

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT: CONSENT CALENDAR

Application No.: 5-11-298

Applicant: Orange County Sanitation District (OCSD)

Agent: Environmental Science Association (ESA), Attn: Kevin Smith

Location: Santa Ana River West (Huntington Beach) & East (Newport Beach) Levees, City of Huntington Beach & Newport Beach (County of Orange)

Project Description: To permanently authorize the construction allowed under Emergency Permit 5-10-200-G for repair work consisting of in-situ mixing of soil, cement and water ("soil mixing") to reinforce the levees. Additional soil mix reinforcement to the levees (not yet undertaken) is proposed to finalize the repairs.

Staff Recommendation: Approval with conditions

SUMMARY OF STAFF RECOMMENDATION:

The applicant is proposing to permanently authorize the construction allowed under Emergency Permit 5-10-200-G for repair work consisting of in-situ mixing of soil with a cement and water mixture ("soil mixing"). In addition, the applicant is proposing additional work that would finalize the stabilization work on the levees. The major issue of this staff report concerns development that could be affected by waves, erosion, storm conditions, sea level rise or other natural hazards in the future and may affect habitat, public access, recreation and water quality.

Staff is recommending **approval** of the proposed project with **Eleven (11) Special Conditions** regarding: **1)** submittal of a Revised Final Project Plan; **2)** assumption of risk; **3)** future development; **4)** a Belding's Savannah Sparrow, California Clapper Rail and California Least Tern Survey; **5)** a biological monitor; **6)** submittal of a Final Construction Staging Plan; **7)** submittal of a Final Traffic Control Plan/Access Detour Plan; **8)** Construction Best Management Practices; **9)**

location of debris disposal site; **10)** submittal of a Storm Water Pollution Prevention Plan (SWPPP); and **11)** Construction Responsibilities During Waterside/Santa Ana River (SAR) work.

The proposed development is taking place in the City of Huntington Beach and in the City of Newport Beach. The City of Newport Beach only has a certified Land Use Plan (LUP), but the City of Huntington Beach has a certified Local Coastal Program (LCP). Based on Coastal Act Section 30601.3, the Commission may process and act upon a consolidated Coastal Development Permit (CDP) application. The City of Huntington Beach has given its consent to the California Coastal Commission (CCC) to process a consolidated Coastal Development Permit with the Commission. The standard of review for a consolidated Coastal Development Permit application are the Chapter 3 policies of the Coastal Act with the appropriate Local Coastal Program used as guidance.

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APPENDICES

Appendix 1 – Substantive File Documents

EXHIBITS

Exhibit #1 – Location Map
 Exhibit #2 – West Levee Site/Profile Plan
 Exhibit #3 – East Levee Site/Profile Plan
 Exhibit #4 – West Levee: Phase 1 Site Plan
 Exhibit #5 – East Levee: Phase 1 Site Plan
 Exhibit #6 – West Levee: Phase 2 Site Plan
 Exhibit #7 – East Levee: Phase 2 Site Plan
 Exhibit #8 – West Levee: Cofferdam Limits Site Plan
 Exhibit #9 – East Levee: Cofferdam Limits Site Plan
 Exhibit #10 – Existing 84-inch Pipeline to be Removed Plans

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve the coastal development permit applications included on the consent calendar in accordance with the staff recommendations.

Staff recommends a **YES** vote. Passage of this motion will result in approval of all the permits included on the consent calendar. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

II. SPECIAL CONDITIONS

1. Revised Final Project Plan.

- A. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicant shall submit, for the Executive Director's review and approval, two (2) full size sets of a Revised Final Project Plans. The Revised Final Project Plan shall be in substantial conformance with the plans received by South Coast District staff on March 20, 2012., except they shall be modified as follows: 1) the revised reduced and up-to-date work limits shall be identified; and 2) the revised location of the batch plant/construction equipment site that does not impact the wetland shall be identified.
- B.** The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

2. Assumption of Risk, Waiver of Liability and Indemnity.

- A.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from sea level rise, erosion, flooding, and/or wave uprush; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.
- B.** Prior to any conveyance of the property that is the subject of this Coastal Development Permit, the landowner shall execute and record a deed restriction, in a form and content acceptable to the Executive Director incorporating all of the above terms of subsection (A) of this condition. The restriction shall include a legal description of the applicant's entire parcel. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction.

This deed restriction shall not be removed or changed without a Commission amendment to this Coastal Development Permit.

- C. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a written agreement in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.
- 3. Future Development.** This permit is only for the development described in Coastal Development Permit No. 5-12-298. Pursuant to Title 14 California Code of Regulations Section 13250(b)(6), the exemptions otherwise provided in Public Resources Code Section 30610(a) shall not apply to the development governed by Coastal Development Permit No. 5-12-298. Accordingly, any future improvements to the levees uses authorized by this permit, including but not limited to repair and maintenance identified as requiring a permit in Public Resources Section 30610(d) and Title 14 California Code of Regulations Sections 13252(a)-(b), shall require an amendment to Permit No. 5-12-298 from the Commission or shall require an additional Coastal Development Permit from the Commission or from the applicable certified local government.
- 4. Belding's Savannah Sparrow, California Clapper Rail and California Least Tern Survey.**
 - A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a valid Belding's Savannah Sparrow, California Clapper Rail and California Least Tern pre-construction survey. The Belding's Savannah Sparrow, California Clapper Rail and California Least Tern pre-construction survey shall be completed before construction of the proposed project.
 - B.** If the Belding's Savannah Sparrow, California Clapper Rail and California Least Tern are found to be nesting on or near the project site, the applicant shall cease all work. Construction will not continue until after the nesting season.
- 5. Biological Monitor.** An appropriately trained biologist shall monitor construction activity for disturbance to sensitive species or habitat area. At minimum, monitoring shall occur once a week during any week in which construction occurs. Daily monitoring shall occur during construction activities, which could significantly impact biological resources such as construction within 100-feet of wetlands and construction that could result in disturbances to Belding's Savannah Sparrow, California Clapper Rail, or California Least Tern. Based on field observations, the biologist shall advise the applicant regarding methods to minimize or avoid significant impacts, which could occur upon sensitive species or habitat areas. The applicant shall not undertake any activity, which would disturb sensitive species or habitat area unless specifically authorized and mitigated under this Coastal Development Permit or unless an amendment to this Coastal Development Permit for such disturbance has been obtained from the Coastal Commission.

6. Final Construction Staging Plan.

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT the permittee shall submit for the review and approval of the Executive Director, two (2) full size sets of a Construction Staging Plan that demonstrate the following:

- (1) The plan shall demonstrate that:
 - (a) Construction equipment, materials or activity shall not occur outside the staging area and construction corridor identified on the site plan required by this condition;
 - (b) The construction staging area will gradually be reduced as less materials and equipment are necessary;
 - (c) The construction access route will only be intermittently closed for transport of equipment and materials. When not in use for transportation of equipment and materials, it will be made available for undisrupted public access.
 - (d) Construction equipment, materials, or activity shall not be placed or occur within the Santa Ana River or the Santa Ana River Marsh (wetland);
 - (e) Adjacent habitat areas shall be fenced to avoid encroachment and impact; and
 - (f) No impacts to habitat areas are allowed.
- (2) The plan shall include, at a minimum, the following components:
 - (a) A site plan that depicts:
 1. limits of the staging area(s);
 2. location of any habitat areas;
 3. construction corridor(s);
 4. construction site; and
 5. location of construction fencing and temporary job trailers.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

7. Final Traffic Control Plan/Access Detour Plan.

- A.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit for the review and approval of the Executive Director, two (2) full size sets of a Traffic Control Plan/Access Detour Plan that demonstrate the following:
- (1) Every effort shall be made to minimize the duration of the bicycle and pedestrian path along the top of the East and West Levees, sidewalk, bicycle and road lane closures so that impacts upon public access are minimized;
 - (2) The bicycle and pedestrian path along the top of the East and West Levees, sidewalk, bicycle and road lanes should be opened, even intermittently, whenever possible during construction;
 - (3) A Traffic Control Plan/Access Detour Plan to re-route pedestrian and bicycle traffic shall be identified for those periods when the bicycle and pedestrian path along the top of the East and West Levees, sidewalk and/or bicycle lane is closed within the project area; and
 - (4) The plan shall also depict the language to be placed on the detour signs, as well as, the appearance of these signs.
- B.** The permittee shall undertake development in accordance with the approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

8. Construction Best Management Practices.

- A.** The permittee shall comply with the following construction-related requirements:
- (1) No construction materials, debris, or waste shall be placed or stored where it may be subject to wave, wind, rain, or tidal erosion and dispersion;
 - (2) Any and all debris resulting from construction activities shall be removed from the project site within 24 hours of completion of the project;
 - (3) Construction debris and sediment shall be removed from construction areas each day that construction occurs to prevent the accumulation of sediment and other debris which may be discharged into coastal waters;
 - (4) Erosion control/sedimentation Best Management Practices (BMP's) shall be used to control dust and sedimentation impacts to coastal waters during construction. BMP's shall include, but are not limited to: placement of sand

bags around drainage inlets to prevent runoff/sediment transport into coastal waters; and

- (5) All construction materials, excluding lumber, shall be covered and enclosed on all sides, and as far away from a storm drain inlet and receiving waters as possible.

