

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

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Clean Water Act Section 401 Water Quality Certification
and Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials

**PROJECT: Hanson El Monte Pond Flood Control, Restoration,
and Recharge Project
Certification Number R9-2014-0064
WDID: 9 000002725**

Reg. Meas. ID: 396877 Place ID: 807111 Party ID: 26533 Person ID: 127936

**APPLICANT: Lakeside's River Park Conservancy
12108 Industry Road
Lakeside, CA 92040**

ACTION:

<input type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input checked="" type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004-DWQ
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated June 5, 2014 was submitted by Lakeside's River Park Conservancy (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (United States Code (USC) Title 33, section 1341) for the proposed Hanson El Monte Pond Flood Control, Restoration, and Recharge Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on July 3, 2015. The Applicant proposes to discharge dredged or fill material to waters of the United States and/or State associated with construction activity at the Project site. The Applicant has also applied for a Clean Water Act section 404 permit from the United States Army Corps of Engineers for the Project (USACE)(USACE File No. SPL-2014-00414-SAS).

The Project is located within the City of Lakeside, San Diego County, California at 10402 El Monte Road. The Project center reading is located at latitude 32.868264 and longitude -116.899874. The Applicant has paid all required application fees for this Certification in the amount of \$1,201.00. On June 19, 2014, the San Diego Water Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to connect the San Diego River to the manmade Hansen Pond during high flow events in order to increase flood control. An inlet arched-type culvert stabilized with articulated concrete block (ACB) will be installed through an existing erosion control berm that currently separates the pond from the river. Surface waters will flow through the culvert during a 10-year or greater storm event. The applicant also proposes to establish and enhance freshwater marsh, California Department of Fish and Wildlife (CDFW) southern willow scrub (SWS), and coastal sage scrub habitat. Overall, there will be a net gain in wetland area and function.

The project site covers 83 acres which includes the 43-acre pond. The pond was created as part of a previous sand mining operation. Specifically, the applicant proposes to convert 15.47 acres of the pond to freshwater marsh, establish an additional 3.14 acres of freshwater marsh from existing upland areas, establish 2.65 acres CDFW SWS habitat from existing upland areas, enhance 5.07 acres of CDFW SWS through non-native species removal, restore 0.31 acre of existing freshwater marsh (which will include grading), and establish and enhance 16.64 acres of coastal sage scrub habitat.

Grading will occur in the area south of the pond in order to lower elevations for freshwater marsh establishment. Cut soil will be placed in the southern portion of the pond to make it shallower for freshwater marsh conversion. Rock and/or cleaned recycled concrete will be placed in the pond to create an underwater revetment to stabilize the in-pond fill and preclude lateral movement. Invasive species removal will occur around the perimeter of the pond.

The Project application includes a description of the design objective, operation, and degree of treatment expected to be attained from equipment, facilities, or activities (including construction and post-construction BMPs) to treat waste and reduce runoff or other effluents which may be discharged. Compliance with the Certification conditions will help ensure that construction and post-construction discharges from the Project will not cause on-site or off-site downstream erosion, damage to downstream properties, or otherwise damage stream habitats in violation of water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan).

Project construction will permanently impact 15.47 acres of lake (pond) and 0.33 acre of wetland (freshwater marsh) waters of the United States and/or State. Of the 0.33 acre of wetland water impacts, 0.02 acre of impacts from construction of a plantable ACB at the flood control inlet. The remaining 0.31 acre of impact will occur from minor grading activities in existing freshwater marsh in order to implement the restoration. The Applicant reports that the Project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impacts to aquatic resources considering all potential practicable alternatives, such as the potential for alternate available locations, designs, reductions in size, configuration or density.

The project proposes the establishment of 3.14 acre of wetland (freshwater marsh) waters of the United States and or/State. No compensatory mitigation is proposed as the Project's purpose is to create wetlands and enhance habitat for wildlife. This Project will provide an overall net gain in the waters of the United States and or/State.

Detailed written specifications and work descriptions for the Project including, but not limited to, the geographic boundaries of the project, timing, sequence, monitoring, maintenance, ecological success performance standards and provisions for long-term management and protection of the restoration areas are described in the *Revegetation Plan for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project County of San Diego, California* (Restoration Plan), dated October 14, 2015. San Diego Water Board acceptance of the Restoration Plan applies only to the Project described in this Certification and must not be construed as approval for other current or future projects. The Restoration Plan is incorporated in this Certification by reference as if set forth herein. The Restoration Plan provides for implementation of wetland restoration which offsets adverse water quality impacts attributed to the Project.

Additional Project details are provided in Attachments 1 through 3 of this Certification.

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Attachments:

- 1. Definitions**
- 2. Project Location Maps**
- 3. Project Site Plans**

I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

- A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.
- B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

II. GENERAL CONDITIONS

- A. **Term of Certification.** Water Quality Certification No. R9-2014-0064 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section 1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.
- B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.
- C. **General Waste Discharge Requirements.** The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf.

- D. Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein. Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.
- E. Project Conformance with Water Quality Control Plans or Policies.** Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 USC section 1313). The Basin Plan is accessible at:
- http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml
- F. Project Modification.** The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.
- G. Certification Distribution Posting.** During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.
- H. Inspection and Entry.** The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:
1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;
 3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and

4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.

I. **Enforcement Notification.** In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.

J. **Certification Actions.** This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:

1. Violation of any term or condition of this Certification;
2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of Hansen El Monte Pond, the San Diego River, or its tributaries;
3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;
4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.

K. **Duty to Provide Information.** The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.

L. **Property Rights.** This Certification does not convey any property rights of any sort, or any exclusive privilege.

M. **Petitions.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after

the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

III. CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Approvals to Commence Construction.** The Applicant shall not commence Project construction until all necessary federal, State, and local approvals are obtained.
- B. **Personnel Education.** Prior to the start of the Project, and annually thereafter, the Applicant must educate all personnel on the requirements in this Certification, pollution prevention measures, spill response measures, and BMP implementation and maintenance measures.
- C. **Spill Containment Materials.** The Applicant must, at all times, maintain appropriate types and sufficient quantities of materials on-site to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reach waters of the United States and/or State.
- D. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.
- E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.
- F. **Waste Management.** Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the United States and or State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited.

- G. **Downstream Erosion.** Discharges of concentrated flow during construction or after Project completion must not cause downstream erosion or damage to properties or stream habitat.
- H. **Construction Equipment.** All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.
- I. **Process Water.** Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm water runoff flows. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.
- J. **Surface Water Diversion.** All surface waters, including ponded waters, must be diverted away from areas of active grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of the receiving water quality objectives. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.
- K. **Re-vegetation and Stabilization.** All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. The Applicant shall implement and maintain BMPs to prevent erosion of the rough graded areas. After completion of grading, all areas must be re-vegetated with native species appropriate for the area. The re-vegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be accessed at <http://www.cal-ipc.org/ip/inventory/>.
- L. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.
- M. **Vegetation Removal.** Removal of vegetation must occur by hand, mechanically, or through application of United States Environmental Protection Agency (USEPA) approved herbicides deployed using applicable BMPs to minimize adverse effects to beneficial uses of waters of the United States and/or State. Discharges related to the application of aquatic pesticides within waters of the United States must be done in

compliance with State Water Resources Control Board Water Quality Order No. 2004-0009-DWQ, the *Statewide General National Pollution Discharge Elimination System Permit for the Discharge of Aquatic Weed Control in Waters of the United States*, and any subsequent reissuance as applicable.

- N. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.
- O. **On-site Qualified Biologist.** The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall be given the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.
- P. **Beneficial Use Protection.** The Applicant must take all necessary measures to protect the beneficial uses of waters of El Monte Pond and the San Diego River. This Certification requires compliance with all applicable requirements of the Basin Plan. If at any time, an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project is violating, or threatens to violate, water quality objectives, the associated Project activities shall cease immediately and the San Diego Water Board shall be notified in accordance with Notification Requirement VII.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or stream habitats.
- B. **Storm Drain Inlets.** All storm drain inlet structures within the Project boundaries must be stamped or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

- A. **Project Impact Avoidance and Minimization.** The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.
- B. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to the San Diego River, its unnamed tributaries, and Hanson El Monte Pond within the San Diego Watershed must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable

temporary and permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

	Impacts (acres)	Impacts (linear ft.)	Mitigation for Impacts (acres)	Mitigation Ratio (area mitigated :area impacted)	Mitigation for Impacts (linear ft.)	Mitigation Ratio (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Lake	15.47	N/A	1	N/A	N/A	N/A
Wetland	0.33	N/A	1	N/A	N/A	N/A
Temporary Impacts²						
Stream Channel	0.02	150	N/A	N/A	N/A	N/A

1. The restoration Project is converting 15.47 acres of pond to freshwater marsh and establishing an additional 3.14 acres of freshwater marsh in an adjacent upland area. 0.02 acres of wetland will be permanently impacted from the installation of ACB at the arched-type culvert inlet, while 0.31 acres of freshwater marsh will be permanently impacted as a result of grading, but will be restored as a result of Project implementation. Overall, there will be a net gain of 3.12 acres of waters of United States and/or State.
2. All areas of temporary impacts must be restored to pre-project contours and re-vegetated with native species.

C. Restoration Plan Implementation. The Applicant must fully and completely implement the Restoration Plan; any deviations from, or revisions to, the Restoration Plan must be pre-approved by the San Diego Water Board.

D. Performance Standards. Restoration under this Certification shall be considered achieved once it has met the ecological success performance standards contained in the Restoration Plan (Section 3.6, pages 30-31) to the satisfaction of the San Diego Water Board.

E. Temporary Project Impact Areas. The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge of pollutants to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.

F. Long-Term Management and Maintenance. The restoration site must be managed, protected, and maintained, in perpetuity, in conformance with the long-term management plan and the final ecological success performance standards identified in the Restoration Plan.

VI. MONITORING AND REPORTING REQUIREMENTS

- A. **Representative Monitoring.** Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.
- B. **Monitoring Reports.** Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.
- C. **Monitoring and Reporting Revisions.** The San Diego Water Board may make revisions to the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.
- D. **Records of Monitoring Information.** Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) analyses were performed;
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and
 6. The results of such analyses.
- E. **California Rapid Assessment Method.** The California Rapid Assessment Method (CRAM)¹ assessment must be performed using the depressional wetland module to assess the pre-construction project conditions and five year post-project conditions. CRAM monitoring must be conducted once prior to the start of Project construction authorized under this Certification and once at five years following construction completion. The CRAM assessment results shall be submitted with the Annual Project Progress Report. An evaluation, interpretation, and tabulation of all CRAM assessment data shall be submitted with the Final Project Completion Report.
- F. **Jurisdictional Waters Delineation.** Five years after project implementation, the Applicant must conduct a jurisdictional waters delineation using the methodology described in the *Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008) that demonstrates that the Project produced a net gain of Waters of the U.S. and/or State. The current amount of waters of the U.S. on-site is 45 acres. The jurisdictional wetland delineation report shall be included in or submitted with the Final Project Completion Report.

¹ The most recent versions of the California Rapid Assessment Method (CRAM) for Wetlands and additional information regarding CRAM can be accessed at <http://www.cramwetlands.org/>

G. Discharge Commencement Notification. The Applicant must notify the San Diego Water Board in writing **at least 5 days prior to** the start of Project construction.

H. Annual Project Progress Reports. The Applicant must submit annual Project progress reports describing status of BMP implementation, restoration, and compliance with all requirements of this Certification to the San Diego Water Board prior to **March 1** of each year following the issuance of this Certification, until the Project has reached completion. The Annual Project Progress Reports must contain restoration monitoring information sufficient to demonstrate how the Project is progressing towards accomplishing its objectives and meeting its performance standards. Annual Project Progress Reports must be submitted even if Project construction has not begun. The monitoring period for each Annual Project Progress Report shall be January 1st through December 31st of each year. Annual Project Progress Reports must include, at a minimum, the following:

1. **Project Status and Compliance Reporting.** The Annual Project Progress Report must include the following Project status and compliance information:
 - a. The names, qualifications, and affiliations of the persons contributing to the report;
 - b. The status, progress, and anticipated schedule for completion of Project construction activities including the installation and operational status of best management practices project features for erosion and storm water quality treatment;
 - c. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and
 - d. A description of each incident of noncompliance during the annual monitoring period and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
2. **Restoration Monitoring Reporting.** Restoration monitoring information must be submitted as part of the Annual Project Progress Report for a period of not less than five years, sufficient to demonstrate that the project has accomplished its objectives and met ecological success performance standards contained in the Restoration Plan. Following Project implementation the San Diego Water Board may reduce or waive monitoring requirements upon a determination that performance standards have been achieved. Conversely the San Diego Water Board may extend the monitoring period beyond five years upon a determination that the performance standards have not been met or the project is not on track to meet them. The Annual Project Progress Report must include the following restoration monitoring information:

- a. Names, qualifications, and affiliations of the persons contributing to the report;
 - b. An evaluation, interpretation, and tabulation of the parameters being monitored, including the results of the Restoration Plan monitoring program, and all quantitative and qualitative data collected in the field;
 - c. Monitoring data interpretations and conclusions as to how the project(s) is progressing towards meeting performance standards and whether the performance standards have been met;
 - d. A description of the progress toward implementing a plan to manage the project after performance standards have been achieved to ensure the long term sustainability of the resource in perpetuity, including a discussion of long term financing mechanisms, the party responsible for long term management, and a timetable for future steps;
 - e. Qualitative and quantitative comparisons of current conditions with pre-construction conditions and previous monitoring results;
 - f. Photo documentation, including all areas of permanent and temporary impact, prior to and after site construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced;
 - g. The results of the California Rapid Assessment Method (CRAM) monitoring required under section VI.E of this Certification;
 - h. As-built drawings of the project site(s), no bigger than 11"X17"; and
 - i. A survey report documenting boundaries of the restoration site(s).
- I. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project.** The final report must include the following information:
1. Date of construction initiation;
 2. Date of construction completion;
 3. BMP installation and operational status for the Project;
 4. As-built drawings of the Project, no bigger than 11"X17";

5. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced;
 6. An evaluation, interpretation, and tabulation of all California Rapid Assessment Method (CRAM) data collected throughout the term of Project construction in accordance with section VI.E of this Certification; and
 7. The jurisdictional wetland delineation report in accordance with section VI.F.
- J. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.
- K. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2014-0064:80711;lhonma
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), and converted to text searchable format using Optical Character Recognition (OCR). All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2015-0064:80711;lhonma.

- L. **Document Signatory Requirements.** All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:
1. For a corporation, by a responsible corporate officer of at least the level of vice president.
 2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.

3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
4. A duly authorized representative may sign applications, reports, or information if:
 - a. The authorization is made in writing by a person described above.
 - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

- M. Document Certification Requirements.** All applications, reports, or information submitted to the San Diego Water Board must be certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

VII. NOTIFICATION REQUIREMENTS

- A. Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
- B. Hazardous Substance Discharge.** Except for a discharge which is in compliance with this Certification, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, shall as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially

impeding cleanup or other emergency measures, immediately notify the County of San Diego, in accordance with California Health and Safety Code section 5411.5 and the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.17), and immediately notify the State Water Board or the San Diego Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of section 13271 of the Water Code unless the Applicant is in violation of a Basin Plan prohibition.

- C. **Oil or Petroleum Product Discharge.** Except for a discharge which is in compliance with this Certification, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the California Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Government Code Title 2, Division 1, Chapter 7, Article 3.7 (commencing with section 8574.1). This requirement does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Clean Water Act section 311, or the discharge is in violation of a Basin Plan prohibition.
- D. **Anticipated Noncompliance.** The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.
- E. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:
1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**
 2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to

comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**

3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP maintenance plan that complies with manufacturer specifications. The Applicant must provide such notification to the San Diego Water Board within **10 days** of the transfer of BMP maintenance responsibility.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of responsibility for compliance with this Certification in the event that a transferee fails to comply.

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

- A. The County of San Diego has found the Project exempt from California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) pursuant to Public Resources Code section 21083.3 and CEQA Guidelines section 15183 relating to projects consistent with an existing community plan, general plan, or zoning. The County of San Diego has determined that there are no project-specific significant effects which are peculiar to the Project or its site because the County's General Plan Update EIR adequately anticipated and described the impacts of the Project, identified applicable mitigation measures, and this Project implements these mitigation measures.
- B. The San Diego Water Board has reviewed the County of San Diego's Statement of Reasons for Exemption from Additional Environmental Review and 15183 Checklist and concurs that the Project as proposed will not have project-specific significant effects on resources within the San Diego Water Board's purview.

IX. SAN DIEGO WATER BOARD CONTACT PERSON

Lisa Honma, Environmental Scientist
Telephone: 619-521-3367
Email: Lisa.Honma@waterboards.ca.gov

X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Hanson El Monte Pond Flood Control, Restoration, and Recharge Project** (Certification No. R9-2014-0064) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2014-0064 issued on October 19, 2015.



DAVID W. GIBSON
Executive Officer
San Diego Water Board

19 Oct. 2015

Date

ATTACHMENT 1

DEFINITIONS

Activity - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

Buffer - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

California Rapid Assessment Method (CRAM) - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method.

Compensatory Mitigation Project - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Discharge of dredged material – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

Discharge of fill material – means the addition of fill material into waters of the United States and/or State.

Dredged material – means material that is excavated or dredged from waters of the United States and/or State.

Ecological Success Performance Standards – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Enhancement – means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

Fill material – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

Isolated wetland – means a wetland with no surface water connection to other aquatic resources.

Mitigation Bank – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

Preservation - means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

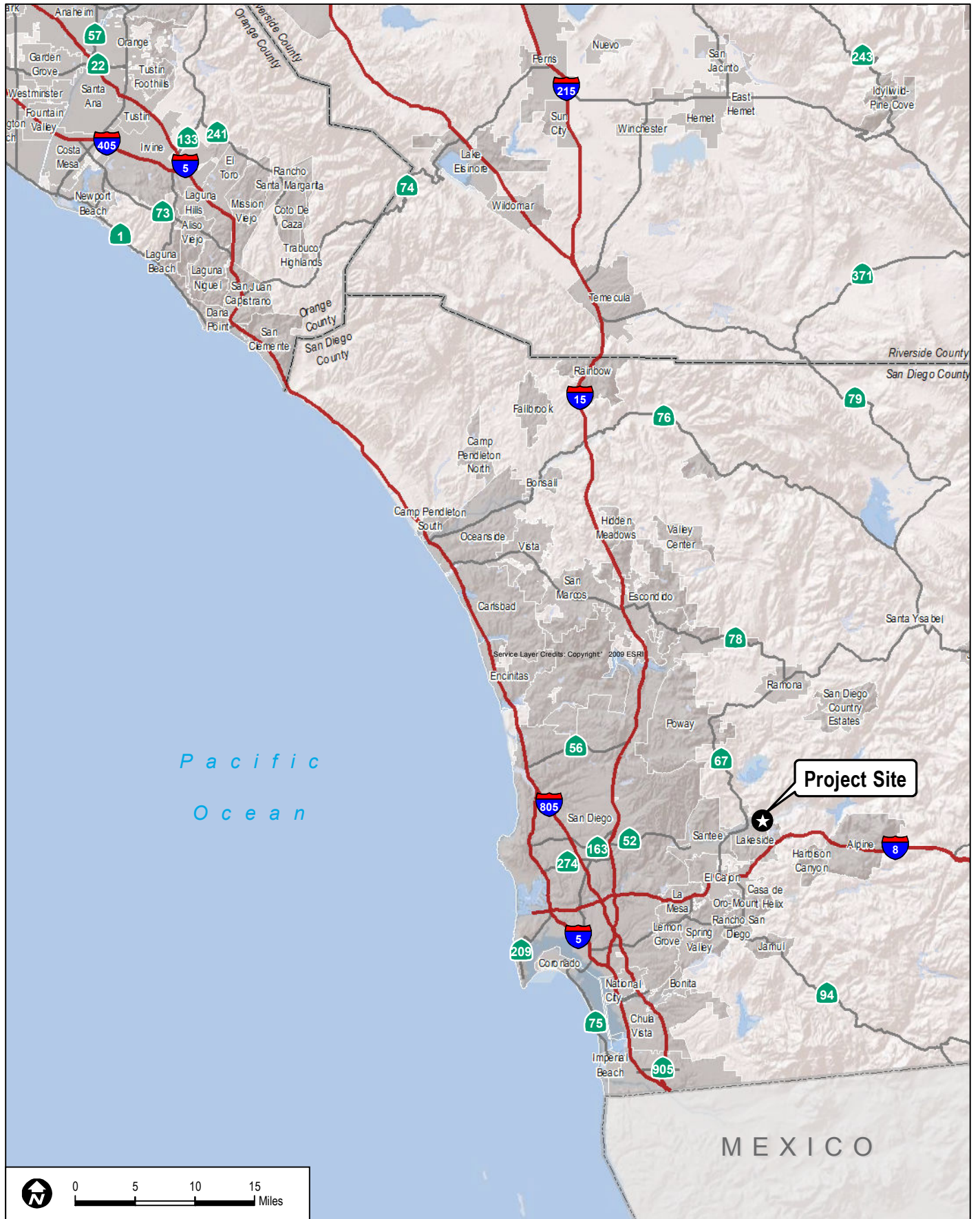
Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

Uplands - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

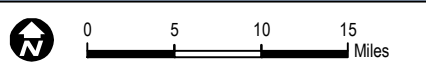
Water quality objectives and other appropriate requirements of state law – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

ATTACHMENT 2
PROJECT LOCATION MAPS

- Figure 1 – Regional Map
- Figure 2 – Vicinity Map
- Figure 3 – Hydrologic Basin/Area Map



Project Site

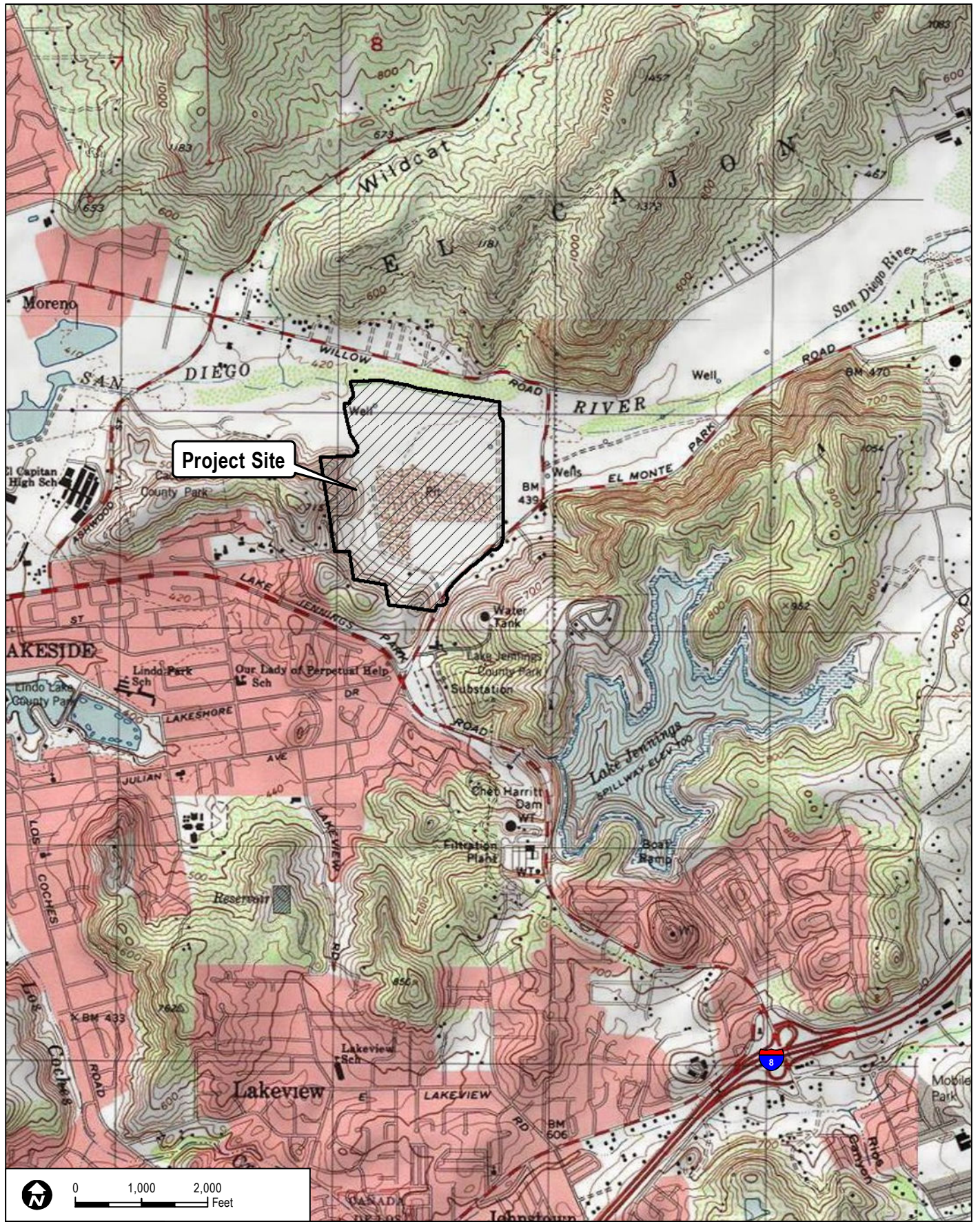


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**FIGURE 1
Regional Map**

Joint Permit Application for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project



