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W30a

May 3, 2016

To: Coastal Commission and Interested Parties

From: Alison Dettmer, Deputy Director
Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division

Subject: **Addendum to CC-0004-15 SANDAG, San Elijo Lagoon Double-Track Project, Encinitas, Solana Beach, San Diego Co.**

This addendum includes minor revisions to the April 26, 2016, staff report. The changes reflect agreed-upon commitments to use natural appearing (as opposed to chain-link) fencing to separate the public from the rail tracks at the Chesterfield Drive crossing in Encinitas, if use of such fencing is approved by the California Public Utilities Commission. The proposed modification to the staff report does not change staff's recommendation that the Commission **concur**.

Additions are shown below in underline and deletions in ~~strikethrough~~.

Page 23, last paragraph (Public Views):

Temporary visual impacts during construction are unavoidable and would be further minimized by the above-described coordination with the Caltrans I-5 and SELRP projects. Construction will include removal and replacement of riprap scour protection beneath the bridge crossing, which will involve temporary disturbance to surrounding vegetation, but with the proposed implementation of the "Conceptual Revegetation Plan" SANDAG has included (as Appendix N of the Biological Technical Report), no permanent change in visual impact would occur. SANDAG has also included a commitment that fencing for public safety at the Chesterfield Drive crossing will be modified to a faux-wood split rail appearance (similar to fencing installed in Leucadia), unless the California Public Utilities Commission (CPUC) denies such modification. The Commission agrees with SANDAG that the project would not adversely affect the area's visual and scenic quality, and finds the project would minimize visual impact and landform alteration and be consistent with the visual resource protection policy (Section 30251) of the Coastal Act.

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Filed:	11/24/15
6 Months:	5/24/16
Staff:	M.Delaplaine-SF
Staff Report:	4/26/16
Hearing Date:	5/11/16

STAFF REPORT: REGULAR CALENDAR

Consistency Certification No.:	**CC-0004-15**
Applicant:	**San Diego Association of Governments**
Location:	Rail Corridor between southern Encinitas and northern Solana Beach, including the crossing of San Elijo Lagoon, San Diego County (**Exhibits 1 and 2**)
Project Description:	Construction of 1.5 miles of a second mainline railroad track (double-track), a new railroad bridge over San Elijo Lagoon, and associated crossovers, signals, and other improvements
Staff Recommendation:	Concurrence

SUMMARY OF STAFF RECOMMENDATION

The San Diego Association of Governments (SANDAG) has submitted a consistency certification for a 1.5-mile segment of double-track, between southern Encinitas and northern Solana Beach, and across San Elijo Lagoon. The project includes: (1) replacing "Bridge 240," a wood trestle bridge which traverses the lagoon's entrance channel, with a wider (but with less fill in the lagoon) concrete pile bridge; (2) widening and raising the height of the berm supporting the rail line across the lagoon; (3) making a number of signal, street crossing, and pedestrian crossing improvements; (4) installing riprap bank protection underneath the bridge; (5) installing

culverts to maximize tidal flows; (6) construction of a temporary construction work berm for the bridge replacement; (7) making temporary and permanent infrastructure improvements; and (8) creating several staging areas to enable site access, construction, and equipment assembly.

Construction, which would commence this fall and take up to three years, would be coordinated with the Caltrans I-5 lagoon crossing recently authorized by the Commission (March 2016), as well as the San Elijo Lagoon Restoration Project (SELRP), which will be before the Commission later this spring or summer.

The project involves wetland fill and development within environmentally sensitive habitat areas (ESHA). Because the double tracking would increase rail capacity, it cannot be considered an incidental public service (or a very minor incidental public facility). It is therefore not an allowable use under the Coastal Act wetland policy (Sections 30233(a) and (c)). It is also not a use "dependent on the resources" and is therefore inconsistent with the environmentally sensitive habitat policy (Section 30240). The project is consistent with the alternatives and mitigation tests of these policies; nevertheless, it could only be found consistent with the Coastal Act through the "conflict resolution" provision contained in Section 30007.5, as discussed below.

The project includes adequate measures to protect water quality and would reduce automobile congestion, miles traveled, energy consumption, air emissions, and non-point source pollutants into nearby water bodies. The project would maintain and enhance public access by expanding the rail line used by SANDAG and other rail services, which in turn helps to reduce automobile traffic on I-5 in an area where this freeway supports public access and recreation. The project is therefore consistent with the water quality, air quality, energy conservation, and public access policies of the Coastal Act (Sections 30231, 30232, 30253, 30210, 30213, and 30252).

The project creates a conflict between the allowable use tests of the wetland policy and ESHA policies on the one hand, and the public access and transit, water quality, air quality, and energy conservation policies of the Coastal Act on the other. The project is similar to a number of previous SANDAG double tracking projects which the Commission determined could be concurred with using the conflict resolution section of the Coastal Act. More fundamentally, and as the Commission noted in approving the related Caltrans I-5 crossing of San Elijo Lagoon (CDP 6-15-2092 and NOID NCC-NOID-0005-15), the Commission has already established the policy basis for the subject project qualifying for, and being found consistent with, Section 30007.5, through its review of the North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program (NCC PWP/TREP - CC-0002-14/PWP-6-NCC-13-0203-1).

Staff recommends that, in accordance with this policy direction, the Commission concur with this consistency certification because authorization of the project would, on balance, be most protective of significant coastal resources and consistent with the conflict resolution policy of the Coastal Act (Section 30007.5).

Commission staff therefore recommends **concurrence** with CC-0004-15. The **motion** to implement this recommendation is found on **Page 4**. The standard of review for this project is Chapter 3 of the Coastal Act.

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APPENDICES

EXHIBITS

I. APPLICANT'S CONSISTENCY CERTIFICATION

The San Diego Association of Governments (SANDAG) has certified that the proposed activity complies with the California Coastal Management Program and will be conducted in a manner consistent with that program.

II. MOTION AND RESOLUTION

Motion:

*I move that the Commission **concur** with consistency certification CC-0004-15.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in an agreement with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

*The Commission hereby **concurs** with consistency certification CC-0004-15 by SANDAG on the grounds that the project described therein would be consistent with the enforceable policies of the California Coastal Management Program.*

III. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

SANDAG proposes to construct a 1.5-mile segment of double-track along the portion of the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail corridor that crosses San Elijo Lagoon and connects the southern Encinitas and northern Solana Beach. The project consists of adding 1.5 miles of a second main track (double-track) between Control Point (CP) Cardiff (Mile Post (MP) 239.6) to the north and CP Craven (MP 241.1) to the south (**Exhibits 1 & 2**), and would tie into the existing double track segments to the north and south. The project also includes the following features:

Track Improvements would consist of a second main track along the corridor. To accommodate the wider double-tracking, additional track embankment east of the existing embankment would be placed within the right-of-way (ROW), and to a raised elevation, to enable the rail line to accommodate a 100-year storm event and the year 2100 predicted mean sea level rise. Grading, retaining walls, utilities, and drainage improvements would also be required at various points along the alignment.

Bridge Replacement would involve replacing Bridge 240.4 across the lagoon entrance channel. The existing bridge is a 308-foot long, single track timber trestle bridge (built in the early 1940s), which would be replaced by a new double track concrete bridge containing eight 42-foot spans

(concrete girders), each supported by five 2-foot diameter steel piles (**Exhibit 3**). The total replacement bridge would be 336 feet long. The overall in-water bridge footprint would be reduced through use of steel piles with longer bridge spans over the lagoon.

Bridge construction would take place in a single phase, offline from the existing bridge, to maintain rail service during construction and decrease the duration of construction over the San Elijo Lagoon inlet channel. To minimize duration of work within the lagoon, a temporary construction work berm would be constructed under and on either side of the proposed bridge to accommodate construction equipment and activities. The berm would be in place for approximately 14 months.

Signal and Equipment Improvements to upgrade the corridor would be provided, including a new universal crossover at MP 239.5, various signals, instrument houses, and a 40 ft. antenna monopole antenna adjacent to CP Cardiff to support office-to-field communications.

Utility/Drainage Improvements would be made, including those needed to protect existing gas, sewer, and electric lines that parallel the rail corridor, as well as a number of drainage improvements.

At-Grade Crossing and Street Improvements would include modifications to the Chesterfield Drive at-grade crossing north of the Lagoon, in Encinitas, and a new signal house with crossing predictors, LED flashers and gates to accommodate the second track. Additional curb, gutter, pedestrian crossing, and bike trail improvements in Encinitas would also be incorporated. Safety features would include a 12-foot wide pedestrian crossing on the north side of Chesterfield Drive, directional guidance and signage for bicyclists and pedestrians, and installation of conduit for future exit gates.

Accommodations for a **Pedestrian Undercrossing** would enable pedestrian access through the railroad berm from the San Elijo Lagoon hiking trails in the vicinity of MP 241.0 in Solana Beach. The pedestrian undercrossing near this location would be part of a future project by the San Elijo Lagoon Conservancy (SELC) to provide safe access between lagoon hiking trails and shoreline.

Track Embankment Protection would consist of various types, including but not limited to rip rap and articulated concrete block (ACB), in the following locations: (1) on the west side of the track between the ocean inlet and Bridge 240.4; (2) around both Bridge 240.4 abutments, and (3) 300 feet south of the bridge on the east side of tracks. These features are intended to protect the track from storm events, scour, and wave action, and have been designed to accommodate/protect against projected mean sea level rise through the year 2100.

The inlet channel component of this work would occur at times of the year when the inlet channel naturally accumulates sediment to be used as a working pad to create dry work areas. (The dry pads would later be dredged as part of the San Elijo Lagoon Restoration Project (SELRP)). Rip rap would be placed at or below the existing grade to the maximum extent feasible to avoid permanent loss of wetland substrate.

Site Access, Construction Staging, and Assembly Areas are depicted on **Exhibit 6**. These would: (1) be integrated with the SELRP and I-5 NCC projects (in order to minimize habitat, traffic, and other adverse impacts); (2) be located both north and south of the lagoon's entrance channel; and (3) include (a) temporary (construction) and permanent (maintenance) access roads; (b) access (for construction) by rail, through a siding that can be created between CP Cardiff and the Chesterfield at-grade crossing; and (c) bridge construction, to be conducted offline from the existing track.

The **Construction Period** would be up to three years. Construction is currently scheduled to commence in fall 2016 and end in summer 2020.

B. COMMISSION JURISDICTION AND STANDARD OF REVIEW

Federal Consistency Review. The project triggers federal consistency review because it needs a federal Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers and involves federal funding. The TREP component of the NCC PWP/TREP (discussed on page 7) functions as a master federal consistency certification to ensure the entire suite of rail, highway, transit, bicycle, pedestrian and other community and resource improvements described therein will be appropriately linked, phased and implemented in a manner consistent with applicable Coastal Act policies. However, given the long-term nature (30 - 40 year planning horizon) of the planning process for those improvements, many individual project components (such as the one at issue in this report) were not described to a level of specificity allowing final determinations of consistency when the NCC PWP/TREP was approved. That initial review was therefore programmatic, such that (as now) when specific projects become more fully developed and proposed, further federal consistency review would be conducted. In other words, federal consistency review is to be phased as plans evolve, and to be triggered as future federal funding and federal permitting decisions are being made. The standard of review in these cases remains the Coastal Act, with the affected LCP(s) and the PWP/TREP providing guiding policy and/or background information. To assist in these reviews, the NCC PWP/TREP identifies specific filing content requirements regarding future federal consistency submittals for projects included within the NCC PWP/TREP.

In reviewing past consistency certifications for SANDAG (and North County Transit District (NCTD)) LOSSAN Corridor double-track and bridge replacement projects, the Commission has noted a historic procedural disagreement between the rail proponents and the Commission over whether the projects were subject to state law coastal development permits, or whether state law was preempted, based on past court decisions. At the same time the Commission historically agreed to "set aside" such disagreements and review the projects through the federal consistency process. When the Commission concurred and approved the "PWP/TREP" (as discussed on page 7) on August 13, 2014, the Commission essentially agreed to continue this procedural approach, at least for the projects listed in Phase 1 of the PWP/TREP. The subject project is one of those Phase 1-listed projects.

Standard of Review. The standard of review for assessing consistency with the California Coastal Management Program is set forth in Chapter 3 of the Coastal Act ("Chapter 3"), Cal. Pub. Res. Code Sections 30200-30265.5, and employing that standard, the Commission concurs with this consistency certification based on its finding that the project is consistent with the policies set forth in Chapter 3.

C. OTHER AGENCY APPROVALS

U.S. Army Corps of Engineers (USACE)
SANDAG has applied to the USACE for a federal Clean Water Act Section 404 permit (Public Notice/Application No. SPL-2015-00852-MG).

San Diego Regional Water Quality Control Board (RWQCB)
SANDAG has applied to the RWQCB for a Clean Water Act Section 401 Water Quality Certification.

Federal Transit Administration (FTA)
The FTA will fund the project and will also serve as the lead agency for informal consultation under Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act.

Other Agency Consultations
SANDAG will be coordinating/consulting with: (1) the U.S. Fish and Wildlife Service, under the Endangered Species Act (Section 7); (2) The National Marine Fisheries Service, under the Magnuson-Stevens Act (Essential Fish Habitat); and (3) the State Historic Preservation Officer, under the National Historic Preservation Act (Section 106).

D. RELATED COMMISSION ACTION

North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program (NCC PWP/TREP)
On August 13, 2014, the Commission authorized a comprehensive plan and set of procedures for the upgrading of the County-wide I-5 (Highway)/LOSSAN Rail corridor, in the form of a document known as the "North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program" (NCC PWP/TREP - CC-0002-14/PWP-6-NCC-13-0203-1). This plan serves as a single integrated document for comprehensively planning, reviewing, and authorizing the NCC's transportation, community, and resource enhancement projects within the NCC extending from La Jolla to Oceanside along the North San Diego County coastline. The NCC PWP/TREP creates a framework within which identified projects can be analyzed and implemented over the next 30 to 40 years under a coordinated plan. The goal of this process is to optimize the suite of included improvements so that transportation goals are achieved in a manner that maintains and improves public access while also maximizing protection and enhancement of the region's significant sensitive coastal resources. As noted on the previous page, the subject project is listed in Phase 1 of the rail corridor expansion portion of the NCC PWP/TREP.

Caltrans I-5 San Elijo Lagoon Crossing and SELRP

On March 9, 2016, the Commission approved with conditions a coastal development permit and Notice of Impending Development (NOID) for Caltrans' San Elijo Lagoon I-5 crossing, located to the east of the subject rail corridor (CDP No. 6-15-2092/NOID No. NCC-NOID-0005-15). As specified in the above-referenced PWP/TREP (and as required under SB 468, which became law in October 2011), the subject SANDAG and Caltrans I-5 San Elijo crossing projects will be closely coordinated both with each other and with the San Elijo Lagoon Restoration Project (SELRP), which will shortly also be before the Commission as a permit matter this spring or summer. All three projects are in the process of obtaining necessary permits before the anticipated construction start date (Fall 2016). As the Commission's findings for CDP 6-15-2092/NCC-NOID-0005-15 explained, the close coordination of these three projects would achieve a number of important resource protection goals, including significant reductions in the duration of construction activities within and surrounding the lagoon, staging impacts, and truck and construction traffic, all of which would benefit wetlands and environmentally sensitive habitat, air quality, energy consumption, and public access and recreation.

Previously Reviewed SANDAG/NCTD Double Tracking Projects

Prior to Commission approval of the PWP/TREP, the Commission reviewed San Diego County double tracking projects on an individual basis. These past reviews consisted of consistency certifications submitted by SANDAG and NCTD for the following LOSSAN segments:

(1) 2.6-mile-long Pulgas to San Onofre double-tracking at the north end of Camp Pendleton (CC-086-03);

(2) 2.7-mile-long O'Neill to Flores double-track project in central Camp Pendleton (CC-004-05);

(3) 2.9-mile-long Santa Margarita River double-tracking project at the south end of Camp Pendleton (CC-052-05);

(4) 1.2-mile-long extension of passing track and construction of one replacement and one new railroad bridge over Loma Alta Creek in Oceanside (CC-008-07);

(5) 2.4-mile-long segment of double-track and second railroad bridge over Agua Hedionda Lagoon in Carlsbad (CC-075-09);

(6) 1.2-mile-long segment of double-track and replacement of a single-track bridge in the Sorrento Valley in San Diego (CC-052-10);

(7) one-mile-long segment of double-track and replacement of three single-track bridges in Sorrento Valley in San Diego (CC-056-11); and

(8) 4.3-mile-long segment of double-track south of San Onofre in San Diego County (CC-009-12).

Since approval of the PWP/TREP, the Commission has authorized two more SANDAG rail projects:

(1) San Diego River double track crossing (CC-0003-15); and

(2) Poinsettia Station improvements (also listed in Phase 1 of the PWP/TREP), which included track spacing improvements to increase rail capacity through the station (CC-0005-15).

E. WETLANDS

Coastal Act Section 30233(a) states in part:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> . . .
>
> *(4) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines* . . . .

Coastal Act Section 30233(c) states:

> *(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.*

The San Elijo Lagoon Restoration Project Final EIR/EIS describes San Elijo Lagoon as a coastal wetland with ecological resources that are important to the region, as well as a recreational and visual amenity for the community. The lagoon and adjacent uplands in the Reserve provide habitats that support sensitive species. The lagoon study area is biologically rich with over 20 species of fish, over 20 species of reptiles and amphibians, 24 species of mammals, and over 295 bird species (including 65 nesting), in addition to a complex suite of terrestrial and marine invertebrates. Included are six federally threatened and endangered birds, such as light-footed Ridgway's rail (*Rallus obsoletus levipes*) and least Bell's vireo (*Vireo bellii pusillus*). Biological surveys of the lagoon study area identified one federally listed plant species, Del Mar manzanita (*Arctostaphylos glandulosa* ssp.*crassifolia*); one state-listed plant species, Orcutt's goldenbush (*Hazardia orcuttii*); and 20 additional special status plants. A mosaic of habitat and ecosystems occurs, from open water to dense freshwater marsh. The lagoon's habitat values are linked directly to tidal inundation and frequency.

San Elijo Lagoon is also among of the 19 high priority coastal wetlands afforded special protection by Section 30233(c), as well as the protection provided in Section 30233(a) for all coastal wetlands and other waters. While the proposed bridge for the lagoon crossing would ultimately result in a decreased amount of fill for pilings, and would improve overall tidal flushing capacity by widening and deepening the channel, the bridge and the expanded berm

needed to accommodate the second track cannot be implemented without wetland fill. As discussed below (see table, page 13), the project would result in 8.41 acres of fill of Coastal Act-defined wetlands, both temporary (5.40 acres) and permanent (3.01 acres).

The project therefore triggers the three-part test of Coastal Act Section 30233(a), and in addition, the functional capacity and allowable use tests of Section 30233(c). The Commission therefore needs to analyze whether the project is an allowable use under these sections, whether it is the least environmentally damaging feasible alternative, and whether adequate mitigation is being provided.

Allowable Use

Section 30233(a) of the Coastal Act limits uses involving wetland fill to seven categories of uses. During the numerous reviews list above (page 9), in reviewing past SANDAG and NCTD rail projects involving wetland fill, the only arguable allowable use that could be considered for this project would be as an "incidental public service," as specified in Section 30233(a)(4). However, as the Commission has also established through those reviews, the SANDAG double tracking projects do not qualify for this use because they would increase passenger and freight capacity in the LOSSAN corridor, both individually for this project and cumulative for the entire corridor. Moreover, the project could not be deemed to qualify under the more restrictive Section 30233(c) limitations on uses in San Elijo lagoon and other priority wetlands to "very minor incidental public services."

Thus, the only way the Commission could find this project consistent with the Coastal Act is through the "conflict resolution" provision of Section 30007.5 of the Coastal Act. In its consistency certification, SANDAG acknowledges the Commission's position that the project is not an allowable use under Section 30233. At the same time, and as will be discussed further below, SANDAG notes that the Commission has established the policy basis under which it intends to consider as authorizable under Section 30007.5, the projects identified in the North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program (NCC PWP/TREP - CC-0002-14/PWP-6-NCC-13-0203-1). In addition, the Commission reiterated this policy basis in its March 2016 approval (see page 8) of the related Caltrans I-5 crossing of San Elijo Lagoon (CDP 6-15-2092 and NOID NCC-NOID-0005-15).

Alternatives

Concerning the alternatives test of Section 30233(a), SANDAG looked at a number of alternatives, including the No Project alternative. The No Project and single-track alternatives would not meet the project's objectives of improving rail service through the corridor. It became quite clear early in the development of alternatives that wetland avoidance alternatives would not be feasible or available, as the railroad berm in the lagoon would need to be widened, and the bridge could not be replaced without pilings in the lagoon.

Given that understanding, SANDAG then looked at various berm elevation and alignment alternatives. SANDAG determined that the proposed elevation was the *minimum necessary* to protect the rail line from a 100-year storm event, once projected sea level rise taken was taken into account. With respect to alignments, SANDAG compared the alternative of expanding the berm to the east with the alternative of expanding it to the west, and determined the eastward

expansion would be less environmentally damaging, in part due to the fact that an expansion to the west would restrict tidal exchange at the mouth, which would adversely affect the entire lagoon's water circulation. The Commission agrees with both of these elevation and alignment conclusions.

Bridge design alternatives were examined in San Elijo Lagoon Bridge Optimization Study (April 2012, SANDAG), which looked at hydrological alternatives for both the rail and highway crossings and attempted to determine the ideal hydrological regime for lagoon restoration. This study examined a range of channel widths and depths at the "choke points" in the lagoon (i.e., where the rail line and highways (I-5 and 101) cross the lagoon. The study determined that the ideal width and depth beneath the rail bridge would be 187 ft. (bottom width) and channel invert depth would be -5.5 ft., NGVD. To accommodate these dimensions, the bridge is being widened from 308 ft. to 368 ft., which will increase the lagoon's functional capacity, especially because the project is being coordinated with the Caltrans I-5 and SELRP projects. As the Commission noted in its recent review of the Caltrans I-5 bridge: "The combination of the optimized I-5 bridge, optimized LOSAN railroad bridge, and components of the SELRP would result in increased tidal range and fluvial flow characteristics, with associated benefits for lagoon habitats, residence time, water quality, and flood control." That conclusion, which the Commission reiterates here, means that the alternative design selected for the bridge and scour protection represents the least damaging alternative from a functional capacity and hydrological standpoint.

SANDAG next examined access road alternatives, noting that given the length of the project, combined with the certainty that maintenance activities would need to occur during its projected life, an access road would be needed. For the raised berm in the lagoon, the proposed access road would be 10 ft. wide and located west of the tracks. SANDAG states: "The access road was designed to the minimum width required for vehicular access in an attempt to reduce the Project footprint and associated impacts to lagoon habitat." The cross section for this feature is shown in **Exhibit 11**, p. 3.

San Diego Gas and Electric (SDG&E) relies on an access road located east of the rail line, which runs from Solana Beach to the south side of the lagoon entrance channel, to perform maintenance and repair activities to its electric power lines (above-ground) and its gas lines (submerged) that cross the lagoon. SANDAG's consistency certification therefore looked at two access road alternatives: joint SANDAG/SDG&E use of the either the proposed SANDAG access road or the existing SDG&E access road.

SANDAG rejected both these alternatives for a number of reasons, including: (1) the distance between the two utility corridors (75-300 ft.); (2) the differences in their elevations (the SDG&E corridor is just above the lagoon surface, whereas the rail berm would be 30 ft. high), which, among other issues, means the SDG&E road would not be available during storm events and extreme high tides; (3) the difficulty in obtain permission to use the SDG&E access road; (4) liability and emergency access concerns; (5) the fact that crossing the two corridors with heavy equipment would necessitate either temporary (and repeated), or permanent, wetland fill for access ramps; (6) the fact that other users rely on the SDG&E access road, including public trail wildlife viewing users, which could inhibit maintenance activities. SANDAG concluded:

> ***Joint Use of Proposed Railroad Access Road***
> …
>
> *For these reasons the proposed NCTD access road would not provide a practicable alternative access to SDG&E's and other utility provider's utilities that cross through San Elijo Lagoon in the vicinity of the railroad ROW.*
>
> ***Joint Use of SDG&E's Existing Access Road***
> …
>
> *For these reasons, the SDG&E access road would not be a practicable alternative to the proposed NCTD access road on top of the railroad berm.*

After reviewing this SANDAG conclusion, the Commission staff requested additional information from SANDAG, in an effort to ascertain whether both access roads were truly necessary, with the idea being that elimination of the new access road could reduce the required width of the rail berm, and therefore reduce the extent of wetland fill. SANDAG subsequently met with the Commission staff to discuss this alternative. **Exhibit 11**, which reflects the result of these discussions, establishes that eliminating the access road on the railroad berm would necessitate a greater distance between the tracks, which would result in increased, not decreased, wetland fill. As a result of these further discussions and analysis the Commission agrees with SANDAG that the alternative of eliminating the access road on the berm would not reduce wetland fill or be a less environmentally damaging alternative.

Because it was not mentioned in that study, the Commission staff also requested an explanation for the rejection of a full-span bridge crossing (i.e., no pilings in the lagoon). SANDAG's response (email communication, April 20, 2016) made it clear that such an alternative would be both economically infeasible (over ten times the project cost, or roughly $30 million) and would entail significant adverse environmental effects, including adverse visual impacts, additional wetland fill that would be needed for bridge foundations, larger staging areas for heavier equipment, and additional maintenance needs that would generate pollutants entering the lagoon on a periodic basis. Thus, even looking at just environmental effects, the Commission agrees that alternative would not be less environmentally damaging, and adding the costs, would be infeasible.

Based on the above discussion, the Commission concludes that the proposed project, with the mitigation discussed in the following paragraphs, represents the least environmentally damaging feasible alternative and therefore complies with the alternatives test of Section 30233(a).

Mitigation

The table that follows shows the impact by wetland type; the wetland mapping results are shown in **Exhibit 8**, and the acreage-by-project component shown in **Exhibit 9**. (Note: Due to the project duration, the temporary impacts are treated as permanent, for purposes of determining mitigation requirements, as the footnote in the table notes.)

Table 2
Loss of CCC Wetlands by Habitat Type

Vegetation Community/ Habitat Type	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impacts (acres)
Arundo	0.08	--	0.08
Disturbed wetland	0.01(1)	0.23	0.24
Mulefat		0.10	0.10
Freshwater seep	0.04(1)	--	0.04
Southern Coastal Salt Marsh	1.29(1)	0.98	2.27
Open Water	2.90	0.59	3.49
Tidal Mudflat	0.98	1.10	2.08
Unvegetated streambed	0.10	0.06	0.16
Subtotal	**5.40**	**3.06**	**8.46**
Establishment resulting from Bridge Replacement	--	+0.05	+0.05
TOTAL Net Impacts	**5.40**	**3.01**	**8.41**

Note: (1) This impact to wetland habitat is considered to be Long-Term Temporary

Source: *Biological Technical Report* and consistency certification (p. 8) (both dated October 2015).

As this Table shows, **permanent** impacts to CCC wetlands would total **3.01 acres** (3.06 acres, before subtracting the net increase of 0.05 acres from are created by lengthening the bridge[1] for a net impact of 3.01 acre). Most (>90%) of the permanent impacts would result from the increased width of the widened track support berm. **Temporary** impacts to CCC wetlands would total **5.40 acres**. Most of this acreage would also stem from three activities: widened track bed (39%), channel inlet scour protection (32%), and bridge replacement (20%) (**Exhibit 9**).

As was contemplated in the development and previously-mentioned Commission review of the PWP/TREP, mitigation for the project's wetland impacts would be addressed through the PWP/TREP's Resource Enhancement and Mitigation Program (REMP), an element of the NCC PWP/TREP. The Commission's August 2014 approval of the PWP/TREP provided the authorization for an overall framework, under which identified projects would be analyzed, implemented, and coordinated over the next 30 to 40 years. The goal of this process was to optimize the suite of improvements so that transportation goals could be achieved while maximizing protection and enhancement of sensitive coastal resources, including wetlands, within the corridor. The REMP designates specific mitigation sites to be used for NCC PWP/TREP-listed transportation projects, in a manner intended to coordinate and maximize the benefits of wetland and upland restoration required as mitigation. The REMP also contains the requisite overall monitoring and performance standards, as well as a plan for long-term management following the initial monitoring period, to assure restoration success. (More details on the management of these mitigation sites can be found in the NCC PWP/TREP, REMP component.)

