CHIEF | RECORDER | INSTRUMENTMAN | INSTRUMENTS & NOS. - TAPE DATA - ETC | WEATHER |
|---|---|---|---|---|
| D. SPARKS | | | | |

| STATION | | | | | |
|---|---|---|---|---|---|
| 805 28.36 | | | 1.430 | 10.529 | 10.529 |
| | 1.426 | 11.959 | | | |
| NEBP | | | 1.425 | 10.533 | 10.533 |
| | 1.550 | 11.958 | | | |
| SEBP | | | 1.535 | 10.408 | 10.408 (10.386) |
| | 1.929 | 11.943 | | | |
| 805 28.33 | | | | | 10.014 |




REMARKS | DATE OF SURVEY | CHECKED BY | DATE | SHEET OF | FILE NO.

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

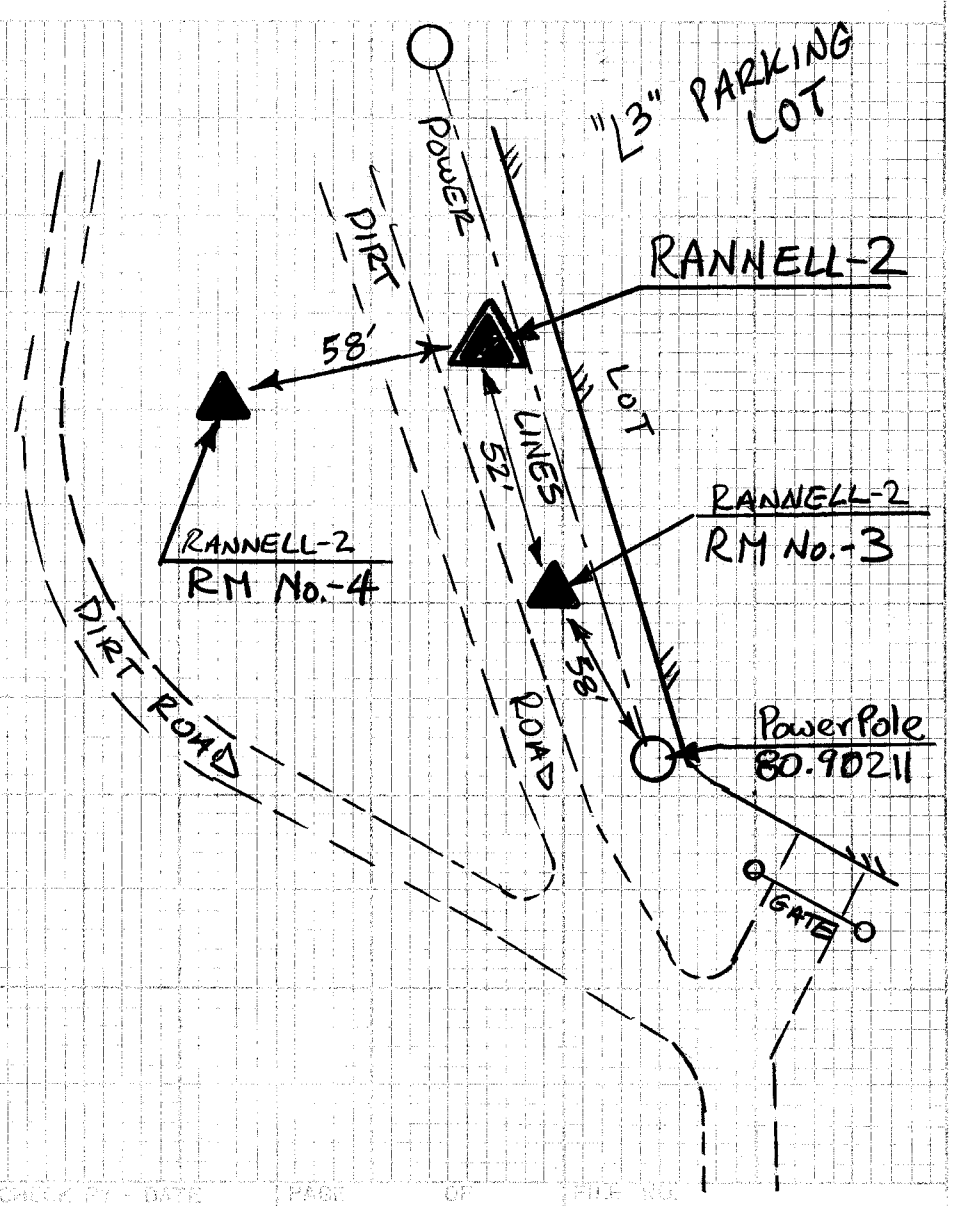
# SURVEY NOTES

| SURVEY DESCRIPTION | UNIT - EXPEND. AUTHOR. | CO. RTE. PM |
|---|---|---|
| SR 07-206 | 267600 | SD 805 28.0 |

| PARTY CHIEF | RECORDER | INSTRUMENTMAN | INSTRUMENTS & NOS. - TAPE DATA - ETC | WEATHER |
|---|---|---|---|---|
| D. SPARKS | | | | |

| STATION | CT 2007 NAVD88 | CT 2007 NGVD29 | CT 1982 NGVD29 | CITY NAVD88 | CITY NGVD29 |
|---|---|---|---|---|---|
| | | 0.687 | | | 0.670 |
| RANNELL-2 | 119.500 | 118.813 | 118.811 | 119.466 | 118.796 |
| | | 0.687 | | | |
| RANN-2 RM-3 | 119.383 | 118.696 | | 119.362 | 118.692 |
| | | 0.687 | | | |
| RANN-2 RM-4 | 118.927 | 118.240 | | | |

| | BS | HI | FS | UNADJ. ELEV. | ADJ. ELEV. |
|---|---|---|---|---|---|
| RAN-2 RM-4 | | | -1.676 | 118.242 | 118.240 |
| | +1.220 | 119.918 | | | |
| RAN-2 RM-3 | | | -1.434 | 118.698 | 118.696 |
| | +1.318 | HI 120.132 | | | |
| RANNELL-2 | | | -1.431 | 118.814 | 118.813 |
| | +2.005 | HI 120.245 | | | |
| RAN-2 RM-4 | | | | | 118.240 |




REMARKS | DATE OF SURVEY | CHECK BY - DATE | PAGE OF | FILE NO.

DES. ENGR. OR REP. SIGN

2007-200 primary sparks
GPS Fast Static Results
Values for Sparks only. After review and analysis you may submit your final values for inclusion in the database.
*held 805-27.10 for entire survey

| Name | Northing | Easting | Elevation | CGF | Latitude | Longitude | Ellipsoid | Convergence |
|---|---|---|---|---|---|---|---|---|
| 805-26.34 | 579583.680 | 1910907.573 | 115.848 | 0.9999725 | 32ø52'50.15399"N | 117ø12'07.50309"W | 81.180 | -0ø31'23.5" |
| 805-26.6 | 580139.476 | 1910988.766 | 99.333 | 0.9999744 | 32ø53'08.21925"N | 117ø12'04.57472"W | 64.680 | -0ø31'21.9" |
| 805-27.10 | 580612.599 | 1910366.834 | 38.576 | 0.9999834 | 32ø53'23.39204"N | 117ø12'28.66854"W | 3.896 | -0ø31'35.1" |
| 805-27.41 | 580899.224 | 1910070.496 | 46.318 | 0.9999818 | 32ø53'32.60739"N | 117ø12'40.17127"W | 11.625 | -0ø31'41.4" |
| 805-27.76 | 581229.408 | 1909647.883 | 32.628 | 0.9999836 | 32ø53'43.19842"N | 117ø12'56.54865"W | -2.084 | -0ø31'50.4" |
| 805-28.21 | 581860.193 | 1909235.230 | 19.649 | 0.9999849 | 32ø54'03.54938"N | 117ø13'12.65155"W | -15.076 | -0ø31'59.3" |
| 805-28.54 | 582295.906 | 1908919.180 | 22.710 | 0.9999839 | 32ø54'17.59702"N | 117ø13'24.96908"W | -12.026 | -0ø32'06.0" |
| City 19 | 580499.439 | 1910540.148 | 29.391 | 0.9999849 | 32ø53'19.77049"N | 117ø12'21.96066"W | -5.281 | -0ø31'31.4" |
| City 26wm | 580599.769 | 1911020.648 | 45.366 | 0.9999823 | 32ø53'23.16986"N | 117ø12'03.50969"W | 10.724 | -0ø31'21.3" |
| City 6wm | 580691.861 | 1910154.476 | 25.461 | 0.9999853 | 32ø53'25.90147"N | 117ø12'36.86671"W | -9.231 | -0ø31'39.6" |
| City 7001 | 580467.053 | 1910405.377 | 26.404 | 0.9999855 | 32ø53'18.67911"N | 117ø12'27.13424"W | -8.276 | -0ø31'34.3" |
| City 7003 | 580573.090 | 1910480.579 | 39.172 | 0.9999833 | 32ø53'22.14349"N | 117ø12'24.27847"W | 4.498 | -0ø31'32.7" |
| City 7004 | 580633.166 | 1910266.023 | 31.510 | 0.9999845 | 32ø53'24.02958"N | 117ø12'32.55435"W | -3.177 | -0ø31'37.2" |
| City 8782 | 580628.594 | 1910288.024 | 32.903 | 0.9999842 | 32ø53'23.88773"N | 117ø12'31.70629"W | -1.782 | -0ø31'36.8" |
| City 8786 | 580421.822 | 1910897.927 | 31.366 | 0.9999847 | 32ø53'17.35733"N | 117ø12'08.16865"W | -3.286 | -0ø31'23.8" |
| City 8973 | 580700.890 | 1910164.639 | 25.104 | 0.9999854 | 32ø53'26.19760"N | 117ø12'36.47889"W | -9.588 | -0ø31'39.4" |
| City 8992 | 580476.723 | 1910403.707 | 26.419 | 0.9999854 | 32ø53'18.99251"N | 117ø12'27.20192"W | -8.261 | -0ø31'34.3" |
| HPGN CA 11 CC | 583606.438 | 1906707.700 | 104.702 | 0.9999696 | 32ø54'59.45838"N | 117ø14'50.54847"W | 69.860 | -0ø32'53.1" |
| RANNELL-2 | 581660.480 | 1910072.072 | 118.240 | 0.9999696 | 32ø53'57.31828"N | 117ø12'40.38067"W | 83.561 | -0ø31'41.5" |
| SV PARK | 580889.597 | 1910412.670 | 55.489 | 0.9999804 | 32ø53'32.39710"N | 117ø12'27.00297"W | 20.817 | -0ø31'34.2" |

(h) held horizontal from primary results
(v) ortho from Sparks levels.

| Name | Northing | Easting | Elevation | CGF | Latitude | Longitude | Ellipsoid | Convergence |
|---|---|---|---|---|---|---|---|---|
| 805 27.05 v | 580670.102 | 1910556.489 | 53.102 | 0.9999810 | 32ø53'25.31511"N | 117ø12'21.39221"W | 18.427 | -0ø31'31.1" |
| 805 27.06 v | 580655.561 | 1910493.069 | 43.377 | 0.9999826 | 32ø53'24.82423"N | 117ø12'23.82703"W | 8.698 | -0ø31'32.4" |
| 805 27.09 v | 580714.408 | 1910511.466 | 50.562 | 0.9999814 | 32ø53'26.73988"N | 117ø12'23.14002"W | 15.885 | -0ø31'32.1" |
| 805 27.11 v | 580765.910 | 1910600.672 | 47.431 | 0.9999818 | 32ø53'28.43819"N | 117ø12'19.72608"W | 12.764 | -0ø31'30.2" |
| 805 27.21 | 580837.141 | 1910265.320 | 40.991 | 0.9999827 | 32ø53'30.65041"N | 117ø12'32.65359"W | 6.308 | -0ø31'37.3" |
| 805 27.42 | 580975.727 | 1909979.345 | 37.009 | 0.9999832 | 32ø53'35.06338"N | 117ø12'43.70539"W | 2.311 | -0ø31'43.4" |
| 805 27.58 | 581090.617 | 1909805.400 | 36.697 | 0.9999831 | 32ø53'38.74057"N | 117ø12'50.43872"W | 1.991 | -0ø31'47.1" |
| 805 27.92 | 581461.969 | 1909462.952 | 27.128 | 0.9999842 | 32ø53'50.69172"N | 117ø13'03.74704"W | -7.591 | -0ø31'54.4" |
| 805 28.09 | 581635.717 | 1909324.733 | 23.927 | 0.9999845 | 32ø53'56.28990"N | 117ø13'09.12737"W | -10.797 | -0ø31'57.3" |
| 805 28.31 | 581955.807 | 1909081.575 | 16.984 | 0.9999852 | 32ø54'06.60659"N | 117ø13'18.59818"W | -17.748 | -0ø32'02.5" |
| 805 28.32 | 581989.919 | 1909119.735 | 17.064 | 0.9999851 | 32ø54'07.72539"N | 117ø13'17.14206"W | -17.665 | -0ø32'01.7" |
| 805 28.36 | 582050.154 | 1909128.081 | 10.527 | 0.9999861 | 32ø54'09.68316"N | 117ø13'16.84252"W | -24.200 | -0ø32'01.6" |
| 805-27.10 * | 580612.599 | 1910366.834 | 38.576 | 0.9999834 | 32ø53'23.39204"N | 117ø12'28.66854"W | 3.896 | -0ø31'35.1" |
| 805-27.41 h | 580899.224 | 1910070.496 | 46.315 | 0.9999818 | 32ø53'32.60739"N | 117ø12'40.17127"W | 11.622 | -0ø31'41.4" |
| 805-27.76 h | 581229.408 | 1909647.883 | 32.628 | 0.9999836 | 32ø53'43.19841"N | 117ø12'56.54866"W | -2.084 | -0ø31'50.4" |
| 805-28.21 h | 581860.193 | 1909235.230 | 19.650 | 0.9999849 | 32ø54'03.54939"N | 117ø13'12.65155"W | -15.075 | -0ø31'59.3" |
| 805-28.54 h | 582295.906 | 1908919.180 | 22.714 | 0.9999839 | 32ø54'17.59702"N | 117ø13'24.96909"W | -12.021 | -0ø32'06.0" |

# DIVISION OF STRUCTURES
# PRELIMINARY INVESTIGATIONS
# SURVEY INFORMATION SHEET


John Fundus
Jfundus@dot.ca.gov
http://pi.dot.ca.gov/piupload.htm
Phone: 916-227-8359
Calnet: 8-498-8359
Fax: 916-227-8300


**PROJECT IDENTIFICATION**

| | |
|---|---|
| Project: | I-805 North |
| E.A.#: | 2T2001 |
| BR. #: | 57-0759R/L |
| County: | San Diego CA |
| Route: | P. M. 24.4 |
| | K. P. |

Brief Description:

Bridge Widening

**PROJECT INFORMATION**[1]

| | | | | |
|---|---|---|---|---|
| Date of Field Survey: | January 17, 2008 | | Mapping Plane: | 0406 |
| Information sent: | | | Units: | U.S. survey feet |
| Horizontal | NAD83 | Epoch: 2007 | Zone: | Combined Grid Factor: |
| Vertical Datum: | NAVD88 | List: | Run: | 0.9999755 |

Please provide the following:

Instructions

☒ List of Horizontal & Vertical control nearest to the bridge site:
- a) Should contain the four nearest control around the bridge site.
- b) Prefer to have two on each side of structure. All bridge control should be within 200m radius of abutments.
- c) Control reference file number (to be used as a cross reference)
- d) District surveys should research and send only coordinate and elevation values specific to project EA.

☐ Not Available

☒ Monument Descriptions
☐ Not Available

☒ Control diagram showing the interrelationship between existing control.
☐ Not Available

☒ Control sketches showing control monuments in relationship to surrounding physical features including swing ties when available.
☐ Not Available

☐ To Reach Description
☒ Not Available

Notes:
See SR12_027 Control.pdf

**CONTROL in a "*.KCM" DATA FILE (Required - no exceptions)**

☒ Enclosed

| | |
|---|---|
| *.KCM File Name | SR12_071 Control.kcm |

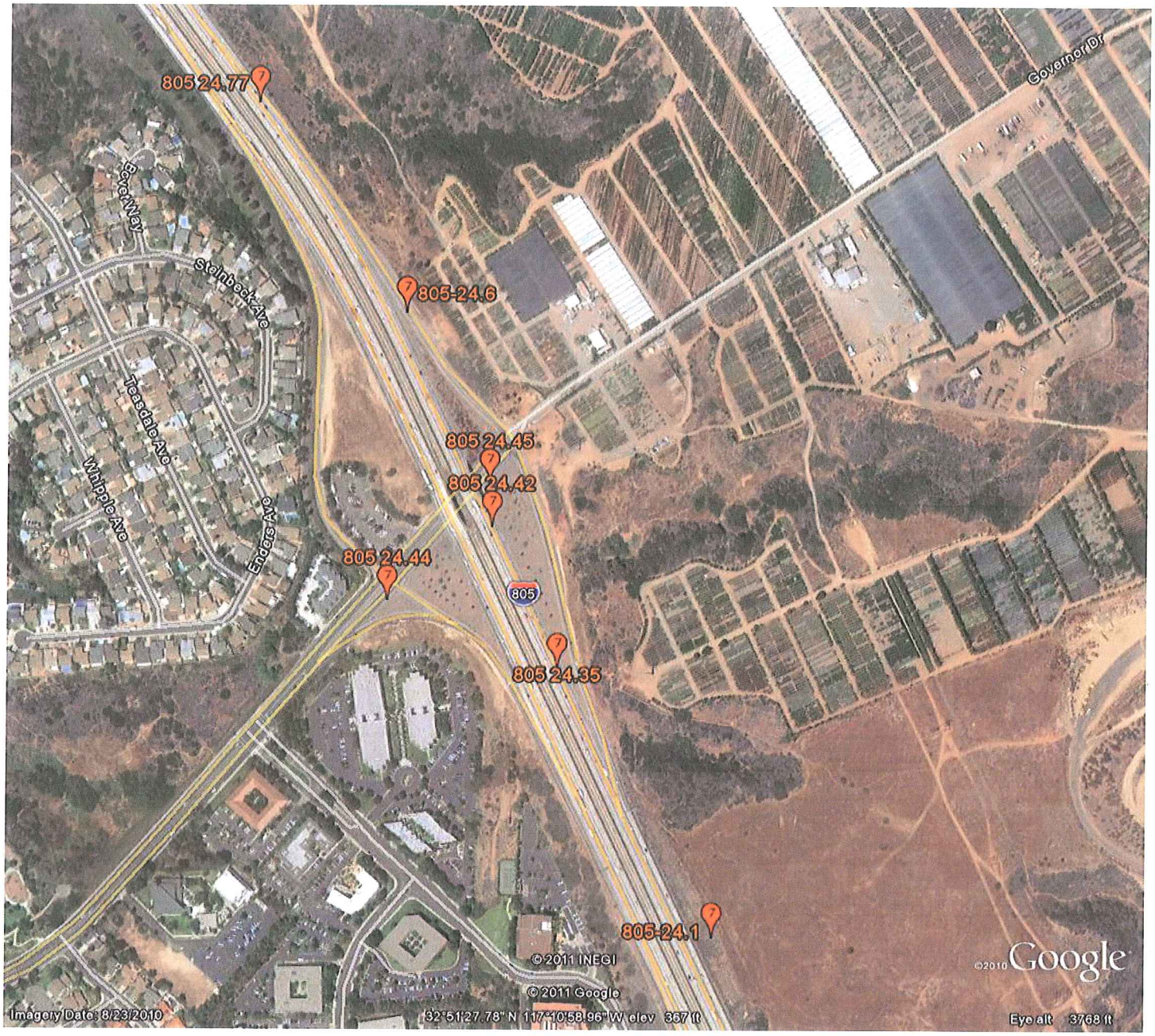
| | |
|---|---|
| Information provided by: Ken Lang | E-mail address: kenneth_lang@dot.ca.gov |
| Direct Number: 619-688-6605 | Cal Net Number: |
| Notes: | |

**DISTRICT SURVEYS CONTACT (If different from above)**

| | |
|---|---|
| Contact: | E-mail address: |
| Direct Number: | Cal Net Number: |
| Notes: | |

**The survey data indicated above and information sheet is to be provided by surveys and must be returned to the District Designer for inclusion into the Bridge Site Data Package.**

[1] **The control provided must be in the same project control net used to lay out the roadway *and* bridge foundations.**


805 24.77
Governor Dr
Severo Way
Stalback Ave
805-24.6
Tessdale Ave
Whipple Ave
Enders Ave
805 24.45
805 24.42
805 24.44
805
805 24.35
805-24.1
©2011 INEGI
©2011 Google
©2010 Google
Imagery Date: 8/23/2010
32°51'27.78" N 117°10'58.96" W elev 367 ft
Eye alt 3768 ft

# Point Report

***Project : tgo081630 sr08-115 sd805 pm24.5 Br***

| | | | |
|---|---|---|---|
| **User name** | WStrong | **Date & Time** | 4:14:41 PM 1/17/2008 |
| **Coordinate System** | Projection from data collector | **Zone** | Zone from data collector |
| **Project Datum** | (WGS 84) | | |
| **Vertical Datum** | NAVD88 | **Geoid Model** | [redacted] NONE |
| **Coordinate Units** | US survey feet | | |
| **Distance Units** | US survey feet | | |
| **Height Units** | US survey feet | | |

Point listing

| Name | Northing | Easting | Elevation | Feature Code | Description |
|---|---|---|---|---|---|
| 805 24.35 | 1892688.175 | 6275081.795 | 377.313 | 110 PMHV | Fd per Corridor Cntrl |
| 805 24.42 | 1893166.563 | 6274842.661 | 380.566 | 130 SUHV | Set 5/8" Reb W Plast Cap |
| 805 24.44 | 1892903.924 | 6274484.779 | 357.398 | 130 SUHV | Set PK & Wshr in AC |
| 805 24.45 | 1893311.516 | 6274828.689 | 359.700 | 130 SUHV | Set PK & Wshr in AC |
| 805 24.77 | 1894600.825 | 6273994.254 | 358.741 | 110 PMHV | Fd per Corridor Cntrl |
| 805-24.1 | 1891787.800 | 6275637.746 | 389.472 | 110 PMHV | Fd per Corridor Cntrl |
| 805-24.6 | 1893889.189 | 6274528.159 | 377.910 | 110 PMHV | Fd per Corridor Cntrl |

Back to top

# BRIDGE SITE CONTROL

## SURVEY NOTES SR 08-115

EA. 081630 CO-RTE-PM SD-805-24.5

PARTY CHIEF W. STRONG 57 RECORDER KRL INSTRUMENT PERSON RAV

SURVEY DESCRIPTION 805 & GOVERNOR DR. BRIDGE SITE DATE OF SURVEY 1/17/2008

DEPARTMENT OF TRANSPORTATION D-11

Horizontal: Datum/Epoch/Units: CCS83 (2007) FEET ccs83 zone 6

Vertical: Datum/Geoid/Units: NAVD88 (CGPS) / RTE 805 COR. CALIBRATION

CGF of Area: 0.9999755

Method of Horizontal Survey: CONVENTIONAL TRAVERSE

Method of Vertical Survey: TRIG. LEVELS

Constrained Horizontal Control: 805-24.1, 805 24.35, 805-24.6, 805 24.77

Constrained Vertical Control: 805 24.35, 805-24.6

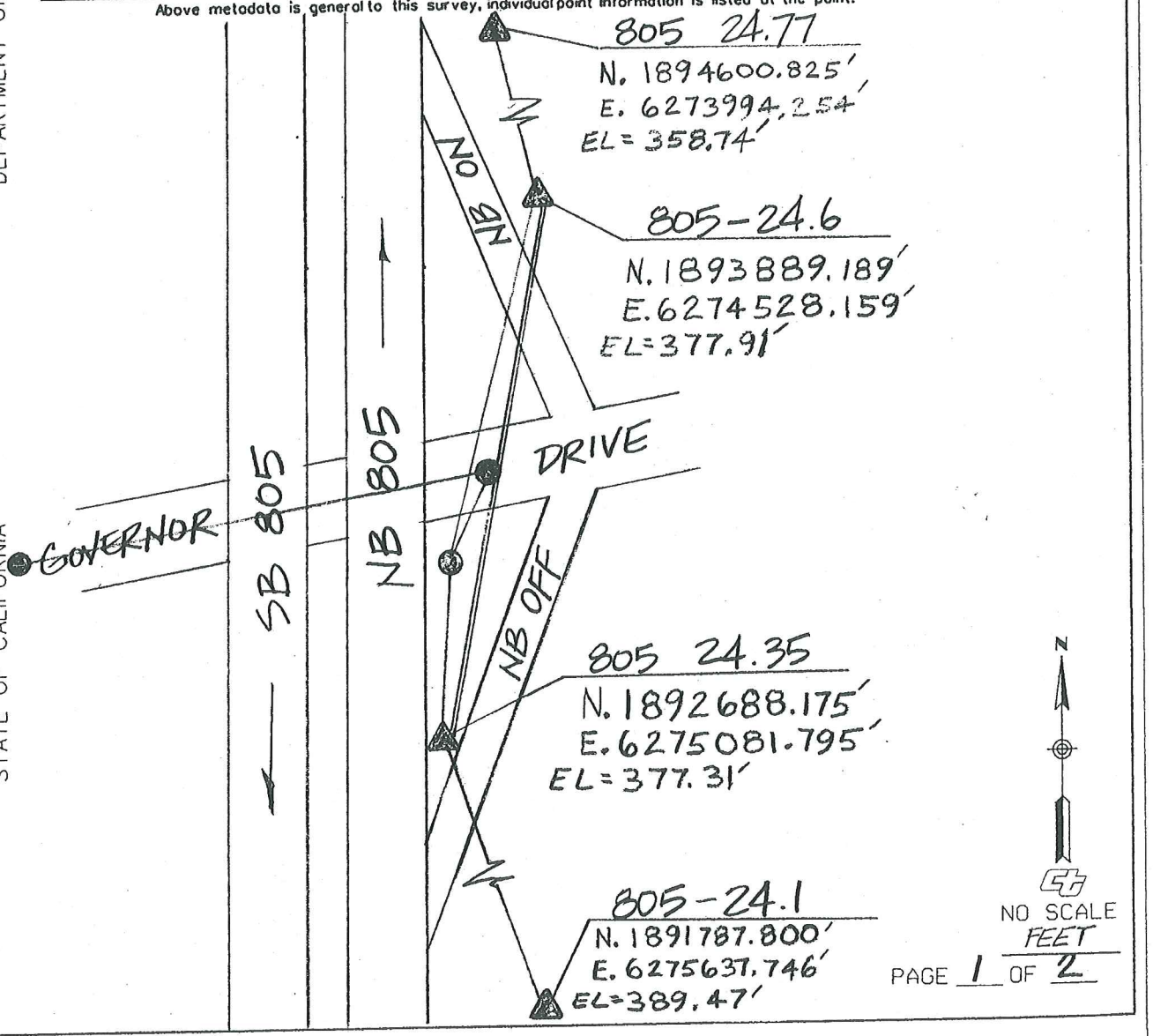
POSITIONAL ACCURACY TO CONSTRAINTS: HORIZONTAL: 0.03' RMS AT 95% VERTICAL: 0.05' RMS AT 95%

A CALIBRATION WAS [redacted] USED ON THIS SURVEY: TBSF1/ARCHIVES/CALIBRATIONS/

NOTES: VERT. CALIBRATION PER RTE. 805 CONTROL.

Above metadata is general to this survey, individual point information is listed at the point.

STATE OF CALIFORNIA



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# SURVEY NOTES

SR08-115 EA. 081630 | CO-RTE-PM SD-805-24.5

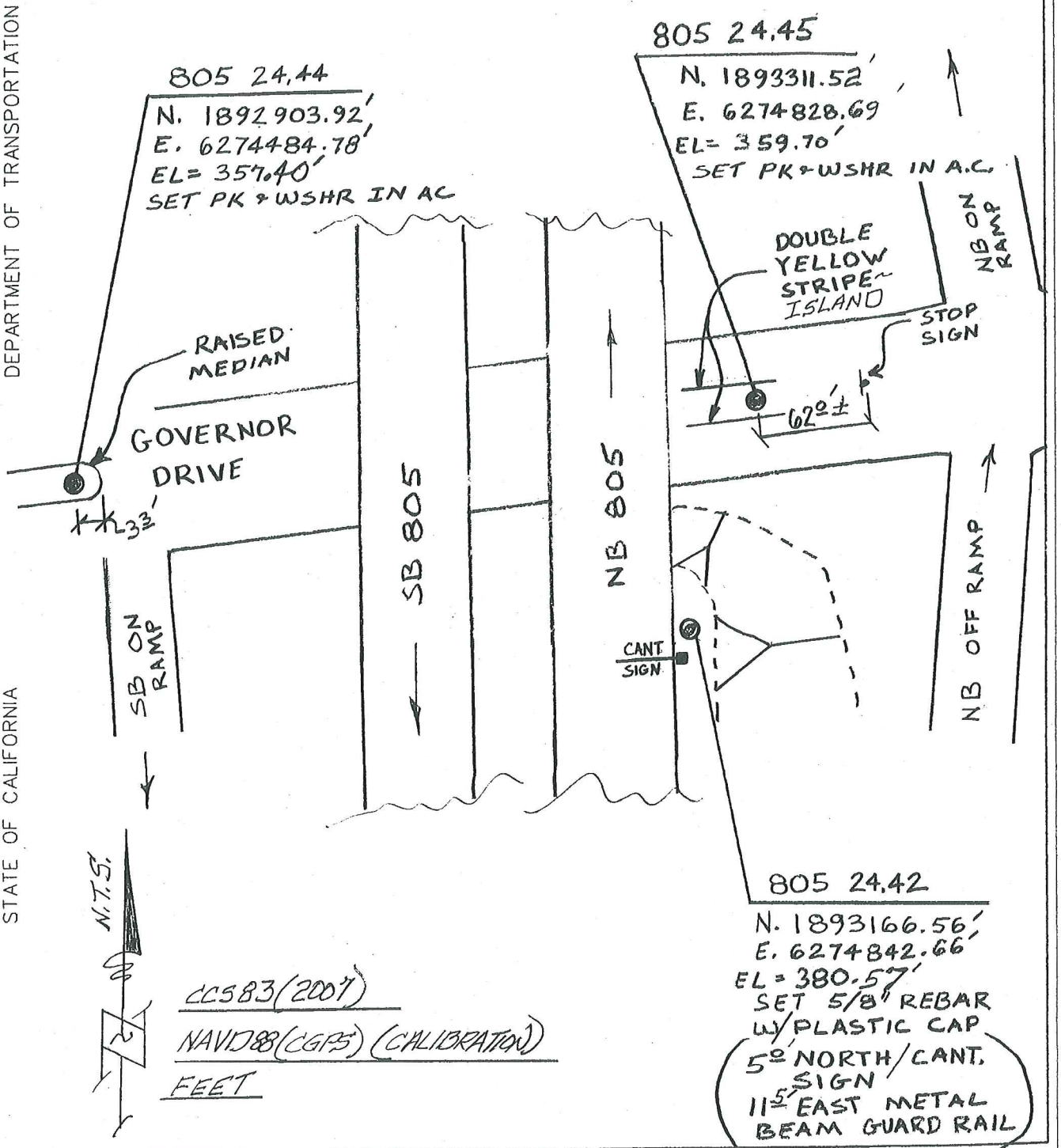
PARTY CHIEF W. STRONG - S7 | RECORDER KRL | INSTRUMENT PERSON RAV

SURVEY DESCRIPTION 805 @ GOVERNOR DR BRIDGE SITE | DATE OF SURVEY 1/17/2008

## BRIDGE SITE WPS SET:

DEPARTMENT OF TRANSPORTATION

STATE OF CALIFORNIA




CCS83(2007)

NAVD88(CGPS) (CALIBRATION)

FEET

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# DIVISION OF STRUCTURES
# PRELIMINARY INVESTIGATIONS
# SURVEY INFORMATION SHEET


| | | |
|---|---|---|
| John Fundus | Phone: | 916-227-8359 |
| Jfundus@dot.ca.gov | Calnet: | 8-498-8359 |
| http://pi.dot.ca.gov/piupload.htm | Fax: | 916-227-8300 |


**PROJECT IDENTIFICATION**

| | |
|---|---|
| Project: | I-805 North |
| E.A.#: | 2T2001 |
| BR. #: | 57-0760 R/L |
| County: | San Diego CA |
| Route: | P. M. 24.97 |
| | K. P. |
| Brief Description: | Bridge Widening |

**PROJECT INFORMATION**[1]

| | | | | |
|---|---|---|---|---|
| Date of Field Survey: | 4-30-08 | | Mapping Plane: | 1 |
| Information sent: | | | Units: | U.S. survey feet |
| Horizontal | NAD83 | Epoch: 2007 | Zone: 6 | Combined Grid Factor: .9999835 |
| Vertical Datum: | NAVD88 | List: | Run: | |

| | |
|---|---|
| Please provide the following:<br><br>Instructions | ☒ List of Horizontal & Vertical control nearest to the bridge site:<br>a) Should contain the four nearest control around the bridge site.<br>b) Prefer to have two on each side of structure. All bridge control should be within 200m radius of abutments.<br>c) Control reference file number (to be used as a cross reference)<br>d) District surveys should research and send only coordinate and elevation values specific to project EA.<br>☐ Not Available |
| | ☒ Monument Descriptions<br>☐ Not Available |
| | ☒ Control diagram showing the interrelationship between existing control.<br>☐ Not Available |
| | ☒ Control sketches showing control monuments in relationship to surrounding physical features including swing ties when available.<br>☐ Not Available |
| | ☐ To Reach Description<br>☒ Not Available |
| Notes:<br>See sd805_pm24_5_2008_116.pdf | |

**CONTROL in a "*.KCM" DATA FILE (Required - no exceptions)**

| | |
|---|---|
| ☒ Enclosed | |
| *.KCM File Name | RoseCanyon.kcm |
| Information provided by:<br>Michael Wartenberg | E-mail address:<br>michael_wartenberg@dot.ca.gov |
| Direct Number:<br>619-688-6609 | Cal Net Number: |
| Notes: | |

**DISTRICT SURVEYS CONTACT (If different from above)**

| | |
|---|---|
| Contact:<br>Same | E-mail address: |
| Direct Number: | Cal Net Number: |
| Notes: | |

**The survey data indicated above and information sheet is to be provided by surveys and must be returned to the District Designer for inclusion into the Bridge Site Data Package.**

[1] **The control provided must be in the same project control net used to lay out the roadway *and* bridge foundations.**

# Points

## *Project : TGO SR08-116*

Point listing

| Name | Northing | Easting | Elevation | Feature Code |
|---|---|---|---|---|
| 805 25.0 | 1895342.187 | 6272893.450 | 251.400 | 130 SUHV |
| 805 25.03 | 1895395.931 | 6272918.569 | 246.900 | 130 SUHV |
| 805 25.05 | 1895732.303 | 6273394.932 | 255.570 | 130 SUHV |
| 805 25.20 | 1895921.087 | 6273223.886 | 300.163 | 130 SUHV |
| 805 25.25 | 1895618.001 | 6272657.929 | 276.370 | 130 SUHV |
| 805-24.95 | 1895441.280 | 6273324.660 | 337.440 | 110 PMHV |

Horizontal Values =>> RTK
Vertical Values =>> Trig Levels from 805-24.95

**Back to top**

# SURVEY NOTES SR

EA. 081630 CO-RTE-PM SD805 PM 22.6

PARTY CHIEF D. ALVARADO RECORDER J. REMELE INSTRUMENT PERSON J. REMELE

SURVEY DESCRIPTION BRIDGE SITE DATE OF SURVEY 12-27-07

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA

Horizontal: Datum/Epoch/Units: CCS'83, NSRS 2007, FEET ccs83 zone 6

Vertical: Datum/Geoid/Units: NAVD 88 (CGPS), 2003 FEET

CGF of Area: 0.9999770

Method of Horizontal Survey: RTK VRS

Method of Vertical Survey: TRIG LVLS from 805-24.95

Constrained Horizontal Control: VRS

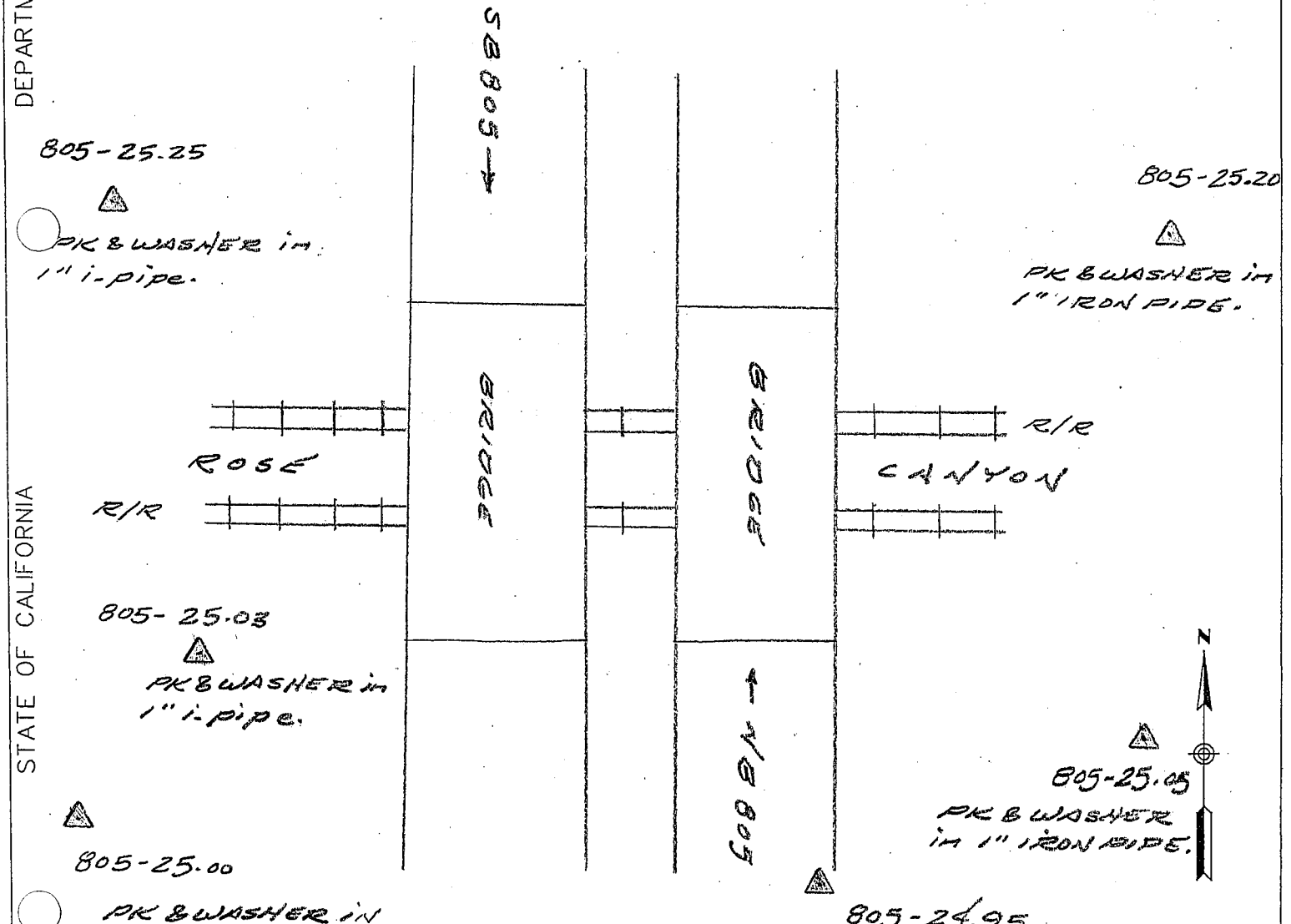
Constrained Vertical Control: 805-24.95

POSITIONAL ACCURACY TO CONSTRAINTS: HORIZONTAL: 0.05' RMS AT 95% VERTICAL: 0.02' RMS AT 95%

A CALIBRATION WAS ~~NOT~~ USED ON THIS SURVEY: TBSF1/ARCHIVES/CALIBRATIONS/

NOTES: Calibrated to 805-24.95

Above metadata is general to this survey, individual point information is listed at the point.