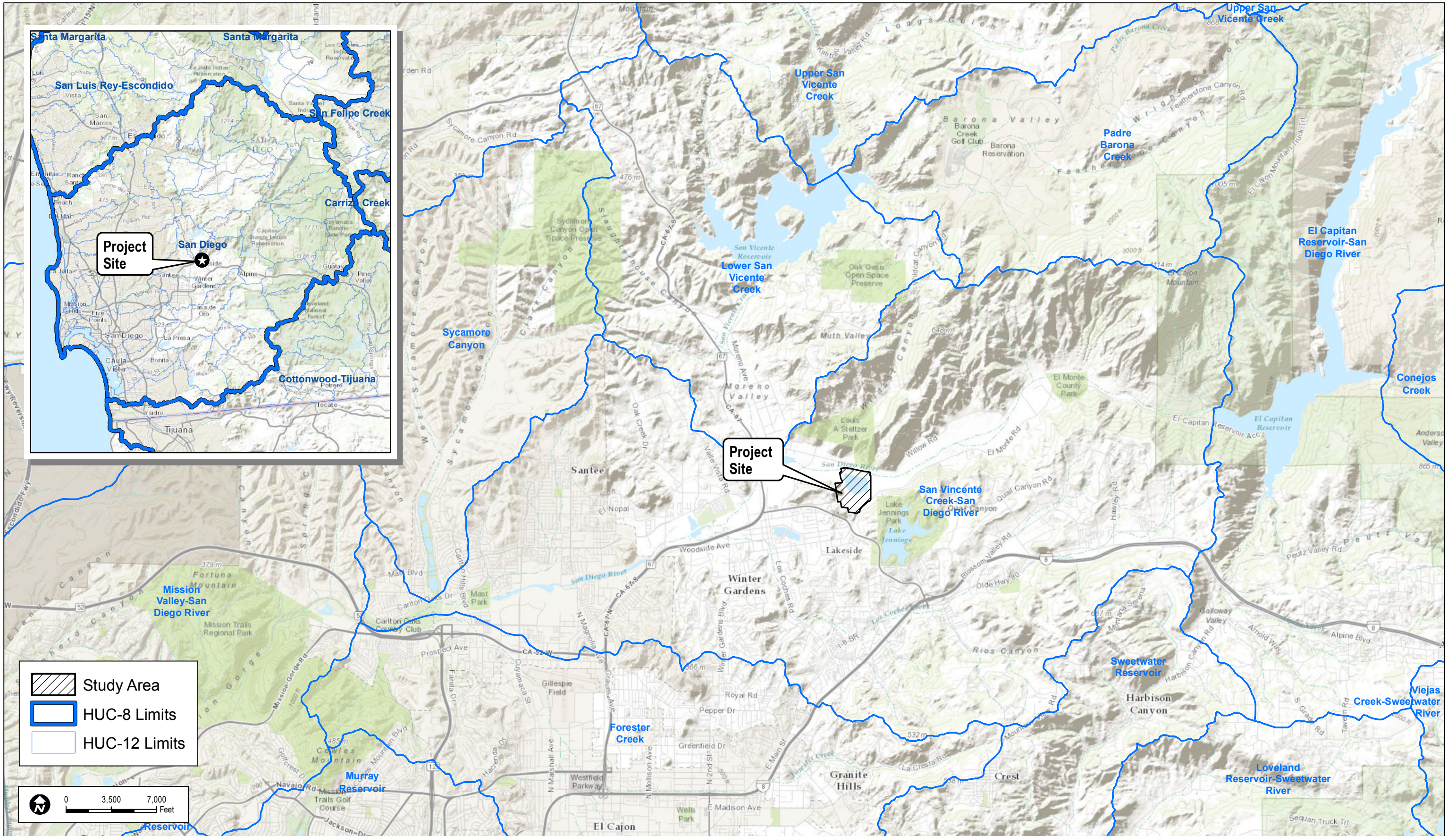
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SOURCE: USGS 7.5-Minute Series Quadrangle.

**FIGURE 2
Vicinity Map**

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Joint Permit Application for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project



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SOURCE: USGS

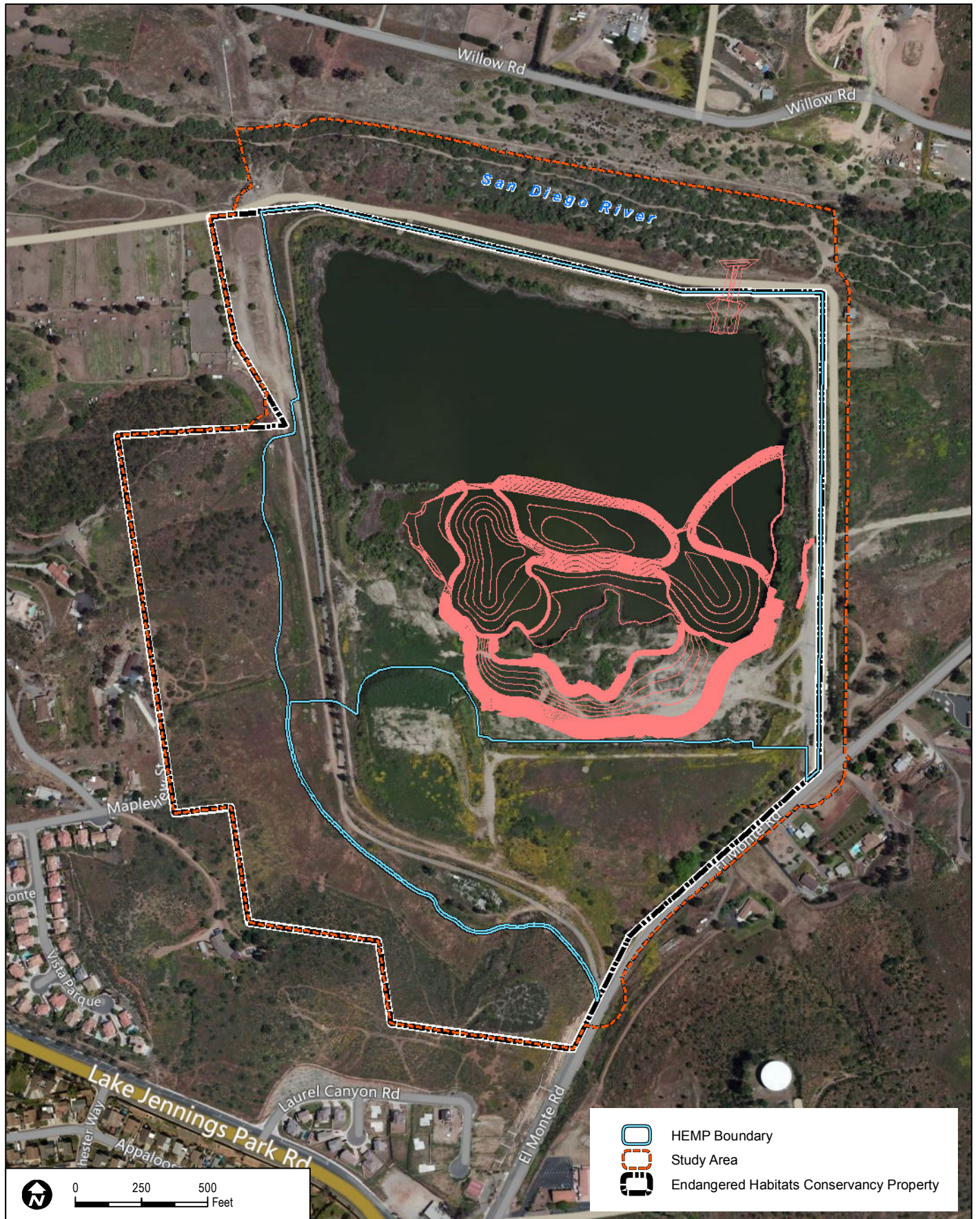
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Joint Permit Application for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project

FIGURE 3
Hydrologic Basin/Area Map

**ATTACHMENT 3
PROJECT SITE PLANS**

Figure 5 – Site Plan/Conceptual Grading Plan
Figure 6a – Jurisdictional Wetland Delineation Impacts Map
Figure 6b – Jurisdictional Wetland Delineation Impacts Map
Figure 6c – Jurisdictional Wetland Delineation Impacts Inlet & Outlet Map
Figure 5 – Conceptual Revegetation Plan
Figure 6 – Conceptual Revegetation Plan
Grading Plans for Hanson El Monte Pond Habitat Restoration & Flood
Control/Ground Water Recharge Project – Sheets 1 through 18





Legend

- Study Area
- Endangered Habitats Conservancy Property
- HEMP Boundary
- Data Station
- RWQCB/CDFW Non-Wetland Waters/Ephemeral Drainages

Jurisdictional Delineation

- ACOE/RWQCB/CDFW/COUNTY, Wetland Waters
- ACOE/RWQCB/CDFW/COUNTY, Non-Wetland Waters
- CDFW/COUNTY Only, Wetlands
- Vegetation Mapping

Vegetation Communities/Landcovers:

- AGL, Annual Grassland/Non-Native Grassland
- BBS, Broom Baccharis Scrub
- CSS, Coastal Sage Scrub
- DEV, Developed
- DH, Disturbed Habitat
- DH, Disturbed Habitat
- EUC, Eucalyptus Woodland
- FWM, Freshwater Marsh
- MFS, Mulefat Scrub
- NNGB, Non-Native Grassland; broadleaf dominated
- OW, Open Water
- SCWR, Southern Cottonwood-willow Riparian Forest
- SWS, Southern Willow Scrub
- TS, Tamarisk Scrub
- dBBS, Disturbed Broom Baccharis Scrub
- dCSS, Disturbed Coastal Sage Scrub
- dMFS, Disturbed Mulefat Scrub
- dSCWR, Disturbed Southern Cottonwood-willow Riparian Forest
- dSWS, Disturbed Southern Willow Scrub

0 110 220 Feet

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Joint Permit Application for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project

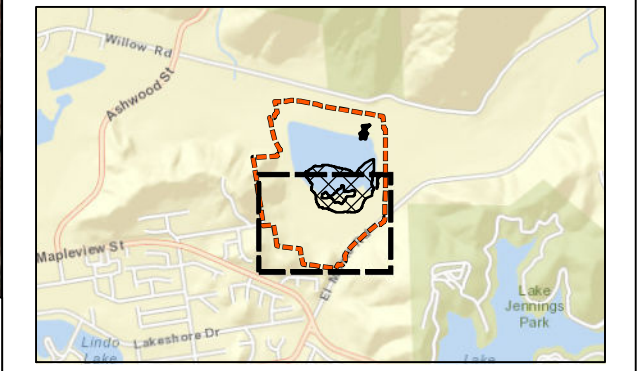
FIGURE 6a
Jurisdictional Wetland Delineation Impacts Map



- Legend**
- Study Area
 - Endangered Habitats Conservancy Property
 - HEMP Boundary
 - Data Station
 - RWQCB/CDFW Non-Wetland Waters/Ephemeral Drainages
- Jurisdictional Delineation**
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 - dSWS, Disturbed Southern Willow Scrub

Permanent Impact

Temporary Impact



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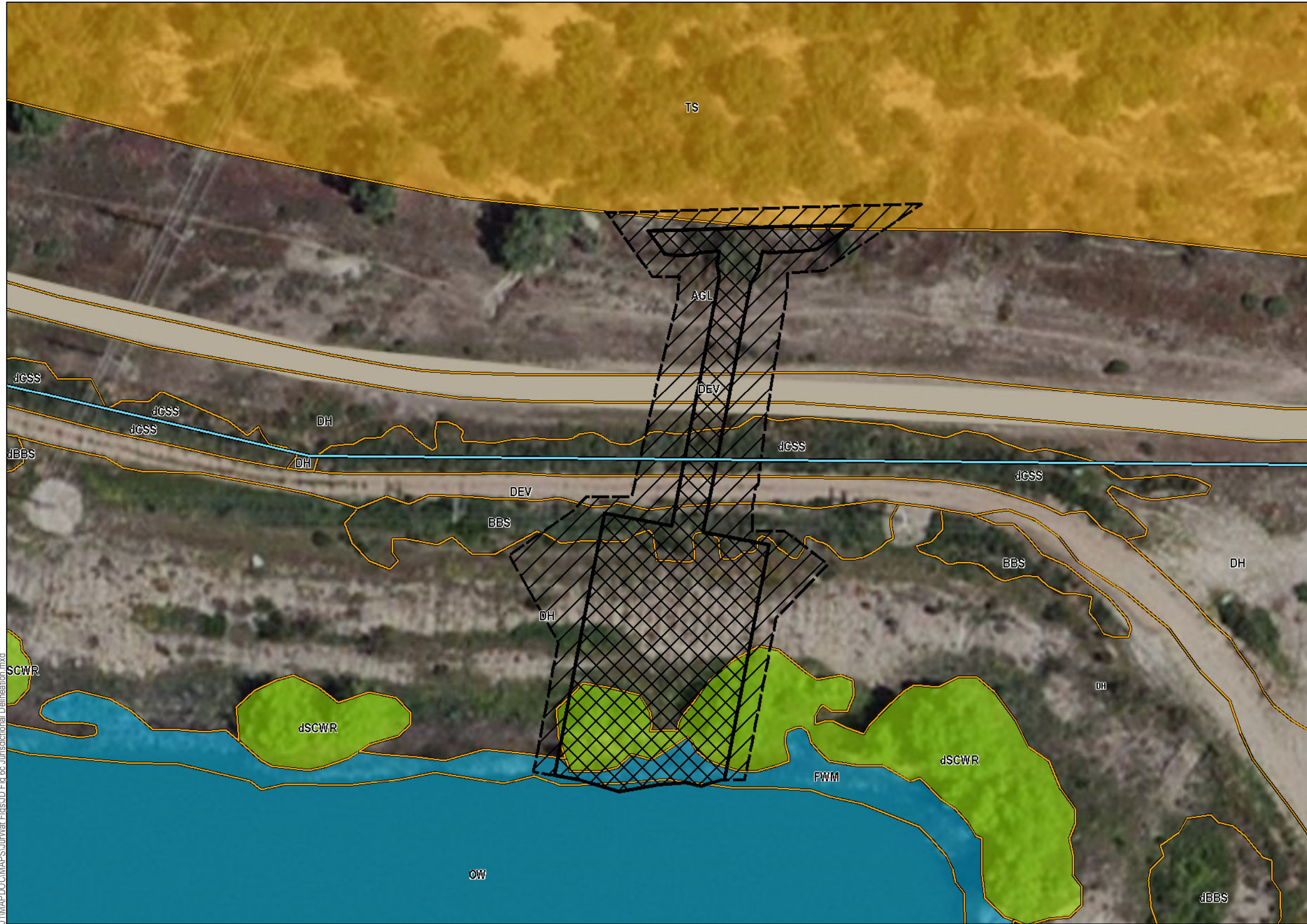
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AERIAL SOURCE: BING MAPPING SERVICE

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Joint Permit Application for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project

FIGURE 6b
Jurisdictional Wetland Delineation Impacts Map



Legend

- Study Area
- HEMP Boundary

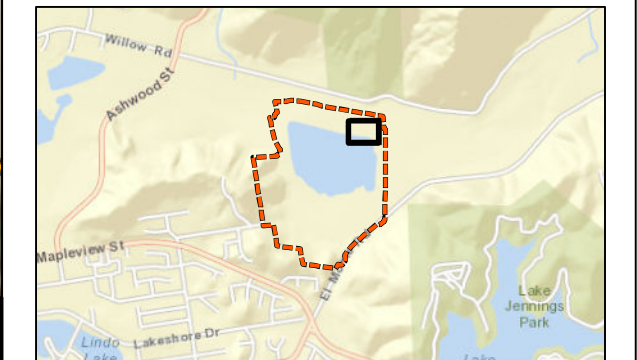
Jurisdictional Delineation

- ACOE/RWQCB/CDFW/COUNTY, Wetland Waters
- ACOE/RWQCB/CDFW/COUNTY, Non-Wetland Waters
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- dSWS, Disturbed Southern Willow Scrub

- Permanent Impact
- Temporary Impact



ARCHED CULVERT INLET IMPACT



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LEGEND

Symbol	Description
[White with dot pattern]	Coastal freshwater marsh establishment (conversion)
[Blue with grid pattern]	Riparian establishment (southern willow scrub/forest)
[Light blue with diagonal line pattern]	Riparian enhancement
[Yellow with diagonal line pattern]	Upland CSS/BBS enhancement
[Green with diagonal line pattern]	Upland CSS/BBS establishment



Scale: 1"=180'

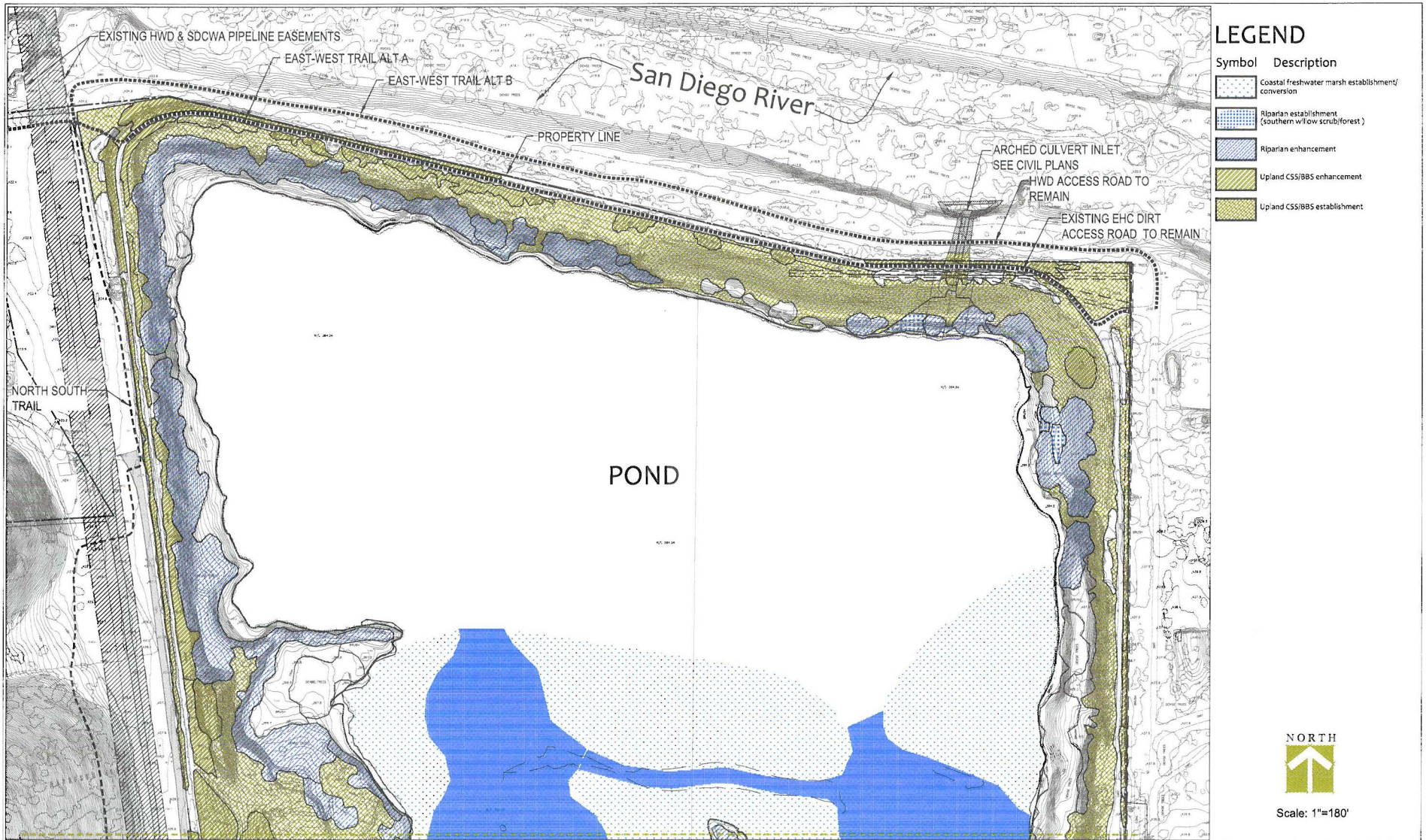
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JUNE 2015

Revegetation Plan for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project

FIGURE 5

Conceptual Revegetation Plan



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JUNE 2015

Revegetation Plan for the Hanson El Monte Pond Flood Control, Restoration and Recharge Project

