Don Houston
Environmental Project Manager
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August 1, 2013

Ms. Amy Baker
Project Manager
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Re: Notice to Proceed (NTP) Request #8 to Construct the Boulevard Substation Rebuild

Dear Ms. Baker:

On June 21, 2012, the California Public Utilities Commission (CPUC) selected the East County (ECO) Substation Alternative Site combined with the ECO Partial Underground 138 kilovolt (kV) Transmission Route Alternative (Decision A.09-08-003) as the approved ECO Substation Project (Project). The decision grants San Diego Gas & Electric Company (SDG&E) a Permit to Construct and conditionally authorizes construction of the Project with the implementation of pre-construction mitigation measures (MMs). A Notice of Determination was submitted to the State Clearinghouse on June 21, 2012, indicating the CPUC's approval of the Project.

Purpose

SDG&E is formally requesting authorization from the CPUC to begin all activities associated with construction of the Boulevard Substation rebuild and demolition of the existing Boulevard Substation. The rebuilt Boulevard Substation will provide 138 kV and 69 kV facilities to accommodate the proposed transmission line, gen-tie interconnections, and 12 kV facilities to service the surrounding area. The existing Boulevard Substation site is located at 40749 Old Highway 80, south of Interstate 8 within the unincorporated community of Boulevard. The proposed Boulevard Substation rebuild site will be located immediately east of the existing substation on an approximately 8.5-acre parcel owned by SDG&E, but will only permanently occupy approximately two acres. Once the rebuilt Boulevard Substation has been constructed and energized, the existing substation will be dismantled and removed, and the site will be recontoured. The locations of the existing Boulevard Substation and the rebuild site are depicted in Attachment A: Overview Map.

This NTP request includes the replacement of the Old Highway 80 culvert; grading refinements; and the installation of fire walls, a water tank, a splash berm, and a retaining wall, as described in Minor Project Refinement (MPR) request #5. MPR request #5 was submitted to the CPUC on June 27, 2013, resubmitted to the CPUC on July 18, 2013, and approved by the CPUC on July 26, 2013. With the exception of the changes described in MPR #5, construction methods, equipment, and structures to be installed for the Boulevard Substation were described in detail and fully analyzed in the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

Pre-Construction Mitigation Measures

A list of all of the pre-construction measures that are relevant to the Boulevard Substation rebuild (as identified in the Mitigation Monitoring, Compliance, and Reporting Program [MMCRP]) and their statuses are summarized in Attachment B: Pre-Construction Status Report of this NTP request. Attachment B: Pre-Construction Status Report provides the full text of each measure; the corresponding status; an explanation of the status; and explanation of how some of the measures have been divided into tasks to facilitate the

identification and completion of the pre-construction components of those tasks. In order to facilitate tracking and implementation, some of the measures have been organized into tasks so that the pre-construction and construction components of the measures can be tracked separately. These measures may appear on more than one line in the attachment and are identified by different task numbers. For example, the pre-construction components of these measures may be identified as "complete," while the rest of the measure is either marked as "to be implemented during construction" or is not included in the report, depending on the specific language of the measure.

In accordance with MMs BIO-1a and BIO-2a, Attachment A: Overview Map and Attachment C: Final Engineering Plans depict the approved workspace limits and jurisdictional waters at the Boulevard Substation rebuild site. Purchase orders demonstrating that dulled-metal finish structures and non-specular conductors will be installed, in accordance with MMs VIS-3i and VIS-3j, are included as Attachment D: Conductor Purchase Orders. A Traffic Control Plan satisfying the pre-construction requirements of MM TRA-1 and TRA-2 is included as Attachment E: Boulevard Substation Traffic Control Plan. While MMs BIO-1g, HYD-1, HYD-2, HYD-4, and GEO-1 are still pending as of this NTP request, they will be fulfilled with the submittal of the Boulevard Substation Storm Water Pollution Prevention Plan, which will be submitted to the CPUC prior to the commencement of construction. All other required MMs, as stated in the MMCRP, will be implemented immediately prior to or during construction.

Activity Summary

Construction of the Boulevard Substation will occur in accordance with the descriptions provided in Section B.3.1.4 of the Final EIR/EIS and MPR request #5. The information described in these documents includes specific details pertaining to grading and disturbance areas, material staging and storage, and installation of underground and aboveground equipment for the Boulevard Substation rebuild and demolition of the existing Boulevard Substation.

Upon completion of the Project, temporary facilities will be removed, and waste, trash, and debris will be collected and properly disposed of. In addition, all areas of temporary disturbance will be restored through recontouring, revegetation, and/or landscaping in accordance with the Amended Boulevard Substation Landscape Screening Plan, which will be submitted to the CPUC prior to the installation of landscaping at the Boulevard Substation rebuild site. Construction of the Boulevard Substation rebuild site and demolition of the existing substation are anticipated to take approximately 15 months from initial site development through energization, and are anticipated to begin in August 2013 and end in November 2014.

We respectfully request authorization of this NTP request by August 15, 2013, so that we can begin construction activities at the Boulevard Substation rebuild site and meet the overall Project schedule. Should you have any questions or need additional information, please do not hesitate to contact me at XXX-XXX-XXXX.

Sincerely,

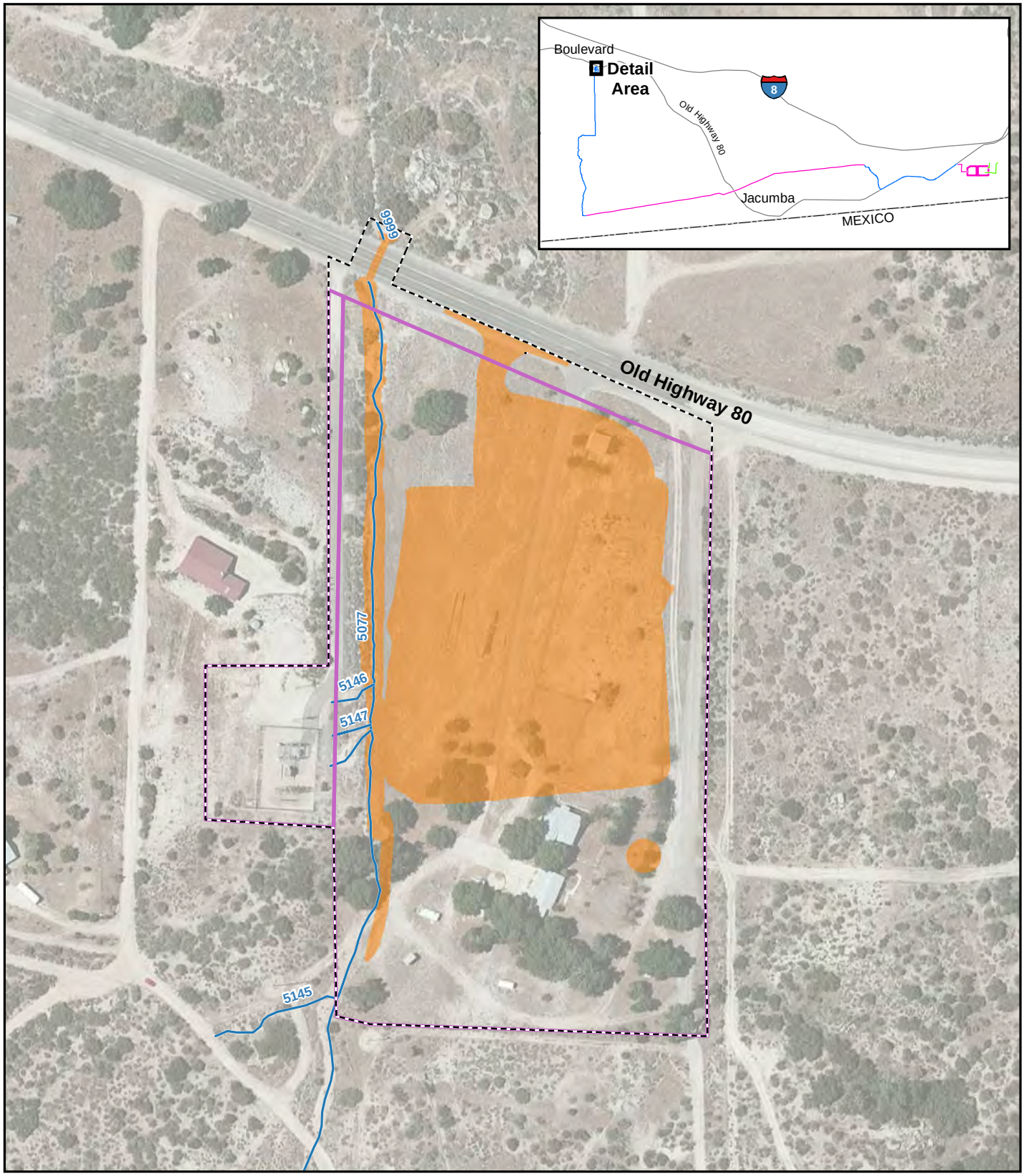
Don Houston

Don Houston
Environmental Project Manager
San Diego Gas & Electric Company

Attachment A: Overview Map
Attachment B: Pre-Construction Status Report
Attachment C: Final Engineering Plans
Attachment D: Conductor Purchase Orders
Attachment E: Boulevard Substation Traffic Control Plan

cc: Kirstie Reynolds, SDG&E
David Hochart, Dudek
Anne Marie McGraw, Insignia Environmental
Jeffry Coward, Insignia Environmental

ATTACHMENT A: OVERVIEW MAP



Attachment A: Work Area Location

East County Substation Project

- Work Area
- Permanent Footprint
- Drainage
- SDG&E Property

SDGE A Sempra Energy utility

INSIGNIA ENVIRONMENTAL

1:2,000

0 150 300 Feet

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7/2/2013

ATTACHMENT B: PRE-CONSTRUCTION STATUS REPORT

Attachment B: Pre-Construction Status Report

Thursday, August 01, 2013
8:27:03 AM

- -To Be Implemented During Construction
- -Pending OR To Be Implemented Immediately Prior to Construction
- -To Be Implemented Following Construction
- -Complete
- -Not Applicable

Report Criteria:
AGENCY: CPUC
SOURCE: MMCRP
TIMING: Design; Design and During; Design and Post; Pre; Pre and During; Pre and Post; Pre, During, and Post
LOCATION: Boulevard Substation

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-01a	01	Confine all construction and construction-related activities to the minimum necessary area as defined by the final engineering plans	All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. An environmental monitor shall complete regular observations to ensure that all work is completed within the approved work limits, and in the event any work occurs beyond the approved limits, it shall be reported.	SDG&E submitted GIS data showing the limits of the approved workspace to the CPUC on November 27, 2012. The approved workspace will be delineated with stakes and/or flagging immediately prior to construction. Environmental Inspectors will be present during construction to ensure that all work is completed within the approved work limits. SDG&E has depicted the limits of the approved workspace in Attachment A: Overview Map and Attachment C: Final Engineering Plans to this NTP request.	Pre and During	To Be Implemented Immediately Prior to Const.
Biological	BIO-01b	01	Conduct contractor training for all construction staff	Prior to construction, all developer, contractor, and subcontractor personnel shall receive training regarding the appropriate work practices necessary to implement the mitigation measures and comply with environmental regulations, including plant and wildlife species avoidance, impact minimization, and best management practices. Sign-in sheets and hard hat decals shall be provided that document contractor training has been completed for construction personnel.	The Project's environmental awareness education program was approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the Safe Worker Environmental Awareness Program Truck Driver Training handout on January 8, 2013. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-01d	02	Restore all temporary construction areas pursuant to a Habitat Restoration Plan	A habitat restoration specialist will be designated and approved by the California Public Utilities Commission and Bureau of Land Management and will determine the most appropriate method of restoration.	The Habitat Restoration Specialist was approved by the CPUC and BLM on April 19, 2012.	Pre	Complete
Biological	BIO-01d	03	Restore all temporary construction areas pursuant to a Habitat Restoration Plan	Restoration techniques may include: hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Any salvage and relocation of speies considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. The Habitat Restoration Plan shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project.	The Boulevard Substation rebuild site is located entirely on a disturbed site; therefore, this measure is not applicable to this location.	Pre and During	N/A
Biological	BIO-01e	01	Provide habitat compensation or restoration for permanent impacts to native vegetation communities	Permanent impact to all native vegetation communities shall be compensated through a combination habitat compensation and habitat restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Habitat compensation shall be accomplished through agency-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting comparable habitats to those lands impacted by the ECO Substation Project. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as compensation for permanent impacts provided that restoration is demonstrated to be feasible and the restoration effort is implemented pursuant to a Habitat Restoration Plan, which includes success criteria and monitoring specifications as described above for Mitigation Measure BIO-1d. The Habitat Restoration Plan shall be approved by the permitting agencies prior to construction of the project. All habitat compensation and restoration used as mitigation for the ECO Substation Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the ECO Substation Project on private lands shall include long-term management and legal protection assurances.	The Boulevard Substation rebuild site is located entirely on a disturbed site; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A
Biological	BIO-01g	01	Prepare and implement a Stormwater Pollution Prevention Plan	Prepare a Stormwater Pollution Prevention Plan pursuant to the specifications described in Mitigation Measure HYD-1.	The Boulevard Substation SWPPP was uploaded to SMARTS on July 29, 2013 and will be submitted to the CPUC. The SWPPP will be implemented during construction.	Pre and During	Pending

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-02a	01	Limit temporary and permanent impacts to jurisdictional features to the minimum necessary as defined by the final engineering plans	Obtain and implement the terms and conditions of agency permit(s) for unavoidable impacts to jurisdictional wetlands and waters. All construction areas, access to construction areas, and construction-related activities shall be strictly limited to the areas within the approved work limits identified on the final engineering plans. The limits of the approved work space shall be delineated with stakes and/or flagging that shall be maintained throughout the construction period. The project applicant shall obtain applicable permits and provide evidence of permit approval, which may include but not be limited to a Clean Water Act Section 404 Permit, a Clean Water Act Section 401 water quality certification, and a Section 1602 streambed alteration agreement with the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game for impacts to jurisdictional features prior to project construction. The terms and conditions of these authorizations shall be implemented.	The Section 401 Water Quality Certification was issued on July 31, 2012 and was submitted to the CPUC on August 10, 2012. The USACE 404 Permit was issued on September 19, 2012 and submitted to the CPUC on September 19, 2012. The CDFG 1600 Agreement was issued on October 30, 2012 and submitted to the CPUC on November 6, 2012. The limits of the approved workspace will be delineated with stakes and/or flagging immediately prior to construction. The terms and conditions of the permits will be implemented during construction. Attachment A: Overview Map and Attachment C: Final Engineering Plans to this NTP request depicts the limits of work and jurisdictional drainage features in the work area. The permits will be amended and modified, as necessary, prior to impacting jurisdictional features not already permitted for impact.	Pre and During	To Be Implemented During Construction
Biological	BIO-02b	01	Compensate for impacts to jurisdictional waters and wetlands	Temporary and permanent impacts to all jurisdictional resources shall be compensated through a combination habitat creation (i.e., establishment), enhancement, preservation, and/or and restoration at a minimum of a 1:1 ratio or as required by the permitting agencies. Any creation enhancement, preservation, and/or restoration effort shall be implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to construction of the project. A habitat restoration specialist will be designated and approved by the permitting agencies and will determine the most appropriate method of restoration. Restoration techniques may include hydroseeding, hand-seeding, imprinting, and soil and plant salvage. Temporary impacts shall be restored sufficient to compensate for the impact to the satisfaction of the CPUC or BLM (depending on the location of the impact). If restoration of temporary impact areas is not possible to the satisfaction of the CPUC or BLM, the temporary impact shall be considered a permanent impact and compensated accordingly. All habitat creation and restoration used as mitigation for the Proposed ECO Substation Project on public lands shall be located in areas designated for resource protection and management. All habitat creation and restoration used as mitigation for the project on private lands shall include long-term management and legal protection assurances.	The Final Compensatory Mitigation Plan (CMP) that included the Habitat Restoration Plan (HRP) as an attachment was approved by the CDFW on December 11, 2012, and was submitted to the CPUC on December 17, 2012. Preliminary title reports documenting SDG&E's ownership of both properties were submitted to the CDFW on December 3, 2012. SDG&E is currently working with the CDFW and USFWS to draft Habitat Management Plans (HMPs) for each property that include the terms approved in the HMMP, and to provide further details related to the preservation and management of vegetation communities and special-status plants and wildlife that occur or have the potential to occur on the properties. Long-term protection will be achieved through the placement of conservation easements over each of the properties once the HMPs are finalized. A description of the compensatory mitigation actions for temporary impacts is provided in the HRP. The Habitat Restoration Specialist that was approved by the CPUC and BLM on April 19, 2012 will ensure compliance with the HRP, including documenting the achievement of the prescribed success criteria. Off-site habitat restoration is not required for compensatory mitigation for permanent impacts; thus, an HRP will not be submitted for off-site mitigation.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-02c	01	Where drainage crossings are unavoidable, construct access roads at right angles to drainages	Unless not possible due to existing landforms or site constraints, access roads shall be built perpendicular to drainages to minimize the impacts to these resources and prevent impacts along the length of jurisdictional features.	No access roads will be built across drainages at the Boulevard Substation; therefore, this measure is not applicable to this location.	Pre and During	N/A
Biological	BIO-03a	01	Prepare and implement a Noxious Weeds and Invasive Species Control Plan	A Noxious Weeds and Invasive Species Control Plan shall be prepared and reviewed by the California Public Utilities Commission/Bureau of Land Management and applicable permitting agencies. On BLM lands, the plan shall be consistent with an Integrated Pest Management approach per the Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Report (2007).	The final Noxious Weeds and Invasive Species Control Plan was approved by the CPUC on November 29, 2012 and by the CDFW on January 10, 2013.	Pre	Complete
Biological	BIO-04a	02	Prepare and implement a Dust Control Plan	(j) Prepare and file with the San Diego Air Pollution Control District, Bureau of Land Management and California Public Utilities Commission a Dust Control Plan that describes how these measures would be implemented and monitored at all locations of the project. This plan shall be developed consistent with the requirements of Mitigation Measure AQ-1.	The CPUC approved the Dust Control Plan on October 12, 2012. The Dust Control Plan was submitted to the San Diego Air Pollution Control District on October 16, 2012.	Pre	Complete
Biological	BIO-05a	01	Install fencing or flagging around identified special-status plant species populations in the construction areas	Prior to the start of construction, a qualified biologist shall conduct focused surveys during the appropriate blooming period for special-status plant species for all construction areas. All of the special-status plant locations shall be recorded using a Global Positioning System (GPS), which will be used to site the avoidance fencing/flagging.	A qualified biologist was approved by the CPUC on April 12, 2012. Surveys for special-status plant species were conducted between April 19 and May 3, 2012; August 28 and August 30, 2012; and April 17 and May 5, 2013. All locations were recorded using a GPS unit. The 2012 rare plant survey results were submitted to the CPUC on October 24, 2012. The 2012 Rare Plant Survey Report was submitted to the CPUC on November 13, 2012. The 2013 Rare Plant Survey Report will be prepared in August 2013 following the late-season rare plant surveys. All special-status plant species will be flagged immediately prior to construction.	Pre	To Be Implemented Immediately Prior to Const.
Biological	BIO-05a	02	Install fencing or flagging around identified special-status plant species populations in the construction areas	Special-status plant species shall be avoided to the maximum extent possible by all construction activities. The boundaries of all special-status plant species to be avoided shall be delineated in the field with clearly visible fencing or flagging. The fencing/flagging shall be maintained for the duration of project construction activities.	All special-status plant species will be flagged immediately prior to construction and the flagging will be maintained during construction activities.	Pre and During	To Be Implemented Immediately Prior to Const.

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-05b	01	Implement special-status plant species compensation	Impacts to special-status plant species shall be maximally avoided. Where impacts to special-status plant species are unavoidable, the impact shall be quantified and compensated through off-site land preservation and/or plant salvage and relocation. Where off-site land preservation is biologically preferred, the land shall contain comparable special-status plant resources as the impacted lands and shall include long-term management and legal protection assurances to the satisfaction of the CPUC or BLM. Land preservation must be completed within 18 months of permit issuance. Where salvage and relocation is demonstrated to be feasible and biologically preferred, it shall be conducted pursuant to an agency-approved plan that details the methods for salvage, stockpiling, and replanting, as well as the characteristics of the receiver sites.	The CPUC confirmed that SDG&E has demonstrated assurance of willing sellers for mitigation lands on September 25, 2012. The Final Compensatory Mitigation Plan (CMP) that included the Habitat Restoration Plan as an attachment was approved by the CDFW on December 11, 2012 and submitted to the CPUC on December 17, 2012. The CMP includes the details of the mitigation lands that have been secured by SDG&E. Further details of land preservation and long-term management are included in the Final Habitat Mitigation and Monitoring Plan that was approved by the USACE on November 21, 2012. The remaining requirements of this measure will be implemented during construction.	Pre and During	To Be Implemented During Construction
Biological	BIO-05b	02	Implement special-status plant species compensation	Any salvage and relocation plans shall be approved by the permitting agencies prior to project construction. Any salvage and relocation of species considered desert native plants shall be conducted in compliance with the California Desert Native Plant Act. Success criteria and monitoring shall also be included in the plan. If salvage and relocation is not possible to the satisfaction of the CPUC or BLM, off-site land preservation shall be required.	No salvage and relocation of special-status plant species is planned for the Project; therefore, this measure is not applicable.	Pre	N/A
Biological	BIO-07f	01	Obtain and implement the terms of agency permit(s) with jurisdiction federal or state listed species	If determined necessary, the applicant shall obtain a biological opinion through Section 7 consultation between the Bureau of Land Management and U.S. Fish and Wildlife Service for impacts to federally listed wildlife species and a Section 2081 permit (or consistency determination) from the California Department of Fish and Game for impacts to state listed wildlife species resulting from this project, if applicable.	The Biological Opinion was issued on September 1, 2011 and submitted to the CPUC on August 10, 2012. No take of state-listed species is anticipated; therefore, a 2081 permit is not required.	Pre	Complete
Biological	BIO-07g	01	Conduct protocol surveys for Quino checkerspot butterfly within 1 year prior to project construction activities in occupied habitat	SDG&E shall conduct pre-construction protocol surveys for Quino checkerspot butterfly within 1 year prior to construction activities, or as required by U.S. Fish and Wildlife Service, in any area known to support the species. Surveys shall be conducted by a qualified, permitted biologist in accordance with the most currently accepted protocol survey method. Results shall be reported to the U.S. Fish and Wildlife Service within 45 days of the completion of the survey. The surveys that were conducted in the spring of 2010 will be valid for construction in 2012 so long as construction commences before May 2012. If construction is not scheduled to commence before May 2012, SDG&E will contact the U.S. Fish and Wildlife Service to discuss whether an additional survey is warranted.	Occupied Quino checkerspot butterfly habitat is not present at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre and During	N/A
Biological	BIO-07h	01	Provide compensation for temporary and permanent impacts to Quino checkerspot butterfly habitat through conservation and/or restoration	Temporary and permanent impact to Quino checkerspot butterfly shall be compensated through a combination of habitat compensation and habitat restoration at a minimum of a 2:1 mitigation ratio for non-critical habitat and a minimum of a 3:1 mitigation ratio for critical habitat, or as required by the permitting agencies. Habitat compensation shall be accomplished through U.S. Fish and Wildlife Service-approved land preservation or mitigation fee payment for the purpose of habitat compensation of lands supporting Quino checkerspot butterfly. Land preservation or mitigation fee payment for habitat compensation must be completed within 18 months of permit issuance. Habitat restoration may be appropriate as habitat compensation provided that the restoration effort is demonstrated to be feasible and implemented pursuant to a Habitat Restoration Plan, which shall include success criteria and monitoring specifications and shall be approved by the permitting agencies prior to project construction. All habitat compensation and restoration used as mitigation for the Proposed Project on public lands shall be located in areas designated for resource protection and management. All habitat compensation and restoration used as mitigation for the Proposed Project on private lands shall include long-term management and legal protection assurances.	Occupied Quino checkerspot butterfly habitat is not present at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-07i	01	Final design of transmission towers and access roads through critical habitat shall maximally avoid host plants for Quino checkerspot butterfly	The final design of the ECO Project through Quino checkerspot butterfly habitat shall maximally avoid and minimize habitat resources used by the species. SDG&E shall explore alternate tower locations, reduced road widths, reduced vegetation maintenance, and other design modifications and obtain agency approval of the final design through this area.	Occupied Quino checkerspot butterfly habitat is not present at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Design	N/A
Biological	BIO-07j	01	Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds	If the project must occur during the avian breeding season (February 1st to August 31st, and as early as January 1 for some raptors), SDG&E should work with the California Department of Fish and Game (CDFG), Bureau of Land Management, and the U.S. Fish and Wildlife Service (USFWS) to prepare a Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) to address avoidance of impacts to nesting birds. SDG&E will submit to the agencies the NBMMRP (see following for details) for review and approval prior to commencement of the project during the breeding season. The NBMMRP should include the following: 1. Nest Survey Protocols describing the nest survey methodologies 2. A Management Plan describing the methods to be used to avoid nesting birds and their nests, eggs, and chicks 3. A Monitoring and Reporting Plan detailing the information to be collected for incorporation into a regular Nest Monitoring Log (NML) with sufficient details to enable USFWS and CDFG to monitor SDG&E's compliance with Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 4. A schedule for the submittal (usually weekly) of the NML 5. Standard buffer widths deemed adequate to avoid or minimize significant project-related edge effects (disturbance) on nesting birds and their nests, eggs, and chicks 6. A detailed explanation of how the buffer widths were determined 7. All measures SDG&E will implement to preclude birds from utilizing project-related structures (i.e., construction equipment, facilities, or materials) for nesting.	The Nesting Bird Management, Monitoring, and Reporting Plan (NBMMRP) was approved by the CDFW on January 10, 2013 and by the USFWS on January 16, 2013. The CDFW- and USFWS-approved NBMMRP was approved by the CPUC on January 22, 2013.	Pre and During	Complete