B. Best Management Practices (BMP's) designed to prevent spillage and/or runoff of construction-related materials, sediment, or contaminants associated with construction activity shall be implemented prior to the on-set of such activity. Selected BMP's shall be maintained in a functional condition throughout the duration of the project. Such measures shall be used during construction:

- (1) The permittee shall ensure the proper handling, storage, and application of petroleum products and other construction materials. These shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. It shall be located as far away from the receiving waters and storm drain inlets as possible;
- (2) The permittee shall develop and implement spill prevention and control measures;
- (3) The permittee shall maintain and wash equipment and machinery in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems. Washout from concrete trucks shall be disposed of at a location not subject to runoff and more than 50-feet away from a stormdrain, open ditch or surface water; and
- (4) The permittee shall provide adequate disposal facilities for solid waste, including excess concrete, produced during construction.

9. Location of Debris Disposal Site. The permittee shall dispose of all demolition and construction debris resulting from the proposed project at an appropriate location. If the disposal site is located within the Coastal Zone, a Coastal Development Permit or an amendment to this permit shall be required before disposal can take place.

10. Storm Water Pollution Prevention Plan (SWPPP)

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the permittee shall submit for the review and approval of the Executive Director, two (2) sets of a Storm Water Pollution Prevention Plan (SWPPP) prepared and signed by licensed engineer that, at a minimum, meets the following:

The Storm Water Pollution Prevention Plan must show that permittee is properly prepared to apply site design, source control and treatment control

BMP's, appropriate for the potential stormwater pollutants at this site, in order to protect coastal waters from polluted runoff generated by construction activities to the maximum extent practicable.

- B.** The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this Coastal Development Permit unless the Executive Director determines that no amendment is legally required.

11. Construction Responsibilities During Waterside/Santa Ana River (SAR) Work

The permittee shall comply with the following construction related requirements:

- A.** No demolition or construction materials, equipment, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain or tidal erosion and dispersion;
- B.** Any and all debris resulting from demolition or construction activities, and any remaining construction material, shall be removed from the project site within 24 hours of completion of the project;
- C.** Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters;
- D.** Machinery or construction materials not essential for project improvements will not be allowed at any time in the intertidal zone;
- E.** If turbid conditions are generated during construction a silt curtain will be utilized to control turbidity;
- F.** Floating booms will be used to contain debris discharged into coastal waters and any debris discharged will be removed as soon as possible but no later than the end of each day;
- G.** Non buoyant debris discharged into coastal waters will be recovered by divers as soon as possible after loss;
- H.** All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day.

- I.** The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction;
- J.** Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the Coastal Zone, a Coastal Development Permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required;
- K.** All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil;
- L.** Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems;
- M.** The discharge of any hazardous materials into any receiving waters shall be prohibited;
- N.** Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible;
- O.** Best Management Practices (BMP's) and Good Housekeeping Practices (GHP's) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity; and
- P.** All BMP's shall be maintained in a functional condition throughout the duration of construction activity.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. PROJECT LOCATION AND DESCRIPTION, PRIOR COMMISSION ACTIONS ON-SITE AND OTHER AGENCY REVIEW

1. PROJECT LOCATION AND DESCRIPTION

The subject sites are located on the West Levee (City of Huntington Beach) and the East Levee (City of Newport Beach) of the Santa Ana River (SAR), just inland of Pacific Coast Highway in Orange County (Exhibits #1-3). The West Levee is located adjacent to the Orange County Sanitation District Sewage Treatment Facility No. 2. The East Levee is located adjacent to the Santa Ana River Marsh, a wetland. No work is proposed in the adjacent wetland. The Santa Ana River spans between these two (2) project locations. At the top of each of these two (2) levees there is a public bicycle and pedestrian path that leads to the beach.

The purpose of this project is to finalize the stabilization of the Santa Ana River Levees slopes that experienced general subsidence with localized, relatively severe settling in 2008 due to the effects of a previous microtunneling operation approved under Coastal Development Permit No. 5-05-361-(OCSD) for the Newport Trunk Sewer and Bitter Point Force Mains project. The subsidence effects that were documented included: cracking of the bicycle and pedestrian paths on top of the Santa Ana River (SAR) Levees, sinkholes within Plan No.2 in Huntington Beach, settlement of the 120-inch outfall pipe support, and settlement of the rip rap along the East and West SAR Levees.

The repair work was broken up into two (2) parts. Phase 1 ensured that the river levees were stabilized in order to maintain flood protection so they would not fail during the winter of 2010-2011. This Phase 1 work was approved through Emergency Permit No. 5-10-200-G-(OCSD) in September 2010 and has been completed. The repair more specifically consisted of the following:

In-situ mixing of soil with a cement and water mixture added (“soil mixing”) within the level areas (bicycle and pedestrian paths) on the top of the two (2) levees. The East Levee repair area consisted of an approximate 150-foot by 25-foot area. The West Levee repair area consisted of an approximate 100-foot by 25-foot area. Construction on the East Levee avoided the wetland area (Santa Ana River Marsh). Work did not take place within the Santa Ana River. Soil mixing was accomplished with an auger-type mixer mounted on a rig, producing a column of mixed soil 3-feet in diameter to 9-feet in diameter. A series of these columns were constructed overlapping each other and covering the construction area. It was anticipated that these cured soil/cement columns would prevent further settling. The soil mixing process produced approximately 1,120 cubic yards of spoil to be transported outside of the Coastal Zone (Exhibits #4-5).

The proposed project is a follow-up to Emergency Permit No. 5-10-200-G-(OCSD) that was issued in September 2010 for the work described above. As required, following the issuance of an Emergency Permit, the applicant submitted a regular Coastal Development Permit Application No. CDP No. 5-11-298-(OCSD) for permanent authorization of development approved under the Emergency Permit, as well as for the remaining work necessary (Phase 2, which is described below) to finalize the stabilization work for the East and West Levees.

Phase 2 is intended to complete the stabilization of the Santa Ana River Levees and bring them back to their original condition. This remaining work will take place along the rip rap of the East and West Levees and will extend from the top to the base of the rip rap slope in the SAR. Additionally, work will also take place on the inland areas of the East and West Levees from the bicycle and pedestrian paths. Similar to the work associated with Phase 1 of the repair work, the proposed construction method for the remaining levee repair work consists of mixing soil with cement and a water mixture (soil mixing) and injecting the mixture into and near the settling zone. Soil mixing would be accomplished with an auger-type mixer mounted on a drill rig. The rotary auger would produce a column of mixed soil 5-feet in diameter to 12-feet in diameter. The columns would be constructed so that there is overlapping with other columns throughout the portion of the levee banks identified as subsiding. The existing rip rap in the construction area would be removed prior to soil mixing and then replaced after soil mixing is completed (Exhibits #6-7).

To accomplish the Phase 2 repair, the project proposes temporary installation of coffer dams in the SAR to isolate and dewater the base of each levee. The work area at the base of each levee will measure approximately 100 to 150-feet (along the levee toe) by 50 to 60-feet (into the river – measured from the top (bicycle and pedestrian paths) of the rip rap slope of the levees (Exhibits #8-9).

Additionally, at both levee locations, it is anticipated that a batch plant/construction equipment site will be established for mixing cement with water onsite for injection into the soil during soil mixing. These sites would be inland of the bicycle and pedestrian paths. They would not be located within the SAR, on either of the paths or on the wetland adjacent to the East Levee. Since the original submittal of the project, some aspects of the project have changed, such as the location of the batch plant/construction equipment, the work limits, etc. Staff has received a written description of these changes, and has sufficient information to determine the impacts associated with those changes, but the plans haven't yet been revised to depict the revised project. Thus, the Commission finds it necessary to impose **SPECIAL CONDITION NO. 1**, which requires submittal of a Revised Final Project Plan which depict the final location of all proposed development as described by the applicant. If the final plans submitted don't depict the development in substantial conformance with the written description and/or the impacts would be different, such changes would be referred to the Commission in the form of an amendment.

In addition, the proposed project also includes removal of a section of an abandoned 84-inch sewer pipe that runs north-south through the inland portion of the West Levee. This section of the abandoned pipe is within the rehabilitation and that is the reason for its removal. The remaining portion of the abandoned pipe will remain in ground, but each end will be sealed water tight (Exhibit #10).

Construction access to the East Levee site will be from an access road off of Pacific Coast Highway and construction access to the West Levee will be through the Orange County Sanitation District Sewage Treatment Facility No. 2.

The applicant has submitted a Construction Staging Plan and states that the staging area for the West Levee work would be located within the Orange County Sanitation District Sewage Treatment Facility No. 2. Additionally, the applicant states that the staging area for the East Levee work will be within an area adjacent to the Santa Ana River Marsh. The submitted Construction Staging Plan only provides general information and lacks specifics, such as a narrative describing the staging areas and plan details showing the exact location of the staging areas. Additionally, with the wetland adjacent to the East Levee and the applicant proposing to place the staging area near the wetland, it is necessary to have a detailed staging plan that verifies that no impacts to the adjacent wetland is proposed. Thus, the Commission finds it necessary to impose **SPECIAL CONDITION NO. 6**, which requires submittal of a Final Construction Staging Plan.