FIGURE 6

Conceptual Revegetation Plan

GENERAL GRADING NOTES

- 1. APPROVAL OF THIS GRADING PLAN DOES NOT CONSTITUTE APPROVAL OF VERTICAL OR HORIZONTAL ALIGNMENT OF ANY PRIVATE ROAD SHOWN HEREON FOR COUNTRY ROAD PURPOSES.
2. FINAL APPROVAL OF THESE GRADING PLANS SUBJECT TO FINAL APPROVAL OF THE ASSOCIATED IMPROVEMENT PLANS WHERE APPLICABLE. FINAL CURB ELEVATIONS MAY REQUIRE CHANGES IN THESE PLANS.
3. IMPORT MATERIAL SHALL BE OBTAINED FROM A LEGAL SITE.
4. A CONSTRUCTION, EXCAVATION OR ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS WILL BE REQUIRED FOR ANY WORK IN THE COUNTY RIGHT-OF-WAY.
5. ALL SLOPES OVER THREE FEET IN HEIGHT WILL BE PLANTED IN ACCORDANCE WITH SAN DIEGO COUNTY SPECIFICATIONS.
6. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. NOTICE OF PROPOSED WORK SHALL BE GIVEN TO THE FOLLOWING AGENCIES:
UNDERGROUND SERVICE ALERT: TEL NO: 1-800-422-4133
SAN DIEGO GAS & ELECTRIC: TEL NO: 1-800-227-2600
PACIFIC TELEPHONE: TEL NO: (619) 266-4683
COX CATV: TEL NO: (619) 263-5793 EXT. 5199
SEWER: COUNTY OF SAN DIEGO-HHSA TEL NO: (619) 466-0585
HELIX WATER DISTRICT: SAN DIEGO COUNTY WATER AUTHORITY TEL NO: (858) 522-6568
7. A SOILS REPORT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
8. APPROVAL OF THESE PLANS BY THE DIRECTOR OF PUBLIC WORKS DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED AND VALID GRADING PERMIT HAS BEEN ISSUED.
9. THE DIRECTOR OF PUBLIC WORKS' APPROVAL OF THESE PLANS DOES NOT CONSTITUTE COUNTY BUILDING OFFICIAL APPROVAL OF ANY FOUNDATION FOR STRUCTURES TO BE PLACED ON THE ITEMS COVERED BY THESE PLANS. NO WAIVER OF THE GRADING ORDINANCE REQUIREMENTS CONCERNING MINIMUM COVER EXPANSIVE SOIL IS MADE OR IMPLIED (SECTIONS 87.403 & 87.410). ANY SUCH WAIVER MUST BE OBTAINED FROM THE DIRECTOR OF PLANNING AND LAND USE.
10. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTHMOVING EQUIPMENT AND ANY 7:00 AM AND 6:00 PM EACH DAY, MONDAY THRU SATURDAY, AND NO EARTHMOVING OR GRADING OPERATIONS SHALL BE CONDUCTED ON THE PREMISES ON SUNDAYS OR HOLIDAYS.
11. ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PRODUCE A CONTOURED TRANSITION FROM CUT OR FILL FACES TO NATURAL GROUND AND ABUTTING CUT OR FILL SURFACES.
12. NOTWITHSTANDING THE MINIMUM STANDARDS SET FORTH IN THE GRADING ORDINANCE AND NOTWITHSTANDING THE APPROVAL OF THESE GRADING PLANS, THE PERMITTEE IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PUBLIC STREET, SIDEWALK ALLEY, FUNCTION OF ANY SEWAGE DISPOSAL SYSTEM, OR ANY OTHER PUBLIC OR PRIVATE PROPERTY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, CRACKING, EROSION SILTING, SCOUR OR OTHER DAMAGE WHICH MIGHT BE CAUSED BY THE GRADING DESCRIBED ON THIS PLAN. THE COUNTY WILL HOLD THE PERMITTEE RESPONSIBLE FOR CORRECTION OF NON-DEPICTED IMPROVEMENTS WHICH DAMAGE ADJACENT PROPERTY.
13. MAXIMUM SLOPE RATIOS:
CUT-1.5:1 FOR MINOR SLOPES UNDER 15' HIGH OR IN ROCK. 2:1 FOR MAJOR SLOPES. CUT SLOPES MAY BE 1:1 OR STEEPER IN ROCK WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
FILL-2:1
EXCAVATION: 165,694 CYD
FILL: 172,294 CYD
WASTE/IMPORT: 6,600 CYD IMPORT
(NOTE: A SEPARATE VALID PERMIT MUST EXIST FOR EITHER WASTE OR IMPORT AREAS.)
NOTE: EARTHWORK QUANTITIES DO NOT REFLECT ANY SPECIAL CONDITIONS THAT MAY BE SPECIFIED IN THE PRELIMINARY SOILS REPORT AND ARE FOR REFERENCE ONLY. SINCE THE EXACT METHOD OR MEANS USED BY THE CONTRACTOR DURING GRADING OPERATIONS, NOR CAN THE ENGINEER GUARANTEE THE EXACT SOILS CONDITION OVER THE ENTIRE SITE, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FINAL EARTHWORK QUANTITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING HIS OWN EARTHWORK QUANTITIES FOR BIDDING, CONTRACT AND CONSTRUCTION PURPOSES.
14. SPECIAL CONDITION: IF ANY ARCHAEOLOGICAL RESOURCES ARE DISCOVERED ON THE SITE OF THIS GRADING DURING GRADING OPERATIONS, THE PERMITTEE WILL NOTIFY THE PROJECT ARCHEOLOGIST OF THE DISCOVERY.
15. ALL GRADING DETAILS WILL BE IN ACCORDANCE WITH SAN DIEGO COUNTY STANDARD DRAWINGS DS-8, DS-10, DS-11 AND SDRSD D-75.
16. FINISHED GRADING SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER AND INSPECTED BY THE COUNTY ENGINEER FOR DRAINAGE CLEARANCE. (APPROVAL OF ROUGH GRADING DOES NOT CERTIFY FINISH BECAUSE OF POTENTIAL SURFACE DRAINAGE PROBLEMS THAT MAY BE CREATED BY LANDSCAPING ACCOMPLISHED AFTER ROUGH GRADING CERTIFICATION.
17. THE ACTIVE DISTURBED AREA OF A PROJECT SITE SHALL BE NO MORE THAN 50 ACRES FOR AN INDIVIDUAL GRADING PERMIT/IMPROVEMENT PLAN OR COMBINATION OF GRADING PERMITS UNDER ASSOCIATED TENTATIVE OR FINAL MAPS, UNLESS OTHERWISE APPROVED BY THE COUNTY OFFICIAL, 125% OF THE REQUIRED STORMWATER BMP MATERIALS SHALL BE MAINTAINED ON SITE TO PROTECT DISTURBED SOILS. REQUIREMENTS FOR EXCEPTION TO FIFTY (50) ACRE ACTIVE SOIL DISTURBANCE LIMITATIONS IS SET FORTH IN THE DIRECTOR'S LETTER OF DIRECTION (DLJ-LD-1, PAGE 2) AND COUNTY CODE SECTION 87.414.D.

(NOTE: A SEPARATE VALID PERMIT MUST EXIST FOR EITHER WASTE OR IMPORT AREAS.)
NOTE: EARTHWORK QUANTITIES DO NOT REFLECT ANY SPECIAL CONDITIONS THAT MAY BE SPECIFIED IN THE PRELIMINARY SOILS REPORT AND ARE FOR REFERENCE ONLY. SINCE THE EXACT METHOD OR MEANS USED BY THE CONTRACTOR DURING GRADING OPERATIONS, NOR CAN THE ENGINEER GUARANTEE THE EXACT SOILS CONDITION OVER THE ENTIRE SITE, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FINAL EARTHWORK QUANTITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING HIS OWN EARTHWORK QUANTITIES FOR BIDDING, CONTRACT AND CONSTRUCTION PURPOSES.

SAN DIEGO COUNTY WATER AUTHORITY NOTES

- 1. NO GRADING SHALL OCCUR WITHIN OUR WATER AUTHORITY EASEMENT WITHOUT PRIOR APPROVAL FROM THE WATER AUTHORITY.
2. IF CONTRACTOR PLANS TO TRANSPORT LARGE GRADING EQUIPMENT OVER WATER AUTHORITY EASEMENT/ROAD, CONTRACTOR TO SUBMIT LIST AND WEIGHT OF EQUIPMENT FOR REVIEW AND APPROVAL BY THE WATER AUTHORITY.



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
(619) 291-0700
RICKENGINEERING.COM

GRADING PLANS FOR:
HANSON EL MONTE POND HABITAT RESTORATION AND FLOOD CONTROL/GROUNDWATER RECHARGE PROJECT

OWNERS CERTIFICATE

IT IS AGREED THAT FIELD CONDITIONS MAY REQUIRE CHANGES TO THESE PLANS.

IT IS FURTHER AGREED THAT THE OWNER (DEVELOPER) SHALL HAVE A REGISTERED CIVIL ENGINEER MAKE SUCH CHANGES, ALTERATIONS OR ADDITIONS TO THESE PLANS WHICH THE DIRECTOR OF PLANNING & DEVELOPMENT SERVICES DETERMINES ARE NECESSARY AND DESIRABLE FOR THE PROPER COMPLETIONS OF THE IMPROVEMENTS.

ACCESSOR'S PARCEL NO. 392-150-01, 10, 11, 12, 14, 15, 16
NAME:
ADDRESS:

SOILS ENGINEER'S CERTIFICATE

I, _____, A REGISTERED CIVIL ENGINEER OF THE STATE OF CALIFORNIA, PRINCIPALLY DOING BUSINESS IN THE FIELD OF APPLIED SOIL MECHANICS, HEREBY VERIFY THAT A SAMPLING AND STUDY OF THE SOIL CONDITIONS PREVALENT WITHIN THIS SITE WAS MADE BY ME OR UNDER MY DIRECTION BETWEEN THE DATES OF _____ AND _____ ONE COMPLETE COPY OF SOILS REPORT COMPILED FROM THIS STUDY, WITH MY RECOMMENDATIONS HAS BEEN SUBMITTED TO THE OFFICE OF THE COUNTY ENGINEER.

THESE GRADING PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS AS OUTLINED IN OUR SOILS AND GEOTECHNICAL REPORT FOR THIS PROJECT TITLED "HANSON EL MONTE POND RESTORATION PROJECT."

THE SOILS AND GEOTECHNICAL REPORT SHALL BE CONSIDERED PART OF THIS PLAN AND ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND RECOMMENDATIONS OF SAID REPORT DATED AUGUST 7, 2013.

DECLARATION OF RESPONSIBLE CHARGE

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

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

JOHN D. GODDARD JR.
5620 FRIARS ROAD
SAN DIEGO, CA 92110
PHONE: 619/291-0707

OWNER/PERMITEE
LAKESIDE RIVER PARK CONSERVANCY
ENDANGERED HABITATS CONSERVANCY
P.O. BOX 22438
SAN DIEGO, CA 92192
PHONE: (858) 558-1595

LEGAL DESCRIPTION

ALL PORTION OF LOT 105, AND OF THE TIMBER RESERVE OF EL CAJON VALLEY'S LANDS ACCORDING TO MAP THEREOF NO. 289

SITE ADDRESS

EL MONTE ROAD, LAKESIDE, CA 92040

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

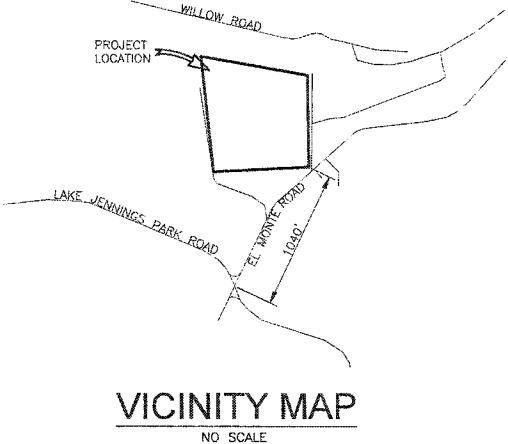
I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE COUNTY OF SAN DIEGO WATER AUTHORITY IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PROJECT DESIGN.

Table with 2 columns: SIGN, DATE, RE NUMBER. Includes PDS ENVIRONMENTAL REVIEW, DISTURBED AREA CALCS, SLOPES, PADS, ROADS, OTHER, TOTAL.

RECORD PLAN
BY: DATE:
R.C.E. DATE:
EXPIRES:

SAN DIEGO COUNTY FIRE AUTHORITY
APPROVED BY: DATE:
R.C.E. DATE:

HELIX WATER DISTRICT REVIEW
APPROVED BY: DATE:
R.C.E. DATE:



SPECIAL NOTES

- 1. NEITHER THE OWNER NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
2. THE EXISTING UTILITIES OR STRUCTURES REPORTED BY THE OWNER OR OTHERS, AND THOSE SHOWN ON THE RECORDS EXAMINED, ARE INDICATED WITH THEIR APPROXIMATE LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF THE UTILITIES PRIOR TO STARTING WORK, AND UNCOVER AND LOCATE ALL UNDERGROUND AND OVERHEAD/ABOVE GRADE UTILITIES AND INSTALLATIONS, WHETHER SHOWN ON THESE PLANS OR NOT, AND TO PROTECT SUCH FACILITIES FROM DAMAGE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE THAT ALL SLOPES, PAD SIZES, STREETS, UTILITIES, AND STORM DRAINS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY MISUNDERSTANDING REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE "ENGINEER OF WORK" AT 291-0707. THE CONTRACTOR SHALL ALSO PROTECT FACILITIES HE CONSTRUCTS FROM EROSION ACTION OF WATER BY WHATEVER MEANS NECESSARY. (SANDBAGS, DIKES, SHORING, ETC.), UNTIL SUCH TIME AS THE TOTAL PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY THE RESPECTIVE GOVERNMENT AGENCY INVOLVED.
4. ALL WORK THAT CREATES NOISE LEVELS EQUAL TO OR GREATER THAN 60 DECIBELS SHALL BE PERFORMED BETWEEN SEPTEMBER 2ND AND JANUARY 14TH.
5. VEGETATION CLEARING WORK SHALL BE PERFORMED BETWEEN SEPTEMBER 2ND AND JANUARY 14TH.
6. THE PROJECT IS LOCATED WITHIN AND ADJACENT TO SENSITIVE HABITAT. WORK SHALL STAY WITHIN APPROVED LIMIT OF WORK AND DAYLIGHT LINES AT ALL TIMES. ACCESS AND STAGING SHALL BE CONDUCTED ONLY IN AREAS SHOWN ON PLANS.

SHEET INDEX

Table with 2 columns: DESCRIPTION, SHEET NO. Includes TITLE SHEET, INDEX, NOTES & DETAILS, GRADING PLANS, EROSION CONTROL NOTES & DETAILS, EROSION CONTROL PLANS, STAGING AND ACCESS/HAUL ROUTE PLAN, STRUCTURAL PLANS, REVEGETATION PLANS & DETAILS, TRAIL PLANS & DETAILS.

ENGINEER'S NOTE

- 1. UNAUTHORIZED CHANGES & USES: THE ENGINEER OF WORK PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
2. GRADING TOLERANCES:
PADS:
STREETS:
CHANNEL:
SHEET GRADED PADS:
CUT & FILL SLOPES:

APN'S

392-150-01, 10, 11, 12, 14, 15, 16

OWNER/PERMITEE

IT IS AGREED THAT FIELD CONDITIONS MAY REQUIRE CHANGES TO THESE PLANS.

IT IS FURTHER AGREED THAT THE OWNER (DEVELOPER) SHALL HAVE A REGISTERED CIVIL ENGINEER MAKE SUCH CHANGES, ALTERATIONS OR ADDITIONS TO THESE PLANS WHICH THE DIRECTOR OF PUBLIC WORKS DETERMINES ARE NECESSARY AND DESIRABLE FOR THE PROPER COMPLETIONS OF THE IMPROVEMENTS.

I HEREBY AGREE TO COMMENCE WORK ON ANY IMPROVEMENTS SHOWN ON THESE PLANS WITHIN EXISTING COUNTY RIGHT-OF-WAY WITHIN 60 DAYS AFTER ISSUANCE OF THE CONSTRUCTION PERMIT AND TO PURSUE SUCH WORK ACTIVELY ON EVERY NORMAL WORKING DAY UNTIL COMPLETED, IRRESPECTIVE AND INDEPENDENT OF ANY OTHER WORK ASSOCIATED WITH THIS PROJECT OR UNDER MY CONTROL.

WORK TO BE DONE

GRADING AND DRAINAGE WORK CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS, THE CURRENT SAN DIEGO AREA REGIONAL STANDARD DRAWINGS, THE SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION AND THE SAN DIEGO COUNTY GRADING ORDINANCE AND CALTRANS STANDARD PLANS.

- 1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2013 EDITION (GREENBOOK) AND SUPPLEMENTS.
STANDARD DRAWINGS:
1. SAN DIEGO REGIONAL STANDARD DRAWINGS (2006).

LEGEND:

Table with 3 columns: DWG. NO., SYMBOL, and description of various engineering symbols like PROJECT BOUNDARY/RIGHT OF WAY, LAKE EDGE, EXISTING EASEMENT, EXISTING STORM DRAIN, etc.

ABBREVIATIONS

Table with 2 columns: Abbreviation and Full Name. Includes APN, BVC, C.B, CL, C.O, DWY, EC, EVC, EX, FG, FL, HP, LP, LT, MAX, M.H, MIN, MOD, OS, PIP, PP, POA, P/L, PSF, PVC, R, RCP, RSD, RT, R/W, SD, SDGDS, SDRSD, TC, TEMP, VC, W/.

WDID: XXXXXXXXXXXX

STORMWATER TREATMENT CONTROL AND LID BMP'S table with columns: DESCRIPTION/TYPE, SHEET, MAINT. CATEGORY, REVISIONS. Includes MINOR SWMP.

PERMITS
LANDSCAPING & IRRIGATION NO.
REZONE PERMIT NO.
SPECIAL USE PERMIT NO.
MAP NO. 00289

BENCH MARK
DESCRIPTION: EC-216, 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON
LOCATION:
RECORD FROM: SD COUNTY BENCHMARK RECORDS
ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT
SHEET 1 OF 40 SHEETS
COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS

TITLE SHEET FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT
CALIFORNIA COORDINATE INDEX 254-1797
APPROVED FOR:
ENGINEER OF WORK: JOHN D. GODDARD JR.
DATE:
PDS 2014-LDGRM-00012

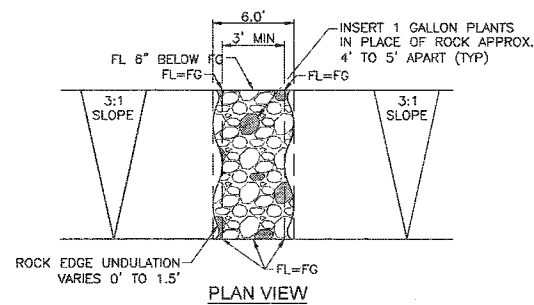
EROSION CONTROL, SWMP AND BMP NOTES REQUIRED ON PLAN

STORM WATER MANAGEMENT NOTES

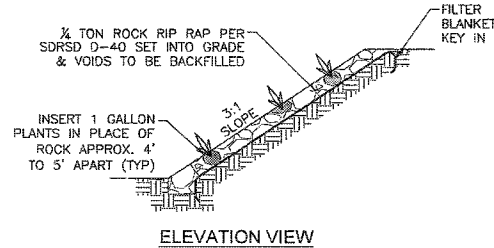
1. DURING THE RAINY SEASON THE AMOUNT OF EXPOSED SOIL ALLOWED AT ONE TIME SHALL NOT EXCEED THAT WHICH CAN BE ADEQUATELY PROTECTED BY THE CONTRACTOR IN THE EVENT OF A RAINSTORM. 125% SHALL BE RETAINED ON THE JOB SITE IN A MANNER THAT ALLOWS FULL DEPLOYMENT AND COMPLETE INSTALLATION IN 48 HOURS OR LESS OF A FORECAST RAIN.
2. NO AREA BEING DISTURBED SHALL EXCEED 50 ACRES AT ANY GIVEN TIME WITHOUT DEMONSTRATING TO THE SAN DIEGO COUNTY D.P.W. DIRECTOR'S SATISFACTION THAT ADEQUATE EROSION AND SEDIMENT CONTROL CAN BE MAINTAINED. ANY DISTURBED AREA THAT IS NOT ACTIVELY GRADED FOR 15 DAYS MUST BE FULLY PROTECTED FROM EROSION. UNTIL ADEQUATE LONG-TERM PROTECTIONS ARE INSTALLED, THE DISTURBED AREA SHALL BE INCLUDED WHEN CALCULATING THE ACTIVE DISTURBANCE AREA. ALL EROSION CONTROL MEASURES SHALL REMAIN INSTALLED AND MAINTAINED DURING ANY INACTIVE PERIOD.
3. THE CONTRACTOR/PROJECT OSP IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORM WATER REGULATIONS AT ALL TIMES. THE BMPs (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE MAINTENANCE OF THE BMPs IS THE PERMITTEE'S RESPONSIBILITY, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMPs MAY RESULT IN ENFORCEMENT ACTION BY THE COUNTY OF SAN DIEGO OR OTHERS. IF INSTALLED BMPs FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.
4. ON PROJECTS OF GREATER THAN ONE ACRES ADD THE FOLLOWING NOTE: A NOTICE OF INTENT (NOI) HAS BEEN OR WILL BE FILED WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) AND THAT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN OR WILL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY (PERMIT NO. CAS000002) FOR ALL OPERATIONS ASSOCIATED WITH THESE PLANS. THE NOI NUMBER ASSIGNED BY SWRCB FOR THIS PROJECT IS [WDID NO.] [ALTERNATIVE: NOT YET ASSIGNED, BUT WILL BE PROVIDED BEFORE A PERMIT IS ISSUED]. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR REVIEW BY COUNTY.
5. THE CONTRACTOR SHALL IMPLEMENT THE SWPPP AND PROVIDE ALL RELATED INSTALLATION, REPORTING MAINTENANCE AND MONITORING OUTLINE FL...CONTRACTOR SHALL PROVIDE OSP FOR PROJECT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH SWPPP AND CGP AT ALL TIMES.

ARCHAEOLOGICAL MONITORING NOTES

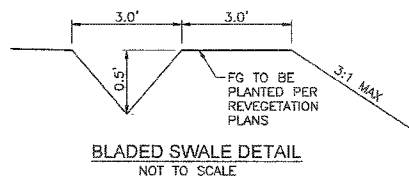
1. THE COUNTY CERTIFIED ARCHAEOLOGIST/HISTORIAN AND NATIVE AMERICAN MONITOR SHALL ATTEND THE PRE-CONSTRUCTION MEETING WITH THE CONTRACTORS TO EXPLAIN AND COORDINATE THE REQUIREMENTS OF THE MONITORING PROGRAM.
 2. THE CONSULTING ARCHAEOLOGIST SHALL MONITOR ALL AREAS IDENTIFIED FOR GRADING/EXCAVATION INDICATED IN THE APPROVED CULTURAL RESOURCES REPORT.
 3. DURING THE ORIGINAL CUTTING OF PREVIOUSLY UNDISTURBED DEPOSITS, THE ARCHAEOLOGICAL MONITOR(S) AND NATIVE AMERICAN MONITOR(S) SHALL BE ON-SITE ON THE RATE OF EXCAVATION, THE MATERIALS EXCAVATED, AND THE PRESENCE AND ABUNDANCE OF ARTIFACTS AND FEATURES. THE FREQUENCY AND LOCATION OF INSPECTIONS WILL BE DETERMINED BY THE PRINCIPAL INVESTIGATOR IN CONSULTATION WITH THE NATIVE AMERICAN MONITOR.
 4. MONITORING OF PREVIOUSLY DISTURBED AREAS, GRADED AREAS, OR AREAS THAT CONTAIN NON-CULTURAL AND GEOLOGICALLY STERILE MATERIAL, SHALL BE MONITORED AT THE DISCRETION OF THE PRINCIPAL INVESTIGATOR AS DICTATED BY THE POTENTIAL, OR ABSENCE OF POTENTIAL, TO ENCOUNTER CULTURAL MATERIALS.
 5. IN THE EVENT THAT PREVIOUSLY UNIDENTIFIED POTENTIALLY SIGNIFICANT CULTURAL RESOURCES ARE DISCOVERED, THE ARCHAEOLOGICAL MONITOR(S) SHALL HAVE THE AUTHORITY TO DIVERT OR TEMPORARILY HALT GROUND DISTURBANCE OPERATION IN THE AREA OF DISCOVERY TO ALLOW EVALUATION OF POTENTIALLY SIGNIFICANT CULTURAL RESOURCES. THE PRINCIPAL INVESTIGATOR SHALL CONTACT THE COUNTY ARCHAEOLOGIST AT THE TIME OF DISCOVERY. THE PRINCIPAL INVESTIGATOR, IN CONSULTATION WITH COUNTY STAFF ARCHAEOLOGIST, SHALL DETERMINE THE SIGNIFICANCE OF THE DISCOVERED RESOURCES. THE COUNTY ARCHAEOLOGIST, THEN CARRIED OUT USING PROPER ARCHAEOLOGICAL METHODS.
 6. IF ANY HUMAN BONES ARE DISCOVERED, THE PRINCIPAL INVESTIGATOR SHALL CONTACT THE COUNTY CORONER. IN THE EVENT THAT THE REMAINS ARE DETERMINED TO BE OF NATIVE AMERICAN ORIGIN, THE MOST LIKELY DESCENDANT, AS IDENTIFIED BY THE NATIVE AMERICAN HERITAGE COMMISSION, SHALL BE CONTACTED IN ORDER TO DETERMINE PROPER TREATMENT AND DISPOSITION OF THE REMAINS.
 7. PRIOR TO ROUGH GRADING INSPECTION SIGN-OFF, PROVIDE EVIDENCE THAT THE FIELD GRADING MONITORING ACTIVITIES HAVE BEEN COMPLETED TO THE SATISFACTION OF THE DIRECTOR OF PLANNING AND LAND USE. EVIDENCE SHALL BE IN THE FORM OF A LETTER FROM THE PROJECT ARCHAEOLOGIST.
 8. PRIOR TO FINAL GRADING RELEASE, SUBMIT TO THE SATISFACTION OF THE DIRECTOR OF PLANNING AND LAND USE, A FINAL REPORT THAT DOCUMENTS THE RESULTS, ANALYSIS, AND CONCLUSIONS OF ALL PHASES OF THE ARCHAEOLOGICAL MONITORING PROGRAM. THE REPORT SHALL ALSO INCLUDE THE FOLLOWING:
 - 8.1. DEPARTMENT OF PARKS AND RECREATION PRIMARY AND ARCHAEOLOGICAL SITE FORMS.
 - 8.2. EVIDENCE THAT ALL CULTURAL COLLECTED DURING THE GRADING MONITORING PROGRAM CFR PART 79, AND THEREFORE WOULD BE PROFESSIONALLY CURATED AND MADE AVAILABLE TO OTHER ARCHAEOLOGISTS/RESEARCHERS FOR FURTHER STUDY. THE COLLECTIONS AND ASSOCIATED RECORDS SHALL BE TRANSFERRED, INCLUDING TITLE, TO AN APPROPRIATE CURATION FACILITY WITHIN SAN DIEGO COUNTY, TO BE ACCOMPANIED BY PAYMENT OF THE FEES NECESSARY FOR PERMANENT CURATION. EVIDENCE SHALL BE IN THE FORM OF A LETTER FROM THE CURATION FACILITY IDENTIFYING THAT ARCHAEOLOGICAL MATERIALS HAVE BEEN RECEIVED AND THAT ALL FEES HAVE BEEN PAID.
- IN THE EVENT THAT NO CULTURAL RESOURCES ARE DISCOVERED, A BRIEF LETTER, A BRIEF LETTER TO THAT EFFECT SHALL BE SENT TO THE GRADING MONITORING ACTIVITIES THAT HAVE BEEN COMPLETED.
- OR
- ENTER INTO A SECURED AGREEMENT WITH THE COUNTY OF SAN DIEGO, DEPARTMENT OF PLANNING AND LAND USE, SECURED BY A LETTER OF CREDIT, BOND, OR CASH FOR 150 PERCENT OF ESTIMATED COSTS ASSOCIATED WITH THE PREPARATION OF THE FINAL REPORT THAT DOCUMENTS THE RESULTS, ANALYSIS, AND CONCLUSIONS OF ALL PHASES OF THE ARCHAEOLOGICAL MONITORING PROGRAM, AND A 10 PERCENT CASH DEPOSIT NOT TO EXCEED \$30,000. A COST ESTIMATE SHALL BE SUBMITTED AND APPROVED BY THE DIRECTOR OF PLANNING AND LAND USE FOR THE COST OF PREPARING THE FINAL GRADING MONITORING CERAMICS ANALYSIS, FAUNAL ANALYSIS, FLORAL ANALYSIS, ASSEMBLAGE ANALYSIS, CONSULTATION WITH COUNTY STAFF ARCHAEOLOGIST. (CR-M)