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-07j	02	Conduct pre-construction nesting bird surveys and implement appropriate avoidance measures for identified nesting birds	To determine presence of nesting birds that the project activities may affect, surveys should be conducted beyond the project area-300 feet for passerine birds and 500 feet for raptors. The survey protocols should include a detailed description of methodologies utilized by CDFG-approved avian biologists to search for nests and describe avian behaviors that indicate active nests. The protocols should include but are not limited to the size of project corridor being surveyed, method of search, and behavior that indicates active nests. Each nest identified in the project area should be included in the NML. The NMLs should be updated daily and submitted to the CDFG weekly. Since the purpose of the NMLs is to allow the CDFG to track compliance, the NMLs should include information necessary to allow comparison between nests protected by standard buffer widths recommended for the project (300 feet for passerine birds, 500 feet for raptors) and nests whose standard buffer width was reduced by encroachment of project-related activities. The NMLs should provide a summary of each nest identified, including the species, status of the nest, buffer information, and fledge or failure data. The NMLs will allow for tracking the success and failure of the buffers and will provide data on the adequacy of the buffers for certain species. SDG&E will rely on its avian biologists to determine the appropriate standard buffer widths for nests within the project corridor/footprint to employ based on the sensitivity levels of specific species or guilds of avian species. The determination of the standard buffer widths should be site- and species-/guild-specific and data-driven and not based on generalized assumptions regarding all nesting birds. The determination of the buffer widths should consider the following factors: a. Nesting chronologies b. Geographic location c. Existing ambient conditions (human activity within line of sight-cars, bikes, pedestrians, dogs, noise) d. Type and extent of disturbance (e.g., noise levels and quality- punctuated, continual, ground vibrations-blasting-related vibrations proximate to tern colonies are known to make the birds flush the nests) e. Visibility of disturbance f. Duration and timing of disturbance g. Influence of other environmental factors h. Species' site-specific level of habituation to the disturbance. Application of the standard buffer widths should avoid the potential for project-related nest abandonment and failure of fledging, and minimize any disturbance to the nesting behavior. If project activities cause or contribute to a bird being flushed from a nest, the buffer must be widened.	SDG&E provided the CPUC with documentation of CDFW approval of Larry Butcher, Dean DiTommaso, Jeffry Coward, and Abbie Alterman as avian biologists on January 8, 2013. Kevin Kilpatrick, Lauren Brudney, Lisa Eigner, and Shirley Innecken have also been approved by the CDFW as avian biologists. SDG&E may request CDFW approval of additional avian biologists during construction, as needed. Nesting bird surveys began in January 2013 and were conducted in accordance with the NBMMRP prior to construction. The NBMMRP will be implemented during construction.	Pre and During	To Be Implemented During Construction
Biological	BIO-10a	01	Design all transmission towers and lines to conform with Avian Power Line Interaction Committee standards	The Proposed Project shall implement recommendations by the Avian Power Line Interaction Committee (2006), which will protect raptors and other birds from electrocution. These measures are sufficient to protect even the largest birds that may perch or roost on transmission lines or towers from electrocution.	According to the MMCRP, this measure is not applicable to the Boulevard Substation.	Design	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Biological	BIO-10b	01	Develop and implement project-specific Avian Protection Plans	Develop and implement project-specific Avian Protection Plans. Develop and implement an Avian Protection Plan related to wire, transmission tower, and facilities impacts from electrocution and collision of bird species. An Avian Protection Plan shall be developed jointly with the U.S. Fish and Wildlife Service and California Department of Fish and Game and shall provide the framework necessary for implementing a program to reduce bird mortalities and document actions. The Avian Protection Plan shall include the following: corporate policy, training, permit compliance, construction design standards, nest management, avian reporting system, risk assessment methodology, mortality reduction measures, avian enhancement options, quality control, public awareness, and key resources.	The Avian Protection Plan (APP) was approved by the USFWS on January 3, 2013. The APP was approved by the CDFW on December 18, 2012. SDG&E submitted the Final APP with CDFW and USFWS concurrence letters to the CPUC on January 16, 2013. The Revised Final APP was submitted to the USFWS on January 11, 2013. The Revised Final APP will be implemented during construction.	Pre, During, and Post	To Be Implemented During Construction
Biological	ECO-BIO-08	01	Provide environmental training to project personnel	Prior to construction, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the APMs and to comply with the applicable environmental laws and regulations, including appropriate wildlife avoidance; impact minimization procedures; the importance of these resources, and the purpose and necessity of protecting them; and methods for protecting sensitive ecological resources. The training will include BMPs to reduce the potential for erosion and sedimentation during construction of the Project.	The intent and requirements of ECO-BIO-08 will be satisfied through the implementation of the environmental awareness education program for all construction staff prior to construction, which is required by BIO-01b. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction
Biological	ECO-BIO-09	01	Avoid impacts during surveys	Survey personnel will keep survey vehicles on existing roads.	Survey crews have been instructed to stay on existing roads during survey activities.	Pre, During, and Post	To Be Implemented During Construction
Biological	ECO-BIO-09	02	Avoid impacts during surveys	During Project surveying activities, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat will require prior approval from the Project biological monitor. Hiking off roads or paths for survey data collection will be allowed year-round as long as all of the other applicable APMs are met.	A biological monitor will be present during, or provide prior approval for, brush clearing for footpaths, line-of-sight cutting, and land surveying panel point placement in sensitive habitat in accordance with this measure.	Pre, During, and Post	To Be Implemented During Construction
Biological	ECO-BIO-20	01	Construct escape ramps within retention basins	Permanent retention basins will be constructed with escape ramps along two sides of the pond to allow entrapped wildlife to escape. The slope of the ramps will not exceed a two to one ratio and will be constructed of non-slippery material, or as specified by the biological monitor.	Attachment C: Final Engineering Plans includes the grading plans for the retention/detention basin. The retention/detention basin will be constructed according to the grading plans and will include wildlife escape ramps.	Pre and During	To Be Implemented During Construction
Visual	ECO-AES-01	01	Reduce potential visual contrast with the desert landscape setting	To reduce potential visual contrast and integrate the ECO Substation's appearance with the desert landscape setting, when project construction has been completed, all disturbed terrain at the ECO Substation site will be restored through recontouring and revegetation in accordance with the Landscaping Plan included as Appendix 5: Landscape Concept Plans.	This measure only pertains to the ECO Substation; therefore, it is not applicable to this location.	Pre and Post	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	ECO-AES-02	01	All disturbed terrain restored	When project construction has been completed, all disturbed terrain at the Boulevard Substation site will be restored through recontouring, revegetation, and landscaping in accordance with the Boulevard Substation Landscape Concept Plan included as Appendix 5: Landscape Concept Plans. To provide screening and thus reduce potential project visibility, the Boulevard Substation Landscape Concept Plan includes larger shrubs and trees that will partially screen views of the substation from Old Highway 80 and from adjacent residential properties.	The intent and requirements of ECO-AES-02 will be satisfied through the implementation of the Boulevard Substation Landscape Screening Plan, which is required by VIS-03h, as the mitigation measure is intended to reduce potential Project visibility and help the facility blend in with the landscape. The CPUC approved the Boulevard Substation Landscape Screening Plan on November 15, 2012. SDG&E will submit the Amended Boulevard Substation Landscape Screening Plan to the CPUC prior to intalling landscaping at the Boulevard Substation rebuild site.	Pre and Post	To Be Implemented During Construction
Visual	ECO-AES-03	01	Reduce the project's potential visibility from Old Highway 80	To reduce the project's potential visibility from Old Highway 80, the underground portion of the new 138 kV transmission line will be extended an additional distance of approximately 600 feet to the south, and the steel cable riser pole will be relocated to replace structure SP-2.	This measure only pertains to the 138 kV Transmission Line; therefore, it is not applicable to this location.	Pre and During	N/A
Visual	VIS-01a	01	Reduce impacts at scenic highway and trail crossings	At highway and trail crossings, structures shall be placed at the maximum feasible distance from the crossing to reduce visual impacts as long as other significant resources are not negatively affected.	No overhead structures associated with the Boulevard Substation rebuild site will be placed across any highways or trails; therefore, this measure is not applicable to this location.	Design and During	N/A
Visual	VIS-01b	01	Reduce impacts at scenic view areas	In scenic view areas (the Jewel Valley Trail and the Jewel Valley Road Pathway) transmission line structures would be placed to avoid sensitive features and/or allow conductors to clearly span the features, within limits of standard design where feasible.	San Diego County confirmed on October 18, 2012 that no official trails or recreation areas are located in the Project area; therefore, this measure is not applicable.	Design and During	N/A
Visual	VIS-03a	01	Reduce visibility of construction activities and equipment	If visible from nearby roads, residences, public gathering areas, or recreational areas, facilities, or trails, stationary construction sites and staging areas and fly yards shall be visually screened using temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. Where practical, construction staging and storage will be screened with opaque fencing from close-range residential views. Additionally, construction in areas visible from recreation facilities and areas during holidays and periods of heavy recreational use shall be avoided. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days before the start of construction.	SDG&E submitted final design drawings for temporary screening fencing to the CPUC on November 26, 2012. The drawings were approved by the CPUC on December 6, 2012. Temporary screening fencing will be constructed according to the approved drawings.	Pre, During, and Post	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-03b	01	Reduce construction night-lighting impacts	SDG&E shall design and install all lighting at construction and storage yards and at staging areas and fly yards such that illumination of the project facilities, vicinity, and nighttime sky is minimized. The Construction Lighting Mitigation Plan shall be reviewed for consistency with the County of San Diego Light Pollution Code (Section 59.100 et. al) and Sections 6322 and 6322 of the Zoning Ordinance to ensure outdoor light fixtures emitting light into the night sky do not result in a detrimental effect on astronomical research and to ensure reflected glare and light trespass is minimized. SDG&E shall not order any exterior lighting fixtures or components until the Construction Lighting Mitigation Plan is approved by the CPUC and BLM. The Plan shall include but is not necessarily limited to the following: · Lighting shall be designed so that exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary; · All lighting shall be of minimum necessary brightness consistent with worker safety; and · High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.	The CPUC approved the Construction Lighting Mitigation Plan on September 26, 2012. This plan will be implemented during construction. SDG&E will submit the final lighting specifications to the CPUC once they have been ordered.	Pre and During	To Be Implemented During Construction
Visual	VIS-03d	01	Reduce in-line views of land scars	Construct access or spur roads at appropriate angles from the originating primary travel facilities to minimize extended in-line views of newly graded terrain, when feasible. Contour grading should be used where feasible to better blend graded surfaces with existing terrain. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC and BLM for review and approval at least 60 days prior to the start of construction.	Due to the level landscape at the Boulevard Substation, the access road to be constructed will not create any land scars and views of newly graded terrain will be minimal. No contour grading will be necessary. Attachment C: Final Engineering Plans, included with this NTP request, demonstrates compliance with this measure.	Pre and During	Complete
Visual	VIS-03e	01	Reduce visual contrast from unnatural vegetation lines	In those areas where views of land scars are unavoidable, the boundaries of disturbed areas shall be aggressively revegetated to create a less distinct and more natural-appearing line to reduce visual contrast. Furthermore, all graded roads and areas not required for ongoing operation, maintenance, or access shall be returned to preconstruction conditions. In those cases where potential public access is opened by construction routes, SDG&E shall create barriers or fences to prevent public access and shall patrol construction routes to prevent vandalized access and litter cleanup until all areas where vegetation was removed are returned to pre-project state. SDG&E shall submit final construction and restoration plans demonstrating compliance with this measure to the CPUC and BLM for review and approval at least 60 days before the start of construction.	Due to the level landscape at the Boulevard Substation, the access road to be constructed will not create any land scar views or contrast from unnatural vegetation lines. In addition, the access road into the substation will be gated to prevent public access. Attachment C: Final Engineering Plans, included with this NTP request, demonstrates compliance with this measure.	Pre, During, and Post	Complete
Visual	VIS-03f	01	Minimize vegetation removal	Only the minimum amount of vegetation necessary for the construction of structures and facilities will be removed. Topsoil located in areas to be restored shall be conserved during excavation and reused as cover on disturbed areas to facilitate re-growth of vegetation. Topsoil located in developed or disturbed areas is excluded from this measure.	The Boulevard Substation rebuild site is located entirely on a disturbed site; therefore, this measure is not applicable to this location.	Pre and During	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-03g	01	Reduce visual contrast associated with substation and ancillary facilities	SDG&E shall submit to the CPUC a Surface Treatment Plan describing the application of colors and textures to all new facility structure buildings, walls, fences, and components comprising all ancillary facilities including substations. The Surface Treatment Plan must reduce glare and minimize visual intrusion and contrast by blending the facilities with the landscape. The Treatment Plan shall be submitted to the CPUC for approval at least 90 days before (a) ordering the first structures that are to be color treated during manufacture or (b) construction of any of the ancillary facility components, whichever comes first. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a revised Plan. The Surface Treatment Plan shall include: · Specification and 11 x 17-inch color simulations at life-size scale of the treatment proposed for use on project structures, including structures treated during manufacture · A list of each major project structure, building, tower and/or pole, and fencing specifying the color{s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation) · Two sets of brochures and/or color chips for each proposed color · A detailed schedule for completion of the treatment · Procedures to ensure proper treatment maintenance for the life of the project. SDG&E shall not specify to the vendors the treatment of any buildings or structures treated during manufacture or perform the final treatment on any buildings or structures treated on site, until SDG&E receives notification of approval of the Surface Treatment Plan by the CPUC. Within 30 days following the start of commercial operation, SDG&E shall notify the CPUC that all buildings and structures are ready for inspection.	The CPUC approved the Surface Treatment Plan on December 7, 2012. SDG&E will submit an Amended Surface Treatment Plan to the CPUC prior to applying surface treatments to facilities at the Boulevard Substation rebuild site.	Pre, During, and Post	To Be Implemented During Construction
Visual	VIS-03h	01	Screen substations and ancillary facilities	SDG&E shall provide a Final Screening/Landscape Plan for screening vegetation, walls, and fences that reduces visibility of ancillary facilities and helps the facility blend in with the landscape. Similar to the use of berms in the Conceptual Landscape Plans prepared for the PEA, the use of berms to facilitate project screening may also be incorporated into the Final Plan. SDG&E shall submit the Plan to the CPUC for review and approval at least 90 days before installing the landscape screening. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, SDG&E shall prepare and submit for review and approval a revised Plan. The plan shall include but not necessarily be limited to: · An 11 x 17-inch color simulation of the proposed landscaping at 5 years · A plan view to scale depicting the project and the location of screening elements · A detailed list of any plants to be used, their size and age at planting, the expected time to maturity, and the expected height at 5 years and at maturity · SDG&E shall complete installation of the screening/landscape plan before the start of project operation · SDG&E shall notify the CPUC within 7 days after completing installation of the screening/landscape plan that the screening components are ready for inspection.	The CPUC approved the Boulevard Substation Landscape Screening Plan on November 15, 2012. SDG&E will submit the Amended Boulevard Substation Landscape Screening Plan to the CPUC prior to installing landscaping at the Boulevard Substation rebuild site.	Pre and Post	To Be Implemented During Construction
Visual	VIS-03i	01	Reduce potential visual contrast of transmission structures	SDG&E will use dulled-metal-finish transmission structures and non-specular conductors.	Conductor purchase orders demonstrating that non-specular conductors will be installed are included in this NTP request as Attachment D: Conductor Purchase Orders.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-03j	01	Reduce potential transmission conductor visibility and visual contrast	The following design measures shall be applied to all new structure locations, conductors, and re-conductored spans to reduce the degree of visual contrast caused by the new facilities: · All new conductors and re-conductored spans to be non-specular to reduce conductor visibility and visual contrast. · Where revisions would not conflict with existing design considerations to avoid sensitive resources (including hydrological, cultural, and biological resources), no new access roads shall be constructed such that they directly approach existing or proposed towers in a straight line from sensitive viewing locations immediately downhill of the structures.	The Surface Treatment Plan was approved by the CPUC on December 7, 2012. Due to the level of landscaping at the Boulevard Substation, the access road to be constructed will not directly approach towers in a straight line from sensitive viewing locations downhill of structures. Conductor purchase orders demonstrating that dulled-metal dinish transmission structures and non-specular conductors will be installed are included in this NTP request as Attachment D: Conductor Purchase Orders. SDG&E will submit an Amended Surface Treatment Plan to the CPUC prior to applying surface treatments to facilities at the Boulevard Substation rebuild site.	Pre and During	To Be Implemented During Construction
Visual	VIS-03k	01	Reduce potential visual contrast from transmission structure spacing	Where the line parallels existing transmission lines, the spacing of structures shall match the existing transmission structures, where feasible, to minimize visual effects.	This measure only pertains to the 138 kV Overhead Transmission Line per the MMCRP; therefore, this measure is not applicable to this location.	Pre and During	N/A
Visual	VIS-03l	01	Reduce potential view blockage and visual contrasts of structures	Transmission line structures will not be installed directly in front of residences or in direct line-of-sight from a residence, where feasible. SDG&E will consult with affected property owners on structure siting to reduce land use and visual impacts.	No individual transmission line structures will be sited at the Boulevard Substation; therefore, this measure is not applicable to this location.	Pre	N/A
Visual	VIS-03m	01	Reduce visual impacts resulting from native tree removal	In the event that ornamental or native trees within the project area will be removed due to project design and grading, SDG&E shall prepare a Tree Replacement Plan to be submitted with the Screening/Landscape Plan. The Tree Replacement Plan shall include but is not limited to the following: · Tree Removal Locations: Indicate the size, type, and location of each tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required.) · Assessment of the health and structural conditions, soils, tree size (trunk diameter, basal diameter, height, canopy spread), pest and disease presence, and accessibility of native oak trees to be removed due to project design and grading in order to determine whether existing trees can be transplanted outside the project footprint post-construction. If the assessment determines native oak trees can be transplanted, the oaks would be augmented with additional oak plantings in case the larger trees decline and are lost as a result of the relocation process. If native oak trees cannot be transplanted, the Tree Replacement Plan shall indicate the size, type, and location of each proposed replacement tree (additional items, such as a tree survey by a professional engineer or licensed land survey, may be required). · Photos of the site and/or trees to be removed. · Oak replacement plan focusing on oak tree planting with smaller container trees at higher numbers, recommended at least 5:1 with 15-gallon size trees. The Tree Replacement Plan must minimize mature tree loss to the degree feasible. The Tree Replacement Plan shall be submitted to the CPUC for approval at least 90 days prior to planned tree removal. If the CPUC notifies SDG&E that revisions to the Plan are needed before the Plan can be approved, within 30 days of receiving that notification, the SDG&E shall prepare and submit the revised Tree Replacement Plan for review and approval.	The Tree Replacement Plan was approved by the CPUC on October 8, 2012. The Tree Replacement Plan will be implemented following construction.	Pre and Post	To Be Implemented Following Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Visual	VIS-04a	01	Reduce long-term night-lighting impacts from substations and ancillary facilities	SDG&E shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project facilities, vicinity, and nighttime sky is minimized. The Lighting Mitigation Plan shall be reviewed for consistency with the County of San Diego Light Pollution Code (Section 59.100 et. al) and Sections 6322 and 6322 of the Zoning Ordinance to ensure outdoor light fixtures emitting light into the night sky do not result in a detrimental effect on astronomical research and to ensure reflected glare and light trespass is minimized. SDG&E shall submit a Lighting Mitigation Plan to the CPUC for review and approval at least 90 days before ordering any permanent exterior lighting fixtures or components. SDG&E shall not order any exterior lighting fixtures or components until the Lighting Mitigation Plan is approved by the CPUC. The Plan shall include but is not necessarily limited to the following: · Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project boundary. · All lighting shall be of minimum necessary brightness consistent with worker safety. · High illumination areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied.	The CPUC approved the Lighting Mitigation Plan on October 25, 2012. The plan was submitted to San Diego County on November 15, 2012. The plan will be implemented during and following construction.	Pre, During, and Post	To Be Implemented During Construction
Land	LU-01a	01	Prepare Construction Notification Plan	Forty-five days prior to construction, SDG&E shall prepare and submit a Construction Notification Plan to the BLM and CPUC for approval. The Plan shall identify the procedures that will be used to inform property owners of the location and duration of construction, identify approvals that are needed prior to posting or publication of construction notices, and include text of proposed public notices and advertisements. The Plan shall address at a minimum two of the following components: · Public notice mailer. A public notice mailer shall be prepared and mailed no less than 15 days prior to construction. The notice shall identify construction activities that would restrict, block, remove parking, or require a detour to access existing residential properties. The notice shall state the type of construction activities that will be conducted and the location and duration of construction, including all helicopter activities. SDG&E shall mail the notice to all residents or property owners within 1,000 feet of project components. If construction delays of more than 7 days occur, an additional notice shall be prepared and distributed. · Newspaper advertisements. Fifteen days prior to construction within a route segment, notices shall be placed in local newspapers and bulletins, including Spanish language newspapers and bulletins. The notice shall state when and where construction will occur and provide information about the public liaison person and hotline. If construction is delayed for more than 7 days, an additional round of newspaper notices shall be placed to discuss the status and schedule of construction. · Public venue notices. Thirty days prior to construction, notice of construction shall be posted at public venues such as libraries, community notification boards, post offices, rest stops, community centers, and other public venues to inform affected residents of the purpose and schedule of construction activities. · Public liaison person and toll-free information hotline. SDG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring property owners about noise, dust, and other construction disturbances. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public. SDG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and shall develop procedures for responding to callers. Procedures for handling and responding to calls shall be addressed in the Construction Notification Plan.	The Construction Notification Plan was approved by the CPUC on October 31, 2012. The BLM indicated on August 29, 2012 that they do not need to review the Construction Notification Plan prior to construction. The CPUC approved a broad public notice mailer on February 26, 2013. The broad public notice mailer for the entire Project was distributed on June 5, 2013. Evidence of mailing was submitted to the CPUC on June 12, 2013. SDG&E is providing the CPUC with a weekly public inquiry log for the information hotline, in accordance with the Construction Notification Plan.	Pre and During	To Be Implemented During Construction
Land	LU-01b	01	Notify property owners and provide access	To facilitate access to properties obstructed by construction activities, SDG&E shall notify property owners and tenants at least 24 hours in advance of construction activities and shall provide alternative access if required.	SDG&E will notify property owners, tenants, the CPUC, and the BLM if access to properties will be obstructed.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Land	LU-02	01	Revise project elements to minimize land use conflicts	At least 90 days prior to completing final transmission line design for the approved route, SDG&E shall notify landowners of parcels through which the alignment would pass regarding the specific location of the ROW, individual towers, staging areas, access roads, or other facilities associated with the project that would occur on the subject property. The notified parties shall be provided at least 30 days in which to identify conflicts with any planned development on the subject property and to work with SDG&E to identify potential reroutes of the alignment that would be mutually acceptable to SDG&E and the landowner. Property owners whose land may be divided into potentially uneconomic parcels shall be afforded this same opportunity, even if development plans have not been established. SDG&E shall endeavor to accommodate these reroutes only to the extent that they are reasonable and feasible, do not create a substantial increase in cost, and do not create adverse impacts to resources or to other properties that would be greater in magnitude than impacts that would occur from construction and operation of the alignment as originally planned. SDG&E shall provide a written report to the CPUC/BLM providing evidence of the notice to landowners and copies of any responses to the notice within 30 days of the notice closing date for responses. SDG&E shall also identify in the documentation submitted to the CPUC and BLM whether reroutes recommended by the landowner or SDG&E can be accommodated. Where they cannot be accommodated, the reasons shall be provided. SDG&E shall provide information sufficient for the CPUC and BLM to determine that the reroute creates no more adverse impact than the originally planned alignment location. SDG&E shall include environmental information consistent with that required for a variance. Where a reroute is proposed, the CPUC or BLM will review and agree to accept or reject individual reroutes. The CPUC or BLM may also recommend compromise reroutes for any of the parcels for which responses were provided in a timely fashion.	The Boulevard Substation is located on SDG&E-owned property. The culvert replacement will occur within the San Diego County right-of-way; however, San Diego County will be notified through the curb/grade permit process. Therefore, this mitigation measure is not applicable to this location.	Design	N/A
Wilderness and Recreation	WR-01	01	Provide notice for access restrictions or anticipated closures to wilderness and recreation areas	SDG&E shall coordinate with the County of San Diego to ensure that proper signage is posted in advance for any access restriction and/or anticipated closures of wilderness and recreation areas (including trails and pathways) so that recreational users may plan accordingly. Signage shall be posted 30 days prior to construction at public venues such as rest stops, resource management offices, and along access routes to known recreational destinations that would be restricted, blocked, or detoured. Notices shall provide information on alternative recreation areas that may be used during the closure of these facilities.	SDG&E consulted with San Diego County on October 18, 2012 regarding potential access restrictions to wilderness and recreation areas. The County confirmed that no access restrictions and/or anticipated closures of wilderness and recreation areas will occur as no official trails or recreation areas are located in the Project area; therefore, this measure is not applicable.	Pre	N/A
Cultural and Paleontological	CUL-01a	01	Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan	A Historic Properties Treatment Plan-Cultural Resources Management Plan (HPTP-CRMP) shall be prepared to avoid or mitigate impacts for significant cultural resources pursuant to Section 106 Guidelines. An MOA shall be developed among all federal, state, and local agencies to implement the HPTP-CRMP. As part of the HPTP-CRMP, recorded cultural resources that can be avoided shall be listed and demarcated during construction as Environmentally Sensitive Areas (ESAs). All recommended NRHP- and/or CRHR-eligible resources that would not be affected by direct impacts, but are within 100 feet of direct impact areas, shall be designated as ESAs. Protective fencing or other markers shall be erected and maintained on SDG&E-owned property, easements, or ROW to protect ESAs from inadvertent trespass for the duration of construction in the vicinity (the ESA fencing should demarcate the limits of the construction areas and where people have to stay within the easement, ROW, or SDG&E-owned property). An archaeologist shall monitor during ground-disturbing activities at all cultural resource ESAs. The HPTP-CRMP shall also define any additional areas that are considered to be of high sensitivity for discovery of buried NRHP-eligible historic properties and CRHR-eligible historic resources, including burials, cremations, or sacred features. These areas of high sensitivity shall also be monitored by qualified archaeologists during construction.	The Research Design for Archaeological Data Recovery at CA-SDI-7074 (HPTP) was approved by the BLM on August 10, 2012. The MOA was signed by all signatory parties on August 10, 2012. The final HPTP was incorporated into the final MOA, which was provided to the CPUC in August 2012. The CRMP was approved by the BLM on August 10, 2012. The CRMP was submitted to the CPUC on September 24, 2012. No NRHP- or CRHR-eligible sites, or sites treated as eligible, have been recorded within the area of potential effect for the Boulevard Substation. In the event that cultural resources are discovered during construction, the requirements of the HPTP and CRMP will be implemented and archaeological monitoring will be conducted at the Boulevard Substation site, as necessary.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	CUL-01a	02	Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan	If recommended NRHP-eligible historic properties and CRHR-eligible historic resources are not avoidable, the HPTP-CRMP shall provide a process for evaluating NRHP and CRHR eligibility, consulting with Native Americans about site treatment, working with engineers to avoid resources; suggest various options for reducing adverse effects; and outline a data recovery mitigation plan that would include research design, field sampling, laboratory analysis, reporting, curation, and dissemination of results. Other treatment measures to resolve adverse effects could include but are not limited to historical documentation, photography, collection and publishing of oral histories, field work to gather information for research purposes or some form of public awareness or interpretation. A description of alternative treatments to resolve adverse effects other than data recovery excavations could also include: · Relocation of construction component to portions of historic properties that do not contribute to the qualities that make the resource eligible for the NRHP and CRHR; · Deeding cemetery of other sensitive areas outside of the substation property and related facilities into open space in perpetuity and providing necessary long-term protection measures; · Public interpretation including the preparation of a public version of the cultural resources studies and/or education materials for local schools; · Providing Native American tribes future access to traditional and cultural areas on the Project site, but outside of the substation property and related facilities, after completion of Project construction; and · SDG&E financial support of existing cultural centers for the preparation of interpretive displays.	Refer to CUL-01a, Task 1 regarding the status of the HPTP and CRMP. No NRHP- or CRHR-eligible sites, or sites treated as eligible, have been recorded within the area of potential effect for the Boulevard Substation. In the event that cultural resources are discovered during construction, the requirements of the HPTP and CRMP will be implemented and archaeological monitoring will be conducted at the Boulevard Substation site, as necessary.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	CUL-01a	03	Develop and implement a Historic Properties Treatment Plan-Cultural Resources Management Plan	The HPTP-CRMP shall include provisions for reporting and curation of artifacts and data at a facility that is approved by the agency. The applicant shall attempt to gain permission for artifacts from privately held land to be curated with the other project collections. As part of the HPTP-CRMP, processing of all collected cultural remains shall be described. All artifacts shall be analyzed to identify function and chronology as they relate to the history of the area. Faunal material shall be identified as to species.	Refer to CUL-01a, Task 1 regarding the status of the HPTP and CRMP. No NRHP- or CRHR-eligible sites, or sites treated as eligible, have been recorded within the area of potential effect for the Boulevard Substation. In the event that cultural resources are discovered during construction, the requirements of the HPTP and CRMP will be implemented and archaeological monitoring will be implemented at the Boulevard Substation site, as necessary.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	CUL-01b	01	Avoid and protect significant resources	SDG&E shall design and implement a long-term management plan to protect NRHP-eligible, CRHR-eligible sites or sites treated as eligible for project management purposes from direct impacts of project operation and maintenance and from indirect impacts (such as erosion and access) that could result from the presence of the project. The plan shall be developed in consultation with the BLM and other consulting parties to design measures that shall be effective against project maintenance impacts, such as vegetation clearing and road and tower maintenance, and project-related vehicular impacts. The plan shall also include a context for understanding the cultural resources within the ROW and describe how protective measures will be undertaken for the cultural resources within the ROW or main project area that may experience operational and access impacts as a result of the project. Measures considered shall include demarcation of Environmentally Sensitive Areas (ESA's) during any subsequent project construction maintenance activities for all historic properties within 50 feet of direct impact areas, permanent restrictive fencing or gates, permanent access road closures, signage, stabilization of potential erosive areas, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting the resources. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to resources.	No NRHP-eligible or CRHR-eligible sites or sites treated as eligible have been identified within the area of potential effect for the Boulevard Substation. However, in the event that cultural resources are discovered during construction, the requirements of the Long-Term Management Plan will be implemented.	Pre, During, and Post	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	CUL-01c	01	Training for contractor	All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. SDG&E shall complete training for all construction personnel and retain documentation showing when training of personnel was completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that shall be avoided, and that travel and construction activity shall be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the ROW by SDG&E, its representatives, or employees shall not be allowed. Violators shall be subject to prosecution under the appropriate State and federal laws, and violations shall be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction: · All construction contracts shall require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources. · SDG&E shall provide training for supervisory construction personnel describing the potential for exposing cultural resources and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources	SDG&E coordinated with the BLM regarding the cultural awareness video and materials on November 13, 2012. SDG&E provided the cultural awareness video to the BLM on December 10, 2012. The brochure, wallet card, cultural awareness video, sign-in sheet, and hard-hat decal were approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the SWEAP Truck Driver Training handout on January 8, 2013. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	CUL-01d	01	Construction monitoring	Prior to issuance of grading permit(s), the SDG&E shall retain a qualified archaeologist, in accordance with the Secretary of the Interior's Standards and Guidelines (Secretary's Standards) (36 CFR 61), and Native American observer to monitor ground-disturbing activities in culturally sensitive areas in an effort to identify any unknown resources. A qualified archaeologist shall attend preconstruction meetings, as needed, to make comments and/or suggestions concerning the monitoring program and to discuss excavation plans with the excavation contractor. The requirements for archaeological monitoring shall be noted on the construction plans.	Because no culturally sensitive areas are located at the Boulevard Substation site, no monitoring is required. As a result, this measure is not applicable to this location.	Pre	N/A
Cultural and Paleontological	CUL-01e	01	Discovery of unknown resources	In the event that previously unknown cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance to allow evaluation of recommended significant cultural resources. The process for handling inadvertent discoveries shall be documented in the CRMP. It shall detail the methods, consultation procedures, and timelines for assessing register eligibility, formulating a mitigation plan, and implementing treatment should avoidance and protection of the resource not be possible. Mitigation and treatment plans for unanticipated discoveries shall be approved by the BLM and SHPO prior to implementation. The archaeologist in coordination with the BLM shall evaluate the significance of the discovered resources based on eligibility for the NRHP, CRHR, or local registers. Preliminary determinations of NRHP eligibility shall be made by the CPUC and BLM, in consultation with other appropriate agencies and local governments, and the SHPO.	The Monitoring, Post-Review Discovery, and Unanticipated Effects Plan (CRMP) was approved by the BLM on August 10, 2012. The CRMP was submitted to the CPUC on September 24, 2012. The CRMP will be implemented during construction.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	CUL-01f	01	Control unauthorized access	SDG&E shall coordinate with the authorized officer of the BLM or local landowner/administrator at least 60 days before construction in order to determine if gates shall be installed on access roads, especially trails that would be dually used as access roads, to prevent unauthorized vehicular access to the ROW. Gate installation shall be required at the discretion of the BLM. On trails proposed for dual use as access roads, gates shall be wide enough to allow horses, bicycles, and pedestrians to pass through. SDG&E shall document its coordination efforts with the BLM of the road/trail and provide this documentation to the CPUC and BLM 30 days prior to construction. Signs prohibiting unauthorized use of the access roads shall be posted on the installed gates.	One gate will be installed at the entry driveway to the Boulevard Substation, which will be located on property owned by SDG&E. Because this driveway will be gated and does not provide access to the right-of-way, this measure is not applicable to this location.	Pre and During	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	CUL-01g	01	Funding of law enforcement patrols	To control unauthorized use of project access roads and to provide for the general protection of cultural and natural resources made more accessible as a result of the project facilities, SDG&E shall provide funding to BLM and CPUC for law enforcement patrols for the term of the ROW. The BLM and CPUC will formulate what funding is reasonable to implement the above.	The BLM confirmed in an email to the CPUC on February 1, 2013 that this measure is not a pre-construction requirement and will be addressed in the Long-Term Management Plan, which will be prepared and submitted to the CPUC and BLM during construction.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	CUL-01h	01	Continue consultation with Native Americans and other traditional groups	SDG&E shall provide assistance to the BLM and CPUC, as requested by the BLM and CPUC, to continue required government to government consultation with interested Native American tribes and individuals (Executive Memorandum of April 29, 1994, and Section 106 of the National Historic Preservation Act) and other traditional groups to identify and assess or mitigate the impact of the approved project on traditional cultural properties or other resources of Native American concern, such as sacred sites and landscapes, or areas of traditional plant gathering for food, medicine, basket weaving, or ceremonial uses. As directed by the BLM and CPUC, SDG&E shall undertake required treatments, studies, or other actions that result from such consultation. Actions that are required during or after construction shall be defined, detailed, and scheduled in the HPTP-CRMP and implemented by SDG&E and may include the following: · Information regarding further developments in the project; · Participation by Native American monitors in any additional surveys, archaeological excavations, and ground-disturbing construction activities; · Return of any prehistoric artifacts requiring repatriation under the NAGPRA that are recovered to the appropriate tribe after they have been analyzed by archaeologists; · The right to inspect sites where human remains are discovered and to determine the treatment and disposition of the remains; and · Copies of all site records, survey reports, or other environmental documents.	Because no culturally sensitive areas or historic properties are located at the Boulevard Substation site, no monitoring is required. If resources of Native American concern are identified during construction, SDG&E will provide assistance to the BLM and CPUC as needed in accordance with the CRMP.	Pre, During, and Post	To Be Implemented During Construction
Cultural and Paleontological	CUL-02	01	Human remains	All location of known Native American human remains shall be avoided through project design and designation as ESAs if within 100 feet of project components.	No Native American human remains have been identified in the Project area. If any Native American human remains are discovered, they will be avoided during construction.	Pre and During	To Be Implemented During Construction
Cultural and Paleontological	ECO-CUL-02	01	Pre-construction analysis and assessment	At least 120 days prior to construction, a cultural/historical resource consultant will be retained by SDG&E to complete an analysis and assessment of the potential to disturb resources that were identified during the initial studies from major ground-disturbing activities. The analysis and assessment will be prepared to meet the requirements of the CEQA and NEPA. Project component sites that require testing for significance determination will be treated on a case-by-case basis using all applicable criteria.	SDG&E has contracted with ASM Affiliates under Insignia Environmental to provide qualified archaeologists for the Project. Potential CRHR- and NRHP-eligible sites were analyzed and assessed in the August 2011 Eligibility Report prepared by ASM Affiliates. The fieldwork portion of the East County Substation Data Recovery Project was completed in accordance with the HPTP, and the BLM approved the completion of the data recovery on December 21, 2012.	Pre	Complete
Cultural and Paleontological	PALEO-01a	01	Inventory and evaluate paleontological resources in the Final APE	Prior to construction, SDG&E shall conduct and submit to the BLM and CPUC for approval an inventory of significant paleontological resources within the affected area, based on field surveys of areas identified as marginal through high or undetermined paleontological sensitivity potential.	A Paleontological Resource Assessment was prepared for the Project by the San Diego Natural History Museum Department of PaleoServices in 2008. The Paleontological Monitoring and Treatment Plan was approved by the CPUC and BLM on October 10, 2012.	Pre	Complete

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Cultural and Paleontological	PALEO-01b	01	Develop Paleontological Monitoring and Treatment Plan	Following completion and approval of the paleontological resources inventory and prior to construction, SDG&E shall prepare and submit to the CPUC and BLM for approval a Paleontological Monitoring Treatment Plan (Plan). The Plan shall be designed by a Qualified Paleontologist and shall be based on Society of Vertebrate Paleontology (SVP) guidelines and meet all regulatory requirements, including BLM and County of San Diego Paleontological Resource Guidelines. The qualified paleontologist shall have an MA or PhD in paleontology, shall have knowledge of the local paleontology, and shall be familiar with paleontological procedures and techniques. The Plan shall identify construction impact areas of moderate to high sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. The Plan shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sediments determined to have a moderate to high sensitivity. Sediments of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the Qualified Paleontologist). Sediments with zero sensitivity will not require paleontological monitoring. The Qualified Paleontologist shall have a BA in Geology or Paleontology, and a minimum of 1 year of monitoring experience in local sediments. The Plan shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The Plan shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The Plan shall specify that all paleontological work undertaken by the applicant on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to, a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed shall be issued by the lead agency and other agencies with jurisdiction, following approval of the Paleontological Monitoring and Treatment Plan.	Refer to PALEO-01a regarding the status of the Paleontological Monitoring and Treatment Plan.	Pre	Complete
Cultural and Paleontological	PALEO-01e	01	Train construction personnel	Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall be trained regarding the recognition of possible subsurface paleontological resources and protection of all paleontological resources during construction. The project shall complete training for all construction personnel. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. Training shall inform all construction personnel that Environmentally Sensitive Areas include areas determined to be paleontologically sensitive, as defined on the paleontological sensitivity maps for the project, and must be avoided, and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of protected fossils on or off the ROW by the project, its representatives, or employees will not be allowed. Violators will be subject to prosecution under the appropriate state and federal laws, and violations will be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop-work order. The following issues shall be addressed in training or in preparation for construction: · All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing subsurface paleontological resources, their responsibility to avoid and protect all such resources, and the penalties for collection, vandalism, or inadvertent destruction of paleontological resources. · The project shall provide a background briefing for supervisory personnel describing the potential for exposing paleontological resources, the location of any potential Environmentally Sensitive Areas, and procedures and notifications required in the event of discoveries by project personnel or paleontological monitors. Supervisory personnel shall enforce restrictions on collection or disturbance of fossils. · Upon discovery of paleontological resources by paleontologists or construction personnel, work in the immediate area of the find shall be diverted, and the project paleontologist shall be notified. Once the find has been inspected and a preliminary assessment made, the project paleontologist will notify the lead agency and other appropriate land managers and proceed with data recovery in accordance with the approved Treatment Plan consistent with Mitigation Measure PALEO-1B (Develop Paleontological Monitoring and Treatment Plan).	SDG&E submitted the contract language to the CPUC on September 4, 2012. The environmental awareness program, including paleontological resources awareness materials, was approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the SWEAP Truck Driver Training handout on January 8, 2013. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Noise	ECO-NOI-02	01	Notify property owners within 300 feet	SDG&E will provide notice of the construction plans to all property owners within 300 feet of the Project by mail at least one week prior to the start of construction activities. The announcement will state the construction start date, anticipated completion date, and hours of operation, and well as provide a telephone contact number for receiving questions or complaints during construction.	The Construction Notification Plan was approved by the CPUC on October 31, 2012. The BLM indicated on August 29, 2012 that they do not need to review the Construction Notification Plan. As required by LU-1a, public notice mailers were distributed on June 5, 2013 to notify property owners. Evidence of mailing was submitted to the CPUC on June 12, 2013.	Pre and During	Complete
Noise	NOI-01	01	Blasting Plan	SDG&E will prepare a blasting plan that will reduce impacts associated with construction-related noise and vibrations related to blasting. The blasting plan will be site specific, based on general and exact locations of required blasting and the results of a project-specific geotechnical investigation. The blasting plan will include a description of the planned blasting methods, an inventory of receptors potentially affected by the planned blasting, and calculations to determine the area affected by the planned blasting. Noise calculations in the blasting plan will account for blasting activities and all supplemental construction equipment. The final blasting plan and pre-blast survey shall meet the requirements provided below, as well as those outlined in Mitigation Measure HAZ-4b. The blasting plan will include a schedule to demonstrate, where feasible, construction blasting to occur infrequently enough that it will not exceed the County's impulsive noise standard because blasting would not occur for more than 25% (15 minutes) during a 1-hour period due to the short time duration of a blast. Where this is not possible, other construction blasting would be coordinated with impacted building occupants to occur in their absence, or at other acceptable times, to avoid nuisance or annoyance complaints. If necessary, the applicant will temporarily relocate impacted residents on an as-needed basis for the duration of the blasting activities. The applicant will be responsible for temporary relocation expenses (i.e.; expenses for temporary housing) incurred by impacted residents if relocation is necessary during blasting activities.	No blasting will occur at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre and During	N/A
Noise	NOI-01	02	Blasting Plan	To ensure that potentially impacted residents are informed, the applicant will provide notice by mail to all property owners within 300 feet of the project at least 1 week prior to the start of construction activities.	No blasting will occur at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre and During	N/A
Noise	NOI-02	01	Conductor configuration selection to address noise impacts	As part of the project's design selection process, the proper conductor configuration shall be selected so that the corona noise does not exceed the County's noise ordinance limits along the transmission line corridor measured during worst-case weather conditions at or beyond 6 feet from the boundary of the easement upon which the transmission line is located.	According to the MMCRP, this measure applies to the SWPL Loop-In only; therefore, this measure is not applicable to the Boulevard Substation.	Design and Post	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Transportation	TRA-01	01	Prepare and implement a Traffic Control Plan	At minimum, the plan will include the following: · SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible. · SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches. · Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration. · Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used. · All Caltrans' standards for utility encroachments shall be met. · The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual. · Clearances or overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized. · New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur. · For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWs). · Utilities shall not be located in median areas. · Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed. · Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways. · New installations shall not impair sight distances. · SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts. · SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness. SDG&E shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to the CPUC and BLM with input from commenting agencies and provided to SDG&E for implementation during all construction activities.	The Traffic Control Plan is included with this NTP request as Attachment E: Boulevard Substation Traffic Control Plan. The Traffic Control Plan will be implemented during construction.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Transportation	TRA-02	01	Repair roadways damaged by construction activities	If damage to roads occurs, SDG&E shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired at SDG&E's cost. Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.	A draft curb/grade permit is included in this NTP request with Attachment E: Boulevard Substation Traffic Control Plan. If damage to roads occurs during construction, SDG&E will repair roads in coordination with San Diego County.	Pre, During, and Post	To Be Implemented During Construction
Transportation	TRA-03	01	Consult with and inform the FAA, DOD, and U.S. Customs and Border Protection	SDG&E shall consult with the FAA, DOD, and U.S. Customs and Border Protection (San Diego Sector) to avoid potential safety issues associated with proximity to airports, military bases or training areas, and land strips and to determine where Border Protection aircraft operate in the County. Prior to construction, SDG&E shall provide written notification to the FAA, the U.S. Air Force Regional Environmental Coordinator (or appropriate DOD representative), U.S. Customs and Border Protection (San Diego Sector), and to the CPUC and BLM, stating when and where the new transmission lines and towers will be erected, and shall install markers as requested by the U.S. Customs and Border Protection or FAA. SDG&E shall also provide all agencies listed above with aerial photos or topographic maps clearly showing the new lines and towers.	The nearest airport, Jacumba Airport, is located approximately seven miles from the Boulevard Substation rebuild site. No transmission lines or towers will be constructed in proximity to airports, military bases, training areas, or land strips at the Boulevard Substation rebuild site; therefore, this measure is not applicable to this location.	Pre	N/A
Public Health and Safety	HAZ-01a	01	Hazardous Materials Management Plan	Prior to approval of final construction plans, SDG&E shall prepare an HMMP for the construction phase of the project, which shall be reviewed and approved by the appropriate agency, and shall include the following components: · The plan shall identify all hazardous materials that will be present on any portion of the construction site, including, but not limited to, fuels, solvents, and petroleum products. The plan shall address storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials. · The plan shall identify secondary containment and spill prevention countermeasures, as well as a contingency plan to identify potential spill hazards, how to prevent their occurrence, and responses for different quantities of spills that may occur. Secondary containment and countermeasures shall be in place throughout construction so that if any leaks or spills occur, responses will be made immediately. · The plan shall identify materials (and their locations) that will be on site and readily accessible to clean up small spills (i.e., spill kit, absorbent pads, and shovels). Such emergency spill supplies and equipment shall be clearly marked and located adjacent to all areas of work and in construction staging areas. The plan shall identify the spill-response materials that must be maintained in vehicles and substation sites during construction and procedures for notification to the appropriate authorities. · The plan shall identify adequate safety and fire suppression devices for construction-related activities involving toxic, flammable, or explosive materials (including refueling construction vehicles and equipment). Such devices shall be readily accessible on the project site, as specified by the County's Fire Department and per the Uniform Building Code and Uniform Fire Code. The plan shall be included as part of all contractor specifications and final construction plans to the satisfaction of the appropriate agency. The plan shall also identify requirements for notices to federal and local emergency response authorities and shall include emergency response plans. The plan shall be submitted to BLM and CPUC at least 30 days prior to construction.	The CPUC approved the Hazardous Materials and Waste Management Plan on October 31, 2012. The plan will be implemented during construction.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-01a	02	Hazardous Materials Management Plan	Prior to construction, all contractor and subcontractor personnel shall receive training regarding the components of the HMMP, as well as applicable environmental laws and regulations related to hazardous materials handling, storage, and spill prevention and response measures.	The requirements of the HMMP have been incorporated into the environmental awareness education program. The Project's environmental awareness education program was approved by the CPUC on December 10, 2012 and by the BLM on December 17, 2012. The CPUC approved the Safe Worker Environmental Awareness Program Truck Driver Training handout on January 8, 2013. Implementation of the environmental awareness education program for construction personnel began in February 2013, and the first set of completed sign-in sheets were submitted to the CPUC on February 7, 2013. SDG&E will continue to administer the environmental awareness education program to all construction personnel immediately prior to them commencing work on the Project and will continue to submit the completed sign-in sheets to the CPUC and BLM during construction as attachments to the Weekly Environmental Compliance Status Report.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01a	03	Hazardous Materials Management Plan	SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities.	SDG&E has designated Geosyntec Consultants as the Designated Field Representative. The Designated Field Representative or a designee will be on site during construction to ensure adherence to the Hazardous Materials and Waste Management Plan.	Pre and During	To Be Implemented During Construction