The anticipated construction work would be completed in approximately 35-weeks. The construction work would be phased in order to continually provide access to the beach and ocean for bicycles and pedestrians along the East and West Levee bicycle and pedestrian paths. In order to make sure that there are no adverse impacts to public access to the ocean, the applicant has submitted a Final Traffic Control Plan/Access Detour Plan. The plan states that because the levees are relatively narrow and because the machinery needed for the soil mixing work is relatively large, through traffic along the paths cannot be allowed when the mixing is in progress. There are two (2) bridges: 1) south of the project site along Pacific Coast Highway and 2) north of the project site along Hamilton Avenue/Victoria Street. Bicycle and pedestrian traffic can be detoured away from the active construction at these bridges. The soil mixing will be conducted on only one levee at a time, starting with the West Levee. This will allow the levee traffic to be diverted to the East Levee. Then the work will shift to the East Levee and the levee traffic will be diverted to the West Levee. While the applicant has provided a Final Traffic Control Plan/Access Detour Plan, the plan is missing specifics, such as the language to be found on signs that will direct the public regarding the detours and also the appearance of these signs. Thus, the Commission finds it necessary to impose **SPECIAL CONDITION NO. 7**, which requires submittal of a Final Traffic Control Plan/Access Detour Plan.

The East Levee is adjacent to the SAR Marsh, which is known habitat for the Belding's Savannah Sparrow, state listed as an endangered species, and the California Clapper Rail, federally listed an endangered species and is also a California state fully protected species. The California Least Tern, federally listed as an endangered species, also uses the river and marsh for foraging during the breeding season. In order to determine if any of these species would be impacted by the proposed project, a pre-construction survey conducted by Environmental Science Associates (ESA) was completed on October 7, 2010. The survey determined that no state or federally listed species of special concern or their habitat are expected to be impacted by the project. While this survey indicated that no Belding's Savannah Sparrow, California Clapper Rail and California Least Tern will be impacted by this project, that survey is dated since it was conducted in 2010. An updated survey must be

completed to determine if the conclusion stated in the 2010 survey is still correct. Thus, the Commission finds it necessary to impose **SPECIAL CONDITION NO. 4**, which requires submittal of a current Belding's Savannah Sparrow, California Clapper Rail and California Least Tern survey.

During construction there is a possibility that inadvertent adverse impacts to the existing habitat may occur if construction crews are not adequately informed of the presence and location of sensitive habitat. To remedy this concern, a biological monitor should be present on site to assist construction crews in identifying sensitive habitats and methods for avoiding impacts to those habitats. Thus, the Commission finds it necessary to impose **SPECIAL CONDITION NO. 5**, which requires that an appropriately trained biologist shall monitor construction activity and to implement methods to avoid disturbance to sensitive species or habitat area.

Storage or placement of construction materials, debris, or waste in a location subject to erosion and dispersion or which may be discharged into coastal water via rain or wind would result in adverse impacts upon the marine environment that would reduce the biological productivity of coastal waters. For instance, construction debris entering coastal waters may cover and displace soft bottom habitat. Sediment discharged into coastal waters may cause turbidity, which can shade and reduce the productivity of foraging avian and marine species' ability to see food in the water column. In order to avoid adverse construction-related impacts upon marine resources, **SPECIAL CONDITION NO. 8** outlines construction-related requirements to provide for the safe storage of construction materials and the safe disposal of construction debris. In order to prevent impacts to coastal waters, **SPECIAL CONDITION NO. 9** requires that all demolition and cut material debris be disposed of at a legal site. Choice of a site within the Coastal Zone shall require an amendment to this permit or a new Coastal Development Permit, unless the Executive Director determines that no amendment or new permit is legally required.

Besides adhering to the Construction Best Management Practices as required by **SPECIAL CONDITION NO. 8** above, a Storm Water Pollution Prevention Plan (SWPPP) should be prepared for the proposed project that would specifically deal with water quality on site during construction. The applicant acknowledges that a SWPPP needs to be development for the project site, but such a plan has not yet been development. Therefore, it is necessary to impose **SPECIAL CONDITION NO. 10** which requires the applicant to submit a Storm Water Pollution Prevention Plan (SWPPP)

During the construction activities along the rip rap and within the SAR, there is potential for adverse impacts to water quality. To avoid and minimize potential project impacts on water quality during dredging and construction of these project elements, several Best Management Practices (BMP's) need to be implemented. Therefore, the Commission imposes **SPECIAL CONDITION NO. 11**, which outlines construction responsibilities (BMP's) during waterside work.

2. PRIOR COMMISSION ACTIONS ON-SITE

a. Coastal Development Permit No. 5-05-361

On October 11, 2006, the Commission approved Coastal Development Permit No. 5-05-361-(OCSD) for: replacement of two (2) force main sewer lines and abandoning of a third: an existing 24-inch line will be replaced with a new, 6,580 linear foot, a 42-inch (36-inch internal diameter (ID)) High Density Polyethylene Force Main line; a 2,035 linear foot section of an existing 36-inch line will be replaced with a new 42-inch (36-inch ID) High Density Polyethylene Force Main line; and an existing 30-inch line will be entirely abandoned in place. Staff recommended approval of the project subject to seven (7) Special Conditions: **SPECIAL CONDITION NO. 1** required a biological monitor. **SPECIAL CONDITION NO. 2** limited work to take place only from September 1 through February 15. **SPECIAL CONDITION NO. 3** required performance of a post construction survey of the subject site. **SPECIAL CONDITION NO. 4** required submittal of site access, staging, work area and equipment storage plan(s). **SPECIAL CONDITION NO. 5** required submittal of a tunneling and monitoring mitigation plan. **SPECIAL CONDITION NO. 6** required geotechnical conformance. **SPECIAL CONDITION NO. 7** required an assumption of risk. The permit was issued on April 8, 2008.

b. Emergency Permit No. 5-10-200-G

On September 30, 2010, the Commission approved Emergency Permit No. 5-10-200-G-(OCSD) for: the repair of the East (Newport Beach) and West (Huntington Beach) Santa Ana River Levees that were damaged as a result of a microtunneling project (CDP No. 5-05-361) conducted underneath the Santa Ana River to install a new sewer line. The microtunneling project compromised the stability of the levees and resulted in settlement along the levees. Observed impacts to the levees include cracking along the bicycle and pedestrian paths along the river, ground settlements, and damaged portions of the rip rap slopes along the river. Typical Conditions of Approval were attached to this Emergency Permit. Additionally, the following Conditions of Approval were included: 1) a biological survey shall be completed prior to initiation of construction activities and shall provide recommendations for a biological monitor to be present during construction. Construction access to the East Levee site will take place along an existing maintenance road within the Semeniuk Slough (Previously used to access the site for the micortunneling project CDP No. 5-05-361) and construction access to the West Levee will be through the Orange County Sanitation District Sewage Treatment Facility No. 2; 2) silt fencing will be used as a Best Management Practice to deal with sediment control; 3) the applicant shall comply with the submitted Traffic Control and Construction Access and Detour Plans; and 4) the applicant shall comply with the submitted monitoring as discussed in their bid documents.

3. OTHER AGENCY REVIEW

a) California Department of Fish & Game (CDFG)

The CDFG issued a Streambed Alteration Agreement (Notification No. 1600-2011-0381-R5) from the California Department of Fish & Game (CDFG) dated March 14, 2012 for the project.

b) Regional Water Quality Control Board (RWQCB)

The RWQCB issued a Section 401 Permit dated February 28, 2012 for the proposed project.

B. HAZARDS

The proposed development is in a hazard prone location. Therefore, the project has been conditioned to require that the landowner and any successor-in-interest assume the risk of undertaking the development. As conditioned, the Commission finds that the development conforms to the requirements of Sections 30235 and 30253 of the Coastal Act regarding the siting of development in hazardous locations.

C. DEVELOPMENT

The development is located within an existing developed area and is compatible with the character and scale of the surrounding area. However, the proposed project raises concerns that future development of the project site potentially may result in a development which is not consistent with the Chapter 3 policies of the Coastal Act. To assure that future development is consistent with the Chapter 3 policies of the Coastal Act, the Commission finds that a future improvements special condition be imposed. As conditioned the development conforms with the Chapter 3 policies of the Coastal Act.

D. HABITAT

As conditioned, the development will not result in significant degradation of adjacent habitat, recreation areas, or parks and is compatible with the continuance of those habitat, recreation, or park areas. Therefore, the Commission finds that the project, as conditioned, conforms with Section 30240(b) of the Coastal Act.

E. PUBLIC ACCESS

The proposed development will not affect the public's ability to gain access to, and/or to use the coast and nearby recreational facilities. Therefore, as proposed the development, as conditioned, conforms with Sections 30210 through 30214, Sections 30220 through 30224, and 30252 of the Coastal Act.

F. RECREATION

The proposed development, as conditioned, does not interfere with public recreational use of coastal resources. The proposed development, as conditioned, protects coastal areas suited for recreational activities. Therefore, the Commission finds that the proposed development, as conditioned, is in

conformity with Sections 30210 through 30214 and Sections 30220 through 30223 of the Coastal Act regarding the promotion of public recreational opportunities.

G. WATER QUALITY

The proposed work will be occurring in a location where there is a potential for a discharge of polluted runoff from the project site into coastal waters. The storage or placement of construction material, debris, or waste in a location where it could be carried into coastal waters would result in an adverse effect on the marine environment. To reduce the potential for construction and post-construction related impacts on water quality, the Commission imposes special conditions requiring, but not limited to, the appropriate storage and handling of construction equipment and materials to minimize the potential of pollutants to enter coastal waters and for the use of on-going best management practices following construction. As conditioned, the Commission finds that the development conforms with Sections 30230 and 30231 of the Coastal Act.

