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: **Routine Maintenance of Alvarado Creek Storm Water Channels (Maps 59, 60, & 64)**
Certification Number R9-2015-0102
WDID: 9 000002862

Reg. Meas. ID: 401493
Place ID: 815856
Party ID: 547569
Person ID: 547570

APPLICANT: **City of San Diego**
Transportation and Storm Water Department
Storm Water Division
2781 Caminito Chollas MS 44
San Diego, CA 92108

ACTION:

☐ Order for Low Impact Certification	☐ Order for Denial of Certification
☑ Order for Technically-conditioned Certification	☐ Enrollment in Isolated Waters Order No. 2004-004-DWQ
☑ Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	

PROJECT DESCRIPTION

An application dated June 12, 2015 was submitted by the City of San Diego Transportation and Storm Water Department, Storm Water Division (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 Routine Maintenance of Alvarado Creek Storm Water Channels (Maps 59, 60, & 64) Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on Date. 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 File No. SPL-2015-00423-MBT).

The Project is located within the City of San Diego, San Diego County, California within upper and lower reaches of Alvarado Creek. The center readings of each reach are as follows:

- Reach 2 of Map 64 (UR2) at latitude 32.776147 and longitude -117.060956;
- Reach 4 of Map 60 (LR4) at latitude 32.782183 and longitude -117.095908;
- Reach 2B of Map 59 (LR2B) at latitude 32.780275 and longitude -117.100717; and
- Reach 2A of Map 59 (LR2A) at latitude 32.780525 and longitude -117.103014.

The Applicant has paid all required application fees for this Certification in the amount of $32,603. On an annual basis, the Applicant shall also pay all active discharge fees and post discharge monitoring fees, as appropriate[1]. On August 31, 2015, 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 ongoing maintenance of Alvarado Creek and its associated storm water channels in UR2, LR4, LR2B, and LR2A. Maintenance is necessary to restore and maintain channel capacity to provide flood protection for the surrounding businesses, roadways, and properties. The maintenance involves the periodic removal of trash, debris, vegetation and accumulated sediment from these reaches of Alvarado Creek and its associated storm water channels.

The Applicant will place sandbag barriers (no wider than 5'x5') at the upstream and downstream ends of each work area to prevent any sediment laden water from discharging to and from each site, and to obstruct and pond dry weather flows. Vactor trucks will be used as needed to remove any ponded or sediment-laden water that may accumulate upstream of the sandbag barriers. Maintenance operations will be fully contained within the channel. Excavated material will be trucked out daily and no equipment shall be left overnight nor fueled on-site. The adjacent road and parking lot, as well as surrounding streets will be swept by City street sweepers daily. Normal channel flows will be restored to the original condition upon the completion of channel maintenance. In UR2, velocities directly after maintenance will require the temporary placement of a check dam (debris fence) near the downstream limit of maintenance that will decrease the channel capacity to a 5- to 10- year storm event until vegetation establishes. As indicated in the City of San Diego's *Water Pollution Control Plan for Upper Alvarado Creek Channel Maintenance Project* and *Water Pollution Control Plan for Lower Alvarado creek Channel Maintenance Project,* Weather Triggered Action Plan sections, maintenance activities will not be initiated unless there is a minimum three-day forecast of no precipitation. In addition, the applicant will suspend maintenance work and remove the system from the channel in the event of forecasted 40 percent or greater chance of likely precipitation of 0.10 inch or more. Additionally, a 30 foot-long tapered ramp will be created at the downstream end of UR2 to minimize possible backwater effects due to an earthen berm created when sediment removal cannot take place beyond the limits of the City of San Diego's maintenance boundary.

[1] The Applicant shall pay an annual active discharge fee each fiscal year or portion of a fiscal year during which discharges occur until the regional board or the State Board issues a Notice of Completion of Discharges Letter to the discharger. Dischargers shall pay an annual post-discharge monitoring fee each fiscal year or portion of a fiscal year commencing with the first fiscal year following the fiscal year in which the regional board or State Board issued a Notice of Completion of Discharges Letter to the discharger, but continued water quality monitoring or compensatory mitigation monitoring is required. Dischargers shall pay the annual post-discharge monitoring fee each fiscal year until the regional board or the State Board issues a Notice of Project Complete Letter to the discharger. Additional information regarding fees can be found electronically at the following location: http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/dredgefillcalculator.xlsx

Maintenance work includes mechanized removal of sediment and vegetation using heavy equipment, including equipment that is equivalent or smaller in size/type to the following: bulldozer(s), excavator(s), loader(s), track steer(s), Gradall(s), concrete truck(s), backhoe(s), and dump truck(s). Maintenance work will remove excavated materials from approximately 1,103 linear feet of UR2, 521 linear feet of LR4, 399 linear feet of LR2B, and 423 linear feet of LR2A. UR2 is 106 feet of concrete-lined trapezoidal channel and 997 feet of earth-bottom channel, is approximately 37-feet wide, and flows from behind a medical services building at 6386 Alvarado Court to an un-channelized reach on San Diego State University Campus. LR4 is a concrete-lined trapezoidal channel approximately 49 feet wide that runs from a culvert at 4597 Mission Gorge Place to a point behind 4533 Mission Gorge Place. LR2B is a concrete trapezoidal channel approximately 46 feet wide that flows from an industrial building at 5805 Fairmont Avenue to a culvert under Fairmont Avenue. LR2A is 301 feet of concrete-lined trapezoidal channel and 122 feet of earthen-bottom channel, is approximately 46 feet wide, and flows the terminus of LR2B to upstream of the confluence of Alvarado Creek and the San Diego River. Staging, access, and loading areas are designated along the lengths of UR2, LR4, LR2B, and LR2A. These will be located at the west corner of the paved parking lot between the addresses of 6433 and 6363 Alvarado Court; a paved parking lot behind 4561 Mission Gorge Place; a paved parking lot behind 5733 Fairmount Avenue; and an existing paved access point at 5732 Fairmount Avenue.

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 1.31 acres (2,415 linear feet) of waters of the United States and/or State including earthen bottom and concrete lined stream channel with freshwater marsh, southern willow scrub, open water, and non-native riparian habitat. The project includes the removal of approximately 1,000 cubic yards of material from Alvarado creek UR2, approximately 400 cubic yards of material from LR2B, approximately 300 cubic yards of material from LR2A, and approximately 600 cubic yards of material from LR4. 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 Applicant reports that compensatory mitigation for the permanent loss of 1.31 acres of jurisdictional waters associated with this Project will be achieved through the rehabilitation of 0.41 acre and enhancement of 1.90 acres of waters of the United States and/or State. All waters of the United States and/or State receiving temporary discharges of fill material will be restored upon removal of the fill. Mitigation for Project discharges of fill material to waters of the United States and/or State will be completed by the Applicant at the Stadium Wetland

Mitigation Site[2] located in the San Diego hydrologic sub-area (HSA 907.11) at a minimum compensation ratio of 1.76:1 (area mitigated:area impacted).

Detailed written specifications and work descriptions for the Stadium Wetland Mitigation Site compensatory mitigation 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 mitigation areas are described in the *Stadium Wetland Mitigation Project (San Diego River) Final Mitigation Plan* (Mitigation Plan), dated March 13, 2015. San Diego Water Board acceptance of the Mitigation Plan applies only to the Project described in this Certification and must not be construed as approval for other current or future projects that are planning to use additional acreage at the site for mitigation. The Mitigation Plan is incorporated in this Certification by reference as if set forth herein. The Mitigation Plan provides for implementation of compensatory mitigation which offsets adverse water quality impacts attributed to the Project in a manner that protects and restores the abundance, types and conditions of aquatic resources and supports their beneficial uses. Implementation of the Mitigation Plan will reduce significant environmental impacts to resources within the San Diego Water Board's purview to a less than significant level. Based on all of these considerations, the Mitigation Plan will adequately compensate for the loss of beneficial uses and habitat within waters of the United States and/or State attributable to the Project.

Additional Project details are provided in Attachments 1 through 5 of this Certification.

[2] The Stadium Wetland Mitigation Site was certified in Certification No. R9-2013-0124, Murphy Canyon Creek Maintenance Project – Reaches 1 and 2 (Place ID 796913).

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Attachments:

1. **Definitions**
2. **Project Location Maps**
3. **Project Site Plans**
4. **Mitigation Figures**
5. **CEQA Mitigation Monitoring and Reporting Program**

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. R9-2015-0102 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 USC Title 33, section1344) 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/go_wdr401regulated_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 Alvarado Creek, San Diego River, or their 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. **Water Pollution Control Plans.** The Project must be designed to comply with the City of San Diego's *Water Pollution Control Plan for Upper Alvarado Creek Channel Maintenance Project*, dated January 22, 2015, and *Water Pollution Control Plan for Lower Alvarado Creek Channel Maintenance Project*, dated January 22, 2015, both prepared by McGrath Consulting.

E. **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.

F. **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.

G. **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.

H. **Downstream Erosion.** Discharges of concentrated flow during construction or after Project completion must not cause downstream erosion or damage to properties or stream habitat.

I. **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.

J. **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.

K. **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.

L. **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/.

M. **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.

N. **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.

O. **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.

P. **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.

Q. **Beneficial Use Protection**. The Applicant must take all necessary measures to protect the beneficial uses of waters of Alvarado Creek. 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 VI.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

IV. 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 Alvarado Creek within the San Diego River 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[1] (linear ft.)	Mitigation Ratio (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Freshwater Marsh – Earthen Bottom Channel	0.34	49	0.34 Rehabilitation[2] 0.34 Enhancement[3]	2:1	N/A	N/A
Southern Willow Scrub – Earthen Bottom Channel	0.07	75	0.07 Rehabilitation[2] 0.07 Enhancement[3]	2:1	N/A	N/A
Open Water – Earthen Bottom Channel	0.03	28	0.03 Enhancement[3]	1:1	N/A	N/A
Non-native Riparian – Earthen Bottom Channel	0.08	838	0.08 Enhancement[3]	1:1	N/A	N/A
Non-Native Vegetation – Earthen Bottom Channel	0.04	235	0.04 Enhancement[3]	1:1	N/A	N/A
Freshwater Marsh – Concrete-Lined Channel	0.29	318	0.58 Enhancement[3]	2:1	N/A	N/A
Southern Willow Scrub – Concrete-Lined Channel	0.38	796	0.76 Enhancement[3]	2:1	N/A	N/A
Non-Native Riparian – Concrete-Lined Channel	0.04	47	0	N/A	N/A	N/A
Disturbed Habitat – Concrete-Lined Channel	0.01	0	0	N/A	N/A	N/A
Non-Native Vegetation – Concrete-Lined Channel	0.03	27	0	N/A	N/A	N/A

1. Compensatory mitigation is being provided in a contiguous area at the Stadium Wetland Mitigation Site (approximately 65 acres) and therefore, compensatory mitigation for linear feet is not being calculated on a project by project basis.
2. Wetland rehabilitation at the Stadium Wetland Mitigation Site.
3. Wetland enhancement at the Stadium Wetland Mitigation Site.

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

D. **Mitigation Use Ledger.** The Applicant shall establish and maintain a mitigation use ledger for the Stadium Wetland Mitigation Site. The mitigation use ledgers shall show all mitigation use transactions from each mitigation site and shall show the beginning and current balance of available mitigation for each type, all additional mitigation released or suspended mitigation transfers. The mitigation use ledger shall include at a minimum:

1. Mitigation site name;
2. Mitigation site water quality certification number;
3. Total amount (acres) of each type of mitigation;
4. Project name to expend mitigation;
5. Project contact name and phone number;
6. Date of mitigation expenditure;
7. Type(s) of mitigation expended;
8. Amount of mitigation expended for the Project; and
9. Balance (acres) of each type of mitigation remaining.

E. **Mitigation Use Ledger Submittal**. The Applicant shall submit updated mitigation use ledgers for the Stadium Wetland Mitigation Site to the San Diego Water Board within 30 days of the issuance of this Certification. Additionally, the Applicant shall submit updated mitigation use ledgers with each water quality certification application submitted by the Applicant that proposes to use compensatory mitigation for project impacts from the Stadium Wetland Mitigation Site.

F. **Performance Standards.** Compensatory mitigation required under this Certification shall be considered achieved once it has met the ecological success performance standards contained in the Mitigation Plan (Section 6, beginning page 76) to the satisfaction of the San Diego Water Board. The construction of this permittee-responsible mitigation site was authorized by the San Diego Water Board under Water Quality Certification No. R9-2013-0124.

G. **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.

H. **Timing of Mitigation Site Construction.** The construction of proposed mitigation must completed no later than 12 months following the start of Project construction. Delays in implementing mitigation must be compensated for by an increased mitigation implementation of 10% of the cumulative compensatory mitigation for each month of delay.

V. 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 V 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. **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.

F. **Geographic Information System Data.** The Applicant must submit Geographic Information System (GIS) shape files of the Project impact sites within 30 days of the start of project construction and GIS shape files of the Project mitigation sites within 30 days of mitigation installation. All impact and mitigation site shape files must be polygons. Two GPS readings (points) must be taken on each line of the polygon and the polygon must have a minimum of 10 points. GIS metadata must also be submitted.

G. **Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing status of BMP implementation, compensatory mitigation, 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 compensatory mitigation monitoring information sufficient to demonstrate how the compensatory mitigation 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.

H. **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/StreamPhotoDocSOP.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced; and

6. An evaluation, interpretation, and tabulation of all California Rapid Assessment Method (CRAM) assessment data collected throughout the term of Project construction in accordance with section V.E of this Certification.

I. **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.

J. **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. R9-2015-0102:815856: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. R9-2015-0102:815856:lhonma.

K. **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.

L. **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."

VI. 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.

VII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

A. The City of San Diego is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has filed a Notice of Determination, dated October 28, 2011, for the Final Recirculated Program Environmental Impacts Report (PEIR) titled *Master Storm Water System Maintenance Program* (State Clearing House Number 2004101032). The Lead Agency has determined the Project will have a significant effect on the environment and mitigation measures were made a condition of the Project.

B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has considered the Lead Agency's PEIR and finds that the Project as proposed will have a significant effect on resources within the San Diego Water Board's purview.

C. The San Diego Water Board has required mitigation measures as a condition of this Certification to avoid or reduce the environmental effects of the Project to resources within the Board's purview to a less than significant level.

D. The Lead Agency has adopted a mitigation monitoring and reporting program pursuant to Public Resources Code section 21081.6 and CEQA Guidelines section 15097 to ensure that mitigation measures and revisions to the Project identified in the PEIR are implemented. The Mitigation Monitoring and Reporting Program (MMRP) is included and incorporated by reference in Attachment 5 to this Certification. The Applicant shall implement the Lead Agency's MMRP described in the PEIR, as it pertains to resources within the San Diego Water Board's purview. The San Diego Water Board has imposed additional MMRP requirements as specified in sections V and VI of this Certification.

E. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Determination in accordance with CEQA Guidelines section 15096 subdivision (i).

VIII. SAN DIEGO WATER BOARD CONTACT PERSON

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

IX. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Routine Maintenance of Alvarado Creek Storm Water Channels (Maps 59, 60, & 64)** (Certification No. R9-2015-0102) 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. R9-2015-0102 issued on September 22, 2015.

James G. Smith, AEO
for DAVID W. GIBSON
Executive Officer
San Diego Water Board

22 Sep 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.

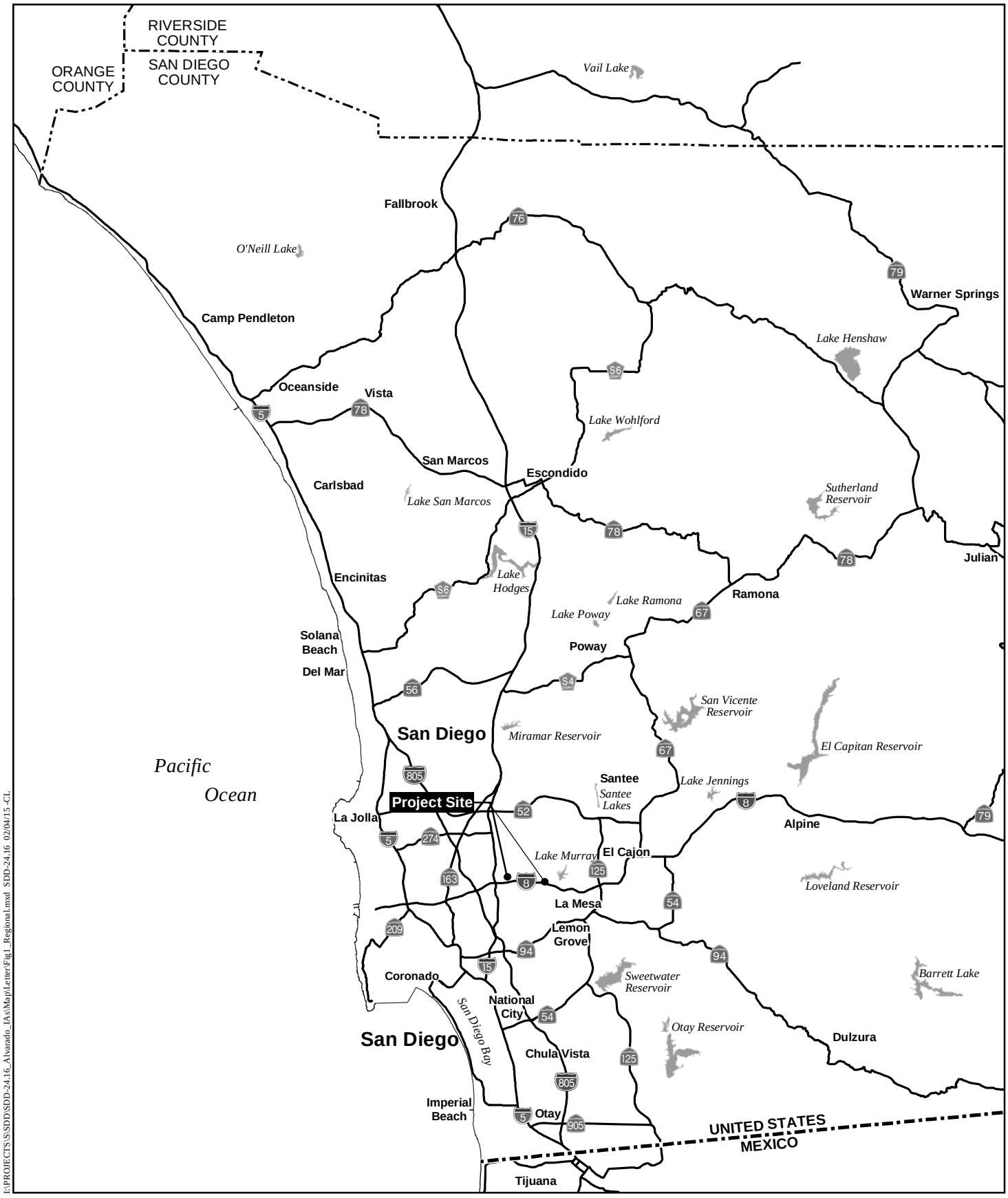
Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically 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 Location Map
Figure 2 – Project Vicinity Map (USGS Topography)



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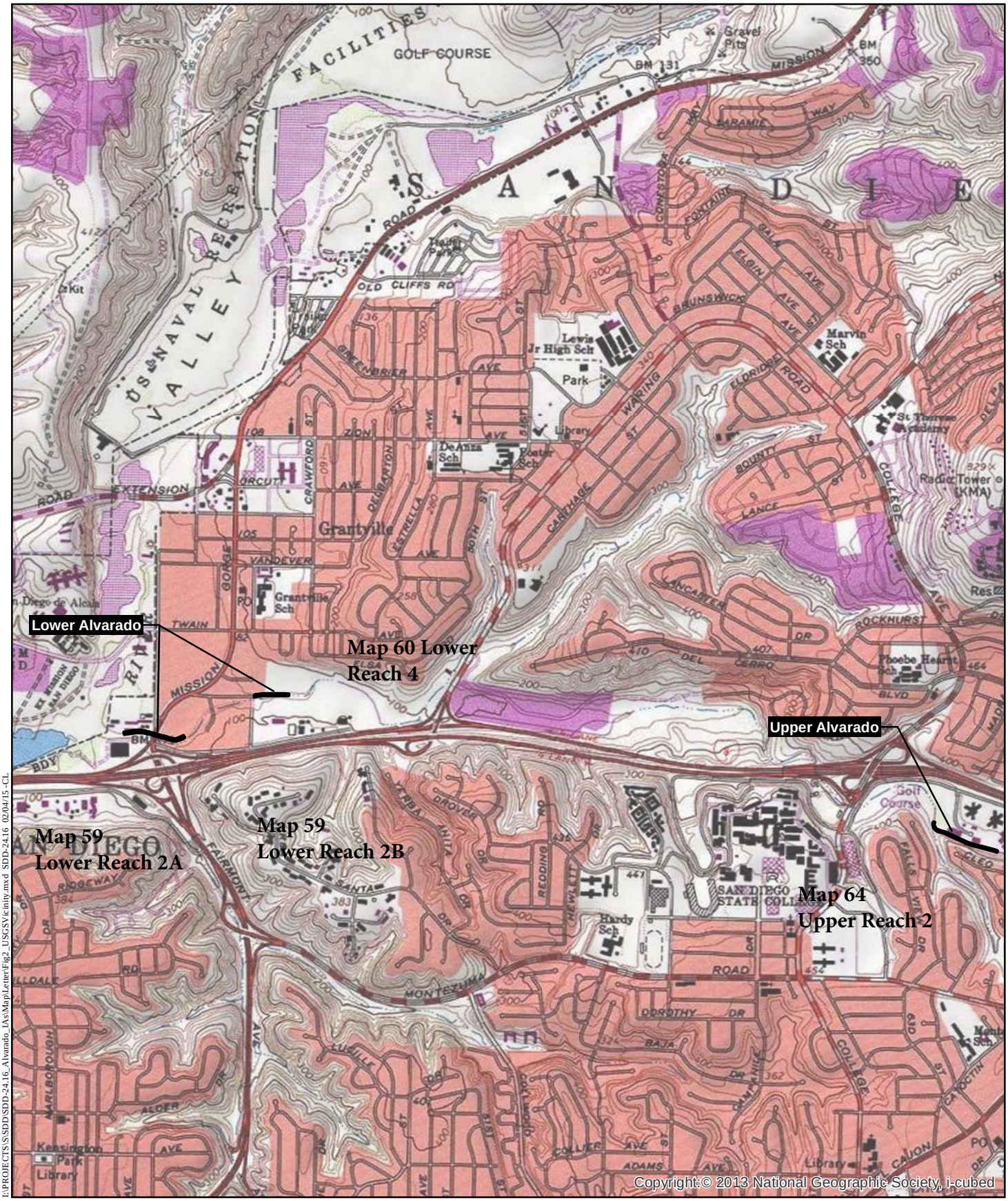
Regional Location Map

ALVARADO CREEK CHANNEL (MAPS 59, 60 AND 64)

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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Project Vicinity Map (USGS Topography)

ALVARADO CREEK CHANNEL (MAPS 59,60 AND 64)

HELIX Environmental Planning

N

0 2,000 Feet

Figure 2

ATTACHMENT 3
PROJECT SITE PLANS

Figure 2 – Upper Alvarado Channel, IWQA Report - Channel Reaches
Figure 2 – Lower Alvarado Channel, IWQA Report - Channel Reaches
Figure 6a – Waters of the U.S./State and City Wetlands, Upper Alvarado
Figure 6b – Waters of the U.S./State and City Wetlands, Lower Alvarado
Maintenance Plans for Alvarado Upper Channel, MMP Map #64, Upper Reach 2, Sheets 1D, 2D, and 3D
Maintenance Plans for Alvarado Lower Channel MMP Map #59 & 60, Sheets 1D through 5D
Figure 7 – As Built Construction Drawings for Upper Alvarado Concrete-Lined Channel
Figure 8 – As Built Construction Drawings for Upper Alvarado Channel Repair Plan
Figure 9 – Construction Drawings for Lower Alvarado – Channel Change Details
Figure 10 – As Built Construction Drawings for Improvements of Alvarado Channel (Lower)
Figure 11 – Grading Plans for East Mission Valley Industrial Center (Portions of Lower Alvarado Reaches 3b & 4

REACH 1

Pedestrian Bridge

REACH 2

REACH 3

DEL CERRO CT

DEL CERRO AV

DARTFORD WY

AIROSO AV

ALVARADO RD

COLLEGE AV

PRIVATE DY

State of California

City of San Diego

BROCKBANK PL

E CAMPUS DR

WEST FALLS VIEW DR

EAST FALLS VIEW DR

FALLS WY

RINCON ST

CLEO ST

GARY ST

JULIE ST

CATOCTIN DR

Legend

- Reach 1
- Reach 2
- Reach 3
- Responsible Party for Maintenance

W:\17204-B_Alvarado_Tripp_Beaver\Channels\WaterResources\UpperAlvaradoCreekChannel\GIS\17204_B_AlvaradoUpper_IWQA_Reaches.mxd

RICK ENGINEERING COMPANY

Scale in Feet

0 200 400

North

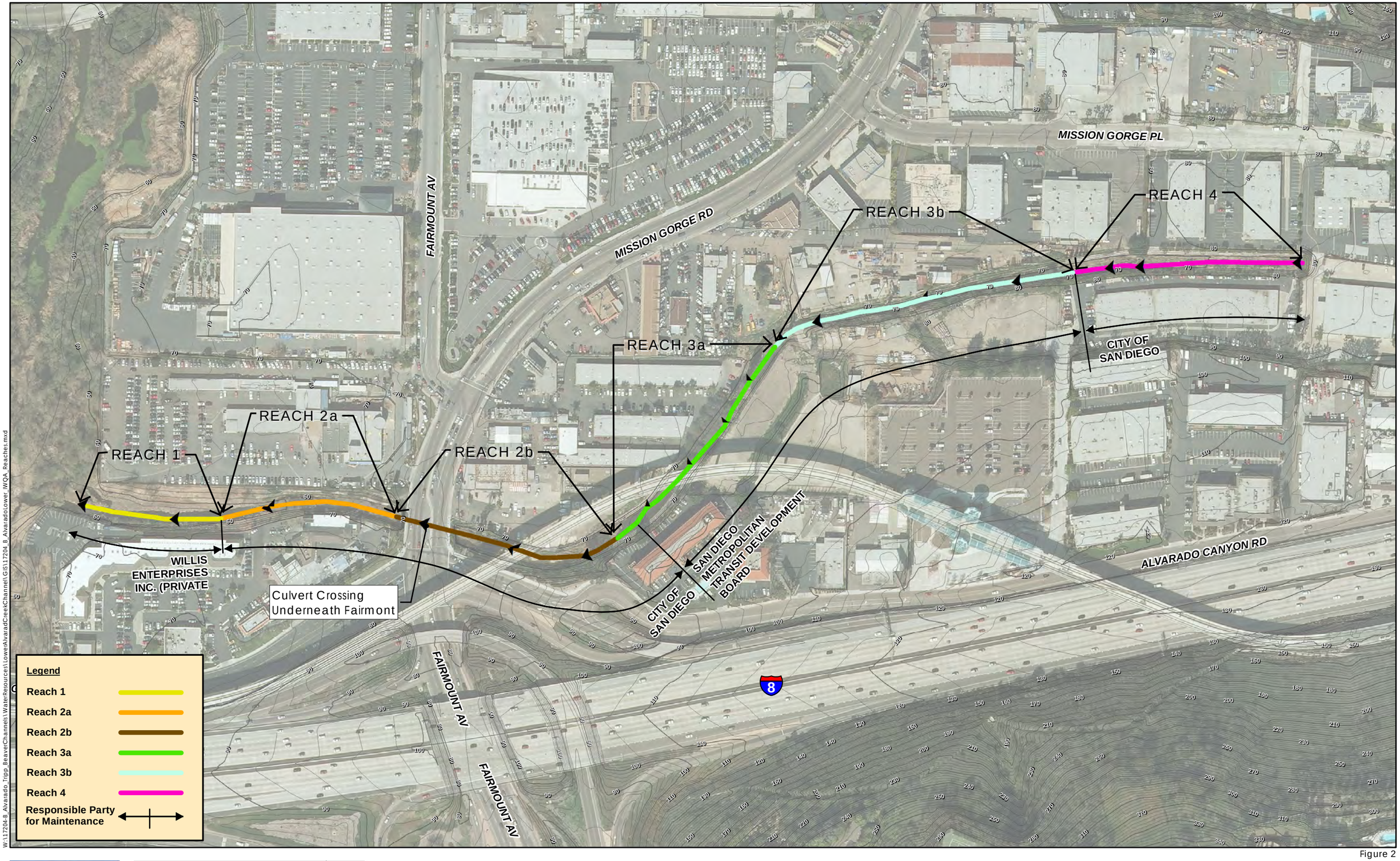
Date of Exhibit: 01.30.2015
DigitalGlobe Aerial Image: 04.2013