FORTIFIED SLOPE DETAIL
NOT TO SCALE



ELEVATION VIEW



BLADED SWALE DETAIL
NOT TO SCALE

LEGEND

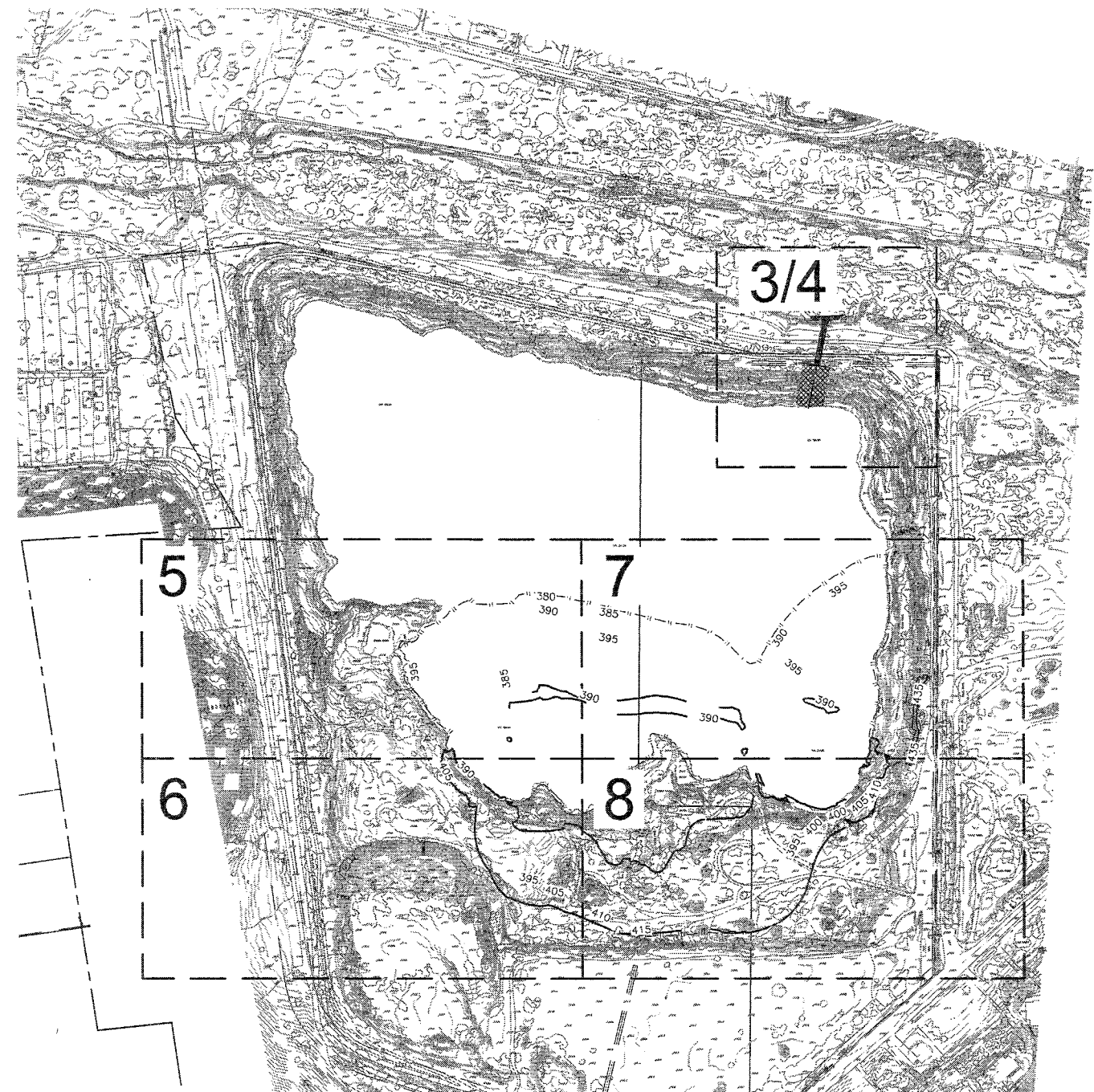
- R/W _____
- EASEMENT _____
- DAYLIGHT _____
- CUT/FILL _____
- SHEET BOUNDARY _____
- SHEET NUMBER _____
- EX MAJOR CONTOURS _____
- EX MINOR CONTOURS _____
- PROPOSED MAJOR CONTOURS _____
- PROPOSED MINOR CONTOURS _____

RECORD PLAN

BY: _____ DATE: _____

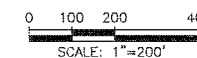
R.C.E. _____

EXPIRES: _____



KEY MAP FOR GRADING PLANS

SCALE: 1"=200'



RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
(FAX) 619.291.4165
rickengineering.com
San Diego Riverside - Chicago - San Luis Obispo - Bakersfield - Sacramento - Phoenix - Tucson

REGISTERED PROFESSIONAL ENGINEER
JOHN D. GODDARD, JR.
No. 33037
CIVIL
JL-16944

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

BENCH MARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 2 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

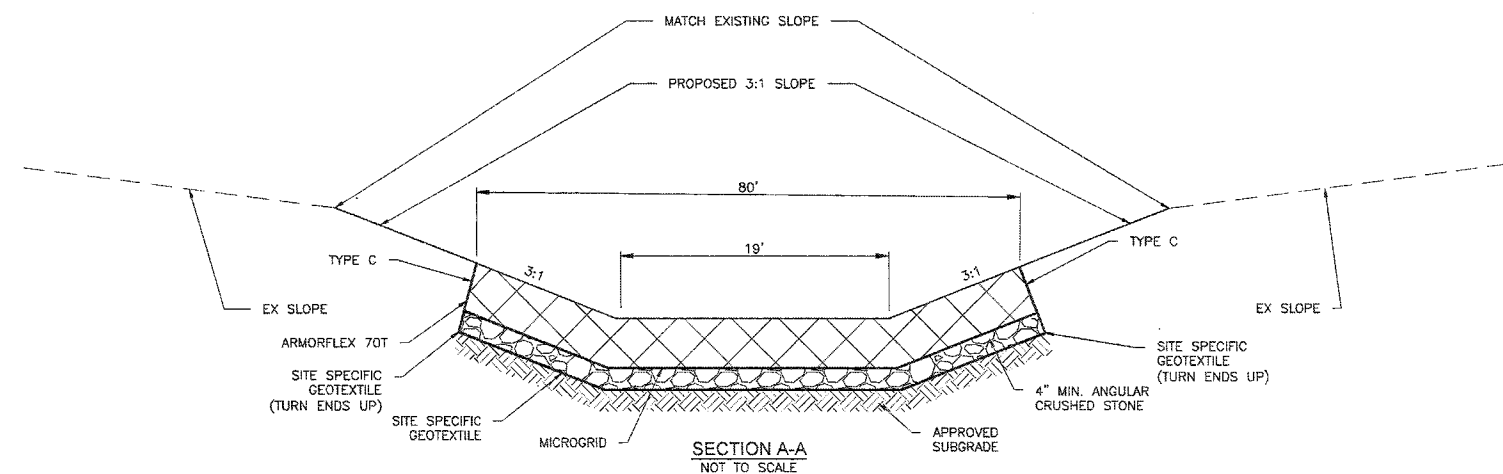
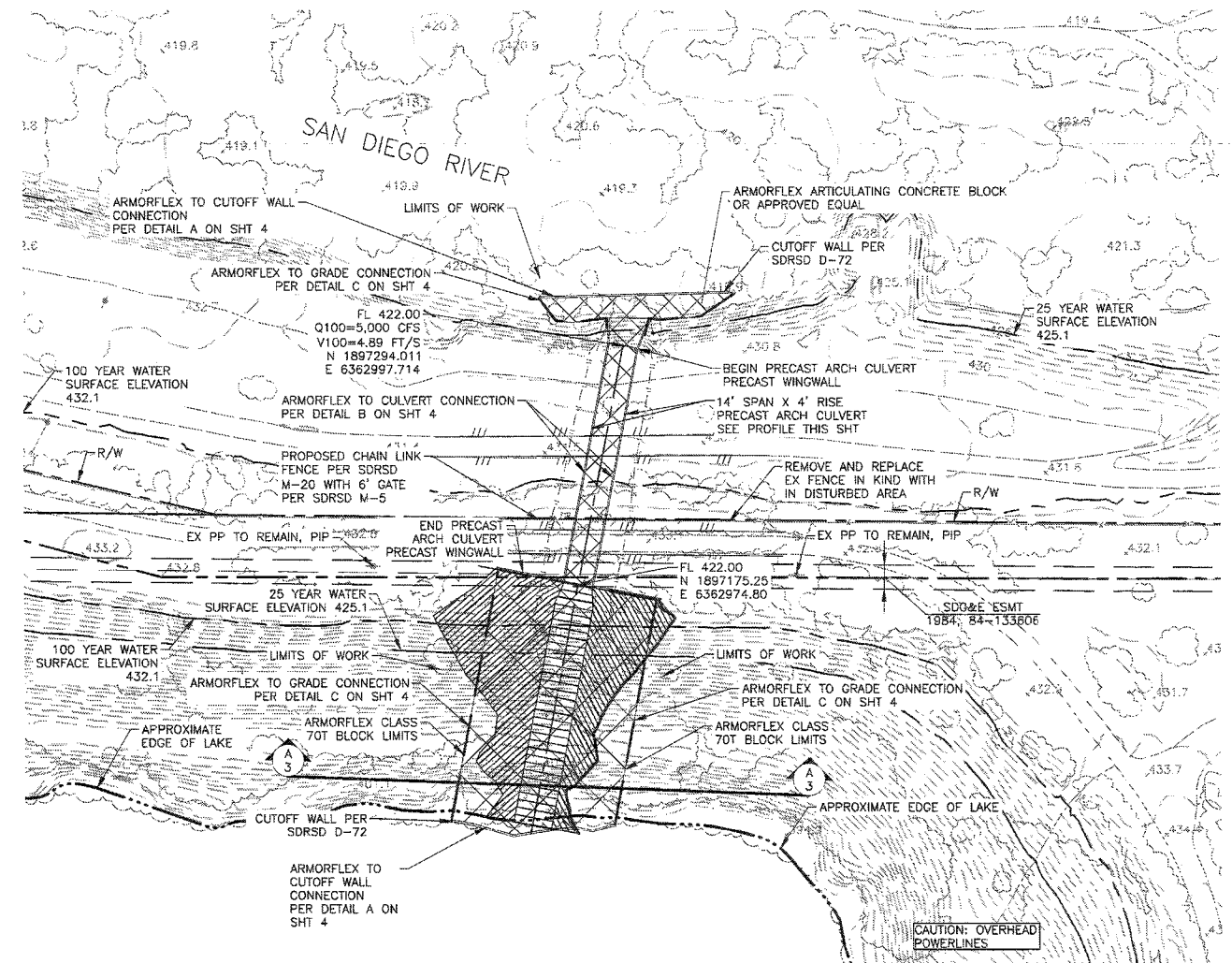
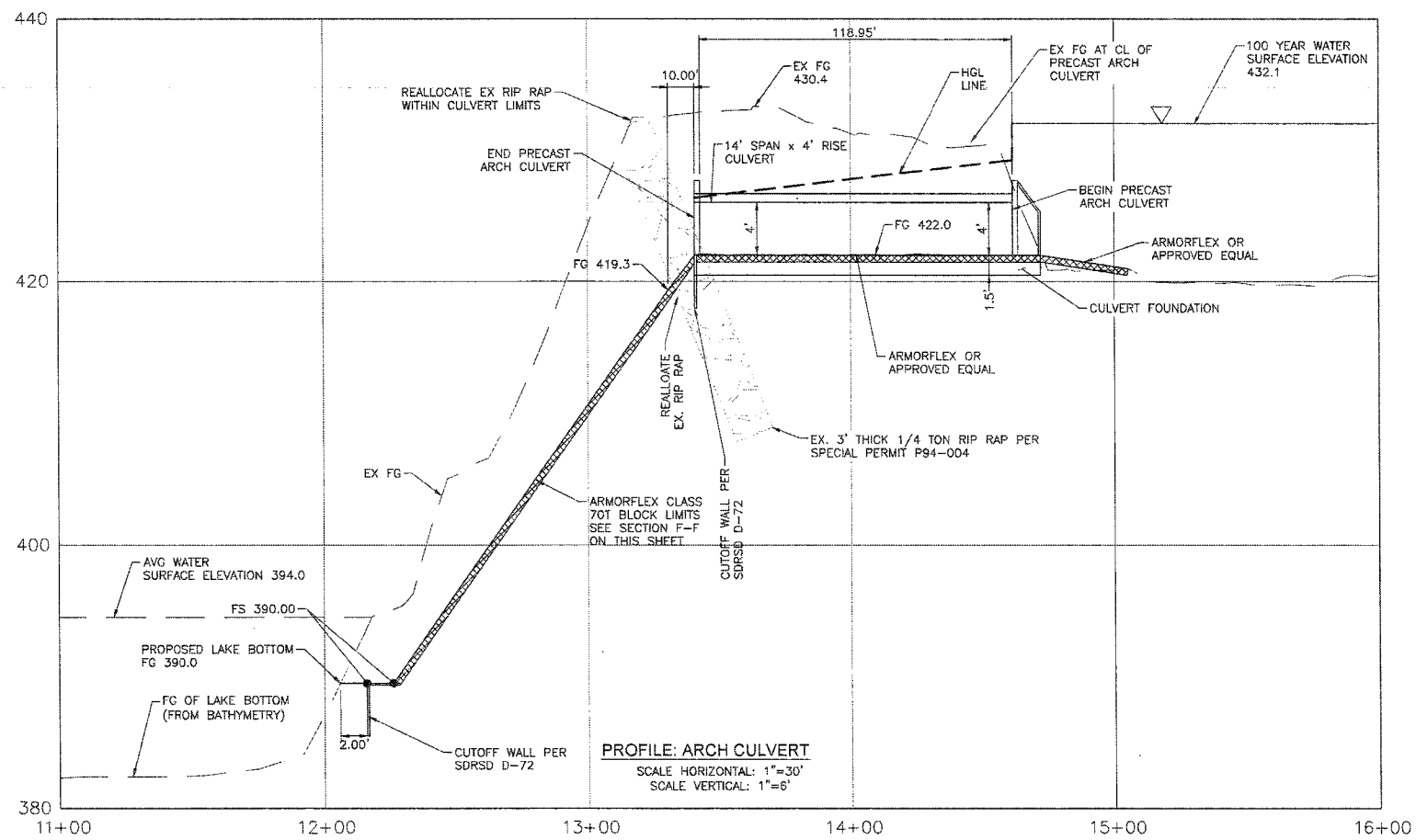
INDEX, NOTES & DETAILS FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT

CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: _____ COUNTY ENGINEER

DATE: _____

PDS 2014-LDGRMJ-00012
CRADING PERMIT NO.



RICK ENGINEERING COMPANY
 5620 FRIARS ROAD
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REGISTERED PROFESSIONAL ENGINEER
 JOHN W. GODDARD JR.
 No. 33037
 CIVIL
 STATE OF CALIFORNIA

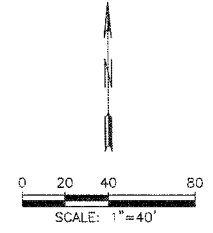
J-16944

RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____



COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

ARTICULATE CONCRETE BLOCK
 MAX VELOCITY= 25.3 FT/S
 MAX SHEAR= 24.8 PSF

BENCH MARK

DESCRIPTION: EC-216, 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 3 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

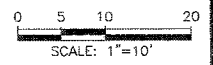
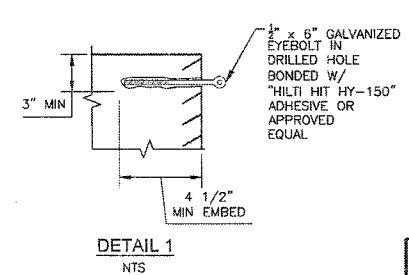
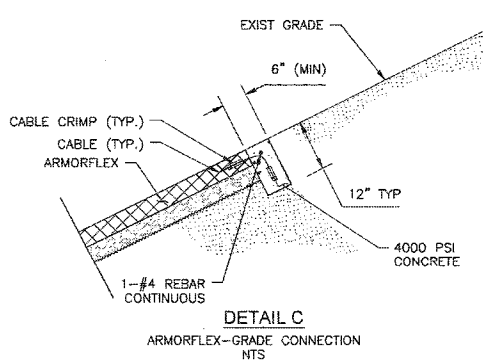
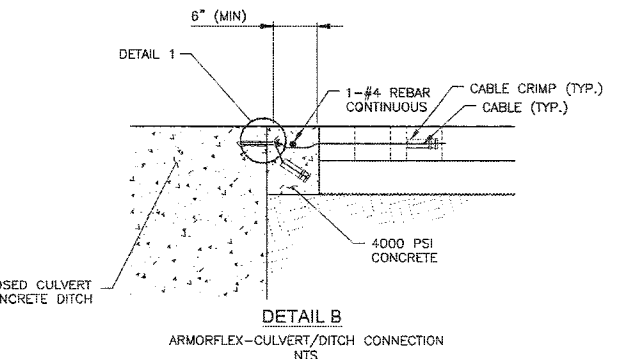
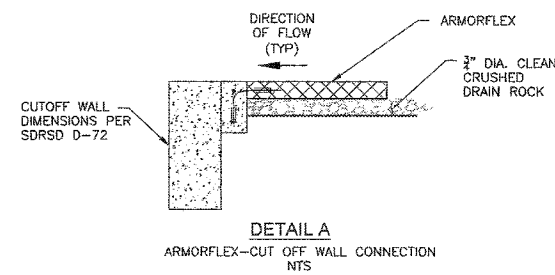
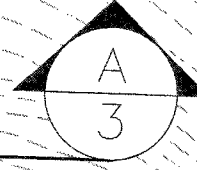
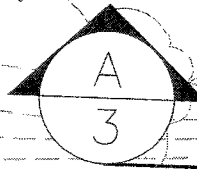
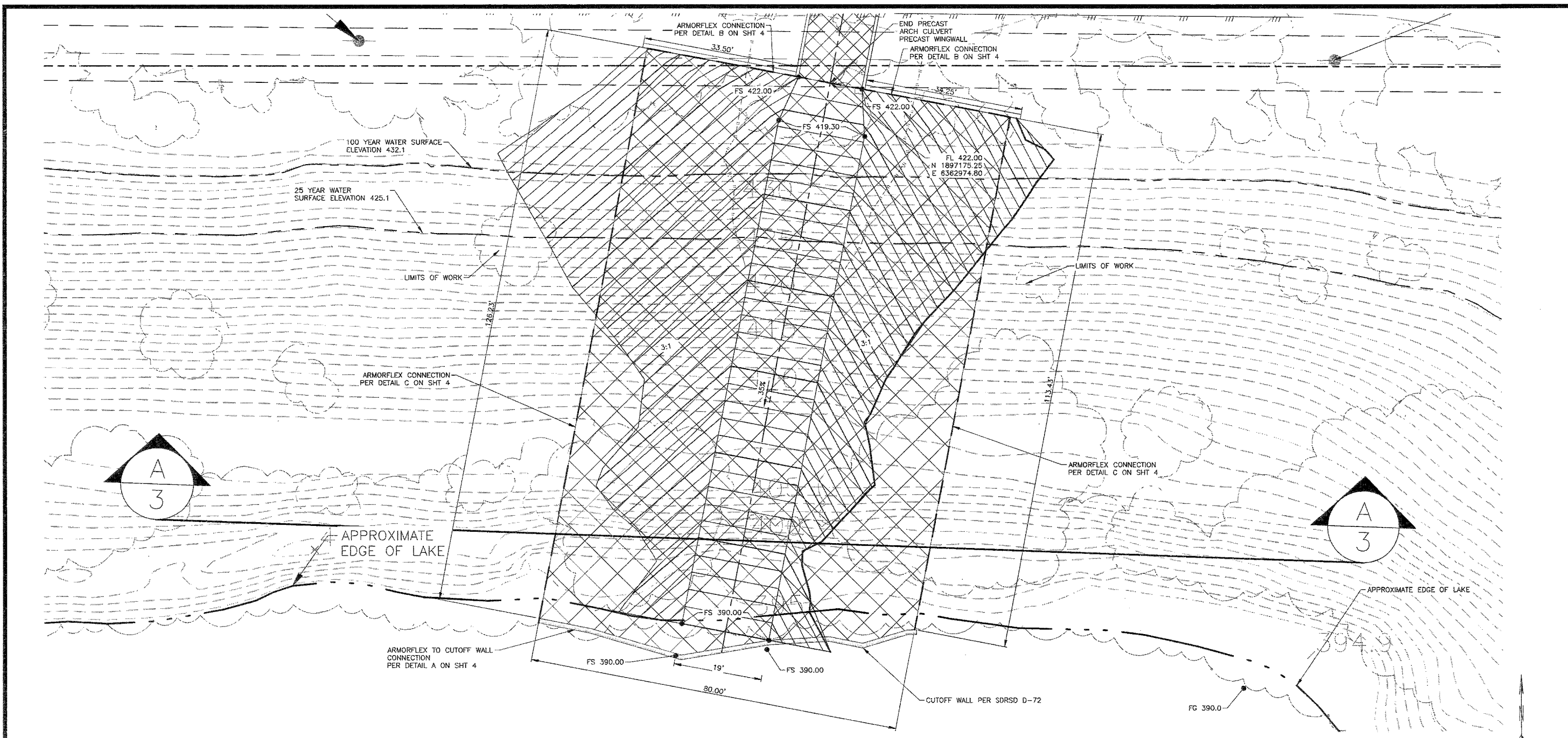
GRADING PLANS FOR:
 HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT
 CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: _____
 COUNTY ENGINEER

