CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

2375 Northside Drive, Suite.100, San Diego, CA 92108
Phone (619) 516-1990 • Fax (619) 516-1994
http://www.waterboards.ca.gov/sandiego/

Amendment No. 1 to Clean Water Act Section 401 Water Quality Certification No. R9-2016-0106

PROJECT: **Mid-Coast Corridor Transit Project**
Certification Number R9-2016-0106

APPLICANT: **San Diego Association of Governments**
401 B Street
Suite 800
San Diego, CA 92101-4231

Reg. Meas. ID: 405394
Place ID: 823299
Party ID: 39834
Person ID: 536187
WDID: 9 000003031

On August 15, 2016, Clean Water Act Section 401 Water Quality Certification No. R9-2016-0106 (Certification) was issued to San Diego Association of Governments (Applicant) for the Mid-Coast Corridor Transit Project (Project). On November 9, 2017, the Certification was amended to allow the placement of four, temporary in-stream work berms for bridge building.

By letter dated September 15, 2017, the San Diego Association of Governments requested the Certification be amended to allow the additional work berms.

Based on the Applicant's request, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is amending the Certification to allow the placement of four, temporary in-stream work berms for bridge building. Except as modified or superseded by the Certification modifications set forth below, all of the findings, provisions and other requirements of Certification No. R9-2016-0106 remain in full force and effect. The following changes are made to Certification No. R9-2016-0106 and are shown in underline/strikeout format to indicate added and removed language:

Page 2, PROJECT DESCRIPTION is modified as follows:

The Applicant proposes to construct a 10.9 mile, double trolley line from the Old Town Transit Center to the University Towne Centre Transit Center that is an extension of the Blue Line. The Project will include nine new stations, five park-and-ride facilities, and 13 new TPSSs. The new stations will be located at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, Veterans Administration Medical Center, University of California San Diego West/Pepper Canyon, University of California San Diego East/Voight Drive, Executive Drive, and the University Towne Centre Transit Center. Bridges and crossings will be constructed over existing waterways, canyons, and roads. Five light-rail transit (LRT) bridges are proposed over existing waterways including the San Diego River, Tecolote Creek, and three locations over Rose Creek (known as Rose

Creek South, Rose Creek North, and Rose Creek LRTs. Other impacts to jurisdictional areas would occur from retaining walls, headwalls, drainage outlets, storm drain connections, storm drain outfall, Rose Canyon concrete channel replacement, Rose Creek Bicycle Path realignment, and utility relocations.

In-Stream, Temporary Work Berms:

Four temporary, all-weather work berms with be installed in Tecolote Creek (one) and Rose Creek (three) to accommodate and facilitate construction of four bridges.

Additional in-stream work must not exceed as described in the *Project Modification Notification and Request for Amendment for the Mid-Coast Corridor Project*, dated September 15, 2017.

Pages 11-12, Section V. PROJECT IMPACTS AND COMPENSATORY MITIGATION table is modified as follows:

B. Project Impacts and Compensatory Mitigation. Unavoidable Project impacts to the San Diego River, Tecolote Creek, and Rose Creek and its unnamed tributaries within the San Diego and Penasquitos Watershed must not exceed the type and magnitude of impacts described in the table below. At a minimum, compensatory mitigation required to offset unavoidable temporary and permanent Project impacts to waters of the United States and/or State must be achieved as described in the table below:

	Impacts (acres)	**Impacts (linear ft.)**	**Mitigation for Impacts (acres)**	**Mitigation Ratio (area mitigated :area impacted)**	**Mitigation for Impacts (linear ft.)**	**Mitigation Ratio (linear feet mitigated :linear feet impacted)**
Permanent Impacts						
Stream Channel	0.16	1,012	0.16 Establisment[1]	1:1	N/A	N/A
Wetland	0.06	119	0.12 Establishment[1]	2:1	N/A	N/A

Temporary Impacts[4]						
Stream Channel	~~1.10~~ 1.30	2,539	~~1.10~~ 1.30[2] Re-establishment	1:1	2,539	1:1
Wetland	0.91	695	1.40[3] Enhancement	1.5:1	N/A	N/A

1. Wetland establishment at Deer Canyon Mitigation site.
2. Stream channel re-establishment onsite.
3. Wetland enhancement offsite at the Tijuana River Mitigation Site – Phase 2.
4. All areas of temporary impacts must be restored to pre-project contours and re-vegetated with native species.

Notification: 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 Amendment. 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.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Amendment No. 1 to Certification No. R9-2016-0106 issued on November 22, 2017.

David W. [illegible]

DAVID W. GIBSON
Executive Officer
San Diego Water Board

22 November 2017
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

2375 Northside Drive, Suite.100, San Diego, CA 92108
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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: **Mid-Coast Corridor Transit Project**
Certification Number R9-2016-0106
WDID: 9 000003031

Reg. Meas. ID: 405394
Place ID: 823299
Party ID: 39834
Person ID: 536187

APPLICANT: **San Diego Association of Governments**
401 B Street
Suite 800
San Diego, CA 92101

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 March 21, 2016 was submitted by San Diego Association of Governments (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 Mid-Coast Corridor Transit Project (Project). The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) deemed the application to be complete on July 1, 2016. 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-2010-00628).

The Project is located within the City of City of San Diego, San Diego County, California at from the communities of Old Town to University of California San Diego/University City. The Project center reading is located at latitude 32° 49" 31.70" North and longitude -117° 13' 49.28" East. The Applicant has paid all required application fees for this Certification in the amount of $57,231.00. On an annual basis, the Applicant shall also pay all active discharge fees and

post discharge monitoring fees, as appropriate[1]. On July 6, 2016, the San Diego Water Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to construct a 10.9 mile, double trolley line from the Old Town Transit Center to the University Towne Centre Transit Center that is an extension of the Blue Line. The Project will include nine new stations, five park-and-ride facilities, and 13 new TPSSs. The new stations will be located at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, Veterans Administration Medical Center, University of California San Diego West/Pepper Canyon, University of California San Diego East/Voight Drive, Executive Drive, and the University Towne Centre Transit Center. Bridges and crossings will be constructed over existing waterways, canyons, and roads. Five light-rail transit (LRT) bridges are proposed over existing waterways including the San Diego River, Tecolote Creek, and three locations over Rose Creek (known as Rose Creek South, Rose Creek North, and Rose Creek LRTs. Other impacts to jurisdictional areas would occur from retaining walls, headwalls, drainage outlets, storm drain connections, storm drain outfall, Rose Canyon concrete channel replacement, Rose Creek Bicycle Path realignment, and utility relocations.

The Project will convert approximately 21.8 acres of pervious ground to impervious surfaces. Runoff leaving the developed Project area would be significantly greater in volume, velocity, peak flow rate, and duration than pre-development runoff from the same area without mitigation. Post-construction best management practices (BMPs) to manage and control the effects of these runoff increases will consist of bioretention devices, infiltration devices, biofiltration devices, self-treating and self-retaining areas. These BMPs have been designed, will be constructed, and maintained to meet City of San Diego's Low Impact Development (LID) Capture Volume and hydromodification treatment requirements.

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).

[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 water board or the State Water Resources Control Board (State Water 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 water board or State Water 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 water board or the State Water 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

Project construction will permanently impact 0.22 acre (1,131 linear feet) of wetlands and non-wetland waters of the United States and/or State. 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 combined permanent loss of 0.22 acre of jurisdictional waters will be achieved through the establishment and re-establishment of 0.28 of wetland and non-wetland 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 discharges of fill material to waters of the United States and/or State will be completed at the Deer Canyon mitigation site (constructed and in the fourth year of monitoring) located in the Miramar hydrologic sub-area (HSA 906.10) at a minimum compensation ratio of 1.3:1 for wetland and non-wetland impacts (area mitigated:area impacted). Impacts to the concrete-lined and riprap sections of Rose Creek will be mitigated on site through in-kind, re-establishment at a ratio of 1:1. Temporal impacts will be mitigated on-site and off-site (Tijuana River Wetland Phase 2 mitigation) at a combined ratio of 1.5:1 (re-establishment and enhancement).

Detailed written specifications and work descriptions for the 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 *Mid-Coast Corridor Transit Project Draft Conceptual Revegetation Plan (onsite revegetation for temporary impacts)*, dated June 1, 2016 (Dudek); the *Compensatory Wetland/Upland Mitigation Plans for Deer Canyon*, dated January 18, 2011 (California Department of Transportation, District 11); and the Wetland Habitat Restoration and Enhancement Plan, Tijuana River Wetland, Phase 2, dated November 2015 (California Department of Transportation, District 11) (Mitigation Plans). San Diego Water Board acceptance of the Mitigation Plans 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 Plans are incorporated in this Certification by reference as if set forth herein. The Mitigation Plans provide 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 Plans 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 Plans 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.

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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. R9-2016-0106 (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 the San Diego River, Tecolote Creek, and Rose Creek 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. **General Construction Storm Water Permit.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity*, (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a runoff management plan (or equivalent construction BMP plan) to prevent the discharge of sediment and other pollutants during construction activities.

E. **Waste Management.** The Applicant must properly manage, store, treat, and dispose of wastes in accordance with applicable federal, state, and local laws and regulations. Waste management shall be implemented to avoid or minimize exposure of wastes to precipitation or storm water runoff. The storage, handling, treatment, or disposal of waste shall not create conditions of pollution, contamination or nuisance as defined in Water Code section 13050. Upon Project completion, all Project generated debris, building materials, excess material, waste, and trash shall be removed from the Project site(s) for disposal at an authorized landfill or other disposal site in compliance with federal, state and local laws and regulations.

F. **Waste Management**. Except for a discharge permitted under this Certification, the dumping, deposition, or discharge of trash, rubbish, unset cement or asphalt, concrete, grout, damaged concrete or asphalt, concrete or asphalt spoils, wash water, organic or earthen material, steel, sawdust or other construction debris waste from Project activities directly into waters of the United States and or State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited.

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

H. **Construction Equipment**. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.

I. **Process Water.** Water containing mud, silt, or other pollutants from equipment washing or other activities, must not be discharged to waters of the United States and/or State or placed in locations that may be subjected to storm water runoff flows. Pollutants discharged to areas within a stream diversion must be removed at the end of each work day or sooner if rain is predicted.

J. **Surface Water Diversion.** All surface waters, including ponded waters, must be diverted away from areas of active grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of the receiving water quality objectives. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.

K. **Re-vegetation and Stabilization.** All areas that have 14 or more days of inactivity must be stabilized within 14 days of the last activity. The Applicant shall implement and maintain BMPs to prevent erosion of the rough graded areas. After completion of grading, all areas must be re-vegetated with native species appropriate for the area. The re-vegetation palette must not contain any plants listed on the California Invasive Plant Council Invasive Plant Inventory, which can be accessed at http://www.cal-ipc.org/ip/inventory/.

L. **Hazardous Materials.** Except as authorized by this Certification, substances hazardous to aquatic life including, but not limited to, petroleum products, unused cement/concrete, asphalt, and coating materials, must be prevented from contaminating the soil and/or entering waters of the United States and/or State. BMPs must be implemented to prevent such discharges during each Project activity involving hazardous materials.

M. **Vegetation Removal.** Removal of vegetation must occur by hand, mechanically, or through application of United States Environmental Protection Agency (USEPA) approved herbicides deployed using applicable BMPs to minimize adverse effects to beneficial uses of waters of the United States and/or State. Discharges related to the application of aquatic pesticides within waters of the United States must be done in compliance with State Water Resources Control Board Water Quality Order No. 2004-

0009-DWQ, the *Statewide General National Pollution Discharge Elimination System Permit for the Discharge of Aquatic Weed Control in Waters of the United States,* and any subsequent reissuance as applicable.

N. **Limits of Disturbance.** The Applicant shall clearly define the limits of Project disturbance to waters of the United States and/or State using highly visible markers such as flag markers, construction fencing, or silt barriers prior to commencement of Project construction activities within those areas.

O. **On-site Qualified Biologist.** The Applicant shall designate an on-site qualified biologist to monitor Project construction activities within or adjacent to waters of the United States and/or State to ensure compliance with the Certification requirements. The biologist shall be given the authority to stop all work on-site if a violation of this Certification occurs or has the potential to occur. Records and field notes of the biologist's activities shall be kept on-site and made available for review upon request by the San Diego Water Board.

P. **Beneficial Use Protection**. The Applicant must take all necessary measures to protect the beneficial uses of waters of the San Diego River, Tecolote Creek, and Rose 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 VII.A of this Certification. Associated Project activities may not resume without approval from the San Diego Water Board.

Q. **Groundwater Dewatering.** If groundwater dewatering is required for the Project, the Applicant shall enroll in and comply with the requirements of San Diego Water Board Order No. R9-2008-0002 NPDES No. CAG919002, *General Waste Discharge Requirements For Groundwater Extraction Waste Discharges From Construction, Remediation, and Permanent Groundwater Extraction Projects to Surface Waters within the San Diego Region Except for San Diego Bay* or its successor permit.

IV. POST-CONSTRUCTION BEST MANAGEMENT PRACTICES

A. **Post-Construction Discharges.** The Applicant shall not allow post-construction discharges from the Project site to cause or contribute to on-site or off-site erosion or damage to properties or stream habitats.

B. **Storm Drain Inlets.** All storm drain inlet structures within the Project boundaries must be stamped or stenciled (or equivalent) with appropriate language prohibiting non-storm water discharges.

C. **Post-Construction BMP Design.** The Project must be designed to comply with the requirements for priority development projects in section E.3 of the Regional MS4 Permit Order R9-2013-0001, *National Pollutant Discharge Elimination Systems Permit and Waste Discharge Requirements for Discharges of Urban Runoff from the MS4s Draining the Watersheds within the San Diego Region* (Regional MS4 Permit) as well as

the most current BMP Design Manual for the City of San Diego. Where conflict exists between the referenced documents the most stringent requirements shall apply. Post-construction BMPs for the Project are described in *Water Quality Technical Report, Segments 1-4, dated January 25, 2016* (WQTR). The WQTR is incorporated by reference as if set forth in full herein.

D. **Post-Construction BMP Implementation.** All post-construction BMPs must be constructed, functional, and implemented prior to completion of Project construction, occupancy, and/or planned use, and maintained in perpetuity. The post construction BMPs must include those described in the WQTR, dated January 25, 2016, prepared by the Applicant; or any subsequent version of the WQTR approved by the City of San Diego.

E. **Post-Construction BMP Maintenance.** The post construction BMPs must be designed, constructed, and maintained in accordance with the most recent California Storm Water Quality Association (CASQA)[2] guidance. The Applicant shall:

1. No less than two times per year, assess the performance of the BMPs to ensure protection of the receiving waters and identify any necessary corrective measures;

2. Perform inspections of BMPs, at the beginning of the wet season no later than October 1 and the end of the wet season no later than April 1, for standing water, slope stability, sediment accumulation, trash and debris, and presence of burrows;

3. Regularly perform preventative maintenance of BMPs, including removal of accumulated trash and debris, as needed to ensure proper functioning of the BMPs;

4. Identify and promptly repair damage to BMPs; and

5. Maintain a log documenting all BMP inspections and maintenance activities. The log shall be made available to the San Diego Water Board upon request.

V. PROJECT IMPACTS AND COMPENSATORY MITIGATION

A. **Project Impact Avoidance and Minimization**. The Project must avoid and minimize adverse impacts to waters of the United States and/or State to the maximum extent practicable.

B. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to the San Diego River, Tecolote Creek, and Rose Creek and its unnamed tributaries within the San Diego and Penasquitos 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:

[2] California Storm Water Quality Association (*California Storm Water BMP Handbook, New Development and Redevelopment 2003)*, available on-line at: http://www.cabmphandbooks.org/ [Accessed on January 15, 2012]

	Impacts (acres)	Impacts (linear ft.)	Mitigation for Impacts (acres)	Mitigation Ratio (area mitigated :area impacted)	Mitigation for Impacts (linear ft.)	Mitigation Ratio (linear feet mitigated :linear feet impacted)
Permanent Impacts						
Stream Channel	0.16	1,012	0.16 Establisment[1]	1:1	N/A	N/A
Wetland	0.06	119	0.12 Establishment[1]	2:1	N/A	N/A
Temporary Impacts[4]						
Stream Channel	1.10	2,539	1.10[2] Re-establishment	1:1	2,539	1:1
Wetland	0.91	695	1.40[3] Enhancement	1.5:1	N/A	N/A

1. Wetland establishment at Deer Canyon Mitigation site.
2. Stream channel re-establishment onsite.
3. Wetland enhancement offsite at the Tijuana River Mitigation Site – Phase 2.
4. All areas of temporary impacts must be restored to pre-project contours and re-vegetated with native species.

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

D. **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 Plans (Deer Canyon - Section VI., pages 18-20; Tijuana River Phase 2 – Section 6.4, pages 41-44) to the satisfaction of the San Diego Water Board.

E. **Compensatory Mitigation Site Design.** The compensatory mitigation site(s) shall be designed to be self-sustaining once performance standards have been achieved. This includes minimization of active engineering features (e.g., pumps) and appropriate siting to ensure that natural hydrology and landscape context support long-term sustainability in conformance with the following conditions:

1. Most of the channels through the mitigation sites shall be characterized by equilibrium conditions, with no evidence of severe aggradation or degradation;

2. As viewed along cross-sections, the channel and buffer area(s) shall have a variety of slopes, or elevations, that are characterized by different moisture gradients. Each sub-slope shall contain physical patch types or features that contribute to irregularity in height, edges, or surface and to complex topography overall; and

3. The mitigation sites shall have a well-developed plant community characterized by a high degree of horizontal and vertical interspersion among plant zones and layers.

F. **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.

G. **Long-Term Management and Maintenance.** The compensatory mitigation site(s) must be managed, protected, and maintained, in perpetuity, in conformance with the final ecological success performance standards identified in the Mitigation Plans. The aquatic habitats, riparian areas, buffers and uplands that comprise the mitigation site(s) must be protected in perpetuity from land-use and maintenance activities that may threaten water quality or beneficial uses within the mitigation area(s) in a manner consistent with the following requirements:

1. Any maintenance activities on the mitigation site(s) that do not contribute to the success of the mitigation site(s) and enhancement of beneficial uses and ecological functions and services are prohibited;

2. Maintenance activities must be limited to the removal of trash and debris, removal of exotic plant species, replacement of dead native plant species, and remedial measures deemed necessary for the success of the compensatory mitigation project;

3. The Mitigation site(s) must be maintained, in perpetuity, free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species must not occupy more than 5 percent of the mitigation site(s); and

4. If at any time a catastrophic natural event (e.g., fire, flood) causes damage(s) to the mitigation site(s) or other deficiencies in the compensatory mitigation project, the Applicant must take prompt and appropriate action to repair the damage(s) including replanting the affected area(s) and address any other deficiencies. The San Diego Water Board may require additional monitoring by the Applicant to assess how the compensatory mitigation site(s) or project is responding to a catastrophic natural event.

H. **Timing of Mitigation Site Construction.** The construction of proposed mitigation must be concurrent with project grading and completed no later than 9 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.

I. **Mitigation Site(s) Preservation Mechanism. Within 90 days from the issuance of this Certification**, the Applicant must provide the San Diego Water Board with a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. **Within 180 days of the start of Project construction**, the Applicant must submit proof of a completed final preservation mechanism that will protect all mitigation areas and their buffers in perpetuity. The conservation easement, deed restriction, or other legal limitation on the mitigation properties must be adequate to demonstrate that the sites will be maintained without future development or encroachment on the sites which could otherwise reduce the functions and values of the sites for the variety of beneficial uses of waters of the United States and/ or State that it supports. The legal limitation must prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the wetland and streambed functions and values of the sites. The preservation mechanism must clearly prohibit activities that would result in soil disturbance or vegetation removal, other than the removal of non-native vegetation. Other infrastructure development to be prohibited includes, but is not limited to, additional utility lines, maintenance roads, and areas of maintained landscaping for recreation.

VI. MONITORING AND REPORTING REQUIREMENTS

A. **Representative Monitoring**. Samples and measurements taken for the purpose of monitoring under this Certification shall be representative of the monitored activity.

B. **Monitoring Reports**. Monitoring results shall be reported to the San Diego Water Board at the intervals specified in section VI of this Certification.

C. **Monitoring and Reporting Revisions**. The San Diego Water Board may make revisions to the monitoring program at any time during the term of this Certification and may reduce or increase the number of parameters to be monitored, locations monitored, the frequency of monitoring, or the number and size of samples collected.

D. **Records of Monitoring Information.** Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

E. **California Rapid Assessment Method.** California Rapid Assessment Method (CRAM)[3] monitoring must be performed to assess the current and potential ecological conditions (ecological integrity) of the impact site and proposed compensatory mitigation site(s). These conditions reflect the overall level of ecological function of an aquatic resource. Prior to initiating Project construction, the Applicant shall develop a monitoring plan to implement California Rapid Assessment Method (CRAM) monitoring. The Applicant must conduct a quantitative function-based assessment of the health of streambed habitat to establish pre-project baseline conditions, set CRAM success criteria, and assess the mitigation site(s) progress towards meeting the success criteria. CRAM monitoring must be conducted prior to the start of Project construction authorized under this Certification and annually following construction completion for years 1, 3, and 5 years. The annual CRAM monitoring results shall be submitted with the Annual Project Progress Report. An evaluation, interpretation, and tabulation of all CRAM assessment data shall be submitted with the Final Project Completion Report.

F. **Benthic Macroinvertebrate Community Analysis.** The Applicant shall conduct bioassessment monitoring, as described in this section, to assess the success of mitigation areas and the impact of construction activities, whenever applicable, using benthic macroinvertebrate community data. Bioassessment shall include: 1) the collection and reporting of benthic macroinvertebrate data; and 2) the collection and reporting of physical habitat data. Bioassessment using benthic macroinvertebrates shall be conducted in wadeable streams with sufficient flow during the index period. In this context, streams shall be defined as streams with surface water flow present during the appropriate index period[4]. Wadeable streams shall be defined as streams that can be safely waded in order to be sampled for benthic invertebrates during the appropriate index period. If the appropriate sampling period lies outside the index period, such as in intermittent streams, please contact the San Diego Water Board.

1. **Field Methods.** Bioassessment monitoring must be performed using the SWAMP field methods specified in *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California*[5] (SOP, Ode 2007) or any updates of these methods. The Applicant shall conduct, concurrently with all required benthic macroinvertebrate collections, the "Full" suite of physical habitat characterization measurements as specified in Table 1 of the SOP.

2. **Laboratory Methods.** Benthic macroinvertebrates shall be identified using the SWAMP laboratory methods specified in *Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in*

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

[4] The appropriate index period can be found electronically at the following location: http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/cgp_biomap.pdf

[5] The SOP can be found electronically at the following location: http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/phab_sopr6.pdf

California[6] (Laboratory SOP, Woodard et al. 2012) or any updates of these methods. Standard Taxonomic Effort (STE) Level II of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT) is required. Quality control samples are required for 10% of the samples each year and Quality Assurance samples must be analyzed by the Aquatic Bioassessment Laboratory of the California Department of Fish and Wildlife.

3. **Data Analysis.** Analysis of benthic macroinvertebrate data shall be conducted using scoring tools including but not limited to the *California Stream Condition Index*[7] (CSCI, Rehn et al., 2015, SWAMP-TM-2015-0002).

4. **Data Storage.** Benthic macroinvertebrate data and physical habitat data shall be submitted to the California Environmental Data Exchange Network[8] (CEDEN).

5. **Monitoring Sites.** All monitoring sites shall be approved by staff at the San Diego Water Board before sampling is initiated and must meet the following conditions:

    a. **Mitigation Sites.** At a minimum, bioassessment monitoring for mitigation areas must be performed at three sites (assessment stations) in Deer Canyon Creek before Project initiation, and then in years three and five following start of Project construction, during the established "index period" for the Penasquitos watershed. The first assessment station is the reference station, which must be located upstream of the mitigation site(s) in a reference area; the second assessment station must be located within the mitigation site(s); and the third assessment station must be located downstream of the mitigation site(s). The reference station upstream of the mitigation site(s) must be located and sampled concurrently with the second and third assessment stations. Reference stations shall be defined as stations that show minimally disturbed conditions.

    b. **Monitoring Sites Before/After Construction.** At a minimum, bioassessment monitoring for impacts during construction must be performed during the established index period for the Penasquitos watershed, at two sites (assessment stations) in Deer Canyon Creek before Project initiation and then 6 months after construction has ended. The first assessment must be located upstream of the construction site, and the second assessment station must be located downstream the construction site.

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[6] The Laboratory SOP can be found electronically at the following location: http://www.waterboards.ca.gov/water_issues/programs/swamp/bioassessment/docs/combined_sop_2016.pdf

[7] The *California Stream Condition Index* can be found electronically at the following location: http://www.waterboards.ca.gov/water_issues/programs/swamp/bioassessment/docs/csci_tech_memo.pdf

[8] The California Environmental Data Exchange Network can be found electronically at the following location: http://www.ceden.org/

6. **Monitoring Reports.** An evaluation, interpretation and tabulation of the benthic macroinvertebrate community analysis must be submitted prior to **March 1** with the respective Annual Project Monitoring Report.

G. **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.

H. **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.

2. **Compensatory Mitigation Monitoring Reporting.** Mitigation monitoring information must be submitted as part of the Annual Project Progress Report for a period of not less than five years, sufficient to demonstrate that the compensatory mitigation project has accomplished its objectives and met ecological success performance standards contained in the Mitigation Plans. Following Project

implementation the San Diego Water Board may reduce or waive compensatory mitigation monitoring requirements upon a determination that performance standards have been achieved. Conversely the San Diego Water Board may extend the monitoring period beyond five years upon a determination that the performance standards have not been met or the compensatory mitigation project is not on track to meet them. The Annual Project Progress Report must include the following compensatory mitigation monitoring information:

a. Names, qualifications, and affiliations of the persons contributing to the report;

b. An evaluation, interpretation, and tabulation of the parameters being monitored, including the results of the Mitigation Plans monitoring program, and all quantitative and qualitative data collected in the field;

c. A description of the following mitigation site(s) characteristics:

   i. Detritus cover;
   ii. General topographic complexity;
   iii. General upstream and downstream habitat and hydrologic connectivity; and
   iv. Source of hydrology

d. Monitoring data interpretations and conclusions as to how the compensatory mitigation project(s) is progressing towards meeting performance standards and whether the performance standards have been met;

e. A description of the progress toward implementing a plan to manage the compensatory mitigation project after performance standards have been achieved to ensure the long term sustainability of the resource in perpetuity, including a discussion of long term financing mechanisms, the party responsible for long term management, and a timetable for future steps;

f. Qualitative and quantitative comparisons of current mitigation conditions with pre-construction conditions and previous mitigation monitoring results;

g. Stream photo documentation, including all areas of permanent and temporary impact, prior to and after mitigation site construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Geographic Positioning System (GPS) coordinates for each of the photo points referenced;

h. A qualitative comparison to adjacent preserved streambed areas;

i. The results of the California Rapid Assessment Method (CRAM) monitoring required under section VI.E of this Certification;

j. The results of the Benthic Macroinvertebrate Community Analysis monitoring required under section VI.F of this Certification;

k. As-built drawings of the compensatory mitigation project site(s), no bigger than 11"X17"; and

l. A survey report documenting boundaries of the compensatory mitigation site(s).

I. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project.** The final report must include the following information:

1. Date of construction initiation;

2. Date of construction completion;

3. BMP installation and operational status for the Project;

4. As-built drawings of the Project, no bigger than 11"X17";

5. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced; and

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

J. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.

K. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2016-0106:823299:mporter
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. R9-2016-0106:823299:mporter.

L. **Document Signatory Requirements**. All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:

1. For a corporation, by a responsible corporate officer of at least the level of vice president.

2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.

3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.

4. A duly authorized representative may sign applications, reports, or information if:

   a. The authorization is made in writing by a person described above.

   b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.

   c. The written authorization is submitted to the San Diego Water Board Executive Officer.

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

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

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

VII. NOTIFICATION REQUIREMENTS

A. **Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

B. **Hazardous Substance Discharge**. Except as provided in Water Code section 13271(b), 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 as provided in Water Code section 13272(b), 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. **Commencement of Construction Notification.** The Applicant must notify the San Diego Water Board in writing at least 5 days prior to the start of initial Project construction ground disturbance

F. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:

1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**

2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**

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

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

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

A. The San Diego Association of Governments 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 November 21, 2016 for the Final Environmental Impact Report (FEIR) titled Final Supplemental Environmental Impact Statement and Subsequent Environmental Impact Report (State Clearing House Number 2010051001). 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 FEIR 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 FEIR 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 FEIR, 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).

IX. SAN DIEGO WATER BOARD CONTACT PERSON

Mike Porter, Engineering Geologist
Telephone: 619.521.3967
Email: mike.porter@waterboards.ca.gov

X. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Mid-Coast Corridor Transit Project** (Certification No. R9-2016-0106) 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. R9-2016-0106 issued on August 15, 2016.

David W. G

DAVID W. GIBSON
Executive Officer
San Diego Water Board

15 August 2016
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.

Waters of the State - means any surface water or groundwater, including saline waters, within the boundaries of the State. [Water Code section13050, subd. (e)].

San Diego Association of Governments
Mid-Coast Corridor Transit Project
And Maintenance Project
Certification No. R9-2016-0106

ATTACHMENT 2
PROJECT LOCATION MAPS

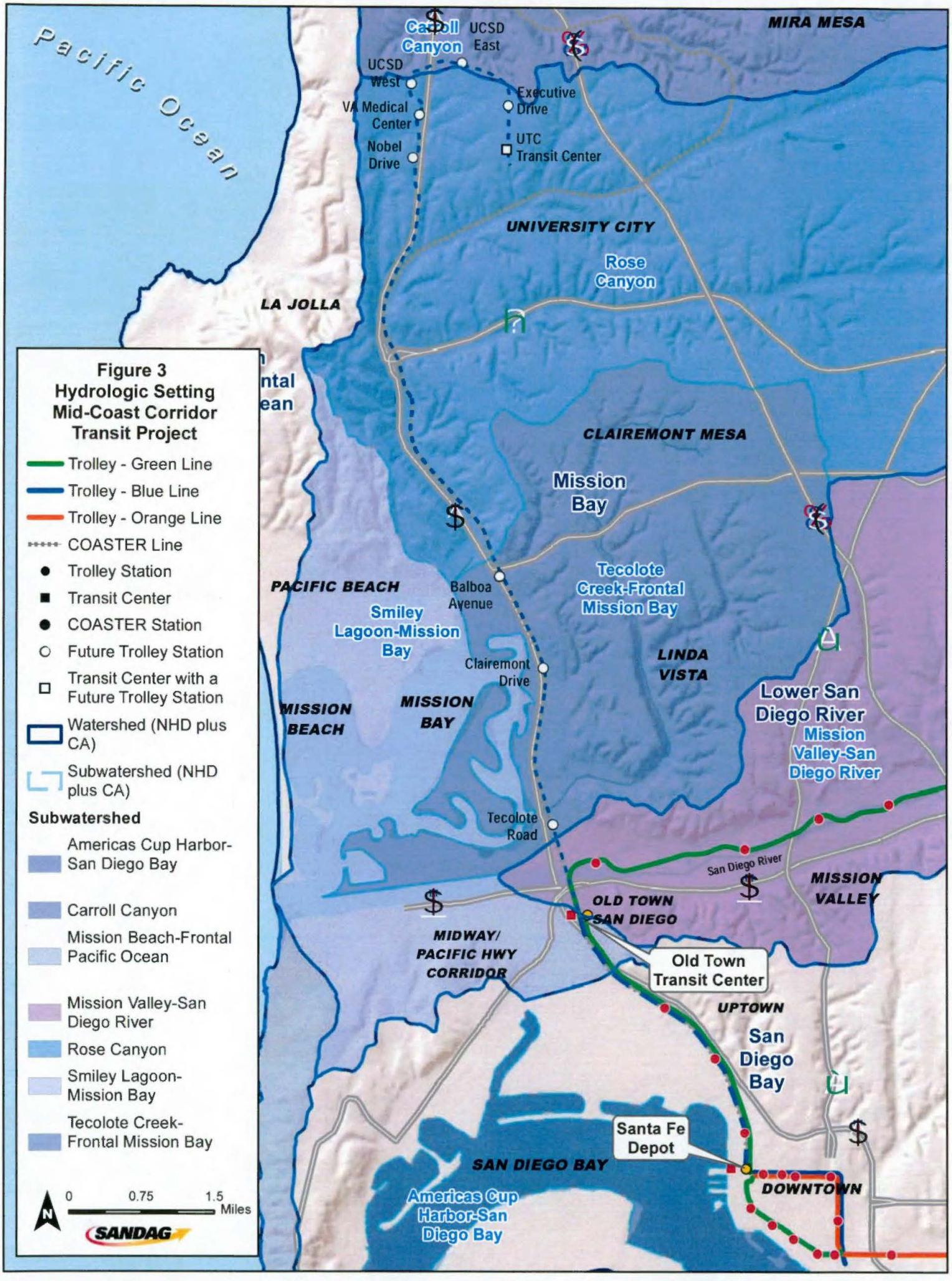
Figure 1 – Regional Map Mid-Coast Corridor Transit Project

Figure 2 – Vicinity Map Mid-Coast Corridor Transit Project

Figure 3 – Hydrologic Setting Mid-Coast Corridor Transit Project


Tustin
Irvine
El Toro Station
El Toro
Rancho Santa Margarita
Laguna Hills
Mission Viejo
Coto De Caza
Aliso Viejo
Trabuco Highlands
Laguna Beach
Laguna Niguel
San Juan Capistrano
Dana Point
San Clemente
Orange County
San Diego County
Lake Elsinore
Sun City
Wildomar
Winchester
East Hemet
Hemet
Idyllwild-Pine Cove
Temecula
Riverside County
San Diego County
Rainbow
Fallbrook
Camp Pendleton North
Bonsall
Camp Pendleton South
Oceanside
Vista
Hidden Meadows
Valley Center
San Marcos
Escondido
Carlsbad
Encinitas
Julian
Ramona
San Diego Country Estates
Poway
San Diego
Santee
Lakeside
Harbison Canyon
Alpine
Pine Valley
El Cajon
Casa de Oro-Mount Helix
La Mesa
Rancho San Diego
Lemon Grove
Spring Valley
Jamul
Coronado
National City
Bonita
Chula Vista
Imperial Beach
Pacific Ocean
MEXICO
Figure 1 Regional Map
Mid-Coast Corridor
Transit Project
Trolley - Future Blue Line Extension
Trolley - Future Blue Line Service on Existing Tracks
N
0
7.5
15
Miles
SANDAG
Copyright:© 2014


Pacific Ocean
UCSD East
UCSD West
VA Medical Center
Nobel Drive
Executive Drive
UTC Transit Center
MIRA MESA
Carroll Rd
Miramar Rd
La Jolla Village Dr
Nobel Dr
Regents Rd
Gilman Dr
UNIVERSITY CITY
Governor Dr
Torrey Pines Rd
La Jolla Pkwy
Prospect St
Pearl St
LA JOLLA
Via Capri
La Jolla Blvd
Nautilus St
Genesee Ave
Clairemont Mesa Blvd
805
Convoy St
Jutland Dr
CLAIREMONT MESA
Morena Blvd
Balboa Ave
Turquoise St
Foothill Blvd
Beryl St
PACIFIC BEACH
Balboa Avenue
Mt Acadia Blvd
Mission Blvd
Garnet Ave
Grand Ave
Ingraham St
Clairemont Drive
LINDA VISTA
Linda Vista Rd
Ulric St
Mission Center Rd
MISSION BEACH
MISSION BAY
Tecolote Rd
Tecolote Road
Friars Rd
San Diego River
MISSION VALLEY
Sea World Dr
Point Loma Blvd
Sports Arena Blvd
OLD TOWN SAN DIEGO
MIDWAY/ PACIFIC HWY CORRIDOR
Old Town Transit Center
Nimitz Blvd
Barnett Ave
UPTOWN
Pacific Hwy
5th Ave
6th Ave
Park Blvd
W Laurel St
N Harbor Dr
Santa Fe Depot
Rosecrans St
Front St
1st Ave
B St
F St
Market St
DOWNTOWN
SAN DIEGO BAY
Figure 2 Vicinity Map
Mid-Coast Corridor
Transit Project
Trolley - Green Line
Trolley - Blue Line
Trolley - Future Blue Line Service on Existing Tracks
Trolley - Future Blue Line Extension
Trolley - Orange Line
COASTER Line
Trolley Station
Transit Center
COASTER Station
Future Trolley Station
Transit Center with a Future Trolley Station
N
0
1
2
Miles
SANDAG


Pacific Ocean
Carroll Canyon
UCSD East
UCSD West
VA Medical Center
Nobel Drive
Executive Drive
UTC Transit Center
MIRA MESA
UNIVERSITY CITY
Rose Canyon
LA JOLLA
CLAIREMONT MESA
Mission Bay
PACIFIC BEACH
Balboa Avenue
Smiley Lagoon-Mission Bay
Tecolote Creek-Frontal Mission Bay
Clairemont Drive
LINDA VISTA
MISSION BEACH
MISSION BAY
Lower San Diego River
Mission Valley-San Diego River
Tecolote Road
San Diego River
MISSION VALLEY
OLD TOWN SAN DIEGO
MIDWAY/ PACIFIC HWY CORRIDOR
Old Town Transit Center
UPTOWN
San Diego Bay
Santa Fe Depot
SAN DIEGO BAY
DOWNTOWN
Americas Cup Harbor-San Diego Bay
Figure 3
Hydrologic Setting
Mid-Coast Corridor
Transit Project
Trolley - Green Line
Trolley - Blue Line
Trolley - Orange Line
COASTER Line
Trolley Station
Transit Center
COASTER Station
Future Trolley Station
Transit Center with a Future Trolley Station
Watershed (NHD plus CA)
Subwatershed (NHD plus CA)
Subwatershed
Americas Cup Harbor-San Diego Bay
Carroll Canyon
Mission Beach-Frontal Pacific Ocean
Mission Valley-San Diego River
Rose Canyon
Smiley Lagoon-Mission Bay
Tecolote Creek-Frontal Mission Bay
N
0
0.75
1.5
Miles
SANDAG

San Diego Association of Governments
Mid-Coast Corridor Transit Project
And Maintenance Project
Certification No. R9-2016-0106

ATTACHMENT 3
PROJECT IMPACTS AND PLANS

Figure 5-1 – Impacts Mid-Coast Corridor Transit Project

Figure 5-2 – Impacts Mid-Coast Corridor Transit Project

Figure 5-3 – Impacts Mid-Coast Corridor Transit Project

Figure 5-4 – Impacts Mid-Coast Corridor Transit Project

Figure 5-5 – Impacts Mid-Coast Corridor Transit Project

Figure 5-6 – Impacts Mid-Coast Corridor Transit Project

Figure 5-7 – Impacts Mid-Coast Corridor Transit Project

Figure 5-8 – Impacts Mid-Coast Corridor Transit Project

Figure 5-9 – Impacts Mid-Coast Corridor Transit Project

Figure 5-10 – Impacts Mid-Coast Corridor Transit Project

Figure 5-11 – Impacts Mid-Coast Corridor Transit Project

Figure 5-12 – Impacts Mid-Coast Corridor Transit Project

Figure 5-13 – Impacts Mid-Coast Corridor Transit Project

Figure 5-14 – Impacts Mid-Coast Corridor Transit Project

Figure 5-15 – Impacts Mid-Coast Corridor Transit Project

Sheet No. 1225 – Plans Mid-Coast Corridor Transit Project

Sheet No. 1231 – Plans Mid-Coast Corridor Transit Project

Sheet No. 516 – Plans Mid-Coast Corridor Transit Project

Sheet No. 517 – Plans Mid-Coast Corridor Transit Project

Sheet No. 1278 – Plans Mid-Coast Corridor Transit Project

San Diego Association of Governments
Mid-Coast Corridor Transit Project
And Maintenance Project
Certification No. R9-2016-0106

Sheet No. 1322 – Plans Mid-Coast Corridor Transit Project

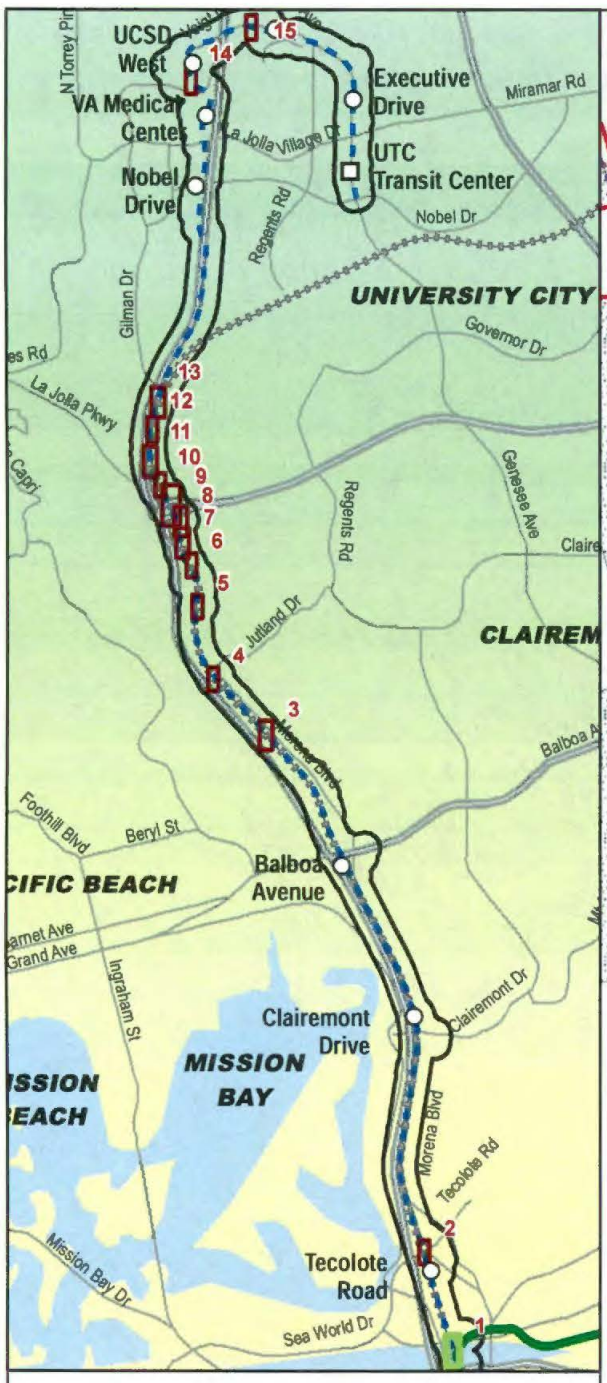
Sheet No. 1351 – Plans Mid-Coast Corridor Transit Project

Sheet No. 1353 – Plans Mid-Coast Corridor Transit Project

Sheet No. 1379 – Plans Mid-Coast Corridor Transit Project

Sheet No. 1380 – Plans Mid-Coast Corridor Transit Project

Sheet No. 1381 – Plans Mid-Coast Corridor Transit Project



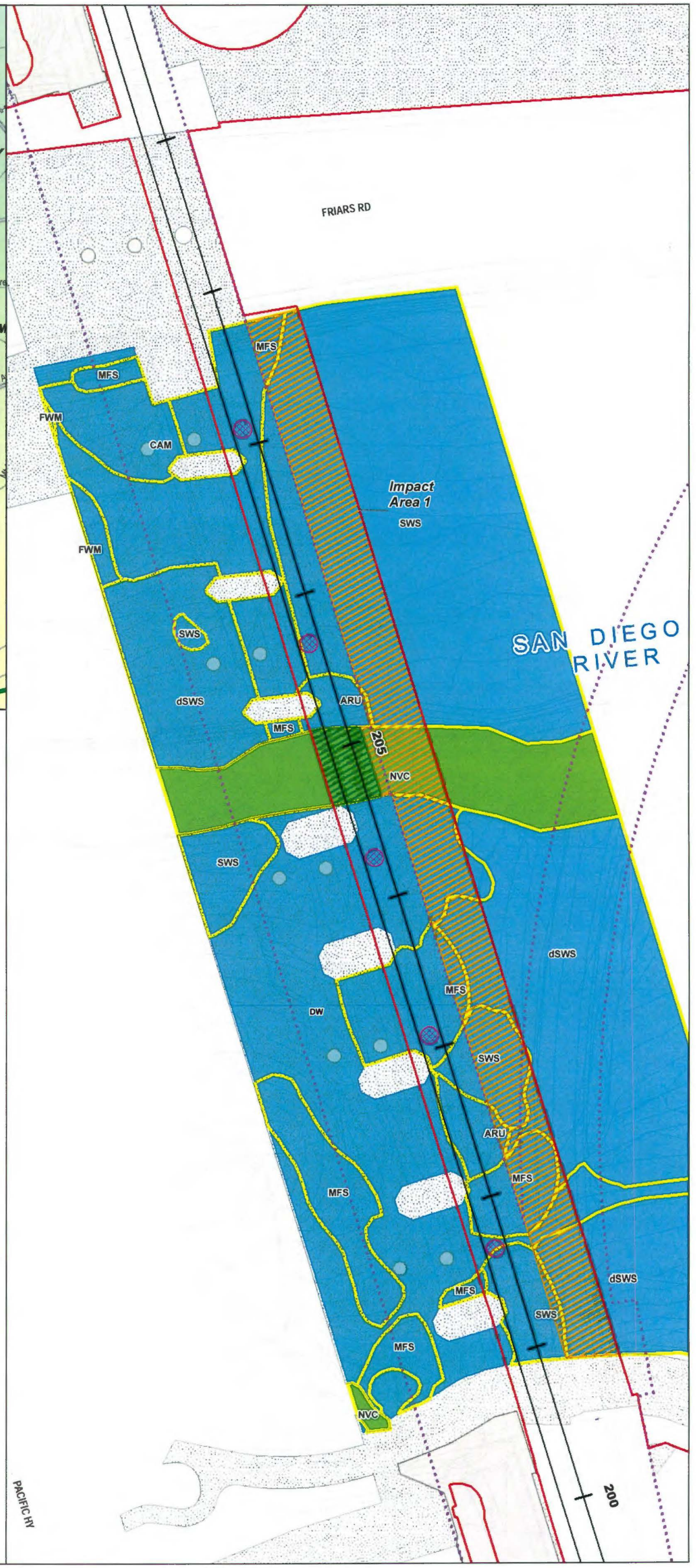


Figure 5-1
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction
- Shading and Construction

Impacts - EMDT or SDRDT

- SDRDT Permanent Impact
- SDRDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Jurisdictional Vegetation Communities

ARU = Arundo-Dominated Riparian

CAM = Cismontane Alkali Marsh

FWM = Coastal and Valley Freshwater Marsh

MFS = Mulefat Scrub

NVC = Non-Vegetated Channel or Floodway

SWS = Southern Willow Scrub

dSWS = disturbed Southern Willow Scrub

DW = Disturbed Wetland

N

0 62.5 125 Feet

SANDAG

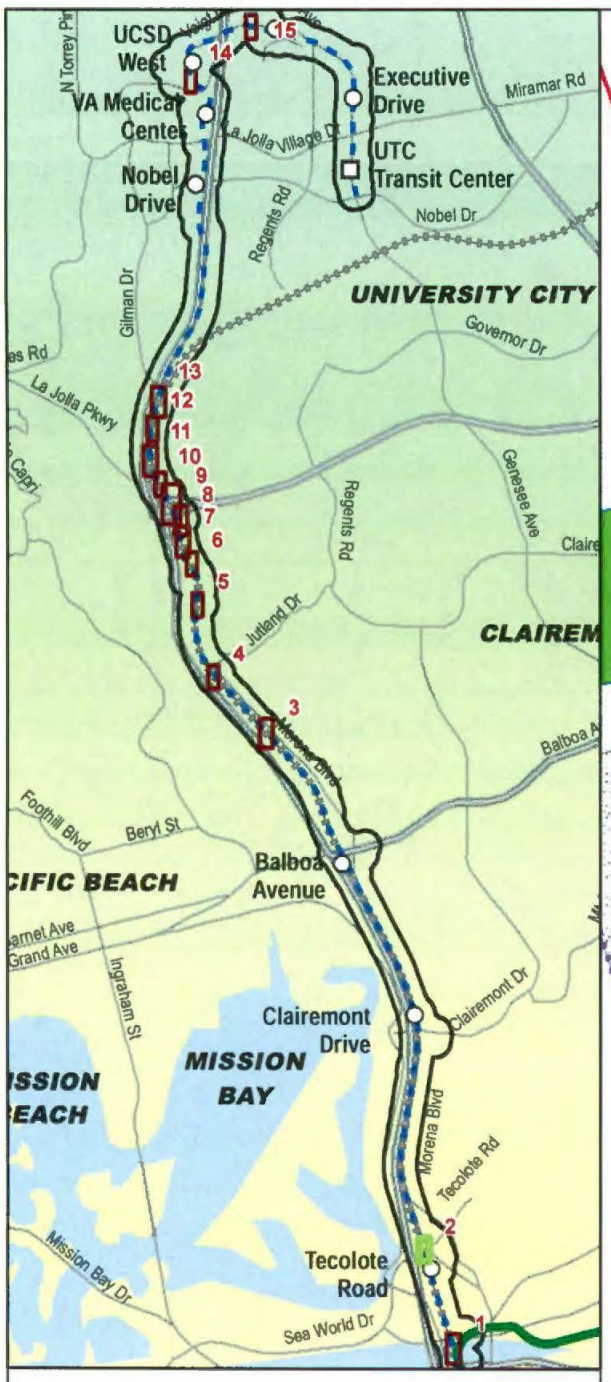


Figure 5-2
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction
- Shading and Construction

Impacts - EMDT or SDRDT

- SDRDT Permanent Impact
- SDRDT Temporary Impact

Jurisdictional Delineation

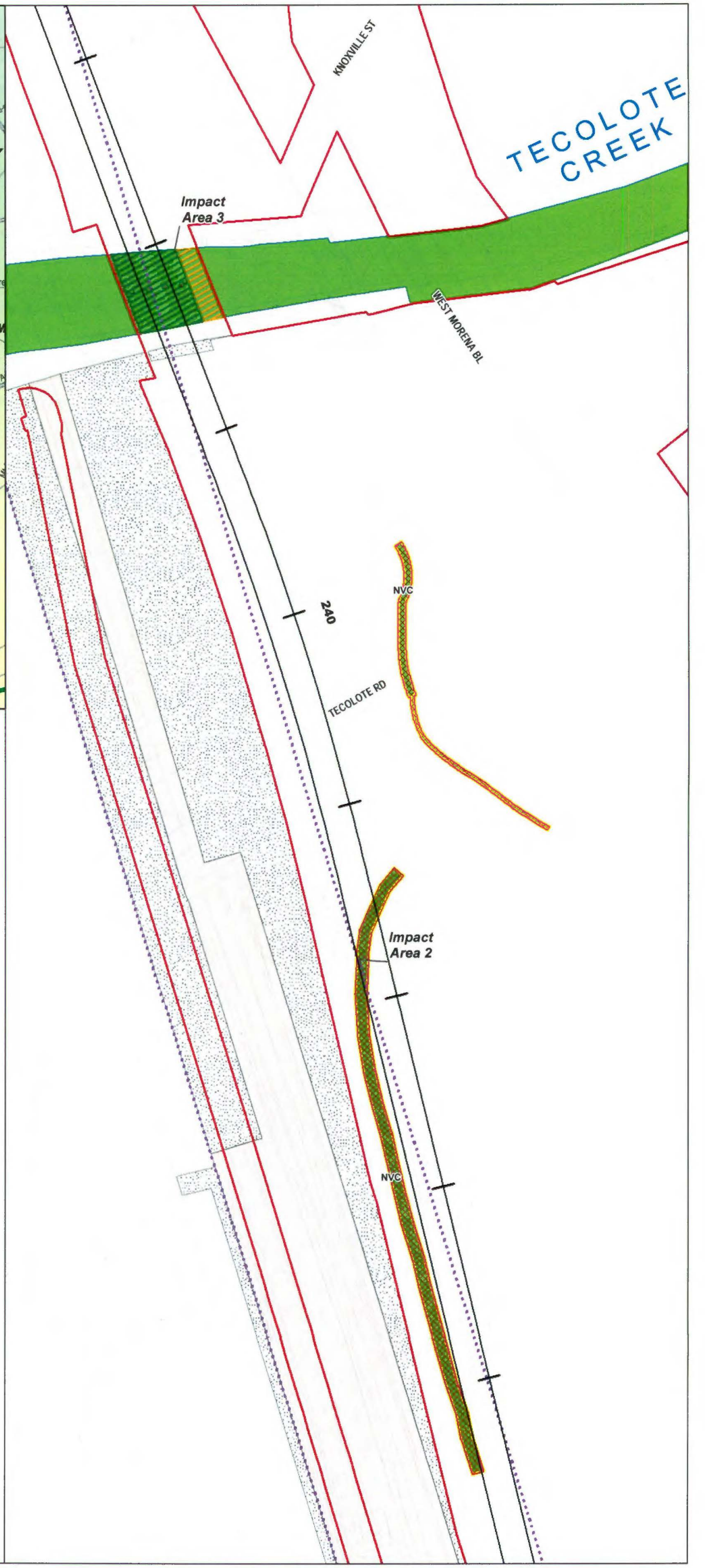
- USACE/RWQCB Waters
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

