

**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/>

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

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**PROJECT: San Juan Creek Bridge Replacement Project  
Certification Number R9-2018-0018  
WDID: 9000002889**

Reg. Meas. ID: 402740 Place ID: 817867 Party ID: 39834 Person ID: 552884
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**APPLICANT: Southern California Regional Rail Authority  
(SCRRA)/Metrolink  
8315 Century Park Court – CP21C  
San Diego, CA 92123**

**ACTION:**

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

**PROJECT DESCRIPTION**

An application dated January 11, 2018 was submitted by Southern California Regional Rail Authority (SCRRA)/Metrolink (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (33 U.S.C. § 1341) for the proposed San Juan Creek Bridge Replacement Project (Project). The Applicant has also applied for Clean Water Act section 404 Permit from the United States Army Corps of Engineers for the Project (USACE File Nos. SPL-2017-00564-TDK).

The applicant proposes to construct the Project at a site located in the City of San Juan Capistrano, Orange County, California, just downstream or westerly of the existing railroad bridge. The bridge project runs north-south and it is generally bounded by Camino Capistrano to the east and Trabuco Creek Channel. The Project center reading is located at latitude 33.49136 and longitude -117.66419.

The Applicant has paid all required fees for this Certification in the amount of \$33,833.00. On March 13, 2018, 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 replace the existing 100-year-old railroad bridge (San Juan Creek Bridge), at MP 197.9, to improve the load and storm capacity, increase safety, and reduce maintenance needs. The replacement bridge will improve river flow by raising the bridge elevation by approximately three feet. It will increase safety and reduce maintenance needs by increasing the load capacity per expected demands and constructing the new foundation per current design standards.

The existing San Juan Creek Bridge will be replaced with a new, separate, ballast deck, single-track, through plate girder bridge. The replacement bridge will be off-site, located immediately to the west side of the existing bridge to minimize interruption to passenger rail service. The replacement bridge will also be higher, and its foundation will be deeper than the existing bridge to meet the current design storm capacity of the channel. Due to the off-site location and elevation raise of the replacement bridge, the project limits extend approximately one-half mile to the north and to the south, respectively, to join existing track. 16 seven-foot diameter piers will be installed within the channel.

Retaining walls will support the elevated railroad roadbed and minimize impact to adjacent properties. Immediately north of the replacement bridge, there is a bikeway over which a new bikeway underpass will be constructed. Track, fiber optic, and signal line work will follow, and rail traffic will be moved to the replacement bridge.

Afterwards, the existing bridge will be demolished, and new substructures will be constructed for a future bridge project that is not yet funded or designed. By constructing the bridge substructure, it is hoped that future disturbance by the railroad within the San Juan Creek channel may be avoided.

Receiving waters potentially affected by the Project are protected in accordance with water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan). This Certification authorizes permanent and temporary impacts to waters of the United States and /or State affected by the Project. The temporary impacts will be restored by the Applicant to pre-Project conditions and do not include physical loss of aquatic resource area or degradation of ecological conditions. No compensatory mitigation for permanent impacts is required as the Project will result in less impervious surface (-0.0174 acre) within San Juan Creek. This is because the existing bridge piers that will be removed are equal to approximately 0.03 acre of structural area within the channel, and the new bridge piers for the replacement bridge and the future bridge are equal to 0.0126-acre total. Based on all these considerations, the Applicant's compliance with the terms and conditions of this Certification will ensure that the water quality standards for all waters of the United States and/or State impacted by the Project are met.

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### Attachments:

1. Definitions
2. Project Figures and Plans

The San Diego Water Board has independently reviewed the record of the Project to analyze the extent and nature of proposed Project impacts to the water quality and beneficial uses of waters of the United States and/or State and associated compensatory mitigation required to offset impacts attributed to the Project. In accordance with this Certification, the Applicant may proceed with the Project under the following terms and conditions:

## 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. R9-2018-0018 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 U.S.C. §1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.
- B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.
- C. **General Waste Discharge Requirements.** The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:



[http://www.waterboards.ca.gov/water\\_issues/programs/cwa401/docs/generalorders/gowdr401regulated\\_projects.pdf](http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf).

- D. Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein. Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.
- E. Project Conformance with Water Quality Control Plans or Policies.** Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 U.S.C §1313.). The Basin Plan is accessible on-line at:
- [http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/basin\\_plan/index.shtm](http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtm)  
|
- 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 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 Juan Creek, or its tributaries;
  3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;
  4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
  5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
- The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.
- K. **Duty to Provide Information.** The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.
- L. **Property Rights.** This Certification does not convey any property rights of any sort, or any exclusive privilege.

M. **Petitions.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: [http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

### III. CONSTRUCTION AND POST CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Construction Requirements.** 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 pollution control plan, construction BMP plan, and/or erosion and sediment control plan to prevent the discharge of sediment and other pollutants during construction activities.
- B. **Post Construction Requirements.** The Project must meet all the Post-Construction requirements of the San Diego Water Board Order No. R9-2013-0001, National Pollutant Discharge Elimination Systems Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watersheds within the San Diego Region (Regional MS4 Permit).

### IV. PROJECT IMPACTS AND COMPENSATORY MITIGATION

- A. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to San Juan Creek and its tributaries within the San Juan 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)
<b>Permanent Impacts</b>						
Streambed	0.0126 <sup>1</sup>	N/A	NA <sup>1</sup>	NA	NA	NA
<b>Temporary Impacts</b>						
Streambed and Riparian	2.54 <sup>2</sup>	960	N/A	NA	N/A	N/A

NA – Not applicable

1. Permanent impacts resulting from 16 seven (7') foot diameter piers installed within the channel. No compensatory mitigation for permanent impacts is required as the Project will result in less impervious surface (-0.0174 acre) within San Juan Creek. This is because the existing bridge piers that will be removed are equal to approximately 0.03 acre of structural area within the channel, and the new bridge piers for the replacement bridge and the future bridge are equal to 0.0126 acre total.
2. All areas of temporary impacts must be restored to pre-project condition.

**B. 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.

## V. MONITORING AND REPORTING REQUIREMENTS

- A. Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing 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 report must include the following information:
1. The names, qualifications, and affiliations of the persons contributing to the report;
  2. The status, progress, and anticipated schedule for completion of Project construction activities;
  3. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and
  4. A description of each incident of noncompliance during the annual monitoring period and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- H. **Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion of the Project.** The final report must include the following information:
1. Date of construction initiation;
  2. Date of construction completion;
  3. As-built drawings of the Project, no bigger than 11”X17”; and
  4. 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](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.
- I. **Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.
- J. **Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to [SanDiego@waterboards.ca.gov](mailto: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. R9-2018-0018:843855:dbradford  
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. R9-2018-0018:843855:dbradford.

- K. **Document Signatory Requirements.** All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:
1. For a corporation, by a responsible corporate officer of at least the level of vice president.



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

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

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

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

## VI. NOTIFICATION REQUIREMENTS

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



- B. **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.
- C. **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 this Certification in the event that a transferee fails to comply.

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

## VII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

A. The San Diego Water Board finds that the Project is statutorily exempt from the California Environmental Quality Act (CEQA) (Pub. Res. Code, § 21000, et seq.) pursuant to Public Resources Code Section 21080 (10) and California Code of Regulations, Title 14, Section 15275(a). These sections state that CEQA does not apply to mass transit projects that institute or increase passenger or commuter service on rail lines, including modernization of existing stations and parking facilities.

## VIII. SAN DIEGO WATER BOARD CONTACT PERSON


Darren Bradford, Environmental Scientist  
California Regional Water Quality Control Board, San Diego Region  
2375 Northside Drive, Suite 100  
San Diego, California 92108  
Telephone: 619-521-3356  
Email: [darren.bradford@waterboards.ca.gov](mailto:darren.bradford@waterboards.ca.gov)

## IX. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **San Juan Creek Bridge Replacement Project** (Certification No. R9-2018-0018) 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. R9-2018-0018 issued on July 31, 2018.

  
\_\_\_\_\_  
DAVID W. GIBSON  
Executive Officer  
San Diego Water Board

31 July 2018  
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.

SCRRA/Metrolink  
San Juan Creek Bridge Replacement Project  
Certification No. R9-2018-0018

**ATTACHMENT 2  
PROJECT FIGURES AND PLANS**

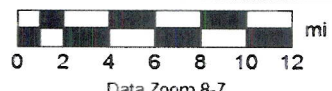
Figure 1 – Regional Location  
Figure 2 – Site Location  
Figure 4 – Project Plans



# FIGURE 1 Regional Location



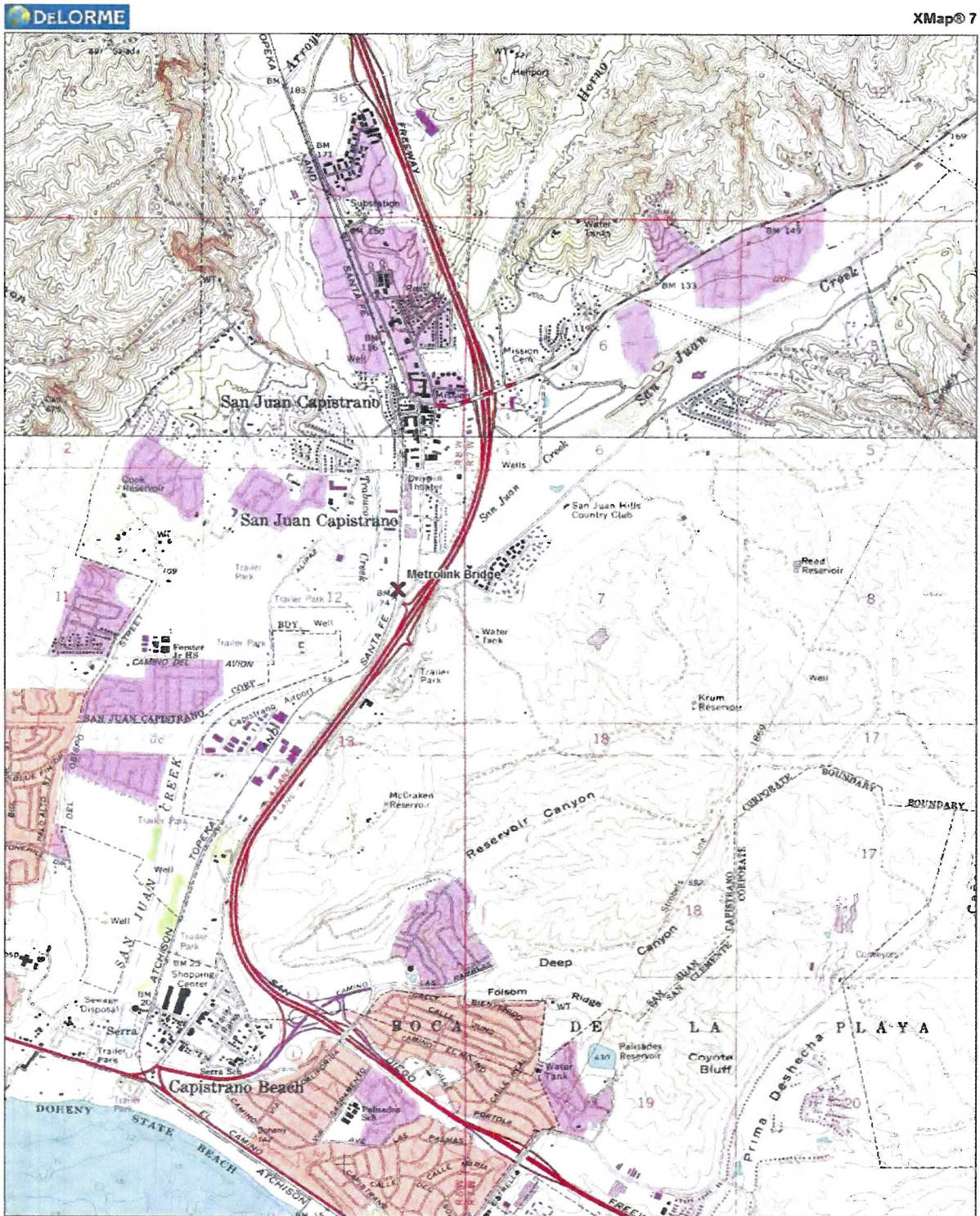
Data use subject to license  
 © DeLorme XMap® 7  
 www.delorme.com