...\copy of control sketch templat Jan. 30, 2007 11:41:34

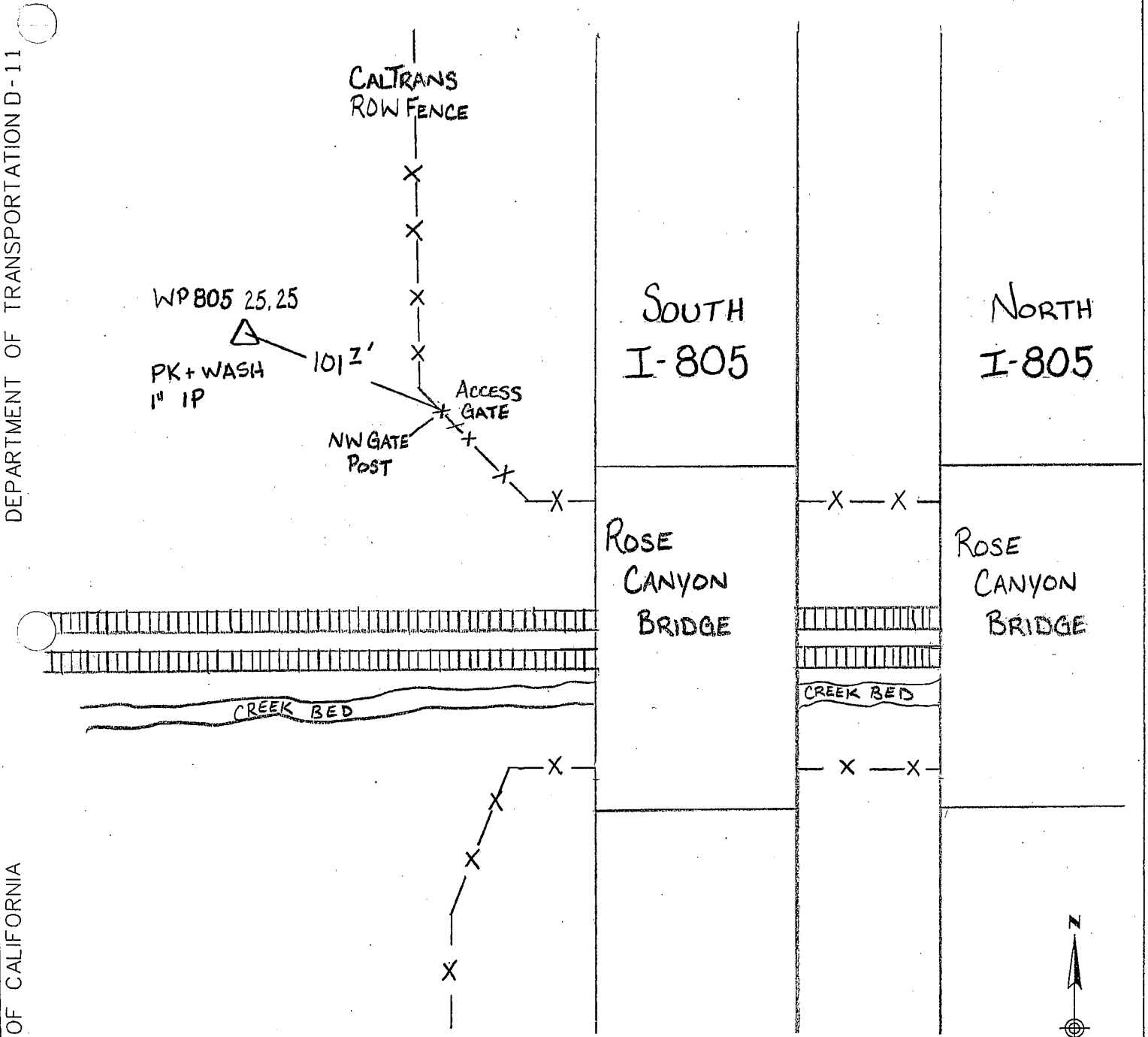
# SURVEY NOTES SR 08-116 EA. 081630 CO-RTE-PM

PARTY CHIEF D. ALVARADO RECORDER G. COX INSTRUMENT PERSON R. PETROFF

SURVEY DESCRIPTION ROSE CANYON BRIDGE SURVEY DATE OF SURVEY 12-27-2007

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA




DATUM: NAD 83 (2007)
NAVD 88 (CGPS)

UNITS IN FEET

NO SCALE



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# SURVEY NOTES SR 08-116

EA. 081630

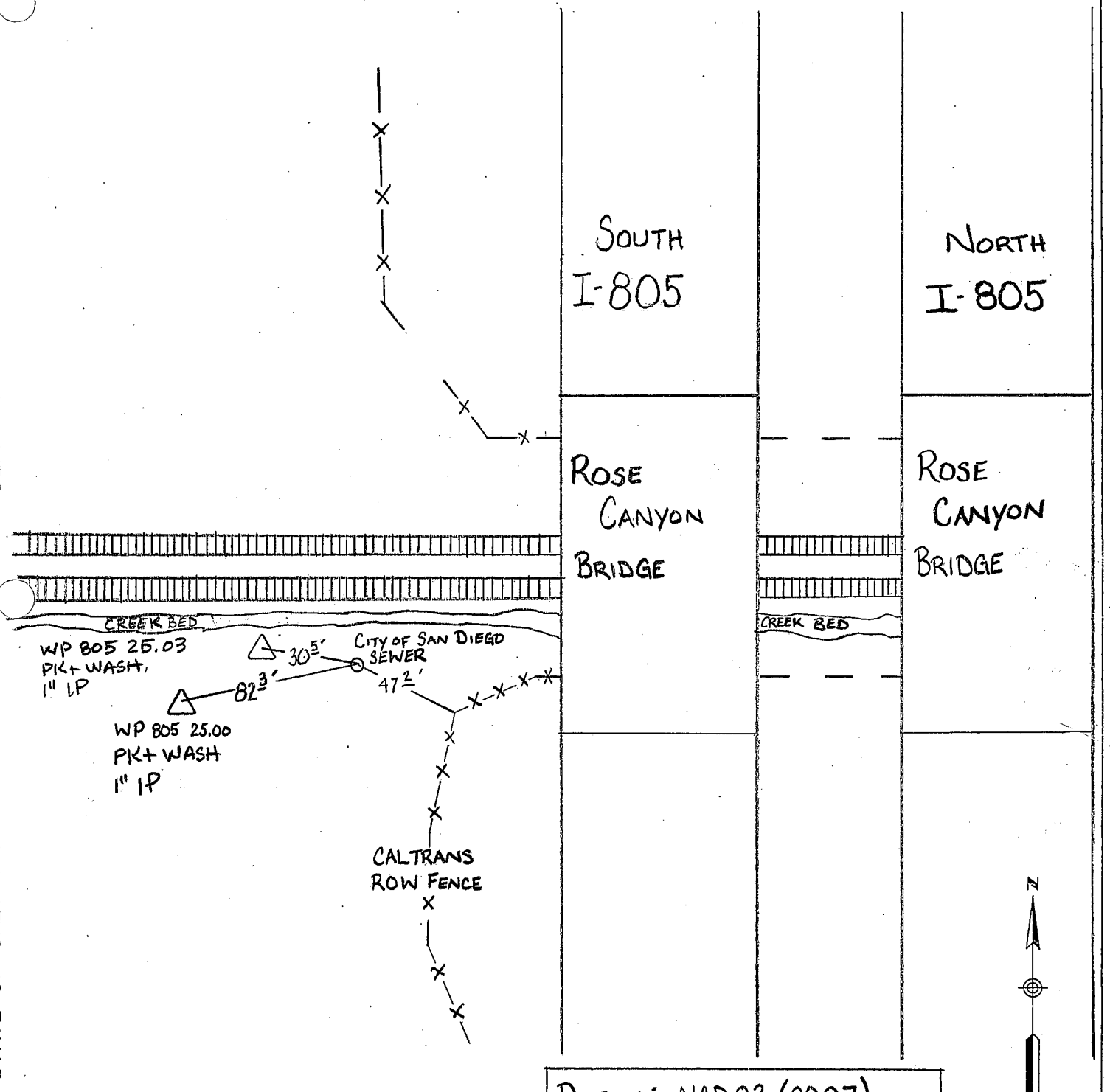
CO-RTE-PM

PARTY CHIEF D. ALVARADO | RECORDER G. COX | INSTRUMENT PERSON R. PETROFF

SURVEY DESCRIPTION ROSE CANYON BRIDGE SURVEY | DATE OF SURVEY 12-27-2007

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA




DATUM: NAD83 (2007)
NAVD 88 (CGPS)

NO SCALE



...\neds\jobs\control example.dgn Jan. 30, 2007 11:49:05

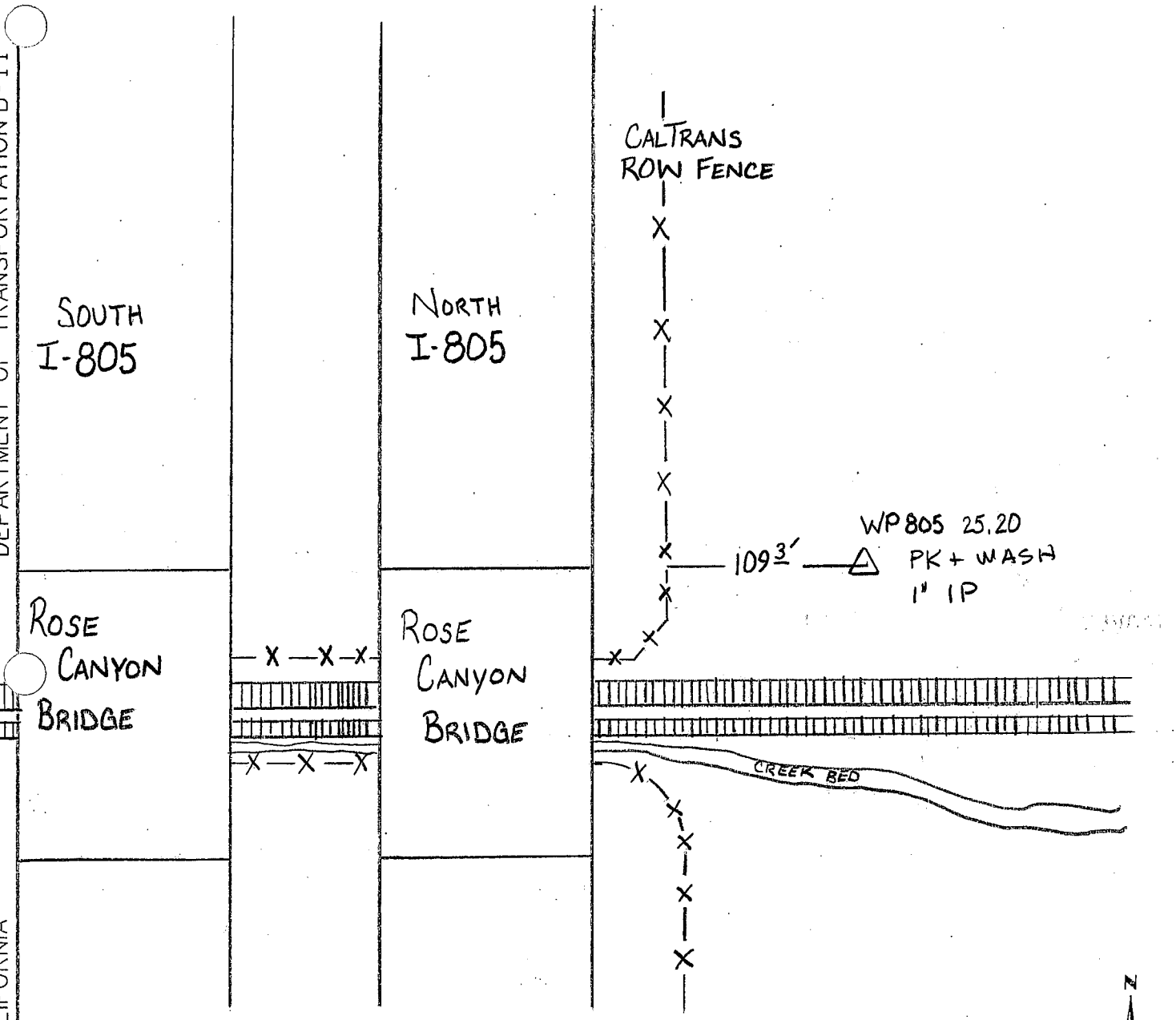
# SURVEY NOTES SR 08-116 EA. 081630 CO-RTE-PM

PARTY CHIEF D. ALVARADO RECORDER G. COX INSTRUMENT PERSON R. PETROFF

SURVEY DESCRIPTION ROSE CANYON BRIDGE SURVEY DATE OF SURVEY 12-27-2007

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA




DATUM: NAD 83 (2007)
NAVD 88 (CGPS)

UNITS IN FEET

NO SCALE



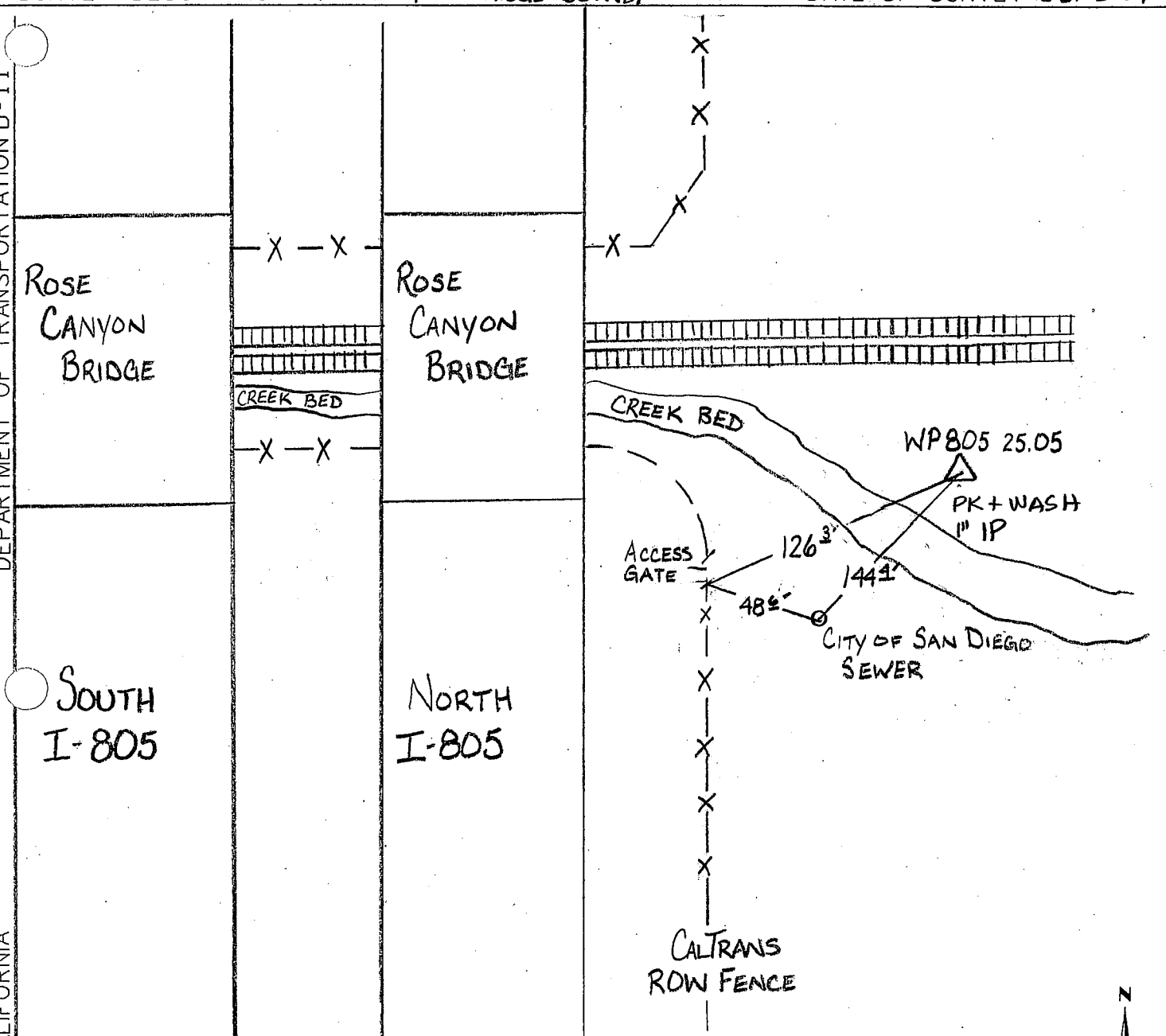
...\neds\jobs\control example.dgn Jan. 30, 2007 11:49:05

# SURVEY NOTES SR 08-116 EA. 081630 CO-RTE-PM

PARTY CHIEF D. ALVARADO RECORDER G. COX INSTRUMENT PERSON R. PETROFF

SURVEY DESCRIPTION ROSE CANYON BRIDGE SURVEY DATE OF SURVEY 12-27-2007

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION D-11




DATUM: NAD 83 (2007)
NAVD 88 (CGPS)

UNITS IN FEET

NO SCALE



...\neds\jobs\control example.dgn Jan. 30, 2007 11:49:05

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

# SURVEY NOTES

| SURVEY DESCRIPTION | UNIT - EXPEND. AUTHOR. | CO. RTE. PM |
|---|---|---|
| TRIG LEVELS FOR BRIDGE SURVEY (ROSE CANYON) | 081630 SR08-116 | SD 805 PM 25.0 |

| PARTY CHIEF | RECORDER | INSTRUMENTMAN | INSTRUMENTS & NOS. - TAPE DATA - ETC. | WEATHER |
|---|---|---|---|---|
| ALVARADO | ALVARADO | REMELE | TRIMBLE 56 | COOL & CLEAR |

| STATION | BS DIR | BS REV | FS DIR | FS REV | ELEVATION | H.I. |
|---|---|---|---|---|---|---|
| 805-24.95 | -0.594 | -0.598 | | | 337.44 | 338.036 |
| WP 4 | | | -1.265 | -1.258 | 336.775 | |
| WP 5 | | | 0.120 | 0.108 | 338.150 | |
| 805 25.05 | | | -82.472 | -82.459 | 255.571 | |
| | | | | | | |
| 805 25.05 | -38.201 | -38.210 | | | 255.571 | 293.776 |
| 805 25.20 | | | 6.383 | 6.390 | 300.163 | 333.911 |
| WP 3 | | | 40.137 | 40.132 | 333.911 | |
| | | | | | | |
| WP3 | -1.666 | -1.676 | | | 333.911 | 335.582 |
| WP2 | | | 0.203 | 0.210 | 335.788 | |
| WP1 | | | -0.580 | -0.581 | 335.001 | |
| 805 25.25 | | | -59.221 | -59.213 | 276.365 | |
| | | | | | | |
| 805 25.25 | 29.682 | 29.667 | | | 276.365 | 246.690 |
| 805 25.03 | | | 0.210 | 0.211 | 246.901 | |
| 805 25.00 | | | 4.714 | 4.706 | 251.400 | |
| WP 6 | | | 89.776 | 89.782 | 336.469 | |
| | | | | | | |
| WP 6 | -1.079 | -1.081 | | | 336.469 | 337.540 |
| 805-24.95 | | | -0.114 | -0.109 | 337.438 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| REMARKS | DATE OF SURVEY | CHECK BY - DATE | PAGE | FILE NO. |
|---|---|---|---|---|
| * FEET | 12-26-07 | | 1 OF 1 | |

DT.FD-GEO 14 Rev 8-81

OSP 98 9735

# DIVISION OF STRUCTURES
# PRELIMINARY INVESTIGATIONS
# SURVEY INFORMATION SHEET


John Fundus
Jfundus@dot.ca.gov
http://pi.dot.ca.gov/piupload.htm
Phone: 916-227-8359
Calnet: 8-498-8359
Fax: 916-227-8300


**PROJECT IDENTIFICATION**

| | |
|---|---|
| Project: | I-805 North |
| E.A.#: | 2T2001 |
| BR. #: | 57-0787 R/L |
| County: | San Diego CA |
| Route: | P. M. 26.3 |
| | K. P. |

Brief Description:

Bridge Widening

**PROJECT INFORMATION**[1]

| | | | | |
|---|---|---|---|---|
| Date of Field Survey: | October 18, 2010 | | Mapping Plane: 1 | |
| Information sent: | | | Units: | |
| Horizontal | NAD83 | Epoch: 2007 | Zone: 6 | Combined Grid Factor: 0.99997835 |
| Vertical Datum: | NAVD88 | List: | Run: | |

| | |
|---|---|
| Please provide the following:<br><br>Instructions | ☒ List of Horizontal & Vertical control nearest to the bridge site:<br>a) Should contain the four nearest control around the bridge site.<br>b) Prefer to have two on each side of structure. All bridge control should be within 200m radius of abutments.<br>c) Control reference file number (to be used as a cross reference)<br>d) District surveys should research and send only coordinate and elevation values specific to project EA.<br>☐ Not Available |
| | ☒ Monument Descriptions<br>☐ Not Available |
| | ☒ Control diagram showing the interrelationship between existing control.<br>☐ Not Available |
| | ☒ Control sketches showing control monuments in relationship to surrounding physical features including swing ties when available.<br>☐ Not Available |
| | ☐ To Reach Description<br>☒ Not Available |
| Notes:<br>See 2011062 control.pdf and sd805_pm26_8_to_27_2_2007_200.pdf | |

**CONTROL in a "*.KCM" DATA FILE (Required - no exceptions)**

| | |
|---|---|
| ☒ Enclosed | |
| *.KCM File Name | CCcontrol.kcm |
| Information provided by:<br>Michael Wartenberg | E-mail address:<br>Michael.Wartenberg@dot.ca.gov |
| Direct Number:<br>619-688-6609 | Cal Net Number: |
| Notes: | |

**DISTRICT SURVEYS CONTACT (If different from above)**

| | |
|---|---|
| Contact: | E-mail address: |
| Direct Number: | Cal Net Number: |
| Notes: | |

**The survey data indicated above and information sheet is to be provided by surveys and must be returned to the District Designer for inclusion into the Bridge Site Data Package.**

[1] **The control provided must be in the same project control net used to lay out the roadway *and* bridge foundations.**

# DIVISION OF STRUCTURES
# PRELIMINARY INVESTIGATIONS
# SURVEY INFORMATION SHEET


John Fundus
Jfundus@dot.ca.gov
http://pi.dot.ca.gov/piupload.htm
Phone: 916-227-8359
Calnet: 8-498-8359
Fax: 916-227-8300


**PROJECT IDENTIFICATION**

| | |
|---|---|
| Project: | I-805 North |
| E.A.#: | 2T2001 |
| BR. #: | 57-DAR2 |
| County: | San Diego CA |
| Route: | P. M. 26.3 |
| | K. P. |

Brief Description:

New Bridge

**PROJECT INFORMATION**[1]

| | | | | |
|---|---|---|---|---|
| Date of Field Survey: | October 18, 2010 | | Mapping Plane: | 1 |
| Information sent: | | | Units: | U.S. survey feet |
| Horizontal | NAD83 | Epoch: 2007 | Zone: 6 | Combined Grid Factor: 0.99997835 |
| Vertical Datum: | | List: | Run: | |

| | |
|---|---|
| Please provide the following:<br><br>Instructions | ☒ List of Horizontal & Vertical control nearest to the bridge site:<br>a) Should contain the four nearest control around the bridge site.<br>b) Prefer to have two on each side of structure. All bridge control should be within 200m radius of abutments.<br>c) Control reference file number (to be used as a cross reference)<br>d) District surveys should research and send only coordinate and elevation values specific to project EA.<br>☐ Not Available |
| | ☒ Monument Descriptions<br>☐ Not Available |
| | ☒ Control diagram showing the interrelationship between existing control.<br>☐ Not Available |
| | ☐ Control sketches showing control monuments in relationship to surrounding physical features including swing ties when available.<br>☐ Not Available |
| | ☐ To Reach Description<br>☒ Not Available |

Notes:
See 2011062 control.pdf and sd805_pm26_8_to_27_2_2007_200.pdf

**CONTROL in a "*.KCM" DATA FILE (Required - no exceptions)**

☒ Enclosed

| | |
|---|---|
| *.KCM File Name | CCcontrol |

| | |
|---|---|
| Information provided by:<br>Michael Wartenberg | E-mail address:<br>Michael.Wartenberg@dot.ca.gov |
| Direct Number:<br>619-688-6609 | Cal Net Number: |
| Notes: | |

**DISTRICT SURVEYS CONTACT (If different from above)**

| | |
|---|---|
| Contact:<br>Same | E-mail address: |
| Direct Number: | Cal Net Number: |
| Notes: | |

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[1] **The control provided must be in the same project control net used to lay out the roadway *and* bridge foundations.**

# DIVISION OF STRUCTURES
# PRELIMINARY INVESTIGATIONS
# SURVEY INFORMATION SHEET


John Fundus
Jfundus@dot.ca.gov
http://pi.dot.ca.gov/piupload.htm
Phone: 916-227-8359
Calnet: 8-498-8359
Fax: 916-227-8300


**PROJECT IDENTIFICATION**

| | |
|---|---|
| Project: | I-805 North |
| E.A.#: | 2T2001 |
| BR. #: | 57-0785R |
| County: | San Diego CA |
| Route: | P. M. 26.4 |
| | K. P. |

Brief Description:

Bridge Widening

**PROJECT INFORMATION**[1]

| | | | | | |
|---|---|---|---|---|---|
| Date of Field Survey: | May 1, 2007 | | Mapping Plane: | 0406 | |
| Information sent: | | | Units: | U.S. survey feet | |
| Horizontal | NAD83 | Epoch: 2007 | Zone: | 0406 | Combined Grid Factor: 0.9999835 |
| Vertical Datum: | NAVD88 | List: | Run: | | |

| | |
|---|---|
| Please provide the following:<br><br>Instructions | ☒ List of Horizontal & Vertical control nearest to the bridge site:<br>a) Should contain the four nearest control around the bridge site.<br>b) Prefer to have two on each side of structure. All bridge control should be within 200m radius of abutments.<br>c) Control reference file number (to be used as a cross reference)<br>d) District surveys should research and send only coordinate and elevation values specific to project EA.<br>☐ Not Available |
| | ☒ Monument Descriptions<br>☐ Not Available |
| | ☒ Control diagram showing the interrelationship between existing control.<br>☐ Not Available |
| | ☒ Control sketches showing control monuments in relationship to surrounding physical features including swing ties when available.<br>☐ Not Available |
| | ☐ To Reach Description<br>☒ Not Available |

Notes:
See SR12_072 Control.pdf

**CONTROL in a "*.KCM" DATA FILE (Required - no exceptions)**

| | |
|---|---|
| ☒ Enclosed | |
| *.KCM File Name | SR12_072 Control.kcm |
| Information provided by:<br>Ken Lang | E-mail address:<br>kenneth_lang@dot.ca.gov |
| Direct Number:<br>619-688-6605 | Cal Net Number: |
| Notes: | |

**DISTRICT SURVEYS CONTACT (If different from above)**

| | |
|---|---|
| Contact: | E-mail address: |
| Direct Number: | Cal Net Number: |
| Notes: | |

**The survey data indicated above and information sheet is to be provided by surveys and must be returned to the District Designer for inclusion into the Bridge Site Data Package.**

[1] **The control provided must be in the same project control net used to lay out the roadway *and* bridge foundations.**

NAD83 Epoch 2007, NAVD88 (CGPS)

| Name | Y | X | Z |
|---|---|---|---|
| 805-26.6 | 1903342.63 | 6269634.22 | 328.16 |
| 805 27.05 | 1905083.53 | 6268215.99 | 176.47 |
| 805 27.06 | 1905035.82 | 6268007.92 | 144.57 |
| 805 27.07 | 1905118.56 | 6268184.39 | 150.33 |
| 805 27.08 | 1905173.40 | 6268266.48 | 152.75 |
| 805 27.09 | 1905228.89 | 6268068.28 | 168.13 |
| 805-27.10 | 1904894.87 | 6267593.77 | 128.82 |
| 805 27.11 | 1905397.86 | 6268360.95 | 157.86 |
| 805 27.21 | 1905631.55 | 6267260.72 | 136.73 |

# SURVEY NOTES SR 2007-200A

EA. 267600

CO-RTE-PM SD 805 PM 26.8-27.2

PARTY CHIEF D.Sparks RECORDER A. Medellin INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Bridge Sites: Mira Mesa Blvd & Carroll Canyon DATE: May 2007

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA

| | |
|---|---|
| Horizontal: Datum/Epoch/Units | CCS 83 1991.35 Zone 6 Metric |
| Vertical: Datum/Geoid/Units | NGVD 29 Metric |
| CGF of Area: | 0.9999835 |
| Method of Horizontal Survey: | Fast Static / Traverse |
| Method of Vertical Survey: | Differential Leveling |
| Constrained Horizontal Control: | 805-26.6 & 805-27.10 |
| Constrained Vertical Control: | 805-27.10 El: 38.576 (NGVD29 soft converted) |

Positional Accuracy to Constraints: Horizontal: 0.003 rms at 95% Vertical: 0.009 rms at 95%

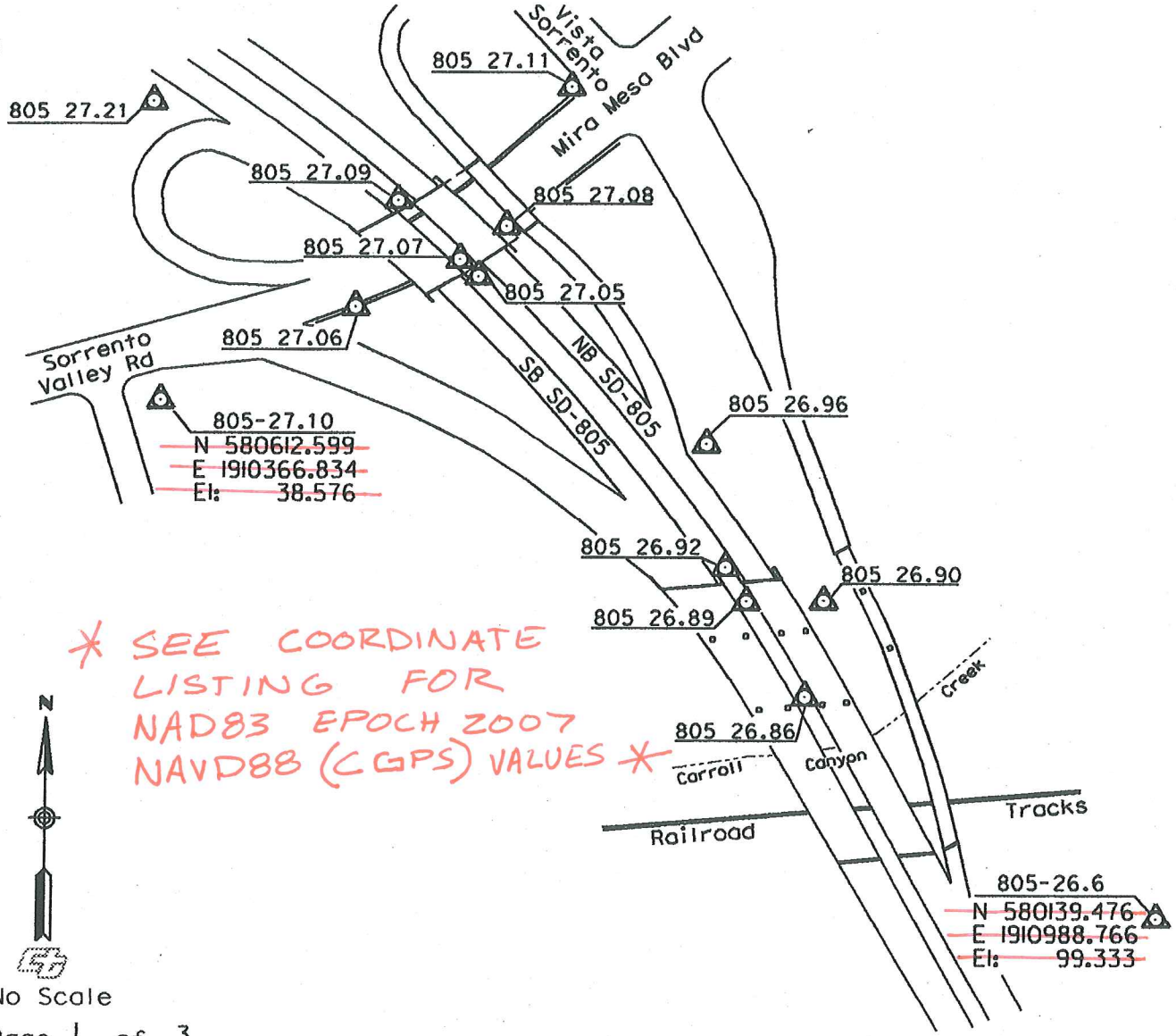
A Calibration WAS (NOT) used on this survey :tbsf1/archives/calibrations/

Notes: H & V checked by Static GPS: 805-26.6, 805-27.2

H by Fast Static GPS: 805 27.05, 27.06, 27.09, 27.11 & 27.21

V by Diff Levels: 805 27.05, 27.06, 27.07, 27.08 ,27.09 & 27.11

H & V by Traverse: 805 26.86, 26.89, 26.90, 26.92, 26.96, 27.07, 27.08,




* SEE COORDINATE LISTING FOR NAD83 EPOCH 2007 NAVD88 (CGPS) VALUES *

No Scale



...\2007200A Control.DGN 6/5/2007 9:05:21 AM

# SURVEY NOTES

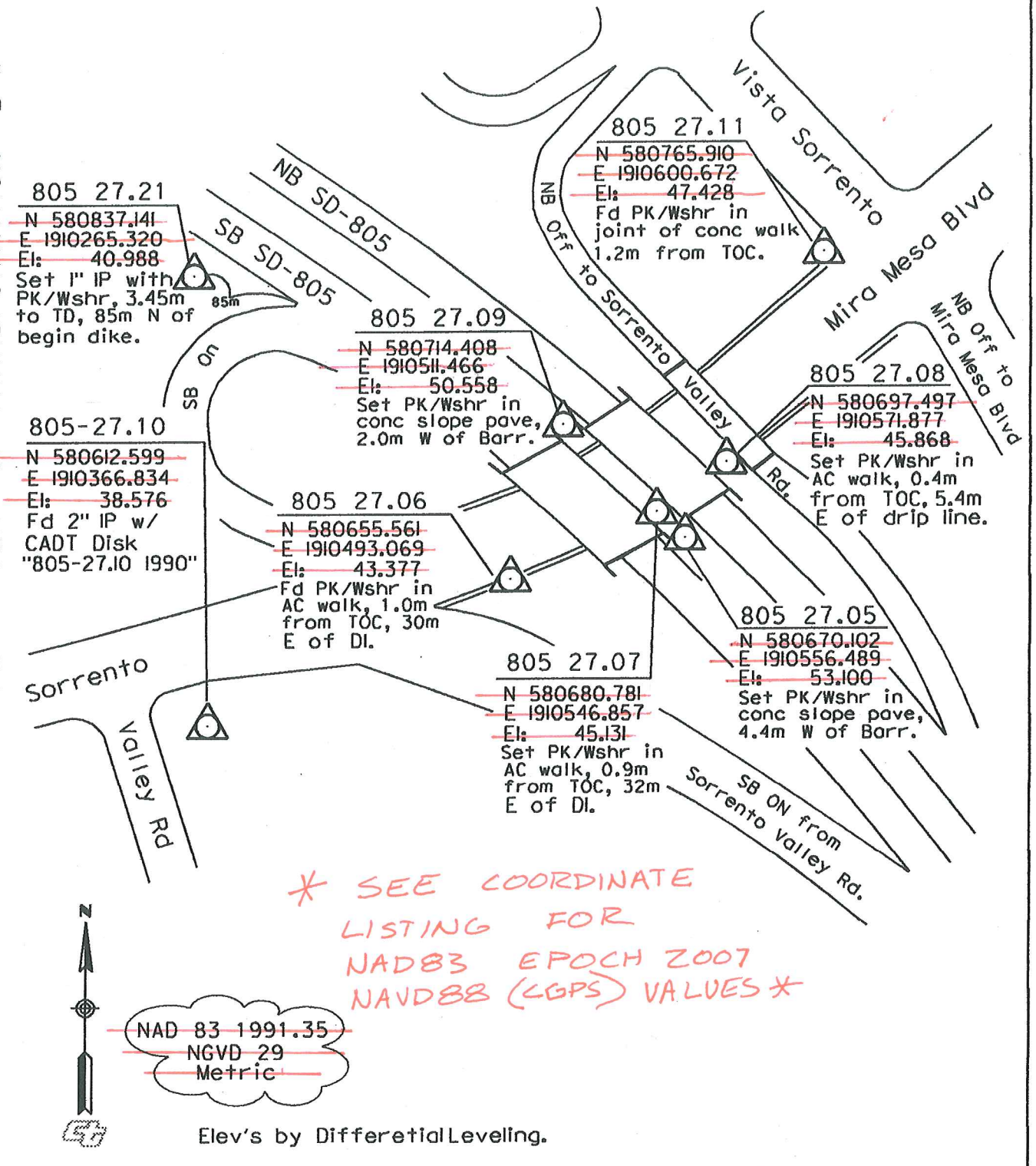
| S.R. | EA. | CO-RTE-PM |
|---|---|---|
| 07-200A | 267600 | SD 805 PM 26.9/27.2 |

PARTY CHIEF D. Sparks | RECORDER A. Medellin | INSTRUMENT PERSON J. Reisig

SURVEY DESCRIPTION Carroll Canyon Bridges | DATE OF SURVEY May 2007

DEPARTMENT OF TRANSPORTATION D-11

STATE OF CALIFORNIA




* SEE COORDINATE LISTING FOR NAD83 EPOCH 2007 NAVD88 (CGPS) VALUES *

Elev's by Differetial Leveling.

Coord's by Least Squares traverse reduction.

No Scale



...\2007200A Control.DGN 6/5/2007 10:21:14 AM

# EXHIBIT 11-A

Fact Sheet Exception to Mandatory Design Standards

8/4/2009

**11-SD-805**
**PM R23.3/R27.7**
**11-276-081630**
**HB5 $473,900,000**

# Fact Sheet Exceptions to Mandatory Design Standards


Prepared by:

Liza A. Galon
Liza A. Galon,
Registered Civil Engineer

Submitted by _____ 8/4/09 (619) 688-6720
Roger Carlin, Date Telephone
Design Manager

Recommended For Approval _____ 9/5/09 (619) 688-6786
James Stewart, Date Telephone
Acting Project Manager

Concurrence by _____ 8/6/09 (619) 220-7377
Joel Haven, Date Telephone
I-805/SR-52 Corridor Director

Concurrence by _____ 8/6/09 (619) 688-6617
Gary Vettese, Date Telephone
District Division Chief - Design

Approved by _____ 8/11/09
Luis Betancourt Date
Design Coordinator
Headquarters Division of Design

## 1. PROPOSED PROJECT

A. Project Description:

The Interstate 805 (I-805) Managed Lanes Projects (Projects) will add managed lanes to the Interstate 805 Corridor to maintain or improve existing and future traffic operation through 2030. These projects will provide separate highway facilities for alternate modes of travel by bus rapid transit (BRT), high occupancy vehicles (HOV), and controlled access by single occupancy vehicles (SOV). The I-805 Managed Lanes Project consists of the south (Beyer Boulevard to Landis Street), Middle (Landis Street to State Route 52) and North (State Route 52 to Interstate 5) projects. Although the three projects are separate, with independent utility and logical termini, there is a need to ensure the facilities built in each project provide systematic modal choice for the regional transportation facility user in concert with the concepts envisioned in the San Diego Association of Governments (SANDAG) Regional Transportation Plan (RTP).

The I-805 North project (Build Alternative) would include construction of four managed lanes, two lanes in each direction, on I-805 from State Route 52 (SR-52) to Carroll Canyon Road and two High Occupancy Vehicle (HOV) by-pass lanes, one lane in each direction, from just north of La Jolla Village Drive to just north of Mira Mesa Boulevard, connecting to the HOV lanes at the end of the northern Carroll Canyon DAR (to be built as a separate project). This project would also construct a DAR at Nobel Drive and the southern portion of the Carroll Canyon DAR, a Park and Ride/BRT Station at Nobel Drive, and a Direct Connector Ramp for westbound SR-52 to northbound I-805 **(Exhibit 1)**. The purpose of the project is to improve mobility of commuters from downtown to major work zone areas at Nobel Drive and Mira Mesa Boulevard. The project length is approximately 4.4 miles, from just south of I-805/SR-52 to just north of Mira Mesa Boulevard.

The estimated capital cost (support costs not included) for this project is $473.9 Million (2009 dollars). Funding for the proposed project is expected from a combination of Federal, State and Local Programs including TransNet II, with Program Code HB5 in the 2013/14 FY.

B. Existing Highway:

The I-805 freeway was opened to traffic in the early 1970s. It is a major north-south freeway beginning at its southern junction with Interstate 5 (I-5) near the international border with Mexico and ending approximately 29 miles north where it again joins with I-5 in the northern area of the City of San Diego in the vicinity of Sorrento Valley. Interstate 805, currently 8 to 10 lanes wide, runs generally parallel to I-5, traversing the central portion of the San Diego urbanized area. Interstate 805 provides an alternative route for I-5 north-south movement of traffic through San Diego, bypassing the downtown San Diego area. It provides direct access to the major employment centers in Otay Mesa, Kearny Mesa, University City and the Sorrento Valley area, and is a major commuter route.

In 2003, MOBILITY 2030 Regional Transportation Plan (RTP) identified the entire length of I-805 and I-5, south of State Route 54 (SR-54), for further study. I-805 is included in the TransNet II program, which was approved by voters in November 2004 as an extension of the original TransNet local sales tax measure.

Currently, I-805 operates at or over capacity during weekday peak periods, typically spanning 3.5 hours in the morning and 2.5 hours in the afternoon. Along the north corridor, the segment between SR-52 and La Jolla Village Drive operates at level of Service (LOS) F (SANDAG 2006).

Projected population and employment growth in the region will result in additional travel demand on the I-805 corridor. By the year 2030, population growth in the area surrounding the corridors is expected to reach 39 percent while employment growth of 28 percent is anticipated. Traffic forecasts indicate that travel demand on the I-805 corridor will increase by up to 50 percent by 2030 (SANDAG 2005a). Without improvements, the I-805 corridor will continue to operate at LOS F in 2030.

Sustaining effective goods movement is essential for economic vitality of the state and region. The I-805 corridor will face the challenge of accommodating future increases in goods movement and travel as a result of continued implementation of the North American Free Trade Agreement and anticipated growth in interregional travel between the San Diego region and northern Baja California.

C. Safety Improvements:

This project proposes median barrier type 60 or higher for the entire length. Due to the widening of I-805, almost all existing metal beam guard rail will be replaced and upgraded. As a safety measure, all existing non-mountable curbs and dikes will be replaced with mountable dikes.

D. Total Project Cost:

The estimated project cost is as follows:

| | | |
|---|---|---|
| Roadway | $ | 301,800,000 |
| Structures | $ | 161,700,000 |
| Right of Way | $ | 10,400,000 |
| Total Project Cost | $ | 473,900,000 |

## 2. FEATURES REQUIRING AN EXCEPTION

A. Design Exception Feature #1

Nonstandard Feature: Interchange Spacing

The following nonstandard distances between interchanges are proposed along Interstate 805 **(Exhibits 3a and 3b)**.

Nobel Drive to La Jolla Village Drive Interchange Spacing = 2463 ft

Junction Route 52 to Governor Drive Interchange Spacing = 4240 ft

Standard for Which Exception is Requested:

Highway Design Manual, Section 501.3 "Spacing", first paragraph states, "the minimum interchange spacing shall be one mile in urban areas, two miles in rural areas, and two miles between freeway-to-freeway interchanges and local street interchanges."

Reason For Requesting Exception:

1. An exception is requested for the non-standard spacing between the Nobel Drive OC to La Jolla Village Drive/Miramar Road OC and Junction Route 52 to Governor Drive UC because making the spacing standard for these interchanges would require extensive costs by impacting the spacing of the other adjacent local street interchanges, which currently meet standards. Furthermore, it would not be feasible to eliminate any local street interchange to meet the standards because it would have great impact regarding access to the surrounding communities. The access routes into Interstate 805 would be eliminated, adding more congestion onto the city streets. Therefore, making these interchanges meet standards would create severe traffic impacts and require additional improvements to the other interchanges.

2. The Nobel Drive Interchange is a half-diamond configuration where there are no northern ramps that would conflict with the southern ramps at the La Jolla Village Drive Interchange. Moreover, the distances between successive exits and successive entrances between these two interchanges meet standards.

Added Cost to Make Standard

To attain standard interchange spacing, the on and offramps at Governor Drive and La Jolla Village Drive would have to be eliminated. The demolition of these ramps plus the added cost for delay would be $47,200,000 as outlined below. A feasibility study to address the added cost as a result of the environmental impacts of removing these ramps has not been made as preliminary estimates have been determined to cost more than the total project cost.

Construction Cost Estimate to make standard:

| | |
|---|---|
| Demolish Governor Dr. Ramps | $ 4,000,000 |
| Demolish La Jolla Village Dr. Ramps | $ 13,200,000 |
| Traffic Costs for Delay | $ 30,000,000 |
| Total Demolition Cost | $ 47,200,000 |

B. Design Exception Feature #2

Nonstandard Feature: Continuous Usable Shoulder Width

The proposed freeway widening will exceed the total width available at the Nobel Drive OC structure and therefore, the outside shoulders underneath the Nobel Drive OC will be less than standard **(Exhibit 4a)**. The freeway widening will also cause to have less than standard shoulders northbound along Interstate 805 (I-805) at the bridge structures crossing over the Carroll Canyon and Mira Mesa Boulevard. Before the bridge structures at the northbound offramps to Mira Mesa Boulevard and Vista Sorrento Parkway, the proposed shoulder widths will also be less than standard. **(Exhibits 4b and 4c)**

Location A: I-805 Under Nobel Drive Bridge (1374+30 to 1378+10)
Shoulder width = 10.0 ft to 8.0 ft

Location B: NB I-805 Outside Shoulder Width (1443+30 thru 1443+80)
By Mira Mesa Boulevard offramp = 10.0 ft to 6.7 ft

Location C: NB I-805 Outside Shoulder Width (1460+00 to 1460+30)
By Vista Sorrento Parkway offramp = 10.0 ft to 7.0 ft

Standard for Which Exception is Requested:

Highway Design Manual, Section 302.1 "Width", first paragraph states, "the shoulder widths given in Table302.1 shall be the minimum continuous usable width of paved shoulder." According to Table 302.1, the standard outside shoulder width on a freeway is 10 ft.