H. LOCAL COASTAL PROGRAM (LCP)

Section 30604 of the Coastal Act provides for the issuance of Coastal Development Permits directly by the Commission in regions where the local government having jurisdiction does not have a certified Local Coastal Program. The permit may only be issued if the Commission finds that the proposed development will not prejudice the ability of the local government to prepare a Local Coastal Program, which conforms with the Chapter 3 policies of the Coastal Act.

The proposed development is taking place in the City of Huntington Beach and in the City of Newport Beach.

A portion of the project is located within the City of Newport Beach that is covered by a Land Use Plan (LUP). The LUP for the City of Newport Beach was effectively certified on May 19, 1982. At the October 2005 Coastal Commission Hearing, the certified LUP was updated. As conditioned, the proposed development is consistent with Chapter 3 of the Coastal Act and with the certified Land Use Plan for the area. Approval of the project, as conditioned, will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3.

The remaining portion of the project is within the City of Huntington Beach, which has a certified Local Coastal Program that was certified by the Commission on March 1985 and subsequently updated.

Based on Coastal Act Section 300601.3, the Commission may process and act upon a consolidated Coastal Development Permit application if both of the following criteria are satisfied:

- 1) A proposed project requires a Coastal Development Permit from both a local government with a certified Local Coastal Program and the commission.
- 2) The applicant, the appropriate local government, and the commission, which may agree through its executive director, consent to consolidate the permit action,

provided that public participation is not substantially impaired by that review consolidation.

The standard of review for a consolidated Coastal Development Permit application are the Chapter 3 policies of the Coastal Act with the appropriate Local Coastal Program used as guidance. On April 17, 2012, the City of Huntington Beach gave its consent to the California Coastal Commission to process a consolidated Coastal Development Permit with the City of Newport Beach.

As conditioned, the proposed development is consistent with the Chapter Three policies of the Coastal Act. Therefore, the Commission finds that the proposed development would not prejudice the ability of the City to prepare a certified coastal program consistent with the Chapter 3 policies of the Coastal Act.

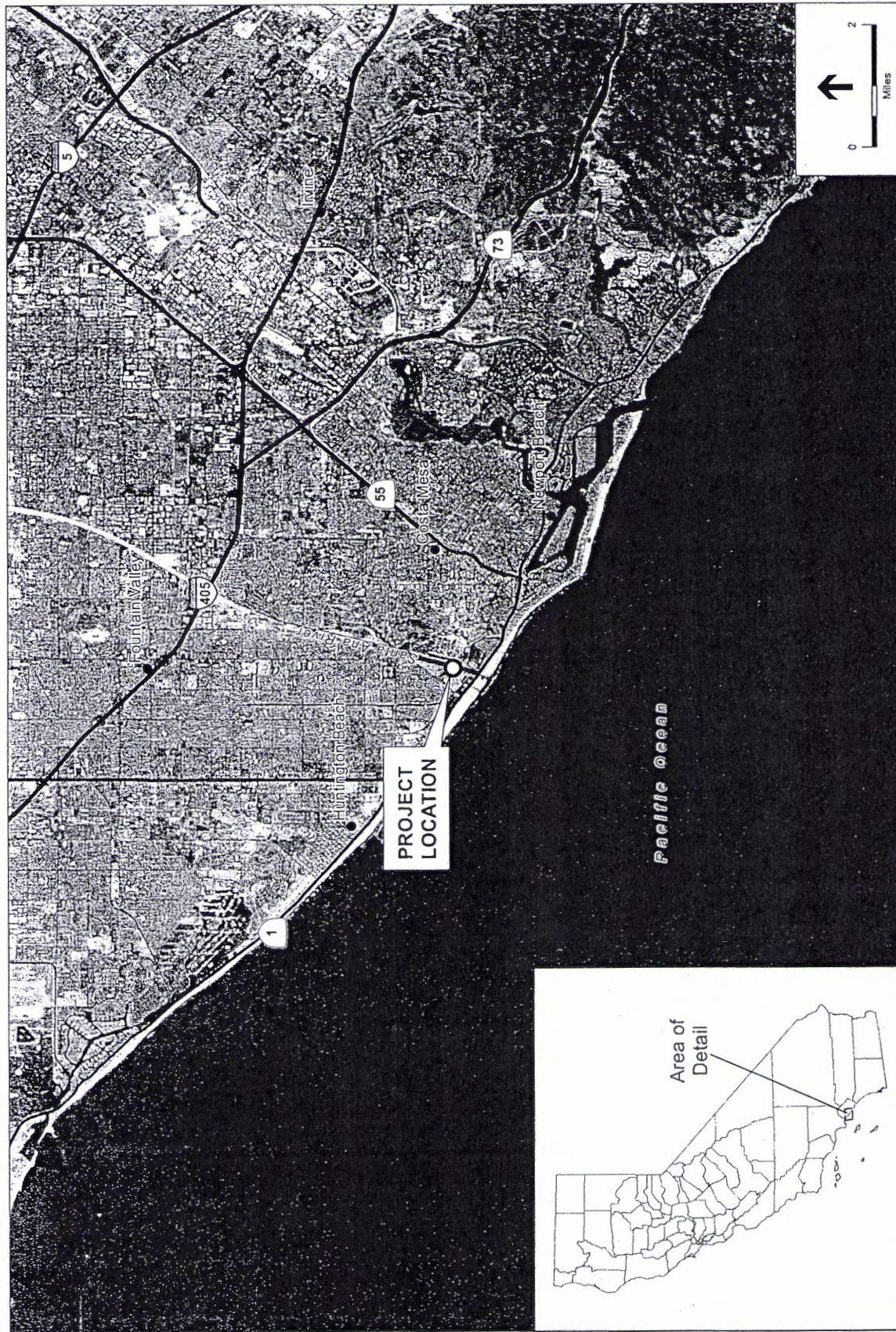
I. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The Orange County Sanitation District is the lead agency responsible for certifying that the proposed project is in conformance with the California Environmentally Quality Act (CEQA). The City determined that in accordance with CEQA, the project is ministerial or categorically exempt. Section 13096(a) of the Commission's administrative regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA).

Although the proposed development is categorically exempt from CEQA, the Commission has imposed conditions to ensure conformity with Coastal Act requirements. As conditioned, there are no feasible alternatives or additional feasible mitigation measures available that would substantially lessen any significant adverse effect that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and consistent with the requirements of the Coastal Act and CEQA.

APPENDIX 1

SUBSTANTIVE FILE DOCUMENTS: CDP No. 5-05-361-(OCSD); CDP No. 5-06-246-(OCSD); Emergency Permit No. 5-10-200-G-(OCSD); City of Newport Beach Certified Land Use Plan (LUP); Orange County Sanitation District 5-58 Bitter Point Force Main Rehabilitation, Phase 2 Santa Ana River Levee Repair Project Initial Study/Mitigated Negative Declaration (SCH# 2011091043) dated November 2011; Letter from Commission staff to applicant dated December 28, 2011; Letter from applicant to Commission staff received February 1, 2012; Biological Site Survey for the Newport Trunk Sewer Project prepared by Environmental Science Associates (ESA) dated October 11, 2012; Information received from ESA dated February 14, 2012; Letter from Commission staff to applicant dated March 2, 2012; Letter from applicant to Commission staff received March 15, 2012; Section 401 Permit from the regional Water Quality Control Board dated February 28, 2012; and Streambed Alteration Agreement (Notification No. 1600-2011-0381-R5) from the California Department of Fish & Game (CDFG) dated March 14, 2012.



