FOR CONTRACT NO.: 04-1A3204

INFORMATION HANDOUT

PERMITS

SAN FRANCISCO BAY CONSERVATION DEVELOPMENT COMMISSION

BCDC - M90-3

AGREEMENTS

CHEVRON USA INC

MATERIALS INFORMATION

PORTION OF PRELIMINARY SITE INVESTIGATION

FOUNDATION REPORT

04-CC-580-PM5.5/6.2

Permittee's Copy

Making San Francisco Bay Better

PERMIT NO. M1990.003.04
(Originally Issued on March 27, 1990, as M90-3, As Amended Through May 31, 2012)

California Department of Transportation
P.O. Box 23660
Oakland, California 94623-0660

Ladies and Gentlemen:

I. Authorization

A. Subject to the conditions stated below, the permittee, the California Department of Transportation, is hereby authorized to do the following:

Location: In the Bay and within the 100-foot shoreline band, at the eastern approach to the Richmond-San Rafael Bridge and alongside the John J. Knox Freeway (I-580), in the City of Richmond, Contra Costa County.

Description:

1. **In the Bay**

   a. Install two outfalls (Amendment No. One);

2. **Within the 100-foot shoreline band**

   a. Implement various improvements at an approximately 30,000-square-foot ~~feet of new public access~~ area located under the eastern end of the Richmond-San Rafael Bridge ~~and~~ connecting to Western Drive ~~alongside the freeway by~~ including: (a) constructing, resurfacing, and restriping an approximately ~~855~~ 910-foot-long, ~~portion of a~~ nine to eleven-foot-wide, 8,200-square-foot ~~one way, asphalt concrete~~ pedestrian and bicycle path; (b) upgrading a drainage system adjacent to the pathway; ~~(b)~~ (c) constructing an approximately ~~200~~ 288-square-foot seating and viewing ~~resting~~ area ~~on the south side of the bridge~~ with a bench and trash receptacle; (d) ~~adding~~ installing a ~~5~~ five-foot-high safety railing along approximately 600 feet of the pathway; ~~(d)~~ (e) placing riprap over an approximately 250-square-foot ~~feet~~ area (within the shoreline band); ~~and (e)~~ (f) landscaping a 22,000-square-foot ~~feet of~~ area located south of the bridge; and (g) conducting in-kind repair and maintenance of the above-described facilities ~~all as generally shown on attached Exhibit A.~~ (Original Permit and Amendment No. Four);

b. Use the public pathway (described in Section I.A.2.a, above) over a three-month period between the hours of 5:30 AM and 9:30 PM to accommodate passenger vehicles and pick-up trucks (3/4 ton maximum) guided by a pilot vehicle —in addition to bicycles and pedestrians—and, following the three-month period, restore the path (as described in Section I.A.2.a, above) for use by bicycles and pedestrians only (Amendment No. Four); and

~~3.~~ c. Facilitate ~~i~~implementation of the Scofield Avenue and Western Drive Undercrossings of Interstate 580 (I-580) Replacement Project (located entirely outside of the Commission's jurisdiction) by: (a) temporarily realigning the eastbound traffic lane, traffic shoulder and bicycle path along the I-580 within a 2,105-square-foot area of the 100-foot shoreline band; and (b) returning the area to pre-project conditions (e.g., repaving, restriping, etc.,) at the completion of the realignment activities (Amendment No. Three).

B. This amended authority is generally pursuant to and limited by your original application dated January 10, 1990, your request for Amendment No. One dated May 18, 1990, your request for Amendment No. Two dated June 9, 1992, ~~and~~ your letter dated February 25, 2011, requesting Amendment No. Three, and your request for Amendment No. Four dated April 18, 2012, including its accompanying exhibits and all conditions of this amended permit.

C. Work authorized in the original permit was to commence prior to July 1, 1991 or the original permit would have lapsed and become null and void. Such work was also to be diligently pursued to completion and was to be completed within one year of commencement, of by July 1, 1992, whichever was earlier, unless an extension of time ~~is~~ was granted by amendment of the original permit.

Work authorized under Amendment No. One was required to commence prior to July 1, 1991, or the amended permit would have lapsed and become null and void. Such work was to be diligently pursued to completion and be completed within one year of commencement or by July 1, 1992, whichever was earlier, unless an extension of time was granted by further amendment of the amended permit.

Amendment No. Two authorized a time extension to the completion time granted under the original permit and Amendment No. One, to July 1, 1994.

Work authorized under Amendment No. Three shall commence prior to June 1, 2012, or the amended permit will lapse and become null and void. Such work must also be diligently pursued to completion and completed by June 1, 2014, unless an extension of time is granted by further amendment of this amended permit.

The temporary joint pedestrian/bicycle/vehicular use of the pathway authorized under Amendment No. Four shall occur for a three-month period only, starting from the date of commencement. Within 30 days of the end of the three-month period, the public

pathway improvements authorized in Section I.A.2.a shall commence and shall be completed within 60 days from the date of commencement. All work authorized in Amendment No. Four shall be completed no later than December 31, 2014, unless an extension of time is requested by the permittee and granted by further amendment of this amended permit. All maintenance activities authorized in this amended permit shall be allowed as long as the facilities and uses authorized herein remain in place.

II. Special Conditions

The amended authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. Specific Plans and Plan Review

1. **Plan Review**. No work whatsoever shall be commenced pursuant to this amended permit until final precise site, grading, public pathway improvement, and landscaping plans and any other relevant criteria, specifications, and plan information for that portion of the work have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required will be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings.

   Work authorized herein pursuant to Amendment No. Three shall not be subject to Special Condition II.B.1.

   The three-month vehicle/pedestrian/bicycle use of the public pathway authorized in Section I.A.2 (Amendment No. Four) is not subject to Special Condition II.A.1. However, the public pathway improvements authorized in Amendment No. Four are subject to Special Condition II.A.1.

   Site and landscaping plans shall include and clearly label the bay shoreline (Mean High Water except in marshlands where the bay shoreline is the inland edge of marsh vegetation), the line 100 feet inland of the Bay shoreline ~~line of highest tidal action~~, property lines, grading, details showing the location, types, dimensions, and materials to be used for all structures, irrigation, landscaping, drainage, seating, parking signs, lighting, fences, paths, trash containers, utilities and other proposed improvements.

   Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon: (1) completeness and accuracy of the plans in showing the features required above, particularly the bay shoreline ~~line of highest tidal action~~, property lines, and the line 100 feet inland of the bay shoreline ~~line of highest tidal action~~, and any other criteria required by this amended permit; (b) consistency of the plans with the terms and conditions of this permit; and (c) assuring that appropriate shoreline protection materials will be viewed as determined by or on behalf of the Commission.

   Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed.

2. **Amendment No. Three.** Work authorized under Amendment No. Three shall generally conform with the plans entitled, "Layout," Sheets L-1 through L-4, prepared by Caltrans and dated February 7, 2011. No changes to the design of the project shall be made without the prior written approval of the BCDC staff.

3. **Conformity with Final Approved Plans.** All work, improvements, and uses shall conform to the final approved plans. Prior to any use of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the amended authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the exterior of any constructed structure, outside fixture, lighting, public pathway, landscaping, signage, or parking area without first obtaining written approval of the change(s) by or on behalf of the Commission.

~~C.~~ B. **Bicycle Lane Closure Plan and Shuttle.** The permittee shall provide a shuttle service for bicyclists for the duration of the bicycle lane closure associated with work authorized in Amendment No. Three in accord with an approved bicycle lane closure plan. At least 60 days prior to the commencement of the construction authorized herein in Amendment No. Three, the permittee shall submit to the Commission staff a bicycle lane closure plan that at a minimum, shall include: (a) a schedule for closing and reopening the bicycle lane; (b) designated pick-up and drop –off locations; (c) a schedule for bicycle shuttle service; and (d) a program to effectively notify bicyclists and other interested members of the public of the shuttle service. The Commission staff shall review and approve in writing the plan within 30 days of receipt (Amendment No. Three).

C. **Public Access (Amendment No. Four)**

1. **Area.** Except for the three-month period when the bicycle and pedestrian pathway will be jointly used by passenger vehicles and pick-up trucks, the approximately 9,000-square-foot (0.2-acres), 910-linear-foot, nine to eleven-foot-wide area of shoreline as generally shown on Exhibit A and identified as "Required Bicycle & Pedestrian Pathway" shall be made available exclusively to the public for unrestricted public access for walking, bicycling, sitting, viewing, fishing, picnicking, and related purposes. If the permittee wishes to use the public access area for other than public access purposes, it must obtain prior written approval by or on behalf of the Commission.

2. **Improvements.** Following the three-month closure authorized herein and prior to December 31, 2014, the permittee shall install the following improvements along an approximately 9,000-square-foot (0.2-acres), 910-linear-foot, nine to eleven-foot-wide area as generally shown on Exhibit A:

   (a) Resurface and restripe the pathway, replace a drainage ditch with a curb, and install "bicycle-friendly" drainage ditch covers (type 24-12X);

   (b) Install a bench and trash receptacle within a seating/vista point area; and

   (c) Install a minimum of one BCDC public shoreline/area sign at the northern pathway trailhead.

Such improvements shall be consistent with the plans submitted to and approved by or on behalf of the Commission pursuant to Condition II.A of this amended authorization.

3. **Maintenance.** The areas and improvements within an approximately 9,000-square-foot area shall be permanently maintained by and at the expense of the permittee or its assignee. Such maintenance shall include, but is not limited to, repairs to all path surfaces; replacement of any bench or trash receptacle or lighting; periodic cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; and assuring that the public access signs remain in place and visible. Within 30 days after notification by staff, the permittee shall correct any maintenance deficiency noted in a staff inspection of the site.

4. **Reasonable Rules and Restrictions.** The permittee may impose reasonable rules and restrictions for the use of the public access area to correct particular problems that may arise. Such limitations, rules, and restrictions shall have first been approved by or on behalf of the Commission upon a finding that the proposed rules would not significantly affect the public nature of the area, would not unduly interfere with reasonable public use of the public access areas, and would tend to correct a specific problem that the permittee has both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior.

5. **Limited Closure and Use of the Public Pathway.** The public pathway shall be used for a three-month period only to accommodate passenger vehicles and pick-up trucks guided by a pilot vehicle, as well as bicycles and pedestrians, between the hours of 5:30 AM and 9:30 PM. During this three-month period, the pathway shall remain open for use at all other hours to bicycles and pedestrians. Following the three-month period and prior to December 31, 2014, the permittee shall restore and improve the path as authorized herein for the restricted use by bicycles and pedestrians.

D. **Construction Operations.** All construction operations shall be performed to prevent construction materials from falling, washing or blowing into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittee shall immediately retrieve and remove such material at its expense (Amendment No. Three).

~~A.~~ E. **Debris Removal**. All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, its assigns, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement.

~~E.~~ F. **Hold Harmless and Indemnify**. The permittee shall hold harmless and indemnify the Commission, all Commission members, Commission employees, and agents of the Commission from any and all claims, demands, losses, lawsuits, and judgments accruing or resulting to any person, firm, corporation, governmental entity, or other entity who alleges injuries or damages caused by work performed in accordance with the terms and conditions of this permit. This condition shall also apply to any damage caused by flooding of or damage to property that is alleged to be caused as a result of some action or lack of action by the Commission growing out of the processing of and issuance of this permit (Amendment No. Three).

~~F.~~ G. **Certification of Contractor Review.** Prior to commencing any grading, demolition, or construction, the general contractor or contractors in charge of that portion of the work shall submit written certification that s/he has reviewed and understands the requirements of the amended permit and the final BCDC-approved plans, particularly as they pertain to any public access or open space required herein, or environmentally sensitive areas (Amendment No. Three).

H. **Recording.** The permittee shall record this permit on all parcels affected by this permit with Contra Costa County within 30 days after execution of the permit issued pursuant to this authorization and shall, within 30 days after recordation, provide evidence of recordation to the Commission.

III. Findings and Declarations

On behalf of the Commission, I find and declare that:

A. **Minor Repair or Improvements.**

1. Original Authorization. The project authorized by the original permit involved construction of a public ~~access~~ bike-path and seating area, which are activities involving the placement of small amounts of inert inorganic fill, the extraction of small amounts of materials, that do not have a significant adverse effect on present or possible future maximum feasible public access to the Bay consistent with the project, as defined in Regulation Section No. 10601(b)(1), and thus are ~~"~~minor repairs or improvements~~"~~ for which the Executive Director may issue a permit, pursuant to Government Code Section 66632(f) and Regulation Section 10622(a).

~~B.~~ 2. **Amendment Nos. One and Two.** Amendment No. One authorized the installation of two outfalls. Amendment No. Two authorized a time extension to complete originally authorized improvements. Both amendments were found to be consistent with Regulation Section 10601(b)(1) for which the Executive Director may issue an amendment to an existing permit pursuant to Regulation Section 10822 and Government Code Section 66632(f).

~~C.~~ 3. **Amendment No. Three.** Amendment No. Three authorized the relocation (for up to two years) of the eastbound travel lane, shoulder and bicycle lane to facilitate replacement of bridge decks, which are located outside of the Commission's jurisdiction. ~~is the subject of Amendment No. Three.~~ The bridge decks are in poor condition, particularly near the deck joints and require replacement. The project will improve the overall safety of the affected section of the I-580 for motorists and cyclists. To enable replacement of the bridge decks, traffic will be shifted to the east, resulting in a travel lane and traffic shoulder to be temporarily located within the Commission's shoreline band. The realigned travel lane and shoulder will result in closure of a bicycle lane for the project duration. To offset the impact of the closure on bicyclists, the permittee will provide a bicycle shuttle service for the duration of the bicycle lane closure as required in Special Condition II.~~C~~ B of this amended permit. The activities authorized under Amendment No. Three involve the placement of small amounts of inert, inorganic material that will have no effect on present or future maximum feasible public access to the Bay, Bay resources or a priority use area, consistent with Regulation Section 10601(b)(1), and is considered a

"minor repair or improvement" for which the Executive Director may issue an amendment to an existing permit consistent with Regulation Section 10810 and Government Code Section 66632(f).

4. **Amendment No. Four.** The use of a pathway by bicycles and pedestrians, and passenger vehicles and pickup trucks to accommodate the construction of the Scofield overpass will occur for a three-month period. During the three-month period when the Western Drive eastbound on-ramp will be closed, a pilot vehicle will be deployed along the pathway between the hours of 5:30 AM and 9:30 PM. Between 9:30 PM and 5:30 AM, motor vehicles will not be allowed to use the pathway. To offset the temporary impacts, the permittee will improve the bicycle and pedestrian pathway following the three-month period. Further, Special Condition II.C of the amended permit requires that the permittee ensure the pathway remain open for the public's unrestricted use following the three-month, multi-modal use period. Special Condition II.C of the amended permit further requires certain improvements along the pathway be implemented, restricts the temporary use of the path by motorized vehicle, and provides a time-frame for the pathway's restoration to bicycle and pedestrian use only. The activities authorized under Amendment No. Four involve the placement of small amounts of inert material that will not adversely affect public access over time, impact Bay resources, or conflict with a priority use area and, thus, as conditioned, is consistent with Regulation Section 10601(b)(1), and is considered a "minor repair or improvement" for which the Executive Director may issue an amendment to an existing permit consistent with Regulation Section 10810 and Government Code Section 66632(f).

~~D.~~ B. **Consistency with McAteer-Petris Act and San Francisco Bay Plan.** The project authorized by this amended permit ~~is~~ are consistent with the McAteer-Petris Act and with the *San Francisco Bay Plan* in that it will not adversely affect the Bay and will enhance public access to and enjoyment of the Bay. Special Condition II.~~C.~~ B. is included in Amendment No. Three that ensures that access for bicyclists will be maintained for the duration of the bicycle lane closure, ensuring that maximum feasible public access to the Bay will be provided, consistent with the McAteer-Petris Act and the San Francisco Bay Plan policies on public access. Special Condition II-C has been included to assure that the temporary joint use of the public access trail under the eastern bridge approach by vehicles, bicycles and pedestrians is done in a manner that protects the safety of all users. Special Condition II-C also requires the repair, restoration, and enhancement of the path after the joint use of the trail to assure that the required public access is the "maximum feasible consistent with the project", as required by the McAteer-Petris Act.

~~E.~~ C. **Consistency with Amended Management Program for San Francisco Bay.** The Commission further finds, declares, and certifies that the activity or activities authorized herein are consistent with the Commission's Amended Management Program for San Francisco Bay, as approved by the Department of Commerce under the Federal Coastal Zone Management Act of 1972, as amended.

~~F.~~ D. **Environmental Review.** Pursuant to Regulation Section 11501, the project authorized by this amended permit is categorically exempt from the requirement to prepare an environmental impact report.

~~G.~~ E. **Commission Listing.** Pursuant to Regulation Section 10620, the original project was listed with the Commission on March 15, 1990.

IV. Standard Conditions

A. **Permit Execution.** This amended permit shall not take effect unless the permittee executes the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

B. **Notice of Completion.** The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.

C. **Permit Assignment.** The rights, duties, and obligations contained in this amended permit are assignable. When the permittee transfers any interest in any property either on which the activity is authorized to occur or which is necessary to achieve full compliance of one or more conditions to this amended permit, the permittee/transferor and the transferee shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignee executes and the Executive Director receives an acknowledgment that the assignee has read and understands the amended permit and agrees to be bound by the terms and conditions of the amended permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit.

D. **Permit Runs With the Land.** Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

E. **Other Government Approvals.** All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.

F. **Built Project must be Consistent with Application.** Work must be performed in the precise manner and at the precise locations indicated in your application, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.

G. **Life of Authorization.** Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.

H. **Commission Jurisdiction.** Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the amended permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.

I. **Changes to the Commission's Jurisdiction as a Result of Natural Processes.** This amended permit reflects the location of the shoreline of San Francisco Bay when the permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this amended permit does not guarantee that the Commission's jurisdiction will not change in the future.

J. **Violation of Permit May Lead to Permit Revocation.** Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee or its assignee if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee or its assignee if the amended permit has been assigned.

K. **Should Permit Conditions Be Found to be Illegal or Unenforceable.** Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittee or its assignee if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

L. **Permission to Conduct Site Visit.** The permittee shall grant permission to any member of the Commission's staff to conduct a site visit at the subject property during and after construction to verify that the project is being and has been constructed in compliance with the authorization and conditions contained herein. Site visits may occur during business hours without prior notice and after business hours with 24-hour notice.