Data Zoom 8-7



**FIGURE 2**  
**Site Location**

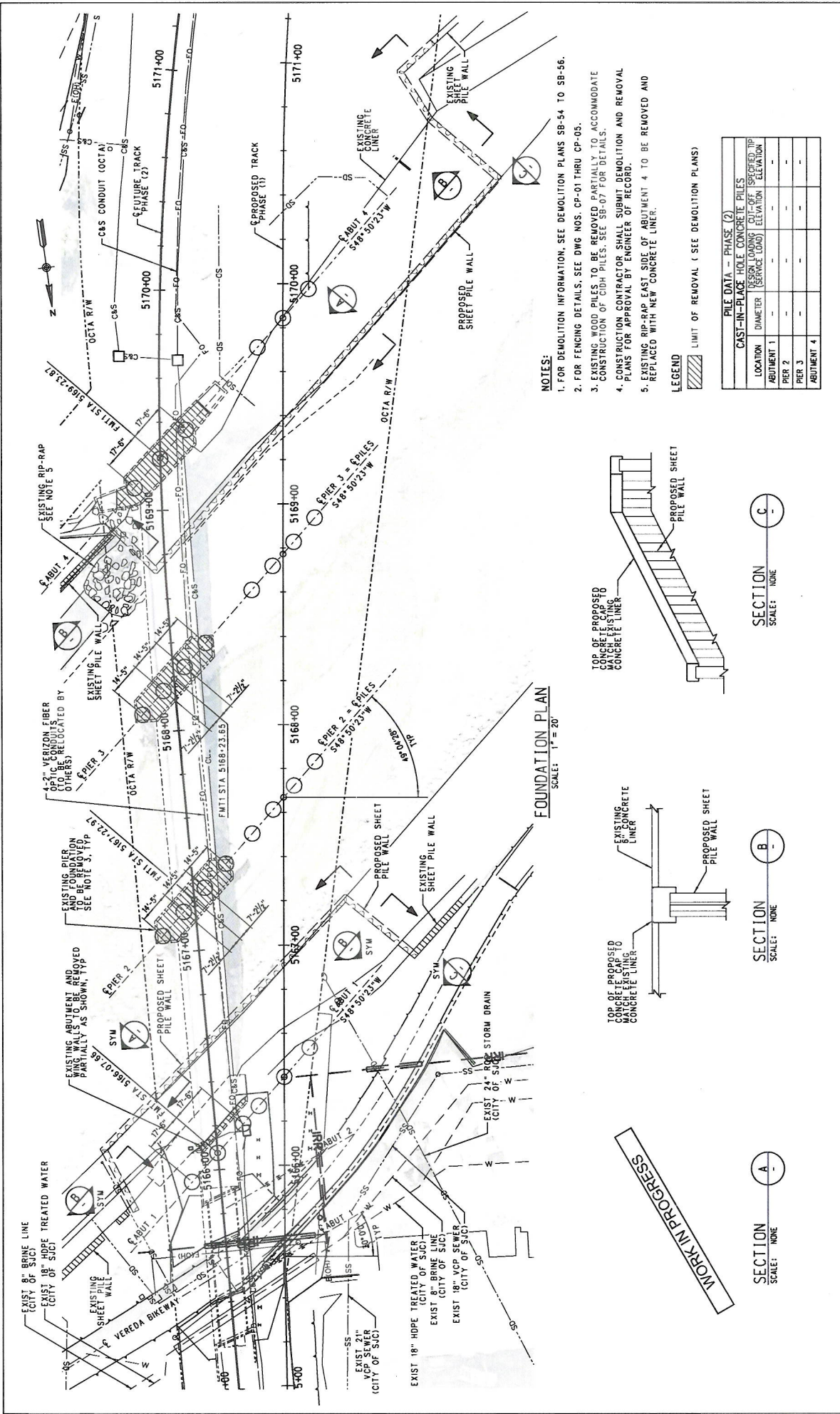


Data use subject to license  
© DeLorme XMap® 7  
www.delorme.com

MN (11 8° E)

0 1000 2000 3000 4000 5000 ft  
Data Zoom 12-6



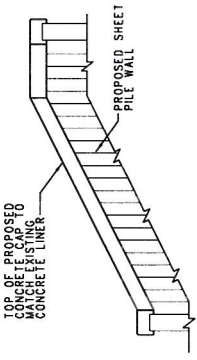


- NOTES:**
1. FOR DEMOLITION INFORMATION, SEE DEMOLITION PLANS SB-54 TO SB-56.
  2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.
  3. EXISTING WOOD PILES TO BE REMOVED PARTIALLY TO ACCOMMODATE CONSTRUCTION OF CIDH PILES. SEE SB-07 FOR DETAILS.
  4. CONSTRUCTION CONTRACTOR SHALL SUBMIT DEMOLITION AND REMOVAL PLANS FOR APPROVAL BY ENGINEER OF RECORD.
  5. EXISTING RIP-RAP EAST SIDE OF ABUTMENT 4 TO BE REMOVED AND REPLACED WITH NEW CONCRETE LINER.

**LEGEND**

LIMIT OF REMOVAL (SEE DEMOLITION PLANS)

PILE DATA - PHASE (2)			
CAST-IN-PLACE HOLE CONCRETE PILES			
LOCATION	DESIGN LOADING (SERVICE LOAD)	CUT-OFF SPECIFIED TIP ELEVATION	
ABUTMENT 1	-	-	-
PIER 2	-	-	-
PIER 3	-	-	-
ABUTMENT 4	-	-	-



SECTION A  
SCALE: NONE

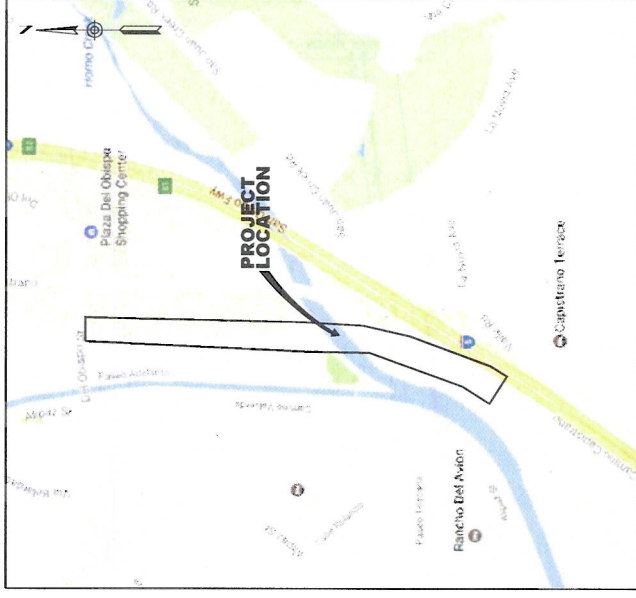
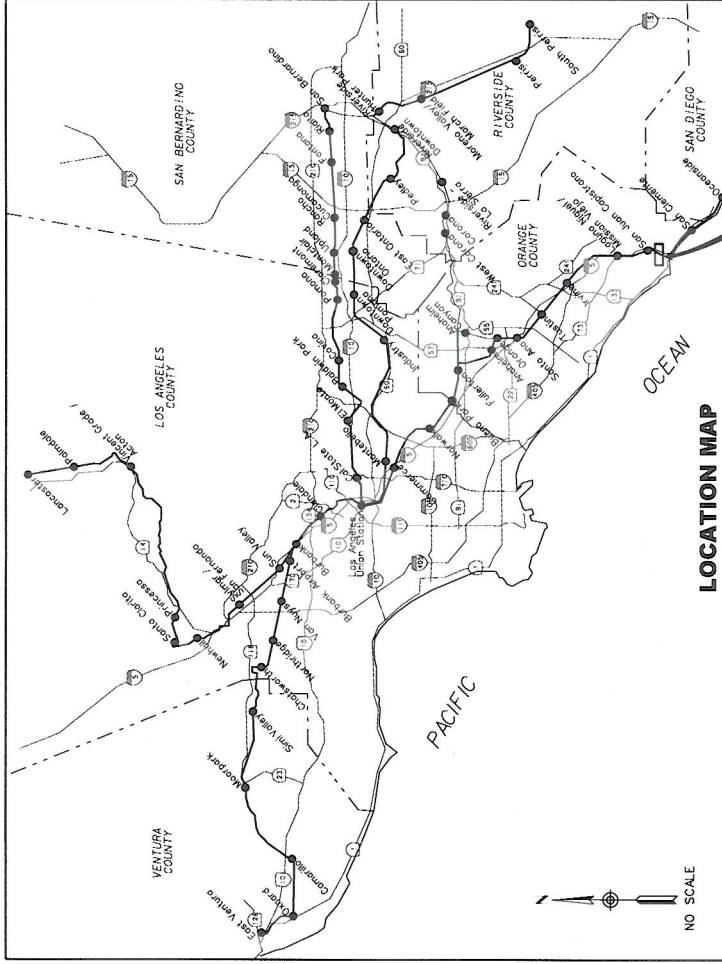
SECTION B  
SCALE: NONE

SECTION C  
SCALE: NONE

REV.	DATE	BY	APP.
<b>EXHIBIT</b>			
DESIGNED BY: M. COLUCCI DRAWN BY: P. ZUCCHI CHECKED BY: M. HACHIGHI APPROVED BY: K. PIRBAZARI DATE: 3-17-2017		SUBMITTED: _____ APPROVED: _____ PROJECT MANAGER: _____	
 			
<b>METROLINK COMMUTER RAIL SYSTEM</b> <b>SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT</b> ORANGE SUBDIVISION - MP 197.4 TO MP 198.4 BRIDGE 197.9 - PHASE (2) FOUNDATION PLAN			
CONTRACT NO. SB-53 DRAWING NO. 103 OF 87 REVISION SHEET NO. AS SHOWN		SCALE: AS SHOWN	

# SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY

## SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT



**MARCH 20, 2017**  
**100% SUBMITTAL**  
**IN-PROGRESS**  
**CONTRACT No. C-XXXX-XX**



APPROVED BY: HEATHER BENING, P.E.  
 PROJECT MANAGER, SCORRA

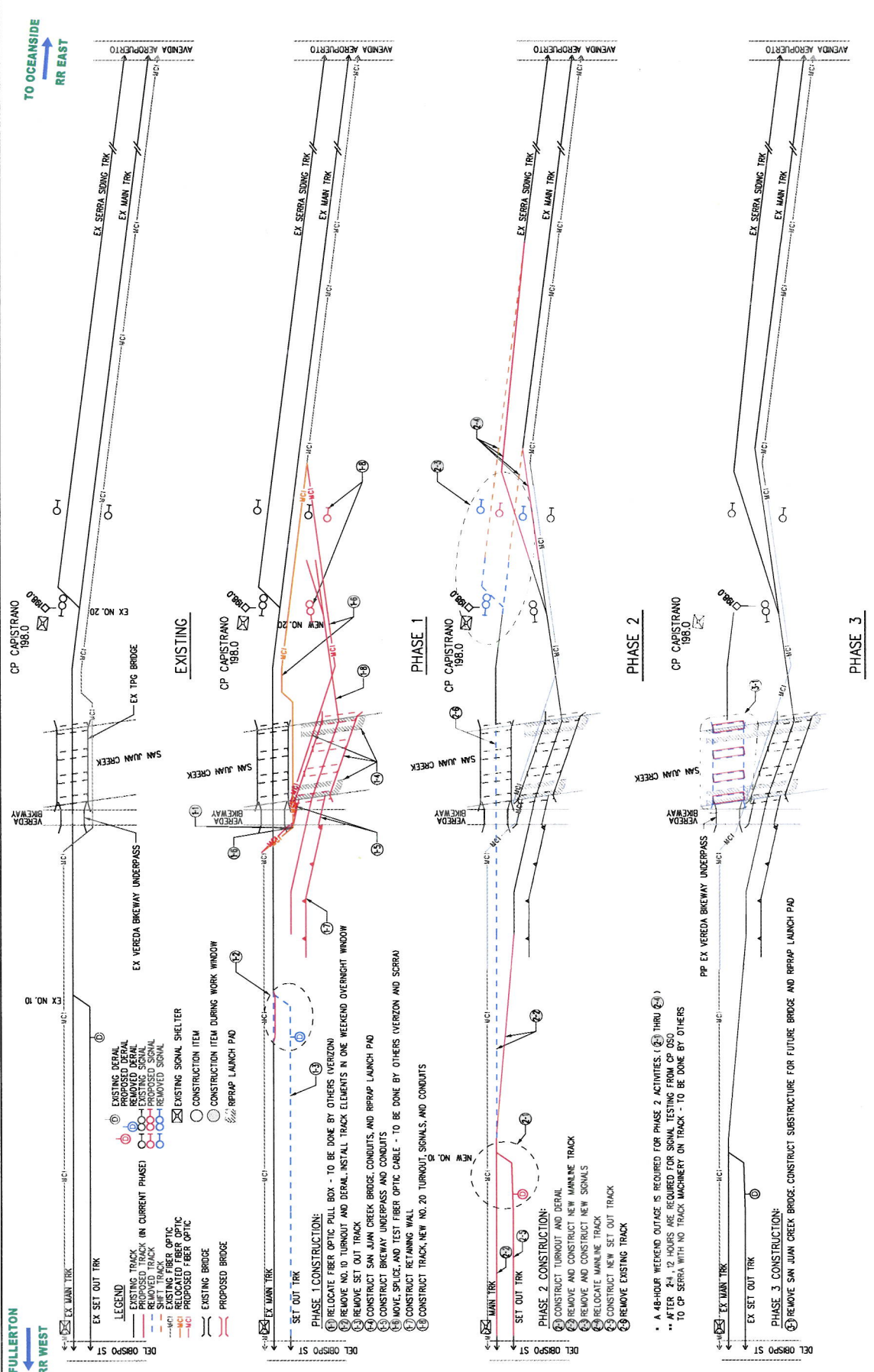
APPROVED BY: ASSTANT DIRECTOR, STANDARDS & DESIGN, SCORRA  
 DATE: \_\_\_\_\_

SUBMITTED BY: KEYVAN PIRBAZARI, P.E.  
 PROJECT MANAGER

APPROVED BY: JASON LEE  
 PROJECT MANAGER, OCTA

DATE: \_\_\_\_\_





TO FULLERTON  
RR WEST

TO OCEANSIDE  
RR EAST

LEGEND

- EXISTING TRACK (IN CURRENT PHASE)
- PROPOSED TRACK
- REMOVED TRACK
- EXISTING SIGNAL
- PROPOSED SIGNAL
- REMOVED SIGNAL
- EXISTING FIBER OPTIC
- PROPOSED FIBER OPTIC
- RELOCATED FIBER OPTIC
- REMOVED FIBER OPTIC
- EXISTING SIGNAL SHELTER
- CONSTRUCTION ITEM DURING WORK WINDOW
- REPRAP LAUNCH PAD
- EXISTING BRIDGE
- PROPOSED BRIDGE

PHASE 1 CONSTRUCTION:

- RELOCATE FIBER OPTIC PULL BOX - TO BE DONE BY OTHERS (OVERZON)
- REMOVE NO. 10 TURNOUT AND DERAIL, INSTALL TRACK ELEMENTS IN ONE WEEKEND OVERNIGHT WINDOW
- REMOVE SET OUT TRACK
- CONSTRUCT SAN JUAN CREEK BRIDGE, CONDUITS, AND REPRAP LAUNCH PAD
- CONSTRUCT BIKEWAY UNDERPASS AND CONDUITS
- MOVE, SPICE, AND TEST FIBER OPTIC CABLE - TO BE DONE BY OTHERS (OVERZON AND SCRRA)
- CONSTRUCT RETAINING WALL
- CONSTRUCT TRACK, NEW NO. 20 TURNOUT, SIGNALS, AND CONDUITS

PHASE 2 CONSTRUCTION:

- CONSTRUCT TURNOUT AND DERAIL
- REMOVE AND CONSTRUCT NEW MAINLINE TRACK
- RELOCATE MAINLINE TRACK
- CONSTRUCT NEW SET OUT TRACK
- REMOVE EXISTING TRACK

PHASE 3 CONSTRUCTION:

- REMOVE SAN JUAN CREEK BRIDGE, CONSTRUCT SUBSTRUCTURE FOR FUTURE BRIDGE, AND REPRAP LAUNCH PAD

\* A 48-HOUR WEEKEND OUTAGE IS REQUIRED FOR PHASE 2 ACTIVITIES (6.1) THROUGH (6.5)  
 \*\* AFTER 24-48 HOURS ARE REQUIRED FOR SIGNAL TESTING FROM CP OSC TO CP SERRA WITH NO TRACK MACHINERY ON TRACK - TO BE DONE BY OTHERS

CONTRACT NO.	GI-05
DRAWING NO.	6 OF 87
REVISION SHEET NO.	0
SCALE	NTS

**METROLINK**  
**JACOBS**

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
**ORANGE SUBDIVISION - MP 197.4 TO MP 198.4**

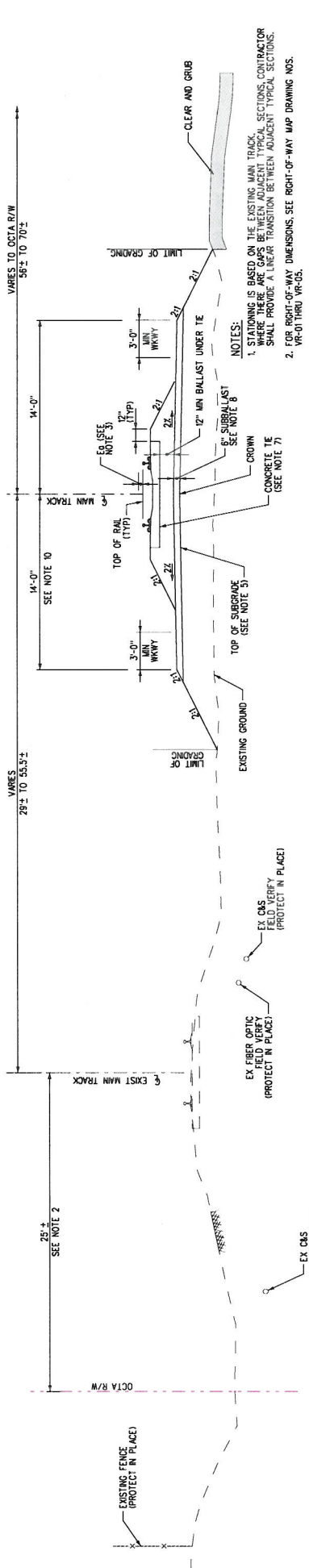
PHASING PLAN

DESIGNED BY	N. MCINTYRE
DRAWN BY	N. MCINTYRE
CHECKED BY	P. MAHONEY
APPROVED BY	K. FIOBAZZARI
DATE	MAR 20, 2017

100% SUBMITTAL  
 IN-PROGRESS  
 NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION

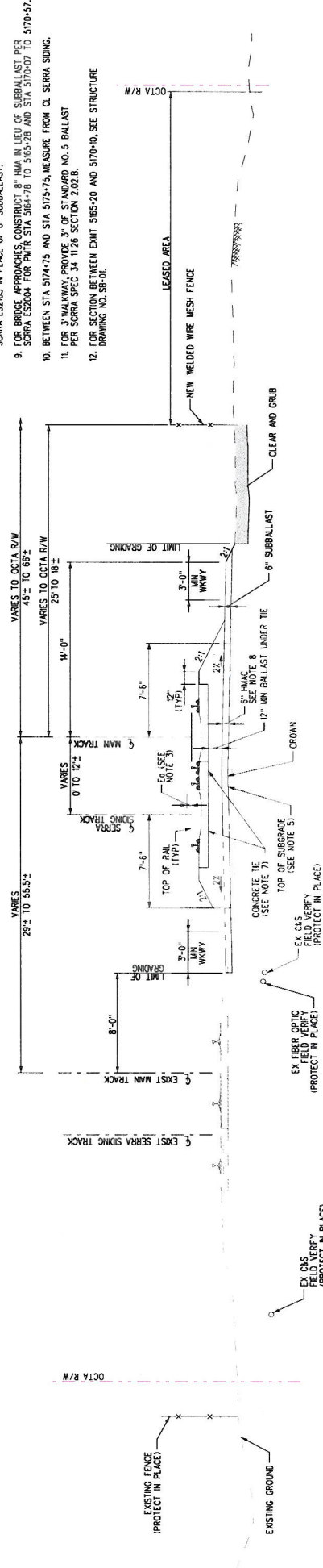




**TYPICAL SECTION C**

EMT 5709-10 TO EMT 575-75

1. STATIONING IS BASED ON THE EXISTING MAIN TRACK. CONTRACTOR SHALL PROVIDE A LINEAR TRANSITION BETWEEN ADJACENT TYPICAL SECTIONS. 14'-0" THROUGH 14'-05."
2. FOR RIGHT-OF-WAY DIMENSIONS, SEE RIGHT-OF-WAY MAP DRAWING NOS. 14-01 THRU 14-05.
3. FOR SUPERELEVATION OF TRACK, SEE TRACK PLAN AND PROFILE DRAWING NOS. 14-01 THRU 14-05. SUPERELEVATIONS SHALL TRANSITION BETWEEN 0' AND 1% LINEARLY THROUGHOUT THE LENGTH OF THE SPIRAL. PLANS DRAWING NOS. 01-01 THRU 01-05.
4. FOR FENCEWORK AND CLEAR AND GRUB WORK, SEE CIVIL IMPROVEMENT PLAN DRAWING NOS. 01-01 THRU 01-05.
5. TOP OF SUBGRADE PLANE SHALL BE 2.80' BELOW TOP OF LOW RAIL OF MAIN TRACK AT CENTERLINE OF TRACK.
6. FOR UTILITY PROTECTION AND RELOCATION, SEE DRAWING NOS. 14-01 THRU 14-05.
7. FOR TIE TYPE, SEE TRACK PLAN AND PROFILE DRAWING NOS. 14-01 THRU 14-05.
8. BETWEEN EMT 5774-00 AND EMT 5776+50, CONSTRUCT 6" HMAc PER SCORRA ES205 IN PLACE OF 6" SUBBALLAST.
9. FOR BRIDGE APPROACHES, CONSTRUCT 8" HMA IN LIEU OF SUBBALLAST PER SCORRA ES200 FOR PH1R STA 5164+78 TO 5165+28 AND STA 5170-07 TO 5170-57.
10. BETWEEN STA 5174+75 AND STA 5175+75, MEASURE FROM CL. SIERRA SINGING. FOR 3' WALKWAY, PROVIDE 3" OF STANDARD NO. 5 BALLAST PER SCORRA SPEC 34.126 SECTION 2.02.B.
11. FOR SECTION BETWEEN EMT 5185+20 AND 5170-10, SEE STRUCTURE DRAWING NO. SB-01.
12. FOR SECTION BETWEEN EMT 5185+20 AND 5170-10, SEE STRUCTURE DRAWING NO. SB-01.



**TYPICAL SECTION D**

EMT 5175-75 TO EMT 5177-05

<b>METROLINK COMMUTER RAIL SYSTEM</b>		CONTRACT NO. TC-02	
<b>SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT</b>		DRAWING NO. 16 OF 87	
<b>ORANGE SUBDIVISION - MP 197.4 TO MP 198.4</b>		REVISION, SHEET NO. 0	
<b>TRACK TYPICAL SECTIONS</b>		SCALE NTS	
<b>SHEET 2 OF 3</b>			
<b>JACOBS</b>		SUBMITTED: PROJECT NUMBER	
DESIGNED BY: MCINTYRE, G. LUI		APPROVED: PROJECT MANAGER	
CHECKED BY: P. MAHONEY		DATE: MAR 20, 2017	
APPROVED BY: K. P. BAZARI		DATE: MAR 20, 2017	
APPROVED BY: [Signature]		DATE: [Date]	
<b>100% SUBMITTAL</b>		BY: [Signature]	
<b>IN-PROGRESS</b>		DATE: [Date]	
<b>NOT FOR CONSTRUCTION</b>		DESCRIPTION	
REV	DATE	BY	APP

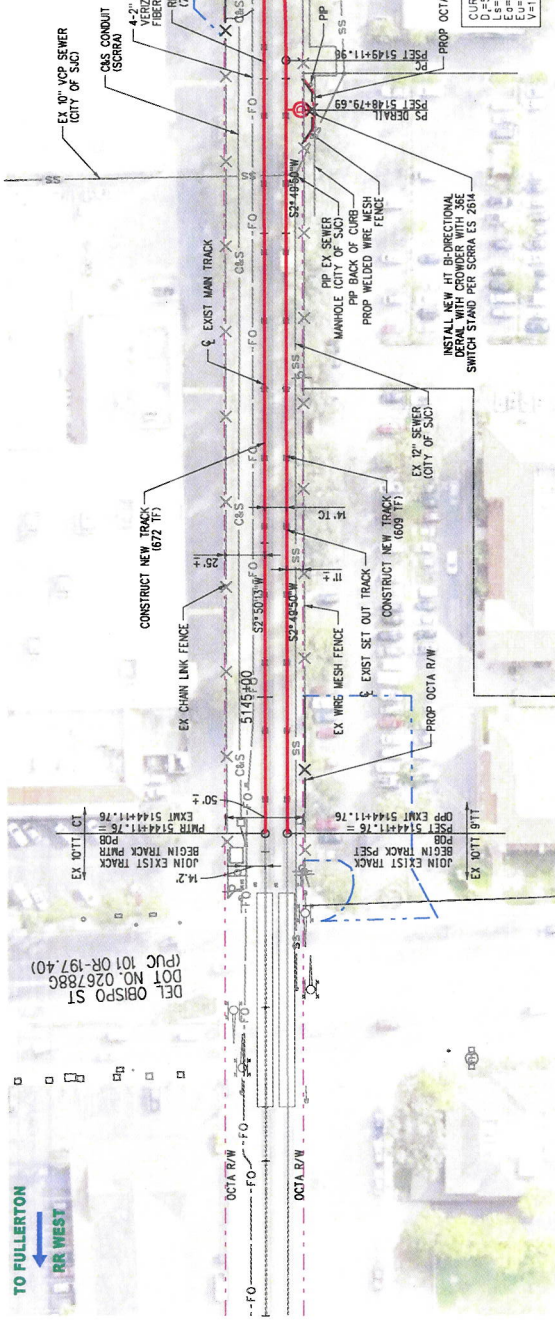






TO FULLERTON  
RR WEST

TO OCEANSIDE  
RR EAST



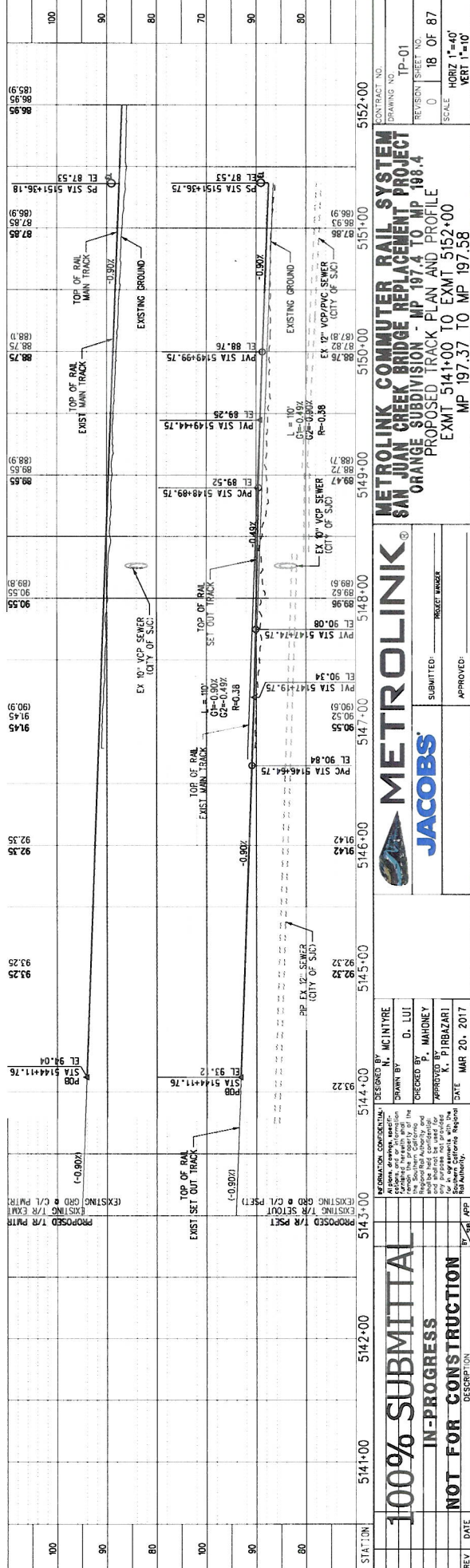
DEL OBISPO ST  
DOT NO. 026788G  
(PUC 101 OR-197.40)

JOIN EXIST TRACK  
PNT EXMT 5144+11.76

EX 10\"/>

**NOTES:**

1. FOR UTILITY INFORMATION SEE DWG NOS. UP-01 THRU UP-05.
2. FOR FENCING DETAILS SEE DWG NOS. CP-01 THRU CP-05.



CONTRACT NO. TP-01  
DRAWING NO. TP-01  
REVISION SHEET NO. 0 OF 87  
SCALE: HORIZ 1"=40'  
VERT 1"=10'

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
**ORANGE SUBDIVISION - MP 197.4 TO MP 198.4**  
PROPOSED TRACK PLAN AND PROFILE  
EXMT 5141+00 TO EXMT 5152+00  
MP 197.37 TO MP 197.58

**METROLINK**  
**JACOBS**

SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

DESIGNED BY: N. MCINTYRE  
DRAWN BY: D. LUI  
CHECKED BY: P. MAHONEY  
APPROVED BY: P. BAZZARI  
DATE: MAR 20, 2017

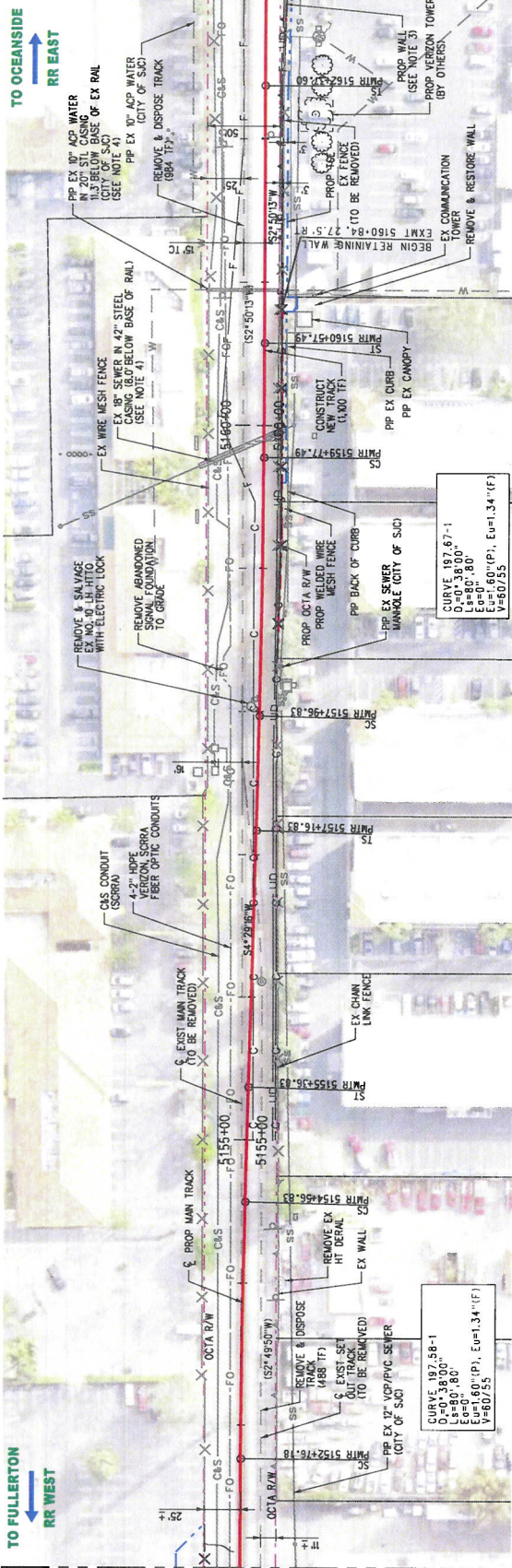
REV	DATE	DESCRIPTION
1	5141+00	100% SUBMITTAL
2	5142+00	IN-PROGRESS
3	5143+00	NOT FOR CONSTRUCTION