Reasons For Requesting Exception:

1. For Location A, an exception is requested for non-standard shoulder widths of 8 feet along northbound and southbound Interstate 805 at the Nobel Drive OC structure (total length of nonstandard shoulders is 650 feet). This bridge was constructed in 1999 using the City of San Diego funds through permit # 11-99-NMC0905. Due to the freeway widening, the outside shoulders, if made standard, would encroach into the northbound and southbound bridge abutments. Due to the high cost to replace the newly constructed Nobel Drive OC, it is proposed to have 8-foot shoulders in this location.

2. For Locations B and C, an exception is requested to have less than standard shoulders northbound along I-805 at the bridge structures to be widened

crossing over the Carroll Canyon and Mira Mesa Boulevard (total length of nonstandard shoulders for locations B and C is 80 feet). This exception is necessary to avoid having the proposed bridge structures conflict with the existing bridge structures at the northbound offramps to Mira Mesa Boulevard / Vista Sorrento Parkway and Sorrento Valley Road / Vista Sorrento Parkway. These offramp bridge structures are being preserved to avoid impacting biologically sensitive areas and the intersection at Vista Sorrento Parkway.

3. For Location B, the cost to replace the offramp bridge to Mira Mesa Boulevard, which is approximately 937 ft long, would be extensive. The biologically sensitive areas, as well as the existing Railroad underneath the bridge would be affected.

Added Cost to Make Standard

An additional $40,000,000 is the preliminary total construction cost estimate required to make this design feature standard for Locations A, B, and D, which would entail widening the above mentioned shoulder widths.

Construction Cost Estimate to make standard:

| | | |
|---|---|---|
| Structure Removal | $ | 1,400,000 |
| Structure Widening or New Construction | $ | 35,100,000 |
| Stage Construction | $ | 3,500,000 |
| Total Construction Costs | $ | 40,000,000 |

C. Design Exception Feature #3

Nonstandard Feature: Specified Superelevation Rates

The superelevation rates shown in Table 1 are proposed along the northbound Interstate 805 (I-805) offramp to Sorrento Valley Road / Vista Sorrento Parkway **(Exhibits 5a and 5b)**.

Standard for Which Exception is Requested:

Highway Design Manual, Section 202.2 “Standards for Superelevation”, states, “based on an **e** max selected by the designer for one of the conditions, superelevation rates from Table 202.2 shall be used within the given range of curve radii. If less than standard superelevation rates are approved (see Index 82.1), Figure 202.2 shall be used to determine superelevation based on the curve radius and maximum comfortable speed.”

**TABLE 1**

| Curve Radii* | **e*** | Proposed Radius (ft) | Proposed **e Range** |
|---|---|---|---|
| 2,200-2,699 | 0.05 | 2400 | ≈0.00-0.03 |
| 3,500-4,499 | 0.03 | 3604 | ≈0.03-0.04 |

* From Table 202.2, Section 202.2 of the HDM.

Reasons For Requesting Exception:

1. An exception is requested for the non-standard superelevation rates along the northbound offramp to Sorrento Valley Road / Vista Sorrento Parkway since making the superelevation rates standard for this offramp would mean replacement of the existing bridge over Mira Mesa Boulevard and a redesign of the local intersection at Vista Sorrento Parkway.

2. The non-standard superelevation rates are located within the gore area of the ramps where the superelevation rate of the ramp usually follows the superelevation rate of the main lanes. In addition, the proposed superelevation rates have been checked against the Maximum Comfortable Speed on Horizontal Curves on Figure 202.2 of the HDM and the maximum comfortable speed for the proposed superelevation rates in conjuction with the proposed radii are between 65 and 75 mph.

Added Cost to Make Standard

An additional $5,700,000 is the preliminary total construction cost estimate required to make this design feature standard, which would entail re-design and construction of the Mira Mesa Boulevard bridge as well as the intersection at Vista Sorrento Parkway.

Construction Cost Estimate to make standard:

| | | |
|---|---|---|
| Structure Removal | $ | 100,000 |
| Structure Widening or New Construction | $ | 4,400,000 |
| Roadway | $ | 700,000 |
| Stage Construction | $ | 500,000 |
| Total Construction Costs | $ | 5,700,000 |

D. Design Exception Feature #4

Nonstandard Feature: Traveled Way Cross Slope On Widening Projects

The following nonstandard traveled way cross slopes currently exist along Interstate 805 (I-805) from Junction Route 52 to just south of the Interstate 5 (I-5)/ Interstate 805 (I-805) merge **(Exhibit 6)**. Table 2 lists the stations and corresponding cross slope.

**TABLE 2**

| Station | Slope ( % ) | Side |
|---|---|---|
| 1268+00 | 1.15 | Left |
| | 1.18 | Right |
| 1269+00 | 1.16 | Left |
| | 1.32 | Right |
| 1270+00 | 1.28 | Left |
| | 1.32 | Right |
| 1288+00 | 1.30 | Right |
| 1374+00 | 1.02 | Right |
| 1375+00 | 1.17 | Right |
| 1428+00 | 1.33 | Left |
| | 1.24 | Right |
| 1431+00 | 0.91 | Right |
| 1438+00 | 1.10 | Left |
| 1439+00 | 1.12 | Left |
| 1472+00 | 0.55 | Right |

Standard for Which Exception is Requested:

Highway Design Manual, Section 301.2 “Cross Slopes”, (2) “Standards”, (b) “for resurfacing or widening when necessary to match existing cross slopes, the minimum shall be 1.5 percent and the maximum shall be 3 percent.”

Reason For Requesting Exception:

1. An exception is requested to have the existing non-standard traveled way cross slopes at spot locations along I-805 from the Junction with SR-52 to just north of Mira Mesa Boulevard. Making the existing traveled way cross slopes meet the current standards would result in excessive costs to replace the structural sections at the spot locations listed above along the entire project freeway segment.

2. The District Traffic Operations Department researched and provided the accident history reports (Table C) of collisions occurring in wet conditions for the I-805 freeway segment between P.M. R23.0 and R28.5. A total of five wet investigations were reported in the northbound direction and a total of two in the southbound direction. Three of the five northbound wet collision investigations were located just north of the Governor Drive UC, and the fourth investigation, in the northbound direction, was located south of the Mira Mesa Boulevard UC, which includes part of the Carroll Canyon bridge structure. The fifth wet investigation, in the northbound direction, was located beyond the project limits just south of the I-5 / I-805 merge and south of the Sorrento Valley Boulevard UC (P.M. R28.109 – R28.309). The wet investigations in the southbound direction were found to be beyond the

project limits just south of the I-5 / I-805 merge and north of the Sorrento Valley Boulevard UC (P.M. 28.335 – 28.549). The wet investigations obtained over the last ten years do not fall within the station and direction listings in the above table. As a result, it is proposed to maintain the existing cross-slopes (listed on table 2) as the Table C list of wet investigations shows no correlation between keeping the existing cross-slopes and the hydproplaning accidents on the roadway.

Added Cost to Make Standard

An additional $9,800,000 is the preliminary total construction cost estimate required to make this design feature standard, which would entail the replacement of the roadway structural sections at spot locations along Interstate 805 (I-805) from Junction Route 52 to just south of the Interstate 5 (I-5) / Interstate 805 (I-805) merge.

Construction Cost Estimate to make standard:

| | | |
|---|---|---|
| Roadway Exc. | $ | 6,800,000 |
| Concrete Pavement | $ | 1,400,000 |
| Hot Mix Asphalt (Type A) | $ | 500,000 |
| Class 2 Aggregate Base | $ | 200,000 |
| Stage Construction | $ | 900,000 |
| Total Construction Costs | $ | 9,800,000 |

## 3. TRAFFIC DATA

A Traffic Forecast Report was prepared by KOA Corporation in coordination with Caltrans' Traffic Forecasting branch. The report was finalized on March 2009 and contains forecasted daily and peak hour volumes for the I-805, North Corridor. The Year 2030 traffic volumes were developed from the SANDAG Series 11 Transportation Model. The design year 2030 Build Freeway traffic volumes for I-805 North project are as follows:

**TABLE 3**
**Year 2030 Traffic Volumes***

| SEGMENT | ADT | | AM Peak Hour Volumes | | PM Peak Hour Volumes | |
|---|---|---|---|---|---|---|
| | NB | SB | NB | SB | NB | SB |
| **I-805** | | | | | | |
| Jct Rte 52 to Governor Dr UC | 116,300 | 122,700 | 9,945 | 7,275 | 7,420 | 10,535 |
| Governor Dr UC to Nobel Dr OC | 112,700 | 124,200 | 9,680 | 7,460 | 7,265 | 10,600 |
| Nobel Dr OC to La Jolla Village Dr OC | 100,800 | 108,400 | 8,840 | 6,360 | 6,385 | 9,115 |
| La Jolla Village Dr OC to Mira Mesa Blvd UC | 105,700 | 111,500 | 8,545 | 7,790 | 7,860 | 9,070 |
| **HOV/Managed Lanes** | | | | | | |

| SEGMENT | ADT | | AM Peak Hour Volumes | | PM Peak Hour Volumes | |
|---|---|---|---|---|---|---|
| | NB | SB | NB | SB | NB | SB |
| **I-805** | | | | | | |
| Jct Rte 52 to Governor Dr UC | 27,800 | 24,900 | 2,400 | 1,680 | 1,845 | 2,235 |
| Governor Dr UC to Nobel Dr OC | 29,000 | 19,800 | 2,495 | 1,360 | 1,915 | 1,755 |
| Nobel Dr OC to La Jolla Village Dr OC | 25,000 | 23,000 | 2,100 | 1,680 | 1,760 | 2,025 |
| La Jolla Village Dr OC to Mira Mesa Blvd UC | 18,900 | 16,800 | 1,560 | 1,275 | 1,320 | 1,455 |
| | | | | | | |

*I-805, North Corridor (EA 11-081630)

Proposed modifications on Interstate Route 805 (I-805) to maintain or improve traffic operations from Route 52 (SR-52) to Mira Mesa Boulevard.

## 4. ACCIDENT ANALYSIS

An analysis of accident records was performed along Interstate 805 (I-805) between post miles 23.267 and 28.874, which includes the area between the State Route 52 (SR-52) and Interstate 5 (I-5) junctions. The most recent and complete time period available of the study was from April 01, 2005 to March 31, 2008.

There were a total number of 568 accidents within the project limits of the I-805 Managed Lanes North Project (SR-52 to I-5). The TASAS three-year summary of accidents is as follows:

**TABLE 4**
**TASAS Table B Data**
**(April 01, 2005 to March 31, 2008)**

| SEGMENT | TOTAL No. of Accidents | ACTUAL RATES (per million vehicle miles) | | | AVERAGE RATES (per million vehicle miles) | | |
|---|---|---|---|---|---|---|---|
| | | F [(1)] | F+I [(2)] | Total [(3)] | F [(1)] | F+I [(2)] | Total [(3)] |
| SD 805 (R23.267-R28.874) | 568 | 0.003 | 0.22 | 0.52 | 0.005 | 0.31 | 0.99 |

(1) Fatal

(2) Fatal plus Injuries

(3) All reported accidents (includes Property Damage Only (PDO) Accidents)

The analysis of accident records showed a total of 568 accidents within the segment and study period mentioned above. Of the total accidents reported, 3 were fatal, 236 resulted in injuries, and 329 involved personal damage only. The analysis for the segment showed 3 fatal accidents of which each one involved a fatality for a total of 3 fatalities within the segment and study period. The primary collision factor for the three fatal accidents was the influence of alcohol. The accidents occurred during the early morning hours and outside the AM/PM peak hours.

Further analysis of the TASAS accident data report showed that the majority of the accidents occurred in the afternoon, 9.5% and 11.4%. The data also shows that 91% of the accidents occurred under dry road surface conditions, 75% under clear weather conditions, and 69.9% during daylight. More than 50% of the total accidents were rear

end collision related, 22.5% were cause by an object being hit (i.e. curb, dike or metal beam guardrail), 18.1% were caused by sideswipe, and more than 50% speed related. It is also noted that 41.2% of the accidents occurred in the northbound direction and 59.3% in the southbound direction. The majority of the collisions occurred along the freeway lanes; 50.7% interior lanes, 20.8% left lanes, and 16.2% right lanes. After review of the TASAS accident data report, the accidents primarily indicate a congested freeway within the study area.

## 5. INCREMENTAL IMPROVEMENTS

There are no incremental improvements that would avoid the need for the requested Design Exceptions.

## 6. FUTURE CONSTRUCTION

There is no construction scheduled in the near future to upgrade the nonstandard features proposed in the project.

## 7. PROJECT REVIEWS, CONCURRENCE

| Reviewer | Title | Representing |
|---|---|---|
| Luis Betancourt | Design Coordinator | HQ Division of Design |
| Laura Espinoza | Acting Design Reviewer | HQ Division of Design |
| Alex Kennedy | Traffic Operations Liaison | HQ Traffic Operations |

## 8. ATTACHMENTS

a. Exhibit 1: Location Map
b. Exhibit 2: Key Map of Subsequent Exhibits
c. Exhibit 3(a-b): Interchange Spacing
d. Exhibit 4(a-c): Continuous Usable Shoulder Width
e. Exhibit 5(a-b): Specified Superelevation Rates
f. Exhibit 6: Traveled Way Cross Slope On Widening Projects

11-SD-805
I-805 PM 23.3/27.7
SR-52 PM 3.5/4.1
EA: 11-081630

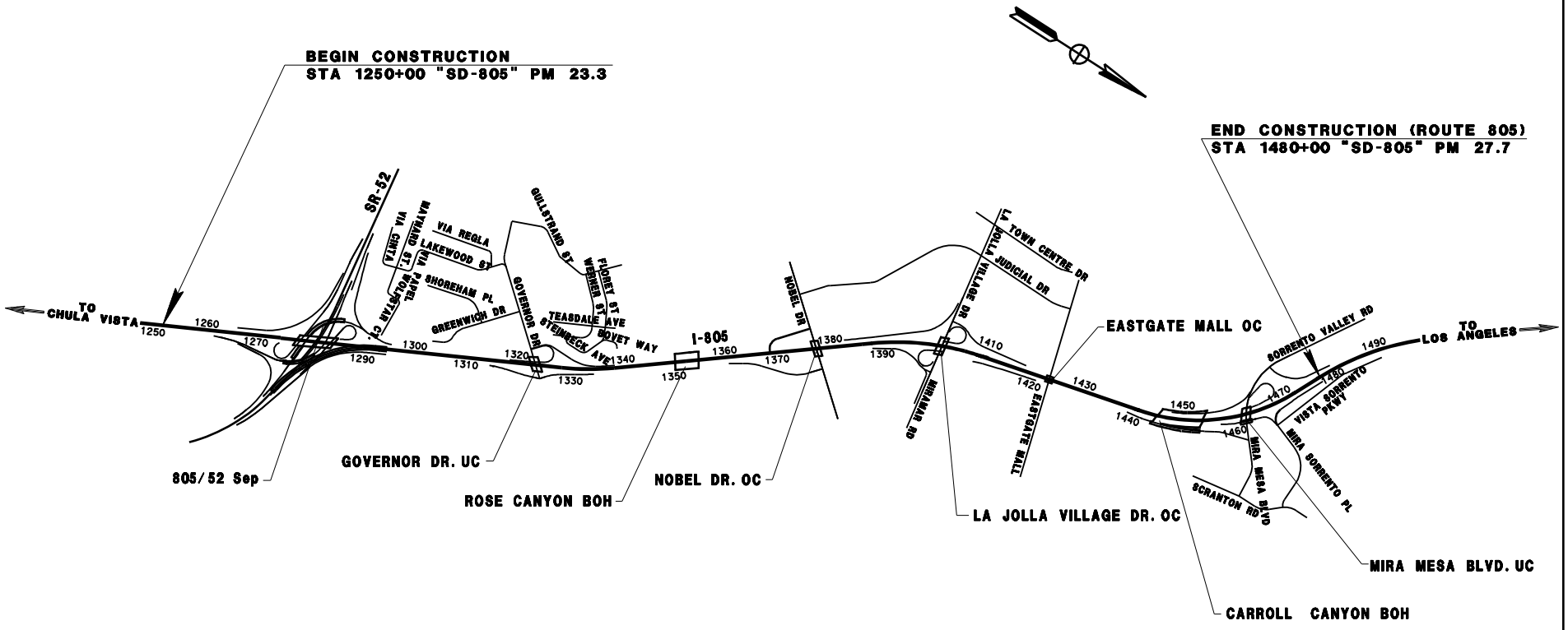



**EXHIBIT 1**
NO SCALE

SD-11-805
I-805 MANAGED LANES
NORTH PROJECT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
LAST REVISION 00-00-00
DATE PLOTTED => 04-AUG-2009
TIME PLOTTED => 12:42

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
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DGN FILE => Exhibit 1.dgn
CU 00000
EA 000000

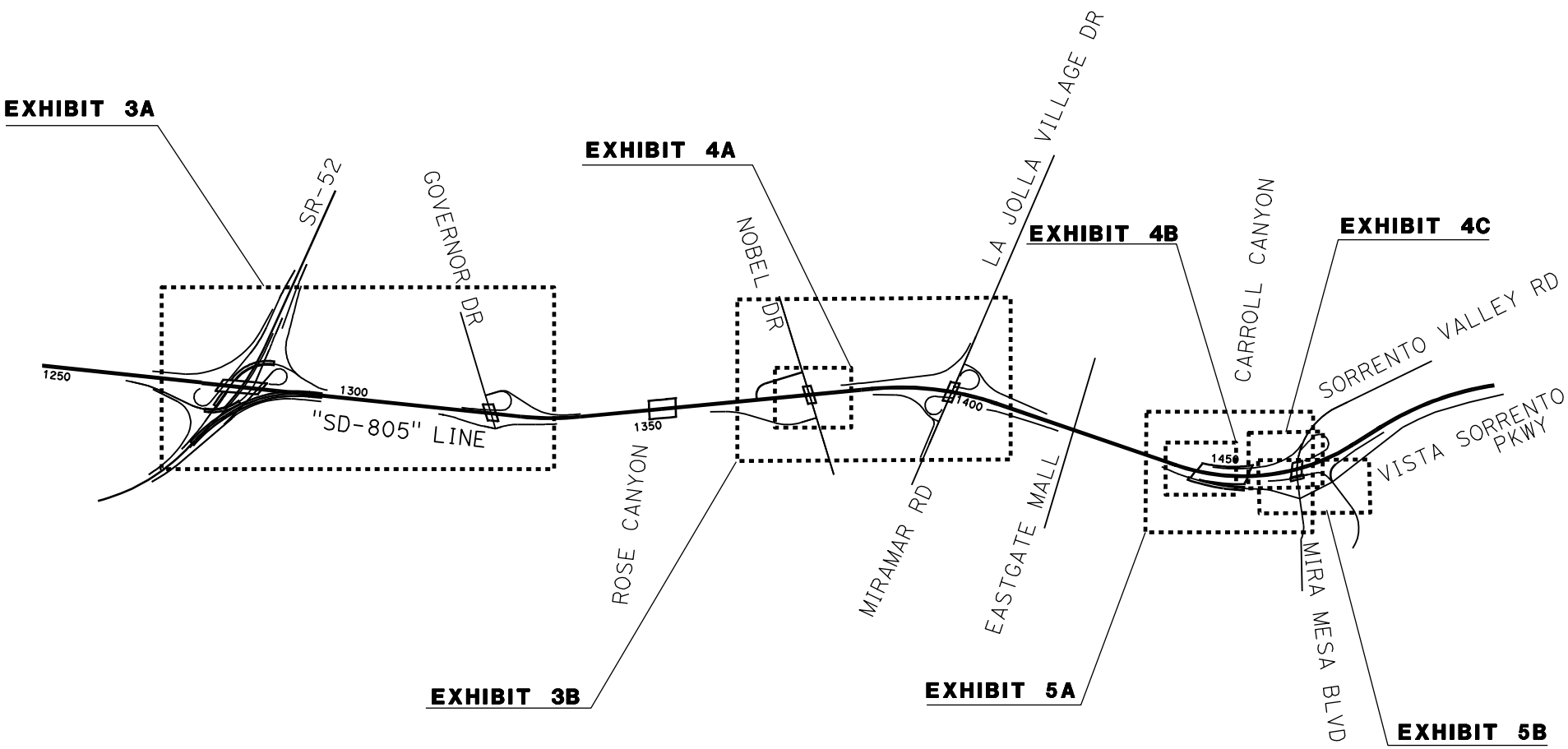


**EXHIBIT 2**

NO SCALE

**EXHIBIT KEY MAP**

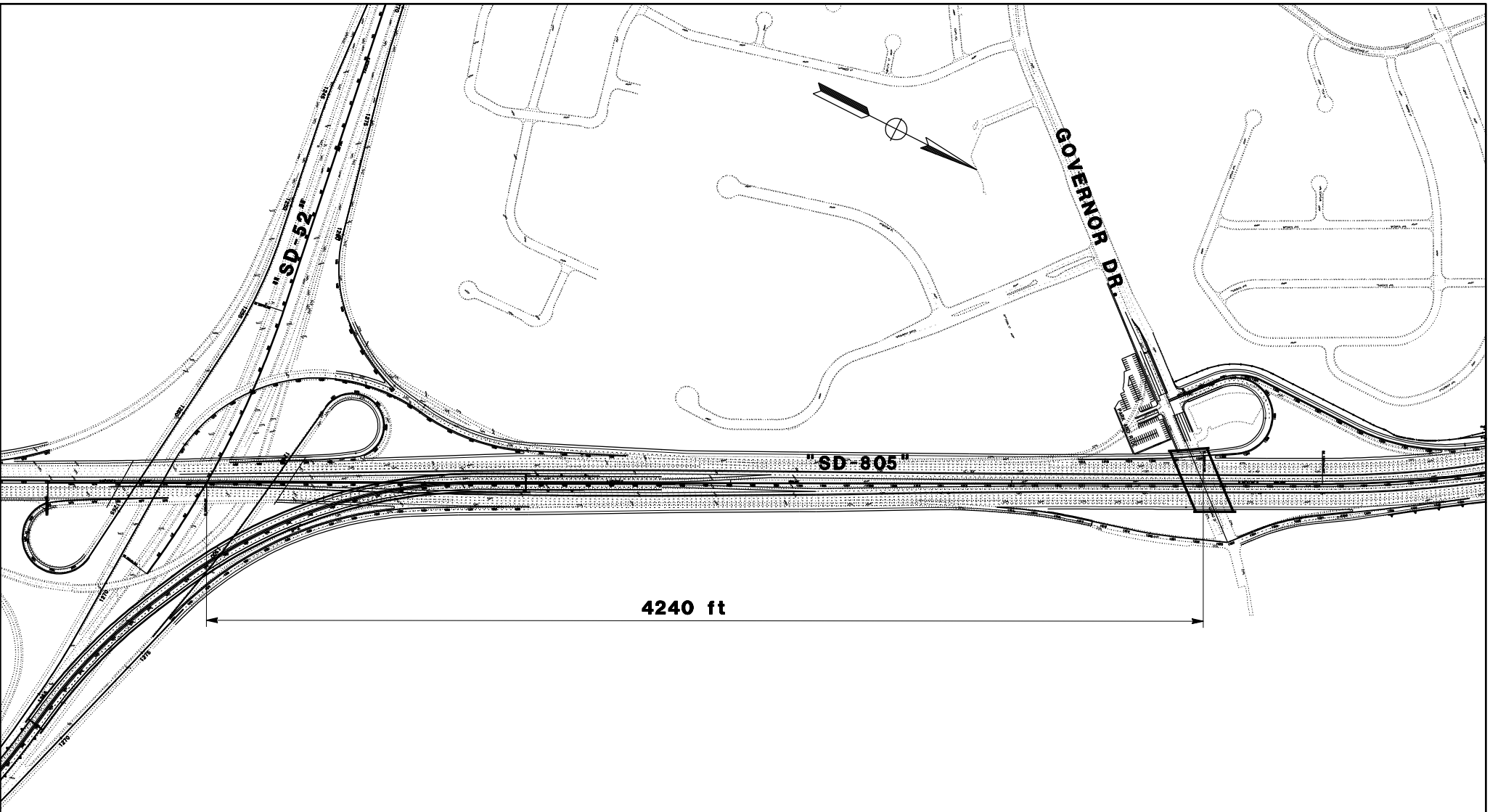


**EXHIBIT 3a**

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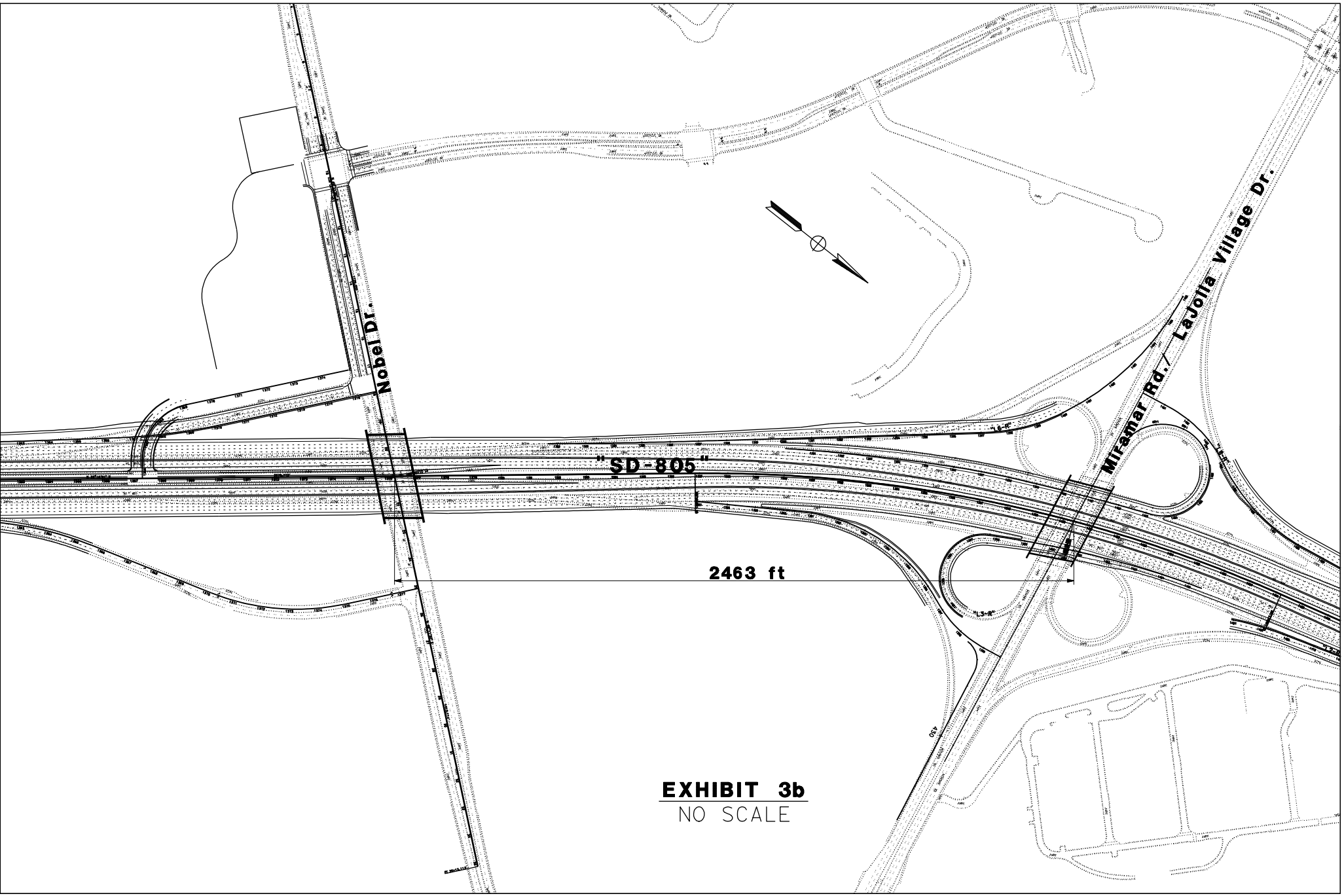


**EXHIBIT 3b**

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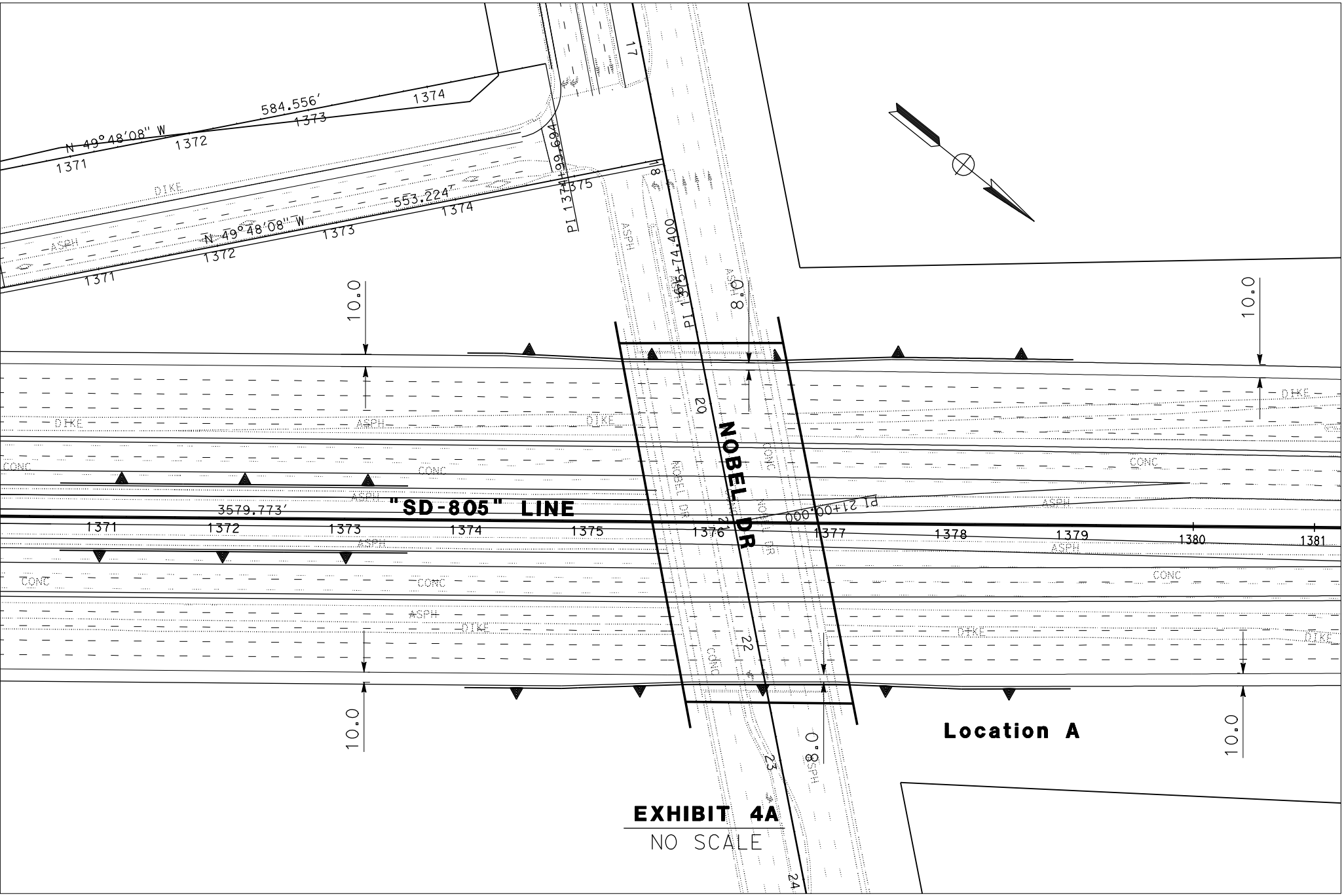
584.556'
N 49°48'08" W
553.224'
N 49°48'08" W
PI 1374+99.664
PI 1376+74.400
PI 21+00.000
3579.773'
"SD-805" LINE
NOBEL DR
Location A
EXHIBIT 4A
NO SCALE
DIKE
ASPH
CONC
10.0
8.0
20
22
23
24
1371
1372
1373
1374
1375
1376
1377
1378
1379
1380
1381

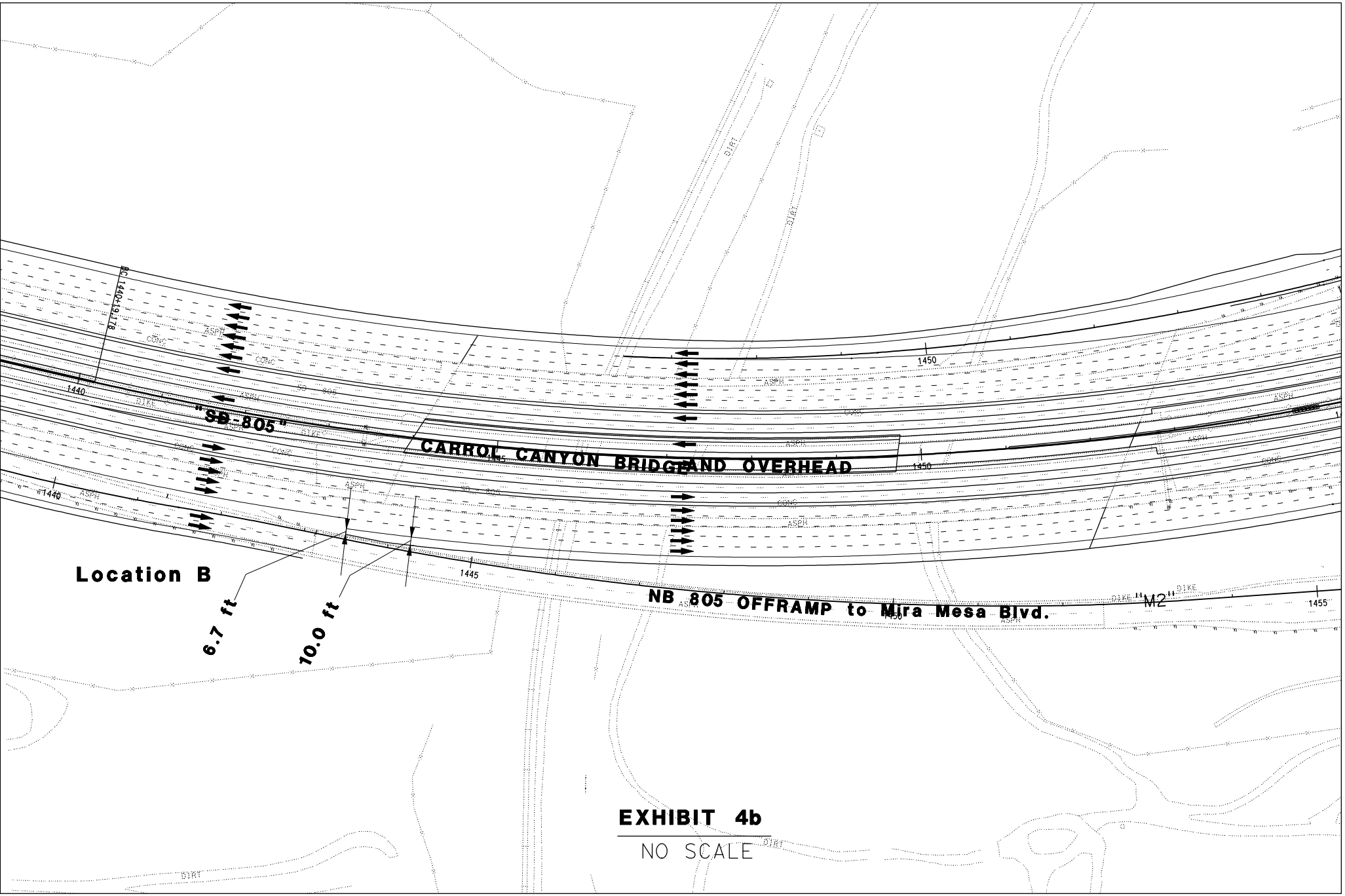


**EXHIBIT 4b**

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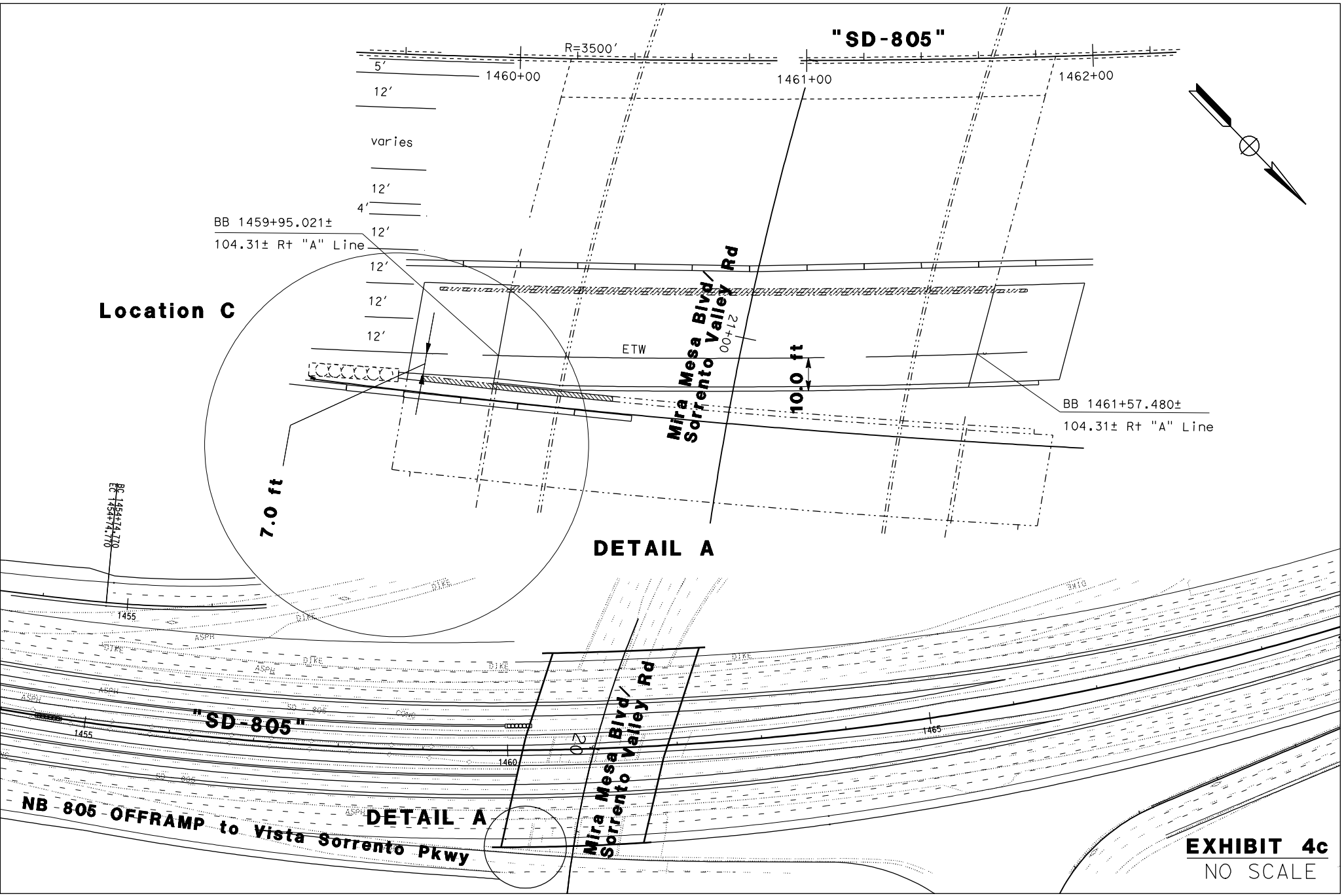


**EXHIBIT 4c**

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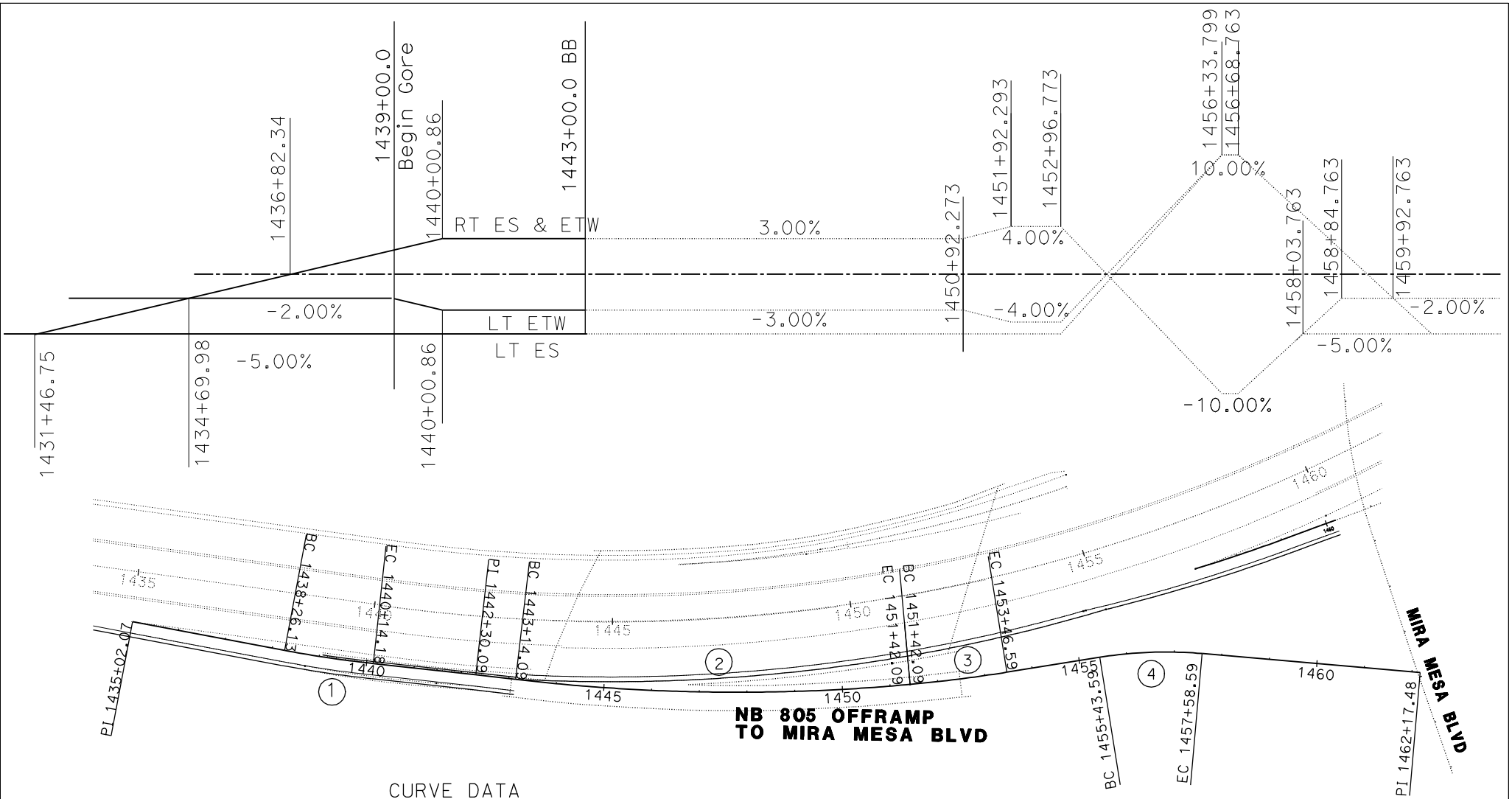