Executed at San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

STEVE GOLDBECK
Acting Executive Director
San Francisco Bay Conservation and
Development Commission

SG/JM/ra

cc: U. S. Army Corps of Engineers, Attn: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn: Certification Section
Environmental Protection Agency
City of Richmond Planning Department
Robert Solotar, Caltrans

* *

Receipt acknowledged, contents understood and agreed to:

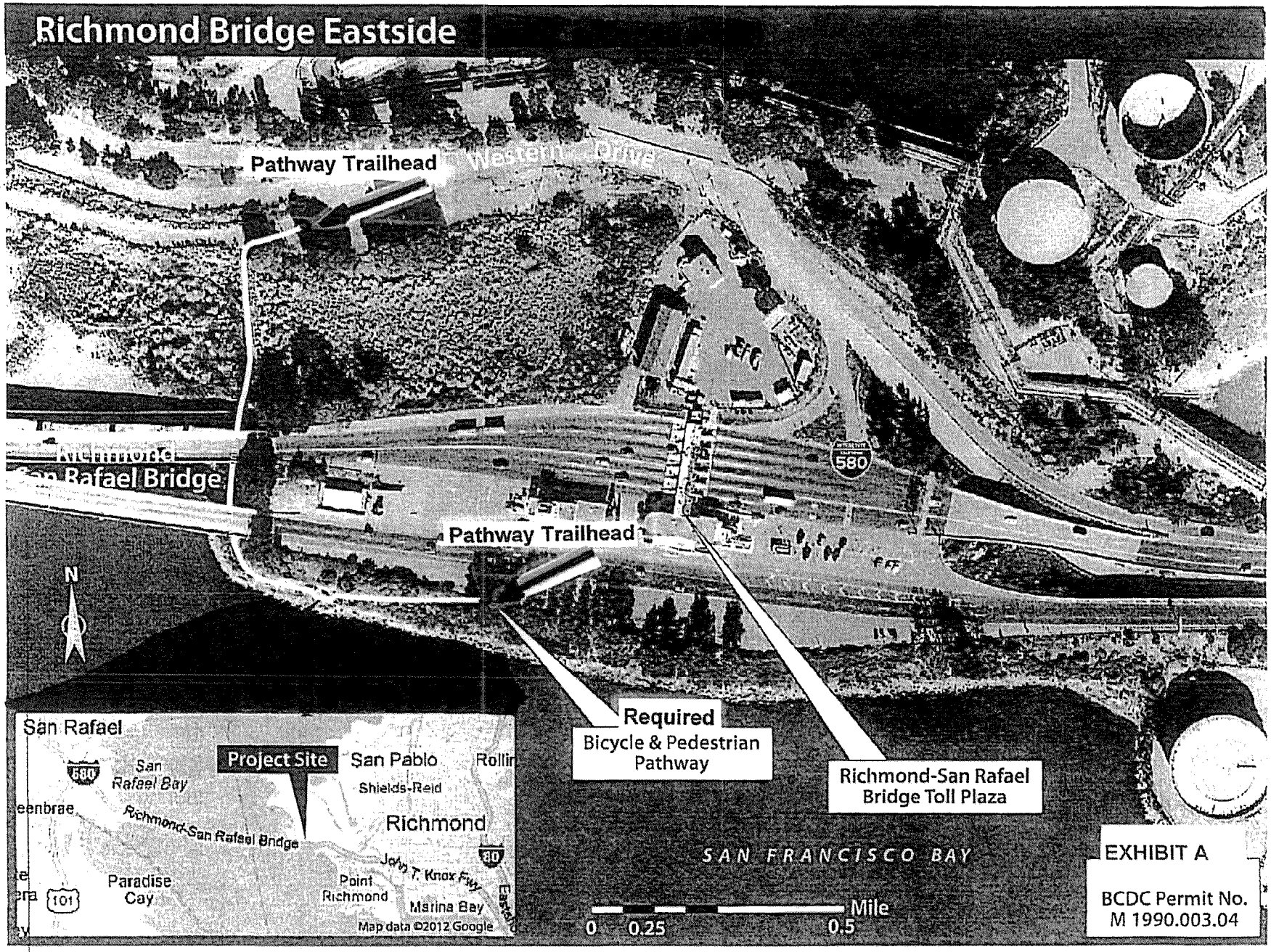
Executed at 111 GRAND AVENUE, OAKLAND CA 94623

On June 1, 2012

[signature]
Applicant

By: HARDEEP S. TAKHAR

ACTING DEPUTY DISTRICT DIRECTOR
Title


Richmond Bridge Eastside
Pathway Trailhead
Western Drive
Rafael Bridge
580
Pathway Trailhead
N
San Rafael
Project Site
San Pablo
Rollin
San Rafael Bay
Shields-Reid
Richmond-San Rafael Bridge
Richmond
80
John T. Knox Fwy
Paradise Cay
Point Richmond
Marina Bay
101
Map data ©2012 Google
Required
Bicycle & Pedestrian Pathway
Richmond-San Rafael Bridge Toll Plaza
SAN FRANCISCO BAY
Mile
0
0.25
0.5
EXHIBIT A
BCDC Permit No.
M 1990.003.04

Meeting Minutes
MOCOCO OH Bridge Rehab
PS&E Phase
PDT Meeting # 10
(EA# 3A8701)

May 15, 2012 at 10:00 am

Action Item Legend:
Italics – Done
Bold – New
Normal – Carried through from previous meeting

ACTION ITEMS

No.	Item	Responsible Agency	Date Due	Status/ Comment
1.	Manny will prepare a detour for transition from S/B to N/B Bridge during an earthquake.	Design	March 2012	Detour done. Ron Tsung to talk with Hwy Ops. Detour will be reviewed for further analysis.
2.	*Jas to set up a focused meeting to follow up with Alan S. Chow and Adrian Levy regarding ramp metering and HOV bypass exception.*	*Design*	*April 2012*	*Done Design to prepare Ramp Metering Exception.*
3.	Jas to follow up with Hydraulics for their Draft PS&E schedule.	Design	April 2012	Draft dewatering plan (one sheet) from WRECO received.
4.	Greg Perra to contact Patrick Coggins of R/W and Jim Smith of U.P.R.R regarding Culvert Improvement Project.	Biology	April 2012	Not an issue anymore.
5.	*Manny to re-visit functional units to get their Draft PS&E.*	*Design*	*April 2012*	*Done*
6.	*Manny to re-visit functional units to get their Draft PS&E.*	*Design*	*April 2012*	*Done*
7.	Manny to provide overhead sign information to Geotech	Design	April 2012	Resolved No New OH sign
8.	Pat Coggins to set a meeting with U.P.R.R for Greg Pera to discuss Culvert Improvement Project.	R/W RR	April 2012	Meeting not required
9.	*Greg Pera to send a map showing the wetland delineation to Hydraulics.*	Biology	*April 2012*	*Done*

10	Craig Jung to explore the feasibility of substituting the 66" pipe in lieu of the sheet piling with the California RWQCB.	Environmental	April 2012	Pending
11	Greg Pera to prepare a draft mitigation schedule and present to Design and PM.	Biology	April 2012	Pending
12	PE to prepare plans showing staging areas (with timber mat, access road and proposed retaining walls and give to Hydraulics)	Design	April 2012	In Process. Target Date 4/24/2012
13	Greg Pera to send letter to US Coast Guard for work at the drainage channel.	Biology	April 2012	Letter is read, but needs the supervisor to sign on it
14	Structures to provide P&Q to Design	Structures Design	Mid April 2012. New Target Date 4/24/12	Received unchecked plans on 4/16/12. Structures need to send checked plans to District.
15	**Manny to incorporate survey information into layout sheets and pavement delineation sheets.**	**Design**	**May 2012**	
16	**Manny and Ofer to meet with Gordon Brown on HOV Lane Extension for Design Exceptions.**	**Design/ Highway Ops**	**May 2012**	
17	**Manny to give as built plans and cross sections to Materials.**	**Design**	**May 2012**	
18	**Gregory Pera to e-mail Craig of Hydraulics and Design culvert information.**	**Biology**	**May 2012**	
19	**Sunny of Geotech to send a copy of Geotech report to Mohamed Kaddoura of OSC.**	**Geotech**	**May 2012**	
20	**Manny to get dewatering plan received from WRECO and give it to Mohamad of OSC.**	**Design**	**May 2012**	
21	**Sea-Ning Wu to give final Material Report Recommendation Memo.**	**Materials**	**May 2012**	
22	**Sunny of Geotech to provide reports on the gradation slopes stability and ground improvement and prepare Geotech Report for Roadway Design.**	**Geotech**	**May / June 2012**	
23	**John Railey of Structures to send Bridge Hydraulics Report to District Design.**	**Structures Design**	**May 2012**	
24	**Norman Gonsalves to prepare permanent BMP,s, Draft PS&E and send to Design**	**Water Quality**	**April 2012**	
25	**Norman Gonsalves to prepare Final SWDR and send to Design**	**Water Quality**	**September 2012**	
26	**Phil of Structures Design to prepare Railroad and Utility protection package and send to Pat and Design**	**Structures Design**	**May 2012**	

27	**Materials to check if outside shoulder in the HOV area could be used as a structural section**	**Materials**	**May 2012**	
28	**Design to prepare Encroachment Variance Request and discuss with Gordon Brown**	**Design**	**July 2012**	

INTRODUCTION

Jas chaired the meeting for Hamid. Project displays were presented and introductions were done. Last month PDT Action Items were discussed. Minutes of March 20, 2012 PDT meeting were approved. Jas said that meeting minutes format was improved after consultation with Hamid. This new format for minutes will keep track of the pending action items from the previous PDT.

PROJECT MANAGEMENT

Hamid needs to get Project Change Request (PCR) approved to cover additional scope and costs for extension of the HOV lane. Design will give draft cost estimate to Hamid today. Also Design worked with Project Manager to update the PDT distribution list.

PS&E SUPPORT

For railroad, Pat needs plans from Structures showing constructability solution for working around the railroad. Pat will arrange a meeting with UPPR. In this meeting, plans will be given to UPPR; and Structure Construction, Structure Design. District Design will participate in this meeting. Right of transmittal is no longer required. Leo Munneke is no longer the utility coordinator. Structures need to work on P&Q. Also plans showing how to protect utilities are required.

Survey for HOV extension is completed. Ofer gave background for the extension. Material to check if outside shoulder in the HOV extension area could be used for structural section. Ofer and Manny to meet with Gordon Brown regarding non standard lane and shoulder width for the HOV lane.

Amended BO is still pending.

65% PS&E phase

Erosion control plans are not done yet.
Traffic sign plans are still in CADD.
Electrical plans and Specs are not completed yet. Manny to send traffic sign plans to Samuel Awad of Geotech. All the Specs shall be in 2010 format. Final SWDR needs to be done by Norman Gonsalves. Norman has not given any permanent BMP's for the 65% PS&E.

PROJECT SCHEDULE

Design needs to update the schedule for District Circulation of the Draft PS&E since many of the key Services Units have not given their draft PS&E.

GENERAL DISCUSSION AND OTHER ITEMS

Encroachment Policy Variance Request for the suspended 10-inch water line needs to be prepared by Design and discussed with Gorden Brown. Design needs to follow high risk policy for the utilities.

NEXT MEETING

May 15, 2012 at 10 AM in Room 11-880/980.

ATTENDEE LIST

Organization	Contact Name	"X" if Present	Phone Number	Email Address
Caltrans				
Electrical	Pierre Lassalle		(510) 286-6468	pierre_lassalle@dot.ca.gov
Erosion Control	Alex McDonald		(510) 286-4147	alex_mcdonald@dot.ca.gov
Water Quality	Jiangfan Chen	X	(510) 286-6069	jiangfan_chen@dot.ca.gov
RWE/Surveys	AJ Burgess		(510) 286-5296	aj_burgess@dot.ca.gov
Traffic System	Ardrian Levy		(510) 622-0109	adrian_levy@dot.ca.gov
Traffic System	Sion Kidane	X	(510) 622-1800	Sion_kidane@dot.ca.gov
Construction	Asghar Rezaei		(925) 766-8280	asghar_rezaei@dot.ca.gov
Construction	Baljit Sidhu		(925) 602-9002	baljit_sidhu@dot.ca.gov
Landscape	Bryan Walker		(510) 286-4833	bryan_walker@dot.ca.gov
Traffic Safety	Cheung-Chim Lau		(510) 286 4571	cheung-chim_lau@dot.ca.gov
Hydraulics	Craig Tomimatsu		(510) 286-6379	craig_tomimatsu@dot.ca.gov
Environmental Analysis	Cristin Hallissy		(510) 622-8717	cristin_hallissy@dot.ca.gov
Erosion Control	David Yam		(510) 286-5662	david_yam@dot.ca.gov
Structure Design	Glenn Matthews		(916) 227-3713	david_tenorio@dot.ca.gov
Structure Design	Gordon Danke		(916) 227-8224	Gordon_danke@dot.ca.gov
Coop Agreement	Elaine Haydu		(510) 286-4889	elaine_haydu@dot.ca.gov
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HQ Design	Gordon Brown	X	(510) 622-5932	gordon_brown@dot.ca.gov
TMP	Harendra Parekh	X	(510) 622-0121	harendra_parekh@dot.ca.gov
Geotechnical	Hooshmand Nikoui		(510) 286-4811	hooshmand_nikoui@dot.ca.gov
Design	Jaswinder Mann		(510) 286-4937	jas_s_mann@dot.ca.gov
DOE	John Prokop		(510) 286-4575	john_prokop@dot.ca.gov
Water Quality	Kamran Nakhjiri		(510) 286-5602	kamran_b_nakhjiri@dot.ca.gov
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VA Study	Binh Dang		(510) 286-5873	Binh_dang@dot.ca.gov
Landscape Architecture	Connie Yip		(510) 622-8703	Connie_yip@dot.ca.gov
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Electrical Signal	Einar Acuna		(510) 622-5741	Einar_acuna@dot.ca.gov
District 4 Program Advisor	Fuk Nyan Kurniawan		(510) 286-5213	Fuk Nyan_kurniawan@dot.ca.gov
HQ Program Advisor	Michael Johnson		(916) 227-8768	Michael b Johnson/hq/Caltrans/cagov
Traffic Signing	Claudia Fang		510-286-4593	claudia_fang@dot.ca.gov
Materials	Sea-Ning Wu	X	510-286-4819	sea-ning_wu@dot.ca.gov
Constructability	Allen Dadafarin		510-622-8722	allen_dadafarin@dot.ca.gov
Constructability	Mario Jerez	X	(510-286-5751	mario_jerez@dot.ca.gov

Organization	Contact Name	"X" if Present	Phone Number	Email Address
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Biology	Stefan Galvez		(510) 286-0984	Stefan_galvez@dot.ca.gov
RW/RR	Patrick Coggins	X	(510) 286-5470	Patrick_coggins@dot.ca.gov
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Design	Mansour Afsari	X	(510) 286-5104	mansour_afsari@dot.ca.gov
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HQ Design	Mike Thomas		(510) 286-4687	mike_thomas@dot.ca.gov
OSC	Mohamed Kaddoura	X	(925) 250-5588	Mohamed_Kaddoura@dot.ca.gov
Storm Water	Norman Gonsalves		(510) 286-5930	norman_gonsalves@dot.ca.gov
Maintenance	Philip Harsono		(510) 286-5722	philip_harsono@dot.ca.gov
Traffic Forecast	Phillip Cox		(510) 286-5584	pcox@dot.ca.gov
Hazmat Coordinator	Ray Boyer		(510) 286-5668	ray_boyer@dot.ca.gov
TOS	Robert Gong		(510) 286-4538	robert_gong@dot.ca.gov
Highway Operations	Offer Brender	X	(510) 286-4540	rodney_oto@dot.ca.gov
Hwy Operations	Peter Lau		(510) 286-6157	Peter_lau@dot.ca.gov
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Survey	Toni Scoralle		(510) 286-5402	Toni_scoralle@dot.ca.gov
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HQ Program Advisor	Takako Fujioka		(916) 227-8120	Takako_fuioka@dot.ca.gov
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Landscape Architecture	Jeanne Gorham		(510) 286-6112	Jeanne_gorham@dot.ca.gov
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Organization	Contact Name	"X" if Present	Phone Number	Email Address
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HQ Structures Design	John Railey	X	(510) 286-8279	John_railey@dot.ca.gov
WRECO				
Drainage Design	Chris Sewell		(925) 941-0017 ext 204	Chris_sewell@wreco.com

Minutes prepared by Manuel Canilao, Jr., Mansour Afsari
Issue Date: Date e-mailed or received.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY CONTRACT - STATE HIGHWAY

RW 8-3 (6/95)

San Ramon , California

April 27 , 20 11

CHEVRON USA INC.
Grantor

Dist.	Co.	Rte.	P.M.	Project
4	CC	580	5.9	0400000483 (1A3209)

Approved by District 04
Dated 5-25-11

MARK L. WEAVER, District Office Chief
R/W Acquisition/Utility Relocation Services

This document No. 62088 in the form of an EASEMENT DEED covering the property particularly described in the above document and attached hereto as Exhibit "A" has been executed by Chevron USA Inc. (Grantor) and delivered to LAWRENCE HIGH, Right of Way Agent for the State of California (State or Grantee).

In consideration of which, and the other considerations hereinafter set forth, it is mutually agreed as follows:

1. (A) The parties have herein set forth the whole of their agreement. The performance of this constitutes the entire consideration for said document and shall relieve the State of all further obligation or claims on this account, or on account of the location, grade or construction of the proposed public improvement.

(B) Grantee requires said property described in Document No 62088 for State highway purposes, a public use for which Grantee has the authority to exercise the power of eminent domain. Grantor is compelled to sell, and Grantee is compelled to acquire the property.

Both Grantor and Grantee recognize the expense, time, effort, and risk to both Grantor and Grantee in determining the compensation for the property by eminent domain litigation. The compensation set forth herein for the property is in compromise and settlement, in lieu of such litigation.

2. The State shall:

(A) Pay the undersigned Grantor the sum of $12,700.00 for the easement conveyed by the above document when said easement vests in the State subject to all liens, encumbrances, assessments, easements and leases (recorded and/or unrecorded) and taxes.

(B) Pay all escrow and recording fees incurred in this transaction, and, if title insurance is desired by the State, the premium charged therefor. Said escrow and recording charges shall not, however, include documentary transfer tax.

3. (A) It is understood that the property being conveyed to the State will be encumbered with temporary construction easements (TCEs) in favor of the State and made a part hereof. The TCEs are to replace Interstate 580 Scofield Avenue bridge decks. The herein acquired rights of usage in said parcels shall be for a period of 24 months; said period shall commence on the date the Office Engineer awards the contract. It is further understood that in no event shall the temporary right granted herein extend beyond the completion of the construction project or February 1, 2014, whichever is earlier, except as provided below.

(B) In case of unpredictable delays in construction, upon written notification, the terms of the Temporary Easement may be extended at the option of the Grantee at the rate of $500.00 per month. Payment for the extended period shall be paid in arrears, ninety (90) days after the completion of the project.

4. Permission is hereby granted the State or its authorized agent to enter upon Grantor's land identified as parcels 62088-1 and 62088-2, where necessary within that certain area shown outlined in green on the map marked Exhibit "B" attached hereto and made a part hereof (the Premises), for the purpose of Temporary Construction Easements.

5. It is agreed and confirmed by the parties hereto that notwithstanding other provisions in this contract, the right of possession and use of the subject property by the State, including the right to remove and dispose of improvements shall commence on May 1, 2011, or the close of escrow controlling this transaction, whichever occurs first, and that the amount shown in Clauses 2 and 3(B) herein includes, but is not limited to, full payment for such possession and use. The Resident Engineer shall notify the Grantor in writing, 96 (ninety-six) hours before entry on said parcels.

6. The undersigned Grantor warrants that they are the owner in fee simple of the property affected by this Temporary Easement as described in Clause 1(B) above and that they have the exclusive right to grant this Temporary Easement.

7. Grantor shall provide a certified copy of the Certificate of Assistant Secretary.

8. Grantor warrants that there are no oral or written leases on all or any portion of the property exceeding a period of one month, and Grantor agrees to hold the State harmless and reimburse the State for any and all of its losses and expenses occasioned by reason of any lease of said property held by any tenant of Grantor for a period exceeding one month.

9. In consideration of the State's waiving the defects and imperfections in all matters of record title, the undersigned Grantor covenants and agrees to indemnify and hold the State of California and its officers, employees, agents, contractors and subcontractors harmless from any and all claims that other parties may make or assert on the title to the Premises. The Grantor's obligation herein to indemnify the State shall not exceed the amount paid to the Grantor under this contract.

10. All work done under this agreement shall conform to all applicable building, fire and sanitary laws, ordinances, and regulations relating to such work, and shall be done in a good and workmanlike manner. All structures, improvements or other facilities, when removed, and relocated, or reconstructed by the State, shall be left in as good condition as found.

The State shall not cause any workmen's or materialmen's liens to be placed upon the Premises and agrees to indemnify and hold Grantor harmless against any such liens placed upon the Premises by the State or its officers, employees, agents, contractors or subcontractors, including but not limited to the payment of attorneys' fees.

All persons entering the Premises under the rights granted under this Temporary Easement shall have a current and valid Transportation Workers Identification Card.

11. The State agrees to indemnify and hold harmless Grantor from any liability arising out of the State's operations under this agreement. The State further agrees to assume responsibility for any damages caused by reason of State's operations under this agreement and the State will, at its option, either repair or pay for such damage.

The State shall not alter, damage or commit any kind of waste upon the Premises. As between the State and Grantor, in the event the construction alters, damages, or commits waste upon the Premises, the State shall be responsible for either the costs of the repair, replacement, or cleanup of the altered or damaged portion of the Premises, at its discretion.

Without in any way limiting the State's liability above, the State shall require its contractors and subcontractors to have insurance coverage as provided for in Section 7-1.12 of the State's Standard Specifications, a copy of which is attached hereto as "Exhibit C," with both Grantor and the State named as additional insureds therein.

The State agrees to enter the Premises and conduct all operations thereon at the State's own risk. The State hereby releases and forever discharges Grantor of and from any and all claims, demands, actions or causes of action whatsoever which the State may have, or may hereafter have, against Grantor specifically arising out of the matter of the entry of the State onto the Premises, except for those claims, demands, actions or causes of action arising from Grantor's negligence or the negligence of its officers, employees, agents, contractors, subcontractors, heirs and assigns. This is a complete and final release and shall be binding upon the undersigned and the heirs, executors, administrators, successors and assigns of the State and covers claims arising out of or connected with the State's use of the Premises.

12. Grantor agrees to fully disclose the existence of the Temporary Construction Easements and the State's project to any and all potential buyers in the event the Grantor should choose to sell the above described parcel during the term of the easement or after the acceptance of this contract.

13. This Right of Way Contract contains all agreements of the parties with respect to any matter mentioned herein. No prior agreements or understanding pertaining to any such matter shall be effective. This Right of Way Contract may be modified in writing only,

signed by the parties in interest at the time of the modifications. Except as otherwise stated in this Right of Way Contract, the State hereby acknowledges that neither Grantor nor the employees or agents of Grantor have made any oral or written warranties or representations to the State relative to the condition or use by the State of the Premises and the State acknowledges that the State and/or its agents assume all responsibilities regarding compliance with the Occupational Safety Health Act.

14. This transaction will be handled through an internal escrow by the State of California, Department of Transportation, District 4 Office, Post Office Box 23440, Oakland, CA 94623-0440.