[1] Fill removal would occur due to an increased distance between bridge abutments, based on the bridge design preferred in the Bridge Optimization Study (discussed above on page 11), which determined the optimized channel openings under both the railroad and I-5 highway.

As the Commission noted in its review of the Caltrans I-5 crossing:

> *The Resource Enhancement and Mitigation Program (REMP) within the NCC PWP/TREP was developed through a collaborative process with representatives from various resource agencies including the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, the Regional Water Quality Control Board, NOAA National Marine Fisheries Service, the U.S. Environmental Protection Agency, and the California Coastal Conservancy. The development of the REMP was initiated by members of this group as early as 2010 in order to identify regionally significant restoration and enhancement opportunities within the NCC. Through the NCC PWP/TREP, this group has been formalized as the REMP Working Group and meets quarterly to track and guide progress through the planned implementation phases of the PWP.*

In accordance with this "umbrella" program, SANDAG's consistency certification states: Compensation for permanent loss of CCC wetland will be provided through the Regional Lagoon Maintenance Program, as identified in the PWP/TREP's Resource Enhancement and Mitigation Program (REMP). Under the REMP, all temporary impacts to wetlands being mitigated on-site will be restored to existing contours and revegetated with appropriate native species. SANDAG's consistency certification includes the following commitments:

1. SANDAG will create a fund that will be used to periodically open the mouth of Los Peñasquitos Lagoon, as necessary (North Coast Corridor Los Peñasquitos Lagoon Mouth Endowment). The funds will consist of a "non-wasting" endowment combined with a management fund to allow for the immediate opening of the lagoon, as necessary. Under the REMP, this would provide mitigation (no-net loss) for 4.60 acres of wetland impacts, which is sufficient to compensate for the permanent loss of 3.01 acres of CCC (i.e., Coastal Act-defined) wetland.

2. Temporal loss of 1.34 acres of CCC wetlands (DW, FWS, and SCSM) will also be mitigated through the Regional Lagoon Maintenance Program for Los Peñasquitos Lagoon, as described above. In total, permanent loss of CCC wetland (3.01 acres), and temporal loss of CCC wetland (1.34 acres), totaling 4.35 acres will be mitigated through the North Coast Corridor Los Peñasquitos Lagoon Mouth Endowment described above.

3. Temporary loss of 3.98 acres of non-vegetated CCC wetland (OW, TMF, and US) will be compensated through restoration on-site and generally through SANDAG's implementation of the SELRP, and specifically through the optimization of tidal flows through a newly designed railroad bridge in conformance with the recommendations of the San Elijo Lagoon Bridge Optimization Study (April 2012, SANDAG). The Project will provide a new double-track railroad bridge that will provide a minimum bottom width of 187 feet, and a channel invert of -5.5 feet, NGVD.

4. Bridge 240.4 will be lengthened in accordance with the San Elijo Lagoon Optimization Study. Upland areas along the northern shore of the lagoon in the vicinity of the bridge will be lowered such that they would become CCC wetlands. The area under the bridge

will be opened up by replacement of existing 14-foot spans associated with the wooden trestle with 42-foot spans as part of the new bridge.

5. To the fullest extent practicable, permeable/plantable armoring will be implemented where necessary (e.g., in channel bottoms and to provide scour protection to the bridge abutments).

6. Riprap will only be placed in areas where modeling predicts high wave and tidal energy. In high-energy areas where riprap is required to control scour, riprap will be buried to the fullest extent practicable.

In addition to the above, a number of avoidance and minimization measures were included in SANDAG's consistency certification, *Biological Technical Report*, and *Conceptual Revegetation Plan*, including but not limited to: (1) designation of a U.S. Fish and Wildlife Service-approved project biologist to oversee compliance with protective measures for biological resources; (2) worker awareness training; (3) construction impact avoidance measures for listed species in the project area; (4) use of turbidity curtains for bridge-related activities; (5) lagoon flow-maintenance for temporary berms placed in the lagoon; and (6) best management practices (BMPs) to protect wetland habitat during construction and demolition activities. The BMP's are further summarized in the water quality section of this report below (and listed in **Exhibit 13**). SANDAG will also implement standard *Caulerpa* and eelgrass pre- and post-construction surveying and mitigation, in accordance with NOAA Fisheries Protocols.

In order to ensure that the off-site mitigation for the proposed project conforms to the requirements of the NCC PWP/TREP, as concurred with by the Commission, SANDAG has agreed to incorporate the following language into its consistency certification:

> **Final Mitigation.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, SANDAG shall provide evidence, in a form and content acceptable to the Executive Director, that adequate credits have been released from the Resource Enhancement and Mitigation Program (REMP) in order to provide compensatory mitigation for the SANDAG San Elijo Lagoon Crossing Project's impacts to wetlands and sensitive upland habitats at a 1:1 mitigation ratio. If adequate credits are not available, the applicant shall provide mitigation from the REMP using typical ratios required by the Commission, as follows: 4:1 for wetlands; 3:1 for riparian habitats, rare habitat types or habitats that support rare species; and 2:1 for other ESHAs, including coastal sage scrub and southern mixed chaparral. Mitigation shall be consistent with the provisions of the REMP.

With the above commitments for on- and off-site mitigation, the Commission finds that the proposed project includes adequate mitigation for impacts to wetland habitat and therefore complies with the third (mitigation) test of Section 30233(a).

Functional Capacity
In addition to the wetland tests discussed above, Section 30233(c) of the Coastal Act requires protection of the lagoon's functional capacity. SANDAG notes in its consistency certification:

> *The Project creates a net benefit to the natural shoreline by enlarging the channel under Bridge 240.4 by lengthening the bridge in accordance with the San Elijo Lagoon Optimization Study. The Project will also reduce the number of support piles under the bridge. This will enhance tidal exchange in the lagoon, improving water quality.*

The project's hydrological benefits are discussed above. Given that discussion, and when considering the project in close coordination between this project and the San Elijo Lagoon Restoration Project (SELRP), the Commission agrees with SANDAG that the project will provide overall benefits to the functional capacity of San Elijo Lagoon.

Conclusion
As stated above, the Commission finds that the proposed project is consistent with the alternatives, mitigation, and functional capacity tests of Section 30233(a) and 30233(c), but inconsistent with the allowable use tests of those sections. Therefore, the only way the Commission could concur with this consistency certification would be if it finds the project consistent with the Coastal Act through the "conflict resolution" provision contained in Section 30007.5. As discussed in **Sections III.H, I**, and **J** of this report, not approving the project would be inconsistent with the water quality, public access and recreation, and air quality/energy consumption policies of the Coastal Act, because it would eliminate benefits to coastal resources that are inherent in the project and mandated by the policies of the Coastal Act. Those benefits include the maximization of existing and future public access, the facilitation of public transit and the minimization of vehicle miles traveled, and the improvement of air and water quality by reducing traffic congestion. Thus, the project creates a conflict between the allowable use test of the wetland policy of the Coastal Act (Section 30233(a) and (c)) on the one hand, and the water quality, public access, and energy conservation policies of the Coastal Act (Sections 30231, 30232, 30210, 30212, 30252, and 30253) on the other. The following section of this report will identify a similar conflict with the Coastal Act's ESHA policy (Section 30240). In the concluding section of this report (**Section III.K**), the Commission will provide further analysis concerning the resolution of these conflicts.

F. ENVIRONMENTALLY SENSITIVE HABITAT

Coastal Act Section 30240 states:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Coastal Act Section 30107.5 states:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

The overall habitat values in and around the lagoon are described above on page 9. To determine the project's specific impacts on these habitats, SANDAG performed biological surveys to identify federally listed species occurring in the project vicinity, which are described in its consistency certification and Biological Technical Report. The surveys determined that the sensitive species likely to be affected would be the federally listed California gnatcatcher (*Polioptila californica californica)* and Ridgway's rail (*Rallus obsoletus levipes)* (previously known as light-footed clapper rail). From a Coastal Act perspective, because the habitats supporting Ridgway's rail are wetlands, impacts to those habitats were addressed in the previous (wetlands) section of this report. Upland ESHA determinations are therefore limited to the environmentally sensitive uplands habitat supporting the California gnatcatcher, which for this project are Diegan coastal sage scrub and goldenbush scrub *(Isocoma menziesii).*[2]

As depicted on **Exhibit 12**, scattered patches of Diegan coastal sage scrub occur throughout the study area. Goldenbush scrub occurs in one location, south of the lagoon and west of the rail corridor (**Exhibit 12, p. 3**). The project would displace 2.11 acres of uplands ESHA, as follows: 2.10 acres Diegan coastal sage scrub, and 0.01 acres of goldenbush scrub. SANDAG's Biological Technical Report considers these two upland habitats to constitute ESHA, because they support a federally listed species (the gnatcatcher). The Commission agrees. Because these habitats constitute ESHA, in order for the project to be consistent with Section 30240(a), the project would need to be a "use dependent on the resource." The Commission finds that the project does not comply with this test and cannot, therefore, be found consistent with Section 30240. Impacts to these habitats nevertheless need to be mitigated to meet the remaining tests of Section 30240(a) and (b), because the Commission is concurring with this project as discussed in **Section K** of this report (Conflict Resolution).

SANDAG proposes to mitigate these permanent impacts to 2.11 acres of uplands (2.10 acres of Diegan coastal sage scrub and 0.01 acres of goldenbush scrub) using off-site preservation or creation at an approved mitigation site, in combination with a number of onsite avoidance, minimization, and monitoring measures. As was the case for the wetland impacts described in the previous section of this report, mitigation for ESHA impacts will be addressed through the Commission-authorized PWP/TREP's Resource Enhancement and Mitigation Program (REMP). As noted above, the REMP designates specific mitigation sites to be used for NCC PWP/TREP transportation projects in order to coordinate and maximize the benefits of wetland and upland restoration required as mitigation for these projects. Accordingly, SANDAG states in its

[2] Several of the mitigation measures discussed in this section include specific measures to protect the Ridgway's rail. These are included in this section of the report because they provide species-specific protection (as opposed to the overall wetland mitigation discussed in the previous section), and because they are mostly combined with gnatcatcher protection measures.

Biological Technical Report:

> *Pursuant to the REMP, at a minimum, the mitigation program will ensure no-net-loss of ESHA function and may include a variety of strategies as described above. The No-Net- Loss Pool of opportunities includes compensatory mitigation sites (i.e., San Elijo Lagoon) that have significant establishment and/or restoration components, and would generally result in a net gain in habitat area and/or functions and services.*

In addition, in order to assure that the off-site mitigation for the proposed project will conforms to the requirements of the NCC PWP/TREP, as concurred with by the Commission, SANDAG has agreed to the following commitment:

> **Final Mitigation.** PRIOR TO COMMENCEMENT OF CONSTRUCTION, SANDAG shall provide evidence, in a form and content acceptable to the Executive Director, that adequate credits have been released from the Resource Enhancement and Mitigation Program (REMP) in order to provide compensatory mitigation for the SANDAG San Elijo Lagoon Crossing Project's impacts to wetlands and sensitive upland habitats at a 1:1 mitigation ratio. If adequate credits are not available, the applicant shall provide mitigation from the REMP using typical ratios required by the Commission, as follows: 4:1 for wetlands; 3:1 for riparian habitats, rare habitat types or habitats that support rare species; and 2:1 for other ESHAs, including coastal sage scrub and southern mixed chaparral. Mitigation shall be consistent with the provisions of the REMP.

The project also includes a number of avoidance and minimization measures that were included in SANDAG's consistency certification, *Biological Technical Report*, and *Conceptual Revegetation Plan*, including but not limited to: (1) designation of a U.S. Fish and Wildlife Service-approved project biologist to oversee compliance with protective measures for biological resources; (2) worker awareness training; (3) placement of environmentally sensitive area fencing; (4) restrictions on vegetation clearing during bird breeding season; (5) construction impact avoidance measures for listed species in the project area; (6) lighting restrictions in the event night-time lighting is needed; and (6) best management practices (BMPs) to protect sensitive habitats during construction and demolition activities. The BMP's are further summarized in the water quality section of this report below (and listed in **Exhibit 13**).

More specifically directed at protecting California gnatcatchers (CAGN) and Ridgway's Rail (RIRA), SANDAG proposes:

(1) Permanent and temporary impacts to Diegan coastal sage scrub and goldenbush scrub will be completed between August 30 and February 15, which is outside of the CAGN breeding season, to avoid disturbance of any nesting activities to the maximum extent feasible;

(2) Permanent and temporary impacts to southern coastal salt marsh and tidal mudflat will be completed between September 15 and March 15, which is outside of the RIRA breeding season, to avoid disturbance of any nesting activities to the maximum extent feasible;

(3) When clearing Diegan coastal sage scrub, goldenbush scrub, southern coastal salt marsh, and/or tidal mudflat outside of the breeding season, a qualified biologist shall perform a minimum of three focused preconstruction surveys, on separate days, to determine the presence of CAGN or RIRA in the Project footprint. Surveys will begin a maximum of 30 days prior to performing vegetation clearing/grubbing, and one survey will be conducted the day immediately prior to the initiation of vegetation clearing. Prior to initiating the Project, SANDAG will provide to the Carlsbad Fish and Wildlife Office (CFWO) a map showing the distribution of CAGN and RIRA relative to the Project footprint and an estimate of the number of CAGN and RIRA territories that will be impacted by the Project. If any CAGN or RIRA are found in the Project footprint, the Project Biologist will direct construction personnel to begin vegetation clearing/grubbing in an area away from the CAGN or RIRA as feasible to minimize incidental take of these species. It shall be the responsibility of the Project biologist to ensure that CAGN and RIRA will not be injured or killed by vegetation clearing/grubbing. If needed, the Project biologist shall walk ahead of clearing/grubbing equipment to passively flush birds towards areas of suitable habitat to be avoided and shall record the number and location of CAGN and RIRA disturbed by vegetation clearing/grubbing. The Project biologist shall notify CFWO at least 7 days prior to vegetation clearing/grubbing.

(4) If Diegan coastal sage scrub, goldenbush scrub, southern coastal salt marsh, and/or tidal mudflat must be cleared during the breeding season because it is not feasible to work outside of the breeding season, pre-construction nesting surveys shall be performed by a USFWS-approved biologist within all Diegan coastal sage scrub, goldenbush scrub, southern coastal salt marsh, and/or tidal mudflat proposed for impact. Pre-construction surveys will consist of a minimum of three survey days within five days of initiating construction activities (such as clearing and grubbing). At least one survey will be conducted the day prior to the initiation of construction activities. If during pre- construction surveys active CAGN or RIRA nests are identified, noise monitoring will be conducted and construction activities will not occur within a 500 foot radius until a qualified biologist determines that the young have fledged, the nest has been abandoned, or noise monitoring indicates that noise levels remain below 60 dBA equivalent continuous noise level. If this level is exceeded, feasible noise attenuation measures will be implemented to reduce noise levels at active nests to 60 dB(A) (except as necessary for emergencies).

(5) To protect Ridgway's Rail the following measures will be implemented during construction within the San Elijo Lagoon (i.e., vegetation clearing, pile driving, temporary bridge construction and demolition):

a. Immediately after each area of the project footprint is surveyed by the Project biologist as described in Measures 22 and 23 above, a 3- to 5-foot-tall exclusionary fence with a maximum of 2-inch mesh openings or equivalent will be installed to inhibit entry of RIRA into the construction footprint within the lagoon and to ensure that impact limits are not exceeded. A fenced path shall be established through the work area at Bridge 240.4 to maintain the movement corridor required by provision (b), below.

b. A path for RIRA movement under Bridge 240.4 will be maintained when there is no construction in the vicinity of the bridge (e.g. most nights and weekends and when active work is only occurring elsewhere in the project). The path for RIRA movement will always include a portion that is not submerged. Prior to initiation of impacts for construction of the bridge, SANDAG will submit a plan to the CFWO for maintaining a path for RIRA movement under the bridge.

(Additional measures may be implemented after SANDAG completes coordination with the U.S. Fish and Wildlife Service (USFWS).)

In conclusion, while the Commission finds that the project is not a use allowed in an ESHA, and is therefore inconsistent with Section 30240, the project will include sufficient measures to protect and mitigate sensitive species to enable it to be found consistent with the other tests required under Section 30240. In order to authorize the project, as noted in the previous section, however, the Commission would need to determine a conflict exists between Coastal Act policies, and if so, apply Section 30007.5 to resolve such conflict.

G. WATER QUALITY

Coastal Act Section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Coastal Act Section 30232 states:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

SANDAG's consistency certification includes a number of measures to minimize effects on and protect water quality in this biologically important estuarine system and downstream coastal waters. These include:

(1) Compliance with Regional Water Quality Control Board Order 2009-0009-DWQ as amended by 2012-0006-DWQ (i.e., the general construction storm water permit).

(2) Pursuant to that order/permit, preparation of and implementation of a Storm Water Pollution Prevention Plan (SWPPP), a Spill Prevention Containment and Countermeasure (SPCC) Plan, grading and drainage plans, erosion and sediment control plans, guidelines for fuel and hazardous materials storage, hazardous spill prevention and clean-up plans, waste handling and disposal practices, and construction and post-construction best management practices.

(3) Post construction water quality design features, such as concrete ties (as opposed to creosote ties to the extent practicable), concrete piles in steel shells to support the new bridge, ballasted tracks, articulated concrete ditch bottoms where water velocity is sufficient to cause scour, energy dissipation at storm drain outlets, and slope protection in areas of high water velocity/wave action.

A list of specific BMPs is provided in **Exhibit 13**.

In addition, as the Commission has noted in reviewing past SANDAG and NCTD double-tracking projects in San Diego County, increases in rail use that reduce highway vehicle use benefit water quality on several ways. The Commission has repeatedly found in reviewing these past projects:

> *Passenger rail vehicles are much cleaner than highway vehicles with respect to oil and grease drips. This is partially attributed to the fact that any drips from rail vehicles fall into a ballasted ROW, where gravel and soil act as a filter to prevent runoff from moving contaminants and because rail transportation involves less oil, grease, and other hydrocarbons than automobiles. On the other hand, automobiles are a significant source of hydrocarbons, which are then flushed by runoff from the Interstate 5 area into nearby water bodies. The proposed project will provide improved public transportation service and freight service, which will help reduce automobile congestion and reduce automobile vehicle miles traveled and the corresponding non-point source emissions.*

Finally, as noted above, by reducing the extent of pilings and otherwise improving lagoon hydrology and functional capacity, the project's long-term effects on water quality will be beneficial, especially when considered in combination with the SELRP. Thus, with the above measures to minimize short-term effects, the Commission finds that the proposed project would not cause significant adverse water quality impacts and would be consistent with the water quality and spill prevention policies (Sections 30231 and 30232) of the Coastal Act.

H. PUBLIC ACCESS, RECREATION, AND TRANSIT

Coastal Act Section 30210 states:

> *In carrying out the requirements of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30213 states in part:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred . . . .*

Coastal Act Section 30252 states in part:

> *The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service . . .*

As SANDAG notes in its consistency certification (and as the Commission has consistently noted in its review of previous SANDAG and NCTD double track projects), one of the benefits of double-tracking along the North Coast Corridor is the improvement of public access, both directly by providing transportation alternatives, and through reductions in private vehicle use on corridor highways. SANDAG notes:

> *Increased use of the passenger rail service as a result of the Project would reduce traffic congestion—a recognized constraint on coastal uses. The passenger rail system provides coastal access from inland areas including direct connections at San Clemente, Oceanside, Carlsbad, Encinitas, and Solana Beach stations, which are within a few blocks of beach access areas. The Project would not interfere with, or change, existing coastal access.*

More locally, SANDAG also notes the project would improve accessibility across (and beneath) the rail corridor, both north and south of the lagoon entrance. SANDAG states:

> *Chesterfield Drive and the associated pedestrian sidewalks cross over the rail corridor within the Project limits. The Project includes modifications to the Chesterfield Drive at-grade crossing, including a new signal house with crossing predictors, LED flashers and gates to accommodate the addition of the second track. Curb, gutter, pedestrian crossing and bike trail improvements are also included as part of the Project. Safety features proposed include a 12-foot wide pedestrian crossing on the north side of Chesterfield Drive, directional guidance and signage for bicyclists and pedestrians, and installation of a conduit for future exit gates. The rail crossing would remain open during construction and continue to serve as public access to the coast.*
>
> *In addition, the Project accommodates a new pedestrian undercrossing that would be designed to accommodate a future pedestrian (trail) undercrossing through the railroad berm from the San Elijo Lagoon hiking trails along the south side of the lagoon. A pedestrian undercrossing would be part of a future project by the SELC* [the San Elijo Lagoon Conservancy] *to safely extend coastal access from the hiking trails to the beach.*

With these features, the Commission agrees with SANDAG and finds that the proposed project would not adversely affect and existing public access and recreational opportunities, and would improve public access both locally due to the above-describe crossing improvements, and regionwide, by reducing automobile traffic on I-5 in an area where this freeway supports public access and recreation. The Commission therefore finds the project consistent with the public access and recreation policies of the CCMP (Coastal Act Sections 30210, 30213, and 30252).

I. PUBLIC VIEWS

Coastal Act Section 30251 states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

The project includes raising the existing rail support berm by an elevation of 4.3 ft. The effect of this change on coastal views would be minor and similar to the existing views of the rail berm. Public views beneath the bridge would be opened up and improved, due to the reduction in bridge pilings. The project includes grading and a 1,045 foot long, and up to 16-foot high, retaining wall, south of Chesterfield Drive and west of San Elijo Avenue in Encinitas. SANDAG states:

> *The wall's architectural treatment will be similar to what will be used for other transportation infrastructure projects in the North Coast Corridor. This retaining wall will be visible from pedestrians and vehicles traveling along Highway 101, the Cardiff State Beach Parking Lot, and San Elijo Campgrounds. However, the proposed retaining wall would not block coastal views of scenic resources because resources are to the west of the viewpoints and the wall is to the east, below San Elijo Avenue.*

Temporary visual impacts during construction are unavoidable and would be further minimized by the above-described coordination with the Caltrans I-5 and SELRP projects. Construction will include removal and replacement of riprap scour protection beneath the bridge crossing, which will involve temporary disturbance to surrounding vegetation, but with the proposed implementation of the "Conceptual Revegetation Plan" SANDAG has included (as Appendix N of the Biological Technical Report), no permanent change in visual impact would occur. The Commission agrees with SANDAG that the project would not adversely affect the area's visual and scenic quality, and finds the project would minimize visual impact and landform alteration and be consistent with the visual resource protection policy (Section 30251) of the Coastal Act.

J. AIR QUALITY AND ENERGY CONSUMPTION

Coastal Act Section 30253 states in part:

> *New development shall do all of the following:*
>
> . . .
>
> *(d) Minimize energy consumption and vehicle miles traveled.*

In past reviews of pre- and post-PWP/TREP SANDAG and NCTD rail improvement projects, as well as the PWP/TREP itself, the Commission has consistently found that NCTD and SANDAG rail improvement projects would increase the use of public transportation, reduce automobile emissions and vehicle miles traveled, and benefit regional air quality. The proposed project would provide these same benefits.

SANDAG reports in its consistency certification that:

> *Due to implementation of increasingly stringent locomotive emission standards being implemented by the U.S. Environmental Protection Agency (U.S. EPA), emissions per locomotive of nitrogen oxides (NOx) and particulate matter (PM) are expected to decrease along the LOSSAN corridor with utilization of California Air Resources Board (ARB) Tier 4 locomotive emission standards that are required to be effective in 2015, and the ARB's pollution reduction agreement with Union Pacific and Burlington Northern Santa Fe Railways.*

The proposed project's air quality benefits include reduced idling time by automobiles on highways and train locomotives in the LOSSAN corridor, which will lead to reduced emissions of air pollutants. In addition, the operational efficiency improvements arising from construction of an additional segment of double-track are expected to increase ridership on existing passenger trains in the corridor and to correspondingly reduce automobile trips and vehicle miles traveled in the corridor. The Commission has historically found that coastal resources would be directly affected by global climate change resulting from increases in greenhouse gas emissions, and finds that, as part of a larger SANDAG effort to improve and expand rail service in the LOSSAN corridor, the project would further help meet greenhouse gas reduction targets for San Diego County mandated under California's Climate Change Initiative (i.e., AB 32) and other legislation. Benefits to coastal resources include reductions in: sea level rise, coastal flooding and erosion, inundation of developed areas and public access and recreation areas, alterations to existing sensitive habitat areas, ocean warming, changes in marine species diversity, distribution, and productivity, and ocean acidification.

Thus, actions to reduce greenhouse gases and to protect coastal resources at risk from the adverse effects of global warming are consistent with a number of Coastal Act goals and policies, including but not limited to the directive in Section 30253 to minimize energy consumption and

vehicle miles traveled. The Commission has repeatedly drawn these conclusions in past SANDAG/NCTD consistency certification reviews, and, more importantly, reiterated them in its review of the PWP/TREP.

The Commission concludes that the project would improve air quality and public transportation in the LOSSAN corridor, and help reduce energy consumption and greenhouse gas emissions, and would, therefore, be consistent with the energy minimization policy of the CCMP (Coastal Act Section 30253(d)).

K. CONFLICT BETWEEN COASTAL ACT POLICIES

Where the Commission determines that a conflict exists between Coastal Act policies, it has relied on Section 30007.5 of the Coastal Act in resolving such conflicts:

> *The Legislature further finds and recognizes that conflicts may occur between one or more policies of the division. The Legislature therefore declares that in carrying out the provisions of this division such conflicts be resolved in a manner that on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.*

Conflict

In order for the Commission to apply this policy, it must first establish that there is a conflict between Coastal Act policies. The fact that a project is consistent with one policy of the Coastal Act and inconsistent with another policy does not necessarily result in a conflict. Rather, to identify a conflict, the Commission must find that to object to the project based on the policy inconsistency would result in coastal zone effects that are inconsistent with some other policy or policies of the Coastal Act.

As discussed previously in **Sections III.E and F**, above, because the project would increase railway capacity, it does not qualify as an incidental public service under Section 30233(a)(4), Commission interpretations of which historically only allow transportation projects in wetlands and open coastal waters where they are necessary to maintain *existing* capacity. For similar reasons, the project does not qualify as a very minor public facility under Section 30233(c), the allowable use test in priority wetlands. Nor is the project "allowable" under Section 30240 as a "use dependent on the resources" within an environmentally sensitive habitat area (ESHA). Therefore, because the project is not an allowable use under these policies, the only way the Commission could find the project consistent with the Coastal Act would be through the "conflict resolution" policy cited above (i.e., Section 30007.5).

As discussed in **Sections III. G, H and J** above, traffic increases that would occur if this project were not to go forward would interfere with public access and would degrade water and air quality. This would result in conditions that are inconsistent with the public access and water and air quality policies of the Coastal Act, because they would adversely affect already impaired coastal water bodies and exacerbate non-attainment status of the coastal air basin.

The Commission has previously established, thru individual reviews of SANDAG and other double-tracking projects, as well as through the more comprehensive review of the PWP/TREP, that double-tracking projects provide significant public access and recreation benefits, both through reducing traffic congestion along and improving public access to the coast. As traffic congestion increases with expected growth of the region, these access impacts will worsen, and when congestion increases, non-essential trips such as those for recreational purposes tend to be among the first to be curtailed. Thus, as the traffic increases, the ability for the public to get to the coast will become more difficult, which would result in a condition that would be inconsistent with the access policies of the Coastal Act.