N

0 50 100 Feet

SANDAG



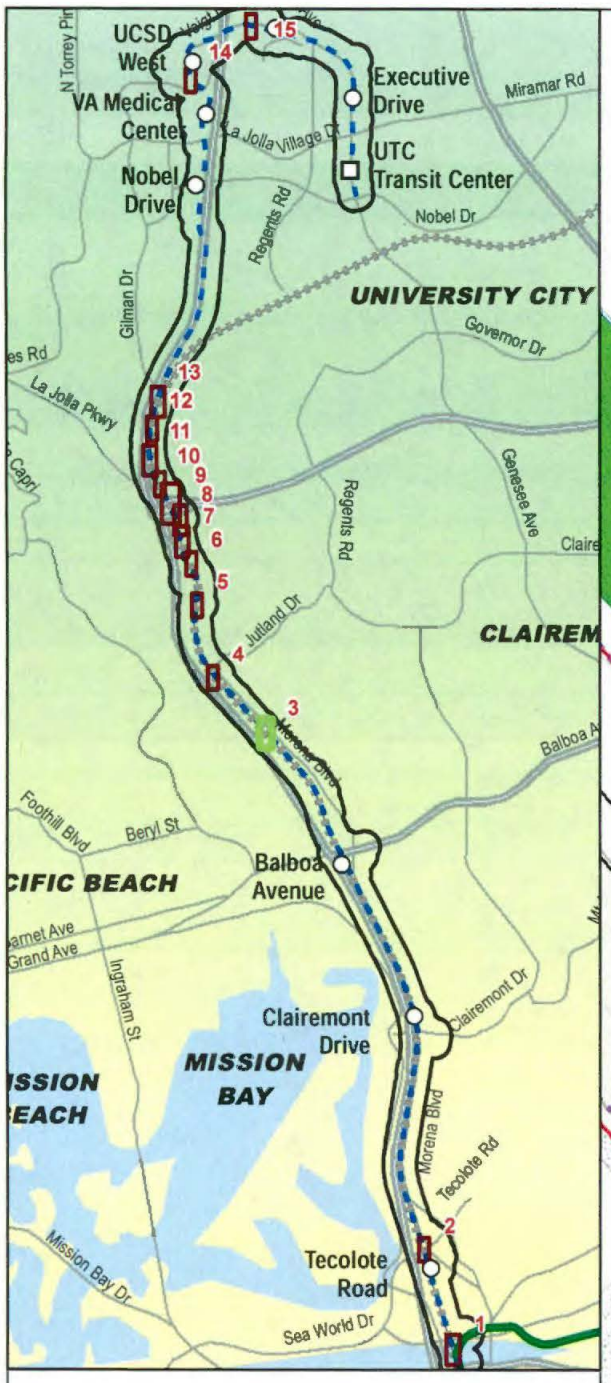


Figure 5-3
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction
- Shading and Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Data Station
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

SWS = Southern Willow Scrub

0 62.5 125 Feet

SANDAG

MORENA BL

Impact Area 5

Impact Area 4

NVC

525

9-4

NVC

9-3

SWS

SANTA FE ST

I-5 NB

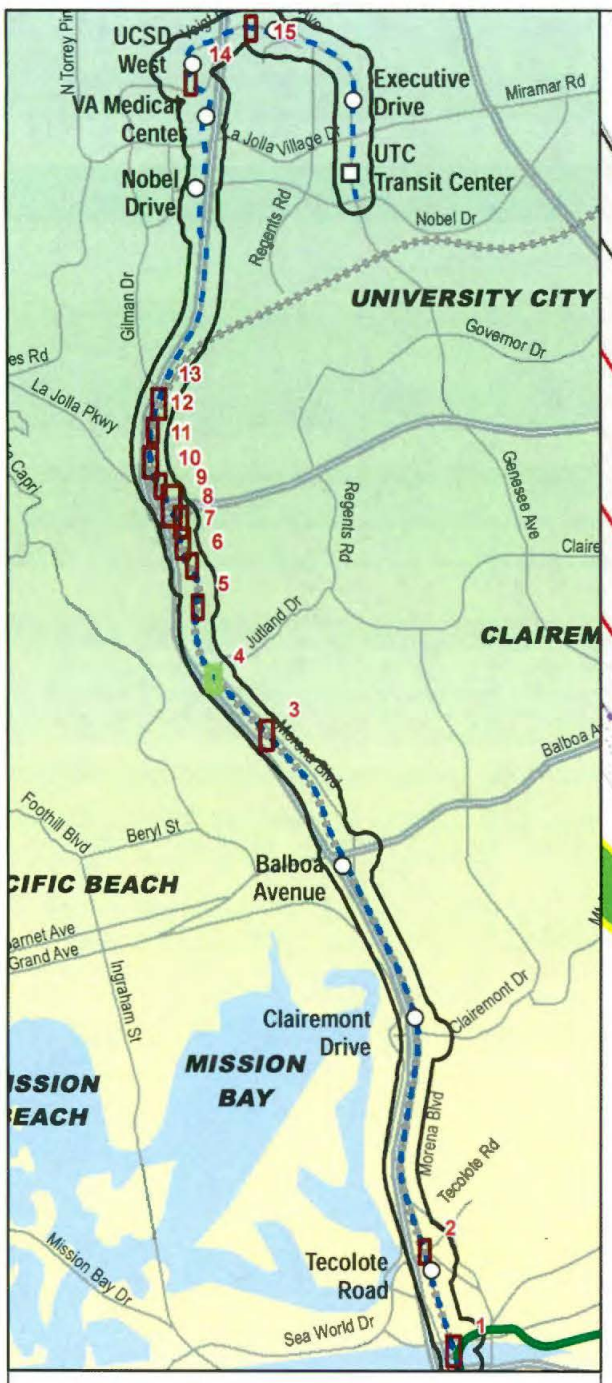


Figure 5-4
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- Data Station
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

N

0 50 100 Feet

SANDAG

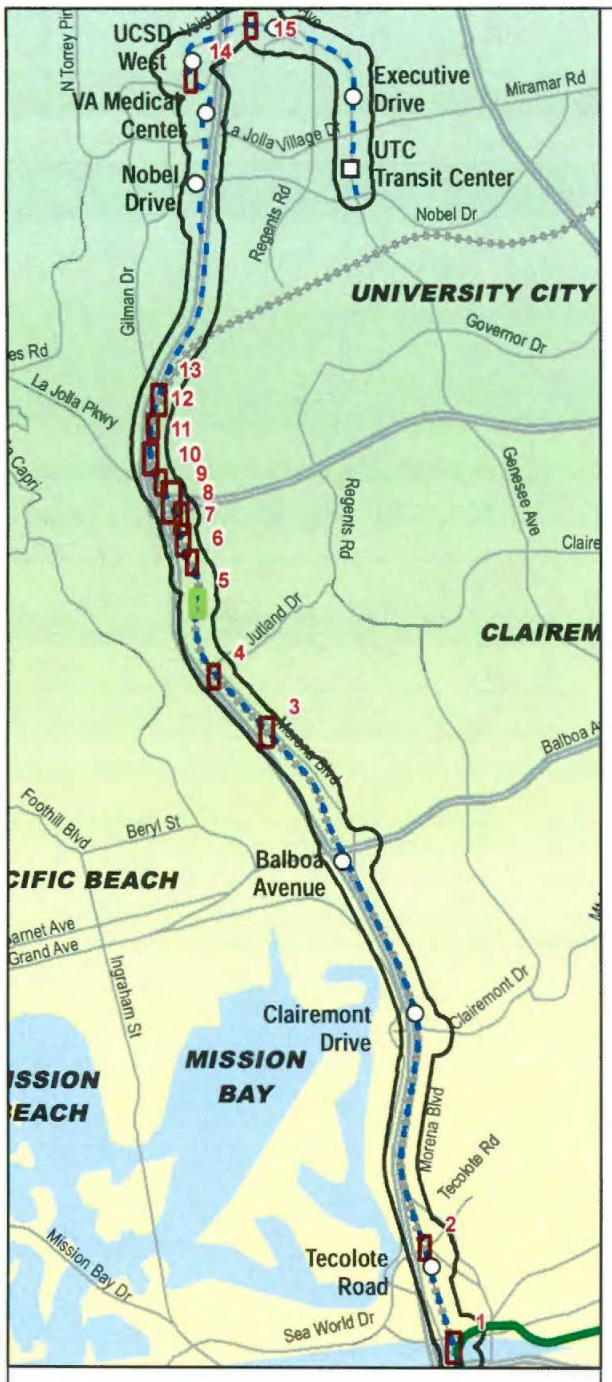


Figure 5-5
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Data Station
- Jurisdictional Vegetation Communities

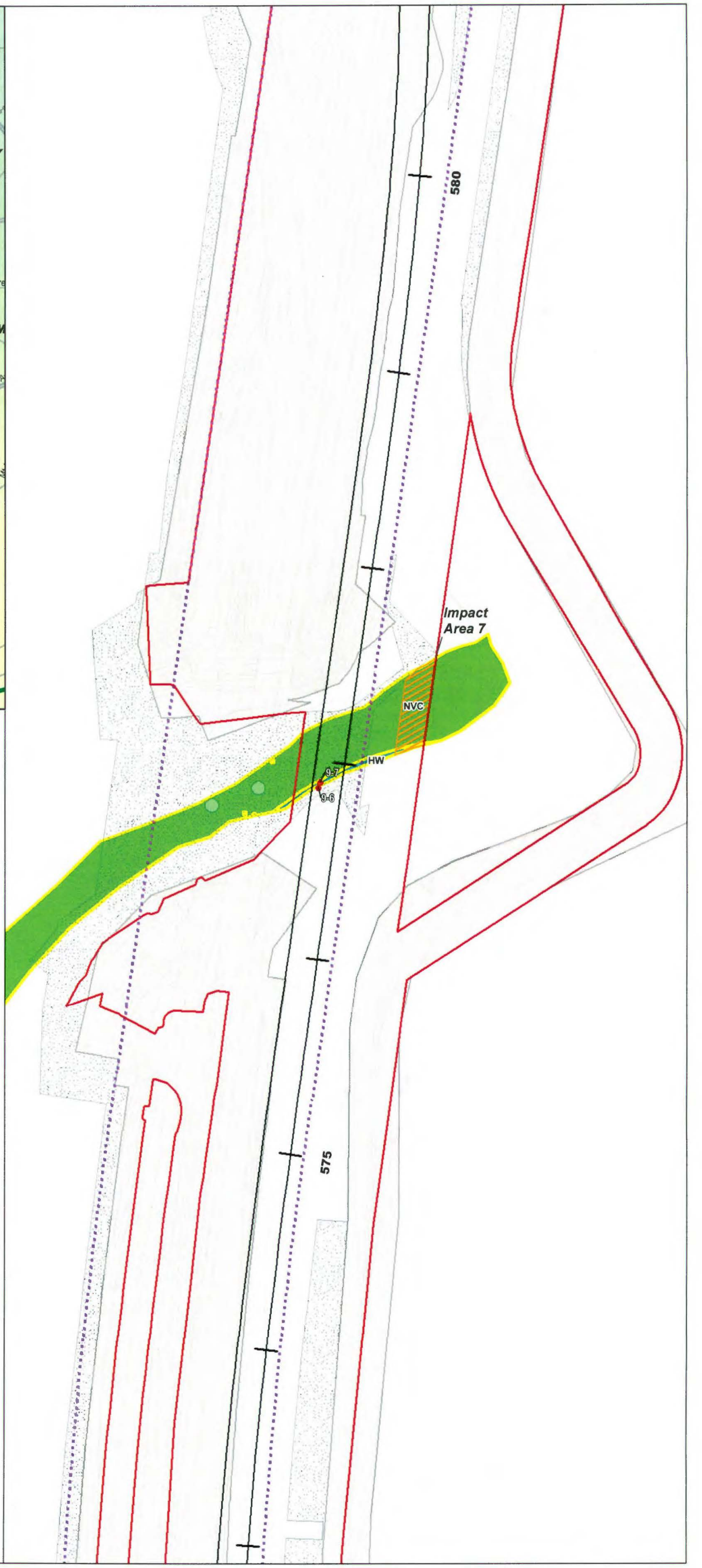
HW = Herbaceous Wetland

NVC = Non-Vegetated Channel or Floodway

N

0 50 100 Feet

SANDAG



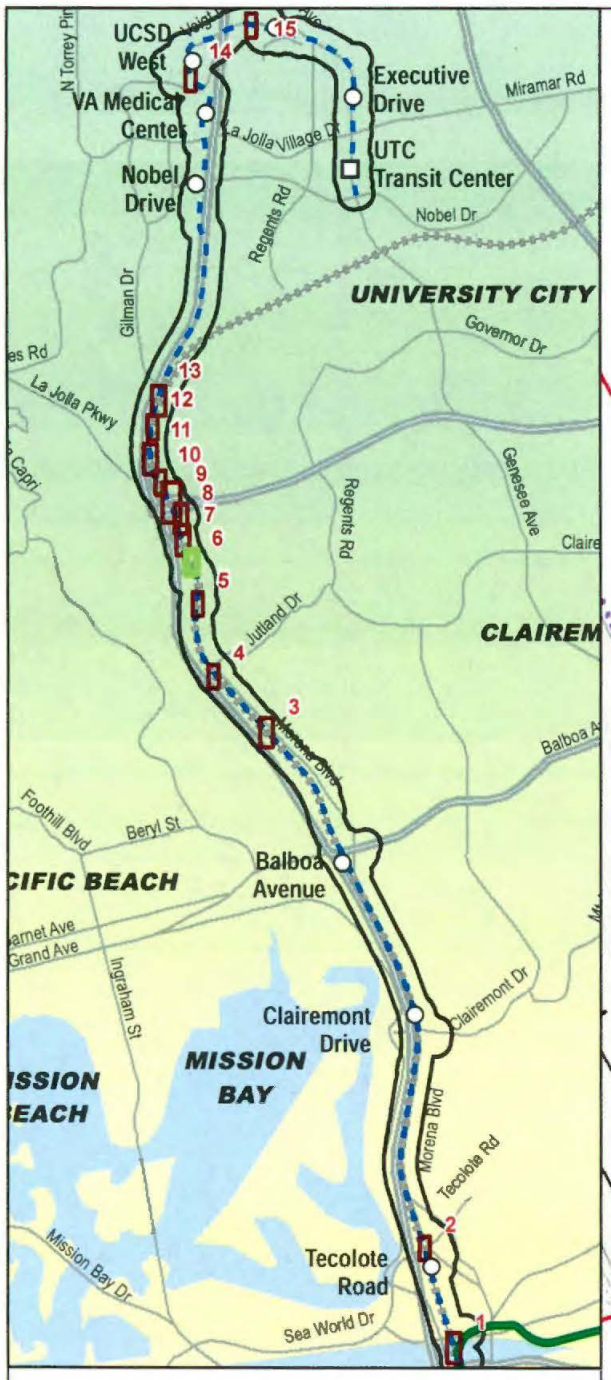


Figure 5-6
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- Data Station
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

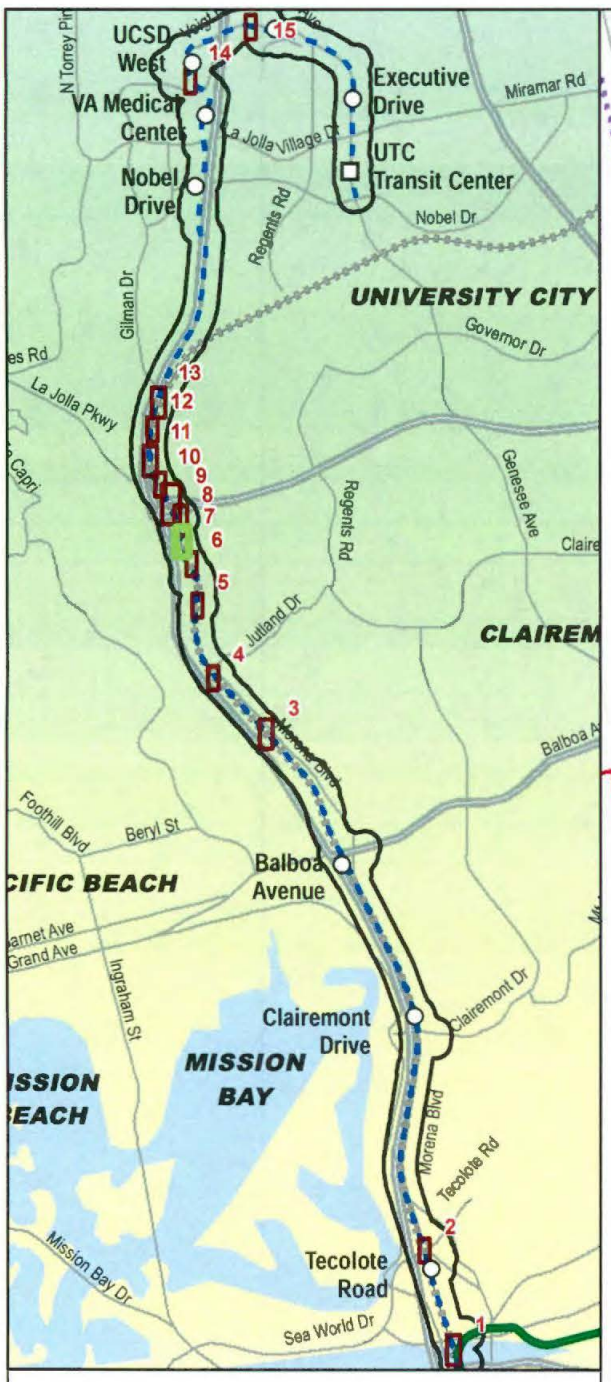


Figure 5-7
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

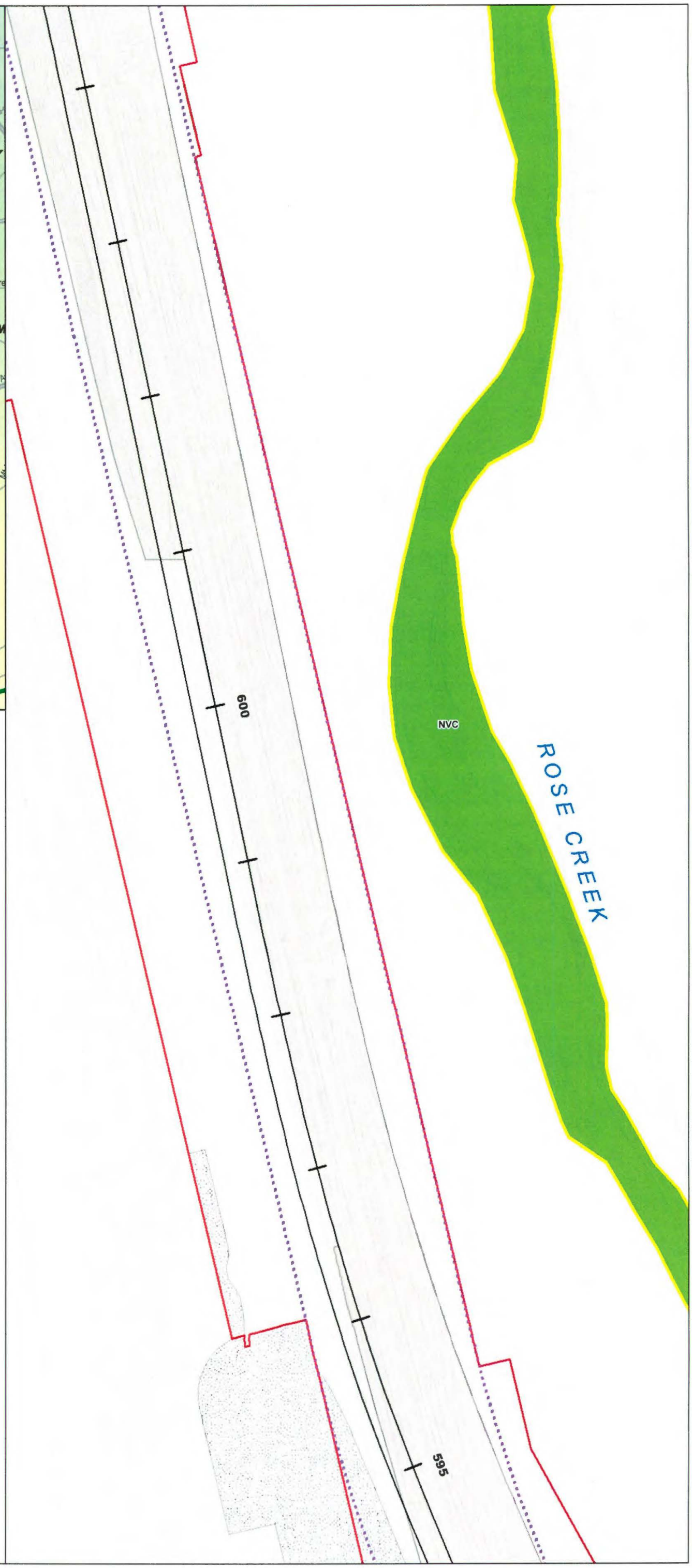
- USACE/RWQCB Waters
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