In Witness Whereof, the Parties have executed this agreement the day and year first above written.

Assistant Secretary, Chevron U.S.A . INC.

(Print Name)

RECOMMENDED FOR APPROVAL:

By _____
LAWRENCE O. HIGH
Associate Right of Way Agent
Acquisition Services

By _____
JASPREET SINGH
District Branch Chief
R/W Acquisition Services

STATE OF CALIFORNIA
Department of Transportation

By _____
R. A. MACPHERSON
Deputy District Director
Right of Way

No Obligation Other Than Those Set Forth Herein Will Be Recognized

Number
62088

EXHIBIT "A"

All that real property situated in the City of Richmond, County of Contra Costa, State of California, being more particularly described as follows:

Parcel 1 (62088-1):

BEGINNING at the most Westerly corner of PARCEL 4 (47798-1) as described in that certain Grant Deed to the State of California, recorded December 23, 1992 in Book 18142, at Page 709, Contra Costa County Records; thence along the general Northerly line of said PARCEL 4 (47798-1) the following three (3) courses: 1) from a tangent that bears North 84°21'24" East, along a curve to the left with a radius of 1460.00 feet, through a central angle of 10°21'51", an arc length of 264.10 feet; 2) North 73°59'33" East, 275.70 feet; and 3) North 16°00'27" West, 20.00 feet to a line parallel with, distant 20.00 feet Northerly, measuring at right angles from the course described above as "North 73°59'33" East, 275.70 feet"; thence along said parallel line, South 73°59'33" West, 275.70 feet to the beginning of a curve concentric with, distant 20.00 feet Northerly, measuring at right angles from the curve described above with a radius of 1460.00 feet; thence along said concentric curve and its Westerly continuation to the right with a radius of 1440.00 feet, through a central angle of 11°40'48", an arc length of 293.55 feet; thence South 02°36'27" East, 18.60 feet to the general Northerly line of the existing State Highway 580; thence along last said line, North 87°23'33" East, 34.10 feet to the Point of Beginning.

CONTAINING 11,406 square feet, more or less.

Parcel 2 (62088-2):

BEGINNING at the Northerly terminus of that course described as "S. 16°00'00" E., 20.00 feet" in PARCEL 4 (47798-1) as described in that certain Grant Deed to the State of California, recorded December 23, 1992 in Book 18142, at Page 709, Contra Costa County Records; thence along said course and the general Northerly line of said PARCEL 4 (47798-1) the following three (3) courses: 1) South 16°00'27" East, 20.00 feet; 2) North 73°59'33" East, 21.30 feet; and 3) along a curve to the right with a radius of 1563.00 feet, through a central angle of 02°33'28", an arc length of 69.77 feet; thence North 15°53'43" West, 21.21 feet; thence South 74°12'43" West, 91.09 feet to the Point of Beginning.

CONTAINING 1,840 square feet, more or less.

MAR 02 2011

Number
62088

The bearings and distances used in the above descriptions are based on the California Coordinate System of 1983, Zone 3. Multiply the above distances by 1.0000659 to obtain ground level distances.

This real property description has been prepared by me, or under my direction, in conformance with the Professional Land Surveyors Act.

Signature: _____
Licensed Land Surveyor

Date: 3/1/2011

MAR 02 2011

EXHIBIT "B"

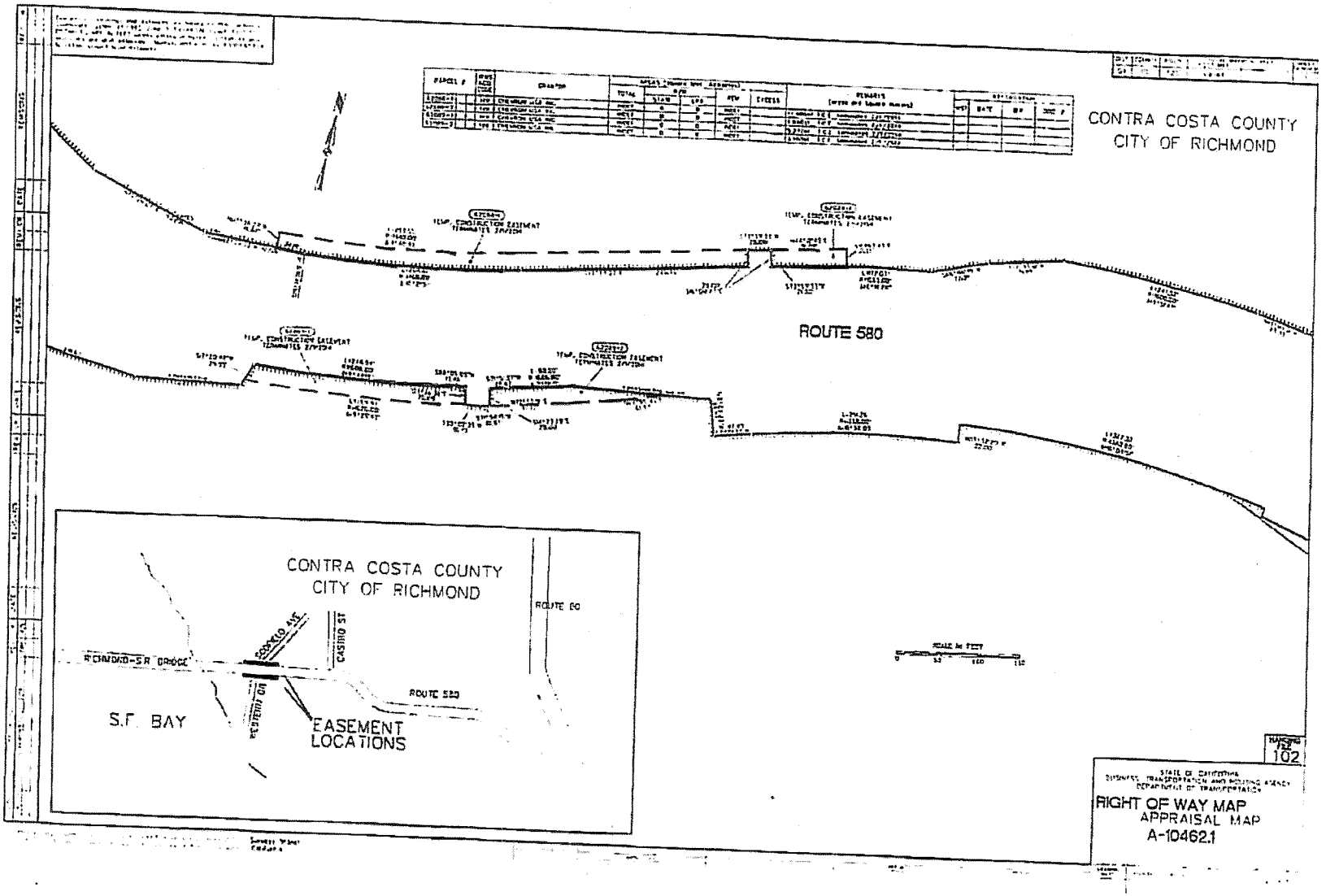
CONTRA COSTA COUNTY
CITY OF RICHMOND
ROUTE 580
CONTRA COSTA COUNTY
CITY OF RICHMOND
CORONADO AVE
CASTRO ST
ROUTE 80
RICHMOND-SR BRIDGE
ROUTE 580
S.F. BAY
EASEMENT
LOCATIONS
RIGHT OF WAY MAP
APPRAISAL MAP
A-10462.1

EXHIBIT "C"

STANDARD SPECIFICATIONS

STATE OF CALIFORNIA

BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION

MAY 2006

ISSUED BY

DEPARTMENT OF TRANSPORTATION

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DEPARTMENT OF TRANSPORTATION
PUBLICATION DISTRIBUTION UNIT
1900 Royal Oaks Drive
Sacramento, California 95815
Telephone (916) 445-3520

The fact that any underground facility is not shown upon the plans shall not relieve the Contractor of the responsibility under Section 8-1.10, "Utility and Non-Highway Facilities." It shall be the Contractor's responsibility, pursuant thereto, to ascertain the location of those underground improvements or facilities which may be subject to damage by reason of the Contractor's operations.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified in this Section 7-1.11, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

7-1.12 INDEMNIFICATION AND INSURANCE

The Contractor's obligations regarding indemnification of the State of California and the requirements for insurance shall conform to the provisions in Section 3-1.025, "Insurance Policies," and Sections 7-1.12A, "Indemnification," and 7-1.12B, "Insurance," of this Section 7-1.12.

7-1.12A Indemnification

With the exception that this section shall in no event be construed to require indemnification by the Contractor to a greater extent than permitted by law, the Contractor shall defend, indemnify and save harmless the State, including its officers, directors, agents (excluding agents who are design professionals), and employees, and each of them (Indemnitees), from any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, losses or liabilities, in law or in equity, of every kind and nature whatsoever (Claims), arising out of or in connection with the Contractor's performance of this contract for:

A. Bodily injury including, but not limited to, bodily injury, sickness or disease, emotional injury or death to persons, including, but not limited to, the public, any employees or agents of the Contractor, State, Department, or any other contractor and;
B. Damage to property of anyone including loss of use thereof; caused or alleged to be caused in whole or in part by any negligent or otherwise legally actionable act or omission of the Contractor or anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable.

Except as otherwise provided by law, the indemnification provisions above shall apply regardless of the existence or degree of fault of Indemnitees. The Contractor, however, shall not be obligated to indemnify Indemnitees for Claims arising from conduct delineated in Civil Code Section 2782. Further, the Contractor's indemnity obligation shall not extend to Claims to the extent they arise from any defective or substandard condition of the roadway which existed at or prior to the time the Contractor commenced work, unless this condition has been changed by the work or the scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain. The Contractor's indemnity obligation shall extend to Claims arising

after the work is completed and accepted only if these Claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work. No inspection by the Department, its employees or agents shall be deemed a waiver by the Department of full compliance with the requirements of this section.

• The Contractor's obligation to defend and indemnify shall not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determines that the Contractor is not liable to the claimant. The Contractor will respond within 30 days to the tender of any claim for defense and indemnity by the State, unless this time has been extended by the State. If the Contractor fails to accept or reject a tender of defense and indemnity within 30 days, in addition to any other remedy authorized by law, so much of the money due the Contractor under and by virtue of the contract as shall reasonably be considered necessary by the Department, may be retained by the State until disposition has been made of the claim or suit for damages, or until the Contractor accepts or rejects the tender of defense, whichever occurs first.

• With respect to third party claims against the Contractor, the Contractor waives any and all rights of any type to express or implied indemnity against the State, its directors, officers, employees, or agents (excluding agents who are design professionals).

7-1.12B Insurance

• Insurance shall conform to the following requirements:

7-1.12B(1) Casualty Insurance

• The Contractor shall, at the Contractor's expense, procure and maintain insurance on all of its operations with companies acceptable to the Department as follows. All insurance shall be kept in full force and effect from the beginning of the work through final acceptance by the State. In addition, the Contractor shall maintain completed operations coverage with a carrier acceptable to the Department through the expiration of the patent deficiency in construction statute of repose set forth in Section 337.1 of the Code of Civil Procedure.

7-1.12B(1)(a) Workers' Compensation and Employer's Liability Insurance

• Workers' Compensation insurance shall be provided as specified in Section 7-1.01A(6), "Workers' Compensation." Employer's Liability Insurance shall be provided in amounts not less than:

(a) $1,000,000 for each accident for bodily injury by accident.
(b) $1,000,000 policy limit for bodily injury by disease.
(c) $1,000,000 for each employee for bodily injury by disease.

• If there is an exposure of injury to the Contractors' employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims.

7-1.12B(1)(b) Liability Insurance

The Contractor shall carry General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of the Contractor providing insurance for bodily injury liability, and property damage liability for the limits of liability indicated below and including coverage for:

(a) premises, operations and mobile equipment.
(b) products and completed operations.
(c) broad form property damage (including completed operations).
(d) explosion, collapse and underground hazards.
(e) personal injury.
(f) contractual liability.

7-1.12B(1)(c) Liability Limits/Additional Insureds

The limits of liability shall be at least:

(a) $2,000,000 for each occurrence (combined single limit for bodily injury and property damage).
(b) $2,000,000 aggregate for products-completed operations.
(c) $4,000,000 general aggregate. This general aggregate limit shall apply separately to the Contractor's work under this Contract.
(d) $15,000,000 umbrella or excess liability. For projects over $25,000,000 only, an additional $10,000,000 umbrella or excess liability (for a total of $25,000,000). Umbrella or excess policy shall include products liability completed operations coverage and may be subject to $15,000,000 or $25,000,000 aggregate limits. Further, the umbrella or excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

The State and the Department, including their officers, directors, agents (excluding agents who are design professionals), and State employees, shall be named as additional insureds under the General Liability and Umbrella Liability Policies with respect to liability arising out of or connected with work or operations performed by or on behalf of the Contractor under this contract. Coverage for such additional insureds shall not extend to liability:

(1) arising from any defective or substandard condition of the Roadway which existed at or prior to the time the Contractor commenced work, unless such condition has been changed by the work or the scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain; or
(2) for claims occurring after the work is completed and accepted unless these claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work; or
(3) to the extent prohibited by Section 11580.04 of the Insurance Code.

The policy shall stipulate that the insurance afforded the additional insureds shall apply as primary insurance. Any other insurance or self-insurance maintained by the Department or State will be excess only and shall not be called upon to contribute with this insurance. Such additional insured coverage shall be provided by a policy provision or by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO).

7-1.12B(2) Automobile Liability Insurance

The Contractor shall carry automobile liability insurance, including coverage for all owned, hired and non-owned automobiles. The primary limits of liability shall be not less than $1,000,000 combined single limit each accident for bodily injury and property damage. The umbrella or excess liability coverage required under Section 7-1.12B(1)(c), "Liability Limits/Additional Insureds," shall also apply to automobile liability.

7-1.12B(3) Policy Forms, Endorsements and Certificates

The Contractor's General Liability Insurance shall be provided under Commercial General Liability policy form No. CG 0001 as published by the Insurance Services Office (ISO) or under a policy form at least as broad as policy form No. CG 0001.

Evidence of insurance in the form of copies of insurance policies, Certificates of Insurance and any self-insurance coverage documentation, including the required "additional insured" endorsements, shall be furnished by the Contractor to the Department as specified in Sections 3-1.025, "Insurance Policies," and 3-1.03, "Execution of Contract." The evidence of insurance shall provide that there will be no cancellation, lapse, or reduction of coverage without thirty (30) days' prior written notice to the Department. Insurance policies and Certificates of Insurance, furnished as evidence of required insurance, for the General Liability, Auto Liability and Umbrella-Excess Liability policies shall set forth deductible amounts applicable to each policy and all exclusions which are added by endorsement to each policy. The Department may expressly allow deductible clauses, which it does not consider excessive, overly broad, or harmful to the interests of the State. Standard ISO form No. CG 0001 or similar exclusions will be allowed provided they are not inconsistent with the requirements of Section 3-1.025, "Insurance Policies," and this section. Allowance of any additional exclusions is at the discretion of the Department. Regardless of the allowance of exclusions or deductions by the Department, the Contractor shall be responsible for any deductible amount and shall warrant that the coverage provided to the Department is consistent with the requirements of this section.

7-1.12B(4) Enforcement

The Department may take any steps as are necessary to assure Contractor's compliance with its obligations. Should any insurance policy lapse or be canceled during the contract period the Contractor shall, within thirty (30) days prior to the effective expiration or cancellation date, furnish the Department with evidence of renewal or replacement of the policy. Failure to continuously maintain insurance coverage as herein provided is a material breach of contract. In the event the

Contractor fails to maintain any insurance coverage required, the Department may, but is not required to, maintain this coverage and charge the expense to the Contractor or terminate this Contract. The required insurance shall be subject to the approval of Department, but any acceptance of copies of insurance policies, insurance certificates and self-insurance documentation by the Department shall in no way limit or relieve the Contractor of the Contractor's duties and responsibilities under the Contract to indemnify, defend and hold harmless the State, its officers, agents, and employees. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude the State from taking other actions as is available to it under any other provision of the contract or law. Failure of the Department to enforce in a timely manner any of the provisions of this section shall not act as a waiver to enforcement of any of these provisions at a later date.

7-1.12B(5) Self-Insurance

Self-insurance programs and self-insured retentions in insurance policies are subject to separate annual review and approval by the State of evidence of the Contractor's financial capacity to respond. Additionally, self-insurance programs or retentions must provide the State with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance.

7-1.12B(6) Miscellaneous

Nothing contained in the Contract is intended to make the public or any member thereof a third party beneficiary of the Insurance or Indemnity provisions of these Standard Specifications, nor is any term, condition or other provision of the Contract intended to establish a standard of care owed to the public or any member thereof.

7-1.125 Legal Actions Against the Department

In the event litigation is brought against the Department concerning compliance by the Department with State or Federal laws, rules or regulations applicable to highway work, the provisions of this Section 7-1.125 shall apply.

(A) If, pursuant to court order, the Department prohibits the Contractor from performing all or any portion of the work, the delay will be considered a right of way delay within the meaning of Section 8-1.09, "Right of Way Delays," unless the contract is terminated as hereinafter provided.

(B) If, pursuant to court order (other than an order to show cause) the Department is prohibited from requiring the Contractor to perform all or any portion of the work, the Department may, if it so elects, eliminate the enjoined work pursuant to Section 4-1.03, "Changes," or terminate the contract.

(C) If the final judgment in the action prohibits the Department from requiring the Contractor to perform all or any portion of the work, the Department will either eliminate the enjoined work pursuant to Section 4-1.03, "Changes," or terminate the contract.

(D) If the contract is to be terminated, the termination and the determination of the total compensation payable to the Contractor shall be governed by the provisions in Section 8-1.11, "Termination of Contract."

7-1.13 DISPOSAL OF MATERIAL OUTSIDE THE HIGHWAY RIGHT OF WAY

If the Contractor elects to dispose of materials at locations other than those where arrangements have been made by the Department, or, if material is to be disposed of and the Department has not made arrangements for disposal of the material, the Contractor shall make arrangements for disposing of the materials outside the highway right of way and shall pay all costs involved. Arrangements shall include, but not be limited to, entering into agreements with property owners and obtaining necessary permits, licenses and environmental clearances. Before disposing of any material outside the highway right of way, the Contractor shall furnish to the Engineer satisfactory evidence that the Contractor has entered into agreements with the property owners of the site involved and has obtained the permits, licenses and clearances.

When any material is to be disposed of outside the highway right of way, and the Department has not made arrangements for disposal of the material, the Contractor shall first obtain written authorization from the property owner on whose property the disposal is to be made and the Contractor shall file with the Engineer the authorization or a certified copy thereof together with a written release from the property owner absolving the State from any and all responsibility in connection with the disposal of material on the property. Before any material is disposed of on the property, the Contractor shall obtain written permission from the Engineer to dispose of the material at the location designated in the authorization.

When material is disposed of as above provided and the disposal location is visible from a highway, the Contractor shall dispose of the material in a neat and uniform manner to the satisfaction of the Engineer.

Where the Department has made arrangements with owners of land in the vicinity of a project for the disposal of materials on an owner's property, the arrangements are made solely for the purpose of providing all bidders an equal opportunity to dispose of the materials on the property. Bidders or Contractors may, upon written request, inspect the documents evidencing the arrangements between property owners and the Department. The Contractor may, if the Contractor so elects, exercise any rights that have been obtained, which may be exercised by a Contractor under the arrangements, subject to and upon the conditions hereinafter set forth.

Such arrangements are not a part of the contract and it is expressly understood and agreed that the Department assumes no responsibility to the bidder or Contractor whatsoever in respect to the arrangements made with the property owner to dispose of materials thereon and that the Contractor shall assume all risks in connection with the use of the property, the terms upon which the use shall be made, and there is no warranty or guaranty, either express or implied, as to the quantity or types of materials that can be disposed of on the property.

In those instances in which the Department has compiled "Materials Information" as referred to in Section 2-1.03, "Examination of Plans,

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY CONTRACT - STATE HIGHWAY

RW 8-3 (6/95)

San Ramon , California

April 27 , 20 11

CHEVRON USA INC.
Grantor

Dist.	Co.	Rte.	P.M.	Project
4	CC	580	5.9	0400000483 (1A3209)

Approved by District 04
Dated 4-25-11

MARK L. WEAVER, District Office Chief
R/W Acquisition/Utility Relocation Services

This document No. 62089 in the form of an EASEMENT DEED covering the property particularly described in the above document and attached hereto as Exhibit "A" has been executed by Chevron USA Inc. (Grantor) and delivered to LAWRENCE HIGH, Right of Way Agent for the State of California (State or Grantee).

In consideration of which, and the other considerations hereinafter set forth, it is mutually agreed as follows:

1. (A) The parties have herein set forth the whole of their agreement. The performance of this constitutes the entire consideration for said document and shall relieve the State of all further obligation or claims on this account, or on account of the location, grade or construction of the proposed public improvement.