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Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-01b	01	Health and Safety Program	Prior to approval of final construction plans, SDG&E shall prepare a Health and Safety Program for each applicable phase of the project (i.e., construction, operation, and decommissioning). The program shall be developed to protect both workers and the general public during all phases of the project. The program shall be implemented to educate construction workers about the hazards associated with the particular project site and the safety measures that must be taken to prevent injury. The program shall include standards regarding occupational safety, safe work practices for each task, hazard training requirements for workers, and mechanisms for documentation and reporting. Regarding occupational health and safety, the program should identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; OSHA standard practices for safe use of explosives and blasting agents; and measures for reducing occupational EMF exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program should include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. The program should include worker training regarding how to identify potentially contaminated soils and/or groundwater. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established. The program should identify requirements for temporary fencing around staging areas, storage yards, and excavation areas during construction or decommissioning activities. Such fencing should be designed to restrict transient traffic, off-highway vehicle (OHV) use, and the general public from accessing areas under construction and should be removed once construction or decommissioning activities are complete. The program should also identify appropriate measures to be taken during operation of the project to limit public access to hazardous facilities (e.g., permanent fencing, locked access). In order to inform workers and the general public of the dangers of abandoned mines, pamphlets with the "Stay Out-Stay Alive" information used by federal and state governments should be distributed as part of the program. The program shall be submitted to BLM and CPUC at least 30 days prior to construction.	The CPUC approved the Health and Safety Program and Safety Assessment on December 13, 2012. The Health and Safety Program and Safety Assessment will be implemented during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01b	02	Health and Safety Program	SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the program for all construction activities.	SDG&E has designated Mike Toby as the Designated Field Representative. The Designated Field Representative or his designee will be on site during construction to ensure adherence to the Health and Safety Program and Safety Assessment.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01c	01	Waste Management Plan	Prior to approval of final construction plans, SDG&E shall prepare a Waste Management Plan, which shall determine waste procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures. The plan shall be submitted to CPUC and BLM at least 30 days prior to construction.	The Waste Management Plan has been combined with the Hazardous Material Management Plan required by HAZ-01a. The CPUC approved the Hazardous Materials and Waste Management Plan on October 31, 2012. The plan will be implemented during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-01c	02	Waste Management Plan	SDG&E shall designate an environmental field representative who shall be on site to observe, enforce, and document adherence to the plan for all construction activities.	SDG&E has designated Geosyntec Consultants as the Designated Field Representative. The Designated Field Representative or a designee will be on site during construction to ensure adherence to the Hazardous Materials and Waste Management Plan.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-01d	01	Testing for environmental hazards associated with demolition	Prior to demolition of the existing Boulevard Substation and surrounding buildings, soil, conduit, equipment, and structures shall be tested for environmental hazards, including oil, lead-based paint, and asbestos. An asbestos and lead-based paint survey shall be performed by a Cal/OSHA certified Asbestos Consultant/Site Surveillance Technician and a California Department of Public Health (CDPH) certified Inspector/Assessor, Sampling Technician, or Program Monitor. The survey shall be performed in accordance with the applicable state guidance to identify asbestos containing materials (ACM), asbestos containing construction materials (ACCM), and lead-based paint (LBP) as defined in the California Code of Regulations. If ACM, ACCM, or LBP is identified, abatement and disposal of all regulated materials shall be performed by a Cal/OSHA/CDPH certified abatement contractor prior to or during the demolition process.	Abatement of ACM, ACCM, and LBP from the existing buildings on the Boulevard Substation rebuild site was performed by a certified abatement contractor in December 2012. Additional abatement at the existing buildings on the Boulevard Substation rebuild site will be conducted prior to demolition as needed. Sampling and abatement of the existing Boulevard Substation's equipment and other components will be performed following construction of the new Boulevard Substation, but prior to demolition of the existing substation.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-02a	01	Test for pesticides/herbicides on currently or historically farmed land	In areas where the land has been or is currently being farmed, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any contamination. The sampling and testing shall be prepared in consultation with the County Agricultural Commission, conducted by an appropriate California licensed professional, and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to construction.	There are no areas where land has been or is currently farmed on the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre	N/A
Public Health and Safety	HAZ-02a	02	Test for pesticides/herbicides on currently or historically farmed land	Results of the laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to the CPUC and BLM at least 30 days prior to construction.	There are no areas where land has been or is currently farmed on the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre	N/A
Public Health and Safety	HAZ-02a	03	Test for pesticides/herbicides on currently or historically farmed land	If soil or groundwater contamination is confirmed as a result of soil sampling, SDG&E shall immediately stop work and notify the designated environmental field representative. All work in the contaminated area shall cease, the work shall be cordoned off, and the environmental field representative shall implement appropriate health and safety procedures. Work outside the contaminated area may continue as determined by the environmental field representative. Excavated materials containing elevated levels of pesticides or herbicides would require special handling and disposal according to procedures established by the regulatory agencies. Effective dust control suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. SDG&E shall contact the appropriate regulatory agencies for the State of California (e.g., DTSC or RWQCB) and the County to plan options for handling, treating, and/or disposing of materials.	There are no areas where land has been or is currently farmed on the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre and During	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	HAZ-03	01	Soil testing for lead contamination	Soil samples shall be collected and tested from all excavation sites within 500 feet of any area identified as a current or historical shooting range to determine the presence of lead and extent of any contamination. The sampling and testing shall be conducted by a California licensed professional and sent to a California Certified Laboratory. A report documenting the areas proposed for sampling and the process used for sampling and testing shall be submitted to the project's lead agency for review and approval at least 60 days prior to excavation. Results of the laboratory testing and recommended resolutions for handling and excavating any materials found to exceed regulatory requirements shall be submitted to the project's lead agency 30 days prior to excavation. In addition, a Soil/Lead Contamination Handling Plan shall be prepared to address appropriate procedures in the event that lead contamination is discovered as a result of soil testing. This plan shall contain provisions for a lead-awareness program for workers, as well as guidelines for the identification, removal, transport, and disposal of lead-impacted materials. This plan shall also emphasize that all activities within, or in close proximity to, contaminated areas must follow applicable environmental and hazardous waste laws and regulations. This plan shall be submitted to the project's lead agency 30 days prior to excavation. Documentation of any confirmed or suspected contamination identified during testing or excavation shall be made in the form of a report identifying the location and potential contamination, as well as the process used for sampling. Results of laboratory testing and recommended resolutions for handling and excavating materials found to exceed regulatory requirements shall be submitted to the CPUC and BLM for review and approval.	Per the MMCRP, this measure only applies to the ECO Substation site; therefore, this measure is not applicable to this location.	Pre and During	N/A
Public Health and Safety	HAZ-04a	01	Safety assessment	Prior to commencing construction activities, SDG&E shall conduct a safety assessment to describe potential safety issues associated with the project, how safety prevention measures would be implemented, where medical aid kits would be located, the appropriate response action for each safety hazard, and procedures for notifying the appropriate authorities. The assessment shall address issues such as site access, construction hazards, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.	The CPUC approved the Health and Safety Program and Safety Assessment on December 13, 2012. The Health and Safety Program and Safety Assessment will be implemented during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	HAZ-04b	01	Blasting Plan	If blasting is deemed necessary for the construction of project components, SDG&E shall conduct a pre-blast survey and prepare a blasting plan. A written report of the pre-blast survey and final blasting plan shall be provided to the appropriate regulatory agency and approved prior to any rock removal using explosives. In addition to any other requirements established by the appropriate regulatory agencies, the pre-blast survey and blasting plan shall meet the following conditions, as well as those outlined in Mitigation Measure NOI-1: The pre-blast survey shall be conducted for structures within a minimum radius of 1,000 feet from the identified blast site to be specified by SDG&E. Sensitive receptors that could reasonably be affected by blasting shall be surveyed as part of the pre-blast survey. Notification that blasting would occur shall be provided to all owners of the identified structures to be surveyed prior to commencement of blasting. The pre-blast survey shall be included in the final blasting plan. The final blasting plan shall address air-blast limits, ground vibrations, and maximum peak particle velocity for ground movement, including provisions to monitor and assess compliance with the air-blast, ground vibration, and peak particle velocity requirements. The blasting plan shall meet criteria established in Chapter 3 (Control of Adverse Effects) in the Blasting Guidance Manual of the U.S. Department of Interior Office of Surface Mining Reclamation and Enforcement. The blasting plan shall outline the anticipated blasting procedures for the removal of rock material at the proposed turbine foundation locations. The blasting procedures shall incorporate line control to full depth and controlled blasting techniques to create minimum breakage outside the line control and maximum rock fragmentation within the target area. Prior to blasting, all applicable regulatory measures shall be met. SDG&E, its general contractor, or its subcontractor (as appropriate) shall keep a record of each blast for at least 1 year from the date of the last blast.	No blasting will occur at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A
Public Health and Safety	PS-01a	01	Minimize electromagnetic and public safety communications	The project shall be designed to minimize EMI (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with FCC regulations.	The CPUC approved a report demonstrating minimization of EMI in compliance with FCC regulations on January 11, 2013. SDG&E has specified and will implement designs that minimize EMI during construction, in accordance with the report.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Health and Safety	PS-01a	02	Minimize electromagnetic and public safety communications	Signal strength studies shall be completed prior to construction and conducted when proposed locations have the potential to impact transmissions.	The CPUC approved a report discussing signal strength measurements and interference issues on January 11, 2013. SDG&E has specified and will implement designs that minimize transmission impacts, in accordance with the report, during construction.	Pre and During	To Be Implemented During Construction
Public Health and Safety	PS-01b	01	Limit conductor surface potential	Prior to construction, SDG&E shall specify and implement designs that limit the conductor surface electric gradient in accordance with the Institute of Electrical and Electronic Engineers (IEEE) Radio Noise Design Guide.	To address PS-1b, SDG&E submitted a report with a memo attached that discusses compliance with the IEEE Radio Noise Design Guide to the CPUC on December 13, 2012. SDG&E has specified and will implement designs that limit the conductor surface electric gradient in accordance with the IEEE Radio Noise Design Guide.	Pre, During, and Post	To Be Implemented During Construction
Public Health and Safety	PS-02	01	Determine proper grounding procedures and implement appropriate grounding measures	As part of the project siting and construction process, SDG&E's contractor(s) shall identify objects (such as fences, conductors, and pipelines) that have the potential for induced voltages and work with the affected parties to determine proper grounding procedures (Note: CPUC General Order 95 and the NESC do not have specific requirements for grounding). SDG&E shall install all necessary grounding measures prior to energizing the line.	A ground grid will be installed at the substation and all objects installed as part of construction, such as fencing and gates, will be properly grounded prior to energization. No other objects have been identified within the vicinity of the substation that would require grounding.	Pre and During	To Be Implemented During Construction
Air Quality	ECO-AIR-13	01	Green building practices at ECO Substation	During final design, SDG&E will consider the feasibility of using rooftop photovoltaic panels on the control shelters to help support operating load at the ECO Substation. SDG&E will also investigate utilizing solar tubes for lighting in the control shelters. SDG&E's Project team will work closely with SDG&E's Sustainable Communities team to implement green building practices at the ECO Substation.	This measure describes green building practices at the ECO Substation; therefore, it is not applicable to this location.	Design	N/A
Hydrology and Water	ECO-HYD-01	01	Compensation for permanent impacts to waters of the U.S. and state-only waters	SDG&E will compensate for permanent impacts to any waters of the U.S. and state-only waters at a minimum ratio of one to one or as required by the USACE, CDFG, and RWQCB through their respective permitting processes.	The intent and requirements of ECO-HYD-01 will be satisfied through the implementation of the HMMP and CMP during construction, as required by BIO-01e. Refer to BIO-01e regarding the status of these plans. SDG&E will satisfy the compensatory mitigation requirements during construction in accordance with the permit requirements.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-01	01	A Stormwater Pollution Prevention Plan shall be prepared to reduce soil erosion during construction	In compliance with the new SWRCB's NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002, effective July 1, 2010), SDG&E shall prepare a project-specific SWPPP before construction begins, and it shall be kept on site throughout the construction process. The SWPPP shall include the following: · Identification of pollutant sources and non-stormwater discharges associated with construction activity. · Specifications for BMPs that shall be implemented during project construction to minimize the potential for accidental releases and runoff from the construction areas, including temporary construction yards, pull sites, and helicopter landing zones. Specifications shall include: - A plan for training construction crews - A plan for monitoring and inspecting BMPs and site conditions - A plan for sampling and analysis of pollutants (as necessary). · Where applicable, the following shall apply: - Construction impacts shall be minimized to the greatest extent possible - Upon completion of construction phases, roadways shall be reduced to minimum widths needed - Areas disturbed during construction shall be revegetated to their natural states - Construction roadways shall follow natural contours to the extent practical and be designed to minimize stream crossings, avoid wetlands, and maintain surface water runoff patterns to prevent erosion - CDFG guidelines for culverts shall be followed to minimize long-term maintenance and meet a 10-year rain event to minimize trapping of sediment. · Where applicable, the following shall apply to reduce the release of contaminants to the local surface and groundwater: - For on-site storm drain inlets, mark all inlets with the words "No Dumping! Flows to Sensitive Habitat" or similar. - For landscaping, show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. Show self-retaining landscape, if any. State that final landscape plans will preserve existing native trees, shrubs, and ground cover will cover maximum extent possible. - Design landscaping to minimize irrigation, runoff, and use of pesticides and fertilizers that contribute to stormwater pollution. Select plants that are appropriate for site soils, slopes, climate, wind, sun, rain, land use, ecological consistency, and plant interactions. - For outdoor storage of equipment or materials, show storage areas and how they will be covered and what structural features or grading will be incorporated to prevent pollutants from discharging from the site. - Designate areas for vehicle/equipment repair, maintenance, and cleaning, and document how these areas will be contained to prevent pollutant runoff. - For leaking or failure of large power transformers, have 100% containment at each power transformer.	The Boulevard Substation SWPPP was uploaded to SMARTS on July 29, 2013 and will be submitted to the CPUC. The SWPPP will be implemented during construction.	Pre and During	Pending

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-02	01	Avoidance and preventative measures to protect local groundwater during excavation	Prior to excavation, a qualified geologist/hydrologist shall determine the depth of groundwater in areas where excavation would occur.	The Geotechnical Investigation Report, which identified depth to groundwater, was submitted to the CPUC on August 1, 2012.	Pre	Complete
Hydrology and Water	HYD-02	02	Avoidance and preventative measures to protect local groundwater during excavation	The project shall be designed to avoid areas of shallow groundwater where feasible. In such areas where groundwater cannot be avoided during excavation, the site shall be dewatered during construction, and materials that could contaminate the groundwater shall be kept at least 200 feet from the dewatering activities. An NPDES permit shall be obtained for proper disposal of water. Treatment may be required prior to discharge.	Procedures for dewatering and proper disposal of water are included in the Project-specific SWPPPs. The Boulevard Substation SWPPP was uploaded to SMARTS on July 29, 2013. The SWPPP, including documentation of the Notice of Intent to the SWRCB and WDID number, will be submitted to the CPUC. The SWPPP will be implemented during construction.	Design and During	Pending
Hydrology and Water	HYD-03	01	Identification of sufficient water supply	Prior to construction SDG&E will prepare comprehensive documentation that identifies one or more confirmed, reliable water sources that when combined meet the project's full water supply construction needs. Documentation will consist of the following: · Preparation of a groundwater study. For well water that is to be used, the applicant will commission a groundwater study by a qualified hydrogeologist to assess the existing condition of the underlying groundwater/aquifer and all existing wells (with owner's permission) in the vicinity of proposed well location/water sources. The groundwater study will evaluate aquifer properties and aquifer storage. The groundwater study will estimate short and long-term well water supplies from each well proposed to be used, and documentation indicating that each well is capable of producing the total amount of water to be supplied for construction from each well. The groundwater study will estimate short- and long-term impacts of the use of the well(s) on the local groundwater production (short-term extraction for construction water and ongoing O&M water), on all project wells, and on other wells in the project area. The groundwater study will include an assessment of the potential for subsidence brought on by project-related water use in the area. The applicant will provide demonstration of compliance will all applicable laws and regulations and will obtain a County of San Diego Major Use Permit for use of any proposed well prior to construction. · Documentation of Purchased Water Source(s). For water that is to be purchased from one or more water/utility district(s), the applicant shall provide written documentation from such district(s) indicating the total amount of water to be provided and the time frame that the water will be made available to the project. The Sweetwater Authority has provided written confirmation of water availability to support the project. Total confirmed water supplies from the combination of above documented sources shall equal the total gallons of water needed through construction of the project.	The Construction Water Supply Plan was approved by the CPUC with additional documentation on January 31, 2013. SDG&E submitted an Amended Construction Water Supply Plan to the CPUC on June 20, 2013. The CPUC approved the Amended Construction Water Supply Plan on July 8, 2013	Design	Complete

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-04	01	Preparation of a Stormwater Management Plan	SDG&E shall commission an SWMP in compliance with the County of San Diego Major Storm Water Management Plan. The SWMP shall be project specific and developed in conjunction with project design. The SWMP shall include site design BMPs that, where applicable, shall: · Maintain predevelopment rainfall runoff characteristics. The BMPs shall: Locate the project and road improvement alignments to avoid or minimize impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions; Minimize the project's impervious footprint; Conserve natural and critical areas, such as floodplains, steep slopes, wetlands, and areas with erosive and unstable soil conditions; Where landscape is proposed, drain rooftops, impervious sidewalks, walkways, trails, and patios into adjacent landscaping; Design and locate roadway structures and bridges to reduce the amount of work in live streams, and minimize the construction impacts - Implement the following methods to minimize erosion from slopes: Disturb existing slopes only when necessary; Minimize cut-and-fill areas to reduce slope lengths; Incorporate retaining walls to reduce steepness of slopes or to shorten slopes; Provide benches or terraces on high cut-and-fill slopes to reduce concentration of flows; Round and shape slopes to reduce concentrated flow; Collect concentrated flows in stabilized drains and channels; Protect slopes and channels. - The BMPs shall: Minimize disturbances to natural drainages; Convey runoff safely from the tops of slopes; Vegetate slopes with native or drought-tolerant vegetation; Stabilize permanent channel crossings; Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters. - Include other design principles that are comparable and equally effective. · The SWMP shall also incorporate Low Impact Development Features into the project, including but not limited to: Preserve well-draining soils (Type A or B); Preserve significant trees; Set back development envelope from drainages; Restrict heavy construction equipment access to planned green/open space areas; Re-till soils compacted by construction vehicles/equipment; Collect and reuse upper soil layers of development site containing organic materials; Curb cuts to landscaping; Use rural swales; Use concave median; Use permeable pavements; Pitch pavements toward landscaping; Use cisterns and rain barrels; Downspout to swale; Use vegetated roofs; Use soil amendments; Reuse native soils; Use smart irrigation systems; and Use street trees (HDR 2009b). The SWMP shall ensure that the project follows CDFG guidelines for culverts to minimize long-term maintenance and meet a 10-year rain event to minimize the trapping of sediment.	A statement of conformance was submitted to the CPUC on September 26, 2012 stating that HYD-04 will be fulfilled by the preparation and implementation of the Project-specific SWPPPs. The CPUC agreed on October 8, 2012 that a SWMP will not be required if a SWPPP is submitted per BIO-01g and HYD-01. The Boulevard Substation SWPPP was uploaded to SMARTS on July 29, 2013 and will be submitted to the CPUC. The SWPPP will be implemented during construction.	Pre and During	Pending

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-05	01	Implementation of creek-crossing procedures	Where creek crossings can be completed during dry season, with no flows present in the creek, seasonally timed restorative open trenching will be completed. This procedure will use minimum trench widths. Trench cut material will not be placed outside of the creek bed and outside of 100-year inundated areas. Trench fill will be compacted and replaced to existing conditions, including matching existing creek bed gradations, and restoring vegetation. Open trenching restoration will be completed prior to any wet season flows, and will include anti-erosion action plans for any unplanned rainfall during construction. The applicant shall obtain all required permits prior to completing open trenching through drainages. In any case, flows will be isolated from open trenching by best management practices mandated by the General Construction Permit. Areas of trenching would be restored and/or vegetated at completion of work. Where creek crossing cannot be completed during the dry season creek crossing shall use jack-and-bore procedures to avoid direct impacts and shall be conducted in a manner that does not result in sediment-laden discharge or hazardous materials release to the water body. The following measures shall be implemented during horizontal boring (jack-and-bore) operations: (1) Site preparation shall begin no more than 10 days prior to initiating horizontal bores to reduce the time soils are exposed adjacent to creeks and drainages. (2) Trench and/or bore pit spoil shall be stored a minimum of 25 feet from the top of the bank or wetland/riparian boundary. Spoils shall be stored behind a sediment barrier and covered with plastic or otherwise stabilized (i.e., tackifiers, mulch, or detention). (3) Portable pumps and stationary equipment located within 100 feet of a water resource (i.e., wetland/riparian boundary, creeks, and drainages) shall be placed within secondary containment with adequate capacity to contain a spill (i.e., a pump with 10-gallon fuel or oil capacity should be placed in secondary containment capable of holding 15 gallons). A spill kit shall be maintained on site at all times. (4) Immediately following backfill of the bore pits, disturbed soils shall be seeded and stabilized to prevent erosion, and temporary sediment barriers shall be left in place until restoration is deemed successful. (The applicant shall obtain the required permits prior to conducting creek crossing work. Required permits may include ACOE CWA Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement 1602. The applicant shall implement all pre- and post-construction conditions identified in the permits issued. The plan shall be submitted to the CPUC, County of San Diego, and ACOE 60 days prior to construction.)	Per the MMCRP, this measure only applies to the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Pre, During, and Post	N/A
Hydrology and Water	HYD-06	01	Horizontal Directional Drill Contingency Plan	If horizontal directional drilling is to be used during construction SDG&E shall prepare a Horizontal Directional Drill Contingency Plan to address procedures for containing an inadvertent release of drilling fluid (frac-out). The plan shall contain specific measures for monitoring frac-outs, for containing drilling mud, and for notifying agency personnel. The plan shall also discuss spoil stockpile management, hazardous materials storage and spill cleanup, site-specific erosion and sediment control, and housekeeping procedures, as described in the SWPPP. The plan shall be submitted to the CPUC, BLM, and ACOE 60 days prior to construction.	Horizontal directional drilling will not occur at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre	N/A
Hydrology and Water	HYD-06	02	Horizontal Directional Drill Contingency Plan	SDG&E shall obtain the required permits prior to conducting work associated with horizontal directional drilling activities. Required permits may include U.S. Army Corps of Engineers Clean Water Act Section 404, Regional Water Quality Control Board Clean Water Act 401, and CDFG Streambed Alteration Agreement Section 1602. SDG&E shall implement all pre- and post-construction conditions identified in the permits issued for the horizontal directional drilling.	Horizontal directional drilling will not occur at the Boulevard Substation site; therefore, this measure is not applicable to this location.	Pre and During	N/A
Hydrology and Water	HYD-07	01	Bury power line below 100-year scour depth	At locations where the buried power line is to be at or adjacent to a streambed capable of scour, the power line shall be located below the expected depth of scour from a 100-year flood, or otherwise protected from exposure by scour that, for purposes of this mitigation measure, also includes lateral (stream bank) erosion and potential scour associated with flows overtopping or bypassing a culvert or bridge crossing.	Per the MMCRP, this measure only applies to the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Design and During	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Hydrology and Water	HYD-07	02	Bury power line below 100-year scour depth	During final design, a registered civil engineer with expertise in hydrology, hydraulics, and river mechanics shall make a determination of where the underground line could be at risk of exposure through scour or erosion from a 100-year event.	Per the MMCRP, this measure only applies to the 138 kV Underground Transmission Line; therefore, this measure is not applicable to this location.	Pre	N/A
Geology, Mineral, Soil	GEO-01	01	Erosion Control and Sediment Transport Control Plan	The Erosion Control and Sediment Transport Control Plan would be included with the project grading plans submitted to the County for review and comment. The plan would be submitted to CPUC and BLM a minimum of 60 days prior to project design and would be prepared in accordance with the standards provided in the Manual of Erosion and Sedimentation Control Measures and consistent with practices recommended by the Resource Conservation District of Greater San Diego County. Implementation of the plan would help stabilize soil in graded areas and waterways and reduce erosion and sedimentation. The plan would designate BMPs that would be implemented during construction activities. Erosion control efforts, such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (e.g., flagging), vehicle mats in wet areas, and retention/settlement ponds, would be installed before extensive soil clearing and grading begins. Appropriate stabilization measures, such as mulching or seeding, would be used to protect exposed areas during construction activities.	Per confirmation by the CPUC on July 18, 2012, the SWPPP will satisfy the requirements of GEO-01. The Boulevard Substation SWPPP was uploaded to SMARTS on July 29, 2013 and will be submitted to the CPUC. The SWPPP will be implemented during construction.	Pre and During	Pending
Geology, Mineral, Soil	GEO-01	02	Erosion Control and Sediment Transport Control Plan	Revegetation plans, the design and location of retention ponds, and grading plans would be submitted to the CDFG and ACOE for review in the event of construction near waterways.	Per confirmation by the CPUC on July 18, 2012, the SWPPP will satisfy the requirements of GEO-01. The Boulevard Substation SWPPP was uploaded to SMARTS on July 29, 2013 and will be submitted to the CPUC. The SWPPP will be implemented during construction.	Pre	Pending
Geology, Mineral, Soil	GEO-02	01	Conduct geotechnical studies for soils to assess characteristics and aid in appropriate foundation design	The design-level geotechnical studies to be performed by SDG&E shall identify the presence, if any, of potentially detrimental soil chemicals, such as chlorides and sulfates. Appropriate design measures shall be utilized for protection of reinforcement, concrete, and metal-structural components against corrosion, including use of corrosion-resistant materials and coatings, increased thickness of project components exposed to potentially corrosive conditions, and use of passive and/or active cathodic protection systems. The geotechnical studies shall also identify areas with potentially expansive or collapsible soils and include appropriate design features, including excavation of potentially expansive or collapsible soils during construction and replacement with engineered backfill, ground-treatment processes, and redirection of surface water and drainage away from expansive foundation soils. Studies shall conform to industry standards of care and ASTM standards for field and laboratory testing. Design shall conform to applicable sections of the County of San Diego grading codes, CBC, and the standard specifications for public works construction. The geotechnical studies prepared by a certified geologist shall be submitted to CPUC and BLM 60 days prior to construction of proposed structures.	The Geotechnical Investigation Report, which includes an assessment of soil characteristics, was submitted to the CPUC on August 1, 2012.	Pre and During	Complete
Geology, Mineral, Soil	GEO-03	01	Conduct geotechnical investigations	The applicant shall perform design-level geotechnical investigations to evaluate the potential for liquefaction, lateral spreading, seismic slope instability, and ground-cracking hazards to affect the approved project and all associated facilities. Where these hazards are found to exist, appropriate engineering design and construction measures that meet CBC and IEEE design parameters shall be incorporated into the project designs. Appropriate measures for project facilities could include construction of pile foundations, ground improvement of liquefiable zones, installation of flexible bus connections, and incorporation of slack in underground cables to allow ground deformations without damage to structures. The geotechnical investigations prepared by a certified geologist shall be submitted to CPUC and BLM 60 days prior to construction of proposed structures.	The Geotechnical Investigations Report was submitted to the CPUC on August 1, 2012.	Pre and During	Complete
Public Services and Utilities	PSU-01a	01	Notification of utility service interruption	Prior to construction in which a utility service interruption is known to be unavoidable, SDG&E shall notify members of the public affected by the planned outage by mail of the impending interruption, and shall post flyers informing the public of the service interruption in neighborhoods affected by the planned outage. Copies of notices and dates of public notification shall be provided to the applicable lead agency.	Members of the public will be notified if a utility service interruption is known to be unavoidable.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Public Services and Utilities	PSU-01b	01	Protect underground utilities	Prior to construction of the transmission/gen-tie line, SDG&E shall submit to the CPUC and BLM written documentation, including evidence of review by the appropriate jurisdictions, including the following: · Construction plans designed to protect existing utilities and that show the dimensions and location of the finalized alignment · Records that the applicant provided the plans to affected jurisdiction for review, revision, and final approval · Evidence that the project meets all necessary local requirements · Evidence of compliance with design standards · Copies of necessary permits, agreements, or conditions of approval · Records of discretionary decisions made by the appropriate agencies.	Per the language in this measure, this measure only applies to the 138 kV Transmission Line; therefore, it is not applicable to this location.	Pre	N/A
Public Services and Utilities	PSU-01c	01	Coordinate with utility providers	SDG&E shall coordinate with all applicable utility providers with facilities located within or adjacent to the project to ensure that design does not conflict with other facilities prior to construction. In the event of a conflict, the project will be aligned vertically and/or horizontally as appropriate to avoid other utilities and provide adequate operational and safety buffering. Alternately, the other existing facilities may be relocated. Long-term operations and maintenance of the project will be negotiated through easement, purchased ROW, franchise agreement, or joint use agreement.	As specified by the MMCRP, this measure is only applicable to the 138 kV Transmission Line; therefore, this measure is not applicable to this location.	Design	N/A