TO FULLERTON  
RR WEST

TO OCEANSIDE  
RR EAST



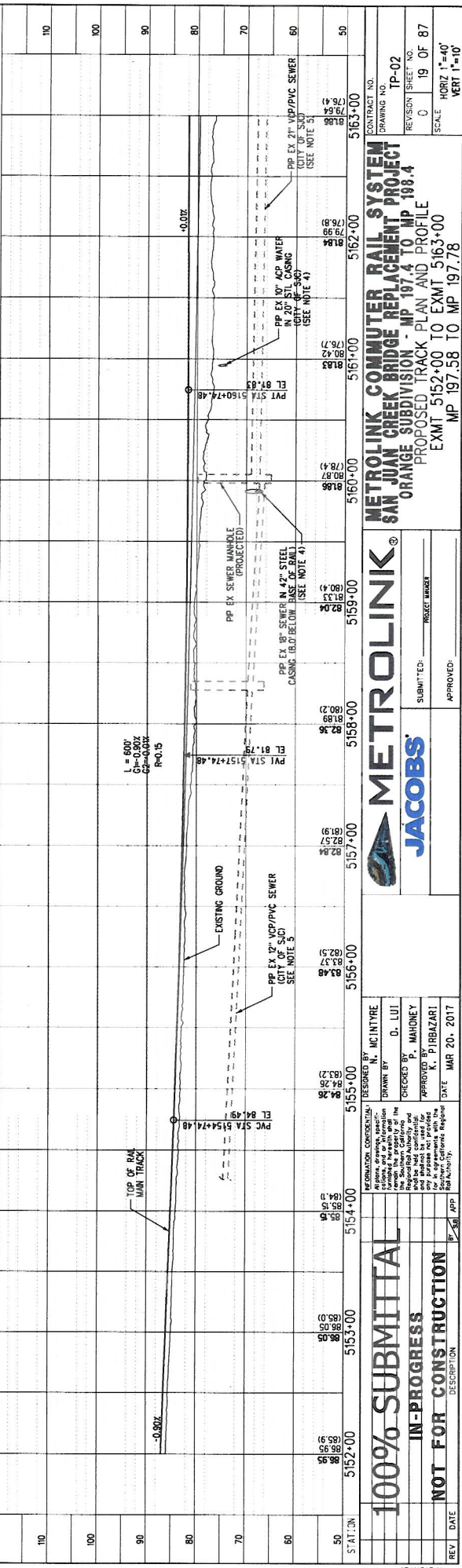
SEE DRAWING NO. TP-01  
MATCH LINE - EXMT 5152+00

CURVE 187.58-1  
D=0+38100.00  
L=80+80.00  
E=0+601.00 (P), E=1+341.00 (F)  
V=60/2.55

CURVE 187.67-1  
D=0+38100.00  
L=80+80.00  
E=0+601.00 (P), E=1+341.00 (F)  
V=60/2.55

NOTES:  
1. FOR UTILITY INFORMATION SEE DWG NOS. UP-01 THRU UP-05.  
2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.  
3. FOR WALL INFORMATION, SEE DWG NOS. SB-30 AND SB-31.

4. LOCATE SEWER AND WATER PRIOR TO WALL CONSTRUCTION.  
5. THE SEWER PROFILE IS SHOWN AS A PROJECTION AT TRACK CENTERLINE.



**METROLINK**  
**JACOBS**

INFORMATION CONTAINED HEREIN IS THE PROPERTY OF METROLINK. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF METROLINK.

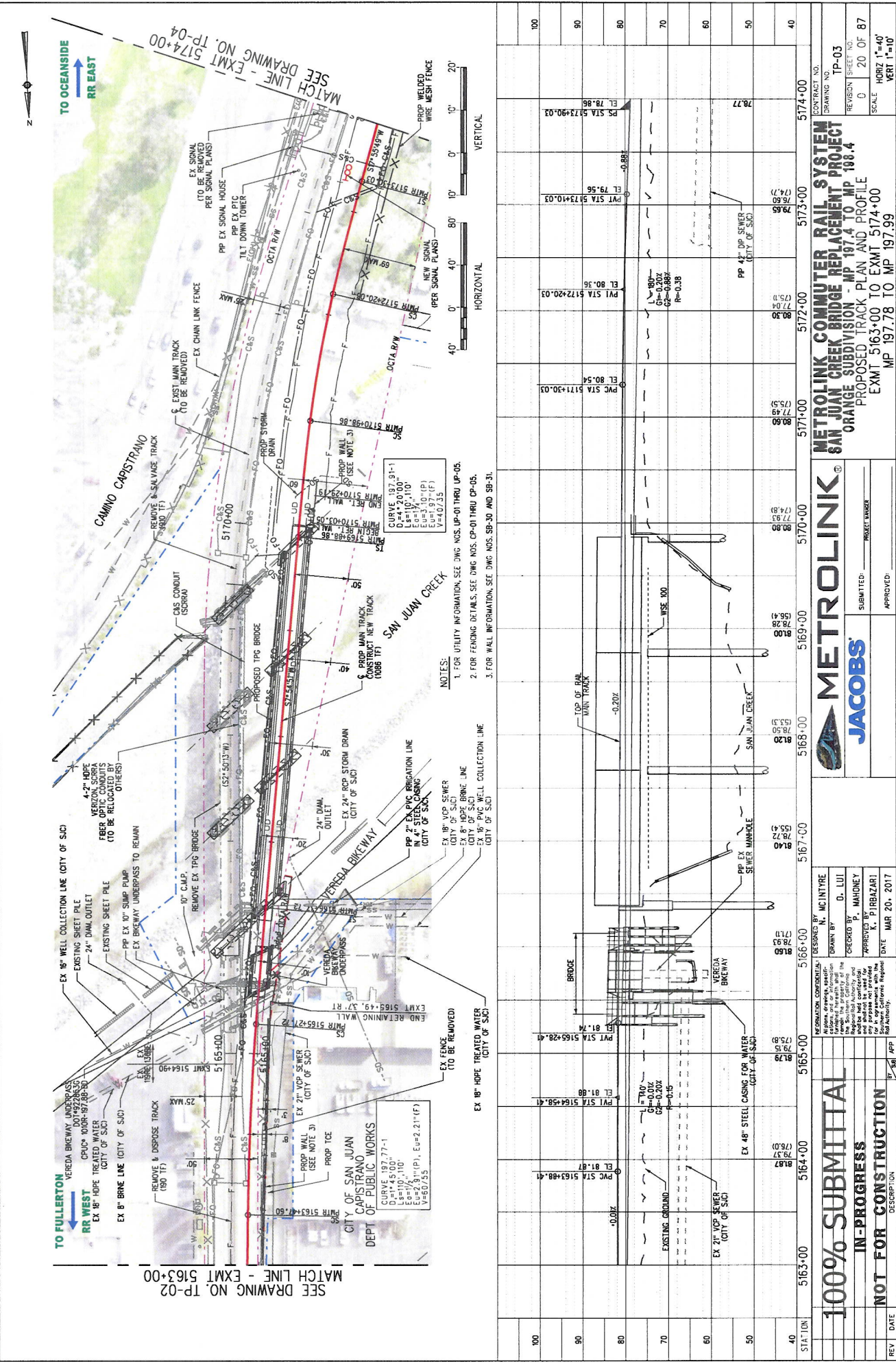
DESIGNED BY: N. MCINTYRE  
DRAWN BY: D. LUI  
CHECKED BY: P. MAHONEY  
APPROVED BY: K. P. IJAZARI  
DATE: MAR 20, 2017

SUBMITTED: PROJECT WAGON  
APPROVED:

REV	DATE	DESCRIPTION
1	03/20/17	100% SUBMITTAL
2	03/20/17	IN-PROGRESS
3	03/20/17	NOT FOR CONSTRUCTION

CONTRACT NO. TP-02  
DRAWING NO. TP-02  
REVISION SHEET NO. 0  
SCALE 1"=40'  
HORIZ 1"=100'  
VERT 1"=10'





SEE DRAWING NO. TP-02 MATCH LINE - EXMT 5163+00  
 SEE DRAWING NO. TP-04 MATCH LINE - EXMT 5174+00

REV	DATE	DESCRIPTION
100		
90		
80		
70		
60		
50		
40		

STA	100	90	80	70	60	50	40				
5163+00	5164+00	5165+00	5166+00	5167+00	5168+00	5169+00	5170+00	5171+00	5172+00	5173+00	5174+00
EL. 81.87	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88	EL. 81.88

<b>100% SUBMITTAL</b> <b>IN-PROGRESS</b> <b>NOT FOR CONSTRUCTION</b>											
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DESIGNED BY: MCINTYRE DRAWN BY: D. LUI CHECKED BY: P. MAHONEY APPROVED BY: P. BAZZARI DATE: MAR 20, 2017											
METROLINK COMMUTER RAIL SYSTEM SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT ORANGE SUBDIVISION - MP 197.4 TO MP 198.4 PROPOSED TRACK PLAN AND PROFILE EXMT 5163+00 TO EXMT 5174+00 MP 197.78 TO MP 197.99						CONTRACT NO. TP-03 DRAWING NO. 0 SHEET NO. 20 OF 87 SCALE: HORIZ 1"=40' VERT 1"=10'					
SUBMITTED: PROJECT MANAGER APPROVED:											

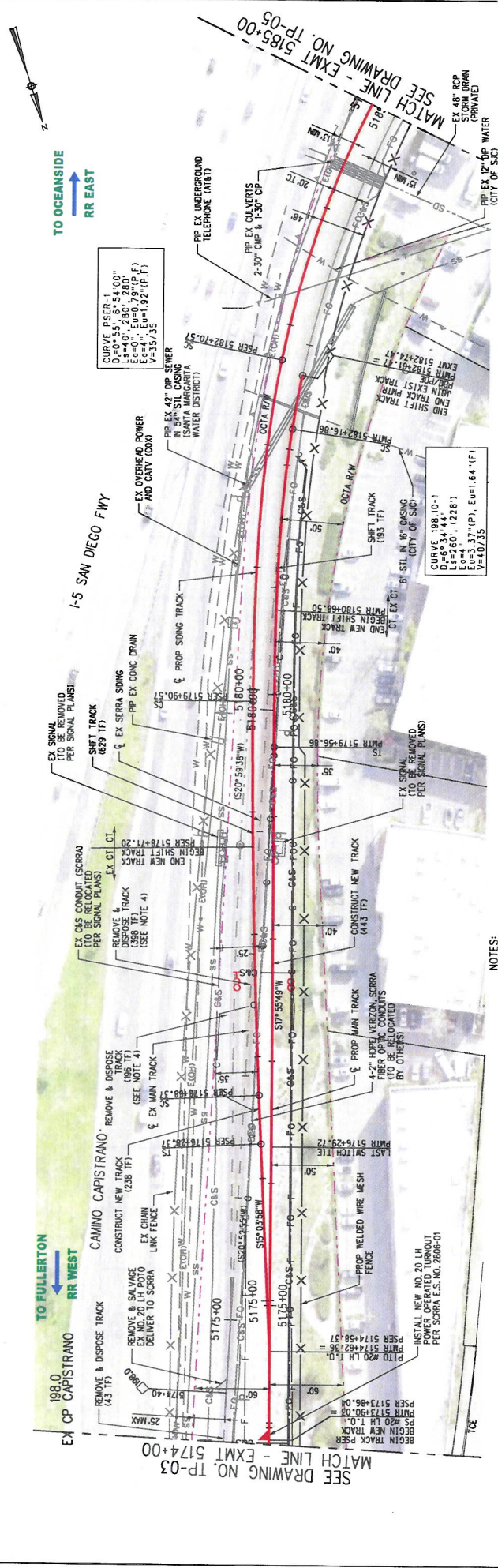
JACOBS

NOTES:  
 1. FOR UTILITY INFORMATION, SEE DWG NOS. CP-01 THRU LP-05.  
 2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.  
 3. FOR WALL INFORMATION, SEE DWG NOS. SB-30 AND SB-31.