(B) Grantee requires said property described in Document No 62089 for State highway purposes, a public use for which Grantee has the authority to exercise the power of eminent domain. Grantor is compelled to sell, and Grantee is compelled to acquire the property.

Both Grantor and Grantee recognize the expense, time, effort, and risk to both Grantor and Grantee in determining the compensation for the property by eminent domain litigation. The compensation set forth herein for the property is in compromise and settlement, in lieu of such litigation.

2. The State shall:

(A) Pay the undersigned Grantor the sum of $8,100.00 for the easement conveyed by the above document when said easement vests in the State subject to all liens, encumbrances, assessments, easements and leases (recorded and/or unrecorded) and taxes.

(B) Pay all escrow and recording fees incurred in this transaction, and, if title insurance is desired by the State, the premium charged therefor. Said escrow and recording charges shall not, however, include documentary transfer tax.

3. (A) It is understood that the property being conveyed to the State will be encumbered with temporary construction easements (TCEs) in favor of the State and made a part hereof. The TCEs are to replace Interstate 580 Scofield Avenue bridge decks. The herein acquired rights of usage in said parcels shall be for a period of 24 months; said period shall commence on the date the Office Engineer awards the contract. It is further understood that in no event shall the temporary right granted herein extend beyond the completion of the construction project or February 1, 2014, whichever is earlier, except as provided below.

(B) In case of unpredictable delays in construction, upon written notification, the terms of the Temporary Easement may be extended at the option of the Grantee at the rate of $500.00 per month. Payment for the extended period shall be paid in arrears, ninety (90) days after the completion of the project.

4. Permission is hereby granted the State or its authorized agent to enter upon Grantor's land identified as parcels 62089-1 and 62089-2, where necessary within that certain area shown outlined in red on the map marked Exhibit "B" attached hereto and made a part hereof (the Premises), for the purpose of Temporary Construction Easements.

5. It is agreed and confirmed by the parties hereto that notwithstanding other provisions in this contract, the right of possession and use of the subject property by the State, including the right to remove and dispose of improvements shall commence on May 1, 2011, or the close of escrow controlling this transaction, whichever occurs first, and that the amount shown in Clauses 2 and 3(B) herein includes, but is not limited to, full payment for such possession and use. The Resident Engineer shall notify the Grantor in writing, 96 (ninety-six) hours before entry on said parcels.

6. The undersigned Grantor warrants that they are the owner in fee simple of the property affected by this Temporary Easement as described in Clause 1(B) above and that they have the exclusive right to grant this Temporary Easement.

7. Grantor shall provide a certified copy of the Certificate of Assistant Secretary.

8. Grantor warrants that there are no oral or written leases on all or any portion of the property exceeding a period of one month, and Grantor agrees to hold the State harmless and reimburse the State for any and all of its losses and expenses occasioned by reason of any lease of said property held by any tenant of Grantor for a period exceeding one month.

9. In consideration of the State's waiving the defects and imperfections in all matters of record title, the undersigned Grantor covenants and agrees to indemnify and hold the State of California and its officers, employees, agents, contractors and subcontractors harmless from any and all claims that other parties may make or assert on the title to the Premises. The Grantor's obligation herein to indemnify the State shall not exceed the amount paid to the Grantor under this contract.

10. All work done under this agreement shall conform to all applicable building, fire and sanitary laws, ordinances, and regulations relating to such work, and shall be done in a good and workmanlike manner. All structures, improvements or other facilities, when removed, and relocated, or reconstructed by the State, shall be left in as good condition as found.

The State shall not cause any workmen's or materialmen's liens to be placed upon the Premises and agrees to indemnify and hold Grantor harmless against any such liens placed upon the Premises by the State or its officers, employees, agents, contractors or subcontractors, including but not limited to the payment of attorneys' fees.

All persons entering the Premises under the rights granted under this Temporary Easement shall have a current and valid Transportation Workers Identification Card.

11. The State agrees to indemnify and hold harmless Grantor from any liability arising out of the State's operations under this agreement. The State further agrees to assume responsibility for any damages caused by reason of State's operations under this agreement and the State will, at its option, either repair or pay for such damage.

The State shall not alter, damage or commit any kind of waste upon the Premises. As between the State and Grantor, in the event the construction alters, damages, or commits waste upon the Premises, the State shall be responsible for either the costs of the repair, replacement, or cleanup of the altered or damaged portion of the Premises, at its discretion.

Without in any way limiting the State's liability above, the State shall require its contractors and subcontractors to have insurance coverage as provided for in Section 7-1.12 of the State's Standard Specifications, a copy of which is attached hereto as "Exhibit C," with both Grantor and the State named as additional insureds therein.

The State agrees to enter the Premises and conduct all operations thereon at the State's own risk. The State hereby releases and forever discharges Grantor of and from any and all claims, demands, actions or causes of action whatsoever which the State may have, or may hereafter have, against Grantor specifically arising out of the matter of the entry of the State onto the Premises, except for those claims, demands, actions or causes of action arising from Grantor's negligence or the negligence of its officers, employees, agents, contractors, subcontractors, heirs and assigns. This is a complete and final release and shall be binding upon the undersigned and the heirs, executors, administrators, successors and assigns of the State and covers claims arising out of or connected with the State's use of the Premises.

12. Grantor agrees to fully disclose the existence of the Temporary Construction Easements and the State's project to any and all potential buyers in the event the Grantor should choose to sell the above described parcel during the term of the easement or after the acceptance of this contract.

13. This Right of Way Contract contains all agreements of the parties with respect to any matter mentioned herein. No prior agreements or understanding pertaining to any such matter shall be effective. This Right of Way Contract may be modified in writing only,

signed by the parties in interest at the time of the modifications. Except as otherwise stated in this Right of Way Contract, the State hereby acknowledges that neither Grantor nor the employees or agents of Grantor have made any oral or written warranties or representations to the State relative to the condition or use by the State of the Premises and the State acknowledges that the State and/or its agents assume all responsibilities regarding compliance with the Occupational Safety Health Act.

14. This transaction will be handled through an internal escrow by the State of California, Department of Transportation, District 4 Office, Post Office Box 23440, Oakland, CA 94623-0440.

In Witness Whereof, the Parties have executed this agreement the day and year first above written.

Assistant Secretary, Chevron U.S.A. INC.

(Print Name)

RECOMMENDED FOR APPROVAL:

By _____
LAWRENCE O. HIGH
Associate Right of Way Agent
Acquisition Services

By _____
JASPREET SINGH
District Branch Chief
R/W Acquisition Services

STATE OF CALIFORNIA
Department of Transportation

By _____
R. A. MACPHERSON
Deputy District Director
Right of Way

No Obligation Other Than Those Set Forth Herein Will Be Recognized

Number
62089

EXHIBIT "A"

All that real property situated in the City of Richmond, County of Contra Costa, State of California, being more particularly described as follows:

Parcel 1 (62089-1):

COMMENCING at the Southeasterly corner of PARCEL 6 (47797-5) as described in that certain Grant Deed to the State of California, recorded December 23, 1992 in Book 18142, at Page 709, Contra Costa County Records; thence along the Easterly line of said PARCEL 6 (47797-5), North 13°26'38" West, 0.77 feet to the POINT OF BEGINNING; thence continuing along said Easterly line and the exterior boundary of said PARCEL 6 (47797-5) the following four (4) courses: 1) North 13°26'38" West, 19.23 feet; 2) South 80°05'05" West, 13.44 feet; 3) from a tangent that bears South 77°03'18" West, along a curve to the right with a radius of 1606.00 feet, through a central angle of 08°44'18", an arc length of 244.94 feet; and 4) South 17°20'48" West, 21.48 to the Southwesterly corner of said PARCEL 6 (47797-5); thence from a tangent that bears North 86°04'17" East, along a curve to the left with a radius of 1626.00 feet, through a central angle of 09°29'43", an arc length of 269.47 feet to the Point of Beginning.

CONTAINING 5,270 square feet, more or less.

Parcel 2 (62089-2):

BEGINNING at the Southwesterly corner of PARCEL 5 (47797-4) as described in that certain Grant Deed to the State of California, recorded December 23, 1992 in Book 18142, at Page 709, Contra Costa County Records; thence along the exterior boundary of said PARCEL 5 (47797-4) the following four (4) courses: 1) North 14°23'20" West, 20.00 feet; 2) North 71°51'37" East, 22.47 feet; 3) from a tangent that bears North 74°43'47" East, along a curve to the left with a radius of 1606.00 feet, through a central angle of 02°51'41", an arc length of 80.20 feet; and 4) North 80°20'53" East, 113.64 feet; thence South 69°55'45" West, 61.57 feet; thence South 71°01'36" West, 57.70 feet; thence South 72°53'18" West, 97.13 feet to the Point of Beginning.

CONTAINING 3,180 square feet, more or less.

The bearings and distances used in the above descriptions are based on the California Coordinate System of 1983, Zone 3. Multiply the above distances by 1.0000659 to obtain ground level distances.

This real property description has been prepared by me, or under my direction, in conformance with the Professional Land Surveyors Act.

Signature: _____
Licensed Land Surveyor

Date: 3/2/2011

LICENSED LAND SURVEYOR
JERRY ZHONG
Exp. 12/31/11
No. 7784
STATE OF CALIFORNIA

MAR 02 2011

Form RW 8-1(Q) (Revised 01/08)

EXHIBIT "B"

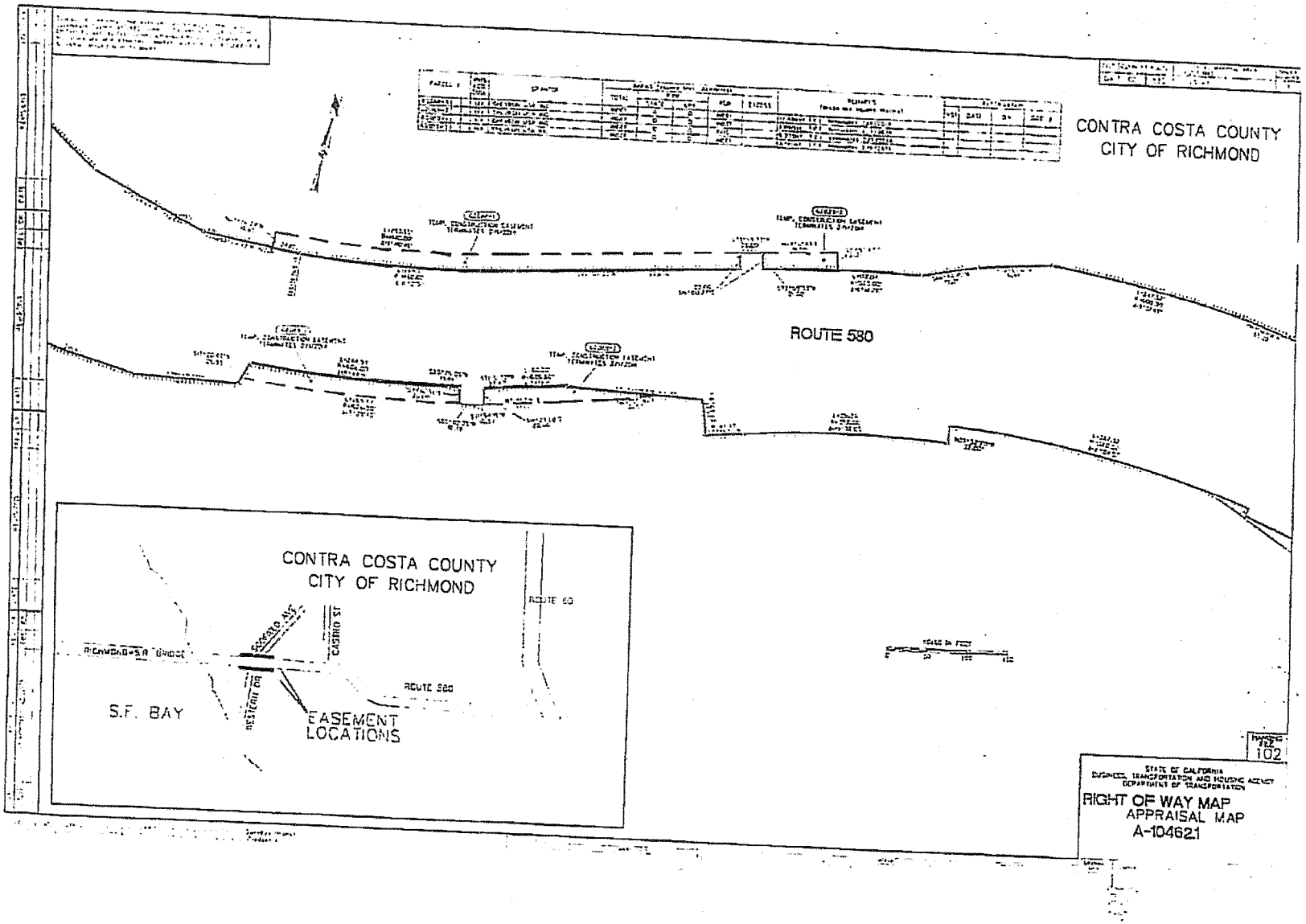
CONTRA COSTA COUNTY
CITY OF RICHMOND
ROUTE 580
CONTRA COSTA COUNTY
CITY OF RICHMOND
ROUTE 80
CASTRO ST
RICHMOND-S.R. BRIDGE
ROUTE 580
S.F. BAY
EASEMENT
LOCATIONS
102
STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION
RIGHT OF WAY MAP
APPRAISAL MAP
A-104621

EXHIBIT "C"

STANDARD SPECIFICATIONS

STATE OF CALIFORNIA

BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION

MAY 2006

ISSUED BY

DEPARTMENT OF TRANSPORTATION

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DEPARTMENT OF TRANSPORTATION
PUBLICATION DISTRIBUTION UNIT
1900 Royal Oaks Drive
Sacramento, California 95815
Telephone (916) 445-3520

The fact that any underground facility is not shown upon the plans shall not relieve the Contractor of the responsibility under Section 8-1.10, "Utility and Non-Highway Facilities." It shall be the Contractor's responsibility, pursuant thereto, to ascertain the location of those underground improvements or facilities which may be subject to damage by reason of the Contractor's operations.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified in this Section 7-1.11, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

7-1.12 INDEMNIFICATION AND INSURANCE

The Contractor's obligations regarding indemnification of the State of California and the requirements for insurance shall conform to the provisions in Section 3-1.025, "Insurance Policies," and Sections 7-1.12A, "Indemnification," and 7-1.12B, "Insurance," of this Section 7-1.12.

7-1.12A Indemnification

With the exception that this section shall in no event be construed to require indemnification by the Contractor to a greater extent than permitted by law, the Contractor shall defend, indemnify and save harmless the State, including its officers, directors, agents (excluding agents who are design professionals), and employees, and each of them (Indemnitees), from any and all claims, demands, causes of action, damages, costs, expenses, actual attorneys' fees, losses or liabilities, in law or in equity, of every kind and nature whatsoever (Claims), arising out of or in connection with the Contractor's performance of this contract for:

A. Bodily injury including, but not limited to, bodily injury, sickness or disease, emotional injury or death to persons, including, but not limited to, the public, any employees or agents of the Contractor, State, Department, or any other contractor and;
B. Damage to property of anyone including loss of use thereof; caused or alleged to be caused in whole or in part by any negligent or otherwise legally actionable act or omission of the Contractor or anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable.

Except as otherwise provided by law, the indemnification provisions above shall apply regardless of the existence or degree of fault of Indemnitees. The Contractor, however, shall not be obligated to indemnify Indemnitees for Claims arising from conduct delineated in Civil Code Section 2782. Further, the Contractor's indemnity obligation shall not extend to Claims to the extent they arise from any defective or substandard condition of the roadway which existed at or prior to the time the Contractor commenced work, unless this condition has been changed by the work or the scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain. The Contractor's indemnity obligation shall extend to Claims arising

after the work is completed and accepted only if these Claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work. No inspection by the Department, its employees or agents shall be deemed a waiver by the Department of full compliance with the requirements of this section.

The Contractor's obligation to defend and indemnify shall not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determines that the Contractor is not liable to the claimant. The Contractor will respond within 30 days to the tender of any claim for defense and indemnity by the State, unless this time has been extended by the State. If the Contractor fails to accept or reject a tender of defense and indemnity within 30 days, in addition to any other remedy authorized by law, so much of the money due the Contractor under and by virtue of the contract as shall reasonably be considered necessary by the Department, may be retained by the State until disposition has been made of the claim or suit for damages, or until the Contractor accepts or rejects the tender of defense, whichever occurs first.

With respect to third party claims against the Contractor, the Contractor waives any and all rights of any type to express or implied indemnity against the State, its directors, officers, employees, or agents (excluding agents who are design professionals).

7-1.12B Insurance

Insurance shall conform to the following requirements:

7-1.12B(1) Casualty Insurance

The Contractor shall, at the Contractor's expense, procure and maintain insurance on all of its operations with companies acceptable to the Department as follows. All insurance shall be kept in full force and effect from the beginning of the work through final acceptance by the State. In addition, the Contractor shall maintain completed operations coverage with a carrier acceptable to the Department through the expiration of the patent deficiency in construction statute of repose set forth in Section 337.1 of the Code of Civil Procedure.

7-1.12B(1)(a) Workers' Compensation and Employer's Liability Insurance

Workers' Compensation insurance shall be provided as specified in Section 7-1.01A(6), "Workers' Compensation." Employer's Liability Insurance shall be provided in amounts not less than:

(a) $1,000,000 for each accident for bodily injury by accident.
(b) $1,000,000 policy limit for bodily injury by disease.
(c) $1,000,000 for each employee for bodily injury by disease.

If there is an exposure of injury to the Contractors' employees under the U.S. Longshoremen's and Harbor Workers' Compensation Act, the Jones Act or under laws, regulations or statutes applicable to maritime employees, coverage shall be included for such injuries or claims.

7-1.12B(1)(b) Liability Insurance

The Contractor shall carry General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of the Contractor providing insurance for bodily injury liability, and property damage liability for the limits of liability indicated below and including coverage for:

(a) premises, operations and mobile equipment.
(b) products and completed operations.
(c) broad form property damage (including completed operations).
(d) explosion, collapse and underground hazards.
(e) personal injury.
(f) contractual liability.

7-1.12B(1)(c) Liability Limits/Additional Insureds

The limits of liability shall be at least:

(a) $2,000,000 for each occurrence (combined single limit for bodily injury and property damage).
(b) $2,000,000 aggregate for products-completed operations.
(c) $4,000,000 general aggregate. This general aggregate limit shall apply separately to the Contractor's work under this Contract.
(d) $15,000,000 umbrella or excess liability. For projects over $25,000,000 only, an additional $10,000,000 umbrella or excess liability (for a total of $25,000,000). Umbrella or excess policy shall include products liability completed operations coverage and may be subject to $15,000,000 or $25,000,000 aggregate limits. Further, the umbrella or excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

The State and the Department, including their officers, directors, agents (excluding agents who are design professionals), and State employees, shall be named as additional insureds under the General Liability and Umbrella Liability Policies with respect to liability arising out of or connected with work or operations performed by or on behalf of the Contractor under this contract. Coverage for such additional insureds shall not extend to liability:

(1) arising from any defective or substandard condition of the Roadway which existed at or prior to the time the Contractor commenced work, unless such condition has been changed by the work or the scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain; or
(2) for claims occurring after the work is completed and accepted unless these claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work; or
(3) to the extent prohibited by Section 11580.04 of the Insurance Code.

The policy shall stipulate that the insurance afforded the additional insureds shall apply as primary insurance. Any other insurance or self-insurance maintained by the Department or State will be excess only and shall not be called upon to contribute with this insurance. Such additional insured coverage shall be provided by a policy provision or by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO).

7-1.12B(2) Automobile Liability Insurance

The Contractor shall carry automobile liability insurance, including coverage for all owned, hired and non-owned automobiles. The primary limits of liability shall be not less than $1,000,000 combined single limit each accident for bodily injury and property damage. The umbrella or excess liability coverage required under Section 7-1.12B(1)(c), "Liability Limits/Additional Insureds," shall also apply to automobile liability.

7-1.12B(3) Policy Forms, Endorsements and Certificates

The Contractor's General Liability Insurance shall be provided under Commercial General Liability policy form No. CG 0001 as published by the Insurance Services Office (ISO) or under a policy form at least as broad as policy form No. CG 0001.