In concert with these previous decisions and findings, the Commission finds that Sections 30210, 30213, and 30252 require maximization of public access, lower cost recreation, and extension of transit service. Section 30231 of the Coastal Act requires the maintenance and restoration of coastal water quality. Section 30253(d) provides for improved air quality and reductions in energy consumption and vehicle miles traveled. Section 30252 articulates that one of the Coastal Act's access goals is encouraging maintenance and enhancement of public access through facilitating the provision or extension of transit service. Thus, not only would objecting to this consistency certification be inconsistent with the access policies, but it would also result in adverse effects to coastal waters and the air basin, and be inconsistent with the achievement of water quality, air quality, energy conservation, reductions in vehicle miles traveled, and transit goals expressed in Sections 30231, 30253(d), and 30252. The Commission therefore finds that the proposed project creates a conflict between allowable use tests of the wetland and ESHA policies (Sections 30233(a) and (c)/30240) on the one hand, and the water quality/air quality/energy conservation/reductions in vehicle miles traveled/public access and transit policies (Sections 30231/30253(d)/30252) on the other.

Conflict Resolution

Having established a conflict among Coastal Act policies, Section 30007.5 requires the Commission to resolve the conflict in a manner that is on balance most protective of coastal resources. Particularly relevant here are found in the Commission's March 2016 findings for the related Caltrans I-5 crossing project, in which the Commission found:

> *… the Commission has already conducted a conflict-resolution analysis (refer to findings in PWP-6-NCC-13-0203-1). In so doing, the Commission found that approval of the NCC PWP/TREP, including this component, notwithstanding its inconsistencies with Coastal Act Section 30233, presented conflicts among Coastal Act policies and was, on balance, the "most protective of significant coastal resources" for purposes of the conflict resolution provisions of Coastal Act Section 30007.5. The proposed project has incorporated all of the design/development strategies and implementation measures in the NCC PWP/TREP to minimize and mitigate adverse environmental impacts; and therefore, can rely upon the conflict resolution findings contained within the original review of the NCC PWP/TREP.*

The Commission finds that the same policy considerations are applicable to this SANDAG project, and that objecting to this consistency certification would result in conditions that would be inconsistent with the access policies (Section 30210), and would be inconsistent with the

achievement of water quality, air quality, energy conservation, and reductions in vehicle miles traveled goals expressed in Sections 30231, 30253(d), and 30252. In resolving the Coastal Act conflict raised, the Commission finds that the impacts on coastal resources from not constructing the project would be more significant and adverse than the project's coastal wetland and ESHA impacts (impacts which would be mitigated, as described above). Further, not constructing the project would eliminate the benefits that would ensue from deepening and widening the entrance channel to improve functional capacity and assist lagoon restoration efforts. The Commission therefore concludes that concurring with this consistency certification would, on balance, be most protective of significant coastal resources, and that the project is consistent with Coastal Act Section 30007.5.

APPENDIX A

SUBSTANTIVE FILE DOCUMENTS

1. CC-0004-15 (SANDAG) Federal Consistency Certification San Elijo Lagoon Bridge Replacement and Double Track Project, Encinitas to Solana Beach, San Diego County, October 2015), and accompanying technical reports and applications, consisting of: (1) Conceptual Revegetation Plan (October 2015); (2) Clean Water Act Section 404 and Application (November 20, 2015); (3) Clean Water Act Section 401 Water Quality Certification(November 20, 2015); (4) Biological Technical Report (October 2015); (5) Fluvial Hydraulics and Coastal Engineering Analyses, Draft Final, September 2015); (6) Water Quality Evaluation (October 2015); (7) Stormwater Pollution Program (SWPPP), Draft (August 28, 2015); and (8) Cultural Resources Report (October 2015).
2. CDP 6-15-2092 and NOID NCC-NOID-0005-15 (Caltrans), San Elijo Lagoon I-5 Crossing.
3. CC-0002-14/PWP-6-NCC-13-0203-1 (SANDAG/Caltrans), North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Plan (NCC PWP/TREP), San Diego County.
4. NCC PWP/TREP Amendment No. PWP-6-NCC-16-0001-1.
5. San Elijo Lagoon Bridge Optimization Study, Moffat & Nichol (April 2012).
6. San Elijo Lagoon Restoration Project Final EIR/EIS, prepared for USACE, San Diego County Dept. of Parks and Recreation, and San Elijo Lagoon Conservancy, Moffat & Nichol/AECOM (February 2016).
7. CC-0005-15 (SANDAG), Poinsettia Station Improvement Project, Carlsbad.
8. CC-0003-15 (SANDAG), San Diego River Railroad Bridge Replacement and Double Track Project.
9. CC-006-14 (NCTD), San Dieguito River Railroad Bridge, Scour Repair Project, San Diego County)
10. CC-009-12 (SANDAG), San Onofre-Pulgas Double Track Project.
11. CC-056-11 (SANDAG), Sorrento Valley Double Track Project.
12. CC-006-11 and CC-052-10 (NCTD), San Dieguito River Railroad Bridge, Southern Abutment and Scour Protection projects, Del Mar.
13. CC-075-09 (NCTD), Agua Hedionda Railroad Bridge and Double Track Project.
14. CC-059-09 (NCTD), Bridge Replacement Projects, Los Penasquitos Lagoon.
15. CC-008-07 (NCTD), Passing track and bridge improvements, Loma Alta Creek, Oceanside.
16. CC-055-05 (NCTD), Bridge replacement, Agua Hedionda Lagoon.
17. CC-052-05 (NCTD), Santa Margarita River double tracking project, Camp Pendleton.
18. CC-004-05 (NCTD), O'Neill to Flores double track project, Camp Pendleton.
19. CC-086-03 (NCTD), Pulgas to San Onofre double tracking project, Camp Pendleton.
20. CC-029-02 (NCTD), Oceanside-Escondido Railroad Project.
21. *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517

Figure 1. Project Location and Vicinity

Exhibit 1
CC-0004-15
SANDAG

Figure 2. USGS Topographic Map

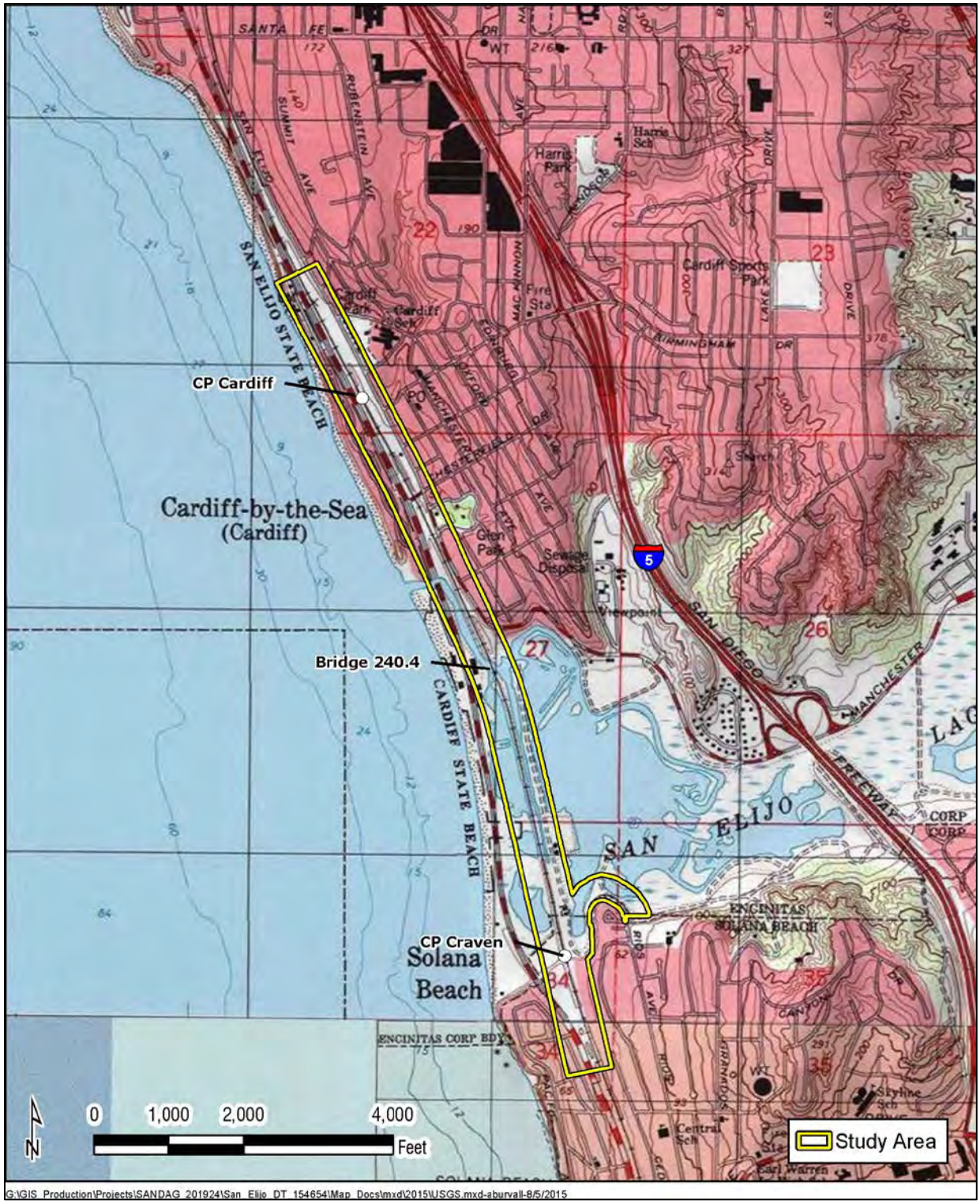


Exhibit 1, p, 2
CC-0004-15
SANDAG

Figure 3a. Project Footprint

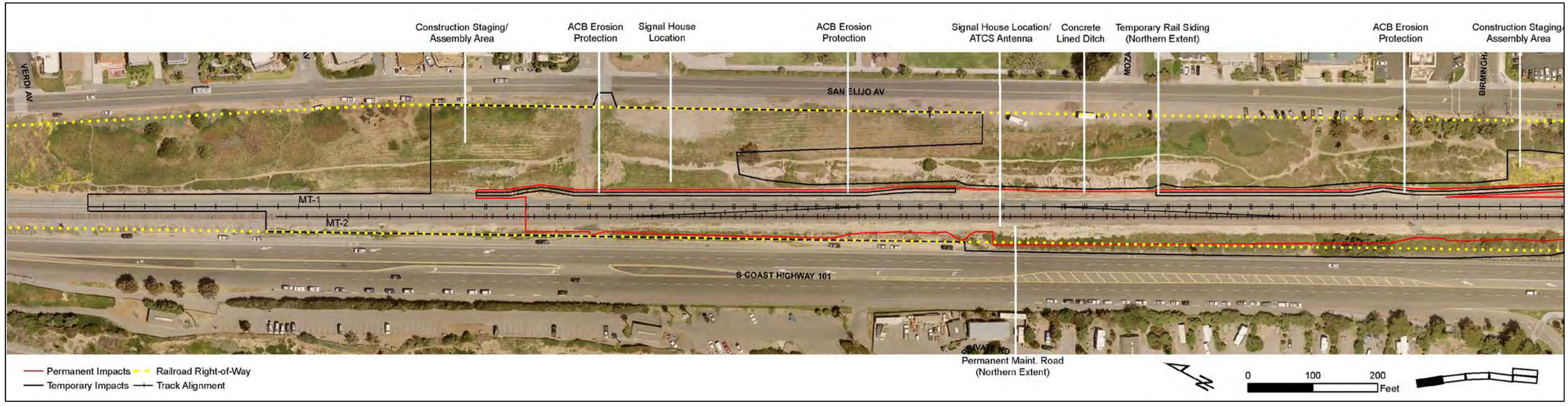


Figure 3b. Project Footprint

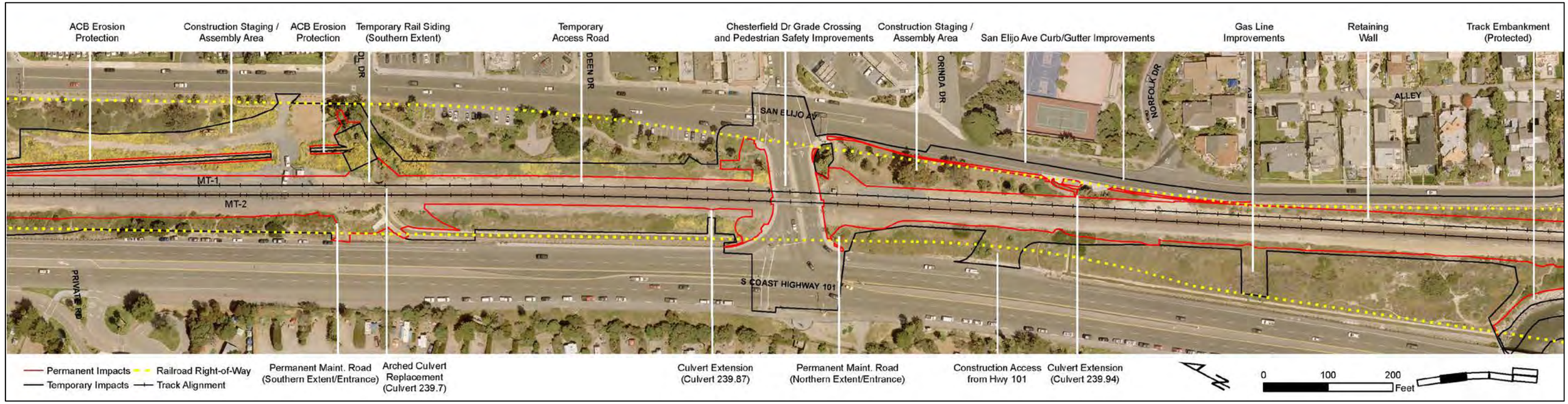


Exhibit 2
CC-0004-15
SANDAG

Figure 3c. Project Footprint

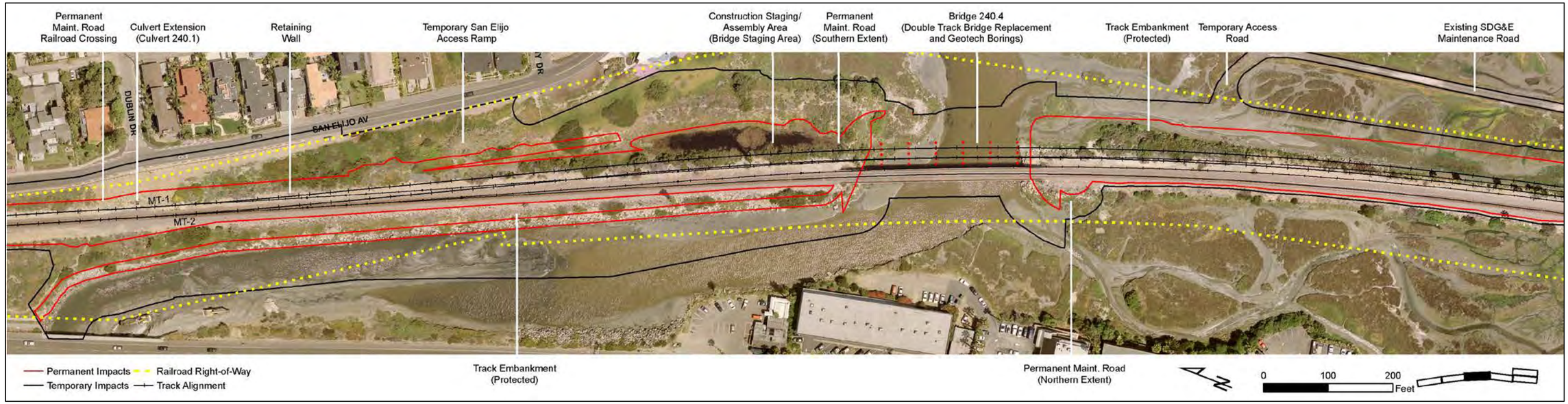


Figure 3d. Project Footprint

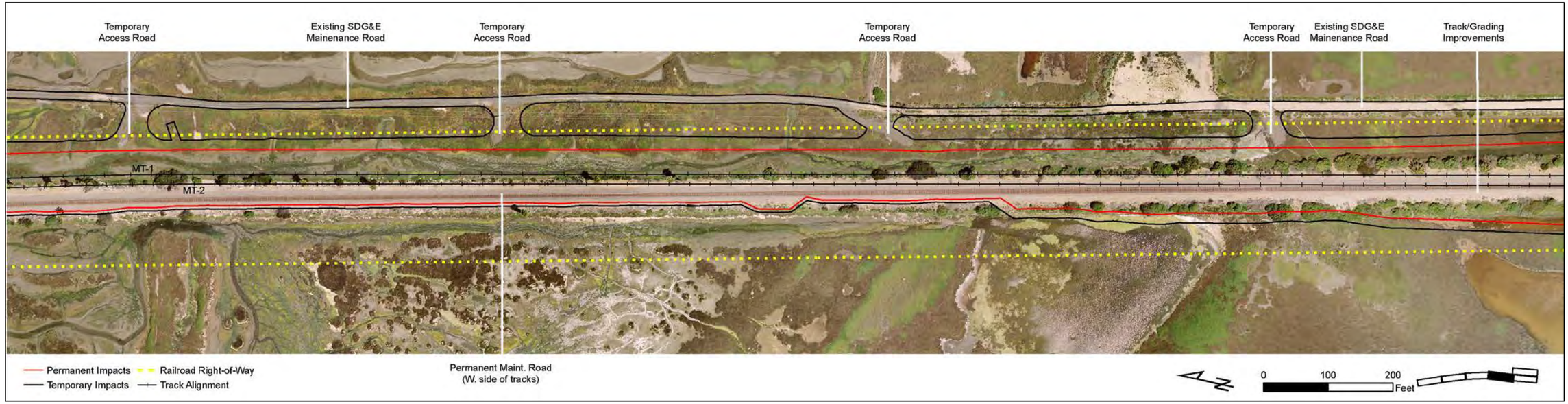


Exhibit 2, p. 2
CC-0004-15
SANDAG

Figure 3e. Project Footprint

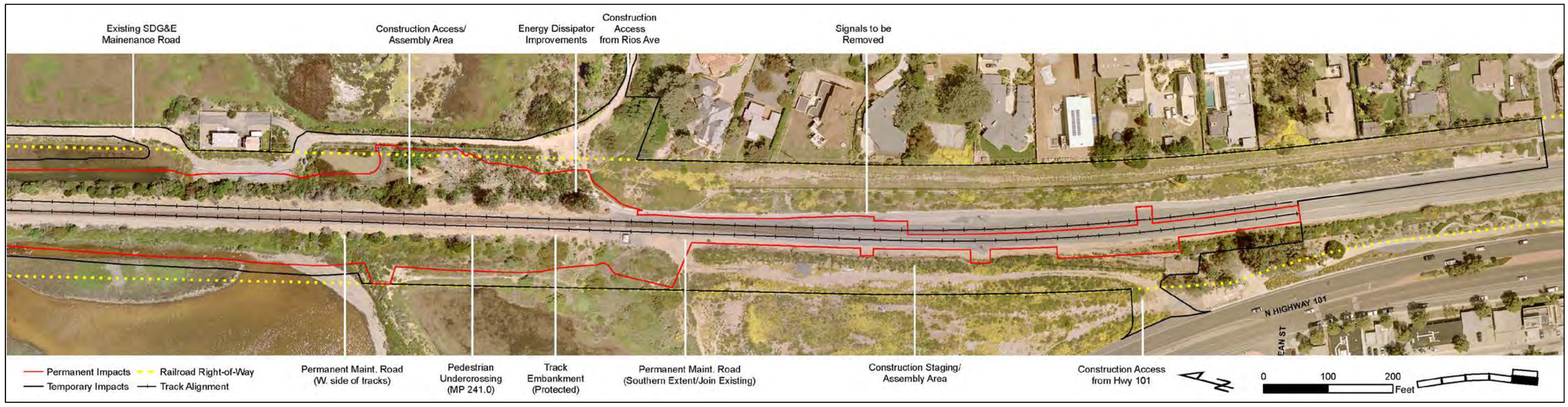
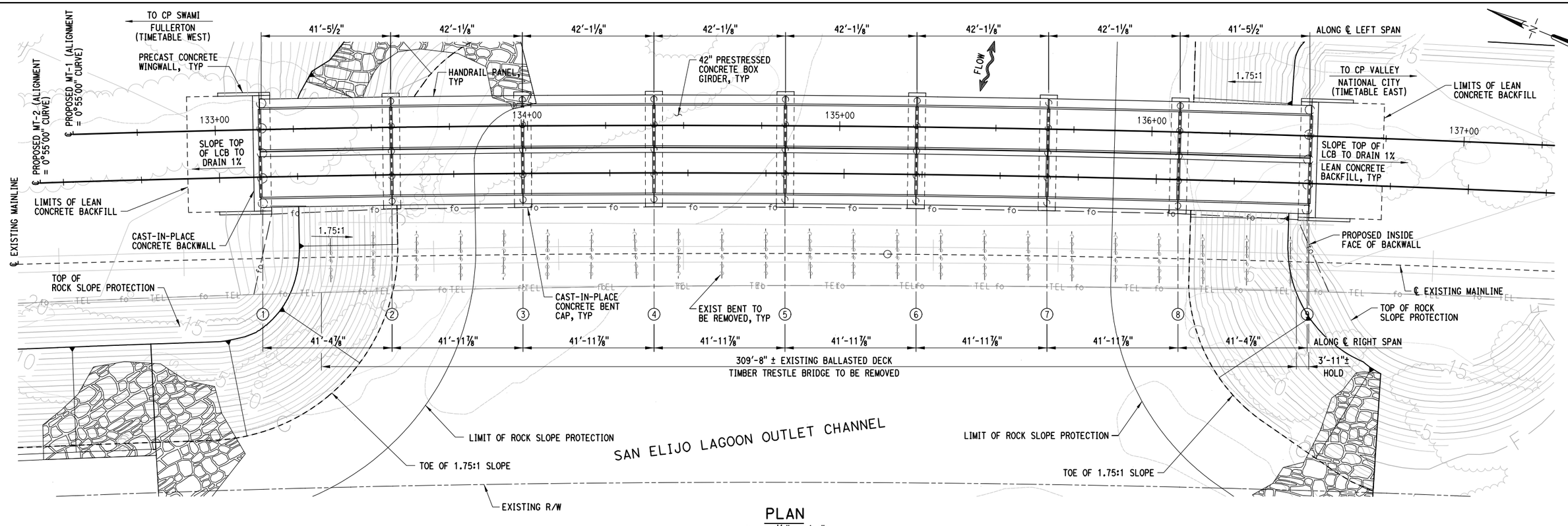


Figure 3f. Project Footprint

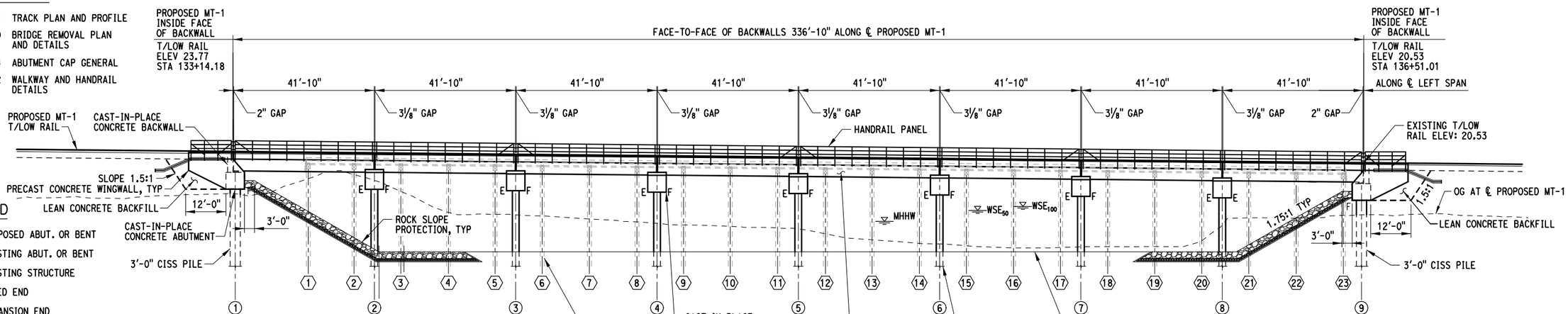
Exhibit 2, p. 3
CC-0004-15
SANDAG



PLAN
SCALE: 1/16" = 1'-0"

REFERENCES:

240.4-TP01	TRACK PLAN AND PROFILE
240.4-BR10	BRIDGE REMOVAL PLAN AND DETAILS
240.4-BR14	ABUTMENT CAP GENERAL
240.4-BR22	WALKWAY AND HANDRAIL DETAILS



LEGEND

- (1) PROPOSED ABUT. OR BENT
- (1) EXISTING ABUT. OR BENT
- EXISTING STRUCTURE
- F = FIXED END
- E = EXPANSION END

ELEVATION
SCALE: 1/16" = 1'-0"

NOTES:

1. EXISTING R/W OUTSIDE OF VIEW SHOWN.
2. DIMENSIONS ARE AT ℄ OF LEFT SPAN.
3. FOR HANDRAIL DETAILS, SEE DWG. 240.4-BR22.
4. ALL STATIONING AND ELEVATIONS BASED ON PROPOSED MT-1.

TABLE OF ESTIMATED WEIGHTS

DESCRIPTION	WEIGHT
BOX GIRDER MK B-42 (EACH)*	151,850 LB (75.92 TONS)
BOX GIRDER MK B-42 (EACH)**	154,660 LB (77.33 TONS)
WINGWALL MK-RW1 (EACH)	20,600 LB (10.30 TONS)

* INCLUDES ATTACHED CURB ON ONE GIRDER EDGE.
** INCLUDES ATTACHED SPECIAL CURB ON ONE GIRDER EDGE.