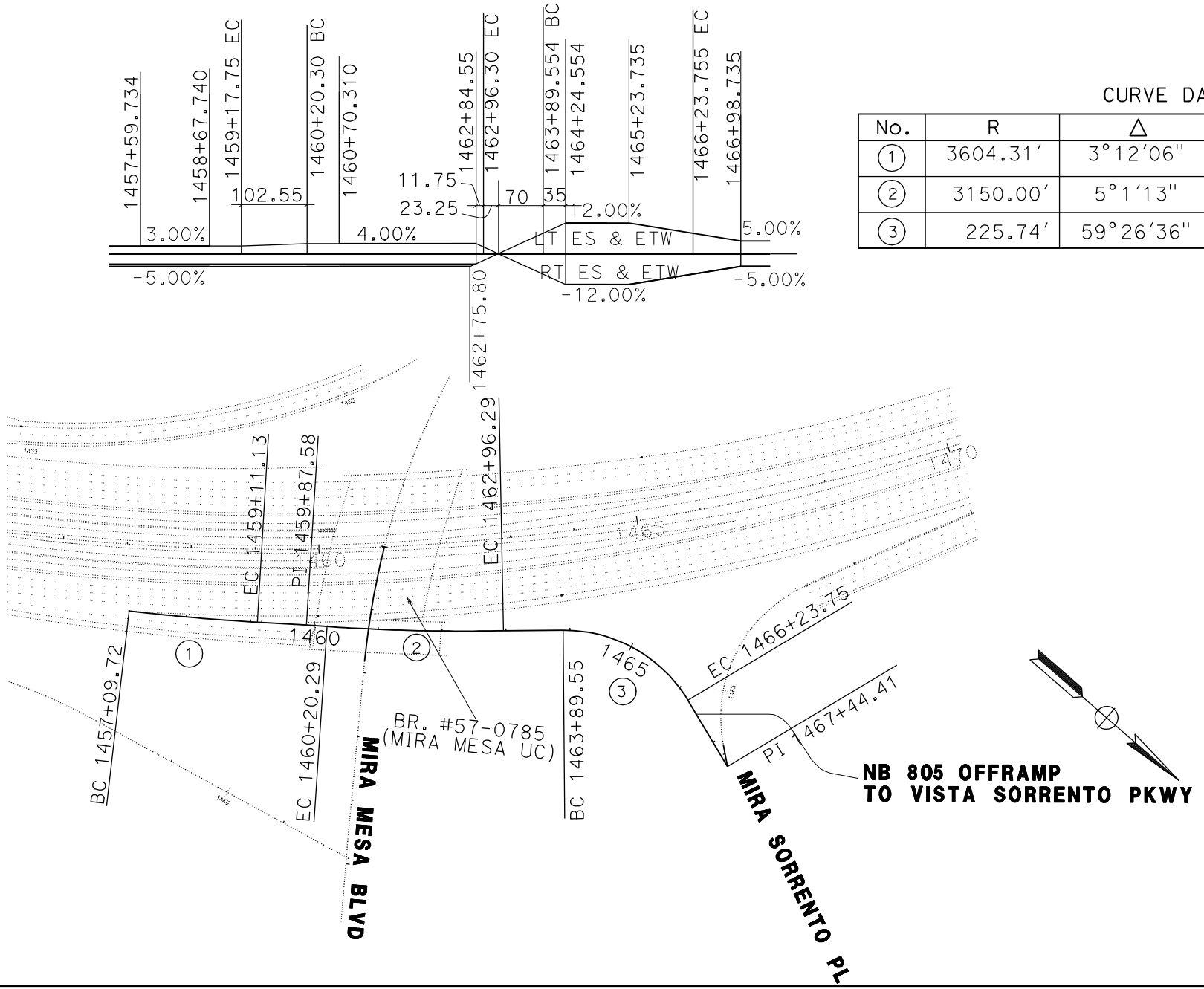


CURVE DATA

| No. | R | Δ | T | L |
|---|---|---|---|---|
| ① | 2400.00′ | 4°29′22″ | 94.07′ | 188.05′ |
| ② | 3988.01′ | 11°53′45″ | 415.49′ | 828.00′ |
| ③ | 2988.00′ | 3°55′17″ | 102.29′ | 204.50′ |
| ④ | 872.00′ | 14°7′37″ | 108.05′ | 215.00′ |

**EXHIBIT 5a**

NO SCALE

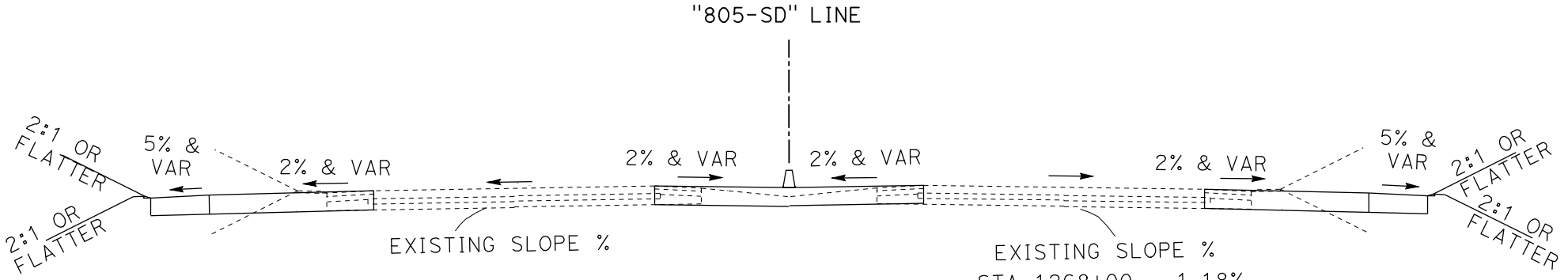



CURVE DATA

| No. | R | Δ | T | L |
|---|---|---|---|---|
| ① | 3604.31′ | 3°12′06″ | 100.73′ | 201.41′ |
| ② | 3150.00′ | 5°1′13″ | 138.09′ | 276.00′ |
| ③ | 225.74′ | 59°26′36″ | 128.87′ | 234.20′ |

**EXHIBIT 5b**

NO SCALE




EXISTING SLOPE %

| | |
|---|---|
| STA 1268+00 | 1.15% |
| STA 1269+00 | 1.16% |
| STA 1270+00 | 1.28% |
| STA 1428+00 | 1.33% |
| STA 1438+00 | 1.10% |
| STA 1439+00 | 1.12% |

EXISTING SLOPE %

| | |
|---|---|
| STA 1268+00 | 1.18% |
| STA 1269+00 | 1.32% |
| STA 1270+00 | 1.32% |
| STA 1288+00 | 1.30% |
| STA 1374+00 | 1.02% |
| STA 1375+00 | 1.17% |
| STA 1428+00 | 1.24% |
| STA 1431+00 | 0.91% |
| STA 1472+00 | 0.55% |

ROUTE 805
STA 1252+00 TO 1477+00

**EXHIBIT6**

NO SCALE

# EXHIBIT 11-B

Fact Sheet Exception to Advisory Design Standards

8/4/2009

**11-SD-805**
**PM R23.3/R27.7**
**11-276-081630**
**HB5 $473,900,000**

# Fact Sheet Exceptions to Advisory Design Standards


Prepared by:

Liza A. Galon,
Registered Civil Engineer

Submitted by _____ 8/4/09 (619) 688-6720
Roger Carlin, Date Telephone
Design Manager

Recommended For Approval _____ 8/5/09 (619) 688-6786
James Stewart, Date Telephone
Acting Project Manager

Approved by _____ 8/6/09 (619) 220-7377
Joel Haven, Date Telephone
I-805/SR-52 Corridor Director

Approved by _____ 8/17/09 (619) 688-6617
Gary Vettese, Date Telephone
District Division Chief - Design

## 1. PROPOSED PROJECT

A. Project Description:

The Interstate 805 (I-805) Managed Lanes Projects (Projects) will add managed lanes to the Interstate 805 Corridor to maintain or improve existing and future traffic operation through 2030. These projects will provide separate highway facilities for alternate modes of travel by bus rapid transit (BRT), high occupancy vehicles (HOV), and controlled access by single occupancy vehicles (SOV). The I-805 Managed Lanes Project consists of the south (Beyer Boulevard to Landis Street), Middle (Landis Street to State Route 52) and North (State Route 52 to Interstate 5) projects. Although the three projects are separate, with independent utility and logical termini, there is a need to ensure the facilities built in each project provide systematic modal choice for the regional transportation facility user in concert with the concepts envisioned in the San Diego Association of Governments (SANDAG) Regional Transportation Plan (RTP).

The I-805 North project (Build Alternative) would include construction of four managed lanes, two lanes in each direction, on I-805 from State Route 52 (SR-52) to Carroll Canyon Road and two High Occupancy Vehicle (HOV) by-pass lanes, one lane in each direction, from just north of La Jolla Village Drive to just north of Mira Mesa Boulevard, connecting to the HOV lanes at the end of the northern Carroll Canyon DAR (to be built as a separate project). This project would also construct a DAR at Nobel Drive and the southern portion of the Carroll Canyon DAR, a Park and Ride/BRT Station at Nobel Drive, and a Direct Connector Ramp for westbound SR-52 to northbound I-805 **(Exhibit 1)**. The purpose of the project is to improve mobility of commuters from downtown to major work zone areas at Nobel Drive and Mira Mesa Boulevard. The project length is approximately 4.4 miles, from just south of I-805/SR-52 to just north of Mira Mesa Boulevard.

The estimated capital cost (support costs not included) for this project is $473.9 Million (2009 dollars). Funding for the proposed project is expected from a combination of Federal, State and Local Programs including TransNet II, with Program Code HB5 in the 2013/14 FY.

B. Existing Highway:

The I-805 freeway was opened to traffic in the early 1970s. It is a major north-south freeway beginning at its southern junction with Interstate 5 (I-5) near the international border with Mexico and ending approximately 29 miles north where it again joins with I-5 in the northern area of the City of San Diego in the vicinity of Sorrento Valley. Interstate 805, currently 8 to 10 lanes wide, runs generally parallel to I-5, traversing the central portion of the San Diego urbanized area. Interstate 805 provides an alternative route for I-5 north-south movement of traffic through San Diego, bypassing the downtown San Diego area. It provides direct access to the major employment centers in Otay Mesa, Kearny Mesa, University City and the Sorrento Valley area, and is a major commuter route.

In 2003, MOBILITY 2030 Regional Transportation Plan (RTP) identified the entire length of I-805 and I-5, south of State Route 54 (SR-54), for further study. I-805 is included in the TransNet II program, which was approved by voters in November 2004 as an extension of the original TransNet local sales tax measure.

Currently, I-805 operates at or over capacity during weekday peak periods, typically spanning 3.5 hours in the morning and 2.5 hours in the afternoon. Along the north corridor, the segment between SR-52 and La Jolla Village Drive operates at level of Service (LOS) F (SANDAG 2006).

Projected population and employment growth in the region will result in additional travel demand on the I-805 corridor. By the year 2030, population growth in the area surrounding the corridors is expected to reach 39 percent while employment growth of 28 percent is anticipated. Traffic forecasts indicate that travel demand on the I-805 corridor will increase by up to 50 percent by 2030 (SANDAG 2005a). Without improvements, the I-805 corridor will continue to operate at LOS F in 2030.

Sustaining effective goods movement is essential for economic vitality of the state and region. The I-805 corridor will face the challenge of accommodating future increases in goods movement and travel as a result of continued implementation of the North American Free Trade Agreement and anticipated growth in interregional travel between the San Diego region and northern Baja California.

C. Safety Improvements:

This project proposes median barrier type 60 or higher for the entire length. Due to the widening of I-805, almost all existing metal beam guard rail will be replaced and upgraded. As a safety measure, all existing non-mountable curbs and dikes will be replaced with mountable dikes.

D. Total Project Cost:

The estimated project cost is as follows:

| | | |
|---|---|---|
| Roadway | $ | 301,800,000 |
| Structures | $ | 161,700,000 |
| Right of Way | $ | 10,400,000 |
| Total Project Cost | $ | 473,900,000 |

## 2. FEATURES REQUIRING AN EXCEPTION

A. Design Exception Features #1, #2 and #3

Nonstandard Features:

- Intervening Tangent between Reversing Curves
- Superelevation Transition
- Superelevation Runoff

The project proposes ramp alignments with reversing curves, which have no connecting tangents. These reversing curves result in non-standard superelevation runoffs and non-standard superelevation transitions. Since there will be no tangent length between the reversing curves, the superelevation runoff using the two-thirds, one-third standard given in Figure 202.5 of the Highway Design Manual, is not possible. The reversing curves are located on two ramp alignments listed below **(Exhibits 3a and 3b)**.

| Exhibit | Ramp Location | Beginning of Reversing Curves |
|---|---|---|
| 3a | NB 805 Offramp To Miramar Road | Station 1390+68.202 (2 curves) |
| 3b | SB 805 Offramp To Miramar Road | Station 1401+16.024 (2 curves) |

Standards for Which Exception Is Requested:

Highway Design Manual, Section 203.6 "Reversing Curves", paragraph one states, " when horizontal curves reverse direction the connecting tangents should be long enough to accommodate the standard superelevation runoffs given on Figure 202.5. If this is not possible, the 6% per 100 feet rate of change should govern (see Index 202.5(3))."

Highway Design Manual, Section 202.5 "Superelevation Transition", (1) *General*, paragraph two states, "a superelevation transition should be designed in accordance with the diagram and tabular data shown in Figure 202.5A to satisfy the requirements of safety, comfort and pleasing appearance."

Highway Design Manual, Section 202.5 "Superelevation Transition", (2) *Runoff*, paragraph one states, "two-thirds of the superelevation runoff should be on the tangent and one-third within the curve."

Reasons For Requesting Exception:

An exception to have reversing curves without connecting tangents along two offramps is requested to avoid impacting adjacent private properties and biologically sensitive areas. The two offramps are located at the I-805/La Jolla Village Drive Interchange.

1. The I-805/La Jolla Village Drive Interchange contains the northbound I-805 offramp to eastbound Miramar Road and the southbound I-805 offramp to westbound La Jolla Village Drive. The City of San Diego will be improving this interchange into a partial cloverleaf interchange (L-9) containing reversing curves with no connecting tangents along the two above mentioned offramps. The City of San Diego's project is to improve the I-805/La Jolla Village Drive Interchange with improvements to Miramar Road. As part of the City of San Diego's project, the above mentioned northbound and southbound offramps will be realigned and signalized at Miramar Road and La Jolla Village Drive, respectively. The reversing curves are located on a ramp with no through movements. Therefore, vehicles will be traveling at low speeds through the reversing curves as they enter the signalized intersections. In addition, the 6% per 100 feet rate of change between the two curves will still be met even if there is no tangent in between to accommodate a standard superelevation transition.

2. The northbound I-805 offramp to eastbound Miramar Road **(Exhibit 3a)** is located in a restricted area. To avoid the reversing curves along this offramp, additional right of way would need to be acquired impacting the adjacent biologically sensitive areas, which in turn would impact the United States Miramar Marine Corps Air Station. Therefore, it is not reasonable to expand the project into this restricted area.

3. The southbound I-805 offramp to westbound La Jolla Village Drive **(Exhibit 3b)** is also located in a restricted area adjacent to private properties. To avoid the reversing curves along this offramp, additional right of way would need to be acquired impacting the adjacent properties located up the slopes to the northwest of this state facility.

Added Cost to Make Standard:

An additional $4,700,000 is the preliminary total construction cost estimate required to make the two offramps standard.

Construction cost estimate to make standard:

| | | |
|---|---|---|
| Reconstruct Ramps | $ | 4,200,000 |
| Stage Construction | $ | 500,000 |
| Total Construction Cost | $ | 4,700,000 |

B. Design Exception Feature #4

Nonstandard Feature: Freeway Exits

The project proposes non-standard freeway exits along northbound I-805 to Mira Mesa Boulevard and Sorrento Valley Road. For these two ramps, it is proposed to use a diverge branch connection angle of 2° 51' 45" instead of the standard ramp diverge angle of 4° 52' 08" **(Exhibits 4a and 4b)**.

| Exhibit | Ramp Location |
|---|---|
| 4a | NB 805 Offramp to Mira Mesa Boulevard |
| 4b | NB 805 Offramp to Sorrento Valley Road |

Standard for Which Exception Is Requested:

Highway Design Manual, Section 504.2 "Freeway Entrances and Exits", (2) *Standard Designs*, paragraph one states, "design of freeway entrances and exits should conform to the standard designs illustrated in Figure 504.2A-B (single lane), and Figure 504.3L (two-lane entrances and exits) and/or Figure 504.4 (diverging branch connections), as appropriate."

Reasons For Requesting Exception:

An exception to use diverge branch connection angles of 2° 51' 45" is proposed to save the existing bridge structures along the northbound I-805 offramp to Mira Mesa Boulevard and the northbound I-805 offramp to Sorrento Valley Road.

1. The northbound I-805 offramp to Sorrento Valley Road/Vista Sorrento Parkway contains the existing bridge structure overcrossing Mira Mesa Boulevard. A diverge branch connection angle of 2° 51' 45" is used instead of the standard ramp diverge angle of 4° 52' 08" to align with the existing bridge structure. It would be impossible to match the current bridge structure using the standard ramp angle without affecting other design standards. The entire structure would need to be replaced and the public road intersection at Vista Sorrento Parkway redesigned, with a tighter curve radius, which in turn would lead to other design exceptions.

2. The cost to remove and replace the offramp bridge to Mira Mesa Boulevard/Vista Sorrento Parkway, which is approximately 940 ft long, would be extensively high. The biologically sensitive areas, as well as the existing MTS Railroad underneath the bridge would be affected.

Added Cost to Make Standard:

An additional $24,800,000 is the preliminary total construction cost estimate required to make this design exception standard.

Construction cost estimate to make standard:

| | | |
|---|---|---|
| Structure Removal | $ | 800,000 |
| Structure Widening or New | $ | 21,100,000 |
| Reconstruct Intersection | $ | 700,000 |
| Stage Construction/Traffic Control | $ | 2,200,000 |
| Total Construction Cost | $ | 24,800,000 |

C. Design Exception Feature #5

Nonstandard Feature: Design Speed On Freeway Connector

The southbound I-805 to eastbound State Route 52 (SR-52) connector is an existing connector with a design speed less than 50 miles per hour as shown in the table below. It is proposed to leave the connector in its existing condition **(Exhibit 5)**.

**TABLE 1**

| Design Speed* (mph) | Minimum Curve Radius* (ft) | Existing and Proposed Curve Radii (ft) |
|---|---|---|
| 50 | 850 | 600, 655, 700 |

* From Table 203.2, Section 203.2 of the HDM.

Standard for Which Exception is Requested:

Highway Design Manual, Section 504.4 "Freeway-to-Freeway Connections", (2) *Design Speed,* first paragraph states, "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 should be consistent with approaching vehicle speeds."

Reasons For Requesting Exception:

An exception is requested for the existing and proposed non-standard curve radii along the southbound I-805 to eastbound and westbound SR-52 connectors to not require replacement of the existing connector structure and reconstruction of the connector ramps.

1. The TASAS three-year summary of collisions (April 01, 2005 to March 31, 2008) for these connectors showed a total of 4 collisions and the local collision rates are below the statewide average. A review of the accidents showed loose material on roadway slippery surface, wet conditions, a vehicle hitting an object and a collision due to a tire defect. Overall, the collision rates for these connectors are less than the statewide average. The speed limit is currently posted at 45 mph for both connectors and a review of the collisions shows that this lower design speed did not cause any of the recorded collisions. In addition, the vertical sight distance for both connectors is consistent with approaching vehicle speeds.

2. The southbound I-805 to eastbound SR-52 connector is an existing state facility with a non-standard curve radius. To make the existing curve radius meet the current standards would entail replacing the entire connector and impact the adjacent eastbound SR-52 offramp to northbound I-805. This ramp would in turn encroach into the south abutments of the two NB and SB I-805 bridges. In itself, the complete redesign of the connector would

negatively affect other areas of the SR-52 / I-805 Interchange. To make this connector standard would require extensive costs.

Added Cost to Make Standard

An additional $69,600,000 is the preliminary total construction cost estimate required to make this design feature standard, which would entail complete redesign and reconstruction of the connector to eastbound SR-52 from southbound I-805.

Construction cost estimate to make standard:

| | | |
|---|---|---|
| Structure Removal | $ | 1,200,000 |
| Structure New or Widening | $ | 58,600,000 |
| Reconstruct Ramps | $ | 900,000 |
| Roadway | $ | 1,600,000 |
| Retaining Wall | $ | 1,000,000 |
| Stage Construction | $ | 6,300,000 |
| Total Construction Costs | $ | 69,600,000 |

D. Design Exception Feature #6

Nonstandard Feature: Maximum Profile Grade

The project proposes to maintain the existing non-standard profile grade along the southbound I-805 to westbound SR-52 connector. Currently, the existing connector exceeds the required maximum profile grade of 6 percent. The following table shows the alignment and station range where the profile grade exceeds 6 percent **(Exhibit 6)**.

**TABLE 2**

| Location | Station Range | Profile Grade (%) |
|---|---|---|
| SB I-805 to WB SR-52 Connector | 1280+00.00 to 1285+50.00 | Up to 6.85 |

Standard for Which Exception Is Requested:

Highway Design Manual, Section 504.4 “Freeway-to-Freeway Connections”, (3) *Grades*, paragraph one states, “the maximum profile grade on freeway-to-freeway connections should not exceed 6 percent.”

Reasons For Requesting Exception:

An exception to maintain the existing nonstandard profile grade along the southbound I-805 to westbound SR-52 connector is requested to avoid complete redesign of the connector, and thus avoid impacting the adjacent biologically sensitive areas to the north of this connector.

1. This project proposes to reconstruct part of the connector and maintain the existing nonstandard profile grade of 6.85% at the specified station range mentioned above. The reconstruction of the connector ties on to existing at this specific range where the nonstandard profile grade lies. Redesigning the connector would entail the addition of a retaining wall along the slope on the right side of the connector, impacting adjacent biologically sensitive areas.

2. An analysis of collision records was performed on the connector for the most recent and complete time period available, April 01, 2005 to March 31, 2008, where only one collision was reported. A study of the collision showed a 2-vehicle collision at the connector exit due to a tire defect. Overall, the collision rate for this connector (0.15) is less than the statewide average (0.35). It is evident that the collisions were not attributed to the connector's geometrics. The cost to make this connector meet standard would be extensive.

Added Cost to Make Standard:

An additional $1,600,000 is the preliminary total construction cost estimate required to make this design standard.

Construction cost estimate to make standard:

| | | |
|---|---|---|
| Reconstruct Ramp | $ | 900,000 |
| Retaining Wall | $ | 500,000 |
| Stage Construction | $ | 200,000 |
| Total Construction Cost | $ | 1,600,000 |

E. Design Exception Feature #7

Nonstandard Feature: Embankment (Fill) Side Slopes

The project proposes nonstandard embankment (fill) side slopes at two locations. One of the locations is between the eastbound SR-52 to northbound I-805 connector and the southbound I-805 to eastbound SR-52 connector. The other location is along the northbound I-805 offramp to La Jolla Village Drive.

**TABLE 3**

| Location | Station Range | Slope |
|---|---|---|
| Between EB I-805 to NB I-805 Connector and SB I-805 to EB SR-52 Connector | 1267+18.00 to 1267+50.00 | Steeper than 4:1 |
| NB I-805 OffRamp to La Jolla Village Dr | 1394+00.00 to 1395+00.00 | Steeper than 4:1 |

Standard for Which Exception Is Requested:

Highway Design Manual, Section 304.1 "Side Slope Standards", paragraph one states, "for new construction, widening, or where slopes are otherwise being modified, embankment (fill) slopes should be 4:1 or flatter" **(Exhibits 7a and 7b).**

Reasons For Requesting Exception:

An exception is requested to have nonstandard embankment (fill) side slopes steeper than 4:1 at two locations of the proposed I-805 North Project to avoid impacting their surrounding areas.

1. The first location of interest, where it is proposed to maintain the existing side slope steeper than 4:1, is at the embankment slope between the eastbound SR-52 to northbound I-805 connector and the southbound I-805 to eastbound SR-52 connector. In order to make this side slope meet standards, the existing adjacent southbound I-805 to eastbound SR-52 connector would need to be redesigned and constructed with a tighter horizontal radius. This connector currently has a nonstandard radius. The redesign and construction of this connector would force a much shorter radius impacting the adjacent environmentally sensitive San Clemente Canyon Creek. There is an existing metal beam guard railing along this connector from the bridge crossing over the San Clemente Canyon Creek up to and including a portion of the loop ramp.

2. The second location of interest is the side slope along the northbound I-805 offramp to Miramar Road. To make the side slope standard along this offramp, additional right of way would need to be acquired impacting the adjacent biologically sensitive areas, which in turn would impact the United States Miramar Marine Corps Air Station. It is proposed to add metal beam guard railing to mitigate the nonstandard side slope in this location. Therefore, it is not reasonable to make this design meet standards.

Added Cost to Make Standard:

An additional $100,800,000 is the preliminary total construction cost estimate required to make this design standard.

Construction cost estimate to make standard:

| | | |
|---|---|---|
| Reconstruct Bridge | $ | 89,100,000 |
| Reconstruct Tangent & Loop | $ | 1,700,000 |
| Structure Removal | $ | 700,000 |
| Embankment | $ | 100,000 |
| Retaining Wall | $ | 100,000 |
| Stage Construction | $ | 9,100,000 |
| Total Construction Cost | $ | 100,800,000 |

F. Design Exception Feature #8

Nonstandard Feature: Compound Curves

An exception is requested to maintain the existing nonstandard compound curves along two different alignments. Currently, the compound curve along the eastbound SR-52 to northbound I-805 connector does not meet the two-thirds radii standard. In a similar situation, the southbound I-805 offramp to Governor Drive does not meet the standard. The following table shows the different locations and existing alignment information **(Exhibits 8a and 8b)**:

**TABLE 4**

| Location | Station | Curve Radius (ft) |
|---|---|---|
| EB 52 to NB 805 Connector | 1270+30 | 152 |
| SB 805 Offramp to Governor Drive | 1320+40 | 220 |

Standard for Which Exception Is Requested:

Highway Design Manual, Section 203.5 "Compound Curves", first paragraph states, "the shorter radius should be at least two-thirds the longer radius when the shorter radius is 1,000 feet or less. On one-way roads, the larger radius should follow the smaller radius."

Reasons For Requesting Exception:

An exception to maintain the existing nonstandard compound curves along the eastbound SR-52 to northbound I-805 connector and the southbound I-805 offramp to Governor Drive is requested because redesigning both alignments would impact state facilities and adjacent residences, respectively.

1. The eastbound SR-52 to northbound I-805 connector is located at the I-805/SR-52 Junction where redesign and construction of this connector would impact other state facilities creating a domino effect within the junction. The southbound I-805 offramp to Governor Drive is adjacent to nearby residences. The redesign and construction of this offramp would entail right of way acquisition impacting the adjacent private properties in the community of University City.

2. An analysis of collision records was performed on both state facilities for the most recent and complete time period available, April 01, 2005 to March 31, 2008. A total of six collisions were found along the eastbound SR-52 to northbound I-805 connector and two along the southbound I-805 offramp to Governor Drive. A review of the accidents showed that the primary collision

factors of the six collisions along the eastbound SR-52 to northbound I-805 connector were speeding and improper turns. The primary collision factors of the two collisions along the southbound I-805 offramp to Governor Drive were speeding and driving under the influence. The review of the analysis shows that all the collisions that occurred along the two state facilities were not caused by the geometry of the ramps.

Added Cost to Make Standard:

An additional $12,900,000 is the preliminary total construction cost estimate required to make this design feature standard.

Construction cost estimate to make standard:

| | | |
|---|---|---|
| Structure Removal | $ | 100,000 |
| Structure New or Widening | $ | 8,400,000 |
| Roadway | $ | 1,600,000 |
| Reconstruct Ramp | $ | 1,600,000 |
| Stage Construction | $ | 1,200,000 |
| Total Construction Cost | $ | 12,900,000 |

## 3. TRAFFIC DATA

A Traffic Forecast Report was prepared by KOA Corporation in coordination with Caltrans' Traffic Forecasting branch. The report was finalized on March 2009 and contains forecasted daily and peak hour volumes for the I-805, North Corridor. The Year 2030 traffic volumes were developed from the SANDAG Series 11 Transportation Model. The design year 2030 Build Freeway traffic volumes for I-805 North Project are as follows:

**TABLE 5**
**Year 2030 Traffic Volumes***

| SEGMENT | ADT | | AM Peak Hour Volumes | | PM Peak Hour Volumes | |
|---|---|---|---|---|---|---|
| | NB | SB | NB | SB | NB | SB |
| **I-805** | | | | | | |
| Jct Rte 52 to Governor Dr UC | 116,300 | 122,700 | 9,945 | 7,275 | 7,420 | 10,535 |
| Governor Dr UC to Nobel Dr OC | 112,700 | 124,200 | 9,680 | 7,460 | 7,265 | 10,600 |
| Nobel Dr OC to La Jolla Village Dr OC | 100,800 | 108,400 | 8,840 | 6,360 | 6,385 | 9,115 |
| La Jolla Village Dr OC to Mira Mesa Blvd UC | 105,700 | 111,500 | 8,545 | 7,790 | 7,860 | 9,070 |

| HOV/Managed Lanes | | | | | | |
|---|---|---|---|---|---|---|
| **SEGMENT** | **ADT** | | **AM Peak Hour Volumes** | | **PM Peak Hour Volumes** | |
| | **NB** | **SB** | **NB** | **SB** | **NB** | **SB** |
| **I-805** | | | | | | |
| Jct Rte 52 to Governor Dr UC | 27,800 | 24,900 | 2,400 | 1,680 | 1,845 | 2,235 |
| Governor Dr UC to Nobel Dr OC | 29,000 | 19,800 | 2,495 | 1,360 | 1,915 | 1,755 |
| Nobel Dr OC to La Jolla Village Dr OC | 25,000 | 23,000 | 2,100 | 1,680 | 1,760 | 2,025 |
| La Jolla Village Dr OC to Mira Mesa Blvd UC | 18,900 | 16,800 | 1,560 | 1,275 | 1,320 | 1,455 |
| | | | | | | |

*I-805, North Corridor (EA 11-081630)

Proposed modifications on Interstate Route 805 (I-805) to maintain or improve traffic operations from Route 52 (SR-52) to Mira Mesa Boulevard.

## 4. ACCIDENT ANALYSIS

An analysis of accident records was performed along Interstate 805 (I-805) between post miles 23.267 and 28.874, which includes the area between the State Route 52 (SR-52) and Interstate 5 (I-5) junctions. The most recent and complete time period available of the study was from April 01, 2005 to March 31, 2008.

There were a total number of 568 accidents within the project limits of the I-805 Managed Lanes North Project (SR-52 to I-5). The TASAS three-year summary of accidents is as follows:

**TABLE 6**
**TASAS Table B Data**
**(April 01, 2005 to March 31, 2008)**

| SEGMENT | TOTAL No. of Accidents | ACTUAL RATES (per million vehicle miles) | | | AVERAGE RATES (per million vehicle miles) | | |
|---|---|---|---|---|---|---|---|
| | | F [1] | F+I [2] | Total [3] | F [1] | F+I [2] | Total [3] |
| SD 805 (R23.267-R28.874) | 568 | 0.003 | 0.22 | 0.52 | 0.005 | 0.31 | 0.99 |

[1] Fatal

[2] Fatal plus Injuries

[3] All reported accidents (includes Property Damage Only (PDO) Accidents)

The analysis of accident records showed a total of 568 accidents within the segment and study period mentioned above. Of the total accidents reported, 3 were fatal, 236 resulted in injuries, and 329 involved personal damage only. The analysis for the segment showed 3 fatal accidents of which each one involved a fatality for a total of 3 fatalities within the segment and study period. The primary collision factor for the three fatal accidents was the influence of alcohol. The accidents occurred during the early morning hours and outside the AM/PM peak hours.

Further analysis of the TASAS accident data report showed that the majority of the accidents occurred in the afternoon, 9.5% and 11.4%. The data also shows that 91% of the accidents occurred under dry road surface conditions, 75% under clear weather conditions, and 69.9% during daylight. More than 50% of the total accidents were rear

end collision related, 22.5% were cause by an object being hit (i.e. curb, dike or metal beam guardrail), 18.1% were caused by sideswipe, and more than 50% speed related. It is also noted that 41.2% of the accidents occurred in the northbound direction and 59.3% in the southbound direction. The majority of the collisions occurred along the freeway lanes; 50.7% interior lanes, 20.8% left lanes, and 16.2% right lanes. After review of the TASAS accident data report, the accidents primarily indicate a congested freeway within the study area.

## 5. INCREMENTAL IMPROVEMENTS

There are no incremental improvements that would avoid the need for the requested Design Exceptions.

## 6. FUTURE CONSTRUCTION

There is no construction scheduled in the near future to upgrade the nonstandard features proposed in the project.

## 7. PROJECT REVIEWS, CONCURRENCE

| Reviewer | Title | Representing |
|---|---|---|
| Luis Betancourt | Design Coordinator | HQ Division of Design |
| Laura Espinoza | Acting Design Reviewer | HQ Division of Design |
| Alex Kennedy | Traffic Operations Liaison | HQ Traffic Operations |

## 8. ATTACHMENTS

a. Exhibit 1: Location Map
b. Exhibit 2: Key Map of Subsequent Exhibits
c. Exhibit 3(a-b): Reversing Curves on the La Jolla Village Drive Offramps
d. Exhibit 4(a-b): Divergence Angle on Freeway Exits
e. Exhibit 5: Design Speed on Freeway Connector
f. Exhibit 6: Maximum Profile Grade On Freeway Connector
g. Exhibit 7(a-b): Embankment (Fill) Side Slopes Steeper Than 4:1
h. Exhibit 8(a-b): Compound Curves

**11-SD-805**
**I-805 PM 23.3/27.7**
**SR-52 PM 3.5/4.1**
**EA: 11-081630**

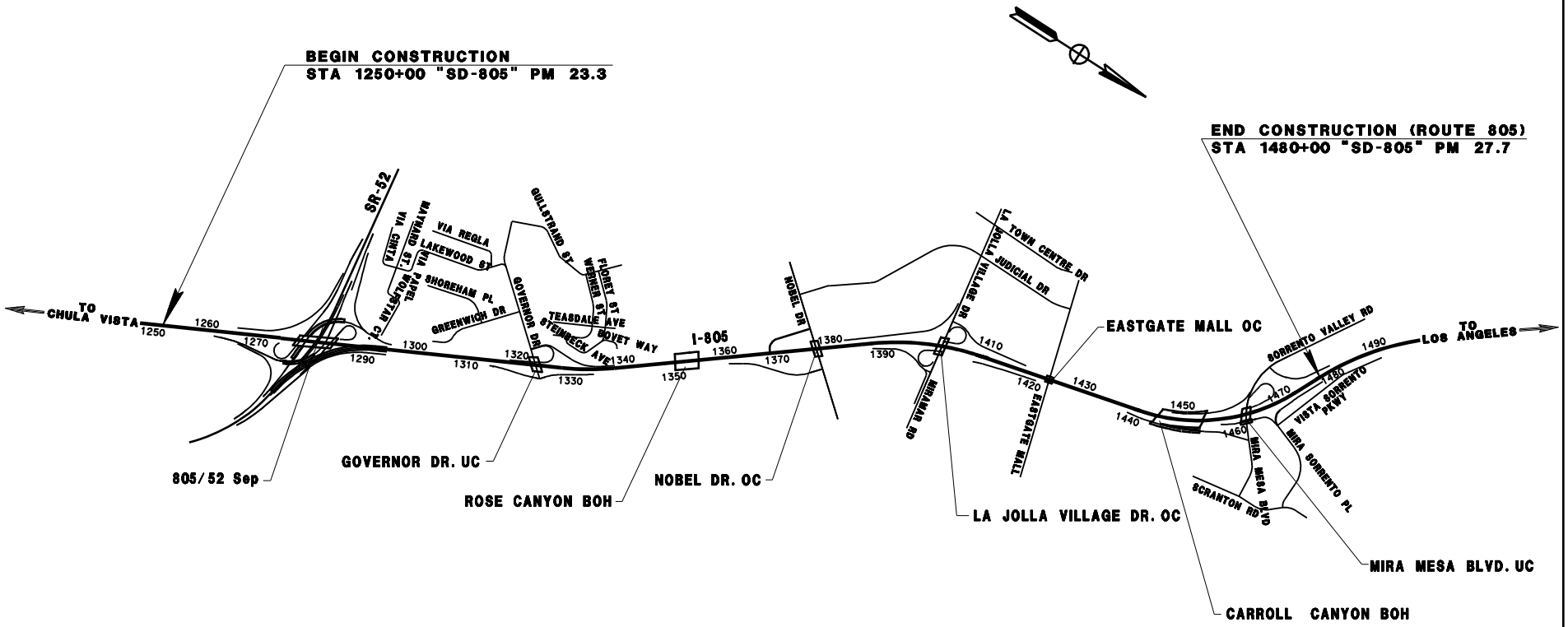



**EXHIBIT 1**
NO SCALE

**SD-11-805**
**I-805 MANAGED LANES**
**NORTH PROJECT**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 05-AUG-2009
TIME PLOTTED => 11:32

BORDER LAST REVISED 4/11/2008
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
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DGN FILE => EXHIBIT_1.dgn
CU 00000
EA 000000

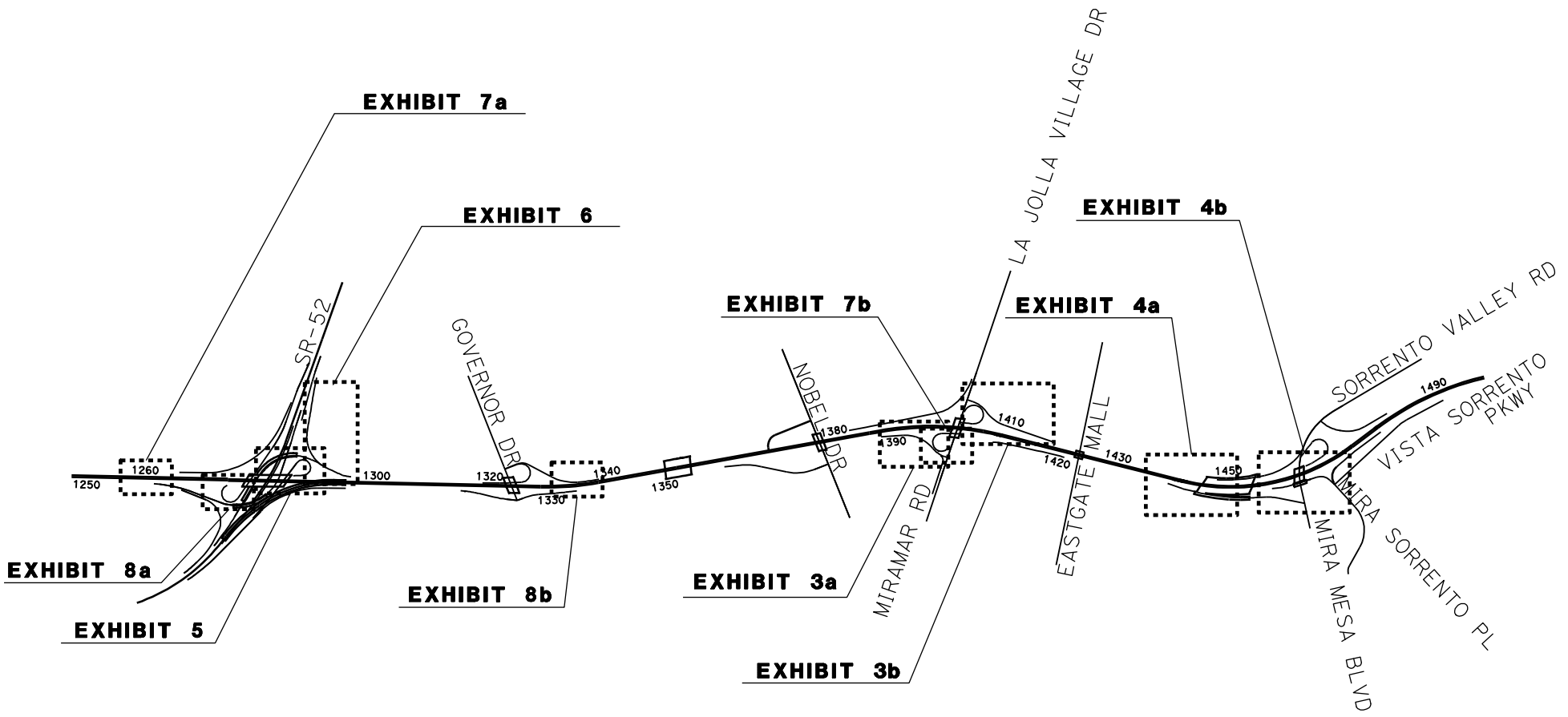
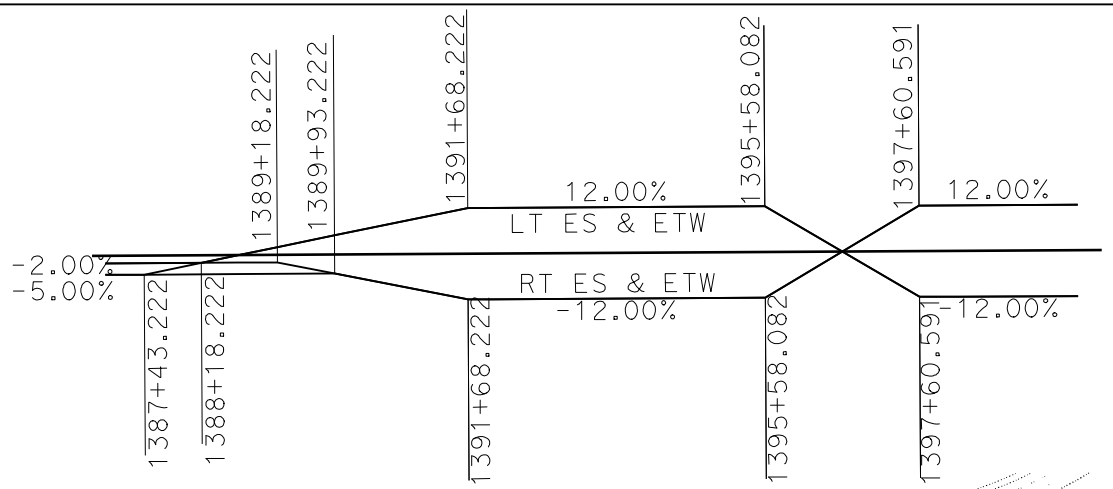
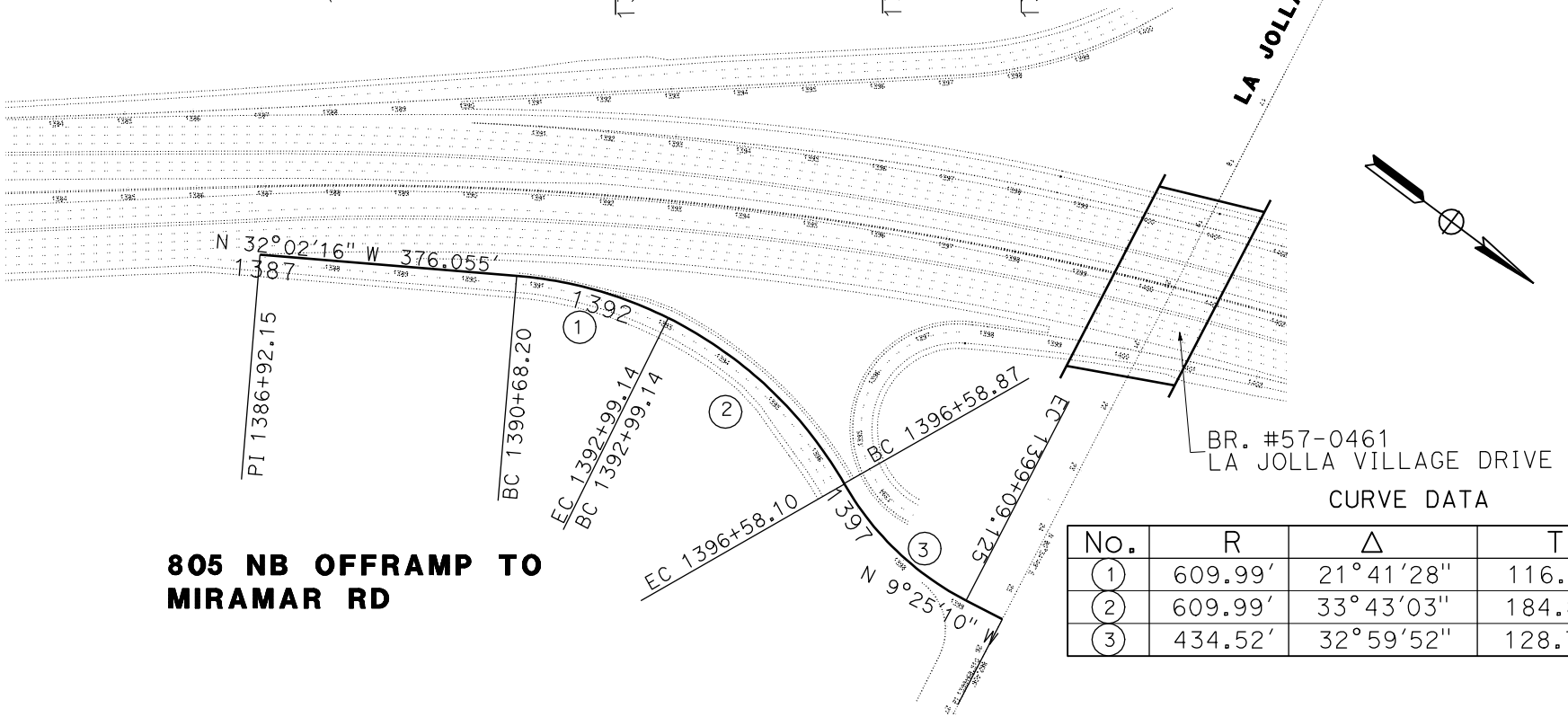