OCSD - Levee Rehabilitation - 208091.02

Figure 1

Regional Location Map

COASTAL COMMISSION

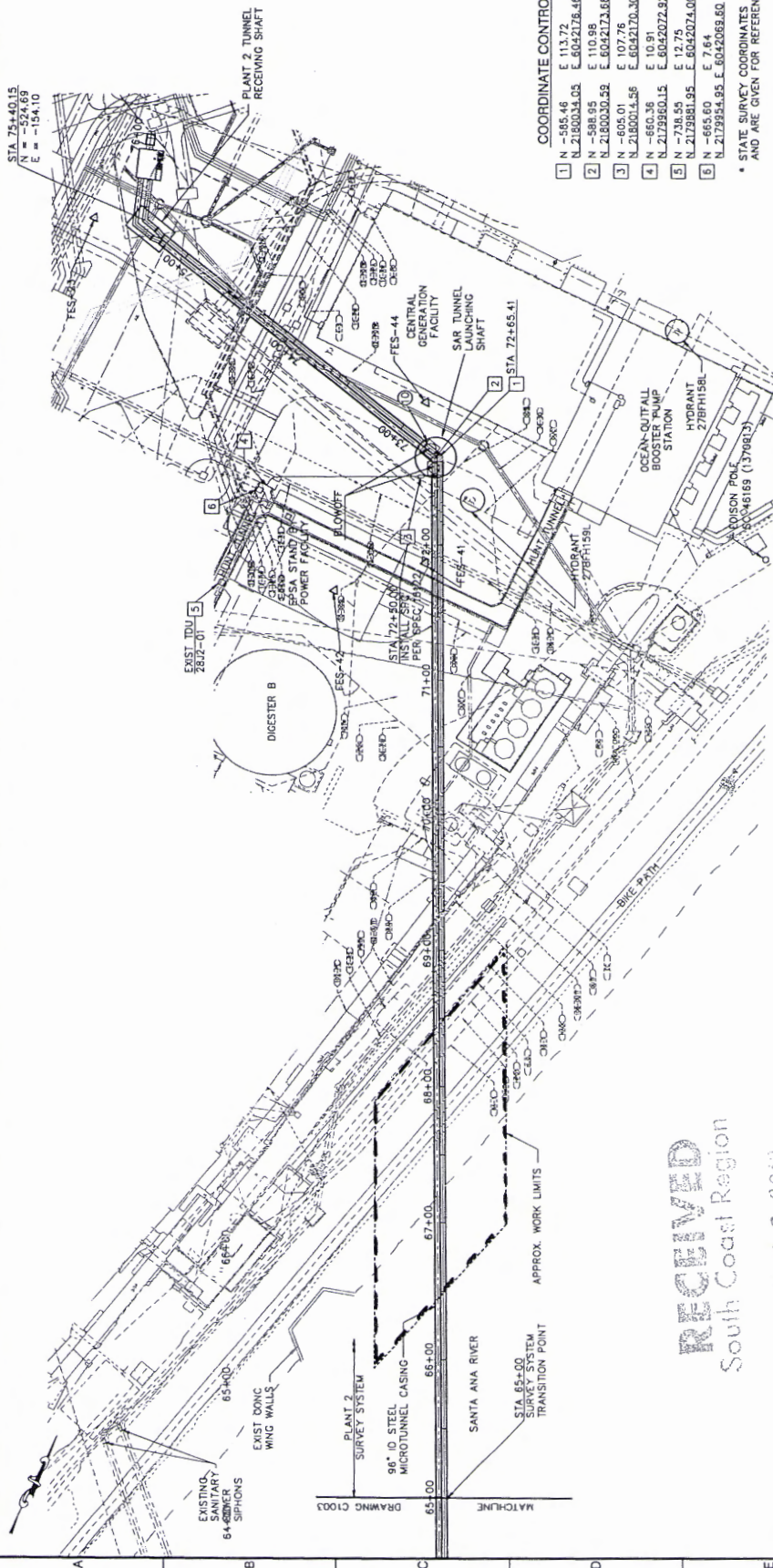
EXHIBIT # 1

PAGE 1 OF 1

SOURCE: ESA, 2011.

WEST LEVEE

1 2 3 4 5 6 7 8 9 10



COORDINATE CONTROL TABLE *

| | | | | |
|---|---|---------|---|--------|
| 1 | N | -585.46 | E | 113.72 |
| 2 | N | -585.95 | E | 110.86 |
| 3 | N | -605.01 | E | 107.76 |
| 4 | N | -660.36 | E | 10.91 |
| 5 | N | -738.55 | E | 12.75 |
| 6 | N | -665.60 | E | 7.64 |

* STATE SURVEY COORDINATES ARE UNDERLINED AND ARE GIVEN FOR REFERENCE.

NOTES:
1. SEE DRAWING C1002 FOR PROFILE OF MICROTUNNEL CASING PIPE.



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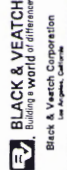
EXHIBIT # 2
PAGE 1 OF 2

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South Coast Region

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COASTAL COMMISSION

DESIGNED BY: HUNTER, MICHAEL - 11/14/11
DRAWN BY: HUGHES, THERESA - 11/14/11
CHECKED BY: MILLER, CHRIS - 11/14/11
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AT FULL SIZE
(IF NOT 2" SCALE ACCORDINGLY)



ORANGE COUNTY
SANITATION DISTRICT

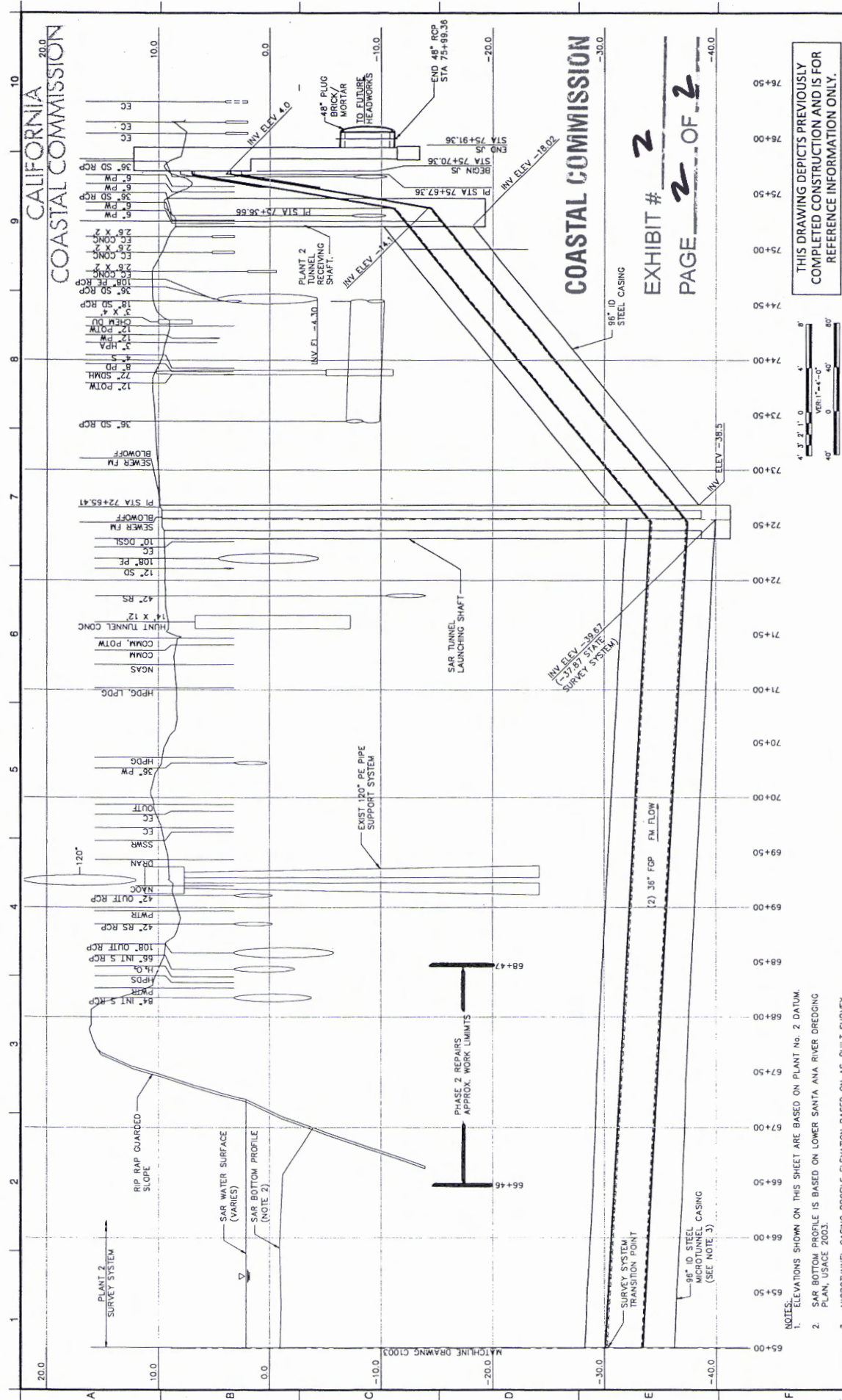
BITTER POINT FORCE MAIN REHABILITATION
PHASE 2 SANTA ANA RIVER LEVEE REPAIR
MICROTUNNEL PLAN VIEW - STATION
65+00 TO 76+05.36 - WEST LEVEE

PROJECT/CONTRACT NO.
5-58
DRAWING NO.
C1001
6 OF 29

| MARK | DESCRIPTION | DATE/APPR. |
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PROJECT/CONTRACT NO. 5-58

**BITTER POINT FORCE MAIN REHABILITATION
PHASE 2 SANTA ANA RIVER LEVEE REPAIR**

ORANGE COUNTY
SANITATION DISTRICT



BLACK & VEATCH
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Black & Veatch Corporation

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 DRAWN BY: HUGHES, TRENTON - 11/14/11
 CHECKED BY: MUELLER, CHRIS - 11/14/11