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Fire and Fuel	FF-01	01	Develop and implement a Construction Fire Prevention / Protection Plan	San Diego Gas & Electric Company (SDG&E) shall develop a multiagency Construction Fire Prevention/Protection Plan in consultation with the California Department of Forestry and Fire Protection (CAL FIRE), San Diego Rural Fire Protection District (SDRFPD), and San Diego County Fire Authority (SDCFA) to the satisfaction of the CPUC. SDG&E shall monitor construction activities to ensure implementation and effectiveness of the plan. The final plan will be approved by the CPUC prior to the initiation of construction activities and shall be implemented during all construction activities by SDG&E. At minimum, the plan will include the following: · Procedures for minimizing potential ignition (vegetation clearing, fuel modification establishment, parking requirements; smoking restrictions, hot work restrictions); Red Flag Warning restrictions; Fire coordinator role and responsibility; Fire suppression equipment on site at all times work is occurring; Requirements of Title 14 of the California Code of Regulations (CCR), Article 8 #918 "Fire Protection" for private land portions; Access road widening (28-foot County roads, 18-foot-wide spur roads); Applicable components of the SDG&E Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009); Emergency response and reporting procedures; Emergency contact information; Worker education materials; kick-off and tailgate meeting schedules; Other information as provided by CAL FIRE, SDRFPD, SDCFA, CPUC, and Bureau of Land Management (BLM). Additional restrictions will include the following: · During the construction phase of the project, SDG&E shall implement ongoing fire patrols. SDG&E shall maintain fire patrols during construction hours and for 1 hour after end of daily construction, and hotwork · Fire Suppression Resource Inventory - In addition to 14 CCR 918.1(a), (b), and (c), SDG&E shall update in writing the 24-hour contact information and on-site fire suppression equipment, tools, and personnel list on a quarterly basis and provide it to the CAL FIRE, SDRFPD, and SDCFA. · During Red Flag Warning events, as issued daily by the National Weather Service in state responsibility areas (SRAs) and local responsibility areas (LRA), all non-essential, non-emergency construction and maintenance activities shall cease or be required to operate under Hot Work Procedure. · SDG&E and contractor personnel shall be informed of changes to the Red Flag event status and PAL as stipulated by CAL FIRE and CNF. · All construction crews and inspectors shall be provided with radio and/or cellular telephone access that is operational throughout the project area to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction site. All fires shall be reported to the fire agencies with jurisdiction in the project area immediately upon ignition. · Each crew member shall be trained in fire prevention, initial attack firefighting, and fire reporting. Each member shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as-needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect. · Each member of the construction crew shall be trained and equipped to extinguish small fires with hand-held fire extinguishers in order to prevent them from growing into more serious threats. Each crew member shall at all times be within 100 feet of a vehicle containing equipment necessary for fire suppression as outlined in the final Construction Fire Prevention/Protection Plan. SDG&E will provide a draft copy of the Construction Fire Prevention/Protection Plan to the CAL FIRE, SDRFPD, and SDCFA for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E and revisions to the plan will address each comment to the satisfaction of the CPUC. The final plan will be approved by the CPUC with input from CAL FIRE, SDRFPD, SDCFA, and BLM, as desired, prior to the initiation of construction activities and provided to SDG&E for implementation during all construction prior to the initiation of construction activities.	SDG&E submitted the Construction Fire Prevention/Protection Plan with the SDRFPD approval letter to the CPUC on December 19, 2012. SDG&E submitted SDCFA and CAL FIRE approval letters for the Construction Fire Prevention/Protection Plan to the CPUC on February 8, 2013. The Construction Fire Prevention/Protection Plan will be implemented during construction.	Pre, During, and Post	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Fire and Fuel	FF-02	01	Wildland Fire Prevention and Fire Safety Electric Standard Practice O&M Plan	Revise the Wildland Fire Prevention and Fire Safety Electric Standard Practice Plan (2009) to create the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational Maintenance Plan. The revised plan will address the ECO Substation Project and will be implemented during all operational maintenance work associated with the project for the life of the project. Important fire safety concepts that will be included in this document are as follows: · Implement existing practices including Electric Standard Practice 113.1, Maintenance of existing Remote Automated Weather Stations and territory-wide weather system monitoring, adjusted system reclosing policies (patrols), replacement of wood poles with steel in priority areas, and additional measures as may be developed, participation in San Diego County FireSafe Council and other public outreach. · Guidance on where maintenance activities may occur (non-vegetated areas, cleared access roads, and work pads that are approved as part of the project design plans) Fuel modification buffers required by the Fire Protection Plan (FPP) · When vegetation work will occur (prior to any other work activity) · Timing of vegetation clearance work to reduce likelihood of ignition and or fire spread · Coordination procedures with fire authority · Integration of the project's Construction Fire Prevention/Protection Plan content · Personnel training and fire suppression equipment · Fire safety coordinator role as manager of fire prevention and protection procedures, coordinator with fire authority and educator · Communication protocols · Incorporation of CAL FIRE, San Diego Rural Fire Protection District (SDRFPD), and SDCFA reviewed and approved Response Plan mapping and assessment. · Other information as provided by CAL FIRE, SDRFPD, SDCFA, BLM, and CPUC SDG&E will provide a draft copy of the Wildland Fire Prevention and Fire Safety Electric Standard Practice Operational; Maintenance Plan to CAL FIRE, SDRFPD, SDCFA, BLM, and CPUC for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E and plan revisions will address each comment to the satisfaction of the CPUC. The final plan will be approved by the CPUC prior to energizing the project and provided to SDG&E for implementation during all operational maintenance activities.	The Wildland Fire Prevention and Fire Safety Electric Standard Practice 113.1, which was revised in consultation with relevant agencies, was approved by the CPUC on Feburary 1, 2013. The plan will be implemented following construction.	Pre and Post	To Be Implemented Following Construction
Fire and Fuel	FF-03	01	Provide assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA)	Provide assistance to SDRFPD and SDCFA to improve the response and firefighting effectiveness near electrical substations, transmission lines, and aerial infrastructure based on project fire risk and protection needs. Assistance by SDG&E shall include providing funding for one SDCFA Fire Code Specialist II position to enforce existing fire code requirements, including but not limited to implementing required fuel management requirements (e.g., defensible space), in priority areas to be identified by the SDCFA for the life of the project. All fuel management activities shall be in accordance with CEQA Guidelines Section 15304 (i), which indicates that the minor land alternation activities will not have a significant effect on the environment, as the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. In addition, SDG&E is to provide funding to allow SDCFA to employ up to four volunteer/reserve firefighters as part-time code inspectors on a stipend basis for up to 90 days per year for the life of the project. The funding for the SDCFA Fire Code Specialist II position and the four volunteer/reserve firefighters as part-time code inspectors will be provided through proportional contributions, to be determined by CPUC and BLM, from SDG&E (and the other applicants) to the SDCFA prior to construction.	A signed MOU between the SDCFA and SDG&E, dated January 2013, was provided to the CPUC on January 28, 2013. SDG&E provided the first annual contribution to the SDCFA and submitted proof of payment to the CPUC on January 29, 2013. The CPUC concurred that the pre-construction components of this measure were satisfied on January 30, 2013. SDG&E will submit annual contributions to the SDCFA during construction and provide proof to the CPUC after every annual payment.	Pre and During	To Be Implemented During Construction

Location: Boulevard Substation

Measure Category Title	MMNo	TaskNo	Mitigation Measure	Task Text	Comments	Timing	Status
Fire and Fuel	FF-03	02	Provide assistance to San Diego Rural Fire Protection District (SDRFPD) and San Diego County Fire Authority (SDCFA)	A fixed annual fire mitigation fee of approximately $116,600 will be provided by SDG&E to SDRFPD for mitigation funding. The funding will be utilized to assist with the purchase and maintenance of a Type I engine with an aqueous film forming foam (AFF) apparatus with a deck gun to apply a heavy stream. In addition, the funding will be utilized to provide for a third volunteer stipend to staff the engine with firefighters and training for electrical firefighting for 10 personnel (2 per year on a 5-year rotation). The fire mitigation fee will be paid annually during the life of the project and terminated upon decommissioning of the substation and related facilities.	A signed MOU between the SDRFPD and SDG&E, dated November 2012, was provided to the CPUC on January 28, 2013. The MOU includes a payment schedule with the initial payment scheduled for six months following the commencement of construction and the annual payment of $116,600 scheduled on the anniversary of the initial payment date. SDG&E will provide an initial payment of $116,600 to the SDRFPD on September 11, 2013 and provide evidence of payment to the CPUC following every annual payment.	Pre, During, and Post	To Be Implemented During Construction
Fire and Fuel	FF-04	01	Customized Fire Protection Plan for Project	A draft Fire Protection Plan (FPP) will be submitted to CAL FIRE, SDRFPD, and SDCFA at least 90 days before the start of any construction activities. Comment on the draft FPP shall be provided to SDG&E and SDG&E shall resolve each comment in consultation with each responsible agency. The final FPP shall be approved by the CPUC prior to the initiation of construction activities. The FPP will include, at minimum, the following: · San Diego County FPP Content Requirements (http://www.sdcounty.ca.gov/dplu/docs/Fire-Report-Format.pdf) · Rural Fire Protection District Content Requirements: Provisions for fire safety and prevention; Water supply; Fire suppression/detection systems - built-in detection system with notification; Secondary containment; Site security and access; Emergency shut-down provisions · Integration into plans prepared to satisfy Mitigation Measures FF-1 and FF-2 The FPP will be incorporated into MM FF-1, the Construction Fire Prevention/Protection Plan, and MM FF-2, the Wildland Fire Prevention and Fire Safety Electric Standard Practice (2009)7 Operational Maintenance Plan. The Customized Fire Protection Plan will incorporate clarifications and additional ECO Substation Project APMs described in Section B of this EIR/EIS.	The SDRFPD approved the Fire Protection Plan on November 7, 2012. SDG&E submitted the SDRFPD-approved Fire Protection Plan to the CPUC with the SDRFPD approval letter on November 12, 2012. The CPUC provided comments on January 9, 2013. SDG&E provided responses to the CPUC's comments on January 16, 2013. SDG&E submitted SDCFA and CAL FIRE approval letters for the Fire Protection Plan to the CPUC on February 8, 2013. The Fire Protection Plan will be implemented following construction.	Pre, During, and Post	To Be Implemented Following Construction
Fire and Fuel	FF-06	01	Funding for FireSafe Council	Provide funding for Boulevard/Jacumba/La Posta FireSafe Council with a clarified focus of coordinating a Community Wildfire Protection Plan (CWPP) and Evacuation Plan. Funding for the Boulevard/Jacumba/La Posta FireSafe Council will enable this newly formed organization a means to proactively complete these plans, provisions for applying for grant funding, and ultimately, for implementing fuel reduction and evacuation plans. Funding will be a lump sum, one-time amount with SDG&E providing fair share of CWPP and Evacuation Plan preparation.	SDG&E submitted a proposal for funding the Boulevard/Jacumba/La Posta FireSafe Council to the CPUC on November 12, 2012. The CPUC received concurrence of the funding amount from the BLM on January 15, 2013. SDG&E submitted proof of payment to the FireSafe Council to the CPUC on January 24, 2013.	Pre	Complete
Fire and Fuel	FF-07	01	Preparation of Disturbed Area Revegetation Plan	All areas disturbed during construction activities that will not be continuously included in the long-term maintenance access right-of-way (ROW) will be provided native plant restoration in order to prevent non-native, weedy plants from establishing. Disturbed areas that will be included in the long-term maintenance program will not be revegetated as any plants that establish in these areas will be removed on an ongoing (at least annual) basis. Mitigation Measure FF-7 corresponds with Mitigation Measure Bio-1d and is not a duplicative plan but will be implemented under the biological monitoring program. It directs that the temporary disturbance areas will be revegetated with native plants common to the area through direction detailed in a Habitat Restoration Plan. The Habitat Restoration Plan will be prepared to restore native habitat and to reduce the potential for non-native plant establishment. The restoration plan will incorporate a Noxious Weeds and Invasive Species Control Plan to assist in restoring the construction area to the prior vegetated state and lessen the possibility of establishment of non-native, flammable plant species. A copy of the Revegetation Plan will be provided to the CPUC and BLM.	A memo stating that implementation of BIO-1d and BIO-3a will satisfy all requirements of FF-7 was approved by the CPUC on October 15, 2012. Refer to BIO-1d and BIO-3a for the status of these measures.	Pre, During, and Post	To Be Implemented During Construction

ATTACHMENT C: FINAL ENGINEERING PLANS

BOULEVARD SUBSTATION GRADING PLAN

VICINITY MAP
NO SCALE
THOMAS BROS. INDEX
1300, F-7

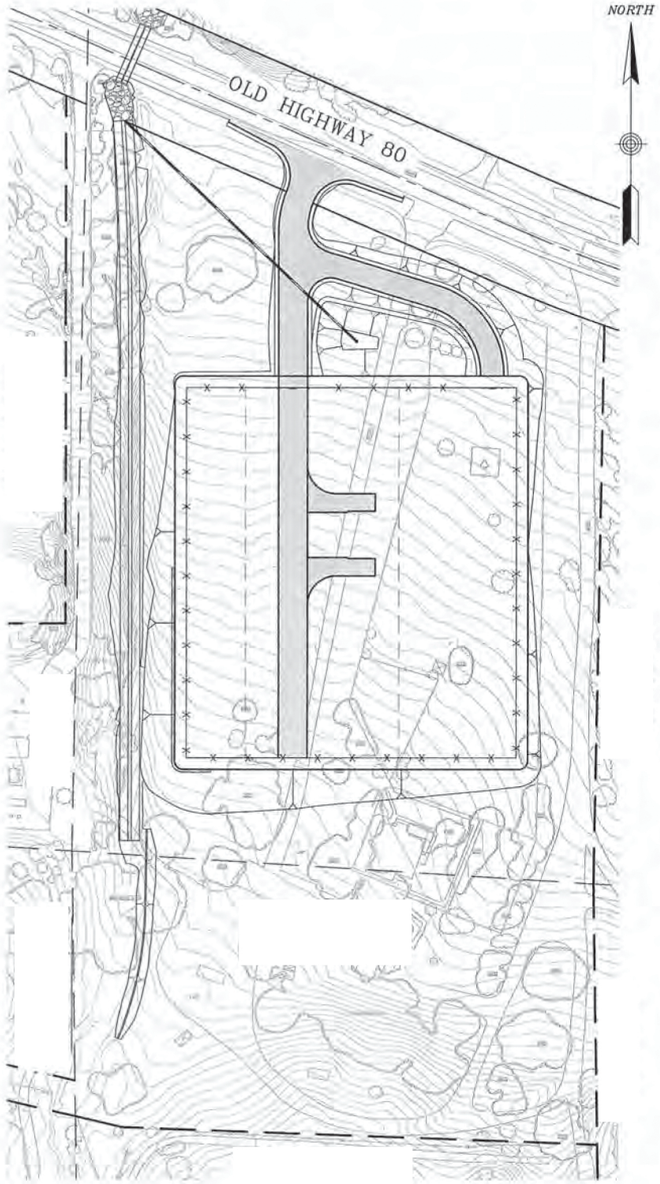
DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.
I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY SAN DIEGO GAS AND ELECTRIC COMPANY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS DESIGNER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

JOSEPH LOEFFELHOLZ R.C.E. NO. 69868 DATE
EXPIRES: 9-30-14

ENVIRONMENTALLY SENSITIVE AREAS (ESAs) DESIGNATED BY MARKED BOUNDARIES IN THE FIELD ARE OFF-LIMITS TO CONSTRUCTION ACTIVITIES. ARCHAEOLOGICAL MONITORING OF ANY GROUND DISTURBANCE AND/OR NEW CONSTRUCTION ACTIVITY NEAR AN ESA MAY BE REQUIRED. FOLLOWING THE INITIATION OF CONSTRUCTION ACTIVITIES, THE ON-SITE PROFESSIONAL ARCHAEOLOGIST MAY DETERMINE THAT FULL-TIME MONITORING IS NO LONGER REQUIRED.

DIGALERT
DIAL TOLL FREE
811
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA



KEY MAP
1"=60'

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE WORK TO BE DONE ACCORDING TO THESE PLANS, SDG&E SPECIFICATIONS, STANDARD SPECIFICATIONS AND THE SAN DIEGO REGIONAL STANDARD DRAWINGS, STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, AND WATER AGENCY STANDARDS.

STANDARD DRAWINGS

1. SAN DIEGO REGIONAL STANDARD DRAWINGS, DOCUMENT NO. AEC1231062, FILED DECEMBER 31, 2006.
2. STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS, DATED MAY 2006.
3. WATER AGENCY STANDARDS (SDWAS). SEPTEMBER 28, 2009.

STANDARD SPECIFICATIONS

1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (2009 EDITION) INCLUDING THE 2006 REGIONAL AND 2006 CITY OF SAN DIEGO SUPPLEMENTAL AMENDMENTS DOC. AEC1231062, FILED DECEMBER 31, 2006.

CONTRACTOR'S NOTE

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

EARTHWORK QUANTITIES

CUT (TO SUBGRADE):	29,017 CY
NATIVE FILL (TO SUBGRADE):	3,096 CY
EXPORT:	25,921 CY

NOTE:
GRADING QUANTITIES ARE UNADJUSTED AND ESTIMATED VOLUMES ONLY AND ARE NOT TO BE USED AS PAY QUANTITIES OR FOR BIDDING PURPOSES. GRADING CONTRACTOR SHALL INDEPENDENTLY VERIFY EARTHWORK QUANTITIES TO DETERMINE THE OVERALL SCOPE OF GRADING WORK TO BE PERFORMED

ABBREVIATIONS

AC	ASPHALT CONCRETE	OH	OVERHEAD
BW	BOTTOM OF WALL	POB	POINT OF BEGINNING
CONC	CONCRETE	PVC	POLY-VINYL-CHLORIDE
CL	CENTER LINE	PVT	PRIVATE
DG	DECOMPOSED GRANITE	PCC	PORTLAND CEMENT CONCRETE
DL	DAYLIGHT	R/W	RIGHT-OF-WAY
EOP	EDGE OF PAD	RC	RELATIVE COMPACTION
EOS	EDGE OF SHOULDER	RIM	RIM ELEVATION
ETW	EDGE OF TRAVEL WAY	RT	RIGHT
EX	EXISTING	RSD	SAN DIEGO REGIONAL STANDARD DRAWINGS
FF	FINISH FLOOR	S	SLOPE
IE	INVERT ELEVATION	SCH	SCHEDULE
ID	INSIDE DIAMETER	SD	STORM DRAIN
INT	INTERSECTION	SDRSD	SAN DIEGO REGIONAL STANDARD DRAWINGS
FS	FINISH SURFACE	SDWAS	SAN DIEGO WATER AGENCIES STANDARDS
FG	FINISH GRADE	SF	SQUARE FEET
FL	FLOW LINE	STA	STATION
GB	GRADE BREAK	TC	TOP OF CURB
HDPE	HIGH DENSITY POLYETHYLENE	TF	TOP OF FOOTING
HP	HIGH POINT	TG	TOP OF GRATE
LF	LINEAR FEET	TOB	TOP OF BERM
LOC	LOCATION	TOS	TOE OF SLOPE
LT	LEFT	TOD	TOP OF DITCH
MAX	MAXIMUM	TW	TOP OF WALL
MIN	MINIMUM	TYP	TYPICAL
MH	MANHOLE	W/	WITH
OC	ON CENTER	WAS	WATER AGENCIES STANDARDS
OD	OUTSIDE DIAMETER		

GRADING SPECIFICATIONS

1. ALL GRADING SHALL BE DONE UNDER THE OBSERVATION OF A QUALIFIED GEOTECHNICAL ENGINEER AND ENGINEERING GEOLOGIST AND IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL INVESTIGATION, BOULEVARD SUBSTATION BOULEVARD, CALIFORNIA". LOCATED IN THE COUNTY OF SAN DIEGO, CALIFORNIA, DATED JANUARY 29, 2009, PREPARED BY URS (PROJECT # 27668032.00001) AND "UPDATE REPORT AND CHANGE OF GEOTECHNICAL ENGINEER OF RECORD", PREPARED BY GEOCON, INC. (PROJECT # G1522-32-032,) DATED FEBRUARY 7, 2013. ALL FILL MATERIAL SHALL BE ACCORDING TO THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND SUBMITTED TO THE SDG&E PROJECT ENGINEER PRIOR TO THE ACCEPTANCE OF WORK.
2. AT THE COMPLETION OF THE GRADING OPERATIONS, AN AS-GRADED GEOLOGICAL REPORT SHALL BE PREPARED AND DELIVERED TO THE SDG&E PROJECT ENGINEER.
3. THESE GRADING PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS OUTLINED IN THE REFERENCED GEOTECHNICAL REPORTS PREPARED FOR THIS PROJECT.

THOMAS V. LANGPAP DATE
G.E. NO. 503
EXPIRES: XX-XX-XX

DAVID B. EVANS DATE
C.E.G. NO. 1860
EXPIRES: XX-XX-XX

TOPOGRAPHY

SOURCE OF TOPOGRAPHY IS: DEVELOPED BY PHOTOGRAMMETRIC METHODS BASED ON AERIAL SURVEY BY INLAND AERIAL, INC., 7117 ARLINGTON AVE. SUITE A, RIVERSIDE, CA 92503 ON JUNE 18, 2010.

SYMBOL	LEGEND	STD.
120	EXISTING CONTOUR	
117	FINISH CONTOUR	
	CUT SLOPE	
	FILL SLOPE	
C F C F	CUT/FILL LINE	
	GRADE BREAK	
	PCC DRAINAGE DITCH	RSD D75
	RIP-RAP DISSIPATOR	RSD D-40
	WING HEADWALL	RSD D-34
	DRAINAGE CHANNEL	
	DRAINAGE PATTERN	
	6" A.C. BERM TYPE A	RSD G-5
	AC PAVING	A 907
	RETAINING WALL	
x x x	8' CHAIN LINK FENCE	
	GRATED DRAINAGE DITCH	C 907
	DRAINAGE PIPE	RSD D-60
345.35 FS	SPOT ELEVATION	
DETAIL LETTER / SHEET NUMBER	DETAIL CALLOUT	
ELEVATION/ PROFILE / SHEET NUMBER	ELEVATION OR PROFILE CALLOUT	

BASIS OF COORDINATES

THE COORDINATES ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 AND ARE EXPRESSED IN TERMS OF THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE VI, AT EPOCH 1991.35 AND ARE BASED ON MONUMENT "SAN DIEGO GPS 31 1990" LOCATED 2.5 MILES NORTHEAST OF JACUMBA, ON THE SOUTH SIDE OF INTERSTATE FREEWAY 8 AT POST MILE 74.9, 400 FEET WEST OF TELEPHONE CALL BOX 8-750 SET AT THE TOP OF A 20' HIGH ROCK CUT.

BASIS OF BEARINGS

BEARINGS ARE REFERENCED TO GRID NORTH AS DEFINED BY THE CALIFORNIA COORDINATE SYSTEM 1983, ZONE VI.

BASIS OF ELEVATION

ELEVATION ARE REFERENCED TO NAVD88 AS DETERMINED LOCALLY BY VERTICAL BENCHMARK "W-612", WITH THE PUBLISHED ELEVATION OF 3203.32SFT (NAVD88 DATUM) LOCATED 10.95 MILES EAST ALONG THE EAST BOUND LANES OF INTERSTATE HIGHWAY 8 FROM THE RIBBONWOOD ROAD OVERPASS AT BOULEVARD, 104.5' SOUTHEAST OF THE CENTERLINE OF THE EASTBOUND HIGHWAY LANES, IN THE TOP OF THE SOUTHWEST END OF THE SOUTHEAST CONCRETE HEADWALL OF CONCRETE BOX CULVERT BC57-201-G-755-00 OF US HIGHWAY 80, 9.5 FEET NORTHEAST OF THE SOUTHWEST HEADWALL.

BENCHMARK

POINT IS BENCHMARK DISK SET IN A CONCRETE HEADWALL "W 612 1941". NAVD88 ELEVATION = 3203.32SFT.

SHEET INDEX

BETA ENGINEERING
PINEVILLE, LOUISIANA

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

GRADING PLAN – TITLE SHEET

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED KEY MAP	7/1/13	NDL	TJD

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474 REV.: 2
CHECKED BY: JAL	DATE: 10/2/12		
APPROVED BY:	DATE:		BUE-S-900
CAD NO.: BUES90000	PLOT SCALE: 1 = 1		

May 14, 2012 – 10:17:32

GRADING NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE APPROVED PLANS AND APPROVED REVISIONS. ANY CHANGES OR REVISIONS THEREFROM SHALL BE APPROVED BY BETA AND SDG&E.
2. ALL GRADING SHALL BE INSPECTED AND TESTED BY OR UNDER THE DIRECTION OF A QUALIFIED GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATION AND SHALL OBSERVE AND TEST THE PLACEMENT AND COMPACTION OF FILL AND BACKFILL AND COMPACTION OF TRENCHES SUBMIT GEOTECHNICAL REPORTS AS REQUIRED, AND VERIFY THE SUITABILITY OF ANY FILL MATERIAL. THE GEOTECHNICAL ENGINEER SHALL STATE THAT OBSERVATIONS AND TESTS WERE MADE BY OR UNDER DIRECTION OF THE GEOTECHNICAL ENGINEER AND THAT EMBANKMENTS AND EXCAVATIONS WERE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, THESE PLANS, AND SDG&E SPECIFICATIONS..
3. THE SUBCONTRACTOR SHALL PROPERLY GRADE ALL EXCAVATED SURFACES TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING OF WATER. SUBCONTRACTOR SHALL CONTROL SURFACE WATER TO AVOID DAMAGE TO ADJOINING PROPERTIES OR TO FINISHED WORK ON THE SITE AND SHALL TAKE REMEDIAL MEASURES TO PREVENT EROSION OF FRESHLY GRADED AREAS UNTIL SUCH TIME AS PERMANENT DRAINAGE AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED TO THE SATISFACTION OF BETA, SDG&E AND THE MITIGATION MONITOR.
4. ALL AREAS TO BE FILLED SHALL BE PREPARED PRIOR TO FILLING AND FILL SHALL BE PLACED IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT. ALL VEGETABLE MATTER AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED BY THE SUBCONTRACTOR FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED. LOOSE FILL AND UNSUITABLE SOILS SHALL BE REMOVED TO SUITABLE FIRM NATURAL GROUND. THE EXPOSED SOILS SHALL BE SCARIFIED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND THEN COMPACTED TO A MINIMUM OF 90% OF ASTM-D1557.
5. IT SHALL BE THE SUBCONTRACTOR'S RESPONSIBILITY TO PLACE, SPREAD, MOISTURE CONDITION AND COMPACT ALL FILL IN STRICT ACCORDANCE WITH SDG&E'S SPECIFICATIONS. A GEOTECHNICAL ENGINEER SHALL BE BETA'S REPRESENTATIVE TO OBSERVE THE CONSTRUCTION OF FILLS. THE EXCAVATION AND THE PLACEMENT OF FILL SHALL BE UNDER THE DIRECT OBSERVATION OF THE GEOTECHNICAL ENGINEER, AND HE SHALL GIVE WRITTEN NOTICE OF CONFORMANCE WITH THE SPECIFICATIONS UPON COMPLETION OF GRADING. DEVIATIONS FROM SDG&E'S SPECIFICATIONS WILL BE PERMITTED ONLY UPON WRITTEN AUTHORIZATION FROM THE GEOTECHNICAL ENGINEER.
6. FILL SLOPES SHALL BE COMPACTED BY BACKROLLING AT VERTICAL INTERVALS NOT TO EXCEED 4 FEET AND SHALL BE TRACK-WALKED AT THE COMPLETION OF EACH SLOPE AS NEEDED TO ACHIEVE SATISFACTORY COMPACTION OF THE FILL SLOPE AS PER THE SUPPLEMENTAL RECOMMENDATIONS LISTED IN THE UPDATE TO THE GEOTECHNICAL REPORT, PREPARED BY GEOCON INC, DATED FEBRUARY 7, 2013.
7. FILL AND CUT SLOPES ARE 2:1 HORIZONTAL TO VERTICAL UNLESS OTHERWISE NOTED.
8. GRADING SHALL BE DONE WITHIN A TOLERANCE OF (+/-)0.1' OF THE GRADES AND ELEVATIONS SHOWN ON THESE PLANS AND ALL SLOPES SHALL BE CONSTRUCTED WITHIN 0.5'(+/-) OF THE LOCATION SHOWN ON THESE PLANS. IN NO WAY SHALL THE ABOVE TOLERANCES RELIEVE THE SUBCONTRACTOR OF THE RESPONSIBILITY OF PROVIDING A FINISH THAT WILL NOT POND WATER.
9. UPON COMPLETION OF THE GRADING OBSERVATIONS AND ACCEPTANCE BY THE GEOTECHNICAL ENGINEER AND THE BETA SITE REPRESENTATIVE, NO FURTHER EXCAVATION OR FILLING WORK SHALL BE DONE UNLESS DIRECTED AND UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER, THE BETA SITE REPRESENTATIVE, OR THE SDG&E SITE REPRESENTATIVE.
10. BY REFERENCE HERE, THE REPORT ENTITLED "GEOTECHNICAL INVESTIGATION, BOULEVARD SUBSTATION" LOCATED IN THE CITY OF BOULEVARD, CALIFORNIA, DATED JANUARY 29, 2009, PREPARED BY URS, INC (PROJECT # 27668032.00001) AND THE UPDATE REPORT PREPARED BY GEOCON, INC. (PROJECT #G1522-32-032) DATED FEBRUARY 7, 2013 ARE INCLUDED AS PART OF THESE PLANS.
11. IN THE CASE OF CONFLICTS, THE REQUIREMENTS OF THE EARTHWORK SPECIFICATIONS IN THE GEOTECHNICAL REPORT AND UPDATE SHALL GOVERN. THE REQUIREMENTS OF THESE NOTES AND THESE PLANS SHALL BE REVISED ACCORDINGLY
12. WHERE GRADING DOES NOT OCCUR, ALL EXISTING PLANT MATERIAL IS TO BE PROTECTED IN PLACE. NO CONSTRUCTION EQUIPMENT WILL BE ALLOWED TO TRAVEL THROUGH AND DAMAGE ANY OF THESE AREAS. ALL AREAS OF NATURAL MATERIAL SHALL BE FENCED UNDER THE DIRECTION OF THE PROJECT BIOLOGIST. SUBCONTRACTOR WILL BE RESPONSIBLE TO REPAIR ANY AND ALL DAMAGE/IMPACTS TO THESE AREAS.
13. TREES SHOWN TO BE SAVED, AND TREES OUTSIDE OF THE AREAS TO BE GRADED, OR OTHER AREAS TO BE IMPROVED, SHALL BE PROTECTED FROM DAMAGE BY THE SUBCONTRACTOR'S OPERATIONS. REFER TO DEMOLITION PLAN FOR MORE GUIDANCE.

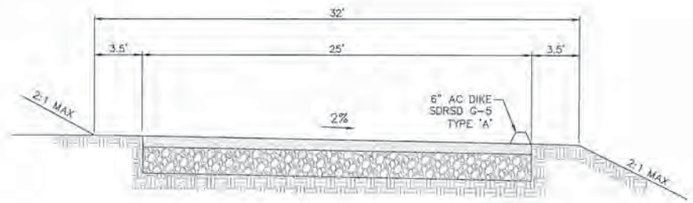
CONTRACTOR NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTION TO THE SUBCONTRACTOR BY THE ENGINEER OF WORK.

1. NEITHER THE OWNER, NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE SUBCONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
2. SUBCONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS REQUIRED TO PROTECT ADJACENT PROPERTIES DURING THE GRADING OPERATIONS.
3. WHERE TRENCHES ARE WITHIN EASEMENTS, STREETS, OR 10 FEET OF ANY BUILDING, GEOTECHNICAL REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF WORK BY A QUALIFIED GEOTECHNICAL ENGINEER WHICH INDICATE THAT TRENCH BACKFILL WAS COMPACTED UNDER THE OBSERVATION AND TESTING OF THE GEOTECHNICAL ENGINEER AND IN ACCORDANCE WITH THE ABOVE NAMED SPECIFICATIONS.
4. SUBCONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
5. SUBCONTRACTOR SHALL NOTIFY THE RESPECTIVE UTILITY COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. BEFORE EXCAVATING, VERIFY LOCATION OF EXISTING ELECTRICAL, GAS, TELEPHONE, CATV AND ALL OTHER UTILITIES. CONTACT UNDERGROUND SERVICE ALERT AT 811.
6. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO OTHER EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE SUBCONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT ON RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE SUBCONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE EXPENSE OF THE SUBCONTRACTOR.
7. ALL ON SITE IMPROVEMENTS ARE PRIVATE. ALL TREES, BRUSH, GRASS, AND OTHER OBJECTIONABLE MATERIAL TO BE REMOVED SHALL BE COLLECTED AND DISPOSED OF BY THE SUBCONTRACTOR OFF THE SITE SO AS TO LEAVE THE AREAS THAT HAVE BEEN CLEARED WITH A NEAT AND FINISHED APPEARANCE AND FREE FROM UNSIGHTLY DEBRIS.
8. THE ELEVATIONS SHOWN ON THE PLANS REPRESENT THE FINISH SURFACE ELEVATIONS OF ROADS, PAVEMENTS, FLOOR SLABS ON-GRADE, AND LANDSCAPED AREAS UNLESS OTHERWISE NOTED. THE SUBCONTRACTOR SHALL MAKE ALLOWANCES FOR THE THICKNESS OF PAVING MATERIALS, CONCRETE SLABS, AND TOPSOIL.
9. ANY QUANTITIES INDICATED ON THESE PLANS ARE ENGINEERS' ESTIMATES ONLY AND ARE NOT TO BE USED BY SUBCONTRACTOR FOR BIDDING PURPOSES.
10. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LICENSED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED BY THE LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT.
11. SUBCONTRACTOR SHALL PROVIDE FOR DEWATERING AT EXCAVATIONS FROM EITHER SURFACE WATER OR SEEPAGE, AND PROVIDE ADEQUATE SHORING TO PREVENT CAVING.
12. THE SUBCONTRACTOR IS RESPONSIBLE FOR OBTAINING A PERMIT FOR TEMPORARY CONSTRUCTION DEWATERING. A PERMIT IS REQUIRED FROM THE REGIONAL WATER QUALITY CONTROL BOARD FOR ANY DISCHARGE OF GROUND WATER TO THE ENVIRONMENT. THE SUBCONTRACTOR SHALL COMPLY WITH REGIONAL WATER QUALITY CONTROL BOARD WASTE DISCHARGE PERMIT REQUIREMENTS, AS APPLICABLE. BEFORE STARTING DEWATERING OPERATIONS, THE CONTRACTOR SHALL OBTAIN AUTHORIZATION, AS REQUIRED, FOR THE DISPOSAL OF GROUNDWATER. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAMPLING, TESTING MONITORING AND REPORTING REQUIREMENTS.