CURVE: 187.91+1  
 L=10+110'  
 E=10+110'  
 E=197+1(F)  
 V=40/35

CURVE: 5163+771-1  
 L=10+110'  
 E=10+110'  
 E=197+1(F)  
 V=60/35





STATION	5174+00	5175+00	5176+00	5177+00	5178+00	5179+00	5180+00	5181+00	5182+00	5183+00	5184+00	5185+00
80	78.25	78.57	78.97	79.37	79.77	80.17	80.57	80.97	81.37	81.77	82.17	82.57
70	77.85	78.17	78.57	78.97	79.37	79.77	80.17	80.57	80.97	81.37	81.77	82.17
60	77.45	77.77	78.17	78.57	78.97	79.37	79.77	80.17	80.57	80.97	81.37	81.77
50	77.05	77.37	77.77	78.17	78.57	78.97	79.37	79.77	80.17	80.57	80.97	81.37

**100% SUBMITTAL**  
**IN-PROGRESS**  
**NOT FOR CONSTRUCTION**

CONTRACT NO. TP-04  
DRAWING NO. 21 OF 87  
REVISION 0  
SCALE: HORIZ 1"=40'  
VERT 1"=10'

DESIGNED BY: N. MCINTYRE  
DRAWN BY: D. LUI  
CHECKED BY: P. MAHONEY  
APPROVED BY: A. P. IRLAZARI  
DATE: MAR 20, 2017

PROJECT MANAGER: \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_

**JACOBS**  
**METROLINK**

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
**ORANGE SUBDIVISION - MP 197.4 TO MP 198.4**  
**PROPOSED TRACK PLAN AND PROFILE**  
EXMT 5174+00 TO EXMT 5185+00  
MP 197.99 TO MP 198.20

NOTES:

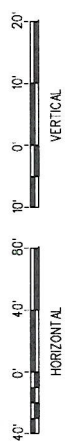
1. FOR UTILITY INFORMATION SEE DWG NOS. UP-01 THRU UP-05.
2. FOR FENCING DETAILS SEE DWG NOS. OP-01 THRU OP-05.
3. FOR WALL INFORMATION SEE DWG NOS. SB-30 AND SB-31.
4. REMOVE AND DISPOSE TIES, SALVAGE RAIL TO SCORRA.





CURVE P/SER-1  
 DC=0'55", 6'54.00"  
 L=40', 280', 280', 280'  
 E=3', E=2', 0.2', 0.2', 0.2', 0.2'  
 V=35'/35'

NOTES:  
 1. FOR UTILITY INFORMATION, SEE DWG NOS. UP-01 THRU UP-05.  
 2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.



STATION	5185+00	5186+00	5187+00	5188+00	5189+00	5190+00	5191+00	5192+00	5193+00	5194+00	5195+00	5196+00
100												
90												
80												
70												
60												
50												
40												

**100% SUBMITTAL**

**IN-PROGRESS**

**NOT FOR CONSTRUCTION**

**METROLINK®**

**JACOBS**

CONTRACT NO. \_\_\_\_\_ DRAWING NO. **TP-05**

REVISION SHEET NO. **0** OF **22** SCALE **HORIZ 1"=40'**

VERT **1"=10'**

**METROLINK COMMUTER RAIL SYSTEM**

**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**

**ORANGE SUBDIVISION - MP 197.4 TO MP 198.4**

**PROPOSED TRACK PLAN AND PROFILE**

**EXMT 5185+00 TO EXMT 5196+00**

**MP 198.20 TO MP 198.41**

DESIGNED BY: MCINTYRE, D. LUI

CHECKED BY: MAHONEY

APPROVED BY: K. PIRBAZARI

DATE: MAR 20, 2011

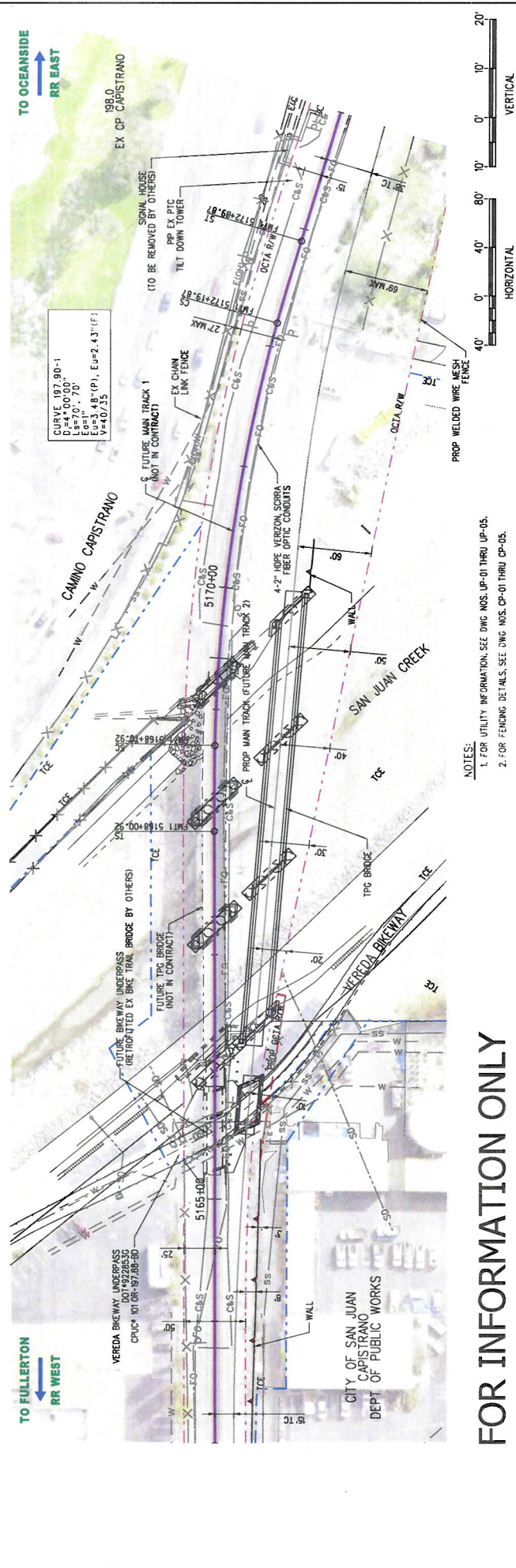
REV	DATE	DESCRIPTION





TO FULLERTON  
RR WEST

TO OCEANSIDE  
RR EAST



CURVE 197.90-1  
L=70.70'  
E=11.41'  
Ea=3.45'(P), Ee=2.43'(F)  
V=40/35

NOTES:  
1. FOR UTILITY INFORMATION, SEE DWG NOS. UP-01 THRU UP-05.  
2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.

FOR INFORMATION ONLY

STATION	5163+00	5164+00	5165+00	5166+00	5167+00	5168+00	5169+00	5170+00	5171+00	5172+00	5173+00	5174+00
REV												
DATE												
DESCRIPTION												
40												
50												
60												
70												
80												
90												
100												

**100% SUBMITTAL**  
**IN-PROGRESS**  
**NOT FOR CONSTRUCTION**

CONTRACT NO. 5174-00  
DRAWING NO. 1F-03  
REVISION SHEET NO. 0 23 OF 87  
SCALE HORIZ 1"=40'  
VERT 1"=10'

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DESIGNED BY: KC INTYRE  
DRAWN BY: D. LUI  
CHECKED BY: MARDINEY  
APPROVED BY: K. P. RBAZARI  
DATE: MAR 20, 2017

FOR INFORMATION ONLY

**METROLINK**  
**JACOBS**

1. FOR UTILITY INFORMATION, SEE DWG NOS. UP-01 THRU UP-05.  
2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.

CONTRACT NO. 5174-00  
DRAWING NO. 1F-03  
REVISION SHEET NO. 0 23 OF 87  
SCALE HORIZ 1"=40'  
VERT 1"=10'

FOR INFORMATION ONLY

**METROLINK**  
**JACOBS**

1. FOR UTILITY INFORMATION, SEE DWG NOS. UP-01 THRU UP-05.  
2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.

CONTRACT NO. 5174-00  
DRAWING NO. 1F-03  
REVISION SHEET NO. 0 23 OF 87  
SCALE HORIZ 1"=40'  
VERT 1"=10'

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
**ORANGE SUBDIVISION - MP 197.4 TO MP 198.4**  
**FUTURE TRACK PLAN AND PROFILE**  
EXMT 5163+00 TO EXMT 5174+00  
MP 197.78 TO MP 197.99

**METROLINK**  
**JACOBS**

STATION	5163+00	5164+00	5165+00	5166+00	5167+00	5168+00	5169+00	5170+00	5171+00	5172+00	5173+00	5174+00
40												
50												
60												
70												
80												
90												
100												

DATE: MAR 20, 2017

FOR INFORMATION ONLY



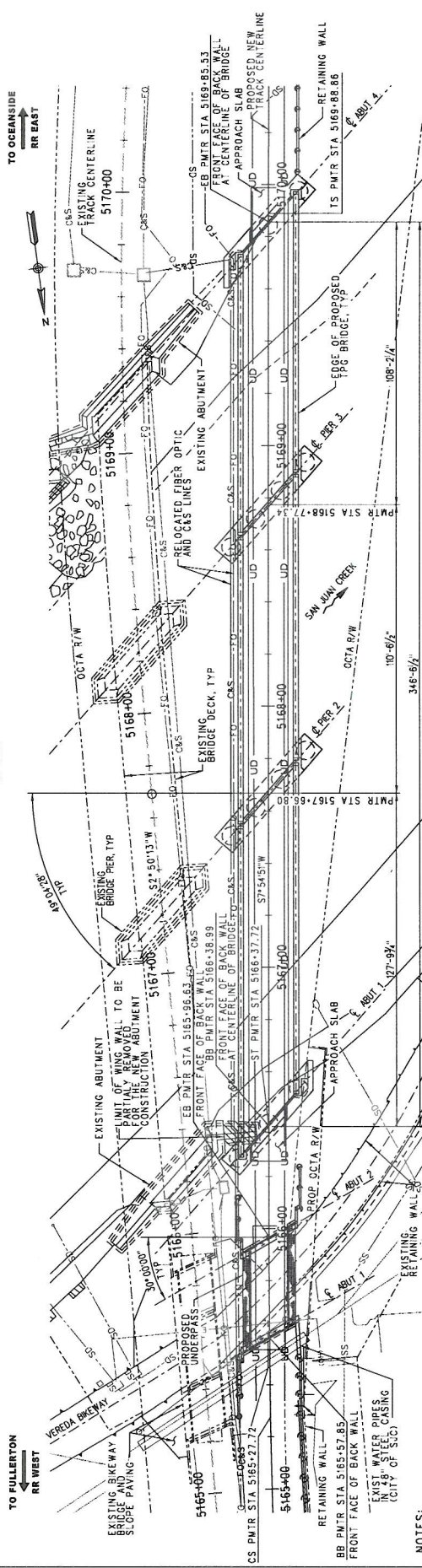
**ATTENTION !**  
 INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UNDERGROUND OR ABOVE GROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES BEFORE BEGINNING CONSTRUCTION.

