# PUBLIC NOTICE

**U.S. ARMY CORPS OF ENGINEERS** **BUILDING STRONG®**
**LOS ANGELES DISTRICT (CORPS)**

**APPLICATION FOR PERMIT**
**North County Transit District (NCTD) Bridge 243 Repair Project**

**Public Notice/Application No.:** SPL-2014-00658-RRS
**Project:** NCTD Bridge 243.0 Repair Project
**Comment Period:** November 20, 2014 through December 21, 2014
**Project Manager:** Robert Smith; 760-602-4831; Robert.R.Smith@usace.army.mil

**Applicant**
Jill Gibson
(760) 583-0148
North County Transit District
810 Mission Ave
Oceanside, California 92054

**Contact**
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(619) 298-7127
BRG Consulting, Inc.
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San Diego, California 92101

**Location**
The Project is located along the Los Angeles to San Diego (LOSSAN) Rail Corridor in San Diego County, California, in the northern portion of the City of Del Mar and at the western end of the San Dieguito River Valley. Bridge 243.0 crosses the San Dieguito River channel approximately 1400 feet upstream of the Pacific Ocean and the project area is in the San Dieguito River/Lagoon Channel substrate within the city of Del Mar, San Diego County, CA (at: 32.97285, -117.26669).

**Activity**
The NCTD Bridge 243.0 Repair Project consists of a dredging and fill project to repair and enhance the structural integrity of the existing timber railroad Bridge 243 over the San Dieguito River along the LOSSAN corridor at the mouth of the lagoon. The Project entails the dredging of 5,854 cubic yards (cy) around the bridge from Bent Nos. 2 to Bent Nos. 28 for a total length of approximately 360 ft. and a total width of approximately 70 ft. (28,200 sq. ft.) for a dredging impact to navigable waters of 0.54 acres. After the dredging occurs NCTD proposes to place geotextile fabric at the base of the slope along the bottom of the dredged area and backfill with 1,000 lb. Class riprap (4,139 cy) to a total depth of -5.4 ft. NGVD29 (-3.11 ft. Mean Lower Low Water (MLLW)) with the top of the riprap occurring at –4 ft. NGVD29 (-1.71 ft. MLLW). The riprap would then be covered with 3,056 cy of native river sand/soil to an elevation of -3 ft. The proposed project would provide protection from the scour of substrate between Bents 2 thru Bents 28. Also the dredged material from the channel dredging would be temporarily disposed of at a nearby upland stockpile location (see attached drawings). Total impacts to navigable waters of the U.S. sum to 1.13 acres of temporary impacts from staging/construction access and 0.54 acres of permanent impacts of dredging and fill impacts to tidal waters with no eelgrass impacts. After the dredged material has been stockpiled it will then be tested per the Inland Testing Material (ITM) and any suitable material may be placed at other disposal sites (beach, railroad berms) subject to additional Corps authorization as needed. Also note that NCTD has committed to removing the existing timber railroad bridge and riprap structures as there are plans to replace the bridge with a new double track bridge structure; however this replacement project is not

funded for construction and is not planned to be in service until the year 2030. For more information see page 9 of this notice.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that support the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act

Comments should be mailed to:

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
ATTN: Robert Smith
Carlsbad Field Office
5900 La Place Ct., Suite 100
Carlsbad, CA 92008

Alternatively, comments can be sent electronically to: Robert.R.Smith@usace.army.mil

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable water and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions

and services.

## Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

## Preliminary Review of Selected Factors

**EIS Determination**- A preliminary determination has been made that an environmental impact statement is not required for the proposed work.

**Water Quality**- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the State of California Regional Water Quality Control Board – San Diego Region (RWQCB). Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance. The applicant has submitted an application to the RWQCB.

**Coastal Zone Management**- The applicant has certified that the proposed activity would comply with and would be conducted in a manner that is consistent with the approved State Coastal Zone Management Program. For those projects in or affecting the coastal zone, the Federal Coastal Zone Management Act requires that prior to issuing the Corps authorization for the project, the applicant must obtain concurrence from the California Coastal Commission (CCC) that the project is consistent with the State's Coastal Zone Management Plan. The District Engineer hereby requests the California Coastal Commission's concurrence or non-concurrence. This project is located inside the coastal zone and preliminary review indicates that it would affect coastal zone resources. The CCC was also involved with the original construction of the San Onofre Nuclear Generating Station (SONGS) restoration project in the San Dieguito lagoon which was recently completed in 2012 by Southern California Edison (SCE) per CCC requirements to mitigate for impacts due to the SONGS project. After a review of the comments received on this public notice and in consultation with the CCC, the

Corps will make a final determination of whether this project affects coastal zone resources after review of the comments received on this Public Notice.

**Essential Fish Habitat** - Essential Fish Habitat (EFH), as defined by the Magnuson-Stevens Fishery Conservation and Management Act, occurs within the project area and EFH is affected by the proposed project. The Corps of Engineers preliminary determination indicates that the proposed activity would adversely affect EFH. Therefore, formal consultation under Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) is required at this time with the National Marine Fisheries Service (NMFS). The Corps of Engineers preliminary determination indicates that the proposed activity may adversely affect EFH. Pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Los Angeles District hereby requests initiation of EFH consultation for the proposed project. The applicant has performed an eelgrass survey in September 2014 and in 2009 for the LOSSAN Biological report and has submitted the results to the Corps and no eelgrass or Caulerpa was found in the project area. This notice initiates the EFH consultation requirements of the Act and the Corps will be forwarding the EFH assessment to your office.

In order to comply with the Magnuson-Stevens Fishery Conservation and Management Act (MSA), pursuant to 50 CFR 600.920(e)(3), I am providing, enclosing, or otherwise identifying the following information:

1. Description of the proposed action: See project description on page 1 and Baseline information on page 9 of this public notice.
2. On site inspection information: See Baseline information on page 9 of this public notice.
3. Analysis of the potential adverse effects on EFH: Project may adversely affect tidal navigable waters of the U.S. in the river/lagoon/adjacent beach areas, during construction due to the proposed dredging and fill activities from noise, turbidity, monitoring of flow changes to the lagoon and the inlet from temporary diversions/cofferdams/turbidity curtains and permanent placement of riprap across the channel.
4. Proposed minimization, conservation, or mitigation measures: The applicant will be implementing a Stormwater Pollution Prevention Plan (SWPPP) which includes monitoring, site management, non-stormwater management, erosion controls, sediment controls, and other Best Management Practices such as water quality sampling and analysis.
5. Conclusions regarding effects of the proposed project on EFH: The Corps hereby requests EFH consultation with NMFS as the Corps has determined that the project may have adverse effects to EFH resources.

Therefore, it is the Corps' initial determination the proposed activity may adversely affect but would not have a substantial adverse impact, on EFH or federally managed fisheries in California waters. My final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS. If I do not receive written comments (regular mail or e-mail) within the 30-day notification period, I will assume concurrence by NMFS with the proposed mitigation measures.

**Cultural Resources**- The latest version of the National Register of Historic Places has been consulted under the National Historic Preservation Act (NHPA). This review constitutes the extent of cultural resources investigations by the District Engineer, and she is otherwise unaware of the presence of such resources. NCTD has submitted a Cultural Resources Letter Report, dated October 22, 2014. The Letter Report provides a review of an updated cultural resources record search for the project area, as well as a one-half mile radius. This Area of Potential Effect (APE) was previously evaluated in the Cultural Resources Survey for the Bridge 243.0 Revetment Project in 2011. Two

prehistoric cultural resources have been previously recorded within the one-half mile record search radius; however no cultural or historic resources have been recorded within the project area. Since the project area has been previously disturbed by previous dredging, bank stabilization, and the original bridge construction the Corps may make a determination that there is a No Potential to Cause Effect to cultural resources in the project area but welcomes comments regarding compliance with the NHPA. SCE and the Corps have recently secured authorization from the State Historic Preservation Office (SHPO) to allow for 14 recently discovered pilings located in the inlet dredging area just west of the Highway 101/Camino Del Mar bridge west of Bridge 243 to be removed or cut down to the mud line by SCE. The recent discovery of the pilings delayed the downstream dredging of the inlet in the last few years in order to comply with the NHPA regulations regarding the cultural status of the pilings.