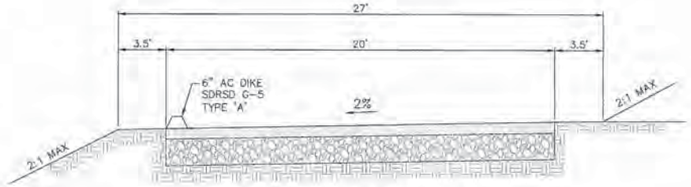
SPECIAL NOTES:

1. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE QUANTITIES SHOWN HEREON.
2. THE SUBCONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL SLOPES ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS OR FIELD STAKES, THE SUBCONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER.
3. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING, RELOCATING, AND OR REMOVAL OF EXISTING UTILITIES.
4. THE SUBCONTRACTOR SHALL UNCOVER ALL UTILITIES THAT MAY BE JOINED, CROSSED, OR PARALLELED TO VERIFY BOTH HORIZONTAL AND VERTICAL LOCATION PRIOR TO ANY CONSTRUCTION. ANY CONFLICT OR DISCREPANCY SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION, OTHERWISE THE SUBCONTRACTOR ACCEPTS FULL RESPONSIBILITY FOR ANY ADDITIONAL CONSTRUCTION OR RELOCATION COSTS.
5. ALL APPROVED GEOTEXTILE ENGINEERING FABRIC SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
6. A FILTER BLANKET THICKNESS OF 1' OR RIP-RAP THICKNESS '1' (WHICHEVER IS LESS) UNDERLAIN BY A LAYER OF SAND (75% RETAINED ON #200 SIEVE) SHALL BE CONSTRUCTED BENEATH ALL RIP RAP AS PER TABLE 200-17 OF THE SAN DIEGO SUPPLEMENT TO THE GREENBOOK, 2009 EDITION.
7. THE SUBCONTRACTOR SHALL REPLACE ALL DESTROYED OR DAMAGED SURFACE IMPROVEMENTS WITH IMPROVEMENTS EQUAL OR SUPERIOR.
8. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL PROPOSED CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS AND SAN DIEGO GAS AND ELECTRIC.



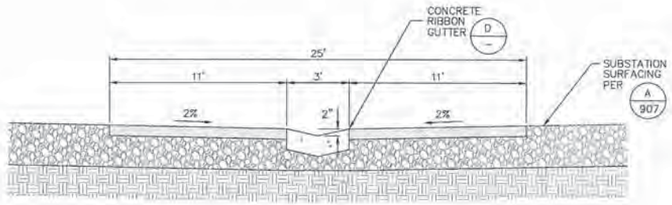
3" ASPHALT CONCRETE ON 8" CLASS II BASE @ MIN 95% RC OVER 12" NATIVE SCARIFIED AND RECOMPACTED TO A MIN OF 90% RC

ACCESS ROAD A
NO SCALE



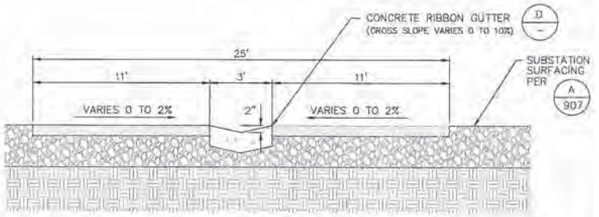
3" ASPHALT CONCRETE ON 8" CLASS II BASE @ MIN 95% RC OVER 12" NATIVE SCARIFIED AND RECOMPACTED TO A MIN OF 90% RC

ACCESS ROAD B
NO SCALE



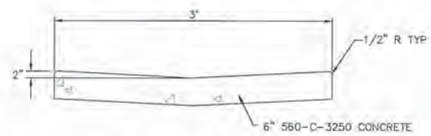
3" ASPHALT ON 8" CLASS II BASE @ MIN 95% RC OVER 12" SELECT FILL @ MIN 95% RC OVER FILL RECOMPACTED TO A MIN OF 90% RC

SUBSTATION ROAD DETAIL C
STATION 3+32.91 TO 6+14.41
NO SCALE



3" ASPHALT ON 8" CLASS II BASE @ MIN 95% RC OVER 12" SELECT FILL @ MIN 95% RC OVER FILL RECOMPACTED TO A MIN OF 90% RC

SUBSTATION ROAD DETAIL C
TRANSITION SECTION
STATION 2+95.41 TO 3+32.91
NO SCALE



D RIBBON GUTTER
NO SCALE

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED CONTRACTOR NOTES	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

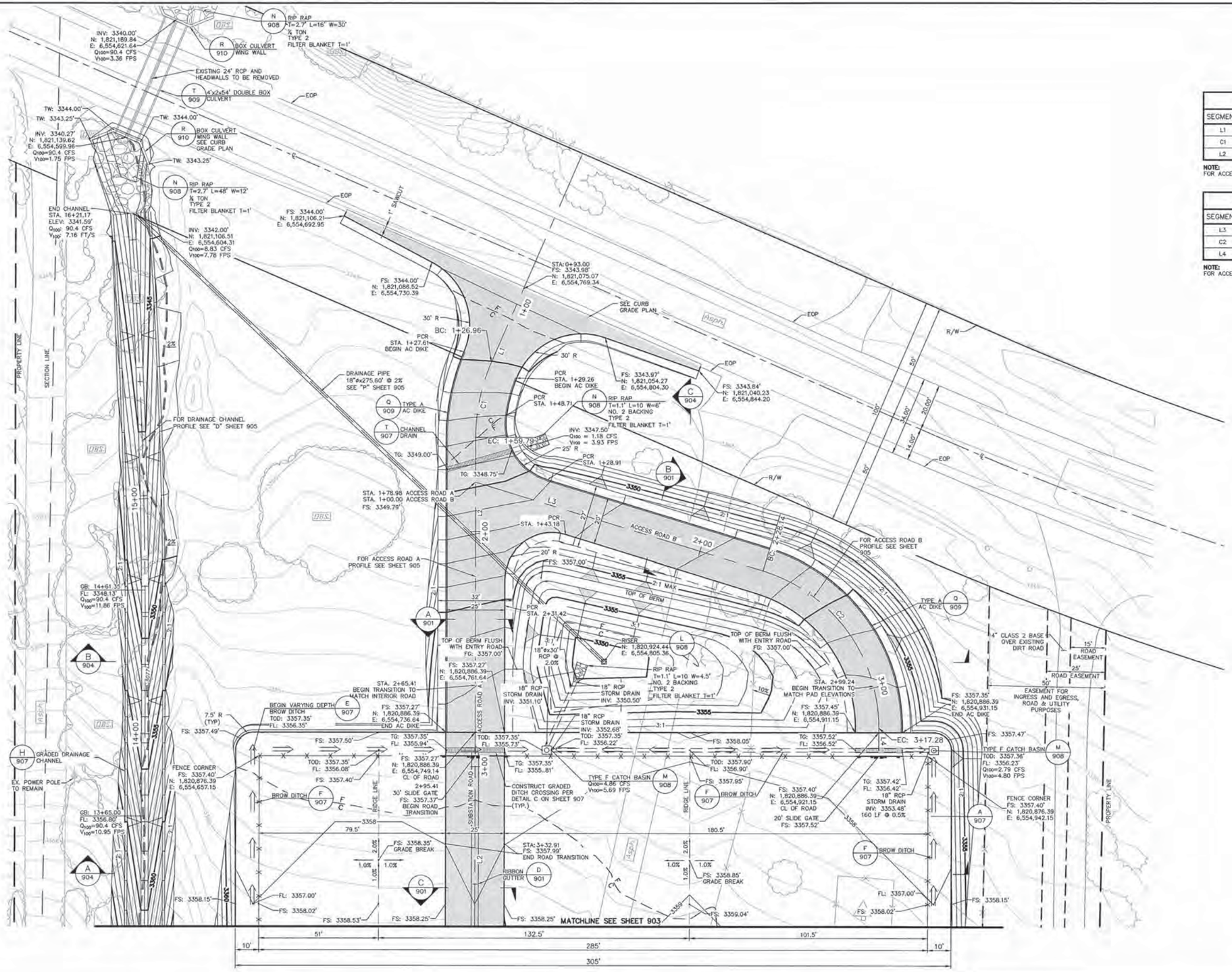
BOULEVARD SUBSTATION

GRADING NOTES & TYPICAL SECTIONS

DRAWN BY:	NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV: 2
CHECKED BY:	JAL	DATE: 10/2/12			
APPROVED BY:		DATE:			
CAD NO.:	BUES90100	PLOT SCALE: 1 = 1			

BUE-S-901

May 14, 2012 - 10:17:32



HORIZONTAL CENTERLINE DATA – ACCESS ROAD A					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L1	0+92.36	1+26.96	S23° 31' 03"W		34.59'
C1	1+26.96	1+59.79	23° 31' 03"	80.00'	32.84'
L2	1+59.79	6+14.41	S0° 00' 00"E		454.61'

NOTE:
FOR ACCESS ROAD A PROFILE, SEE SHEET 905

HORIZONTAL CENTERLINE DATA – ACCESS ROAD B					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L3	1+00.00	2+28.14	S72° 57' 51"E		128.14'
C2	2+28.14	3+17.28	72° 57' 51"	70.00'	89.14'
L4	3+17.28	3+26.74	S0° 00' 00"E		9.46'

NOTE:
FOR ACCESS ROAD B PROFILE, SEE SHEET 905

NORTH

0 20' 40'
SCALE: 1" = 20'

NOTE:
SEE DEMOLITION PLAN FOR EXISTING STRUCTURES, SURFACE IMPROVEMENTS AND MISC. ITEMS TO BE REMOVED OR SALVAGED

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED WIDTH OF DRAINAGE CHANNEL	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

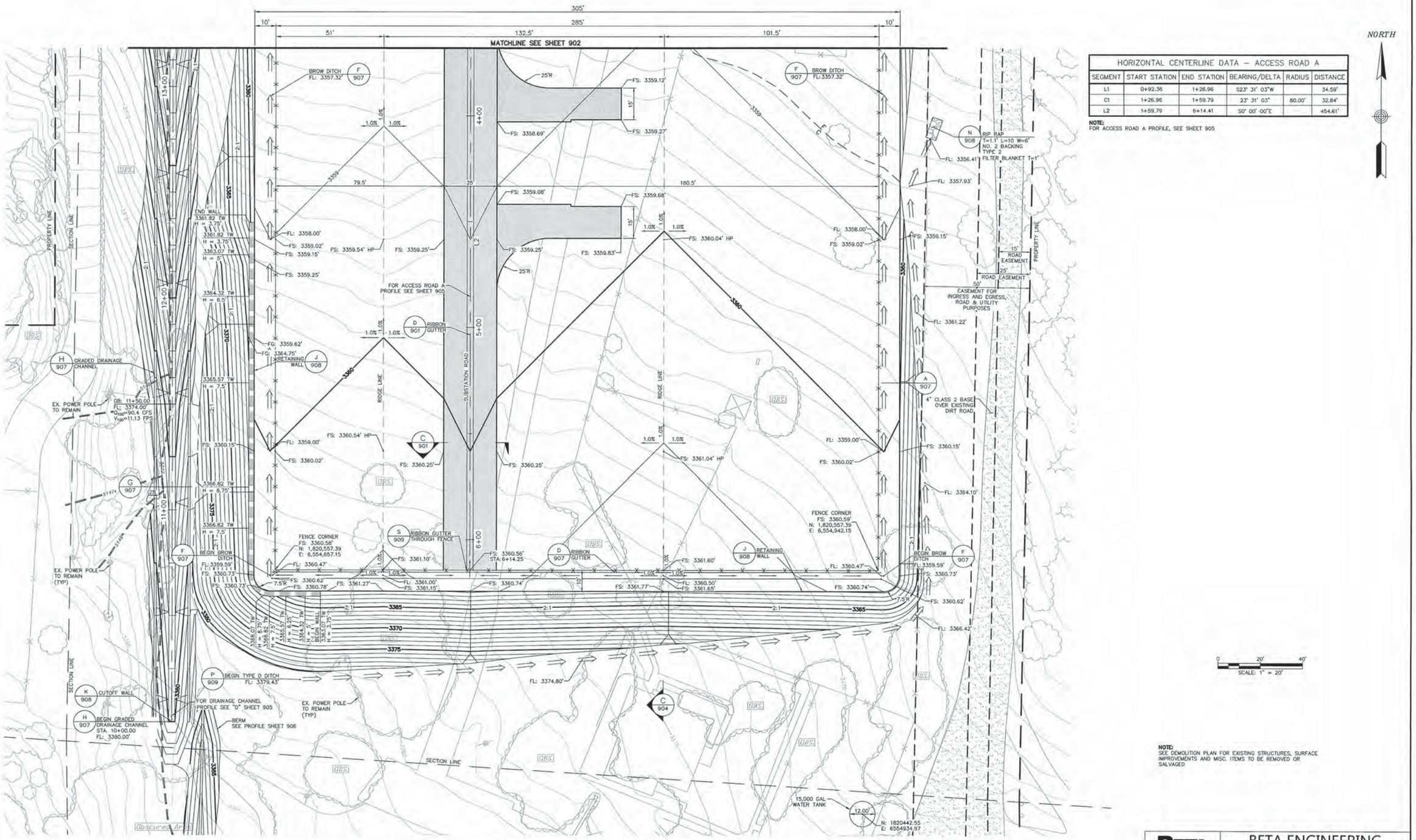
BOULEVARD SUBSTATION

GRADING & DRAINAGE PLAN

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.:	2
CHECKED BY: JAL	DATE: 10/2/12				
APPROVED BY:	DATE:				
CAD NO.: BUES90200	PLOT SCALE: 1 = 1				

BUE–S–902

May 14, 2012 – 10:17:32



HORIZONTAL CENTERLINE DATA – ACCESS ROAD A					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L1	0+92.36	1+26.96	S23° 31' 03"W		34.59'
C1	1+26.96	1+59.79	23° 31' 03"	80.00'	32.84'
L2	1+59.79	6+14.41	S0° 00' 00"E		454.61'

NOTE:
FOR ACCESS ROAD A PROFILE, SEE SHEET 905

NOTE:
SEE DEMOLITION PLAN FOR EXISTING STRUCTURES, SURFACE IMPROVEMENTS AND MISC. ITEMS TO BE REMOVED OR SALVAGED

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REDUCED LENGTH OF RETAINING WALL, REVISED WIDTH OF DRAINAGE CHANNEL	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

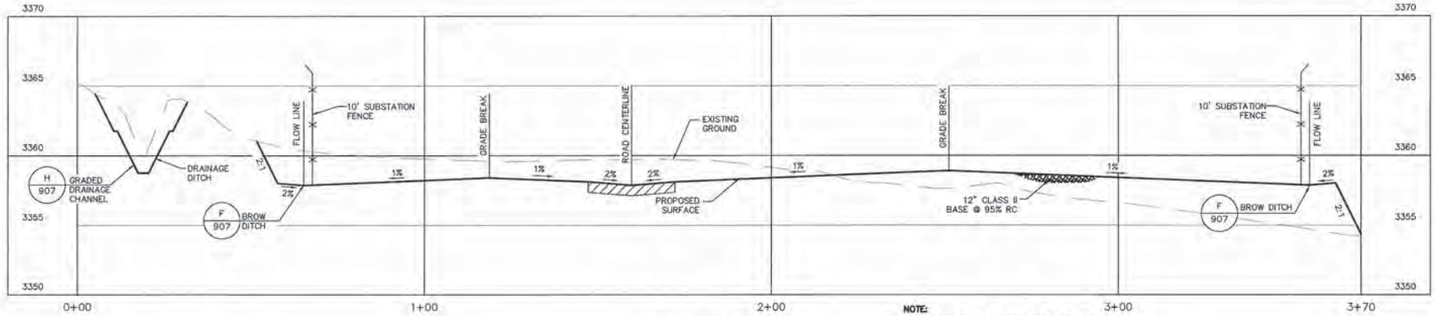
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

GRADING & DRAINAGE PLAN

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.: 2	
CHECKED BY: JAL	DATE: 10/2/12				BUE–S–903
APPROVED BY:	DATE:				
CAD NO.: BUES90300	PLOT SCALE: 1 = 1				

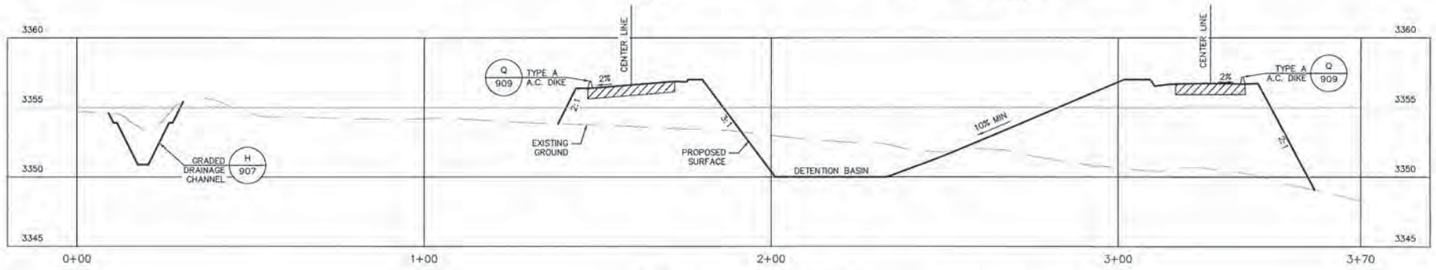
May 14, 2012 – 10:17:32



A 902 EAST–WEST SECTION

NOTE:
SEE SUPPLEMENTAL RECOMMENDATIONS LISTED IN THE "UPDATE REPORT AND CHANGE OF GEOTECHNICAL ENGINEER OF RECORD" PREPARED BY GEOCON INCORPORATED, DATED FEBRUARY 7, 2013 FOR ALLUVIUM REMOVAL DEPTHS

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



B 902 EAST–WEST SECTION

NOTE:
SEE SUPPLEMENTAL RECOMMENDATIONS LISTED IN THE "UPDATE REPORT AND CHANGE OF GEOTECHNICAL ENGINEER OF RECORD" PREPARED BY GEOCON INCORPORATED, DATED FEBRUARY 7, 2013 FOR ALLUVIUM REMOVAL DEPTHS

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

C 902 NORTH–SOUTH SECTION

NOTE:
SEE SUPPLEMENTAL RECOMMENDATIONS LISTED IN THE "UPDATE REPORT AND CHANGE OF GEOTECHNICAL ENGINEER OF RECORD" PREPARED BY GEOCON INCORPORATED, DATED FEBRUARY 7, 2013 FOR ALLUVIUM REMOVAL DEPTHS

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REMOVED RETAINING WALL, WIDENED GRADED DRAINAGE CHANNEL	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

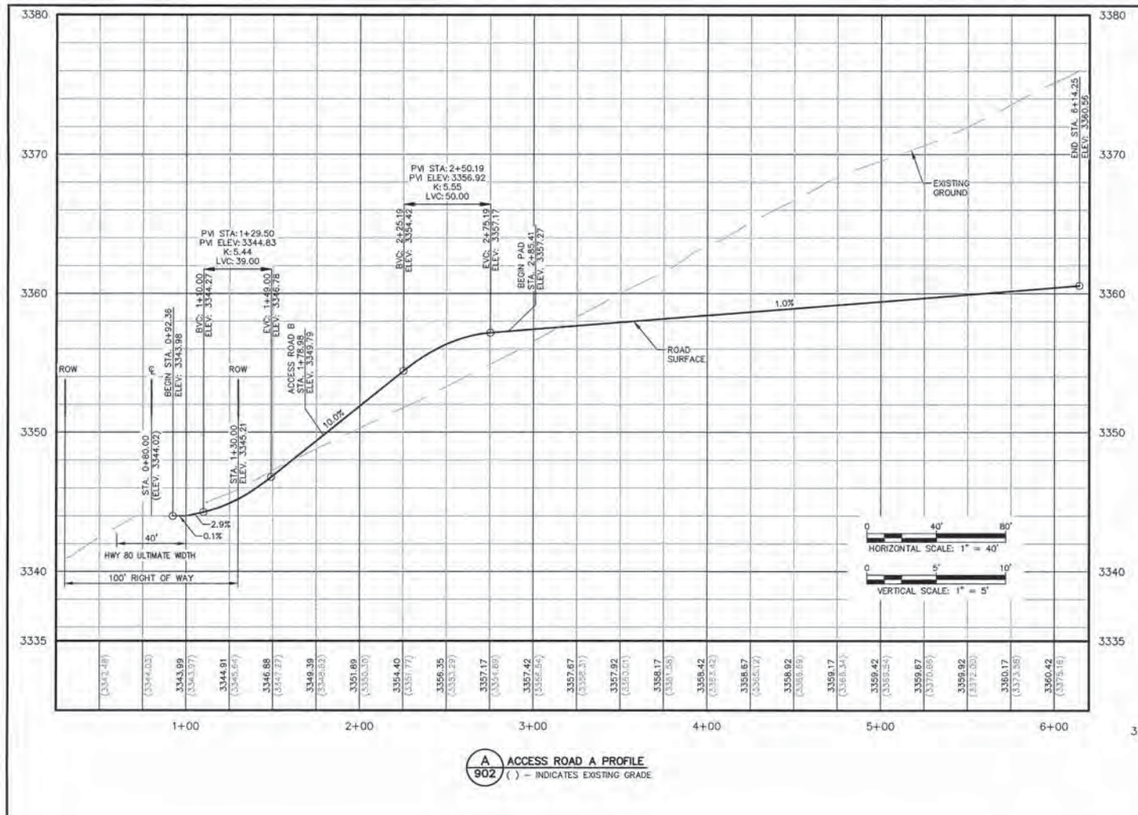
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

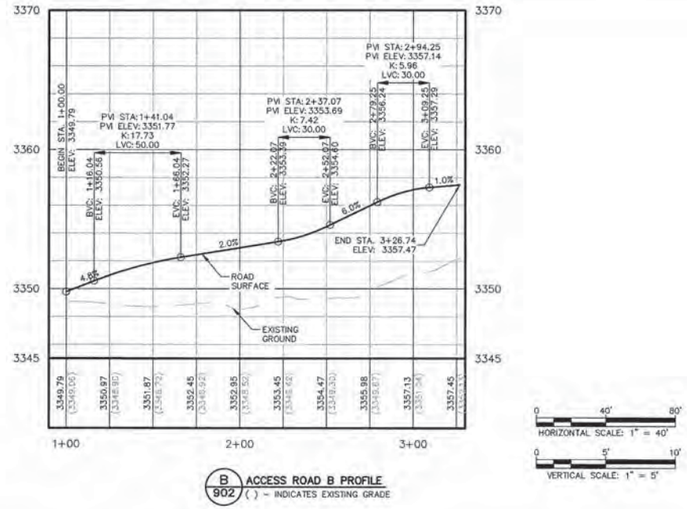
SITE PLAN SECTIONS

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.: 2	BUE–S–904
CHECKED BY: JAL	DATE: 10/2/12				
APPROVED BY:	DATE:				
CAD NO.: BUES90400	PLOT SCALE: 1 = 1				

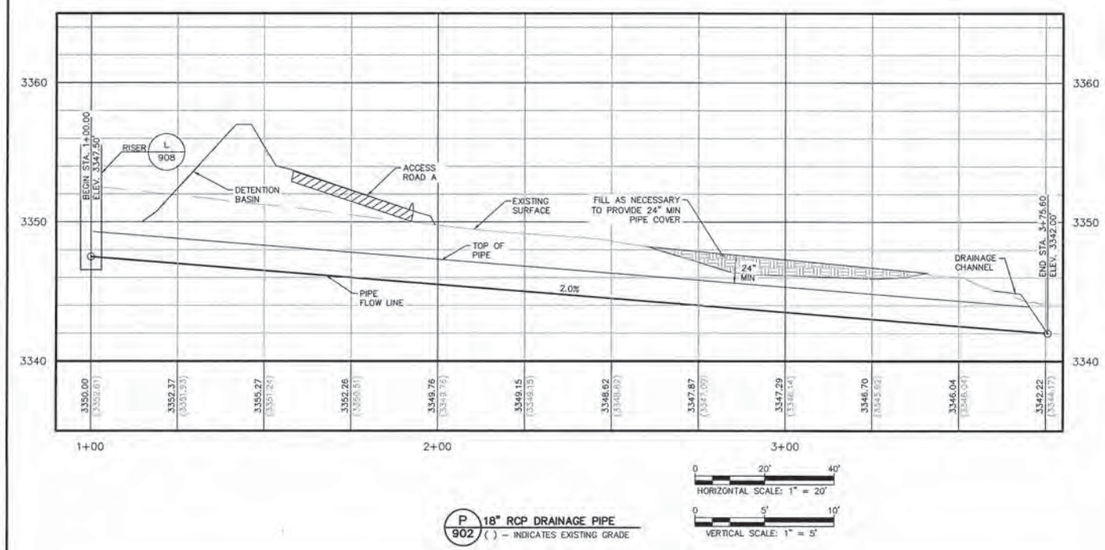
May 14, 2012 – 10:17:32



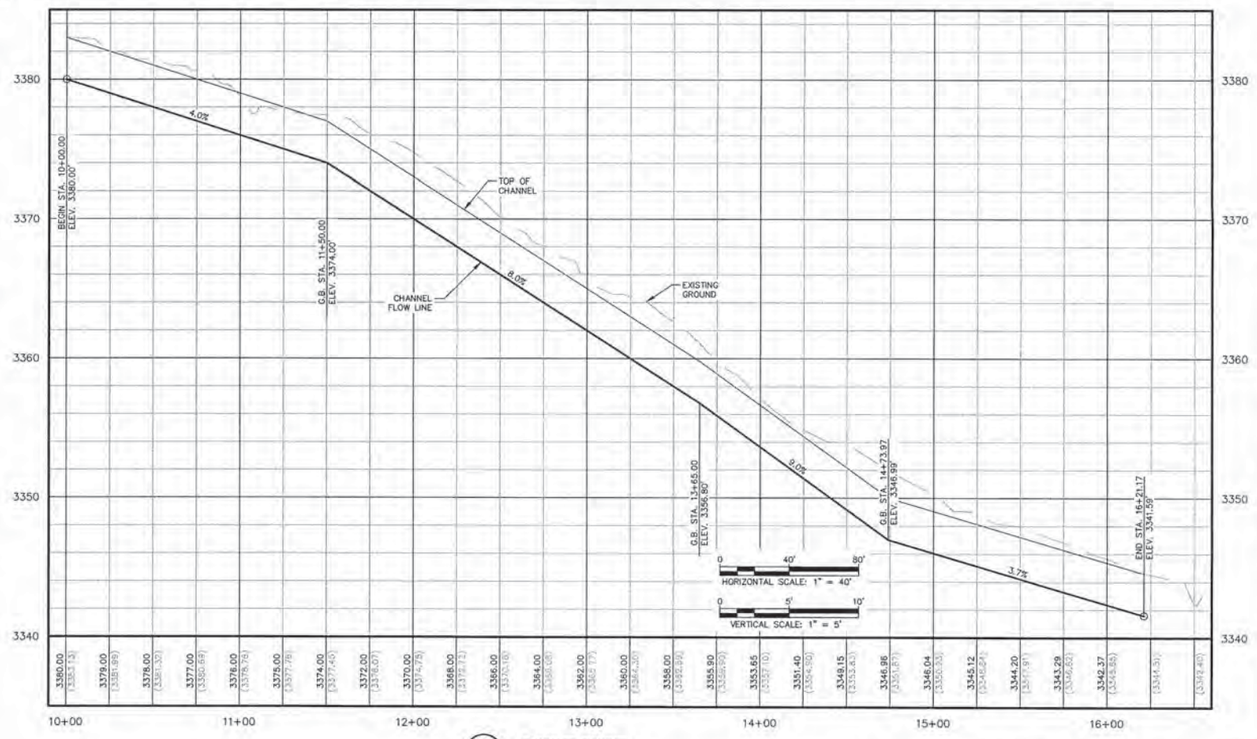
A 902 ACCESS ROAD A PROFILE
( ) – INDICATES EXISTING GRADE



B 902 ACCESS ROAD B PROFILE
( ) – INDICATES EXISTING GRADE



P 902 18" RCP DRAINAGE PIPE
( ) – INDICATES EXISTING GRADE



D 902 DRAINAGE CHANNEL
( ) – INDICATES EXISTING GRADE

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED PROFILES	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

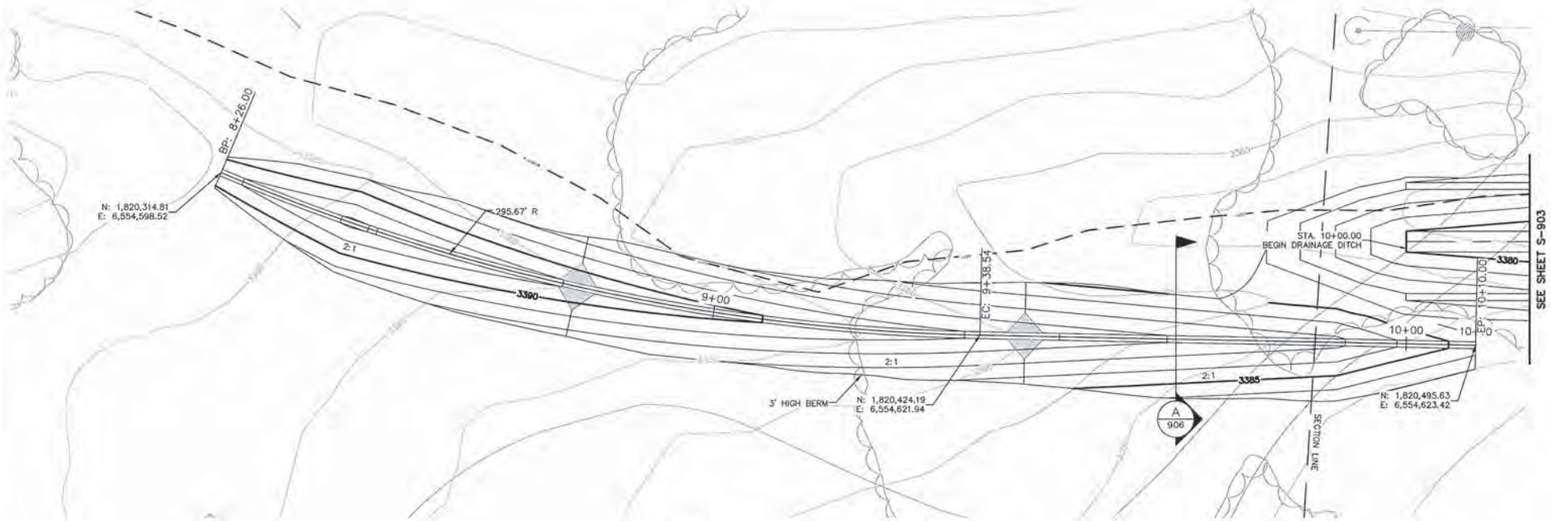
BOULEVARD SUBSTATION

ENTRY ROADS & DRAINAGE PROFILES

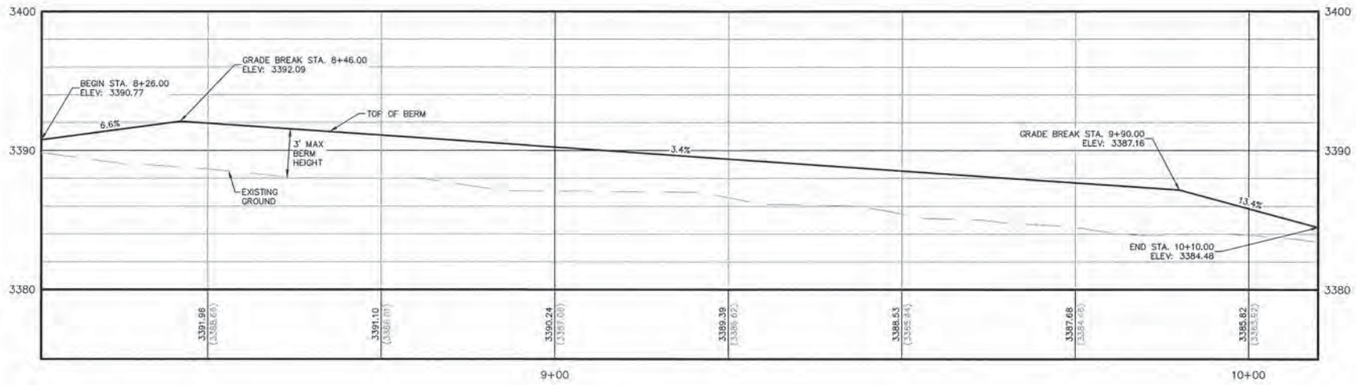
DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474 REV.: 2
CHECKED BY: JAL	DATE: 10/2/12		
APPROVED BY:	DATE:		
CAD NO.: BUES90500	PLOT SCALE: 1 = 1		

BUE-S-905

May 14, 2012 – 10:17:32

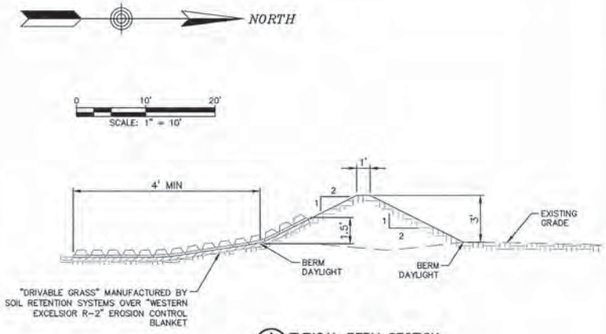


BERM PLAN



BERM PROFILE

( ) - INDICATES EXISTING GRADE



A TYPICAL BERM SECTION
STA. 8+26 TO 10+00
NO SCALE

0 10' 20'
HORIZONTAL SCALE: 1" = 10'

0 5' 10'
VERTICAL SCALE: 1" = 5'

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REDUCED LENGTH OF SPLASH BERM	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

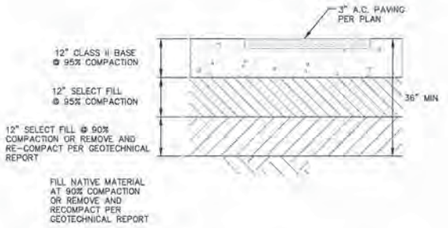
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

DRAINAGE BERM PLAN & PROFILE

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.: 2	
CHECKED BY: JAL	DATE: 10/2/12				
APPROVED BY:	DATE:				BUE-S-906
CAD NO.: BUES90600	PLOT SCALE: 1 = 1				

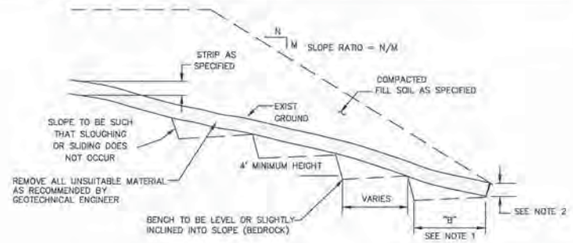
May 14, 2012 - 10:17:32



NOTES:

1. ALL OVERSIZE MATERIAL SHALL BE BURIED AT A DEPTH BELOW FINISH GRADE IN ACCORDANCE WITH EARTHWORK SPECIFICATIONS.
2. FILL MATERIAL SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT.