Evidence of insurance in the form of copies of insurance policies, Certificates of Insurance and any self-insurance coverage documentaion, including the required "additional insured" endorsements, shall be furnished by the Contractor to the Department as specified in Sections 3-1.025, "Insurance Policies," and 3-1.03, "Execution of Contract." The evidence of insurance shall provide that there will be no cancellation, lapse, or reduction of coverage without thirty (30) days' prior written notice to the Department. Insurance policies and Certificates of Insurance, furnished as evidence of required insurance, for the General Liability, Auto Liability and Umbrella-Excess Liability policies shall set forth deductible amounts applicable to each policy and all exclusions which are added by endorsement to each policy. The Department may expressly allow deductible clauses, which it does not consider excessive, overly broad, or harmful to the interests of the State. Standard ISO form No. CG 0001 or similar exclusions will be allowed provided they are not inconsistent with the requirements of Section 3-1.025, "Insurance Policies," and this section. Allowance of any additional exclusions is at the discretion of the Department. Regardless of the allowance of exclusions or deductions by the Department, the Contractor shall be responsible for any deductible amount and shall warrant that the coverage provided to the Department is consistent with the requirements of this section.

7-1.12B(4) Enforcement

The Department may take any steps as are necessary to assure Contractor's compliance with its obligations. Should any insurance policy lapse or be canceled during the contract period the Contractor shall, within thirty (30) days prior to the effective expiration or cancellation date, furnish the Department with evidence of renewal or replacement of the policy. Failure to continuously maintain insurance coverage as herein provided is a material breach of contract. In the event the

Contractor fails to maintain any insurance coverage required, the Department may, but is not required to, maintain this coverage and charge the expense to the Contractor or terminate this Contract. The required insurance shall be subject to the approval of Department, but any acceptance of copies of insurance policies, insurance certificates and self-insurance documentation by the Department shall in no way limit or relieve the Contractor of the Contractor's duties and responsibilities under the Contract to indemnify, defend and hold harmless the State, its officers, agents, and employees. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude the State from taking other actions as is available to it under any other provision of the contract or law. Failure of the Department to enforce in a timely manner any of the provisions of this section shall not act as a waiver to enforcement of any of these provisions at a later date.

7-1.12B(5) Self-Insurance

Self-insurance programs and self-insured retentions in insurance policies are subject to separate annual review and approval by the State of evidence of the Contractor's financial capacity to respond. Additionally, self-insurance programs or retentions must provide the State with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance.

7-1.12B(6) Miscellaneous

Nothing contained in the Contract is intended to make the public or any member thereof a third party beneficiary of the Insurance or Indemnity provisions of these Standard Specifications, nor is any term, condition or other provision of the Contract intended to establish a standard of care owed to the public or any member thereof.

7-1.125 Legal Actions Against the Department

In the event litigation is brought against the Department concerning compliance by the Department with State or Federal laws, rules or regulations applicable to highway work, the provisions of this Section 7-1.125 shall apply.

(A) If, pursuant to court order, the Department prohibits the Contractor from performing all or any portion of the work, the delay will be considered a right of way delay within the meaning of Section 8-1.09, "Right of Way Delays," unless the contract is terminated as hereinafter provided.

(B) If, pursuant to court order (other than an order to show cause) the Department is prohibited from requiring the Contractor to perform all or any portion of the work, the Department may, if it so elects, eliminate the enjoined work pursuant to Section 4-1.03, "Changes," or terminate the contract.

(C) If the final judgment in the action prohibits the Department from requiring the Contractor to perform all or any portion of the work, the Department will either eliminate the enjoined work pursuant to Section 4-1.03, "Changes," or terminate the contract.

(D) If the contract is to be terminated, the termination and the determination of the total compensation payable to the Contractor shall be governed by the provisions in Section 8-1.11, "Termination of Contract."

7-1.13 DISPOSAL OF MATERIAL OUTSIDE THE HIGHWAY RIGHT OF WAY

If the Contractor elects to dispose of materials at locations other than those where arrangements have been made by the Department, or, if material is to be disposed of and the Department has not made arrangements for disposal of the material, the Contractor shall make arrangements for disposing of the materials outside the highway right of way and shall pay all costs involved. Arrangements shall include, but not be limited to, entering into agreements with property owners and obtaining necessary permits, licenses and environmental clearances. Before disposing of any material outside the highway right of way, the Contractor shall furnish to the Engineer satisfactory evidence that the Contractor has entered into agreements with the property owners of the site involved and has obtained the permits, licenses and clearances.

When any material is to be disposed of outside the highway right of way, and the Department has not made arrangements for disposal of the material, the Contractor shall first obtain written authorization from the property owner on whose property the disposal is to be made and the Contractor shall file with the Engineer the authorization or a certified copy thereof together with a written release from the property owner absolving the State from any and all responsibility in connection with the disposal of material on the property. Before any material is disposed of on the property, the Contractor shall obtain written permission from the Engineer to dispose of the material at the location designated in the authorization.

When material is disposed of as above provided and the disposal location is visible from a highway, the Contractor shall dispose of the material in a neat and uniform manner to the satisfaction of the Engineer.

Where the Department has made arrangements with owners of land in the vicinity of a project for the disposal of materials on an owner's property, the arrangements are made solely for the purpose of providing all bidders an equal opportunity to dispose of the materials on the property. Bidders or Contractors may, upon written request, inspect the documents evidencing the arrangements between property owners and the Department. The Contractor may, if the Contractor so elects, exercise any rights that have been obtained, which may be exercised by a Contractor under the arrangements, subject to and upon the conditions hereinafter set forth.

Such arrangements are not a part of the contract and it is expressly understood and agreed that the Department assumes no responsibility to the bidder or Contractor whatsoever in respect to the arrangements made with the property owner to dispose of materials thereon and that the Contractor shall assume all risks in connection with the use of the property, the terms upon which the use shall be made, and there is no warranty or guaranty, either express or implied, as to the quantity or types of materials that can be disposed of on the property.

In those instances in which the Department has compiled "Materials Information" as referred to in Section 2-1.03, "Examination of Plans,

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
AMENDMENT TO RIGHT OF WAY CONTRACT
(Form #)

EXHIBIT
8-EX-19 (Rev. 6/95)

Approved by District 04
Dated 7-13-11

for ALLISON G. PAICH, Interim R/W Office Chief
R/W Acquisition Services

04	CC	580	5.9
Dist	Co	Rte	P.M.
62088/82089		1A3209(04 0000 0483)	
Parcel Nos.		Exp Auth	

WHEREAS, Chevron USA INC, hereinafter (Grantor) and the State of California, acting by and through the Department of Transportation, hereinafter (State), have heretofore entered into that certain Right of Way Contracts dated April 27, 2011, which contract set forth the terms and conditions under which the State acquired certain rights for State transportation purposes as described in Right of Way Contract-State Highway and Highway Easement Deed Nos. 62088/62089.

WHEREAS, Subsequent to entering into said contracts, Department of Transportation Review and Approval Schedules to minimize contract work time on Grantor's property were **not available to include in the original Right of Way Contract.**

WHEREAS, By reasons of the foregoing it is now the desire of the parties hereto to amend said right of way contract.

NOW, THEREFORE, It is agreed by and between the parties hereto as follows: **The State shall provide Grantor with the contractor's Critical Path Method (CPM), 30 days before commencing construction. Grantor agrees to adhere to review and approval times as stated in Exhibit A attached.** Grantor will use its reasonable best efforts to adhere to the review and approval times specified in Exhibit A. Start times begin when Grantor receives item for review or approval.

State and Grantor agree and acknowledge that delivery of this Agreement the Amendment to Right of Way Contract may be accomplished by scanning and emailing and that a scanned signature of either party (Grantor or State) shall be treated as if an original signature.

All other terms and conditions of contract remain unchanged.

IN WITNESS WHEREOF, The parties hereto have executed this 10th day of June, 2011.

By _____
Assistant Secretary, Chevron U.S.A. INC.
Douglas L. Ely

RECOMMENDED FOR APPROVAL:

By _____
LAWRENCE O. HIGH
Associate Right of Way Agent
Acquisition Services

By _____
JASPREET SINGH
District Branch Chief
R/W Acquisition Services

STATE OF CALIFORNIA
Department of Transportation

By _____
MARK L. WEAVER
Deputy District Director
Right of Way and Land Surveys

No Obligation Other Than Those Set Forth Herein Will Be Recognized

EXHIBIT A

CHEVERON USA INC
Richmond Refinery

Deck Replacement and Earthquake Retrofit Project
04-cc-580 04-1A3201
Scofield Ave UC Br. No. 28-0140 R/L

Time Requirements for Chevron's Review or Approval

Items Reviewed by Chevron (concurrence time):

1. Deck construction plan: 2 weeks
2. Structural steel painting plan, containment system, installation, removal: 2 weeks
3. Permanent steel deck form working drawings, installation plan: 2 weeks
4. Welding plan for work above protection system: 1 week
5. Survey plans – deck level: 1 week
6. Materials disposal plans: 1 week
7. Materials delivery plan: 1 week
8. Debris control plan: 1 week
9. Light standard removal and installation plan: 1 week
10. Stage construction plans for all stages: 2 weeks
11. CRIPS – with minimal impacts on Chevron: 2 weeks

Approval by Chevron time frame:

1. Protection system working drawings, installation plan, removal plan: 5 weeks
2. Deck removal plan: 2 weeks
3. Temporary support working drawings: 2 weeks
4. Temporary support installation and removal plans: 2 weeks
5. Falsework working drawings, installation and removal: 2 weeks
6. Scafolding working drawings, installation and removal: 2 weeks

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION
AMENDMENT TO RIGHT OF WAY CONTRACT
(Form #)

EXHIBIT
8-EX-19 (Rev. 6/95)

CONTRACT AMENDMENT # 2

04	CC	580	5.9
Dist	Co	Rte	P.M.
62088		1A3209 (04 0000 0483)	
Parcel No.		Exp Auth	

WHEREAS, Chevron U.S.A. Inc. hereinafter (Grantor) and the State of California, acting by and through the Department of Transportation, hereinafter (State), have heretofore entered into that certain Right of Way Contract dated April 27, 2011 and Contract Amendment dated July 13, 2011, which contracts set forth the terms and conditions under which the State acquired certain rights for State transportation purposes as described in Right of Way Contract-State Highway, Easement Deed Nos. 62088.

WHEREAS, subsequent to entering into said contract and contract amendment, new design requirements are needed to mitigate hardships to the local traveling public from the eastbound Western Drive on-ramp closure.

WHEREAS, the Bay Conservation and Development Commission, BCDC has agreed to issue a permit for utilization of the bike path on Chevron property as part of the temporary detour when Chevron U.S.A. Inc. approves this contract amendment.

WHEREAS, by reasons of the foregoing it is now the desire of the parties hereto to amend said Right of Way Contract.

NOW, THEREFORE, It is agreed by and between the parties hereto as follows: Permission is hereby granted to the State or its authorized agent to enter upon Grantor's land identified as parcel 62088-3, where necessary within that certain area shown outlined in red on the map marked Exhibit "A" attached hereto and made a part hereof (the Premises), for the purpose of Temporary Access Easement (TAE). The TAE is to provide access via the bike path on Grantor's property to eastbound Interstate Route 580 to local traffic during the closure and upgrade of the eastbound Western Drive on-ramp. The herein acquired rights of usage on said parcel shall be for a period of 4 months; said period shall commence on the date the Resident Engineer notifies the Grantor. At least a 72 hour telephone notice to (510) 242-1889 shall be given before entry on said parcel for TAE purposes. It is further understood that in no event shall the temporary right granted herein extend beyond the completion of the construction project or June 30, 2014, whichever is earlier, except as provided in the original Right of Way Contracts dated April 27, 2011.

It is agreed and understood that usage of the TAE by local traffic will be under the following conditions:

1. Vehicle usage will be from 5:30am to 9:30pm.
2. State will provide a flagperson to control entry onto the bike path.
3. Vehicles larger than a ¾ ton pickup truck are prohibited.
4. State will provide a pilot vehicle to accompany all vehicles traversing the bike path.
5. State will pave and restripe the bike path upon completion of the detour.
6. State to provide and install absorbent straw wattles or similar runoff protection devices along both sides of the trail where it crosses Chevron's property.
7. State will replace the existing gate and fence within the proposed easement area with a new gate and fence and relocate this replacement to the western edge of the easement area across the access road.
8. Grantor understands and agrees that after completion of the work of replacing and relocating the fence and gate, said facility will be considered as Chevron's sole property and Chevron will be responsible for its maintenance and repair.
9. Grantor and State will share the operation and security of Grantor's gate.

State shall pay Grantor $1,600.00 for the Temporary Access Easement on parcel 62088-3.

State and Grantor agree and acknowledge that delivery of this Agreement, the Amendment #2 to Right of Way Contract may be accomplished by scanning and emailing and that a scanned signature of either party (Grantor or State) shall be treated as if an original signature. However, in order to compensate Grantor, the State of California requires contracts with original signatures.

All other terms and conditions of contract remain unchanged.

IN WITNESS WHEREOF, The parties hereto have executed this 17th day of May, 2012.

By _____
J. J. Ely
Assistant Secretary, Chevron U.S.A. INC.

RECOMMENDED FOR APPROVAL:

By _____
LAWRENCE O. HIGH
Associate Right of Way Agent
Acquisition Services

STATE OF CALIFORNIA
Department of Transportation

By _____
JASPREET SINGH
District Branch Chief
R/W Acquisition Services

By _____ for Mark L. Weaver
MARK L. WEAVER
Deputy District Director
Right of Way and Land Surveys

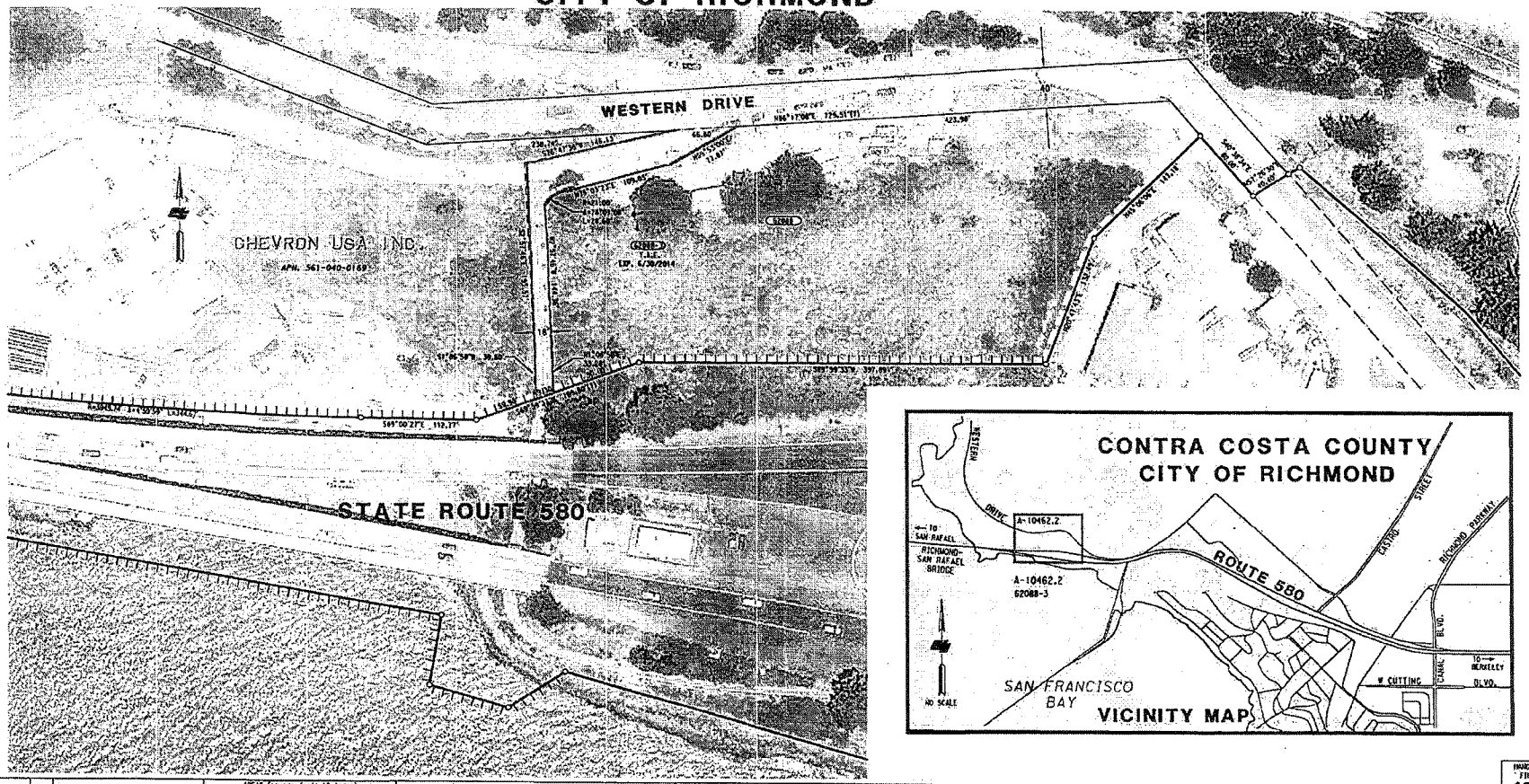
No Obligation Other Than Those Set Forth Herein Will Be Recognized

EXHIBIT "A"

DISTANCE SHOWN ARE ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 3, CA-NPGN, EPOCH 1991.35. MULTIPLY DISTANCES SHOWN BY 1.000065854 TO OBTAIN GROUND LEVEL DISTANCES.

CONTRA COSTA COUNTY
CITY OF RICHMOND

DIST.	COUNTY	ROUTE	TOTAL MAPPING AREA POST MILE
04	CC	580	5.5/6.1



PARCEL #S	ACQ. CODE	GRANTOR	AREAS (square feet; AC=Acres) TOTAL	R/W	REM	EXCESS	REMARKS	RECORDATION INST	DATE	DOCUMENT REF.	EA	PROJECT ID
62088-3	C	CHEVRON USA INC					9,926 S.F. T.A.E. EXP. 06-30-2014				1A3201	0400000483

LEGEND

- O DIMENSION POINT
- ACCESS PROHIBITED
- T.A.E. TEMPORARY ACCESS EASEMENT
- APN. ASSESSOR'S PARCEL NUMBER
- S.F. SQUARE FEET
- (T) TOTAL

Supplementary information may be obtained from the District Office, Office of R/W Engineering, Surveys and Mapping Services, 111 Grand Avenue, Oakland, California.

SCALE IN FEET: 0 60 100 160

E.A.	1A3201
R/W P.S.	CAW

MAP REFERENCES

HARD COPY	APPRAISAL	RECORD	MONUMENT
	A-10462.1 A-1050.1	R-102.24 R-70.6	

DRAWING DATE	COUNTY	ROUTE	POST MILE	SHEET
2/16/2012	CC	580	5.9	1 of 1

DATE	REVISIONS	BY	DATE	REVISIONS	BY	DATE	REVISIONS	BY
01/19/12	ADDUCE TEMPORARY RIGHTS per TR. #4	CAW	4/13/2012	RECONFIG. PCL 62997-1 & TRANSFER AS PCL 62088-3 PER R/W ACQUISITIONS, IN ADVANCE TO TR. #6	CAW			CAW
02/28/12	INCREASE TEMPORARY RIGHTS per TR. #5	CAW						

HANGING FILE 102

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

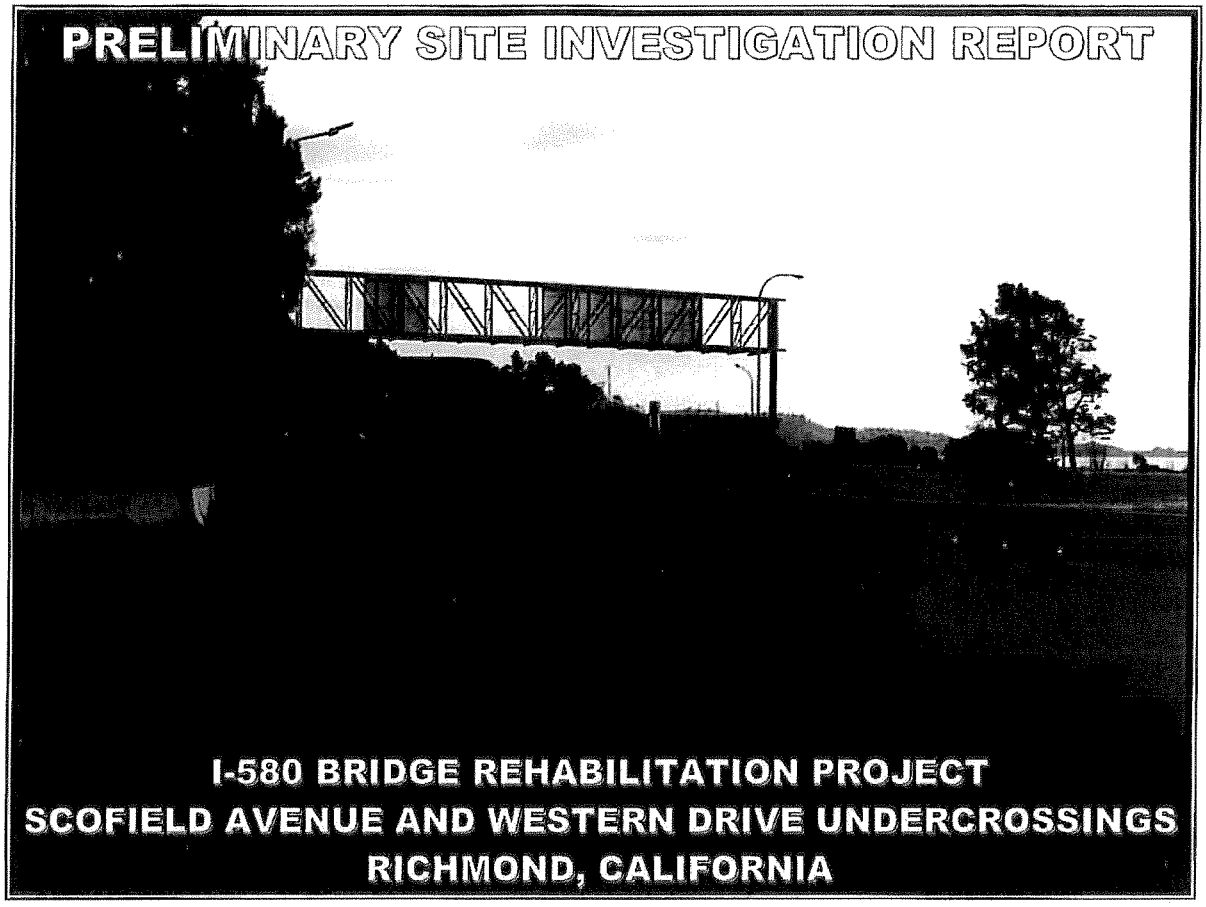
RIGHT OF WAY
APPRAISAL MAP INDEX
A-10462.2

SCALE 1"=50'

APRIL 13, 2012

PORTION OF

PRELIMINARY SITE INVESTIGATION REPORT



I-580 BRIDGE REHABILITATION PROJECT
SCOFIELD AVENUE AND WESTERN DRIVE UNDERCROSSINGS
RICHMOND, CALIFORNIA

PREPARED FOR:
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING
111 GRAND AVENUE, MS8C
OAKLAND, CA 94612

Caltrans

PREPARED BY:
GEOCON CONSULTANTS, INC.
6671 BRISA STREET
LIVERMORE, CA 94550

GEOCON

GEOCON PROJECT NO. E8560-06-05
CALTRANS EA 04-1A3201

MARCH 2011

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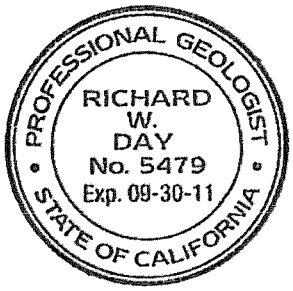
REPORT LIMITATIONS

This report has been prepared exclusively for the State of California Department of Transportation (Caltrans) District 4. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

GEOCON CONSULTANTS, INC.