**LEGEND**  
 [Symbol] REMOVAL (SEE DEMOLITION PLANS)  
 E DENOTES EXPANSION BEARINGS  
 F DENOTES FIXED BEARINGS

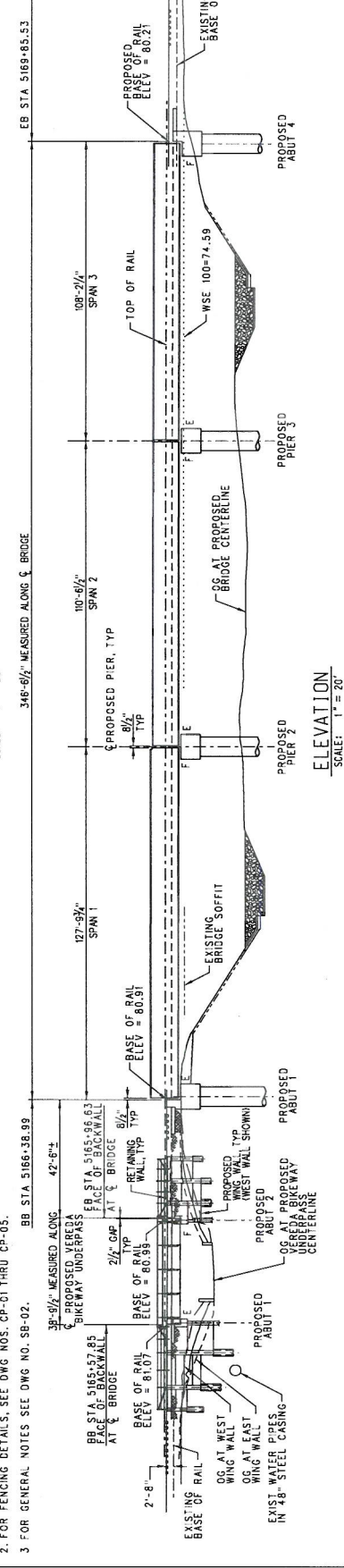
PMTB STA 5169+85.57  
 ELEV 80.82

PMTB STA 5166+37.90  
 ELEV 81.52

**PROFILE**  
 NO SCALE



**PLAN**  
 SCALE: 1" = 20'



**ELEVATION**  
 SCALE: 1" = 20'

- NOTES:**
1. FOR MORE INFORMATION ON VEREDA BIKEWAY UNDERPASS SEE DWG NO. SB-27.
  2. FOR FENCING DETAILS, SEE DWG NOS. CP-C1 THRU CP-05.
  3. FOR GENERAL NOTES SEE DWG NO. SB-02.

CONTRACT NO.  
 DRAWING NO. SB-01  
 REVISION SHEET NO. 51 OF 87  
 SCALE AS SHOWN

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
 ORANGE SUBDIVISION - MP 197.4 TO MP 198.4  
 BRIDGE 197.9 - PHASE (1)  
 GENERAL PLAN

**METROLINK**

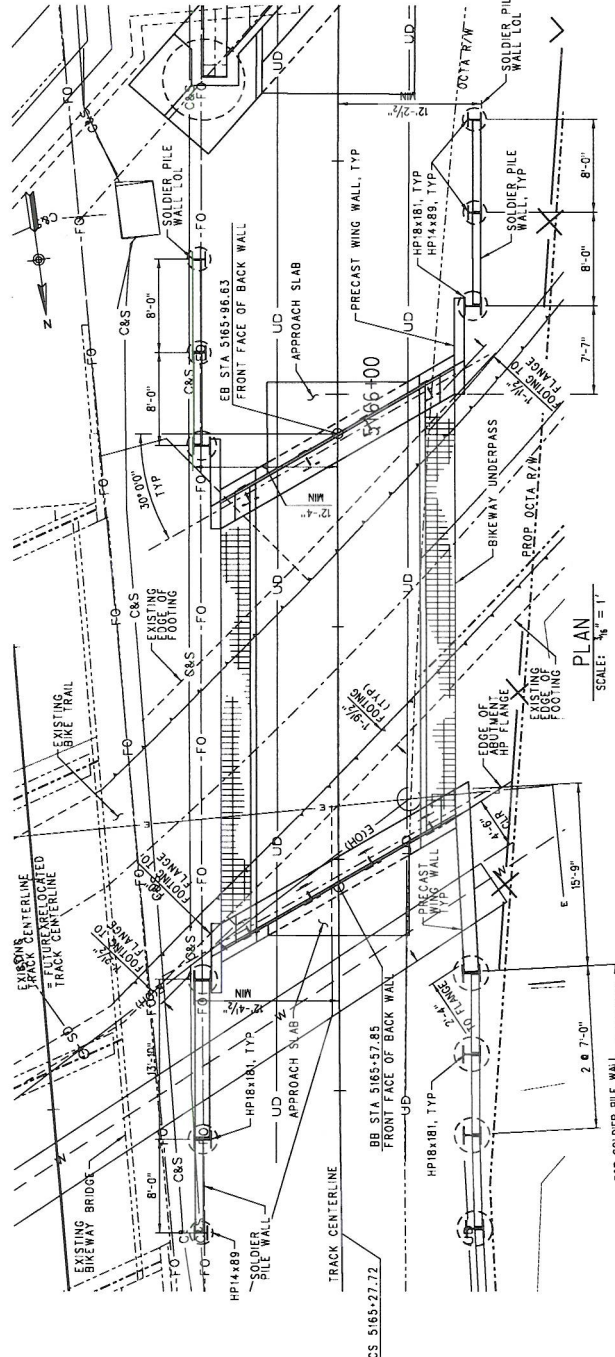
**JACOBS**

SUBMITTED: \_\_\_\_\_ PROJECT NUMBER: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_

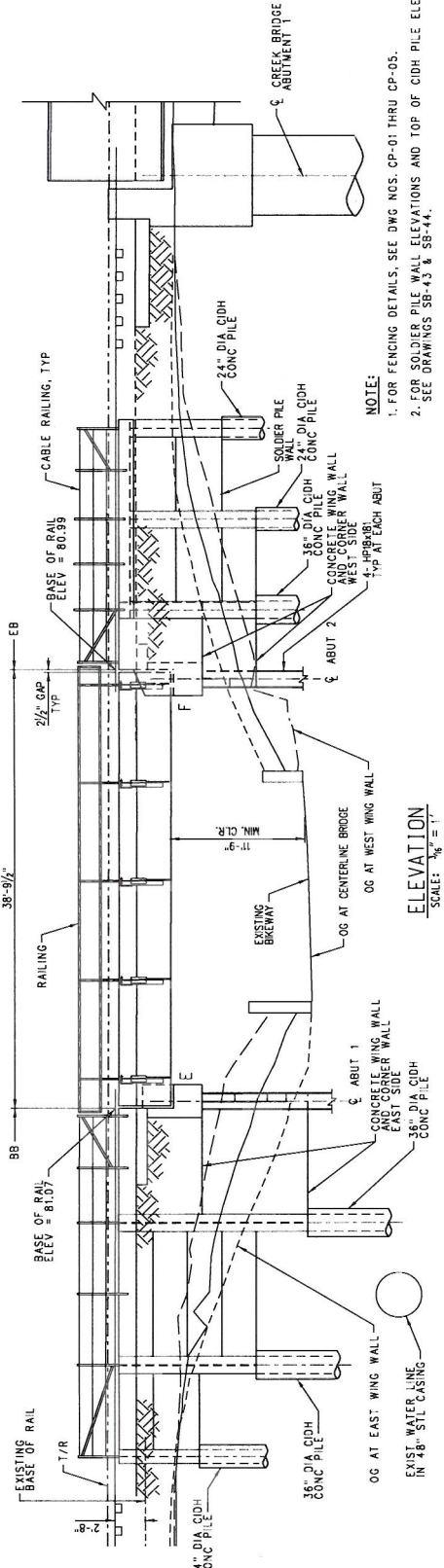
DESIGNED BY: GCL/JI  
 DRAWN BY: ZUCCHI  
 CHECKED BY: HIGHTON  
 APPROVED BY: P. BRAZARI  
 DATE: 3-17-2017

**100% SUBMITTAL**  
**IN-PROGRESS**  
**NOT FOR CONSTRUCTION**

REV. DATE



STEEL GIRDER BRIDGE  
TYPICAL SECTION  
SCALE: 1/4" = 1'



T/R TO TOP OF SEAT	
RAIL + PAD	= 7 7/8"
TIE	= 8"
BALLAST	= 12"
WATERPROOFING	= 1"
DECK	= 5/8"
GROD	= 3 5/8"
BEARING	= 3"
TOTAL	= 5'-8 1/4"

NOTE:

- 1. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.
- 2. FOR SOLDIER PILE WALL ELEVATIONS AND TOP OF CIDH PILE ELEVATION, SEE DRAWINGS SB-43 & SB-44.