N

0 62.5 125 Feet

SANDAG



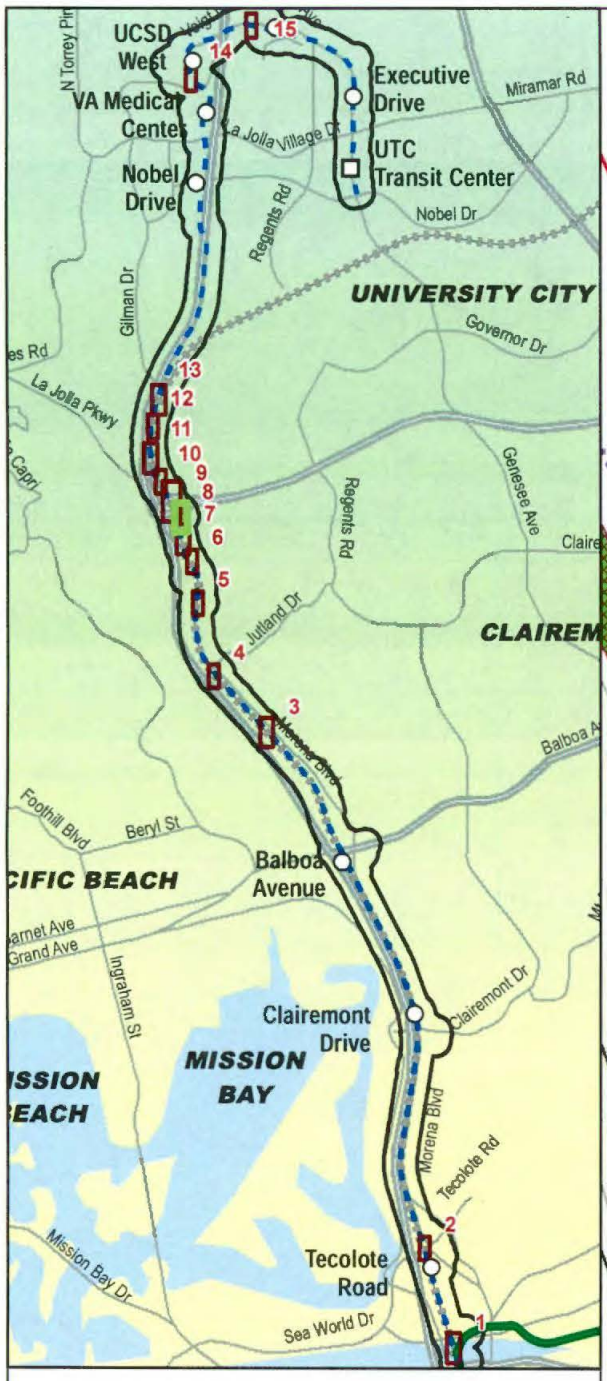


Figure 5-8
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

0 62.5 125 Feet

SANDAG

SR-52 WB

SR-52 EB

SR-52 EB ON RA

Impact Area 11

Impact Area 10

NVC

605

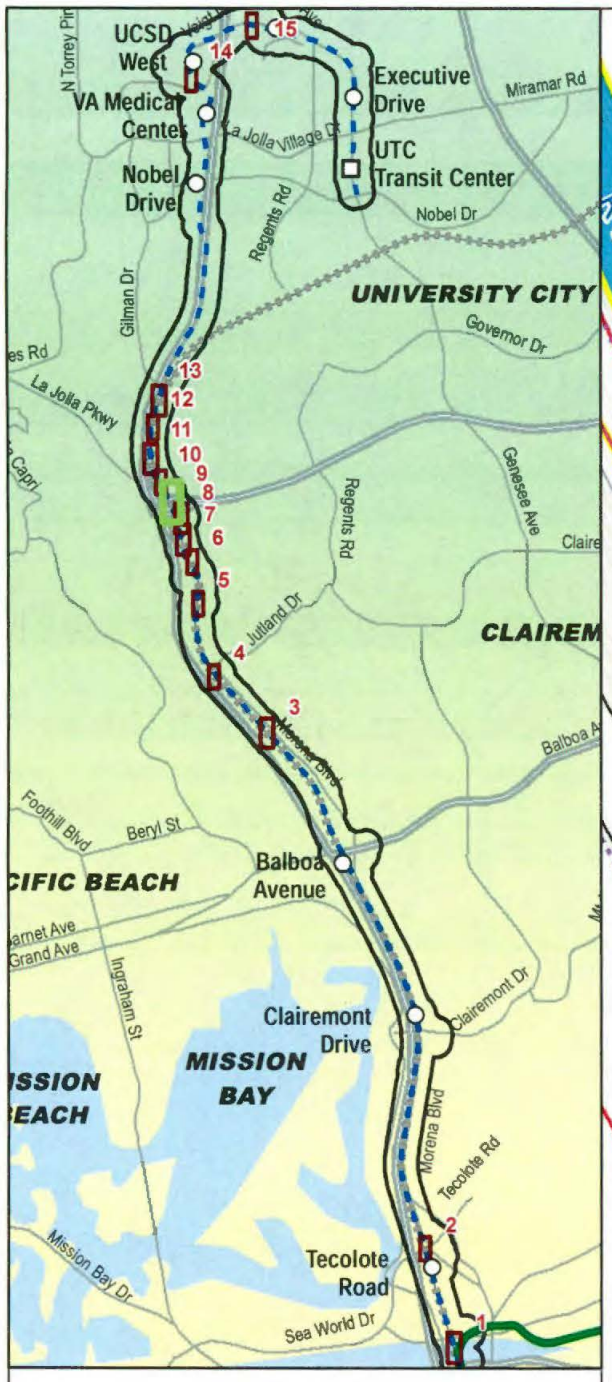


Figure 5-9
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

SWS = Southern Willow Scrub

0 85 170 Feet

SANDAG

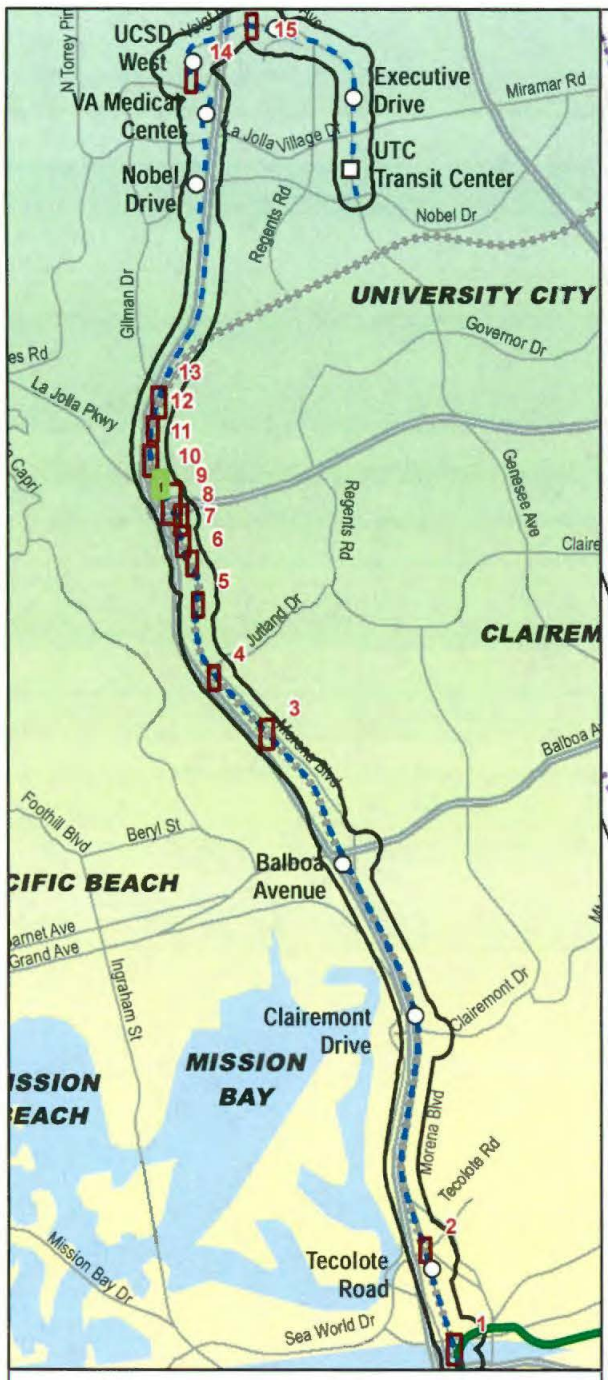


Figure 5-10
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

SWS = Southern Willow Scrub

N

0 50 100 Feet

SANDAG

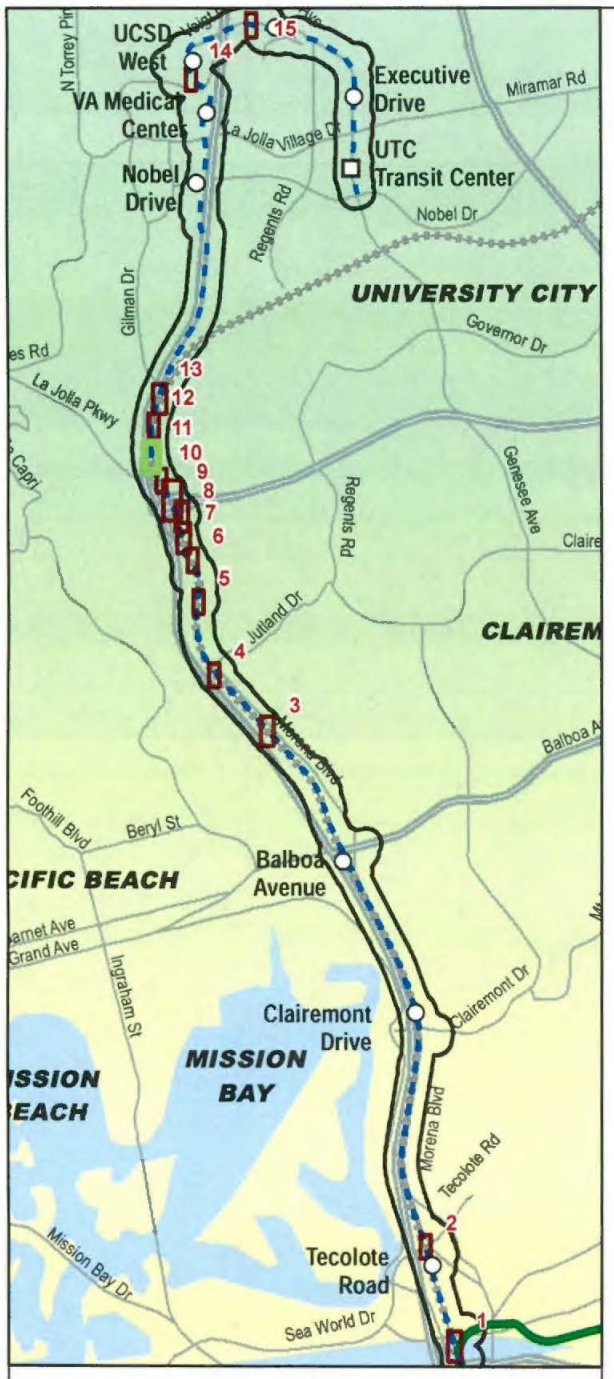


Figure 5-11
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Data Station
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

SWS = Southern Willow Scrub

N

0 62.5 125 Feet

SANDAG

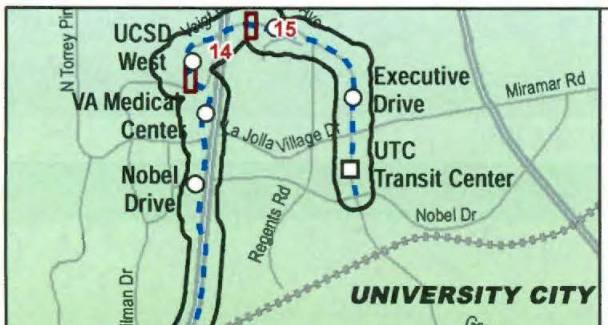


Figure 5-12
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

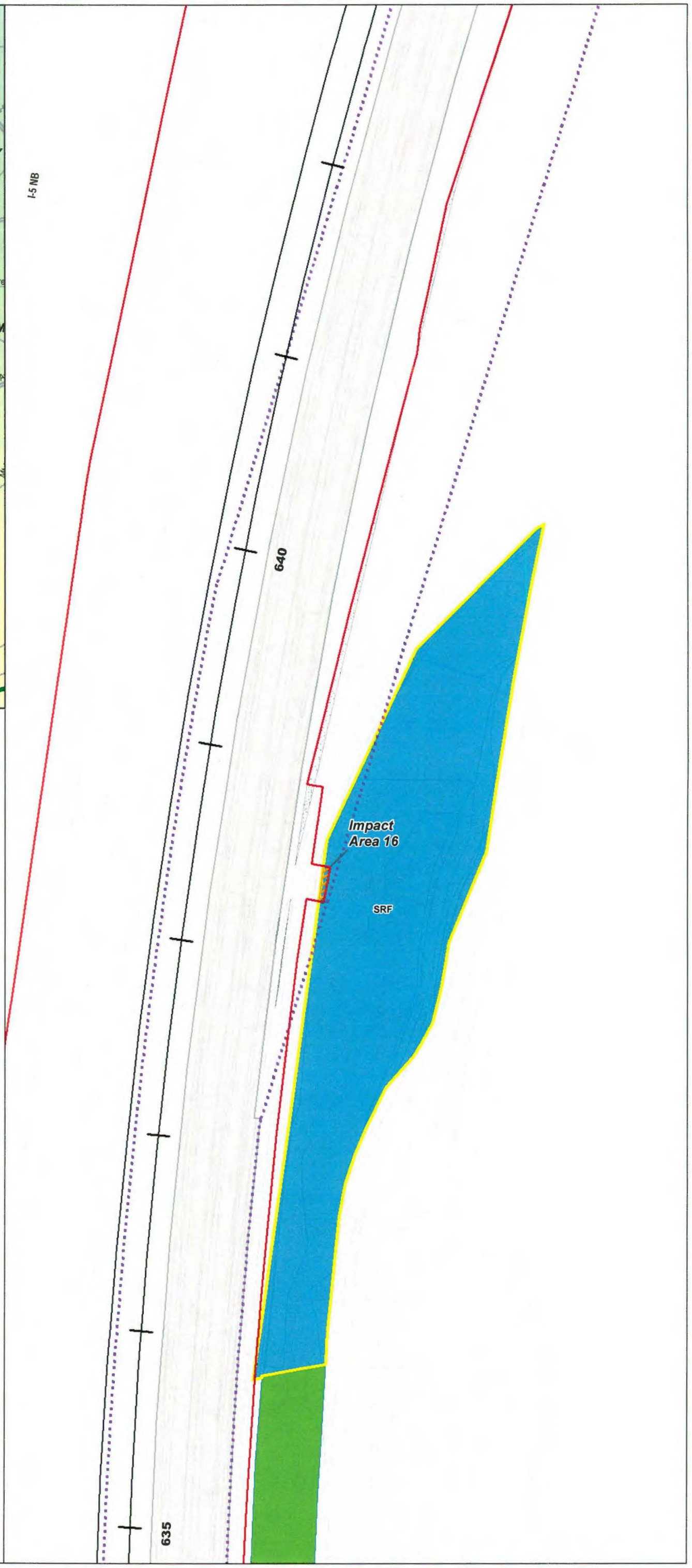
- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Jurisdictional Vegetation Communities

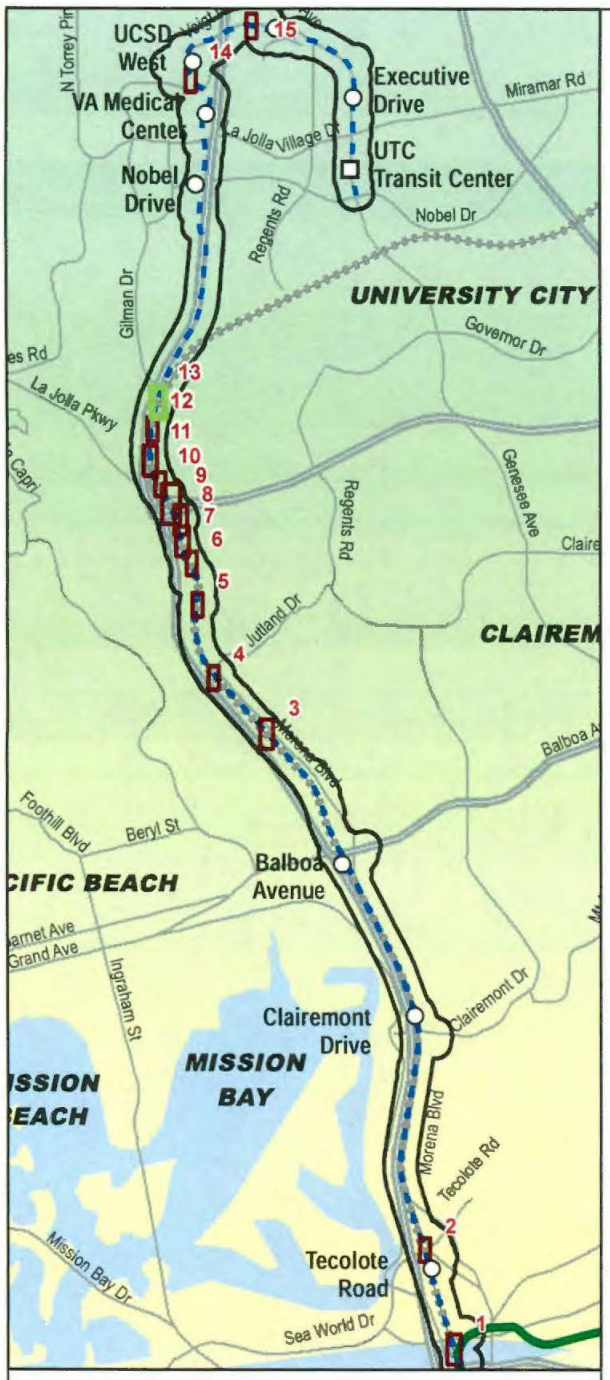
SRF = Southern Riparian Forest

N

0 50 100 Feet

SANDAG





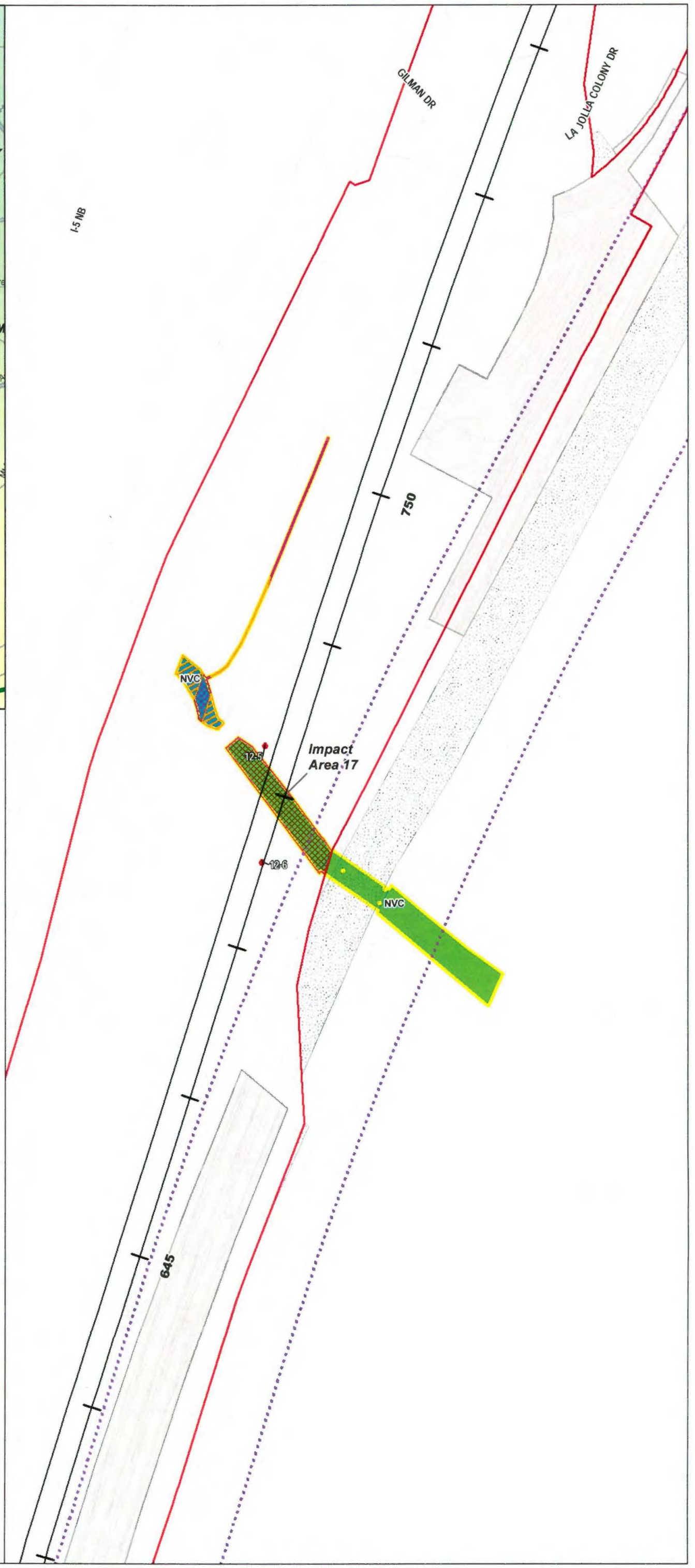


Figure 5-13
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work
- Railroad Right-of-Way

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Permanent
- Construction

Impacts - EMDT or SDRDT

- EMDT Permanent Impact
- EMDT Temporary Impact

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Data Station
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

N

0 62.5 125 Feet

SANDAG

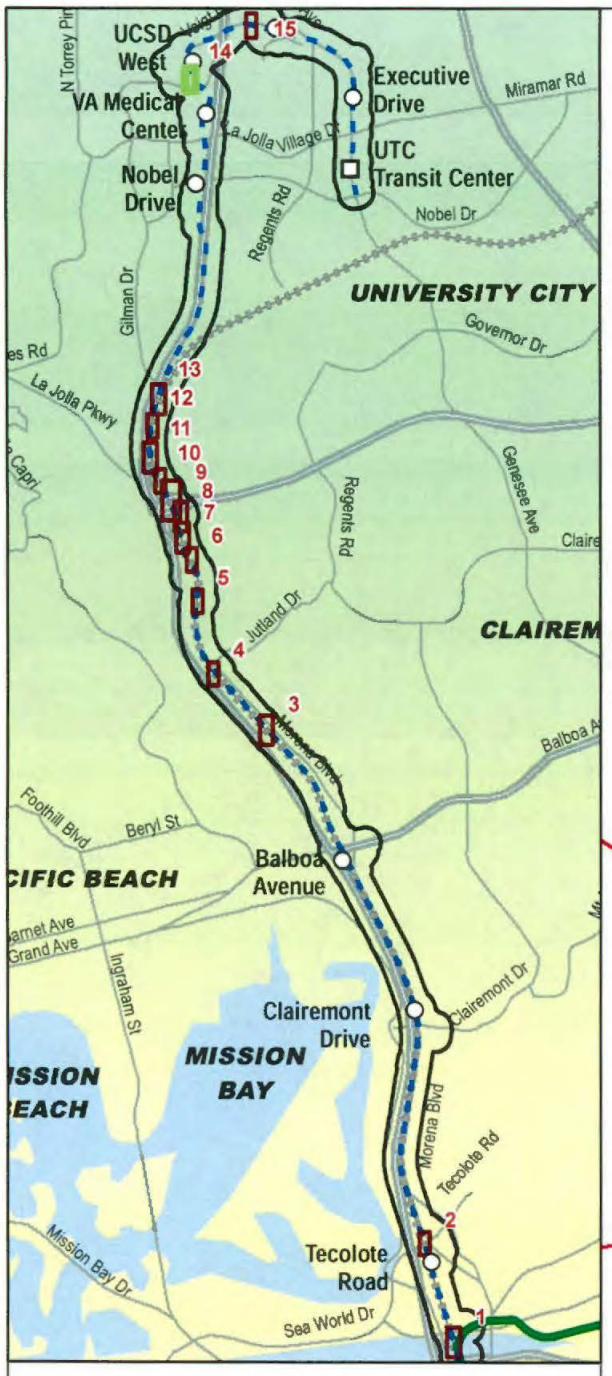


Figure 5-14
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work

Impacts to Jurisdictional Resources - Mid-Coast Corridor

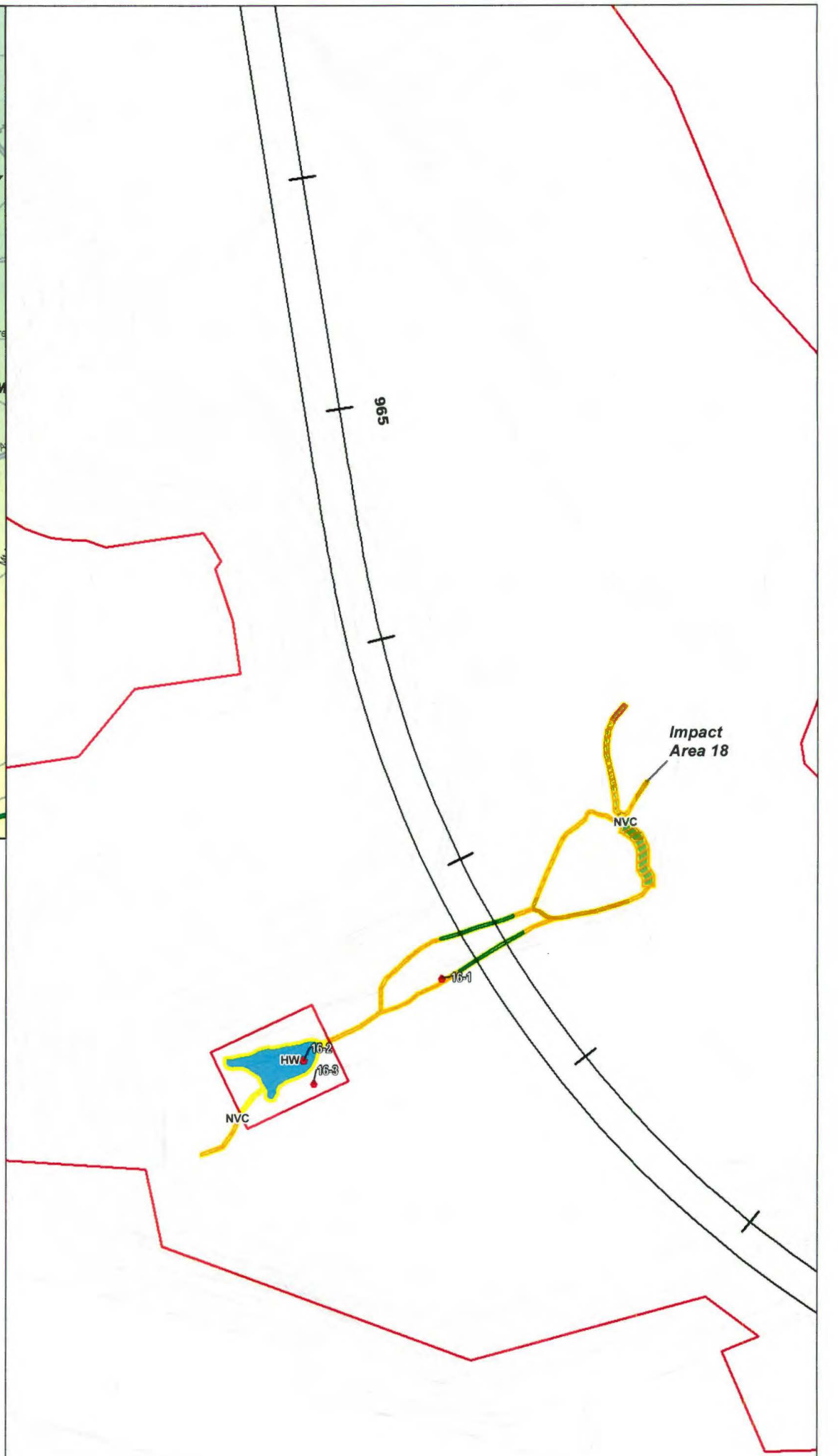
- Permanent
- Construction
- Shading and Construction

Jurisdictional Delineation

- USACE/RWQCB Waters
- USACE/RWQCB Wetlands
- Data Station
- Jurisdictional Vegetation Communities

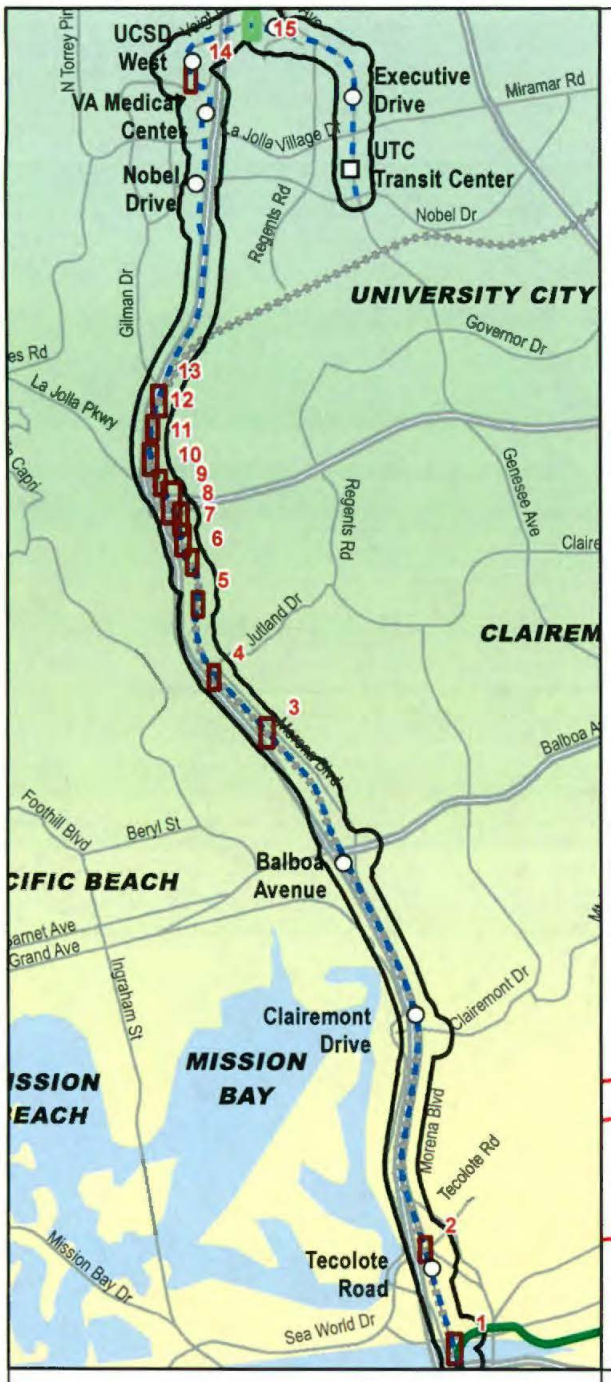
HW = Herbaceous Wetland

NVC = Non-Vegetated Channel or Floodway



0 50 100 Feet

SANDAG



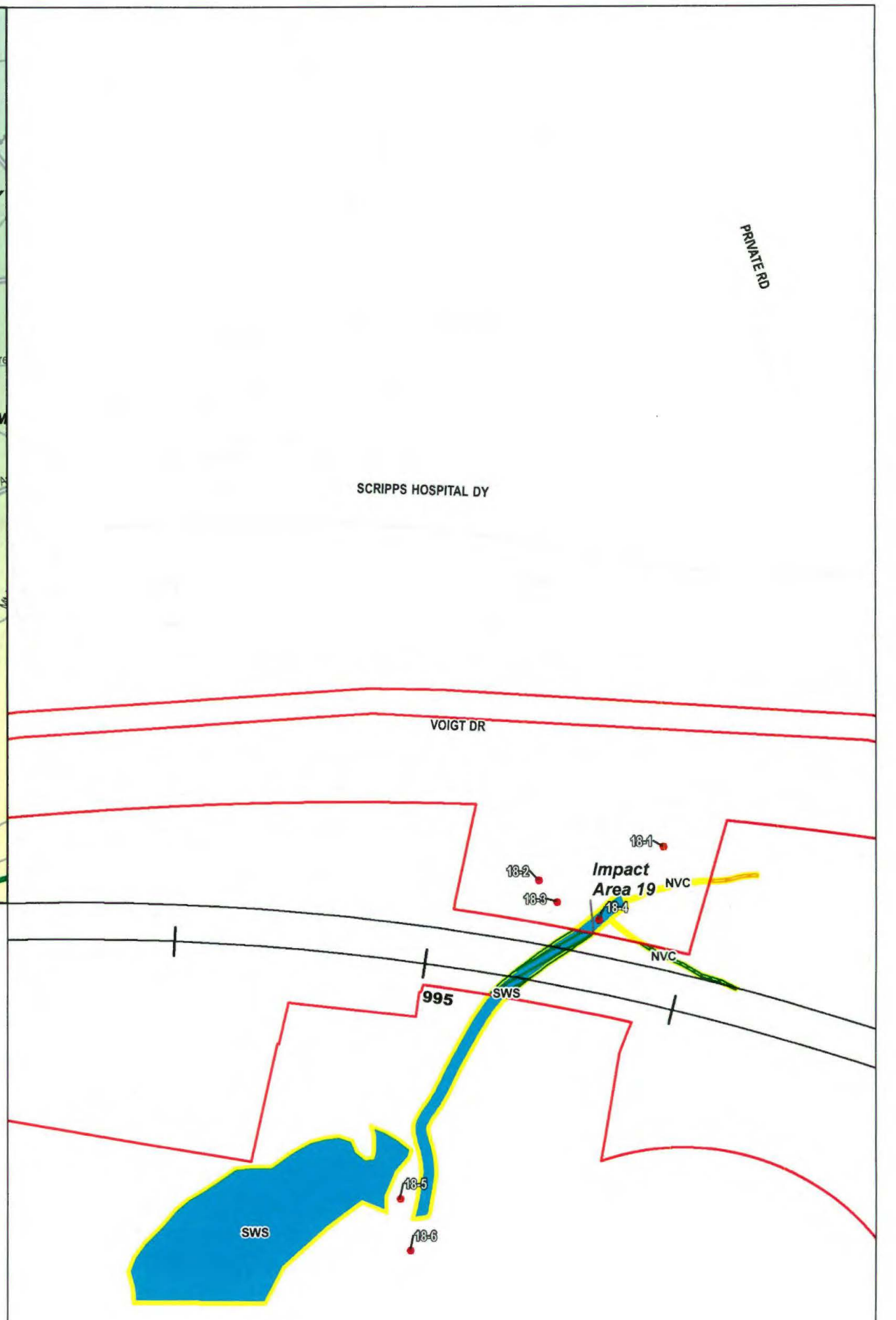


Figure 5-15
Impacts
Mid-Coast Corridor
Transit Project

- Future Trolley Station
- Transit Center with a Future Trolley Station
- LRT Limits of Work