Richard Day, CEG, CHG
Senior Geologist

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING

Reviewed By:	Recommended By:	Approved By:
William Whiteley, PE Task Order Manager	Ray Boyer, PE District Branch Chief	Allen Baradar, PE, REA District Office Chief

PROJECT TEAM

Contact	Affiliation	Responsibility
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William Whiteley, PE 510.286.5683 510.286.5642 fax william_whiteley@dot.ca.gov	Caltrans – District 4 Environmental Engineering 111 Grand Avenue, MS8C Oakland, California 94612	Task Order Manager
Richard Day, CEG, CHG Lauren Vigliotti, PG 925.371.5900 925.371.5915 fax livermore@geoconinc.com	Geocon Consultants, Inc. 6671 Brisa Street Livermore, CA 94550 *(Caltrans Consultant)*	Project Management Sample Collection Field QA/QC Investigation Report
Doug Krause, CIH 530.758.6397 530.758.6506 fax dskrause@pacbell.net	Krause & Associates 216 F. Street Suite 162 Davis, CA 95616 (*Geocon Subconsultant*)	Health and Safety
Diane Galvan 562.989.4045 562.989.4040 fax diane@atlglobal.com	Advanced Technology Laboratories 1510 E. 33rd Street Signal Hill, CA 90807 (*Geocon Subcontractor*)	Soil Sample Analysis
Dan Kocher 510.895.3675 510.895.3680 milpitaslab@emsl.com	EMSL Analytical Inc. 2235 Polvorosa Avenue, Suite 230 San Leandro, CA 94577 *(Geocon Subcontractor)*	Asbestos Analysis

PRELIMINARY SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Preliminary Site Investigation Report for the Interstate 580 (I-580) Bridge Rehabilitation project was prepared by Geocon Consultants, Inc. under California Department of Transportation (Caltrans) Contract No. 04A3578 and Task Order No. 5 (TO-05), EA 04-1A3201.

1.1 Project Description and Proposed Improvements

The project location consists of Caltrans right-of-way (ROW) along a portion of the northbound (NB) and southbound (SB) shoulders of I-580 in Richmond, Contra Costa County, California. The location of the proposed bridge rehabilitations is between Post Miles (PM) CC-580-PM 5.5/6.1. The bridge structures at the project location include the Scofield Avenue UC (Bridge No. 28-0140L/R) and the Western Drive Onramp UC (Bridge No. 28-0141R) which carry westbound I-580 traffic. Bridge No. 28-0140L includes two structures: the eastbound I-580 roadway, and the eastbound on-ramp from Western Drive; Bridge No. 28-0140R is the westbound I-580 roadway. These structures consist of a mixture of continuous welded steel plate girders on reinforced concrete bents, riveted steel bents, hanging abutment and cantilever abutments with spread footings. The PSI will be conducted prior to replacing the bridge decks and joints between the deck and steel girders. The project location is depicted on the attached Vicinity Map, Figure 1.

1.2 General Objectives

The purpose of the site investigation was to evaluate concentrations of California Assessment Manual (CAM) 17 metals, including aerially deposited lead (ADL), total petroleum hydrocarbons (TPH), and naturally occurring asbestos (NOA) in soil at the project location. Groundwater is not expected to be encountered during the proposed construction activities; therefore, no groundwater samples were collected.

ADL may be present at the project location primarily due to historic leaded fuel emissions from automobile exhausts. Lead poses risks related to inhalation, ingestion, and dermal contact with the material. NOA may be in soil within the project limits. If not managed, disturbance of NOA during construction activities may potentially pose an inhalation risk to the health of construction personnel.

The information obtained from this investigation will be used by Caltrans to evaluate soil disposal costs and identify health and safety concerns.

The scope of work also included a survey for asbestos-containing materials (ACM) and lead containing paint (LCP) at each structure, the results of which are provided under separate cover.

2.0 BACKGROUND

2.1 Hazardous Waste Determination Criteria

Regulatory criteria to classify a waste as California hazardous for handling and disposal purposes are contained in the CCR, Title 22, Division 4.5, Chapter 11, Article 3, §66261.24. Criteria to classify a waste as Resource, Conservation, and Recovery Act (RCRA) hazardous are contained in Chapter 40 of the Code of Federal Regulations (40 CFR), Section 261.

For waste containing metals, the waste is classified as California hazardous when: 1) the total metal content exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the soluble metal content exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste has the potential of exceeding the STLC when the waste's total metal content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to ten times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or Federal hazardous, when the soluble metal content exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability and corrosivity; however, for the purposes of this investigation, toxicity (i.e., lead concentrations) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or other criteria. Waste that is classified as either California hazardous or RCRA hazardous requires management as a hazardous waste.

2.2 DTSC Variance

The DTSC issued a statewide Variance effective July 1, 2009, regarding the management of ADL-impacted soils within Caltrans right-of-way. Under the Variance, soil that is classified as a non-RCRA hazardous waste, based primarily on ADL content, may be suitable for reuse within Caltrans right-of-way. ADL soil that is classified as a RCRA hazardous waste is not eligible for reuse under the Variance and must be disposed of as a RCRA hazardous waste (Caltrans Type Z-3).

ADL soil reused under the Variance must always be at least five feet above the highest groundwater elevation and, depending on lead concentrations, must be covered with at least one foot of non-hazardous soil or a pavement structure. The ADL soil may not be placed in areas where it might contact groundwater or surface water (such as streams and rivers), and must be buried in locations that are protected from erosion that may result from storm water run-on and run-off.

Review of the statewide Variance indicates the following conditions regarding the reuse and management of ADL-impacted soil as fill material for construction and maintenance operations. If ADL soil meets the Variance criteria but is not intended to be reused within Caltrans right-of-way, then the excavated soil must be disposed of as a California hazardous waste (Caltrans Type Z-2). A copy of the Variance is presented as Appendix A.

Caltrans Type Y-1: ADL soil exhibiting a total lead concentration less than or equal to 1,411 milligrams per kilogram (mg/kg), a DI-WET (WET using deionized water as extractant) lead concentration less than or equal to 1.5 milligrams per liter (mg/l), and a pH value greater than or equal to 5.5 may be reused within the same Caltrans corridor and must be covered with at least one foot of non-hazardous soil.

Caltrans Type Y-2: ADL soil exhibiting a total lead concentration less than or equal to 1,411 mg/kg, a DI-WET lead concentration less than or equal to 1.5 mg/l, and a pH value greater than 5 and less than 5.5 may be reused within the same Caltrans corridor and must be covered and protected from infiltration by a pavement structure.

ADL soil exhibiting a total lead concentration less than or equal to 1,411 mg/kg, a DI-WET lead concentration greater than 1.5 mg/l and less than or equal to 150 mg/l, and a pH value greater than 5 may be reused within the same Caltrans corridor and must be covered and protected from infiltration by a pavement structure.

ADL soil exhibiting a total lead concentration greater than 1,411 mg/kg and less than or equal to 3,397 mg/kg, a DI-WET lead concentration less than or equal to 150 mg/l, and a pH value greater than 5 may be reused within the same Caltrans corridor and must be covered and protected from infiltration by a pavement structure.

Caltrans Type Z-2: ADL soil exhibiting a total lead concentration greater than 3,397 mg/kg, a DI-WET lead concentration greater than 150 mg/l, or a pH value less than or equal to 5 is not eligible for reuse under the Variance and must be disposed of as a California hazardous waste.

Caltrans Type Z-3: ADL soil exhibiting a TCLP lead concentration greater than or equal to 5 mg/l is not eligible for reuse under the Variance and must be disposed of as a RCRA hazardous waste.

2.3 Environmental Screening Levels

The San Francisco Bay Regional Water Quality Control Board (SFRWQCB) has prepared a technical report entitled *Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, Interim Final* (May 2008), which presents Environmental Screening Levels (ESLs) for soil, groundwater, soil gas, and surface water, to assist in evaluating sites impacted by releases of hazardous chemicals. The ESLs are conservative values for more than 100 commonly detected contaminants, which may be used to compare with environmental data collected at a site. ESLs are strictly risk assessment tools and "not regulatory clean up standards." The presence of a chemical at concentrations in excess of an ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; this simply indicates that a potential for adverse risk may exist and that additional evaluation is or "may be" warranted (SFRWQCB, 2008).

The most conservative ESL table was used for this characterization: Table A – Shallow Soil ($\leq$3 meters below ground surface; bgs) – Groundwater is a Current or Potential Source of Drinking Water. The respective ESLs are listed at the end of Tables 3 and 4 for comparative purposes.

2.4 Naturally Occurring Asbestos

As defined in current California Air Resources Board (CARB) rules, serpentine material refers to any material that contains at least 10% serpentine, and asbestos-containing serpentine refers to serpentine materials with an asbestos content greater than 5% as determined by CARB Test Method 435 (CARB 435). The use of serpentine material for road surfacing is prohibited in California by Title 17 of the California Code of Regulations (CCR) Section 93106, Asbestos Airborne Toxic Control Measure (ATCM) for Surfacing Application (ATCM 93106), unless the material has been tested and determined to have an asbestos content of less than 0.25%. Materials found to contain asbestos of 0.25% or more are considered to be designated waste if transported offsite, requiring disposal at a landfill facility designated to accept asbestos waste. Alternatively, asbestos-containing materials may be reused onsite if buried beneath a minimum 6 inches of soil.

The CARB specifies mitigation practices for construction, grading, quarrying, and surface mining operations that contain natural occurrences of asbestos outlined in Title 17, Section 93105, Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations (ATCM 93105). Based on Part (e) Subpart (2) of ATCM 93105 an asbestos dust mitigation plan is required and must be implemented for a project if NOA is disturbed after the start of construction. Additionally, ATCM 93105 specifies that the air pollution control district (APCD) must be notified and an asbestos dust mitigation plan submitted to the APCD. The ATCM states that air monitoring may be required on the property. NOA potentially posses a health hazard when it becomes an airborne particulate.

The construction/maintenance activities mentioned above could disturb NOA-laden debris and soil, thereby potentially creating an airborne hazard. Mitigation practices can reduce the risk of exposure to airborne NOA containing dust. Dust suppression practices include wetting the materials being disturbed and wearing approved respirators with high-efficiency particulate air (HEPA) filters during construction activities.

3.0 SCOPE OF SERVICES

The scope of services requested by Caltrans under TO-05, EA 04-1A3201 included the following:

3.1 Pre-field Activities

- Prepared a site-specific *Health and Safety Plan* to provide guidelines on the use of personal protective equipment and the health and safety procedures implemented during the field activities.
- Prepared a Workplan for the investigation activities dated January 5, 2011, which was approved by Caltrans.
- Provided a minimum of 48-hours notice to the local public utilities via Underground Service Alert prior to job site mobilization.
- Retained the services of Advanced Technology Laboratories (ATL), a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analyses of soil samples.
- Retained the services of EMSL, a Caltrans-approved and California-certified analytical laboratory, to perform the asbestos analysis of soil samples.

3.2 Field Activities

The field investigation was performed on February 3, 2011, by Geocon staff. The following field activities were performed during the sampling efforts:

- Advanced nine soil borings adjacent to the bridge structures at the project location using hand-auger techniques. The borings were advanced to a maximum depth of 3 feet.
- Collected 27 soil samples for selected analysis of CAM 17 metals, total lead, TPH, NOA, and pH.
- Transported samples to California-certified environmental laboratories for analysis under standard chain-of-custody (COC) documentation.

4.0 INVESTIGATIVE METHODS

4.1 Sampling Procedures

Soil samples were collected from nine boring locations identified by the Caltrans TO Manager. Geocon recorded the boring locations using Differential Global Positioning System (DGPS) equipment. Boring coordinates are presented on Table 1 and boring locations are shown on the Site Plan, Figure 2.

The soil samples for analysis of CAM 17 metals and TPH were collected in new stainless steel tubes sealed with Teflon tape and plastic end-caps. Soil samples for total lead and NOA analyses were collected into new resealable plastic bags. Sample containers were labeled and transported to Caltrans-approved, certified environmental laboratories using standard COC documentation. Soil borings were backfilled to surface with soil cuttings.

Geocon provided QA/QC procedures during the field activities. These procedures included washing the sampling equipment with a Liqui-Nox® solution followed by a double rinse with deionized water. Decontamination water was disposed of to the ground surface within Caltrans right-of-way in a manner not to create runoff, away from drain inlets or potential water bodies.

4.2 Laboratory Analyses

Laboratory analyses were performed under a routine turnaround-time (TAT). Samples submitted for CAM 17 metals, total lead, TPH, and pH were analyzed by ATL; samples submitted for NOA were analyzed by EMSL. The laboratory reports and COC documentation are included as Appendix B.

The soil samples were analyzed as follows:

- 14 samples for total lead using Environmental Protection Agency (EPA) Test Method 6010 ICAP
- 12 samples for CAM 17 metals according to Title 22 CCR, EPA Test Methods 6010 ICAP and 7471A
- 6 samples with total lead concentrations greater than 50 mg/kg (i.e. greater then ten times the STLC of 5.0 mg/l) were further analyzed for WET lead
- 3 samples with total lead concentrations greater than 100 mg/kg and WET lead concentrations greater than 5.0 mg/l were further analyzed for TCLP and DI-WET lead.
- 9 samples for TPH as gasoline (TPHg) using EPA Method 8015B
- 9 samples for TPH as diesel and motor oil (TPHd/mo) using EPA Method 8015B
- 9 soil samples for NOA using the CARB Test Method 435
- 9 soil samples for pH using EPA Method 9045

4.3 Laboratory QA/QC

QA/QC procedures were performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. The laboratory QA/QC procedures included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix; whichever was more frequent, with spike made at ten times the detection limit or at the analyte level.

Prior to submitting the samples to the laboratory, the COC documentation was reviewed for accuracy and completeness.

5.0 INVESTIGATIVE RESULTS

5.1 Subsurface Conditions

Observations during field activities indicated that surface soil at the project location generally consists of brown, gravelly sand and silt. Groundwater was not encountered during the advancement of the soil borings.

5.2 Laboratory Analytical Results

The analytical results are summarized in Tables 2 through 5 and are summarized below:

- The following metals were not detected above their respective laboratory reporting limits in the samples: beryllium, molybdenum, selenium, silver, and thallium.
- Total lead was reported at concentrations ranging from less than the laboratory reporting limit of 5.0 milligrams per kilogram (mg/kg) to 990 mg/kg, with six samples equal to or exceeding 50 mg/kg (i.e., ten times the STLC of 5.0 mg/l).
- WET lead was reported at concentrations between 1.6 and 41 mg/l.
- TCLP lead was detected at concentrations of 0.54 mg/l and 1.2 mg/l.
- DI-WET lead was not detected above the laboratory reporting limits of 0.25 mg/l in the three samples analyzed.
- Remaining CAM 17 metals were reported in the samples at concentrations below ten times their respective STLCs.
- TPHg and TPHd were not detected above the laboratory reporting limits of 1.0 mg/kg in the samples.
- NOA was not detected above the 0.25% target analytical sensitivity level in the samples.
- pH values ranged from 6.7 to 8.1

5.3 Laboratory Quality Assurance/Quality Control

We reviewed the QA/QC results provided with the laboratory analytical reports. The data indicate non-detect results for the method blanks. The relative percent differences (RPDs) for a matrix spike duplicate and two duplicates were outside recovery criteria. The surrogate recovery was biased high for one sample, possible due to matrix interferences. However, the analytical batch was validated by the Laboratory Control Spike. One sample required dilution due to internal standard failure. Based on this limited data review, no additional qualifications of the soil data are necessary, and the data are of sufficient quality for the purposes of this report.

5.4 Statistical Evaluation for Lead Detected in Soil Samples

Statistical methods were applied to the total lead data to evaluate: 1) the upper confidence limits (UCLs) of the arithmetic means of the total lead concentrations for each sampling depth; and 2) if an acceptable correlation between total and WET lead concentrations exists that would allow the prediction of WET lead concentrations based on calculated UCLs. Per Caltrans, the lead data for the project location were treated as a single sample population for statistical evaluation, which consisted of borings 10-01 to 10-09.

5.4.1 Calculating the UCLs for the Arithmetic Mean

The upper one-sided 90% and 95% UCLs of the arithmetic mean are defined as the values that, when calculated repeatedly for randomly drawn subsets of site data, equal or exceed the true mean 90% and 95% of the time, respectively. Statistical confidence limits are the classical tool for addressing uncertainties of a distribution mean. The UCLs of the arithmetic mean concentration are used as the mean concentrations because it is not possible to know the true mean due to the essentially infinite number of soil samples that could be collected from a site. The UCLs therefore account for uncertainties due to limited sampling data. As data become less limited at a site, uncertainties decrease, and the UCLs move closer to the true mean.

Non-parametric bootstrap techniques were used to calculate the UCLs. For those samples in which total lead was not detected, a value equal to one-half of the detection limit was used in the UCL calculation. The bootstrap test results are included in Appendix C. The following tables present the calculated UCLs and statistics for the data set.

Site Borings - 10-01 to 10-09

SAMPLE INTERVAL (feet)	90% TOTAL LEAD UCL (mg/kg)	95% TOTAL LEAD UCL (mg/kg)	TOTAL LEAD MEAN (mg/kg)	MINIMUM VALUE (mg/kg)	MAXIMUM VALUE (mg/kg)
0.5 to 1.0	288.1	327.1	161.5	7.2	990
1.0 to 1.5	62.9	69.8	37.1	5.1	200
2.5 to 3.0	13.5	14.0	11.5	3.0	17

5.4.2 Correlation of Total and WET Lead

Total and corresponding WET lead concentrations are bivariate data with a linear structure. This linear structure should allow for the prediction of WET lead concentrations based on the UCLs calculated above in Section 5.4.1.

To estimate the degree of interrelation between total and corresponding WET lead values (x and y, respectively), the *correlation coefficient [r]* is used. The correlation coefficient is a ratio that ranges from +1 to –1. A *correlation coefficient* of +1 indicates a perfect direct relationship between two variables; a *correlation coefficient* of –1 indicates that one variable changes inversely with relation to the other. Between the two extremes is a spectrum of less-than-perfect relationships, including zero, which indicates the lack of any sort of linear relationship at all. The *correlation coefficient* was calculated for the six (x, y) data points (i.e., soil samples analyzed for both total lead [x] and WET lead [y]). The resulting *coefficient of determination* (r^2) equaled 0.98, which yields a corresponding *correlation coefficient* (r) of 0.99.