**100% SUBMITTAL**  
**IN-PROGRESS**  
**NOT FOR CONSTRUCTION**

DESIGNED BY: GCL/JI  
DRAWN BY: ZUCCHI  
CHECKED BY: D. HIGHT/CH  
APPROVED BY: P. BRAZAR/  
DATE: 3-17-2017

**METROLINK**

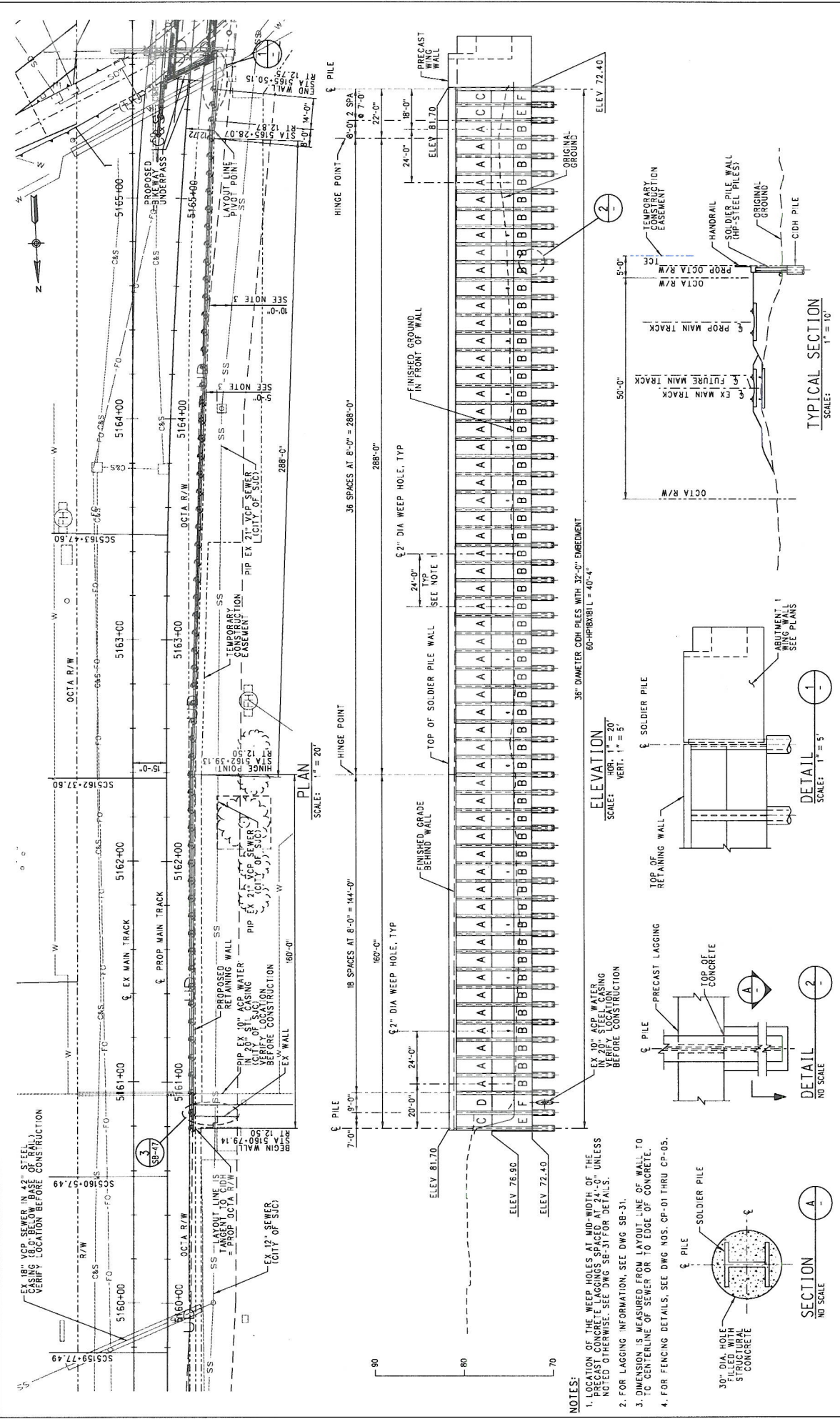
**JACOBS**

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
ORANGE SUBDIVISION - MP 197.4 TO MP 198.4  
VEREDA BIKEWAY UNDERPASS  
GENERAL PLAN

CONTRACT NO.  
DRAWING NO. SB-28  
REVISION SHEET NO. 7B OF 87  
SCALE AS SHOWN

REV.	DATE	BY	APP.





- NOTES:**
1. LOCATION OF THE WEEP HOLES AT MID-WIDTH OF THE PRECAST CONCRETE LAGGINGS SPACED AT 24'-0" UNLESS NOTED OTHERWISE. SEE DWG SB-31 FOR DETAILS.
  2. FOR LAGGING INFORMATION, SEE DWG SB-31.
  3. DIMENSION IS MEASURED FROM LAYOUT LINE OF WALL TO 3'-0" CENTERLINE OF SEWER OR TO EDGE OF CONCRETE.
  4. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.

**100% SUBMITTAL**

**IN-PROGRESS**

**NOT FOR CONSTRUCTION**

DESIGNED BY: M. GOLJI  
 CHECKED BY: D. ZUCCHI  
 DRAWN BY: P. ZUCCHI

APPROVED BY: P. BARAZARI  
 DATE: 3-17-2017

**METROLINK**

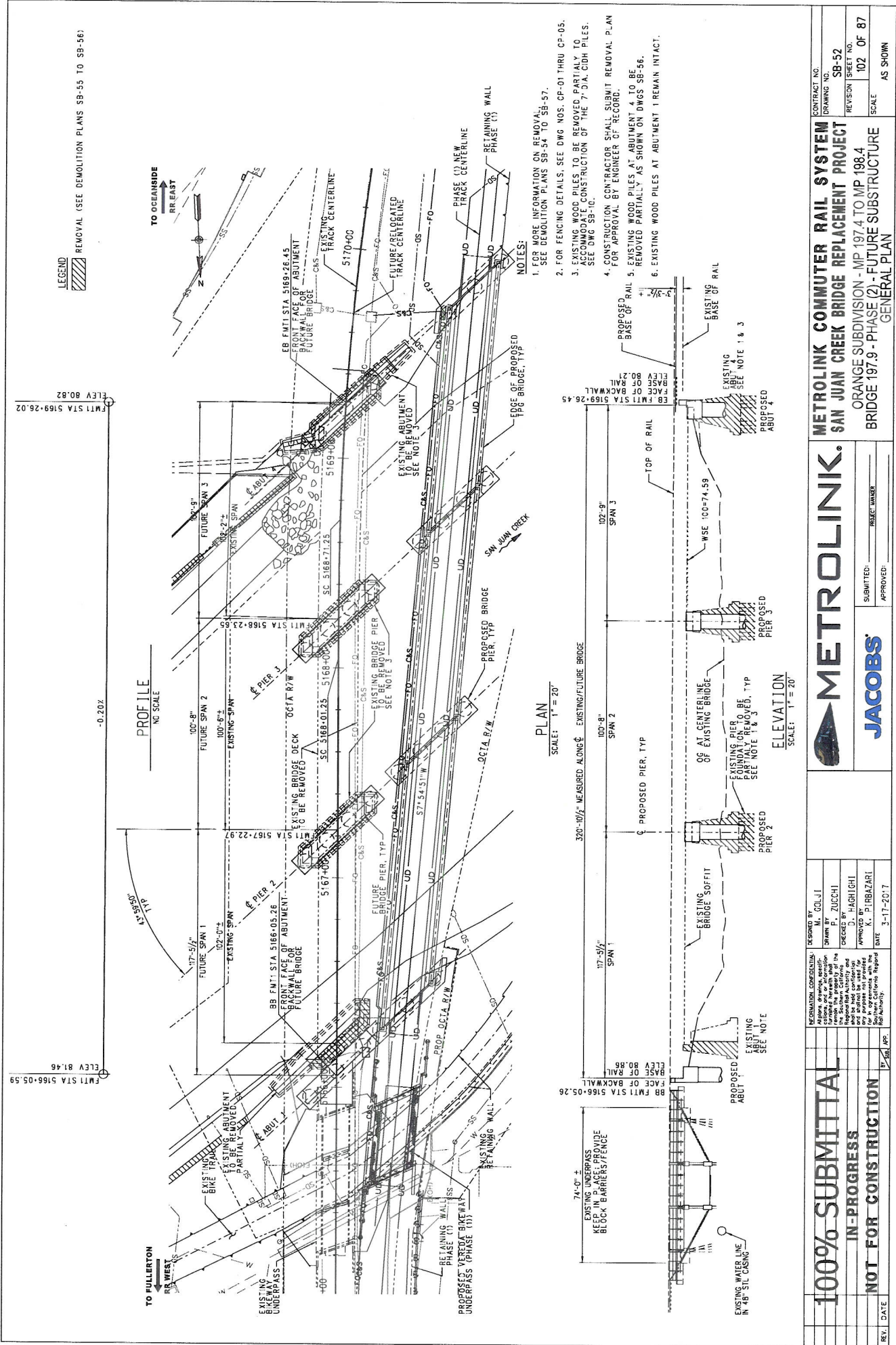
**JACOBS**

**METROLINK COMMUTER RAIL SYSTEM**  
**SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT**  
 ORANGE SUBDIVISION - MP 197.4 TO MP 198.4  
 NORTH SOLDIER PILE RETAINING WALL  
 GENERAL PLAN

CONTRACT NO. SB-46  
 DRAWING NO. 86  
 REVISION SHEET NO. 100 OF 87  
 SCALE AS SHOWN

REVISIONS:

NO.	DATE	DESCRIPTION
1	3-17-2017	FOR REVIEW



**LEGEND**  
 [Hatched Box] REMOVAL (SEE DEMOLITION PLANS SB-55 TO SB-56)

TO FULLERTON  
 RR WEST

TO OCEANSIDE  
 RR EAST

**PROFILE**  
 NG SCALE

**PLAN**  
 SCALE: 1" = 20'

**ELEVATION**  
 SCALE: 1" = 20'

**NOTES:**

1. FOR MORE INFORMATION ON REMOVAL, SEE DEMOLITION PLANS SB-54 TO SB-57.
2. FOR FENCING DETAILS, SEE DWG NOS. CP-01 THRU CP-05.
3. EXISTING WOOD PILES TO BE REMOVED PARTIALLY TO BE REMOVED FULLY AS SHOWN ON DWGS SB-56. SEE DWG SB-56.
4. CONSTRUCTION CONTRACTOR SHALL SUBMIT REMOVAL PLAN FOR APPROVAL BY ENGINEER OF RECORD.
5. EXISTING WOOD PILES AT ABUTMENT 4 TO BE REMOVED PARTIALLY AS SHOWN ON DWGS SB-56.
6. EXISTING WOOD PILES AT ABUTMENT 1 REMAIN INTACT.

<p><b>100% SUBMITTAL</b>  <b>IN-PROGRESS</b>  <b>NOT FOR CONSTRUCTION</b></p>	<p>REVISION NO. _____          DATE _____</p>	<p>DESIGNED BY: M. CCLJLI          DRAWN BY: ZUCCHI          CHECKED BY: HIGHT          APPROVED BY: K. PIRBAZARI          DATE: 3-17-2017</p>	<p>INFORMATION CONCERNING:          Approval services, including the design and construction of the bridge structure, and the related utility and right-of-way work, and related to the project, and for all agreements with the City of Orange and the Orange Transportation Authority.</p>	<p>CONTRACT NO. _____          DRAWING NO. SB-52          REVISION SHEET NO. 102 OF 87          SCALE AS SHOWN</p>
	<p><b>METROLINK COMMUTER RAIL SYSTEM</b>  <b>SAN JUAN CREEK BRIDGE REPLACEMENT PROJECT</b>          ORANGE SUBDIVISION - MP 197.4 TO MP 198.4  <b>BRIDGE 197.9 - PHASE (2) - FUTURE SUBSTRUCTURE</b>  <b>GENERAL PLAN</b></p>			



SUBMITTED BY: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_

PROJECT NUMBER: \_\_\_\_\_