Impacts to Jurisdictional Resources - Mid-Coast Corridor

- Construction
- Shading and Construction

Jurisdictional Delineation

- USACE/RWQCB Wetlands
- Data Station
- Jurisdictional Vegetation Communities

NVC = Non-Vegetated Channel or Floodway

SWS = Southern Willow Scrub

N

0 50 100 Feet

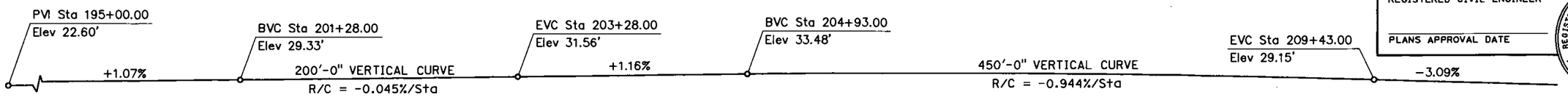
SANDAG

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD	-	

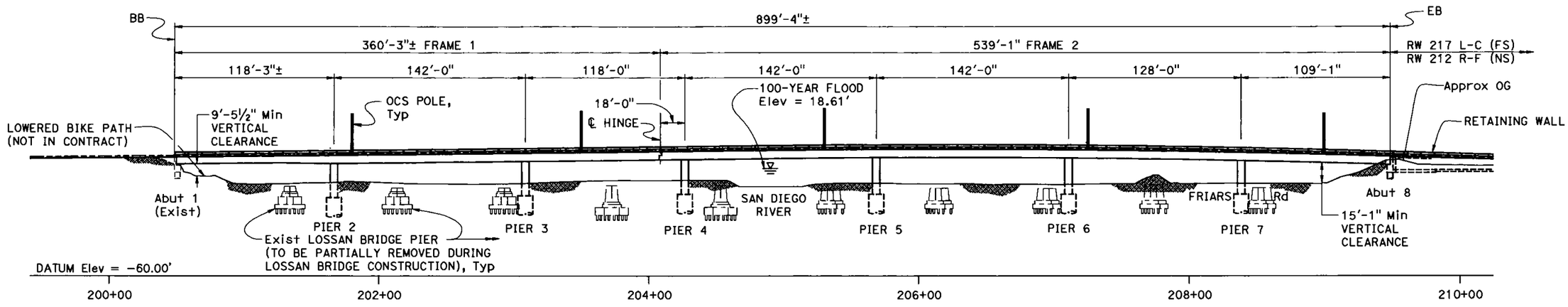
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA



PROFILE GRADE
NO SCALE



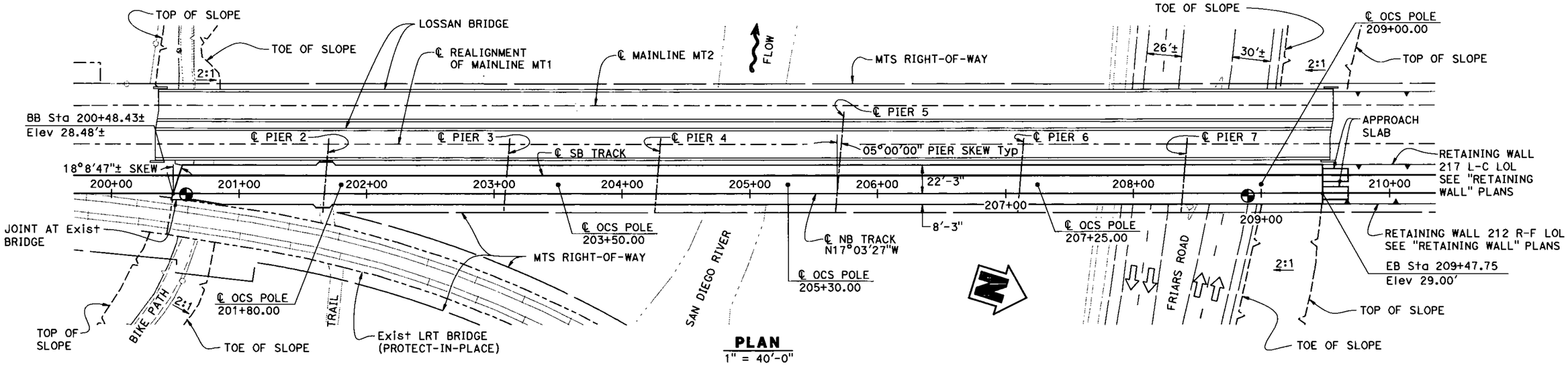
NOTE: Exist and New LOSSAN Bridge Superstructure and Abutments not shown

ELEVATION
1" = 40'-0"

LEGEND:

- Indicates Point of Minimum Vertical Clearance
- Indicates Direction of Traffic

NOTES:
1. For "PILE DATA TABLE", see "FOUNDATION PLAN" sheet.
2. For "INDEX TO PLANS" and "GENERAL NOTES", see "INDEX TO PLANS" sheet.
3. LOSSAN Bridge work is not in contract.



PLAN
1" = 40'-0"

No.	DATE	REVISION	BY	CHK	APRV

KLEINFELDER Bright people. Right Solutions
Simon Wong Engineering
550 WEST C STREET SUITE 1200 SAN DIEGO, CA. 92101
TEL (619) 831-4600 FAX (619) 232-1039

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

DESIGNED BY Muco, L.	CHECKED BY Gazaway, K.	DATE 02/15
DETAILS BY Espanto, G.	CHECKED BY Gazaway, K.	02/15
QUANTITIES BY	CHECKED BY	
SANDAG Gastelum, G.		02/15

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

SAN DIEGO RIVER BRIDGE
GENERAL PLAN NO. 1

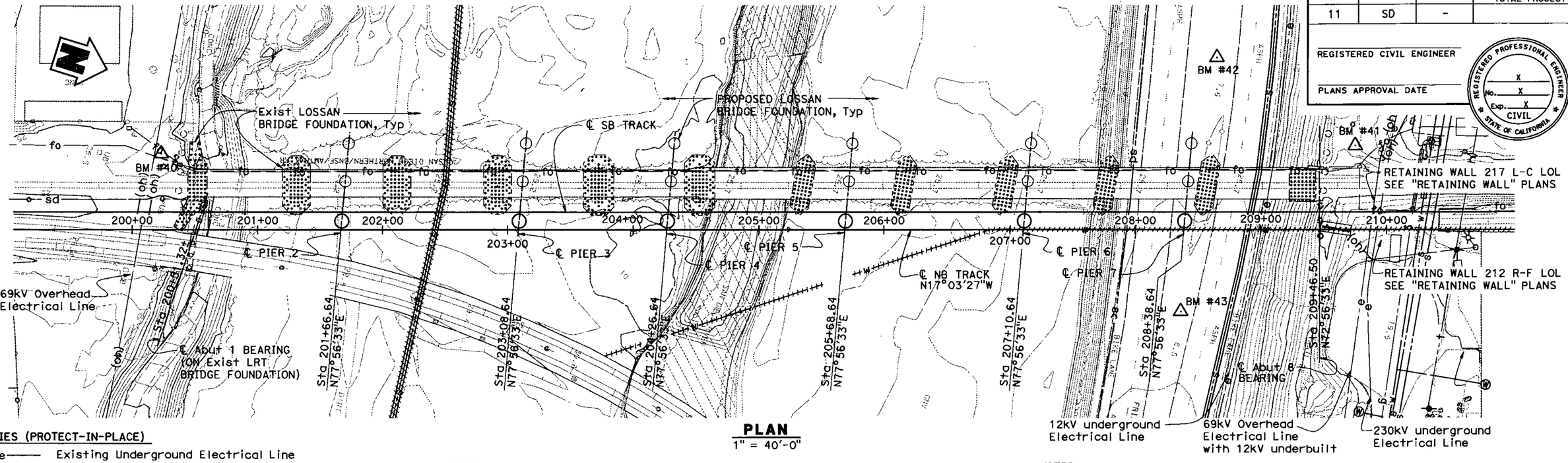
SCALE	
AS SHOWN	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 1G-GP001	SHEET NO. 1225

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD	-	

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA



PLAN
1" = 40'-0"

UTILITIES (PROTECT-IN-PLACE)

- Existing Underground Electrical Line
- Existing 66" Plastic Lined RCP Underground Sewer Line
- Existing Underground Storm Drain Line
- Existing Underground 8" CIP Water Line
- Existing 14" Iron Underground Sewer Line (Concrete encased)

UTILITIES (TO BE RELOCATED BY OTHERS)

- Existing Underground Fiber Optic Line
- Existing 69kV and 12kV Overhead Electrical Line
- Existing Overhead Telephone Line
- Existing 20" Underground Gas Line in a 30" casing

LEGEND:

- ○ - Indicates 120" dia Cast-in-Drilled-Hole Pile with Permanent Casing
- ○ - Indicates 48" dia Cast-in-Drilled-Hole Pile
- Abandoned 10" CIP Underground Water Line
- Abandoned 30" VCP Underground Sewer Line (Concrete Encased)

NOTES:

1. For Limits of Payment for excavation and backfill not shown, see A62-C
2. LOSSAN Bridge work is not in contract.

BENCHMARK

HORIZONTAL DATUM: NAD-83, CCS83 ZONE 6
VERTICAL DATUM: NAVD88

SURVEY CONTROL:

BM #40 SET 5/8" REBAR CAP "LS 4430 AECP"
N 1857733.6530
E6269080.1360
Elev = 26.1180

BM #41 SET 5/8" REBAR CAP "LS 4430 AECP"
N1858641.9480
E6268794.8150
Elev = 23.4000

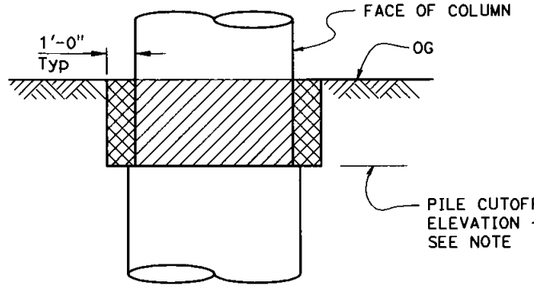
BM #42 SET MAG NAIL FLASH FLUSH
N1858516.1010
E6268760.3490
Elev = 7.5850

BM #43 SET MAG NAIL FLASH FLUSH
N1858547.8630
E6268960.9000
Elev = 8.5240

PILE DATA TABLE

Location	Pile Type	Cut-off Elevation (ft)	Nominal Resistance (kips)		Steel Casing Specified Tip Elevation (ft)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Compression	Tension			
Pier 2	120" CIDH Pile with Permanent Steel Casing	-2.75'	4,510	0	-112.75	-121.00 (a) -140.75 (d)	-140.75
Pier 3	120" CIDH Pile with Permanent Steel Casing	-1.25'	4,260	0	-111.25	-117.00 (a) -139.25 (d)	-139.25
Pier 4	120" CIDH Pile with Permanent Steel Casing	0.25'	4,390	0	-109.75	-116.00 (a) -137.75 (d)	-137.50
Pier 5	120" CIDH Pile with Permanent Steel Casing	1.50'	4,540	0	-108.50	-116.50 (a) -136.50 (d)	-136.50
Pier 6	120" CIDH Pile with Permanent Steel Casing	1.25'	4,280	0	-108.75	-114.00 (a) -135.75 (d)	-135.75
Pier 7	120" CIDH Pile with Permanent Steel Casing	-0.75'	4,110	0	-110.75	-113.50 (a) -138.75 (d)	-138.75
Abutment 8	48" CIDH	16.00'	560	0	N/A	-28.50 (a) -39.00 (d)	-39.00

NOTES:
1. Design Tip Elevation is controlled by: (a) Compression, (d) Lateral Load.
2. The specified tip elevation shall not be raised above the design tip elevation for lateral.
3. Liquefiable soil layers that do not contribute to the nominal resistance at piers 2 thru 6, pier 7 and abutment 8 extend to elevation -45 ft, -81 ft and -24 ft respectively.



NOTE: For specified pile cut-off elevation, see "PILE DATA TABLE" this sheet

LEGEND:

- STRUCTURAL EXCAVATION BRIDGE
- STRUCTURAL BACKFILL BRIDGE

EARTHWORK LIMITS OF PAYMENT
No Scale

No.	DATE	REVISION	BY	CHK	APRV

KLEINFELDER Bright people. Right Solutions
Simon Wong Engineering
550 WEST C STREET SUITE 1200 SAN DIEGO, CA. 92101
TEL (619) 831-4600 FAX (619) 232-1039

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

DESIGNED BY Muco, L.	CHECKED BY Gazaway, K.	DATE 02/15
DETAILS BY Espanto, G.	CHECKED BY Gazaway, K.	02/15
QUANTITIES BY	CHECKED BY	
SANDAG Gastelum, G.		02/15

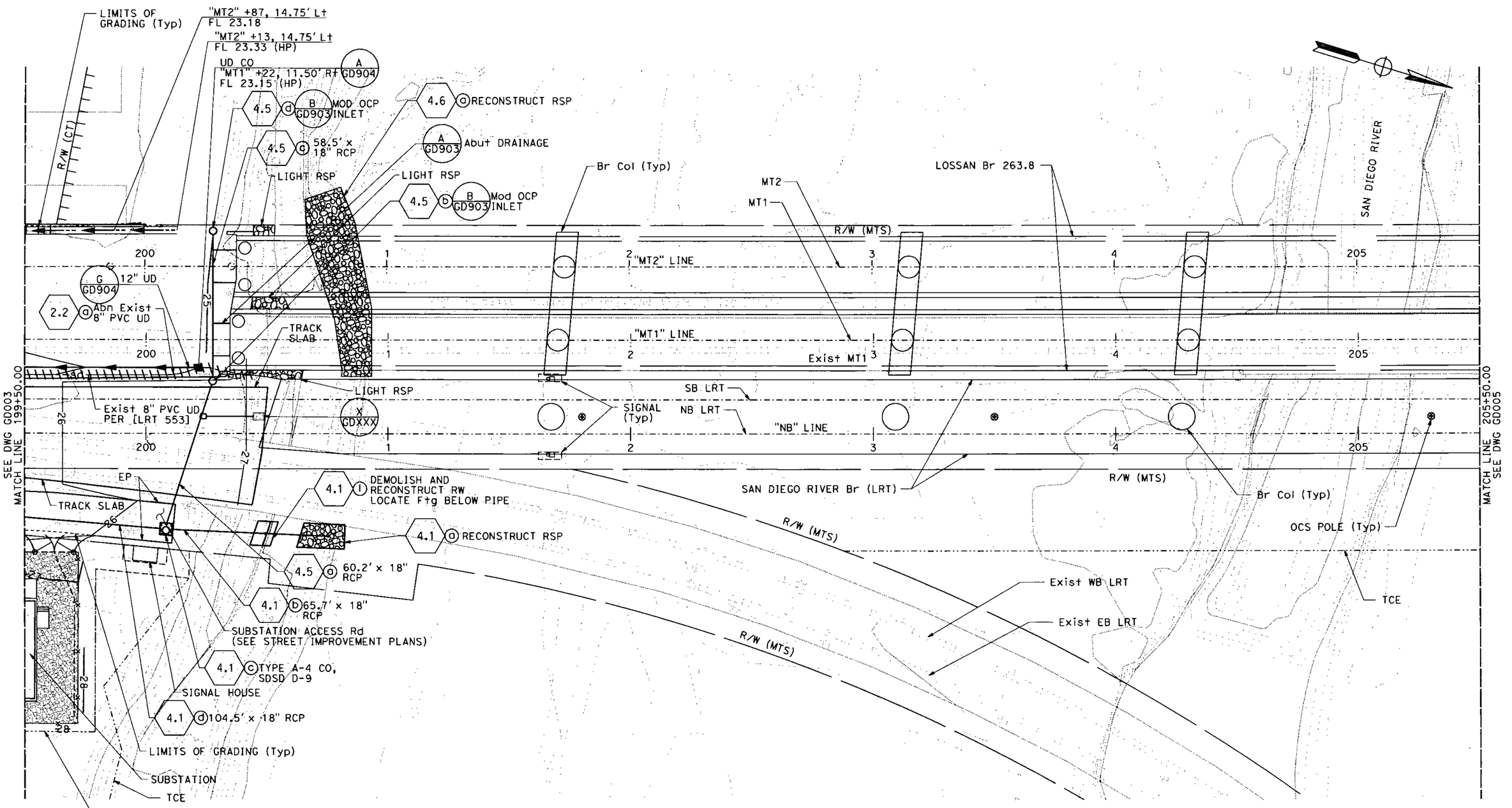
SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

SAN DIEGO RIVER BRIDGE
FOUNDATION PLAN

SCALE	
AS SHOWN	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 1G-FP001	SHEET NO. 1231



No.	DATE	REVISION	BY	CHK	APRV

PARSONS BRINCKERHOFF
401 B STREET, SUITE 1650 SAN DIEGO, CA 92101
TEL (619) 338-9376 FAX (619) 338-8123

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

REGISTERED PROFESSIONAL ENGINEER — No. ____ Exp. ____ CIVIL — STATE OF CALIFORNIA

		DATE
DESIGNED BY	Jones, T.	02/15
DRAWN BY	Malinao, C.	02/15
CHECKED BY	Samii, H.	02/15
SANDAG	Gastelum, G.	02/15

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

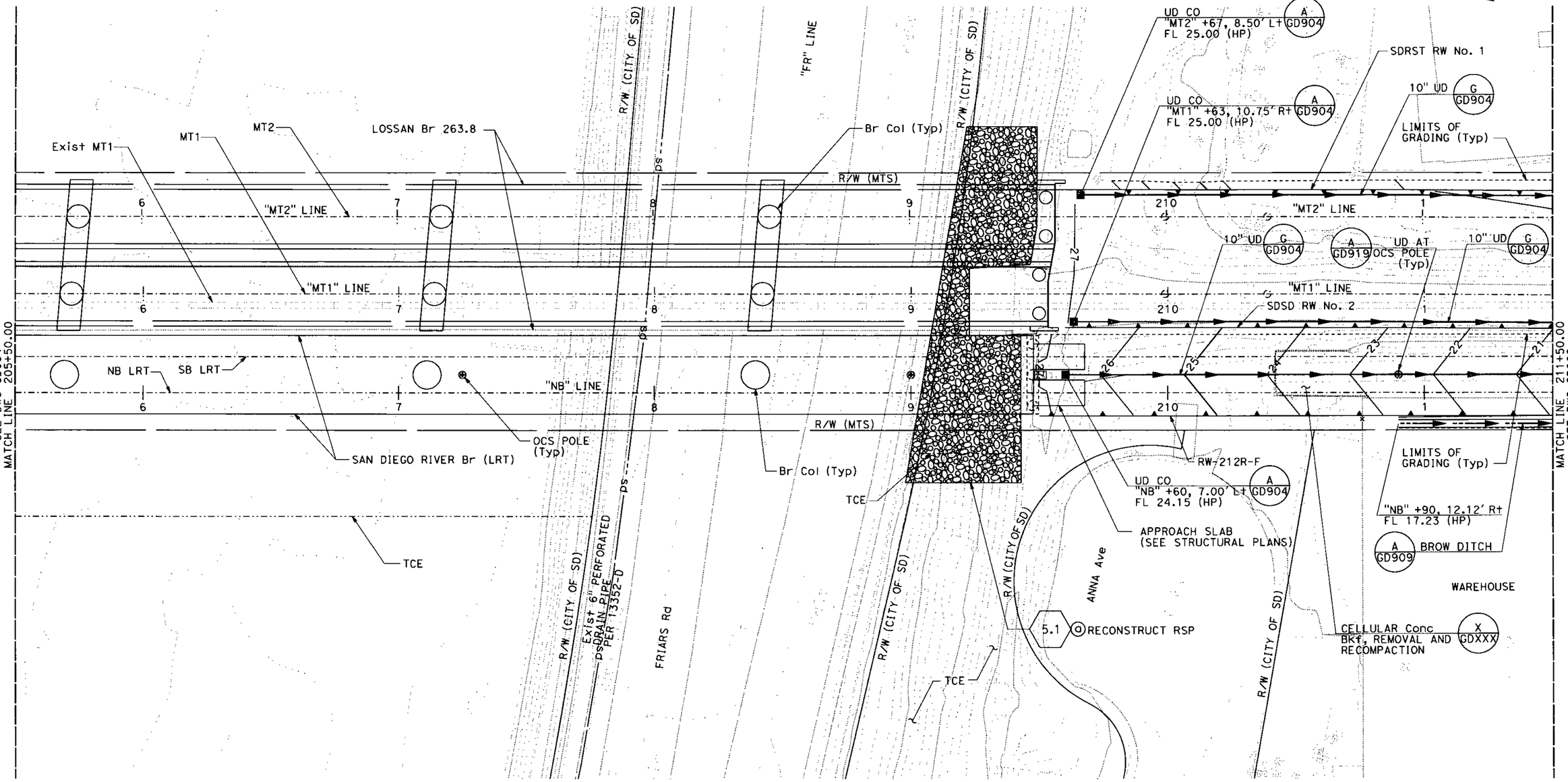
MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

GRADING AND DRAINAGE
STA 199+50.00 TO STA 205+50.00

SCALE HORIZ: 1"=20'

SANDAG CONTRACT NO. 5001904

DRAWING NO. GD004 | SHEET NO. 516



No.	DATE	REVISION	BY	CHK	APRV

PARSONS BRINCKERHOFF
401 B STREET, SUITE 1650 SAN DIEGO, CA 92101
TEL (619) 338-9376 FAX (619) 338-8123

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

DESIGNED BY Jones, T.	DATE 02/15
DRAWN BY Malinao, C.	02/15
CHECKED BY Samii, H.	02/15
SANDAG Gastelum, G.	02/15

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT

65% PLANS

GRADING AND DRAINAGE
STA 205+50.00 TO STA 211+50.00

SCALE HORIZ: 1"=2D'

SANDAG CONTRACT NO. 5001904

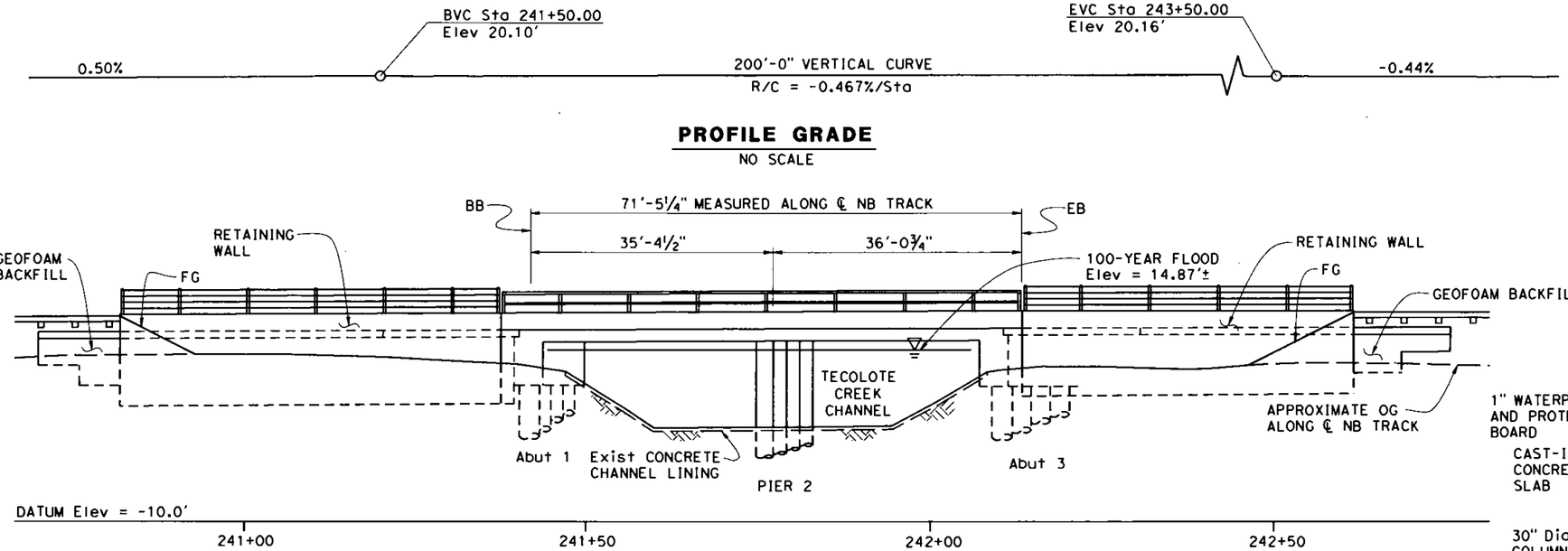
DRAWING NO. GD005 | SHEET NO. 517

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD	-	

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

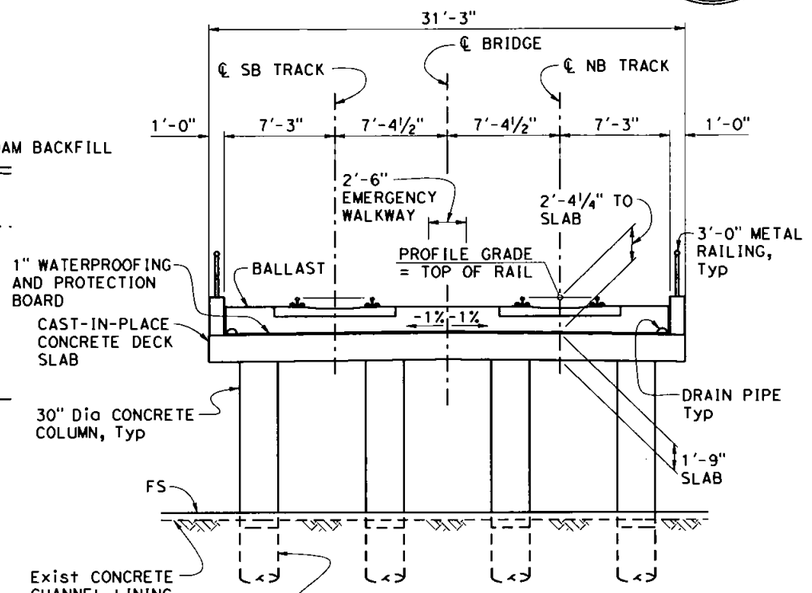
REGISTERED PROFESSIONAL ENGINEER — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA



NOTE: Exist LOSSAN Bridge not shown

PROFILE GRADE

NO SCALE

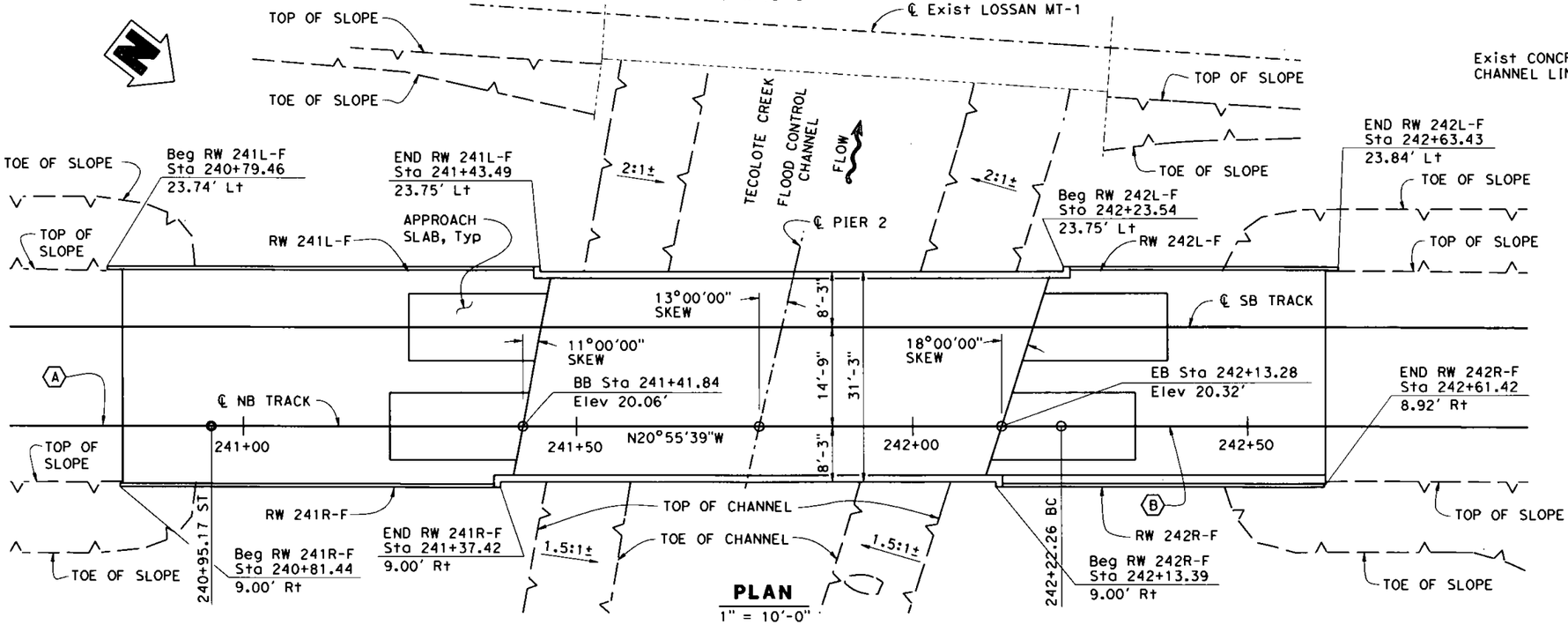


TYPICAL SECTION

1" = 5'-0"

ELEVATION

1" = 10'-0"



PLAN

1" = 10'-0"

SPIRAL AND CURVE DATA

No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
(A)	SPIRAL	0°57'18"	N/A	50.00'
(B)	10010.00'	4°00'15"	349.91'	699.54'

NOTES:

1. For "INDEX TO PLANS" and "GENERAL NOTES", see "DECK CONTOURS" sheet
2. For "PILE DATA TABLE", see "FOUNDATION PLAN" sheet

No.	DATE	REVISION	BY	CHK	APRV

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

KLEINFELDER — Bright people. Right Solutions.
Simon Wong Engineering
550 WEST C STREET SUITE 1200 SAN DIEGO, CA. 92101
TEL (619) 831-4600 FAX (619) 232-1039

DESIGNED BY Schroth-Nichols, E.	CHECKED BY Gazaway, K.	DATE 04/15	
DETAILS BY Esponto, G.	CHECKED BY Gazaway, K.	04/15	
QUANTITIES BY	CHECKED BY		
SANDAG Gastelum, G.		04/15	

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

TECOLOTE CREEK BRIDGE
GENERAL PLAN

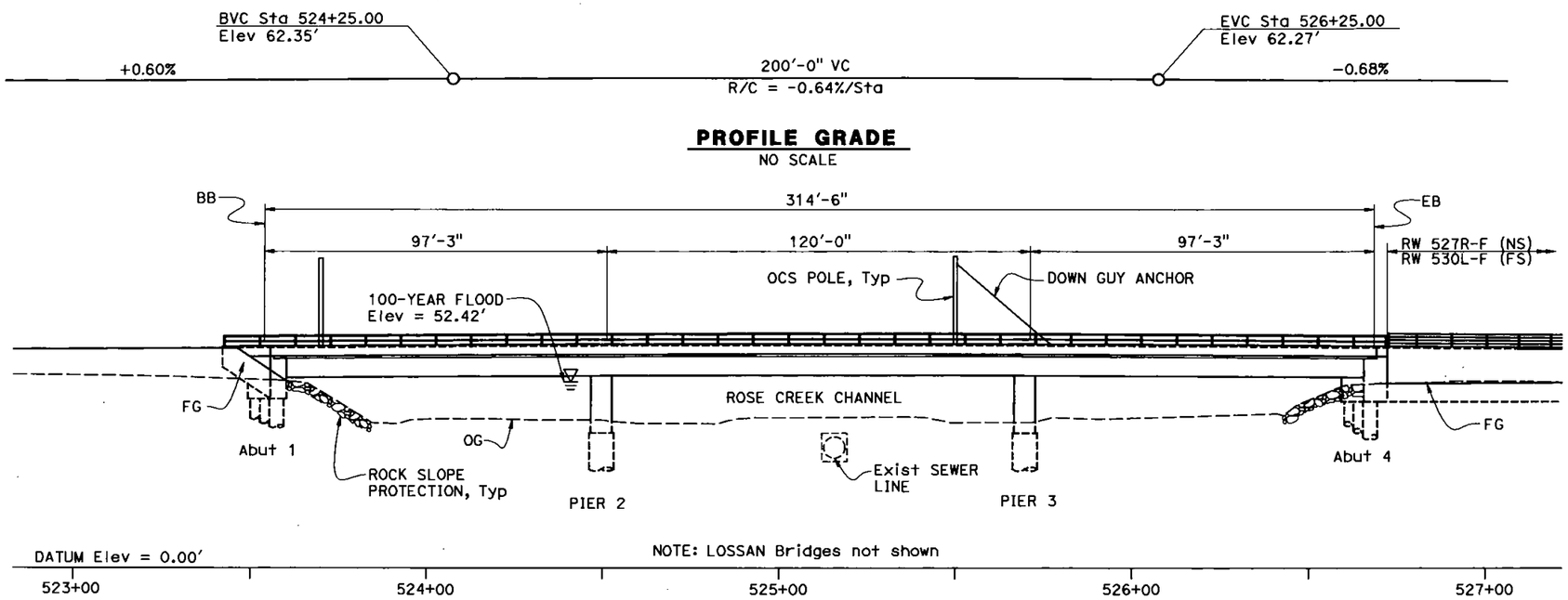
SCALE	
AS SHOWN	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 1H-GP001	SHEET NO. 1278

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD	5	

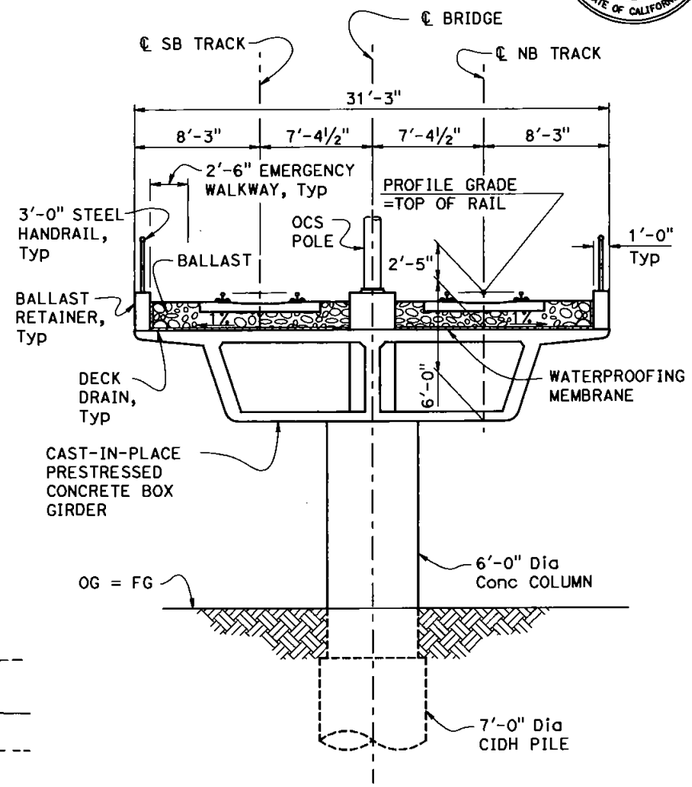
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEITH J. GAZAWAY
No. 58952
Exp. 6/30/15
CIVIL
STATE OF CALIFORNIA

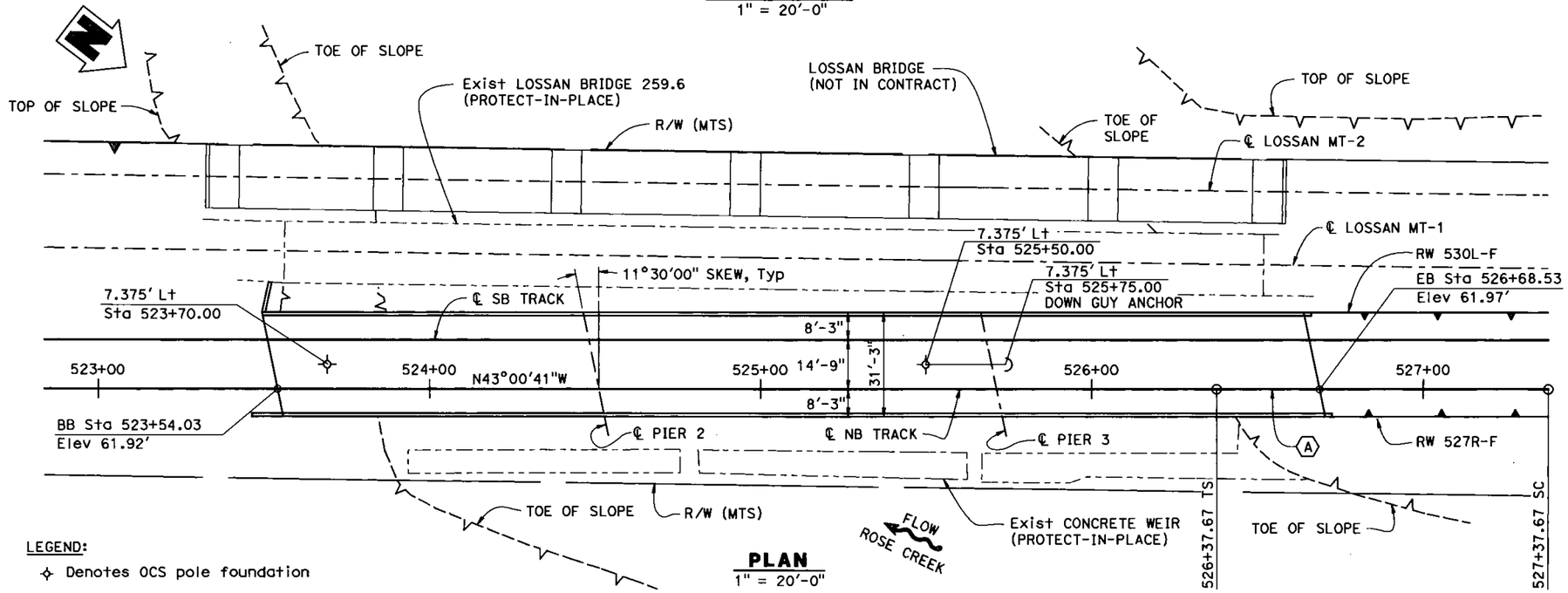


PROFILE GRADE
NO SCALE



NOTE: LOSSAN Bridge 259.6 not shown

TYPICAL SECTION
1" = 5'-0"



PLAN
1" = 20'-0"

LEGEND:
⊹ Denotes OCS pole foundation

NOTE: For "PILE DATA TABLE", see FOUNDATION PLAN sheet

SPIRAL DATA

No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
(A)	SPIRAL	00°17'12"	N/A	100.00'

No.	DATE	REVISION	BY	CHK	APRV

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

KLEINFELDER
Bright people. Right Solutions.
Simon Wong Engineering
550 WEST C STREET SUITE 1200 SAN DIEGO, CA. 92101
TEL (619) 831-4600 FAX (619) 232-1039

DESIGNED BY Amirihormozaki, E.	CHECKED BY Gazaway, K.	DATE 02/15	
DETAILS BY Espanto, G.	CHECKED BY Gazaway, K.	02/15	
QUANTITIES BY	CHECKED BY		
SANDAG Gastelum, G.		02/15	

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

ROSE CREEK SOUTH BRIDGE GENERAL PLAN

SCALE	
AS SHOWN	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 2A-GP001	SHEET NO. 1322

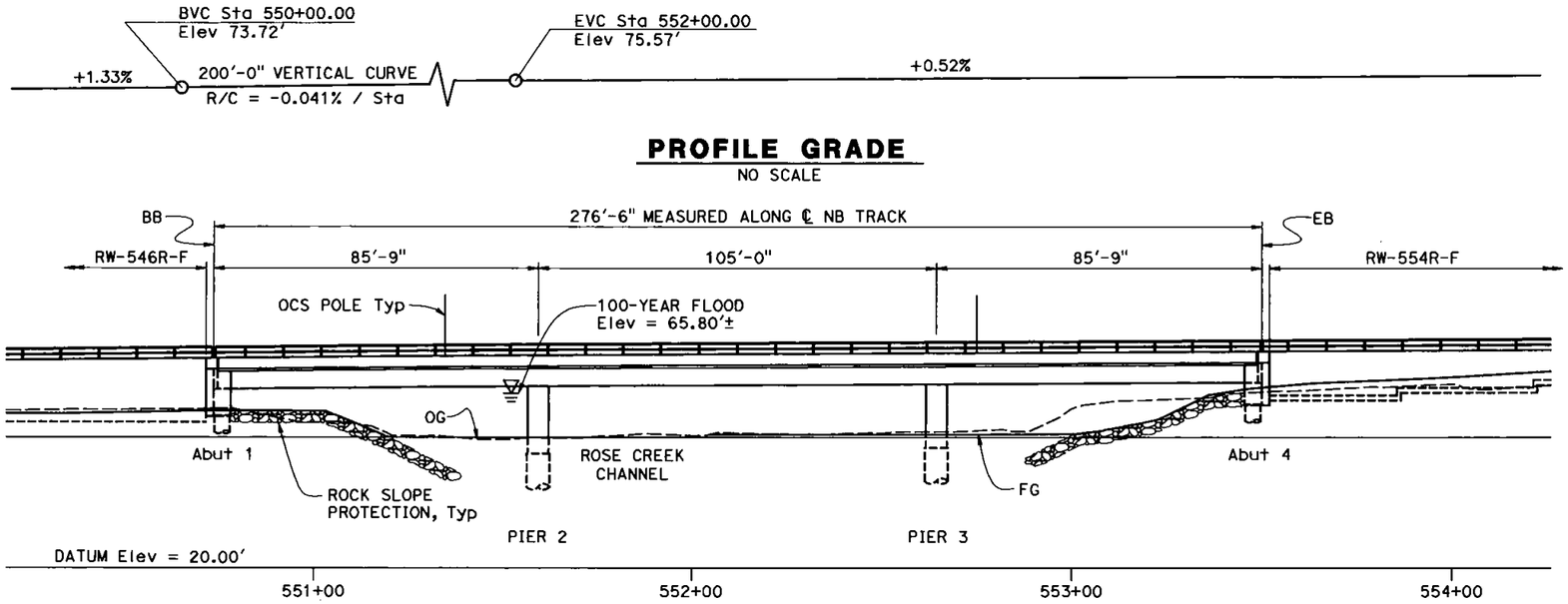
2/27/2015 10:15:03 AM gespanto
⊕IP-SHORT-PEN-TABLE
...\MCCTP-S2A-G04GP001.dgn

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

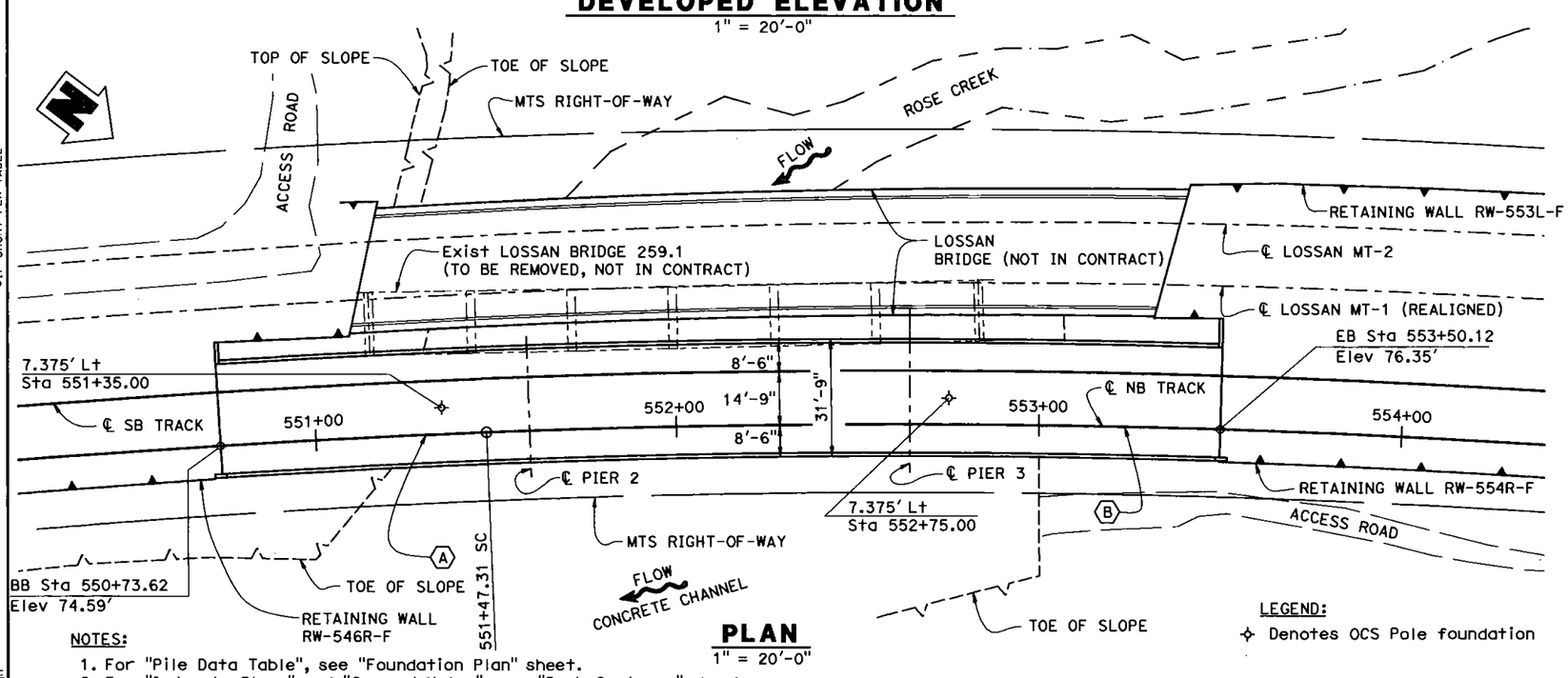
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — STRUCTURAL — STATE OF CALIFORNIA



PROFILE GRADE
NO SCALE

NOTE: Exist and Proposed LOSSAN Bridge not shown

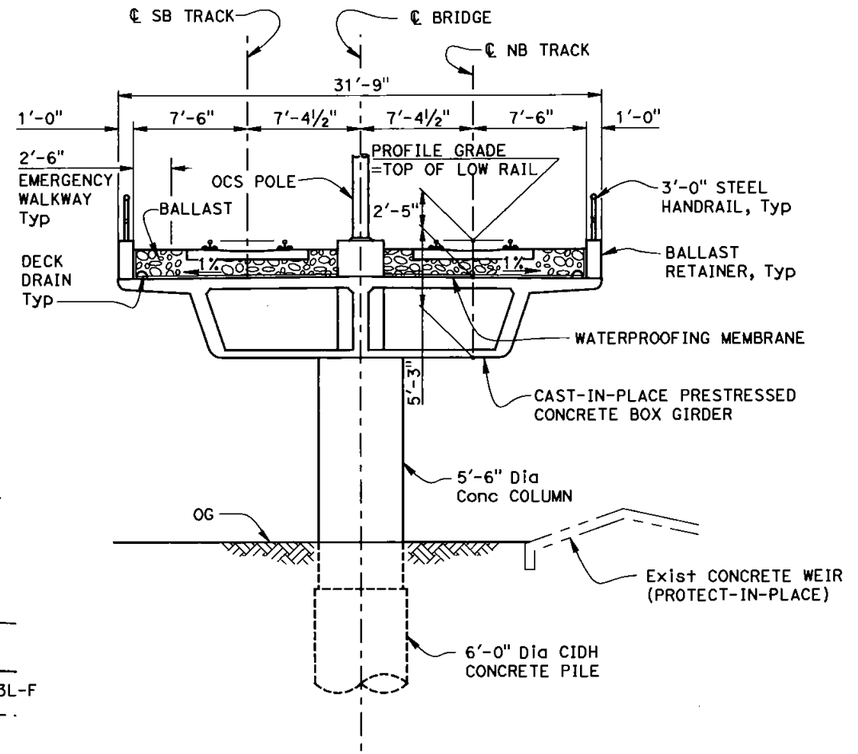
DEVELOPED ELEVATION
1" = 20'-0"



PLAN
1" = 20'-0"

NOTES:
1. For "Pile Data Table", see "Foundation Plan" sheet.
2. For "Index to Plans" and "General Notes", see "Deck Contours" sheet.
3. For RW-546R-F, RW-553L-F AND RW-554R-F, see "Retaining Wall Plans"

LEGEND:
⟡ Denotes OCS Pole foundation



TYPICAL SECTION
1" = 5'-0"

SPIRAL AND CURVE DATA

No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
(A)	SPIRAL	02°39'37"	N/A	260.00'
(B)	2800.00'	45°11'53"	1165.47'	2208.80'

No.	DATE	REVISION	BY	CHK	APRV

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

KLEINFELDER Bright people. Right Solutions. | Simon Wong Engineering
550 WEST C STREET SUITE 1200 SAN DIEGO, CA. 92101
TEL (619) 831-4600 FAX (619) 232-1039

DESIGNED BY Sullivan, M.	CHECKED BY Brown, W.	DATE 02/15	
DETAILS BY Bilodeau, D.	CHECKED BY Brown, W.	02/15	
QUANTITIES BY	CHECKED BY		
SANDAG Gastelum, G.		02/15	

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

ROSE CREEK NORTH BRIDGE
GENERAL PLAN

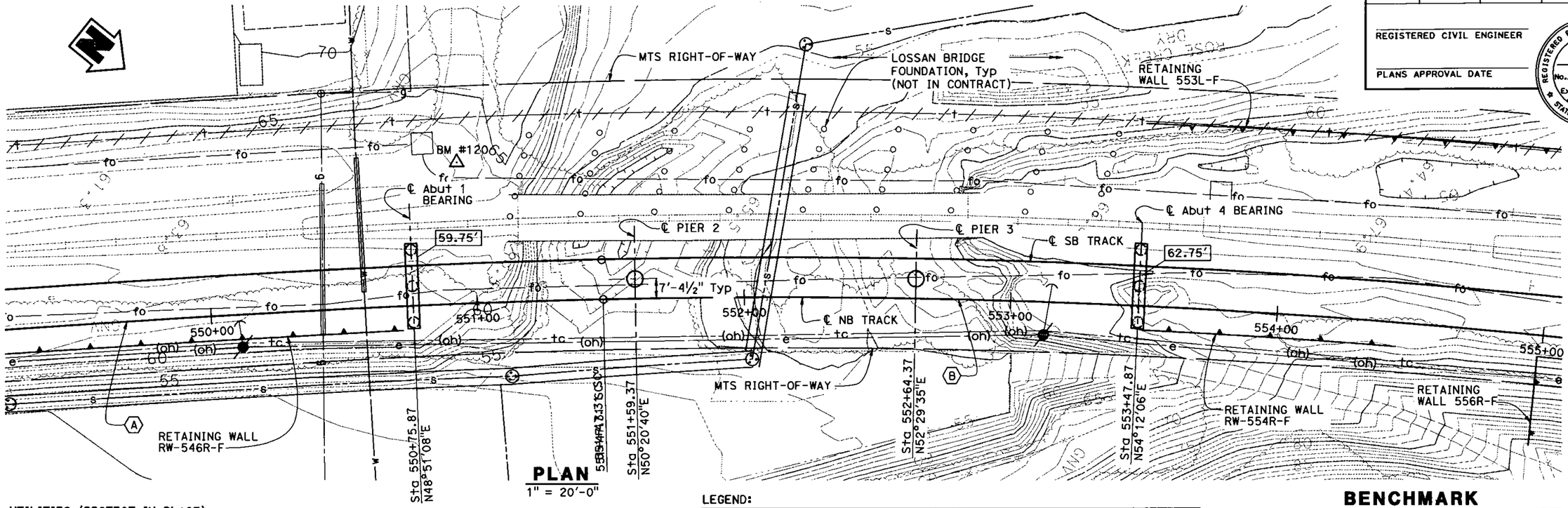
SCALE	
AS SHOWN	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 2B-GP001	SHEET NO. 1351

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — STRUCTURAL — STATE OF CALIFORNIA



PLAN
1" = 20'-0"

UTILITIES (PROTECT-IN-PLACE)

——s—— Existing 24" EVSC Underground Sewer Line in Concrete Encasement

UTILITIES (TO BE RELOCATED BY OTHERS)

——e—(oh) Existing Overhead Electrical Line
——tc-(oh) Existing Overhead Telephone Line (TPAC)
——fo—— Existing Underground Fiber Optic Line (NCTD) (MCI)
——g—— Existing 4" Underground Gas Line

UTILITIES (TO BE ABANDONED)

—t—t— Existing Underground Telephone Line
Existing 12" ACP Underground Water Line

SPIRAL AND CURVE DATA

No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
⟨A⟩	SPIRAL	02°39'37"	N/A	260.00'
⟨B⟩	2800.00'	45°11'53"	1165.47'	2208.80'

LEGEND:

- ○ - Indicates 72" Cast-in-Drilled-Hole Pile at Piers
- ○ - Indicates 48" Cast-in-Drilled-Hole Pile at Abutment
- 59.75' - Indicates bottom of Abutment elevation

NOTE: For limits of payment for excavation and backfill, see "Pier Layout" sheet and ⟨A62C⟩

BENCHMARK

HORIZONTAL DATUM: NAD-83, CCS83 ZONE 6
VERTICAL DATUM: NAVD88

SURVEY CONTROL:

BM #120 SET REBAR AND CAP
N 1880496.9592
E 6261079.1371
Elev = 63.2880

PILE DATA TABLE

Location	Pile Type	Cut-off Elevation (ft)	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Compression	Tension		
Abutment 1	48" CIDH	60.0	630	0	23.0 (a) 18.0 (d)	18.0
Pier 2	72" CIDH	50.0	4250	0	-14.0 (a) 2.5 (d)	-14.0
Pier 3	72" CIDH	51.5	4250	0	-8.0 (a) 8.0 (d)	-8.0
Abutment 4	48" CIDH	63.0	630	0	28.5 (a) 24.0 (d)	24.0

NOTES:

1. Design tip elevations are controlled by: (a) Compression, (d) Lateral Load
2. The specified tip elevation shall not be raised above the design tip elevations for lateral load.
3. Unsuitable soil layers (liquefiable, scourable, etc) that do not contribute to the nominal resistance exist at Piers 2 and 3 extending to elevations 41.5 ft and 49 ft respectively.