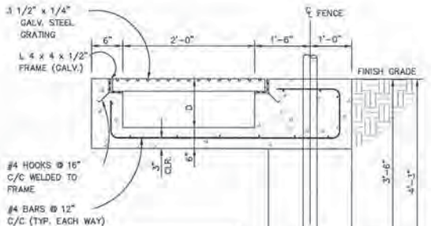
A TYPICAL SUBSTATION SECTION
NO SCALE



NOTES:

1. THE MINIMUM WIDTH "B" OR KEY SHALL BE 2 FEET WIDER THAN THE COMPACTION EQUIPMENT, AND NOT LESS THAN 10 FEET.
2. THE OUTSIDE EDGE OF BOTTOM KEY SHALL BE BELOW TOPSOIL OR LOOSE SURFACE MATERIAL AND EXPOSE DENSE FORMATIONAL MATERIAL.
3. KEYS ARE REQUIRED WHERE THE NATURAL SLOPES ARE STEEPER THAN 6 HORIZONTAL TO 1 VERTICAL, OR WHERE SPECIFIED BY GEOTECHNICAL ENGINEER.

B BENCHING DETAIL
NO SCALE

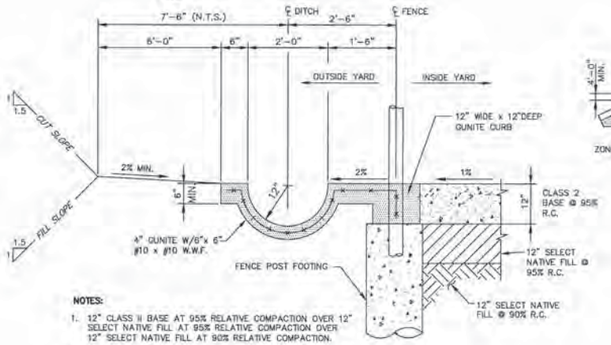


	D
AT 20' GATE	1.0'
AT 30' GATE	VARIES 1.41' TO 1.54'

NOTES:

1. 12" CLASS II BASE AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 90% RELATIVE COMPACTION.
2. CONCRETE FOR GUNITE SHALL BE 470-C-2000 OR 2500 PSI CONCRETE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARDS.
3. FOR GROUNDING BENEATH BROW DITCH, SEE DRAWING BUE-S-660.4 DETAIL 20.
4. DEPTH OF DITCH VARIES AT ACCESS ROAD A 30' ENTRY GATE.

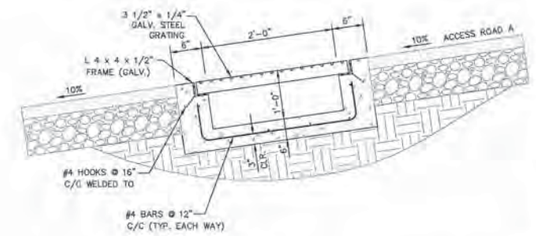
C DRAIN DITCH CROSSING AT GATES
NO SCALE



NOTES:

1. 12" CLASS II BASE AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 90% RELATIVE COMPACTION.
2. CONCRETE FOR GUNITE SHALL BE 470-C-2000 OR 2500 PSI CONCRETE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARDS.
3. FOR GROUNDING BENEATH BROW DITCH, SEE DRAWING BUE-S-660.4 DETAIL 20.

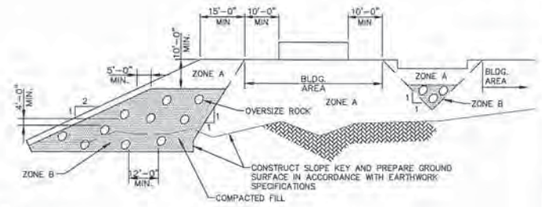
F BROW DITCH AT FENCE LINE
NO SCALE



NOTES:

1. 12" CLASS II BASE AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 90% RELATIVE COMPACTION.
2. CONCRETE FOR GUNITE SHALL BE 470-C-2000 OR 2500 PSI CONCRETE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARDS.

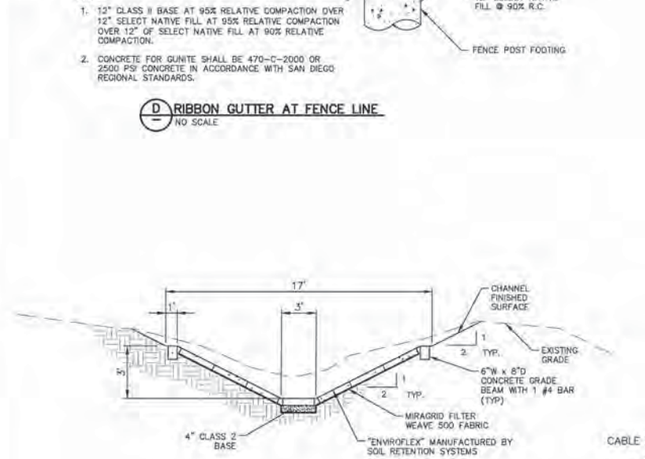
I ACCESS ROAD DRAINAGE DITCH
NO SCALE



NOTES: (ZONES A AND B DEFINED IN SPECIFICATIONS)

1. COMPACTED SOIL FILL SHALL CONTAIN AT LEAST 40% SOIL SIZES PASSING 1/4" SIEVE (BY WEIGHT), AND BE COMPACTED IN ACCORDANCE WITH SPECIFICATIONS FOR STRUCTURAL FILL.
2. ZONE A MUST EXTEND 3 FEET BELOW THE DEEPEST UTILITY OR A MINIMUM OF 10 FEET BELOW SURFACE, WHICHEVER IS GREATER.
3. ZONE B DISPOSAL NOT PERMITTED FOR SLOPES STEEPER THAN 2 TO 1.
4. ROCKS OVER 4 FEET IN MAXIMUM DIMENSION NOT PERMITTED IN FILL.
5. CONTINUOUS OBSERVATION REQUIRED BY GEOTECHNICAL ENGINEER DURING ROCK PLACEMENT

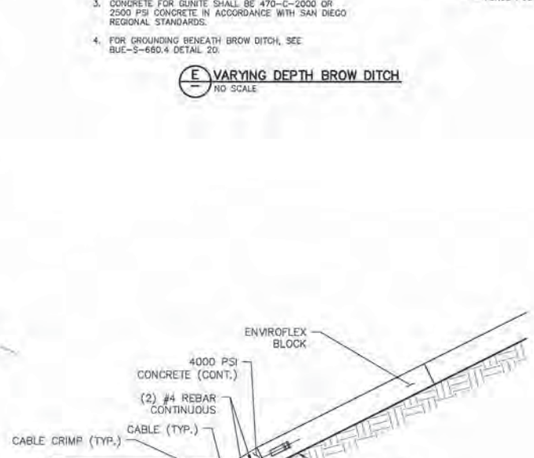
J OVERSIZED ROCK PLACEMENT
NO SCALE



NOTES:

1. 12" CLASS II BASE AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 90% RELATIVE COMPACTION.
2. CONCRETE FOR GUNITE SHALL BE 470-C-2000 OR 2500 PSI CONCRETE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARDS.

D RIBBON GUTTER AT FENCE LINE
NO SCALE



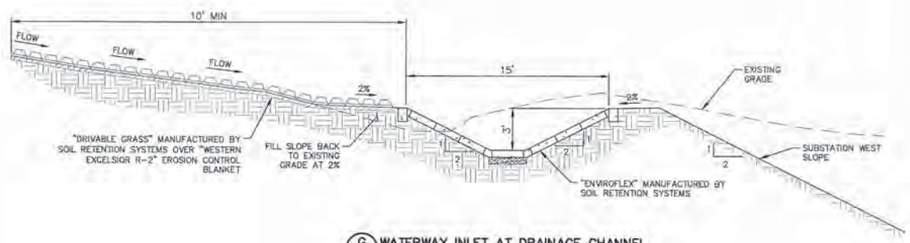
NOTES:

1. DEPTH D VARIES 0' TO 7.4' AT A CONSTANT SLOPE. MINIMUM SLOPE IS 0.5%
2. 12" CLASS II BASE AT 95% RELATIVE COMPACTION OVER 12" SELECT NATIVE FILL AT 95% RELATIVE COMPACTION OVER 12" OF SELECT NATIVE FILL AT 90% RELATIVE COMPACTION.
3. CONCRETE FOR GUNITE SHALL BE 470-C-2000 OR 2500 PSI CONCRETE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARDS.
4. FOR GROUNDING BENEATH BROW DITCH, SEE BUE-S-660.4 DETAIL 20.

E VARYING DEPTH BROW DITCH
NO SCALE

H GRADED DRAINAGE CHANNEL
NO SCALE

ENVIROFLEX AT GRADE BREAK



G WATERWAY INLET AT DRAINAGE CHANNEL
STA 10+70 TO 11+20
NO SCALE

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED DETAILS	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

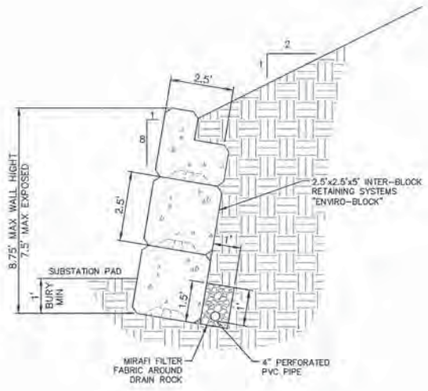
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

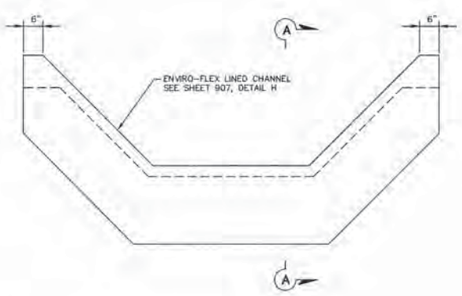
GRADING DETAILS

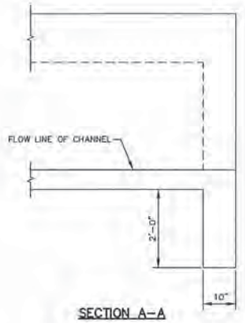
DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.: 2	
CHECKED BY: JAL	DATE: 10/2/12				
APPROVED BY:	DATE:				**BUE-S-907**
CAD NO.: BUES90700	PLOT SCALE: 1 = 1				

May 14, 2012 - 10:17:32



J TYPICAL GRAVITY RETAINING WALL SECTION
NO SCALE



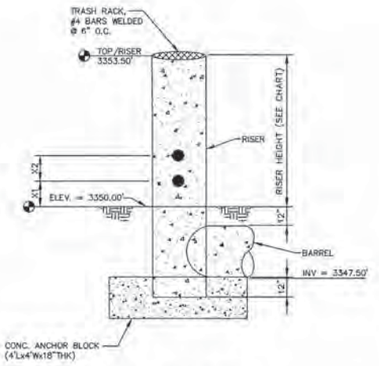


SECTION A-A

K CUTOFF WALL FOR DRAINAGE CHANNEL
NO SCALE

NOTE:

1. CONCRETE SHALL BE 3000 PSI TYPE II

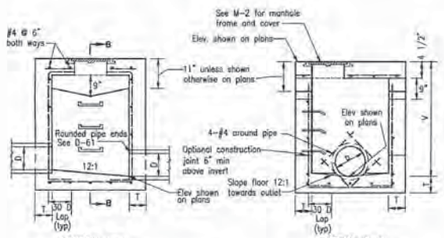


NOTE:

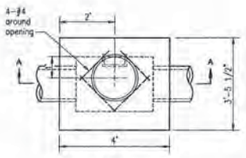
1. MATERIAL SHALL BE PROVIDED HOT DIP GALVANIZED AFTER FABRICATION
2. SUBCONTRACTOR SHALL PROVIDE 6" STENCIL ON TWO FACES WITH ANNOTATED ONE FOOT MARK AND HALF FOOT TICK MARK FROM BASE TO TOP OF PIPE.
3. CONCRETE SHALL BE 470-C-200 OR 2500 PSI CONCRETE IN ACCORDANCE WITH SAN DIEGO REGIONAL STANDARDS.

RISER DIMENSIONS			
RISER DIA.	RISER HEIGHT	BARREL DIA.	BARREL LENGTH
18"	3.5'	18"	SEE PLANS
HOLE DIMENSIONS			
SPACING	DISTANCE (IN.)	# OF HOLES	HOLES DIA. (IN.)
BOT/RISER			
X1	3	1	2.0
X2	12	1	2.0

L RISER DETAIL
NO SCALE



SECTION A-A SECTION B-B

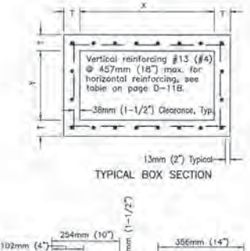


PLAN

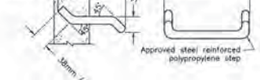
NOTES

1. See D-11A & 11B for additional notes and details.
2. When V exceeds 4' steps shall be installed. See D-11A for details.
3. Exposed edges of concrete shall be rounded with a radius of 1/2".
4. Construct openings on both sides unless otherwise shown on plans.
5. Maintain 1-1/2" clear spacing between reinforcing and concrete surface.
6. Install 1" steel protection bar across opening.
7. Diameter "D" shall be 18" max. for larger diameter pipes this drawing must be modified. Pipe diameters to be shown on plans.
8. If constructed adjacent to sidewalk, the surface of the top slab of the catch basin shall match the sidewalk slope and finish.

M TYPE F CATCH BASIN
NO SCALE



TYPICAL BOX SECTION



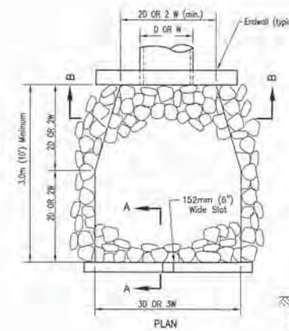
STEP DETAIL

NOTES

1. Concrete shall be 332kg/M-C-22-Mpa (560-C-3250) unless otherwise noted.
2. Reinforcing steel shall comply with this drawing unless otherwise specified.
3. Reinforcing steel shall be intermediate grade deformed bars conforming to latest ASTM specifications.
4. Bends shall be in accordance with latest ACI code.
5. Minimum splice length for reinforcing shall be 30 diameters.
6. Floor shall have a wood trowel finish and, except where used as junction boxes, shall have a minimum slope of 1:12 toward the outlet.
7. Depth V is measured from the top of the structure to the flowline of the box.
8. Wall thickness and reinforcing steel required may be decreased in accordance with table above.
9. Wall thickness shall be stepped on the outside of the box.
10. When the structure depth V exceeds 1.21m (4'), steps shall be cast into the wall at 381mm (15") intervals from 381mm (15") above floor to within 305mm (12") of top of structure. Where possible place steps in wall without pipe opening, otherwise over opening of smallest diameter.
11. Alternate step may be an approved steel reinforced polypropylene step.
12. Upon approval of the Agency and the Engineer, as defined by Section 6703 of the Business and Professions Code, the use of precast storm structures is acceptable as an alternate to cast-in-place. Precast units shall conform to ASTM standards and be manufactured in a permanent facility designed for that purpose.
13. Dimension "T" shall be a minimum of 152mm (6").
14. Typical reinforcement lap shall be 30 times the bar diameter minimum.

BOX SECTION REINFORCEMENT			
MAXIMUM SPAN X or Y	DEPTH V	THICKNESS T	HOR. & FLR. REINF.
914mm (3'-0") to 1.22m (4'-0")	1.22m (4'-0")	152mm (6")	#13 (#4) @ 457mm (18")
1.24m (4'-1") to 2.13m (7'-0")		152mm (6")	#13 (#4) @ 305mm (12")
2.16m (7'-1") to 2.44m (8'-0")		152mm (6")	#13 (#4) @ 203mm (8")
914mm (3'-0") to 1.22m (4'-0")	1.24m to 2.44m (4'-1"to 8'-0")	152mm (6")	#13 (#4) @ 457mm (18")
1.24m (4'-1") to 1.52m (5'-0")		152mm (6")	#13 (#4) @ 305mm (12")
1.55m (5'-1") to 1.83m (6'-0")		152mm (6")	#13 (#4) @ 203mm (8")
1.85m (6'-1") to 2.44m (8'-0")		152mm (6")	#13 (#4) @ 152mm (6")
914mm (3'-0") to 1.22m (4'-0")	2.46m to 3.66m (8'-1" to 12'-0")	152mm (6")	#13 (#4) @ 381mm (15")
1.24m (4'-1") to 1.52m (5'-0")		203mm (8")	#13 (#4) @ 305mm (12")
1.55m (5'-1") to 1.83m (6'-0")		203mm (8")	#13 (#4) @ 203mm (8")
1.85m (6'-1") to 2.44m (8'-0")		203mm (8")	#13 (#4) @ 152mm (6")
914mm (3'-0") to 1.22m (4'-0")	3.65m to 4.88m (12'-1" to 16'-0")	203mm (8")	#13 (#4) @ 305mm (12")
1.24m (4'-1") to 1.52m (5'-0")		203mm (8")	#13 (#4) @ 305mm (12")
1.55m (5'-1") to 1.83m (6'-0")		203mm (8")	#13 (#4) @ 203mm (8")
1.85m (6'-1") to 2.13m (7'-0")		203mm (8")	#13 (#4) @ 152mm (6")
2.13m (7'-1") to 2.44m (8'-0")		203mm (8")	#13 (#5) @ 203mm (8")
914mm (3'-0") to 1.22m (4'-0")	4.90m to 6.10m (16'-1" to 20'-0")	203mm (8")	#13 (#4) @ 305mm (12")
1.24m (4'-1") to 1.52m (5'-0")		254mm (10")	#13 (#4) @ 305mm (12")
1.55m (5'-1") to 1.83m (6'-0")		254mm (10")	#13 (#4) @ 203mm (8")
1.85m (6'-1") to 2.13m (7'-0")		254mm (10")	#13 (#4) @ 152mm (6")
2.13m (7'-1") to 2.44m (8'-0")		254mm (10")	#13 (#5) @ 203mm (8")
914mm (3'-0") to 1.22m (4'-0")	6.12m to 7.32m (20'-1" to 24'-0")	203mm (8")	#13 (#4) @ 305mm (12")
1.24m (4'-1") to 1.52m (5'-0")		254mm (10")	#13 (#4) @ 305mm (12")
1.55m (5'-1") to 1.83m (6'-0")		254mm (10")	#13 (#4) @ 203mm (8")
1.85m (6'-1") to 2.13m (7'-0")		254mm (10")	#13 (#4) @ 152mm (6")
2.13m (7'-1") to 2.44m (8'-0")		305mm (12")	#13 (#5) @ 203mm (8")

HORIZONTAL & FLOOR REINFORCING

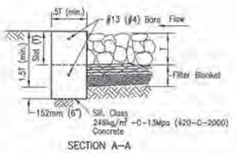


PLAN

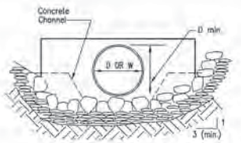
Design Velocity m/sec (ft/sec)*	Rock Classification	T (min)
1.8-3 (6-10)	No. 2 Backing	320mm (1.1ft)
3-3.7 (10-12)	220 kg (1/4 ton)	823mm (2.7ft)
3.7-4.3 (12-14)	450 kg (1/2 ton)	1.1m (3.5ft)
4.3-4.9 (14-16)	900 kg (1 ton)	1.3m (4.4ft)
4.9-5.5 (16-18)	1.8 tonne (2 ton)	1.6m (5.4ft)

*over 5.5 mps (18 fps) requires special design

D = Pipe Diameter
W = Bottom Width of Channel



SECTION A-A



SECTION B-B

NOTES

1. Plans shall specify:
   A) Rock Class and thickness (T).
   B) Filter material, number of layers and thickness.
2. Rip rap shall be either quarry stone or broken concrete (if shown on the plans.) Cobbles are not acceptable.
3. Rip rap shall be placed over filter blanket which may be either granular material or filter fabric (woven filter silt film fabric shall not be used).
4. See Regional Supplement Amendments for selection of filter blanket.
5. Rip rap energy dissipators shall be designated as either Type 1 or Type 2. Type 1 shall be with concrete sill; Type 2 shall be without sill.

N RIP RAP ENERGY DISSIPATER
NO SCALE

REVISIONS

NO.	WORK DONE:	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED DETAILS	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

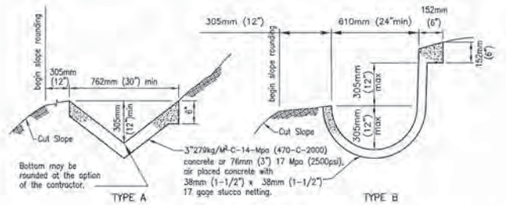
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

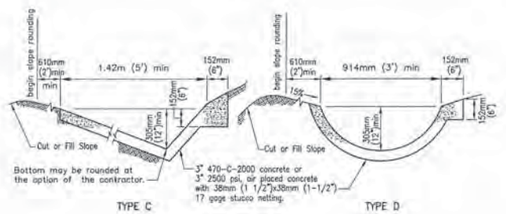
GRADING DETAILS

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.: 2
CHECKED BY: JAL	DATE: 10/2/12			
APPROVED BY:	DATE:			BUE-S-908
CAD NO.: BUES90800	PLOT SCALE: 1 = 1			

May 14, 2012 - 10:17:32



BROW DITCH



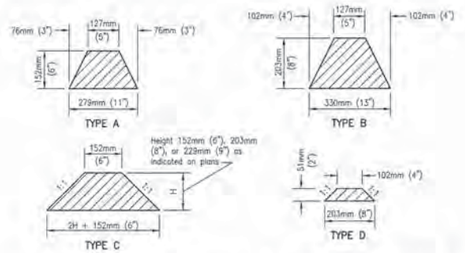
TERRACE DITCH

NOTES

1. Longitudinal slope of lined ditch shall be 2% minimum.
2. Over-slope down ditches shall employ 152mm (6") thickened edge section at both sides of ditch.

LEGEND ON PLANS

P DRAINAGE DITCHES
NO SCALE

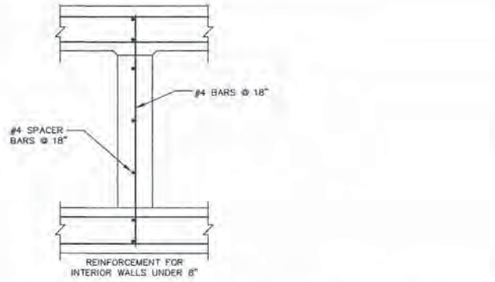


APPROX. DIKE QUANTITIES	
TYPE	REQD PER LIN. FT.
A	25.4kg (0.0250 ln.)
B	38.1kg (0.0375 ln.)
C-152mm (6")	38.1kg (0.0375 ln.)
C-203mm (8")	59.2kg (0.0583 ln.)
C-229mm (9")	71.3kg (0.0702 ln.)
D	6.3kg (0.0062 ln.)
E	41.4kg (0.0407 ln.)
F	63.3kg (0.0623 ln.)

NOTES:

1. Dikes shall be placed on a 51mm (2") of A.C. surfacing, extending throughout the width of the dike.
2. PG-70-10 grade asphalt to be used for all dikes.
3. A.C. dikes may be shaped and compacted with an extrusion machine or other equipment capable of shaping and compacting the material to the required cross section.

Q A.C. DIKES
NO SCALE



TYPICAL SECTION SPAN
(FLAT INVERT, SHOWING REINFORCEMENT FOR INTERIOR WALLS 8" AND OVER)

T DOUBLE BOX CULVERT
NO SCALE

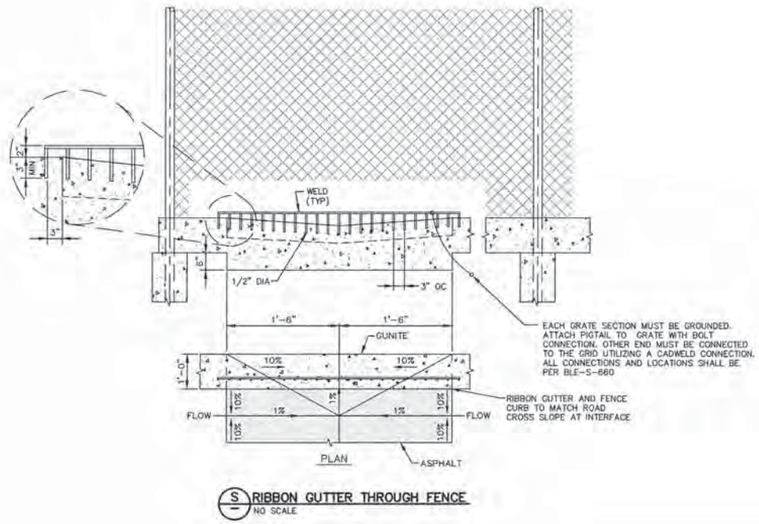
DOUBLE BOX CULVERT TABLE
(ALL MEASUREMENTS IN FEET AND/OR INCHES)

SPAN(S)			4'-0" *		
HEIGHT			2'-0"		
STRENGTH CLASSIFICATION			A	B	C
MAX FILL OVER TOP			11	21	32
CONC.	TOP SLAB	T1	6 1/2	6 1/2	7 1/4
	BOTTOM SLAB	T2	6	7 1/4	8 1/2
	SIDEWALLS	T3	6	6	6
REINFORCING STEEL	"a"	SIZE BAR #	5	4	4
		SPACING	11	11	9
		LENGTH	10-3	10-2	10-2
	"b" or "b1"	SIZE BAR #	5	5	5
		SPACING	11	11	9
		LENGTH "b"	9-4	9-4	9-6
		LENGTH "b1"	9-4	9-5	9-6
	"c"	SIZE BAR #	4	5	5
		SPACING	11	11	9
		LENGTH	4-6	4-6	4-6
	"d" DIST.	TOP SLAB-TOT. NO.	10	6	6
	BARS	BOTTOM SLAB-TOT. NO.	8	6	6
	"e" BARS	SIZE BAR #	4	4	4
		SPACING	18	18	18
	SPACERS	NUMBER		23	
QUAN.	CONCRETE: C.Y. PER LIN. FT.		0.47	0.51	0.57
	REINF. LBS PER LIN. FT.		81	74	84

* - REFERENCE RSD D-77A FOR 4'-0" SPAN.

NOTE:

1. FOR REINFORCEMENT CLEARANCE, EXCEPT AT BOTTOM, SEE MISCELLANEOUS DETAILS SAN DIEGO REGIONAL STANDARDS DRAWING NUMBERS D-81A & D-81B.



S RIBBON GUTTER THROUGH FENCE
NO SCALE

REVISIONS

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED DETAILS	7/1/13	NDL	TJD

BETA ENGINEERING
PINEVILLE, LOUISIANA

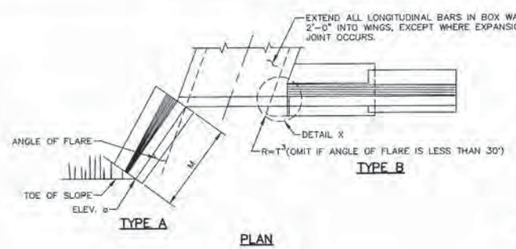
SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

GRADING DETAILS

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV.: 2	
CHECKED BY: JAL	DATE: 10/2/12				
APPROVED BY:	DATE:				BUE-S-909
CAD NO.: BUES90900	PLOT SCALE: 1 = 1				

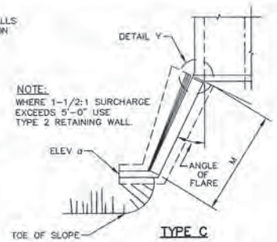
May 14, 2012 - 10:17:32



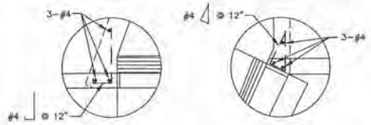
TYPE A

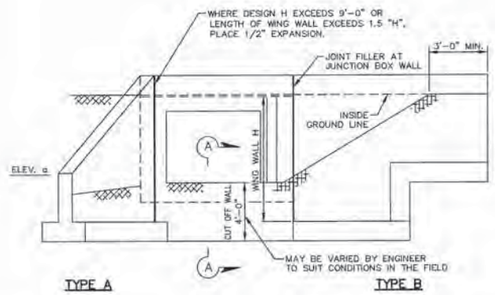
TYPE B

PLAN



TYPE C

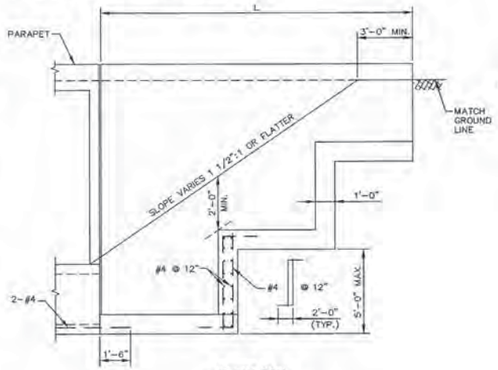




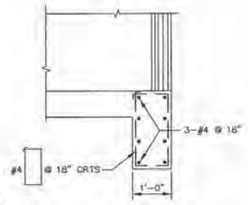
TYPE A

TYPE B

END ELEVATION

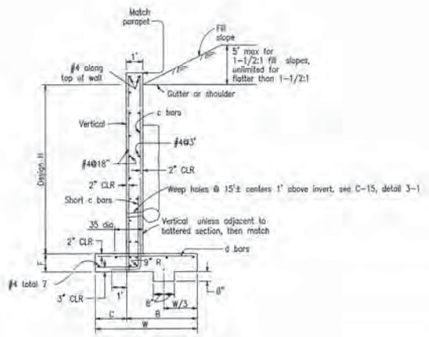


ELEVATION



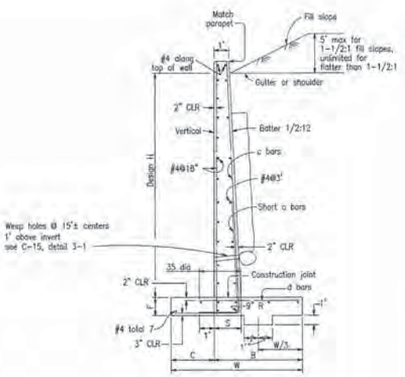
SECTION A-A

R BOX CULVERT WING WALL
NO SCALE



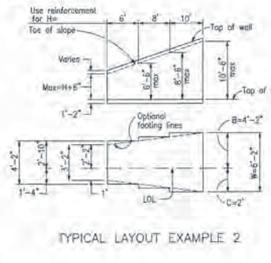
TYPICAL SECTION
H=4' Thru 12'

D-79B



TYPICAL SECTION
H=13' Thru 16'

D-79C



TYPICAL LAYOUT EXAMPLE 2

NOTES

1. Unit Stresses: F_s=20,000 psi, F_c=1,200 psi, N=10
   Maximum Toe Pressure = 1-1/2 Tons/sq. ft.
   Elevations, length and angle of flare of wings may be varied by the Engineer to suit conditions encountered in the field.
2. Walls designed for 2' fivefoot surcharge, 1-1/2:1 sloping surcharge not to exceed 5' in elevation plus 2' livefoot surcharge, or unlimited 2:1 surcharge. Dimensions H, L, M, N, Elevation a and Angle of flare (as apply) are shown on the plans.
3. Wall height may be exceeded by 6" before going to next greater H. Eliminate cutoff wall if adjacent channel is paved and skew is 20° maximum.

D-79E

H	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'
W	3'-2"	3'-8"	4'-2"	4'-8"	5'-2"	5'-8"	6'-2"	6'-8"	7'-2"	7'-8"	8'-2"	8'-8"	9'-2"
C	1'	1'-2"	1'-4"	1'-6"	1'-8"	1'-10"	2'	2'-2"	2'-4"	2'-6"	2'-8"	2'-10"	3'
B	2'-2"	2'-8"	2'-10"	3'-2"	3'-6"	3'-10"	4'-2"	4'-6"	4'-10"	5'-2"	5'-6"	5'-10"	6'-2"
F	1'-2"												
Batter	None									1/2 : 12			
S	1'	1'	1'	1'	1'	1'	1'	1'	1'	1'-6 ½"	1'-7"	1'-7 ½"	1'-8"
c Bars	#4@24	#4@18	#5@20	#5@14	#5@10	#5@7	#6@7½	#7@8	#7@6	#8@15	#10@15	#10@13	#10@11
d Bars	#4@24	#4@18	#5@20	#5@14	#5@10	#6@14	#7@15	#8@18	#7@12	#8@15	#8@15	#10@13	#9@11
Conc. ³⁄₄	0.32	0.38	0.44	0.48	0.55	0.81	0.67	0.73	0.79	1.02	1.10	1.18	1.26
Reinf. ⁴⁄₀	13	16	19	25	30	37	49	62	76	73	90	104	125

NOTE
Quantities do not include that portion above the design H limit.

D-79F

GENERAL NOTES

QUANTITIES: Quantities are for the sloped invert slab and do not include splices in the longitudinal bars, nor temperature reinforcement for exposed top culvert, nor concrete or reinforcement for parapets or cutoff walls.

SPECIAL COVERAGE: Box standard plans are not to be used for culverts in a corrosive environment or where there is a severe abrasive flow condition.

DESIGNATION: Show on plans as span x height-strength classification x length (e.g. 4 x 4-A x 60' L, followed by alternatives.

ALTERNATIVES: Invert will be sloped unless "Trapezoidal Invert", "Flat Invert" or "V Invert" is included in designation. Ends of culvert will be rounded unless "Square Ends" are designated. Parapets will be as shown unless "____ ft. parapet" is designated in plans. Such designations may be different for inlet and outlet ends.

REINFORCEMENT PLACEMENT: Main Reinforcement is positioned transverse or, for curved culverts, radial. When radial, reinforcing spacing is measured along C/L.

CONSTRUCTION NOTES

CONCRETE: Bottom slab & walls shall be Class 560-B-3250. Top slab shall be Class 560-C-3250.