For the *correlation coefficient* that indicates a linear relationship between total and WET lead concentrations, it is possible to compute the line of dependence or a best-fit line between the two variables. A least squares method was used to find the equation of a best-fit line (regression line) by forcing the y-intercept equal to zero since that is a known point. The equation of the regression line was determined to be $y = 0.0413(x)$, where x represents total lead concentrations and y represents predicted WET lead concentrations.

This equation was used to estimate the expected WET lead concentrations for the UCLs calculated in for samples collected from the Site (see Section 5.4.1). Regression analysis results and a scatter plot depicting the (x, y) data points along with the regression line are included in Appendix C. The predicted WET lead concentrations are summarized in Table 6.

6.0 CONCLUSIONS

Waste classifications are evaluated based on the 90% UCL of the lead content for the relevant excavation depths; this has historically been considered sufficient to satisfy a good faith effort by the EPA as discussed in SW-846. Risk assessment characterization is based on the 95% UCL of the lead content in the waste for the relevant depths; this is in accordance with the Risk Assessment Guidance for Superfund (RAGS) Volume 1 Documentation for Exposure Assessment. Per Caltrans, the 90% UCLs are to be used to evaluate onsite reuse and the 95% UCLs are to be used to evaluate offsite disposal.

6.1 Lead Results

The following table summarizes the predicted waste classification for excavated soil based on the calculated weighted averages of the total lead UCLs and predicted WET lead concentrations for data collected at the Site. Weighted averages are calculated by using the total lead concentration for each 0.5-foot depth interval as the value for the underlying 0.5-foot depth interval (unless a sample was collected from the underlying depth interval). The total and WET lead calculations are summarized below and in Table 6.

Excavation Depth	90% UCL Total Lead (mg/kg)	90% UCL Predicted WET Lead (mg/l)	95% UCL Total Lead (mg/kg)	Waste Classification
0 to 1.0 ft	288	**11.9**	327	**Hazardous**
Underlying soil (1.0 to 3.0 ft)	*51*	*2.1*	*56*	*Non-Hazardous*
0 to 2.5 ft	153	**6.3**	173	**Hazardous**
Underlying Soil (2.5 to 3.0 ft)	*14*	*0.6*	*14*	*Non-Hazardous*
0 to 3.0 ft	130	**5.4**	146	**Hazardous**

90% UCL applicable for waste classification and onsite reuse; 95% UCL applicable for risk assessment and offsite disposal

Based on the data presented in the above table, soil excavated from the surface to a depth of 1.0 foot would be classified as California hazardous waste since the predicted WET lead concentration is greater than the STLC of 5.0 mg/l. Based on the TCLP results, soil would not be classified as RCRA hazardous waste. Based on the DI-WET results, soil may be reused onsite (Caltrans Type Y-1) in accordance with the DTSC Variance by placing lead-impacted soil beneath one foot of clean fill or pavement.

Underlying soil below a depth of 1.0 foot would be classified as non-hazardous.

6.2 Other CAM 17 Metals

The CAM 17 metals concentrations, other than lead, in site soil were compared to ESLs (Table A, SFRWQCB, May 2008). Arsenic and vanadium were reported at concentrations greater than their respective ESL values in the soil samples collected at the site. Arsenic was detected in the samples at concentrations ranging from less than the laboratory reporting limit of 1.0 to mg/kg to 7.5 mg/kg, exceeding the residential land use ESL of 0.39 mg/kg and the commercial/industrial land use ESL of 1.6 mg/kg for shallow soil (≤3 meters; SFRWQCB, Table A). Vanadium was reported in the soil samples at concentrations between 17 mg/kg and 30 mg/kg, exceeding the residential land use ESL of 16 mg/kg for shallow soil.

Upper one-sided 95% UCLs were calculated for the full set of arsenic and vanadium concentrations. Non-parametric bootstrap techniques were used to calculate the UCLs. For those samples in which arsenic was not detected, a value equal to one-half of the detection limit was used in the UCL calculation. The UCLs were compared with the residential and commercial/industrial land use ESLs and with published background levels typically present in California soils as presented in *Background Concentrations of Trace and Major Elements in California Soils* (Kearney Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California, March 1996). The bootstrap results are included in Appendix B. The calculated standard bootstrap UCLs, ESLs and published background concentrations are summarized in the table below:

Metal	95% UCL	PUBLISHED BACKGROUND MEAN[1]	PUBLISHED BACKGROUND RANGE [1]	RESIDENTIAL ESL	COMMERCIAL/ INDUSTRIAL ESL
Arsenic	3.6	3.5	0.6 to 11.0	0.39	1.6
Vanadium	23.6	112	39 to 288	16	200

Concentrations reported in milligrams per kilogram (mg/kg)

[1] Kearney Foundation of Soil Science, March 1996

The 95% UCL value for arsenic in the soil samples collected at the Site is greater than the residential and commercial/industrial land use ESLs and within the published background range. The SFRWQCB *November 2007 Update to Environmental Screening Levels (ESLs) Technical Document* states that ambient background concentrations of arsenic typically exceed risk-based screening levels. In such instances, it may be more appropriate to compare site data to regionally specific established background levels.

The 95% UCL value for vanadium in the soil samples collected at the site is greater than the residential land use ESL. However, the 95% UCL for vanadium is less than the commercial/industrial land use ESL and the published background range.

Based on the reported arsenic and vanadium results, there may be restrictions on reuse and/or disposal options for excavated soil.

6.3 Total Petroleum Hydrocarbons

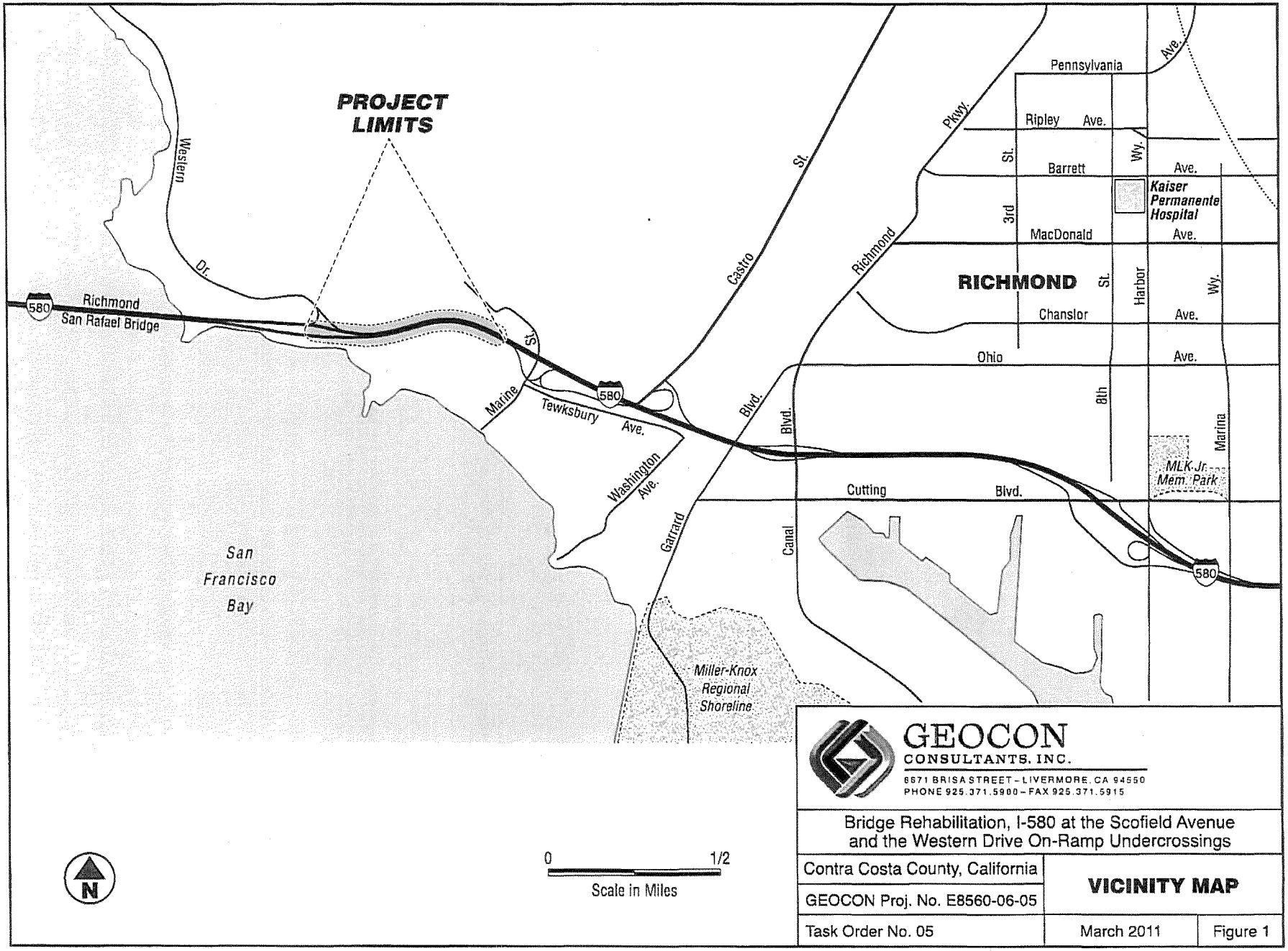
TPHg was not detected above the laboratory reporting limit of 1.0 mg/kg. TPHd and TPHmo were reported at concentrations below their respective ESLs for residential and commercial/industrial land use. Therefore, there should be no restrictions on reuse options for excavated soil based on TPH content.

6.4 Naturally Occurring Asbestos

NOA was not detected above the target analytical sensitivity of 0.25%; therefore, there should be no restrictions on handling of excavated soil based on NOA content.

6.5 Worker Protection

The contractor(s) should prepare a project-specific health and safety plan to prevent or minimize worker exposure to metals and TPH in soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of metals in soil.



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Bridge Rehabilitation, I-580 at the Scofield Avenue and the Western Drive On-Ramp Undercrossings

Contra Costa County, California	**VICINITY MAP**	
GEOCON Proj. No. E8560-06-05		
Task Order No. 05	March 2011	Figure 1

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Contra Costa I-580 Bridge Rehabilitation

Richmond, California	SITE PLAN	
GEOCON Proj. No. E8560-06-05	March 2011	Figure 2

SITE0311

TABLE 1
Boring Coordinates
I-580 Bridge Rehabilitation Project
Richmond, Contra Costa County

Boring	Northing	Easting
10-01	2,167,713.974	6,013,018.723
10-02	2,167,653.831	6,013,039.215
10-03	2,167,591.990	6,013,058.597
10-04	2,167,459.349	6,013,133.075
10-05	2,167,389.887	6,013,336.744
10-06	2,167,420.757	6,013,196.065
10-07	2,167,329.275	6,013,531.594
10-08	2,167,322.972	6,013,624.481
10-09	2,167,323.543	6,013,687.523

Coordinates are shown in feet, NAD 83 (Zone 3)

TABLE 2
Summary of Lead and pH Results
I-580 Bridge Rehabilitation Project
Richmond, Contra Costa County

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
10-01-.5	0.5	7.3	---	---	---	---
10-01-1.5	1.5	9.8	---	---	---	6.4
10-02-.5	0.5	7.2	---	---	---	---
10-02-1.5	1.5	5.1	---	---	---	---
10-02-3	3	<5.0	---	---	---	5.7
10-03-.5	0.5	120	3.1	---	---	---
10-03-1.5	1.5	11	---	---	---	---
10-03-3	3	7.9	---	---	---	6.8
10-04-.5	0.5	27	---	---	---	---
10-04-1.5	1.5	9.3	---	---	---	---
10-04-2.5	2.5	17	---	---	---	7.6
10-05-.5	0.5	160	6.5	<0.25	<0.25	---
10-05-1.5	1.5	14	---	---	---	---
10-05-2.5	2.5	16	---	---	---	7.3
10-06-.5	0.5	990	41	<0.25	1.2	---
10-06-1.5	1.5	200	11	<0.25	0.54	---
10-06-3	3	13	---	---	---	7.7
10-07-.5	0.5	120	1.6	---	---	---
10-07-1.5	1.5	68	2.4	---	---	---
10-07-3	3	15	---	---	---	7.1
10-08-.5	0.5	13	---	---	---	---
10-08-1.5	1.5	10	---	---	---	---
10-08-3	3	8.0	---	---	---	7.5
10-09-.5	0.5	8.6	---	---	---	---
10-09-1.5	1.5	6.9	---	---	---	---
10-09-3	3	12	---	---	---	8.2

Notes:

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

WET = Waste Extraction Test using citric acid as the extraction fluid

DI-WET = Waste Extraction Test using deionized water as the extraction fluid

TCLP = Toxicity Characteristic Leaching Procedure

--- = Not analyzed

< = Analyte was not detected above the laboratory reporting limit

TABLE 3
Summary of CAM 17 Metals Results
I-580 Bridge Rehabilitation Project
Richmond, Contra Costa County

Sample ID	Sample Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
10-01-.5	0.5	<2.0	1.2	90	<1.0	<1.0	6.7	6.4	6.8	7.3	<0.10	<1.0	8.8	<1.0	<1.0	<1.0	19	28
10-02-.5	0.5	<2.0	1.5	180	<1.0	<1.0	7.3	6.1	7.2	7.2	<0.10	<1.0	8.9	<1.0	<1.0	<1.0	17	18
10-03-.5	0.5	<2.0	<1.0	110	<1.0	<1.0	16	8.9	17	120	0.12	<1.0	20	<1.0	<1.0	<1.0	20	89
10-04-.5	0.5	<2.0	<1.0	130	<1.0	<1.0	12	8.4	12	27	<0.10	<1.0	17	<1.0	<1.0	<1.0	21	42
10-04-2.5	2.5	<10	7.5	220	<5.0	<5.0	21	16	30	17	<0.10	<5.0	29	<5.0	<5.0	<5.0	30	57
10-05-.5	0.5	<2.0	2.1	130	<1.0	<1.0	12	6.2	17	160	<0.10	<1.0	16	<1.0	<1.0	<1.0	26	100
10-05-2.5	2.5	11	6.4	150	<5.0	<5.0	18	13	27	16	0.10	<5.0	31	<5.0	<5.0	<5.0	24	61
10-06-.5	0.5	<2.0	2.1	130	<1.0	1.1	20	11	30	990	0.20	<1.0	29	<1.0	<1.0	<1.0	24	360
10-06-3	3	<2.0	2.1	150	<1.0	<1.0	15	12	21	13	<0.10	<1.0	25	<1.0	<1.0	<1.0	22	49
10-07-.5	0.5	<2.0	1.2	95	<1.0	<1.0	14	11	19	120	0.15	<1.0	22	<1.0	<1.0	<1.0	18	64
10-08-.5	0.5	<2.0	1.7	120	<1.0	<1.0	12	11	13	13	<0.10	<1.0	20	<1.0	<1.0	<1.0	21	37
10-09-.5	0.5	<2.0	4.3	65	<1.0	<1.0	19	9.4	15	8.6	<0.10	<1.0	32	<1.0	<1.0	<1.0	21	40
ESLs																		
Residential Land Use		6.3	0.39	750	4.0	1.7	750	40	230	200	1.3	40	150	10	20	1.3	16	600
Comm/Ind Land Use		40	1.6	1500	8.0	7.4	750	80	230	750	10	40	150	10	40	16	200	600
Construction Exposure		310	15	2,600	98	39	1,200,000	94	310,000	750	58	3,900	260	3,900	3,900	62	770	230,000

Notes:

Results are shown in milligrams per kilogram (mg/kg).

Values listed for chromium are for Chromium III, as there is no standard for total chromium.

< = Analyte was not detected above the laboratory reporting limit.

ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, Revised May 2008.

TABLE 4
Summary of Total Petroleum Hydrocarbons Results
I-580 Bridge Rehabilitation Project
Richmond, Contra Costa County

Sample ID	Sample Depth (ft)	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)
10-01-1.5	1.5	<1.0	2.7	8.5
10-02-1.5	1.5	---	<1.0	1.8
10-02-3	3	<1.0	---	---
10-03-1.5	1.5	---	48	120
10-03-3	3	<1.0	---	---
10-04-1.5	1.5	---	18	72
10-04-2.5	2.5	<1.0	---	---
10-05-1.5	1.5	---	<1.0	3.1
10-05-2.5	2.5	<1.0	---	---
10-06-1.5	1.5	---	6.0	26
10-06-3	3	<1.0	---	---
10-07-1.5	1.5	---	24	90
10-07-3	3	<1.0	---	---
10-08-1.5	1.5	---	8.8	28
10-08-3	3	<1.0	---	---
10-09-1.5	1.5	---	5.1	32
10-09-3	3	<1.0	---	---
ESLs				
Residential		83	83	370
Commercial/Industrial		83	83	2,500
Construction Exposure		4,200	4,200	12,000

Notes:
mg/kg = milligrams per kilogram
TPHg = Total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
TPHmo = Total petroleum hydrocarbons as motor oil
--- = Not Analyzed
< = Not detected above the stated laboratory reporting limit
ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, May 2008.

TABLE 5
Summary of NOA Results
I-580 Bridge Rehabilitation Project
Richmond, Contra Costa County

Sample ID	Sample Depth (feet)	Asbestos Content (% dry weight)
10-01-1.5	1.5	ND
10-02-1.5	1.5	ND
10-03-1.5	1.5	ND
10-04-1.5	1.5	ND
10-05-1.5	1.5	ND
10-06-1.5	1.5	ND
10-07-1.5	1.5	ND
10-08-1.5	1.5	ND
10-09-1.5	1.5	<0.25% Chrysotile

ND = None detected at 0.25% target analytical sensitivity.

TABLE 6
Summary of Lead Statistical Analysis
I-580 Bridge Rehabilitation Project
Richmond, Contra Costa County

Site Borings - 10-01 to 10-09

TOTAL LEAD

	UCLs (mg/kg)	
	90% UCL	95% UCL
0 to 0.5 ft	288.1	327.1
1.0 to 1.5 ft	62.9	69.8
2.5 to 3.0 ft	13.5	14.0

EXCAVATION SCENARIOS

	Weighted Averages		
	90% UCL		95% UCL
Excavation Depth	Total Lead (mg/kg)	WET Lead* (mg/l)	Total Lead (mg/kg)
0 to 1.0 ft	288	11.9	327
Underlying Soil (1.0 to 3.0 ft.)	*51*	*2.1*	*56*
0 to 2.5 ft	153	6.3	173
Underlying Soil (2.5 to 3.0 ft)	*14*	*0.6*	*14*
0 to 3.0 ft	130	5.4	146

Notes:

UCL = Upper Confidence Limit (90% UCL is applicable for waste classification; 95% UCL applicable for risk assessment)
mg/kg = milligrams per kilogram
mg/l = milligrams per liter
Weighted average values are based upon calculated UCLs for each depth interval.
* = WET lead concentrations are predicted using slope of regression line,
where y = predicted WET lead and x = total lead.

Regression Line Slope: $y =$ 0.0413 x

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: MS. OFELIA ALCANTARA
Office Chief
Structure Design – West

Attention: Mike Van De Pol

Date: June 21, 2011

File: 04-CC-580 (PM 5.8 & 6.0)
04-1A3201
Scofield Ave. & Western Dr.
Bridge Deck Replacement

From: SUNNY YANG
Transportation Engineer
Office of Geotechnical Design – West
Geotechnical Services
Division of Engineering Services

HOOSHMAND NIKOUI
Chief, Branch A
Office of Geotechnical Design – West
Geotechnical Services
Division of Engineering Services

Subject : Revised Final Foundation Report

This Revised Final Foundation Report supersedes the previous version dated February 22, 2011. This Foundation Report is in response to your request dated September 27, 2010 for foundation recommendations for widening a small area on Eastbound I-580, near Richmond – San Rafael Bridge Toll Plaza (PM 5.8 / 6.0). This is an updated version from the Draft Final Foundation Report dated November 30, 2010, with new pile foundation cutoff elevations.

1. SCOPE OF WORK

The following tasks were performed for the preparation of this Foundation Report:

- Field geotechnical exploration, including drilling five exploratory borings at the project site;
- Foundation design analysis; and
- Preparation of this Foundation Report.

2. PROJECT DESCRIPTION

As part of the project to replace decks of Scofield Ave. and Western Dr. Undercrossing bridges, it is planned to widen the north side (median area) of the eastbound roadway. The eastern portion of the roadway to be widened is confined by an existing concrete retaining wall, and the western portion is an embankment slope. Structure Design proposed three types of structures to support the widening area (Fig. 1). The eastern portion, approximately 60 feet long, is designed as modification of existing retaining wall with bolster to be founded on steel-pipe-reinforced micropiles. The middle portion, approximately 80 feet long, is a slab structure supported by soil nails and column extensions on CIDH piles. The western portion, approximately 50 feet long, is

Type-1 retaining wall founded on spread footing.