DATE: _____

DESIGNER OF WORK: _____
 DATE: _____

PDS 2014-LDGRMJ-00012
 GRADING PERMIT NO: _____



NOTE:
CONNECTION DETAILS PER ARMORFLEX
RECOMMENDATIONS OR APPROVED
EQUAL PRODUCT RECOMMENDATION

RICK ENGINEERING COMPANY
San Diego

5620 FRIARS ROAD
SAN DIEGO, CA 92110
619.291.0707
FAX 619.291.4165

rickengineering.com

San Diego Riverside - Orange - San Luis Obispo - Bakersfield - Sacramento - Phoenix - Tucson



RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

BENCHMARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 4 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

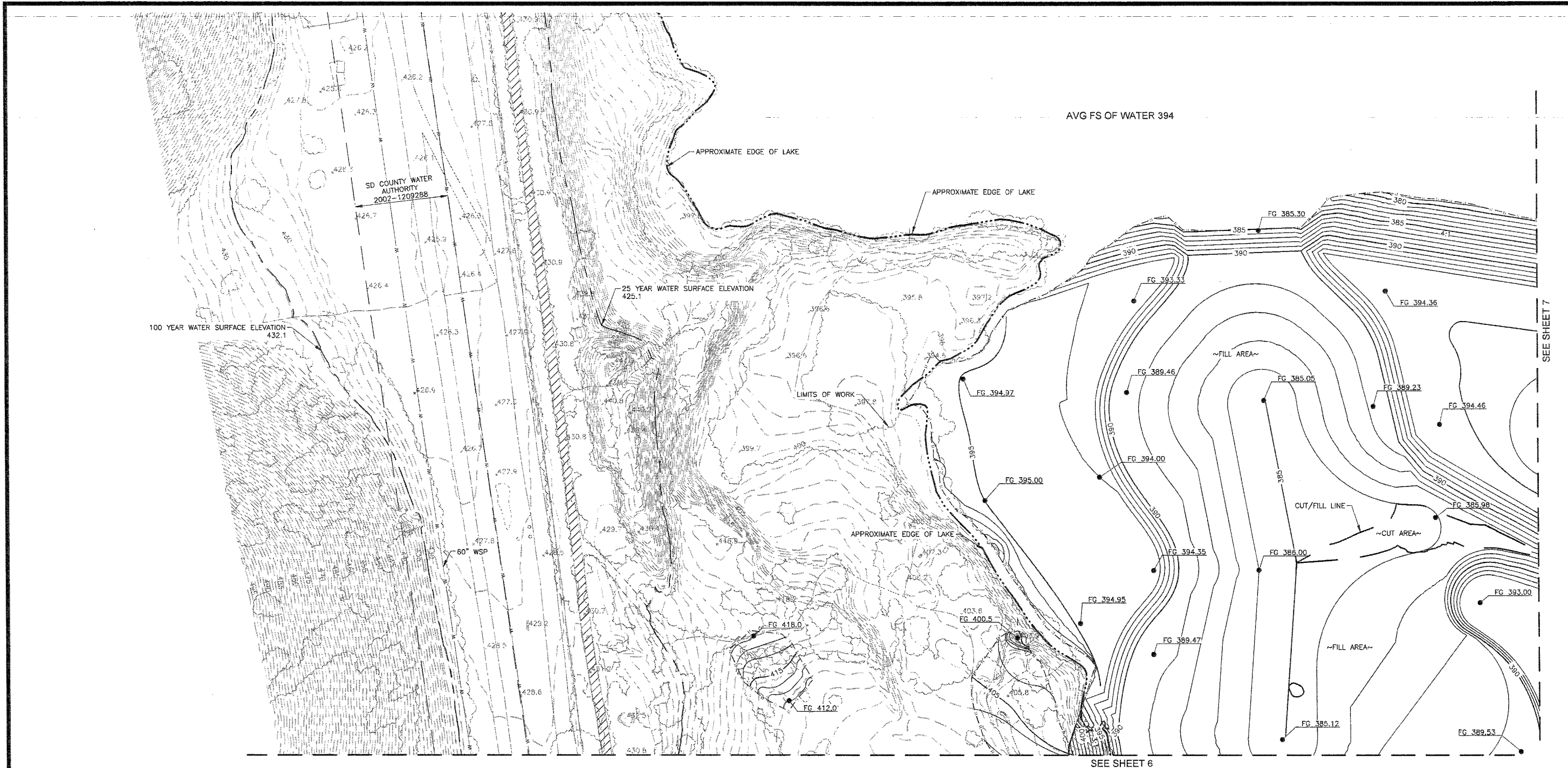
GRADING PLANS FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT

CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: _____ ENGINEER OF WORK

BY: _____ DATE: _____

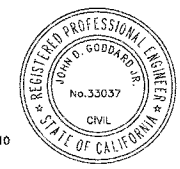
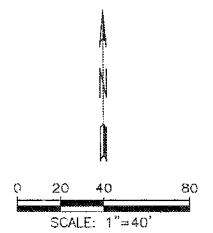
PDS 2014-LDGRM-00012



SEE SHEET 7

SEE SHEET 6

NOTE: INSTALL TURBIDITY CURTAIN PRIOR TO BEGINNING FILLING WORK/WORK WITHIN POND AREA, SEE SHEET 13.



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 SAN DIEGO, CA 92110
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 (FAX) 619.291.4165
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RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

BENCH MARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 5 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

GRADING PLANS FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT
 CALIFORNIA COORDINATE INDEX 254-1797

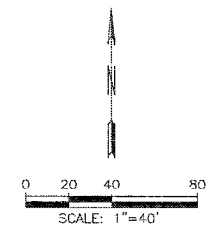
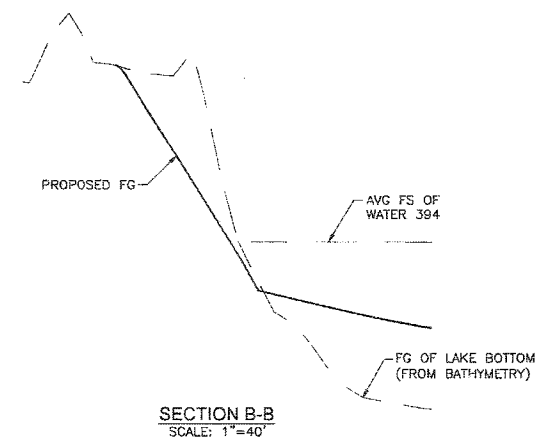
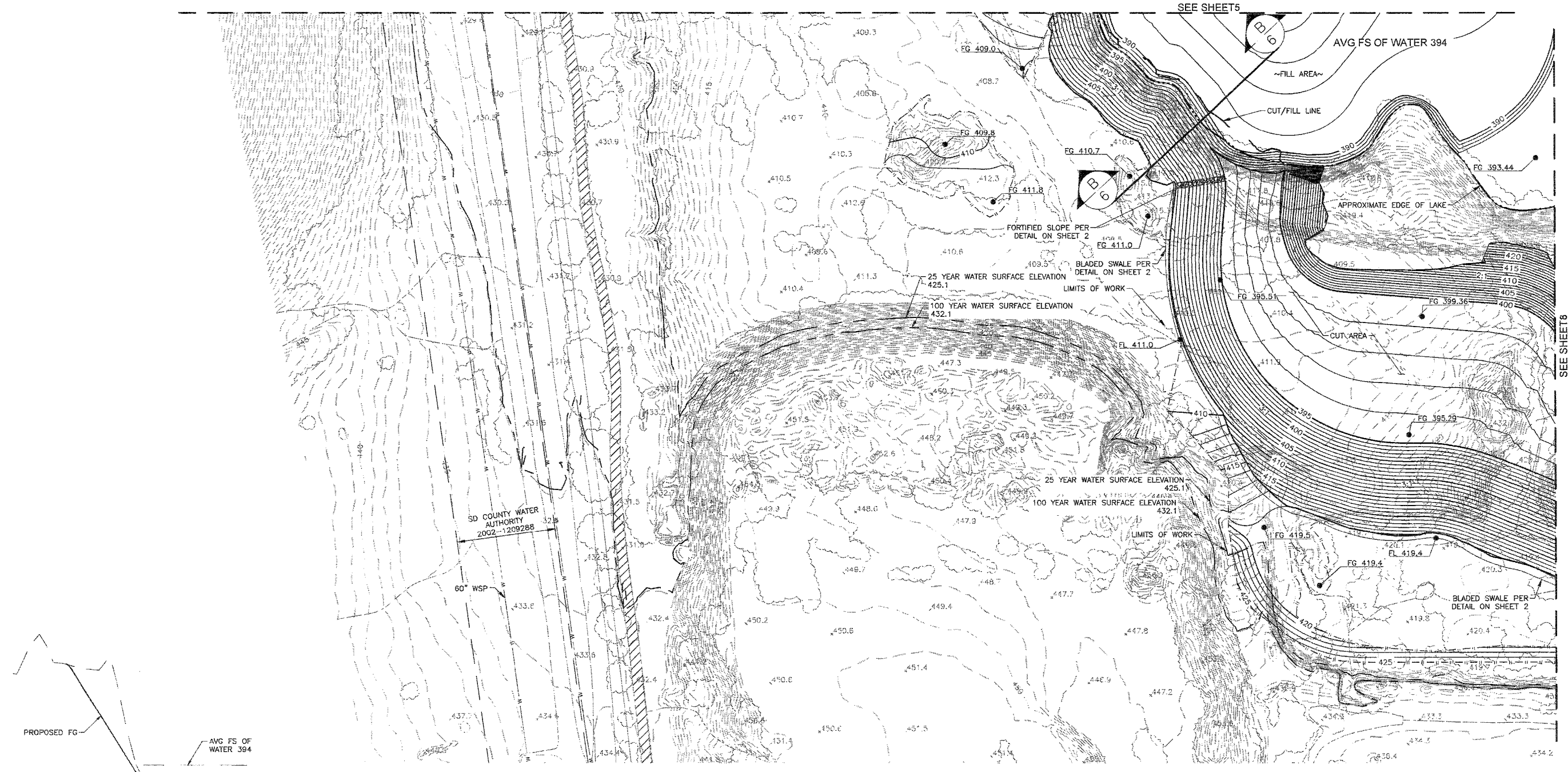
APPROVED FOR: MORRIS K. HARRINGTON COUNTY ENGINEER

ENGINEER OF WORK: _____ DATE: _____

BY: _____ DATE: _____

PDS 2014-LDGRMJ-00012 GRADING PERMIT NO:

SEE SHEETS 5



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RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

BENCH MARK

DESCRIPTION: EC-216, 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 6	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
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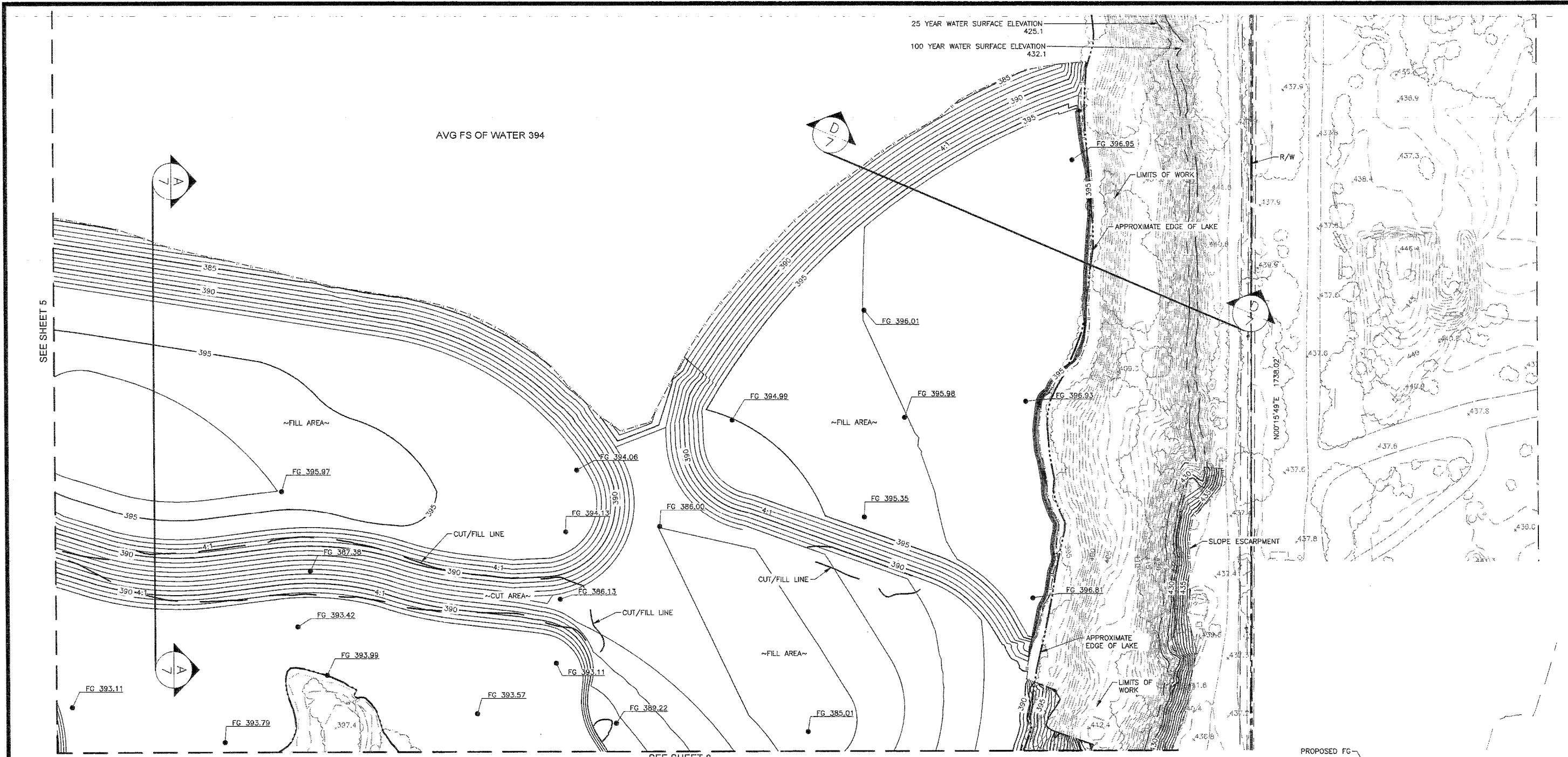
GRADING PLANS FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT

CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: _____ COUNTY ENGINEER	ENGINEER OF WORK: _____ DATE: _____
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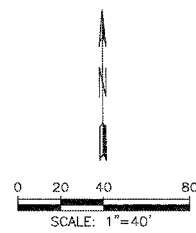
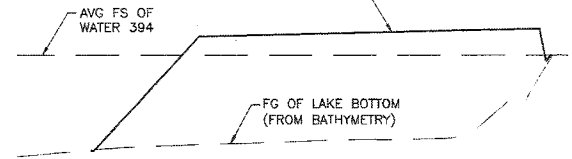
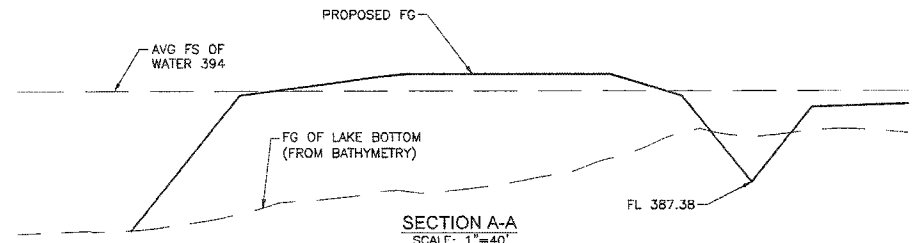
DATE: _____

PDS 2014-LDGRM-00012
GRADING PERMIT NO. _____



SEE SHEET 5

SEE SHEET 8



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RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

BENCH MARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

SECTION D-D
SCALE: 1"=40'

PRIVATE CONTRACT

SHEET 7	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
---------	--	-----------

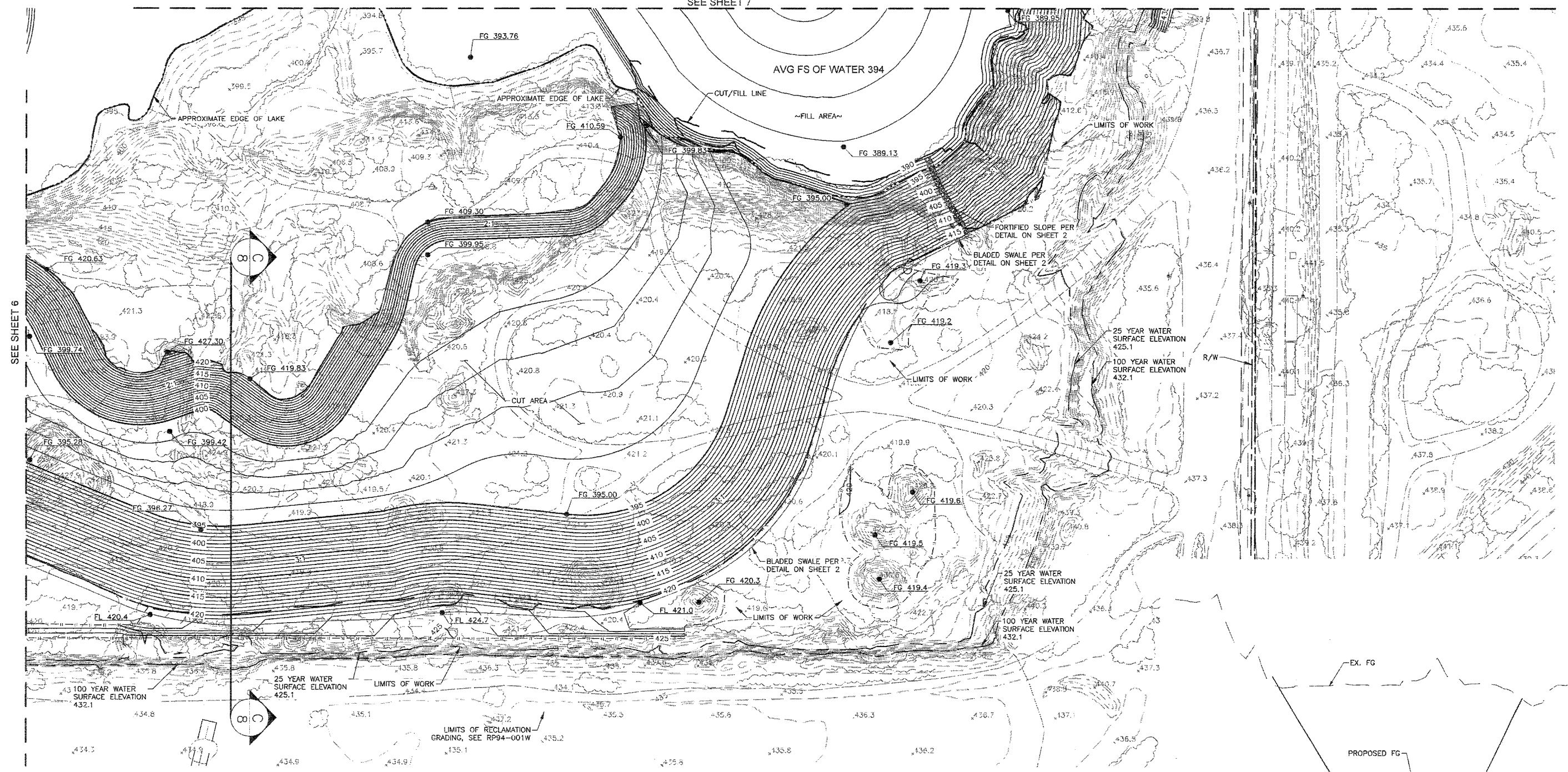
GRADING PLANS FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT
 CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: MICHAEL E. FAHRENDORFER COUNTY ENGINEER

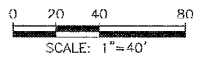
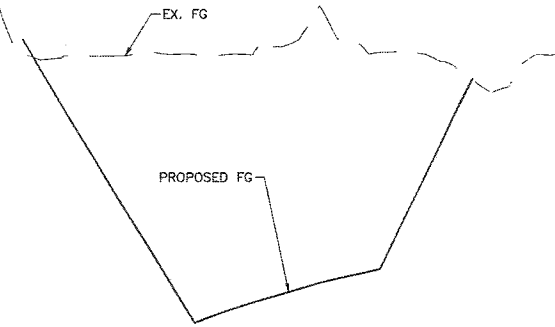
ENGINEER OF WORK: _____ DATE: _____

PROJECT NO: PDS 2014-LDGRMJ-00012

SEE SHEET 7



SEE SHEET 6



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RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

BENCH MARK

DESCRIPTION: EC-218.3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

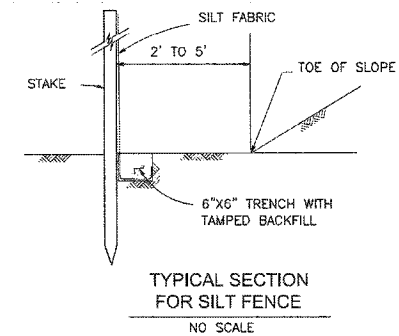
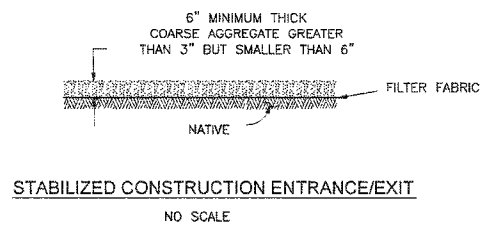
ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 8	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
GRADING PLANS FOR: HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT		
CALIFORNIA COORDINATE INDEX		254-1797
APPROVED FOR: MICHAEL N. FACKENBERG COUNTY ENGINEER	ENGINEER OF WORK: _____ DATE: _____	PDS 2014-LDGRMJ-00012 CREATING PERMIT NO.