Figure 2

Upper Alvarado Channel

IWQA Report - Channel Reaches

17204-BA



W:\17204-B_Alvarado_Tripp_BeaverChannels\WaterResources\LowerAlvaradCreekChannel\GIS\17204_B_AlvaradoLower_IWQA_Reaches.mxd

RICK ENGINEERING COMPANY

Scale in Feet
0 200 400
North

Date of Exhibit: 01.30.2015
DigitalGlobe Aerial Image: 04.2013

Figure 2

Lower Alvarado Channel

IWQA Report - Channel Reaches

17204-BA

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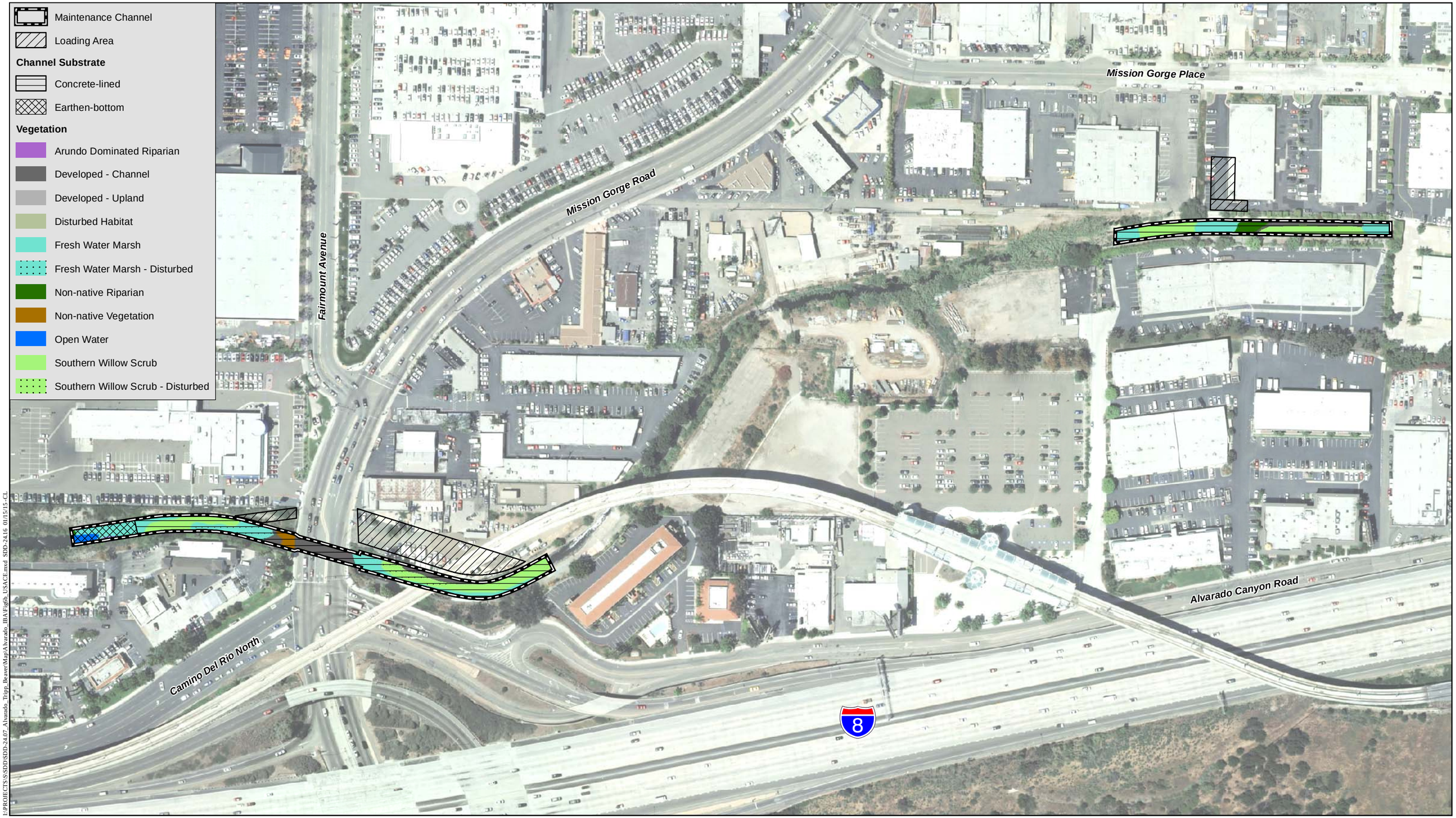
Waters of the U.S./State and City Wetlands, Upper Alvarado

STORM WATER FACILITY MAPS 59, 60, AND 64
(UPPER/LOWER ALVARADO CREEK CHANNELS)

Figure 6a

HELIX Environmental Planning

N 0 110 Feet



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Waters of the U.S./State and City Wetlands, Lower Alvarado

STORM WATER FACILITY MAPS 59, 60, AND 64
(ALVARADO CREEK CHANNELS)

Figure 6b

HELIX Environmental Planning

N 0 170 Feet

MAINTENANCE PLANS FOR:
ALVARADO UPPER CHANNELS MMP MAP # 64

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

3. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG.

4. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.

5. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.

6. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO FIELD ENGINEERING DIVISION (858) 627-3200.

7. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR.

8. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

9. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.

GROUND WATER DISCHARGE

1. ALL GROUND WATER EXTRACTION AND SIMILAR WASTE DISCHARGES TO SURFACE WATER NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF SATE ORDER NO R9-2009-0002 NPDES CAG919002.

2. THE ESTIMATED MAXIMUM DISCHARGE RATES MUST NOT EXCEED THE LIMITS SET IN THE OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL BOARD UNLESS PRIOR NOTIFICATION AND SUBSEQUENT AUTHORIZATION HAS BEEN OBTAINED, AND DISCHARGE OPERATIONS MODIFIED TO ACCOMMODATE THE INCREASED RATES.

3. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2007-0034 NPDES NO. CAG919001.

SHEET INDEX

TOPOGRAPHY SOURCE

CITY OF SAN DIEGO SANGIS 1999 2 FOOT CONTOURS, NAVD29

BENCHMARK

SOUTHEAST CORNER OF RESERVOIR DR. AND ALVARADO RD.
I.E. 353.76

REFERENCE DRAWINGS

DRAINAGE CHANNEL - ALVARADO MEDICAL CENTER AS BUILT..... CITY OF SAN DIEGO DWG. NO. 13526-1-D

STORM WATER PROTECTION NOTES

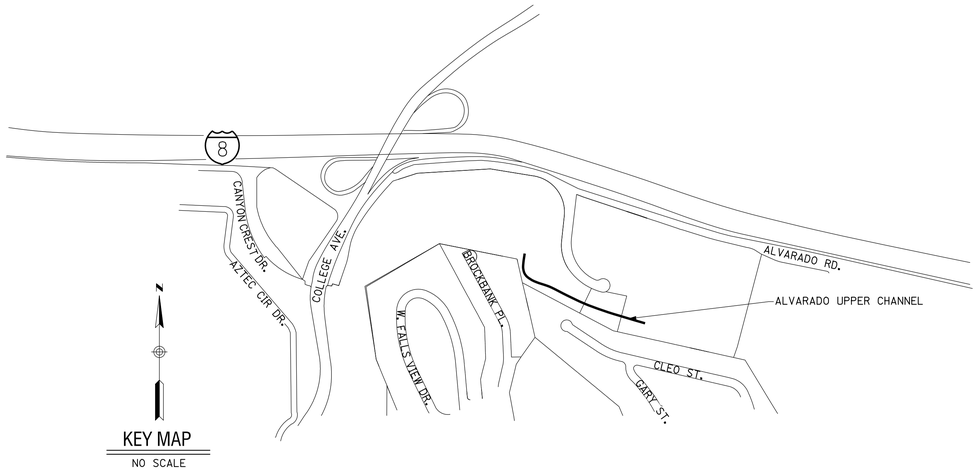
1. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO. R92007001; AND RISK LEVEL: CHECK ONE BELOW.

   ☒ WPCP
   ☐ CGP RISK LEVEL 1 ☐ CGP LUP TYPE 1
   ☐ CGP RISK LEVEL 2 ☐ CGP LUP TYPE 2
   ☐ CGP RISK LEVEL 3 ☐ CGP LUP TYPE 3

2. CHECK ONE:
   ☐ THIS PROJECT WILL EXCEED THE MAXIMUM DISTURBED AREA LIMIT, THEREFORE A WEATHER TRIGGERED ACTION PLAN (WTAP) IS REQUIRED.
   ☐ THIS PROJECT WILL FOLLOW PHASED GRADING NOT TO EXCEED FIVE (5) ACRES PER PHASE.
   ☒ NOT APPLICABLE

3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WPCP OR SWPPP AS APPLICABLE.

WATER POLLUTION CONTROL PLAN FOR UPPER ALVERADO CREEK
CHANNEL MAINTENANCE PROJECT PREPARED BY:
McGRATH CONSULTING
PO BOX 2488
EL CAJON, CA. 92021
(619) 250-2025
PREPARED 01/22/2015



KEY MAP
NO SCALE

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 CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

CARSON P. EDGINGTON R.C.E. NO. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER * CARSON P. EDGINGTON * NO. 76519 * STATE OF CALIFORNIA *

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

MAINTENANCE OF CONCRETE CHANNELS TO REMOVE ACCUMULATED SEDIMENT AND OTHER DEBRIS

STANDARD SPECIFICATIONS:

DOCUMENT NO.	DESCRIPTION
PITS070112-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2012 EDITION
PITS070112-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2012 EDITION
PITS070112-04	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2012 EDITION
PITS070112-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD SPECIFICATIONS, 2010 EDITION

STANDARD DRAWINGS

DOCUMENT NO.	DESCRIPTION
PITS070112-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION
PITS070112-05	CALIFORNIA DEPARTMENT OF TRANSPORTION U.S. CUSTOMARY STANDARD PLANS, 2010 EDITION
CASQA MANUAL	CALIFORNIA STORMWATER QUALITY ASSOCIATION, STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK PORTAL: CONSTRUCTION, JANUARY 2015

LEGEND

EXISTING IMPROVEMENTS

ITEM	SYMBOL
EXIST. CONTOURS	
EXIST. LOT LINE	
MULTI-HABITAT PLANNING AREA (MHPA)	
EXIST. CURB INLET	
EXIST. STORM DRAIN MAIN	SD
EXIST. SEWER MAIN	S
EXIST. WATER MAIN	W
CHANNEL MAINTENANCE AREA	
ACCESS & LOADING AREA	
LOADING AREA	
BY-PASS PUMP	
TEMPORARY DIVERSION HOSE LINE	

STORM WATER MANAGEMENT BMPs

ITEM		SYMBOL
STREET SWEEPING AND VACUUMING DAILY	SEE CASQA MANUAL	SE-7
SANDBAG BARRIER	SEE CASQA MANUAL	SE-8
STORM DRAIN INLET PROTECTION	SEE CASQA MANUAL	SE-10

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT

STREET DATA TABLE

STREET NAME	CLASSIFICATION	SPEED (MPH)	ADT (VEHICLES)	R/W (FT)

CONSTRUCTION SITE STORM WATER PRIORITY: _____

MAINTENANCE PLANS FOR:

ALVARADO UPPER CHANNEL
MMP MAP # 64
UPPER REACH 2

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORM WATER DEPARTMENT
SHEET 1 OF 3 SHEETS

I.O. NO. _____
P.T.S NO. _____
V.T.M. _____

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

XXXX-XXXX
NAD83 COORDINATES
XXX-XXXX
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

-1-D

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02-JUN-2015 10x18

ALVARADO COURT

CLEO STREET

BROCKBANK PLACE

STATE OF CALIFORNIA

STA. 10+00 START OF MAINTENANCE FOR UPPER ALVARADO CREEK LOT LINE

BY-PASS PUMP

ACCESS AND STAGING AREA

EX. STORM DRAIN (TYP.)

EX. SEWER MAIN (TYP.)

EX. WATER MAIN (TYP.)

UPPER ALVARADO CREEK CENTERLINE

40' EASEMENT

TEMPORARY DIVERSION HOSE LINE

30' SEDIMENT REMOVAL TAPER

CITY OF SAN DIEGO MAINTAINED

CHECK DAM, STA. 12+20 SEE DETAIL THIS SHEET

BY-PASS PUMP

STA. 20+90 END OF MAINTENANCE FOR UPPER ALVARADO CREEK

CITY OF SAN DIEGO MAINTAINED

SE-7

SE-8

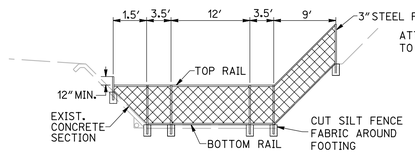
SE-10

A

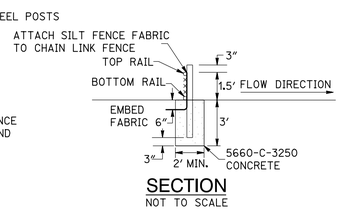
A

GRAPHIC SCALE 1" = 50'

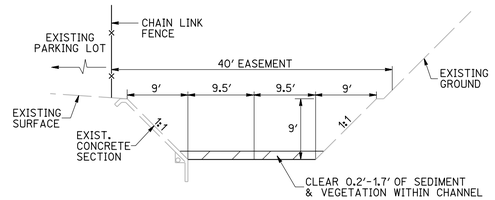
50 25 0 50 100 150



CHECK DAM DETAIL
NOT TO SCALE



SECTION
NOT TO SCALE



SECTION A-A
NOT TO SCALE

NOTES
1. CHAIN LINK FENCE SHALL BE 2"MESH, 9 GAGE GALVANIZED STEEL WIRE, PLACED ON THE UPSTREAM SIDE OF THE POSTS AND RAILS.
2. SECURE FENCE TO RAILS WITH 12 GAGE GALVANIZED STEEL WIRE LOOPED AT 6"OC.
3. POSTS SHALL BE 3"STEEL PIPE, 5.79LB/FT. FILL WITH MORTAR AFTER PLACING.
4. CHAIN LINK FENCE SHALL BE SECURED TO POSTS WITH 9 GAGE WIRE CLIPS AT 9"OC.

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER * CARSON P. EDGINGTON NO. 76519 * STATE OF CALIFORNIA

MAINTENANCE PLANS FOR:

ALVARADO UPPER CHANNEL
MMP MAP #64
UPPER REACH 2

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORM WATER DEPARTMENT
SHEET 2 OF 3 SHEETS

I.O. NO.
P.T.S NO.
V.T.M.

FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

XXXX-XXXX
NAD83 COORDINATES

XXX-XXXX
LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

-2-D

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5620 FRIARS ROAD
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rickengineering.com
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J-17204B

M:\17204-B_Alvarado_Trlgp_BeaverChannels\Civil\Sheets\Upper_Alvarado_Creek_Channel-IMP\17204B_pgrd_02.dgn
M:\17204-B_Alvarado_Trlgp_BeaverChannels\Civil\Sheets\Upper_Alvarado_Creek_Channel-IMP\SD Corp\Pds 2005_dscrlpt
02-JUN-2015 10:18

MAINTENANCE BMPs

1. ALL BEST MANAGEMENT PRACTICES (BMPs) WILL BE IMPLEMENTED PRIOR TO OR CONCURRENT WITH CONSTRUCTION AND MAINTAINED THROUGHOUT THE PROJECT. A QUALIFIED CONTACT PERSON WILL BE RESPONSIBLE FOR IMPLEMENTING THE WATER POLLUTION CONTROL PLAN (WPCP). ALL WORK SHALL BE COMPLETED BETWEEN SEPTEMBER 15TH AND FEBRUARY 15TH UNLESS AN EXTENSION IS GRANTED IN CONFORMANCE WITH ALL APPLICABLE PERMITS.

2. CONTRACTOR WILL LIMIT ALL CONSTRUCTION RELATED ACTIVITIES TO THE PROJECT FOOTPRINT.

3. EXISTING VEGETATION TO BE PRESERVED IN PLACE SHALL BE CLEARLY MARKED WITH A BUFFER AREA FOLLOWING THE GUIDANCE OF BMP FACT SHEET EC-2.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUCH ON STREETS AND OTHER PAVED SURFACES DUE TO EXCAVATION ACTIVITIES. STREET SWEEPING AND VACUUMING WILL BE MANAGED FOLLOWING THE GUIDANCE OF BMP FACT SHEET SE-7.

5. WEATHER TRIGGERED ACTION PLAN SHALL BE IMPLEMENTED WHEN THERE IS A FORECASTED 50% OR GREATER CHANCE OF LIKELY PRECIPITATION OF 0.1INCH OR GREATER BY THE NATIONAL WEATHER SERVICE FORECAST.

6. CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER AFTER EACH RUNOFF -PRODUCING RAINFALL.

7. TEMPORARY EROSION OR SEDIMENT CONTROL MEASURES WILL BE REMOVED UPON COMPLETION OF MAINTENANCE UNLESS THEIR REMOVAL WOULD RESULT IN GREATER ENVIRONMENTAL IMPACT THAN LEAVING THEM IN PLACE.

8. HAZARDOUS MATERIALS USED DURING MAINTENANCE WILL NOT BE STORED WITHIN 50 FEET FROM STORM WATER FACILITIES. HAZARDOUS MATERIALS SHALL BE MANAGED AND STORED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. A REGISTERED FIRST-RESPONSE, PROFESSIONAL HAZARDOUS MATERIALS CLEAN-UP/REMEDIATION SERVICE SHALL BE LOCALLY AVAILABLE ON CALL.

9. SPILLS SHALL BE MANAGED FOLLOWING THE GUIDANCE OF BMP FACT SHEET WM-4. SPILL CLEANUP MATERIALS SHALL BE AVAILABLE ONSITE AT ALL TIMES.

10. THE CONTRACTOR SHALL PROVIDE EQUIPMENT NECESSARY TO EXTINGUISH SMALL BRUSH FIRES (FROM SPARKING VEHICLES, ETC.) ON-SITE DURING ALL PHASES OF PROJECT ACTIVITIES, ALONG WITH TRAINED PERSONNEL FOR USE OF SUCH EQUIPMENT.

11. THE CONTRACTOR SHALL MONITOR THE 5 DAY WEATHER FORECAST. IF ANY PRECIPITATION IS FORECASTED, THE SITE SHALL BE SECURED TO PREVENT ANY CONSTRUCTION RELATED MATERIALS FROM LEAVING THE SITE AND ENTERING THE CHANNELS. NO CONSTRUCTION ACTIVITIES SHALL OCCUR DURING RAIN EVENTS.

12. SAMPLING AND ANALYSIS, MONITORING AND REPORTING, AND POST-MAINTENANCE MANAGEMENT OF THE PROJECT SHALL BE CONDUCTED AS DETERMINED NECESSARY BY THE CITY OF SAN DIEGO.

13. CHANNELS WILL BE INSPECTED WITHIN 72 HOURS OF THE FIRST 2-YEAR STORM FOLLOWING MAINTENANCE. IF SUBSTANTIAL EROSION HAS OCCURRED, EROSION CONTROL MEASURES RECOMMENDED BY THE FIELD ENGINEER WILL BE IMPLEMENTED TO REMEDIATE EROSION AREAS AND TO MINIMIZE FUTURE EROSION.

14. CONTRACTOR SHALL PROVIDE TRAINING FOR ALL PERSONNEL RESPONSIBLE FOR THE PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF ONSITE BMPs.

15. THE QUALIFIED CONTACT PERSON WILL ASSIGN A MONITOR FOR DAILY INSPECTION OF THE BMPs EACH MORNING. THE MONITOR WILL CHECK THE NATIONAL WEATHER SERVICE FORECAST, COMPLETE BMP INSPECTION CHECKLIST, PERFORM ANY NECESSARY BMP MAINTENANCE/REPAIRS, AND REPORT THE RESULTS TO THE QUALIFIED CONTACT PERSON. COMPLETED INSPECTION CHECKLIST WILL BE KEPT WITH THE WPCP.

16. PREVIOUSLY UNDISTURBED STAGING AREAS WILL BE REVEGETATED WITHIN 30 DAYS OF COMPLETION OF MAINTENANCE ACTIVITIES. THE REVEGETATED AREAS WILL BE MONITORED FOR A PERIODS OF NOT LESS THAN 25 MONTHS AFTER PLANTING.

17. FINAL LOCATION OF CHANNEL CENTERLINE WILL BE DETERMINED IN THE FIELD AND COORDINATED WITH THE NECESSARY PROJECT SPECIALIST (BIOLOGIST, HISTORICAL MONITOR, ETC.)

ADDITIONAL MAINTENANCE REQUIREMENTS

1. THE CITY SHALL NOTIFY CALIFORNIA DEPARTMENT OF FISH & WILDLIFE (CDFW), IN WRITING, AT LEAST FIVE DAYS PRIOR TO INITIATION OF CONSTRUCTION PRIOR TO COMPLETION OF CONSTRUCTION (PROJECT) ACTIVITIES. NOTIFICATION SHALL BE SENT TO CDFW'S SOUTH COAST OFFICE, ATTN: STREAMBED ALTERATION PROGRAM-SM# 1600-2011-0271-R5.

2. AVOID THE INTRODUCTION OF INVASIVE PLANT SPECIES WITH PHYSICAL EROSION CONTROL MEASURES.

3. PRIOR TO COMMENCING ANY MAINTENANCE ACTIVITY WHICH MAY IMPACT SENSITIVE BIOLOGICAL RESOURCES, THE MONITORING BIOLOGIST SHALL VERIFY THAT THE FOLLOWING ACTIONS HAVE BEEN TAKEN, AS APPROPRIATE:

   -FENCING, FLAGGING, SIGNAGE OR OTHER MEANS TO PROTECT SENSITIVE RESOURCES TO REMAIN AFTER MAINTENANCE HAS BEEN IMPLEMENTED;

   -NOISE ATTENUATION MEASURES NEEDED TO PROTECT SENSITIVE WILDLIFE ARE IN PLACE AND EFFECTIVE; AND/OR

   -NESTING BIRDS HAVE BEEN IDENTIFIED AND NECESSARY MAINTENANCE SETBACKS HAVE BEEN ESTABLISHED IF MAINTENANCE IS TO OCCUR BETWEEN JANUARY 15 AND AUGUST 31.

4. IF ANY WILDLIFE IS ENCOUNTERED DURING THE COURSE OF MAINTENANCE, SAID WILDLIFE SHALL BE ALLOWED TO LEAVE THE MAINTENANCE AREA UNHARMED.

PEIR ENVIRONMENTAL MITIGATION MEASURES

GENERAL MITIGATION MEASURE 1 OF THE MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) ADOPTED FOR THE MMP REQUIRES ALL OF THE MITIGATION MEASURES IDENTIFIED IN THE PROGRAM EIR (PEIR) BE INCLUDED WITH THE MAINTENANCE DOCUMENTS AND CONTRACT SPECIFICATIONS FOR EACH MAINTENANCE ACTIVITY, TO FULFILL THIS REQUIREMENT, THE MMRP IS INCLUDED IN ITS ENTIRETY AS ATTACHMENT A TO THIS IMP.

ALVARADO (UPPER) CHANNEL - MMP MAP NO. 64
IMP MAINTENANCE METHODOLOGY TABLE

FACILITY/CHANNEL	ALVARADO (UPPER) CHANNEL (UR4) (6300 - 6540 ALVARADO ROAD)
DIMENSIONS	ALVARADO (UPPER) CHANNEL TRAPEZOIDAL, CONCRETE-LINED 1,000' LENGTH APPROX. 30' TOP WIDTH 8-9' BOTTOM WIDTH 2-24' IN DEPTH 2-24"OF SEDIMENT 500-700 CUBIC YARDS MAXIMUM CUBIC YARDS: 1000 ALVARADO (UPPER) CHANNEL TRAPEZOIDAL, CONCRETE-LINED 100' LENGTH APPROX. 35' TOP WIDTH 25' BOTTOM WIDTH 10' IN DEPTH 1-4"OF SEDIMENT
MAINTENANCE METHOD	MECHANIZED SEDIMENT & VEGETATION REMOVAL
EQUIPMENT (EQUIPMENT WILL BE EQUIVALENT OR SMALLER IN SIZE/TYPE)	• DOZER (CAT D6) • FRONT-END LOADER (CAT 966) • DUMP TRUCKS (803/804 SERIES 10/12 YD) • TRACK STEER W/AUGER ATTACHMENT (CAT 289) • GRADALL (5100 SERIES) • EXCAVATOR (320 W/THUMB ATTACHMENT) • MINI-EXCAVATOR • CONCRETE PUMPING TRAILER • CONCRETE TRUCK • BACKHOE • CHECK-DAM • 4"OR 6"TRASH PUMPS (WACKER OR GODWIN - FOR DRY WEATHER FLOW DIVERSION)
SCHEDULE	IN CHANNEL WORK WILL TAKE 7 DAYS - 7 DAYS A WEEK; 6:00 AM TO 6:00 PM;
STAFFING	10 TO 14 PEOPLE
MAINTENANCE PROCEDURE	
CHANNEL SEQUENCE	1. ALVARADO (UPPER- SOIL) CHANNEL (STATION 10+00 TO 20+90)
ACCESS & LOADING AREA(S)	ALVARADO (UPPER) CHANNEL ACCESS & LOADING AREA - (STATION 10+00 TO 12+20) - DOZER ENTER/EXIT(S) CHANNEL EASEMENT FROM EXISTING PAVED ASPHALT PARKING LOT VIA EXISTING CONCRETE RAMP. LOADING AREA - (STATION 10+00 TO 12+20) - FRONT-END LOADER LOADS TRUCKS IN CHANNEL AT BASE OF RAMP. IF CHANNEL BOTTOM IS TOO UNSTABLE TO SAFELY LOAD TRUCKS, MATERIAL WILL BE BUCKETED FROM CHANNEL WITH GRADALL OR EXCAVATOR AND LOADED DIRECTLY INTO HAUL TRUCKS AND TAKEN IMMEDIATELY TO LEGAL DISPOSAL SITE (MIRAMAR LANDFILL)
STAGING AREA	DOZER AND FRONT-END LOADER EQUIP WILL BE STAGED ON SITE ON THE PAVED, ASPHALT PARKING LOT. ALL MATERIALS WILL BE HAULED IMMEDIATELY TO A LEGAL DISPOSAL SITE (MIRAMAR LANDFILL).
METHODOLOGY	1. DRY WEATHER FLOW DIVERSION BERM (TIGER DAM, SANDBAGS, AND/OR VISQUEEN), DIVERSION PIPES, & PUMPS WILL BE PLACED AT EASTERN LIMITS OF CHANNEL CLEANING. DIVERSION PIPES WILL BE PLACES ON NORTHERN SIDE OF CHANNEL AND EXTENDED TO A DISCHARGE AREA JUST WEST OF THE WESTERLY MAINTENANCE LIMITS. DOZER PUSHES VEGETATION & SEDIMENT TO FRONT-END LOADER STATIONED INSIDE OF CHANNEL WITHIN ACCESS & LOADING AREA. 2. DRY WEATHER DIVERSION PIPES & PUMPS WILL BE PLACED AT WESTERN LIMITS OF CHANNEL CLEANING. DIVERSION PIPES WILL PLACED ON NORTHERN SIDE OF CHANNEL AND EXTENDED TO A DISCHARGE AREA JUST WEST OF THE WESTERLY MAINTENANCE LIMITS. 3.DOZER ENTER/EXIT(S) CHANNEL AT ACCESS & LOADING AREA. 4.DOZER PUSHES VEGETATION & SEDIMENT TO FRONT-END LOADER STATIONED INSIDE OF CHANNEL WITHIN ACCESS & LOADING AREA. 5.FRONT-END LOADER SCOOPS MATERIAL & LOADS MATERIAL INTO WAITING DUMP TRUCK LOCATED AT BOTTOM OF ACCESS RAMP. 6.DUMP TRUCKS HAUL MATERIAL TO LEGAL DISPOSAL SITE. 7.FRONT-END LOADER AND DOZER EXIT CHANNEL. 8.BACKHOE ENTERS CHANNEL AND DIGS FOUR, THREE FOOT DEEP HOLES FOR CHECK-DAM (SEE SHEET 2, CHECK-DAM DETAIL). 9.AT STATION (12+20.00) CONCRETE IS PUMPED FROM PUMPING TRAILER INTO HOLES AROUND STEEL POSTS THAT SUPPORT CHECK-DAM. 10.DRY WEATHER DIVERSION BERM, DIVERSION PIPES, & PUMPS REMOVED.
POST-MAINTENANCE	1. DEMOBILIZE EQUIPMENT. 2. REMOVE TEMPORARY CONSTRUCTION BMPS
OTHER NOTES	1. SWEEPERS WILL SWEEP ADJACENT PUBLIC RIGHTS-OF-WAY AND IMMEDIATE TRUCK LOADING SITES NIGHTLY. 2. EQUIPMENT FUELED OUTSIDE CHANNEL & LOCATED AT LEAST 150' FROM WATERS OF US/STATE. 3.GODWIN PUMP WILL HAVE VISQUEEN CONTAINMENT BASIN CONSTRUCTED BENEATH IT WITH SAND BAGS TO A HEIGHT OF TWELVE INCHES (12"), CREATING 'BUNKER EFFECT' TO CAPTURE ANY FLUID SPILLAGE FROM MACHINE. WITH CONTAINMENT BASIN PRECAUTIONS IN PLACE, PUMP WILL BE REFUELED IN-PLACE ON A DAILY BASIS.