HYDRAULIC DATA TABLE

MHHW	= 3.04 ft
WSE_{100}	= 7.50 ft
WSE_{50}	= 6.30 ft
VCH_{100}	= 3.80 ft/s

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY J. YU
DRAWN BY J. MAY
CHECKED BY B. REZNIKOV
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
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(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

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NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

BRIDGE GENERAL PLAN

Exhibit 3
CC-0004-15
SANDAG

9/30/2015
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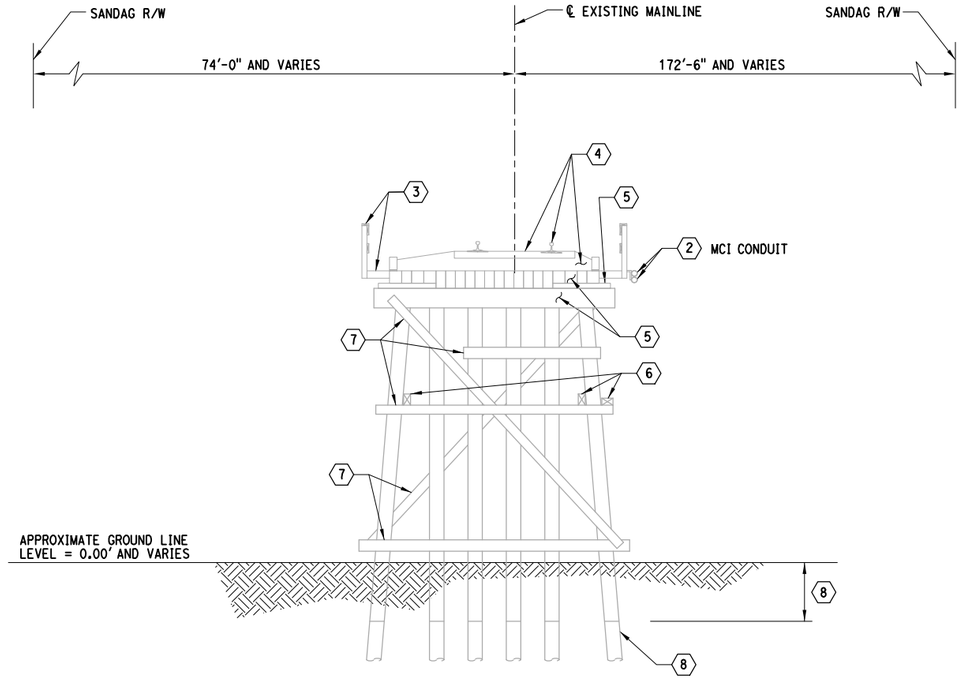


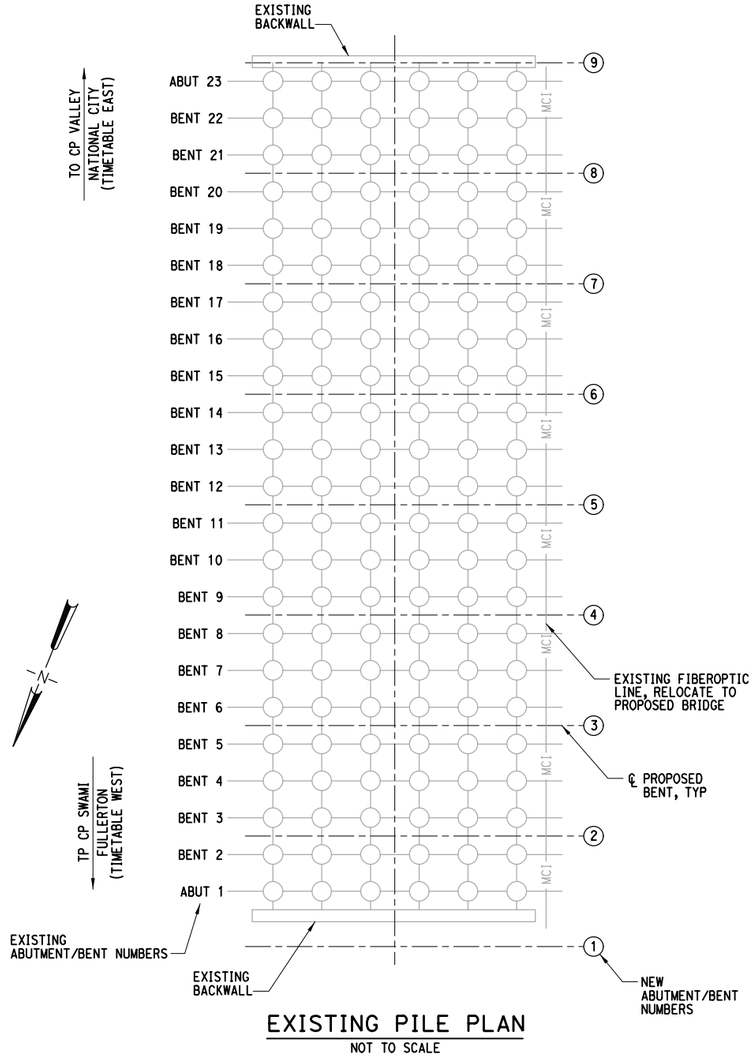
TYPICAL SECTION AT EXISTING BENT

(LOOKING TIMETABLE EAST)
NOT TO SCALE

EXISTING PILE CUTOFF TABLE	
EXISTING ABUTMENT/ BENT NO.	PILE CUTOFF LOCATIONS
ABUTMENT 1	3'-0" BELOW GRADE
BENT 2	3'-0" BELOW GRADE
BENT 3	3'-0" BELOW GRADE
BENT 4	3'-0" BELOW GRADE
BENT 5	3'-0" BELOW GRADE
BENT 6	AT EXISTING GRADE
BENT 7	AT EXISTING GRADE
BENT 8	AT EXISTING GRADE
BENT 9	AT EXISTING GRADE
BENT 10	AT EXISTING GRADE
BENT 11	AT EXISTING GRADE
BENT 12	AT EXISTING GRADE
BENT 13	AT EXISTING GRADE
BENT 14	AT EXISTING GRADE
BENT 15	AT EXISTING GRADE
BENT 16	AT EXISTING GRADE
BENT 17	AT EXISTING GRADE
BENT 18	AT EXISTING GRADE
BENT 19	AT EXISTING GRADE
BENT 20	AT EXISTING GRADE
BENT 21	3'-0" BELOW GRADE
BENT 22	3'-0" BELOW GRADE
ABUTMENT 23	3'-0" BELOW GRADE

BRIDGE REMOVAL NOTES

1. CONTRACTOR SHALL SUBMIT A BRIDGE REMOVAL AND DISPOSAL PLAN FOR APPROVAL BY SANDAG PRIOR TO COMMENCING ANY BRIDGE REMOVAL. THE REMOVAL PLAN SHALL CONFORM TO CONTRACT DOCUMENTS AND SHOW THE METHODS AND SEQUENCE OF REMOVAL AND EQUIPMENT TO BE USED.
2. UTILITY COMPANY SHALL TEMPORARILY RELOCATE FIBER OPTIC UTILITIES FROM EXISTING BRIDGE PRIOR TO START OF DEMOLITION OF EXISTING BRIDGE. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY.
3. REMOVE EXISTING TIMBER HANDRAILS/WALKWAY.
4. REMOVE EXISTING RAIL, TIMBER CROSS TIES AND BALLAST.
5. REMOVE EXISTING TIMBER DECK, STRINGERS AND PILE CAPS IN SECTIONS.
6. REMOVE EXISTING LONGITUDINAL TIMBER BRACES.
7. REMOVE EXISTING TRANSVERSE TIMBER BRACES.
8. ALL PILES SHALL BE CUT OFF AND REMOVED TO THE DEPTH SHOWN ON "EXISTING PILE CUTOFF TABLE".



EXISTING PILE PLAN

NOT TO SCALE

PILE LEGEND:

○ EXISTING TIMBER PILE

9/29/2015

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REV.	DATE	DESCRIPTION	BY / SUB.	APP.

DESIGNED BY J. YU
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REMOVAL PLANS AND DETAILS

Exhibit 3, p. 2
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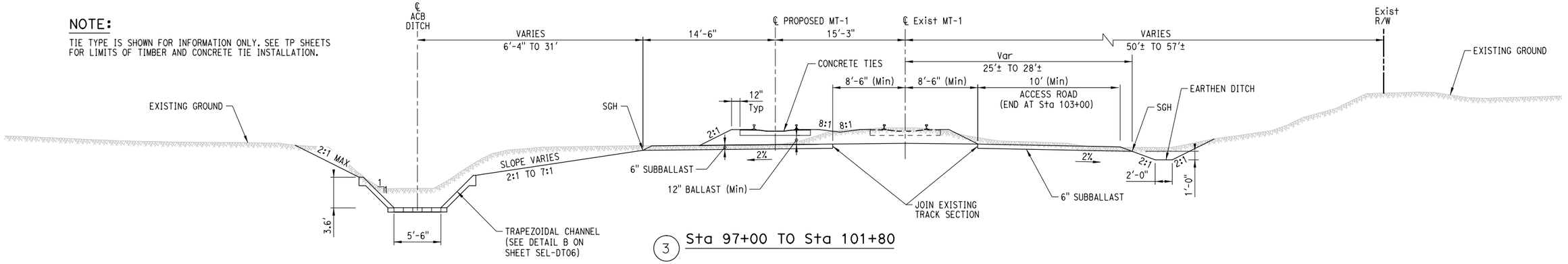
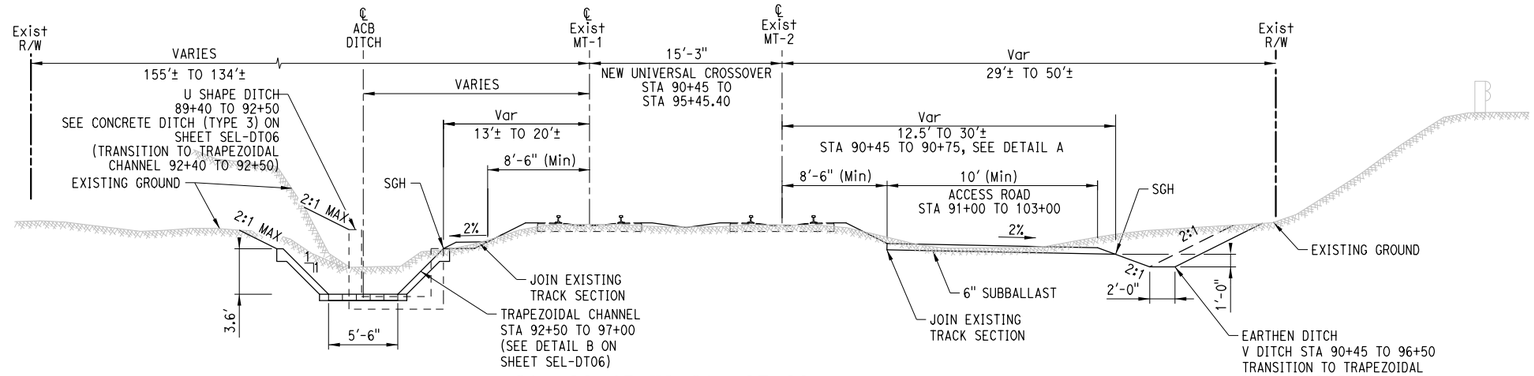
NOTE:

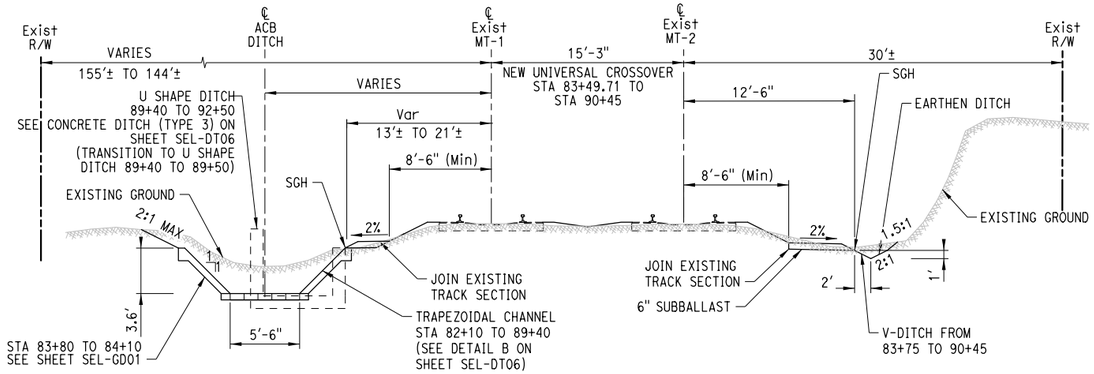
TIE TYPE IS SHOWN FOR INFORMATION ONLY. SEE TP SHEETS FOR LIMITS OF TIMBER AND CONCRETE TIE INSTALLATION.



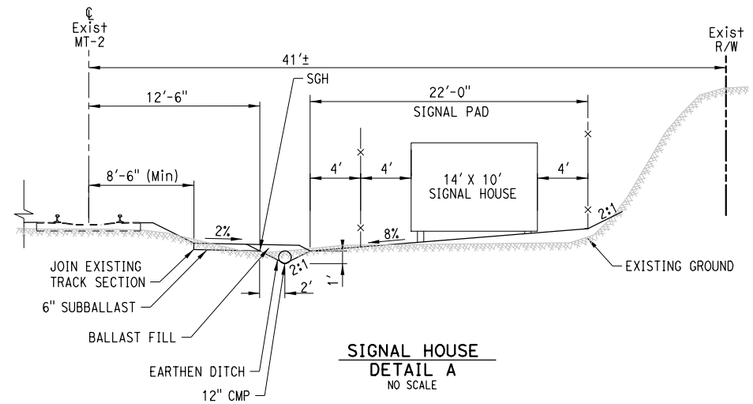
3 Sta 97+00 TO Sta 101+80



2 Sta 90+45 TO Sta 97+00



1 Sta 82+00 TO Sta 90+45



SIGNAL HOUSE DETAIL A
NO SCALE

REV.	DATE	DESCRIPTION	BY / SUB. / APP.

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DRAWN BY M.R. GRANADO
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TYPICAL SECTIONS
SHEET 1 OF 7

Exhibit 4
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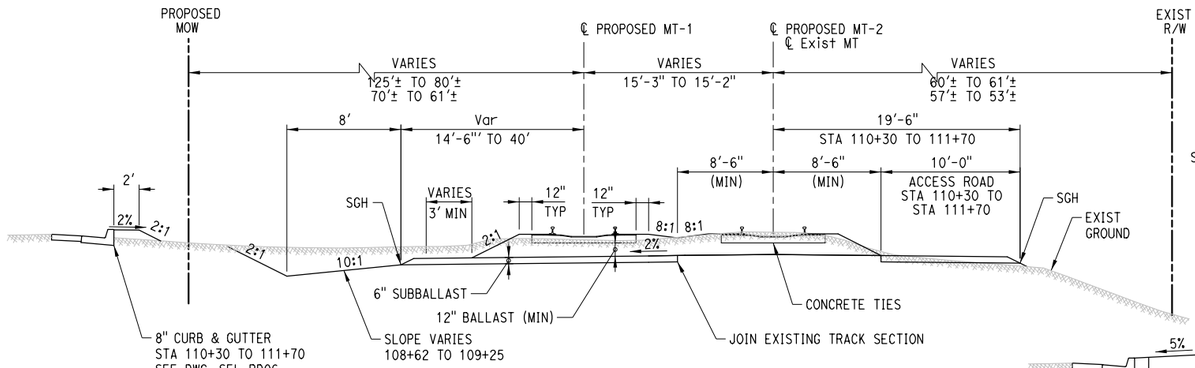
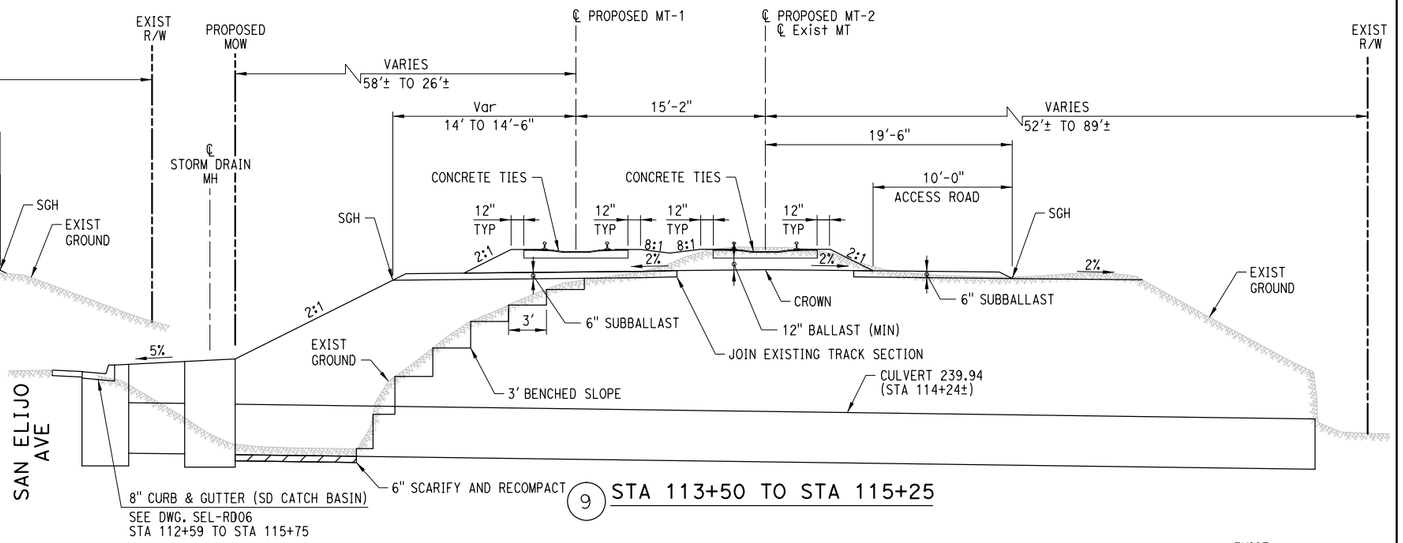
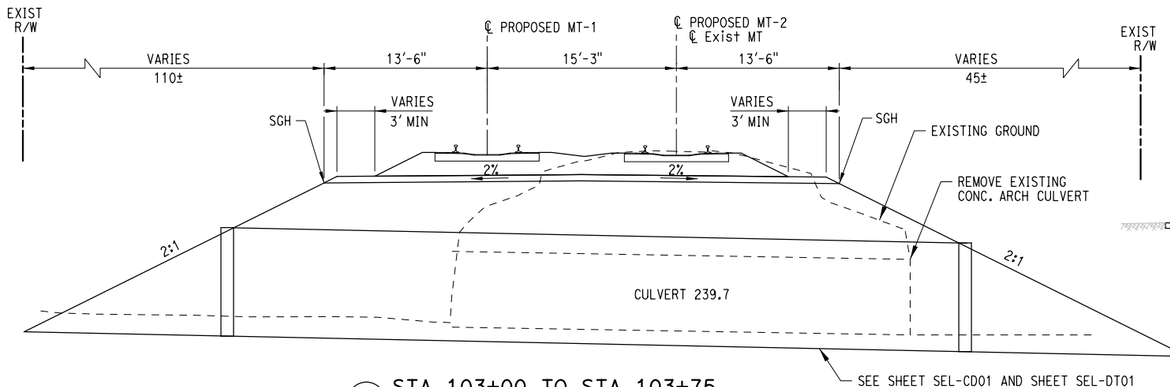


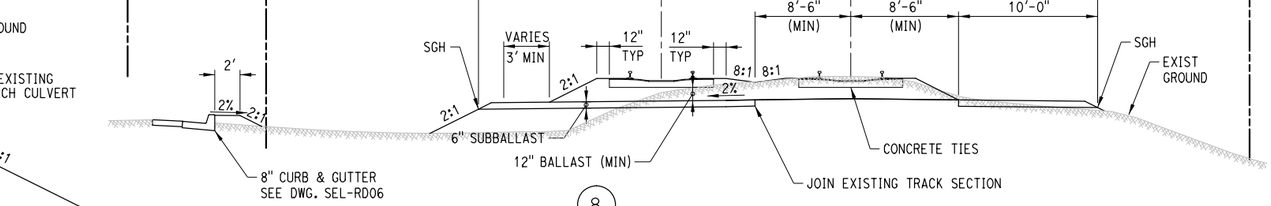
6 STA 103+75 TO STA 109+45
STA 110+30 TO STA 111+70



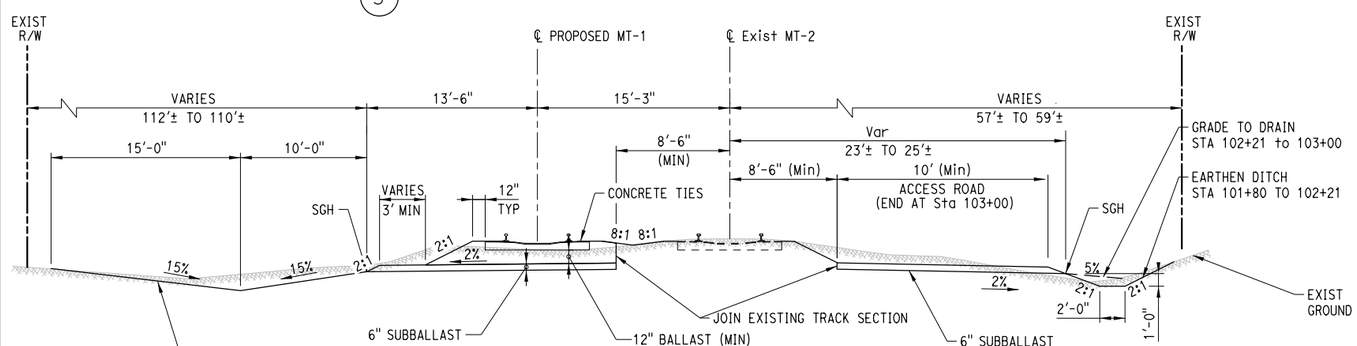
9 STA 113+50 TO STA 115+25



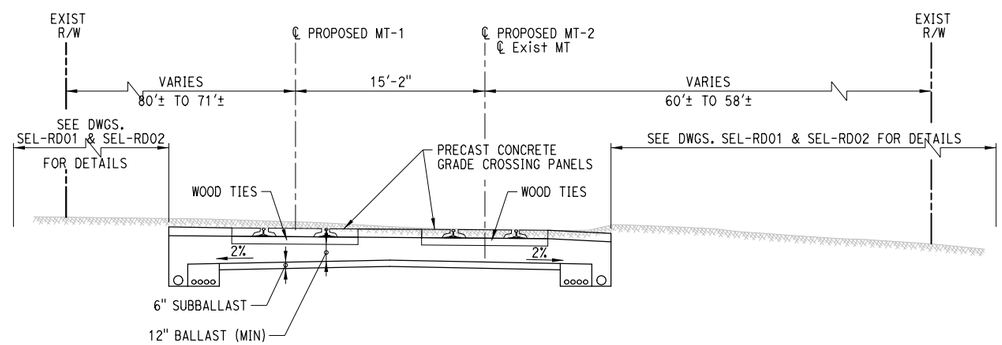
5 STA 103+00 TO STA 103+75



8 STA 111+70 TO STA 113+50



4 STA 101+80 TO STA 103+00



7 STA 109+45 TO STA 110+30
CHESTERFIELD GRADE CROSSING

REV.	DATE	DESCRIPTION	BY SUB.	APP.

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APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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San Diego's Regional Planning Agency

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SAN ELIJO LAGOON DOUBLE TRACK

TYPICAL SECTIONS
SHEET 2 OF 7

Exhibit 4, p. 2
CC-0004-15
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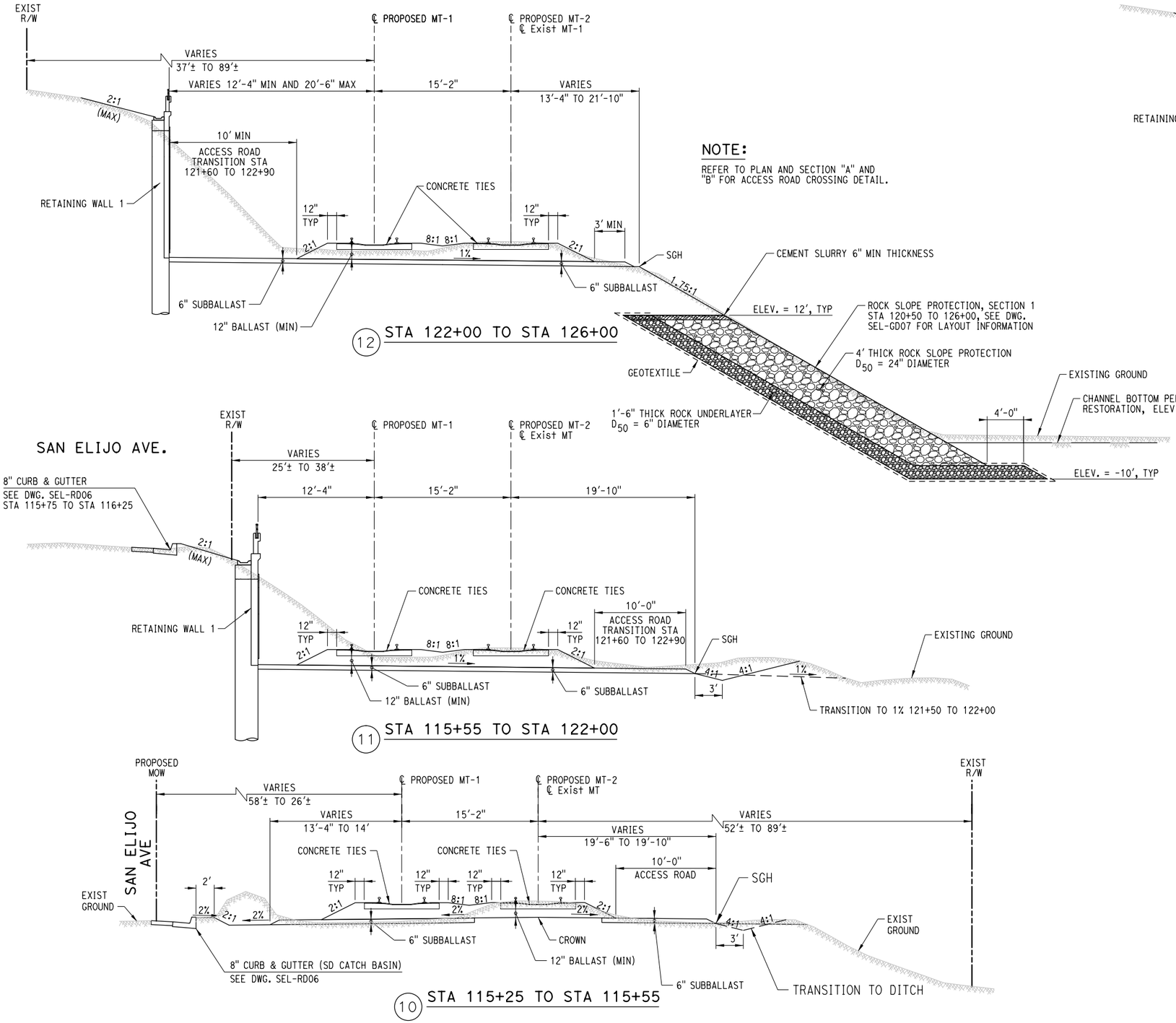

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

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DATE SEPTEMBER 2015

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TYPICAL SECTIONS
SHEET 3 OF 7

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Exhibit 4, p. 3
CC-0004-15
SANDAG

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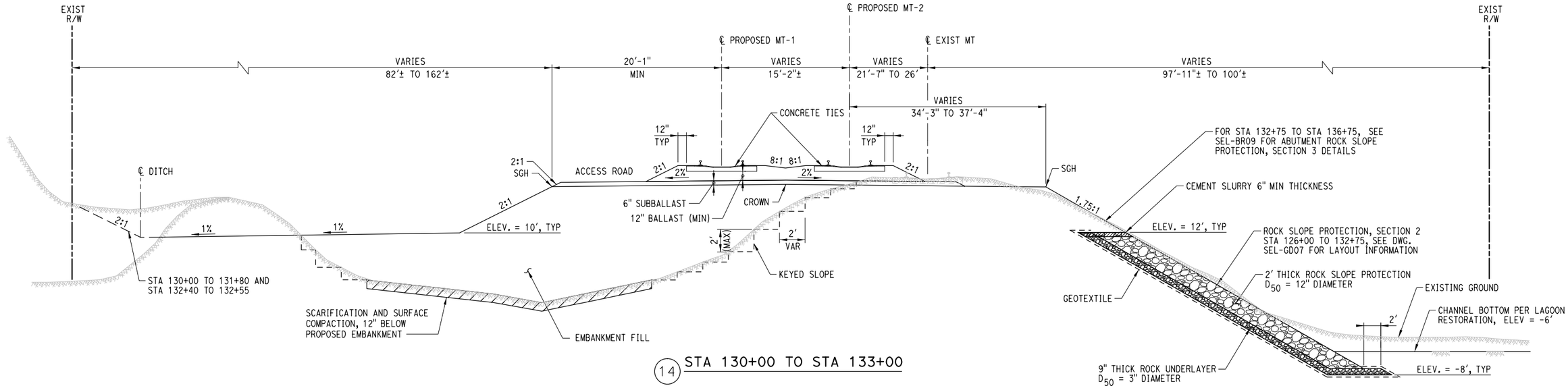
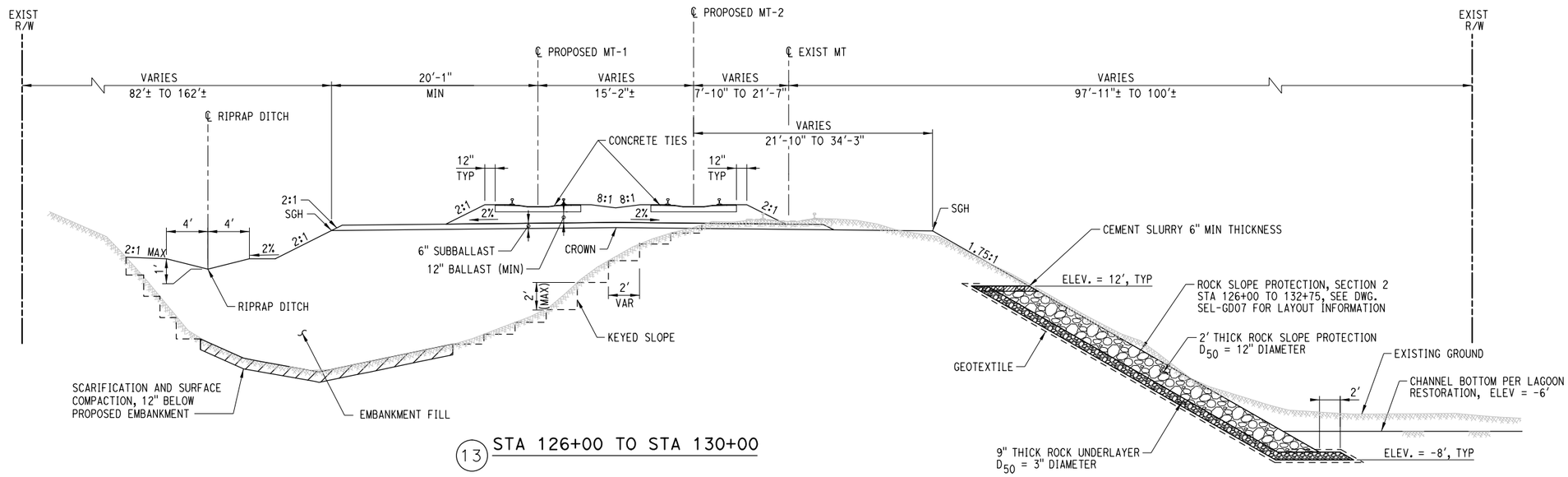