EXPANSION JOINTS: Bottom Slab - No expansion joints shall be placed.
Top Slab and Walls - When cover is less than span length, place 1/2" expansion joint filler at 50'± centers outside the paved roadway lanes and place weakened plane joints per Detail A of Weakened Planes Detail 3-2 of C-15 at 30'± centers under paved roadway lanes. When cover depth is greater than span length, place 1/2" expansion joint filler at 30'± centers and additional 1/2" expansion joints at locations of change of foundation character as directed by the Engineer.

CONSTRUCTION LOADS: Not permitted until concrete has reached a strength of 3,000 p.s.i. or age of 28 days, whichever occurs first, and falsework plans have been submitted by the Contractor to the Engineer and approved.

CONSTRUCTION JOINTS: Temporary joints may be permitted if normal (or radial) to C/L of RCB. Otherwise, the Contractor is to submit a proposal for consideration.

DESIGN NOTES

SPECIFICATIONS
DESIGN: AASHTO's publication titled A Policy on Geometric Design of Highways, dated 1994, with revisions as supplemented by State of California Bridge Planning and Design Manual.

Sections designed for culvert in a trench on hard foundation or culvert untrenched on yielding foundation. Special design will be required for culverts on piles or rock foundations.

LOADING
LIVE LOAD: For legal highway loads, use HS20-44 or alternative with 30% impact for all cover depths with no impact on invert.

COVER LESS THAN 2': Wheel load distribution on the top slab is E=0.1753+3.2 longitudinally and concentrated along the span. Wheel load distribution on the invert slab is 7.5' longitudinally and uniformly over the breadth of the culvert.

COVER 2' OR MORE: Wheel loads distributed uniformly over a square, the sides of which are 1.75 times the depth of cover, but not less longitudinally than E on the top slab, or 7.5' on the invert slab when such areas from several wheel concentrations overlap. The total load shall be considered as uniformly distributed over the area defined by the outside limits of the individual areas, but the overall longitudinal dimension shall not exceed the total length of the supporting slab. Neglect live load, on single spans when cover is more than 8' and exceeds span, and on multiple spans when cover exceeds distance between exterior walls.

DEAD LOAD: Earth load of 120 pcf and an equivalent fluid pressure of 36 pcf, reduced to 84 pcf and 25 pcf respectively for clear spans of 20' or less.

UNIT STRESSES: F_s = 20,000 psi, N = 10
F_c = 1,200 psi

Reinforcement embedment is 1-1/2 dia. clear, min 1" and in 1/4" increments, except as noted.

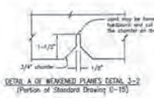
Distribution "d" bars expressed as a percent of main positive reinforcement.

Classification "A" top slab = $\frac{100}{\sqrt{\text{SPAN}}}$ max. 50% (unless traffic longitudinal)

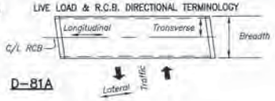
Classification "B" to "E": Top and bottom slabs #4 @ 18" max.

USE OF STANDARD DRAWING

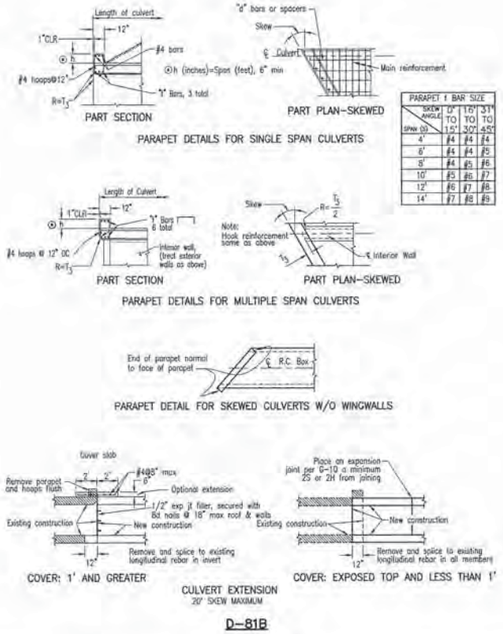
"Strength Classification," as symbolized by the letters ("A", "B", "C" or "D"), at the top of the data table is merely a convenient designation for a particular structural section for a culvert of any given opening, fill or dictated by the cover or depth of fill over the the top slab.



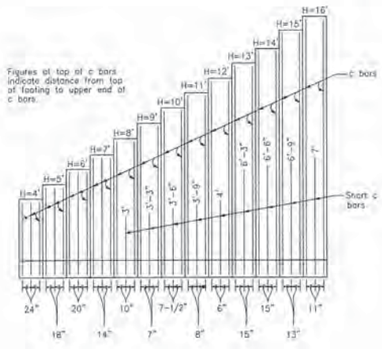
DETAIL A OF WEAKENED PLANES DETAIL 3-2
(Portion of Standard Drawing C-15)



D-81A



D-81B



TYPICAL LAYOUT EXAMPLE 1

D-79D

NO.	WORK DONE	DATE:	BY:	APP'D:
0	NEW DRAWING	10/4/12	NDL	TJD
1	ADRESSED SDG&E COMMENTS	4/12/13	NDL	TJD
2	REVISED DETAILS	7/1/13	NDL	TJD

REVISIONS

BETA ENGINEERING
PINEVILLE, LOUISIANA

SAN DIEGO GAS & ELECTRIC COMPANY
SAN DIEGO, CALIFORNIA

BOULEVARD SUBSTATION

GRADING DETAILS

DRAWN BY: NDL	DATE: 9/14/12	SCALE: AS NOTED	W.O.: 5984474	REV:	2
CHECKED BY: JAL	DATE: 10/2/12				
APPROVED BY:	DATE:				
CAD NO.: BUES91000	PLOT SCALE: 1 = 1				

BUE-S-910

May 14, 2012 - 10:17:32

ATTACHMENT D: CONDUCTOR PURCHASE ORDERS

4725 HWY 28 EAST
PINEVILLE, LA 71360
PH (318) 487-9599
FAX (318) 442-1741

Purchase Order

DATE REQUIRED: SEE NOTES

FREIGHT: FOB JOBSITE
PREPAY &
ADD

P.O. #:	B567-S-D13
REVISION: 0	ORDER DATE: 11/20/12
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
SIGNED:	Trinity Deville

signature

TO: **Agile Sourcing Partners, Inc.**
2385 Railroad Avenue
Corona, California 92880

Attn: Maria Thompson

MARK: BETA ENGINEERING CALIFORNIA LP
BOULEVARD SUBSTATION
BETA P.O. NO. B567-S-D13
DIS-TRAN JOB # 12-3249F

SHIP TO: BETA ENGINEERING CALIFORNIA LP
BOULEVARD SUBSTATION
40749 OLD HIGHWAY 80
BOULEVARD, CA 91905
ATTN: WALTER BOURGOYNE

ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	UNIT PRICE	EXTENDED PRICE
	LOT	STEEL STRUCTURES (APPROXIMATELY 15,553 LBS.) CONSISTS OF THE FOLLOWING: QTY = 1, STRUCTURE SA138-1				
	LOT	STEEL STRUCTURES (APPROXIMATELY 91,296 LBS.) CONSISTS OF THE FOLLOWING: QTY = 14, STRUCTURE SSW138-1 QTY = 1, STRUCTURE SBS138-1 QTY = 2, STRUCTURE SBS138-2 QTY = 2, STRUCTURE SBS138-3 QTY = 2, STRUCTURE STS138-1 QTY = 1, STRUCTURE SBB69-1 QTY = 3, STRUCTURE SPT69-1 QTY = 1, STRUCTURE STS12-1				
		DULLING (SWEEP BLASTING) OF GALVANIZED SURFACES (APPROXIMATELY 106,849 LBS.)			0.05/#	
					Sub-Total	
					7.75% Sales Tax	
					Agile's 1.5% Mark-up	
					Total Purchase Order Amount	

4725 HWY 28 EAST
PINEVILLE, LA 71360
PH (318) 487-9599
FAX (318) 442-1741

Purchase Order

DATE REQUIRED: SEE NOTES

FREIGHT: FOB JOBSITE PREPAID & ALLOWED

P.O. #:	B567-S-D21
REVISION: 0	ORDER DATE: 7/12/13
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
REVISION:	DATE:
SIGNED:	Trinity Deville

signature

TO: **Agile Sourcing Partners, Inc.**
2385 Railroad Avenue
Corona, California 92880

Attn: Maria Thompson

MARK: BETA ENGINEERING CALIFORNIA LP
BOULEVARD SUBSTATION PROJECT
BETA P.O. NO. B567-S-D21

SHIP TO: BETA ENGINEERING CALIFORNIA LP
BOULEVARD SUBSTATION PROJECT
40749 OLD HWY 80
BOULEVARD, CA 91905
ATTN: WALTER BOURGOYNE

ITEM	QTY	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	UNIT PRICE	EXTENDED PRICE
103	6,000	CONDUCTOR, 1590 KCM ACSR, 45/7 STRAND ACSR "LAPWING" (DAMPING CABLE INCLUDED) NON-SPECULAR				
					Subtotal	
					Sales Tax	
					Total Purchase Order Amount	

Notes to Equipment Vendor:

1. This order is in reference to Mid-State Quote 10195281-00 dated January 9, 2013.
2. Seller shall supply the cable on 17,000 foot reels. (+5/-4.5%)
3. ***Seller shall deliver the material to the jobsite near Boulevard, California by March 7, 2014. Deliveries will not be accepted before February 17, 2014.***

ATTACHMENT E: BOULEVARD SUBSTATION TRAFFIC CONTROL PLAN

SAN DIEGO GAS & ELECTRIC COMPANY

BOULEVARD SUBSTATION
TRAFFIC CONTROL PLAN

JULY 2013

SDGE

A Sempra Energy utility℠

TABLE OF CONTENTS

LIST OF ATTACHMENTS

1 – INTRODUCTION

This Traffic Control Plan (Plan) describes how San Diego Gas & Electric Company (SDG&E) and its contractors plan to reduce traffic impacts during construction of the Boulevard Substation component of the East County (ECO) Substation Project (Project). The Project involves the construction of a new 500/230/138 kilovolt (kV) ECO Substation, rebuild of the Boulevard Substation in a new location, and construction of an approximately 14-mile-long 138 kV transmission line, consisting of overhead and underground segments in southeastern San Diego County.

This Plan was prepared in accordance with Mitigation Measure (MM) TRA-1 of the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) for the Project, which includes guidelines for reducing impacts associated with construction-related traffic and procedures to be followed in the field. MM TRA-1 requires the Plan to be consistent with the California Department of Transportation's (Caltrans') standards and regulations. This Plan was developed to ensure compliance with federal, state, and local regulations, as well as the requirements stipulated by the Bureau of Land Management (BLM) and California Public Utilities Commission (CPUC) in the MMCRP.

2 – OBJECTIVES

The purpose of this Plan is to support compliance with the MMCRP throughout the duration of construction of the Boulevard Substation. The contents of this Plan are intended to accomplish the following objectives:

- Reduce impacts of construction-related traffic
- Maintain consistency with MM TRA-1, as specified in the MMCRP, as well as with relevant federal, state, and local ordinances

3 – APPLICABLE REGULATIONS

This Plan conforms to the regulatory ordinances outlined by Caltrans, the CPUC, and the County of San Diego. Ordinances to be adhered to include the following:

- Caltrans' Manual on Uniform Traffic Control Devices (MUTCD)
- Caltrans' Work Area Traffic Control Handbook (WATCH) Manual
- County of San Diego Department of Public Works Public Road Standards

4 – MITIGATION MEASURES

TRA-1: Prepare and implement a Traffic Control Plan. At minimum, the plan will include the following:

- SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the Project area to the greatest extent possible.

- SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches.

- Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration.

- Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used.

- All Caltrans' standards for utility encroachments shall be met.

- The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual.

- Clearances or overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized.

- New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur.

- For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWs).

- Utilities shall not be located in median areas.

- Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed.

- Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways.

- New installations shall not impair sight distances.

- SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts.

- SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness.

SDG&E shall provide a draft copy of the Traffic Control Plan to the agencies listed for comment a minimum of 90 days prior to the start of any construction activities. The comments will be provided back to SDG&E, and plan revisions will address each comment to the satisfaction of the commenting agency. The final plan will be submitted to the CPUC and BLM with input from commenting agencies and provided to SDG&E for implementation during all construction activities.

5 – PLAN IMPLEMENTATION

Table 1: Boulevard Substation Crosswalk for Mitigation Measure TRA-1 describes SDG&E's implementation of this Plan throughout construction of the Boulevard Substation. The guidelines outlined in Table 1: Boulevard Substation Crosswalk for Mitigation Measure TRA-1 will reduce construction-related traffic impacts; meet the regulatory ordinances set forth by federal, state, and local agencies; and establish notification requirements for emergency personnel.

6 – REFERENCES

Caltrans. 2012. MUTCD.

Caltrans. 2012. WATCH Manual.

County of San Diego Department of Public Works. March 2012. Public Road Standards.

Table 1: Boulevard Substation Crosswalk for Mitigation Measure TRA-1

Mitigation Measure Requirement	Mitigation Measure Implementation
SDG&E shall encourage carpooling to the construction site to reduce personal vehicle traffic in the project area to the greatest extent possible.	The Safe Worker and Environmental Awareness Program, which is mandatory to work on the Project ROW, encourages carpooling to and from the construction site.
SDG&E will consider the specific object sizes, weights, origin, destination, and unique handling requirements, and evaluate alternative transportation approaches.	SDG&E's construction contractor will utilize specialized equipment delivery professionals for the delivery of large equipment deliveries to the site. These professionals will consider the specific object sizes, weights, origin, destination, unique handling requirements, and evaluate alternative transportation approaches for each delivery, as needed. In addition, required permits will be obtained from appropriate cities, counties, and other agencies, such as Caltrans, as needed.
Measures such as informational signs and flaggers shall be implemented when equipment may result in blocked roadways, and traffic cones or similar shall be implemented to identify any necessary changes in temporary lane configuration.	Attachment A: Draft Curb/Grade Permit and Attachment B: Standard Traffic Control Plan describe the measures that will be implemented when equipment/material deliveries or construction activities cause blocked or restricted roadways or temporary impacts to the movement of traffic in the Project area.
Flaggers and directional guidance for bicyclists along Old Highway 80 shall be used.	If necessary during construction, flaggers and directional guidance for bicyclists and motorists along Old Highway 80 shall be used during construction of improvements to the southern access road entrance and for any equipment loading/unloading along the road shoulder in accordance with Attachment A: Draft Curb/Grade Permit and Attachment B: Standard Traffic Control Plan.
All Caltrans' standards for utility encroachments shall be met.	This measure requirement is not applicable to construction of the Boulevard Substation because no utilities will be installed within Old Highway 80, which is under the jurisdiction of the County of San Diego, as part of construction of the Boulevard Substation.
The plan shall be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices and the Work Area Traffic Control Handbook (WATCH) Manual.	Attachment A: Draft Curb/Grade Permit and Attachment B: Standard Traffic Control Plan have been developed in accordance with Caltrans's MUTCD and the WATCH Manual.

Mitigation Measure Requirement	Mitigation Measure Implementation
Clearances or overhead crossings shall conform to regulations of the CPUC and BLM, and the number of crossings shall be minimized.	This measure requirement is not applicable to construction of the Boulevard Substation because no overhead crossings are anticipated as part of construction of the substation.
New installations under an existing roadbed shall be made by the boring-and-jacking method. No trenching under the traveled way will occur.	The existing culvert under Old Highway 80 will be replaced with a new culvert as required by the County of San Diego. Traffic control procedures that will be implemented during replacement of the culvert are provided in Attachment A: Draft Curb/Grade Permit.
For freeways and expressways, the placement of longitudinal encroachments is prohibited within controlled-access rights-of-way (ROWs).	This measure requirement is not applicable to construction of the Boulevard Substation because no freeway or expressway crossings will occur as part of the construction of the substation.
Utilities shall not be located in median areas.	This measure requirement is not applicable to construction of the Boulevard Substation because no underground utility lines will be constructed in public roadways as part of the substation.
Transverse crossings shall be normal (90°) to the highway alignment where practical. If impractical, skews of up to 30° from normal may be allowed.	This measure requirement is not applicable to construction of the Boulevard Substation because no highway crossings will occur as part of the construction of the substation.
Supports for overhead lines crossing freeways shall be located outside the controlled-access ROW and not on cut-or-fill slopes, and shall not impair sight distances. All installations shall be placed as close to the ROW line as possible. Aboveground utilities shall be outside of the clear recovery zone (20 feet from edge-of-travel way for conventional highways and 30 feet for freeways and expressways). Allowance shall be made for future widening of the highways.	This measure requirement is not applicable to construction of the Boulevard Substation because no freeway or expressway crossings will occur as part of the construction of the substation.
New installations shall not impair sight distances.	The access road entrance into the Boulevard Substation will require a curb/grade permit. The County of San Diego reviews sight distances as part of the curb/grade permit application, which is included as Attachment A: Draft Curb/Grade Permit. As shown in Attachment C: Sight Distance Conformance, the final design of the access road entrance conforms to County of San Diego's sight distance requirements.

Mitigation Measure Requirement	Mitigation Measure Implementation
SDG&E shall coordinate in advance with the applicants for the other two connected actions. This effort shall include coordinating the timing of construction of the various projects to reduce potential conflicts.	SDG&E will provide notifications to Energia Sierra Juarez U.S. Transmission LLC (ESJ) as required by the mutual ROW Agreement with ESJ. SDG&E will maintain communications during construction with ESJ's project manager, Alberto Abreu. SDG&E will also maintain communications with the Tule Project management personnel and will keep them advised of the construction schedule to avoid any potential conflicts.
SDG&E shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. The County will then notify respective police, fire, ambulance, and paramedic services. SDG&E shall notify counties and cities of the proposed locations, nature, timing, and duration of any construction activities, and advise of any access restrictions that could impact their effectiveness.	SDG&E has met with the United States Customs and Border Patrol, County of San Diego, Carrizo Gorge Railway Police, San Diego Rural Fire Protection District, San Diego County Fire Authority, and the San Diego County Sheriff's Department regarding the location of the Project, as well as the nature, timing, and duration of the anticipated construction activities and potential access restrictions. Specific threats and risks to the Project have also been discussed with many of these agencies. Attachment D: Agency Briefing Summary describes the coordination efforts that SDG&E has engaged in with these agencies to date. Communications with all of these agencies are ongoing and will be maintained throughout construction by Jack Strumpsky (Security Lead) and Dennis Baldridge (Project Fire Marshall) of SDG&E. SDG&E will continue to provide updates on schedule and access restrictions that could affect Project workers, the agencies, or the community.

ATTACHMENT A: DRAFT CURB/GRADE PERMIT

EAST COUNTY SUBSTATION PROJECT

BOULEVARD SUBSTATION FRONTAGE IMPROVEMENTS

PRIVATE DRIVEWAY PLANS & CULVERT UPGRADE

GENERAL NOTES

1. A PERMIT SHALL BE OBTAINED FROM THE SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY WORK WITHIN THE COUNTY PUBLIC STREET RIGHT-OF-WAY.
2. THE STRUCTURAL SECTION SHALL BE IN ACCORDANCE WITH SAN DIEGO COUNTY STANDARDS AND AS APPROVED BY THE COUNTY'S MATERIALS LABORATORY.
3. APPROVAL OF THESE IMPROVEMENT PLANS AS SHOWN DOES NOT CONSTITUTE APPROVAL OF ANY CONSTRUCTION OUTSIDE THE PROJECT BOUNDARY.
4. IMPORT MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE.
5. ALL SLOPES OVER THREE FEET IN HEIGHT WILL BE PLANTED IN ACCORDANCE WITH SAN DIEGO COUNTY SPECIFICATIONS.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY AGENCIES, ADVISE THEM OF THE PROPOSED IMPROVEMENTS AND BEAR THE COST OF RELOCATIONS, IF NEEDED.
7. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE FOLLOWING AGENCIES: SAN DIEGO GAS & ELECTRIC, PACIFIC BELL, CABLE TV, WATER DISTRICT, AND SANITATION DISTRICT.
8. A SOILS REPORT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
9. LOCATION AND ELEVATION OF IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR WILL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
10. ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PRODUCE A CONTOURED TRANSITION FROM CUT OR FILL FACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.
11. NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE GRADING ORDINANCE AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE PERMITTEE IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PUBLIC STREET, SIDEWALK ALLEY, FUNCTION OF ANY SEWAGE DISPOSAL SYSTEM, OR ANY OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING, EROSION SILTING, SCOUR OR OTHER DAMAGE WHICH MIGHT RESULT FROM THE GRADING DESCRIBED ON THIS PLAN. THE COUNTY WILL HOLD THE PERMITTEE RESPONSIBLE FOR CORRECTION OF NON-DEPICTED IMPROVEMENTS WHICH DAMAGE ADJACENT PROPERTY.
12. POWER SOURCES AND RUNS SERVING STREET LIGHTS SHALL BE SHOWN ON THE "AS-BUILT " IMPROVEMENT DRAWINGS. ALL SOURCES SHALL BE LOCATED WITHIN THE DEDICATED RIGHT-OF-WAY, OR WITHIN EASEMENTS DEDICATED TO THE COUNTY OF SAN DIEGO.
13. SPECIAL CONDITION: IF ANY ARCHEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE OF THIS GRADING DURING GRADING OPERATIONS, SUCH OPERATIONS WILL CEASE IMMEDIATELY, AND THE PERMITTEE WILL NOTIFY THE DIRECTOR OF PUBLIC WORKS OF THE DISCOVERY. GRADING OPERATIONS WILL NOT RECOMMENCE UNTIL THE PERMITTEE HAS RECIEVED WRITTEN AUTHORITY FROM THE DIRECTOR OF PUBLIC WORKS.
14. PRIVATE ROAD IMPROVEMENTS SHOWN HEREON ARE FOR INFORMATION ONLY. COUNTY OFFICIALS SIGNATURE HEREON DOES NOT CONSTITUTE APPROVAL OR RESPONSIBILITY OF ANY KIND FOR THE DESIGN OR CONSTRUCTION OF THESE PRIVATE IMPROVEMENTS. (IF APPLICABLE)
15. FINISHED GRADING SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER AND INSPECTED BY THE COUNTY ENGINEER FOR DRAINAGE CLEARANCE.
16. CONTRACTOR TO PROVIDE R-VALUE TEST RESULTS.
17. WORKING HOURS WILL BE 7 AM TO 7 PM, MONDAY THROUGH SATURDAY.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATION BY THE COUNTY OF SAN DIEGO IS CONFINED TO REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

BY: _____ DATE: _____
ALISA S. VIALPANDO

RCE NO. 47945 EXPIRES: _____

CONTRACTOR'S NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRATOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD COUNTY OF SAN DIEGO HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF COUNTY OF SAN DIEGO PROFESSIONALS.

ENGINEER'S NOTE

UNAUTHORIZED CHANGES & USES: THE ENGINEER OF WORK PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

BASIS OF COORDINATES

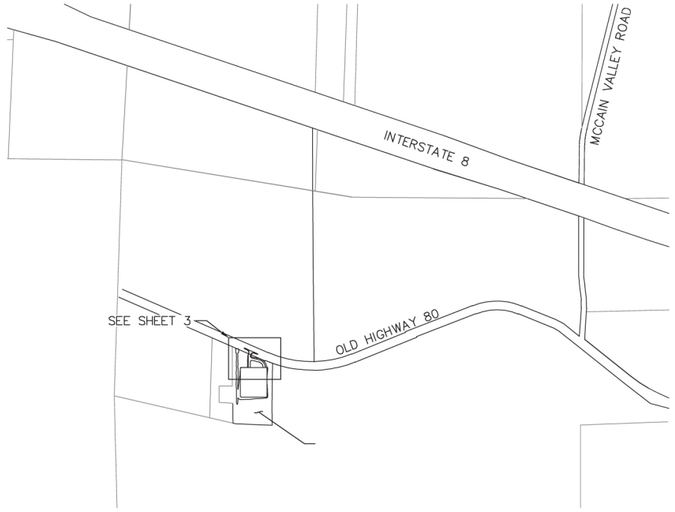
THE BASIS OF COORDINATES OF THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM, ZONE 6, NAD 83 (1992). THE COORDINATES ARE DISPLAYED IN US SURVEY FEET. THE BASIS OF ELEVATIONS IS NAVD 88. ELEVATIONS ARE DISPLAYED IN US SURVEY FEET.

TOPOGRAPHY

SITE TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY INLAND AERIAL SURVEYS, INC. (PROJECT NO. 08-77231) FOR NOLTE & ASSOCIATES DATED FEBRUARY 28, 2008 AND JANUARY 12, 2012.

LEGAL DESCRIPTION

THIS PRIVATE ACCESS ROAD IS A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 17 SOUTH, RANGE 7 EAST, SAN BERNARDINO MERIDIAN IN THE OF COUNTY OF SAN DIEGO, CALIFORNIA.



KEY MAP

SCALE: 1" = 800'

IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE, ACCORDING TO THESE PLANS, THE CURRENT SAN DIEGO COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR IMPROVEMENTS OF SUBDIVISION STREETS AND STANDARD REFERENCE DRAWINGS. WATER FACILITIES WORK SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DRAWINGS OF THE WATER DISTRICT.

AC	ASPHALT CONCRETE PAVING		PROPOSED ASPHALT
BP	BEGINNING POINT		PROPOSED P.C.C.
CL	CENTERLINE		RIGHT-OF-WAY LINE
(EG)	EXISTING GRADE		CENTERLINE
EOP	EDGE OF PAVEMENT		TRAFFIC SIGN
FG	FINISHED GRADE		EDGE OF PAVEMENT
FL	FLOW LINE	3110	PROPOSED CONTOURS
GB	GRADE BREAK	3100	EXISTING CONTOURS
EP	EDGE OF PAVEMENT	F	EXISTING U.G. FIBER OPTIC
RD	ROAD		DOUBLE BOX CULVERT(C.I.P.) & WINGWALLS PER SDRSD D-77A&G AND D-79A&B
EA	EACH		RIP RAP PER SDRSD D-40 & PLAN
RP	RADIUS POINT		
ROW	RIGHT OF WAY		
GB	GRADE BREAK		
ETW	EDGE OF TRAVEL WAY		
EX	EXISTING		
RC	RELATIVE COMPACTION		
TW	TOP OF WALL		
PCR	POINT OF CURB RETURN		
BVC	BEGIN VERTICAL CURVE		
EVC	EVC VERTICAL CURVE		

SHEET INDEX:

WITH REGARD ONLY TO THE WORK SHOWN ON THESE PLANS FOR THE SDG&E EAST COUNTY SUBSTATION GRADING AND ACCESS ROAD OVER APN 661-041-03, THE DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES (PDS) FOR THE COUNTY OF SAN DIEGO ACKNOWLEDGES THAT SAN DIEGO GAS & ELECTRIC (SDG&E) HAS CONSULTED WITH PDS REGARDING THOSE LAND USE MATTERS WITHIN SCOPE OF PDS'S REVIEW AUTHORITY IN THE MANNER REQUIRED BY SECTION XIV(B) OF CALIFORNIA PUBLIC UTILITIES COMMISSION, GENERAL ORDER 131-D, DECISION 94-06-14 AS MODIFIED BY DECISION 95-08-038.

_____
FOR COUNTY ENGINEER DATE

STORMWATER TREATMENT CONTROL BMPS			
DESCRIPTION/TYPE	SHEET	MAINTENANCE CATEGORY	REVISIONS
N/A			

*BMP'S TO BE INSTALLED PER PROJECT SWPPP AND WDID NO._____

UNDERGROUND SERVICE ALERT

CALL:TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

"CAUTION":
REMEMBER THAT THE USA CENTER NOTIFIES ONLY THOSE UTILITIES BELONGING TO THE CENTER. THERE COULD BE OTHER UTILITIES PRESENT AT THE WORK SITE. THE CENTER WILL INFORM YOU OF WHOM THEY WILL NOTIFY.

HUNSAKER & ASSOCIATES SAN DIEGO, INC
PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 FX(858)558-1414

LEGAL DESCRIPTION
ASSESSORS PARCEL NO. _____

RECORD PLAN
NAME: _____
R.C.E. _____
DATE: _____

ENGINEER OF WORK

REGISTERED PROFESSIONAL ENGINEER ALISA S. VIALPANDO No. 47945 Exp. 12/31/13 CIVIL STATE OF CALIFORNIA

NAME: ALISA S. VIALPANDO
PHONE NO. 858-558-4500
ADDRESS: 9707 WAPLES STREET SAN DIEGO, CA 92121

COUNTY APPROVED CHANGES

NO.	DESCRIPTION	APPROVED BY	DATE

BENCH MARK
NAME: H116
LOCATION: N 1838891.823 E 6422319.031
DESCRIPTION: USBM
ELEVATION: 2442.400' DATUM: NAVD 88

PRIVATE CONTRACT

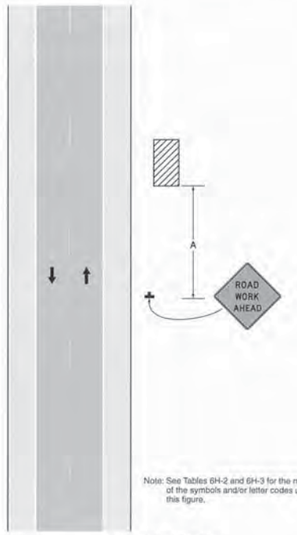
SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	3 SHEETS
1		

IMPROVEMENT PLAN FOR:
BOULEVARD SUBSTATION FRONTAGE TITLE SHEET

RECOMMENDED FOR APPROVAL	APPROVED:	
ENGINEER OF WORK ALISA S. VIALPANDO R.C.E. 47945 EXP. 12/31/2013	CHECKED BY: APPROVAL DATE:	IMPROVEMENT PLAN NO. CG

ENGINEER'S NAME: ALISA S. VIALPANDO, HUNSAKER & ASSOCIATES SAN DIEGO, INC.
PHONE NO: 858-558-4500

Figure 6H-1. Work Beyond the Shoulder (TA-1)



Typical Application 1

Notes for Figure 6H-1—Typical Application 1
Work Beyond the Shoulder

Guidance:

1. *If the work space is in the median of a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.*

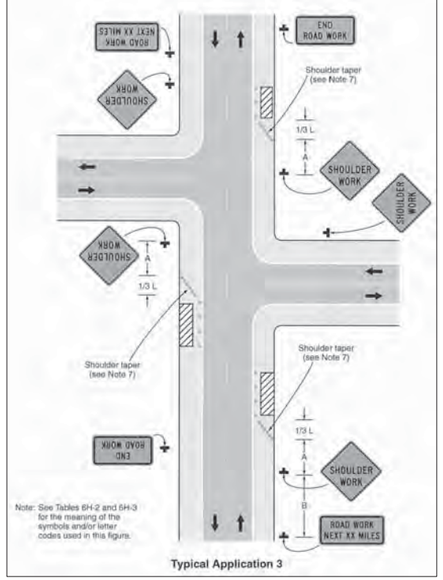
Option:

2. The ROAD WORK AHEAD sign may be replaced with other appropriate signs such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.
3. The ROAD WORK AHEAD sign may be omitted where the work space is behind a barrier, more than 24 inches behind the curb, or 15 feet or more from the edge of any roadway.
4. For short-term, short duration or mobile operation, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
5. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Figure 6H-3. Work on the Shoulders (TA-3)



Typical Application 3

Notes for Figure 6H-3—Typical Application 3
Work on the Shoulders

Guidance:

1. *A SHOULDER WORK sign should be placed on the left side of the roadway for a divided or one-way street only if the left shoulder is affected.*

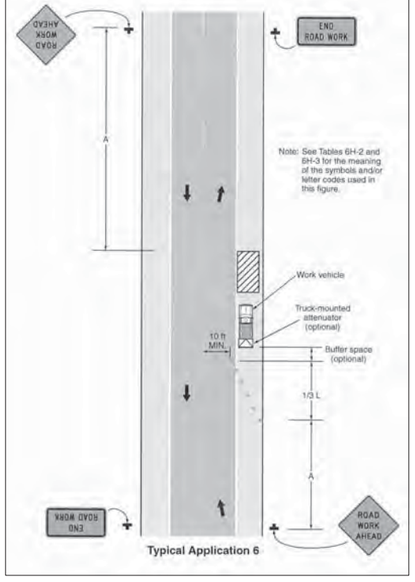
Option:

2. The Workers symbol sign may be used instead of SHOULDER WORK signs.
3. The SHOULDER WORK AHEAD sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
4. For short duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
5. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.
7. When paved shoulders having a width of 8 feet or more are closed, at least one advance warning sign shall be used. In addition, channelizing devices shall be used to close the shoulder in advance to delineate the beginning of the work space and direct vehicular traffic to remain within the traveled way.

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Typical Application 6

Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

Guidance:

1. *All lanes should be a minimum of 10 feet in width as measured to the near face of the channelizing devices.*
2. *The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.*

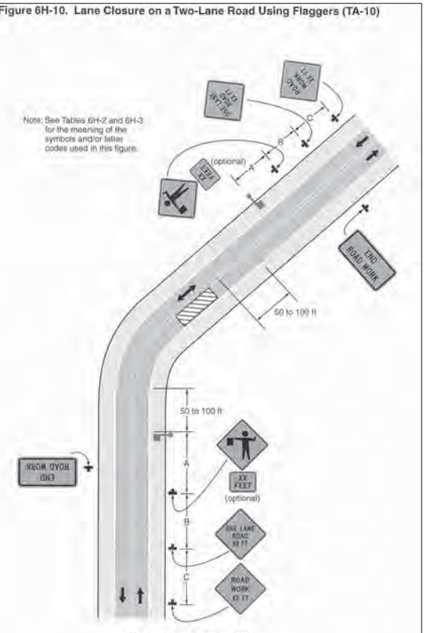
Option:

3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 9 feet may be used.
4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely-spaced channelizing devices, provided that the minimum lane width of 10 feet is maintained.
5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
6. Temporary traffic barriers may be used along the work space.
7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
8. A truck-mounted attenuator may be used on the shadow vehicle.
9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

11. Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.
12. Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.
13. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Figure 6H-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)



Typical Application 10

Notes for Figure 6H-10—Typical Application 10
Lane Closure on a Two-Lane Road Using Flaggers

Option:

1. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).
2. The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short-duration operations.
3. Flashing warning lights and/or flags may be used to call attention to the advance warning signs. A BE PREPARED TO STOP sign may be added to the sign series.