MASTER MAINTENANCE PLAN (MMP) PROTOCOL REQUIREMENTS:

1. BIO-1: RESTRICT VEHICLES TO ACCESS DESIGNATED IN THE MMP.

2. BIO-2: FLAG AND DELINEATE ALL SENSITIVE BIOLOGICAL RESOURCES TO REMAIN WITHIN OR ADJACENT TO MAINTENANCE AREA PRIOR TO INITIATION OF MAINTENANCE ACTIVITIES IN ACCORDANCE WITH THE SITE SPECIFIC INDIVIDUAL BIOLOGICAL ASSESSMENT (IBA), INDIVIDUAL HYDROLOGY AND HYDRAULIC ASSESSMENT (IHHA), AND/OR INDIVIDUAL MAINTENANCE PLAN (IMP) PREPARED FOR THE WORK.

3. BIO-3: CONDUCT A PRE-MAINTENANCE MEETING ON SITE PRIOR TO THE START OF ANY MAINTENANCE ACTIVITY THAT OCCURS WITHIN OR ADJACENT TO SENSITIVE BIOLOGICAL RESOURCES. THE PRE-MAINTENANCE MEETING SHALL INCLUDE A QUALIFIED BIOLOGIST, FIELD ENGINEER, PLANNER, EQUIPMENT OPERATORS/SUPERINTENDENT AND OTHER KEY PERSONNEL CONDUCTING OR INVOLVED IN CHANNEL MAINTENANCE ACTIVITIES. THE QUALIFIED BIOLOGIST SHALL POINT OUT OR IDENTIFY SENSITIVE BIOLOGICAL RESOURCES TO BE AVOIDED DURING MAINTENANCE, FLAG/DELINEATE SENSITIVE RESOURCES TO BE AVOIDED, REVIEW SPECIFIC MEASURES TO PROTECT SENSITIVE BIOLOGICAL RESOURCES AS NECESSARY. THE BIOLOGIST SHALL ALSO REVIEW THE PROPOSED EROSION CONTROL METHODS TO CONFIRM THEY WILL NOT POSE RISK TO WILDLIFE (E.G., NON-BIODEGRADABLE BLANKETS MAY ENTANGLE WILDLIFE).

4. BIO-4: AVOID THE INTRODUCTION OF INVASIVE PLANT SPECIES WITH PHYSICAL EROSION CONTROL MEASURES.

5. BIO-5: CONDUCT APPROPRIATE PRE-MAINTENANCE SURVEYS IF MAINTENANCE IS PROPOSED DURING THE BREEDING SEASON OF A SENSITIVE ANIMAL SPECIES (JANUARY 15 TO AUGUST 31). IF SENSITIVE ANIMAL SPECIES COVERED BY THE PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR) ARE IDENTIFIED, THEN APPLICABLE MEASURES FROM THE MITIGATION MONITORING AND REPORTING PLAN (MMRP) SHALL BE IMPLEMENTED UNDER THE DIRECTION OF A QUALIFIED BIOLOGIST TO AVOID SIGNIFICANT DIRECT AND/OR INDIRECT IMPACTS TO IDENTIFIED SENSITIVE ANIMAL SPECIES. IF SENSITIVE ANIMAL SPECIES ARE IDENTIFIED DURING PRE-MAINTENANCE SURVEYS THAT ARE NOT COVERED BY THE PEIR, SWD SHALL CONTACT THE APPROPRIATE WILDLIFE AGENCIES AND ADDITIONAL ENVIRONMENTAL REVIEW UNDER CEQA WILL BE REQUIRED.

6. BIO-6: REMOVE ARUNDO THROUGH ONE, OR A COMBINATION OF, THE FOLLOWING METHODS;(1) FOLIAR SPRAY (SPRAYING HERBICIDE ON LEAVES AND STEMS WITHOUT CUTTING FIRST) WHEN ARUNDO OCCURS IN MONOTYPIC STANDS, OR (2) CUT AND PAINT (CUTTING STEMS CLOSE TO THE GROUND AND SPRAYING OR PAINTING HERBICIDE ON CUT STEM SURFACE) WHEN ARUNDO IS INTERMIXED WITH NATIVE PLANTS. WHEN SEDIMENT SUPPORTING ARRUNDO MUST BE REMOVED, THE SEDIMENT SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO REMOVE THE RHIZOMES, WHEREVER FEASIBLE. FOLLOWING REMOVAL OF SEDIMENT CONTAINING RHIZOMES, LOOSE RHIZOME MATERIAL SHALL BE REMOVED FROM THE CHANNEL AND DISPOSED OFFSITE. AFTER THE INITIAL TREATMENT, THE AREA OF REMOVAL SHALL BE INSPECTED ON A QUARTERLY BASIS FOR UP TWO YEARS, OR UNTIL NO RESPROUTING IS OBSERVED DURING AN INSPECTION. IF RESPROUTING IS OBSERVED, THE CUT AND PAINT METHOD SHALL BE APPLIED TO ALL RESPROUTS.

7. BIO-7: AVOID MECHANIZED MAINTENANCE WITHIN 300 FEET OF A COOPER'S HAWK NEST, 900 FEET OF A NORTHERN HARRIER'S NEST, OR 500 FEET OF ANY OTHER RAPTOR'S NEST UNTIL ANY FLEDGLINGS HAVE LEFT THE NEST.

8. WM-1: DISPOSE AND TRANSPORT COMPOSTABLE GREEN WASTE MATERIAL TO AN APPROVED COMPOSTING FACILITY, IF AVAILABLE.

9. WM-2: RE-USE EXCAVATED MATERIAL, WHENEVER POSSIBLE, AS FILL MATERIAL, AGGREGATE SAND REPLENISHMENT, OR OTHER RAW MATERIAL USES. RE-USED MATERIAL (AGGREGATES, SOIL, SAND OR SILT) SHALL BE DOCUMENTED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

10. WM-3: SEPARATE WASTE TIRES FROM EXCAVATED MATERIAL AND TRANSPORT THEM TO AN APPROPRIATE DISPOSAL FACILITY. IF MORE THAN NINE TIRES ARE IN A VEHICLE OR WASTE BIN AT ANY ONE TIME, THEY SHALL BE TRANSPORTED UNDER A COMPLETED COMPREHENSIVE TRIP LOG (CTL) TO DOCUMENT THAT THE TIRES WERE TAKEN TO AN APPROPRIATE DISPOSAL FACILITY.

11. WM-4: LOG AND TRANSPORT ANY HAZARDOUS MATERIALS ENCOUNTERED DURING MAINTENANCE TO A HAZARDOUS WASTE STORAGE, RECYCLING, TREATMENT OR DISPOSAL FACILITY. PERSONNEL HANDLING HAZARDOUS MATERIALS SHALL HAVE THE APPROPRIATE TRAINING TO HANDLE, STORE, TRANSPORT, AND/OR DISPOSE THE MATERIAL. HAZARDOUS MATERIALS (E.G., MACHINE OIL, MERCURY SWITCHES, AND REFRIGERANT GASES) SHALL BE REMOVED FROM APPLIANCES AND DISPOSED IN ACCORDANCE WITH THIS PROTOCOL.

12. WQ-2: PREVENT OFF-SITE SEDIMENT TRANSPORT DURING MAINTENANCE THROUGH THE USE OF EROSION AND SEDIMENT CONTROLS WITHIN STORM WATER FACILITIES, ALONG ACCESS ROUTES AND AROUND STOCKPILE/STAGING AREAS. INSTALL BMPS SUCH AS SILT FENCES, FIBER ROLLS; GRAVEL BAGS; TEMPORARY SEDIMENT BASINS; STABILIZED MAINTENANCE ACCESS POINTS (E.G., SHAKER PLATES); CONTAINMENT BARRIERS (E.G., SILT FENCE, FIBER ROLLS AND/OR BERMS) FOR MATERIAL STOCKPILES; AND PROPERLY FITTED COVERS FOR MATERIAL TRANSPORT VEHICLES. REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL MEASURES UPON COMPLETION OF MAINTENANCE UNLESS THEIR REMOVAL WOULD RESULT IN GREATER ENVIRONMENTAL IMPACT THAN LEAVING THEM IN PLACE.

13. WQ-3: STORE BMP MATERIALS ON-SITE TO PROVIDE COMPLETE PROTECTION OF EXPOSED AREAS AND PREVENT OFF-SITE SEDIMENT TRANSPORT.

14. WQ-4: PROVIDE TRAINING FOR PERSONNEL RESPONSIBLE FOR THE PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF ON-SITE BMPS.

15. WQ-7: AVOID STORING HAZARDOUS MATERIALS USED DURING MAINTENANCE WITHIN 50 FEET FROM STORM WATER FACILITIES. HAZARDOUS MATERIALS SHALL BE MANAGED AND STORED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

16. WQ-8: STORE MAINTENANCE-RELATED TRASH IN AREAS AT LEAST 50 FEET FROM STORM WATER FACILITIES, AND REMOVE ANY TRASH RECEPTACLES REGULARLY (AT LEAST WEEKLY).

17. WQ-10: INSPECT EARTHEN-BOTTOM STORM WATER FACILITIES WITHIN 30 DAYS OF THE FIRST 2-YEAR STORM FOLLOWING MAINTENANCE. IMPLEMENT EROSION CONTROL MEASURES RECOMMENDED BY THE FIELD ENGINEER, SUCH AS FIBER BLANKETS, TO REMEDIATE SUBSTANTIAL EROSION WHICH HAS OCCURRED AND TO MINIMIZE FUTURE EROSION.

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER * CARSON P. EDGINGTON NO. 76519 * STATE OF CALIFORNIA

MAINTENANCE PLANS FOR:

ALVARADO UPPER CHANNEL
MMP MAP #64
UPPER REACH 2

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORM WATER DEPARTMENT
SHEET 3 OF 3 SHEETS

I.O. NO.
P.T.S NO.
V.T.M.

FOR CITY ENGINEER DATE

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NAD83 COORDINATES

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LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

-3-D

RICK ENGINEERING COMPANY
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

J-17204B

M:\17204-B_Alvarado_Trlgo_BeaverChannels\Civil\Sheets\Upper_Alvarado_Creek_Channel-IMP\17204B_pgrz_03.dgn
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02-JUN-2015 10:18

MAINTENANCE PLANS FOR:

ALVARADO LOWER CHANNEL MMP MAP # 59 & 60

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF SAN DIEGO FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.

3. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TOLL FREE 1-800-422-4133, TWO DAYS BEFORE YOU DIG.

4. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT GRADING AND/OR CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD AND THE CITY OF SAN DIEGO MUNICIPAL CODE AND STORM WATER STANDARDS MANUAL.

5. "PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OF-WAY, SATISFACTORY TO THE PERMIT- ISSUING AUTHORITY.

6. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARK-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE CITY OF SAN DIEGO FIELD ENGINEERING DIVISION (858) 627-3200.

7. DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS A CONSTRUCTION CHANGE IS APPROVED BY THE CITY ENGINEER OR THE CHANGE IS REQUIRED BY THE CITY INSPECTOR.

8. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE RESIDENT ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF SAN DIEGO.

9. THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CALIFORNIA DEPARTMENT OF FISH AND GAME. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.

GROUND WATER DISCHARGE

1. ALL GROUND WATER EXTRACTION AND SIMILAR WASTE DISCHARGES TO SURFACE WATER NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA AN OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF SATE ORDER NO R9-2009-0002 NPDES CAG919002.

2. THE ESTIMATED MAXIMUM DISCHARGE RATES MUST NOT EXCEED THE LIMITS SET IN THE OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL BOARD UNLESS PRIOR NOTIFICATION AND SUBSEQUENT AUTHORIZATION HAS BEEN OBTAINED, AND DISCHARGE OPERATIONS MODIFIED TO ACCOMMODATE THE INCREASED RATES.

3. ALL GROUND WATER EXTRACTIONS AND SIMILAR WASTE DISCHARGES TO SURFACE WATERS NOT TRIBUTARY TO THE SAN DIEGO BAY ARE PROHIBITED UNTIL IT CAN BE DEMONSTRATED THAT THE OWNER HAS APPLIED AND OBTAINED AUTHORIZATION FROM THE STATE OF CALIFORNIA VIA OFFICIAL "ENROLLMENT LETTER" FROM THE REGIONAL WATER QUALITY CONTROL BOARD IN ACCORDANCE WITH THE TERMS, PROVISIONS AND CONDITIONS OF STATE ORDER NO R9-2007-0034 NPDES NO. CAG919001.

SHEET INDEX

TOPOGRAPHY SOURCE

CITY OF SAN DIEGO SANGIS 1999 2 FOOT CONTOURS, NAVD29

BENCHMARK

BRASS PLUG AT NORTHEAST CORNER OF MISSION GORGE ROAD AND TWAIN AVENUE
ELEV. 81.431 BASED ON NVGD 29 AS SHOWN IN THE CITY OF SAN DIEGO BENCH BOOK

REFERENCE DRAWINGS

GRADING PLANS FOR EAS MISSION VALLEY INDUSTRIAL CENTER.....CITY OF SAN DIEGO DWG. NO. 16540-D

CONCRETE LINED CHANNEL PLANS.....FEDERAL PROJECT NO. 1-172(12)

STORM WATER PROTECTION NOTES

1. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO. R92007-0001; AND RISK LEVEL: CHECK ONE BELOW.

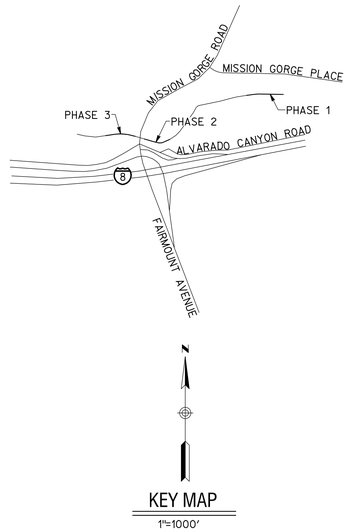
☒ WPCP
☐ CGP RISK LEVEL 1 ☐ CGP LUP TYPE 1
☐ CGP RISK LEVEL 2 ☐ CGP LUP TYPE 2
☐ CGP RISK LEVEL 3 ☐ CGP LUP TYPE 3

2. CHECK ONE:

☐ THIS PROJECT WILL EXCEED THE MAXIMUM DISTURBED AREA LIMIT, THEREFORE A WEATHER TRIGGERED ACTION PLAN (WTAP) IS REQUIRED.
☐ THIS PROJECT WILL FOLLOW PHASED GRADING NOT TO EXCEED FIVE (5) ACRES PER PHASE.
☒ NOT APPLICABLE

3. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WPCP OR SWPPP AS APPLICABLE.

WATER POLLUTION CONTROL PLAN FOR UPPER ALVERADO CREEK CHANNEL MAINTENANCE PROJECT PREPARED BY:
McGRATH CONSULTING
PO BOX 2488
EL CAJON, CA. 92021
(619) 250-2025
PREPARED 01/22/2015



KEY MAP
1"=1000'

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 CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

CARSON P. EDGINGTON R.C.E. NO. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER
CARSON P. EDGINGTON
NO. 76519
STATE OF CALIFORNIA

RICK ENGINEERING COMPANY
5620 FRIARS ROAD
SAN DIEGO, CA 92110
619-291-0707
(FAX) 619-291-4165

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

MAINTENANCE OF CONCRETE & EARTHENED CHANNELS TO REMOVE ACCUMULATED SEDIMENT AND OTHER DEBRIS

STANDARD SPECIFICATIONS:

DOCUMENT NO.	DESCRIPTION
PITS070112-01	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), 2012 EDITION
PITS070112-02	CITY OF SAN DIEGO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (WHITEBOOK), 2012 EDITION
PITS070112-04	CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2012 EDITION
PITS070112-06	CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S. CUSTOMARY STANDARD SPECIFICATIONS, 2010 EDITION

STANDARD DRAWINGS

DOCUMENT NO.	DESCRIPTION
PITS070112-03	CITY OF SAN DIEGO STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION
PITS070112-05	CALIFORNIA DEPARTMENT OF TRANSPORTION U.S. CUSTOMARY STANDARD PLANS, 2010 EDITION
CASQA MANUAL	CALIFORNIA STORMWATER QUALITY ASSOCIATION, STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK PORTAL: CONSTRUCTION, JANUARY 2015

LEGEND

EXISTING IMPROVEMENTS

ITEM	SYMBOL
EXIST. CONTOURS	
EXIST. LOT LINE	
MULTI-HABITAT PLANNING AREA (MHPA)	
EXIST. CURB INLET	
EXIST. STORM DRAIN MAIN	SD
EXIST. SEWER MAIN	S
EXIST. WATER MAIN	W
CHANNEL MAINTENANCE AREA	
ACCESS & LOADING AREA	
LOADING AREA	
BY-PASS PUMP	
TEMPORARY DIVERSION HOSE LINE	

STORM WATER MANAGEMENT BMPs

ITEM		SYMBOL
STREET SWEEPING AND VACUUMING DAILY	SEE CASQA MANUAL	SE-7
SANDBAG BARRIER	SEE CASQA MANUAL	SE-8
STORM DRAIN INLET PROTECTION	SEE CASQA MANUAL	SE-10

CONSTRUCTION SITE STORM WATER PRIORITY: _____

MAINTENANCE PLANS FOR:

ALVARADO LOWER CHANNEL
MMP MAP #59 & 60

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORMWATER DEPARTMENT
SHEET 1 OF 5 SHEETS

I.O. NO. _____
P.T.S NO. _____
V.T.M. _____

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

XXXX-XXXX
NAD83 COORDINATES
XXX-XXXX
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

-1-D

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT

THE CITY OF SAN DIEGO • STATE OF CALIFORNIA • SEMPER VIGILANS

STREET DATA TABLE

STREET NAME	CLASSIFICATION	SPEED (MPH)	ADT (VEHICLES)	R/W (FT)

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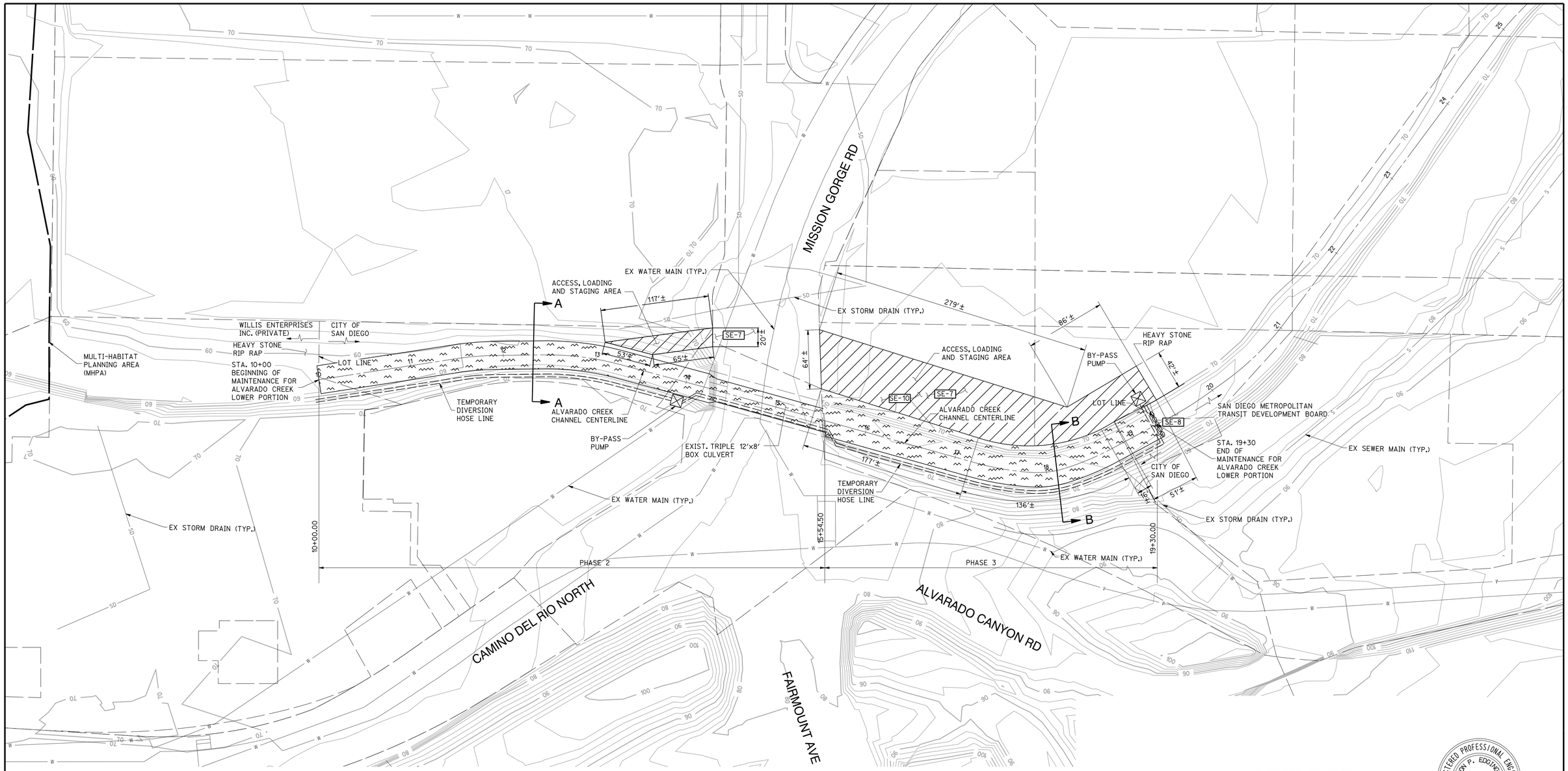
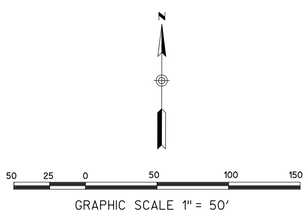
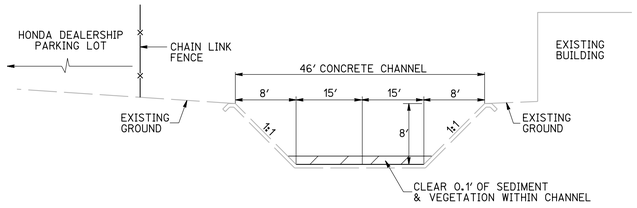
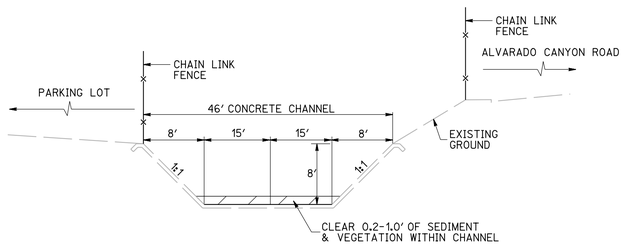
02-JUN-2015 10:12







SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE

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ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER
CARSON P. EDGINGTON
NO. 76519
STATE OF CALIFORNIA

MAINTENANCE PLANS FOR:
ALVARADO LOWER CHANNEL
MMP MAP #59
LOWER REACH 2A & 2B
(PHASES 2 AND 3)

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORMWATER DEPARTMENT
SHEET 2 OF 5 SHEETS

I.O. NO.
P.T.S NO.
V.T.M.

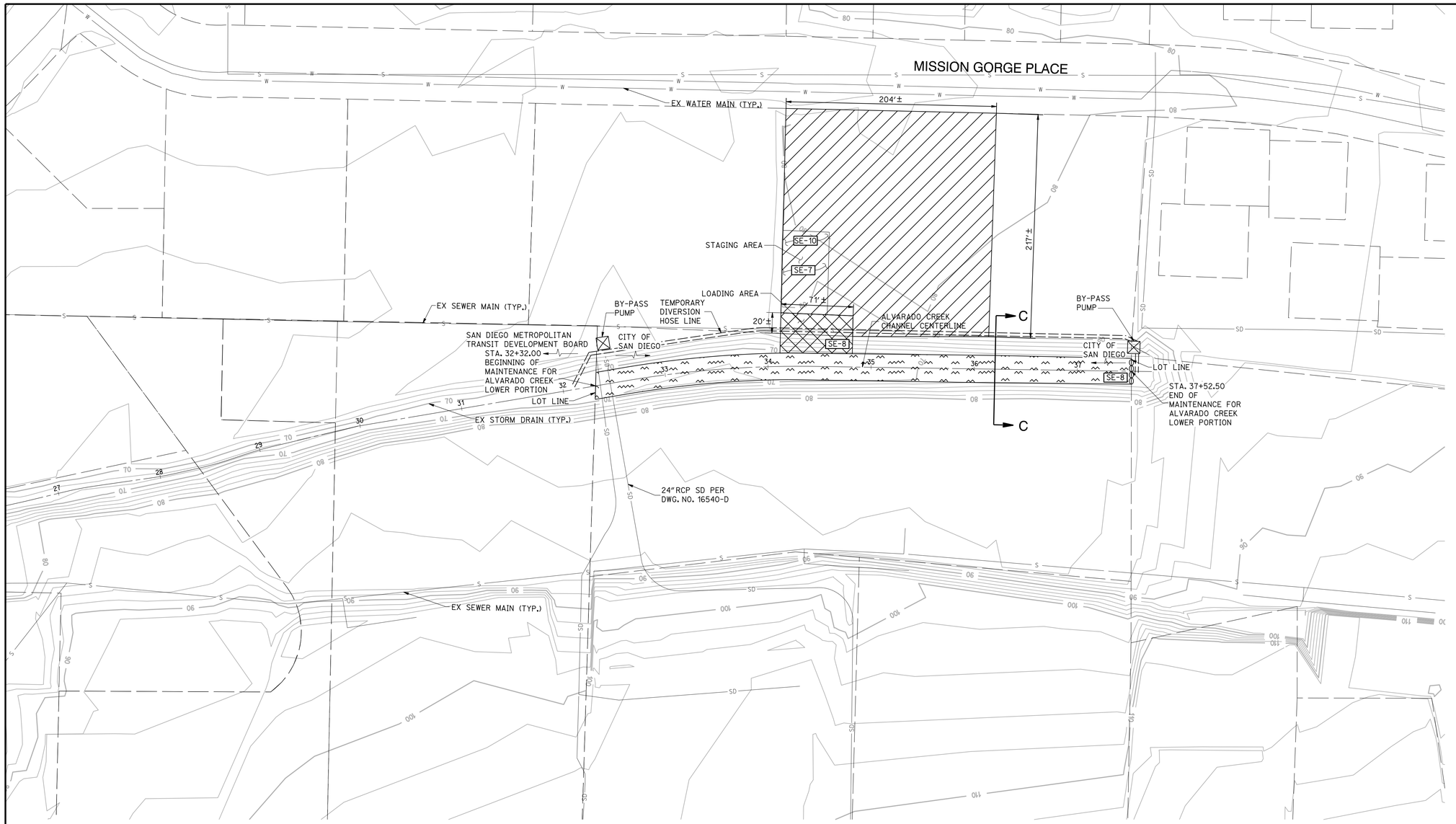
FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

XXXX-XXXX
NAD83 COORDINATES
XXX-XXXX
LAMBERT COORDINATES

-2-D



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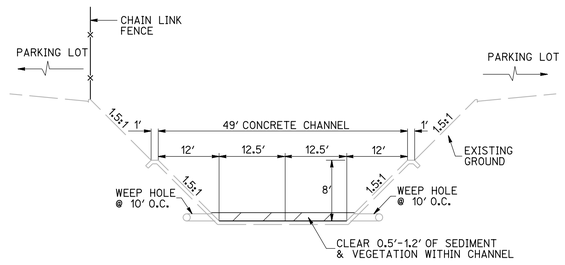
GRAPHIC SCALE 1" = 50'



SECTION C-C
NOT TO SCALE

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER
CARSON P. EDGINGTON
NO. 76519
STATE OF CALIFORNIA

MAINTENANCE PLANS FOR:
ALVARADO LOWER CHANNEL
MMP MAP #60
LOWER REACH 4
(PHASE 1)

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORMWATER DEPARTMENT
SHEET 3 OF 5 SHEETS

LO. NO.
P.T.S NO.
V.T.M.

FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

XXXX-XXXX
NAD83 COORDINATES
XXX-XXXX
LAMBERT COORDINATES

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

-3-D

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J-17204B

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ALVARADO (LOWER) CHANNEL - MMP MAP NO. 60
IMP MAINTENANCE METHODOLOGY TABLE (PHASE 1)

FACILITY/CHANNEL	ALVARADO (LOWER) CHANNEL (LR4) PHASE 1 (4522-4576 MISSION GORGE PLACE)
DIMENSIONS	ALVARADO (LOWER) CHANNEL (PHASE 1) TRAPAZOIDAL, CONCRETE-LINED APPROX 500' LENGTH APPROX. 49' TOP WIDTH 25' BOTTOM WIDTH 8' IN DEPTH 1/2-1.5' OF SEDIMENT CUBIC YARDS 300-400 MAXIMUM CUBIC YARDS: 600
MAINTENANCE METHOD	MECHANIZED SEDIMENT & VEGETATION REMOVAL
EQUIPMENT (EQUIPMENT WILL BE EQUIVALENT OR SMALLER IN SIZE/TYPE)	• GRADALL (5100 SERIES) • FRONT-END LOADER (CAT 966) • DUMP TRUCKS (10/12 YD) • 4" OR 6" TRASH PUMPS (WACKER OR GODWIN - FOR DRY WEATHER FLOW DIVERSION)
SCHEDULE	IN CHANNEL WORK WILL TAKE 5 DAYS ; 6:00 AM TO 6:00 PM;
STAFFING	10 TO 14 PEOPLE
MAINTENANCE PROCEDURE	
CHANNEL SEQUENCE	1. ALVARADO (LOWER) WILL BE MAINTAINED IN SEQUENTIAL ORDER PHASE 1, 2, THEN 3
ACCESS & LOADING AREA(S)	ALVARADO (LOWER) CHANNEL (PHASE 1) *ACCESS & LOADING AREA* - LOADER DRIVES INTO CHANNEL FROM EXISTING PAVED ASPHALT PARKING LOT REAR OF 4561 MISSION GORGE PLACE. LOADING OCCURS AT REAR OF 4561 MISSION GORGE PLACE.
STAGING AREA	STAGING OF TRUCKS WILL BE DONE ON MISSION GORGE PLACE. LOADER AND GRADALL WILL BE STAGED BEHIND 4561 MISSION GORGE PLACE. ALL MATERIALS WILL BE HAULED IMMEDIATELY TO A LEGAL DISPOSAL SITE (MIRAMAR LANDIFLL).
METHODOLOGY	1.DRY WEATHER FLOW DIVERSION BERM (TIGER DAM, SANDBAGS, AND/OR VISQUEEN), DIVERSION PIPES, & PUMPS WILL BE PLACED AT EASTERN LIMITS AND WESTERN LIMITS OF CHANNEL CLEANING. DIVERSION PIPES WILL BE PLACES ON NORTHERN SIDE OF CHANNEL AND EXTENDED TO A DISCHARGE AREA JUST WEST OF THE WESTERLY MAINTENANCE LIMITS. 2.LOADER IS CHAINED TO GRADALL & LOWERED INTO CHANNEL AT ACCESS & LOADING AREA. 3.LOADER PUSHES VEGETATION & SEDIMENT TO GRADALL STATIONED OUTSIDE/ABOVE CHANNEL ON PAVED, ASPHALT PARKING LOT. 4.GRADALL SCOOPS MATERIAL & LOADS MATERIAL INTO WAITING DUMP TRUCK LOCATED ON PAVED, ASPHALT PARKING LOT. 5.DUMP TRUCKS HAUL MATERIAL TO LEGAL DISPOSAL SITE (MIRAMAR LANDFILL). 6.LOADER IS CHAINED TO GRADALL FOR ASSISTANCE OUT OF CHANNEL. 7.DRY WEATHER DIVERSION BERM, DIVERSION PIPES, & PUMPS REMOVED. 8.LOADER & GRADALL EXIT PAVED, ASPHALT PARKING LOT.
POST-MAINTENANCE	1. DEMOBILIZE EQUIPMENT. 2. REMOVE TEMPORARY CONSTRUCTION BMPS.
OTHER NOTES	1.SWEEPERS WILL SWEEP ADJACENT PUBLIC RIGHTS-OF-WAY AND IMMEDIATE TRUCK LOADING SITES NIGHTLY. 2.A PUMP MAY BE USED AT VARIOUS LOCATIONS TO REMOVE PONDED WATER PRIOR TO EQUIPMENT ENTERING THE CHANNEL. WATER WILL BE DISCHARGED IN THE VICINITY OF THE DIVERSION DISCHARGE. 3.ALL EQUIPMENT (OTHER THAN PUMPS) FUELED OUTSIDE CHANNEL & LOCATED AT LEAST 150' FROM WATERS OF US/STATE.

ALVARADO (LOWER) CHANNEL - MMP MAP NO. 59
IMP MAINTENANCE METHODOLOGY TABLE (PHASE 2)

FACILITY/CHANNEL	ALVARADO (LOWER) CHANNEL (LR2B)- PHASE 2 (4282 CAMINO DEL RIO NORTH)
DIMENSIONS	ALVARADO (LOWER) CHANNEL (PHASE 2) TRAPAZOIDAL, CONCRETE-LINED & SOIL BOTTOM APPROX. 370' LENGTH 40-60' TOP WIDTH 18-26' BOTTOM WIDTH 9-12' IN DEPTH 3-6' OF SEDIMENT 100-200 CUBIC YARDS MAXIMUM CUBIC YARDS: 400
MAINTENANCE METHOD	MECHANIZED SEDIMENT & VEGETATION REMOVAL
EQUIPMENT (EQUIPMENT WILL BE EQUIVALENT OR SMALLER IN SIZE/TYPE)	• GRADALL (5100 SERIES) • SKID STEER/BOBCAT (S650) • DUMP TRUCKS (10/12 YD) • 4" OR 6" TRASH PUMPS (WACKER OR GODWIN - FOR DRY WEATHER FLOW DIVERSION) • RUBBER TRACKED SKIDSTEER (JOHN DEERE 333E) • EXCAVATOR (JOHN DEERE 50D)
SCHEDULE	IN CHANNEL WORK WILL TAKE 3 DAYS ; 6:00 AM TO 6:00 PM;
STAFFING	8 TO 10 PEOPLE
MAINTENANCE PROCEDURE	
CHANNEL SEQUENCE	1. ALVARADO (LOWER) WILL BE MAINTAINED IN SEQUENTIAL ORDER PHASE 1, 2, THEN 3
ACCESS & LOADING AREA(S)	ALVARADO (LOWER) CHANNEL (PHASE 2) *ACCESS & LOADING AREA* - BOBCAT & EXCAVATOR DRIVE INTO CHANNEL FROM EXISTING ASPHALT ACCESS RAMP ON NORTH SIDE OF CHANNEL - GRADALL LOADS TRUCKS STATIONED ON EXISTING PAVED ACCESS RAMP.
STAGING AREA	STAGING OF EQUIPMENT WILL BE DONE ON PAVED, ASPHALT RAMP. ALL MATERIALS WILL BE HAULED IMMEDIATELY TO A LEGAL DISPOSAL SITE (MIRAMAR LANDIFLL).
METHODOLOGY	1.DRY WEATHER FLOW DIVERSION BERM (TIGER DAM, SANDBAGS, AND/OR VISQUEEN), DIVERSION PIPES, & PUMPS WILL BE PLACED AT EASTERN LIMITS OF PHASE 3 MAINTENANCE AREA (LR2A). DIVERSION PIPES WILL DISCHARGE WEST OF PHASE 2 MAINTENANCE AREA. 2.DRY WEATHER DIVERSION PIPES & PUMPS WILL BE PLACED EASTERN LIMITS OF PHASE 2 MAINTENANCE AREA. DIVERSION PIPES WILL DISCHARGE WEST OF PHASE 2 MAINTENANCE AREA. 3.BOBCAT AND EXCAVATORIS DRIVE INTO AT ACCESS & LOADING AREA. 4.BOBCAT PUSHES VEGETATION & SEDIMENT TO GRADALL STATIONED ON ACCESS RAMP. 5.GRADALL SCOOPS MATERIAL & LOADS MATERIAL INTO WAITING DUMP TRUCK LOCATED WITHIN ACCESS & LOADING AREA (PAVED ACCESS RAMP). 6.DUMP TRUCKS HAUL MATERIAL TO LEGAL DISPOSAL SITE (MIRAMAR LANDFILL). 7.BOBCAT & EXCAVATOR DRIVE OUT OF CHANNEL UP PAVED ACCESS RAMP.
POST-MAINTENANCE	1. DEMOBILIZE EQUIPMENT. 2. REMOVE TEMPORARY CONSTRUCTION BMPS.
OTHER NOTES	1.SWEEPERS WILL SWEEP ADJACENT PUBLIC RIGHTS-OF-WAY AND IMMEDIATE TRUCK LOADING SITES NIGHTLY. 2.A PUMP MAY BE USED AT VARIOUS LOCATIONS TO REMOVE PONDED WATER PRIOR TO EQUIPMENT ENTERING THE CHANNEL. WATER WILL BE DISCHARGED IN THE VICINITY OF THE DIVERSION DISCHARGE. 3.ALL EQUIPMENT (OTHER THAN PUMPS) FUELED OUTSIDE CHANNEL & LOCATED AT LEAST 150' FROM WATERS OF US/STATE.

ALVARADO (LOWER) CHANNEL - MMP MAP NO. 59
IMP MAINTENANCE METHODOLOGY TABLE (PHASE 3)

FACILITY/CHANNEL	ALVARADO (LOWER) CHANNEL (LR2A) PHASE 3 (5801 FAIRMOUNT AVENUE)
DIMENSIONS	ALVARADO (LOWER) CHANNEL (PHASE 3) TRAPEZOIDAL, CONCRETE-LINED APPROX. 380' LENGTH APPROX. 60' TOP WIDTH 30' BOTTOM WIDTH 8-12' IN DEPTH 2-12' OF SEDIMENT 100-200 CUBIC YARDS MAXIMUM CUBIC YARDS: 300
MAINTENANCE METHOD	MECHANIZED SEDIMENT & VEGETATION REMOVAL
EQUIPMENT (EQUIPMENT WILL BE EQUIVALENT OR SMALLER IN SIZE/TYPE)	• GRADALL (5100 SERIES) • SKID STEER/BOBCAT (S650) • FRONT-END LOADER (CAT 966) • DUMP TRUCKS (10/12 YD) • 4" OR 6" TRASH PUMPS (WACKER OR GODWIN - FOR DRY WEATHER FLOW DIVERSION)
SCHEDULE	IN CHANNEL WORK WILL TAKE 3 DAYS ; 6:00 AM TO 6:00 PM;
STAFFING	8 TO 10 PEOPLE
MAINTENANCE PROCEDURE	
CHANNEL SEQUENCE	1. ALVARADO (LOWER) PHASE 3 (STATION 10+00 TO 14+25)
ACCESS & LOADING AREA(S)	ALVARADO (LOWER) CHANNEL (PHASE 3) *ACCESS & LOADING AREA* - (STATION 13+06 TO 14+25) - PRIMARY PLAN, BOBCATS ENTERS CHANNEL FROM PHASE 2 ACCESS AREA. BOBCATS ARE DRIVEN FROM PHASE 2 AREA EASTERLY TO PHASE 3 AREA THROUGH EXISTING STORM DRAIN BOX CULVERTS LOCATED UNDERNEATH MISSION GORGE ROAD. BOBCATS WORK FROM EASTERLY LIMITS OF PHASE 3 AREA AND PUSH SEDIMENT AND VEGETATION WESTERLY TO PHASE 2 ACCESS AND LOADING AREA. BACKUP PLAN -LOADER IS CHAINED TO GRADALL AND LOWERED INTO CHANNEL FROM EXISTING PARKING LOT AT 5801 FAIRMOUNT AVENUE. GRADALL POSITIONED ABOVE CHANNEL. GRADALL LOADS TRUCKS STATIONED ON EXISTING PARKING LOT AT 5801 FAIRMOUNT AVENUE.
STAGING AREA	STAGING OF TRUCKS & EQUIPMENT WILL BE DONE ON PAVED, ASPHALT PARKING LOT AT 5801 FAIRMOUNT AVENUE. ALL MATERIALS WILL BE HAULED IMMEDIATELY TO A LEGAL DISPOSAL SITE (MIRAMAR LANDIFLL).
METHODOLOGY	1.DRY WEATHER FLOW DIVERSION BERM (TIGER DAM, SANDBAG, AND/OR VISQUEEN), DIVERSION PIPES, & PUMPS WERE PUT IN PLACE DURING PHASE 2 CHANNEL MAINTENANCE. THESE ITEMS ARE LOCATED AT THE EASTERN LIMITS OF MAINTENANCE AREA OF PHASE 3. 2.BOBCAT ENTERS CHANNEL FROM ACCESS AREA IN THE SAME FASHION AS PHASE 2. 3.BOBCAT TRAVELS FROM PHASE 2 (LR2B), AND PUSHES MATERIAL FROM PHASE 3 AREA OF WORK TO PHASE 2 LOADING AREA. 4.MATERIAL IS LOADED INTO DUMP TRUCKS IN THE SAME FASHION AS PHASE 2 WORK. 5.DUMP TRUCKS HAUL MATERIAL TO LEGAL DISPOSAL SITE (MIRAMAR LANDFILL) 6. DRY WEATHER DIVERSION BERM, DIVERSION PIPES, & PUMPS REMOVED. 7.BACKUP PLAN - LOADER IS CHAINED TO GRADALL AND LOWERED INTO CHANNEL AT ACCESS & LOADING AREA. 8.GRADALL STATIONED OUTSIDE/ABOVE CHANNEL AT 5801 FAIRMOUNT AVENUE. 9.GRADALL SCOOPS MATERIAL & LOADS MATERIAL INTO WAITING DUMP TRUCKS AT 5801 FAIRMOUNT AVENUE. 10.DUMP TRUCKS HAUL MATERIAL TO LEGAL DISPOSAL SITE (MIRAMAR LANDFILL). 11.LOADER IS CHAINED TO GRADALL AND RAISED OUT OF CHANNEL. 12.DRY WEATHER DIVERSION BERM, DIVERSION PIPES, & PUMPS REMOVED.
POST-MAINTENANCE	1. DEMOBILIZE EQUIPMENT. 2. REMOVE TEMPORARY CONSTRUCTION BMPS.
OTHER NOTES	1.SWEEPERS WILL SWEEP ADJACENT PUBLIC RIGHTS-OF-WAY AND IMMEDIATE TRUCK LOADING SITES NIGHTLY. 2.A PUMP MAY BE USED AT VARIOUS LOCATIONS TO REMOVE PONDED WATER PRIOR TO EQUIPMENT ENTERING THE CHANNEL. WATER WILL BE DISCHARGED IN THE VICINITY OF THE DIVERSION DISCHARGE. 3.ALL EQUIPMENT (OTHER THAN PUMPS) FUELED OUTSIDE CHANNEL & LOCATED AT LEAST 150' FROM WATERS OF US/STATE.

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER * CARSON P. EDGINGTON * NO. 76519 * STATE OF CALIFORNIA

MAINTENANCE PLANS FOR:

ALVARADO LOWER CHANNEL
MMP MAP #59 & 60

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORMWATER DEPARTMENT
SHEET 4 OF 5 SHEETS

L.O. NO.
P.T.S NO.
V.T.M.

FOR CITY ENGINEER DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

XXXX-XXXX
NAD83 COORDINATES

XXX-XXXX
LAMBERT COORDINATES

-4-D

RICK ENGINEERING COMPANY
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

J-17204B

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MAINTENANCE BMPs

1. ALL BEST MANAGEMENT PRACTICES (BMPs) WILL BE IMPLEMENTED PRIOR TO OR CONCURRENT WITH CONSTRUCTION AND MAINTAINED THROUGHOUT THE PROJECT. A QUALIFIED CONTACT PERSON WILL BE RESPONSIBLE FOR IMPLEMENTING THE WATER POLLUTION CONTROL PLAN (WPCP). ALL WORK SHALL BE COMPLETED BETWEEN SEPTEMBER 15TH AND FEBRUARY 15TH UNLESS AN EXTENSION IS GRANTED IN CONFORMANCE WITH ALL APPLICABLE PERMITS.

2. CONTRACTOR WILL LIMIT ALL CONSTRUCTION RELATED ACTIVITIES TO THE PROJECT FOOTPRINT.

3. EXISTING VEGETATION TO BE PRESERVED IN PLACE SHALL BE CLEARLY MARKED WITH A BUFFER AREA FOLLOWING THE GUIDANCE OF BMP FACT SHEET EC-2.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUCH ON STREETS AND OTHER PAVED SURFACES DUE TO EXCAVATION ACTIVITIES. STREET SWEEPING AND VACUUMING WILL BE MANAGED FOLLOWING THE GUIDANCE OF BMP FACT SHEET SE-7.

5. WEATHER TRIGGERED ACTION PLAN SHALL BE IMPLEMENTED WHEN THERE IS A FORECASTED 50% OR GREATER CHANCE OF LIKELY PRECIPITATION OF 0.1 INCH OR GREATER BY THE NATIONAL WEATHER SERVICE FORECAST.

6. CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER AFTER EACH RUNOFF -PRODUCING RAINFALL.

7. TEMPORARY EROSION OR SEDIMENT CONTROL MEASURES WILL BE REMOVED UPON COMPLETION OF MAINTENANCE UNLESS THEIR REMOVAL WOULD RESULT IN GREATER ENVIRONMENTAL IMPACT THAN LEAVING THEM IN PLACE.

8. HAZARDOUS MATERIALS USED DURING MAINTENANCE WILL NOT BE STORED WITHIN 50 FEET FROM STORM WATER FACILITIES. HAZARDOUS MATERIALS SHALL BE MANAGED AND STORED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. A REGISTERED FIRST-RESPONSE, PROFESSIONAL HAZARDOUS MATERIALS CLEAN-UP/REMEDIATION SERVICE SHALL BE LOCALLY AVAILABLE ON CALL.

9. THE TREATMENT, STORAGE, AND DISPOSAL OF WASTEWATER DURING THE LIFE OF THE PROJECT MUST BE DONE IN ACCORDANCE WITH WASTE DISCHARGE REQUIREMENTS ESTABLISHED BY THE SAN DIEGO WATER BOARD PURSUANT TO CWC 13260.

10. SPILLS SHALL BE MANAGED FOLLOWING THE GUIDANCE OF BMP FACT SHEET WM-4. SPILL CLEANUP MATERIALS SHALL BE AVAILABLE ONSITE AT ALL TIMES.

11. THE CONTRACTOR SHALL PROVIDE EQUIPMENT NECESSARY TO EXTINGUISH SMALL BRUSH FIRES (FROM SPARKING VEHICLES, ETC.) ON-SITE DURING ALL PHASES OF PROJECT ACTIVITIES, ALONG WITH TRAINED PERSONNEL FOR USE OF SUCH EQUIPMENT.

12. THE CONTRACTOR SHALL MONITOR THE 5 DAY WEATHER FORECAST. IF ANY PRECIPITATION IS FORECASTED, THE SITE SHALL BE SECURED TO PREVENT ANY CONSTRUCTION RELATED MATERIALS FROM LEAVING THE SITE AND ENTERING THE CHANNELS. NO CONSTRUCTION ACTIVITIES SHALL OCCUR DURING RAIN EVENTS.

13. SAMPLING AND ANALYSIS, MONITORING AND REPORTING, AND POST-MAINTENANCE MANAGEMENT OF THE PROJECT SHALL BE CONDUCTED AS DETERMINED NECESSARY BY THE CITY OF SAN DIEGO.

14. CHANNELS WILL BE INSPECTED WITHIN 72 HOURS OF THE FIRST 2-YEAR STORM FOLLOWING MAINTENANCE. IF SUBSTANTIAL EROSION HAS OCCURRED, EROSION CONTROL MEASURES RECOMMENDED BY THE FIELD ENGINEER WILL BE IMPLEMENTED TO REMEDIATE EROSION AREAS AND TO MINIMIZE FUTURE EROSION.

15. CONTRACTOR SHALL PROVIDE TRAINING FOR ALL PERSONNEL RESPONSIBLE FOR THE PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF ONSITE BMPs.

16. THE QUALIFIED CONTACT PERSON WILL ASSIGN A MONITOR FOR DAILY INSPECTION OF THE BMPs EACH MORNING. THE MONITOR WILL CHECK THE NATIONAL WEATHER SERVICE FORECAST, COMPLETE BMP INSPECTION CHECKLIST, PERFORM ANY NECESSARY BMP MAINTENANCE/REPAIRS, AND REPORT THE RESULTS TO THE QUALIFIED CONTACT PERSON. COMPLETED INSPECTION CHECKLIST WILL BE KEPT WITH THE WPCP.

17. PREVIOUSLY UNDISTURBED STAGING AREAS WILL BE REVEGETATED WITHIN 30 DAYS OF COMPLETION OF MAINTENANCE ACTIVITIES. THE REVEGETATED AREAS WILL BE MONITORED FOR A PERIODS OF NOT LESS THAN 25 MONTHS AFTER PLANTING.

18. FINAL LOCATION OF CHANNEL CENTERLINE WILL BE DETERMINED IN THE FIELD AND COORDINATED WITH THE NECESSARY PROJECT SPECIALIST (BIOLOGIST, HISTORICAL MONITOR, ETC.)

ADDITIONAL MAINTENANCE REQUIREMENTS

1. THE CITY SHALL NOTIFY CALIFORNIA DEPARTMENT OF FISH & WILDLIFE (CDFW), IN WRITING, AT LEAST FIVE DAYS PRIOR TO INITIATION OF CONSTRUCTION PRIOR TO COMPLETION OF CONSTRUCTION (PROJECT) ACTIVITIES. NOTIFICATION SHALL BE SENT TO CDFW'S SOUTH COAST OFFICE, ATTN: STREAMBED ALTERATION PROGRAM-SM# 1600-2011-0271-R5.

2. AVOID THE INTRODUCTION OF INVASIVE PLANT SPECIES WITH PHYSICAL EROSION CONTROL MEASURES.

3. PRIOR TO COMMENCING ANY MAINTENANCE ACTIVITY WHICH MAY IMPACT SENSITIVE BIOLOGICAL RESOURCES, THE MONITORING BIOLOGIST SHALL VERIFY THAT THE FOLLOWING ACTIONS HAVE BEEN TAKEN, AS APPROPRIATE:

   -FENCING, FLAGGING, SIGNAGE OR OTHER MEANS TO PROTECT SENSITIVE RESOURCES TO REMAIN AFTER MAINTENANCE HAS BEEN IMPLEMENTED;

   -NOISE ATTENUATION MEASURES NEEDED TO PROTECT SENSITIVE WILDLIFE ARE IN PLACE AND EFFECTIVE; AND/OR

   -NESTING BIRDS HAVE BEEN IDENTIFIED AND NECESSARY MAINTENANCE SETBACKS HAVE BEEN ESTABLISHED IF MAINTENANCE IS TO OCCUR BETWEEN JANUARY 15 AND AUGUST 31.

4. IF ANY WILDLIFE IS ENCOUNTERED DURING THE COURSE OF MAINTENANCE, SAID WILDLIFE SHALL BE ALLOWED TO LEAVE THE MAINTENANCE AREA UNHARMED.

MASTER MAINTENANCE PLAN (MMP) PROTOCOL REQUIREMENTS:

1. BIO-1: RESTRICT VEHICLES TO ACCESS DESIGNATED IN THE MMP.

2. BIO-2: FLAG AND DELINEATE ALL SENSITIVE BIOLOGICAL RESOURCES TO REMAIN WITHIN OR ADJACENT TO MAINTENANCE AREA PRIOR TO INITIATION OF MAINTENANCE ACTIVITIES IN ACCORDANCE WITH THE SITE SPECIFIC INDIVIDUAL BIOLOGICAL ASSESSMENT (IBA), INDIVIDUAL HYDROLOGY AND HYDRAULIC ASSESSMENT (IHHA), AND/OR INDIVIDUAL MAINTENANCE PLAN (IMP) PREPARED FOR THE WORK.

3. BIO-3: CONDUCT A PRE-MAINTENANCE MEETING ON SITE PRIOR TO THE START OF ANY MAINTENANCE ACTIVITY THAT OCCURS WITHIN OR ADJACENT TO SENSITIVE BIOLOGICAL RESOURCES. THE PRE-MAINTENANCE MEETING SHALL INCLUDE A QUALIFIED BIOLOGIST, FIELD ENGINEER, PLANNER, EQUIPMENT OPERATORS/SUPERINTENDENT AND OTHER KEY PERSONNEL CONDUCTING OR INVOLVED IN CHANNEL MAINTENANCE ACTIVITIES. THE QUALIFIED BIOLOGIST SHALL POINT OUT OR IDENTIFY SENSITIVE BIOLOGICAL RESOURCES TO BE AVOIDED DURING MAINTENANCE, FLAG/DELINEATE SENSITIVE RESOURCES TO BE AVOIDED, REVIEW SPECIFIC MEASURES TO PROTECT SENSITIVE BIOLOGICAL RESOURCES AS NECESSARY. THE BIOLOGIST SHALL ALSO REVIEW THE PROPOSED EROSION CONTROL METHODS TO CONFIRM THEY WILL NOT POSE RISK TO WILDLIFE (E.G., NON-BIODEGRADABLE BLANKETS MAY ENTANGLE WILDLIFE).

4. BIO-4: AVOID THE INTRODUCTION OF INVASIVE PLANT SPECIES WITH PHYSICAL EROSION CONTROL MEASURES.

5. BIO-5: CONDUCT APPROPRIATE PRE-MAINTENANCE SURVEYS IF MAINTENANCE IS PROPOSED DURING THE BREEDING SEASON OF A SENSITIVE ANIMAL SPECIES (JANUARY 15 TO AUGUST 31). IF SENSITIVE ANIMAL SPECIES COVERED BY THE PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR) ARE IDENTIFIED, THEN APPLICABLE MEASURES FROM THE MITIGATION MONITORING AND REPORTING PLAN (MMRP) SHALL BE IMPLEMENTED UNDER THE DIRECTION OF A QUALIFIED BIOLOGIST TO AVOID SIGNIFICANT DIRECT AND/OR INDIRECT IMPACTS TO IDENTIFIED SENSITIVE ANIMAL SPECIES. IF SENSITIVE ANIMAL SPECIES ARE IDENTIFIED DURING PRE-MAINTENANCE SURVEYS THAT ARE NOT COVERED BY THE PEIR, SWD SHALL CONTACT THE APPROPRIATE WILDLIFE AGENCIES AND ADDITIONAL ENVIRONMENTAL REVIEW UNDER CEQA WILL BE REQUIRED.

6. BIO-6: REMOVE ARUNDO THROUGH ONE, OR A COMBINATION OF, THE FOLLOWING METHODS;(1) FOLIAR SPRAY (SPRAYING HERBICIDE ON LEAVES AND STEMS WITHOUT CUTTING FIRST) WHEN ARUNDO OCCURS IN MONOTYPIC STANDS, OR (2) CUT AND PAINT (CUTTING STEMS CLOSE TO THE GROUND AND SPRAYING OR PAINTING HERBICIDE ON CUT STEM SURFACE) WHEN ARUNDO IS INTERMIXED WITH NATIVE PLANTS. WHEN SEDIMENT SUPPORTING ARRUNDO MUST BE REMOVED, THE SEDIMENT SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO REMOVE THE RHIZOMES. WHEREVER FEASIBLE. FOLLOWING REMOVAL OF SEDIMENT CONTAINING RHIZOMES, LOOSE RHIZOME MATERIAL SHALL BE REMOVED FROM THE CHANNEL AND DISPOSED OFFSITE. AFTER THE INITIAL TREATMENT, THE AREA OF REMOVAL SHALL BE INSPECTED ON A QUARTERLY BASIS FOR UP TWO YEARS, OR UNTIL NO RESPROUTING IS OBSERVED DURING AN INSPECTION. IF RESPROUTING IS OBSERVED, THE CUT AND PAINT METHOD SHALL BE APPLIED TO ALL RESPROUTS.