**EXHIBIT 2**

NO SCALE

**EXHIBIT KEY MAP**



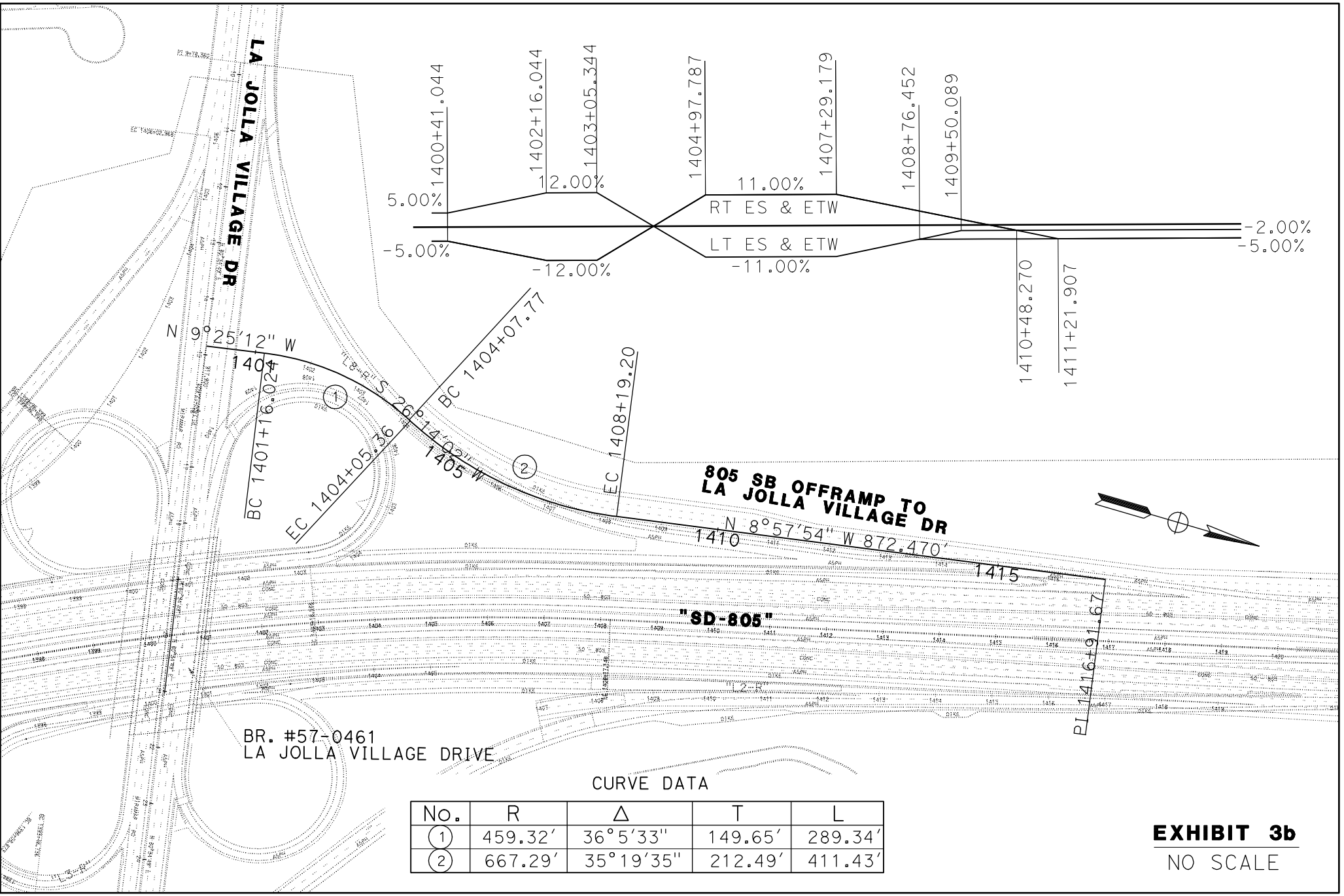

**805 NB OFFRAMP TO MIRAMAR RD**

CURVE DATA

| No. | R | Δ | T | L |
|---|---|---|---|---|
| 1 | 609.99′ | 21°41′28" | 116.87′ | 230.93′ |
| 2 | 609.99′ | 33°43′03" | 184.85′ | 358.97′ |
| 3 | 434.52′ | 32°59′52" | 128.70′ | 250.25′ |

**EXHIBIT 3a**

NO SCALE




CURVE DATA

| No. | R | Δ | T | L |
|---|---|---|---|---|
| (1) | 459.32′ | 36°5′33" | 149.65′ | 289.34′ |
| (2) | 667.29′ | 35°19′35" | 212.49′ | 411.43′ |

**EXHIBIT 3b**

NO SCALE

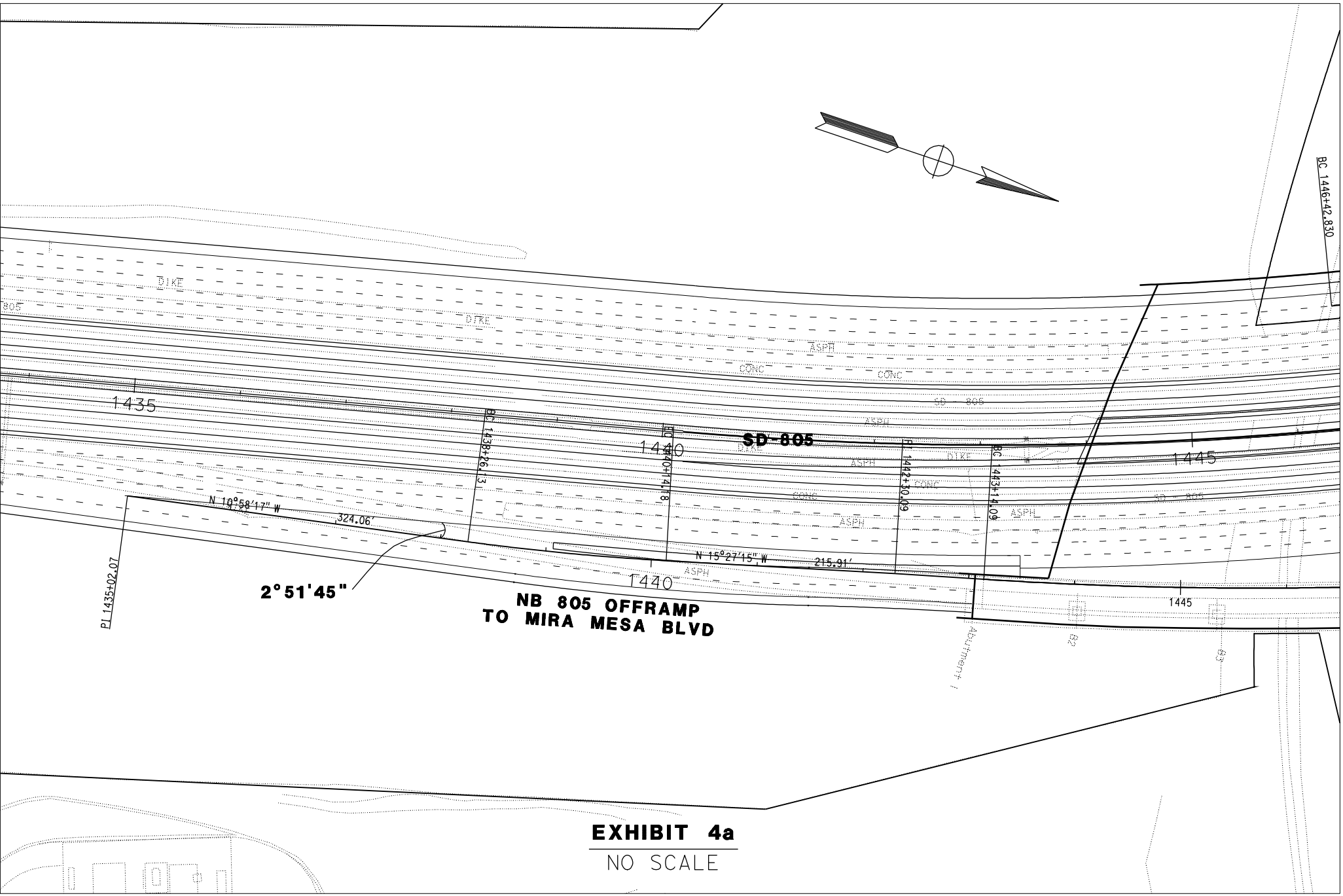



**EXHIBIT 4a**

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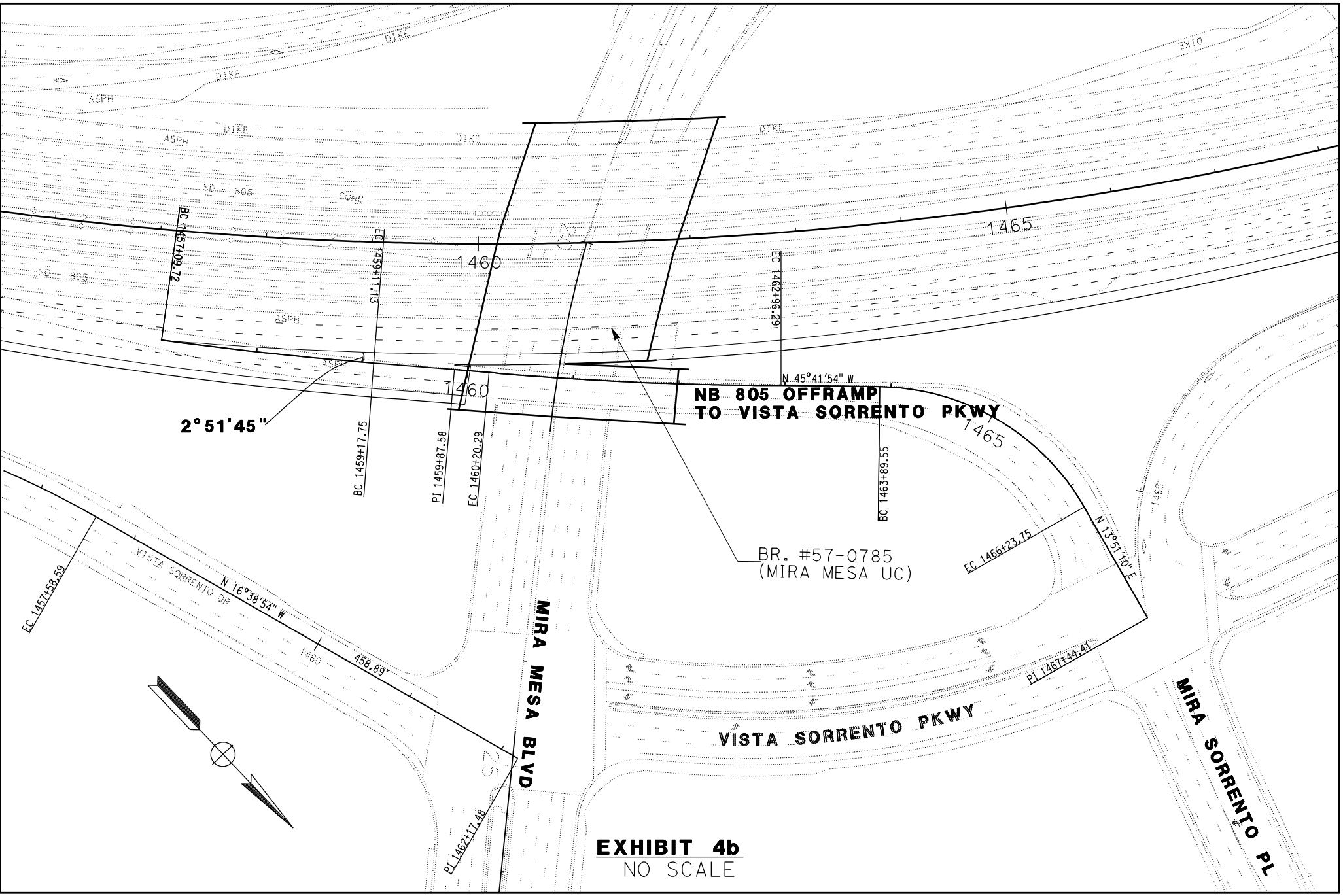


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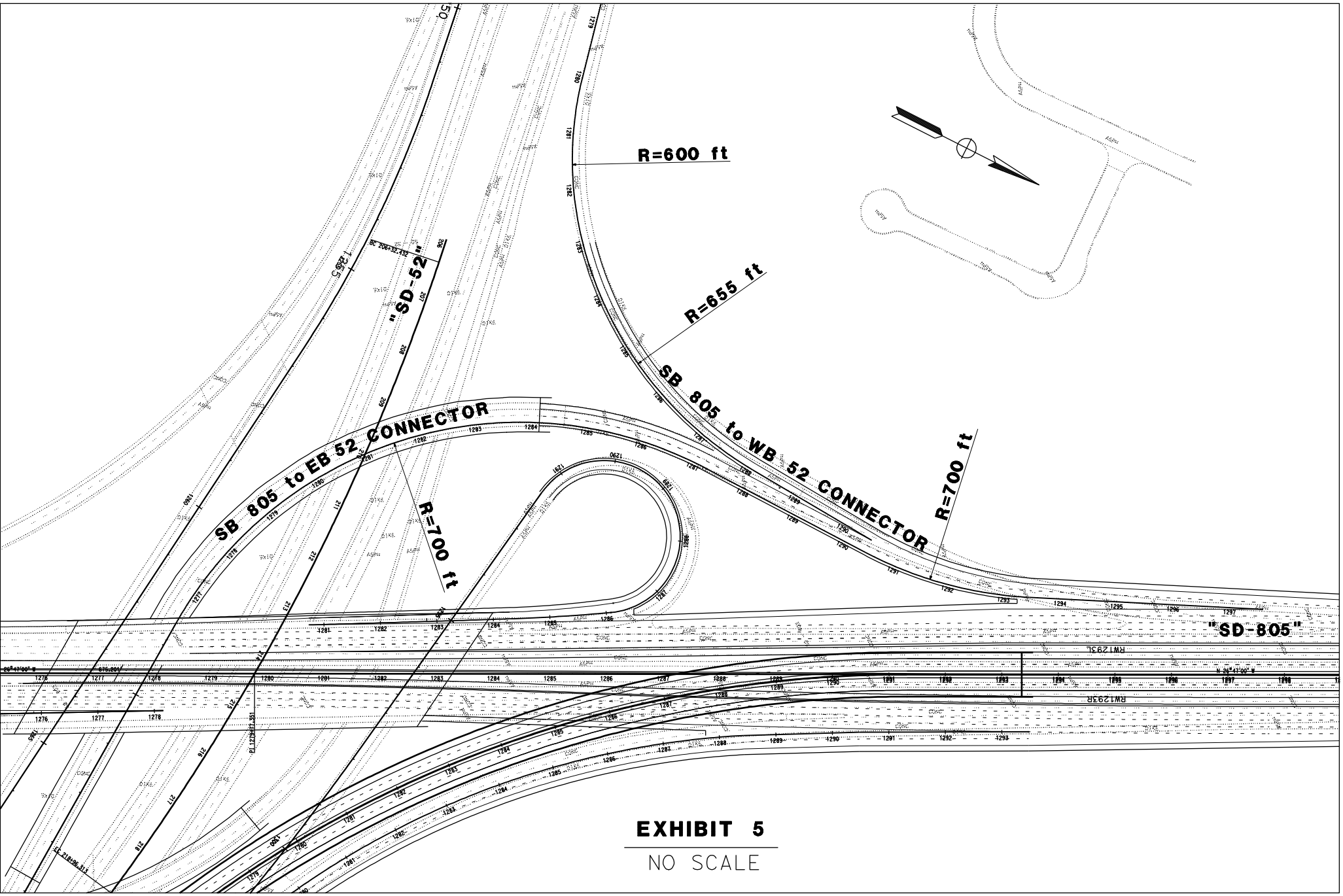


**EXHIBIT 5**

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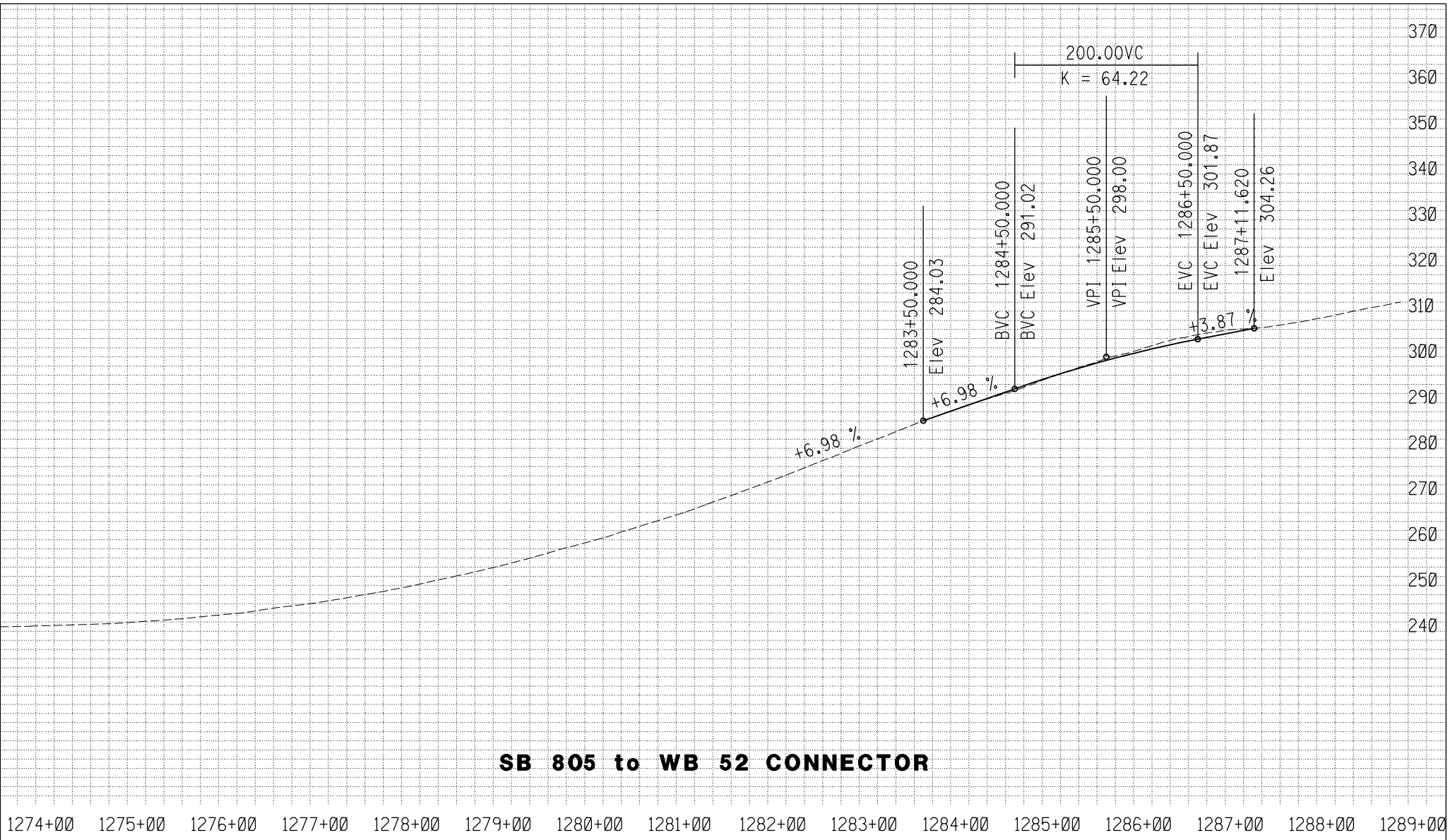


**SB 805 to WB 52 CONNECTOR**

**EXHIBIT 6**

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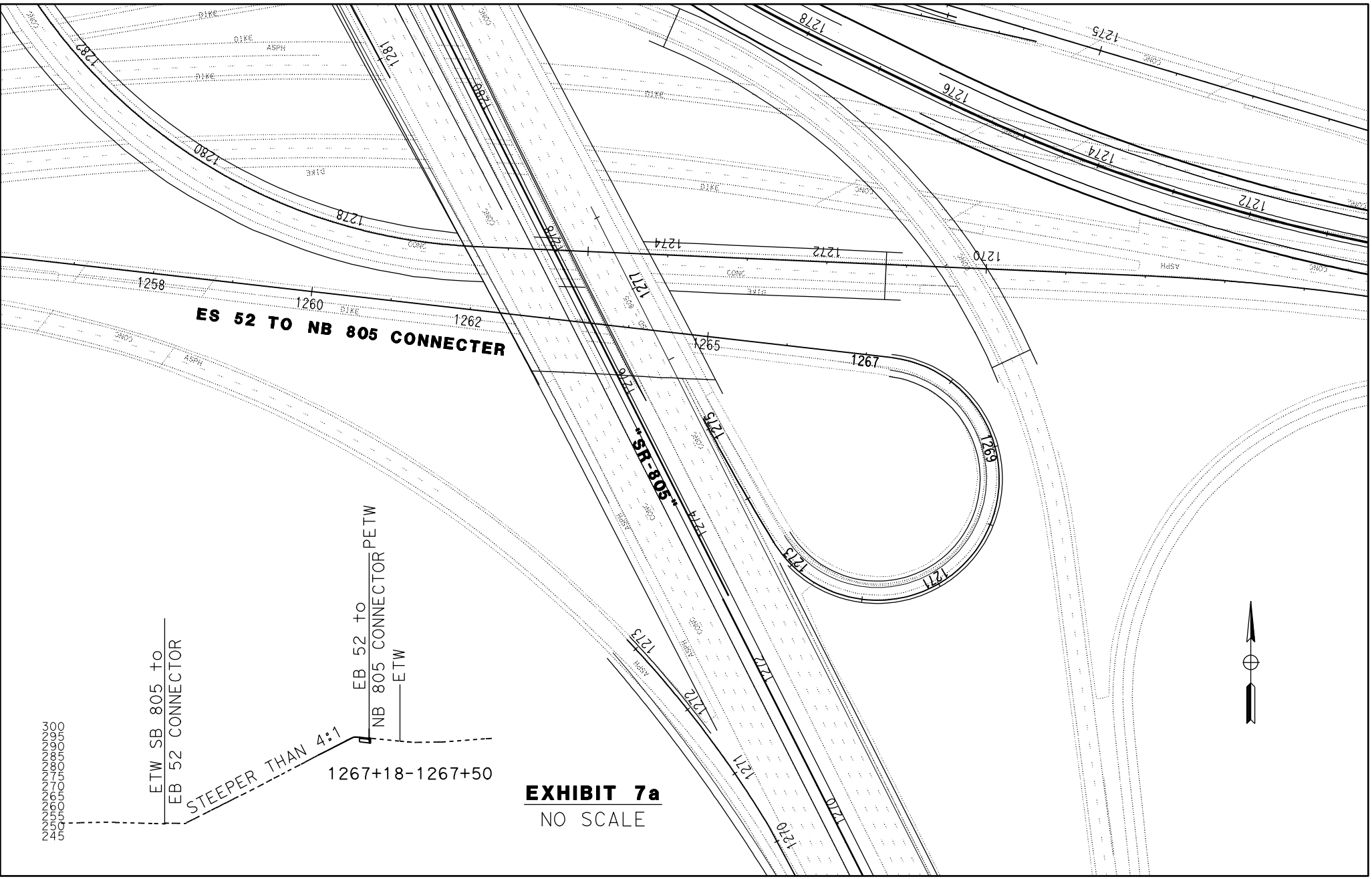


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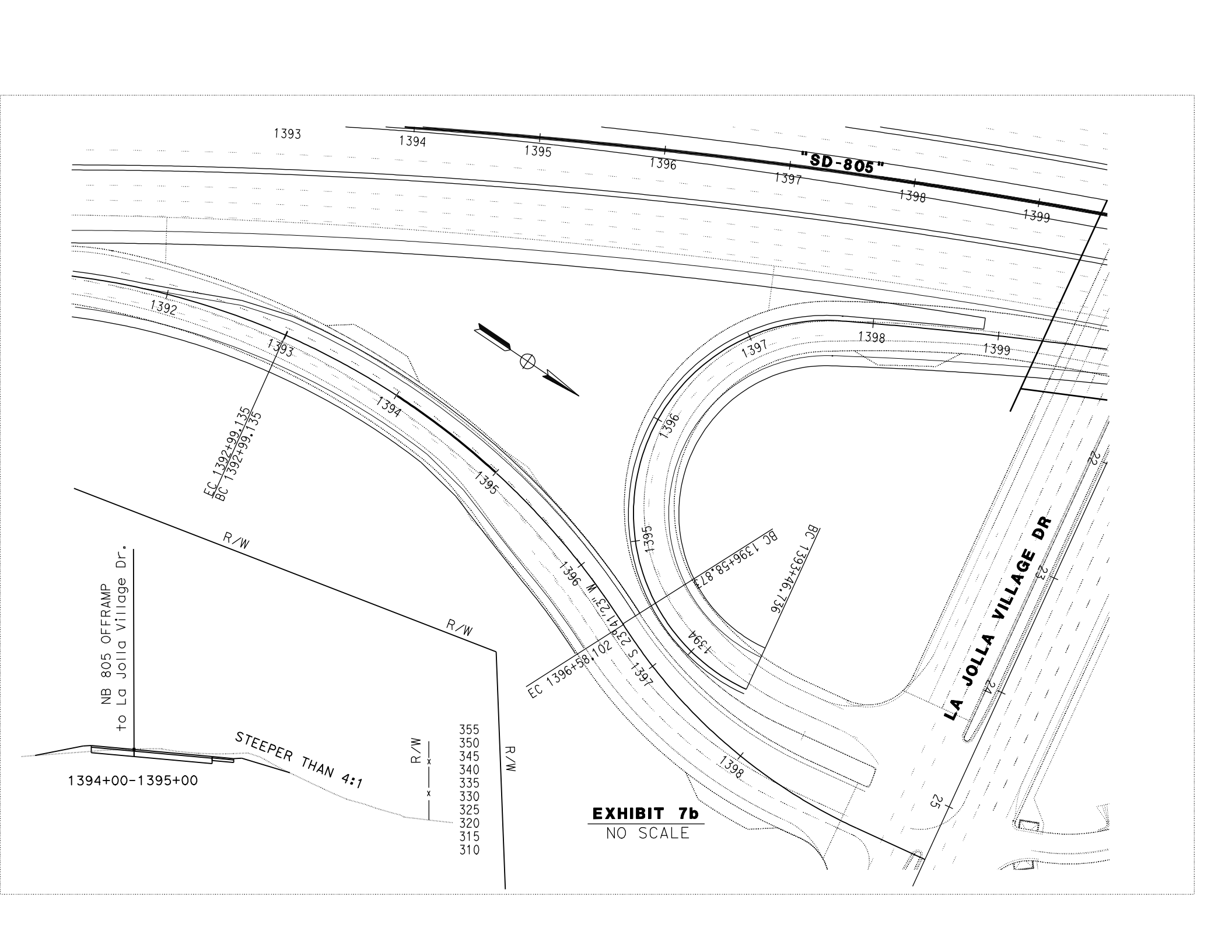
"SD-805"
LA JOLLA VILLAGE DR
NB 805 OFFRAMP
to La Jolla Village Dr.
STEEPER THAN 4:1
1394+00-1395+00
R/W
EC 1392+99.135
BC 1392+99.135
EC 1396+58.102
BC 1396+58.873
BC 1393+46.736
1396 M 23°41'23" W
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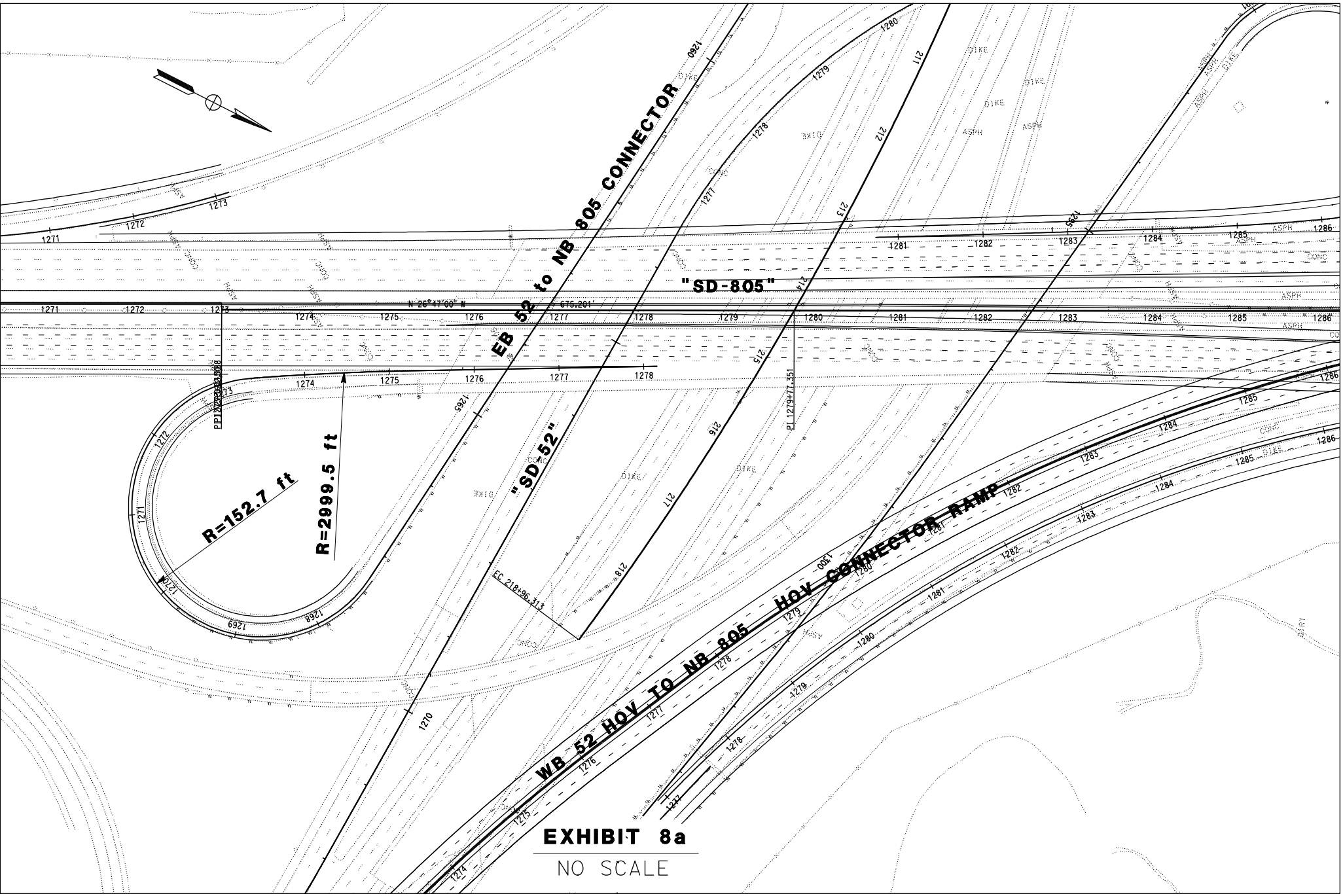
EXHIBIT 7b
NO SCALE

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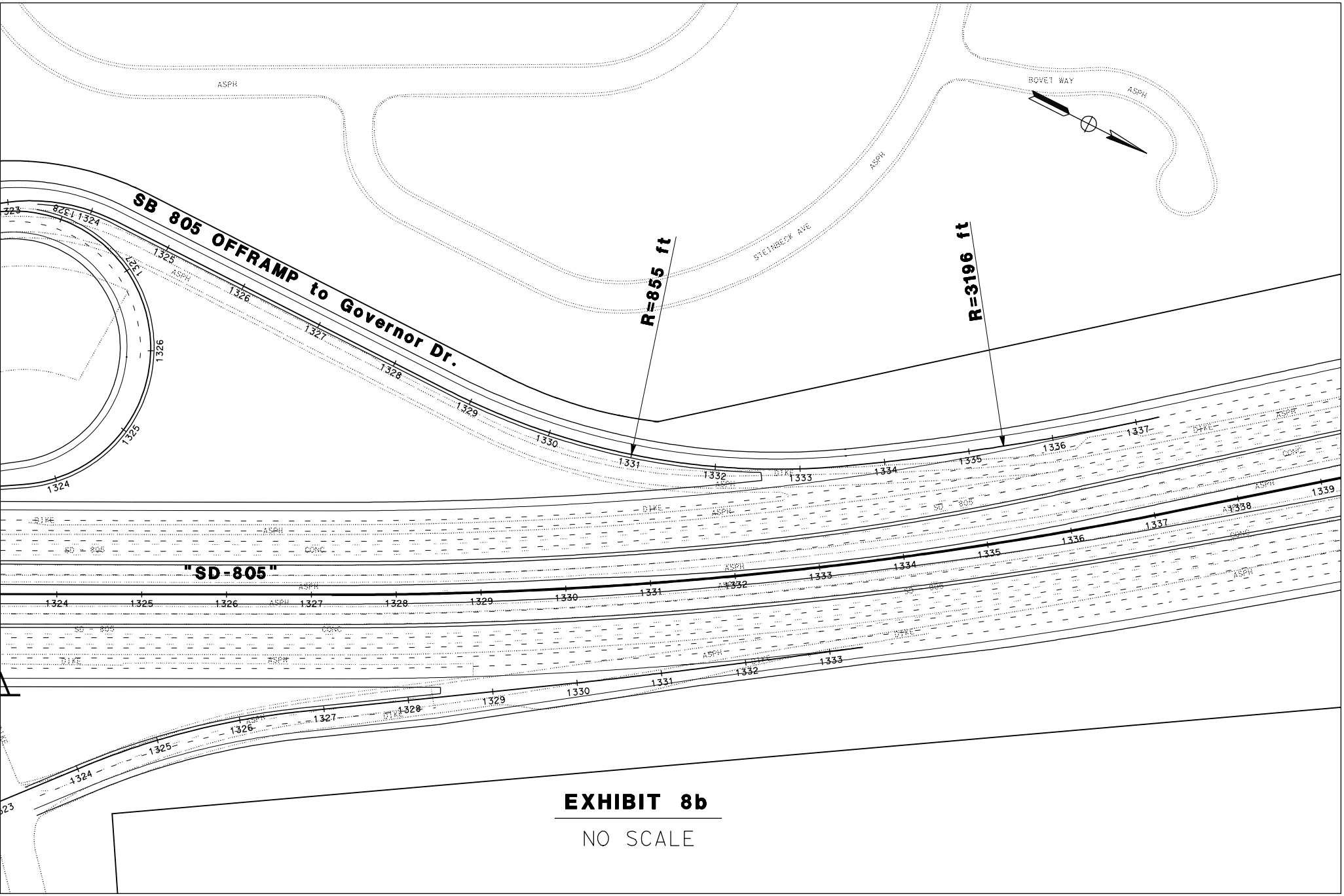


**EXHIBIT 8b**

NO SCALE

# EXHIBIT 14-A

Landscape and Irrigation Design Guidelines

# EXHIBIT 14-A

# District 11 Landscape and Irrigation Design Guidelines

## Highway Planting

### *Design Guidelines*

### *Corridor Theme, (Diegan Coastal Sage Scrub Vegetation*

Corridor theme consists primarily of replacement plantings on freeway slopes that transition from edges of roadway to the edge of the Caltrans right of way. The intent is to provide a select mix of California native shrub planted on all exposed slopes. These container plants will be over seeded with a California native hydroseed mix to assist with erosion control and establishment of slopes. Trees will generally be planted on slopes to provide visual interest and vertical elements along the corridor. The corridor theme will include the following:

- Native trees such as oaks and pines will be planted near the middle of cut slopes at least 30 feet from traveled way in grouped clusters. Trees will not be placed near the tops of cut slopes where vertical forms will diminish easterly views from neighborhoods and commercial properties,
- Native shrubs will be used on all disturbed slopes adjacent to natural areas. Native landscape plantings will be provided on short slopes and at the base of walls at either side of wall structures. Native shrub plantings will be used in these locations,
- Wildflower groundcover will be planted intermittently along the edges of the freeway corridor to add seasonal accent color and for compliance with Federal funding requirements,
- Drought tolerant ornamental trees, such as eucalyptus will be planted at the vicinity of the structures to help visually diminish the scale,
- Riparian tree species such as Sycamores will be planted where possible in the lowest areas to enhance the low valleys that cross the project and provide for a greater diversity of native tree species.

### *Landscape Themes*

At interchanges, themed landscape solutions will be used to transition to the intersecting roadways. Sloped areas along the on and off ramps or loops will be comprised of drought tolerant and/or native trees, shrubs and groundcover to provide accent and enhance the entry to the community. Trees and landscaping can serve as gateways to the local community, giving travelers a sense of arrival.

### *Governor Drive Interchange*

The use of eucalyptus trees at this intersection will provide an identifiable entry statement for the neighborhood. A mixed palette of drought-tolerant shrub and groundcover varieties will also be used within these planting areas to contrast with the trees and unify the interchange theme.

### *Sorrento Valley Road/Mira Mesa Boulevard Interchange*

The interchange will consist of Torrey pines, Sycamores, and Oak trees. The Sycamores will be located at the lowest elevations near edges of proposed bio-swales and detention basins. At interchanges themed landscape solutions will be used to transition to the intersecting roadways. Sloped areas along the on and off ramps or loops will be comprised of drought tolerant and/or native trees, shrubs and groundcovers to provide

accent and enhance the entry to the community. Trees and landscaping can serve as gateway to the local community giving travelers a sense of arrival.

***Rose Canyon and Soledad Canyon***

Cut slopes shall be revegetated with native upland species such as Oaks (Quercus agrifolia), Laurel sumac (Malosma laurina), Lemonade berry (Rhus integrifolia), Toyon (Heternmeles arbutifolia) and Bush sunflower (Encelia californica). Fill slopes and areas adjacent to wetlands and drainages shall be revegetated with native upland species and native wetland species. Upland trees should be planted at midslope. Riparian trees such as Western Cottonwood (Populus fremontii), Western Sycamore (Platanus racemosa) and Western Elderberry (Sambucus Mexicana) can be planted at lower elevations near toe of slope.

Permanent erosion control at Rose Canyon and Soledad Canyon to consist of plantings overseeded by a permanent PSFM or BFM erosion control hydroseed mix of native upland species.

***Pesticides***

Pesticides used to control weeds shall conform to the provisions of Section 20-4.026, "Pesticides," of the Standard Specifications. Except as otherwise provided, pesticide use shall be limited to the following materials:

Diquat

Glyphosate

Sethoxydim

Glyphosate shall be used to kill stolon type weeds.

If the Contractor elects to request the use of other pesticides on this project, the request shall be submitted, in writing to the Department not less than 15 days prior to the intended use of the other pesticides. Except for the pesticides listed above, no pesticides shall be used or applied without prior written approval of the Department.

Pesticides shall not be applied within the plant basins. Pesticides shall not be applied in a manner that allows the pesticides to come in contact with the foliage and woody parts of the plants.

***Weed Germination***

After the irrigation systems have been installed and the plant holes have been excavated and backfilled, and cultivation has been completed, no further planting work shall be done for a period of 21 days, except the soil shall be kept sufficiently moist to germinate weeds. Weeds that germinate shall be killed.

## *Irrigation Systems*

***Design Guidelines***

1. Use District 11 standard sprinkler schedule.
2. All irrigation systems shall be below-grade, automatically controlled.
3. Center feed each sprinkler system.
4. Spray heads on the same lateral circuit shall be balanced for matched precipitation rates.
5. Use largest radius head for the space.
6. Spray systems shall utilize rotor type heads. Limit the use of B (spray) heads. Drip systems are not recommended.
7. Separate half heads and full heads on their own valves.