14 STA 130+00 TO STA 133+00



13 STA 126+00 TO STA 130+00

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. ABDO
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CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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SAN ELIJO LAGOON DOUBLE TRACK

TYPICAL SECTIONS
SHEET 4 OF 7

Exhibit 4, p. 4
CC-0004-15
SANDAG

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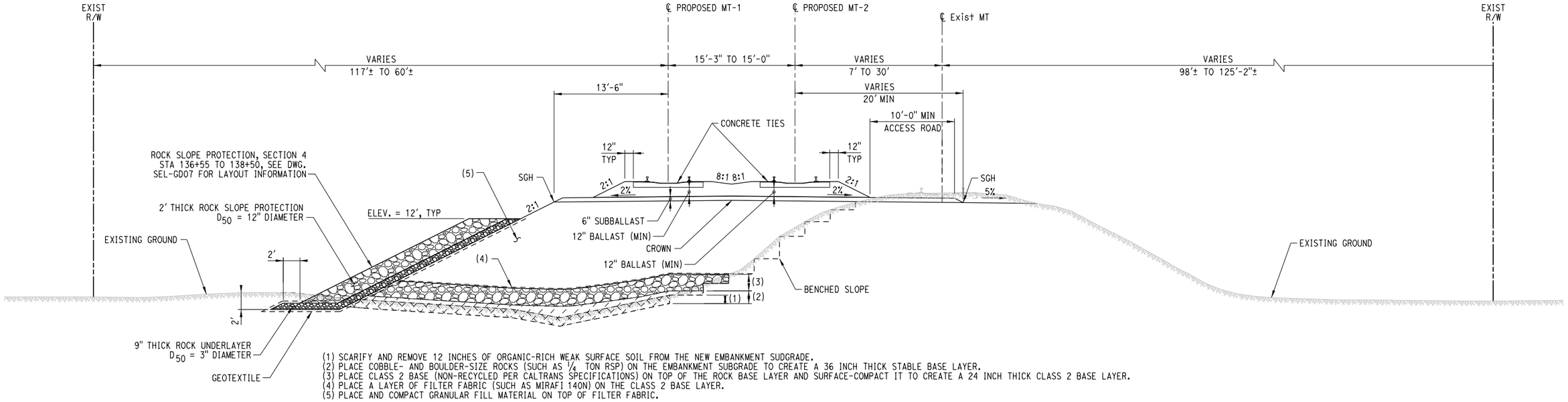
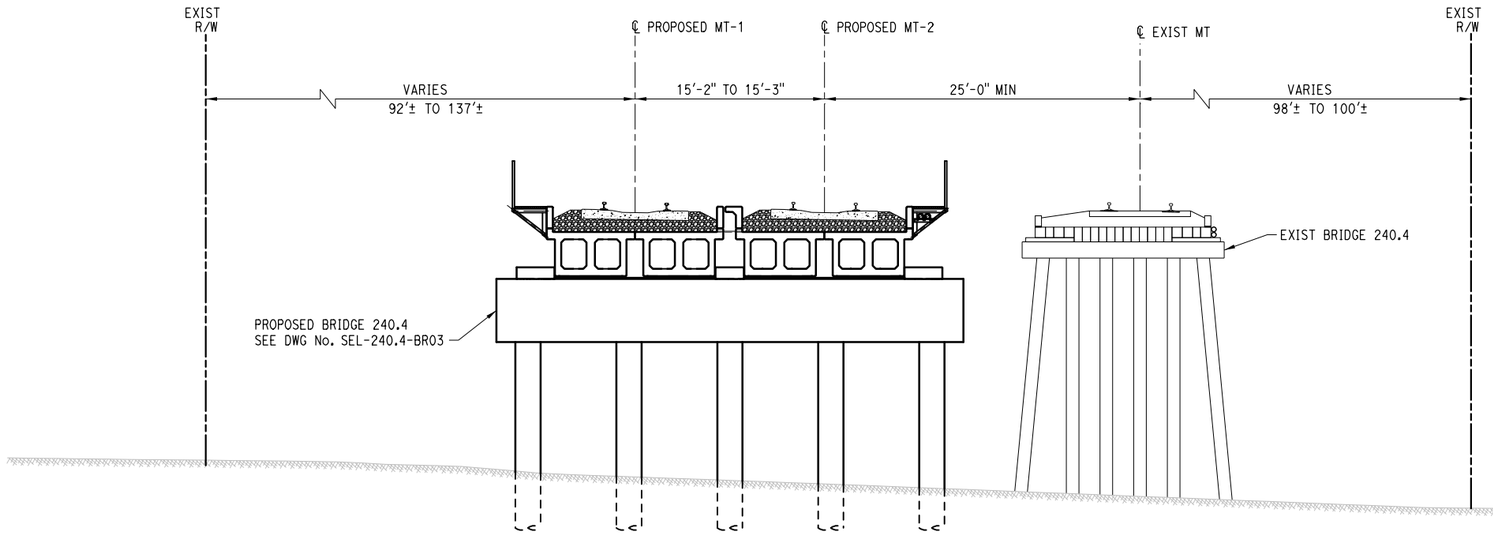


(1) SCARIFY AND REMOVE 12 INCHES OF ORGANIC-RICH WEAK SURFACE SOIL FROM THE NEW EMBANKMENT SUDGRADE.
(2) PLACE COBBLE- AND BOULDER-SIZE ROCKS (SUCH AS 1/4 TON RSP) ON THE EMBANKMENT SUBGRADE TO CREATE A 36 INCH THICK STABLE BASE LAYER.
(3) PLACE CLASS 2 BASE (NON-RECYCLED PER CALTRANS SPECIFICATIONS) ON TOP OF THE ROCK BASE LAYER AND SURFACE-COMPACT IT TO CREATE A 24 INCH THICK CLASS 2 BASE LAYER.
(4) PLACE A LAYER OF FILTER FABRIC (SUCH AS MIRAFI 140N) ON THE CLASS 2 BASE LAYER.
(5) PLACE AND COMPACT GRANULAR FILL MATERIAL ON TOP OF FILTER FABRIC.

(16) STA 137+25 to 161+75



NOTE:

FOR STA 132+75 TO STA 136+75, SEE SEL-BR09 FOR ABUTMENT ROCK SLOPE PROTECTION, SECTION 3 DETAILS

(15) STA 133+10 TO STA 136+50

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

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DESIGNED BY A. ABDO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

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San Diego's Regional Planning Agency

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SAN ELIJO LAGOON DOUBLE TRACK

TYPICAL SECTIONS
SHEET 5 OF 7

Exhibit 4, p. 5
CC-0004-15
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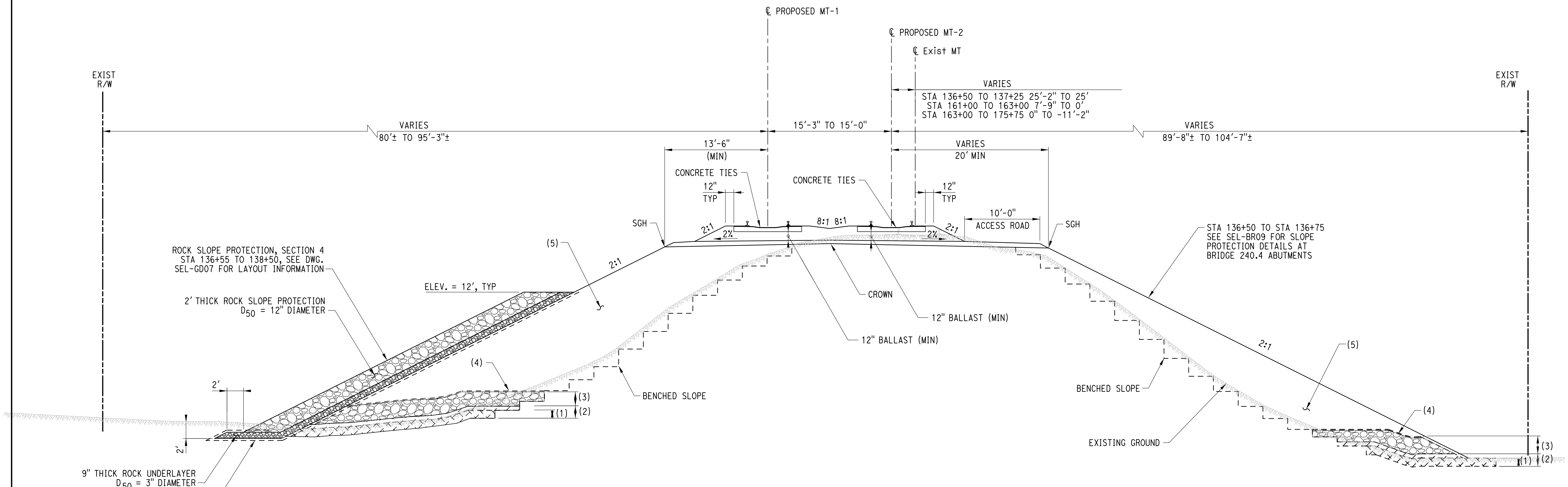

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(17) STA STA 136+50 TO 137+25
AND
STA 161+75 to 175+50

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TYPICAL SECTIONS
SHEET 6 OF 7

Exhibit 4, p. 6
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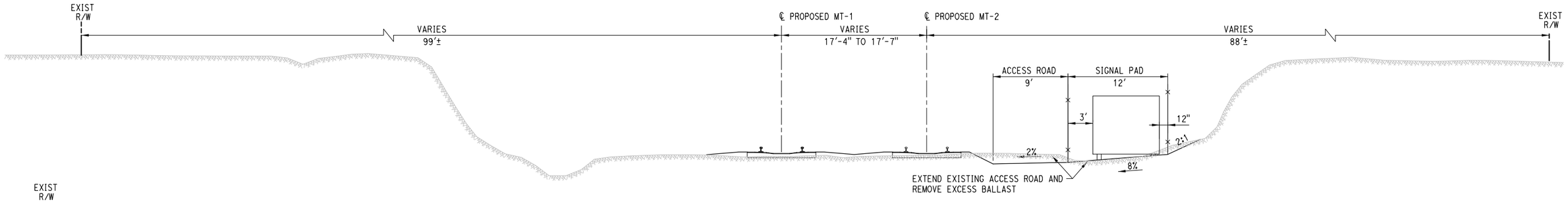
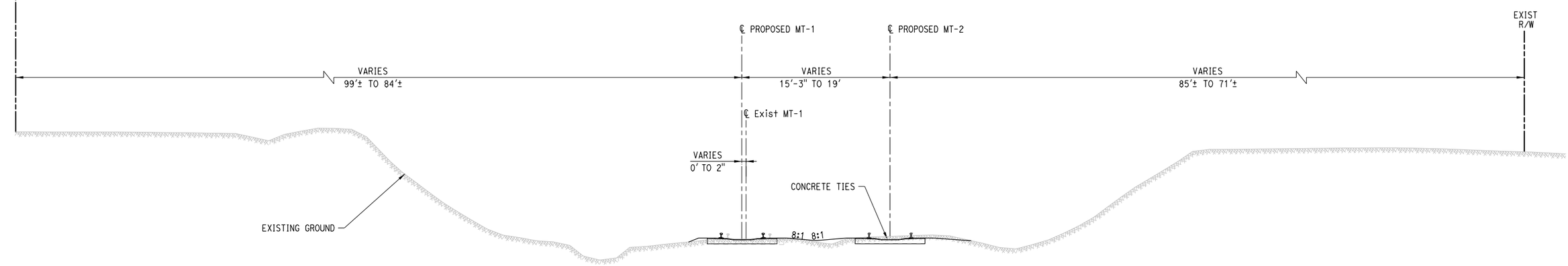
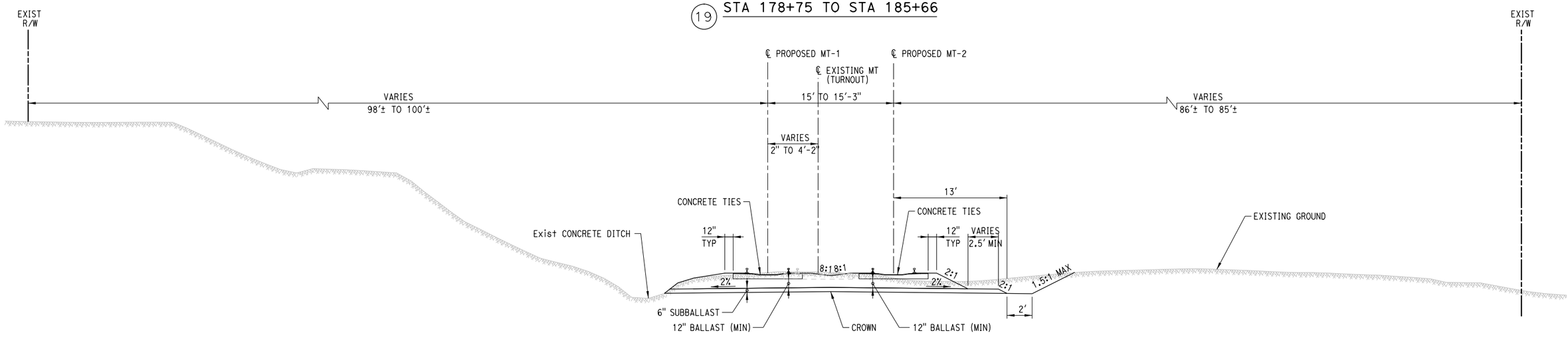


(20) STA 180+65 TO STA 180+85





(19) STA 178+75 TO STA 185+66

(18) STA 175+50 TO STA 178+75

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TYPICAL SECTIONS
SHEET 7 OF 7

Exhibit 4, p. 7
CC-0004-15
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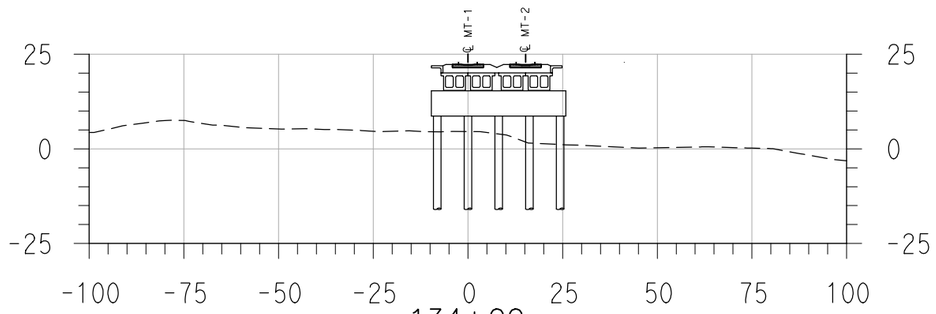
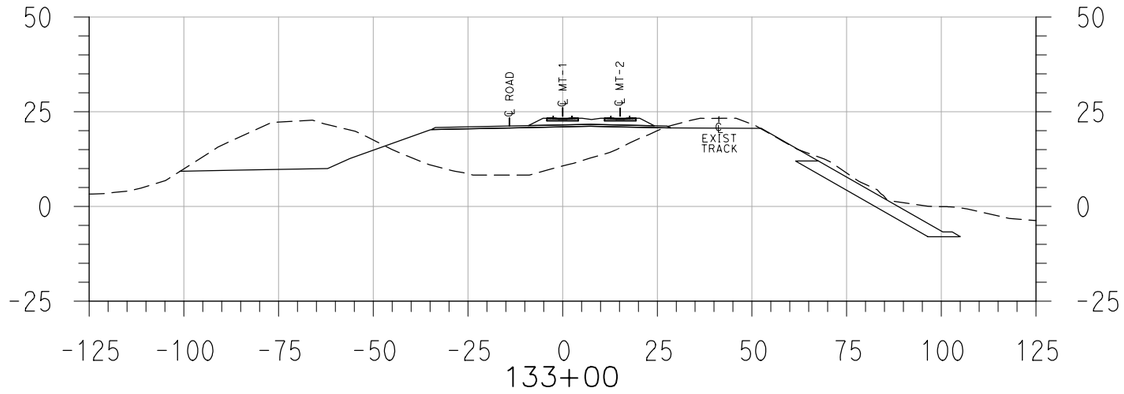


134+00



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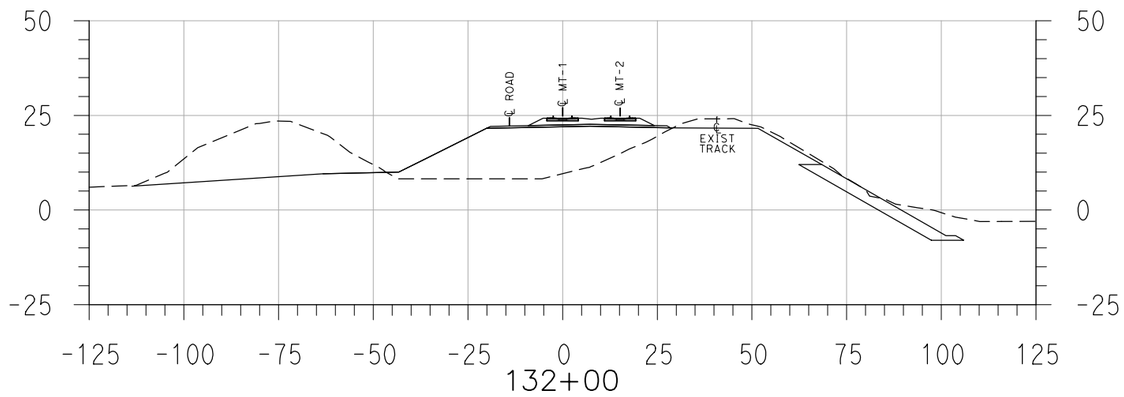

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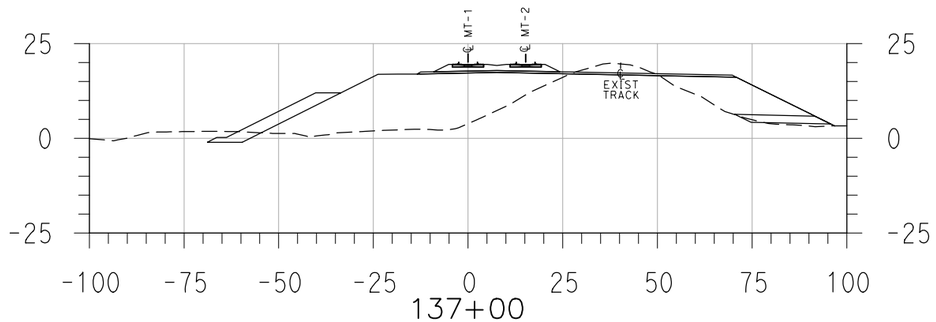
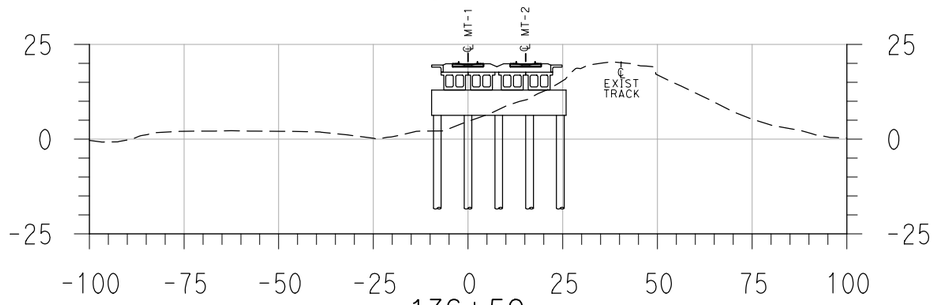


137+00



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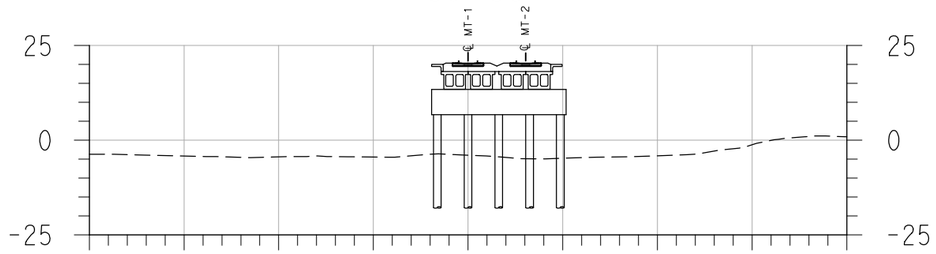

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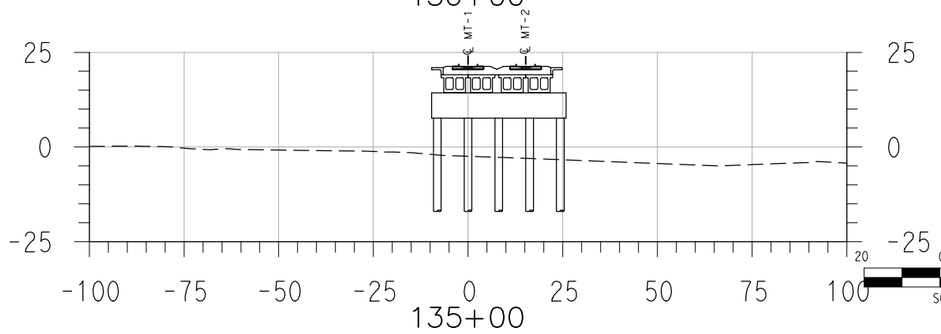

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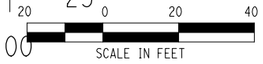

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SAN ELIJO LAGOON DOUBLE TRACK

TRACK CROSS SECTIONS STA. 132+00 TO STA. 137+00

Exhibit 5
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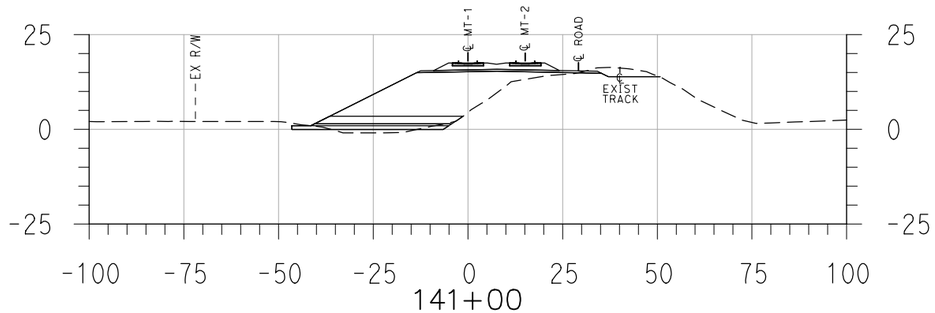

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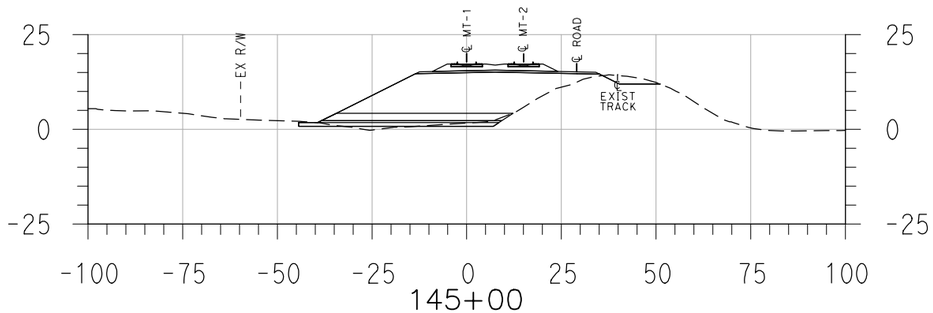
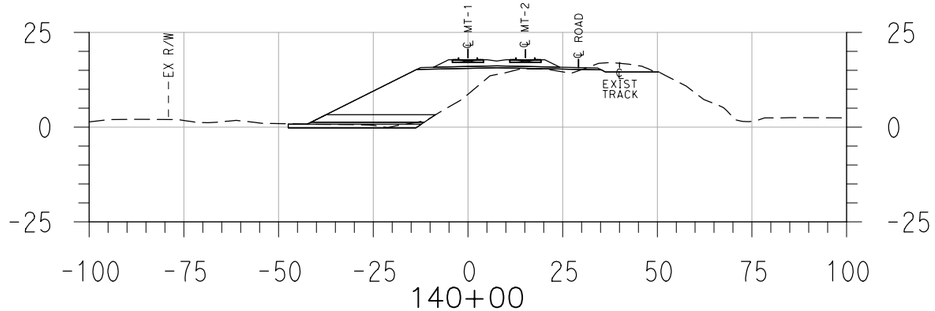


145+00



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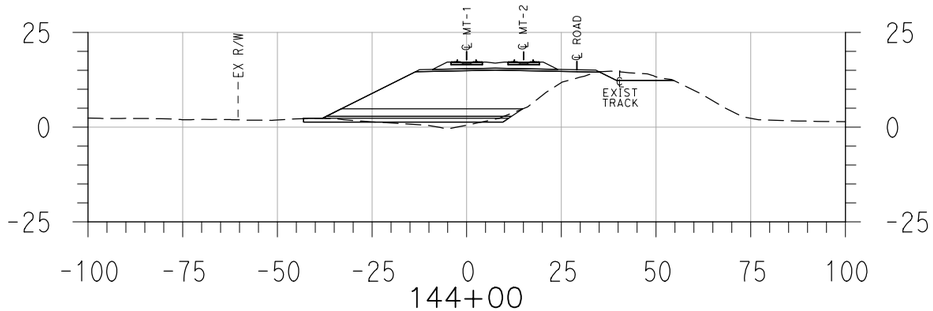

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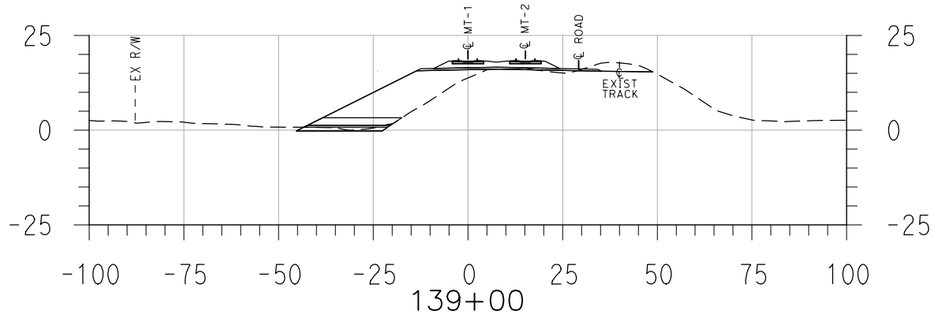