7. BIO-7: AVOID MECHANIZED MAINTENANCE WITHIN 300 FEET OF A COOPER'S HAWK NEST, 900 FEET OF A NORTHERN HARRIER'S NEST, OR 500 FEET OF ANY OTHER RAPTOR'S NEST UNTIL ANY FLEDGLINGS HAVE LEFT THE NEST.

8. WM-1: DISPOSE AND TRANSPORT COMPOSTABLE GREEN WASTE MATERIAL TO AN APPROVED COMPOSTING FACILITY, IF AVAILABLE.

9. WM-2: RE-USE EXCAVATED MATERIAL, WHENEVER POSSIBLE, AS FILL MATERIAL, AGGREGATE SAND REPLENISHMENT, OR OTHER RAW MATERIAL USES. RE-USED MATERIAL (AGGREGATES, SOIL, SAND OR SILT) SHALL BE DOCUMENTED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

10. WM-3: SEPARATE WASTE TIRES FROM EXCAVATED MATERIAL AND TRANSPORT THEM TO AN APPROPRIATE DISPOSAL FACILITY. IF MORE THAN NINE TIRES ARE IN A VEHICLE OR WASTE BIN AT ANY ONE TIME, THEY SHALL BE TRANSPORTED UNDER A COMPLETED COMPREHENSIVE TRIP LOG (CTL) TO DOCUMENT THAT THE TIRES WERE TAKEN TO AN APPROPRIATE DISPOSAL FACILITY.

11. WM-4: LOG AND TRANSPORT ANY HAZARDOUS MATERIALS ENCOUNTERED DURING MAINTENANCE TO A HAZARDOUS WASTE STORAGE, RECYCLING, TREATMENT OR DISPOSAL FACILITY. PERSONNEL HANDLING HAZARDOUS MATERIALS SHALL HAVE THE APPROPRIATE TRAINING TO HANDLE, STORE, TRANSPORT, AND/OR DISPOSE THE MATERIAL. HAZARDOUS MATERIALS (E.G., MACHINE OIL, MERCURY SWITCHES, AND REFRIGERANT GASES) SHALL BE REMOVED FROM APPLIANCES AND DISPOSED IN ACCORDANCE WITH THIS PROTOCOL.

12. WQ-2: PREVENT OFF-SITE SEDIMENT TRANSPORT DURING MAINTENANCE THROUGH THE USE OF EROSION AND SEDIMENT CONTROLS WITHIN STORM WATER FACILITIES, ALONG ACCESS ROUTES AND AROUND STOCKPILE/STAGING AREAS. INSTALL BMPS SUCH AS SILT FENCES, FIBER ROLLS; GRAVEL BAGS; TEMPORARY SEDIMENT BASINS; STABILIZED MAINTENANCE ACCESS POINTS (E.G., SHAKER PLATES); CONTAINMENT BARRIERS (E.G., SILT FENCE, FIBER ROLLS AND/OR BERMS) FOR MATERIAL STOCKPILES; AND PROPERLY FITTED COVERS FOR MATERIAL TRANSPORT VEHICLES. REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL MEASURES UPON COMPLETION OF MAINTENANCE UNLESS THEIR REMOVAL WOULD RESULT IN GREATER ENVIRONMENTAL IMPACT THAN LEAVING THEM IN PLACE.

13. WQ-3: STORE BMP MATERIALS ON-SITE TO PROVIDE COMPLETE PROTECTION OF EXPOSED AREAS AND PREVENT OFF-SITE SEDIMENT TRANSPORT.

14. WQ-4: PROVIDE TRAINING FOR PERSONNEL RESPONSIBLE FOR THE PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF ON-SITE BMPS.

15. WQ-7: AVOID STORING HAZARDOUS MATERIALS USED DURING MAINTENANCE WITHIN 50 FEET FROM STORM WATER FACILITIES. HAZARDOUS MATERIALS SHALL BE MANAGED AND STORED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

16. WQ-8: STORE MAINTENANCE-RELATED TRASH IN AREAS AT LEAST 50 FEET FROM STORM WATER FACILITIES, AND REMOVE ANY TRASH RECEPTACLES REGULARLY (AT LEAST WEEKLY).

17. WQ-10: INSPECT EARTHEN-BOTTOM STORM WATER FACILITIES WITHIN 30 DAYS OF THE FIRST 2-YEAR STORM FOLLOWING MAINTENANCE. IMPLEMENT EROSION CONTROL MEASURES RECOMMENDED BY THE FIELD ENGINEER, SUCH AS FIBER BLANKETS, TO REMEDIATE SUBSTANTIAL EROSION WHICH HAS OCCURRED AND TO MINIMIZE FUTURE EROSION.

PEIR ENVIRONMENTAL MITIGATION MEASURES

GENERAL MITIGATION MEASURE 1 OF THE MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) ADOPTED FOR THE MMP REQUIRES ALL OF THE MITIGATION MEASURES IDENTIFIED IN THE PROGRAM EIR (PEIR) BE INCLUDED WITH THE MAINTENANCE DOCUMENTS AND CONTRACT SPECIFICATIONS FOR EACH MAINTENANCE ACTIVITY. TO FULFILL THIS REQUIREMENT, THE MMRP IS INCLUDED IN ITS ENTIRETY AS ATTACHMENT A TO THIS IMP.

ENGINEER OF WORK

CARSON P. EDGINGTON R.C.E. 76519 DATE

REGISTERED PROFESSIONAL ENGINEER * CARSON P. EDGINGTON * NO. 76519 * STATE OF CALIFORNIA *

MAINTENANCE PLANS FOR:

ALVARADO LOWER CHANNEL
MMP MAP #59 & 60

CITY OF SAN DIEGO, CALIFORNIA
TRANSPORTATION AND STORMWATER DEPARTMENT
SHEET 5 OF 5 SHEETS

I.O. NO. _____
P.T.S NO. _____
V.T.M. _____

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	REC			
AS-BUILTS				

XXXX-XXXX
NAD83 COORDINATES

XXX-XXXX
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

-5-D

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

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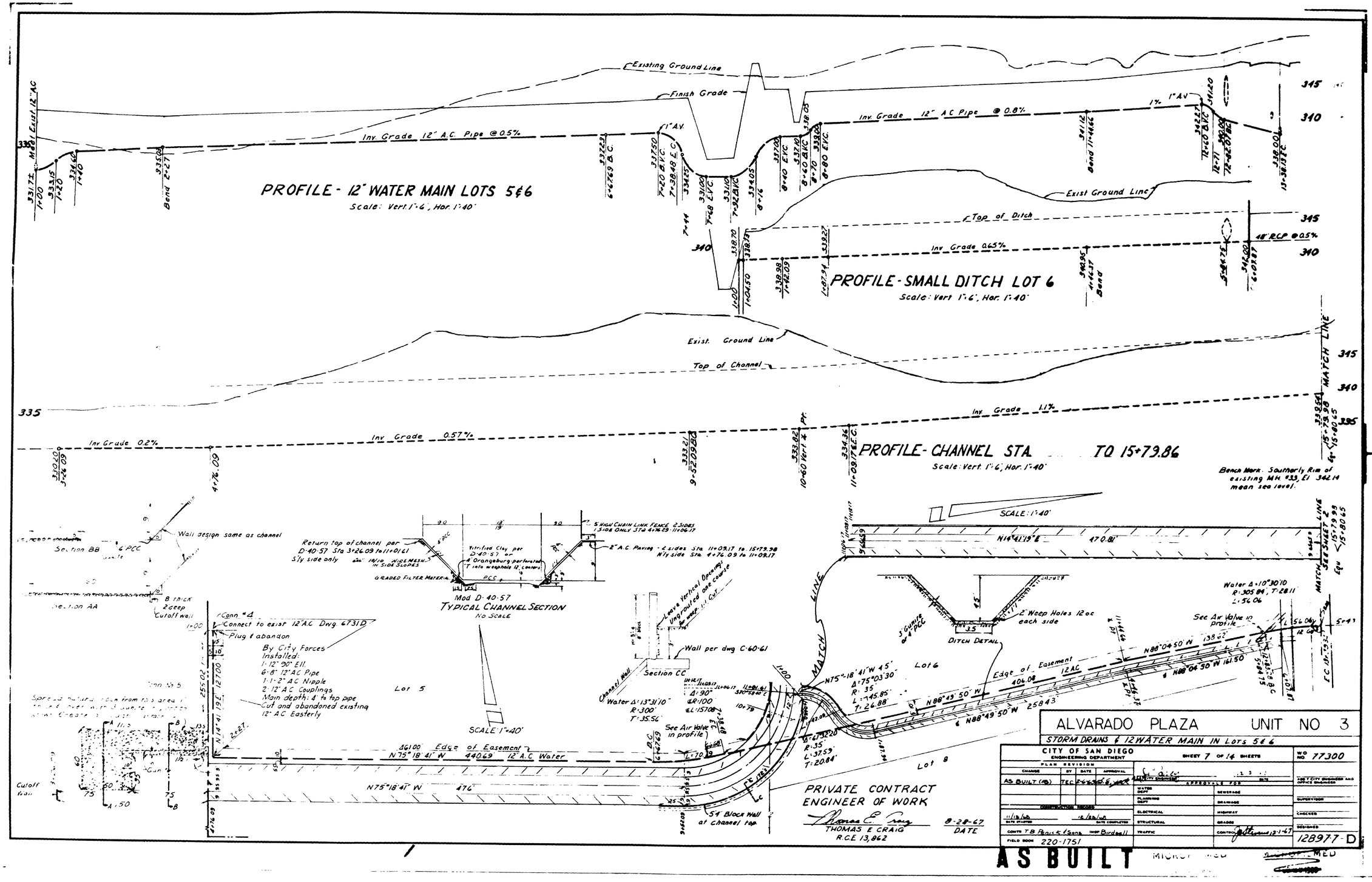
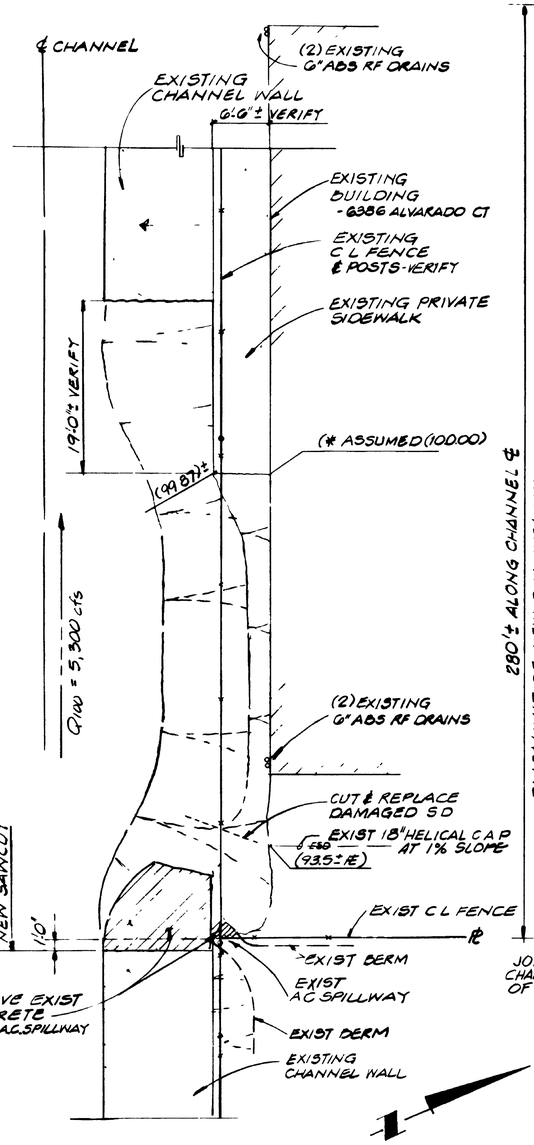
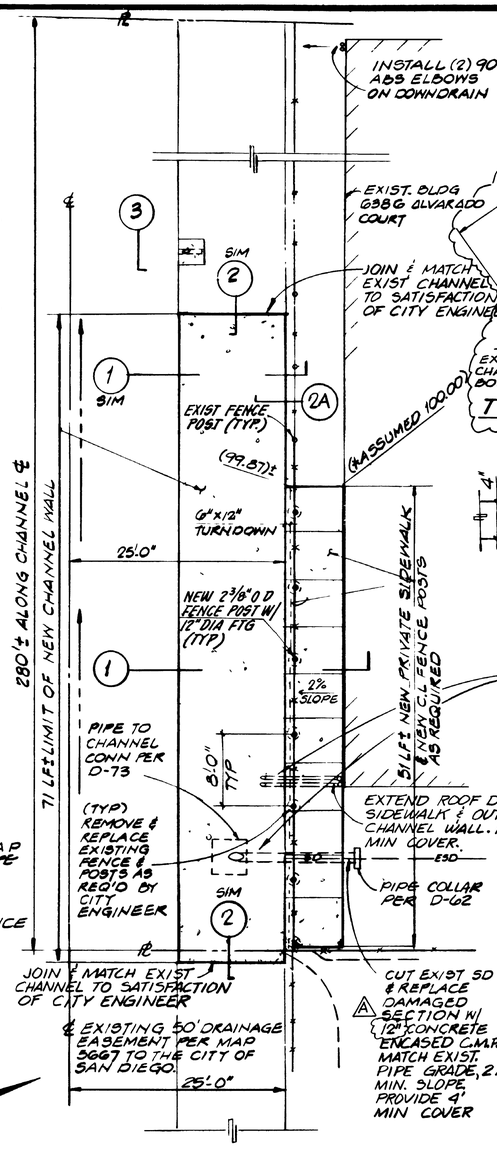
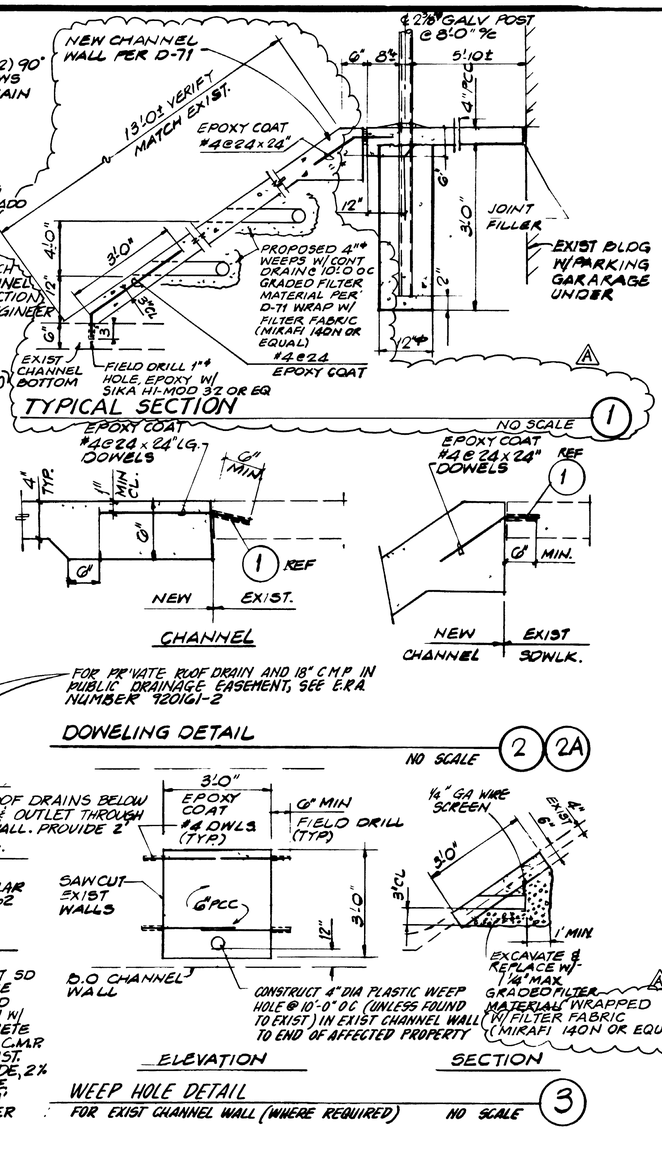


Figure 7 - As Built Construction Drawings for Upper Alvarado Concrete-Lined Channel







WORK TO BE DONE

THE IMPROVEMENTS CONSISTS OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF SAN DIEGO.

STANDARD SPECIFICATIONS

1. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1988 EDITION), INCLUDING THE 1988 REGIONAL AND 1988 CITY OF SAN DIEGO SUPPLEMENTAL AMMENDMENT DOC. NO. 769708, FILED SEPTEMBER 20, 1988.

STANDARD DRAWINGS

1 CITY OF SAN DIEGO STANDARD DRAWINGS, DOCUMENT NO. 769710, FILED SEPTEMBER 20, 1988.

EXISTING LEGEND

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
SPOT ELEVATION	(52.4)	FENCE	
CURB		STORM DRAIN	ESD
BERM	BERM	BUILDING	
CONCRETE			

PROPOSED LEGEND

IMPROVEMENT	STD. DWG. NO.	SYMBOL
FINISH ELEVATION		100.5 TC 100.3 ℄
DIRECTION OF DRAINAGE		
4" P.C.C. PRIVATE SIDEWALK	G-7, G-8, G-10, SDG-100	
18" CONCRETE ENCASED C.M.P.	D-60, D-73	
PIPE COLLAR	D-62	
6' CHAIN LINK FENCE (REUSE EXISTING FENCE-REPLACE POSTS ONLY)	M-8	
4" P.C.C. CHANNEL WALL	D-71, 220-100 (SEE DETAIL 1 FOR WEEP HOLE MODIFICATION)	

GENERAL NOTES

1. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT SPECIAL PERMISSION FROM THE ENGINEERING DEPARTMENT
2. ALL EXISTING UTILITIES OR STRUCTURES REPORTED BY THE FOLLOWING COMPANIES ARE INDICATED HEREON BASED ON INFORMATION OF RECORD. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ARRANGEMENTS FOR THE RELOCATION OR REMOVAL OF EXISTING UTILITIES AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. BEFORE STARTING WORK CONTACT:

SEWER: CITY OF SAN DIEGO	PHONE: 1-800-422-4133
WATER: CITY OF SAN DIEGO	PHONE: 1-800-422-4133
TELEPHONE: PACIFIC BELL	PHONE: 1-800-422-4133
GAS & ELECTRIC: S.D.G.& E.	PHONE: 1-800-422-4133

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONUMENTATION AND/OR BENCHMARKS WHICH WILL BE DISTURBED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENTATION BY A LISCENCED LAND SURVEYOR OR A REGISTERED CIVIL ENGINEER AUTHORIZED TO PRACTICE LAND SURVEYING. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED BY THE LISCENCED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER AS REQUIRED BY THE LAND SURVEYOR'S ACT
4. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.

PREPARED FOR

PACIFIC SOUTHWEST MOTGAGE (P.S.W.M.)
P.O. BOX 85012
SAN DIEGO, CA. 92138
(619)280-1600
ATTN: JOHN NORRIS

BENCH MARK

ASSUMED ELEVATION OF 100.00 FEET AT EDGE OF EXISTING SIDEWALK ADJACENT TO BUILDING. SEE PLAN FOR EXACT LOCATION (●).

EARTHWORK

EMBANKMENT 185 C.Y.
IMPORT 185 CY

ENGINEERING PERMIT NO 92505

REGISTERED PROFESSIONAL ENGINEER — HOWARD W FLEMING JR — NO 33001 EXP 6-30-94 — STATE OF CALIFORNIA — CIVIL

M SAMMAK No. 37146 Expires 6-30-92 CIVIL — REGISTERED PROFESSIONAL ENG. — STATE OF CALIFORNIA

PRIVATE CONTRACT

PLANS FOR THE REPAIR OF A PORTION OF:
ALVARADO CHANNEL BEHIND ALVARADO MEDICAL CENTER WITHIN PARCEL 3 OF P.M. 744 (6386 ALVARADO COURT)

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 1 OF 1 SHEETS
W O NO. 920161

FOR CITY ENGINEER — DATE 4/6/92

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				
A AS BUILT	SB&O	[illegible]	8-25-94	

1862-6309
NAD 83
222-1749
Lambert Coordinates
26574-1-D

CONTRACTOR UTZARD CONSTR. DATE STARTED 6-8-92
INSPECTOR A HANDAL DATE COMPLETED 7-24-92

48652 10

AS BUILT

SB&O — PLANNING DESIGN CONSULTATION
Civil Engineering
Structural Engineering
Land Surveying
9175 Kearny Villa Road Suite 201
San Diego, California 92123 (619) 541-1111

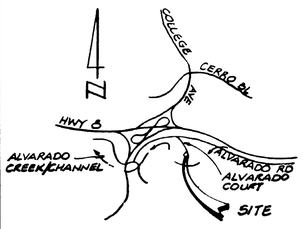
ALVARADO CHANNEL

LEGAL DESCRIPTION

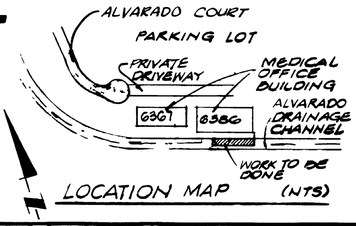
PARCEL 3, PARCEL MAP NO. 744 IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, FILED IN THE OFFICE OF THE COUNTY RECORDER, MARCH 7, 1972

SITE DEVELOPMENT

THIS IS A REPAIR PLAN
THERE WILL BE NO SITE DEVELOPMENT AS PART OF THIS PROJECT. SHOULD SITE DEVELOPMENT BE REQUIRED AT A LATER DATE A SEPERATE LAND DEVELOPMENT PERMIT WILL BE OBTAINED.



VICINITY MAP (NTS)



LOCATION MAP (NTS)

IMPORTANT NOTICE

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIGALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIGALERT I.D. NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG.

ENGINEER OF WORK AND 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 PROFESSIONAL CODE, AND THAT THE DESIGN IS CONSISTENT WITH THE CURRENT STANDARDS.
I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATION BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

Howard W Fleming Jr. 4-03-92
HOWARD W FLEMING JR RCE 33001 (EXP 6-30-94)

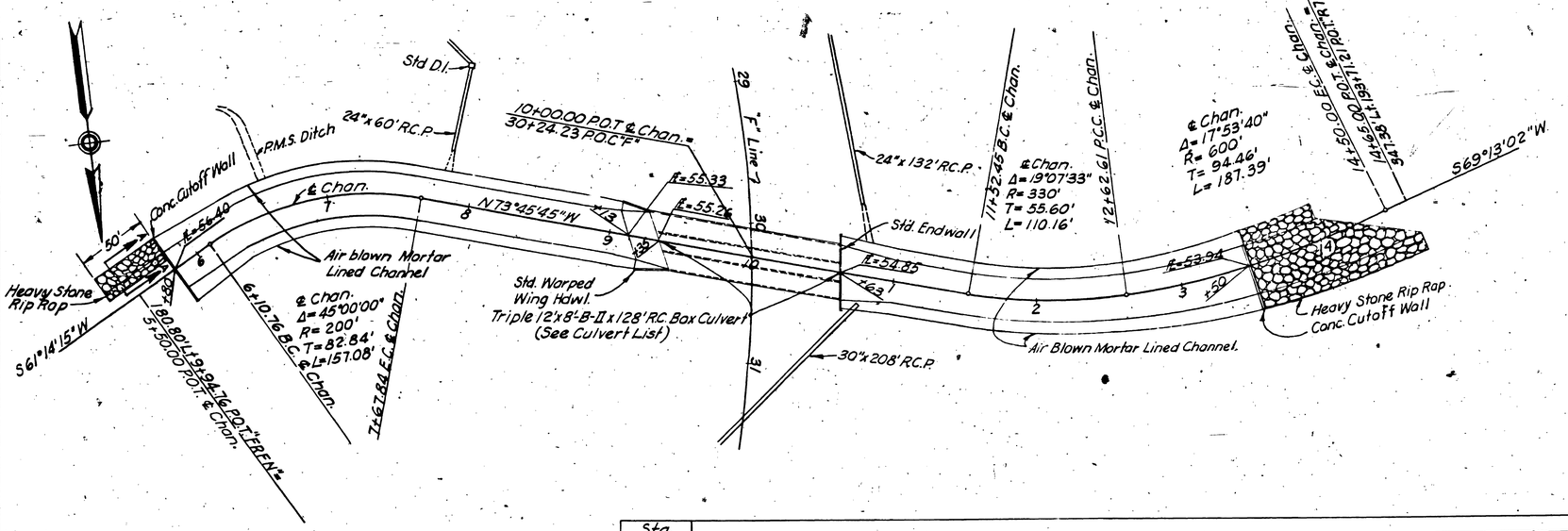
A AS BUILT ADDED SECOND ROW OF WEEP HOLES TO NEW CHANNEL WALLS & FILTER FABRIC WRAP AROUND FILTER MATERIAL, MODIFIED D-71 WEEP HOLES TO 12" ABOVE CHANNEL BTM, REVISED DOWELING BETWEEN NEW CHANNEL WALL AND EXIST BOTTOM, REVISED STORM DRAIN SIZE.

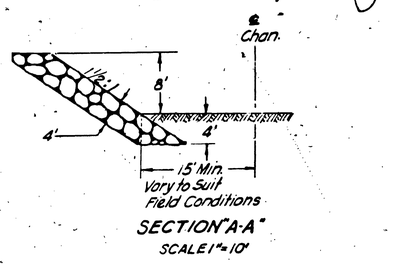
~~3-18-92~~ ~~3/30/92~~ ~~3-31-92~~ 8-11-92
~~3-18-92~~

Figure 8 - As Built Construction Drawings for Upper Alvarado Channel Repair Plan

DIST.	COUNTY	ROUTE	SECTION	SHEET NO.	TOTAL SHEETS
XI	SD	12	SDA	28	73

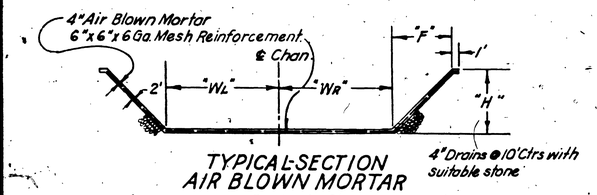
FRA DIV. No.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	CALIF.	I-172(12)		28	90



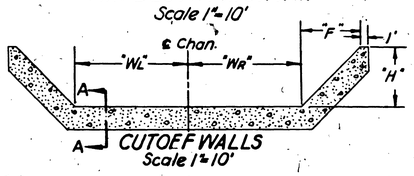


SECTION "A-A"
SCALE 1"= 10'

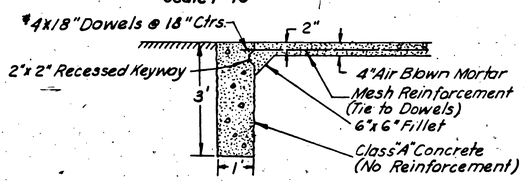
Sta. ℄ Chan.	"WL"	"WR"	"H" Ft.	"F" Ft.	
5+30	Var.	—	8	12	Begin Heavy Stone Rip Rap Lt. Const. Cutoff Wall
5+80	15.0	15.0	8	12	Const Cutoff Wall End Heavy Stone Rip Rap
5+81	15.0	15.0	8	12	Begin Air Blown Mortar
6+32	15.0	15.0	8	8	
8+89	15.0	15.0	8	8	
9+05	16.0		8 Lt.	6 Lt.	Begin Warped Wing Headwall Lt.- Tie to Air Blown Mortar with #4x18" Dowels @ 12" Ctrs.
9+05		15.0	8 Rt.	8 Rt.	
9+21		16.0	8 Rt.	6 Rt.	Begin Warped Wing Headwall Rt- Tie to Air Blown Mortar with #4x18" Dowels @ 12" Ctrs.
9+25	18.67				Begin RC. Box Culvert
9+45		18.67			Begin R.C. Box Culvert
10+60	18.67		8' Rt.	6' Rt.	End RC. Box Lt. Begin Air Blown Mortar Lt.-Tie to Straight Wing walls with #4x18" Dowels @ 12" Ctrs.
10+63					Const. Std. Type A Straight Wing End wall Skew Lt. Length 53 Ft.- No Cutoff wall-Tie to AB.M with 4"x18" Dowels @ 12" Ctrs.
10+66		18.67	8' Lt.	6' Lt.	End RC. Box Rt. Begin Air Blown Mortar Rt- Tie to Straight Wing walls with #4x18 Dowels @ 12" Ctrs.
11+00	15.0	15.0	8	8	
12+50	15.0	15.0	8	8	
13+00	15.0	18.0	8	10	
13+49	15.0	20.0	8	12	End Air Blown Mortar- Const. Cutoff Wall
13+50	15.0	20.0	8	12	Begin Heavy Stone Rip Rap
14+00	15.0	23.0	8	12	End Heavy Stone Rip Rap on Lt. Side
14+65		25.0	8	12½	End Heavy Stone Rip Rap on Rt. Side
6+62					Const. Special Inlet Depression Lt.
7+84					Const. Special Inlet Depression Lt.
10+84					Const. Special Inlet Depression Lt.