**Endangered Species**- Preliminary determinations indicate that the proposed activity would not affect federally-listed endangered or threatened species, or their critical habitat. Therefore, formal consultation under Section 7 of the Endangered Species Act does not appear to be required at this time.

**Public Hearing**- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing.

## Proposed Activity for Which a Permit is Required

Basic Project Purpose- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). According to the applicant the project purpose is to maintain safe and efficient rail operations along the LOSSAN Corridor through San Dieguito Lagoon in accordance with Federal, State, and local transportation plans. Rail travel in this portion of the LOSSAN Corridor is increasing with train trips predicted to more than double by the year 2030. Establishment of the basic project purpose is necessary only when the proposed activity would discharge dredged or fills material into a special aquatic site (e.g., wetlands, pool and riffle complex, mudflats, coral reefs). Because no fills are proposed within special aquatic sites (wetlands, eelgrass) identification of the basic project purpose is not necessary but the Corps has determined that the basic project purpose for the proposed project is transportation bridge structural repair within waters of the U.S. and the project is water dependent.

Overall Project Purpose- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to perform urgent repairs on the NCTD Bridge 243 structure within the San Dieguito River, in the City of Del Mar, San Diego County as needed to ensure adequate safe structural integrity is maintained at Bridge 243.

Alternatives: The applicant has submitted a review of alternatives in an alternatives analysis to the Corps dated November 2014 and alternatives are identified, described and qualitatively evaluated by the applicant in this report by the applicant. The alternatives range from no action to substantial structural improvements.

Table 1 below summarizes the alternatives reviewed by the applicant.

Table 1: List of Alternatives

| **Alternative** |
|---|
| Alternative 1 – Rock riprap scour countermeasure (Project) |
| Alternative 2 – Articulating concrete block (ACB) scour countermeasure |
| Alternative 3 – Regular scour hole maintenance |
| Alternative 4 – Re-dredge lagoon to design template |
| Alternative 5 – Structural Improvements |
| Alternative 6 – No action |

Alternative 1 – Rock Riprap Scour Countermeasure (Applicant's proposed project; Project): Design Guideline 11 within Federal Highway Administration's HEC-23 (FHWA 2009) includes recommendations and design guidelines for countermeasures for bridge pier protection. HEC-23 provides a unique methodology for sizing rock riprap for pier protection as opposed to methods developed for bank revetment or other applications. The railroad industry typically uses riprap as a common permanent scour countermeasure, and this measure was employed to protect the railroad bridge from scour associated with the restoration of Batiquitos Lagoon. The HDR engineering report dated June 2014 covers design specific details of a riprap apron at this location per HEC-23 guidelines. Briefly stated, the apron would be designed to the 100-year event, would tie into the current proposed and permitted riprap revetment to be constructed at the south abutment of the bridge, and would extend approximately 360' across the active channel. The determined projected pier width (a) was 7 feet based on flow angle, therefore requiring a apron width of 14 feet (2a) from the bent in all directions. The existing 14-foot span dimension between bents necessitates a continuous apron, bent to bent. The apron would be constructed three bridge spans at a time due to structural safety concerns. Dredging and fill would be required, along with backfill in areas to match existing grade. The top of the riprap apron will be at -4 feet NGVD29 (-1.71 ft. MLLW) in order to provide 1 foot of stream material cover on the riprap to the SCE design dredge template elevation of -3 ft NGVD29 (-.71 ft. MLLW), and to ensure the channel would not be restricted such that tidal flows would remain essentially as modeled by SCE to support SCE's lagoon restoration.

Alternative 2 – Articulated Concrete Block (ACB) Scour Countermeasure: Articulated concrete block is an interlocking matrix of concrete blocks of uniform size, shape, and weight connected by a series of cables that pass longitudinally through pre-formed ducts in each block. The block provides resistance to erosion and high tractive forces. It is installed over site-specific filter fabric consisting of lightweight blankets or meshes. The primary failure mechanism of articulated concrete block is undermining especially in environments characterized by large fluctuations in the surface elevation of the channel bed and/or bank. Failures have been observed where a corner or edge of the mattress is undercut resulting in complete failure of the revetment. Design Guideline 8 within Federal Highway Administration's HEC-23 (FHWA 2009) includes recommendations and design guidelines for ACB countermeasures for bridge pier protection. In general the layout and dimensioning is similar to the recommendations given for riprap. The general layout is again based upon the projected pier width, determined to be 7 feet at Bridge 243.0. The bents are spaced 14 feet on center; therefore, the apron

will be continuous underneath the bridge. The blocks would be sized appropriately to resist the 100 year flow event. The applicant has deemed this alternative inadequate and not a feasible alternative.

Alternative 3 – Regular Scour Hole Maintenance (i.e., filling Bridge 243 Bent holes with sand): This alternative involves maintaining the channel elevation beneath the bridge at a set elevation through regular inspection and maintenance. As scour holes are identified as posing a risk to the structural integrity of the bridge, channel dredging equipment would be utilized to fill them. Presumably fill would consist of native material. This alternative does not incorporate substantial lagoon dredging upstream or downstream to address current areas of concentrated flow. Scour hole maintenance would be frequent based on the ability of the inflowing tide to generate scour on a daily basis. Maintenance equipment may need to be kept on-hand and close by, or on an on-call basis. This alternative would require regular inspection and measurement, not only following major flood events and then regular maintenance on an as-needed basis, not per a fixed maintenance schedule. Per the applicant's alternative analysis this alternative is feasible but not considered a viable alternative to preserve bridge safety.

Alternative 4 – Re-dredge River/Inlet/Lagoon: Channel dredging and beach nourishment on the adjacent inlet beaches was done in May 2008 by SCE under their existing Corps permit. In November, 2012 the SANDAG Regional Beach Nourishment Project (RBSP II) occurred just upstream of the project which resulted in beach disposal of 146,000 cy of offshore dredged material discharged just upstream of the inlet on the beaches of Solana Beach very near the inlet. Additionally, a sand bar formation upstream of Bridge 243.0 bifurcates and concentrates flow along two flow paths upstream of the bridge. This alternative would involve a one-time dredging/filling operation. Presumably, the downstream reach could be maintained with the planned dredging maintenance activities of the restoration project, if both dredging and filling operations were allowed. This alternative is feasible but not considered a viable alternative by the applicant to preserve bridge safety. The applicant maintains that due to the dynamic nature of the lagoon, the natural formation of low flow "pilot" channels, the variable sand transport rate in the lagoon, the persistent occurrence of the sand bar upstream of Bridge 243.0, and the difficulties in scheduling and permitting dredging activities, all point to a high probability that undesirable bottom conditions would return and leave the bridge vulnerable to local scour.

Alternative 5 – Structural Improvements (to include driving piles next to existing piles)

Bridge structural improvements can be implemented to alleviate a scour concern. Substructure structural improvements, such as strengthening and underpinning, provide bridge support by strengthening the existing substructure (bents) or by creating a secondary, standalone substructure to take a portion or the entire structural load. Substructure strengthening might be accomplished by cross bracing or by driving/drilling new piles around the existing bent and tie these new piles with the existing bent together using a collar, such as poured concrete. Effectively, this would add length to the buried portion of the substructure. Another option is superstructure underpinning, for example to drive/drill piles away from the bents and affix a concrete cap or steel girder on top. The cap, placed perpendicular to the track, would provide additional structural support to the bridge superstructure and protect it from scour hazards.