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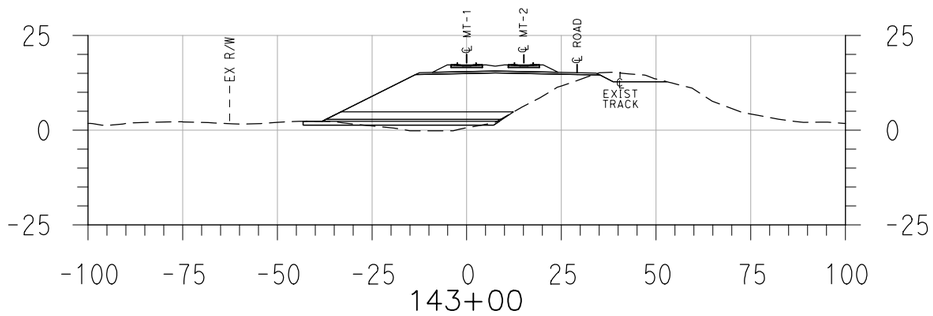

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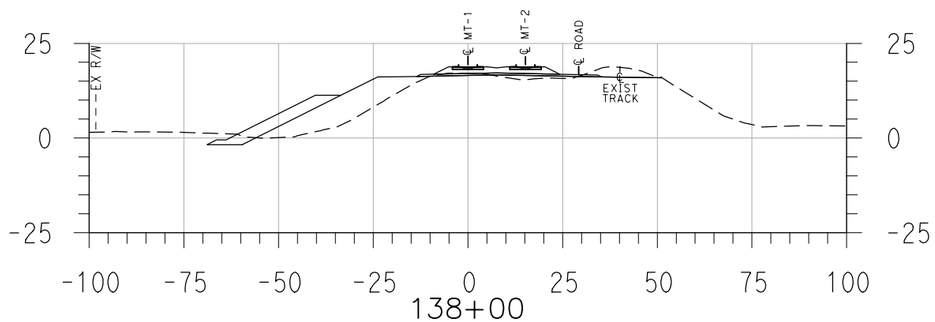

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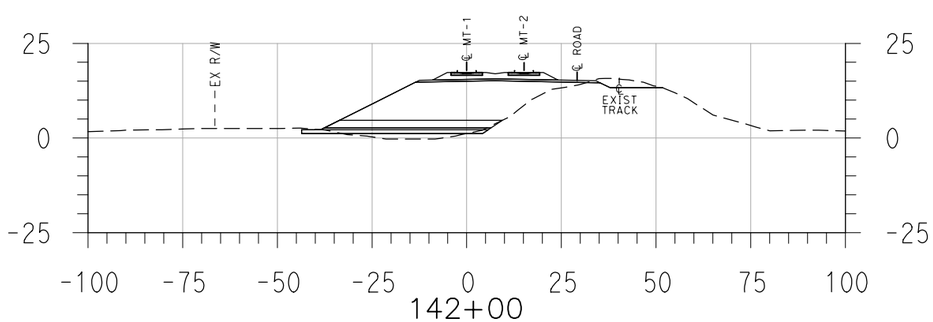

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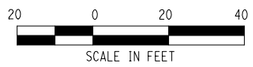

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DATE SEPTEMBER 2015

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SAN ELIJO LAGOON DOUBLE TRACK

TRACK CROSS SECTIONS STA. 138+00 TO STA. 145+00

Exhibit 5, p. 2
CC-0004-15
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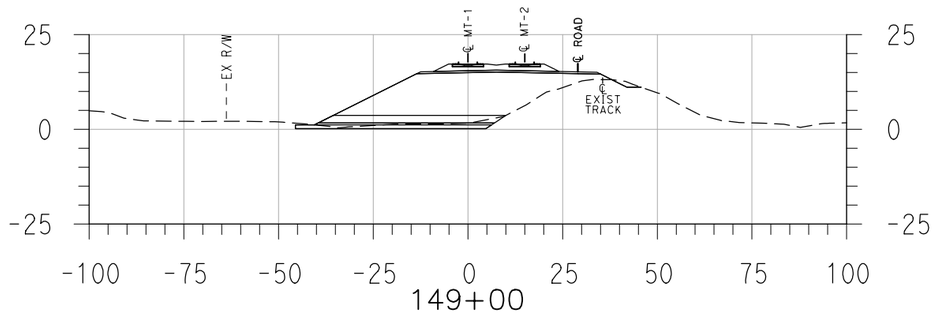

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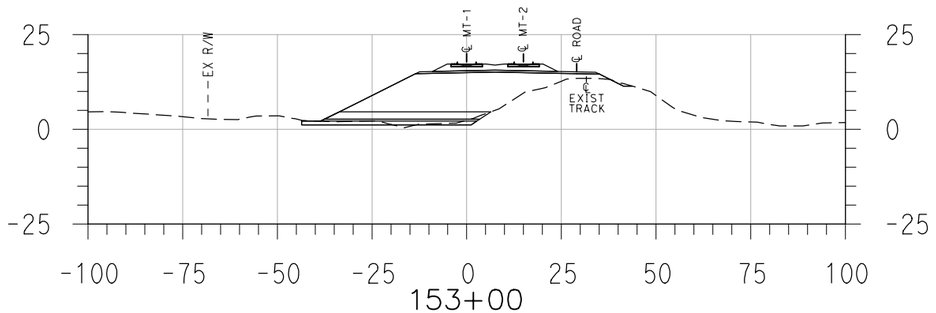
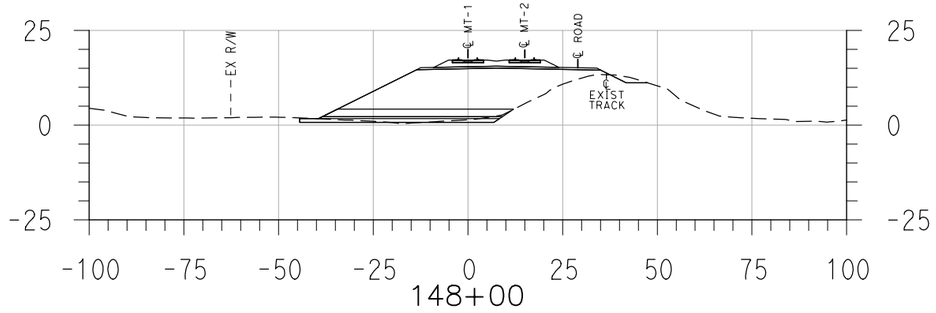


153+00



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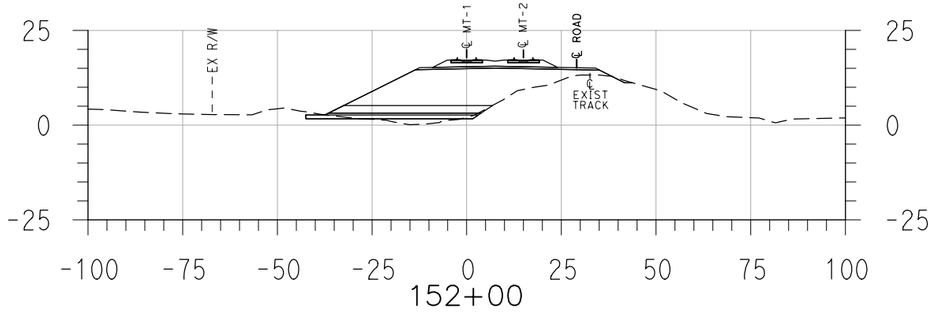

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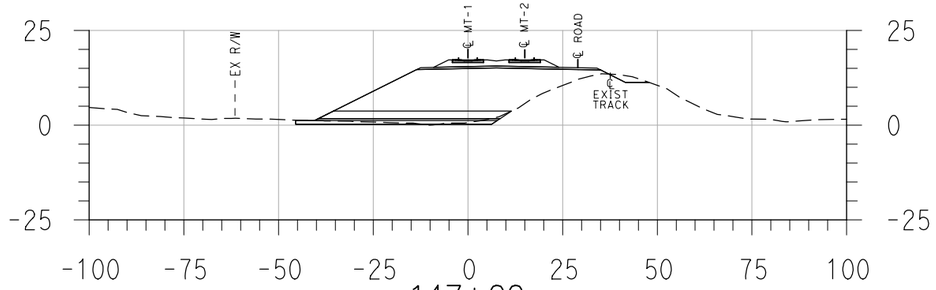

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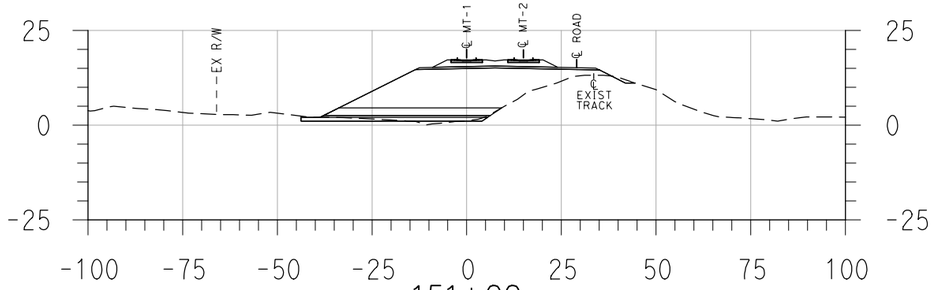

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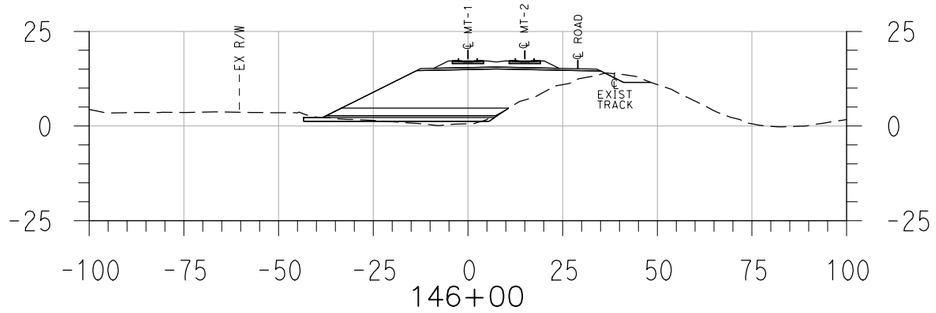

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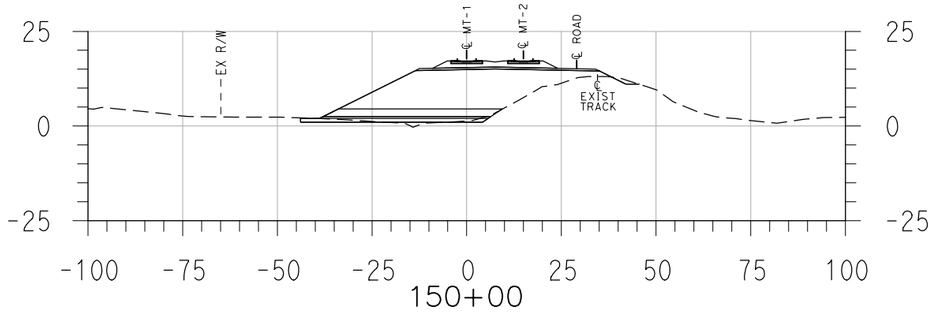

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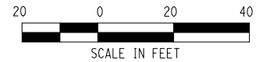

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SAN ELIJO LAGOON DOUBLE TRACK

TRACK CROSS SECTIONS STA. 146+00 TO STA. 153+00

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Exhibit 5, p. 3
CC-0004-15
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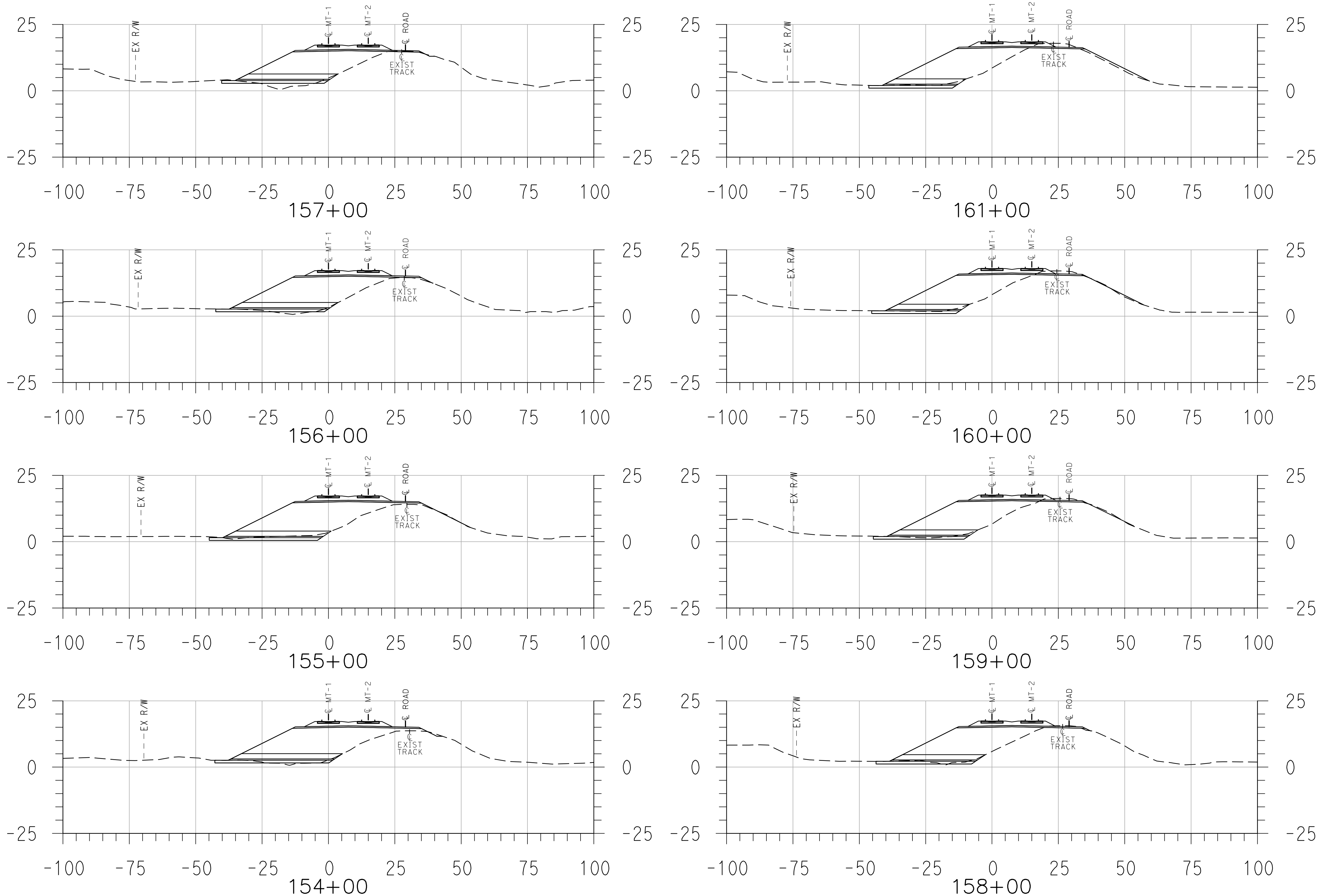

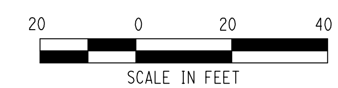

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TRACK CROSS SECTIONS STA. 154+00 TO STA. 161+00

Exhibit 5, p. 4
CC-0004-15
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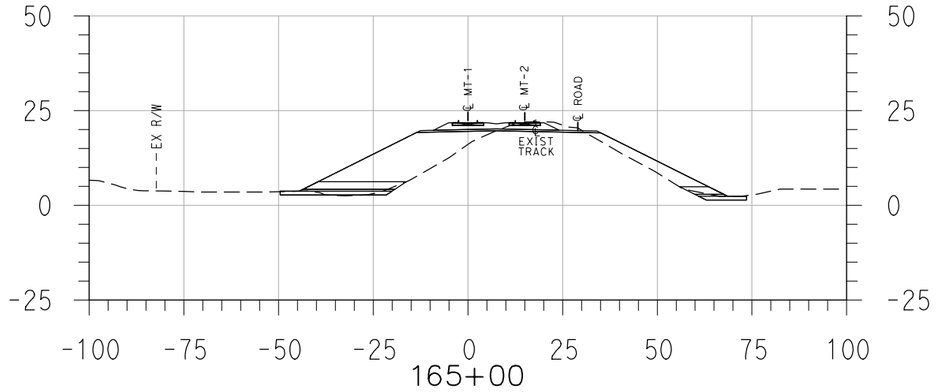

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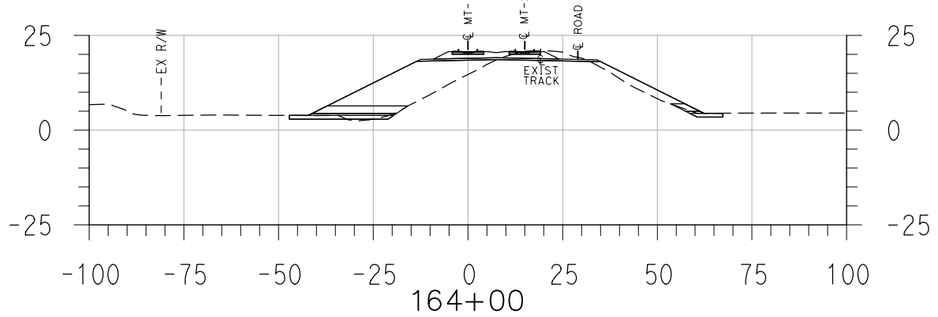

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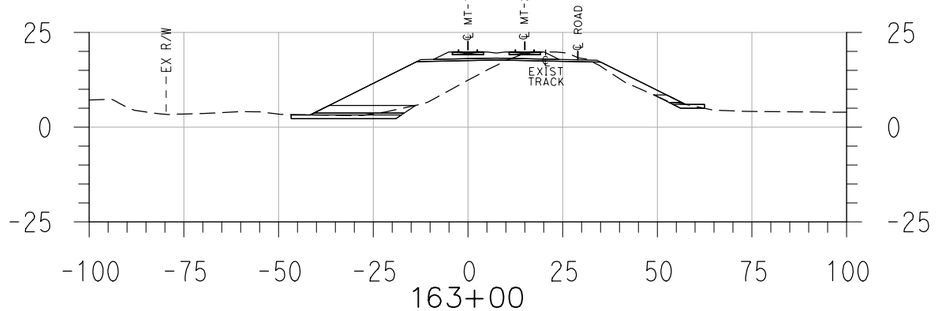

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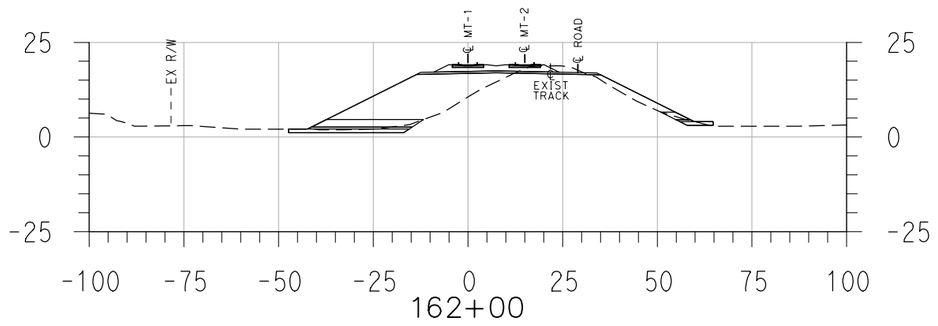

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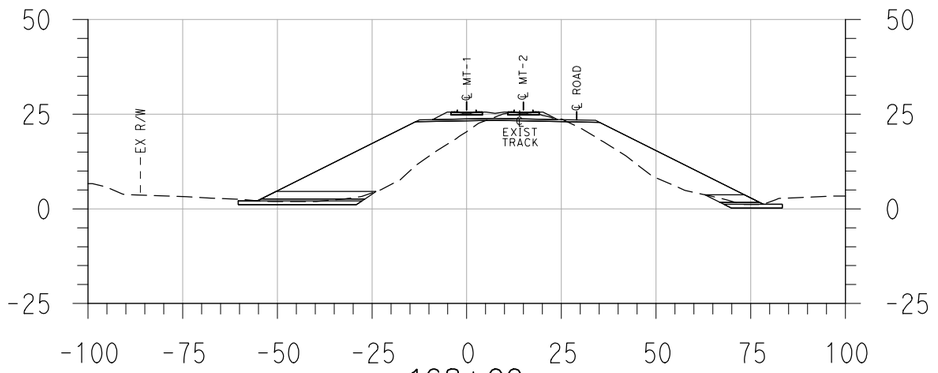
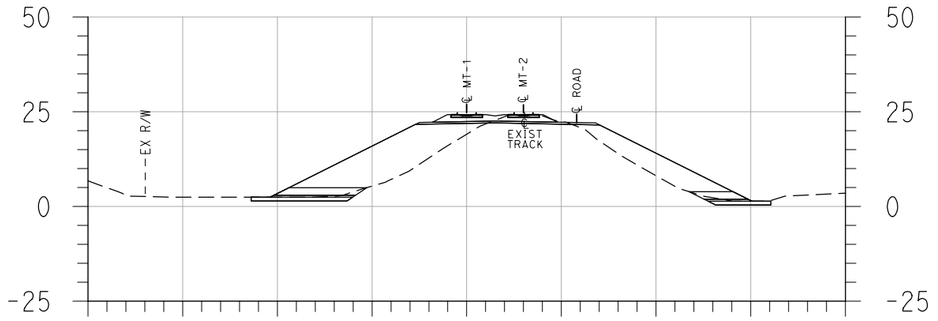


168+00



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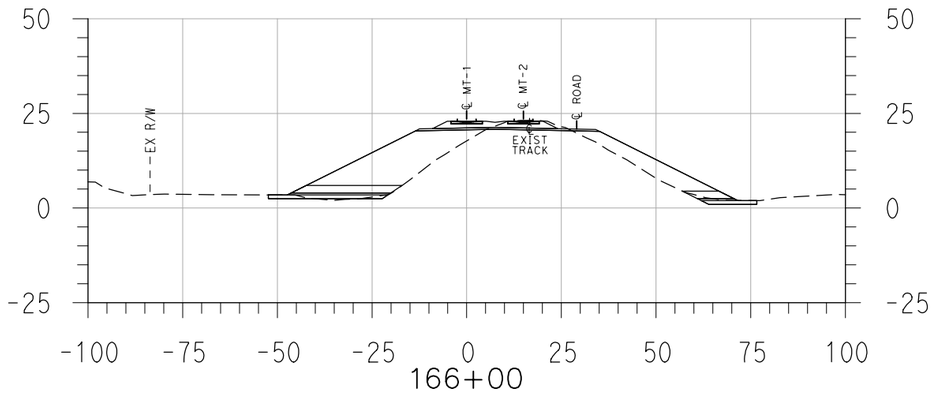

166+00

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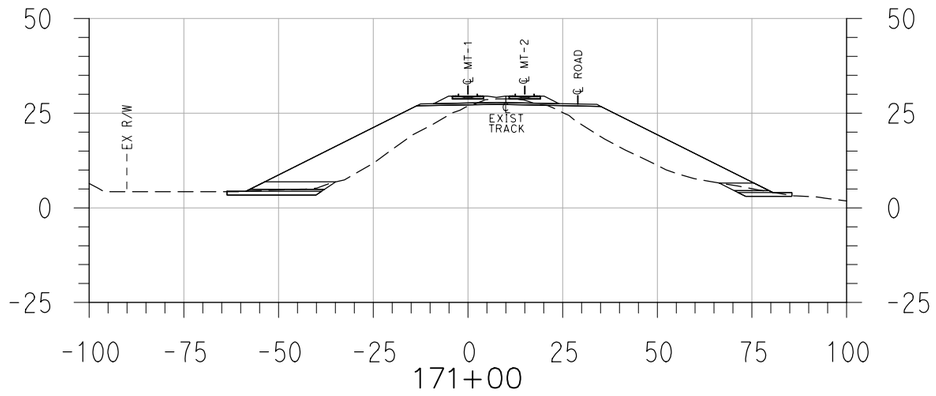
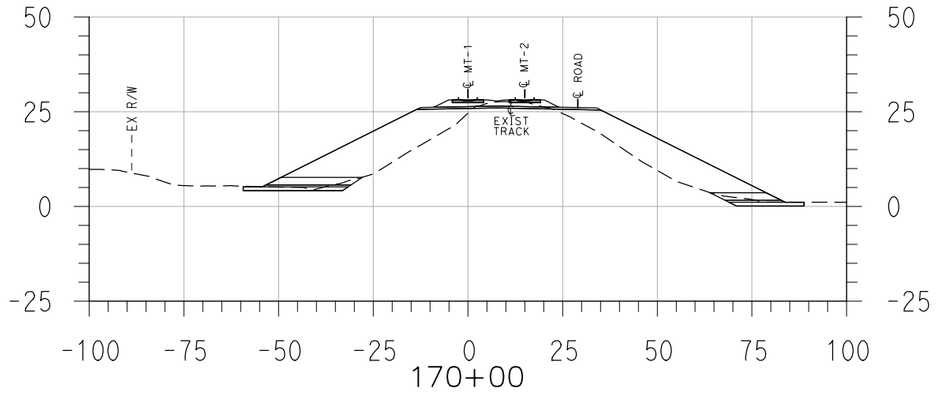
TRACK CROSS SECTIONS STA. 162+00 TO STA. 168+00

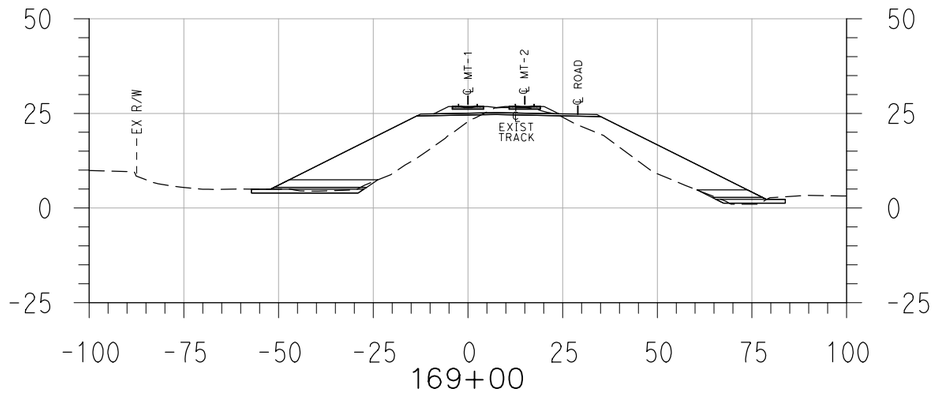
Exhibit 5, p. 5
CC-0004-15
SANDAG



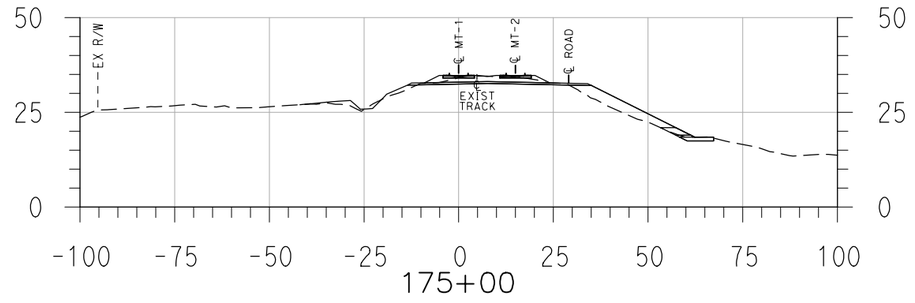
171+00



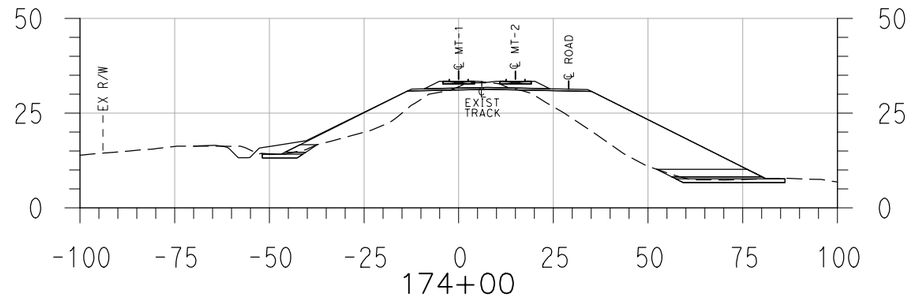
170+00



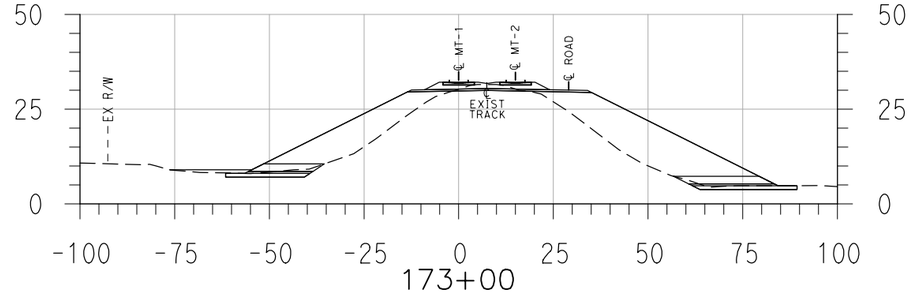
169+00



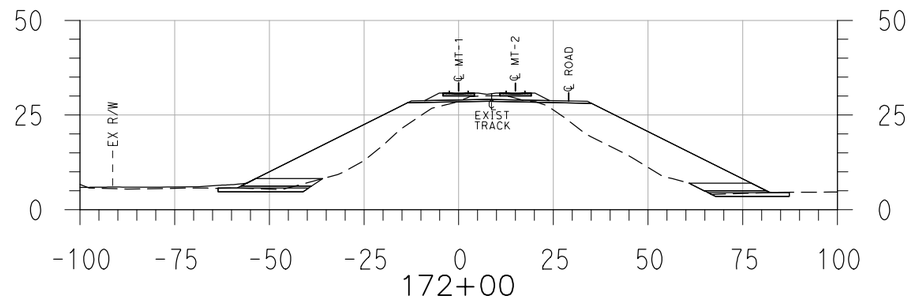
175+00



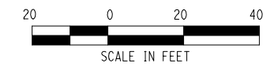
174+00



173+00



172+00



REV.	DATE	DESCRIPTION	BY / SUB. / APP.