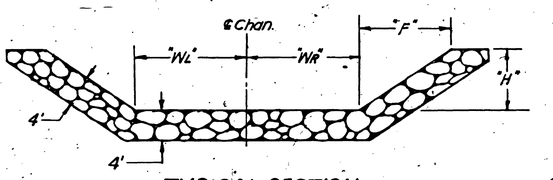
TYPICAL SECTION
AIR BLOWN MORTAR
Scale 1"= 10'



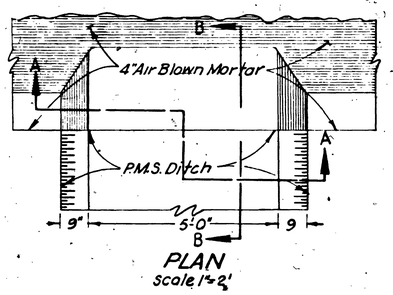
CUTOFF WALLS
Scale 1"= 10'



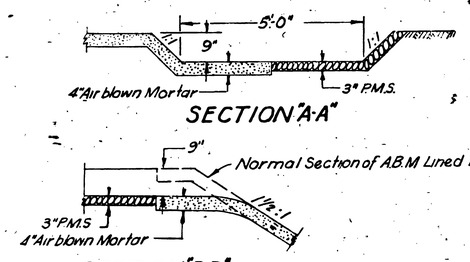
SECTION "A-A"
Scale 1"= 2'



TYPICAL SECTION
HEAVY STONE RIP-RAP
Scale 1"= 10'



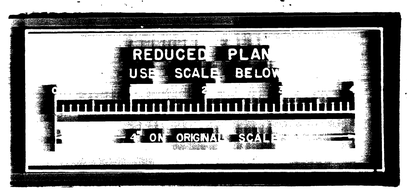
PLAN
Scale 1"= 2'



SECTION "A-A"

SECTION "B-B"

SPECIAL INLET DEPRESSION
Scale 1"= 2'

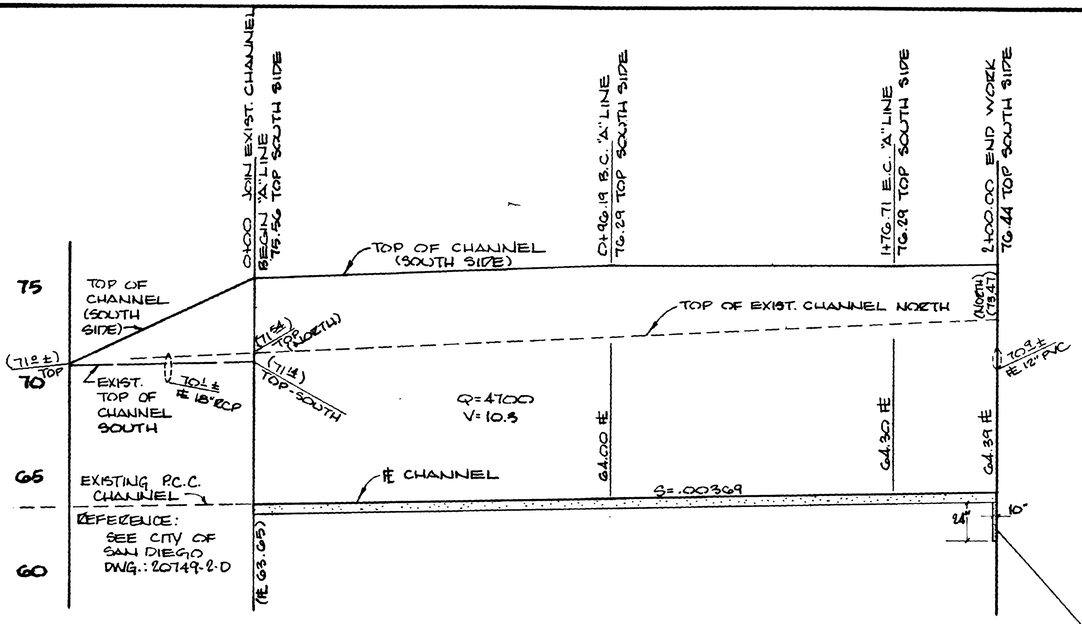


R-11-1860
St. 28+80

CHANNEL CHANGE DETAILS

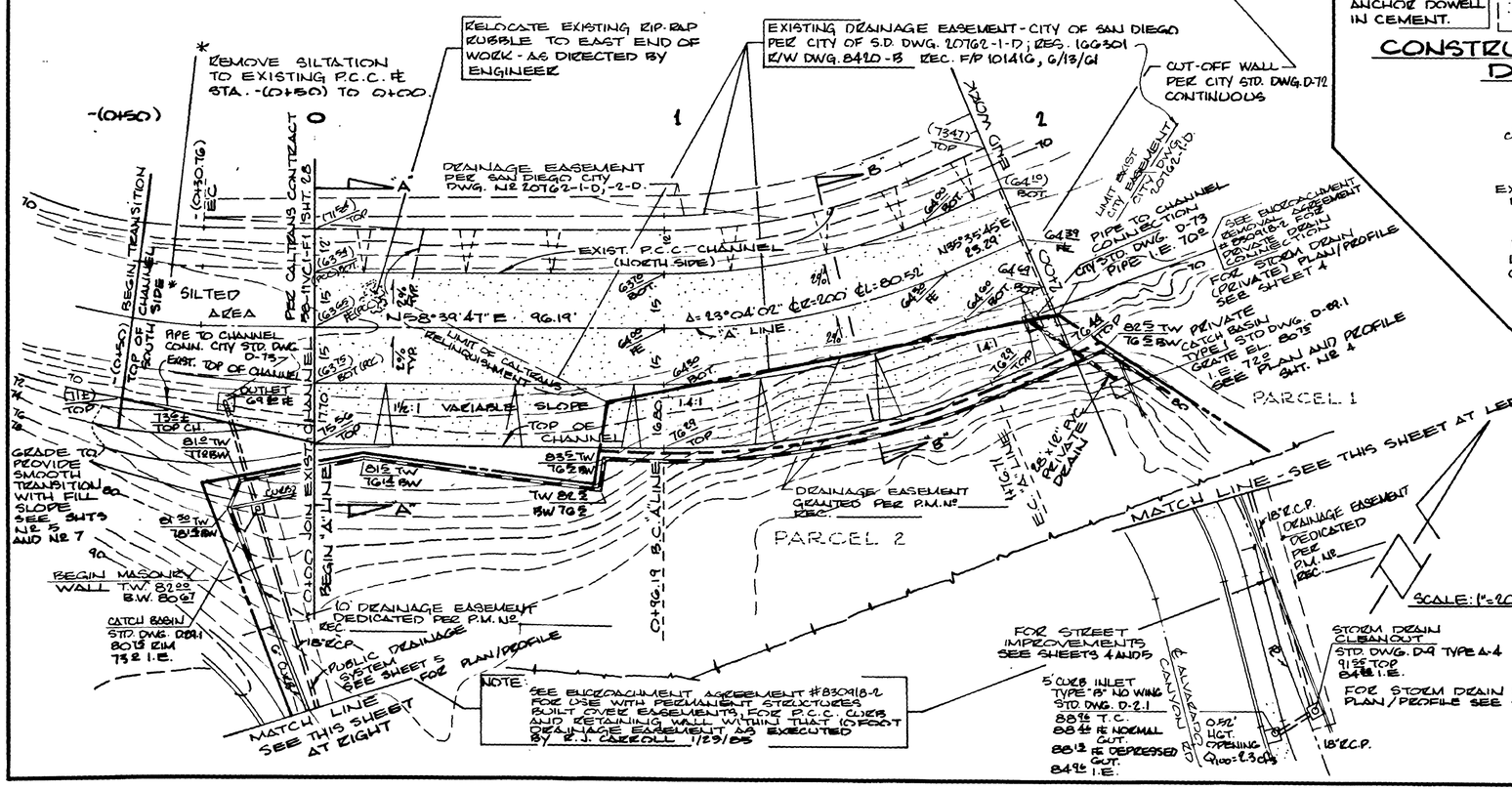
SCALES AS SHOWN

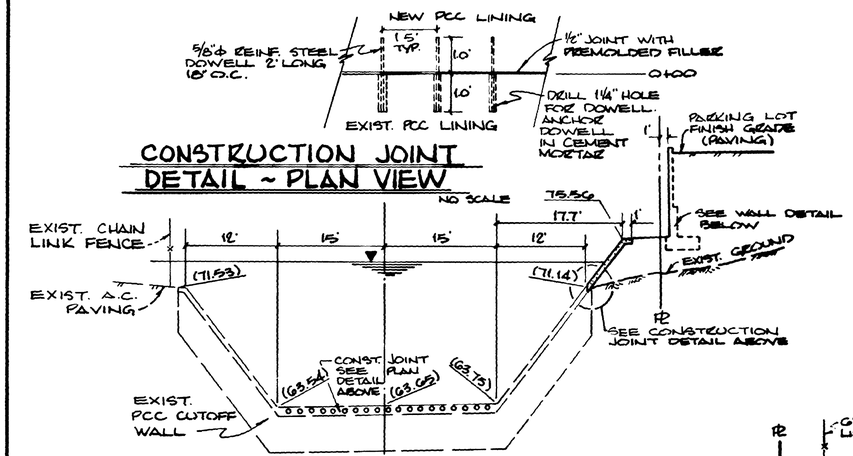
Figure 9 - Construction Drawings for Lower Alvarado - Channel Change Details



PROFILE: ALVARADO CHANNEL

SCALE: HORIZ.: 1"=20'
VERT.: 1"=4'





PRIVATE CONTRACT

PLANS FOR THE IMPROVEMENT OF:

ALVARADO CHANNEL

T.P.M. # 83-0918
STA. 0+00 TO 2+00 "A" LINE
(SOUTH SIDE AND BOTTOM)

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING DEPARTMENT
SHEET 2 OF 7 SHEETS

W.O. NO 830918

C.E. Carroll FOR CITY ENGINEER 3-24-85 DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				
AS-BUILT	SIMPSON 1/29/85		1/26/90	

CONTROL CERTIFICATION 224-1757

CONTRACTOR R. J. CARROLL DATE STARTED 8-21-85
INSPECTOR - NAVARRO DATE COMPLETED 8-21-87

21647-2-D

PLAN: ALVARADO CHANNEL

SIMPSON ENGINEERING
Civil Engineer and Land Surveyors
1240 Broadway #205
P.O. Box 2886
El Cajon, Ca. 92021
(619) 588-4065

11/8/84

REV. 1/29/85 RDS Roger D. Simpson RCE 23925

AS BUILT

Figure 10 - As Built Construction Drawings for Improvements of Alvarado Channel (Lower)

SE-G85

Figure 11 - Grading Plans for East Mission Valley Industrial Center (Portions of Lower Alvarado Reaches 3b & 4)

STADIUM ARMS MAP NO. 6521

TWAIN HEIGHTS UNIT NO. 3 MAP NO. 3585

"A" CHANGE

JOIN EXIST. CONCRETE SWALE

EXIST 36" WATER MAIN ?

LIMITS OF SECTION B-B

GRAVITY HEADWALL

SECTION B-B

7' S.D.G.&E. EASEMENT

REMOVE WOODEN BRIDGE

EXIST 18" PIPE

EXIST. GRAVITY HEADWALL

18" R.C.P.

EXIST. WATER MAIN

WATER EASEMENT

MODIFIED TYPE A-4 CLEANOUT

Asphalt

SEE SHEET NO. 2 FOR STORM DRAIN PROFILE

24" R.C.P.

N 33°10'E 2200'

REMOVE EXISTING A.C. PAVEMENT, FILL & REPAVE TO DRAIN

25' SETBACK LINE

CAUTION! 1½" H.P. GAS

SEE DETAIL AT RIGHT

11"x18" C.M.P.A.

D-20 DRAINAGE OUTLET

EXIST 8" SEWER ?

EXIST 8" WATER ?

MISSION GORGE PLACE

EXISTING OVERHEAD ELECTRICAL LINE TO BE UNDERGROUNDED BY OTHERS

12' S.D.G.&E. EASEMENT

POWER POLE TO BE RELOCATED BY OTHERS

POWER POLES TO BE RELOCATED BY OTHERS

DOWNDRAIN

EXIST. SEWER & WATER LATERALS

3"A.B.M. OR 3"P.C.C.

TOP OF EARTH BERM PER DETAIL @ RIGHT

CHANNEL "B"

NOTE REMOVE ALL EXISTING A.C. AND CONCRETE PAVEMENT BEFORE GRADING OF THIS AREA.

SWALE @ 1% MIN.

SUBDIVISION BOUNDARY

SEE LETTER OF PERMISSION

EXISTING OVERHEAD TELEPHONE LINE TO BE UNDERGROUNDED BY OTHERS

POWER POLES TO BE RELOCATED BY OTHERS

EXIST FENCE

PUBLIC UTILITY AND ROADWAY EASEMENT

CAUTION! EXISTING 8" VC SEWER PER CITY ENGR DWG #4527-D

4' SEWER EASEMENT

NEW FENCE

CUTOFF WALL (D-49)

OPENING IN BERM

MAP NO. 7761

LOT 2

BLOCK 50

LOT 4

LOT 3

MAP NO. 3738

UNIT NO. 1

GOLDEN GRANTVILLE INDUSTRIAL TRACT

SEE SHEET NO. 7

EARTH BERM DETAIL
NO SCALE

OUTLET DETAIL
NO SCALE

SECTION N-N

SECTION G-G DRAINAGE CHANNEL "A"
NO SCALE
(CONSTRUCTION DETAILS PER D-40)

THESE PLANS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL THE NOTICE TO PROCEED OR A BONDED SUBDIVISION PERMIT HAS BEEN ISSUED BY THE CITY ENGINEER.

BENCH MARK

DESCRIPTION BRASS PLUG AT NORTHEAST CORNER & LOCATION MISSION GORGE ROAD AND TWAIN AVE

ELEVATION 81.431 DATUM M.S.L.

ENGINEER OF WORK
HOUSHMAND AFTAHI R.C.E. 18878
PRIVATE CONTRACT

RICK ENGINEERING COMPANY
PLANNERS CIVIL ENGINEERS LAND SURVEYORS
5620 FRIARS ROAD SAN DIEGO, CALIFORNIA 92110 TELEPHONE (714) 281 0787

DATE 6-19-75
PROJECT NO. 5255

Grading Plans for:
EAST MISSION VALLEY INDUSTRIAL CENTER

CITY OF SAN DIEGO, CALIFORNIA
SHEET 6 OF 7 SHEETS

W.O. TM 75-22
NO. 70485

R.C.E. CITY ENGINEER 3-17-76 DATE

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL				
"A" CHANGE	DH		6-15-76	

CONTROL CERTIFICATION 3/5/76

225-1740
LAMBERT COORDINATES

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

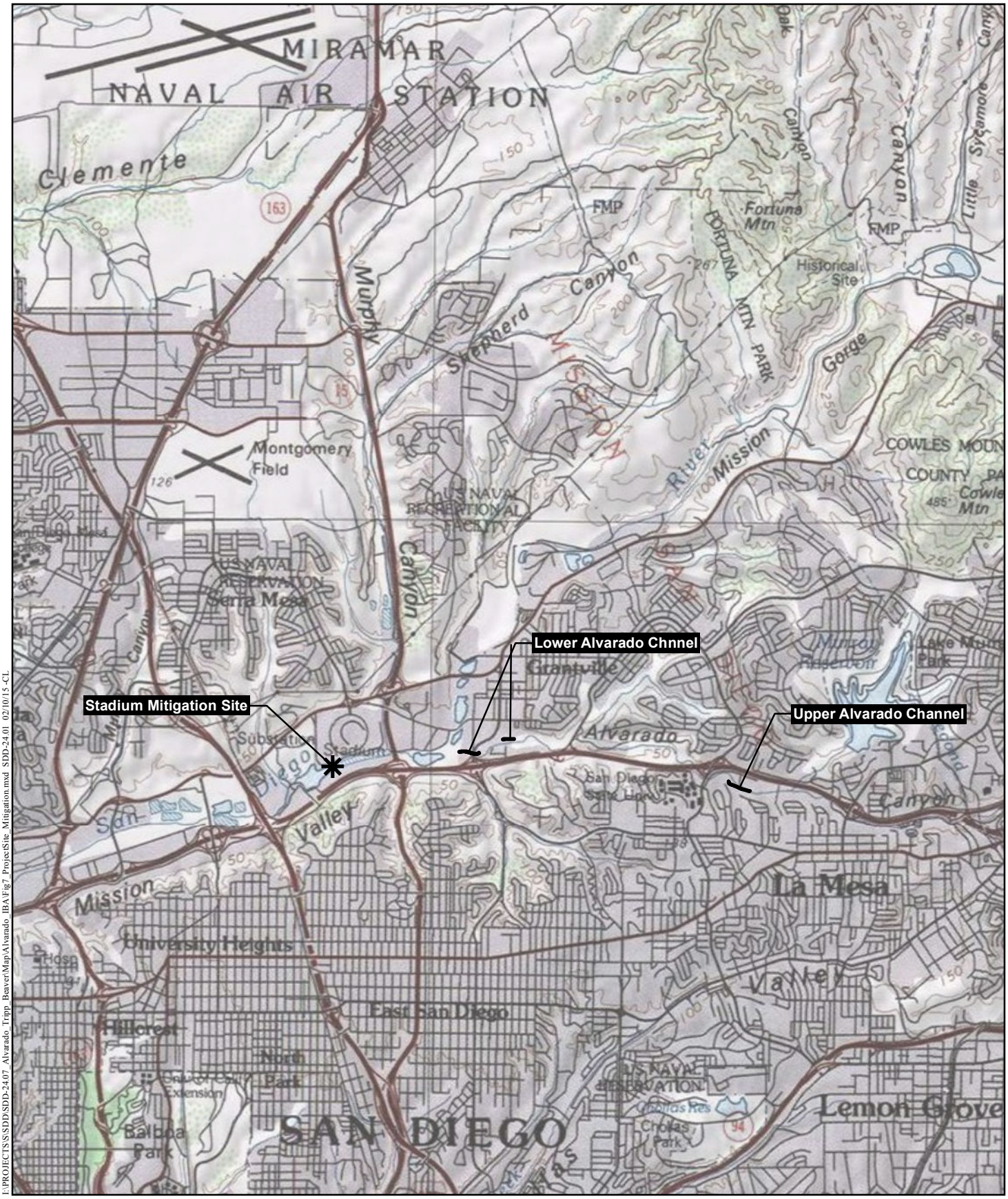
16540-G-D

"A" CHANGE - REPLACED LINED DITCH WITH 24" R.C.P. ADDED OUTLET DETAIL 6-7-76

ATTACHMENT 4
MITIGATION FIGURES

Figure 7 – Project Site and Mitigation Location Map

Stadium Wetland Mitigation Project (San Diego River) – Revised 3/13/2015
Figure 1 – General Location Map
Figure 2 – Local Vicinity Aerial Map
Figure 3 – Mitigation Site Service Area
Figure 5 – Vegetation Communities Map
Figure 6 – Delineation Map
Figure 7 – Vegetation Observed During Field Efforts – Page 1 of 6
Figure 7 – Vegetation Observed During Field Efforts – Page 2 of 6
Figure 7 – Vegetation Observed During Field Efforts – Page 3 of 6
Figure 7 – Vegetation Observed During Field Efforts – Page 4 of 6
Figure 7 – Vegetation Observed During Field Efforts – Page 5 of 6
Figure 7 – Vegetation Observed During Field Efforts – Page 6 of 6
Figure 13 – Mitigation Credit Areas
Figure 14 – Work Plan – Page 1 of 6
Figure 14 – Work Plan – Page 2 of 6
Figure 14 – Work Plan – Page 3 of 6
Figure 14 – Work Plan – Page 4 of 6
Figure 14 – Work Plan – Page 5 of 6
Figure 14 – Work Plan – Page 6 of 6



I:\PROJECTS\SDD\SDD-24.07_Alvarado_Tripp_Beaver\Map\Alvarado_IBA\Fig7_ProjectSite_Mitigation.mxd SDD-24.01 02/10/15 -CL

Project Site and Mitigation Location

STORM WATER FACILITY MAPS 59, 60 AND 64
(ALVARADO CREEK CHANNELS)