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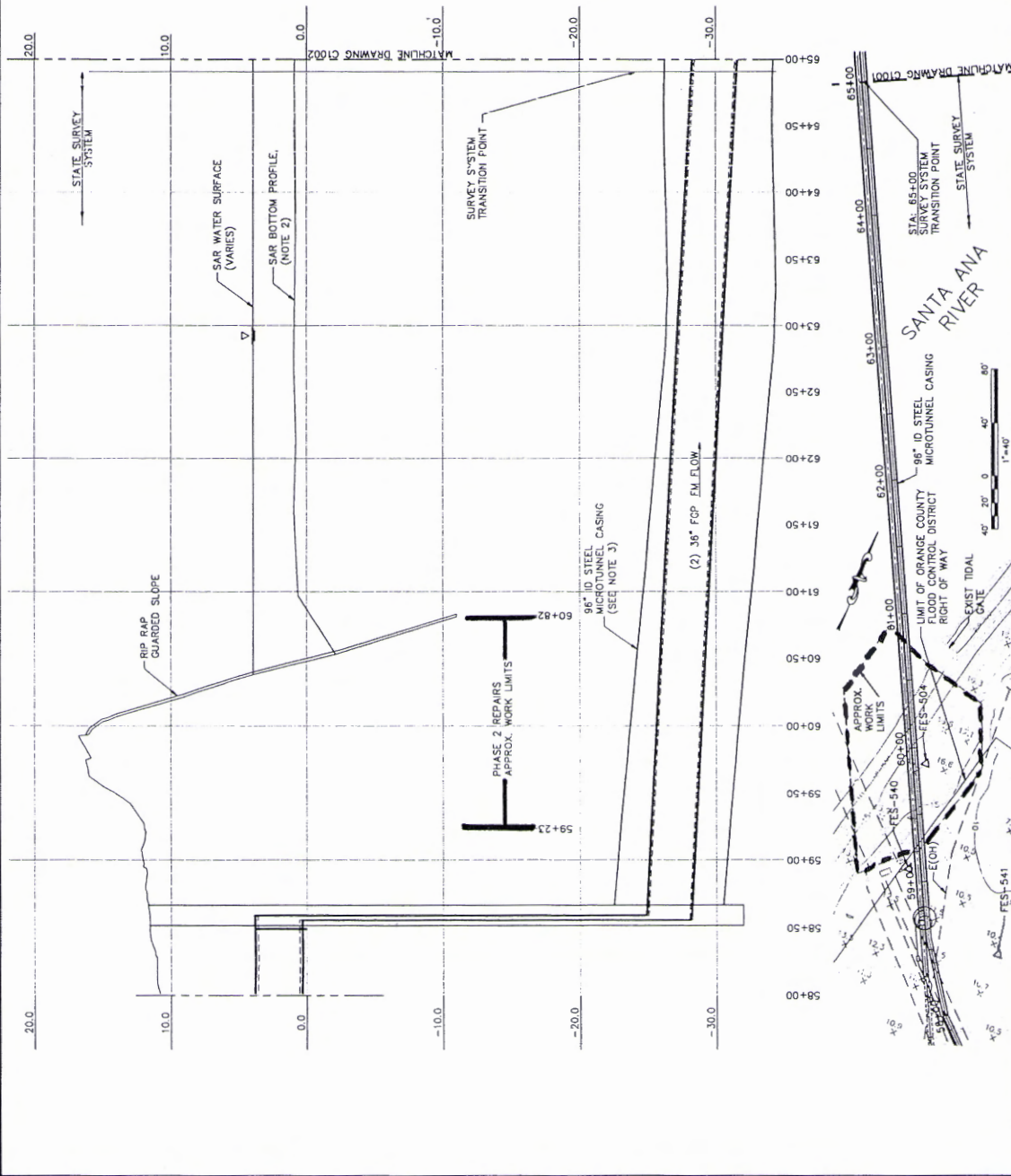
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 E: Nov 14, 2011 2

EAST LEVEE

1 2 3 4 5 6 7 8 9 10



COASTAL COMMISSION

EXHIBIT # **3**
PAGE **1** OF **1**

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South Coast Region
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- NOTES:
ELEVATIONS SHOWN ON THIS DWG ARE
1. BASED ON STATE SURVEY SYSTEM.
2. SAR BOTTOM PROFILE IS BASED ON LOWER SANTA ANA RIVER DREDGING PLAN, USACE, 2003.
3. MICROTUNNEL CASING PROFILE ELEVATION BASED ON AS-BUILT SURVEY.



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| | | |
|--|--|------------------------------|
| ORANGE COUNTY SANITATION DISTRICT | | PROJECT/CONTRACT NO. 5-58 |
| BITTER POINT FORCE MAIN REHABILITATION PHASE 2 SANTA ANA RIVER LEVEE REPAIR | | DRAWING NO. C1003 |
| STA 58+00 TO 65+00 - EAST LEVEE | | 8 OF 29 |
| DESIGNED BY: NUTTER, MICHAEL - 11/14/11 DRAWN BY: JUDGIER, TREVOR - 11/14/11 CHECKED BY: BUELLER, CHRIS - 11/14/11 DATE: APR 11 | | |
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| DATE: APR 11 | | |
| DESCRIPTION | | |



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South Coast Region

WEST LEVEE: PHASE 1

FEB 02 2012

RIVER STATION
39+00.1

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EXHIBIT # 4

PAGE 1 OF 1

PHASE 1 DSM GEOMETRIC DATA

| Column | Center | Center | Center | Depth |
|--------|-----------|-----------|--------|-------|
| ID | Existing | Normaling | (ft) | |
| WIA-1 | 6043772.8 | 2179528.9 | 18% | 18 |
| WIA-2 | 6043774.1 | 2179530.3 | 18% | 18 |
| WIA-3 | 6043766.6 | 2179541.8 | 18% | 18 |
| WIA-4 | 6043763.0 | 2179547.2 | 18% | 18 |
| WIA-5 | 6043755.5 | 2179549.3 | 18% | 18 |
| WIA-6 | 6043761.1 | 2179543.9 | 18% | 18 |
| WIA-7 | 6043780.0 | 2179551.4 | 18% | 18 |
| WIA-8 | 6043649.9 | 2179554.8 | 18% | 18 |
| WIA-9 | 6043744.4 | 2179564.4 | 18% | 20 |
| WIA-10 | 6043669.9 | 2179562.3 | 18% | 18 |
| WIA-11 | 6043775.5 | 2179556.8 | 18% | 18 |
| WIA-12 | 6043800.0 | 2179558.9 | 18% | 32 |
| WIA-13 | 6043819.9 | 2179566.5 | 18% | 50 |
| WIA-14 | 6043762.2 | 2179577.4 | 18% | 29 |
| WIA-15 | 6043763.3 | 2179572.0 | 18% | 41 |
| WIA-16 | 6043768.8 | 2179569.8 | 18% | 18 |
| WIA-17 | 6043833.3 | 2179574.7 | 18% | 53.7 |
| WIA-18 | 6043770.0 | 2179579.6 | 18% | 53.7 |
| WIA-19 | 6043865.0 | 2179582.5 | 18% | 44.2 |
| WIA-20 | 6043712.2 | 2179585.4 | 18% | 45 |
| WIA-21 | 6043777.7 | 2179586.6 | 18% | 53.7 |
| WIA-22 | 6043863.3 | 2179588.6 | 18% | 44.2 |
| WIA-23 | 6043744.4 | 2179593.6 | 18% | 53.7 |
| WIA-24 | 6043811.1 | 2179594.5 | 18% | 44.2 |
| WIA-25 | 6043873.3 | 2179598.8 | 18% | 44.2 |
| WIA-26 | 6043787.7 | 2179601.1 | 18% | 44.2 |
| WIA-27 | 6043847.7 | 2179606.4 | 18% | 44.2 |
| WIA-28 | 6043912.2 | 2179607.2 | 18% | 53.7 |
| WIA-29 | 6043761.1 | 2179607.3 | 18% | 44.2 |
| WIA-30 | 6043863.3 | 2179613.8 | 18% | 44.2 |
| WIA-31 | 6043840.0 | 2179614.0 | 18% | 48 |
| WIA-32 | 6043875.5 | 2179614.8 | 18% | 53.7 |
| WIA-33 | 6043923.3 | 2179621.0 | 18% | 43 |
| WIA-34 | 6043782.2 | 2179621.1 | 18% | 44.2 |
| WIA-35 | 6043841.1 | 2179621.8 | 18% | 53.7 |
| WIA-36 | 6043888.8 | 2179628.2 | 18% | 43 |
| WIA-37 | 6043955.5 | 2179628.7 | 18% | 19 |
| WIA-38 | 6043865.0 | 2179632.2 | 18% | 53.7 |
| WIA-39 | 6043919.9 | 2179634.7 | 18% | 23 |
| WIA-40 | 6043842.2 | 2179635.6 | 18% | 46 |
| WIA-41 | 6043990.0 | 2179636.5 | 18% | 18 |
| WIA-42 | 6043884.4 | 2179641.9 | 18% | 23 |
| WIA-43 | 6043944.4 | 2179643.7 | 18% | 18 |
| WIA-44 | 6043615.5 | 2179644.6 | 18% | 18 |
| WIA-45 | 6043880.0 | 2179648.7 | 18% | 18 |
| WIA-46 | 6043952.2 | 2179650.5 | 18% | 18 |
| WIA-47 | 6043629.9 | 2179652.1 | 18% | 18 |
| WIA-48 | 6043910.0 | 2179658.4 | 18% | 18 |
| WIA-49 | 6043927.7 | 2179658.0 | 18% | 18 |
| WIA-50 | 6043928.8 | 2179664.6 | 18% | 18 |
| WIA-51 | 6043931.8 | 2179673.0 | 18% | 18 |

LEGEND EXISTING PHASE 1 TREATMENT
EXISTING INCLINOMETER

- NOTES
1. CONTOURS BASED ON GROUND SURVEY PERFORMED IN JULY 2011 BY D. BUSH, P.S.
 2. ALL COORDINATES ARE GIVEN IN STATE PLANE
 3. COORDINATES SAMPLED, 28-DAY+ UCS RANGED FROM 330 TO 1,010 PSI
 4. CONTRACTOR TO CONFIRM LOCATION OF PHASE 1 COLUMNS PRIOR TO COMMENCEMENT OF PHASE 2
 5. CONTRACTOR TO PROTECT EXISTING INCLINOMETERS.
 6. APPROXIMATE.

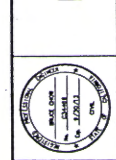
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BITTER POINT FORCE MAIN REHABILITATION
PHASE 2 SANTA ANA RIVER LEVEE REPAIR
PHASE 1 REPAIRS
PLAN VIEW EXISTING CONDITIONS
WEST LEVEE

ORANGE COUNTY
SANITATION DISTRICT



BLACK & VEATCH
Black & Veatch Corporation
Black & Veatch, Inc.