Information confidential allplans, drawings, specifi-cations, and or information furnished herewith shall remain the property of the San Diego Association of Governments and shall be held confidential and shallnot be used for any purpose not provided for in agreements with the San Diego Association of Governments.

DESIGNED BY A. ABDO
DRAWN BY K. WADESON
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL

NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

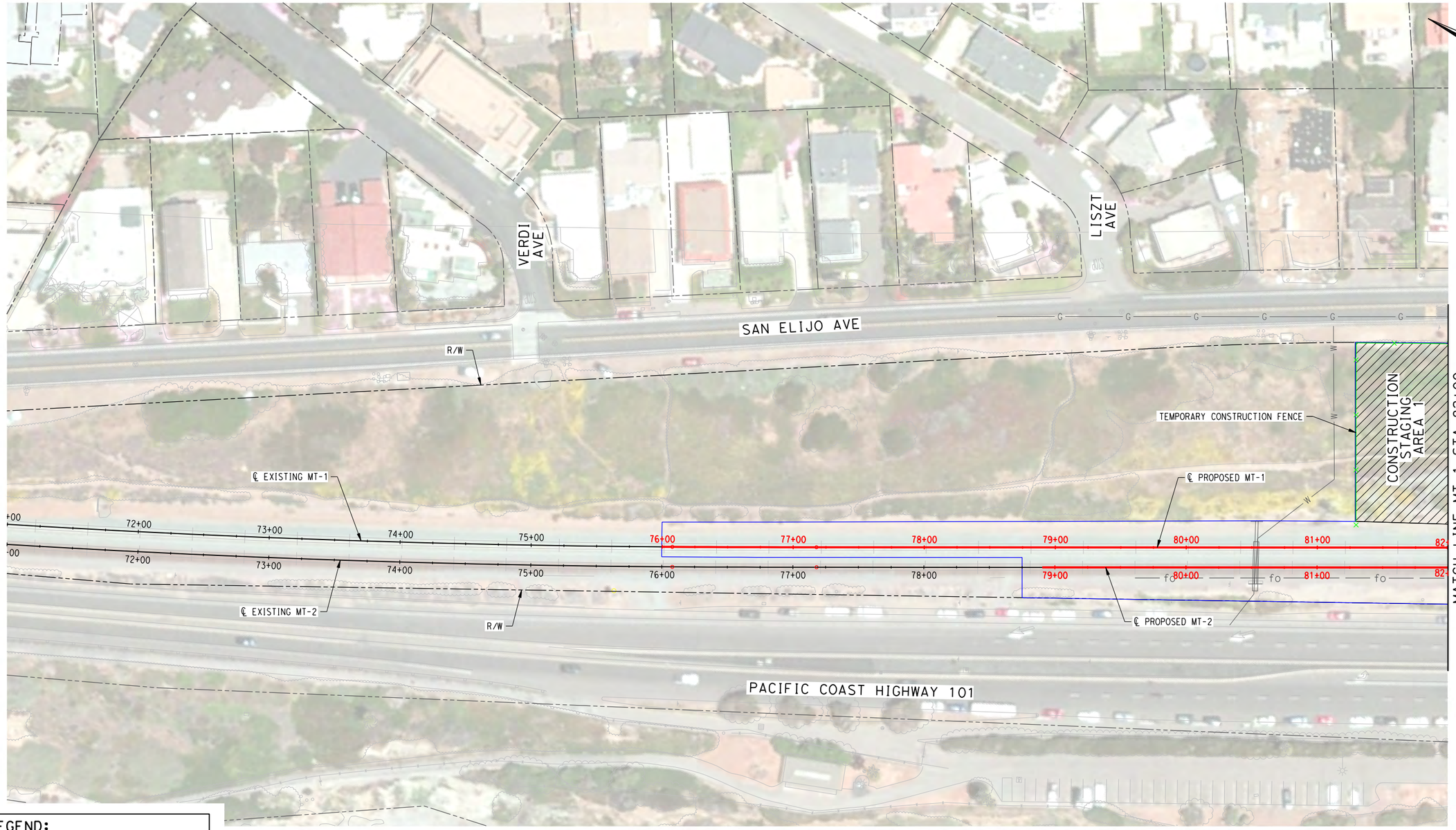
TRACK CROSS SECTIONS STA. 169+00 TO STA. 175+00

Exhibit 5, p. 6
CC-0004-15
SANDAG

c:\pwwork1ng\sac\d0511808\SEL-XS01-XS17.dgn 9/29/2015

TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTES:

1. CONTRACTOR TO AVOID IMPACTS TO EXISTING BLUFFS WHERE POSSIBLE.
2. DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

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SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 71+00 TO STA 82+00

Exhibit 6
CC-0004-15
SANDAG

9/29/2015
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TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

MONTGOMERY AVE

MOZART AVE

SAN ELIJO AVE

R/W

TEMPORARY CONSTRUCTION ENTRANCE

TEMPORARY CONSTRUCTION FENCE

TEMPORARY CONSTRUCTION ENTRANCE

EMPLOYEE PARKING

CONSTRUCTION STAGING AREA 1

℄ EXISTING MT-1

℄ EXISTING MT-2

℄ PROPOSED MT-2

CONSTRUCTION STAGING AREA 2

PACIFIC COAST HIGHWAY 101

CP CARDIFF
MP 239.6

R/W

MATCH LINE MT-1 STA 82+00
SEE SEL-CS01

MATCH LINE MT-1 STA 93+00
SEE DWG. SEL-CS03

83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00 91+00 92+00

LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTES:

1. CONTRACTOR TO AVOID IMPACTS TO EXISTING BLUFFS WHERE POSSIBLE.
2. DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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San Diego, California 92101
(619) 231-4865

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San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

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NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 82+00 TO STA 93+00

Exhibit 6
CC-0004-15
SANDAG

9/29/2015

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TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

BIRMINGHAM DR

LIVERPOOL DR

SAN ELIJO AVE

R/W

TEMPORARY CONSTRUCTION ENTRANCE

TEMPORARY CONSTRUCTION FENCE

℄ EXISTING MT-1

℄ PROPOSED MT-1

CONSTRUCTION STAGING AREA 3

MATCH LINE MT-1 STA 93+00
SEE DWG. SEL-CS02

94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104

CONSTRUCTION STAGING AREA 2

℄ EXISTING MT-2

℄ PROPOSED MT-2

PERMANENT ACCESS ROAD

R/W

CONSTRUCTION ENTRANCE

PACIFIC COAST HIGHWAY 101

MATCH LINE MT-1 STA 104+00
SEE DWG. SEL-CS04

LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTES:

1. CONTRACTOR TO AVOID IMPACTS TO EXISTING BLUFFS WHERE POSSIBLE.
2. DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL

NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

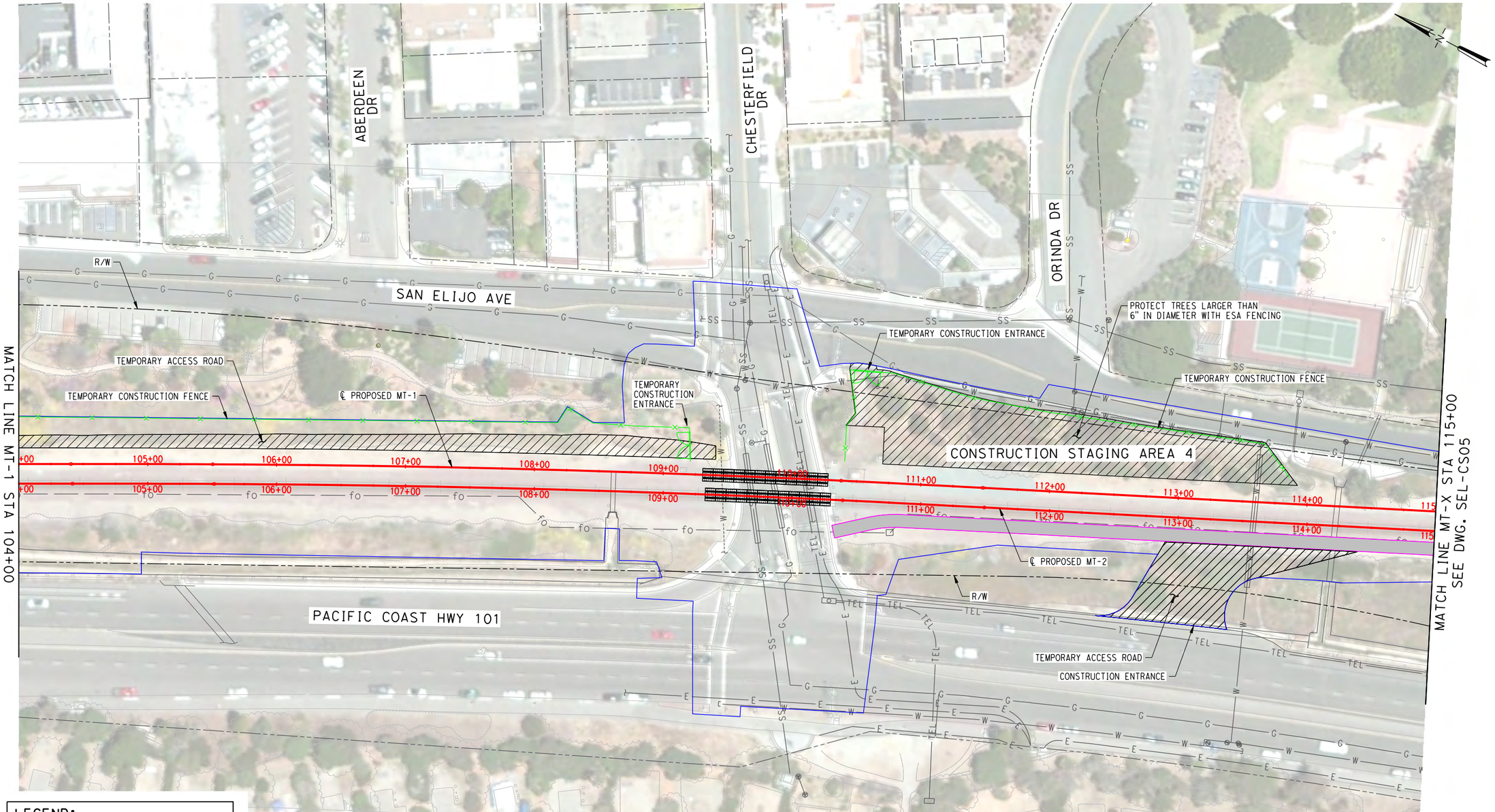
CONSTRUCTION ACCESS & STAGING MT-1 STA 93+00 TO STA 104+00

Exhibit 6, p. 3
CC-0004-15
SANDAG

c:\pwworking\sac\d0518111\SEL-CS03.dgn 9/29/2015

TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTES:

DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB	APP.

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DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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San Diego's Regional Planning Agency

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SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 104+00 TO STA 115+00

Exhibit 6, p. 4
CC-0004-15
SANDAG

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TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTES:

DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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San Diego's Regional Planning Agency

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SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 115+00 TO 126+00

Exhibit 6, p. 5
CC-0004-15
SANDAG

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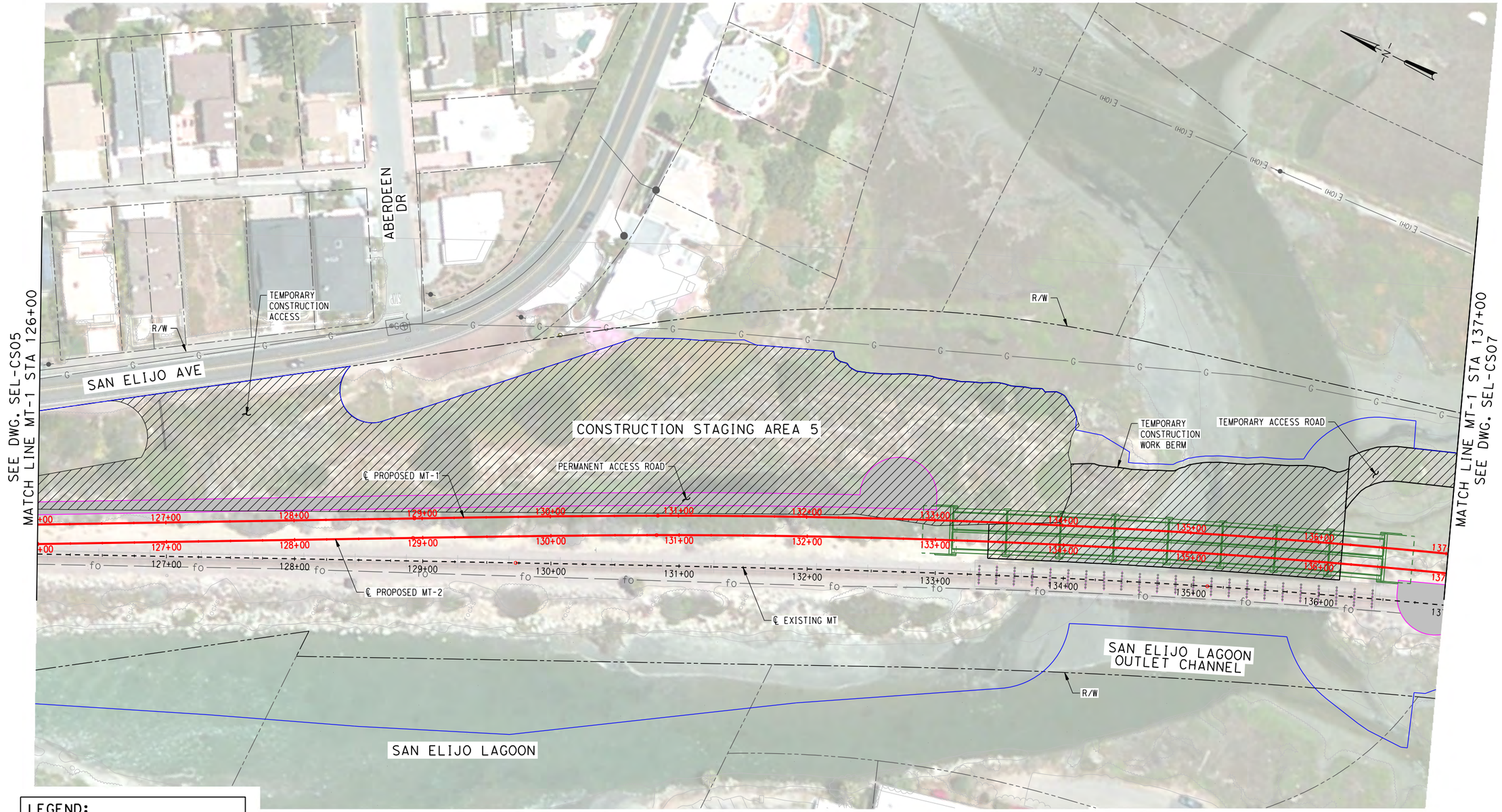
TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTES:

DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
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SANDAG
San Diego's Regional Planning Agency

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SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING STA MT-1 126+00 TO 137+00

Exhibit 6, p. 6
CC-0004-15
SANDAG

9/29/2015
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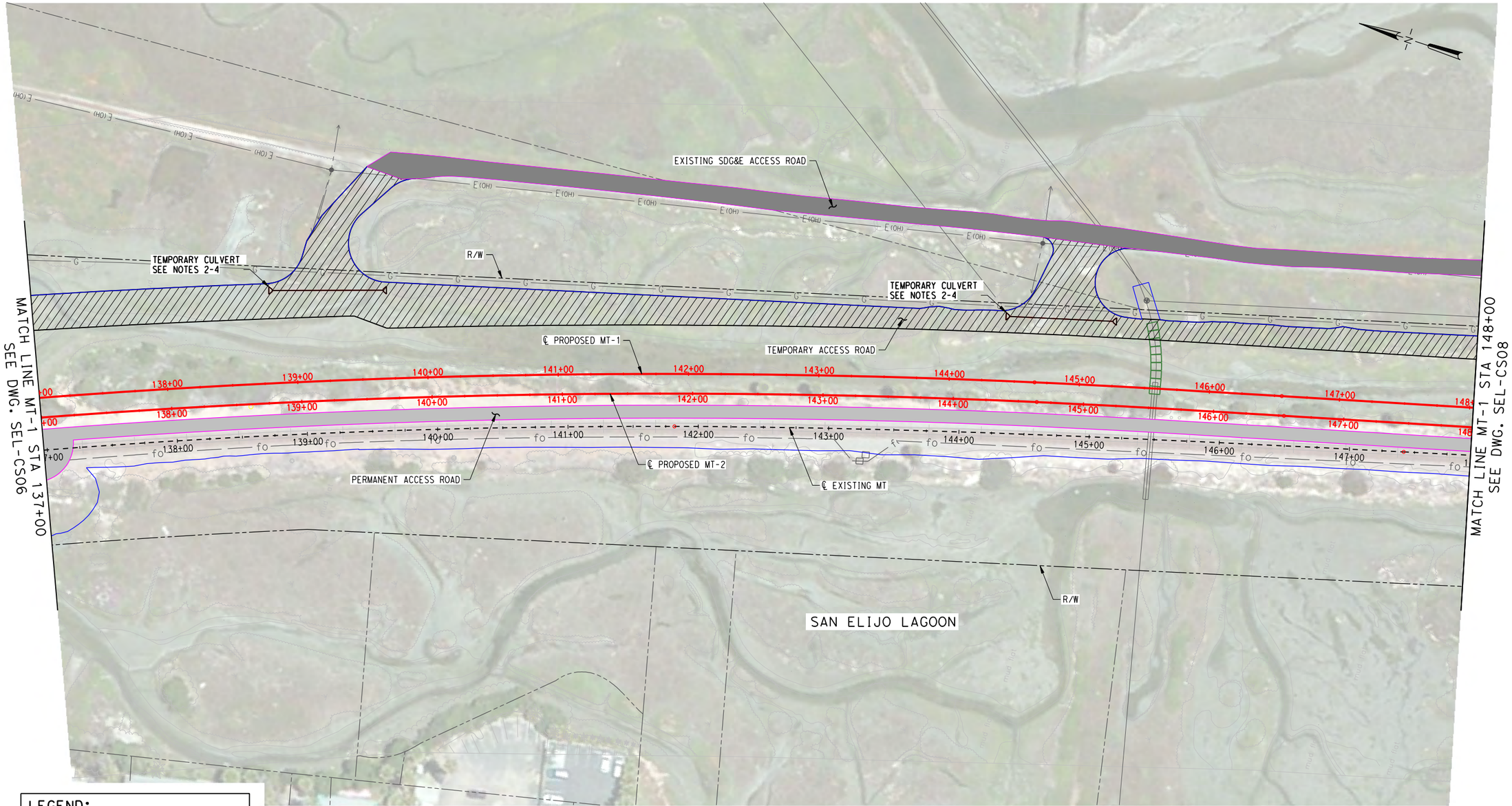
TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTE:

1. DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.
2. CONTRACTOR SHALL PROVIDE TEMPORARY CULVERTS AT THE SHOWN LOCATIONS THROUGHOUT CONSTRUCTION.
3. INVERT ELEVATIONS OF THE TEMPORARY CULVERTS SHALL BE AT ELEVATION 0' AT THE NORTH END AND APPROXIMATELY ELEVATION 1' AT THE SOUTHERN END TO ALLOW TIDAL FLOW.
4. CONTRACTOR SHALL REMOVE TEMPORARY CULVERTS AND RESTORE AFFECTED AREAS TO SALT MARSH UPON PROJECT COMPLETION.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

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NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

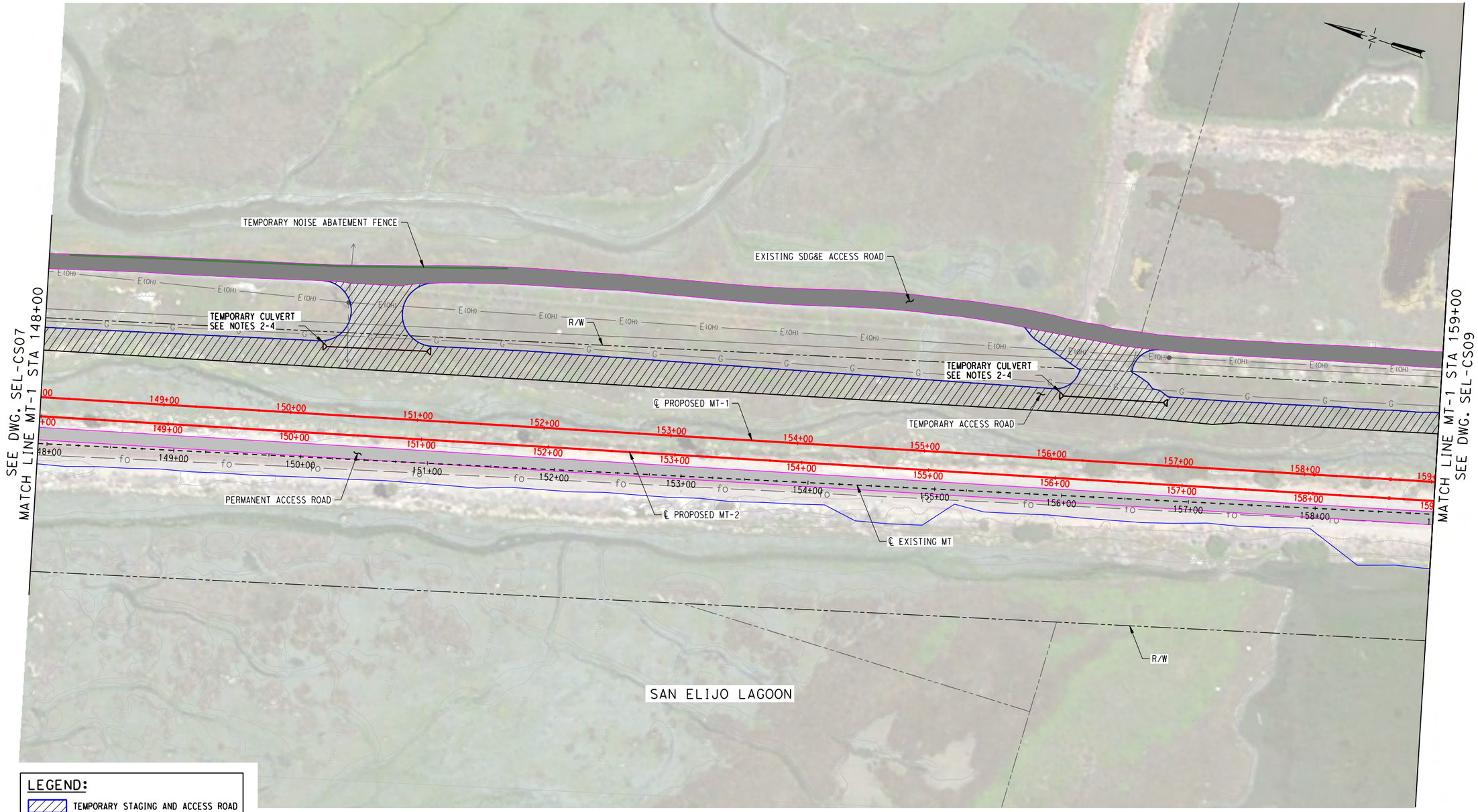
CONSTRUCTION ACCESS & STAGING MT-1 STA 137+00 TO 148+00

Exhibit 6, p. 7
CC-0004-15
SANDAG

c:\pwworking\sac\d0518113\SEL-CS07.dgn 9/29/2015

TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTE:

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40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

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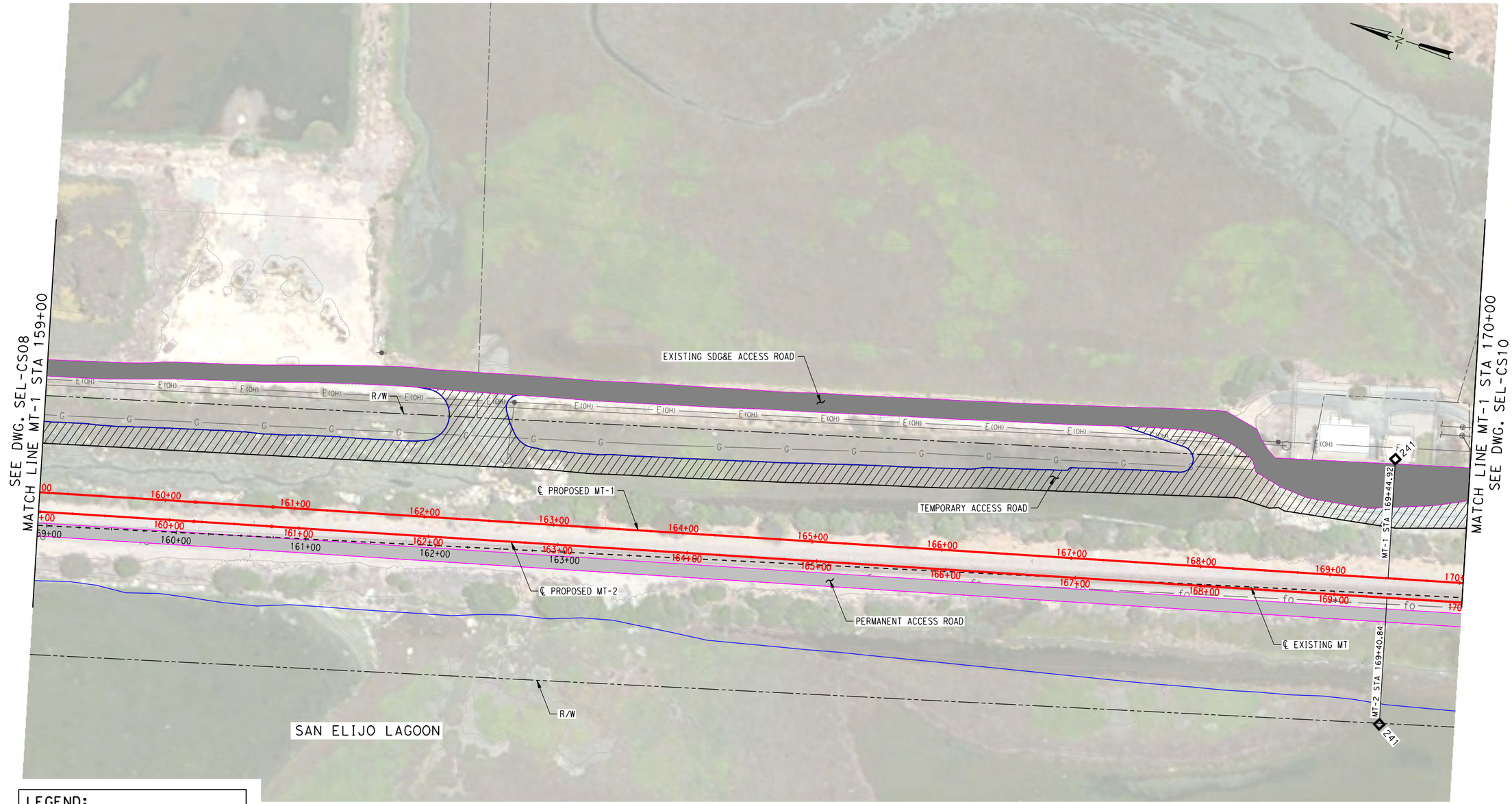
SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 148+00 TO 159+00