HELIX Environmental Planning

N

0 6,000 Feet

Figure 7

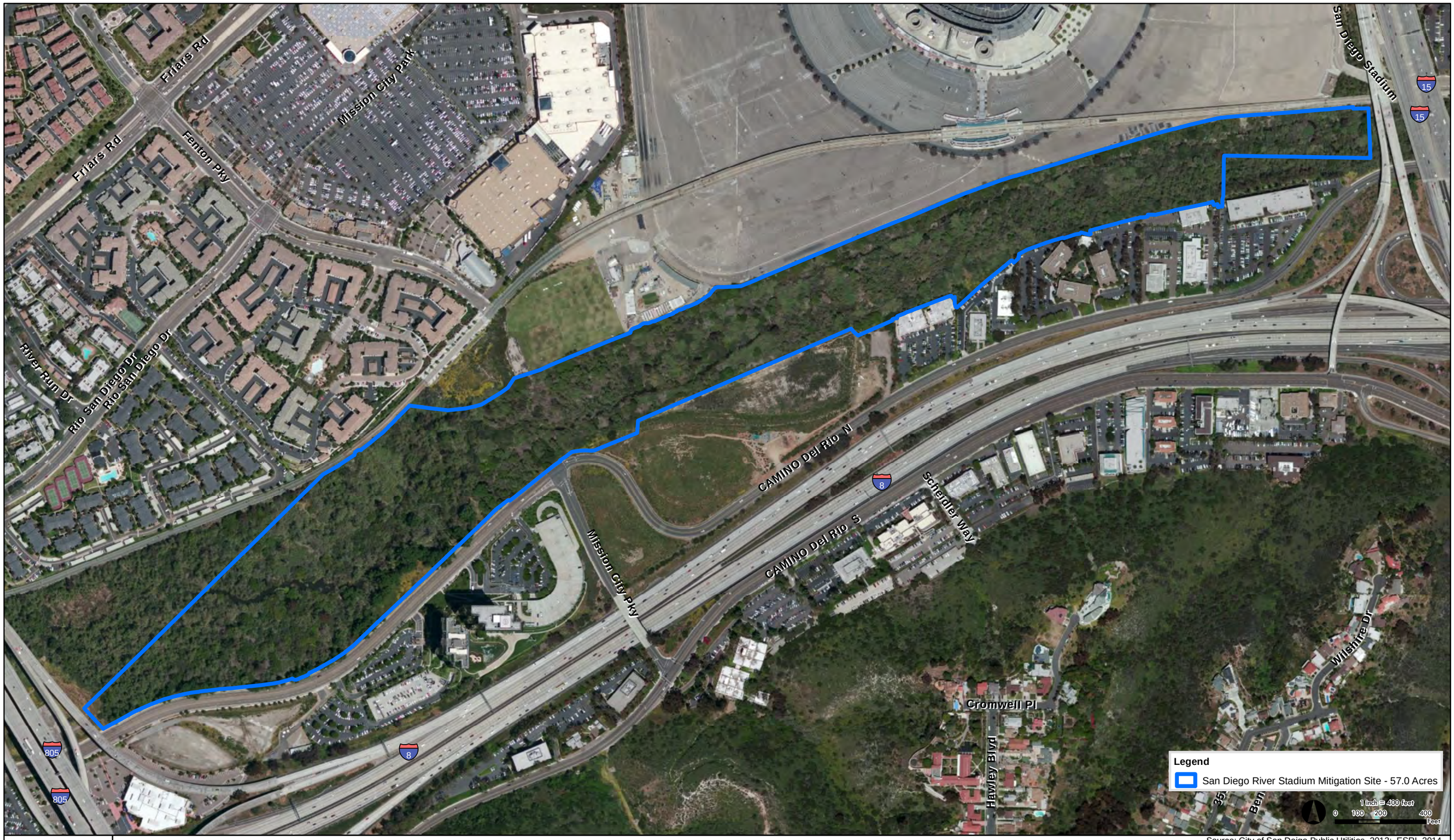
ATKINS

FIGURE 1
General Location Map

100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig1_GeneralLocation.mxd



Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

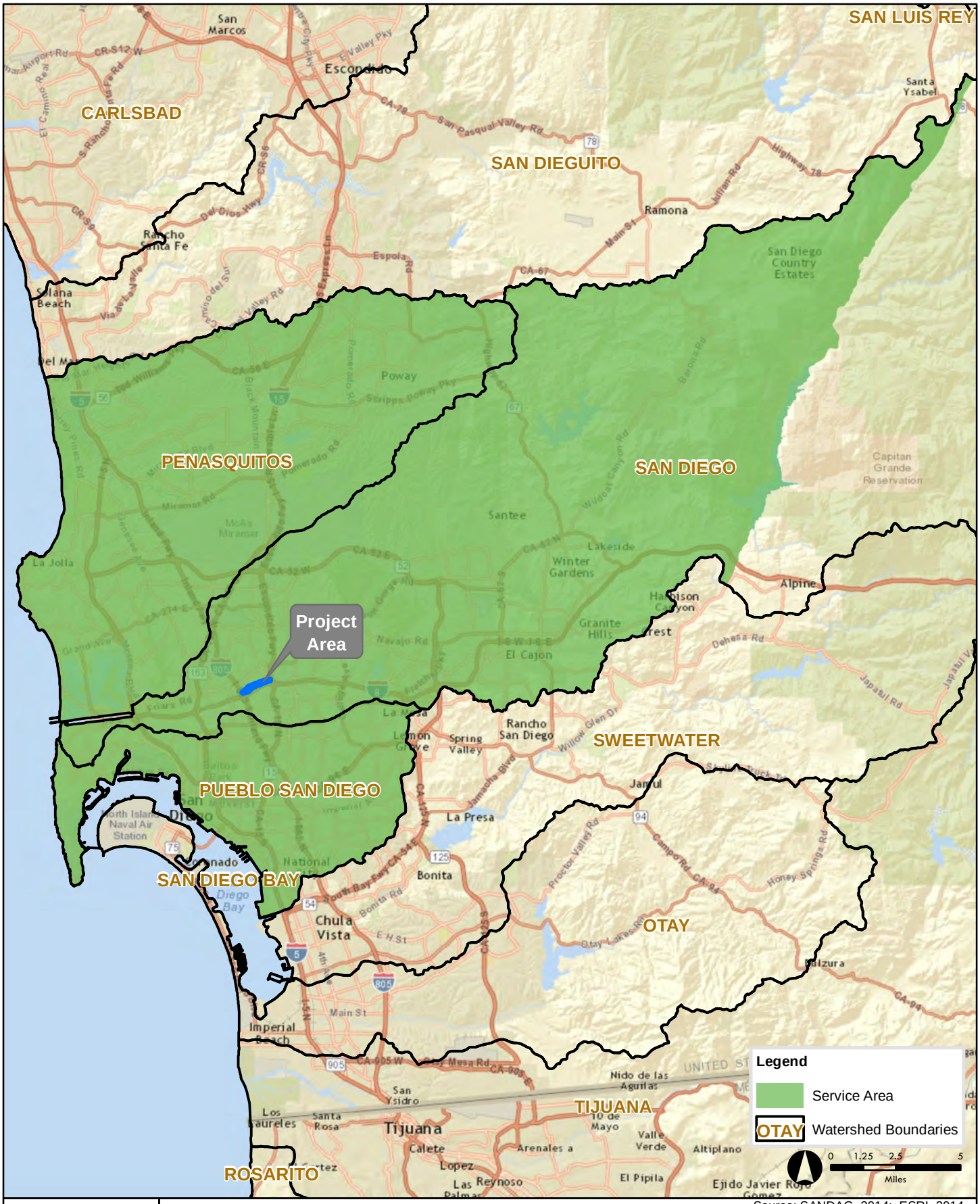
ATKINS

FIGURE 2
Local Vicintiy Aerial Map

100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig2_VicinityAerial.mxd



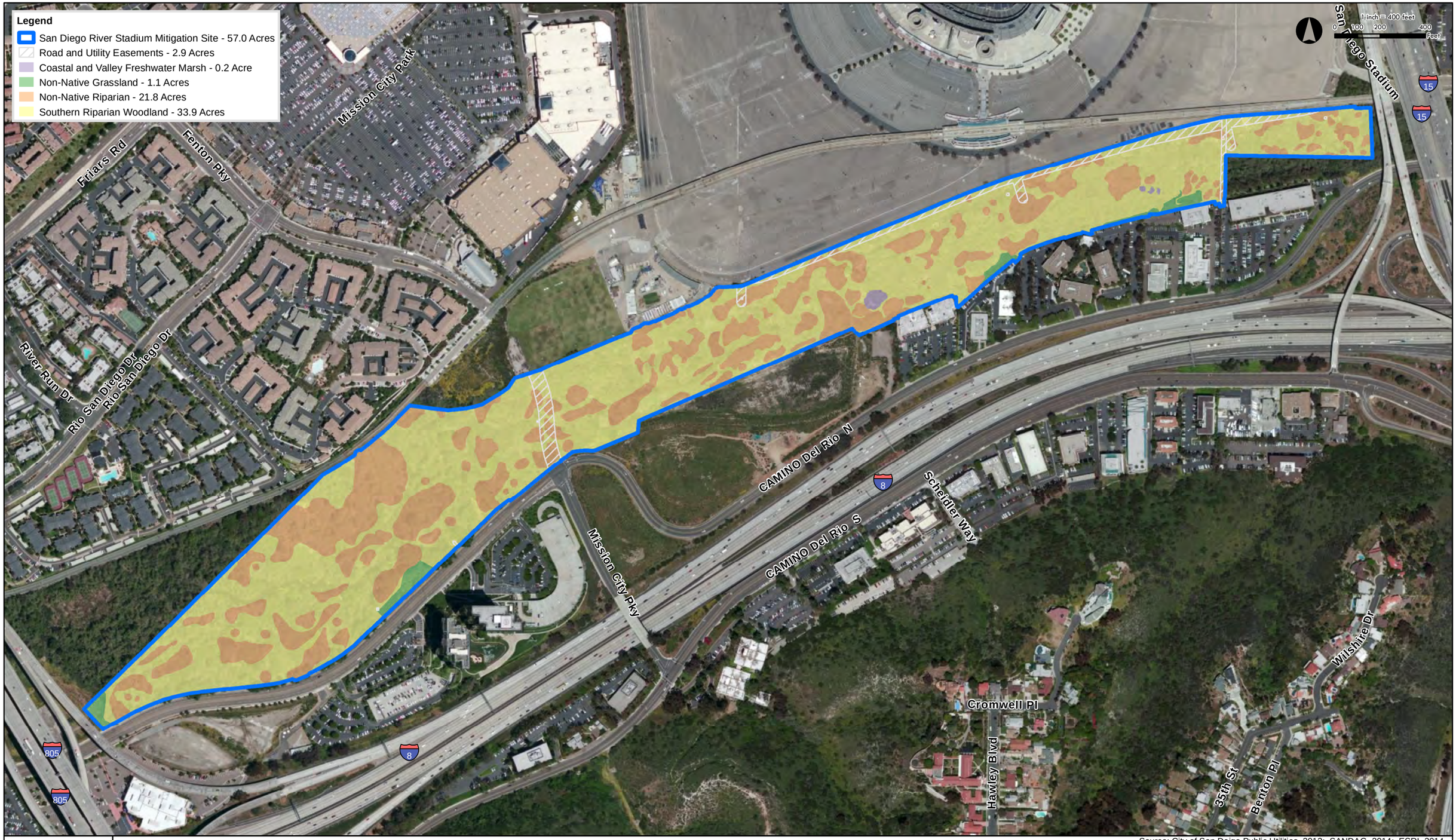
Source: SANDAG, 2014; ESRI, 2014

ATKINS

FIGURE 3
Mitigation Site Service Area

100038033 Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig3_MitigationSiteServiceArea.mxd



Source: City of San Deigo Public Utilities, 2013; SANDAG, 2014; ESRI, 2014

ATKINS

FIGURE 5
Vegetation Communities Map

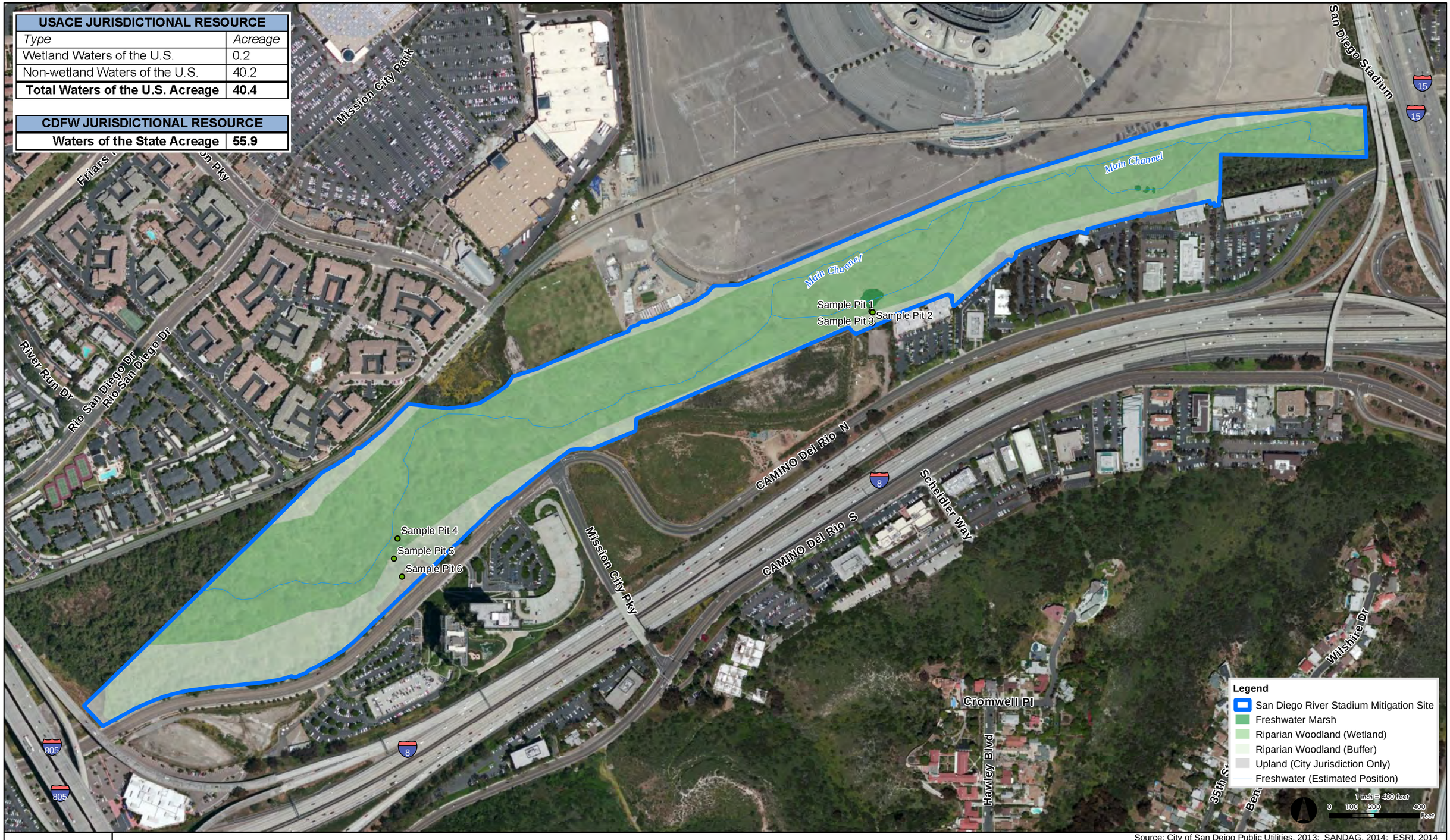
100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig5_VegetationCommunities.mxd

USACE JURISDICTIONAL RESOURCE	
Type	*Acreage*
Wetland Waters of the U.S.	0.2
Non-wetland Waters of the U.S.	40.2
Total Waters of the U.S. Acreage	**40.4**

CDFW JURISDICTIONAL RESOURCE	
Waters of the State Acreage	**55.9**



Source: City of San Deigo Public Utilities, 2013; SANDAG, 2014; ESRI, 2014

ATKINS

FIGURE 6
Delineation Map

100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig6_DileneationMap.mxd

Legend

- San Diego River Stadium Mitigation Site - 57.0 Acres
- Road and Utility Easements - 2.9 Acres

Dominant Species

- 1 - Arundo (Arundo donax)* - 10.4 Acres
- 2 - Eucalyptus (Eucalyptus sp.)* - 0.4 Acre
- 3 - Palms (Phoenix canariensis and Washingtonia robusta)* - 0.7 Acre
- 4 - Fremont Cottonwood (Populus fremontii) - 0.1 Acre
- 5 - Ngaio Tree (Myoporum laetum)* - 1.1 Acres
- 6 - Brazilian Pepper Tree (Schinus terebinthifolius)* - 4.8 Acres
- 7 - Pampas Grass (Cortaderia jubata)* - 3.0 Acres
- 8 - Tamarisk (Tamarix ramosissima)* - 0.2 Acre
- 9 - Edible Fig (Ficus carica)* - 0.2 Acre
- 10 - Understory Mix (L. latifolium, Foeneculum vulgare, and Carpobrotus edulis)* - 0.1 Acre
- 11 - Cape Ivy (Delairea odorata)* - 0.1 Acre
- 12 - Shrub Mix (S. terebinthifolius and M. laetum)* - 0.5 Acre
- 13 - Oleander (Nerium oleander)* - Less than 0.1 Acre
- 14 - Castor Bean (Ricinus communis)* - Less than 0.1 Acre
- 15 - California Bulrush (Scirpus californicus) - 0.2 Acre
- 16 - Perennial Pepperweed (Lepidium latifolium)* - 0.1 Acre
- 17 - Populus fremontii and Salix sp. - 2.7 Acres
- 18 - Dominant Mixed Riparian with Eucalyptus - 0.2 Acre
- 19 - Dominant Mixed Riparian with Ngaio Tree - 0.1 Acre
- 20 - Non-native Grasses and Forbs* - 0.8 Acre
- 21 - Mixed Riparian 31.1 Acres

* = Introduced or Invasive Species

1 inch = 90 feet
0 20 40 80 Feet

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 7
Vegetation Observed During Field Efforts - Page 1 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig7_VegetationMapbookPage1.mxd

Legend

- San Diego River Stadium Mitigation Site - 57.0 Acres
- Road and Utility Easements - 2.9 Acres

Dominant Species

- 1 - Arundo (Arundo donax)* - 10.4 Acres
- 2 - Eucalyptus (Eucalyptus sp.)* - 0.4 Acre
- 3 - Palms (Phoenix canariensis and Washingtonia robusta)* - 0.7 Acre
- 4 - Fremont Cottonwood (Populus fremontii) - 0.1 Acre
- 5 - Ngaio Tree (Myoporum laetum)* - 1.1 Acres
- 6 - Brazilian Pepper Tree (Schinus terebinthifolius)* - 4.8 Acres
- 7 - Pampas Grass (Cortaderia jubata)* - 3.0 Acres
- 8 - Tamarisk (Tamarix ramosissima)* - 0.2 Acre
- 9 - Edible Fig (Ficus carica)* - 0.2 Acre
- 10 - Understory Mix (L. latifolium, Foeneculum vulgare, and Carpobrotus edulis)* - 0.1 Acre
- 11 - Cape Ivy (Delairea odorata)* - 0.1 Acre
- 12 - Shrub Mix (S. terebinthifolius and M. laetum)* - 0.5 Acre
- 13 - Oleander (Nerium oleander)* - Less than 0.1 Acre
- 14 - Castor Bean (Ricinus communis)* - Less than 0.1 Acre
- 15 - California Bulrush (Scirpus californicus) - 0.2 Acre
- 16 - Perennial Pepperweed (Lepidium latifolium)* - 0.1 Acre
- 17 - Populus fremontii and Salix sp. - 2.7 Acres
- 18 - Dominant Mixed Riparian with Eucalyptus - 0.2 Acre
- 19 - Dominant Mixed Riparian with Ngaio Tree - 0.1 Acre
- 20 - Non-native Grasses and Forbs* - 0.8 Acre
- 21 - Mixed Riparian 31.1 Acres

* = Introduced or Invasive Species

1 inch = 90 feet
0 20 40 80 Feet

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

ATKINS

FIGURE 7
Vegetation Observed During Field Efforts - Page 2 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig7_VegetationMapbookPage2.mxd

Legend

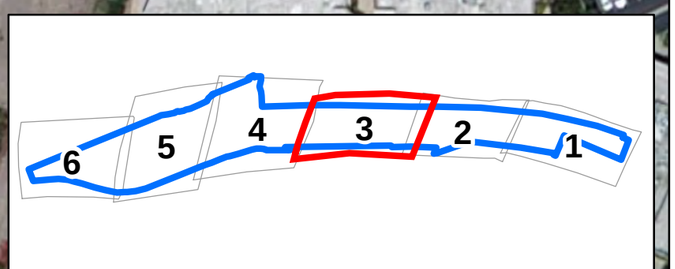
- San Diego River Stadium Mitigation Site - 57.0 Acres
- Road and Utility Easements - 2.9 Acres

Dominant Species

- 1 - Arundo (Arundo donax)* - 10.4 Acres
- 2 - Eucalyptus (Eucalyptus sp.)* - 0.4 Acre
- 3 - Palms (Phoenix canariensis and Washingtonia robusta)* - 0.7 Acre
- 4 - Fremont Cottonwood (Populus fremontii) - 0.1 Acre
- 5 - Ngaio Tree (Myoporum laetum)* - 1.1 Acres
- 6 - Brazilian Pepper Tree (Schinus terebinthifolius)* - 4.8 Acres
- 7 - Pampas Grass (Cortaderia jubata)* - 3.0 Acres
- 8 - Tamarisk (Tamarix ramosissima)* - 0.2 Acre
- 9 - Edible Fig (Ficus carica)* - 0.2 Acre
- 10 - Understory Mix (L. latifolium, Foeneculum vulgare, and Carpobrotus edulis)* - 0.1 Acre
- 11 - Cape Ivy (Delairea odorata)* - 0.1 Acre
- 12 - Shrub Mix (S. terebinthifolius and M. laetum)* - 0.5 Acre
- 13 - Oleander (Nerium oleander)* - Less than 0.1 Acre
- 14 - Castor Bean (Ricinus communis)* - Less than 0.1 Acre
- 15 - California Bulrush (Scirpus californicus) - 0.2 Acre
- 16 - Perennial Pepperweed (Lepidium latifolium)* - 0.1 Acre
- 17 - Populus fremontii and Salix sp. - 2.7 Acres
- 18 - Dominant Mixed Riparian with Eucalyptus - 0.2 Acre
- 19 - Dominant Mixed Riparian with Ngaio Tree - 0.1 Acre
- 20 - Non-native Grasses and Forbs* - 0.8 Acre
- 21 - Mixed Riparian 31.1 Acres

* = Introduced or Invasive Species

1 inch = 100 feet
0 25 50 100 Feet



Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 7
Vegetation Observed During Field Efforts - Page 3 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

P:\Projects - Biological Resources\100038033 San Diego River Stadium Mitigation Project\GIS\mxd\Fig7_VegetationMapbookPage3.mxd

Legend

- San Diego River Stadium Mitigation Site - 57.0 Acres
- Road and Utility Easements - 2.9 Acres

Dominant Species

- 1 - Arundo (Arundo donax)* - 10.4 Acres
- 2 - Eucalyptus (Eucalyptus sp.)* - 0.4 Acre
- 3 - Palms (Phoenix canariensis and Washingtonia robusta)* - 0.7 Acre
- 4 - Fremont Cottonwood (Populus fremontii) - 0.1 Acre
- 5 - Ngaio Tree (Myoporum laetum)* - 1.1 Acres
- 6 - Brazilian Pepper Tree (Schinus terebinthifolius)* - 4.8 Acres
- 7 - Pampas Grass (Cortaderia jubata)* - 3.0 Acres
- 8 - Tamarisk (Tamarix ramosissima)* - 0.2 Acre
- 9 - Edible Fig (Ficus carica)* - 0.2 Acre
- 10 - Understory Mix (L. latifolium, Foeneculum vulgare, and Carpobrotus edulis)* - 0.1 Acre
- 11 - Cape Ivy (Delairea odorata)* - 0.1 Acre
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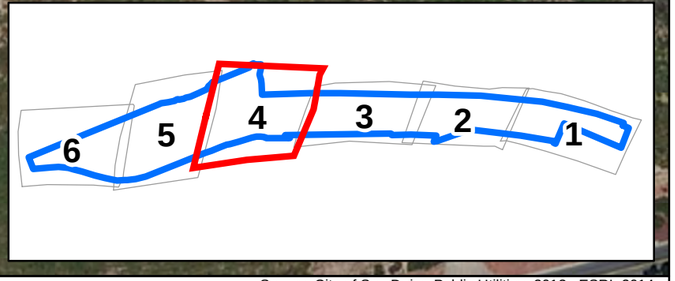
- 21 - Mixed Riparian 31.1 Acres

* = Introduced or Invasive Species

1 inch = 130 feet
0 30 60 120
Feet



Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 7
Vegetation Observed During Field Efforts - Page 4 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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Legend

- San Diego River Stadium Mitigation Site - 57.0 Acres
- Road and Utility Easements - 2.9 Acres

Dominant Species

- 1 - Arundo (Arundo donax)* - 10.4 Acres
- 2 - Eucalyptus (Eucalyptus sp.)* - 0.4 Acre
- 3 - Palms (Phoenix canariensis and Washingtonia robusta)* - 0.7 Acre
- 4 - Fremont Cottonwood (Populus fremontii) - 0.1 Acre
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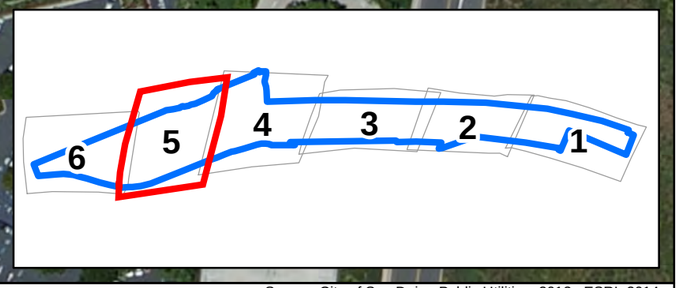
1 inch = 130 feet
0 30 60 120
Feet



Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 7
Vegetation Observed During Field Efforts - Page 5 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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Legend

- San Diego River Stadium Mitigation Site - 57.0 Acres
- Road and Utility Easements - 2.9 Acres

Dominant Species

- 1 - Arundo (Arundo donax)* - 10.4 Acres
- 2 - Eucalyptus (Eucalyptus sp.)* - 0.4 Acre
- 3 - Palms (Phoenix canariensis and Washingtonia robusta)* - 0.7 Acre
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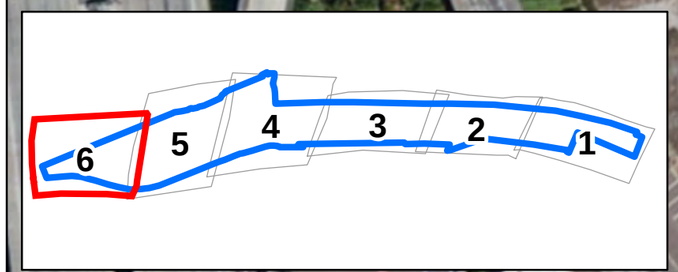

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

FIGURE 7
Vegetation Observed During Field Efforts - Page 6 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 13
Mitigation Credit Areas

100038033

Stadium Wetland Mitigation Project (San Diego River)

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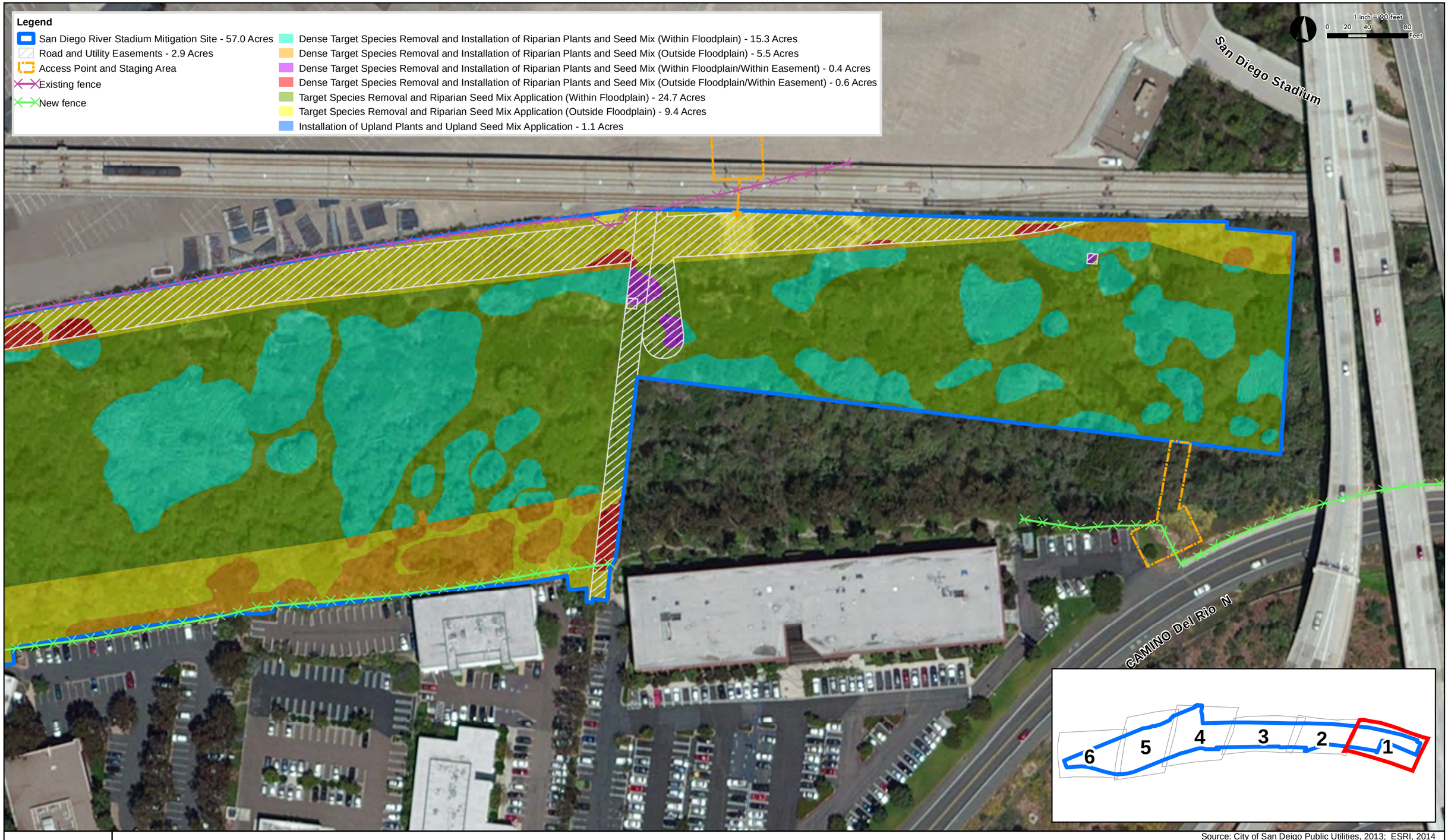

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 14
Work Plan - Page 1 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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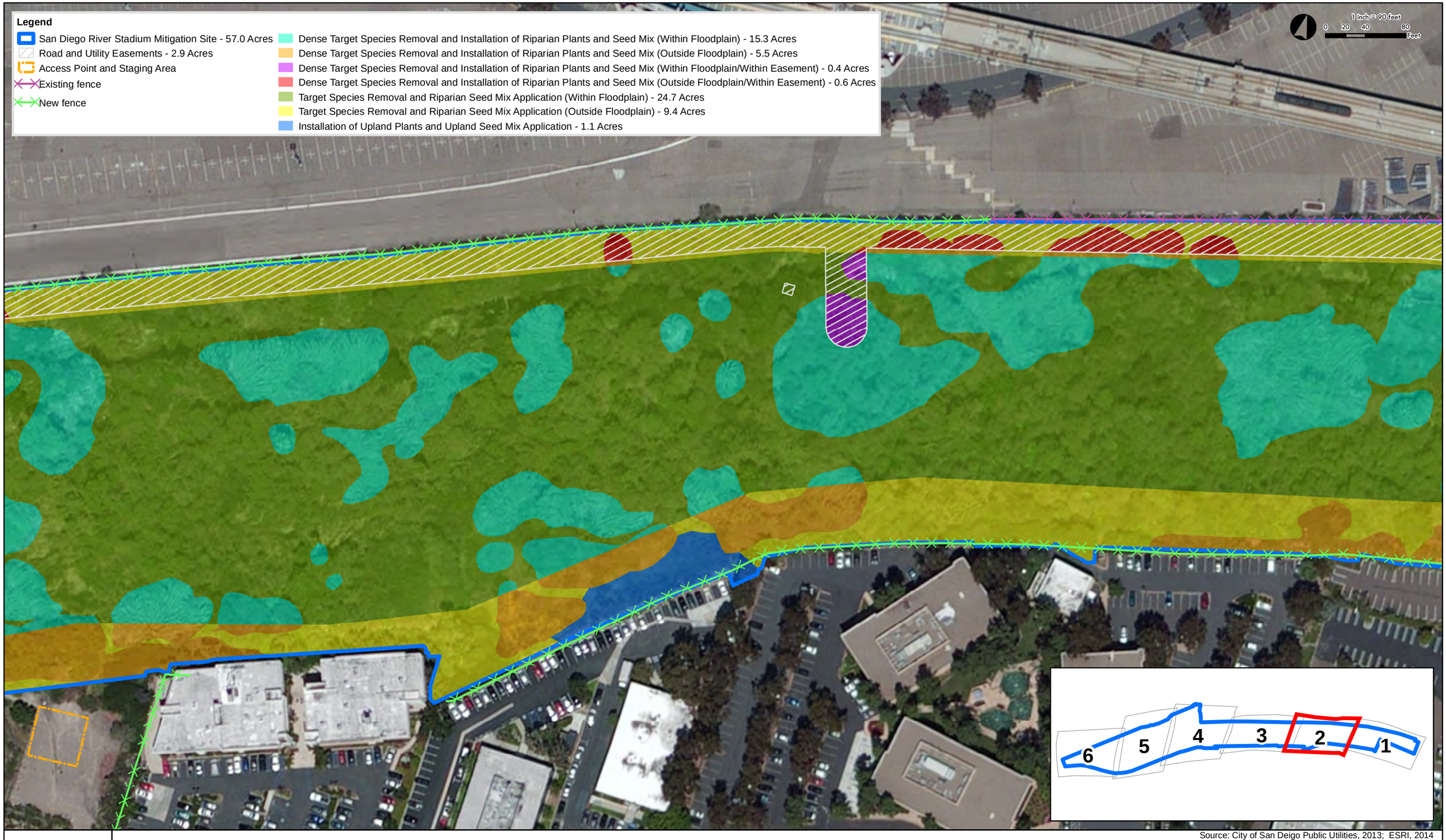