DESIGNED BY: MICHAEL, MICHAEL - 11/14/11
DRAWN BY: MICHAEL, MICHAEL - 11/14/11
CHECKED BY: CHOW, BRUCE - 11/14/11
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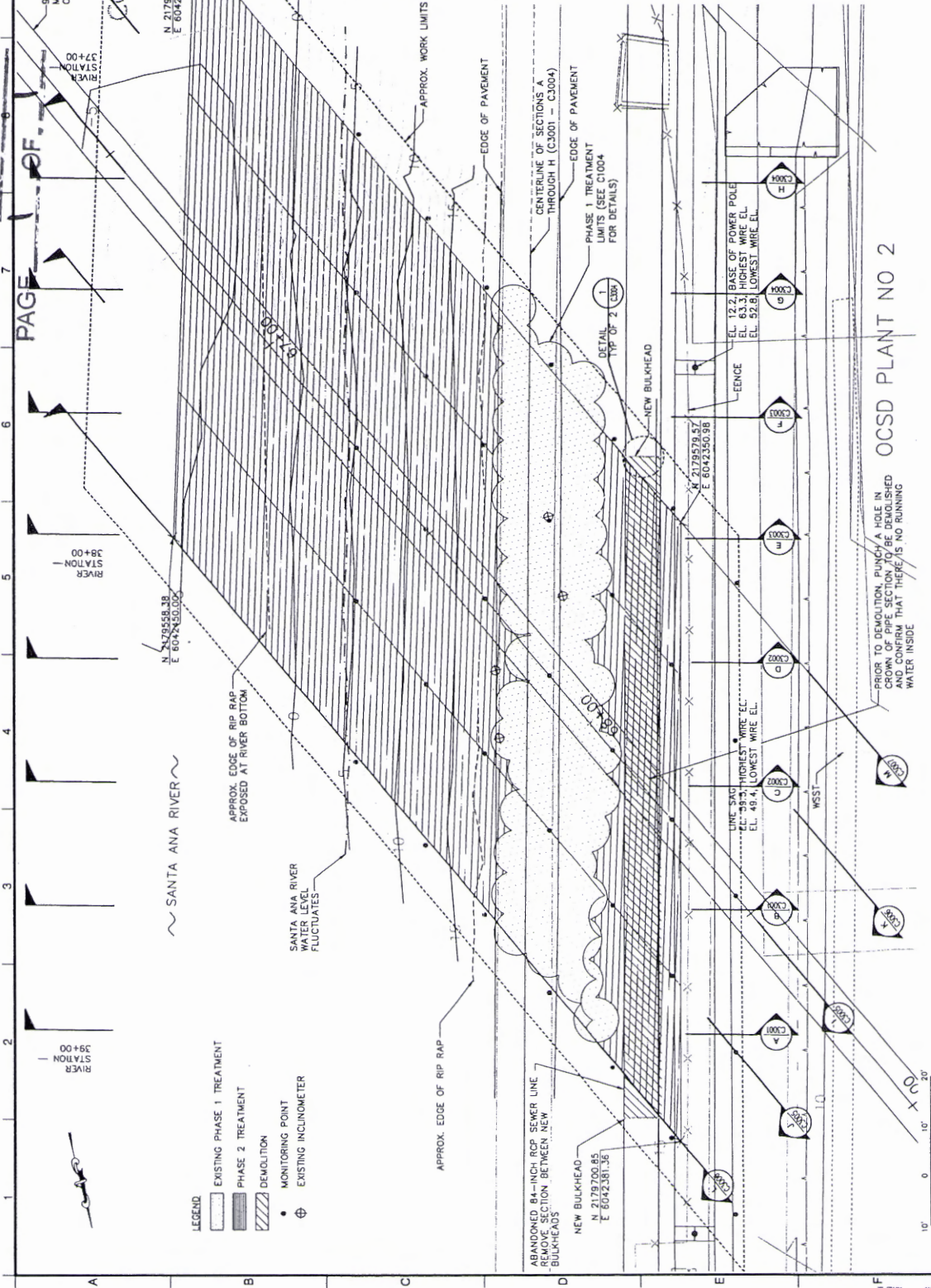
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1. CONTOURS BASED ON GROUND SURVEY PERFORMED IN ALLY BY D. BUSH, P.S.
2. ALL COORDINATES ARE GIVEN IN STATE PLANE
3. COORDINATE SYSTEM USED, 28-DAY+ DSM UCS RANGED FROM 160 TO 690 PS.
4. PHASE 1, WET SAMPLED, 28-DAY+ JG UCS RANGED FROM 160 TO 690 PS.
5. CONTRACTOR TO CONFIRM LOCATION OF PHASE 1 COLUMNS PRIOR TO COMPLETION OF PHASE 2 REPAIRS.
6. CONTRACTOR TO PROTECT EXISTING INCLINOMETERS, EXISTING COLUMN DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

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| MARK | DESCRIPTION | DATE APPR. | DESIGNED BY: NUNTER, MICHAEL - 11/14/11 DRAWN BY: JUGHES, TREVION - 11/14/11 CHECKED BY: MUELLER, CHRIS - 11/14/11 |  |  BLACK & VEATCH Building a World of Difference Black & Veatch Corporation Los Angeles, California |  | ORANGE COUNTY SANITATION DISTRICT | BITTER POINT FORCE MAIN REHABILITATION PHASE 2 SANTA ANA RIVER LEEVEE REPAIR | PROJECT/CONTRACT NO. | 5-58 |
| | | | | | | | | | DRAWING NO. | C1005 |
| | | | | | | | | | PHASE 1 REPAIRS PLAN VIEW EXISTING CONDITIONS EAST LEEVEE | 10 OF 29 |



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| <p>DESIGNED BY: NUNFELT, MICHAEL - 11/14/11 DRAWN BY: HUGHES, THERON - 11/14/11 CHECKED BY: MUELLER, CHRIS - 11/14/11 DATE: Nov 14, 2011 2:10pm XRE/ST</p> | <p>BITTER POINT FORCE MAIN REHABILITATION PHASE 2 SANTA ANA RIVER LEVEE REPAIR</p> | <p>ORANGE COUNTY SANITATION DISTRICT</p> | <p>BLACK & VEATCH Building a World of Difference Black & Veatch Corporation San Francisco, California</p> | <p>PROJECT/CONTRACT NO. 5-58</p> | <p>DRAWING NO. C1006</p> | <p>11 OF 29</p> |
| <p>DATE: Nov 14, 2011 2:10pm XRE/ST</p> | <p>PHASE 2 REPAIRS PLAN VIEW - WEST LEVEE</p> | <p>ORANGE COUNTY SANITATION DISTRICT</p> | <p>BLACK & VEATCH Building a World of Difference Black & Veatch Corporation San Francisco, California</p> | <p>PROJECT/CONTRACT NO. 5-58</p> | <p>DRAWING NO. C1006</p> | <p>11 OF 29</p> |

COASTAL COMMISSION

PAGE 1 OF 1

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22222

COASTAL COMMISSION



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|------------|-------------|--|---|--|--|--|------------------------------|
| DATE APPR. | DESCRIPTION | | BLACK & VEATCH Building World of Difference Black & Veatch Corporation <i>San Diego, California</i> | | ORANGE COUNTY SANITATION DISTRICT | BITTER POINT FORCE MAIN REHABILITATION PHASE 2 SANTA ANA RIVER LEVEE REPAIR | PROJECT/CONTRACT NO. 5-58 |
| | | | | | | PHASE 2 REPAIR PLAN VIEW - EAST LEVEE | DRAWING NO. C1007 |

EXHIBIT # **5**
PAGE **1** OF **1**



SOURCE: Black & Veatch, 2011.