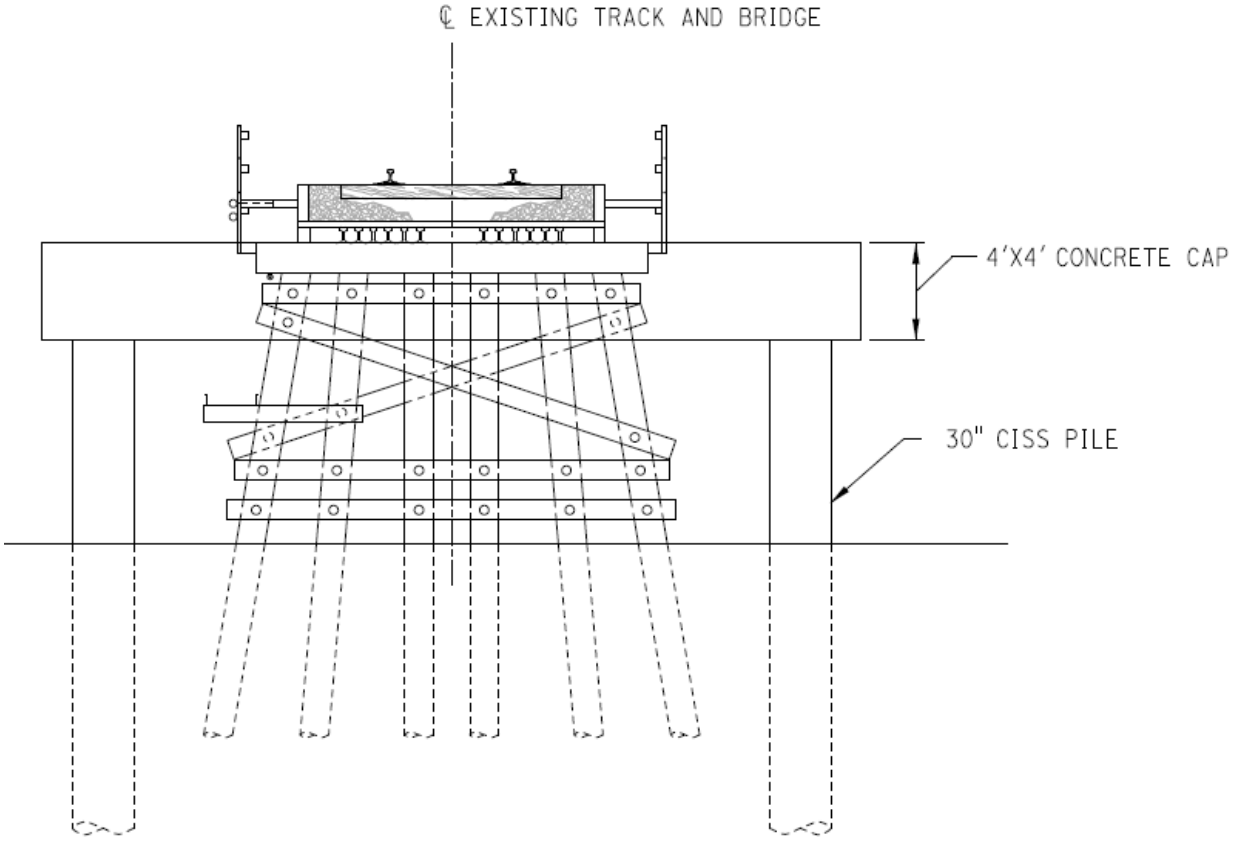


Figure 1: Superstructure Underpinning Example

The applicant maintains that this alternative would provide a durable solution for the remaining life of the bridge with less extensive monitoring and maintenance requirements compared to other alternatives but is more costly, has a long construction time, may have substantial impacts to rail operations, has a deeper excavation for any girder collar option, has the potential to decrease or compromise the existing structure's seismic response, also the vibration from driving piles might compromise the existing timber pile load capacity, cross bracing, and superstructure underpinning would reduce flow area under the bridge and increase water surface elevations and not eliminate bridge settlement concerns during scour.

Alternative 6 – No action: The applicant discussed the no action alternative which would require continuation of regular inspection activities and monitoring of the existing pier scour holes. Further scour could mandate a slow order be placed on the bridge, or structural damage could occur. Emergency maintenance action, including in-stream earthwork, may be required if scour conditions worsened. The No action alternative could lead to potential future risk to public safety, potential future risk to rail operations, potential future emergency in-stream repair work, or potential future structural damage.

Other Alternatives:

There were other alternatives discussed by the applicant during the process of identifying feasible alternatives, including placing rock riprap at a deeper elevation than Alternative 1 and installing a sheet pile countermeasure. These options were deemed inadequate by the applicant and were therefore not identified as feasible alternatives by the applicant. Excavation for rock riprap placement cannot be any deeper than the planned excavation (to elevation -9.4 ft NGVD29 (-7.1 ft. MLLW)) for

Alternative 1 due to structural stability concerns during construction. Therefore, a rock riprap placement alternative with a deeper top elevation could only be accomplished by constructing a thinner rock apron. The thickness of the rock apron in Alternative 1 is already slightly less than HEC-23 guidelines (due to the elevation -9.4 ft NGVD29 (-7.11 MLLW) limit; additional thickness reductions would not be recommended.

Regarding driving sheet piles, the two lines of sheet pile would be at least 25' apart to allow clearance between the sheet piling and the outside wooden pile of each bent. Without an armored surface between the sheet piles, the sheet piles would not prevent the local scour from occurring within the bents, especially at the piles within the interior of the bents. This is an unsatisfactory solution; therefore this option was not deemed a feasible alternative by the applicant. Another variation of the sheet pile option would be to encase (surround) each bent with sheet piling. This could better mitigate local scour at the wooden bents piles, especially if the voids around the piles were filled and the top surface between the piles were armored, but local scour would still occur at the outside of the sheet piles, leaving an unsupported bent length that affects bridge stability. This variation would require a very substantial construction effort and would incur substantial impacts to rail operations. The bridge deck would need to be taken up one span at a time in order to allow installation along the bent face. This alternative was not selected by the applicant.

**Additional Project Information**

Baseline and Other Information- There is no direct fill of eelgrass or wetlands as the existing area has been previously disturbed and consists of sandy substrate. The Corps Regulatory Division has been involved with the dredging, structural repair, and beach nourishment activities near Bridge 243 for many years when NCTD submitted several Corps general permit requests that the Corps authorized to perform bridge repairs and bank stabilization repairs. Most of the bridge structural repairs were performed by NCTD but the south bank stabilization work authorized under the Corps Nationwide permit 14 verification letter dated April 18, 2012 for rip rapped bank stabilization (2011-00298-RRS) was not completed. Also the Corps has authorized the dredging of the San Dieguito River inlet with beach nourishment on the north and south beaches with a Corps permit with Southern California Edison (SCE) that is still valid. SCE is currently proposing to dredge the inlet (last dredged in 2008) in November 2014, but the SCE dredging has been delayed pending resolution of the Bridge 243 repair project and SCE's previous need to obtain NHPA compliance needed for the removal of the 14 pilings in the dredge area. NCTD has installed longitudinal braces at the top of cap level to maintain bridge stability and is monitoring the condition of the bridge with special inspections every two weeks. The Corps has also requested in November 2014 a technical review for a review of the project, the proposed SCE dredging, and potential scour issues through our Dredging and Operations Technical Support (DOTS) program with the Corps Engineer Research and Development Center (ERDC).

The Bridge 243.0 Repair Project will be constructed within the railroad ROW. As part of the proposed project, the channel would be dredged/filled along the length of the bridge, from approximately Bent #2 to approximately Bent #28, for a total length of approximately 360 feet and a total width of approximately 70 feet. In cross section from east to west, there would be a 10.8 foot long 1:2 slope from elevation -4 feet NGVD29 (-1.71 MLLW) to -9.4 feet NGVD29 (-7.11 MLLW), a 48 foot wide flat bottom at elevation -9.4 feet NGVD29 (-7.11 MLLW), and a 10.8 foot long 1:2 slope from elevation -9.4 feet NGVD29 (-7.11 MLLW) to -4 feet ft. NGVD29 (-1.71 MLLW). Geotextile fabric would be placed at the base of the slope along the bottom of the dredged area and the area would be backfilled with 4,139 cubic yards (CY) of (1,000-lb CLASS) riprap. The riprap would extend a total depth of approximately 5.4 vertical feet, with the top of riprap elevation occurring at elevation -4 feet NGVD29 (-1.71 ft. MLLW). The riprap would then be covered with native river sand/soil to an elevation of -3 feet NGVD29 (-.71 ft. MLLW) to be consistent with original grade. Although the riprap may have up to 30

percent void space, the quantities for the placed sand/soil material assumes that a void space equal to 10 percent of the riprap volume will be filled. If the riprap voids take more material it will increase the volume of fill material required and decrease the amount of material excess; however, this will not change the physical dimensions of the placement.

The construction staging/laydown areas will be utilized to assemble, organize, and store equipment and materials necessary for the construction of the project. The proposed staging areas may include the area southeast of the bridge within the railroad ROW adjacent to the Del Mar Public Works Maintenance Yard, as well as SCE's prior staging/laydown area on the Del Mar Fairgrounds property. These areas are currently disturbed. Construction of the proposed project is estimated to take 3 months. Excess dredged material will be stockpiled in non-jurisdictional areas within the railroad right-of-way, south of the bridge before being hauled away for reuse/disposal.