8. Layour sprinkler systems along contours (a system on bottom of slope, a system mid slope and a system on the top).
9. Eliminate or minimize the use of shrub sprays – only use when absolutely necessary.
10. Use pop-up sprinklers on the edge in flat areas (not on a slope) and do not use when behind guardrail or barriers.
11. Use concrete collars with pop-up sprinklers.
12. Use either internal or external check valves.
13. Use bubbler systems with underground bubblers for all trees and vines.
14. Use District C-2 modified sprinklers (underground) detail for all bubblers.
15. Simplify the delineation for bubblers. Show the last head on the long run lateral line and heads at the ends of moderate length side laterals.
16. Try to balance the size of the systems so the same size valve is used in most cases.
17. Manifold all valves with a gate valve; up to maximum of 5 valves in manifold.
18. Try to locate valves near maintenance vehicle pullouts (MVP's).
19. Locate the manifold at the existing side of the MVP's
20. Controller choices:
    1. RICS – Rain Bird Maxicom (see Maxicom design checklist)
    2. ET based controller
    3. Upgradeable to RICS – Rain Bird ESP-MC.
21. Include rain sensor on all non-RICS controllers **Include rain sensor on rics too?????**
22. Locate controller near POC in an accessible and safe location.
23. Use walk gates to controllers for access if necessary.
24. Gate valves just after Backflow Preventer (BFP) or if there is a flow sensor after flow sensor.
25. Use irrigation sleeves at all locations where irrigation lines cross under maintenance access paths, sidewalks, etc. Use irrigation crossovers where irrigation lines cross under paved surfaces such as bike paths and maintenance access roads.
26. Go around walls wherever possible. Avoid going through walls.
27. Include isolation gate valves when there is a long run of mainline.
28. Gate valve before (upstream) of each crossover.
29. Sprinklers shall incorporate flow shutoff device on risers to automatically and instantly stop the flow of water from a riser when the riser is broken on the downstream side of the device.
30. Minimize freeway crossing of mainline. Provide a water source (POC) on each side of the freeway. Provide crossovers under slope paving.

***Caltrans Standard Details:***

- H3 – Basin Type II
- H4 – Vine Planting, Tree Planting

- H5 – Riser Type I
- H6 – Swing I, Swing I(bubblers), Sprinkler Protector I
- H7 – Valve, Valve Box, Valve Box ID (no hinged lids)

District 11 Standard Details:

- Thrust Block details
- Palm Tree Planting
- Sprinkler Type C-2 Mod Installations
- Backflow Preventer Assembly in Enclosure (BPAE)
- Flow Sensor (if needed)
- Irrigation Crossover
- Extend Irrigation Crossover
- Combination Air Release Valve
- Recycled Water Connection Assembly

***Standard Notes to be shown on Irrigation Legend***:

1. All lateral pipe not labeled shall be 1 inch or as shown on pipe sizing charts,
2. All mainline pipe which has a change in direction greater than 90 degrees shall have (20) 45 degree couplings.
3. All sprinkler heads, valves, and mainline shown near MVP locations are to be installed outside of the paved MVP area. Valves to be installed at the exiting end of the MVP.
4. Pull one additional CNC wire from each controller to the last valve box at each valve manifold. (For future use)

***Details to include with project as required:***

- Thrust Block details
- Palm Tree Planting
- Sprinkler Type C-2 Mod Installation
- Flow Sensor (if needed)
- Backflow Preventer Assembly in Enclosure (BPAE)
- Remote Control Valve (if needed) should be on leg of Backflow Preventer
- Combination Air Release Valve
- Recycled Water Connection Assembly

***Recycled Water:***

- Water Recycled Act of 2006 requires pipe be put in for recycled water (purple) if recycled water will become available in the next 10 years,

- If recycled water use is proposed, refer to the Caltrans Plan Check Guidelines for Recycled Water, (Landscape Architectural Standards Manual – "Whenever available, use non-potable water sources.")
- Meet requirements of the County of San Diego Recycled Water Guidelines – Department of Environmental Health including plan submittal and plan check fee
- Water Provider Requirements for Recycled Water Use.
- Meet City of San Diego Requirements for Recycled Water Use including plan submittal and plan check fee. City requires detectable warning tape, test stations and higher psi testing for mainline.

***Irrigation Equipment:***

Materials containing asbestos fibers shall not be used.

- Remote Control Valve (RCV) – Rain Bird Scrubber valve
- Remote Control Valve (Master) – Brass Rain Bird EFB-CP, with manual bleed capability. The remote control valve (master) will be a part of the Remote Irrigation Control System (RICS)
- Gear driven heads- Hunter or Rain Bird 5000 series
- Bubblers – Rain Bird 1400 series
- Shrub Sprays – Rain Bird 1800 series
- Sprinkler (Type C-2 MOD) Bubblers shall be installed in a drainpipe of rigid, perforated, polyvinyl chloride (PVC) pipe, drain grate, and pea gravel for filling the drainpipe,
- Valve Boxes: Covers for concrete valve boxes shall be glass fiber reinforced plastic, plastics, or concrete. Covers for plastic valve boxes shall be glass fiber reinforced plastic or plastic. Plastic covers shall be identified by branding. Concrete or glass fiber reinforced plastic covers shall be identified by plate plastic labels.
- Gate Valves: Gate valves smaller than 3 inches in size, shall b furnished with a cross –handle. Gate valves, 3 inches and larger in size, shall be furnished with a square nut and 3 long shank keys that will operate the valve. Gate valves, 3 inches and larger in size, shall be flanges type gate valves. Pipe flanges used to connect plastic or metal pipe to gate valves shall be metal. Gate valves shall have a solid bronze or brass wedges
- Electric Remote Control Valves: Valves shall be brass construction. Valves shall be angle pattern (bottom inlet) or straight pattern (side inlet). Valves shall not have external tubing. Electric remote control valves shall have manual external and internal bleed capability. Valve solenoids shall be on piece with plunger and spring secured to the solenoid. Valves shall fail in the closed position if the diaphragm is damaged. Irrigation crossovers shall be 10" dia conduit with a 4" water line crossover and a 4" sprinkler control crossover. Conduits placed in open trenches shall be corrugated high density polyethylene (CHDPE) pipe. Conduits may be installed under existing paving by jacking or drilling or by the directional bore method. Conduits installed by the directional bore method shall be polyvinyl-chloride (PVC) plastic pipe Schedule 40. Fittings for water line crossovers shall be Schedule 80.
- Irrigation crossovers shall be 10" dia conduit with a 4" water line crossover and a 4" sprinkler control crossover. Conduits placed in open trenches shall be corrugated high density polyethylene (CHDPE) pipe. Conduits may be installed under existing paving by jacking or drilling or by the directional bore method. Conduits installed by the directional bore method shall be polyvinyl-chloride (PVC) plastic pipe Schedule 40. Fittings for water line crossovers shall be Schedule 80.

- Irrigation sleeves shall by polyvinyl chloride (PVC) plastic pipe. Irrigation sleeves less than 6 inches in diameter shall have a pressure rating of (PR) 315. Irrigation sleeves 6 inches or larger in diameter shall be Schedule 40. Irrigation sleeves shall be installed not less than 18" below finish grade measured from the top of the sleeve. Sleeves shall extend 6" beyond paving. The ends of sleeves shall be capped until used.
- Evapotranspiration Manager – Rain Bird Model No. ETMI, with a remote antenna kit, Model No. ETMANT.
- ET Manager shall be installed if controllers are not part of a Maxicom system.
- Flow sensors – Data Industrial Model No. FS200P. Flow sensors will be a part of the Remote Irrigation Control System (RICS). Flow sensor cable and two low voltage conductors shall be installed in conduit from the flow sensor box through the remote control valve (master) to the irrigation controller.
- Flow sensor cable shall be UL listed as Type TC and meet requirements of ICEA/NEMA, 600-V control cable, 90 degree C and meet the District 11 specifications for flow sensor cable.
- Conductors and pull boxes shall meet District 11 specifications.
- Irrigation controller enclosure cabinets shall be fabricated of stainless steel, shall be ventilated, and have removable-core mortise cam cylinder door locks that receives the State's lock care. Door handles shall have provisions for padlocking in the latched position. Mounting panels shall be fabricated of stainless steel metal sheets with a minimum thickness of 1/8". Inside of the doors will be for storage for irrigation plans.
- Recycled Water Connection Assembly shall consist of a combination air release valve, ball valve basket strainer, pressure reducing valve, remote control valve (master) (if required), pipe, fittings and an irrigation assembly enclosure as shown in the District Standard detail. Assembly shall be painted with a minimum of 2 applications of commercial quality enamel purple paint per District specifications. Enclosure does not require painting.
- Basket strainer body and cover shall be bronze, shall have a removable basket, and a flush valve. Basket shall be stainless steel with a solid bottom, integral handle for removal, and a filtration equivalent of 80 meshes. Basket strainer inlet and outlet shall be flanged connections.
- Combination air release valve (CARV) shall be an automatic, float operated valve and shall function both as an air release and air/vacuum valve. The single body dual purpose combination valve shall have a pressure rating of not less than 150 PSI. The valve cover shall be bolted to the valve body and sealed with a flat gasket. Resilient seats shall be replaceable and provide drop tight shut off to the full pressure rating. The valve body shall be threaded with NPT inlets and outlets and have two additional NPT connections for the addition of gages, testing and draining. A fully ported brass ball valve shall be provided to isolate the combination air valve from the piping system. The CARV body and cover shall be ASTM A126 Class B cast iron. The float, guide shafts, bushings, and linkage mechanism shall be stainless steel. Resilient seats shall be Buna-N. CARVs which are not part of a recycled water assembly unit shall be installed with a ball valve in a valve box with wire mesh and gravel or crushed rock.
- Pressure Reducing Valve shall consist of pressure reducing valves, pressure gages, fittings and pipe. Valves shall be bronze or cast iron spring diaphragm type, hydraulically operated and pilot controlled with flanged or threaded pipe connections, no internal filter screens, and an adjustable discharge pressure range. Pressure gage shall be hermetically sealed with neoprene and have watertight polycarbonate cases and covers with polycarbonate windows. Gages shall be 2" in diameter, calibrated from 0psi-100psi. Internal gage shall be brass and phosphor bronze.

- Copper pipe shall be seamless. Type K hard drawn tubing. Copper pipe supply lines shall be installed between water meters and backflow preventer assemblies.
- Brass pipe and fittings shall be seamless, Red Brass.
- Plastic pipe supply lines shall be polyvinyl chloride (PVC) 1120 or 1220 pressure rated pipe with the minimum pressure rating (PR) shown on the plans. (SCHEDULE 40??) Plastic pipe supply lines (main) must have a minimum cover of 1.5 feet.
- Recycled Water Supply Lines shall be purple colored polyvinyl chloride PVC Schedule 40 and have a permanent warning message to meet DEH and water purveyer requirements. Detectable Warning Tape shall mark location of pressurized recycled water main supply lines per City of San Diego requirements. Detectable warning tape shall be placed in the trench backfill 1-foot above the pipe, following the centerline and running continuously for the entire length of pipe. City of San Diego has special testing requirements prior to backfill.
- Plastic pipe supply lines less than 3" or larger in diameter on the supply side of control valves shall be the rubber ring gasket type, except when pressure rating (PR) 315 plastic pipe supply line is required.
- Plastic pipe supply lines less than 3" in diameter shall have solvent cemented type joints. Primers shall be used on the solvent cemented type joints.
- Fittings for plastic pipe supply lines with a pressure rating (PR) of 315 shall be Schedule 80,
- Thrust blocks shall be installed on the main supply line at all changes in direction and terminus runs,
- Water meters for the irrigation systems will be furnished and installed by the serving utility. The Contractor shall make the arrangements and pay the costs and fees required by the serving utility. The Contractor shall make the arrangements for furnishing and applying water until the water meters have been installed by the serving utility.
- Backflow Preventer Assemblies: The "List of Approved Backflow Prevention Assemblies" is available to Foundation Members. Membership information to join the USC Foundation is available at: Backflow preventer assemblies shall be painted with a minimum of 2 applications of commercial quality enamel paint. Backflow preventer assemblies shall be installed in enclosures.
- Irrigation Equipment Enclosures: Shall be installed over recycled water connection assemblies, backflow preventers and master valve assemblies on a Portland cement concrete pad. Enclosures shall be fabricated of structural steel angles and flattened expanded metal. Expanded metal for sides, ends and top panels shall be fabricated from 9-page minimum thickness, sheet steel. The flattened expanded metal openings shall be approximately ¾ inch x 1-3/4 inch in size. Lock-guard shall be made of a minimum thickness of 3/16-inch cold rolled steel. Enclosures shall be galvanized, after fabrication and painted by the manufacturer with one application of a commercial quality pre-treatment, vinyl wash primer and a minimum of one application of a commercial quality, exterior enamel for metal OR All parts of the backflow preventer assembly enclosure, including hold down assemblies, may be constructed of powder-coated stainless steel instead.

# EXHIBIT 15-A

I-805 North Phase I Visual Quality Manual

# Exhibit 15-A: I-805 North Phase 1 Visual Quality Manual

**Specific Structure Architectural Treatment Requirements**

If there is a conflict between architectural treatment shown on the Structure APS and these specific requirements, the latter governs.

***ROSE CANYON BRIDGE OVERHEAD (Widen), Bridge No. 57-0760L/R***

***Architectural treatment***

- Column pier surface will be concrete and the shape and finish will be consistent with the existing column design.
- Stain shall be applied to the exterior surface of isolation casings at columns to produce a dark brown color with a matte finish. (See Stain Galvanized Surfaces below)
- If seismic retrofit work is required for existing columns, then the exposed column pier surface will be colored to match new columns. Column shape shall be visually compatible with new column shape.

***Stain Galvanized Surfaces***

- Stain shall be applied to the exterior surface of isolation casings at columns to produce a dark brown color with a matte finish. The stain is to be a clear solution of soft buffered organic acids that accelerates the oxidization process without compromising the protective qualities of the galvanized surfacing. No pigment based colorants should be added to achieve the desired color. The stain must react with the galvanized surface over a period of 5-10 days to produce a dark brown color with a matte finish. The stain must be resistant to fading in the sun.
- Mock ups: A test panel at least 4' x 4' in size shall be successfully completed at a location approved by the Department before beginning work on staining galvanized surfaces to demonstrate the color, including curing time and shall be submitted to the Department for written approval. The test panel approved by the Department shall be used as the standard of comparison in determining acceptability of galvanized surface stain.

***CARROLL CANYON DAR BRIDGE OVERHEAD, Bridge No. 57-(NEW)***

***Architectural treatment:***

- Bridge columns to be concrete and the shape and finish shall match the existing column design of the Carroll Canyon Road Bridge (Bridge No. 57C0786) currently under construction by project Contract No. 11-2T0404
- Stain shall be applied to the exterior surface of isolation casings at columns to produce a dark brown color with a matte finish. (See Stain Galvanized Surfaces above)
- Avoid impacts to existing special-design tubular pipe hand railing
- If a raised median is constructed, then the median shall be paved with rock blanket to match the specifications and detail for Carroll Canyon Road Bridge (Bridge No. 57C0786) – including rock size/color and colored mortar.

***SOLEDAD CANYON BRIDGE OVERHEAD (Widen), Bridge No. 57-0787l\L/R***

***Architectural treatment:***

- Bridge columns to be concrete and the shape and finish shall match the existing column design of the SOLEDAD CANYON BR & OH (Bridge No. 5787R/L)

- If isolation casings are required, then stain shall be applied to the exterior surface of isolation casings at columns to produce a dark brown color with a matte finish. (See Stain Galvanized Surfaces above)
- If seismic retrofit work is required for existing columns, then the exposed column pier surface will be colored to match new columns. Column shape shall be visually compatible with new column shape.
- Concrete barrier at median and on edge of deck to be uncolored

***CARROLL CANYON DIRECT ACCESS WALLS, Bridge No. 57-NEW***

The wall architectural treatment and detailing shall be consistent with those being constructed for the Carroll Canyon (DAR) Retaining Walls (Bridge No. 57E0075/76) under Contract No. 11-2T0404.

***Architectural treatment:***

- Architectural treatment and detailing will be consistent with those being constructed for the Carroll Canyon (DAR) Retaining Walls (Bridge No. 57E0075/76) for project Contract No. 11-2T0404 and the proposed features of the Environmental Document. See attached Carroll Canyon (DAR) Retaining Wall Plans & Elevations and Carroll Canyon (DAR) Visual Sims.
- Architectural treatment and detailing constructed by the Carroll Canyon DAR Contract No. 11-2T0404 shall serve as a referee sample.
- The wall terminus between the Carroll Canyon Road Bridge and the Soledad Canyon Bridge shall resemble the design of the wall profile and architectural treatment and detailing of the Carroll Canyon (DAR) Retaining Walls (Bridge No. 57E0075/76). See Architectural Details "DAR 1" Part Mirror Elevation and "DAR 4" Part Front Elevation and "DAR 4" Mirror Part Back Elevation.
- Retaining walls shall be enhanced with architectural detailing including wall pylons, concrete bracket, concrete shelf, grooves, corner transitions, pilasters, architectural caps, wall caps, weathering steel plates and colored surface textures to reduce their apparent scale. Walls and vertical barriers shall be integrally colored. Retaining walls shall have a variable sand blast texture, random flute texture, wall cap, and grooves.
- The scale dimensions, thickness, battered surfaces, finishes and placement of architectural detailing shall be consistent with the architectural features in the contract plans for Contract No. 11-2T0404. The barrier slab overhang above the retaining wall shall be dimensioned to match the size shown on the contract plans.
- If struts are required, then architectural treatment shall be similar to Contract No. 11-2T0404. Similar architectural detailing would include architectural shelf, strut corbel, weathering steel sconces, concrete brackets on shelf, wall caps, pilasters, and other architectural treatment shown on the Elevations and Visual Sims.
- All cast-in-place retaining wall concrete shall be integrally colored with a variable sand blast finish.
- Vertical concrete safety barrier (Type A) shall be considered for locations where space for architectural detailing is limited. Barriers will add additional width in which architectural features such as pilasters and wall cap can be implemented. Barriers at the base of retaining wall shall be integrally colored. See Contract No. 11-2T0404 for non-standard barrier (Type A) details.
- Concrete cap between safety barrier and wall shall be integrally colored with a variable sand blast finish.
- All concrete surfaces except concrete barrier at base of wall shall receive a variable sandblast finish ranging from medium to heavy. Variable sandblast texture shall be accomplished by abrasive blasting of the concrete to produce a generally random, non-uniform finish. Minor blemishes, rock pockets, and tie holes shall be left in place at the discretion of the Department in order to achieve a rough, unfinished appearance. Medium sandblast finish shall generate a sandy texture with air and water bubbles in the

concrete partially exposed. Heavy sandblast finish shall expose the concrete aggregate. At least half of each wall surface shall be comprised of heavy blast finish.

- The random flute texture shall be a formed relief constructed to the dimensions and shapes shown on the plans for Contract No. 2T0404. Random flute texture shall receive a variable sandblast finish.
- The exposed faces of retaining walls and wall barriers shall be integrally pigmented concrete. The color shall closely conform to Davis color No. 5447 "Mesa Buff". The colored concrete shall closely match the retaining walls constructed by Contract No. 11-2T0404 which shall serve as a referee sample.
- Mock Ups: A test panel at least 4' x 4' in size shall be successfully completed at a location approved by the Department, for each architectural texture, before beginning work on architectural textures. The test panel shall be constructed and finished with the materials, tools, equipment and methods to be used in constructing the architectural texture, including colored concrete. If ordered by the Department, additional test panels shall be constructed and finished until the specified finish, texture and color are obtained, as determined by the Department. The test panel approved by the Department shall be used as the standard of comparison in determining acceptability of architectural texture for concrete surfaces.
- Weathering steel plates on retaining walls shall conform to the requirements in ASTM Designation: A588/A588M, the details shown on the plans, and these provisions. Headed studs shall conform to the details shown on the plans and the provisions for stud connectors in Section 55, "Steel Structures," of the Standard Specifications. Weathering steel plates shall be embedded in concrete and construction to the dimensions and shapes as shown on the plans. Surrounding wall texture shall receive a variable sandblast finish. Embedded steel plates shall be protected from the effects of sandblasting. Portions of weathering steel plates in contact with concrete, including headed studs, shall be cleaned and painted in conformance with "Clean and Paint Weathering Steel, " of the Special Provisions for Contract No. 11-2T0404.
- Weathering steel sconces shall conform to the requirements in ASTM Designation:A588/A588M, and this section. Welded steel mesh shall conform to the provisions in Section 75-1.02, "Miscellaneous Iron and Steel," of the Standard Specifications. Bolts, nuts and washers shall conform to the provisions for high-strength steel fastener assemblies in Section 75-1.02 "Miscellaneous Iron and Steel," of the Standard Specifications. Weathering steel sconces shall be anchored to concrete and constructed to the dimensions and shapes as shown on the plans. Surrounding wall texture shall receive a variable sandblast finish. Anchored sconces shall be protected from the effects of sandblasting. Portions of weathering steel sconces in contact with concrete shall be cleaned and painted in conformance with "Clean and Paint Weathering Steel," of the Special Provisions for Contract No. 11-2T0404.

***Plan Requirements:***

- Concept Plans: Sketches depicting Architectural Elevations, Typical Cross Sections and special details showing true proportions of elements are required for review and approval by the District Landscape Architect prior to commencing work on construction plans.
- Construction Plans depicting Architectural Elevations at a 1:1 Vertical/Horizontal scale and Architectural Details are required.

### *Mira Mesa Blvd UC - Widen, Bridge No. 57-0785R*

- Bridge widening shall be CIP/PS Box Girders. The outer girder shall have a sloped face to match the existing bridge design.
- Slope paving shall be integrally pigmented concrete to closely match the existing adjacent slope paving concrete. New slope paving shall be installed next to a clean, sawcut edge – preferably at a joint in the existing slope paving.

- Existing tieback retaining wall: If architectural treatment is damaged by construction activities or tagging, Design Builder shall patch and stain damaged areas to conform to existing wall cobble texture and colors.
- Mock Ups: A test panel at least 4' x4' in size shall be successfully completed at a location approved by the Department before beginning work on slope to demonstrate the color and texture, including curing time and shall be submitted to the Department for written approval. The test panel approved by the Department shall be used as the standard of comparison in determining acceptability of concrete slope paving.

### *Retaining Walls*

**Proposed scope:**

Northbound outside widening may require retaining walls in the vicinity of the Soledad Canyon Bridge Overhead and Mira Mesa Blvd/Vista Sorrento Pkwy. Retaining wall design shall incorporate the following measures:

***Architectural treatment:***

- Architectural treatment and detailing for retaining walls at Soledad Canyon Bridge Overhead will be consistent with those being constructed for the Carroll Canyon Retaining Walls for project Contract No. 11-2T0404. See attached Solledad Canyon Bridge Overhead Retaining Wall Architectural Study Details.
- Retaining walls shall have a variable sand blast texture, random flute texture, pilasters, wall cap, and grooves.
- The scale dimensions, thickness, battered surfaces, finishes and placement of architectural detailing shall be consistent with the architectural features in the contract plans for Contract No. 11-2T0404. If the wall is designed with a barrier slab, the barrier slab overhang shall be dimensioned to match the size shown on the contract plans.
- All cast-in-place retaining wall concrete shall be integrally colored with a variable sand blast finish. Safety barriers at base of wall shall be integrally colored with a Type A finish. Random flute texture shall receive a variable sandblast finish. Color shall closely conform to Davis color No. 5447 "Mesa Buff
- Mock Ups: A test panel at least 4' x 4' in size shall be successfully completed at a location approved by the Department, for each architectural texture, before beginning work on architectural textures. The test panel shall be constructed and finished with the materials, tools, equipment and methods to be used in constructing the architectural texture, including colored concrete. If ordered by the Department, additional test panels shall be constructed and finished until the specified finish, texture and color are obtained, as determined by the Department. The test panel approved by the Department shall be used as the standard of comparison in determining acceptability of architectural texture for concrete surfaces.

- Retaining walls if required at SR 805 and Vista Sorrento Pkwy shall be located at the top of slope near Department right-of-way and be consistent with retaining walls at I-5 and Lomas Santa Fe Drive in Solana Beach. The wall design shall include the architectural treatment listed above and the following additional features: wall cap texture detail with weathering steel plates and tubular railing (modified). See attached Retaining Wall Architectural Study Details and Tubular Railing Details.Tubular Railing shall conform to the provisions in Section 83-1, "Railings," of the Standard Specifications and these special provisions. Weathering steel material used for rolled and welded structural steel sections of railing shall conform to the requirements in ASTM Designation: A 588/A 588M. Portions of tubular

railing (modified) in contact with concrete shall be cleaned and painted in conformance with "Clean and Paint Weathering Steel" of the special provisions for Contract .No. 11-2T0404.

- Mock Ups: A test panel at least 4' x 4' in size shall be successfully completed at a location approved by the Department, for each architectural texture, before beginning work on architectural textures. The test panel shall be constructed and finished with the materials, tools, equipment and methods to be used in constructing the architectural texture, including colored concrete. If ordered by the Department, additional test panels shall be constructed and finished until the specified finish, texture and color are obtained, as determined by the Department. The test panel approved by the Department shall be used as the standard of comparison in determining acceptability of architectural texture for concrete surfaces.

***Plan Requirements:***

- Concept Plans: Sketches depicting Architectural Elevations, Typical Cross Sections and special details showing true proportions of elements are required for review and approval by the District Landscape Architect prior to commencing work on construction plans.
- Construction Plans depicting Architectural Elevations at a 1:1 Vertical/Horizontal scale and Architectural Details are required.

***NOISE BARRIERS***

***Proposed scope:***

Approaching the Governor Drive southbound off-ramp, the project would construct a noise berm/wall combination along the westerly side of the roadway. A noise wall would be constructed at the south end, transitioning to a noise berm/wall combination, and end with a planted noise berm at the north end.

***Noise berm grading:***

Where conditions permit, grading would be designed using the techniques of contour grading that promote smooth transitions to existing landforms, eliminate the appearance of engineered slopes and visually soften the contours.

***Noise System design:***

- All sound walls should be simplified in their design, and to the greatest extent possible kept small in size, bulk and mass.
- Minimize the visual impacts of walls by utilizing wall profiles and alignments that blend with the natural terrain; and customize the grading to reduce the need for walls.

***Sound wall architectural treatment:***

- Architectural treatment and detailing will be consistent with "Masonry Sound Walls Architectural Study Details No. 1". See attached.
- Walls will be constructed of split face concrete masonry units and colored an earth tone (tan/brown) to closely resemble RCP Block and Brick manufacturer color "Mission". Grout joints will match color of the block. Walls shall have evenly spaced 16"x8"x32" pilasters. Pilasters shall be constructed of split face block with a mortar cap. Field wall between pilasters shall be mixed 10" and 8" wide block. The 10" wide block will have the same core side as the 8" side block. The wall shall have 10"x8"x8" smooth (precision) face accent blocks. Wall cap shall be 10"x4"x16" precision blocks with a mortar cap. Wall shall begin and end with a pilaster except where the wall dies into a berm.
- Samples: Block and grout samples shall be submitted and approved by the Department, for each texture and color before beginning work on masonry block walls.

***Plan Requirements:***

Conceptual Plans and Sketches: Architectural Elevations, Typical Cross Sections, and Special Details showing true proportions of elements are required for review and approval by the District Landscape Architect prior to commencing work on construction plans. Conceptual Plans to include proposed berm grading with existing topography. Noise Wall elevation to show berm grading, noise line, wall steps, block pattern, wall cap, finish grade in front and behind wall. Typical section to show block pattern with block size called out, wall cap, footing, and finished grade.

Construction Plans depicting Architectural Elevations showing true proportions of elements (1:1 Vertical/Horizontal scale) and Architectural Details are required.

## Grading and Drainage

### *Drainage Facilities*

- Concrete interceptor ditches will not be placed at the toe of slopes adjacent to residential property or pedestrian use areas. Alternatives such as subterranean drainage placed below finish grade or a planted geo-reinforced drainage surface will be used.
- Concrete drainage features such as interceptor ditches, ditch lining, inlet aprons, gutters, head walls and channels located in roadside areas will be colored to match the surrounding soil. Soft surface alternatives to concrete ditches and rock slope protection will be used whenever possible.
- Rock slope protection will be placed in a slurry bed that is integrally colored to match surrounding soils.
- Concrete headwalls and wing walls shall be integrally colored or stained to match existing soils.
- Project features such as interceptor ditches, inlet aprons, gutters, and maintenance vehicles pullouts could consist of pervious concrete. Pervious concrete shall be integrally colored to match the surrounding soil.

### *Grading*

- Where conditions permit, grading will be designed using the techniques of contour grading that promote smooth transitions to existing landforms, eliminate the appearance of engineered slopes and visually soften the contours.
- Stepped slopes in areas of cut are recommended where soils are highly erodible. Slope rounding will be used to blend slopes with existing topography. Stepped slopes are recommended for cut slopes adjacent to Vista Sorrento Parkway.
- Existing trees and rock outcroppings should be preserved to the greatest extent possible.
- Slopes shall be in accordance with the requirements of the Highway Design Manual.
- Slopes flatter than 4:1 outside the clear recovery zone are desirable, and the Design Builder shall use them where they contribute to the quality of the existing topography, such as “daylighting” small cut areas.
- Adjust grading in order to minimize disturbance to the existing native vegetation.
- Where possible, design the side slopes and embankments to avoid the use of metal guardrails and end treatments. Terminate barriers into slopes wherever possible to avoid end treatments wherever possible.

### *Stormwater BMP Facilities*

- AC overside drains to bio filtration swales will be avoided wherever possible. Water shall be piped by a subsurface system from an inlet to the bioswale

- Concrete aprons at bio filtration swales shall be integrally colored with an exposed aggregate texture. (See Minor Concrete Textured Paving below)
- Whenever feasible, standpipes, headwalls and other vertical appurtenances shall be located in unobtrusive locations and be stained an unobtrusive color.
- Where hydraulically feasible, bioswales will be located in non-obtrusive areas and be designed to appear as natural features. Where possible, they should be shaped in an informal, curvilinear manner, incorporate slope rounding, variable gradients and be similar to the surrounding topography to deemphasize a defined outer edge.
- Maintenance access drives should be located in unobtrusive areas away from local streets and will consist of drivable inert materials with or without herbaceous groundcover that is visually compatible with the surrounding landscape.

Contractor Use Areas

- Avoid placement of contactor use areas such as staging, material storage, contactor office and access or haul roads in landscape areas. When contractor use areas in non-irrigated brush areas are vacated, the soil shall be ripped and hydroseeded with a mix approved by the Department. Staging areas are subject to approval by the Department. If contractor use areas are approved by Department in landscaped areas, the area shall be ripped, irrigation systems shall be repaired and impacted plantings shall be replaced after the area is vacated. The preservation of property specification shall be enforced. Existing trees shall be protected whenever possible.

## Lighting, Signage and Miscellaneous Freeway Appurtenances

### *Lighting and Sign Pedestals*

- Concrete lighting and signage pedestals will be designed in such a way that vertical barrier transitions are not required. Vertical concrete safety barriers will be considered for locations where space for pedestals is limited or to avoid potential snag issues. A barrier transition from the shorter barrier to the taller barrier is recommended at these locations. A continuous tall median barrier is to be avoided.
- Electrical and signal equipment at ramp termini will be placed in visually unobtrusive locations.

### *Textured Paving*

- Landscape areas beyond the gore will be paved with Minor Concrete Textured Paving (MCTP) up to the point where the horizontal distance between edge of paved surface to the edge paved surface measures 30'. MCTP will be integrally colored and textured to match the colored and textures paving constructed beyond the gores for the I-805 HOV/ Carroll Canyon Road Project Contract No. 11-2T0404. If high side super ditches encroach into the MCTP area, then they shall be colored and textured to match the MCTP.
- The following gore areas shall be paved with MCTP. NB offramp to Mira Mesa Blvd; NB offramp and onramp from Mira Sorrento Pl to 805 (3 total); additional areas to be paved with MCTP may be recommended by the Visual Quality Team.
- Minor Concrete Textured Paving shall consist of concrete with an exposed aggregate finish. The concrete shall have a color closely resembling "Ginger," Solomon manufacturer Color No. 288. Color shall be integral, chemically inert, fade resistant mineral oxide or synthetic type. See Contract No. 11-2T0404 Construction Details for paving section design and expansion joint layouts.
- Rock Blanket: If raised median islands are constructed, medians shall be paved with rock blanket to match paving installed by Contract No. 11-2T0404. Samples of rock (color and size) and mortar color shall be provided to the Department for review and approval. See Contract No. 11-2T0404 Construction Details for paving section design.

- Mock Ups: A test panel at least 4’ x4’ in size shall be successfully completed at a location approved by the Department before beginning work on paved areas for each textured paving to demonstrate the textured paving, including color, curing and finishing compounds, rock, mortar color, etc. and shall be submitted to the Department for written approval. The test panel approved by the Engineer shall be used as the standard of comparison in determining acceptability of color and texture for textured paving.

***Access Control Fencing and Gates***

- Access control fencing will be placed in visually unobtrusive locations at interchanges and bridges if possible. Fencing that butts up to an abutment wing wall shall not be taller than the bridge rail.
- Retaining walls and noise walls near right of way boundaries will be designed in such a way that access control fencing will not be needed. The “dead “space that occurs between walls and fences will be avoided if possible. Fencing will abut noise walls at a pilaster; end of wall or at changes in direction of wall if possible.

# EXHIBIT 18-A

Traffic Management Plan Data Sheet

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

Co/Rte/KP _____ EA _____ Alternative No. _____

Project Limit _____

Project Description _____

Expected Construction Schedule _____

1) Public Information

- ☐ a. Brochures and Mailers $ _____
- ☐ b. Press Release
- ☐ c. Paid Advertising $ _____
- ☐ d. Public Information Center/Kiosk $ _____
- ☐ e. Public Meeting/Speakers Bureau
- ☐ f. Telephone Hotline
- ☐ g. Internet
- ☐ h. Others _____ $ _____

2) Motorists Information Strategies

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

3) Incident Management

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

Exhibit 18A

4) Construction Strategies

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

5) Demand Management

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

6) Alternative Route Strategies

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

7) Other Strategies

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

**TOTAL ESTIMATED COST OF TMP ELEMENTS = $ _____**

Project Notes:

PREPARED BY _____ DATE _____

APPROVED BY _____ DATE _____

# EXHIBIT 18-B

Lane Closure Charts

**Chart No. 1**
**Freeway/Expressway Lane Requirements**

| County: SD | Route/Direction: 805/ NB | PM: 22.31 – 27.20 |
|---|---|---|

Closure Description: 0.25 Mi. S. of Clairemont Mesa OC to 0.13 Mi. N. of Mira Mesa Blvd UC

| 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 | 2 | 1 | |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | 1 | 1 | 1 | 2 | 2 | | | | | | | | | | | | | | | | | |
| Sundays | | | | 1 | 1 | 1 | 1 | 2 | 2 | 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 |
| | Work permitted within project right of way where shoulder or lane closure is not required. |

REMARKS:

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Exhibit 18B

**Chart No. 2**
**Complete Connector Closure Hours**

| County: SD | Route/Direction: 805/ NB | PM: 23.267 |
|---|---|---|

Closure Description: NB 805 Connector to Rte. 52

| 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 | C | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | C | | | | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | C | | | | | | | | | | | | C | C | C | |

Legend:

| | |
|---|---|
| C | Connector may be closed completely |
| | Work permitted within project right of way where shoulder or lane closure is not required. |

REMARKS:

No other closure that conflicts with or shares any elements of the following detour will be permitted.

**Detour NB 805 Conn. to Rte. 52**
Detour NB 805 Conn. to EB/WB 52 traffic via northerly on Rte. 805 to NB 805 Off-ramp to Governor Dr., thence westerly on Governor Dr. to SB 805 On-ramp from Governor Dr., thence southerly on Rte. 805 to SB 805 Conn. to EB/WB 52.

**NOTE:** Place a PCMS (Portable Changeable Message Sign) on NB at a location at the discretion of Construction Field Personnel – warning the public of the ramp closure / detour ahead.

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**Chart No. 3**
**Complete Connector Closure Hours**

| County: SD | Route/Direction: 52/ EB | PM: 3.390 |
|---|---|---|
| SD | 52/ WB | 4.050 |

Closure Description: EB 52 Connector to NB 805

WB 52 Connector to NB 805

| 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 | C | C |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | | | | | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | | | | | | | | | | | | | | C | C | C |

Legend:

C — Connector may be closed completely

Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

No other closure that conflicts with or shares any elements of the following detour will be permitted.

**Detour EB 52 Connector to NB 805**
Detour EB 52 Conn. to NB 805 via easterly on Rte. 52 to EB 52 Conn. to SB 805, thence southerly on Rte. 805 to SB 805 Off-ramp to EB Clairemont Mesa Blvd., thence easterly on Clairemont Mesa Blvd. to NB 805 On-ramp from Clairemont Mesa Blvd.

**Detour WB 52 Connector to NB 805**
Detour WB 52 Conn. TO NB 805 traffic via westerly on Rte. 52 to WB 52 Conn. to SB 805, thence southerly on Rte. 805 to SB 805 Off-ramp to EB Clairemont Mesa Blvd., thence easterly on Clairemont Mesa Blvd. to NB 805 On-ramp from Clairemont Mesa Blvd.

**NOTE:** Place a PCMS (Portable Changeable Message Sign) on EB 52 at a location at the discretion of Construction Field Personnel – warning the public of the ramp closure / detour ahead.

**NOTE:** Place a PCMS (Portable Changeable Message Sign) on WB 52 at a location at the discretion of Construction Field Personnel – warning the public of the ramp closure / detour ahead.

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**Chart No. 4**
**Complete Ramp Closure Hours**

| | | |
|---|---|---|
| County: SD | Route/Direction: 805/ NB | PM: 24.275 |
| SD | 805/ NB | 24.598 |
| SD | 805/ NB | 25.126 |
| SD | 805/ NB | 26.624 |
| SD | 805/ NB | 27.010 |
| SD | 805/ SB | 24.331 |
| SD | 805/ SB | 24.664 |
| SD | 805/ SB | 25.250 |
| SD | 805/ SB | 26.954 |
| SD | 805/ SB | 27.383 |

Closure Limits: NB 805 Off-ramp to Governor Dr.

NB 805 On-ramp from Governor Dr.

NB 805 Off-ramp to Nobel Dr.

NB 805 Off-ramp to Mira Mesa Blvd.

NB 805 Off-ramp to Sorrento Valley Rd./ Mira Mesa Blvd.

SB 805 On-ramp from Governor Dr.

SB 805 Off-ramp to Governor Dr.

SB 805 On-ramp from Nobel Dr.

SB 805 On-ramp from Sorrento Valley Rd.

SB 805 Off-ramp to Sorrento Valley Rd./ Mira Mesa Blvd.

| 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 | C | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | C | C | C | |

Legend:

C — Ramp may be closed completely

Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

NOTE: When an Off-ramp is closed completely, place a PCMS (Portable Changeable Message Sign) in the direction of travel allowing the traffic the option to use the preceding Off-ramp and warning them of the ramp closure ahead.

**Chart No. 5**
**Freeway/Expressway Lane Requirements**

| County: SD | Route/Direction: 805/ SB | PM: 28.37 – 23.65 |
|---|---|---|

Closure Description: 0.07 Mi. N. of Sorrento Valley UC to Jct. Rte. 52

| 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 | 1 | 1 | |
| Fridays | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | 1 | 1 | 1 | 2 | 2 | | | | | | | | | | | | | | | | | |
| Sundays | | | | 1 | 1 | 1 | 1 | 1 | 2 | 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 |
| | Work permitted within project right of way where shoulder or lane closure is not required. |

REMARKS:

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**Chart No. 6**
**Complete Connector Closure Hours**

| County: SD | Route/Direction: 805/ SB | PM: 23.964 |
|---|---|---|

Closure Description: SB 805 Connector to Rte. 52

| 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 | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | | | | | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | | | | | | | | | | | | | C | C | C | |

Legend:

| | |
|---|---|
| C | Connector may be closed completely |
| | Work permitted within project right of way where shoulder or lane closure is not required. |

REMARKS:

No other closure that conflicts with or shares any elements of the following detour will be permitted.

**Detour SB 805 Conn. to Rte. 52**
Detour SB 805 Conn. to Rte. 52 traffic via southerly on Rte. 805 to SB 805 Off-ramp to Clairemont Mesa Blvd., thence easterly on Clairemont Mesa Blvd. to NB 805 On-ramp from Clairemont Mesa Blvd., thence northerly on Rte. 805 to NB 805 Conn. to Rte. 52.

**NOTE:** Place a PCMS (Portable Changeable Message Sign) on SB 805 at a location at the discretion of Construction Field Personnel – warning the public of the ramp closure / detour ahead.

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**Chart No. 7**
**Complete Connector Closure Hours**

| County: SD | Route/Direction: 52/ WB | PM: 4.050 |
|---|---|---|

Closure Description: WB 52 Connector to SB 805

| 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 | C | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | C | C | C | |

Legend:

C — Connector may be closed completely

Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

No other closure that conflicts with or shares any elements of the following detour will be permitted.

**Detour WB 52 Conn. to SB 805**
Detour WB 52 Conn. to SB 805 traffic via westerly on Rte. 52 to WB 52 Conn. to NB 805, thence northerly on Rte. 805 to NB 805 Off-ramp to Governor Dr., thence westerly on Governor Dr. to SB 805 On-ramp from Governor Dr.

**NOTE:** Place a PCMS (Portable Changeable Message Sign) on WB 52 at a location at the discretion of Construction Field Personnel – warning the public of the ramp closure / detour ahead.

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**Chart No. 8**
**Complete Ramp Closure Hours**

| County: SD | Route/Direction: 805/ NB | PM: 25.639 |
|---|---|---|
| SD | 805/ NB | 26.315 |

Closure Limits: NB 805 Off-ramp to Miramar Rd./ La Jolla Village Dr.

NB 805 On-ramp from Miramar Rd./ La Jolla Village Dr.

| 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 | C | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | C | C | C | |

Legend:

C Ramp may be closed completely

Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

No closures will be allowed at the above location(s) from Dec. 14th at 1700 thru Dec. 25th.

NOTE: When an Off-ramp is closed completely, place a PCMS (Portable Changeable Message Sign) in the direction of travel allowing the traffic the option to use the preceding Off-ramp and warning them of the ramp closure ahead.

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**Chart No. 9**
**Complete Ramp Closure Hours**

| County: SD | Route/Direction: 805/ SB | PM: 25.570 |
|---|---|---|

Closure Limits: SB 805 On-ramp from La Jolla Village Dr./ Miramar Rd.

| 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 | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | C | C | C | |

Legend:

| | |
|---|---|
| C | Ramp may be closed completely |
| | Work permitted within project right of way where shoulder or lane closure is not required. |

REMARKS:

No closures will be allowed at the above location(s) from Dec. 14th at 1700 thru Dec. 25th.

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**Chart No. 10**
**Complete Ramp Closure Hours**

| County: SD | Route/Direction: 805/ SB | PM: 26.228 |
|---|---|---|
| SD | 805/ SB | 27.215 |

Closure Limits: SB 805 Off-ramp to Miramar Rd./ La Jolla Village Dr.