Guidance:

4. *The buffer space should be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.*

Standard:

5. At night, flagger stations shall be illuminated, except in emergencies.

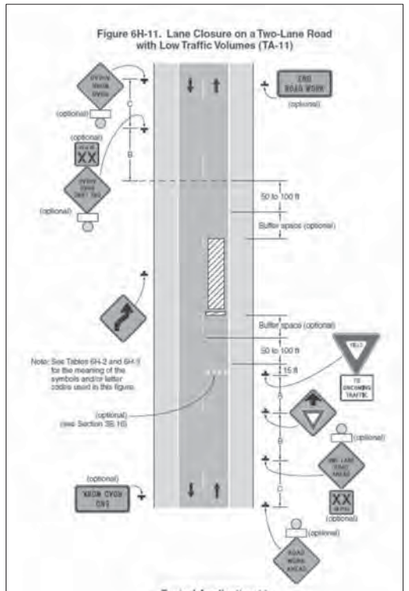
Guidance:

6. *When used, the BE PREPARED TO STOP sign should be located between the Flagger sign and the ONE LANE ROAD sign.*
7. *When a grade crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the grade crossing, the TTC zone should be extended so that the transition area precedes the grade crossing.*
8. *When a grade crossing equipped with active warning devices exists within the activity area, provisions should be made for keeping flaggers informed as to the activation status of these warning devices.*
9. *When a grade crossing exists within the activity area, drivers operating on the left-hand side of the normal center line should be provided with comparable warning devices as for drivers operating on the right-hand side of the normal center line.*
10. *Early coordination with the railroad company or light rail transit agency should occur before work starts.*

Option:

11. A flagger or a uniformed law enforcement officer may be used at the grade crossing to minimize the probability that vehicles are stopped within 15 feet of the grade crossing, measured from both sides of the outside rails.

Figure 6H-11. Lane Closure on a Two-Lane Road with Low Traffic Volumes (TA-11)



Typical Application 11

Notes for Figure 6H-11—Typical Application 11
Lane Closure on a Two-Lane Road with Low Traffic Volumes

Option:

1. This TTC zone application may be used as an alternate to the TTC application shown in Figure 6H-10 (using flaggers) when the following conditions exist:
   a. Vehicular traffic volume is such that sufficient gaps exist for vehicular traffic that must yield.
   b. Road users from both directions are able to see approaching vehicular traffic through and beyond the worksite and have sufficient visibility of approaching vehicles.
2. The Type B flashing warning lights may be placed on the ROAD WORK AHEAD and the ONE LANE ROAD AHEAD signs whenever a night lane closure is necessary.

Table 6H-2. Meaning of Symbols on Typical Application Diagrams

Arrow board	Shadow vehicle
Arrow board support or trailer (shown facing down)	Sign (shown facing left)
Changeable message sign or support trailer	Surveyor
Channelizing device	Temporary barrier
Crash cushion	Temporary barrier with warning light
Direction of temporary traffic detour	Traffic or pedestrian signal
Direction of traffic	Truck-mounted attenuator
Flagger	Type 3 barricade
High-level warning device (Flag tree)	Warning light
Longitudinal channelizing device	Work space
Luminaire	Work vehicle
Pavement markings that should be removed for a long-term project	

Table 6H-3. Meaning of Letter Codes on Typical Application Diagrams

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,000 feet	2,640 feet

* Speed category to be determined by highway agency

** The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

Table 6H-4. Formulas for Determining Taper Length

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
45 mph or more	$L = WS$

Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

NOTE: TRAFFIC CONTROL PER ATTACHED CALTRANS' MUTCD TYPICAL APPLICATIONS, (IN CONJUNCTION WITH THE WORK AREA TRAFFIC CONTROL HANDBOOK) IS FOR DRIVEWAY/PRIVATE ROAD CONSTRUCTION IN COUNTY RIGHT-OF-WAY

WITH REGARD ONLY TO THE WORK SHOWN ON THESE PLANS FOR THE SDG&E EAST COUNTY SUBSTATION GRADING AND ACCESS ROAD OVER APN 661-041-03, THE DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES (PDS) FOR THE COUNTY OF SAN DIEGO ACKNOWLEDGES THAT SAN DIEGO GAS & ELECTRIC (SDG&E) HAS CONSULTED WITH PDS REGARDING THOSE LAND USE MATTERS WITHIN SCOPE OF PDS'S REVIEW AUTHORITY IN THE MANNER REQUIRED BY SECTION XIV(B) OF CALIFORNIA PUBLIC UTILITIES COMMISSION, GENERAL ORDER 131-D, DECISION 94-06-14 AS MODIFIED BY DECISION 95-08-038.

FOR COUNTY ENGINEER _____ DATE _____

HUNSAKER & ASSOCIATES SAN DIEGO, INC

PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 FX(858)558-1414

LEGAL DESCRIPTION

ASSESSORS PARCEL NO. _____

RECORD PLAN

NAME: _____
R.C.E. _____
DATE: _____

ENGINEER OF WORK

REGISTERED PROFESSIONAL ENGINEER ALISA S. VIALPANDO No. 47945 Exp. 12/31/13 CIVIL STATE OF CALIFORNIA

NAME: ALISA S. VIALPANDO
PHONE NO. 858-558-4500
ADDRESS: 9707 WAPLES STREET SAN DIEGO, CA 92121

COUNTY APPROVED CHANGES

NO.	DESCRIPTION	APPROVED BY	DATE

BENCH MARK

NAME: H116
LOCATION: N 1838891.823 E 6422319.031
DESCRIPTION: USBM
ELEVATION: 2442.400' DATUM: NAVD 88

PRIVATE CONTRACT

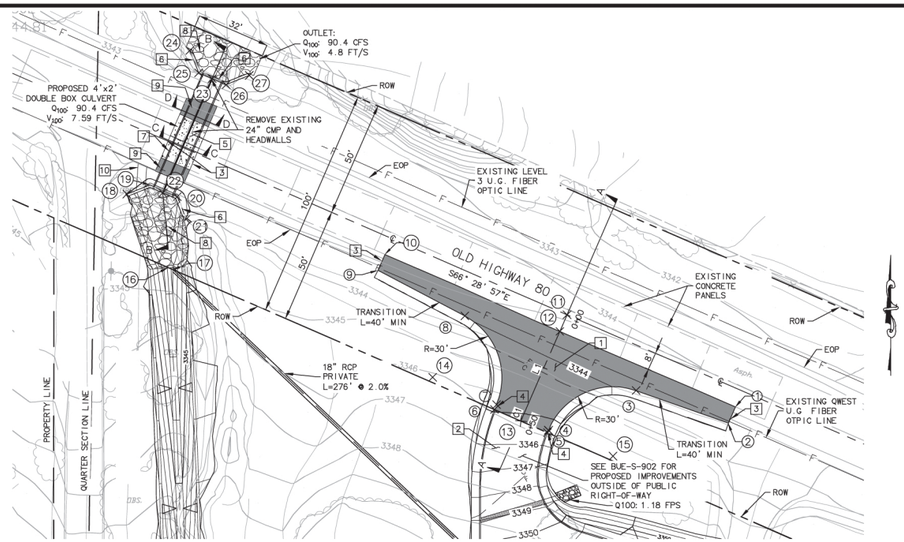
SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	SHEETS
2		3

IMPROVEMENT PLAN FOR:

BOULEVARD SUBSTATION FRONTAGE
TRAFFIC CONTROL DETAILS

RECOMMENDED FOR APPROVAL	APPROVED:
ENGINEER OF WORK ALISA S. VIALPANDO R.C.E. 47945 EXP. 12/31/2013	CHECKED BY: CG / APPROVAL DATE: / IMPROVEMENT PLAN NO.

ENGINEER'S NAME: ALISA S. VIALPANDO, HUNSAKER & ASSOCIATES SAN DIEGO, INC.
PHONE NO: 858-558-4500



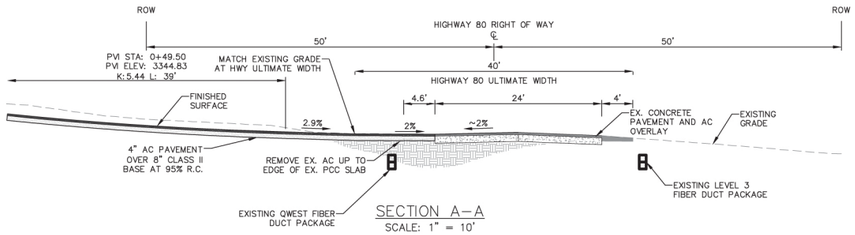
ACCESS TO OLD HIGHWAY 80
SCALE 1: = 30'

POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
1	1821047.27	6554847.23	3,343.59'	EG
2	1821040.23	6554844.20	3,343.44'	FG
3	1821054.27	6554804.30	3,343.97'	PCR
4	1821037.15	6554766.50	3,345.26'	PCR/AC BERM
5	1821036.13	6554768.11	3,345.50'	FG
6	1821046.11	6554743.16	3,344.94'	FG
7	1821048.22	6554744.03	3,344.76'	PCR/AC BERM
8	1821086.52	6554730.39	3,344.00'	PCR
9	1821106.21	6554692.95	3,344.00'	FG

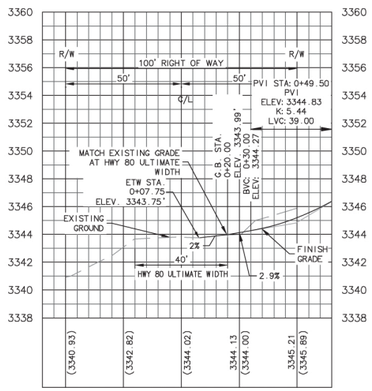
POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
10	1821113.04	6554695.91	3,344.15'	EG
11	1821086.99	6554774.53	3,344.02'	FG
12	1821079.85	6554771.42	3,343.75'	EG
13	1821041.12	6554754.63	3,345.21'	FG
14	1821059.97	6554716.42		RADIUS POINT
15	1821025.98	6554794.34		RADIUS POINT
16	1821107.19	6554602.00	3,341.59'	FL
17	1821106.50	6554604.32	3,342.00'	FL
18	1821139.13	6554584.41	3,343.25'	TW

POINT DATA TABLE				
NUMBER	STATE PLANE NORTHING	STATE PLANE EASTING	ELEVATION	DESCRIPTION
19	1821143.09	6554594.49	3,344.00'	TW
20	1821137.97	6554606.25	3,344.00'	TW
21	1821128.28	6554610.07	3,343.25'	TW
22	1821139.61	6554599.97	3,340.27'	FL
23	1821188.92	6554621.25	3,339.73'	FL
24	1821201.08	6554611.63	3,342.23'	TW
25	1821191.40	6554615.49	3,343.73'	TW
26	1821186.33	6554627.27	3,343.73'	TW
27	1821190.33	6554637.33	3,342.23'	TW

HORIZONTAL CENTERLINE DATA					
SEGMENT	START STATION	END STATION	BEARING/DELTA	RADIUS	DISTANCE
L1	0+00.00	0+46.96	S23° 31' 03"W		46.96'
C1	0+46.96	0+50.00	2° 10' 40"	80.00'	3.04'



SECTION A–A
SCALE: 1" = 10'



ENTRY PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

QUANTITIES

1	PAVEMENT SECTION:	2778 SF
2	CONSTRUCTION ENTRANCE:	863 SF
3	SAWCUT:	82 LF
4	6" AC BERM:	4 LF
5	CONCRETE SECTION:	276 SF
6	D-79A WINGWALL:	2 EA
7	D-77A&G 4'x2' DOUBLE RCB:	54 LF
8	RIP-RAP ¼ TON ROCK CLASS T=2.7 FT.(PER D-40,TYPE I FOR DOWNSTREAM RIP-RAP)	111 CY
9	PAVEMENT SECTION:	206 SF
10	D-22 SPILLWAY:	11 LF

EARTHWORK QUANTITIES

CUT:	21 CY
FILL:	5 CY
NET:	16 CY

DISTURBED AREA

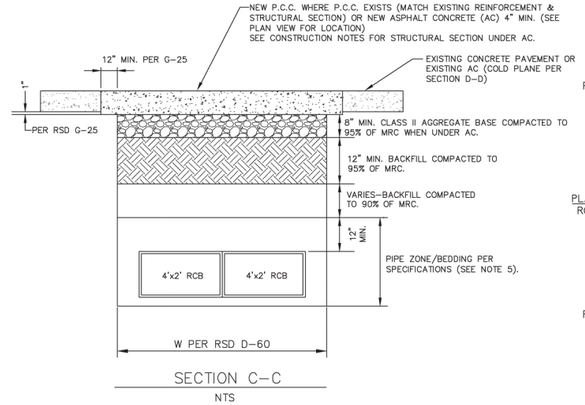
ROAD	3,884 SF
LENGTH OF ACCESS ROAD:	42 LF

CONSTRUCTION NOTE:

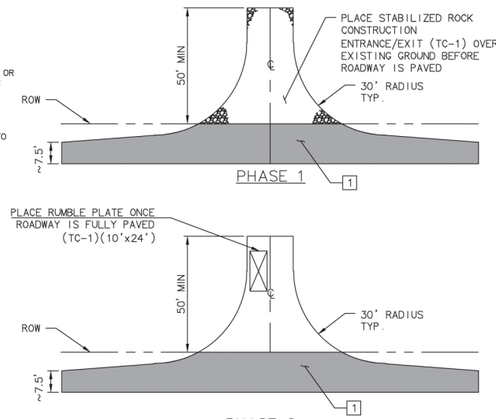
1. CONSTRUCT 4" ASPHALT CONCRETE OVER 8" CLASS II AGGREGATE BASE. REQUIRES COUNTY OF SD LAB APPROVAL AND R-VALUE TESTING WITH REPORT TO COUNTY OF SD LAB PRIOR TO CONSTRUCTION.
2. CONSTRUCT STABILIZED CONSTRUCTION APPROACH PER TC-1.
3. SAWCUT EXISTING AC PAVEMENT AND JOIN TO EXISTING CONCRETE PANELS.
4. CONSTRUCT 6" TYPE 'A' AC DIKE PER SAN DIEGO REGIONAL STANDARD DRAWING G-5.
5. INSTALL ASPHALT CONCRETE PAVEMENT (4" MIN. THICKNESS) PER MODIFIED SD COUNTY DESIGN STANDARD DS-22 SHOWN HEREON.
6. CONSTRUCT WINGWALL PER SDRSD D79-A.
7. PROVIDE CONSTRUCTION TRAFFIC CONTROL AS APPROPRIATE TA-6, TA-10 OR TA-11 RESTORE TO TWO LANE OPERATION AT NIGHT WITH TA-1,TA-3 OR TA-6 AT NIGHT AS APPROPRIATE PER DETAIL ON SHEET 2.
8. WORKING DRAWINGS SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL.
9. SAWCUT AND JOIN EXISTING AC PAVEMENT.

NOTE:

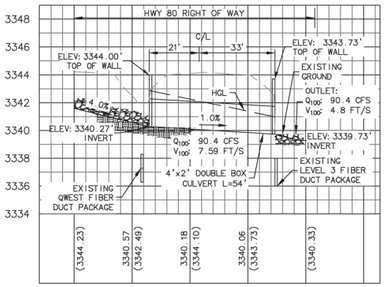
1. THE PAVEMENT STRUCTURAL SECTION SUBGRADE SHALL BE PREPARED AS FOLLOWS: 12 INCHES OF SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO 95% RELATIVE COMPACTION PER ASTM D1557. IN ADDITION THE SUBGRADE SHOULD BE PROOF ROLLED TO ELIMINATE PUMPING OF SUBGRADE.
2. STABILIZED ROCK SHALL BE CRUSHED AGGREGATE GREATER THAN 3" BUT SMALLER THAN 6." COMPACT TO FILL VOID SPACES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
3. ANGLE OF DEPARTURE BETWEEN CARRIZO GORGE ROAD AND SDG&E MAINTENANCE PAD ACCESS ROAD IS 2.8% WHICH IS LESS THAN THE MAXIMUM ANGLE OF DEPARTURE OF 7.0% PER SECTION 6.7N OF THE COUNTY OF SAN DIEGO PUBLIC ROAD STANDARDS (2012)
4. TC-1 PER STORM WATER BMP HAND BOOK. ROCK SHALL BE COMPACED PER NOTE ABOVE.
5. EXISTING UNDERGROUND FACILITIES IN THE ROAD RIGHT-OF-WAY TO BE PROTECTED IN PLACE OR RESTORED IN KIND.



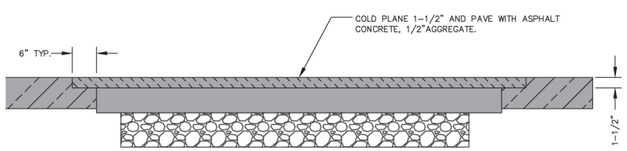
SECTION C–C
NTS



CONSTRUCTION PHASING PLAN
NTS



SECTION B–B
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'



SECTION D–D
NTS

TRENCH SURFACING DETAILS

TRENCH SURFACING NOTES:

1. PAVEMENT MATERIAL AND SURFACING SHALL MATCH EXISTING.
2. ALL REMOVED SURFACE IMPROVEMENTS (CURBS, DIKES, ETC.) SHALL BE REPLACED IN KIND.
3. ALL AREAS OF EXISTING PAVEMENT AC LESS THAN 48" WIDE REMAINING AFTER TRENCHING SHALL BE COLD PLANED AND PAVED PER SECTION E-E.
4. SECTION C-C PAVEMENT THICKNESS SHALL EQUAL EXISTING PAVEMENT THICKNESS PLUS 1" PER RSD G-25 OR G-24.
5. WHEN GRAVEL OR ROCK IS USED WITHIN THE PIPE ZONE, THAT MATERIAL SHALL BE ENCAPSULATED IN A FILTER FABRIC ENVELOPE WITH W/2 > 12" MINIMUM OVERLAP. THIS REQUIREMENT APPLIES ONLY TO TRENCHES UNDER OR WITHIN 10' OF SURFACING.
6. D-D PAVING SHALL BE COMPLETED NO EARLIER THAN 14 CALENDAR DAYS AND NO LATER THAN 75 CALENDAR DAYS AFTER SECTION C-C PAVING.
7. FOR AC PAVEMENT REFER TO RSD G-24.

WITH REGARD ONLY TO THE WORK SHOWN ON THESE PLANS FOR THE SDG&E EAST COUNTY SUBSTATION GRADING AND ACCESS ROAD OVER APN 661-041-03, THE DEPARTMENT OF PLANNING AND DEVELOPMENT SERVICES (PDS) FOR THE COUNTY OF SAN DIEGO ACKNOWLEDGES THAT SAN DIEGO GAS & ELECTRIC (SDG&E) HAS CONSULTED WITH PDS REGARDING THOSE LAND USE MATTERS WITHIN SCOPE OF PDS'S REVIEW AUTHORITY IN THE MANNER REQUIRED BY SECTION XIV(B) OF CALIFORNIA PUBLIC UTILITIES COMMISSION, GENERAL ORDER 131-D, DECISION 94-06-14 AS MODIFIED BY DECISION 95-08-038.

FOR COUNTY ENGINEER DATE

INSPECTIONS

TO REQUEST AN INSPECTION, CALL PRIVATE DEVELOPMENT CONSTRUCTION INSPECTION DURING NORMAL BUSINESS HOURS AT (858) 694-3165 AT LEAST 24 HOURS BEFORE START AND FINISH OF WORK. WHEN CALLING FOR AN INSPECTION, REFER TO THE COMPUTER GENERATED TRAFFIC PERMIT NUMBER AND THE JOB SITE ADDRESS OF YOUR SITE. IN MOST CASES, CONSTRUCTION INSPECTION REQUIRES ONE (1) WORKING DAY NOTICE FOR INSPECTIONS. WE MAY NOT BE ABLE TO PROVIDE NEXT DAY INSPECTIONS IN SOME OF THE MORE REMOTE AREAS OF THE COUNTY OF SAN DIEGO. PLEASE VERIFY WITH THE PERSON TAKING THE INSPECTION REQUEST WHAT DAY THE INSPECTOR WILL BE OUT TO THE SITE.

HUNSAKER & ASSOCIATES
SAN DIEGO, INC
PLANNING 9707 Waples Street
ENGINEERING San Diego, Ca 92121
SURVEYING PH(858)558-4500 · FX(858)558-1414

LEGAL DESCRIPTION

ASSESSORS PARCEL NO. _____

RECORD PLAN

NAME: _____
R.C.E. _____
DATE: _____

ENGINEER OF WORK

REGISTERED PROFESSIONAL ENGINEER ALISA S. VIALPANDO No. 47945 Exp. 12/31/13 CIVIL STATE OF CALIFORNIA

NAME: ALISA S. VIALPANDO
PHONE NO. 858-558-4500
ADDRESS: 9707 WAPLES STREET SAN DIEGO, CA 92121

COUNTY APPROVED CHANGES

NO.	DESCRIPTION	APPROVED BY	DATE

BENCH MARK

NAME: H116
LOCATION: N 1838891.823 E 6422319.031
DESCRIPTION: USBM
ELEVATION: 2442.400' DATUM: NAVD 88

PRIVATE CONTRACT

SHEET	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	SHEETS
3		3

IMPROVEMENT PLAN FOR:

BOULEVARD SUBSTATION FRONTAGE TRANSITION PAVING & CULVERT REPLACEMENT PLAN

RECOMMENDED FOR APPROVAL	APPROVED:
ENGINEER OF WORK ALISA S. VIALPANDO R.C.E. 47945 EXP. 12/31/2013	CHECKED BY: / APPROVAL DATE:
	IMPROVEMENT PLAN NO. CG

ENGINEER'S NAME: ALISA S. VIALPANDO, HUNSAKER & ASSOCIATES SAN DIEGO, INC.
PHONE NO: 858-558-4500

ATTACHMENT B: STANDARD TRAFFIC CONTROL PLAN

Beta Engineering
4725 Highway 28 East
Pineville, LA 71360
phone 318.487.9599
fax 318.442.1741
betaengineering.com

July 15, 2013

San Diego Gas & Electric
1010 Tavern Road, Building 1
Alpine, CA 91901

Attn: Jennifer Kaminsky

Subject: SDG&E East County Substation Project – Boulevard Substation
Traffic Control Plan for Offloading Equipment
Beta Project No. B567
Beta Ref. No. B567-L039

To whom it may concern,

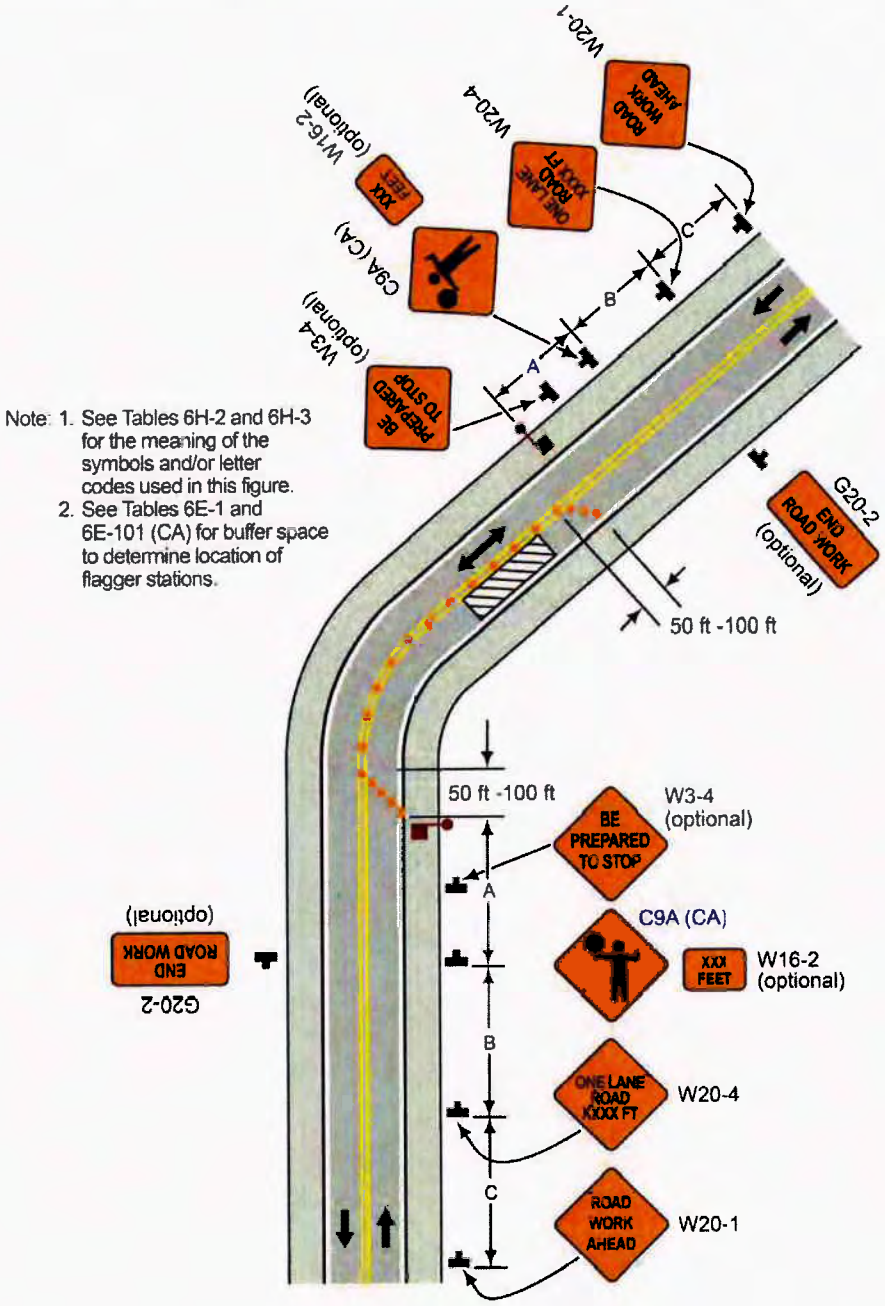
Beta Engineering is submitting the standard Traffic Control Plan for offloading equipment for the above referenced project. Equipment will be unloaded within the project Right-of-Way whenever available. However, equipment may need to be unloaded on public roadways adjacent to the project Right-of-Way for initial access to the project components. These equipment unloading locations include: Old Hwy 80 at the Boulevard Substation entrance. These equipment unloading locations will be used minimally until fully accessible travel ways have been established on the project Right-of-Way to prevent impacts to traffic on these public roadways.
Traffic control work for offloading equipment will follow the standards from the 2012 Edition of the California Manual on Uniform Traffic Control Devices (MUTCD, 2012 ed.). Traffic control work will specifically follow the plans outlined in Figure 6H-10 (CA),"Lane Closures on a Two-Lane Road Using Flaggers" and Table 6E-101 (CA), "Longitudinal Buffer Space or Flagger Station Spacing on Downgrades'. These documents are attached for your reference.

Sincerely,

BETA ENGINEERING CALIFORNIA LP

Dane Anderson
Assistant Project Manager

Figure 6H-10 (CA). Lane Closure on Two-Lane Road Using Flaggers (TA-10)



Typical Application 10

Table 6E-1. Stopping Sight Distance as a Function of Speed

Speed*	Distance
20 mph	115 feet
25 mph	155 feet
30 mph	200 feet
35 mph	250 feet
40 mph	305 feet
45 mph	360 feet
50 mph	425 feet
55 mph	495 feet
60 mph	570 feet
65 mph	645 feet
70 mph	730 feet
75 mph	820 feet

* Posted speed, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed.
Can also be used as Stopping Sight Distance as suggested buffer space length or location for flagger station.

Table 6E-101(CA). Longitudinal Buffer Space or Flagger Station Spacing on Downgrades

Speed (mph)	% Downgrade (Buffer Space)		
	-3% (feet)	-6% (feet)	-9% (feet)
20	116	120	126
25	158	165	173
30	205	215	227
35	257	271	287
40	315	333	354
45	378	400	427
50	446	474	507
55	520	553	593
60	598	638	686
65	682	728	785
70	771	825	891

* Exhibit 3-2. A Policy on Geometric Design of Highways and Streets, AASHTO, 2001, p.115.

ATTACHMENT C: SIGHT DISTANCE CONFORMANCE

Beta Engineering
9990 Mesa Rim Rd. Ste. 150
San Diego, CA 92121

phone 858.750.2370
fax 858.750.2375
betaengineering.com

May 6, 2013

Richard E. Crompton, Deputy Director
County of San Diego
Department of Public Works, MS O336
5555 Overland Avenue
San Diego, CA 92123

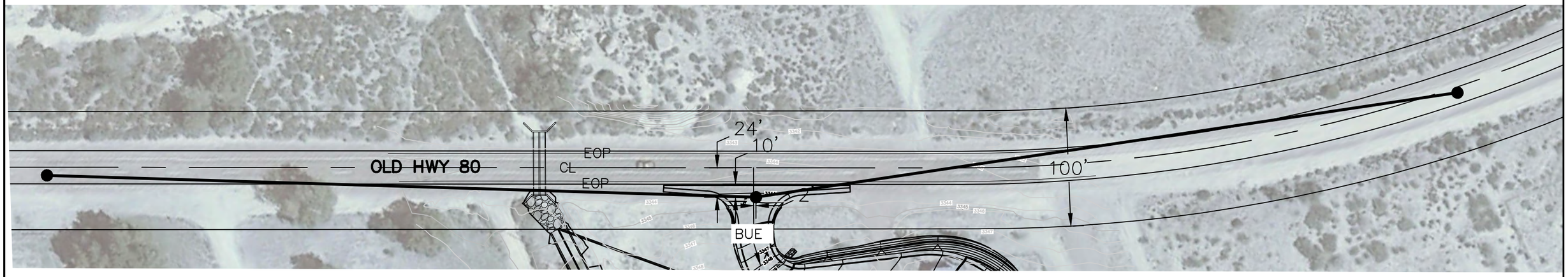
LAND DEVELOPMENT SIGHT DISTANCE POLICY

Dear Mr. Crompton,

This letter is to certify that physically, there is a minimum unobstructed sight distance of 600' in both directions along Old Highway 80 from the private access road serving the proposed SDG&E Boulevard Substation for the prevailing operating traffic speed (60 mph) on Old Highway 80 per the Design Standards of Section 6.1.E of the County of San Diego public Road Standards (dated March 2012), to the satisfaction of the Director of Public Works. Said line of sight falls within the existing right-of-way and a clear space easement is not required.

Respectfully yours,

Brian Donald
RCE 26175
Expiration Date 03/31/2014



TOPOGRAPHY

SITE TOPOGRAPHY BASED ON AERIAL SURVEY PERFORMED BY INLAND AERIAL SURVEYS, INC. (PROJECT NO. 08-77231) FOR NOLTE & ASSOCIATED DATED FEBRUARY 28, 2008 AND JANUARY 12, 2012.

PLAN VIEW

0 80' 160'

TRUE NORTH

Beta	BETA ENGINEERING PINEVILLE, LOUISIANA			
BOULEVARD SUBSTATION BUE ACCESS ROAD AND OLD HWY 80 CORNER SIGHT DISTANCE				
DRAWN BY: JAL	DATE: 4/17/13	HOR. SCALE: noted	W.O.: –	REV.: 0
CHECKED BY: ___	DATE:	VER. SCALE: –	**BUE-SD-1**	
APPROVED BY: ___	DATE:	SHEET 1 OF 2		
CAD NO.: ECOSD1	PLOT SCALE: 1 = 1			

ATTACHMENT D: AGENCY BRIEFING SUMMARY

East County (ECO) Substation Project
Agency Briefing Summary
Last Updated June 20, 2013

California Highway Patrol (CHP)

On January 8, 2013, San Diego Gas & Electric Company (SDG&E) held a briefing with the CHP Rural Operations Sergeant Amata Macias, to discuss the Project's impact to freeways and the construction schedule. SDG&E also provided the CHP a copy of the ECO Substation Project Overview Map for their reference. SDG&E will continue to work with CHP of the schedule and any updates regarding work activities throughout construction.

Carrizo Gorge Railway Police

A briefing was held with the Carrizo Gorge Railway Police Chief of Police Marc Langlais on December 12, 2012, after which railway fire and security teams accompanied SDG&E on a tour of the right-of-way.

County of San Diego, Department of Public Works (DPW)

SDG&E initially met with Ken Brazell, Project Manager for DPW in the Land Development Division on May 6, 2011, to review the underground alternative and the access road from the substation to Old Highway 80. On May 31, 2012, SDG&E met with Mr. Brazell and other individuals from DPW to conduct an overall Project review. On September 13, 2012, SDG&E met with Mr. Brazell and provided copies of grading plans for DPW's review. On November 9 and 19, 2012, SDG&E met with Mr. Brazell to review DPW's comments to the grading plans and drainage study. In addition, since the September 2012, meeting with DPW, SDG&E has been in regular communication (approximately 2-4 times per month) with Mr. Brazell via email and telephone regarding various issues, including construction plans, schedule and associated impacts to traffic.

San Diego County Sheriff

SDG&E initially contacted San Diego County Sheriff Rural Division Supervisor, Sergeant Mike Clough, and resident deputies on November 2, 2012, to discuss Project impacts to the area and possible threats to the Project. SDG&E also provided a copy of the ECO Substation Project Overview Map for their reference.

SDG&E routinely contacts resident deputies on a bi-weekly basis to discuss developments in the right-of-way area as well as the construction schedule.

Fire Agencies: San Diego Rural Fire Protection District (SDRFPD), San Diego County Fire Authority (SDCFA), California Fire (CAL FIRE), and Bureau of Land Management (BLM)

SDG&E has coordinated with all of the agencies listed above as part of the development of the Project fire plans. Additionally, on January 9, 2013, SDG&E held a pre-construction review of the ECO

Substation Project Construction Fire Prevention Plan with Chief David Nissen, SDRFPD, and Captain Cal Hendrie, CAL FIRE. Impacts to traffic and emergency services were also discussed during that meeting. SDG&E will continue to meet with and maintain communications with these individuals, as well as, Clay Howe, BLM, and Fire Marshal James Pine, SDCFA, prior to and during construction. SDG&E's construction contractor will provide the ECO Substation Project Fire Marshal with a 30-day look-ahead for work activities, and the Fire Marshal will provide this information to local fire agencies along with any anticipated activities that could impact the use of roads in the Project area throughout construction.

U.S. Customs and Border Patrol (CBP)

On October 19, 2012, SDG&E held a formal briefing with Boulevard Station, San Diego Sector, Field Operations Supervisor Douglas Cook and Community Liaison Agent Jason Bush to discuss issues associated with upcoming Project construction activities. SDG&E will continue to apprise the agents of changes to the schedule and any updates regarding work activities throughout construction.