Contractors may work from barges when working in the channel under the bridge for excavation/fill of the channel bottom, slope preparation, and riprap placement within the jurisdictional areas. The contractor's staging/lay down area is to be located within a disturbed area at the south end of the lagoon, within the NCTD ROW. In addition, the contractor may use a prior SCE staging/lay down area on the Del Mar Fairgrounds to access the north end of the bridge. NCTD's contractor will ensure that all vehicle maintenance, staging storage, and dispensing of fuel occur in the designated staging/lay down area(s). NCTD's contractor will employ all standard Best Management Practices to ensure that toxic materials, silt or debris do not enter the lagoon channel during project maintenance, repair and/or excavation and placement of riprap. This includes installing a continuous, floating silt (turbidity) curtain around the work area prior to the start of all in-water activities. Prior to the start of construction, NCTD's contractor will erect appropriate temporary construction barriers (i.e., stakes, fencing, etc) to prevent equipment or personnel from entering environmentally sensitive area adjacent to the project area and to prevent wetland impacts. No debris, sawdust, rubbish cement or concrete washings thereof, oil or petroleum products, from the project will be allowed to enter or placed where it may be washed by rainfall or runoff into the lagoon channel. Upon completion of the project, any excess material or debris shall be removed from the work area. At no time will this material be side cast into the lagoon channel.

NCTD's contractor shall perform work below the high tide line during low water conditions when the area is naturally dewatered, to the maximum extent feasible. Diversion or blocking of tidal flows and/or dewatering of the construction site will not occur. Turbidity curtains will be installed around the work areas, as necessary that will take place in the water to reduce sediment from migrating significant distances from the work area. This will be monitored with field turbidity meters at 100 feet and 250 feet from the work areas. If turbidity exceeds thresholds established in the contract documents, silt curtains will be installed and work modified as necessary to keep turbidity outside the silt curtains below the thresholds. The access route to the project site and staging/laydown area for construction vehicles and equipment would be via Jimmy Durante Boulevard to the dirt road on the south side of the lagoon channel to the railroad ROW. Access from the west side of the railroad tracks is from Camino Del Mar to 28$^{th}$ Street to the railroad ROW. Construction of the proposed project is estimated to take 3 months.

Proposed Mitigation– The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with the 404(b)(1) Guidelines. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/compensation), as applied to the proposed project is summarized below:

Avoidance: The proposed project is the repair of Bridge 243.0 to maintain the safe and

efficient rail operations along the LOSSAN Corridor through San Dieguito Lagoon in accordance with Federal, State, and local transportation plans. According to the applicant long-term impacts are avoided by placing the top of riprap at -4 feet NGVD29 (-1.71 ft. MLLW), which is below the elevation for the San Dieguito Wetlands Restoration Project of -3 feet (-.71 ft. MLLW). The riprap structure will avoid any impacts to eelgrass or wetlands as designed.

Minimization: The applicant has proposed the following minimization measures and construction-related Best Management Practices (BMPs):

The riprap protection has been designed to minimize the riprap footprint while providing the necessary protection. The staging/lay down area is to be located within a disturbed area at the south end of the lagoon, within the NCTD ROW. In addition, the contractor may use a prior SCE staging/lay down area on the Del Mar Fairgrounds to access the north end of the bridge.
All vehicle maintenance, staging storage, and dispensing of fuel will occur in the designated staging/lay down area(s). All standard Best Management Practices will be used to ensure that toxic materials, silt or debris do not enter the lagoon channel during project maintenance, repair and/or excavation and placement of riprap. This includes installing a continuous, floating silt (turbidity) curtain around the work area prior to the start of all in-water activities. Prior to the start of construction, appropriate temporary construction barriers (i.e., stakes, fencing, etc) will be erected to prevent equipment or personnel from entering environmentally sensitive area adjacent to the project area and to prevent wetland impacts. No debris, sawdust, rubbish cement or concrete washings thereof, oil or petroleum products, from the project will be allowed to enter or placed where it may be washed by rainfall or runoff into the lagoon channel. Upon completion of the project, any excess material or debris shall be removed from the work area. At no time will this material be side cast into the lagoon channel. Work shall be performed below the high tide line during low water conditions when the area is naturally dewatered, to the maximum extent feasible. Diversion or blocking of tidal flows and/or dewatering of the construction site will not occur. Turbidity curtains will be installed around the in-water work areas to reduce sediment from migrating significant distances from the work area.

Compensation: The applicant maintains that there will be no loss of functions and values within the project area or to the SONGS lagoon restoration project as the riprap will be placed below the permitted dredging elevation downstream and construction impacts will be minimized and will only last for 3 months. There is no direct fill of eelgrass or wetlands as the existing area has been previously disturbed and consists of sandy substrate. The Applicant has also prepared a Hydraulic and Hydrology analysis and has stated that the construction of the project would not have adverse impacts to the overall tidal flows into the lagoon and the original SONGS lagoon restoration project. Also, the proposed activity is necessary to maintain the historical, regionally-important railroad use through the lagoon while providing the environmental benefits associated with the SONGS lagoon restoration project. As such, the applicant has not proposed any compensation.

**Proposed Special Conditions**

None are proposed at this time.

For additional information please call Robert Smith of my staff at 760-602-4831 or via e-mail at Robert.R.Smith@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.

*Regulatory Program Goals:*

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

---

**DEPARTMENT OF THE ARMY**
**LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS**
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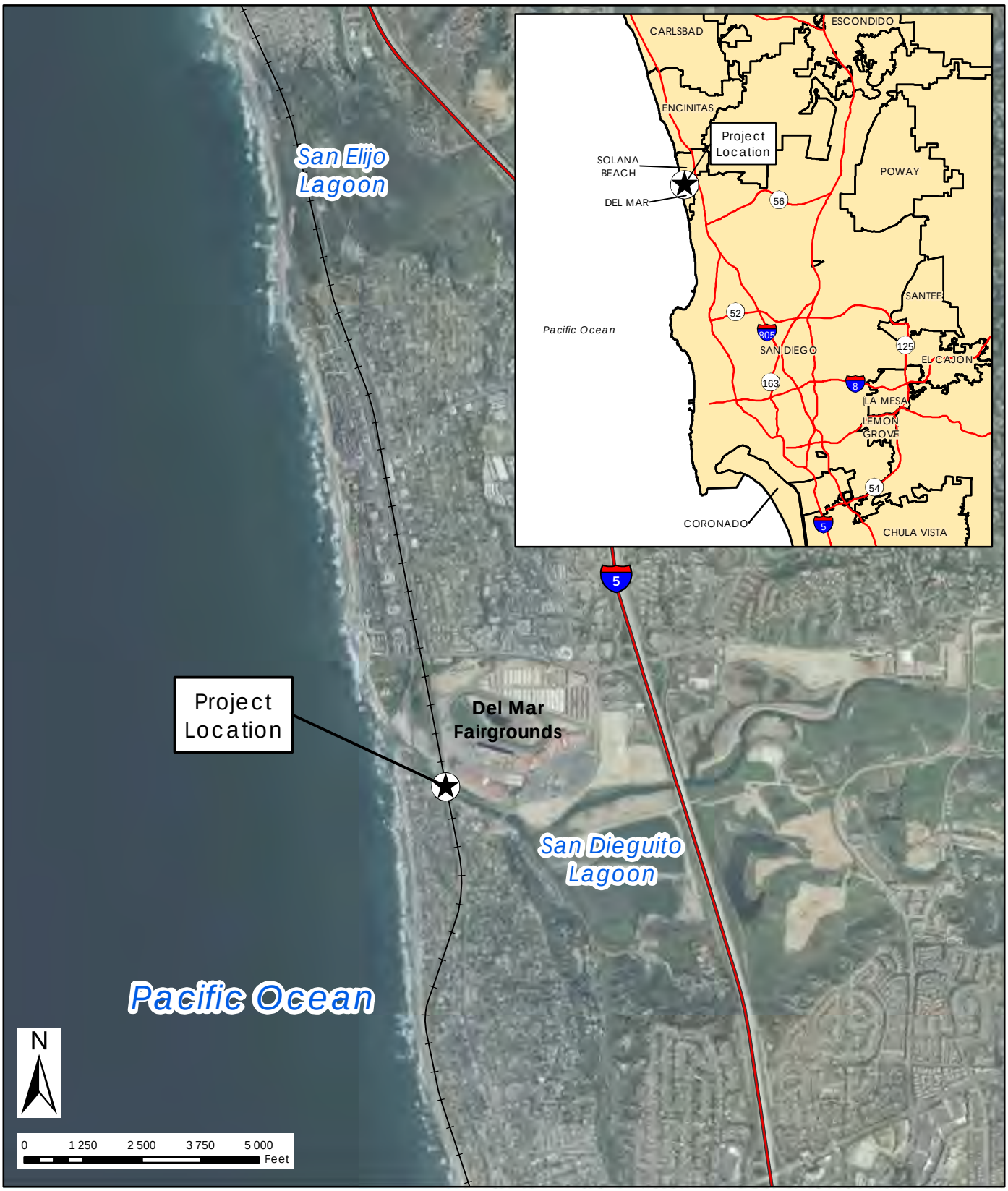