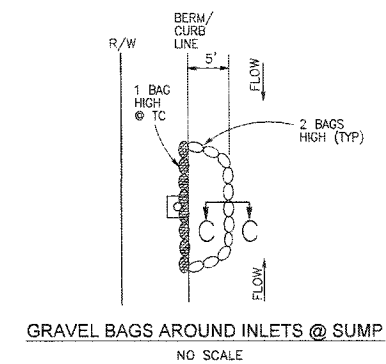
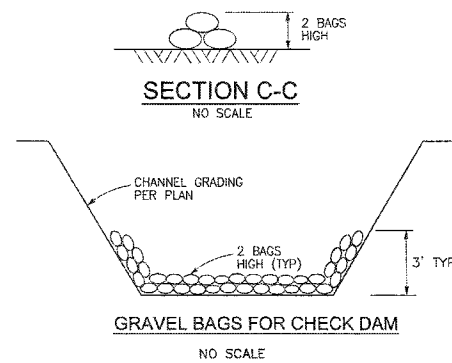
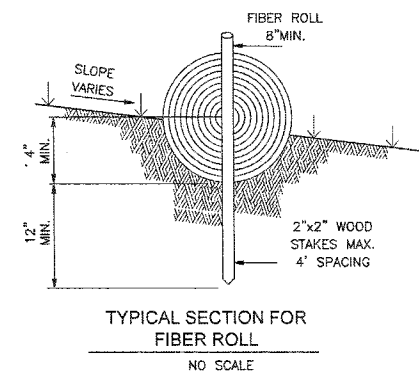
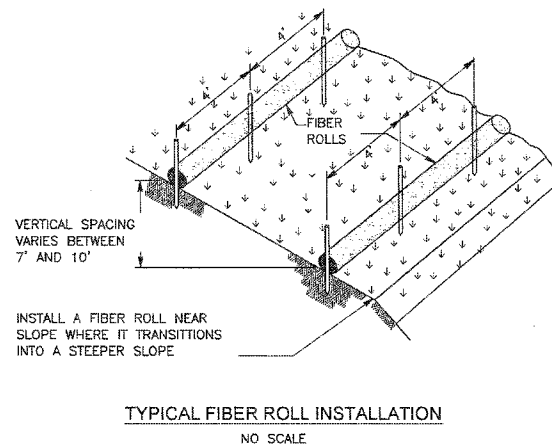
EROSION CONTROL NOTES:

1. NO WORK HAVING POTENTIAL TO CAUSE WATER POLLUTION, AS DETERMINED BY THE ENGINEER, SHALL BE PERFORMED UNTIL THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN SUBMITTED TO THE ENGINEER BY THE CONTRACTOR, AND APPROVED.
2. THE CONTRACTOR SHALL CONSIDER OTHER CONTROL MEASURES, AS NECESSARY, TO SUPPLEMENT THE TEMPORARY CONTROL MEASURES SHOWN ON THESE PLANS, IN ORDER TO MEET THE POLLUTION CONTROL OBJECTIVES OF THE SWPPP.
3. CONTRACTOR SHALL TAKE STEPS TO LIMIT THE AMOUNT OF DISTURBED AREA TO WHICH IS NECESSARY TO COMPLETE PORTION OF WORK.



LEGEND

- FIBER ROLL
- TYPE 1 IMPERMEABLE TURBIDITY BARRIER
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- HYDROSEED
- GRAVEL BAGS (CHECK DAMS)
- GRAVEL BAGS (INLET PROTECT)



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J-16944

RECORD PLAN	
BY: _____	DATE: _____
R.C.E. _____	
EXPIRES: _____	

SAN DIEGO COUNTY FIRE AUTHORITY	
APPROVED BY: _____	DATE: _____

HELIX WATER DISTRICT REVIEW	
APPROVED BY: _____	DATE: _____

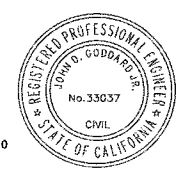
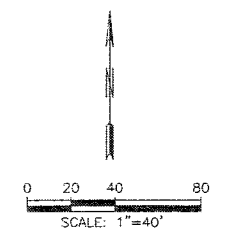
COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS	
LANDSCAPING & IRRIGATION NO. _____	
REZONE PERMIT NO. _____	
SPECIAL USE PERMIT NO. _____	
MAP NO. 00289	
BENCH MARK	
DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON	
LOCATION: _____	
RECORD FROM: SD COUNTY BENCHMARK RECORDS	
ELEVATION: 423.991 DATUM: NGVD 29	

PRIVATE CONTRACT		
SHEET 9	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
EROSION CONTROL NOTES & DETAILS FOR: HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT CALIFORNIA COORDINATE INDEX 254-1797		
APPROVED FOR: WENDY K. FAHREDOONE COUNTY ENGINEER	ENGINEER OF WORK: _____ DATE: _____	
BY: _____ DATE: _____	PDS 2014-LDGRM-00012 GRADING PERMIT NO: _____	



SEE SHEET 11



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J-15944

RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

SAN DIEGO COUNTY FIRE AUTHORITY

APPROVED BY: _____

DATE: _____

HELIX WATER DISTRICT REVIEW

APPROVED BY: _____

DATE: _____

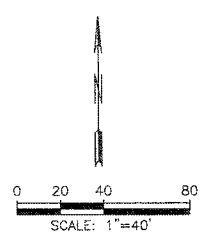
COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS	
LANDSCAPING & IRRIGATION NO. _____	
REZONE PERMIT NO. _____	
SPECIAL USE PERMIT NO. _____	
MAP NO. 00289	

BENCH MARK	
DESCRIPTION: EC-216.3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON	
LOCATION: _____	
RECORD FROM: SD COUNTY BENCHMARK RECORDS	
ELEVATION: 423.991	DATUM: NGVD 29

PRIVATE CONTRACT		
SHEET 10	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
EROSION CONTROL PLANS FOR: HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT		
CALIFORNIA COORDINATE INDEX 254-1797		
APPROVED FOR: MICHAEL W. ZALBRODGE COUNTY ENGINEER	ENGINEER OF WORK: _____	DATE: _____
BY: _____	DATE: _____	PDS 2014-LDGRM-0012 GRADING PERMIT NO. _____

SEE SHEET 9



J-18944

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RECORD PLAN	
BY: _____	DATE: _____
R.C.E. _____	
EXPIRES: _____	

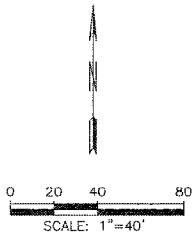
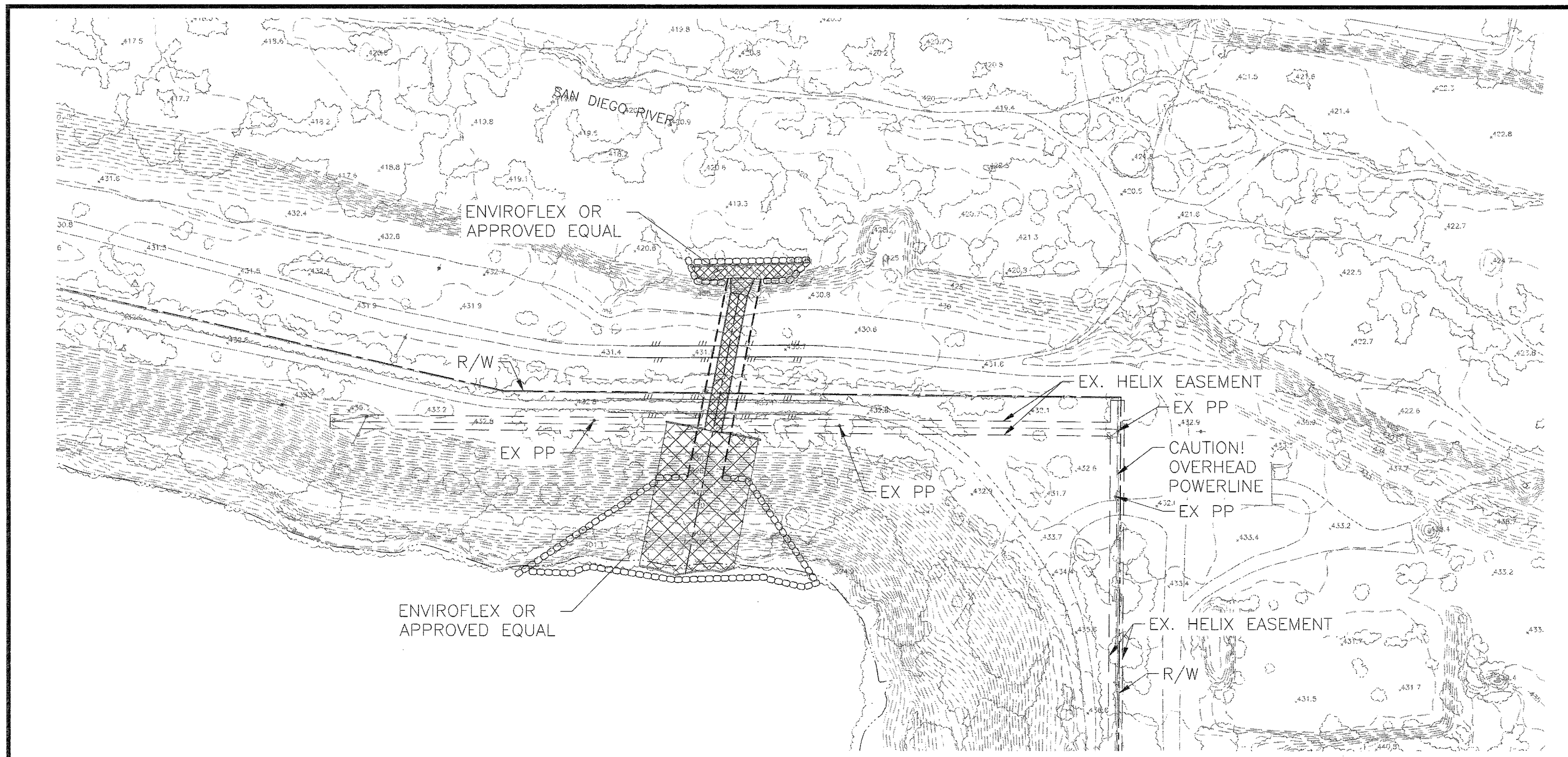
SAN DIEGO COUNTY FIRE AUTHORITY	
APPROVED BY: _____	DATE: _____

HELIX WATER DISTRICT REVIEW	
APPROVED BY: _____	DATE: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS	
LANDSCAPING & IRRIGATION NO. _____	
REZONE PERMIT NO. _____	
SPECIAL USE PERMIT NO. _____	
MAP NO. 00289	
BENCH MARK	
DESCRIPTION: EC-216.3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON	
LOCATION: _____	
RECORD FROM: SD COUNTY BENCHMARK RECORDS	
ELEVATION: 423.991	DATUM: NGVD 29

PRIVATE CONTRACT		
SHEET 11	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
EROSION CONTROL PLANS FOR: HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT CALIFORNIA COORDINATE INDEX 254-1797		
APPROVED FOR: NICHOLAS E. FARRERSON COUNTY ENGINEER	ENGINEER OF WORK: _____ S.D.E. DATE: _____	PDS 2014-LDGRM-00012 DRAWING PERMIT NO:



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RECORD PLAN	SAN DIEGO COUNTY FIRE AUTHORITY	HELIX WATER DISTRICT REVIEW
BY: _____ DATE: _____	APPROVED BY: _____	APPROVED BY: _____
R.C.E. _____	DATE: _____	DATE: _____
EXPIRES: _____		

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

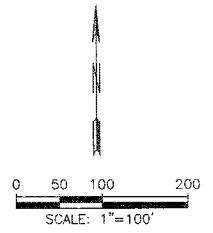
PERMITS
LANDSCAPING & IRRIGATION NO. _____
REZONE PERMIT NO. _____
SPECIAL USE PERMIT NO. _____
MAP NO. 00289
BENCH MARK
DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG
DEPT DISK AND CONC. MON
LOCATION: _____
RECORD FROM: SD COUNTY BENCHMARK RECORDS
ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT		
SHEET 12	COUNTY OF SAN DIEGO	40 SHEETS
DEPARTMENT OF PUBLIC WORKS		
EROSION CONTROL PLANS FOR: HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT		
CALIFORNIA COORDINATE INDEX 254-1797		
APPROVED FOR FORWARD TO COUNTY ENGINEER	ENGINEER OF WORK R.C.E. DATE:	PDS 2014-LDGRMJ-00012 ISSUING PERMIT NO. _____



LEGEND

LIMITS OF WORK	
TURBIDITY BARRIER	
STAGING AREA	
ACCESS/HAUL ROUTE	



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 rickengineering.com

RECORD PLAN

BY: _____ DATE: _____
 R.C.E. _____
 EXPIRES: _____

SAN DIEGO COUNTY FIRE AUTHORITY

APPROVED BY: _____
 DATE: _____

HELIX WATER DISTRICT REVIEW

APPROVED BY: _____
 DATE: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS

LANDSCAPING & IRRIGATION NO. _____
 REZONE PERMIT NO. _____
 SPECIAL USE PERMIT NO. _____
 MAP NO. 00289

BENCH MARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG DEPT DISK AND CONC. MON
 LOCATION: _____
 RECORD FROM: SD COUNTY BENCHMARK RECORDS
 ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 13 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

STAGING AND ACCESS/HAUL ROUTE PLAN FOR:
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT
 CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: WILLIAM K. FAWCETT/DOHC COUNTY ENGINEER
 ENGINEER OF WORK: _____
 DATE: _____
 BY: _____ DATE: _____
 PDS 2014-LDGRMJ-00012
 DRAWING PERMIT NO. _____

Notes:

1. The bridge is designed for site conditions as shown on drawings provided by the project engineer. The project engineer of record is responsible for the suitability of the structure to the site.
2. Contractor must verify all controlling field dimensions prior to construction.
3. Bridge Design is LRFD per AASHTO Standard Specifications for Highway Bridges, 6th Edition.
4. Footing concrete must have a minimum compressive strength of 4000 psi. Footing reinforcing steel must conform to ASTM A615.
5. Precast units, headwall and wingwalls must be precast and installed per the specifications included with these plans.

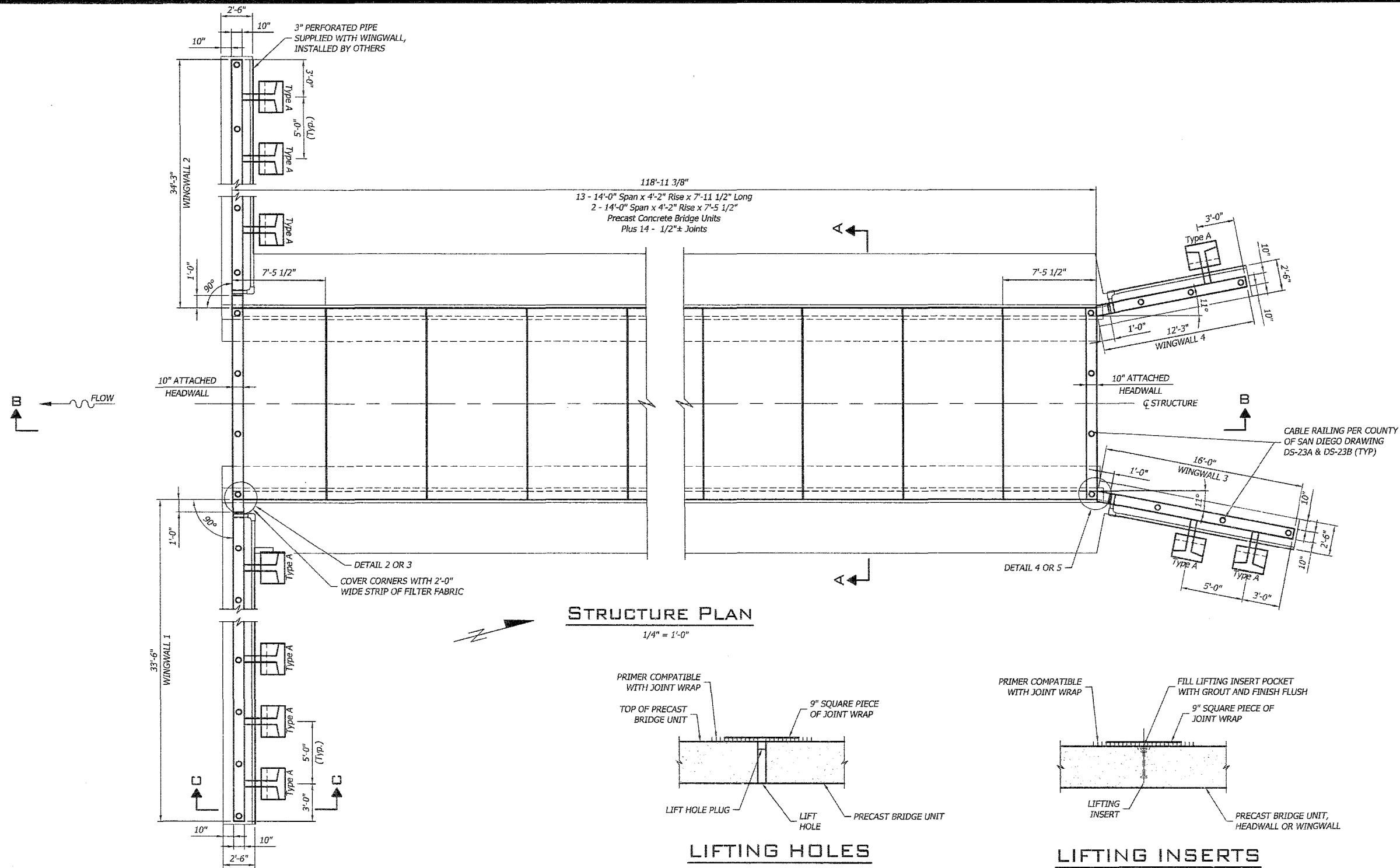
Design Data:

Loading:
 -Units: HL-93
 -Headwalls: Soil Pressure
 -Wingwalls: Soil Pressure

 Fill Height: 2'-0" min to 6'-8" max from top of crown to top of finish grade

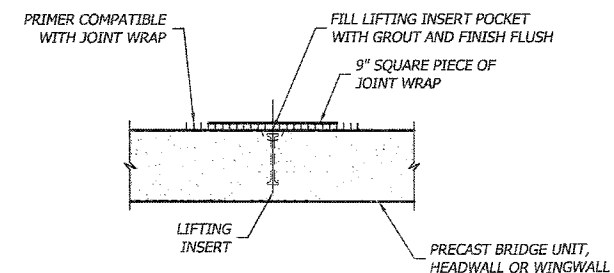
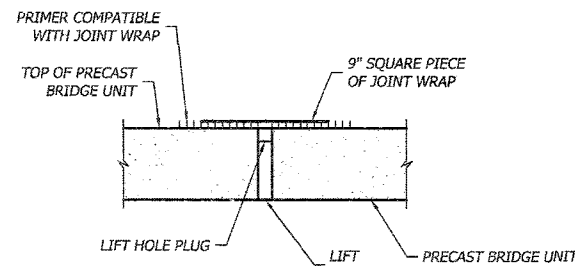
 Nominal Bearing Resistance: 7500 PSF *

 *Foundation design and subgrade preparation is per recommendations by Geocon Incorporated e-mail dated 9/25/2014.



STRUCTURE PLAN

1/4" = 1'-0"



LIFTING HOLES

LIFTING INSERTS

NOT FOR CONSTRUCTION

TYPICAL LIFTING POINT DETAIL

NOT TO SCALE

KLD ENGINEERING

1048B DATTIER CT
 RANCHO CORDOVA, CA 95670
 (916) 572-8023

Karen L. Dill
 6/22/15



RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

SAN DIEGO COUNTY FIRE AUTHORITY

APPROVED BY: _____

DATE: _____

HELIX WATER DISTRICT REVIEW

APPROVED BY: _____

DATE: _____

COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS

LANDSCAPING & IRRIGATION NO. _____

REZONE PERMIT NO. _____

SPECIAL USE PERMIT NO. _____

MAP NO. 00289

BENCH MARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG

DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 14 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT

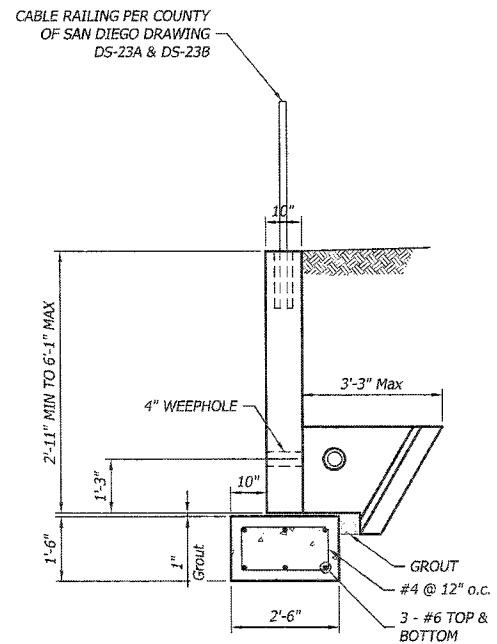
CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: _____ COUNTY ENGINEER

DATE: _____

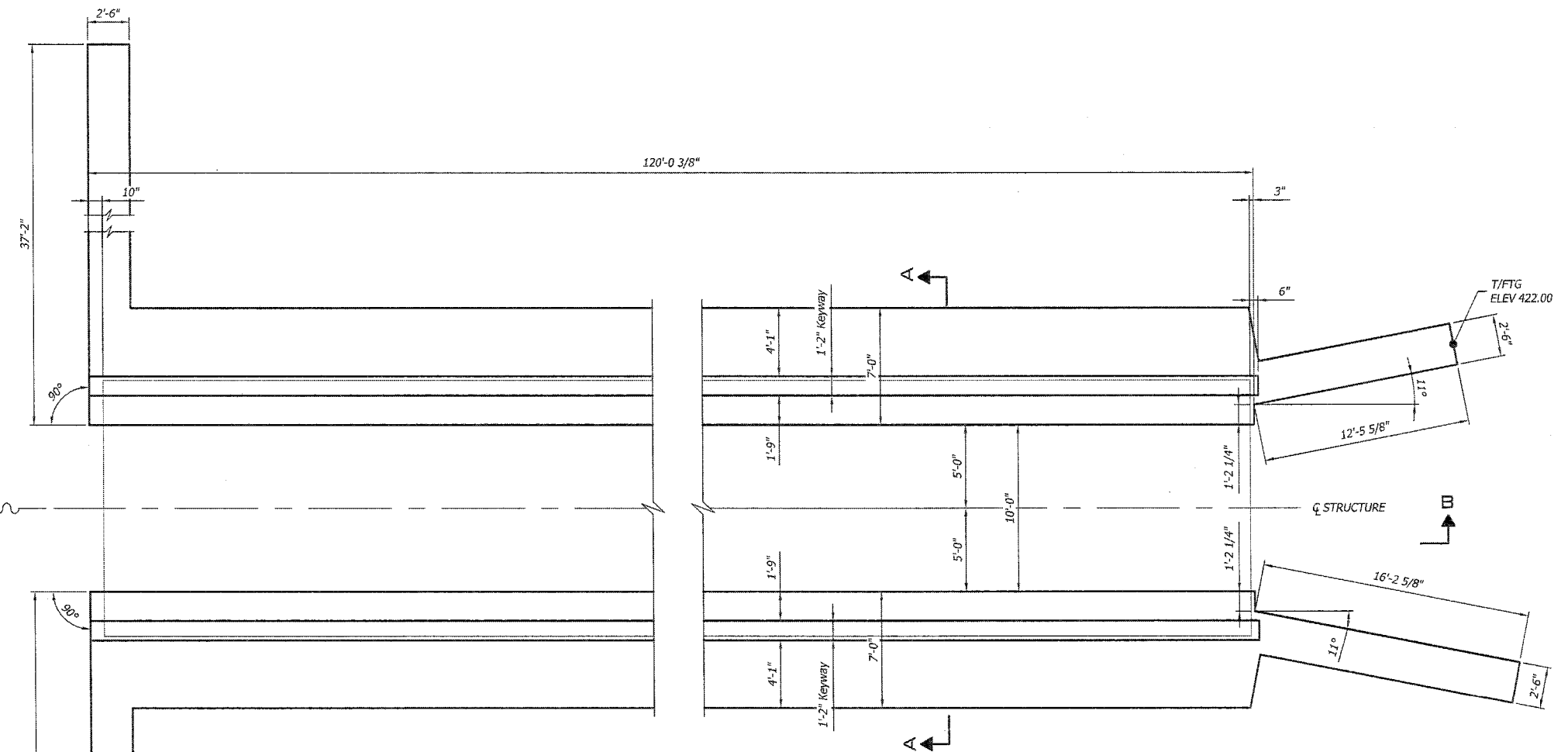
PDS 2014-LDGRMJ-00012

ISSUING PERMIT NO. _____

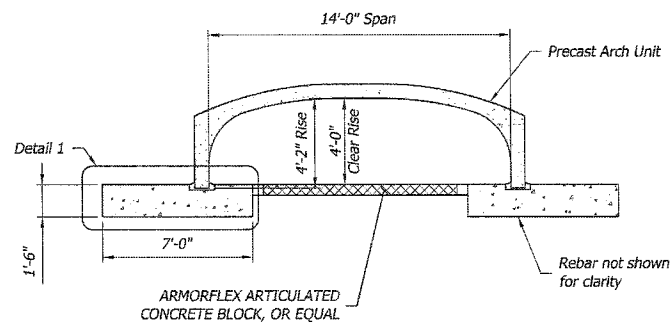


SECTION C - C
1/2" = 1'-0"

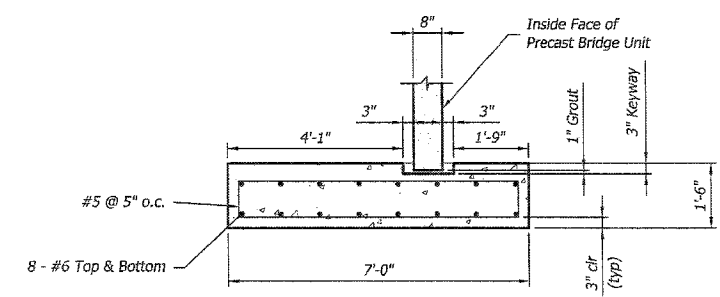
Note: Fill gap between top of footing and bottom of wing wall and bottom of anchor and tip of anchor with grout before wall is backfilled.