SB 805 On-ramp from WB Mira Mesa Blvd.

| 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 | C | C | |
| Fridays | C | C | C | C | C | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | C | C | C | C | C | C | C | | | | | | | | | | | | | | | |
| Sundays | | | | C | C | C | C | C | C | C | C | | | | | | | | | | | C | C | C | |

Legend:

C Ramp may be closed completely

Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

No closures will be allowed at the above location(s) from Dec. 14th at 1700 thru Dec. 25th.

NOTE: When an Off-ramp is closed completely, place a PCMS (Portable Changeable Message Sign) in the direction of travel allowing the traffic the option to use the preceding Off-ramp and warning them of the ramp closure ahead.

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**Chart No. 11**
**Road Lane Requirement**

| County: SD | Route/Direction: EB-WB Governor Dr. | PM: |
|---|---|---|

Closure Description: At Rte. 805

| 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 | X | X | X | X | X | | | | | | | | | | | | | | | | | X | X | X | |
| Fridays | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | |
| Saturdays | | | | X | X | X | X | | | | | | | | | | | | | | | | | | |
| Sundays | | | | X | X | X | X | | | | | | | | | | | | | | | X | X | X | |

Legend:

| | |
|---|---|
| X | Street may be closed |
| | Work permitted within project right of way where shoulder or lane closure is not required. |

REMARKS:

No other closure that conflicts with or shares any elements of the following detour will be permitted.

**Detour EB Governor Dr. at Rte. 805 Full Closure**
Detour EB Governor Dr. at Rte. 805 traffic via easterly on Governor Dr. to SB 805 On-ramp from Governor Dr., thence southerly on Rte. 805 to SB 805 Off-ramp to EB Clairemont Mesa Blvd., thence easterly on Clairemont Mesa Blvd. to NB 805 On-ramp from Clairemont Mesa Blvd., thence northerly on Rte. 805 to NB 805 Off-ramp to Governor Dr.

**Detour WB Governor Dr. at Rte. 805 Full Closure**
Detour WB Governor Dr. at Rte. 805 traffic via westerly on Governor Dr. to NB 805 On-ramp from Governor Dr., thence .northerly on Rte. 805 to NB 805 Off-ramp to Nobel Dr., thence westerly on Nobel Dr. to SB 805 On-ramp from Nobel Dr., thence southerly on Rte. 805 to SB 805 Off-ramp to Governor Dr.

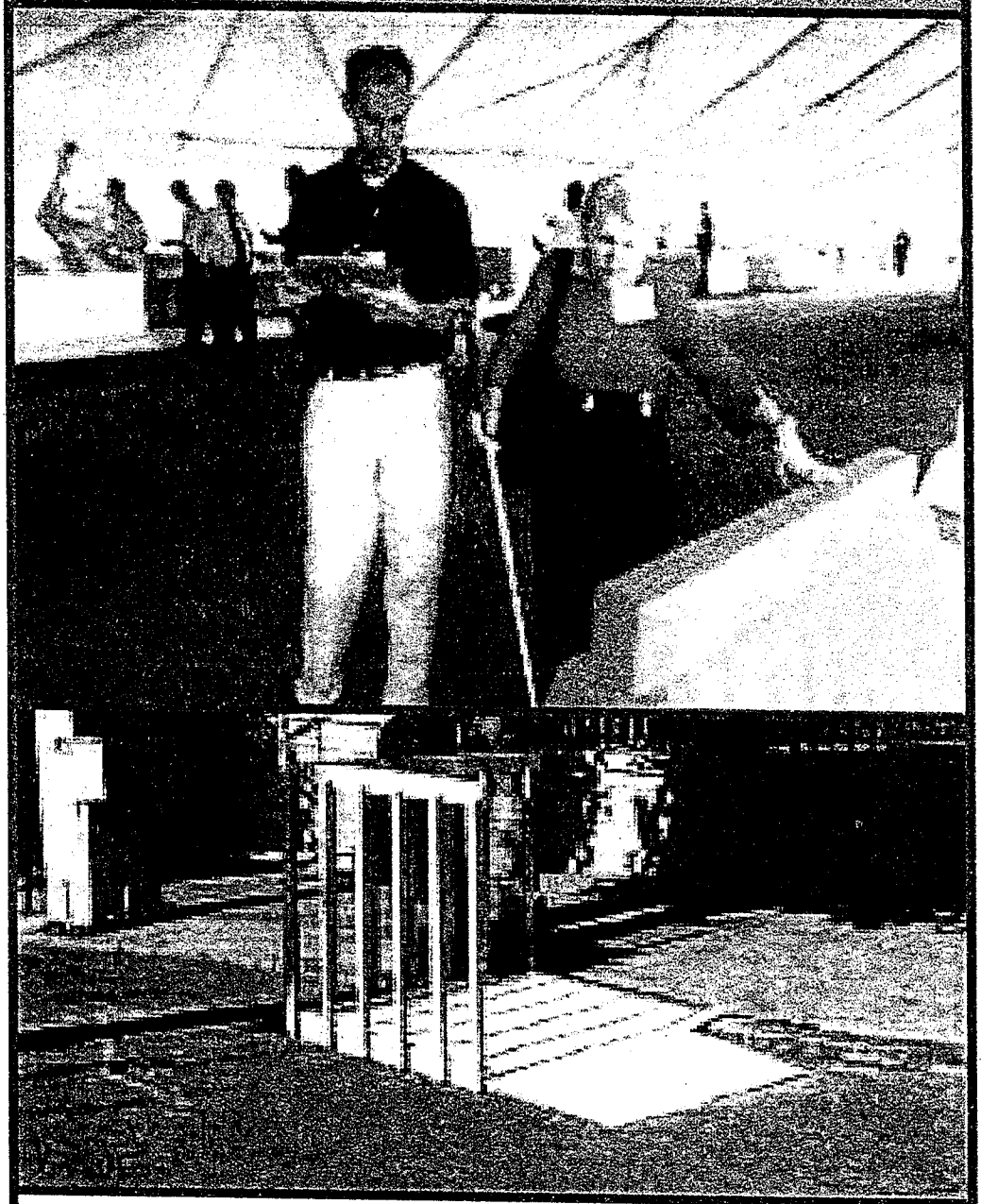
**NOTE:** Place a PCMS (Portable Changeable Message Sign) on EB Governor Dr. at a location at the discretion of Construction Field Personnel. – warning the public of the ramp closure / detour ahead.

**NOTE:** Place a PCMS (Portable Changeable Message Sign) on WB Governor Dr. at a location at the discretion of Construction Field Personnel – warning the public of the ramp closure / detour ahead.

# EXHIBIT 18-C

Temporary Pedestrian Facilities Handbook

# TEMPORARY PEDESTRIAN FACILITIES HANDBOOK



Caltrans

April 2011

*This handbook is for informational purposes only.*

*NOTE: The information is for workers in the field for accommodation of pedestrians with disabilities through and around work zones.*

April 2011

## Introduction

Caltrans maintains safe and convenient access for users of its roads and highways. The needs and control of road users are an essential part of highway construction, utility work, maintenance operations, and management of traffic incidents through a temporary traffic control zone. We have developed this handbook to help field staff accommodate pedestrians—including persons with disabilities, as described in the *Americans with Disabilities Act Accessibility Guidelines* (ADAAG)—through and around work zones.

## Related Caltrans Standards

- Section 7-1.02A, "General," of the 2010 *Standard Specifications* requires the contractor to comply with current laws, regulations, and decrees.
- Section 7-1.04, "Public Safety," requires that the contractor provide for the safety of the public during construction.
- Section 12, "Maintaining Traffic," directs the contractor's attention to the *California Manual on Uniform Traffic Control Devices* (CA MUTCD).
- Standard Special Provision 12-150, "Maintaining Traffic," requires the contractor to maintain pedestrian access.

If the contractor's operation requires the closure of one accessible pedestrian facility, provide a travel path that replicates, if possible, the most desirable characteristics of the existing walk way. Take special care to consider areas in school or senior citizen center locations.

When affected by construction, the contractor should maintain a continuous unobstructed path connecting all existing accessible elements (parking lots, bus stops) through the project.

Provide advanced notification of sidewalk closures.

Keep pedestrian facilities clear of obstructions. Traffic control devices, equipment and other construction materials and features must not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility. Signs and other devices mounted lower than seven feet above the temporary pedestrian pathway should not project more than four inches into accessible pedestrian facilities.

In addition to required openings through falsework, provide accessible pedestrian facilities during pile driving, footing, wall, and other bridge construction operations where an accessible route was available before construction began.

Provide hand railings on each side of pedestrian walkways as necessary to protect pedestrian traffic from hazards from construction operations. Maintain railings and walkways in good condition.

Provide protective overhead covering as necessary to ensure protection from falling objects and dripping from overhead structures.

The resident engineer may require a pedestrian traffic handling plan if the affected facility is not identified in the contract plans. The contractor is responsible for accommodating pedestrians through the temporary traffic control (TTC) whenever the work disrupts pedestrian facilities.

## California MUTCD Requirements

The following three items should be considered when planning for pedestrians in TTC zones:

- ✓ Pedestrians should not be led into conflicts with work site vehicles, equipment, and operations.
- ✓ Pedestrians should not be led into conflicts with vehicles moving through or around the work site.
- ✓ Pedestrians should be provided with a reasonably safe, convenient, and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalk(s) or footpath(s).

Do not sever or move a pedestrian route for non-construction activities such as parking for vehicles and equipment.

Place a barrier detectable by a person with a visual disability traveling with the aid of a long cane across the full width of the closed sidewalk they would normally use.

Unless a reasonably safe route that does not involve crossing the roadway can be provided, advance signing should appropriately direct pedestrians to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, place these signs at intersections. Midblock work sites should not induce pedestrians to attempt skirting the work site or make a midblock crossing. (See Figures 1 and 2 on the next page.)

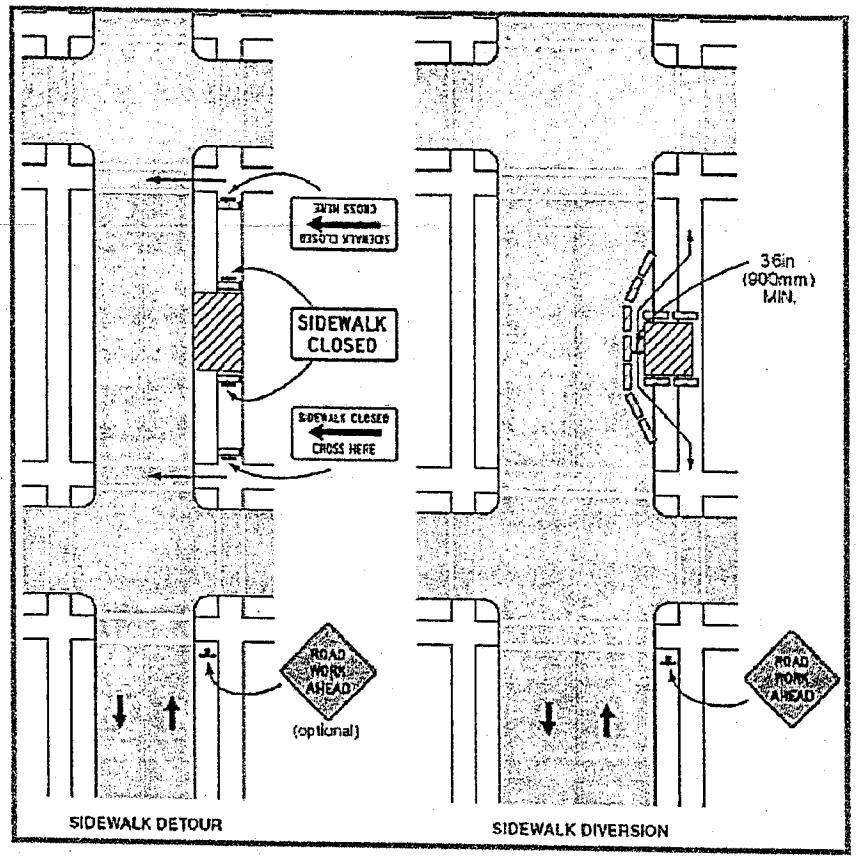



*Figure 1 Sidewalk Detour or Diversion*

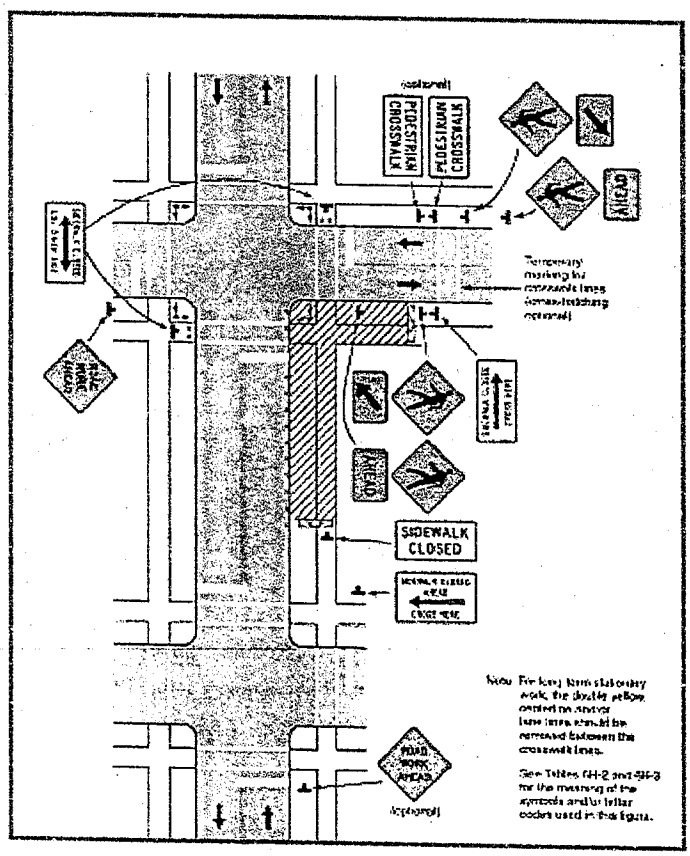



*Figure 2 Crosswalk Closures and Pedestrian Detours*

Consider separating pedestrian movements from both work site activity and vehicular traffic. When pedestrians are routed adjacent to live traffic, provide barrier protection to prevent vehicles from entering the pedestrian facility.

Do not use tape, rope, or plastic chain strung between devices as controls for pedestrian movements. They are not readily detectable.

Where barricades channel pedestrians, use continuous detectable bottom and top rails with no gaps between individual barricades for users of long canes. The bottom of the bottom rail must be no higher than six inches above the ground surface. The top of the top rail must be at least 36 inches above the ground. Refer to Part 6, Sections 6F.58 and 6F.63 of the California MUTCD.

If drums, cones, or tubular markers channel pedestrians, locate them so no gaps exist between the bases of the devices to create a continuous bottom. The height of each drum, cone, or tubular marker must be no less than 36 inches to be detectable to users of long canes. Refer to Part 6, Sections 6F.58, 6F.59, 6F.60, and 6F.62 of the California MUTCD.

Whenever feasible, temporary pedestrian facilities should follow the ADA checklist later in this handbook. Document the reasons why an item does not.

## Permanent Facilities

Construct permanent new facilities and alterations to existing facilities according to the contract plans and specifications.

Additional resources for consideration:

- Caltrans Design Information Bulletin 82-04, "Pedestrian Accessibility Guidelines for Highway Projects," which addresses requirements for new construction and alterations of existing facilities.
- Standard Plans A88A, A88B, A90A, A90B, ES-4C, ES-5C, and ES-7A
- Contact the district design unit to develop plans for any permanent facility to be added by contract change order.

During the inspection process, check that all contractor-installed finished elements comply with dimensions and installation requirements. Check all slopes using a smart level at least two feet long.

***Do not exceed any of the maximums shown in the requirements. They are absolute.***

Whenever feasible, temporary pedestrian facilities should follow this ADA checklist. Document the reasons why item does not.

### Accessible Route Basics

- ☐ The path must be stable, firm, and slip resistant. Pedestrian facilities must be surfaced with asphalt concrete, portland cement concrete or timber. Dirt is not an acceptable surface.

- ☐ The surface should be smooth and continuously hard throughout the entire length of the temporary pedestrian facility. No curbs or abrupt changes should exist in grade or terrain that could cause tripping or be a barrier to wheelchair use.

- ☐ Surface discontinuities must not exceed a ½ inch maximum. Vertical discontinuities between ¼-inch to ½ inch should be beveled at a maximum of 2:1 or flatter, and bevels should be constant across the entire level change. New surfaces must not have vertical surface discontinuities. Curb ramps, landings, and gutter areas must not have surface discontinuities. (See Figure 3 below.)

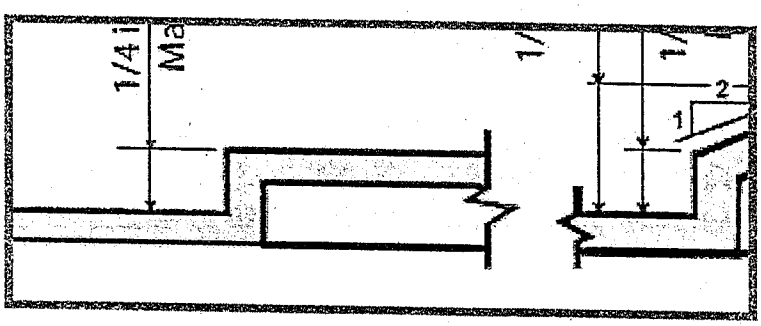



*Figure 3 Surface Discontinuities*

- ☐ On pedestrian access route joints and gratings, surface openings must not permit passage of a sphere more than 1/2 inch. Place horizontal surface openings so that the long dimension is perpendicular to the dominant direction of wheelchair travel.

- ☐ The cross slope must be no greater than 1:50 (2 percent).

- ☐ The running slope must be no greater than 1:20 (5 percent). Otherwise, meet the ramp requirements discussed below.

- Maintain a width of 60 inches throughout the pedestrian pathway. (See Figure 4 below.)

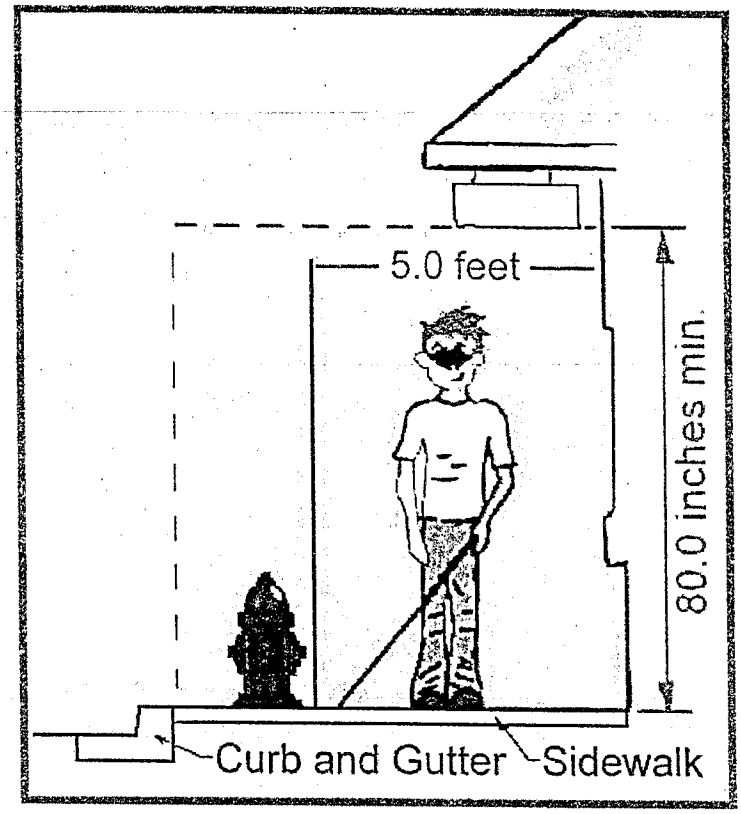



*Figure 4 Pedestrian Path Width*

- When it is not possible to maintain a width of five feet, provide a 60 x 60-inch passing space at least every 200 feet to allow individuals in wheelchairs to pass. (See Figure 5 below.)

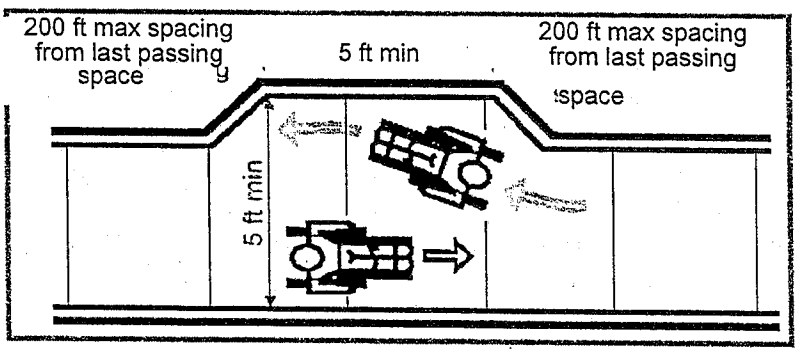



*Figure 5 Passing Space*

- The path must have a clear width of no less than 48 inches. Verify that no fixed objects (cabinets, poles, and so forth) will reduce the path width at any point. (See Figure 6 below.)

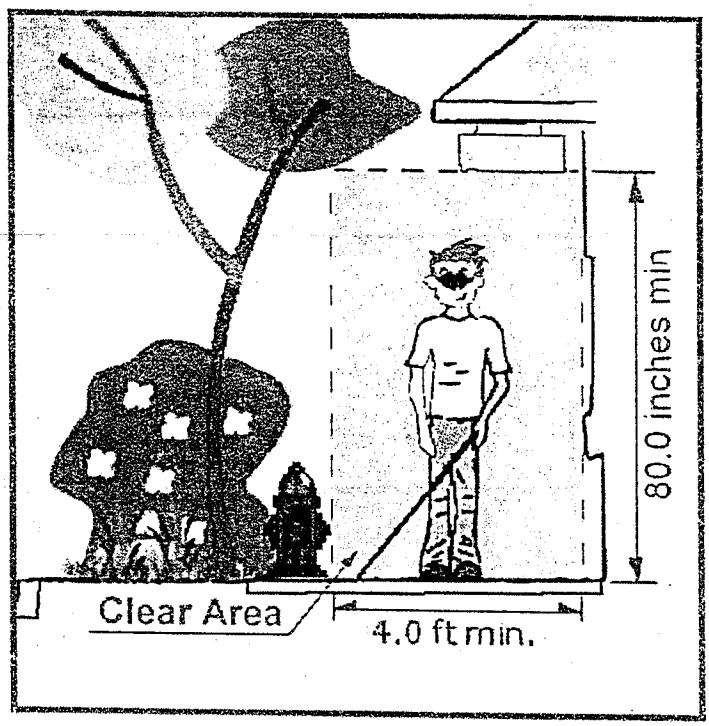



*Figure 6 Minimum Path Width*

- Objects must not protrude into the path. Check with the project engineer for exceptions.

- Signs and other devices mounted lower than seven feet above the temporary pedestrian pathway should not project more than four inches into accessible pedestrian facilities Refer to Part 6, Section 6D.02 of the California MUTCD. (See Figure 7 below.)

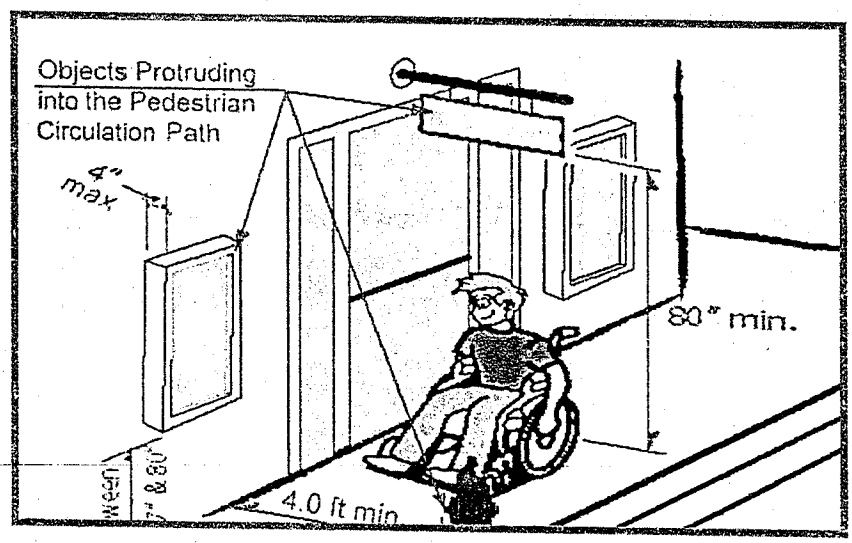



*Figure 7 Protruding Objects*

- Vertical clearance must be 80 inches.

- If the path requires a 180-degree turn, the turning pad must be at least 60 inches deep. (See Figure 8 below)

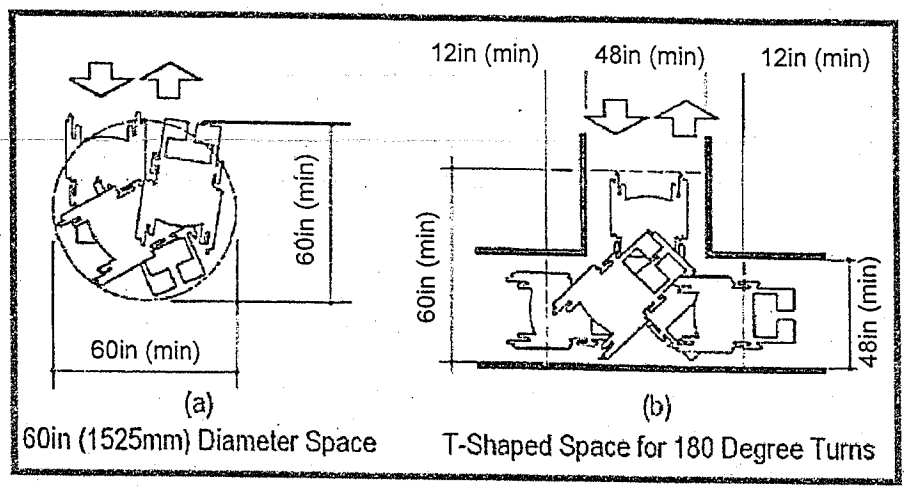
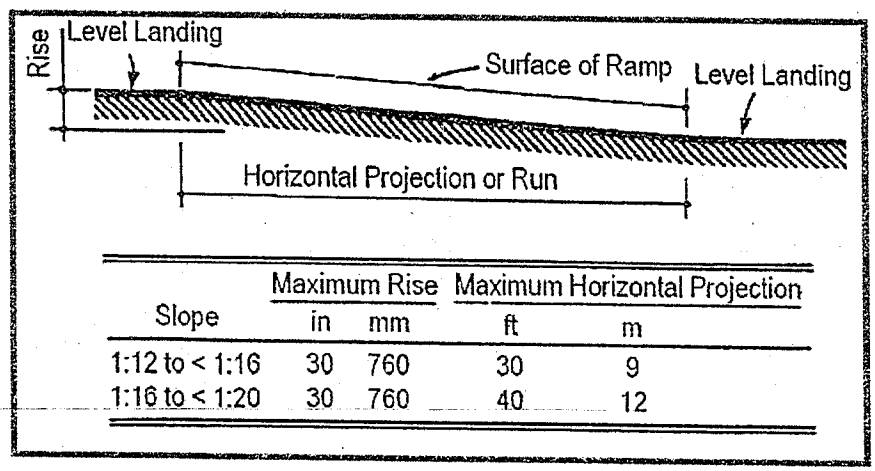



*Figure 8 (ADAAG) Wheelchair Turning Space*

- Provide access to nearby temporary transit stops.
- Pedestrians with disabilities may need temporary nighttime lighting. Refer to contract plans and specifications for requirements.

## Ramps

- The cross slope must be no greater than 1:50 (2 percent).
- The running slope must be no greater than 1:12 (8.33 percent).
- Each ramp must have level landings at the bottom and top. A landing must be as wide as the run leading to it and have a minimum length of 60 inches. (See Figure 9 below.)




| Slope | Maximum Rise | | Maximum Horizontal Projection | |
|---|---|---|---|---|
| | in | mm | ft | m |
| 1:12 to < 1:16 | 30 | 760 | 30 | 9 |
| 1:16 to < 1:20 | 30 | 760 | 40 | 12 |

*Figure 9 (ADAAG)*
*Components of a Single Ramp*
*and Sample Ramp Dimensions*

- Ramps must have hand railings, and edge protection.

Curb ramps to be constructed on sites or facilities where space limitations prohibit the use of a 1:12 slope or less may have slopes and rises as follows:

- A slope between 1:10 and 1:12 is allowed for a maximum rise of 6 inches.
- A slope between 1:8 and 1:10 is allowed for a maximum rise of 3 inches.

A slope steeper than 1:8 is not allowed.

**Scaffolding**

- Keep pedestrian facilities clear of obstructions. Traffic control devices, equipment, and other construction materials and features must not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility. Signs and other devices mounted lower than seven feet above the temporary pedestrian pathway should not project more than four inches into accessible pedestrian facilities.
- In addition to required openings through falsework, provide accessible pedestrian facilities during pile driving, footing, and wall and other bridge construction operations where an accessible route was available before construction began.
- Provide hand railings on each side of pedestrian walkways as necessary to protect pedestrian traffic from construction operations hazards. Maintain railings and walkways in good condition.
- Provide necessary protective overhead covering to ensure protection from falling objects and dripping from overhead structures.

## Pedestrian Signal Buttons

- The pedestrian signal button must have an unobstructed forward reach. For the height of the button, refer to the Standard Plans. (See Figure 10 below.)

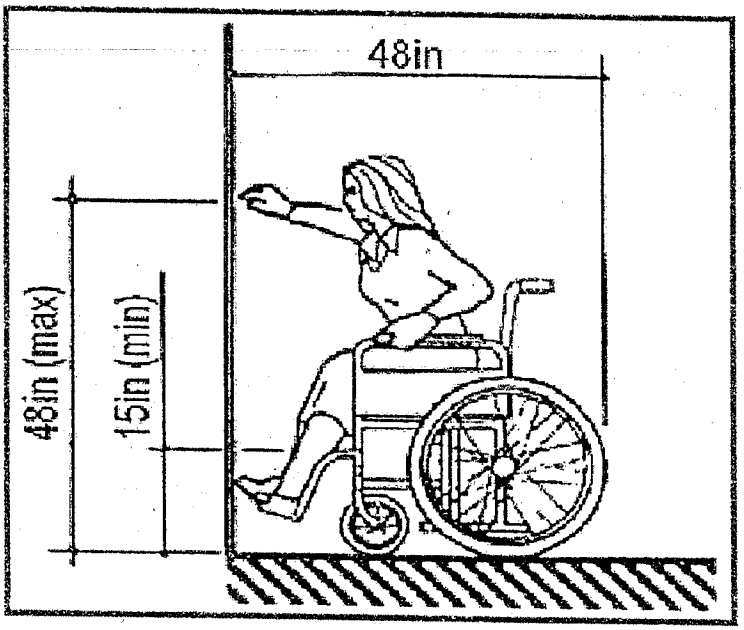



*Figure 10 (ADAAG) High Forward Reach*

- If the pedestrian button requires a side reach, obstructions at bottom cannot extend more than 24 inches from base. For the height of button, refer to the standard plans (See Figure 11 below.)

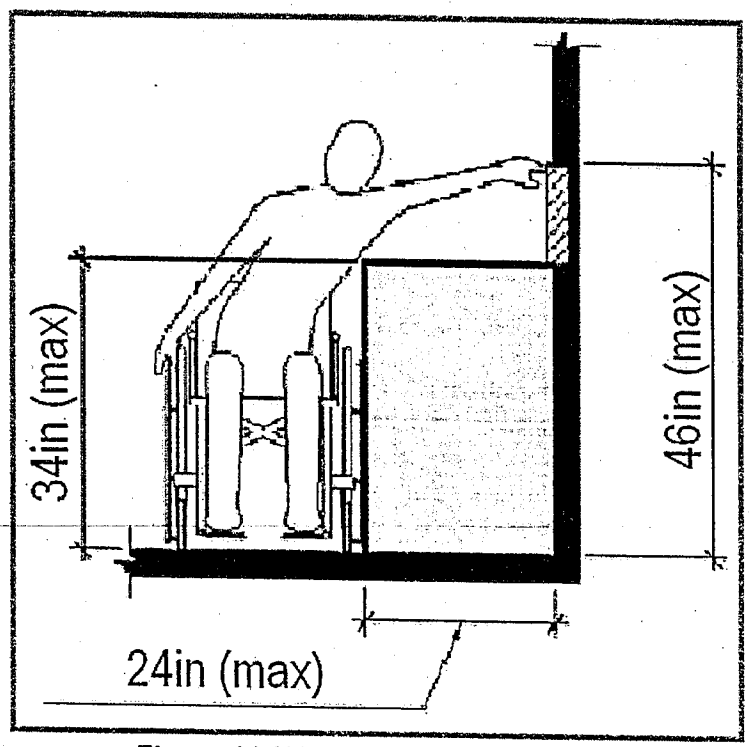



*Figure 11 (ADAAG) High Side Reach*

### Audible Alerts

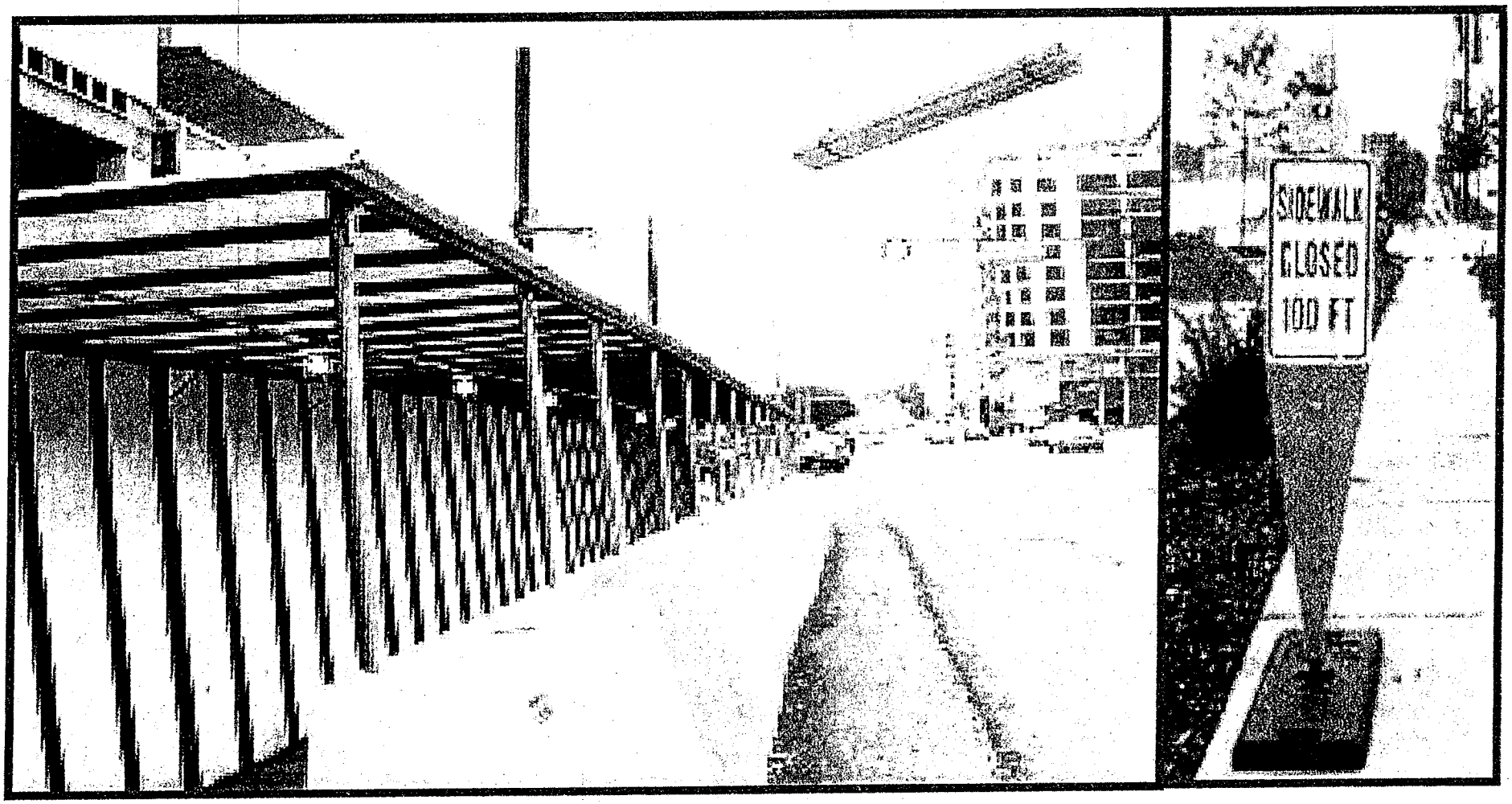
A wide range of pedestrians might be affected by temporary traffic control (TTC) zones, including the young, elderly, and people with disabilities such as hearing, visual, or mobility. These pedestrians need a clearly delineated and usable travel path.

- A speech message by an audible information device is the most desirable way to provide information equivalent to visual signage for notification of sidewalk closures to pedestrians with visual disabilities.

Devices that provide speech messages in response to passive pedestrian actuation are the most desirable. Other devices that continuously emit a message or a message in response to use of a pushbutton are also acceptable. Signage information can also be transmitted to personal receivers, but currently pedestrians with visual disabilities are not likely to carry or use such receivers in TTC zones.

- Audible information devices might not be needed if detectable channelizing devices make an alternate route of travel evident to pedestrians with visual disabilities.

- A pushbutton used to provide equivalent TTC information to pedestrians with visual disabilities should be equipped with a locator tone to notify them that a special accommodation is available and help them locate the pushbutton.


SIDEWALK
CLOSED
100 FT

# EXHIBIT 21-A

Proposed Pavements Design

ıte of California — Business, Transportation and Housing Agency

# Memorandum

To : HANH-DUNG KHUU (MS 340)
Project Engineer
Design

Date: July 26, 2011

File: 11-SD-805
PM 23.2/26.7
EA 2T2001
ID 1100020191

From : DEPARTMENT OF TRANSPORTATION - DISTRICT 11
PAVEMENT ENGINEERING AND PLANT SERVICES

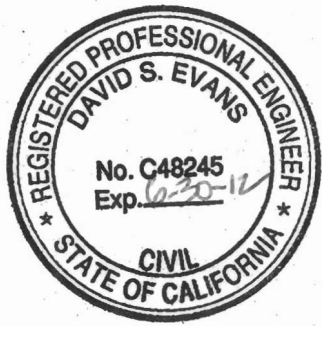
Subject: **STRUCTURAL SECTION RECOMMENDATIONS (REVISED)**

In accordance with your request dated July 19, 2011, we have revised the June 9, 2011 structural section recommendations by adding a northbound on-ramp from Mira Mesa Blvd. and a temporary HMA structural section for the proposed HOV lanes in the median. The design of the temporary HMA section is based on an estimated service life of 5 years or more. Additional money may be needed to maintain and/or repair the section during its service life. The on-ramp section is based on the June 9, 2011 design criteria. The June 9, 2011 structural section recommendations for the outside lanes and shoulders and the inside (HOV) lanes on Route 805 remain unchanged.

If you have questions or comments about this subject, please telephone R. Avila at 858-467-4069.

Ruben Avila
Transportation Engineer, CT/Civil

David Evans
District Pavement Engineer




1 attachment
cc: P File

Attachment 1

## STRUCTURAL SECTION DESIGN - ft

| LOCATION OR LINE | R-VALUE DESIGN | TRAF. INDEX | JPCP (ft) | HMA-A (ft) | AB CL 2 (ft) |
|---|---|---|---|---|---|
| HOV/ TRANSIT LANES* | 15 | 12.5 | 0.85 | 0.25 | 0.65 |
| SOV/ TRUCK LANES OF RTE. 805:* | 15 | 14.5 | 0.90 | 0.25 | 0.65 |
| OUTSIDE SHOULDER OF RTE 805 - PCC OPTION* | 15 | 9.0 | 0.70 | 0.25 | 0.45 |
| OUTSIDE SHOULDER OF RTE 805 - HMA-A OPTION | 15 | 9.0 | | 0.45 | 1.45 |
| NB ON-RAMP FROM MIRA MESA BLVD. - HMA OPTION | 15 | 10.0 | | 0.50 | 1.65 |
| NB ON-RAMP FROM MIRA MESA BLVD. - PCC OPTION* | 15 | 10.0 | 0.70 | 0.25 | 0.45 |
| TEMPORARY HOV/ MANAGED LANES:** | 15 | 11.0 | | 0.60 | 1.75 |

*These designs are based on laterally supported JPCP. For details, see Table 623.1E of HDM dated 7/1/2008

**Additional money may be needed to maintain and/or repair the temporary section during its service life

JPCP = Jointed Plain Concrete Pavement
HMA-A = Hot Mix Asphalt (Type A)
AB CL 2 = Aggregate Base Class 2

# EXHIBIT 22-A

PA&ED Stormwater Data Report

# Storm Water Data Report (SWDR)

Caltrans

**Dist-County-Route:** 11-SD-805

**Post Mile (Kilometer Post) Limits:**
PM 23.3/27.7

**Project Type:** Constructed Managed Lanes

**EA:** 081630

**RU:** 11-276

**Program Identification:** TransNet II

**Phase:** ☐ **PID** ☒ **PA/ED** ☐ **PS&E**

**Regional Water Quality Control Board(s):** San Diego Regional Water Quality Control Board

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: 253 acre

Estimated Construction Start Date: July 2014 Construction Completion Date: July 2019

Notification of Construction (NOC) Date to be submitted: June 2014

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.***

Hanh-Dung Khuu 1/19/2010

Hanh-Dung Khuu, *Registered Project Engineer* Date

***I have reviewed the storm water quality design issues and find this report to be complete, current, and accurate:***

Ron Caraet Jan. 21, 2010

Ron Caraet, *Project Manager* Date

20 Jan 10

Jeff O'Connell *Designated Maintenance Representative* Date

01/20/10

Stephen Alvarez Designated *Landscape Architect Representative* Date

Jan. 20th, 2010

May Alsheikh *District/Regional SW Coordinator or Designee* Date

**Attachment 22**

# STORM WATER DATA INFORMATION

## 1. Project Description

- This project proposes construction of four managed lanes (two lanes in each direction) on Route 805 from 0.4 mile south of the Route 805/52 separation to 0.5 mile north of the Sorrento Valley Undercrossing and on Route 52 from 0.2 miles west to 0.4 mile east of the Route 52/805 separation. This project would also construct Direct Access Ramp (DAR) at Nobel Dr and Carroll Canyon Rd, a Park and Ride/ Transit Station at Nobel Dr, and an HOV Bus Rapid Transit Direct Connector Ramp at the SR52/I-805 Interchange (westbound to northbound and southbound to eastbound). The addition of these managed lanes will improve mobility of commuters from downtown to major work zone areas at Nobel Dr and Mira Mesa Blvd. The project is located within the jurisdiction of the San Diego Regional Water Quality Control Board (RWQCB) Region 9 and within the California Department of Transportation (Caltrans) San Diego County District 11.
- The total disturbed soil area (DSA) of 253 acre is based on the area of construction required for the completion of the project. DSA is calculated from the edge of pavement to the R/W line.
- Existing impervious area is 113.9 acres. Proposed impervious area is 152 acres. The project will increase the impervious surface area by 38.1 acres.
- The project is within the MS4 area of the City of San Diego.