SOURCE: Esri, 2014; BRG Consulting, Inc, 2014

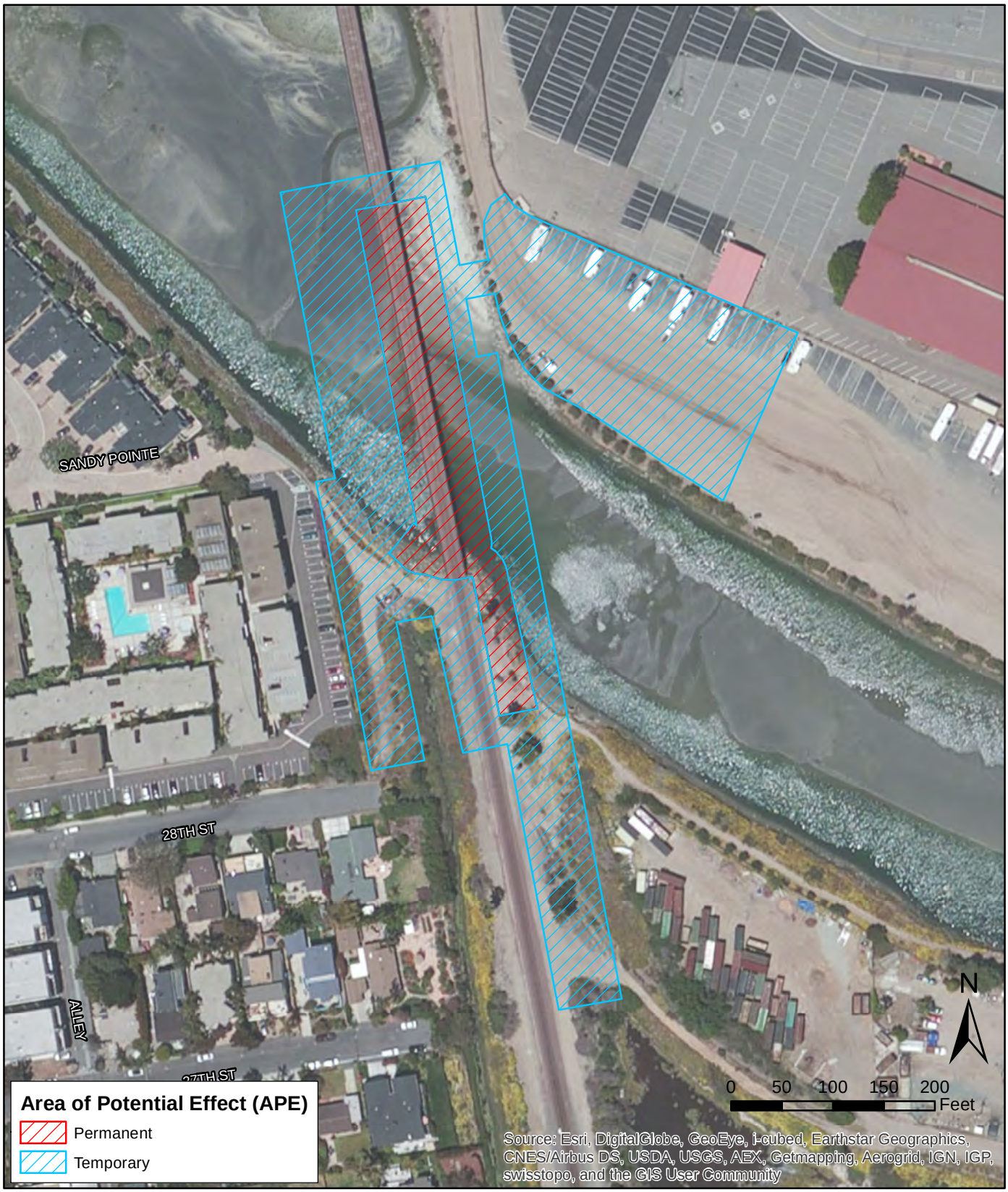
10/10/14

BRG CONSULTING, INC.

Bridge 243 Scour Repair

# Regional Location

FIGURE 1




SOURCE: Esri, 2014; SanGIS, 2014

11/11/14

BRG CONSULTING, INC.

Bridge 243 Scour Repair

# Area of Potential Effect (APE)

FIGURE

2


ESRI Imagery
Dated May 2010
Google Earth Imagery
Dated Nov 2013
Right of Way
Disposal Area South
~2900 CY
Maximum 12.5 feet tall,
assuming 2:1 slopes
avg 50' wide x 254' long
Camino Del
© 2014 Google
SAN DIEGUITO CREEK
Legend
Excess Dredge Material Disposal Area
NCTD Right of War
NonPermittedImpacts
PermittedImpacts
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

## GENERAL NOTES

1. CONTRACTOR SHALL UPDATE AND COMPLETE THE DRAFT SWPPP PREPARED BY HDR AND SUBMIT TO NCTD FOR APPROVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE APPROVED SWPPP.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATIONS AND REMOVAL, INSPECTIONS AND MAINTENANCE OF EROSION CONTROL BEST MANAGEMENT PRACTICES (BMP).
3. ALL BMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), DEVIATION FROM THIS PLAN SHALL BE NOTED AND RECORDED IN WEEKLY INSPECTION REPORTS AS REQUIRED IN THE SWPPP.
4. ALL MAINTENANCE AND INSPECTION REPORTS WITHIN THE SWPPP SHALL BE SIGNED BY A QUALIFIED SWPPP PRACTITIONER (QSP) ASSIGNED BY THE CONTRACTOR AND/OR CLIENT. THE SWPPP PACKAGE AND THE REPORTS SHALL BE AVAILABLE TO ENVIRONMENTAL PROTECTION AGENCY (EPA), REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) AND NCTD REPRESENTATIVES AT ALL TIMES DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC R/W, ON TO PRIVATE PROPERTY, OR ENVIRONMENTALLY SENSITIVE AREAS.
6. CONTRACTOR TO BEND SHRUBS AND GRASSES TO GROUNDLINE IN PROPOSED SOIL STORAGE AREAS, AND, SHALL UTILIZE GEOTEXTILE FABRIC OVER TOPSOIL, GRASSES AND SHRUBS IN AFFECTED AREAS.
7. UPON COMPLETION OF WORK, REMOVE GEOTEXTILE AND ANY EXCAVATED MATERIAL BEING CAREFUL NOT TO DISTURB NATIVE VEGETATION.
8. ANY DISTURBED AREAS IN THE DRY SHALL BE REVEGETATED PER PROJECT SPECIFICATIONS.
9. SILT CURTAIN (TURBIDITY CURTAIN) IN WATER SHALL SURROUND THE AREA BEING WORKED. SILT CURTAIN (TURBIDITY CURTAIN) FOR THE FULL WATER WIDTH NOT NECESSARY IF WORK IS CONFINED TO THE SILT CURTAIN (TURBIDITY CURTAIN) AREA.
10. SILT CURTAIN IS ALSO REFERRED TO AS "TURBIDITY CURTAIN" IN FACTSHEET NS-5 IN CASQA STORMWATER BMP HANDBOOK, CONSTRUCTION. REFER TO SWPPP.
11. THE CONTRACTOR SHALL COORDINATE ACCESS POINTS WITH THE CITY OF DEL MAR OR ADJACENT LAND OWNER.
12. ELEVATIONS BASED ON NGVD 1929 DATUM.
13. EXCAVATION/RIPRAP INSTALLATION MAY OCCUR AT NO MORE THAN 3 BENTS AT A TIME.
14. CONTRACTOR TO TAKE CARE IN EXCAVATING AND PLACING RIPRAP AROUND BRIDGE. ANY DAMAGE TO BRIDGE SHALL BE REPORTED IMMEDIATELY TO NCTD AND REPAIRED IN ACCORDANCE WITH NCTD INSTRUCTIONS, AT CONTRACTOR'S EXPENSE.
15. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH NCTD AND OTHER CONTRACTOR(S) ON SITE.
16. THE EXISTING BRIDGE AND GROUND ELEVATIONS ARE BASED UPON A SURVEY PERFORMED BY PROJECT DESIGN CONSULTANTS IN MARCH, 2014 AND ARE BASED UPON THE CITY OF DEL MAR VERTICAL CONTROL STATION DESIGNATED "LJ 106" HAVING AN ELEVATION OF 13.589 FEET, N.G.V.D. 29 DATUM.
    SAID STATION IS LOCATED ON THE TOP OF A CONCRETE WING-WALL AT THE SOUTHEAST CORNER OF A CONCRETE BRIDGE ON CAMINO DEL MAR CROSSING THE SAN DIEGUITO RIVER IN THE CITY OF DEL MAR, CALIFORNIA.
    THE COORDINATES FOR THE PROJECT BENCHMARK (CITY OF DEL MAR STATION DESIGNATION LJ-106) ARE:
    N 1935802.69, E 6249239.77 FEET, CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 6.
17. HOLES, CUTS AND ABRASIONS MADE IN TIMBER SHALL BE SWABBED WITH PRESERVATIVE.
18. EXISTING PEDESTRIAN TRAIL/CROSSING SOUTH OF THE BRIDGE TO BE CLOSED BY CONTRACTOR DURING CONSTRUCTION.