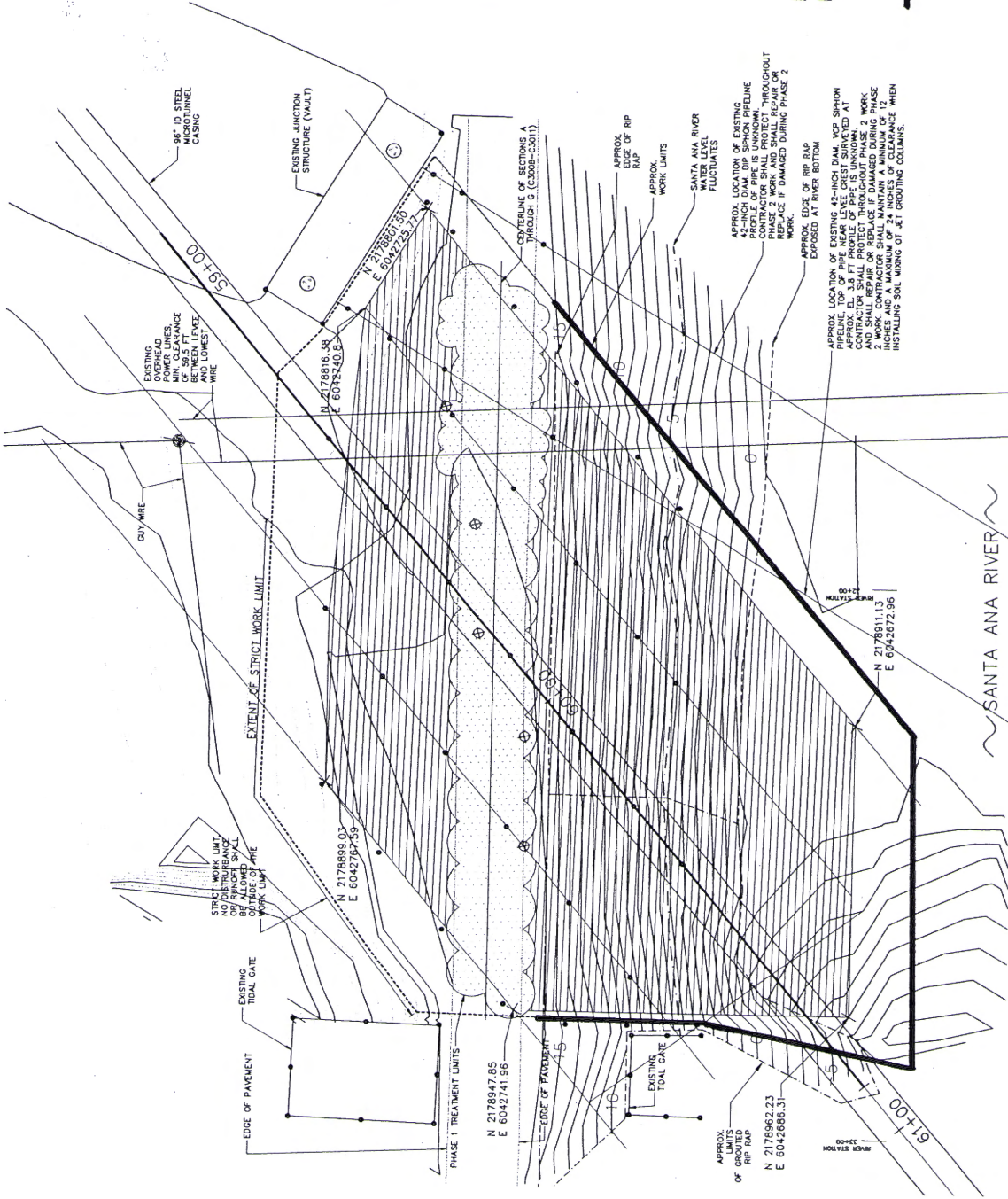
WEST LEVEE COFFER DAM LIMITS

C1006

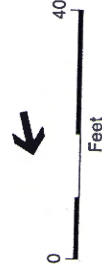
COASTAL COMMISSION

EXHIBIT # 9

PAGE 1 OF 1



- Existing Phase 1 Treatment
- Phase 2 Treatment
- Monitoring Point
- Existing Inclinator
- Coffer Dam Limit



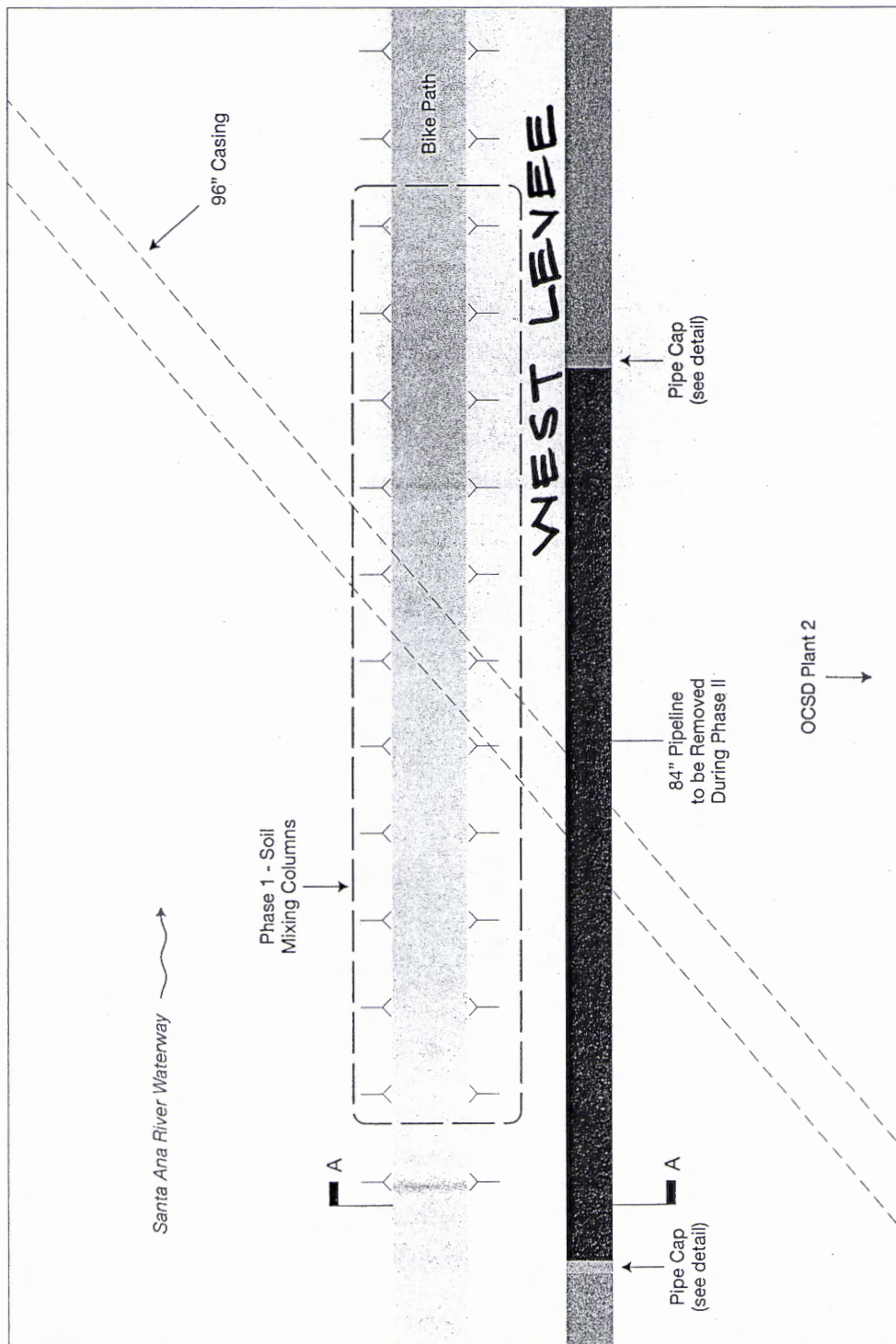
SOURCE: Black & Veatch, 2011.

OCSD - Levee Rehabilitation . 208629.01

East Levee Cofferdam Limits

EAST LEVEE COFFERDAM LIMITS

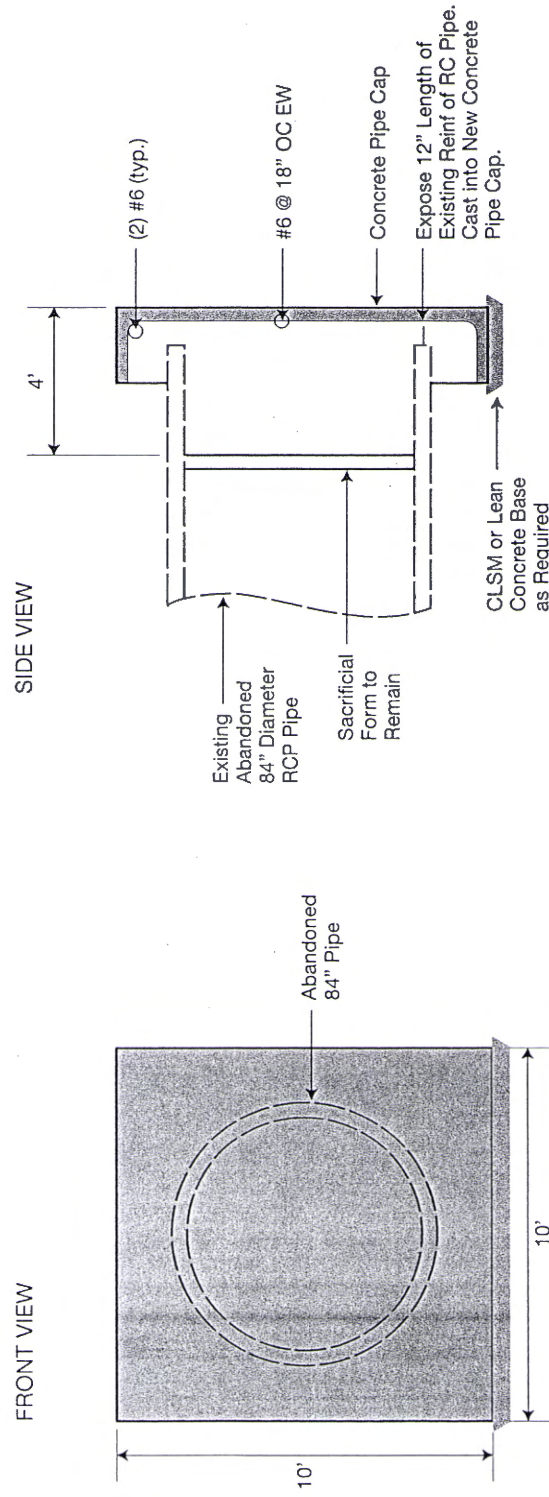
C1007



NOT TO SCALE

SOURCE: OCSD, 2012.

OCSD - Levee Rehabilitation - 208629.01
84" Pipeline to be Removed



Concrete Pipe Cap to be Placed on the Abandoned 84" Pipe

NOT TO SCALE

SOURCE: OCSD, 2012.

OCSD - Levee Rehabilitation - 208629.01

Pipe Cap Detail