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

- The proposed project is within the Miramar Reservoir (906.10) & Miramar (906.40) Hydrologic Areas which are within the Peñasquitos Hydrologic Unit. The proposed project drains directly into San Clemente Canyon, Rose Canyon, and Carroll Canyon. San Clemente Canyon and Rose Canyon merge together approximately 4 miles west of I-805 south of the I-5/SR-52 interchange and drain south to Mission Bay, which is approximately 2.5 miles south of their point of convergence. Carroll Canyon runs west under I-805 and joins Soledad Canyon, which runs north along I-805 until it merges with Penasquitos Creek. Carroll Canyon is one of the three Creeks that feed into the Los Peñasquitos Lagoon in addition to Los Peñasquitos Creek and Carmel Valley Creek.
- None of the receiving water bodies that collect runoff directly from the project area are 303(d) impaired water bodies or have TMDLs requirements in place. Nevertheless, a TMDL is underway for the Los Peñasquitos Lagoon under Investigation Order R9-2006-0076 (TMDLs for Impaired Lagoons, Adjacent Beaches and Agua Hedionda Creek) issued by the San Diego RWQCB. Los Penasquitos Lagoon is the ultimate receiving water body from the northern limits of the project. Los Penasquitos Lagoon is impaired for sedimentation/siltation. Caltrans is working cooperatively with the other dischargers and the San Diego RWQCB to complete the modeling efforts for this lagoon.
- There are no high-risk areas within the project limits. There are no existing hazardous soils within the project limits.
- A 401 certification will be required due to performing activities that may result in discharges to navigable waters.
- The subject section of I-805 stretches from the coastal Penasquitos Canyon Valley to the inland Clairemont mesa that is located to the southeast. The climate in this area is considered semi-arid. Precipitation records available from the National Weather Service indicate that average rainfall at the Miramar Naval Air Station that is located 7.5 mile (12.0 km) inland from the Pacific Coast (elevation of 476 ft), and to the east from the project alignment, is 11 inches (280 mm) per year. In general, at the project area and in its vicinity annual rainfall increases with distance from the coastline. In addition, nearly 90% of the annual precipitation occurs between the months of November and April.
- At about the project location the average high temperature range from 23 C in winter and early spring to 29 C in summer. Average monthly low temperatures range from 7C in December and January to 19 C in August. In addition, with distance from the coastline the potential from higher high and lower low temperatures in the San Diego Region increases. Extreme high temperatures in the summer months can

exceed 43C, and extreme lows in winter can reach –2C. However, the subzero temperatures are of short duration. Therefore, soil freeze/thaw conditions are not expected to exist within the project alignment.

- There are no Drinking Water Reservoirs and /or Recharge Facilities within project limits.
- There are no known specific local agency requirements or concerns at this time.
- The project site lies within the coastal plain section of the Peninsular Ranges Geomorphic Province of California. The northern limit of the project alignment is located within Los Penaquitos Canyon Valley that is filled with alluvial and slope wash deposits. To the southeast, to about the Mira Mesa Undercrossing, the Ardath Shale and Bay Point Formations underlie the project alignment. Along this stretch of the I-805, and the locations of canyons and gullies that preexisted the construction of the freeway, some segments of the project alignment could be found to be underlain by fill materials derived – most likely – from local cuts. To the southeast from the Mira Mesa Undercrossing, the alignment of

  I-805 crosses the Carroll Canyon Valley that is filled with slope wash and alluvial deposits and ascends into Clairemont Mesa. Therefore, from about Carroll Canyon Valley that is located just southeast from Mira Mesa Undercrossing to the about location of the I-805 and SR-52 Interchange (San Clemente Canyon) the project alignment is generally underlain by the Linda Vista Formation. Locally, canyons and arroyos such as Rose Canyon Valley that is located at about the Burlington, Northern and Santa Fe Overhead dissect this section of the project alignment. At the locations of these topographic features small sections of I-805 alignment could be found to be underlain by the Scripps Formation and Stadium Conglomerate (Kennedy and Peterson, 1975). From the geotechnical engineering standpoint, and based on local experience, with the exception of the Ardath Shale Formation, all native geologic units that underlain the alignment of the subject project are competent. However, only relatively minor sections of the project alignment are expected to be underlain by the Ardath Shale Formation.

  For this project the Soil Survey of San Diego Area, California, prepared by the U.S Department of Agriculture (USDA), Soil Conservation Service (1973) was utilized. The review of this report indicates that there are ten different soil units identified within the project area. Along the project alignment, the majority of relatively level areas or mesas are classified as having soils characteristic of the Redding and Redding-Olivenhian series. These series comprise well-drained cobble and gravelly loams that have gravelly and cobble clay subsoil over a surficial hardpan. The floors of the valleys that incise aforementioned mesas have soils characteristic of the Diablo-Lime and Las Flores-Huerhuero series. These series comprise well to moderately drained clays, clay loams and loamy fine sands that have a subsoil of sandy clay or clay.
- From about its interchange with I-5 to the north through the interchange with SR-52 this section of Interstate 805 generally parallels the Pacific coast. It traverses a series of uplifted wave cut terraces called mesas that parallel the existing coastline. East to west trending river valleys, canyons and arroyos deeply dissect these terraces (mesas). Terraces elevations are typically about 100 m or less above Mean Sea Level (MSL) while stream and arroyos elevations are decreasing from the east to the west direction, and at their western limits they are just above the MSL.

  Natural drainage at the location of the subject section of the freeway occurs mainly through the canyons and arroyos. Runoff water and drainage water in developed areas flows or is channeled to these topographic features that carry it from the east to the west, to the Pacific coast.

  No evidence of natural slope instability was found along the project alignment. In this project vicinity, on the slopes where the inherently unstable Ardath Shale Formation crops out several landslides were mapped (Kennedy and Peterson, 1975). However, since most of alternation to the existing freeway will occur in its median, it is not expected that the slope instability hazard could potentially impact subject project.

  Seepage water, springs, ephemeral steams, and perched water condition could potentially be encountered within the project limits. These hydro geologic phenomena are most likely to occur at the toe of slopes and embankments, and at the contact between permeable units (sandstone) and impermeable (shale). In addition, they are likely to occur at the bottoms of the canyons and arroyos that incise mesas. The depth of groundwater is still waiting for further testing for confirmation.
- The project doesn't involve the re-use of Aerially Deposited Lead
- The project does not require any right-of-way acquisition for the implementation of Best Management Practices (BMPs). All BMPs will be constructed within the project right-of-way.

- The project will be designed to avoid or reduce stormwater impacts wherever feasible by disturbing existing slopes only when necessary, minimizing cut and fill areas, incorporating retaining walls to reduce steepness of the slopes or shorten them, providing cut and fill areas flat enough to allow re-vegetation and limit erosion
- Project construction scheduled will be phased to minimize construction during the rainy season to the greatest extent possible. Ease of maintenance will be considered during the design
- Some of the treatment BMPs to be constructed under EA 089754 within the project limits shall be reconstructed to convey flows from the existing paved areas and minimize any stormwater impacts from the project (see Attachment A). Treatment BMPs to be constructed under EA 2T0404 locations have been coordinated with this project and they will not be impacted.

## 3. Regional Water Quality Control Board Agreements

Currently, there are no negotiated understandings or agreements with the San Diego Regional Water Quality Control Board for this project at this time.

## 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

- Addition of impervious area and storm drains will result in a shorter travel time of runoff and therefore shorter time of concentration in the post construction condition. The peak rate of runoff for a given storm frequency will therefore be greater, and the total volume of runoff from the site will be increased by about 82,500 $ft^3$ which will also marginally increase the flow velocities in downstream drainage systems.
- Potential increased erosion from increased runoff flows will be minimized by the use of erosion control measures, such as paved ditches, slope planting and riprap energy dissipaters at culvert outlets. Therefore, adverse impacts to the downstream channel conditions and sediment loading potential are anticipated to be negligible.

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

- In the project area, existing slopes are generally 2:1 (H:V) or flatter. The project will modify some slopes due to the widening, and will not steepen the existing slope to more than 2:1. Retaining walls will be constructed as necessary at locations where the modified side slopes are steeper than 2:1(H:V)
- Currently slopes are stabilized with planting. After the completion of construction, all disturbed slopes will be stabilized with permanent erosion control or planting. The District Landscape Architect, Erosion Control Specialist and Biologist will be working collectively to determine the appropriate vegetation for the project.
- Slopes will be rounded and/or shaped to reduce concentrated flows.
- Concentrated flows will be collected in stabilized drains or channels.
- Hard surfaces will be implemented in gore areas and under bridges for maintenance safety and slope stabilization purposes.
- Temporary and permanent erosion control will be applied on the surface of new slopes. Existing slopes and their vegetation will be preserved to the greatest extent possible.

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

- In the case of fill slopes that are steeper than 4:1, asphalt concrete dikes, down drains, and overside drain will be used to control runoff and minimize gullies and scour.
- It will be necessary to intercept and direct surface runoff as well as modify existing cross drains.
- Where cross-culverts convey on-and-off-site runoff under the highway, outlet energy dissipation or concrete lined channel end treatments will be specified at the inlet/outlet of the culverts. Where

practical, rock slope protection (RSP) will be provided at culvert outlets to minimize scour and erosion at cross-culvert transitions.

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

- The project will preserve existing vegetation to the maximum extent possible. Any vegetation disturbed by construction will be minimized and restored to original conditions.
- All Environmentally Sensitive Areas (ESAs) will be designated on the plans as off limits areas for the contractor.

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

Treatment BMP Strategy, Checklist T-1

- None of the water bodies receiving storm water runoff directly from the project limits are 303(d) impaired or have TMDLs underway. Los Penasquitos Lagoon and Mission Bay are 303(d) impaired but they are far off the project limits. Nevertheless, they will be considered when selecting treatment BMPs for the project as feasible. Los Penasquitos Lagoon is sediment impaired and Mission Bay (at the mouth of Rose Creek only) is impaired for Eutrophic and lead. Eutrophication is the resultant increase in the ecosystem's primary productivity (excessive plant growth and decay), and further effects including lack of oxygen and severe reductions in water quality, fish, and other animal populations. Eutrophication is a result of nutrient pollution, such as the release of sewage effluent, urban stormwater run-off, and run-off carrying excess fertilizers into natural waters. However, it may also occur naturally in situations where nutrients accumulate (e.g. depositional environments) or where they flow into systems on an ephemeral basis.
- At this phase of the project, project is proposing to treat for the most common pollutants coming off freeway runoff, such as metals and sediment. Since only infiltration basins/trenches can address Eutrophication impairment, potential locations of basins can be verified during the design phase if they can be designed as detention or infiltration depending on the soil permeability rates and groundwater table depth. Checklist T-1, Part 4 could not be completed at this phase of the project since a project specific Geotechnical Report has not been prepared at this time.
- The project is anticipated to have 31 bioswales and 3 detention/infiltration basins. The project is anticipated to treat 27.62 acres of impervious surface, which is equivalent to 24% of the total pavement (new and existing) and equivalent to 72.5% of new pavement.
- Implementation of biofiltration swales and detention/infiltration basins are proposed as the treatment BMP strategy. This strategy was selected based on pollutants of concern in the receiving water bodies, hydraulic feasibility, existing site constraints (topography and R/W limitations), and the feasibility of each of the approved Treatment BMPs. Treatment BMPs have been evaluated individually for implementation on the proposed project in accordance with the guidelines provided in the PPDG.

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

- An assessment of the proposed grading identifies several locations for biofiltration swales/strips adjacent to the roadway. Bioswales are proposed as the best available treatment per site conditions. The bioswale locations are along the outside shoulders of I-805 within the right-of –way limits or along ramps. The Drainage and BMP Concept Plan presents the potential locations for bioswales. The biofiltration swales follow existing slopes, with minimal excavation required. All bioswale channels are trapezoidal in section with minimum invert width of 4 ft to maximum width of 8 ft. Side slopes shall be 1:4 (V: H) or flatter. Bioswale calcs are found in Attachment A.

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

- Dry Weather Diversions are not appropriate for this project because dry weather flows generated by Caltrans are not anticipated to be persistent and a connection to an existing sanitary sewer is not possible.

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

- The Drainage and BMP Concept Plans have potential locations for infiltration/detention basins. The feasibility criteria for infiltration basins require a design WQV that exceeds 0.1-acre-foot, sufficient soil permeability and sufficiently low water table, and no threat to local groundwater quality. An infiltration rate test needs to be conducted within the project site to confirm the feasibility of Infiltration Devices. The calculations are found in Attachment A.

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

- Detention basins/infiltration basins are incorporated into the project. Proposed locations are shown on the Project Features Maps. An infiltration rate test needs to be conducted within the project site to confirm the feasibility of Infiltration Devices. The calculations are found in Attachment A.

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

- GSRDs were not incorporated into the project because none of the receiving water bodies are 303(d) listed for trash or have trash TMDL established.

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

- Traction sand traps are not incorporated into the project because the project is not located in or near an area where sand is applied more than twice a year.

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

- Since the project is not acquiring any new right of way, Media filters can't not be incorporated into the project due to site limitations. The project site contains a critical pollutant source area, which is the Park and Ride Area at Nobel Drive. Since the design of the Park and Ride area is not complete at this time, Media Filters will be further evaluated as a potential BMP for this area during the design phase to determine feasibility.

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

- The project site contains a critical pollutant source area, which is the Park and Ride Area at Nobel Drive. Since the design of the Park and Ride area is not complete at this time, MCTTs will be further evaluated as a potential BMP for this area during the design phase to determine feasibility.

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

- The project site does not have a permanent source of water to maintain a pool and the ground water is far below the surface to be considered as a source of water. Therefore a wet basin is not feasible for this project.

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

The project involves constructing Direct Access Ramps (DAR), lane widening and median reconstruction of structural section for the I-805 and interchange modifications. The strategy for the selection of the Construction Site BMPs is to limit construction related sediment and other pollutant transport outside the work area and into a water body.

The Construction Site BMP cost has been estimated based on recent comparable major construction projects to provide conservative measures for protecting water quality in the downstream receiving water bodies during construction. The project proposes to include the following BMPs as bid line items for this phase of the project. When design progresses during the Design Phase of the project, the BMPs will be selected and quantified based on stage construction. Costs are outlined in the 11-page estimate for the project.

- **Temporary Fiber Rolls (074028)**
- **Temporary Drainage Inlet protection (074038)**
- **Temporary Silt Fence (074029)**

- **Temporary Concrete Washout Facility (074032)**
- **Temporary Concrete Washouts (Portable) (074042)**
- **Temporary Hydroseed (074053)**
- **Temporary Construction Entrance (074033)**
- **Street Sweeping (074041)**
- **Temporary Check Dams (074035)**
- **Move In/Move Out (TEC) (074037)**

- Construction Site Management (074016) will be paid as a lump sum.
- Groundwater dewatering will be required during the construction of the project. A permit will be acquired during the construction phase.

## 7. Maintenance BMPs (Drain Inlet Stenciling)

Drain inlet stenciling will be implemented on all pedestrian accessible inlets within Caltrans R/W. Locations and stencil Type will be determined at the PS&E phase.

## REQUIRED ATTACHMENTS

⇒ **Vicinity Map**
⇒ **Evaluation Documentation Form (EDF)**
⇒ **Treatment BMP Summary Spreadsheets (required, if Treatment BMPs are incorporated into project)**

## 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.***

⇒ Storm Water BMP Cost Summary
⇒ BMP cost information from: Preliminary Project Cost Estimate (PPCE) during PID and PA/ED project phases
⇒ 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) [only those parts that are applicable]
Checklists T-1, Parts 1–10 (Treatment BMPs) [only those Parts that are applicable]
⇒ Calculations and cross sections related to BMPs (if requested by District/Regional Storm Water Coordinator)
⇒ Conceptual Drainage Map or Drainage Plans, if available (if requested by District/Regional Storm Water Coordinator for review)

DATE: 01/11/2010

See Figure 4-1, Project Evaluation Process for Consideration of Permanent Treatment BMPS EA: 081630

| 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.<br>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).<br>_____ *(Dist./Reg. SW Coordinator initials)*<br>If **No**, continue to 4. |
| 4. | Is the project located within an area of a local MS4 Permittee? | ☒ | ☐ | If **Yes**, continue to 5. (*City of San Diego*)<br>If **No**, document in SWDR go to 5. |
| 5. | Is the project directly or indirectly discharging to surface waters? | ☒ | ☐ | If **Yes**, continue to 6.<br>If **No**, go to 11. |
| 6. | Is this a new facility or major reconstruction? | ☒ | ☐ | If **Yes**, continue to 8.<br>If **No**, go to 7. |
| 7. | Will there be a change in line/grade or hydraulic capacity? | ☒ | ☐ | If **Yes**, continue to 8.<br>If **No**, go to 11. |
| 8. | Does the project result in a net increase of one acre or more of new impervious surface? | ☒ | ☐ | If **Yes**, continue to 10.<br>If **No**, go to 9.<br>*38.1 acres* |
| 9. | Is the project part of a Common Plan of Development? | ☐ | ☐ | If **Yes**, continue to 10.<br>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.<br>HPB *(Dist./Reg. SW Coord. Initials)*<br>HDK *(Project Engineer Initials)*<br>1/19/10 *(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***

# *Construction Site BMP Consideration Form*

DATE: 01/11/2010

Project Evaluation Process for the Consideration of Construction Site BMPs EA: 081630

| NO. | CRITERIA | YES | NO | SUPPLEMENTAL INFORMATION |
|---|---|---|---|---|
| 1. | Will construction of the project result in areas of disturbed soil as defined by the Project Planning and Design Guide (PPDG)? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Soil Stabilization (SS) will be required. Complete CS-1, Part 1. Continue to 2. If **No**, Continue to 3. |
| 2. | Is there a potential for disturbed soil areas within the project to discharge to storm drain inlets, drainage ditches, areas outside the right of way, etc? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Sediment Control (SC) will be required. Complete CS-1, Part 2.<br><br>Continue to 3. |
| 3. | Is there a potential for sediment or construction related materials and wastes to be tracked offsite and deposited on private or public paved roads by construction vehicles and equipment? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Tracking Control (TC) will be required. Complete CS-1, Part 3.<br><br>Continue to 4. |
| 4. | Is there a potential for wind to transport soil and dust offsite during the period of construction? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Wind Erosion Control (WE) will be required. Complete CS-1, Part 4. Continue to 5. |
| 5. | Is dewatering anticipated or will construction activities occur within or adjacent to a live channel or stream? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5.<br><br>Continue to 6. |
| 6. | Will construction include saw-cutting, grinding, drilling, concrete or mortar mixing, hydro-demolition, blasting, sandblasting, painting, paving, or other activities that produce residues? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5.<br><br>Continue to 7. |
| 7. | Are stockpiles of soil, construction related materials, and/or wastes anticipated? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 8. |
| 8. | Is there a potential for construction related materials and wastes to have direct contact with precipitation; storm water run-on, or stormwater runoff; be dispersed by wind; be dumped and/or spilled into storm drain systems? | ☐ | ☐ | If **Yes**, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6.<br><br>Continue to 9. |
| 9. | End of checklist. | ☐ | Document for Project Files by completing this form, and attaching it to the SWDR. | |

*PE to initialize after concurrence with Construction (PS&E only)* *Date*

## Checklist SW-1, Site Data Sources

Prepared by: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

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** | |
| • Department of Transportation Division of Engineering Services, Preliminary Geotechnical Report for Proposed Retaining Wall. | August 31,2007 |
| • From about its interchange with I-5 to the north through the interchange with SR-52 this section of Interstate 805 generally parallels the Pacific coast. It traverses a series of uplifted wave cut terraces called mesas that parallel the existing coastline. East to west trending river valleys, canyons and arroyos dissect deeply these terraces (mesas). Terraces elevations are typically about 100 m or less above Mean Sea Level (MSL) while stream and arroyos elevations are decreasing from the east to the west direction, and at their western limits they are just above the MSL.<br>• Natural drainage at the location of the subject section of the freeway occurs mainly through the canyons and arroyos. Runoff water and drainage water in developed areas flows or is channeled to these topographic features that carry it from the east to the west, to the Pacific coast. | |
| • | |
| **Hydraulic** | August 31,2007 |
| • Water Quality Planning Tool<br>• www.stormwater.water-programs.com | |
| • Runoff flows in the existing storm drain systems will discharge into the Carroll Canyon that leads to Penasquitos Lagoon, and eventually release into Pacific Ocean Shoreline. A portion of the runoff from the project sites will drain to San Clemente Canyon and Rose Canyon, which will empty into the north end of Mission Bay, which is south of the project. | |
| • | |
| **Soils** | August 31,2007 |
| • Department of Transportation Division of Engineering Services, Preliminary Geotechnical Report for Proposed Retaining Wall. | |
| • There are ten different soil units identified within the project area. Along the project alignment, the majority of relatively level areas or mesas are classified as having soils characteristic of the Redding and Redding-Olivenhian series. These series comprise well-drained cobble and gravelly loams that have gravelly and cobble clay subsoil over a | |

| | |
|---|---|
| surficial hardpan. The floors of the valleys that incise aforementioned mesas have soils characteristic of the Diablo-Lime and Las Flores-Huerhuero series. These series comprise well to moderately drained clays, clay loams and loamy fine sands that have a subsoil of sandy clay or clay. | |
| | |
| **Climatic** | August 31,2007 |
| • Department of Transportation Division of Engineering Services, Preliminary Geotechnical Report for Proposed Retaining Wall. | |
| • At about the project location the average high temperature range from 23 C in winter and early spring to 29 C in summer. Average monthly low temperatures range from 7C in December and January to 19 C in August. In addition, with distance from the coastline the potential from higher high and lower low temperatures in the San Diego Region increases. Extreme high temperatures in the summer months can exceed 43C, and extreme lows in winter can reach –2C. However, the subzero temperatures are of short duration. Therefore, soil freeze/thaw conditions are not expected to exist within the project alignment. | |
| | |
| **Water Quality** | |
| • Water Quality Planning Tool<br>• www.stormwater.water-programs.com | |
| • Water Quality Control Plan (Basin Plan)—San Diego Regional Water Quality Control Board (9). | Sept 1994 |
| • The receiving water bodies for the project includes: Los Penasquitos Lagoon, Pacific Ocean Shoreline and Mission Bay. Penasquitos lagoon is on the 303(d) list for sedimentation /siltation.<br>• Project Planning and Design Guide (May 2007) | |
| **Other Data Categories** | |
| • Caltrans Construction Site BMP Manual | |
| • | |
| • | |
| • | |
| • | |
| | |
| • | |

## Checklist SW-2, Storm Water Quality Issues Summary

Prepared by: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

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). (see section 2) | ☒Complete | ☐NA |
| 2. For the project limits, list the 303(d) impaired receiving water bodies and their constituents of concern. (see section 2) | ☒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. (None) | ☒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. (see section 2) | ☒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. (All work will be conducted within existing ROW) | ☐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: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805
PM (KP): PM 23.3/27.7 EA: 081630
RWQCB: San Diego (Region 9)

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: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805
PM (KP): PM 23.3/27.7 EA: 05/19/09
RWQCB: San Diego (Region 9)

## Slope / Surface Protection Systems

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

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

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

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

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

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

6. 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).

7. Estimate the change to the impervious areas that will result from this project. 37.8 acres ☒Complete

### 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 5

Prepared by: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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 |

# Design Pollution Prevention BMPs
# Checklist DPP-1, Part 4

Prepared by: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805
PM (KP): PM 23.3/27.7 EA: 081630
RWQCB: San Diego (Region 9)

## 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

# Treatment BMPs

## Checklist T-1, Part 1

Prepared by: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

### 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, ___total copper, ___dissolved copper,

   ___total lead ___dissolved lead, ___total zinc, ___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

_____ Infiltration Devices
_____ Wet Basins
_____ Biofiltration Strips
_____ Detention Device
_____ Biofiltration Swales
_____ Austin Sand Filter
_____ Delaware Filter
_____ MCTT

10. Is copper (dissolved) the TDC? If Yes for dissolved Copper, consider: ☐Yes ☐No

_____ Infiltration Devices
_____ Biofiltration Strips
_____ Wet Basin
_____ Biofiltration Swale

11. Is lead (total) the TDC? If Yes for total Lead, consider: ☐Yes ☐No

_____ Infiltration Devices
_____ Wet Basin
_____ Biofiltration Strips
_____ Austin Sand Filter
_____ **Delaware Filter**
_____ Detention Device
_____ Biofiltration Swales
_____ MCTT

12. Is lead (dissolved) the TDC? If Yes for dissolved Lead, consider: ☐Yes ☐No

_____ Infiltration Devices
_____ Biofiltration Strips
_____ Wet Basin
_____ Detention Device
_____ Biofiltration Swales
_____ Austin Sand Filter

13. Is zinc (total) the TDC? If Yes for total Zinc, consider: ☐Yes ☐No

_____ Infiltration Devices
_____ Delaware Filter
_____ Wet Basin
_____ Biofiltration Strips
_____ Biofiltration Swales
_____ Austin Sand Filter
_____ MCTT
_____ Detention Devices

14. Is zinc (dissolved) the TDC? If Yes for dissolved Zinc, consider: ☐Yes ☐No

    _____ Infiltration Devices
    _____ Delaware Filter
    _____ Biofiltration Strip
    _____ Biofiltration Swale
    _____ Austin Sand Filter
    _____ 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

    **x** Infiltration Devices
    **x** Biofiltration Strips
    _____ Wet Basin
    **x** Biofiltration Swale
    _____ Austin Sand Filter
    **x** 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
- ____ GSRDs: Checklist T-1, Part 6
- ____ Traction Sand Traps: Checklist T-1, Part 7
- ____ Media Filter [Austin Sand Filter and Delaware Filter]: Checklist T-1, Part 8
- ____ Multi-Chambered Treatment Train: Checklist T-1, Part 9
- ____ Wet Basins: Checklist T-1, Part 10

20. (a) Estimate what percentage of WQV/WQF will be treated by the preferred Treatment BMP(s): 72.5% equivalent to new pavement ☒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: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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 3

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

**Dry Weather Flow Diversion**

**Feasibility**

1.

2.

3.

☐Yes ☐No

# Treatment BMPs
# Checklist T-1, Part 4

Prepared by: Stephen Luu Date: 05/19/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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<br>If Yes, continue to Design Elements section.<br>If No, continue to Question 9. | ☐ Yes | ☐ No |
| 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: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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
   If Yes, continue to the Design Elements section. If No, continue to Question 6. ☐Yes ☐No

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 ($\geq$ 2:1 length to width ratio at WQV elevation is recommended)? ** | ☒Yes | ☐No |

## Treatment BMPs
## Checklist T-1, Part 6

Prepared by: _____ Date: _____ District-Co-Route: _____

KP (PM): _____ EA: _____

RWQCB: _____

### 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 7

Prepared by:
PM (KP):
RWQCB:

## Traction Sand Traps

### Feasibility

Can a Detention Device be sized to capture the estimated traction sand and the WQV from the tributary area?

If Yes, then a separate Traction Sand Trap may not be necessary. Coordinate with the District/Regional Storm Water Coordinator and also complete Checklist T-1, Part 5.

Has the District/Regional NPDES Storm Water Coordinator been contacted to ensure that the traction sand trap is not classified as a regulated underground injection well? * (CMP type)

# Treatment BMPs
# Checklist T-1, Part 8

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.3/27.7 EA: 081630

RWQCB: San Diego (Region 9)

## 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)? If Yes, continue to Design Elements sections. 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 the device and how much right-of way would be needed to treat WQV? _____ acres If Yes, continue to the Design Elements section. If No, continue to Question 6. | ☐Yes | ☐No |
| 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? ** If No, go to Question 9. | ☒Yes | ☐No |

| | | | |
|---|---|---|---|
| 7. | Is the Austin Sand Filter invert separated from the seasonally high groundwater table by ≥ 10 ft? *<br>If No, design with an impermeable liner. | ☐ Yes | ☐ No |
| 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: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## 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? If No to any question above, then an MCTT is not feasible. | ☐ Yes | ☐ No |
| 5. | Does adequate area exist within the right-of-way to place an MCTT(s)? If Yes, continue to Design Elements sections. If No, continue to Question 6. | ☐ Yes | ☐ No |
| 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 If Yes, continue to Design Elements section. If No, continue to Question 7. | ☐ Yes | ☐ No |
| 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 |

# Construction Site BMPs
# Checklist CS-1, Part 1

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## Soil Stabilization

*General Parameters*

1. How many rainy seasons are anticipated between beginning and end of construction?

2. What is the total disturbed soil area for the project? (ac) — 253

   (a) How much of the project DSA consists of slopes 1V:4H or flatter? (ac) — 0

   (b) How much of the project DSA consists of 1V:4H < slopes < 1V:2H? (ac) — 0

   (c) How much of the project DSA consists of slopes 1V:2H and steeper? (ac) — 50

   (d) How much of the project DSA consists of slopes with slope lengths longer then 20 ft? (ac)

3. What rainfall area does the project lie within? (Refer to Table 2-1 of the Construction Site Best Management Practices Manual)

4. Review the required combination of temporary soil stabilization and temporary sediment controls and barriers for area, slope inclinations, rainy and non-rainy season, and active and non-active disturbed soil areas. (Refer to Tables 2-2, and 2-3 of the Construction Site Best Management Practices Manual for Rainfall Area requirements.) — ☐ Complete

*Scheduling* (SS-1)

5. Does the project have duration of more then one rainy season and have disturbed soil area in excess of 25 acres? — ☒ Yes ☐ No

   (a) Include multiple mobilizations (Move-in/Move-out) as a separate contract bid line item to implement permanent erosion control or revegetation work on slopes that are substantially complete. (Estimate at least 6 mobilizations for each additional rainy season. Designated Construction Representative may suggest an alternate number of mobilizations.) — ☐ Complete

   (b) Edit Order of Work specifications for permanent erosion control or revegetation work to be implemented on slopes that are substantially complete. — ☐ Complete

   (c) Edit permanent erosion control or revegetation specifications to require seeding and planting work to be performed when optimal. — ☐ Complete

*Preservation of Existing Vegetation* (SS-2)

6. Do Environmentally Sensitive Areas (ESAs) exist within or adjacent to the project limits? (Verify the completion of DPP-1, Part 5) ☐ Yes ☐ No

   (a) Verify the protection of ESAs through delineation on all project plans. ☐ Complete

   (b) Protect from clearing and grubbing and other construction disturbance by enclosing the ESA perimeter with high visibility plastic fence or other BMP. ☐ Complete

7. Are there areas of existing vegetation (mature trees, native vegetation, landscape planting, etc.) that need not be disturbed by project construction? Will areas designated for proposed treatment BMPs need protection (infiltration characteristics, vegetative cover, etc.)? (Coordinate with District Environmental and Construction to determine limits of work necessary to preserve existing vegetation to the maximum extent practicable.) ☐ Yes ☐ No

   (a) Designate as outside of limits of work (or designate as ESAs) and show on all project plans. ☐ Complete

   (b) Protect with high visibility plastic fence or other BMP. ☐ Complete

8. If yes for 6, 7, or both, then designate ESA fencing as a separate contract bid line item, *if not already incorporated as part of design pollution prevention work (See DPP-1, Part 5).* ☐ Complete

*Slope Protection*

9. Provide a soil stabilization BMP(s) appropriate for the DSA, slope steepness, slope length, and soil erodibility. (Consult with District/Regional Landscape Architect.)

   (a) Select SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-6 (Straw Mulch), SS-7 (Geotextiles, RECPs, Etc.), SS-8 (Wood Mulching), other BMPs or a combination to cover the DSA throughout the project's rainy season. ☒ Complete

   (b) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest an alternate increase.) ☒ Complete

   (c) Designate as a separate contract bid line item. ☒ Complete

*Slope Interrupter Devices*

10. Provide slope interrupter devices for all slopes with slope lengths equal to or greater than of 20 ft in length. (Consult with District/Regional Landscape Architect and Designated Construction Representative.)

    (a) Select SC-5 (Fiber Rolls) or other BMPs to protect slopes throughout the project's rainy season. ☒ Complete

    (b) For slope inclination of 1V:4H and flatter, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 20 ft on center. ☒ Complete

    (c) For slope inclination between 1V:4H and 1V:2H, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 15 ft on center. ☒ Complete

    (d) For slope inclination of 1V:2H and greater, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 10 ft on center. ☒ Complete

    (e) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest alternate increase.) ☒ Complete

    (f) Designate as a separate contract bid line item. ☒ Complete

*Channelized Flow*

11. Identify locations within the project site where concentrated flow from stormwater runoff can erode areas of soil disturbance. Identify locations of concentrated flow that enters the site from outside of the right-of-way (off-site run-on). ☒ Complete

    (a) Utilize SS-7 (Geotextiles, RECPs, etc.), SS-9 (Earth Dikes/Swales, Ditches), SS-10 (Outlet Protection/Velocity Dissipation), SS-11 (Slope Drains), SC-4 (Check Dams), or other BMPs to convey concentrated flows in a non-erosive manner. ☒ Complete

    (b) Designate as a separate contract bid line item. ☒ Complete

# Construction Site BMPs
# Checklist CS-1, Part 2

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## Sediment Control

*Perimeter Controls - Run-off Control*

1. Is there a potential for sediment laden sheet and concentrated flows to discharge offsite from runoff cleared and grubbed areas, below cut slopes, embankment slopes, etc.? ☒Yes ☐No

   (a) Select linear sediment barrier such as SC-1 (Silt Fence), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or a combination to protect wetlands, water courses, roads (paved and unpaved), construction activities, and adjacent properties. (Coordinate with District Construction for selection and preference of linear sediment barrier BMPs.) ☒ Complete

   (b) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest an alternate increase.) ☒ Complete

   (c) Designate as a separate contract bid line item. ☒ Complete

*Perimeter Controls - Run-on Control*

2. Do locations exist where sheet flow upslope of the project site and where concentrated flow upstream of the project site may contact DSA and construction activities? ☒Yes ☐No

   (a) Utilize linear sediment barriers such as SS-9 (Earth Dike/Drainage Swales and Lined Ditches), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or other BMPs to convey flows through and/or around the project site. (Coordinate with District Construction for selection and preference of perimeter control BMPs.) ☒ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

*Storm Drain Inlets*

3. Do existing or proposed drainage inlets exist within the project limits? ☒Yes ☐No

   (a) Select SC-10 (Storm Drain Inlet Protection) to protect municipal storm drain systems or receiving waters wetlands at each drainage inlet. (Coordinate with District Construction for selection and preference of inlet protection BMPs.) ☒ Complete

   (b) Designate as a separate contract bid line item. ☒ Complete

4. Can existing or proposed drainage inlets utilize an excavated sediment trap as described in SC-10 (Storm Drain Inlet Protection- Type 2)? ☒Yes ☐No

   (a) Include with other types of SC-10 (Storm Drain Inlet Protection). ☒ Complete

*Sediment/Desilting Basin* (SC-2)

5. Does the project lie within a Rainfall Area where the required combination of temporary soil stabilization and sediment control BMPs includes desilting basins? (Refer to Tables 2-1, 2-2, and 2-3 of the Construction Site Best Management Practices Manual for Rainfall Area requirements.) ☒Yes ☐No

   (a) Consider feasibility for desilting basin allowing for available right-of-way within the project limits, topography, soil type, disturbed soil area within the watershed, and climate conditions. Document if the inclusion of sediment/desilting basins is infeasible. ☒ Complete

   (b) If feasible, design desilting basin(s) per the guidance in SC-2 Sediment/ Desilting Basins of the Construction Site BMP Manual to maximize capture of sediment-laden runoff. ☒ Complete

   Designate as a separate contract bid item. ☐ Complete

6. Will the project benefit from the early implementation of proposed permanent Treatment BMPs? (Coordinate with District Construction.) ☒Yes ☐No

   (a) Edit Order of Work specifications for permanent treatment BMP work to be implemented in a manner that will allow its use as a construction site BMP. ☒ Complete

*Sediment Trap* (SC-3)

7. Can sediment traps be located to collect channelized runoff from disturbed soil areas prior to discharge? ☐Yes ☒No

   (a) Design sediment traps in accordance with the Construction Site BMP Manual. ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

# Construction Site BMPs
# Checklist CS-1, Part 3

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## Tracking Controls

*Stabilized Construction Entrance/Exit* (TC-1)

1. Are there points of entrance and exit from the project site to paved roads where mud and dirt could be transported offsite by construction equipment? (Coordinate with District Construction for selection and preference of tracking control BMPs.) ☒Yes ☐No

   (a) Identify and designate these entrance/exit points as stabilized construction entrances (TC-1). ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

*Tire/Wheel Wash* (TC-3)

2. Are site conditions anticipated that would require additional or modified tracking controls such as entrance/outlet tire wash? (Coordinate with District Construction.) ☒Yes ☐No

   Designate as a separate contract bid line item. ☐ Complete

*Stabilized Construction Roadway* (TC-2)

3. Are temporary access roads necessary to access remote construction activity locations or to transport materials and equipment? (In addition to controlling dust and sediment tracking, access roads limit impact to sensitive areas by limiting ingress, and provide enhanced bearing capacity.) (Coordinate with District Construction.) ☐Yes ☐No

   (a) Designate these temporary access roads as stabilized construction roadways (TC-2). ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

*Street Sweeping and Vacuuming* (SC-7)

1. Is there a potential for tracked sediment or construction related residues to be transported offsite and deposited on public or private roads? (Coordinate with District Construction for preference of including street sweeping and vacuuming with tracking control BMPs.) ☒Yes ☐No

   Designate as a separate contract bid line item. ☐ Complete

# Construction Site BMPs
# Checklist CS-1, Part 4

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD-805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## Wind Erosion Controls

*Wind Erosion Control* (WE-1)

1. Is the project located in an area where standard dust control practices in accordance with Standard Specifications, Section 10: Dust Control, are anticipated to be inadequate during construction to prevent the transport of dust offsite by wind? *(Note: Dust control by water truck application is paid for for through the various items of work. Dust palliative, if it is included, is paid for as a separate item.)* ☒ Yes ☐ No

   (a) Select SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-7 (Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats), SS-8 (Wood Mulching) or a combination to cover the DSA subject to wind erosion year-round, especially when significant wind and dry conditions are anticipated during project construction. (Coordinate with District Construction for selection and preference of wind erosion control BMPs.) ☒ Complete

   (b) Designate as a separate contract bid line item. ☒ Complete

# Construction Site BMPs
# Checklist CS-1, Part 5

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## Non-Storm Water Management

*Temporary Stream Crossing* (NS-4) & *Clear Water Diversion* (NS-5)

1. Will construction activities occur within a water body or watercourse such as a lake, wetland, or stream? (Coordinate with District Construction for selection and preference for stream crossing and clear water diversion BMPs.) ☐ Yes ☒ No

   (a) Select from types offered in NS-4 (Temporary Stream Crossing) to provide access through watercourses consistent with permits and agreements.[1] ☐ Complete

   (b) Select from types offered in NS-5 (Clear Water Diversion) to divert watercourse consistent with permits and agreements.[1] ☐ Complete

   (c) Designate as a separate contract bid line item(s). ☐ Complete

*Other Non-Storm Water Management BMPs*

2. Are construction activities anticipated that will generate wastes or residues with the potential to discharge pollutants? ☒ Yes ☐ No

   (a) Identify potential pollutants associated with the anticipated construction activity and select the corresponding BMP such as NS-1 (Water Conservation Practices), NS-2 (Dewatering Operations), NS-3 (Paving and Grinding Operations), NS-7 (Potable Water/Irrigation), NS-8 (Vehicle and Equipment Cleaning), NS-9 (Vehicle and Equipment Fueling), NS-10 (Vehicle and Equipment Maintenance), NS-11 (Pile Driving Operations), NS-12 (Concrete Curing), NS-13 (Material and Equipment Use Over Water), NS-14 (Concrete Finishing), and NS-15 (Structure Demolition/Removal Over or Adjacent to Water).[1] ☒ Complete

   (b) Verify that costs for non-storm water management BMPs are identified in the contract documents. Designate BMP as a separate contract bid line item if the requirements in Construction Site Management (SSP 07-346) are anticipated to be inadequate or if requested by Construction. ☒ Complete

1. Coordinate with District Environmental for consistency with US Army Corps of Engineers 404 permit and Dept. of Fish and Game 1601 Streambed alteration Agreements.

# Construction Site BMPs
# Checklist CS-1, Part 6

Prepared by: Stephen Luu Date: 05/20/09 District-Co-Route: 11-SD805

PM (KP): PM 23.5/28.5 EA: 081630

RWQCB: San Diego (Region 9)

## Waste Management & Materials Pollution Control

*Concrete Waste Management* (WM-8)

1. Does the project include concrete pours or mortar mixing? ☒Yes ☐No

   (a) Select from types offered in WM-8 (Concrete Waste Management) to provide concrete washout facilities. In addition, consider portable concrete washouts and vendor supplied concrete waste management services. (Coordinate with District Construction for selection and preference of waste management and materials pollution control BMPs.) ☒ Complete

   (b) Designate as a separate contract bid line item if the quantity of concrete waste and washout are anticipated to exceed 5.2 $yd^3$ or if requested by Construction. ☒ Complete

*Other Waste Management and Materials Pollution Controls*

2. Are construction activities anticipated that will generate wastes or residues with the potential to discharge pollutants? ☒Yes ☐No

   (a) Identify potential pollutants associated with the anticipated construction activity and select the corresponding BMP such as WM-1 (Material Delivery and Storage), WM-2 (Material Use), WM-4 (Spill Prevention and Control), WM-5 (Solid Waste Management), WM-6 (Hazardous Waste Management), WM-7 (Contaminated Soil Management), WM-9 (Sanitary/Septic Waste Management) and WM-10 (Liquid Waste Management) ☒ Complete

   (b) Verify that costs for waste management and materials pollution control BMPs are identified in the contract documents. Designate BMP as a separate contract bid line item if the requirements in Construction Site Management (SSP 07-346) are anticipated to be inadequate or if requested by Construction. ☐ Complete

*Temporary Stockpiles (Soil, Materials, and Wastes)*

3. Are stockpiles of soil, etc. anticipated during construction? ☒Yes ☐No

   (a) Select WM-3 (Stockpile Management), SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-7 (Geotextiles, RECPs etc.), or a combination as appropriate to cover temporary stockpiles of soil, etc. ☒ Complete

   (b) Select linear sediment barrier such as SC-1 (Silt Fence), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or a combination to encircle temporary stockpiles of soil, etc. (Coordinate with District Construction for selection and preference of BMPs related to stockpiles.) ☒ Complete

(c) Designate as a separate contract bid line item if the requirements in Construction Site management (SSP 07-346) are anticipated to be inadequate or if requested by Construction. ☐ Complete

4. Is there a potential for dust and debris from construction material (fill material, etc.) and waste (concrete, contaminated soil, etc.) stockpiles to be transported offsite by wind? ☒ Yes ☐ No

(a) Select SS-7, temporary cover, plastic sheeting or other BMP to cover stockpiles subject to wind erosion year-round, especially when significant wind and dry conditions are anticipated during project construction. (Coordinate with District Construction for selection and preference of wind erosion control BMPs.) ☒ Complete

(b) Designate as a separate contract bid line item. ☒ Complete