## EXCESS EXCAVATED MATERIAL DISPOSAL

1. THE MATERIAL PILED IN THE SOUTH DISPOSAL AREA SHALL EXTEND NO HIGHER THAN 14 FT ABOVE THE EXISTING GROUND.
2. MATERIAL DISPOSAL SHALL BE CONFINED TO AREAS INDICATED UNLESS WRITTEN APPROVAL IS OBTAINED BY NCTD.
3. PLASTIC SHEETING WITH SUITABLE ANCHORING PER STANDARD EROSION CONTROL BMP SHALL BE APPLIED TO COVER THE ENTIRE MATERIAL PILE IN THE SOUTH DISPOSAL AREA DURING NON-WORKING HOURS AND UPON COMPLETION.
4. MATERIAL DISPOSAL PILE LIMITS AND SILT FENCING MUST REMAIN AT LEAST 25 FEET AWAY FROM THE TRACK CENTERLINE.

## CONSTRUCTION STAGING NOTES

SUGGESTED STAGING FOR ABUTMENT PROTECTION
1. EXCAVATE TO BOTTOM OF RIPRAP ELEVATION
2. INSTALL GEOTEXTILE FABRIC
3. INSTALL RIPRAP
4. BACKFILL AND SEED SLOPES
5. APPLY SLUICED SAND

SUGGESTED STAGING FOR BENT SCOUR PROTECTION (BID ALTERNATE 1)
1. EXCAVATE OR BACKFILL SCOURED AREAS WITH NATIVE MATERIALS (AS NEEDED) TO BOTTOM OF RIPRAP ELEVATION. A MAXIMUM OF 3 BENTS MAY BE EXCAVATED AT ONE TIME.
2. INSTALL GEOTEXTILE FABRIC
3. INSTALL RIPRAP
4. BACKFILL WITH NATIVE MATERIAL TO FINAL GRADING ELEVATION

## BEST MANAGEMENT PRACTICES FOR CONSTRUCTION ACTIVITIES

A. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SWALES, AREA DRAINS, OR NATURAL DRAINAGE COURSES.

B. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.

C. EXCESS OR WASTE GROUT MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO DRAIN AND CONTAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.

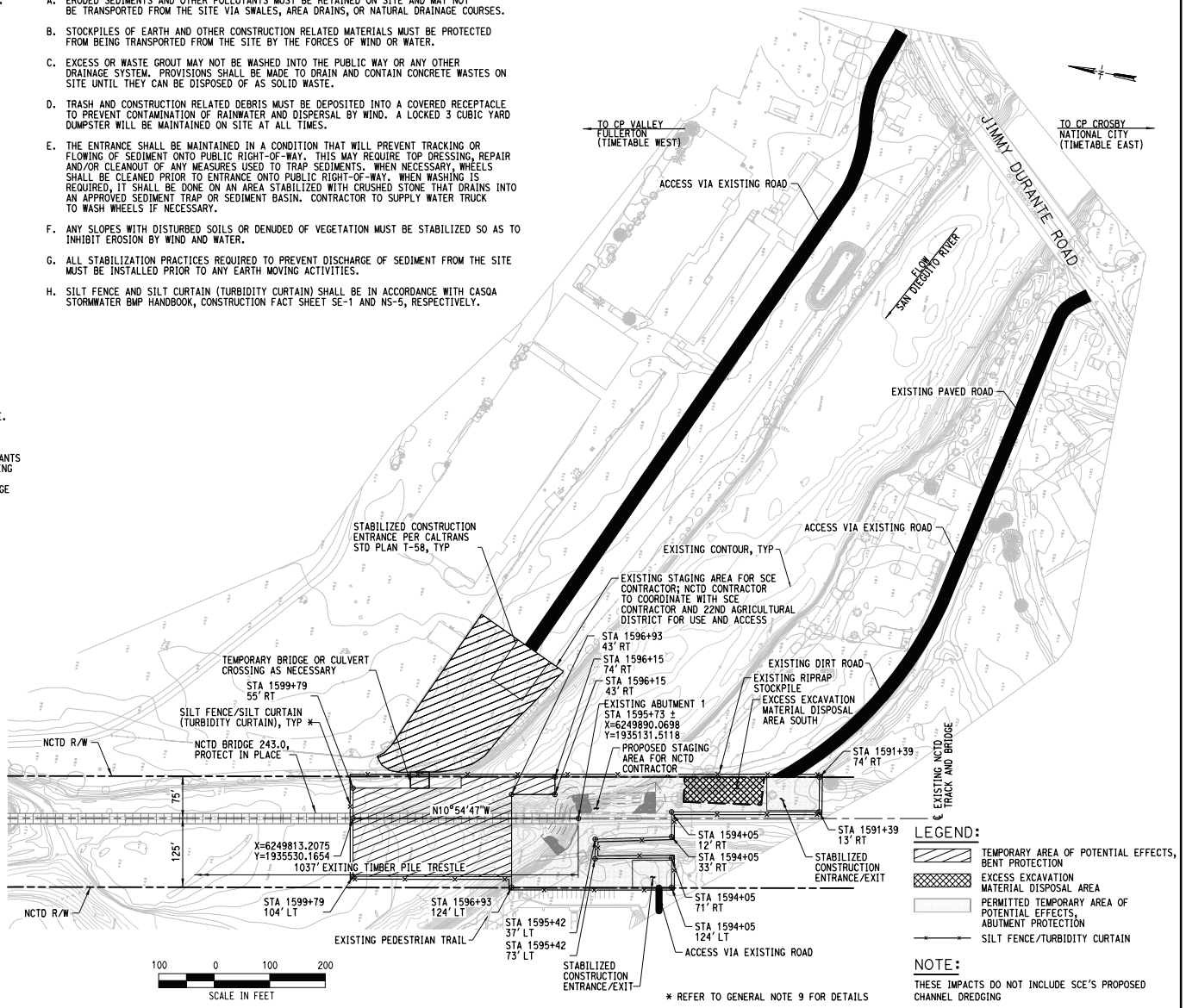
D. TRASH AND CONSTRUCTION RELATED DEBRIS MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND. A LOCKED 3 CUBIC YARD DUMPSTER WILL BE MAINTAINED ON SITE AT ALL TIMES.

E. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENTS. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. CONTRACTOR TO SUPPLY WATER TRUCK TO WASH WHEELS IF NECESSARY.

F. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

G. ALL STABILIZATION PRACTICES REQUIRED TO PREVENT DISCHARGE OF SEDIMENT FROM THE SITE MUST BE INSTALLED PRIOR TO ANY EARTH MOVING ACTIVITIES.

H. SILT FENCE AND SILT CURTAIN (TURBIDITY CURTAIN) SHALL BE IN ACCORDANCE WITH CASQA STORMWATER BMP HANDBOOK, CONSTRUCTION FACT SHEET SE-1 AND NS-5, RESPECTIVELY.




* REFER TO GENERAL NOTE 9 FOR DETAILS

**NOTE:**
THESE IMPACTS DO NOT INCLUDE SCE'S PROPOSED CHANNEL DREDGING

| REV. | DATE | DESCRIPTION | BY | SUB | APP. |
|---|---|---|---|---|---|



DESIGNED BY J. HYLES
DRAWN BY M.R. GRANADO
CHECKED BY R. McNAUGHT
APPROVED BY B. DOEING
DATE NOVEMBER 2014

HDR ENGINEERING, INC.
3230 EL CAMINO REAL, SUITE 200
IRVINE, CALIFORNIA 92602
(619) 237-1885

NCTD

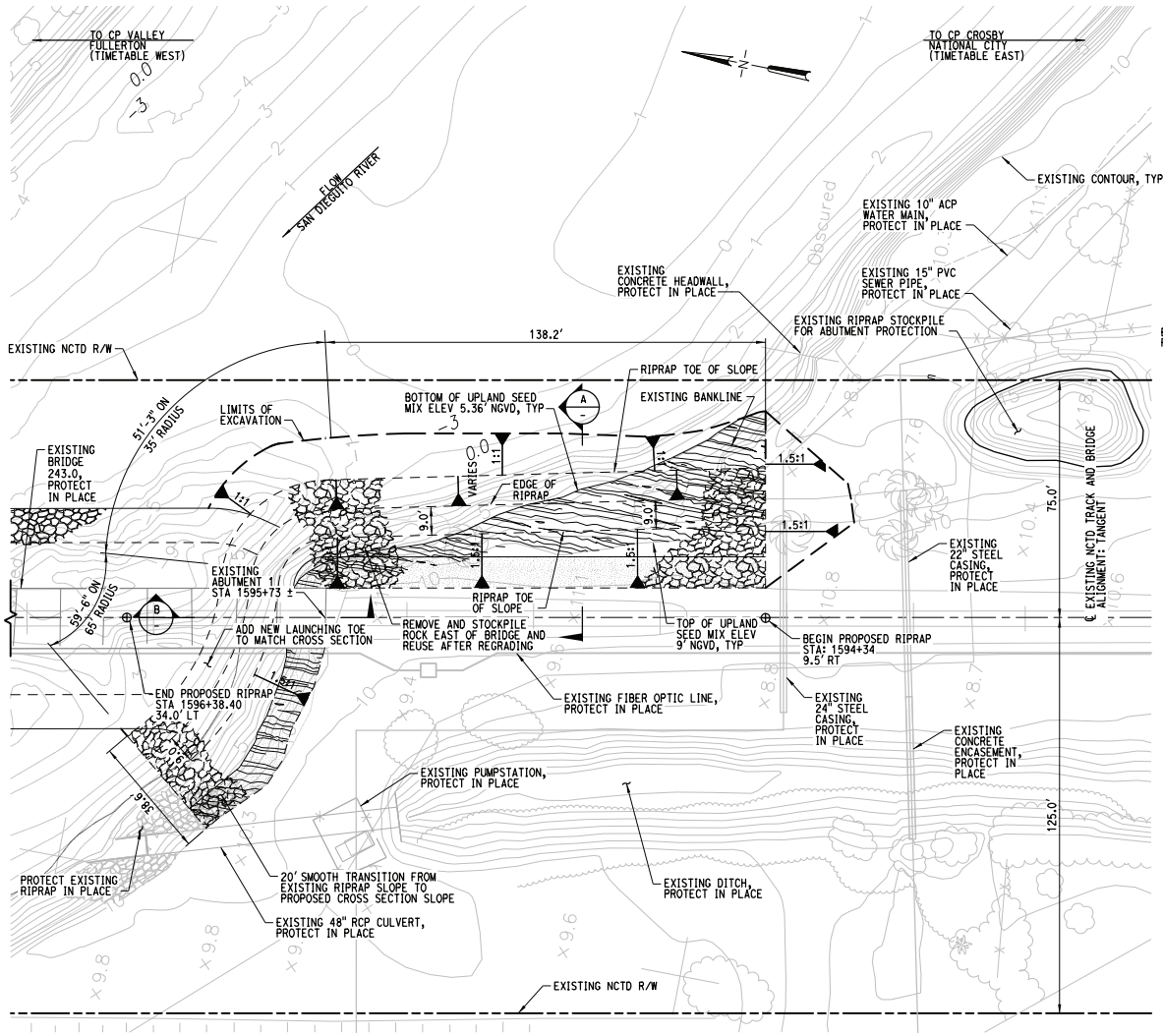
APPROVED: _____

REGISTERED PROFESSIONAL ENGINEER BRIAN J. DOEING No. C48984 Exp. 9/30/16 CIVIL STATE OF CALIFORNIA

# BRIDGE 243.0 RIPRAP PROTECTION OVER SAN DIEGUITO RIVER AREA OF POTENTIAL EFFECTS, CONSTRUCTION ACCESS AND DRAFT SEDIMENT AND EROSION CONTROL PLAN

CONTRACT NO.
DRAWING NO. 243.0-RP01
REVISION
SHEET NO. 2 OF 4
SCALE AS NOTED

c:\2work\hg\sdc\d06031\19\243.0-RP01.dgn DATE




PLAN -

SOUTH BRIDGE ABUTMENT PROTECTION

SCALE: 1"=20'-0"

LEGEND:

HYDRAULICALLY SLUICED SAND

UPLAND SEED MIX

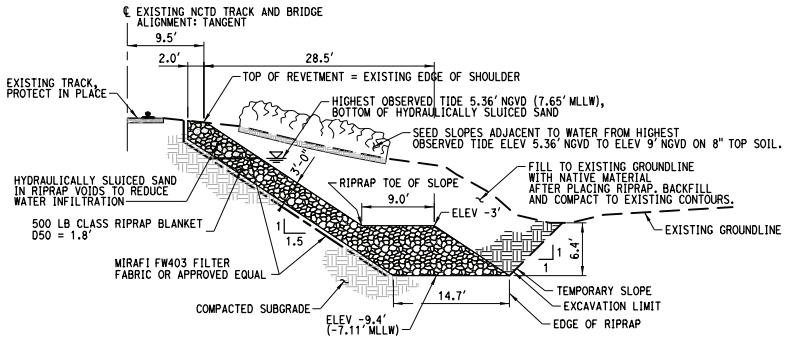
**NOTE:**

1. WORK ON THIS SHEET PERMITTED IN 2012
   404 PERMIT SPL-2011-00298-RRS COASTAL CC-006-11

SAN DIEGUITO CREEK
PLANT PALETTE FOR SHORELINE REVETMENT

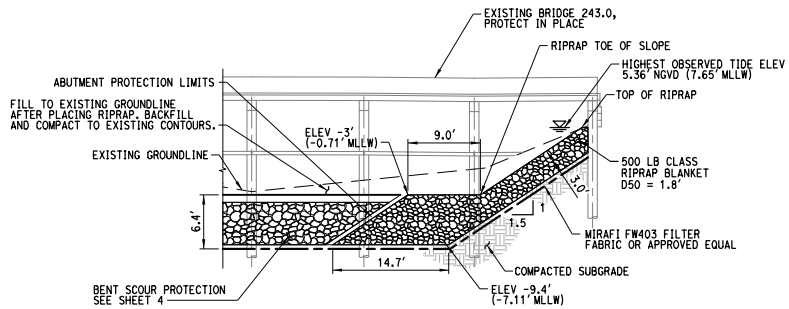
Upland Seed Mix - above elevation 5.36'

| Botanical Name | Common Name | Seed Rate (Pure Live Seed) |
|---|---|---|
| Artemesia california | California sagebrush | 0.2 lbs/acre |
| Baccharis pilularis | coyote brush | 0.5 lbs/acre |
| Ambrosia psilostachya | western ragweed | 0.2 lbs/acre |
| Atriplex lentiformis | big saltbrush | 4.0 lbs/acre |
| Artiplex canescens | | 3.0 lbs/acre |
| Eriogonum fasciculatum | California buckwheat | 2.0 lbs/acre |
| Isocome menziesii | coast goldenbrush | 2.0 lbs/acre |
| Lotus scoparius | deerweed | 1.0 lbs/acre |
| Plantago erecta | Foothill Plantain | 5.0 lbs/acre |