The vertical datum used in this report is NAVD 88. The horizontal datum is NAD 83.

3. EXCEPTION TO POLICY

There is no known exception to Department policy relating to the investigation or design of the proposed structures.

4. FIELD INVESTIGATION AND TESTING PROGRAM

A total of five geotechnical exploratory borings were drilled to investigate subsurface soil conditions (Fig. 2). Of the five borings, three were one-inch soil tubes, and two were rotary wash borings. Table 1 lists depths of these borings and the dates they were drilled.

All samples were visually identified and recorded in the field log using standard method. For all borings, Standard Penetration Tests (SPT) were performed at 5-feet interval. Pocket Penetrometer (PP) tests were conducted on soil samples showing apparent cohesion. Further, for rock samples, Rock Quality Determination (RQD) and percent of sample recovery for each run were recorded.

Table 1. Summary of Field Borings

Boring ID	Boring Type	Surface Elevation (ft)	Total Depth (ft)	Date of completion
R-09-001	1" Soil Tube	36.8	17	9-23-09
R-09-002	1" Soil Tube	26.5	34	9-23-09
R-09-003	1" Soil Tube	35.0	23	9-24-09
R-09-004	Rotary Wash	25.5	47	10-6-09
R-09-005	Rotary Wash	40.3	55	10-7-09

5. SITE GEOLOGY AND SUBSURFACE CONDITIONS

5.1. Topography

The project site is located on the bay plain at the base of the northwest trending hills. These hills are bounding the southwestern edge of the project area and rise to a maximum elevation of approximately 350 feet above sea level. East of the project site are the northwest trending Berkeley Hills. The elevation of the project area varies approximately between 40 to 20 feet above mean sea level. The bay plain generally slopes gently to the south/southwest.

5.2. Site Geology

The project area is entirely underlain by a complex, non-homogenous sequence of sheared sedimentary and metamorphic rocks (Franciscan Complex) with zones and blocks of hard greywacke and shale ranging in age from late Jurassic to Quaternary (USGS, OPFR 94-622).

The project area is entirely covered by Millsholm loam at 50 to 75 percent slope. The Millsholm loam soil formed from interbedded shale and fine-grained sandstone.

In the low lands, mapping indicates that the basement is overlain by marine and non-marine sedimentary and volcanic rocks, above which lie the Quaternary deposits consisting of alluvium and bay mud as surficial deposits.

The alluvium is derived principally from the Contra Costa rocks of Berkeley Hills to the east. The clay-rich soil that develops in these rocks is largely of the montorillonite type and is highly expansive in character (Material Files, 1988).

The alluvium contains unconsolidated silty clay, clay, sand, silt and gravel. The bay muds are clay and silt mixtures with occasional sand layers (lenses). The thickness of the alluvial soils in the project area (bedrock depth) reaches up to 100 feet (Material Files, 1988).

5.3. Subsurface Conditions

In September and October 2010, five geotechnical exploratory borings were drilled at the project site (Fig. 2). Borings R-09-001, R-09-002, and R-09-003 are located on the embankment slope along the north side of westbound roadway. Boring R-09-004 is on the shoulder of Western Drive eastbound on-ramp, and R-09-005 is on the shoulder of westbound roadway.

At R-09-001, R-09-002, and R-09-003, the subsurface soils consist of interlayers of sandy gravel, gravelly sand, and clayey sand.

At boring R-09-004, the subsurface soil consists of 10 feet of compact sandy gravel (SPT blow counts N_{60} ranging from 10 to 18), 15 feet of compact fine sand with gravel (N_{60} ranging from 10 to 24), 5 feet of hard lean clay (Pocket Penetrometer value greater than 4.5 tsf), and 5 feet of very dense silty sand with gravel (N_{60} reaching 78). Moderately weathered, intensely fractured, sandstone bedrock was encountered at 35 feet depth (Elevation –9.5 feet).

At boring R-09-005, the subsurface soil consists of 29 feet of compact to very dense sandy gravel (SPT blow counts N_{60} ranging from 9 to 41) and 14 feet of loose fine sand with gravel (N_{60} ranging from 6 to 11). Moderately weathered, intensely fractured, sandstone bedrock was

encountered at 43 feet depth (Elevation –2.5 feet).

5.4. Groundwater

Groundwater table was encountered in R-09-002 at approximately 25 feet depth (Elevation 1.5 feet). It is understood that the groundwater table probably varies with the water level in the bay.

6. SCOUR EVALUATION

No scour issue exists at this site.

7. CORROSION EVALUATION

Corrosion tests were conducted for soil samples collected at the nearby Richmond Bridge Maintenance Yard, and the results are non-corrosive.

8. SEISMIC RECOMMENDATIONS

Hossain Salimi (Office of Geotechnical Design-West) provided the Preliminary Seismic Design Recommendations in a report dated March 29, 2010. He can be contacted at (916) 227-7147 for additional information.

9. FOUNDATION RECOMMENDATIONS

According to current Caltrans Bridge Design Specifications, the bolsters and abutments are designed using the Working Stress Design (WSD) method, and the LRFD design method is used to design the bents. Structure Design provided structure loads for micropiles and CIDH piles.

The foundation design analysis was performed in general using the methods outlined in AASHTO LRFD Bridge Design Specifications (2007); however, reduction factors for geotechnical strength parameters were based on Caltrans/DES/Geotechnical Services criteria. Idealized subsurface soil profile and soil engineering parameters at each abutment or bent location were defined based on the boring logs (Section 5.3), relevant literature, and engineering judgment.

According to the latest SF Bay tide table at a nearby location, the high tide is as much as Elevation 7 feet. For the purposes of seismic design, the groundwater table is conservatively assumed to be at Elevation 10 feet.

Table 2. Simplified Soil Profile and Engineering Parameters

Elevation (ft)	Layer Thickness (ft)	Classification	Average SPT N_{60}	Friction Angle (deg.)	Unconfined Compressive Strength (psi)	Unit Weight (pcf)
40.5 to 25.5	15	Compact sandy gravel	25	37	-	125
25.5 to 15.5	10	Compact sandy gravel	18	35	-	125
15.5 to 0.5	15	Compact fine sand w/ gravel	17	35	-	125
0.5 to –4.5	5	Hard clay	25	-	32	125
-4.5 to –9.5	3	Very dense silty sand w/ gravel	78	42	-	125
Below –9.5	-	Sandstone	> 100	-	100	135

9.1. Eastern Portion (Sta. 90+01 – Sta. 90+61)

The eastern portion of the widening structure (Fig. 1), approximately 60 feet long, is designed as modification of existing retaining wall with bolster to be founded on 16-inch-diameter micropiles. Twelve-inch-diameter steel pipes will be used as reinforcement. For evaluation of geotechnical capacity of micropiles, the FHWA Reference Manual on Micropile Design and Construction (FHWA Publication No. NHI-05-039) may be consulted. The calculated pile tip elevations are listed in Table 3 below.

9.2. Middle Portion (Sta. 90+61 – Sta. 91+41)

The middle portion of the widening structure (Fig. 1), approximately 80 feet long, is a slab structure supported by soil nails and column extensions on CIDH piles.

For CIDH piles, the computer program SHAFT (Version 5.0) was used to calculate nominal vertical bearing capacity. The computational methods in this program conform to FHWA manual on Drilled Shafts (publication No. FHWA-IF-99-025). Only skin friction was considered in pile resistance calculations. Unsuitable penetrated layers, including liquefiable and scourable soils, are excluded from the bearing capacity calculation.

Tables 3 and 4 provide a summary of foundation design recommendations for abutments and bents, respectively. Table 5 is the pile data table. The computed settlement under compression load is less than one inch in all cases.

The following soil parameters may be used for the design of soil nails:

- Friction angle $\phi = 35^{O}$
- Cohesion $c = 0$

- Total unit weight = 125 pcf
- Bond strength between grout and drilled hole = 15 psi (if rotary drilling is used)
  = 25 psi (if driven casing is used)

The bond strength is based on recommendations from FHWA Geotechnical Engineering Circular No. 7 – Soil Nail Walls (Report No. FHWA0-IF-03-017).

Table 3. Bolsters and Abutments Design Recommendations

Support Location	Pile Type	Cut-off Elevation (ft)	LRFD Service-I I Limit State Load per Support (kips)		LRFD Service-I Limit State Total Load per Pile (kips)	Nominal Resistance (kips)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Total	Permanent				
Bolster	16" micorpile	26.5	67	N/A	67	134	14 (a) 20 (c)	14
Abut 1	16" micorpile	26.5	68	N/A	68	136	14 (a) 20 (c)	14
Abut 5	18" CIDH	35	95	N/A	95	190	-10 (a) 15 (c)	-10

Notes: 1) Design tip elevations are controlled by: (a) Compression (Strength Limit) and (c) Settlement, respectively.
2) The specified tip elevation shall not be raised above the design tip elevation for Compression.

Table 4. Bent Foundations Design Recommendations

Support Location	Pile Type	Cut-off Elevation (ft)	Service-II Limit State Load per Support (kips)	Total Permissible Support Settlement (in)	Required Factored Nominal Resistance (kips)				Design Tip Elevation (ft)	Specified Tip Elevation (ft)
					Strength Limit		Extreme Event			
					Comp. (φ=0.7)	Tension (φ=0.7)	Comp. (φ=1)	Tension (φ=1)		
Bent 2	18" CIDH	29	51	1	76	N/A	N/A	N/A	-10 (a) 18 (c)	-10
Bent 3	18" CIDH	31	51	1	76	N/A	N/A	N/A	-10 (a) 20 (c)	-10
Bent 4	18" CIDH	33	69	1	104	N/A	N/A	N/A	-10 (a) 19 (c)	-10

Notes: 1) Design tip elevations are controlled by: (a) Compression (Strength Limit) and (c) Settlement, respectively.
2) The specified tip elevation shall not be raised above the design tip elevation for Compression.

Table 5. Pile Data Table

Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevations (ft)	Specified Tip Elevation (ft)
		Compression	Tension		
Bolster	16" micropile	134	N/A	14 (a) 20 (c)	14
Abut 1	16" micropile	136	N/A	14 (a) 20 (c)	14
Bent 2	18" CIDH	109	N/A	-10 (a) 18 (c)	-10
Bent 3	18" CIDH	109	N/A	-10 (a) 20 (c)	-10
Bent 4	18" CIDH	149	N/A	-10 (a) 19 (c)	-10
Abut 5	18" CIDH	190	N/A	-10 (a) 15 (c)	-10

Notes: 1) Design tip elevations are controlled by: (a) Compression (Strength Limit) and (c) Settlement, respectively.
2) The specified tip elevation shall not be raised above the design tip elevation for Compression.

9.3. Western Portion (Sta. 91+41 – Sta. 91+91)

The western portion of the widening structure (Fig. 1), approximately 50 feet long, is Type-1 retaining wall founded on spread footing. Based on preliminary structure plan, the maximum wall height is assumed to be 6 feet. Using an internal friction angle $\phi = 37^{O}$ and moist unit weight $\gamma = 120$ pcf for the soil and a factor of safety of 3.0, the maximum allowable bearing pressure was calculated to be approximately 5.6 ksf (i.e., ultimate bearing capacity is 16.9 ksf). This well exceeds the required toe pressure of 1.7 ksf for a 6-foot-high standard Type-1 wall.

10. CONSTRUCTION CONSIDERATIONS

10.1. Micropiles

Construction of micropiles shall conform to the provisions 49-390(49MICR)_E_R05-01-06, "Micropiling" and 49-470(49ALTP)_E_R05-01-06, "Alternative Piling" of Bridge Reference Specifications, 2006 Reference Specs.

All micropiles will need to penetrate through the existing retaining wall footings, which necessitates the utilization of concrete coring techniques. Oversized holes should be made through the footing to allow the subsequent drilling casing to pass through.

10.2. CIDH Piles

All CIDH piles shall be constructed in accordance with Section 49-4 of the Caltrans Standard Specifications and "Guidelines for CIDH Piles Cast in Wet Conditions." Drilling of the CIDH piles, placement of rebar cage, and concrete pour shall be completed in a continuous operation.

Difficult pile installation is anticipated due to the presence of relatively loose sandy material, sandstone rock and ground water. The contractor shall submit the drilling logs for CIDH piles for review after the completion of drilling. The drilling log shall include penetration rate, material descriptions, estimated volume of cuttings (poor, good, excessive) and other information pertaining to the drilling process (loss of circulation, zones of caving, down pressure, etc.) Excavated materials and drilling fluid shall be handled and disposed of in accordance with the contract plan.

Due to the presence of ground water, temporary casing may be needed to prevent caving. The use of temporary casing will require that it be removed while the concrete is being placed in order to develop the expected pile capacity and to facilitate the casing removal. Prior to placement of concrete, the interior surface of the shaft including the bottom should be cleaned of residue from drilling operations.

10.3. Soil Nails

Field soil nail pull out verification tests are required primarily to assure the design pull out resistance is achievable and also for QA/QC of the Contractor's soil nail installation methods and materials. Two verification nails are required to be installed and tested. The recommended locations of such tests are shown on the Plans.

The pull out test procedure described in the sspecial provisions shall be followed. Failed verification tests will be resolved through Geotechnical Design and Structure Design. Geotechnical designer will determine the cause of failure. If the design pullout resistance value given on the plans is found to be the cause, the Department will issue revised soil nail lengths or pullout resistance values. If the Contractor's means and methods are determined to be at fault, the installation methods will be rejected and the Contractor will revise his methods and resubmit working drawings at his expense. In either case, the Contractor will be required to install and test additional verification nails.

Proof tests are performed during wall construction and are for quality control. Proof test on at least one sacrificial test nail shall be performed. The recommended location of such proof test is shown on the Plans.

During drilling, caving may occur in areas where gravelly materials exist, especially if percussion drilling method is used. Drilling for soil nail holes may need casing to mitigate if such condition occurs. The Contractor shall utilize appropriate drilling method and/or equipment to mitigate such ground conditions.

10.4. Retaining Wall

For construction of the retaining wall, surface vegetations on the existing embankment slope should be removed, and at least two feet of surface soil should be excavated before foundation construction or backfilling. A berm of minimum 5 feet in width should be maintained at the base of the wall. If necessary, lightweight material may be used to backfill the top wedge behind the retaining wall, resulting in significant reduction in active pressure against the wall.

11. DISCLAIMER AND CONTACT INFORMATION

The recommendations contained in this report are based on specific project information regarding design loads and structure location provided by DES Structure Design. If any conceptual changes are made during final project design, or if you have any questions, please contact Sunny Yang at (510) 286-4808 or Hooshmand Nikoui, Branch Chief at (510) 286-4811.

c: TJPokrywka, HNikoui, DWilkerson, Daily File, Route File, J Stayton (DES Office Engineer)

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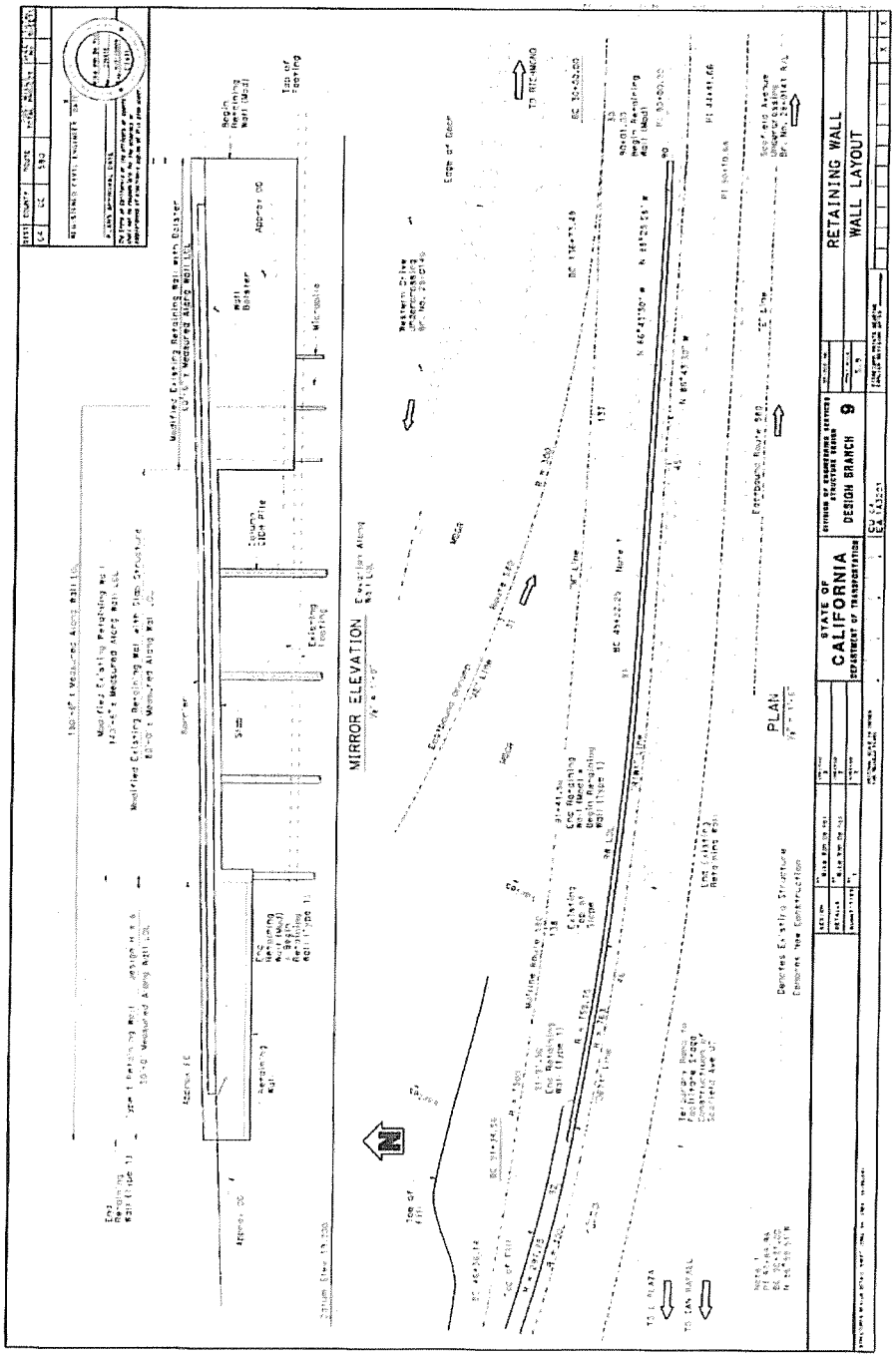

Figure 1. Retaining wall layout

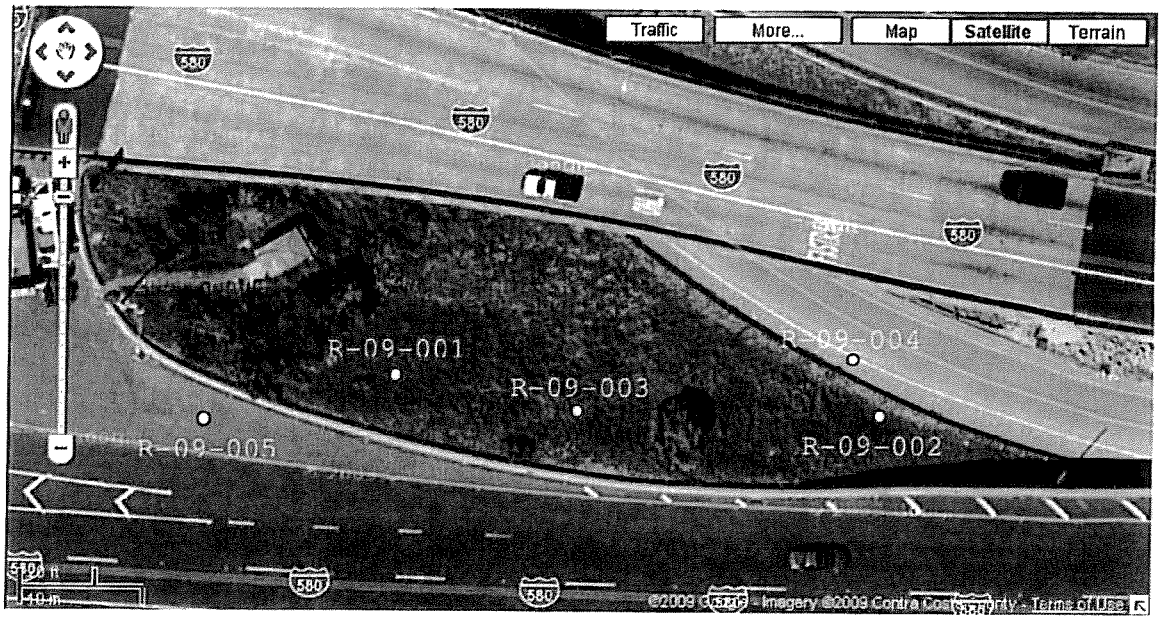

Figure 2. Locations of geotechnical exploratory borings.