FOUNDATION PLAN
1/4" = 1'-0"



SECTION A - A
1/4" = 1'-0"



DETAIL 1
1/2" = 1'-0"

NOT FOR CONSTRUCTION

KLD ENGINEERING
10488 DATTIER CT
RANCHO GORDOVA, CA 95670
(916) 572-8023

Karen L. Dell
6/22/15
REGISTERED PROFESSIONAL ENGINEER
KAREN LESLIE DELL
No. 68444
Exp. 9/30/15
CIVIL
STATE OF CALIFORNIA

RECORD PLAN	
BY: _____	DATE: _____
R.C.E. _____	
EXPIRES: _____	

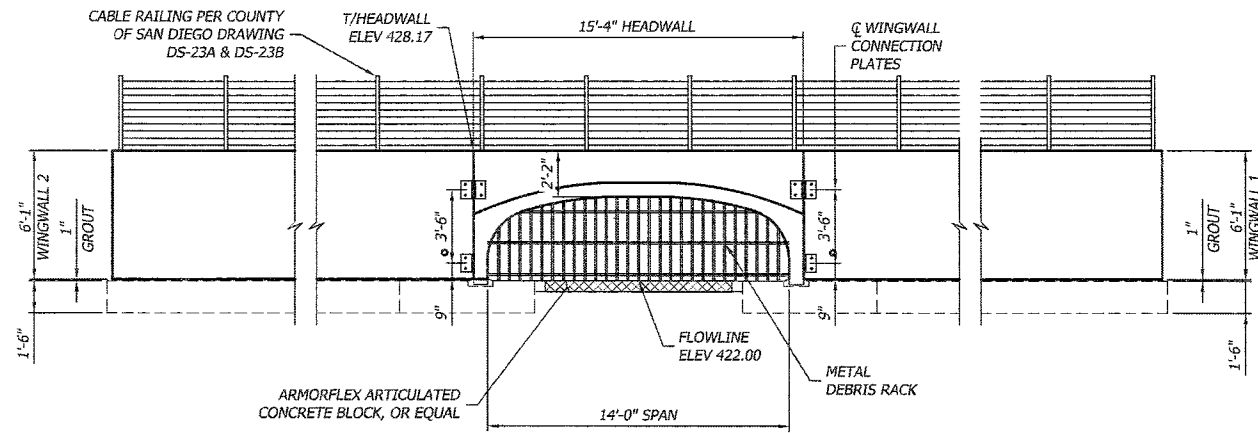
SAN DIEGO COUNTY FIRE AUTHORITY	
APPROVED BY: _____	
DATE: _____	

HELIX WATER DISTRICT REVIEW	
APPROVED BY: _____	
DATE: _____	

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

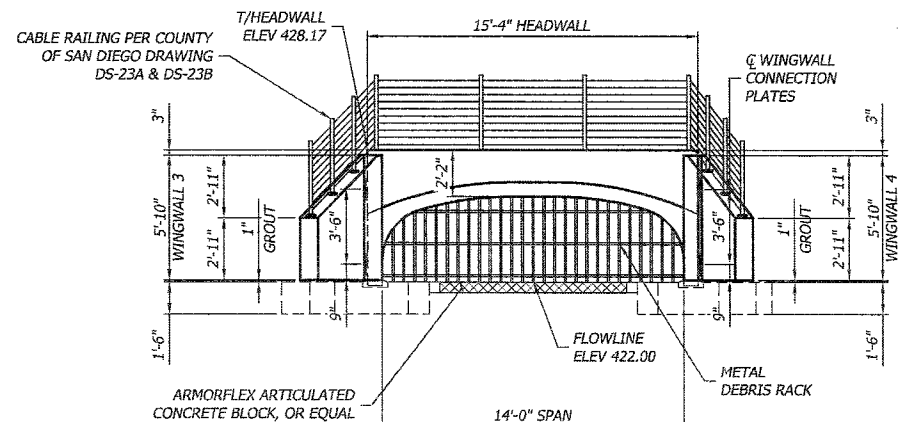
PERMITS	
LANDSCAPING & IRRIGATION NO. _____	
REZONE PERMIT NO. _____	
SPECIAL USE PERMIT NO. _____	
MAP NO. 00289	
BENCH MARK	
DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG	
DEPT DISK AND CONC. MON	
LOCATION: _____	
RECORD FROM: SD COUNTY BENCHMARK RECORDS	
ELEVATION: 423.991	DATUM: NGVD 29

PRIVATE CONTRACT	
SHEET 15	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT	
CALIFORNIA COORDINATE INDEX 254-1797	
APPROVED FOR: MORGAN R. FARRINGTON COUNTY ENGINEER	ENGINEER OF WORK: _____ DATE: _____
DATE: _____	PDS 2014-LDGRMJ-00012 GRADING PERMIT NO: _____



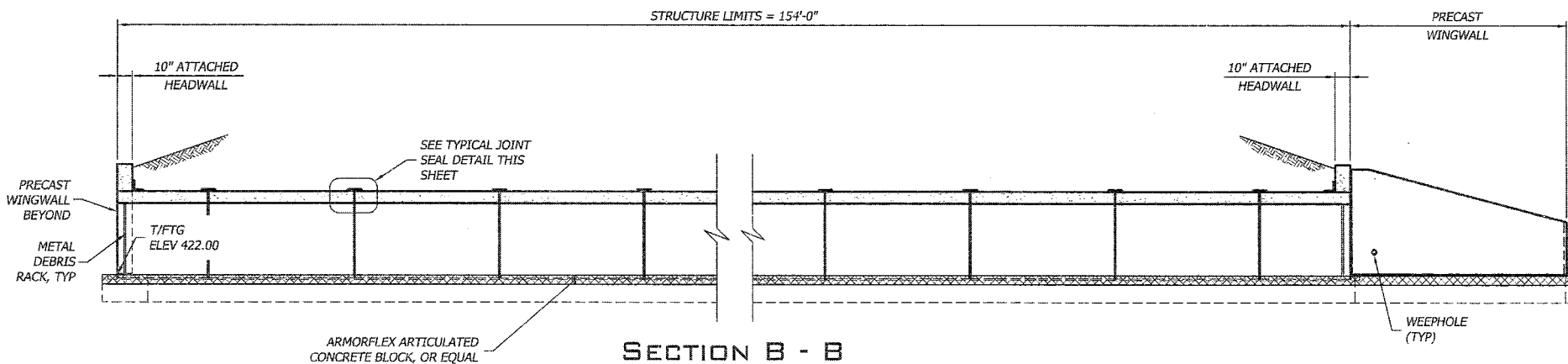
DOWNSTREAM END ELEVATION

1/4" = 1'-0"



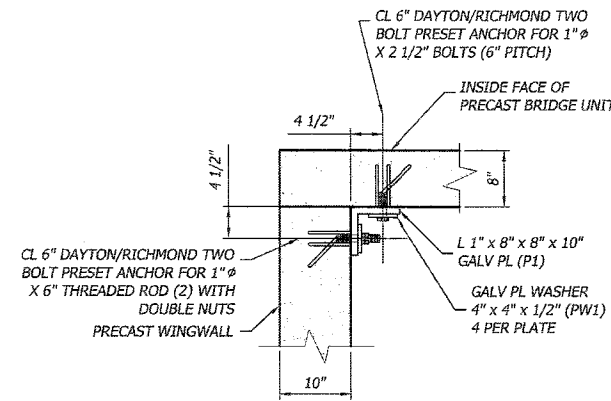
UPSTREAM END ELEVATION

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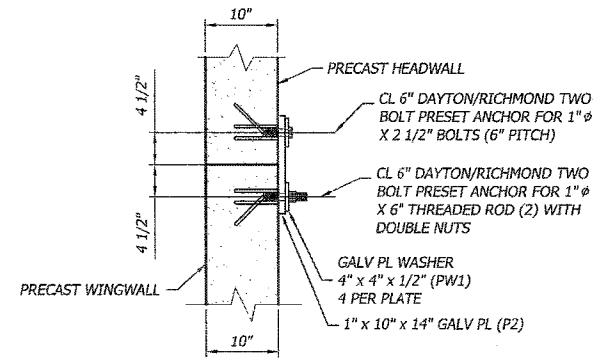
SECTION B - B

1/4" = 1'-0"



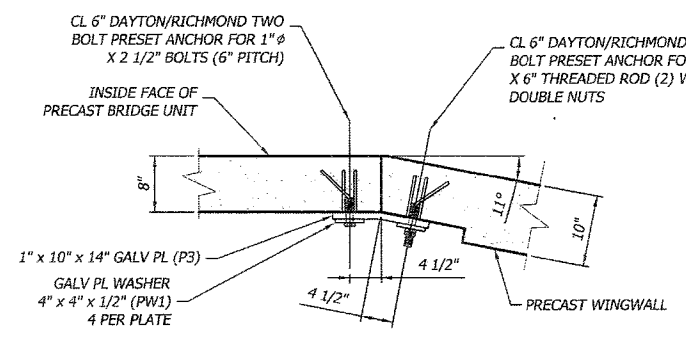
DETAIL 2

1" = 1'-0"



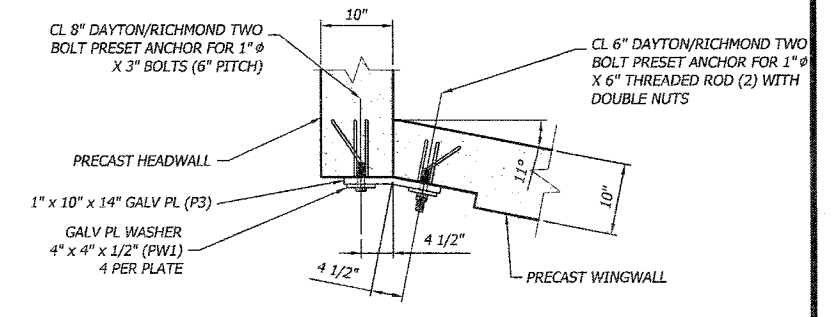
DETAIL 3

1" = 1'-0"



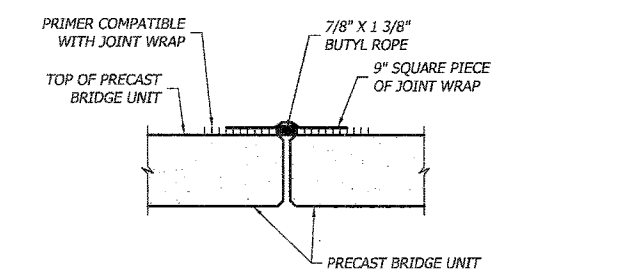
DETAIL 4

1" = 1'-0"



DETAIL 5

1" = 1'-0"



TYPICAL JOINT SEAL DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION

KLD ENGINEERING

10488 DATTIER CT
RANCHO CORDOVA, CA 95670
(916) 572-8023

Karen L. Dell
6/22/15



RECORD PLAN	
BY: _____	DATE: _____
R.C.E. _____	
EXPIRES: _____	

SAN DIEGO COUNTY FIRE AUTHORITY	
APPROVED BY: _____	DATE: _____

HELIX WATER DISTRICT REVIEW	
APPROVED BY: _____	DATE: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS	
LANDSCAPING & IRRIGATION NO. _____	
REZONE PERMIT NO. _____	
SPECIAL USE PERMIT NO. _____	
MAP NO. 00289	
BENCH MARK	
DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG	
DEPT DISK AND CONC. MON	
LOCATION: _____	
RECORD FROM: SD COUNTY BENCHMARK RECORDS	
ELEVATION: 423.991	DATUM: NOV2 29

PRIVATE CONTRACT		
SHEET 16	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT		
CALIFORNIA COORDINATE INDEX 254-1797		
APPROVED FOR COUNTY ENGINEER	DATE: _____	DATE: _____
PDS 2014-LDGRM1-00012		

SPECIFICATIONS FOR THE MANUFACTURE AND DESIGN OF PRECAST THREE SIDED ARCH BRIDGE SYSTEM

1. DESCRIPTION

THIS WORK CONSISTS OF FURNISHING AND CONSTRUCTING A PRECAST THREE SIDED ARCH STRUCTURE, HEADWALLS AND WINGWALLS. MANUFACTURE OF PRECAST PIECES MUST CONFORM TO THE MORE STRINGENT OF THESE SPECIFICATIONS OR ASTM C1504.

2. DESIGN

THE PRECAST UNITS ARE DESIGNED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS "LRFD BRIDGE DESIGN SPECIFICATIONS", 2010 AND ALL INTERIM SPECIFICATIONS TO DATE.

3. MATERIAL - CONCRETE

- 3.1 ALL PRECAST ELEMENTS THAT ARE EXPOSED TO FREEZE - THAW MUST BE AIR ENTRAINED AND COMPOSED OF PORTLAND CEMENT, FINE AND COARSE AGGREGATES, AND AN AIR ENTRAINED ADMIXTURE THAT CONFORMS TO AASHTO M154. CONCRETE MUST HAVE 6 ± 2 PERCENT AIR. THE AIR ENTRAINED ADMIXTURE MUST COMPLY WITH AASHTO M154.
- 3.2 PORTLAND CEMENT MUST CONFORM TO ASTM C150 TYPE I, TYPE II, OR TYPE III CEMENT
- 3.3 COARSE AGGREGATE MUST MEET ASTM C33 SPECIFICATION AND HAVE A MAXIMUM SIZE OF 1 INCH
- 3.4 WATER REDUCING ADMIXTURES FOR THE PURPOSE OF INCREASING THE WORKABILITY OF THE CONCRETE MAY BE SUBMITTED BY THE MANUFACTURER TO THE ENGINEER FOR APPROVAL
- 3.5 CALCIUM CHLORIDE OR ADMIXTURES CONTAINING IT ARE NOT ALLOWED TO BE ADDED TO THE CONCRETE
- 3.6 CEMENT CONTENT MUST BE IN EXCESS OF 564 POUNDS PER CUBIC YARD OF CONCRETE
- 3.7 MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MUST BE SPECIFIED ON SHOP DRAWINGS OF STRUCTURE

4. MATERIAL - STEEL REINFORCEMENT AND HARDWARE

- 4.1 ALL REINFORCEMENT USED IN THE PRECAST ELEMENTS MUST CONFORM TO ASTM SPECIFICATION A185 OR A497. DEFORMED BILLET STEEL MUST CONFORM TO ASTM A615, GRADE 60. STEEL REINFORCING MUST HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. STEEL REINFORCING MUST BE PLACED ACCORDING TO THE DETAILS AND PLANS SHOWN ON THE SHOP DRAWINGS. WELDED WIRE FABRIC USED FOR THE CIRCUMFERENTIAL STEEL MUST HAVE A MINIMUM SPACING OF 2 INCHES AND MAXIMUM OF 4 INCHES.
- 4.2 BOLTS AND THREADED RODS FOR WINGWALL CONNECTIONS MUST CONFORM TO ASTM A307. NUTS MUST CONFORM TO AASHTO M292 (ASTM A194) GRADE 2H. ALL BOLTS, THREADED RODS AND NUTS USED IN WINGWALL CONNECTIONS MUST BE MECHANICALLY ZINC COATED IN

5. ACCORDANCE WITH ASTM B695 CLASS 50.

- 4.3 WINGWALL CONNECTION PLATES AND PLATE WASHERS MUST CONFORM TO AASHTO M270 (ASTM A709) GRADE 36 AND MUST BE HOT DIP GALVANIZED PER AASHTO M111 (ASTM A123).
- 4.4 INSERTS FOR WINGWALL CONNECTIONS MUST BE 1 INCH DIAMETER TWO-BOLT PRESET WINGWALL ANCHORS MANUFACTURED BY DAYTON SUPERIOR CORPORATION, MIAMISBURG, OHIO, (800) 745-3700.
- 4.5 FERRULE LOOP INSERTS MUST BE F-64 FERRULE LOOP INSERTS MANUFACTURED BY DAYTON SUPERIOR CORPORATION, MIAMISBURG, OHIO, (800) 745-3700.
- 4.6 HOOK BOLTS USED IN ATTACHED HEADWALL CONNECTIONS MUST CONFORM TO ASTM A307.
- 4.7 DETACHED HEADWALL CONNECTIONS: INSERTS MUST BE AISI TYPE 304 STAINLESS STEEL, F-58 EXPANDED COIL INSERTS MANUFACTURED BY DAYTON SUPERIOR CORPORATION, MIAMISBURG, OHIO, (800) 745-3700. COIL RODS AND NUTS MUST BE AISI TYPE 304 STAINLESS STEEL. WASHERS MUST BE EITHER AISI TYPE 304 STAINLESS STEEL PLATE WASHERS OR AASHTO M20 (ASTM A709) GRADE 36 PLATE WASHERS HOT DIP GALVANIZED PER AASHTO M111 (ASTM A123).
- 4.8 REINFORCING BAR SPLICES MUST BE MADE USING THE DOWEL BAR SPLICER SYSTEM MANUFACTURED BY DAYTON SUPERIOR CORPORATION, MIAMISBURG, OHIO, (800) 745-3700 AND CONSIST OF THE DOWEL BAR SPLICER (DB-SAE) AND DOWEL-IN (DI).
- 5. FABRICATION OF PRECAST ELEMENTS

- 5.1 FORMS MUST BE SUFFICIENTLY RIGID TO MAINTAIN STRUCTURE SHAPE.
- 5.2 REINFORCEMENT MUST BE BENT TO APPROXIMATELY MATCH THE OUTSIDE CORNER OF THE STRUCTURE. REINFORCEMENT MUST BE WELDED WIRE FABRIC IN A SINGLE OR MULTIPLE LAYERS (NOT TO EXCEED 3 LAYERS) AND SUPPLEMENTED WITH A LAYER DEFORMED BILLET STEEL BARS WHEN NECESSARY.
- 5.3 THE COVER OF CONCRETE OVER THE OUTSIDE CIRCUMFERENTIAL REINFORCEMENT MUST BE 2 INCHES MINIMUM. THE COVER OF CONCRETE OVER THE INSIDE CIRCUMFERENTIAL REINFORCEMENT MUST BE 1-1/2 INCHES MINIMUM. THE CLEAR DISTANCE OF THE END CIRCUMFERENTIAL WIRES MUST NOT BE LESS THAN 1 INCH NOR MORE THAN 2 INCHES FROM THE ENDS OF EACH SECTION. THE ENDS OF THE LONGITUDINAL DISTRIBUTION REINFORCEMENT MUST NOT BE MORE THAN 3 INCHES AND NOT LESS THAN 1-1/2 INCHES FROM THE ENDS OF THE BRIDGE UNIT.
- 5.4 REINFORCEMENT FOR PRECAST HEADWALLS AND WINGWALLS: THE COVER OF CONCRETE OVER THE LONGITUDINAL AND TRANSVERSE REINFORCEMENT MUST BE 2 INCHES MINIMUM. THE CLEAR DISTANCE FROM THE END OF EACH PRECAST ELEMENT TO THE END OF REINFORCING STEEL MUST NOT BE LESS THAN 1-1/2 INCHES NOR MORE THAN 3 INCHES.
- 5.5 TENSION SPLICES IN CIRCUMFERENTIAL REINFORCING MUST BE MADE BY LAPPING AND MUST CONFORM TO AASHTO 5.11.6.2 FOR SMOOTH WELDED WIRE FABRIC. THE DEFORMED WELDED WIRE REINFORCEMENT MUST CONFORM TO AASHTO 5.11.6.1. LAPS MAY BE TACK WELDED FOR CONSTRUCTION PURPOSES ONLY.

FOR SPLICES OTHER THAN TENSION SPLICES, THE OVERLAP MUST BE AT LEAST 12 INCHES FOR WELDED WIRE FABRIC OR 24" DEFORMED BARS. OVERLAP OF WELDED WIRE FABRIC MUST BE MEASURED FROM OUTER MOST CROSS WIRES OF EACH FABRIC SHEET. OVERLAP FOR DEFORMED BARS MUST MEET AASHTO 5.11.5.

5.6 CURING: THE PRECAST CONCRETE ELEMENTS MUST BE CURED FOR A SUFFICIENT LENGTH OF TIME SO THAT THE CONCRETE DEVELOPS THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS OR LESS. USE ONE OF THE FOLLOWING METHODS OF CURING:

- 5.6.1 STEAM CURING: THE PRECAST ELEMENTS MAY BE LOW-PRESSURE STEAM CURED BY A SYSTEM THAT WILL MAINTAIN A MOIST ATMOSPHERE.
- 5.6.2 WATER CURING: THE PRECAST ELEMENTS MAY BE WATER CURED BY ANY METHOD THAT WILL KEEP THE SECTIONS MOIST.
- 5.6.3 MEMBRANE CURING: A SEALING MEMBRANE CONFORMING TO ASTM C309 MAY BE APPLIED AND MUST BE LEFT INTACT UNTIL THE REQUIRED CONCRETE COMPRESSIVE STRENGTH IS ATTAINED. THE CONCRETE TEMPERATURE AT THE TIME OF APPLICATION MUST BE WITHIN 10 DEG F OF THE ATMOSPHERIC TEMPERATURE. ALL SURFACES MUST BE KEPT MOIST PRIOR TO THE APPLICATION OF THE COMPOUNDS AND MUST BE DAMP WHEN THE COMPOUND IS APPLIED.

5.7 STORAGE, HANDLING AND DELIVERY

- 5.7.1 STORAGE: BRIDGE ELEMENTS MUST BE LIFTED AND STORED IN "AS-CAST" POSITION. HEADWALL AND WINGWALL UNITS ARE CAST, STORED AND SHIPPED IN A FLAT POSITION. PRECAST ELEMENTS MUST BE STORED IN A MANNER TO PREVENT CRACKING OR DAMAGE. THE UNITS MUST NOT BE MOVED UNTIL THE CONCRETE COMPRESSIVE STRENGTH HAS REACHED A MINIMUM OF 2500 PSI.
- 5.7.2 HANDLING: HANDLING DEVICES MUST BE USED IN EACH PRECAST ELEMENT. SPREADER BEAMS MAY BE REQUIRED FOR THE LIFTING OF PRECAST BRIDGE ELEMENTS TO PRECLUDE DAMAGE FROM BENDING OR TORSION FORCES.
- 5.7.3 DELIVERY: PRECAST CONCRETE ELEMENTS MUST NOT BE SHIPPED UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED DESIGN COMPRESSIVE STRENGTH, OR AS DIRECTED BY THE DESIGN ENGINEER.