SECTION A

SCALE: 1"=8'-0"




SECTION B

SCALE: 1"=8'-0"

| REV. | DATE | DESCRIPTION | BY | SUB | APP. |
|---|---|---|---|---|---|
| | | | | | |



DESIGNED BY J. HYLES
DRAWN BY M.R. GRANADO
CHECKED BY R. McNAUGHT
APPROVED BY B. DOEING
DATE NOVEMBER 2014

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IRVINE, CALIFORNIA 92602
(619) 237-1885

NCTD

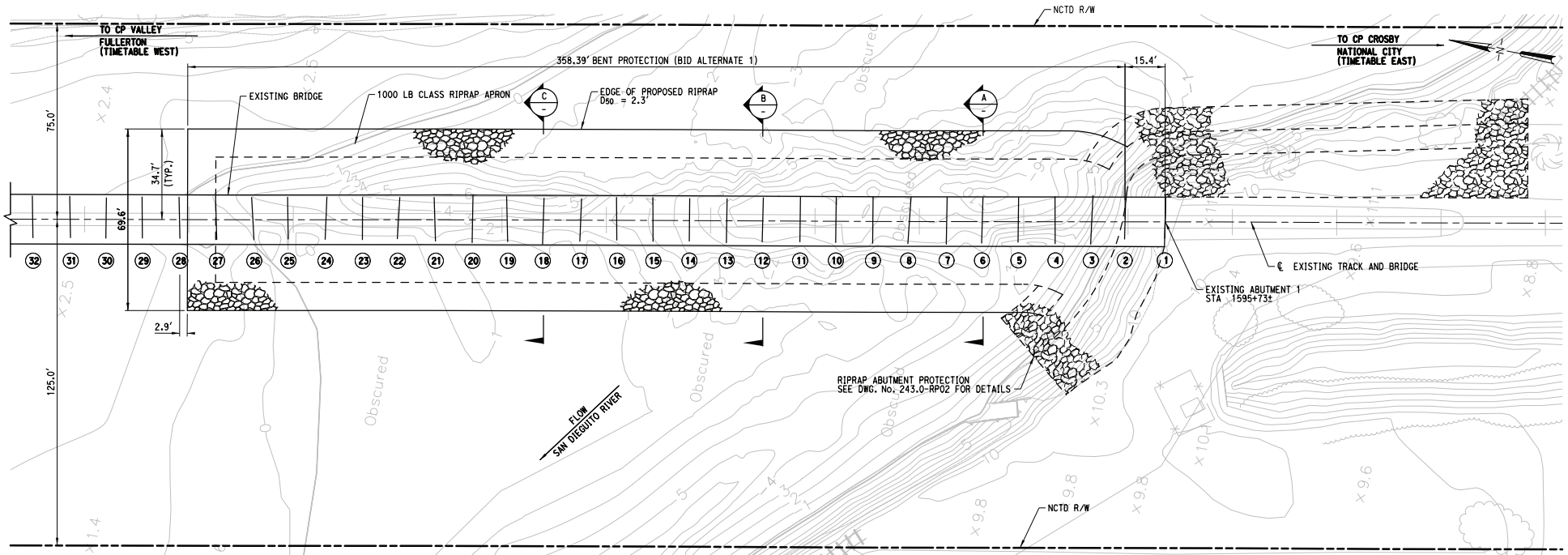
APPROVED: _____

REGISTERED PROFESSIONAL ENGINEER
BRIAN J. DOEING
No. C48984
Exp. 9/30/16
CIVIL
STATE OF CALIFORNIA

# BRIDGE 243.0 RIPRAP PROTECTION
## OVER SAN DIEGUITO RIVER
## SOUTH BRIDGE ABUTMENT PROTECTION PLAN AND DETAILS

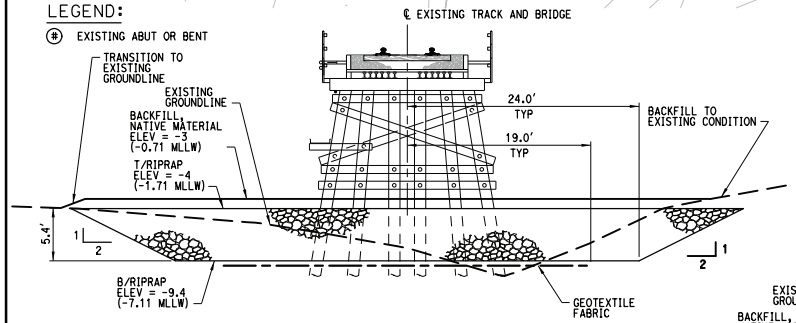
CONTRACT NO.
DRAWING NO. 240.4-RP02
REVISION
SHEET NO. 3 OF 4
SCALE AS NOTED

c:\2work\rlng\sac\d0626862\243.0-RP02.dgn DATE




PLAN
SCALE: 1"=40'-0"

LEGEND:
(#) EXISTING ABUT OR BENT




SECTION A-A @ BENT #6
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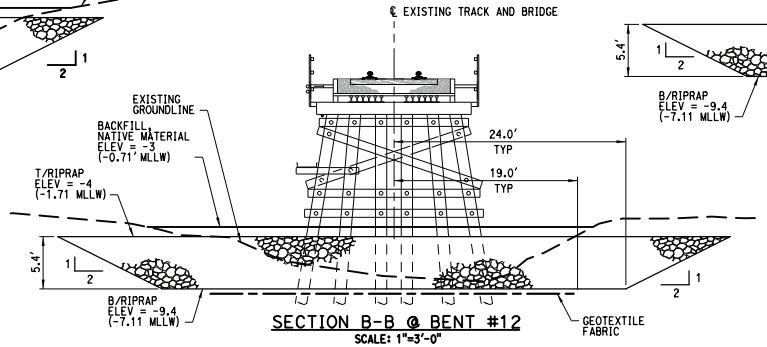


SECTION B-B @ BENT #12
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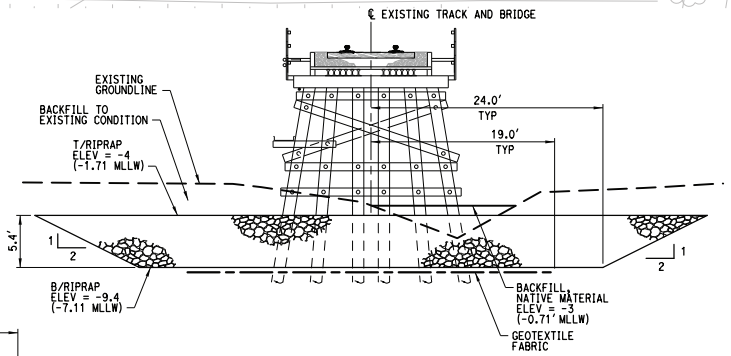


SECTION C-C @ BENT #18
SCALE: 1"=3'-0"

| REV. | DATE | DESCRIPTION | BY / SUB / APP. |
|---|---|---|---|

Information confidential diplans, drawings, specifications, and or information furnished herewith shall remain the property of the North San Diego County Transit District and shall be held confidential and shallnot be used for any purpose not provided for in agreements with the North San Diego County Transit District.

DESIGNED BY J. HYLES
DRAWN BY M.R. GRANADO
CHECKED BY R. McNAUGHT
APPROVED BY B. DOEING
DATE NOVEMBER 2014

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NCTD

APPROVED: _____

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BRIAN J. DOEING
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STATE OF CALIFORNIA

# BRIDGE 243.0 RIPRAP PROTECTION
## OVER SAN DIEGUITO RIVER
## BENT PROTECTION PLAN AND DETAILS

CONTRACT NO.
DRAWING NO. 243.0-RP03
REVISION
SHEET NO. 4 OF 4
SCALE AS NOTED

c:\2work\ngs\sac\00626862\243.0-RP03.dgn DATE