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

ATKINS

FIGURE 14
Work Plan - Page 2 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 14
Work Plan - Page 3 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 14
Work Plan - Page 4 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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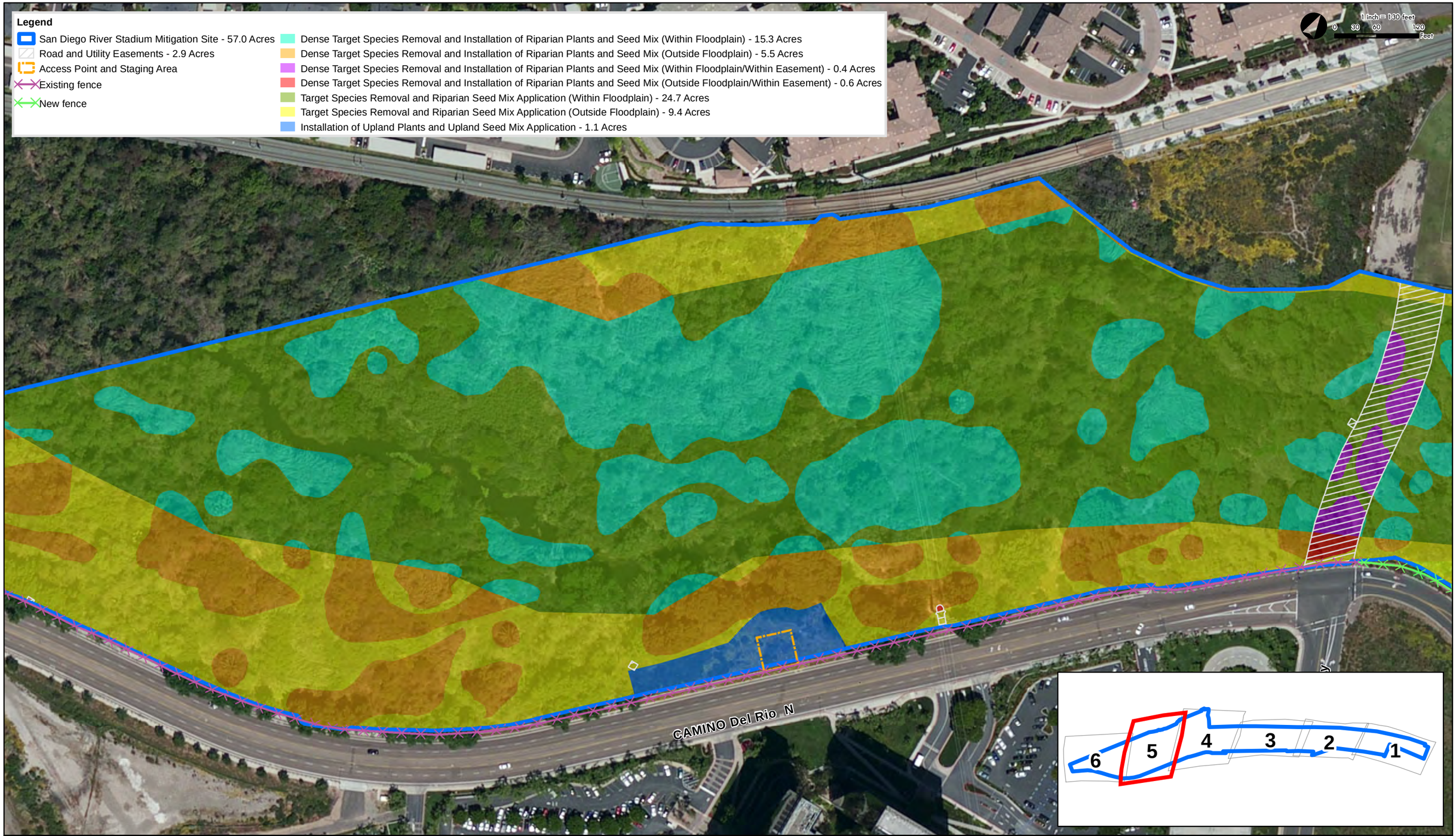

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

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FIGURE 14
Work Plan - Page 5 of 6

100038033

Stadium Wetland Mitigation Project (San Diego River)

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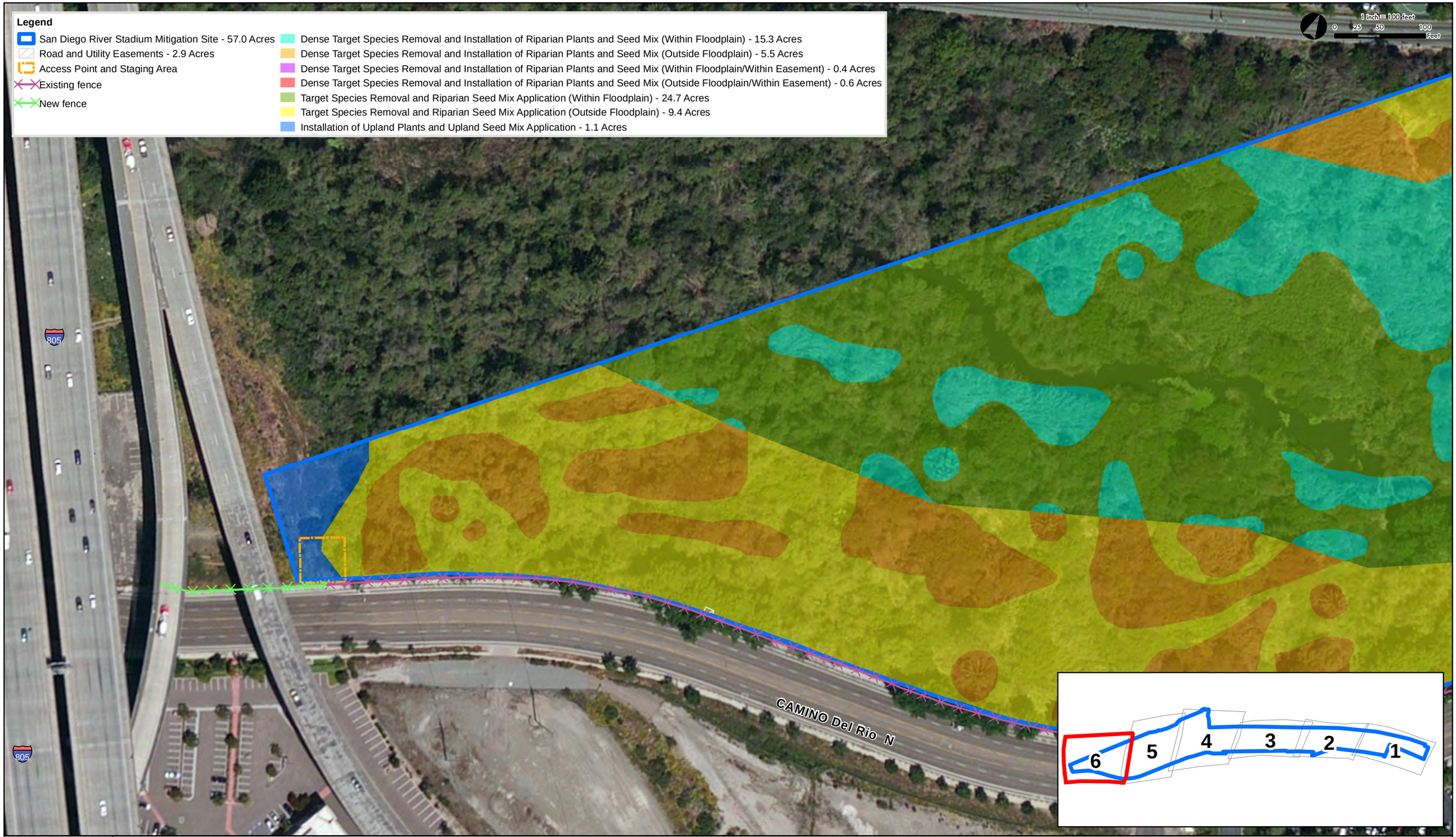

ATKINS

FIGURE 14
Work Plan - Page 6 of 6

Source: City of San Deigo Public Utilities, 2013; ESRI, 2014

100038033

Stadium Wetland Mitigation Project (San Diego River)

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ATTACHMENT 5
CEQA MITIGATION MONITORING AND REPORTING PROGRAM

Applicable PEIR Mitigation Measures

GENERAL

General Mitigation 1: Prior to commencement of work, the ADD Environmental Designee of the Entitlements Division shall verify that mitigation measures for impacts to biological resources (Mitigation Measures 4.3.1 through 4.3.20), historical resources (Mitigation Measures 4.4.1 and 4.4.2), land use policy (Mitigation Measures 4.1.1 through 4.1.13), paleontological resources (Mitigation Measure 4.7.1), and water quality (Mitigation Measures 4.8.1 through 4.8.3) have been included in entirety on the submitted maintenance documents and contract specifications, and included under the heading, "Environmental Mitigation Requirements." In addition, the requirements for a Pre-maintenance Meeting shall be noted on all maintenance documents.

General Mitigation 2: Prior to the commencement of work, a Pre-maintenance Meeting shall be conducted and include, as appropriate, the MMC, SWD Project Manager, Biological Monitor, Historical Monitor, Paleontological Monitor, Water Quality Specialist, and Maintenance Contractor, and other parties of interest.

General Mitigation 3: Prior to the commencement of work, evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

General Mitigation 4: Prior to commencement of work and pursuant to Section 1600 et seq. of the State of California Fish & Game Code, evidence of compliance with Section 1605 is required, if applicable. Evidence shall include either copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

BIOLOGICAL RESOURCES

Mitigation Measure 4.3.1: Prior to commencement of any activity within a specific annual maintenance program, a qualified biologist shall prepare an IBA for each area proposed to be maintained. The IBA shall be prepared in accordance with the specifications included in the Master Program.

Mitigation Measure 4.3.2: No maintenance activities within a proposed annual maintenance program shall be initiated before the City's Assistant Deputy Director (ADD) Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IBAs including proposed mitigation for each of the proposed activities. In their review, the ADD Environmental Designee and agencies shall confirm that the appropriate maintenance protocols have been incorporated into each IMP.

Mitigation Measure 4.3.3: No maintenance activities within a proposed annual maintenance

program shall be initiated until the City's ADD Environmental Designee and Mitigation Monitoring Coordinator (MMC) have approved the qualifications for biologist(s) who shall be responsible for monitoring maintenance activities which may impact sensitive biological resources.

Mitigation Measure 4.3.4: Prior to undertaking any maintenance activity included in an annual maintenance program, a mitigation account shall be established to provide sufficient funds to implement all biological mitigation associated with the proposed maintenance activities. The fund amount shall be determined by the ADD Environmental Designee. The account shall be managed by the City's SWD, with quarterly status reports submitted to DSD. The status reports shall separately identify upland and wetland account activity. Based upon the impacts identified in the IBAs, money shall be deposited into the account, as part of the project submittal, to ensure available funds for mitigation.

Mitigation Measure 4.3.5: Prior to commencing any activity that could impact wetlands, evidence of compliance with other permitting authorities is required, if applicable. Evidence shall include copies of permits issued, letters of resolution issued by the Responsible Agency documenting compliance, or other evidence documenting compliance and deemed acceptable by the ADD Environmental Designee.

Mitigation Measure 4.3.6: Prior to commencing any activity where the IBA indicates significant impacts to biological resources may occur, a pre-maintenance meeting shall be held on site with the following in attendance: City's SWD Maintenance Manager (MM), MMC, and Maintenance Contractor (MC). The biologist selected to monitor the activities shall be present. At this meeting, the monitoring biologist shall identify and discuss the maintenance protocols that apply to the maintenance activities.

At the pre-maintenance meeting, the monitoring biologist shall submit to the MMC and MC a copy of the maintenance plan (reduced to 11"x17") that identifies areas to be protected, fenced, and monitored. This data shall include all planned locations and design of noise attenuation walls or other devices. The monitoring biologist also shall submit a maintenance schedule to the MMC and MC indicating when and where monitoring is to begin and shall notify the MMC of the start date for monitoring.

Mitigation Measure 4.3.7: Within three months following the completion of mitigation monitoring, two copies of a written draft report summarizing the monitoring shall be prepared by the monitoring biologist and submitted to the MMC for approval. The draft monitoring report shall describe the results including any remedial measures that were required. Within 90 days of receiving comments from the MMC on the draft monitoring report, the biologist shall submit one copy of the final monitoring report to the MMC.

Mitigation Measure 4.3.8: Within six months of the end of an annual storm water facility maintenance program, the monitoring biologist shall complete an annual report which shall be distributed to the following agencies: the City of San Diego DSD, CDFG, RWQCB, USFWS, and Corps. At a minimum, the report shall contain the following information:

- Tabular summary of the biological resources impacted during maintenance and the mitigation;

- Master table containing the following information for each individual storm water facility or segment which is regularly maintained;

- Date and type of most recent maintenance;

- Description of mitigation which has occurred; and

- Description of the status of mitigation which has been implemented for past maintenance activities.

Mitigation Measure 4.3.9: Wetland impacts resulting from maintenance shall be mitigated in one of the following two ways: (1) habitat creation, restoration, and/or enhancement, or (2) mitigation credits. The amount of mitigation shall be in accordance with ratios in Table 4.3-10 unless different mitigation ratios are required by state or federal agencies with jurisdiction over the impacted wetlands. In this event, the mitigation ratios required by these agencies will supersede, and not be in addition to, the ratios defined in Table 4.3-10. No maintenance shall commence until the ADD Environmental Designee has determined that mitigation proposed for a specific maintenance activity meets one of these two options.

Table 4.3-10
WETLAND MITIGATION RATIOS

WETLAND TYPE	MITIGATION RATIO
Southern riparian forest	3:1
Southern sycamore riparian woodland	3:1
Riparian woodland	3:1
Coastal saltmarsh	4:1
Coastal brackish marsh	4:1
Southern willow scrub	2:1
Mule fat scrub	2:1
Riparian scrub[1]	2:1
Freshwater marsh[2]	2:1
Cismontane alkali marsh	4:1
Disturbed wetland	2:1
Streambed/natural flood channel	2:1

[1] Mitigation ratio within the Coastal Zone will be 3:1
[2] Mitigation ratio within the Coastal Zone will be 4:1

Mitigation locations for wetland impacts shall be selected using the following order of

preference, based on the best mitigation value to be achieved.

1. Within impacted watershed, within City limits.
2. Within impacted watershed, outside City limits on City-owned or other publicly-owned land.
3. Outside impacted watershed, within City limits.
4. Outside impacted watershed, outside City limits on City-owned or other publically-owned land.

In order to mitigate for impacts in an area outside the limits of the watershed within which the impacts occur, the SWD must demonstrate to the satisfaction of the ADD Environmental Designee in consultation with the Resource Agencies that no suitable location exists within the impacted watershed.

Mitigation Measure 4.3.10: Whenever maintenance will impact wetland vegetation, a wetland mitigation plan shall be prepared in accordance with the Conceptual Wetland Restoration Plan contained in Appendix H of the Biological Technical Report, included as Appendix D.3 of the PEIR. Mitigation which involves habitat enhancement, restoration or creation shall include a wetland mitigation plan containing the following information:

- Conceptual planting plan including planting zones, grading, and irrigation;
- Seed mix/planting palette;
- Planting specifications;
- Monitoring program including success criteria; and
- Long-term maintenance and preservation plan.

Mitigation which involves habitat acquisition and preservation shall include the following:

- Location of proposed acquisition;
- Description of the biological resources to be acquired including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and
- Documentation that the mitigation area would be adequately preserved and maintained in perpetuity.

Mitigation which involves the use of mitigation credits shall include the following:

- Location of the mitigation bank;

- Description of the credits to be acquired including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and

- Documentation that the credits are associated with a mitigation bank which has been approved by the appropriate Resource Agencies.

Mitigation Measure 4.3.11: Upland impacts shall be mitigated through payment into the City's Habitat Acquisition Fund, acquisition and preservation of specific land, or purchase of mitigation credits in accordance with the ratios identified in Table 4.3-11. Upland mitigation shall be completed within six months of the date the related maintenance has been completed.

Table 4.3-11
UPLAND HABITAT MITIGATION RATIOS[1]

Vegetation Type	Tier	Location of Impact with Respect to the MHPA	
		Inside	Outside
Coast live oak woodland	I	2:1	1:1
Scrub oak chaparral	I	2:1	1:1
Southern foredunes	I	2:1	1:1
Beach	I	2:1	1:1
Diegan coastal sage scrub	II	1:1	1:1
Coastal sage-chaparral scrub	II	1:1	1:1
Broom baccharis scrub	II	1:1	1:1
Southern mixed chaparral	IIA	1:1	0.5:1
Non-native grassland	IIIB	1:1	0.5:1
Eucalyptus woodland	IV	--	--
Non-native vegetation/ornamental	IV	--	--
Disturbed habitat/ruderal	IV	--	--
Developed	IV	--	--

[1]Assumes mitigation occurs within an MHPA

(Mitigation Measure 4.3.12 not applicable)

Mitigation Measure 4.3.13: Prior to commencing any maintenance activity which may impact sensitive biological resources, the monitoring biologist shall verify that the following actions have been taken, as appropriate:

- Fencing, flagging, signage, or other means to protect sensitive resources to remain after maintenance have been implemented;

- Noise attenuation measures needed to protect sensitive wildlife are in place and effective; and/or

- Nesting raptors have been identified and necessary maintenance setbacks have been established if maintenance is to occur between January 15 and August 31.

The designated biological monitor shall be present throughout the first full day of maintenance, whenever mandated by the associated IBA. Thereafter, through the duration of the maintenance activity, the monitoring biologist shall visit the site weekly to confirm that measures required to protect sensitive resources (e.g., flagging, fencing, noise barriers) continue to be effective. The monitoring biologist shall document monitoring events via a Consultant Site Visit Record. This record shall be sent to the MM each month. The MM will forward copies to MMC.

Mitigation Measure 4.3.14: Whenever off-site mitigation would result in a physical disturbance to the proposed mitigation area, the City will conduct an environmental review of the proposed mitigation plan in accordance with CEQA. If the off-site mitigation would have a significant impact on biological resources associated with the mitigation site, mitigation measures will be identified and implemented in accordance with the MMRP resulting from that CEQA analysis.

(Mitigation Measure 4.3.15 not applicable)

Mitigation Measure 4.3.16: Maintenance activities shall not occur within the following areas:

- 300 feet from any nesting site of Cooper's hawk (*Accipiter cooperii*);
- 1,500 feet from known locations of the southern pond turtle (*Clemmys marmorata pallida*);
- 900 feet from any nesting sites of northern harriers (*Circus cyaneus*);
- 4,000 feet from any nesting sites of golden eagles (*Aquila chrysaetos*); or
- 300 feet from any occupied burrow or burrowing owls (*Athene cunicularia*).

Mitigation Measure 4.3.17: If evidence indicates the potential is high for a listed species to be present, based on historical records or site conditions, then clearing, grubbing, or grading (inside and outside the MHPA) shall be restricted during the breeding season where development may impact the following species:

- Light-footed clapper rail (between February 15 and August 15);
- Western snowy plover (between March 1 and September 15);
- Least tern (between April 1 and September 15);
- Cactus wren (between February 15 and August 15); or
- Tricolored black bird (between March 1 and August 1.

When other sensitive species, including, but not limited to, the arroyo toad, burrowing owl, or Quino checkerspot butterfly are known or suspected to be present all appropriate protocol surveys and mitigation measures shall be implemented.

Mitigation Measure 4.3.18: If a subject species is not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the ADD Environmental Designee and an applicable resource agency which demonstrates whether or not mitigation measures such as noise walls are necessary between the dates stated above for each species. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

Mitigation Measure 4.3.19: If the SWD chooses not to do the required surveys, then it shall be assumed that the appropriate avian species are present and all necessary protection and mitigation measures shall be required as described in Mitigation Measure 4.3.21

Mitigation Measure 4.3.20: If no surveys are completed and no sound attenuation devices are installed, it will be assumed that the habitat in question is occupied by the appropriate species and that maintenance activities would generate more than 60dB(A) L_{eq} within the habitat requiring protection. All such activities adjacent to the protected habitat shall cease for the duration of the breeding season of the appropriate species and a qualified biologist shall establish a limit of work.

Mitigation Measure 4.3.21: If maintenance occurs during the raptor breeding season (January 15 to August 31), a pre-maintenance survey for active raptor nests shall be conducted in areas supporting suitable habitat. If active raptor nests are found, maintenance shall not occur within 300 feet of a Cooper's hawk nest, 900 feet of a northern harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

Mitigation Measure 4.3.22: If removal of any eucalyptus trees or other trees used by raptors for nesting within a maintenance area is proposed during the raptor breeding season (January 15 through August 31), a qualified biologist shall ensure that no raptors are nesting in such trees. If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 300 feet of any nesting site of Cooper's hawk or other nesting raptor until the young fledge. Should the biologist determine that raptors are nesting, the trees shall not be removed until after the breeding season. In addition, if removal of grassland or other habitat appropriate for nesting by northern harriers, a qualified biologist shall ensure that no harriers are nesting in such areas. If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 900 feet of any nesting site of northern harrier until the young fledge.

(Mitigation Measure 4.3.23 not applicable)

(Mitigation Measure 4.3.24 not applicable)

Mitigation Measure 4.3.25: In order to avoid impacts to nesting avian species, including those species not covered by the MSCP, maintenance within or adjacent to avian nesting habitat shall

occur outside of the avian breeding season (January 15 to August 31) unless postponing maintenance would result in a threat to human life or property.

LAND USE

Mitigation Measure 4.1.1: Prior to commencing maintenance on any storm water facility within, or immediately adjacent to, a Multi-Habitat Planning Area (MHPA), the ADD Environmental Designee shall verify that all MHPA boundaries and limits of work have been delineated on all maintenance documents.

Mitigation Measure 4.1.2: A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(a) recovery permit) shall survey those habitat areas inside and outside the MHPA suspected to serve as habitat (based on historical records or site conditions) for the coastal California gnatcatcher, least Bell's vireo and/or other listed species. Surveys for the appropriate species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service. When other sensitive species, including, but not limited to, the arroyo toad, burrowing owl, or Quino checkerspot butterfly are known or suspected to be present all appropriate protocol surveys and mitigation measures identified in Subchapter 4.3, Biological Resources, required shall be implemented.

Mitigation Measure 4.1.3: If a listed species is located within 500 feet of a proposed maintenance activity and maintenance would occur during the associated breeding season, an analysis of the noise generated by maintenance activities shall be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD Environmental Designee. The analysis shall identify the location of the 60 dB(A) L_{eq} noise contour on the maintenance plan. The report shall also identify measures to be undertaken during maintenance to reduce noise levels.

Mitigation Measure 4.1.4: Based on the location of the 60 dB(A) L_{eq} noise contour and the results of the protocol surveys, the Project Biologist shall determine if maintenance has the potential to impact breeding activities of listed species. If one or more of the following species are determined to be significantly impacted by maintenance, then maintenance (inside and outside the MHPA) shall avoid the following breeding seasons unless it is determined that maintenance is needed to protect life or property.

- Coastal California gnatcatcher (between March 1 and August 15 inside the MHPA only; no restrictions outside MHPA);
- Least Bell's vireo (between March 15 and September 15); and
- Southwestern willow flycatcher (between May 1 and September 1).

Mitigation Measure 4.1.5: If maintenance is required during the breeding season for a listed bird to protect life or property, then the following conditions must be met:

- At least two weeks prior to the commencement of maintenance activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from maintenance activities shall not exceed 60 dB(A) hourly average at the edge of occupied habitat. Concurrent with the commencement of maintenance activities and the maintenance of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated maintenance activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season of the subject species, as noted above.

- Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.

- Prior to the commencement of maintenance activities that would disturb sensitive resources during the breeding season, the biologist shall ensure that all fencing, staking and flagging identified as necessary on the ground have been installed properly in the areas restricted from such activities.

- If noise attenuation walls or other devices are required to assure protection to identified wildlife, then the biologist shall make sure such devices have been properly constructed, located and installed.

Mitigation Measure 4.1.6: A pre-maintenance meeting shall be held with the Maintenance Contractor, City representative and the Project Biologist. The Project Biologist shall discuss the sensitive nature of the adjacent habitat with the crew and subcontractor. Prior to the pre-maintenance meeting, the following shall be completed:

- The Storm Water Division (SWD) shall provide a letter of verification to the Mitigation Monitoring Coordination Section stating that a qualified biologist, as defined in the City of San Diego Biological Resources Guidelines, has been retained to implement the projects MSCP monitoring Program. The letter shall include the names and contact information of all persons involved in the Biological Monitoring of the project. At least thirty days prior to the pre-maintenance meeting, the qualified biologist shall submit all required documentation to MMC, verifying that any special reports, maps, plans and time lines, such as but not limited to, revegetation plans, plant relocation requirements and timing, MSCP requirements, avian or other wildlife protocol surveys, impact avoidance areas or other such information has been completed and updated.

- The limits of work shall be clearly delineated. The limits of work, as shown on the approved maintenance plan, shall be defined with orange maintenance fencing and checked by the biological monitor before initiation of maintenance. All native plants or species of special concern, as identified in the biological assessment, shall be staked, flagged and avoided within Brush Management Zone 2, if applicable.

Mitigation Measure 4.1.7: Maintenance plans shall be designed to accomplish the following.

- Invasive non-native plant species shall not be introduced into areas adjacent to the MHPA. Landscape plans shall contain non-invasive native species adjacent to sensitive biological areas, as shown on the approved maintenance plan.

- All lighting adjacent to, or within, the MHPA shall be shielded, unidirectional, low pressure sodium illumination (or similar) and directed away from sensitive areas using appropriate placement and shields. If lighting is required for nighttime maintenance, it shall be directed away from the preserve and the tops of adjacent trees with potentially nesting raptors, using appropriate placement and shielding.

- All maintenance activities (including staging areas and/or storage areas) shall be restricted to the disturbance areas shown on the approved maintenance plan. The project biologist shall monitor maintenance activities, as needed, to ensure that maintenance activities do not encroach into biologically sensitive areas beyond the limits of work as shown on the approved maintenance plan.

- No trash, oil, parking or other maintenance-related activities shall be allowed outside the established maintenance areas including staging areas and/or storage areas, as shown on the approved maintenance plan. All maintenance related debris shall be removed off-site to an approved disposal facility.

- Access roads through MHPA-designated areas shall comply with the applicable policies contained in the "Roads and Utilities Construction and Maintenance Policies" identified in Section 1.4.2 of the City's Subarea Plan.

(Mitigation Measure 4.1.8 not applicable)

WATER QUALITY

Mitigation Measure 4.8.1: Prior to commencement of any activity within a specific annual maintenance program, a qualified water quality specialist shall prepare an IWQA for each area proposed to be maintained. The IWQA shall be prepared in accordance with the specifications included in the Master Program. If the IWQA indicates that maintenance would impact a water pollutant where the existing level for that pollutant exceeds, or is within 25 percent of, the standard established by the San Diego Basin Plan, mitigation measures identified in Table 4.8-8 shall be incorporated into the IMP to reduce the impact to within the established standard for that pollutant.

Table 4.8-8
MITIGATION MEASURES FOR REDUCED POLLUTANT REMOVAL CAPACITY

	Pollutant Type						
Mitigation Measure	**Bacteria**	**Metals**	**Nutrients**	**Pesticides**	**Sediment**	**TDS/ Chloride Sulfates**	**Trash**
Remove kelp on beaches					●	●	
Sweep streets	●	●	●	●	●	●	●
Retrofit residential landscaping to reduce runoff	●	●	●		●		
Install artificial turf	●	●	●	●	●		●
Install inlet devices on storm drains		●	●		●		
Replace impermeable surfaces with permeable surfaces		●	●		●		●
Install modular storm water filtration systems		●	●	●	●	●	●
Install storm water retention basins		●	●	●	●	●	●
Install catch basin media filters		●	●		●	●	●
Create vegetated swales	●	●	●	●	●	●	●
Restore wetlands	●	●	●	●	●	●	●
Install check dams		●			●		●

Mitigation Measure 4.8.2: No maintenance activities within a proposed annual maintenance program shall be initiated before the City's ADD Environmental Designee and state and federal agencies with jurisdiction over maintenance activities have approved the IMPs and IWQAs including proposed mitigation and BMPs for each of the proposed activities. In their review, the ADD Environmental Designee and agencies shall also confirm that the appropriate maintenance protocols have been incorporated into each IMP.

Mitigation Measure 4.8.3: Prior to commencing any activity where the IWQA indicates significant water quality impacts may occur, a pre-maintenance meeting shall be held on site with following in attendance: City's SWD, MM, MMC, and MC. A qualified water quality specialist shall also be present. At this meeting, the water quality specialist shall identify and discuss mitigation measures, protocols and BMPs identified in the IWQA that must be carried out during maintenance. After the meeting, the water quality specialist shall provide DSD with a letter indicating that the applicable mitigation measures, protocols and BMPs identified in the IWQA have been appropriately implemented.