No.	DATE	REVISION	BY	CHK	APRV

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

KLEINFELDER Bright people. Right Solutions
Simon Wong Engineering
550 WEST C STREET SUITE 1200 SAN DIEGO, CA. 92101
TEL (619) 831-4600 FAX (619) 232-1039

DESIGNED BY Sullivan, M.	CHECKED BY Brown, W.	DATE 02/15	
DETAILS BY Bilodeau, D.	CHECKED BY Brown, W.	02/15	
QUANTITIES BY	CHECKED BY		
SANDAG Gasteium, G.		02/15	

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900
MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

ROSE CREEK NORTH BRIDGE
FOUNDATION PLAN

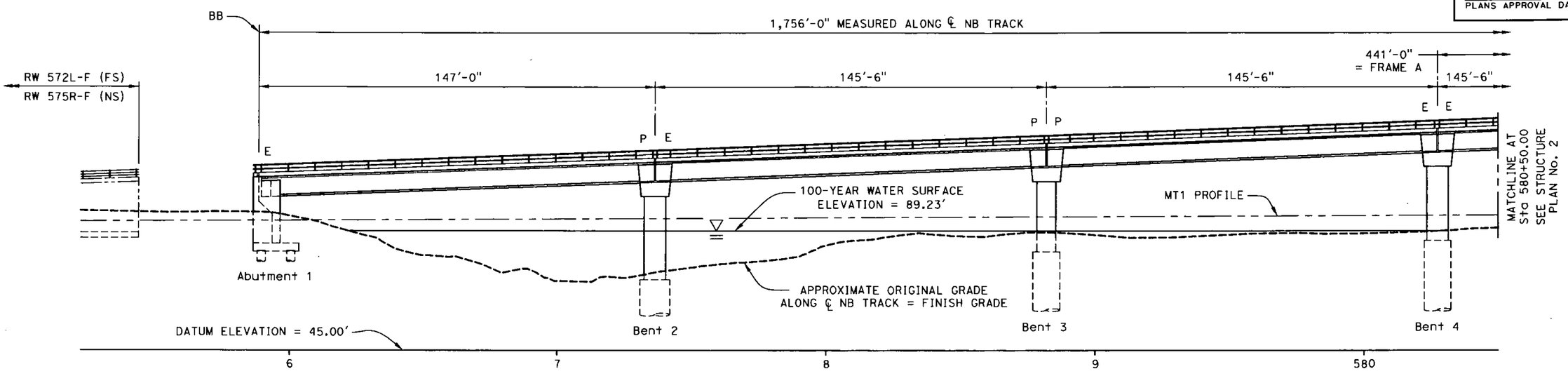
SCALE	
AS SHOWN	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 2B-FP001	SHEET NO. 1353

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEITH J. GAZAWAY
No. 58952
Exp. 6/30/15
CIVIL
STATE OF CALIFORNIA



Legend:

E - Indicates Expansion End

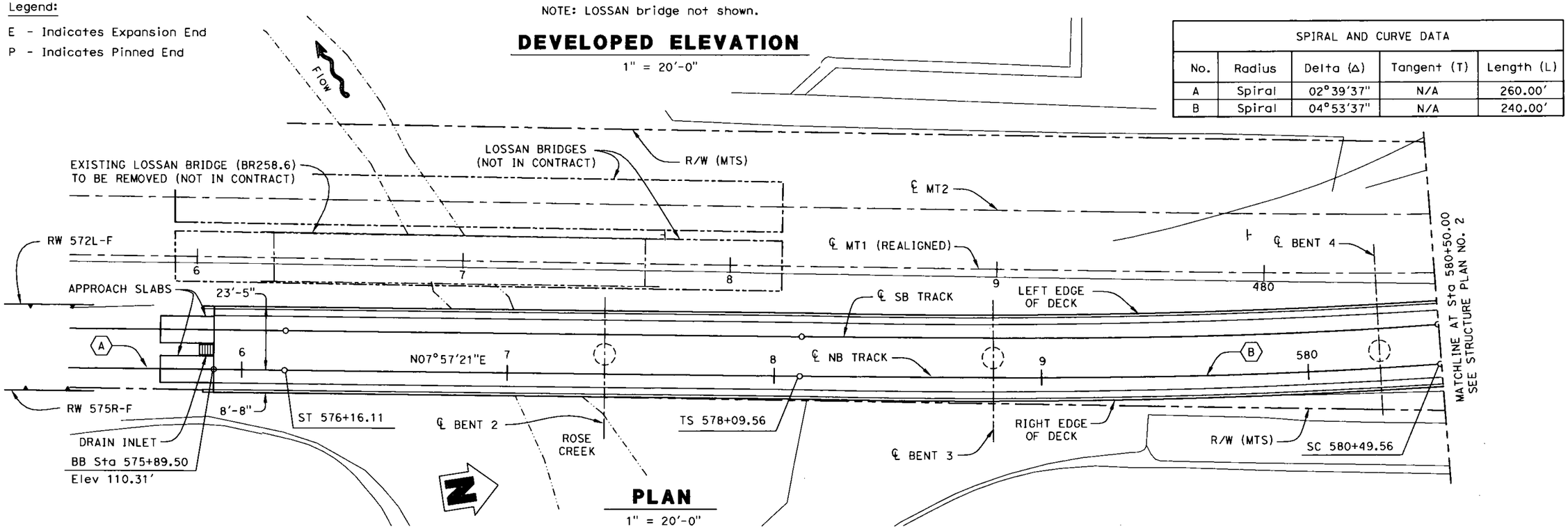
P - Indicates Pinned End

NOTE: LOSSAN bridge not shown.

DEVELOPED ELEVATION

1" = 20'-0"

SPIRAL AND CURVE DATA				
No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
A	Spiral	02°39'37"	N/A	260.00'
B	Spiral	04°53'37"	N/A	240.00'



PLAN

1" = 20'-0"

No.	DATE	REVISION	BY	CHK	APRV

KLEINFELDER Bright people. Right Solutions.
Simon Wong Engineering
550 West C Street, Suite 1200 San Diego, CA. 92101
Tel (619) 831-4600

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

DESIGNED BY	CHECKED BY	DATE
Gazaway, K.	Morel, P.	2/15
DETAILS BY	CHECKED BY	
Brittain, T.	Morel, P.	2/15
QUANTITIES BY	CHECKED BY	
SANDAG		

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

ROSE CREEK LRT OVERHEAD
STRUCTURE PLAN NO. 1

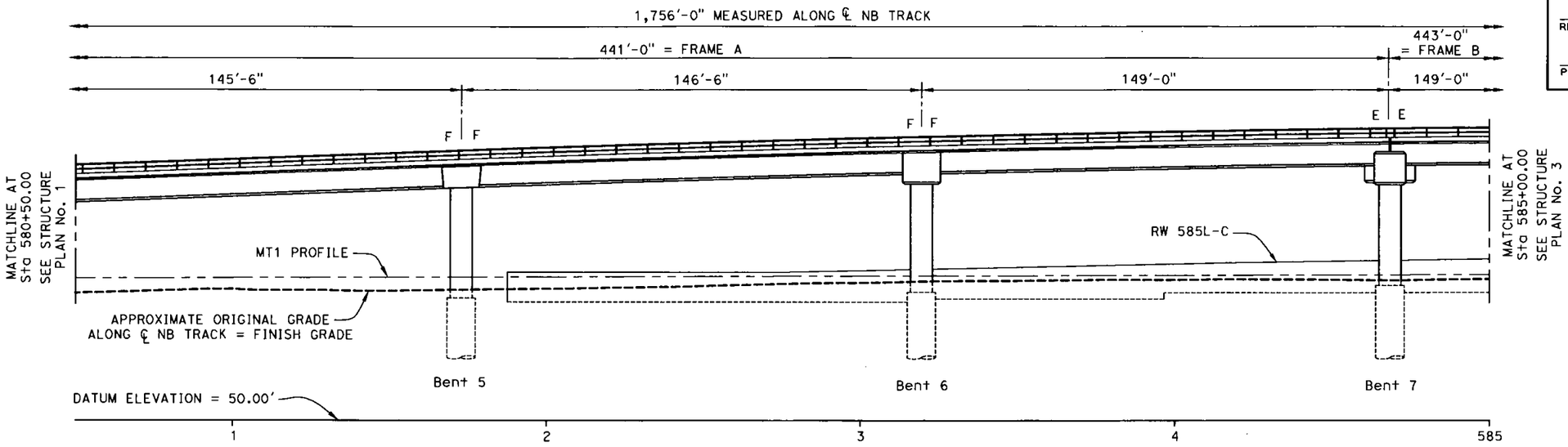
SCALE	
AS SHOWN	
SANDAG CONTRACT NO.	
5001904	
DRAWING NO.	SHEET NO.
2C-SU001	1379

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEITH J. GAZAWAY
No. 58952
Exp. 6/30/15
CIVIL
STATE OF CALIFORNIA



Legend:

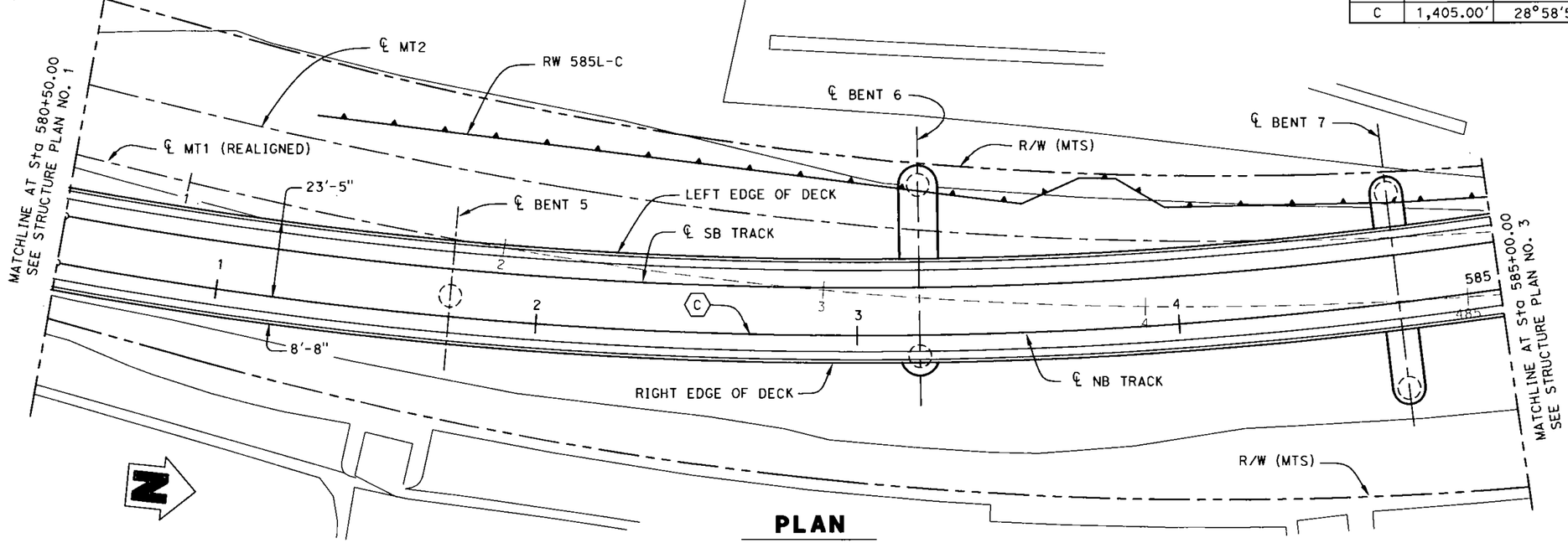
E - Indicotes Expansion End

F - Indicates Fixed End

DEVELOPED ELEVATION

1" = 20'-0"

SPIRAL AND CURVE DATA				
No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
C	1,405.00'	28°58'54"	363.12'	710.69'



PLAN

1" = 20'-0"

No.	DATE	REVISION	BY	CHK	APRV

KLEINFELDER
Bright people. Right Solutions.
Simon Wong Engineering
550 West C Street, Suite 1200 San Diego, CA. 92101
Tel (619) 831-4600

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

DESIGNED BY Gazaway, K.	CHECKED BY Morel, P.	DATE 2/15
DETAILS BY Brittain, T.	CHECKED BY Morel, P.	2/15
QUANTITIES BY	CHECKED BY	
SANDAG		

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

ROSE CREEK LRT OVERHEAD STRUCTURE PLAN NO. 2

SCALE AS SHOWN

SANDAG CONTRACT NO. 5001904

DRAWING NO. 2C-SU002

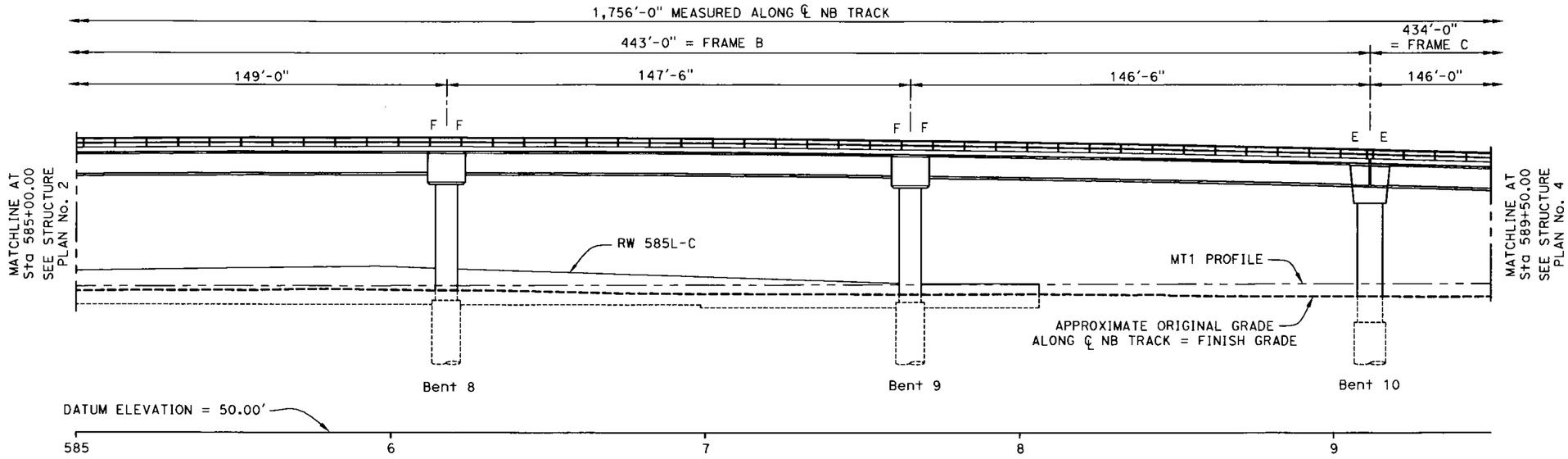
SHEET NO. 1380

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT
11	SD		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
KEITH J. GAZAWAY
No. 58952
Exp. 6/30/15
CIVIL
STATE OF CALIFORNIA



Legend:

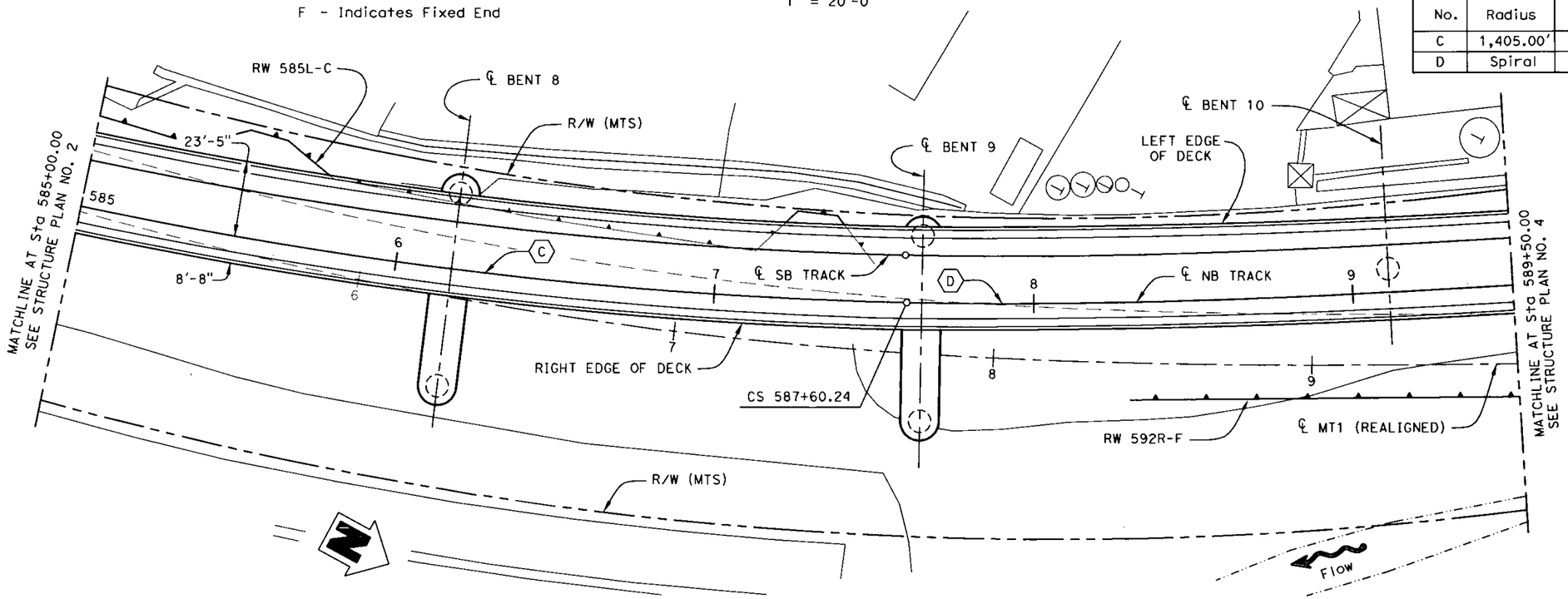
E - Indicates Expansion End

F - Indicates Fixed End

DEVELOPED ELEVATION

1" = 20'-0"

SPIRAL AND CURVE DATA				
No.	Radius	Delta (Δ)	Tangent (T)	Length (L)
C	1,405.00'	28°58'54"	363.12'	710.69'
D	Spiral	04°53'37"	N/A	240.00'



PLAN

1" = 20'-0"

No.	DATE	REVISION	BY	CHK	APRV

KLEINFELDER
Bright people. Right Solutions.
Simon Wong Engineering
550 West C Street, Suite 1200 San Diego, CA. 92101
Tel (619) 831-4600

RELATIVE BORDER SCALE IS IN INCHES 0 1 2

DESIGNED BY Gazaway, K.	CHECKED BY Morel, P.	DATE 2/15	
DETAILS BY Brittain, T.	CHECKED BY Morel, P.	2/15	
QUANTITIES BY	CHECKED BY		
SANDAG			

SANDAG
401 B STREET, SUITE 800
SAN DIEGO, CA 92101-4231
(619) 699-1900

MID-COAST CORRIDOR TRANSIT PROJECT

MID-COAST CORRIDOR TRANSIT PROJECT
65% PLANS

ROSE CREEK LRT OVERHEAD STRUCTURE PLAN NO. 3

SCALE	
AS NOTED	
SANDAG CONTRACT NO. 5001904	
DRAWING NO. 2C-SU003	SHEET NO. 1381

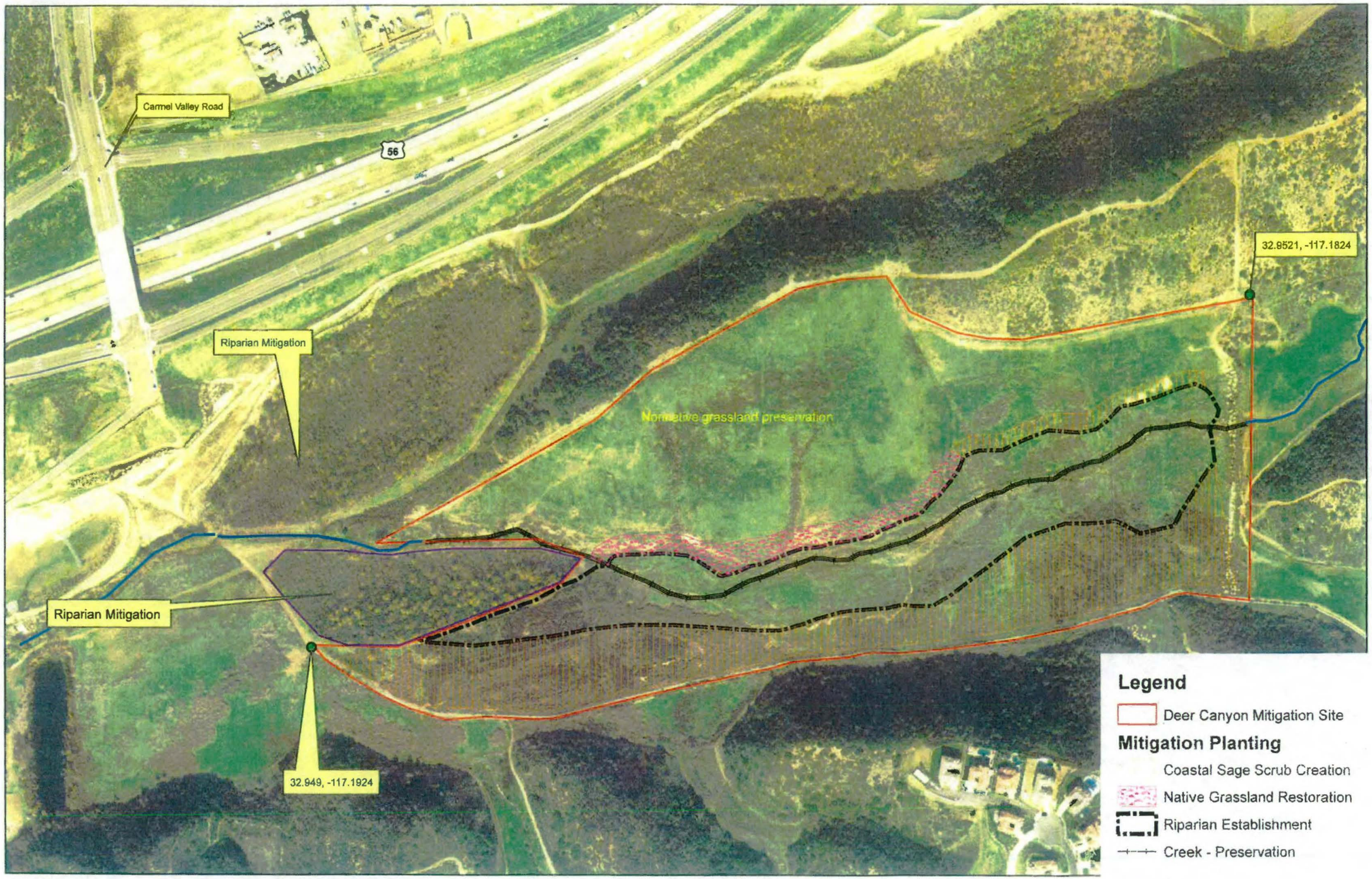


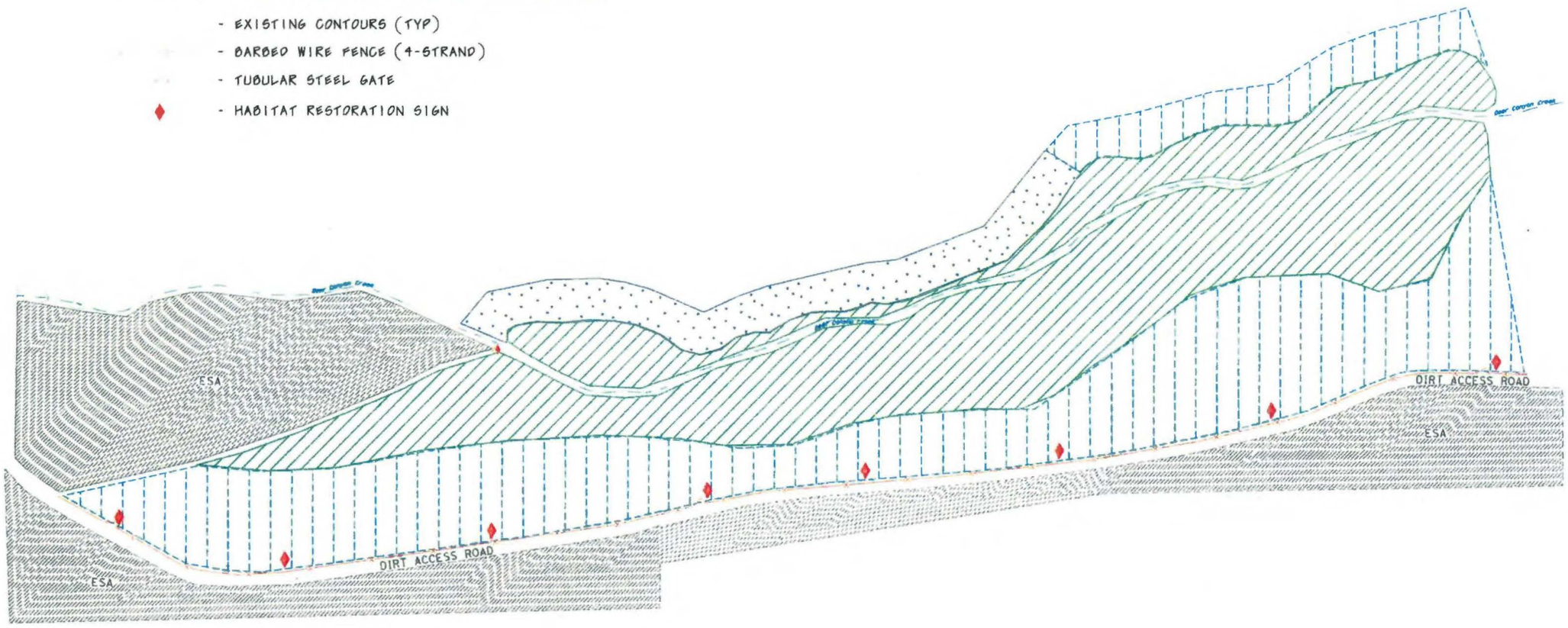
Figure 5. Deer Canyon Mitigation Site

LEGEND

- RIPARIAN PLANTING AREA (12.20 ACRES)
- COASTAL SAGE SCRUB PLANTING AREA (12.14 ACRES)
- NATIVE GRASSLAND SEEDING AREA (2.18 ACRES)
- ESA - ENVIRONMENTALLY SENSITIVE AREA (ESA)
  NO WORK OR EQUIPMENT STORAGE TO OCCUR IN THIS AREA
- EXISTING CONTOURS (TYP)
- BARBED WIRE FENCE (4-STRAND)
- TUBULAR STEEL GATE
- HABITAT RESTORATION SIGN

NOTES

???



Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

NO SCALE

DEER CANYON MITIGATION

CONCEPTUAL PLANTING PLAN 1100020036

FIGURE 6

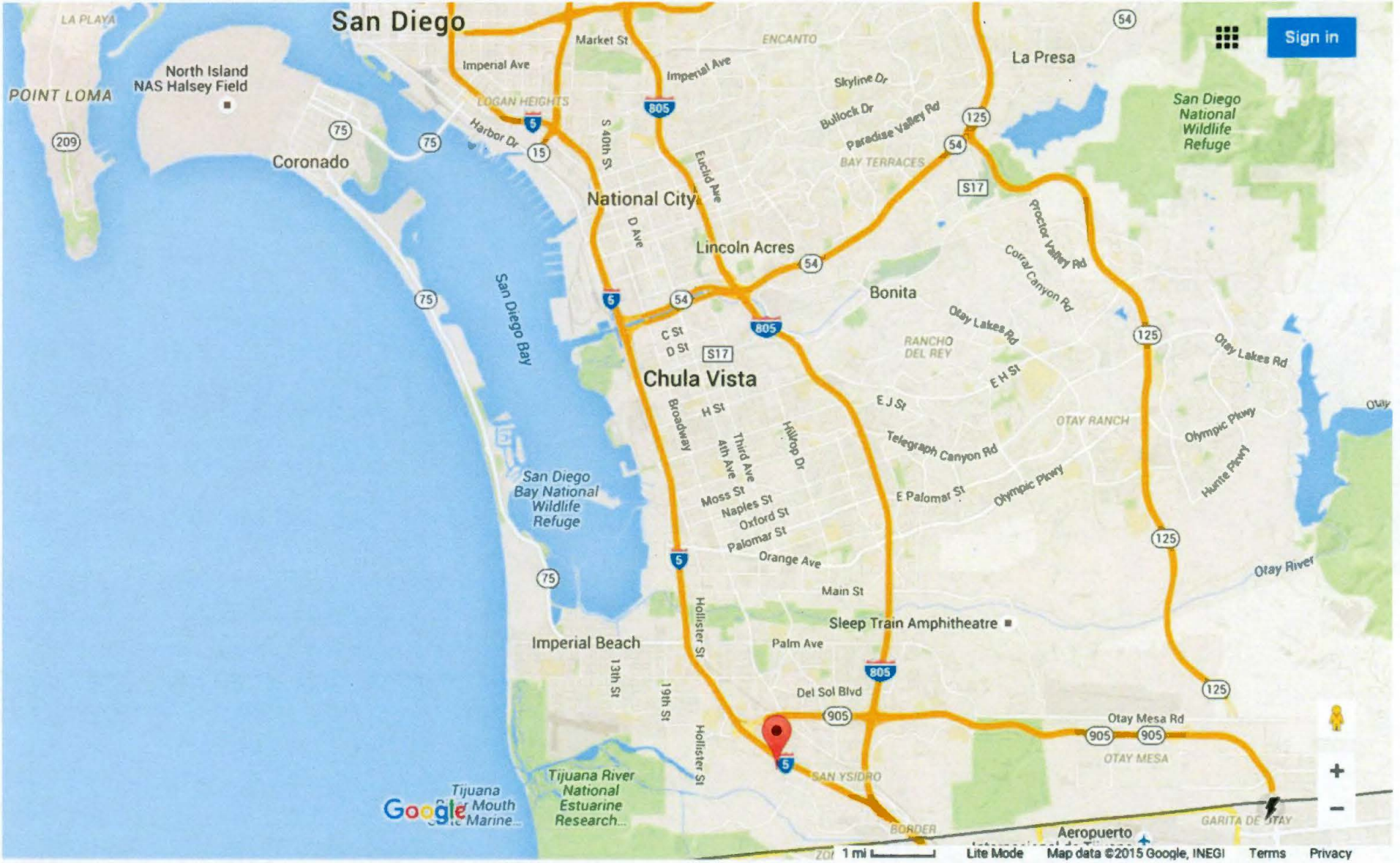


Figure 1. Regional Location Map. The marked point south of I-5 is the approximate location of the Tijuana River Wetland. Source: Google Maps.

Figure 2. Tijuana River Valley Regional Park, San Diego, Calif., showing different mitigation work phases. Sources: Caltrans (2012 aerial photography).

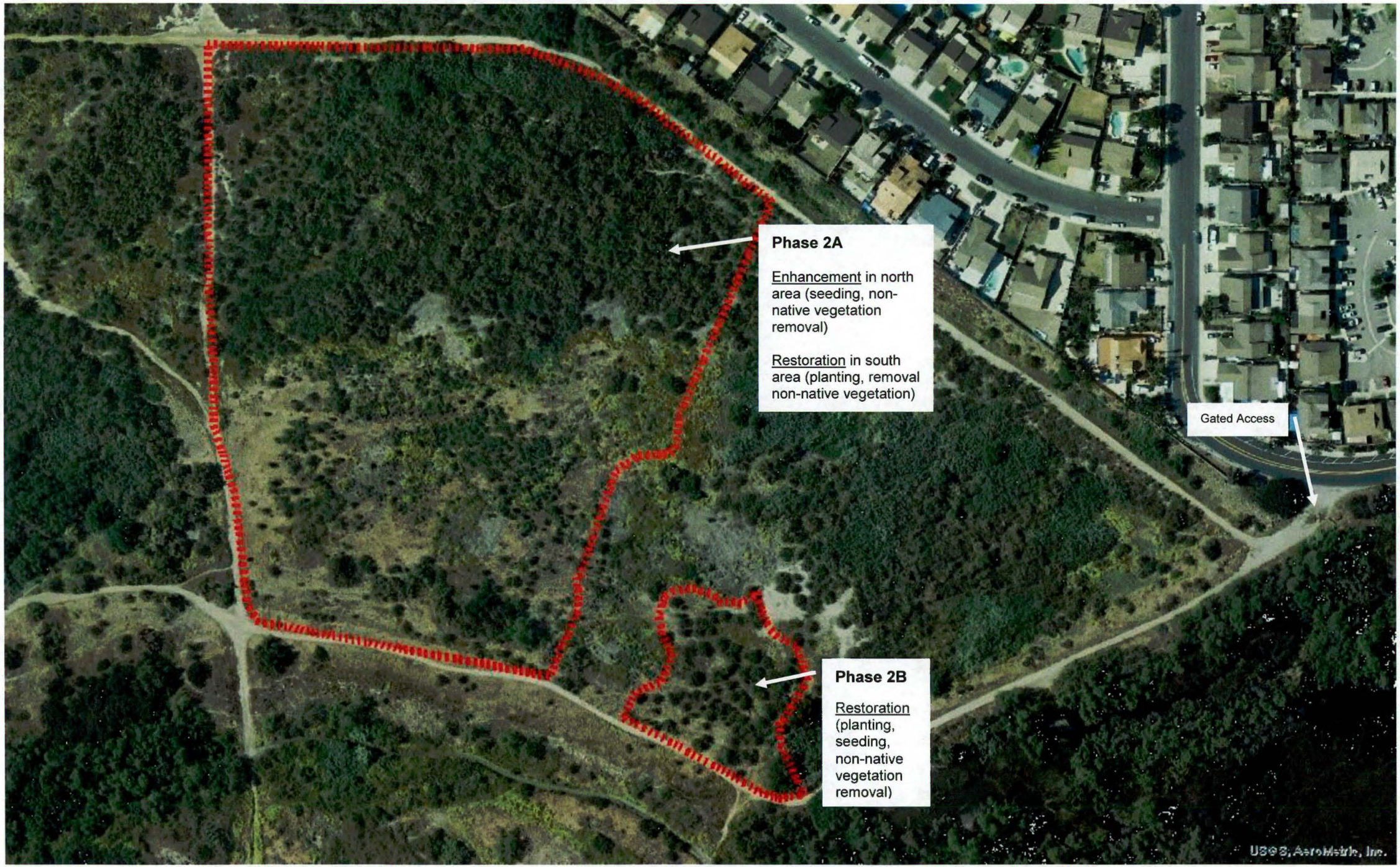


Figure 3. Tijuana River Valley Regional Park, San Diego, Calif., showing Phase 2A and 2B locations, gate and road access. Sources: Caltrans (2012 aerial photography).

San Diego Association of Governments
Mid-Coast Corridor Transit Project
And Maintenance Project
Certification No. R9-2016-0106

ATTACHMENT 5
CEQA MITIGATION MONITORING AND REPORTING PROGRAM

Table 1-1. Mid-Coast Corridor Transit Project Mitigation Monitoring and Reporting Program

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
Ecosystems and Biological Resources (Section 4.8)					
BIO1: On-site Mitigation: To the extent feasible, disturbed lands within or adjacent to the existing MTS right-of-way would be revegetated with wetland and Tier II–III vegetation communities. Revegetated areas would be maintained and monitored for approximately five years to ensure successful reestablishment of vegetation communities.	Habitat Restoration Contractor	Verify development and implementation of a restoration plan.	SANDAG Deputy Project Director-Administration	Design through monitoring period for restoration	USACE, CDFW, RWQCB, USFWS, SANDAG, FTA; CCC as appropriate
BIO2: Off-site Mitigation: Where mitigation requirements cannot be accommodated within existing disturbed lands in the study area, impacts to wetlands and Tier II–III vegetation communities would be mitigated inside or outside of MHPA lands elsewhere within the County of San Diego (e.g., Sage Hill site). Off-site mitigation may include creation (establishing wetlands and Tier II–III vegetation communities in areas that are currently disturbed, developed, or supporting non-native vegetation communities) or enhancement (improving the quality of existing areas of wetlands and Tier II–III vegetation communities through removal of non-native species, establishment of native species, restoration of prior impacts, and protection from future disturbance).	SANDAG EMP	Verify development and implementation of a restoration plan.	SANDAG Deputy Project Director-Administration	Design through monitoring period of restoration	USACE, CDFW, RWQCB, USFWS, SANDAG, FTA; CCC as appropriate
BIO3: Mitigation Credits: In addition to on-site and off-site mitigation, impacts to wetlands and Tier II–III vegetation communities may be mitigated through the purchase of mitigation credits. The purchase of mitigation credits result in the long-term preservation of vegetation communities within established mitigation banks where these communities have been created and/or enhanced and are maintained in perpetuity.	SANDAG EMP	Verify purchase of mitigation credits.	SANDAG Deputy Project Director-Administration	Design	USACE, CDFW, RWQCB, USFWS, SANDAG, FTA; CCC as appropriate
BIO4: Any impacts that cannot be mitigated on-site or at the identified off-site mitigation sites, SANDAG will implement a combination of one or more of the following mitigation alternatives: mitigation bank credits; in-lieu	SANDAG EMP	Verify purchase of mitigation credits or develop a restoration plan.	SANDAG Deputy Project Director-Administration	Design	USACE, CDFW, RWQCB, USFWS, SANDAG, FTA;

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
fee program credits; on-site creation, restoration, or enhancement; and off-site creation, restoration, or enhancement.					CCC as appropriate
BIO5: Impacts to ephemeral basins occupied by San Diego fairy shrimp, including Basin II, would be mitigated at a 2:1 ratio through restoration and/or enhancement of vernal pools within west Otay Mesa on the 40-acre Anderprizes parcel, which was previously acquired for future mitigation of vernal pools and which has been approved by the USFWS for mitigation of impacts to San Diego fairy shrimp, or within another approved mitigation area acceptable to the USFWS. Restoration would be conducted at a minimum 1:1 ratio to achieve a no-net-loss of San Diego fairy shrimp habitat; a combination of restoration and enhancement would make up the remaining mitigation. Restoration would be conducted in accordance with a vernal pool restoration plan to be developed by SANDAG and subject to approval by the USFWS prior to project construction.	SANDAG EMP	Verify development and implementation of a vernal pool restoration plan.	SANDAG Deputy Project Director-Administration	Design through monitoring period for vernal pool restoration	USFWS, SANDAG, FTA; CCC as appropriate

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
Construction Impacts—Ecosystems and Biological Resources (Section 4.17)					
CON4: Biologists would conduct nesting bird surveys not more than 72 hours prior to initiating construction-related ground-disturbing activities (i.e., grading or ground-clearing activities) during the breeding season (February 15 through August 31 for most species, and January 15 through August 15 for raptors, or as determined by a qualified biologist). Biologists would determine if active nests of special-status birds or bird species protected by the MBTA and/or the California Fish and Game Code 3503 are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone during the nesting/breeding season of native bird species potentially nesting on the site. Despite the lack of native habitat, similar pre-construction nesting bird surveys would be conducted at the four TPSSs located outside of the biological study area to the south of the OTTC to ensure the avoidance of native birds potentially nesting in urbanized areas. If ground-disturbing activities are delayed, then additional pre-disturbance surveys would be conducted such that no more than 72 hours would have elapsed between the survey and the initiation of ground-disturbing activities.	SANDAG Biological Consultant	Maintain log of pre-construction surveys demonstrating compliance. Verify implementation of any identified avoidance measures.	SANDAG Deputy Project Director-Administration and SANDAG Deputy Project Director-Construction	Pre-construction and construction	CDFW, SANDAG, FTA
CON5: If biologists find an active nest of a native bird species, then vegetation clearing, ground-disturbing activities, and construction equipment that generates high noise or vibration levels would cease and be postponed or halted at the discretion of the biologist in consultation with the CDFW. This work cessation would be effective within a buffer area from the nest at a distance appropriate to the sensitivity of the species and the distribution of the surrounding habitat (typically 300 feet for most species, up to 500 feet for raptors—the area may vary depending on the types of vegetation surrounding the nest). Construction work would not resume until the biologist has determined that the nest is	Construction Contractor and SANDAG Biological Consultant	Maintain construction monitoring log demonstrating compliance. Verify implementation of any identified avoidance measures.	SANDAG Deputy Project Director-Administration, SANDAG Deputy Project Director-Construction, and SANDAG Biological Consultant	Pre-construction and construction	CDFW, SANDAG, FTA

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
no longer active, the juveniles have fledged, and there is no evidence of a second attempt at nesting. Alternatively, a qualified biological monitor would be present full-time while construction is occurring within the buffer area to observe the nesting birds and would have the authority to halt or redirect construction if the birds exhibit signs of distress. Limits of construction around active nests would be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel would be informed about the sensitivity of nest areas. The biologist would serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts to nesting birds occur.					
CON6: Vegetation clearing within suitable western red bat habitat would be avoided during the maternal roost season (May through August, or as determined by a qualified biologist) where feasible. Pre-construction surveys for roosting western red bat would be conducted within suitable habitat if construction would occur within or adjacent to suitable roost sites during the maternal roost season. If a roost is detected, passive exclusion would include monitoring the roost for three days to determine if the roost is vacated. If the roost is determined to support a reproductive female with young, the roost would be avoided until it is no longer active. If the roost remains active within the three monitoring days and supports a dispersing male but no breeding female or young, the foliage of the tree would be trimmed after the male has left the roost at dusk. The tree would be monitored again the following evening after the foliage has been trimmed to determine if any activity remains at that roost location. If there is no activity, the tree would be removed. If it cannot be determined whether an active roost site supports breeding females or males, the roost site would not be disturbed and construction within 300 feet would be	SANDAG Biological Consultant and Construction Contractor	Maintain log of pre-construction surveys demonstrating compliance. Verify implementation of any identified avoidance measures.	SANDAG Deputy Project Director-Administration and SANDAG Biological Consultant	Pre-construction and construction	CDFW, SANDAG, FTA

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
postponed or halted until the roost is vacated and the young are volant.					
CON7: Focused surveys for the western mastiff bat maternity roosts would be conducted in the summer (May through August, or as determined by a qualified biologist) prior to construction, if feasible. Pre-construction surveys would be conducted by a qualified biologist no earlier than 30 days prior to initiation of bridge modification activities if summer surveys in advance of construction are infeasible, Pre-construction surveys would include the bridge section planned for modification and would be conducted using visual search and ultrasonic recording devices to determine if active roosts of the western mastiff bat are present on or within 300 feet of the bridge section subject to modification. These surveys would concentrate on the periods when roosting bats are most detectable (i.e., when leaving the roost between one hour before sunset and two hours after sunset) and take place over a period of three to five days.	SANDAG Biological Consultant	Maintain log of focused surveys demonstrating compliance. Verify implementation of any identified avoidance measures.	SANDAG Deputy Project Director-Administration and SANDAG Biological Consultant	Pre-construction and construction	CDFW, SANDAG, FTA
CON8: Temporary and humane exclusionary devices would be installed in the fall (September or October) preceding construction at those locations where summer surveys detected an active maternity roost for the western mastiff bat to avoid potential direct impacts. Prior to any exclusion measures being implemented to prevent bats from using an existing roost habitat, a qualified bat biologist would survey (e.g., visually and using an ultrasonic device to record bat calls in concert with sonogram analysis software) and identify nearby alternative maternity colony roost sites. If any supplemental measures must be implemented to ensure successful exclusion of bats from an existing roost and/or the identification of alternative roosting habitat, all related assessments and monitoring must be conducted by a qualified bat biologist, with biological monitoring reports and findings provided to the CDFW.	SANDAG Biological Consultant	Maintain log of focused surveys.	SANDAG Deputy Project Director-Administration and SANDAG Biological Consultant	Pre-construction and construction	CDFW, SANDAG, FTA

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
If construction activities must occur during the summer and pre-construction surveys have identified an active western mastiff bat maternity roost, the roost would not be disturbed and construction within 300 feet would be postponed or halted until the roost is vacated and juveniles have fledged. If construction activities must occur when bats are active and pre-construction surveys have identified non-breeding bat hibernacula in portions of the Trolley Green Line Bridge subject to disturbance from bridge modification activities, the individuals would be safely evicted under the direction of a qualified bat biologist using appropriate means acceptable to the resource agencies (e.g., installation of one-way doors, foam filling of roosting locations when bats are not present, or plastic sheeting hung vertically). In situations requiring one-way doors, a minimum of one week would pass after doors are installed prior to concluding that the roost has been vacated. During this time, temperatures should be sufficiently warm for bats to leave the roost because bats do not typically leave their roost daily during winter months or on unseasonably cold nights in southern coastal California. In situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist, roosts that need to be removed would first be disturbed at dusk by various means at the direction of the bat biologist to allow bats to escape during the darker hours and access to the roost site would be excluded the next day (i.e., there would be one night between initial disturbance and exclusion of the roost site).					
CON9: Temporary impacts to wetland vegetation communities would be mitigated at a 1:1 ratio, as shown in Section 4.8, Table 4-19, Table 4-20, and Table 4-21 of the Final SEIS/SEIR. The location and configuration of wetland vegetation communities within restoration areas in the San Diego River and Rose Creek would be adjusted to ensure that restored areas beneath bridges	Habitat Restoration Contractor	Verify development, approval, and implementation of a restoration plan. Prepare as-built and annual	SANDAG Deputy Project Director-Administration and SANDAG Biological Consultant	Pre-construction and construction	USACE, USFWS, CDFW, RWQCB, SANDAG, FTA

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
are limited to wetland communities that can tolerate reduced sunlight availability. Based on the presence of wetland vegetation communities under existing bridges over the San Diego River and Rose Creek, similar communities, including cismontane alkali marsh, mulefat scrub, and in some cases southern willow scrub, would be planted under the proposed bridges. Restored areas adjacent to the proposed bridges and that are not subject to long-term shading would be revegetated primarily with southern willow scrub.		monitoring reports documenting compliance.			
CON10: Impacts to Tier II (coastal sage scrub) and Tier IIIB (non-native grasslands) vegetation communities would be mitigated according to the mitigation ratios shown in Section 4.8, Table 4-19, Table 4-20, and Table 4-21 of the Final SEIS/SEIR.	SANDAG EMP	Verify development and implementation of a restoration plan.	SANDAG Deputy Project Director-Administration	Pre-construction and construction	USACE, CDFW, USFWS, SANDAG, FTA
CON11: Temporary impacts to jurisdictional aquatic resources would be mitigated at a minimum 1:1 ratio through on-site restoration, subject to approval by the USACE, RWQCB, CCC, and CDFW during the permitting process. On-site restoration would include the restoration of pre-existing contours, elevations, and vegetation communities within areas temporarily disturbed as a result of construction activities in the San Diego River, Tecolote Creek, and Rose Creek. The location and configuration of wetland communities within restoration areas in the San Diego River and Rose Creek would be adjusted to ensure that restored areas beneath bridges are limited to wetland communities that can tolerate reduced sunlight availability. Based on the presence of wetland communities under existing bridges over the San Diego River and Rose Creek, similar communities, including cismontane alkali marsh, mulefat scrub, and in some cases southern willow scrub, would be planted under the proposed bridges. Restored areas adjacent to the proposed	Habitat Restoration Contractor	Verify development, approval, and implementation of a restoration plan. Prepare as-built and annual monitoring reports documenting compliance.	SANDAG Deputy Project Director-Administration	Pre-construction and construction	USACE, RWQCB, CCC, CDFW, SANDAG, FTA

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
bridges and that are not subject to long-term shading would be revegetated primarily with southern willow scrub.					
CON12: Construction-related noise levels in coastal California gnatcatcher occupied habitat within 500 feet of construction activity would not exceed 60 dBA L_{eq} or pre-construction ambient noise levels, whichever is greater, during the breeding season. Project construction within 500 feet of occupied habitat would occur outside of the breeding season if possible. If necessary, construction activities during the breeding season would be managed to limit noise levels in occupied habitat within 500 feet of the project, or noise attenuation measures, such as temporary sound walls, would be implemented to reduce noise levels below 60 dBA L_{eq} or below existing ambient noise levels, whichever is greater.	Construction Contractor	Review noise monitoring log; verify any required corrective actions are taken.	SANDAG Deputy Project Director-Administration and SANDAG Biological Consultant	Pre-construction and construction	USFWS, CDFW, SANDAG, FTA
CON13: To avoid potential adverse impacts to least Bell's vireo and southwestern willow flycatcher from construction-related noise, project construction within 500 feet of occupied habitat would be timed to occur outside of the breeding season if feasible. If project construction within 500 feet of occupied habitat must occur during the breeding season, construction-related noise within the occupied habitat areas would not exceed 60 dBA L_{eq} or pre-construction ambient noise levels, whichever is greater. If necessary, construction activities during the breeding season would be managed to limit noise levels in occupied habitat within 500 feet of the project or noise attenuation measures would be implemented to reduce noise levels below 60 dBA L_{eq} or below existing ambient noise levels, whichever is greater.	Construction Contractor	Review noise monitoring log; verify any required corrective actions are taken.	SANDAG Deputy Project Director-Administration and SANDAG Biological Consultant	Pre-construction and construction	USFWS, CDFW, SANDAG, FTA
CON14: To avoid potential adverse impacts to light-footed clapper rail from construction-related noise, project construction within 500 feet of occupied habitat would be timed to occur outside of the breeding season	Construction Contractor	Review noise monitoring log; verify any required corrective actions	SANDAG Deputy Project Director-Administration and Biological	Pre-construction and construction	USFWS, CDFW, SANDAG, FTA

Affected Resource and Mitigation Measure	Implementation Responsibility	Monitoring Procedure	Monitoring Responsibility	Implementation Phase	Report Recipient
if possible. If project construction within 500 feet of occupied habitat must occur during the breeding season, construction-related noise within the occupied habitat areas would not exceed 60 dBA L_{eq} or pre-construction ambient noise levels, whichever is greater. If necessary, construction activities during the breeding season would be managed to limit noise levels in occupied habitat within 500 feet of the project or noise attenuation measures would be implemented to reduce noise levels below 60 dBA L_{eq} or below existing ambient noise levels, whichever is greater.		are taken.	Consultant		

Source SANDAG 2014

Notes: APE = Area of Potential Effects; Caltrans = California Department of Transportation; CCC = California Coastal Commission; CDFW = California Department of Fish and Wildlife; CPUC = California Public Utilities Commission; CRHR = California Register of Historical Resources; dBA = A-weighted decibel; DPA = Designated Project Archaeologist; EMF = electromagnetic field EMI = electromagnetic interference; EMP = Environmental Project Manager; FTA = Federal Transit Administration; I = Interstate; L_{dn} = day-night noise level; L_{eq} = equivalent sound level; MBTA = Migratory Bird Treaty Act; MHPA = Multiple Habitat Planning Area; MTS = Metropolitan Transit System; NCTD = North County Transit District; NRHP = National Register of Historic Places; OCS = overhead contact system; OTTC = Old Town Transit Center; PRC = Public Resources Code; PRMMP = Paleontological Resources Monitoring and Mitigation Plan; RWQCB = Regional Water Quality Control Board; SANDAG = San Diego Association of Governments; SEIS/SEIR = Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report; SHPO = State Historic Preservation Officer; SME = Structural and Materials Engineering Building UCSD; TPSS = traction power substation; UCSD = University of California, San Diego; USACE = U.S. Army Corps of Engineers; USFWS = U.S. Fish and Wildlife Service; UTC = University Towne Centre; VA = Veterans Administration; Vdb = vibration decibel