6. QUALITY ASSURANCE

THE PRECAST PLANT MUST BE CERTIFIED BY THE NATIONAL PRECAST CONCRETE ASSOCIATION'S PLANT CERTIFICATION PROGRAM OR PRECAST/PRESTRESSED CONCRETE INSTITUTE PLANT CERTIFICATION PRIOR TO AND DURING PRODUCTION OF ALL PRECAST ELEMENTS.

THE PRECAST PLANT MUST RETAIN AN INDEPENDENT TESTING AGENCY TO PERFORM TESTS FOR AIR ENTRAINMENT AND COMPRESSIVE STRENGTH. THESE TESTS ARE TO COMPLY WITH ASTM C231 OR C173 FOR AIR ENTRAINMENT AND ASTM C39. THESE TESTS ARE TO BE DONE AT INTERVALS STATED IN

SECTION 7 OF THIS SPECIFICATION. THE AGENCY MUST PROVIDE THE PRECAST PLANT CERTIFICATION, BY A LICENSED ENGINEER, STATING THAT THE PLANT IS IN COMPLIANCE WITH THESE TESTS.

THE PRECAST PLANT MUST PROVIDE PROOF OF COMPLIANCE OF THIS SECTION UPON REQUEST.

7. TESTING AND INSPECTION

COMPRESSION TESTING MUST BE DONE ON CONCRETE CYLINDERS. A MINIMUM OF 4 CYLINDERS ARE TO BE MADE FOR EACH GROUP OF CONCRETE ELEMENTS CAST FROM THE SAME CONCRETE MIX ON THE SAME DAY. CYLINDERS ARE TO BE TESTED IN ACCORDANCE WITH ASTM C39. CYLINDERS MUST BE CURED IN THE SAME ENVIRONMENT AS THE BRIDGE ELEMENTS.

WHEN THE AVERAGE COMPRESSIVE STRENGTH OF ALL CYLINDERS TESTED IS EQUAL TO OR GREATER THAN THE DESIGN COMPRESSIVE STRENGTH, AND NOT MORE THAN 10% OF THE CYLINDERS TESTED HAVE A COMPRESSIVE STRENGTH LESS THAN THE DESIGN CONCRETE STRENGTH, AND NO CYLINDER TESTED HAS A COMPRESSIVE STRENGTH LESS THAN 80% OF THE DESIGN COMPRESSIVE STRENGTH, THE ELEMENT IS ACCEPTED. IF THE CYLINDERS DO NOT MEET THIS CRITERIA, A MINIMUM OF THREE CORES MUST BE OBTAINED FROM THE PRECAST ELEMENTS MADE WITH THE SAME CONCRETE MIX FROM THE FAILED CYLINDERS.

CORES MUST BE OBTAINED AND TESTED IN ACCORDANCE WITH ASTM C42. IF THE AVERAGE COMPRESSIVE STRENGTH IS EQUAL TO OR GREATER THAN THE DESIGN COMPRESSIVE STRENGTH, THE CORES ARE ACCEPTABLE.

WHEN THE COMPRESSIVE STRENGTH OF ANY CORE IS LESS THAN THE DESIGN COMPRESSIVE STRENGTH, THE PRECAST ELEMENT THE CORE WAS TAKEN FROM MUST BE REJECTED. THE REMAINING PRECAST ELEMENTS MADE FROM THE SAME CONCRETE MIX ON THE SAME DAY ARE TO BE REJECTED, UNLESS AT THE OPTION OF THE PRECAST PLANT, EACH ELEMENT CAN BE CORED AND ACCEPTED INDIVIDUALLY. CORE HOLES MUST BE PLUGGED AND SEALED BY THE PRECAST PLANT IN A MANNER TO MEET THIS SPECIFICATION. THE OWNER OR OWNER'S AGENT MAY INSPECT THE MATERIAL, MANUFACTURE AND FINISHED PRECAST ELEMENTS AT THEIR DISCRETION.

EVERY MANUFACTURER FURNISHING PRECAST ELEMENTS UNDER THIS SPECIFICATION MUST FURNISH ALL FACILITIES AND PERSONNEL NECESSARY TO CARRY OUT THE TESTS REQUIRED.

8. PERMISSIBLE VARIATIONS

THE INTERNAL DIMENSION MUST NOT VARY MORE THAN 1% OR 1-1/2 INCHES, WHICHEVER IS LESS, FROM THE DESIGN DIMENSIONS. THE SLAB AND WALL THICKNESS MUST NOT BE LESS THAN THAT SHOWN ON THE SHOP DRAWINGS BY MORE THAN 1/4 INCH. A THICKNESS MORE THAN THAT SHOWN ON THE SHOP DRAWINGS IS NOT CAUSE FOR REJECTION.

VARIATIONS IN LAYING LENGTHS OF 2 OPPOSITE

SURFACES OF THE BRIDGE UNIT MUST NOT BE MORE THAN 1/2 INCH IN ANY SECTION, EXCEPT WHERE BEVELED ENDS FOR LAYING OF CURVES ARE SPECIFIED BY THE PURCHASER. THE LAY LENGTH OF THE BRIDGE UNITS MUST NOT VARY MORE THAN 1/2 INCH OVER THE LENGTH OF THE STRUCTURE.

WINGWALLS AND HEADWALLS ARE TO BE MANUFACTURED SO THAT THE LENGTH, HEIGHT AND THICKNESS DOES NOT VARY MORE THAN 1/2 INCH FROM WHAT IS SHOWN ON THE SHOP DRAWINGS.

REINFORCEMENT PLACING MUST NOT VARY MORE THAN 1/2 INCH FROM THAT WHICH IS SHOWN ON THE SHOP DRAWINGS. REINFORCING CONCRETE COVER MUST NEVER BE LESS THAN 1-1/2 INCHES FOR THE OUTSIDE CIRCUMFERENTIAL STEEL OR BE LESS THAN 1 INCH FOR THE INSIDE CIRCUMFERENTIAL STEEL.

9. JOINTS

BRIDGE UNITS UTILIZE BUTT ENDS AND ARE TO BE MANUFACTURED SO THAT WHEN PLACED NEXT TO EACH OTHER, THEY PROVIDE A CLEAN, CONTINUOUS LINE OF SECTIONS THAT ARE FREE OF ANY IRREGULARITIES. THE MAXIMUM PERMISSIBLE JOINT MUST BE A MAXIMUM OF 3/4"

10. WORKMANSHIP AND FINISH

PRECAST ELEMENTS ARE TO HAVE A SMOOTH STEEL FORM OR TROWELED SURFACE. THE ENDS OF BRIDGE UNITS MUST BE NORMAL TO THE WALLS AND CENTERLINE OF THE ARCH. THE PRECAST ELEMENTS MUST BE FREE OF ANY SUBSTANTIAL FRACTURE OR BLEMISH.

REPAIRS TO A PRECAST ELEMENT BECAUSE OF FRACTURES OR BLEMISHES CAUSED BY HANDLING OR INSTALLING, MAY BE APPROVED, IN THE OPINION OF THE OWNER, IF THE REPAIRS ARE PROPERLY FINISHED AND CURED TO MEET THIS SPECIFICATION.

11. REJECTION

- PRECAST ELEMENTS MAY BE REJECTED ON ACCOUNT OF ANY OF THE SPECIFICATION REQUIREMENTS. INDIVIDUAL PRECAST ELEMENTS MAY BE REJECTED FOR ANY OF THE FOLLOWING:
 - 11.1 FRACTURES OR CRACKS PASSING THROUGH THE WALL, EXCEPT FOR A SINGLE END CRACK THAT DOES NOT EXCEED ONE HALF THE THICKNESS OF THE WALL.
 - 11.2 DEFECTS THAT INDICATE PROPORTIONING, MIXING, AND MOLDING NOT IN COMPLIANCE WITH THESE SPECIFICATIONS.
 - 11.3 HONEYCOMBED OR OPEN TEXTURE
 - 11.4 DAMAGED ENDS, WHERE THE DAMAGE WOULD PREVENT MAKING A SATISFACTORY JOINT

12. MARKING

EACH PRECAST ELEMENT IS TO BE MARKED BY PERMANENT WATERPROOF PAINT ON THE INSIDE OF THE VERTICAL LEG OF THE BRIDGE SECTION. THE MINIMUM MARKING MUST INCLUDE THE DATE OF MANUFACTURE, TRADEMARK OR NAME OF PRECAST PLANT, AND SPAN AND RISE.

Karen L. Dell
6/22/15

REGISTERED PROFESSIONAL ENGINEER
KAREN LESLIE DELL
No. 65444
Exp. 9/30/15
CIVIL
STATE OF CALIFORNIA

KLD ENGINEERING
10488 DATTIER CT
RANCHO CORDOVA, CA 95670
(916) 572-8023

RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

SAN DIEGO COUNTY FIRE AUTHORITY

APPROVED BY: _____

DATE: _____

HELIX WATER DISTRICT REVIEW

APPROVED BY: _____

DATE: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS

LANDSCAPING & IRRIGATION NO. _____

REZONE PERMIT NO. _____

SPECIAL USE PERMIT NO. _____

MAP NO. 09289

BENCH MARK

DESCRIPTION: EC-216_3 1/2 SD COUNTY ENG
DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 17	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	40 SHEETS
HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT		
CALIFORNIA COORDINATE INDEX 254-1797		
APPROVED FOR COUNTY ENGINEER	ENGINEER OF WORK DATE:	PDS 2014-LDGRAM-00012 DRAWING PERMIT NO.

100% SUBMITTAL
KLD ENGINEERING - (916) 572-8023

SPECIFICATIONS FOR THE MANUFACTURE AND DESIGN OF PRECAST THREE SIDED ARCH BRIDGE SYSTEM

13. CONSTRUCTION

THE BRIDGE UNITS AND WINGWALLS MUST BE INSTALLED ON CAST IN PLACE FOUNDATIONS PER THE PLANS. THE PROJECT ENGINEER MUST VERIFY THAT THE FOUNDATION SUBGRADE IS IN COMPLIANCE WITH THE GEOTECHNICAL REPORT FOR THE PROJECT. DO NOT OVER EXCAVATE FOR FOUNDATIONS UNLESS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER.

THE PROJECT GEOTECHNICAL ENGINEER MUST CERTIFY THAT THE DESIGN BEARING CAPACITY MEETS OR EXCEEDS THE FOOTING DESIGN REQUIREMENTS, PRIOR TO THE CONTRACTOR POURING THE FOOTINGS.

A KEYWAY MUST BE FORMED IN THE TOP SURFACE OF THE BRIDGE FOOTING AS SHOWN ON THE PLANS. NO KEYWAY IS REQUIRED FOR THE WINGWALL FOOTINGS, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

THE FOOTINGS MUST HAVE A SMOOTH FLOAT FINISH. THE SURFACE OF THE FOUNDATION MUST NOT VARY BY MORE THAN 1/4 INCH WHEN MEASURED WITH A 10 FOOT STRAIGHT EDGE. THE FOOTINGS MUST HAVE REACHED A MINIMUM OF 2000 PSI BEFORE INSTALLATION OF ANY PRECAST ELEMENTS. DO NOT START BACKFILLING OPERATIONS UNTIL THE FOOTING HAS REACHED THE FULL DESIGN COMPRESSIVE STRENGTH. FOUNDATION DIMENSION MUST MATCH THOSE THAT ARE SHOWN ON THE PLANS.

THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT A CRANE OF THE CORRECT LIFTING CAPACITY IS AVAILABLE TO HANDLE THE PRECAST CONCRETE UNITS. SITE CONDITIONS MUST BE CHECKED WELL IN ADVANCE OF SHIPPING TO ENSURE PROPER CRANE LOCATION AND TO AVOID ANY LIFTING RESTRICTIONS. THE LIFT ANCHORS OR HOLES PROVIDED IN EACH UNIT ARE THE ONLY MEANS ALLOWED TO LIFT THE ELEMENTS.

PRECAST ELEMENTS MUST BE INSTALLED AS SHOWN ON THE PLANS AND SPECIAL CARE MUST BE TAKEN TO VERIFY THAT ELEMENTS ARE PLACED TO FOLLOW THE DESIGNATED CENTERLINE OF THE STRUCTURE. BRIDGE STRUCTURES AND WINGWALLS ARE TO BE PLACED ON MASONITE OR STEEL SHIMS TO ALLOW A MINIMUM OF 1/2" CLEARANCE BETWEEN BOTTOM OF PRECAST ELEMENT AND TOP OF FOOTING.

THE GAP BETWEEN THE KEYWAY AND THE BRIDGE UNIT, AND THE GAP BETWEEN THE BOTTOM OF THE WINGWALL AND THE TOP OF THE FOOTING MUST BE FILLED WITH CEMENT GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. GROUT TO BE COMPOSED OF PORTLAND CEMENT AND WATER OR CEMENT MORTAR COMPOSED OF ONE PART PORTLAND CEMENT AND THREE PARTS SAND BY VOLUME. VIBRATE GROUT AS REQUIRED TO ENSURE THAT THE ENTIRE KEYWAY AROUND THE BRIDGE ELEMENT IS COMPLETELY FILLED.

IF A PRECAST BRIDGE UNIT IS SHIPPED WITH HORIZONTAL CABLE TIES OR TIE RODS, THE GROUT MUST REACH A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI BEFORE THE CABLE TIES OR RODS ARE REMOVED. IF DUE TO SITE RESTRICTIONS THESE CABLE TIES OR RODS MUST BE REMOVED PRIOR TO PLACEMENT OF THE BRIDGE UNITS, THE CONTRACTOR MUST NOTIFY THE SUPPLIER AND REQUEST AN ALTERNATIVE INSTALLATION PROCEDURE.

BUTT JOINTS BETWEEN BRIDGE UNITS MUST BE COVERED WITH A 7/8" X 1 3/8" BUTYL ROPE AND A 9" WIDE STRIP OF JOINT WRAP. THE SURFACE MUST BE FREE OF DIRT BEFORE APPLYING THE JOINT MATERIAL. A PRIMER COMPATIBLE WITH THE JOINT WRAP MUST BE APPLIED ON EACH SIDE OF THE BUTT JOINT. JOINT PROTECTION MUST EXTEND FROM BOTTOM OF ONE LEG, UP OVER ARCH AND DOWN OPPOSITE THE LEG. ANY LAPS MUST HAVE 6" OF OVERLAP AND HAVE OVERLAP RUNNING DOWN HILL. THE EXTERNAL WRAP MUST BE EITHER EZ-WRAP RUBBER BY PRESS-SEAL GASKET CORPORATION, SEAL WRAP BY MAR MAC MANUFACTURING CO. INC., OR APPROVED EQUAL.

LIFT HOLES ARE TO BE FILLED, PRIMED AND COVERED WITH JOINT WRAP. EDGES ALONG THE HEADWALL COLLAR AND TOP OF BRIDGE UNIT MUST BE COVERED WITH JOINT WRAP AND PRIMER. HEADWALLS THAT ARE CAST INTEGRAL WITH A BRIDGE UNIT REQUIRE NO TYPE OF JOINT PROTECTION.

JOINTS BETWEEN WINGWALL SECTIONS AND JOINTS BETWEEN A WINGWALL AND BRIDGE UNIT MUST BE SEALED WITH A 2' WIDE STRIP OF FILTER FABRIC.

BACKFILL IS DEFINED AS ALL REPLACED EXCAVATION AND NEW EMBANKMENT MATERIAL THAT IS ADJACENT TO THE THREE SIDED STRUCTURE, WINGWALLS AND HEADWALLS. BACKFILL MATERIAL WITHIN ZONE A MUST MEET THE MATERIAL SPECIFICATIONS OF AASHTO SOIL TYPE A1 OR A3. SPANS LESS THAN OR EQUAL TO 24' WITH FILL HEIGHT LESS THAN 12' MAY ALSO USE AASHTO SOIL TYPE A2 OR A4. ZONE A IS DEFINED AS 4' HORIZONTALLY FROM THE OUTSIDE FACE OF EACH LEG AND 2' ABOVE THE TOP OF THE ARCH SLAB (OR FINISHED GRADE IF LESS THAN 2' COVER).

DO NOT BACKFILL DURING WET OR FREEZING WEATHER.

DUMPING FOR BACKFILLING IS NOT ALLOWED ANY NEARER THAN 3 FEET FROM THE PRECAST BRIDGE LEG. THE FILL BEHIND WINGWALLS MUST BE PLACED AT THE SAME TIME AS THAT OF THE BRIDGE FILL.

ALL BACKFILL IN ZONE A IS TO BE COMPACTED TO A MINIMUM DENSITY OF 95% STANDARD PROCTOR PER AASHTO T-99.

SPECIAL CARE IS TO BE TAKEN DURING BACKFILLING TO PROTECT THE PLACEMENT OF JOINT WRAP OR ANY WATERPROOFING MATERIAL.

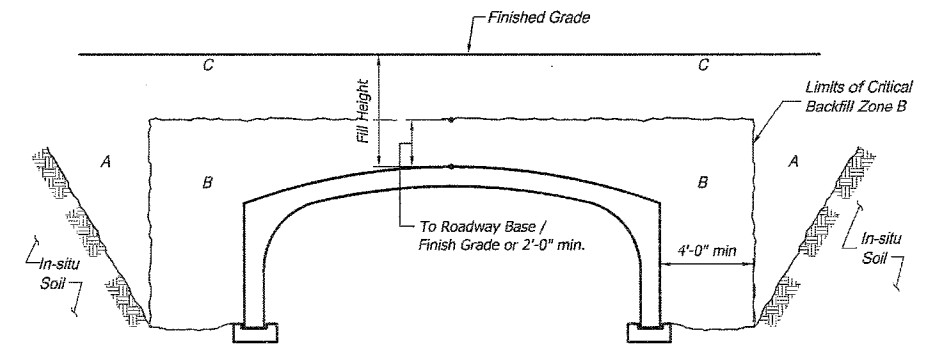
EQUIPMENT WITH AXLE WEIGHT OR TOTAL WEIGHT GREATER THAN THE DESIGN LOAD MUST NOT BE OPERATED ON THE STRUCTURE WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

MECHANICAL TAMPERS OR APPROVED COMPACTING EQUIPMENT MUST BE USED ON ALL BACKFILL MATERIAL THAT IS DIRECTLY ADJACENT TO THE STRUCTURAL ELEMENTS AND OVER THE TOP OF THE STRUCTURE UNTIL THERE IS AT LEAST 1' OF COVER OVER THE TOP. BACKFILL MATERIAL IN ZONE A MUST BE PLACED IN 8" LIFTS (MAXIMUM) BEFORE BEING COMPACTED. AT NO TIME MUST HEAVY CONSTRUCTION OR BACKFILLING EQUIPMENT IN EXCESS OF 12 TONS BE PERMITTED OVER THE STRUCTURE OR WITHIN 3' OF ANY STRUCTURAL ELEMENT WITHOUT AT LEAST 2' OF COVER OVER THE STRUCTURE UNLESS THE STRUCTURE IS DESIGNED FOR LESS COVER.

DURING BACKFILLING, AT NO TIME MUST THERE BE MORE THAN A 24 INCH DIFFERENCE BETWEEN BACKFILL HEIGHT ON EACH SIDE OF THE CULVERT.

FOR FILL HEIGHTS OVER 12', NO BACKFILLING MAY BEGIN UNTIL A BACKFILL COMPACTION TESTING PLAN HAS BEEN COORDINATED WITH AND APPROVED BY THE DESIGN ENGINEER. COST OF THE BACKFILL COMPACTION TESTING IS INCLUDED IN THE COST OF THE PRECAST UNITS.

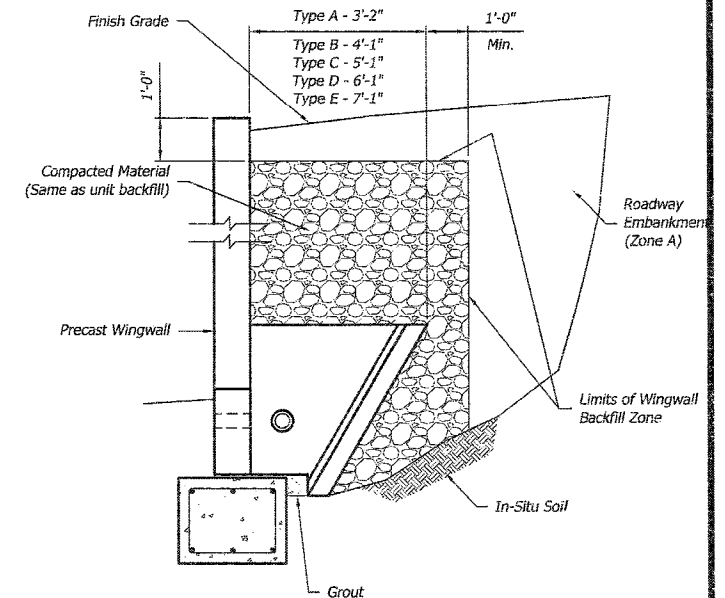
THE CONTRACTOR IS RESPONSIBLE FOR CHECKING SETTLEMENT AND HORIZONTAL DISPLACEMENT OF THE FOUNDATIONS TO ENSURE THEY ARE WITHIN THE ALLOWABLE LIMIT PROVIDED BY THE ENGINEER. THE FIRST MEASUREMENT MUST BE MADE AFTER THE ERECTION OF ALL PRECAST BRIDGE ELEMENTS, A SECOND AFTER COMPLETION OF BACKFILLING, AND A THIRD BEFORE OPENING THE BRIDGE TO TRAFFIC. THE MAXIMUM DIFFERENCE IN VERTICAL DISPLACEMENTS MUST NOT EXCEED 1 INCH ALONG THE LENGTH OF ONE FOUNDATION.



BRIDGE BACKFILL DIAGRAM

Acceptable Soil For Use in Zone B							
Typical USCS Classification	AASHTO GROUP	AASHTO SUBGROUP	Percent Passing US Sieve No.			Character of fraction passing #40 sieve	
			#10	#40	#200	Liquid Limit	Plasticity Index
GW, GP, SP	A-1	A-1a	50 Max	30 Max	15 Max		6 Max
GM, SW, SP, SM		A-1b		50 Max	25 Max		6 Max
GM, SM, ML, SP, GP	A-2	A-2-4			35 Max	40 Max	10 Max
SC, GC, GM		A-2-5			35 Max	41 Min	10 Max
SP, SM, SW	A-3			51 Min	10 Max		Non-plastic
ML, SM, SC	A-4				36 Min	40 Max	10 Max

Span	Fill Height	Acceptable Material Inside Zone B
< 24'-0"	> 12'-0"	A1 or A3
< 24'-0"	< 12'-0"	A1, A2, A3, or A4
> 24'-0"	All	A1 or A3



WINGWALL BACKFILL DIAGRAM

Karen L. Dell
6/22/15

KLD ENGINEERING
10488 DAVITT CT
RANDOLPH CANYON, CA 95670
(916) 572-8023

REGISTERED PROFESSIONAL ENGINEER
No. 65444
Exp. 9/28/15
CIVIL
STATE OF CALIFORNIA

RECORD PLAN

BY: _____ DATE: _____

R.C.E. _____

EXPIRES: _____

SAN DIEGO COUNTY FIRE AUTHORITY

APPROVED BY: _____

DATE: _____

HELIX WATER DISTRICT REVIEW

APPROVED BY: _____

DATE: _____

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

PERMITS

LANDSCAPING & IRRIGATION NO. _____

REZONE PERMIT NO. _____

SPECIAL USE PERMIT NO. _____

MAP NO. 00289

BENCH MARK

DESCRIPTION: EC-216. 3 1/2 SD COUNTY ENG

DEPT DISK AND CONC. MON

LOCATION: _____

RECORD FROM: SD COUNTY BENCHMARK RECORDS

ELEVATION: 423.991 DATUM: NGVD 29

PRIVATE CONTRACT

SHEET 18 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 40 SHEETS

HANSON EL MONTE POND HABITAT RESTORATION & FLOOD CONTROL/GROUND WATER RECHARGE PROJECT

CALIFORNIA COORDINATE INDEX 254-1797

APPROVED FOR: _____ COUNTY ENGINEER

ENGINEER OF WORK: _____

PDS 2014-LDGRM-00012