9/29/2015
c:\pwworking\sac\d0511181\SEL-CS08.dgn

TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTE:

1. DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.
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4. CONTRACTOR SHALL REMOVE TEMPORARY CULVERTS AND RESTORE AFFECTED AREAS TO SALT MARSH UPON PROJECT COMPLETION.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

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NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 159+00 TO 170+00

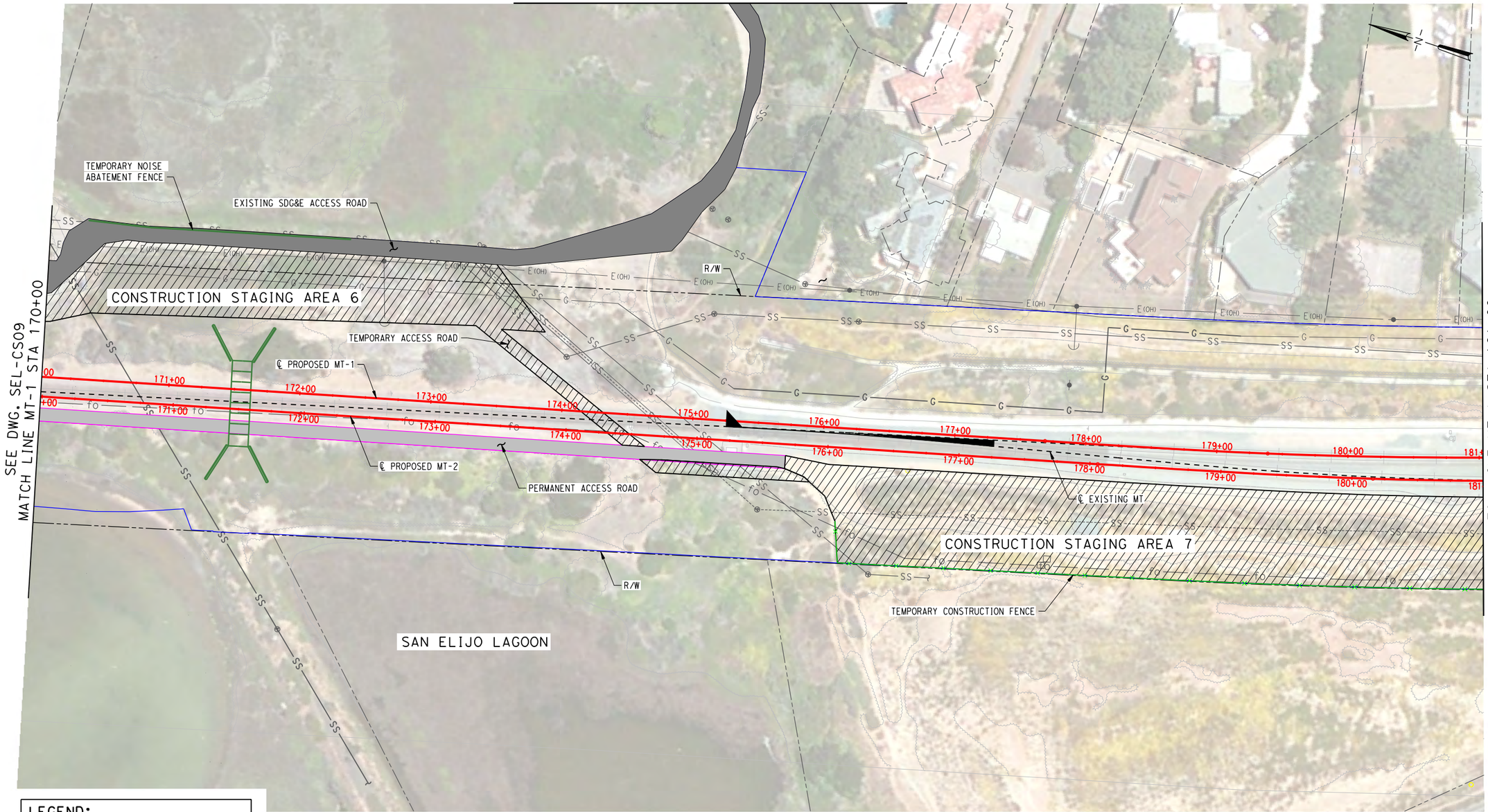
Exhibit 6, p. 9
CC-0004-15
SANDAG

9/29/2015
c:\pwworking\sacad5118\1\SEL-CS09.dgn

TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

SEE DWG. N RIOS AVE. ACCESS
SEE DWG. SEL-CS12



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTE:

DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

Information confidential allplans, drawings, specifi-cations, and or information furnished herewith shall remain the property of the San Diego Association of Governments and shall be held confidential and shallnot be used for any purpose not provided for in agreements with the San Diego Association of Governments.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL

NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

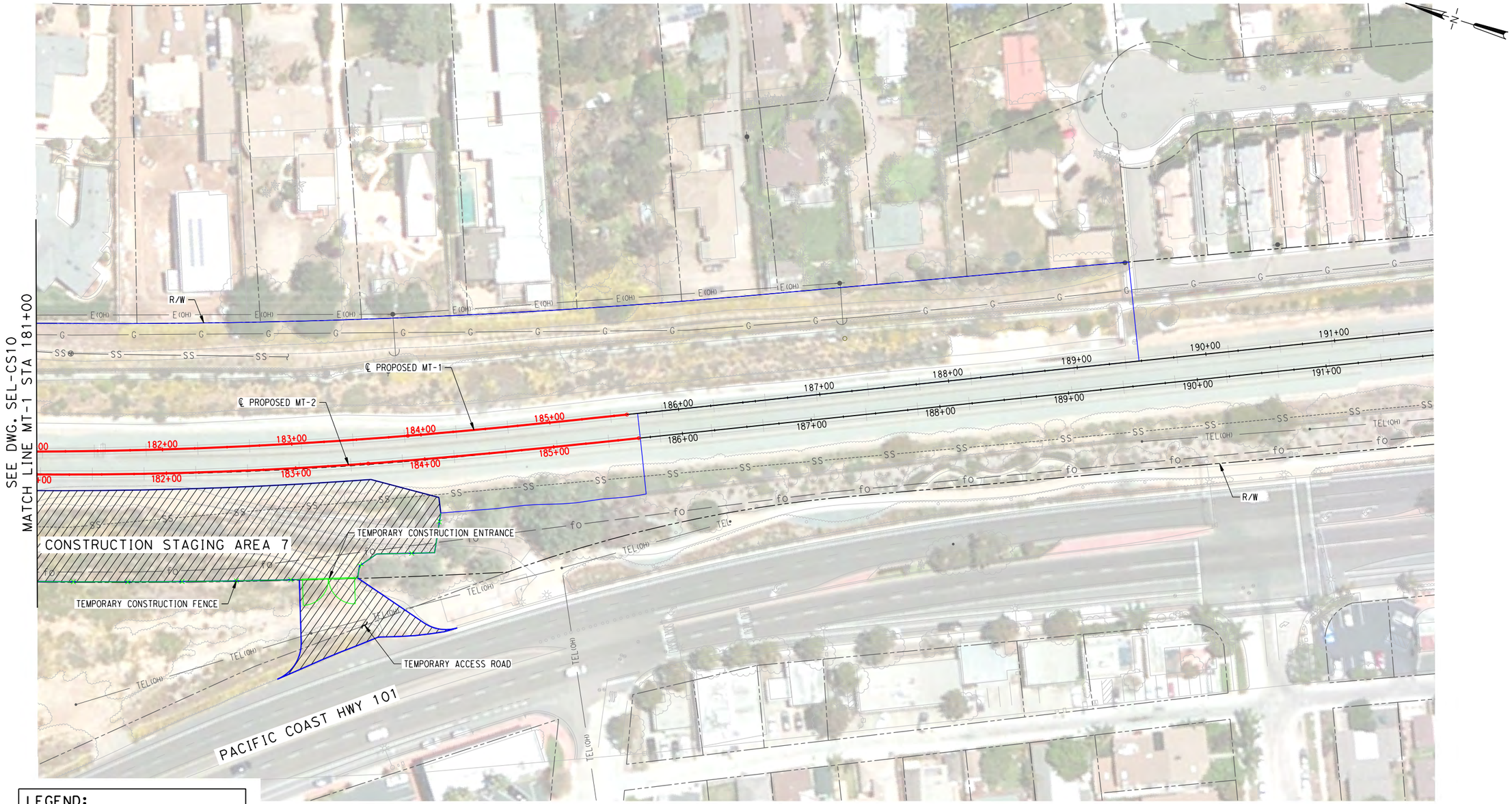
CONSTRUCTION ACCESS & STAGING MT-1 STA 170+00 TO 181+00

Exhibit 6, p. 10
CC-0004-15
SANDAG

c:\pwworking\sac\d0518111\SEL-CS10.dgn 9/29/2015

TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)



LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTE:

DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB	APP.

DESIGNED BY A. RUBIO
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL
NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

CONSTRUCTION ACCESS & STAGING MT-1 STA 181+00 TO END

Exhibit 6, p. 11
CC-0004-15
SANDAG

c:\pwworking\sac\d051811\SEL-CS11.dgn 9/29/2015

TP CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

SAN ELIJO LAGOON

TEMPORARY CONSTRUCTION ENTRANCE

N. RIOS AVE.

SEABRIGHT LN.

EXISTING SDG&E ACCESS ROAD

℄ EXISTING MT

LEGEND:

- TEMPORARY STAGING AND ACCESS ROAD
- PERMANENT ACCESS ROAD
- TEMPORARY CONSTRUCTION FENCE
- PROJECT FOOTPRINT

NOTE:

DUST CONTROL MEASURES TO BE IMPLEMENTED WITH ALL CONSTRUCTION ACCESS AND STAGING AREA.

MATCH LINE N RIOS AVE. ACCESS
SEE DWG. SEL-CS10

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY A. RUBIO
DRAWN BY J. MAY
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

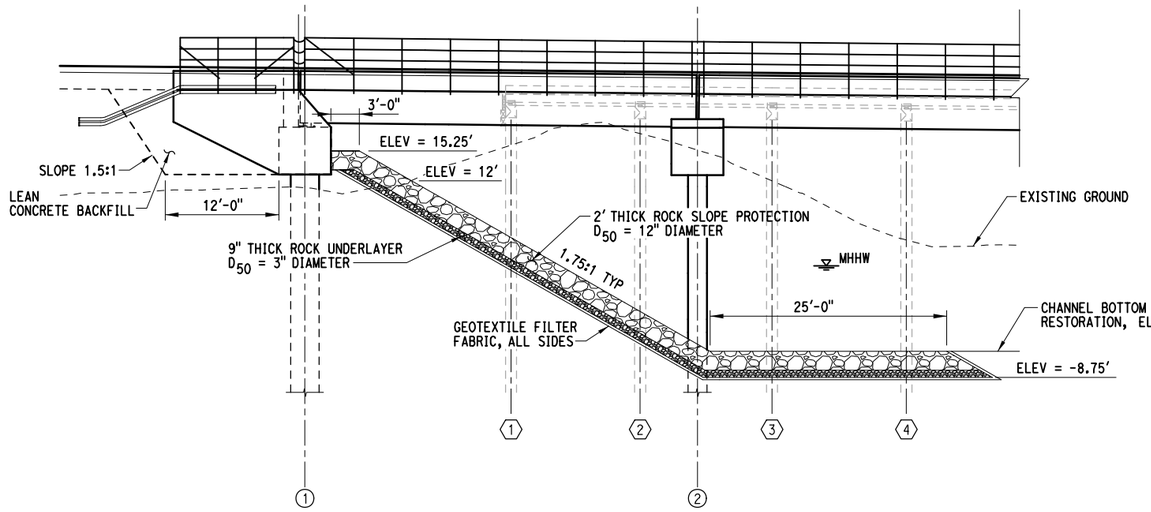
90% SUBMITTAL
NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

CONSTUCTION ACCESS & STAGING NORTH RIOS AVENUE ACCESS

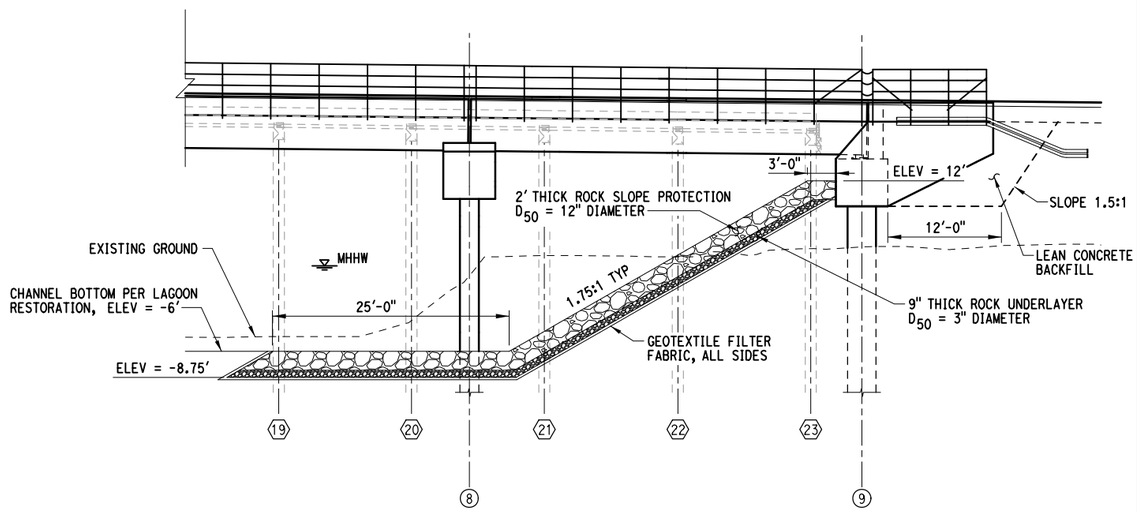
Exhibit 6, p. 12
CC-0004-15
SANDAG

c:\pwworking\sacs\d0511181\SEL-CS12.dgn 9/29/2015



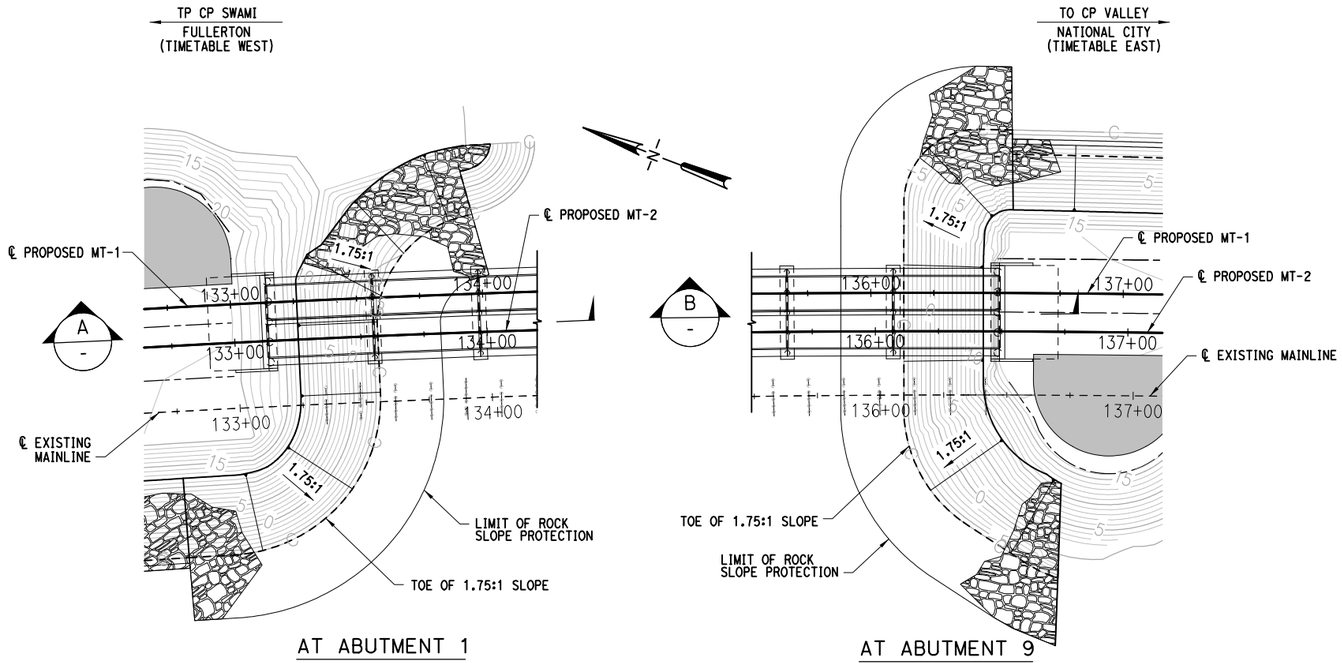
ABUTMENT 1 ELEVATION
SECTION A

NOT TO SCALE
(LOOKING TIMETABLE NORTH)



ABUTMENT 9 ELEVATION
SECTION B

NOT TO SCALE
(LOOKING TIMETABLE NORTH)



AT ABUTMENT 1

AT ABUTMENT 9

ROCK SLOPE PROTECTION LIMITS

SCALE: 1"=30'

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

Information confidential allplans, drawings, specifi-cations, and or information furnished herewith shall remain the property of the San Diego Association of Governments and shall be held confidential and shall not be used for any purpose not provided for in agreements with the San Diego Association of Governments.

DESIGNED BY	J. YU
DRAWN BY	J. MAY
CHECKED BY	B. REZNIKOV
APPROVED BY	G. ROSCA
DATE	SEPTEMBER 2015

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San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL

NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

ABUTMENT SLOPE PROTECTION DETAILS

Exhibit 7
CC-0004-15
SANDAG

9/30/2015

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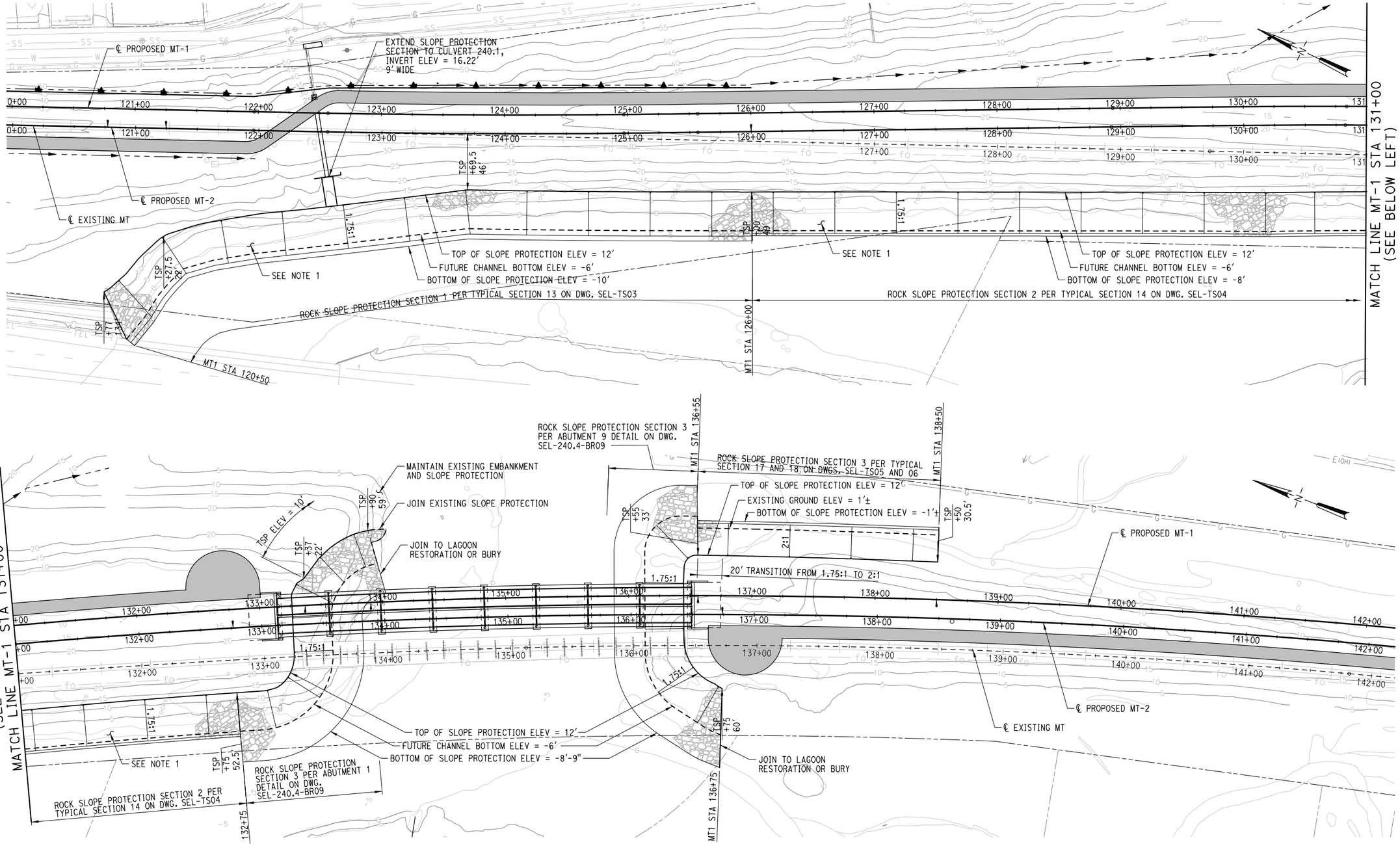

NOTES:

1. GRADING AND SLOPE PROTECTION ALONG INLET CHANNEL TO MATCH EXISTING SURFACE AS CLOSE AS POSSIBLE AT 1.75:1 SLOPE.

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

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DESIGNED BY D. M./R. A.
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SAN ELIJO LAGOON DOUBLE TRACK

GRADING AND DRAINAGE PLAN ROCK SLOPE PROTECTION LAYOUT

Exhibit 7, p. 2
CC-0004-15
SANDAG

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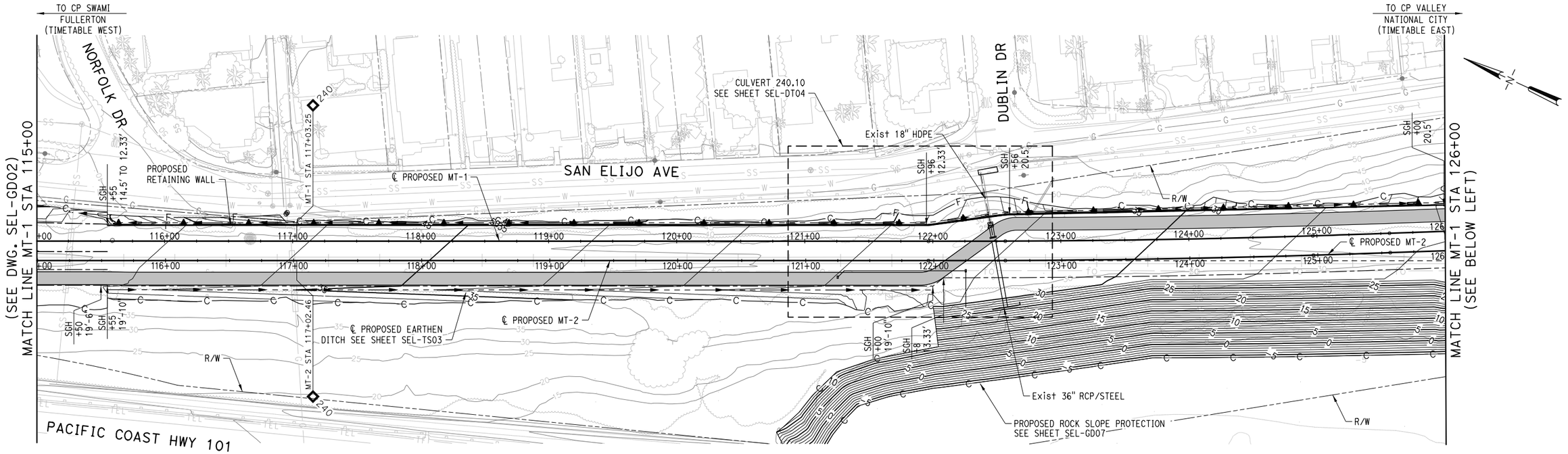

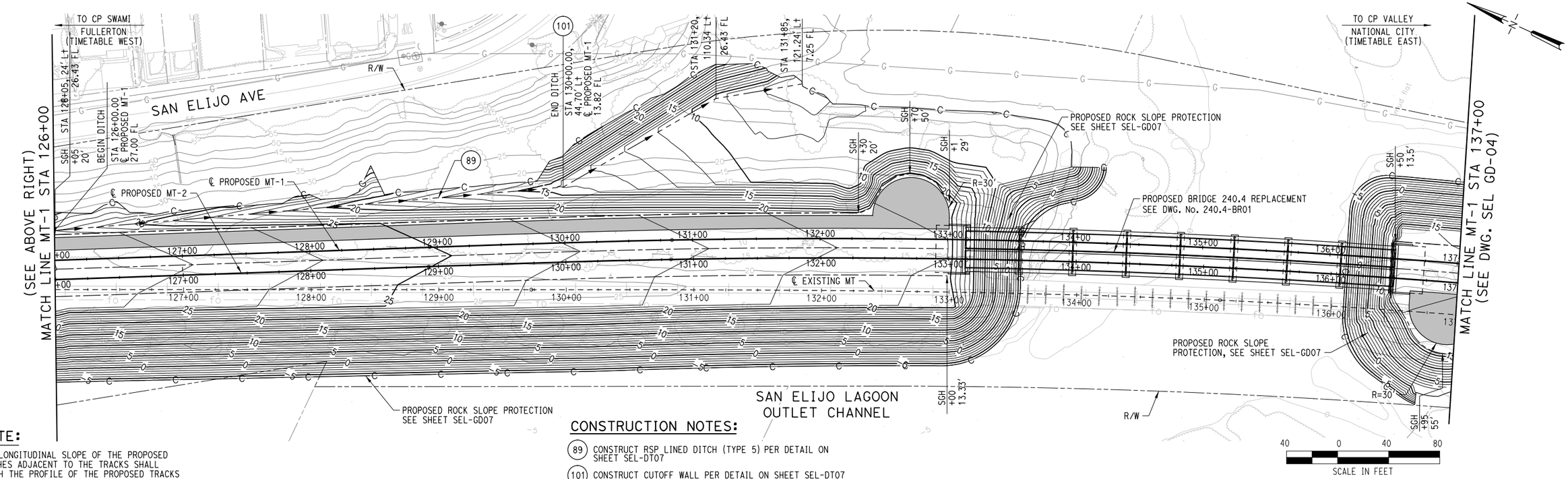

NOTE:

THE LONGITUDINAL SLOPE OF THE PROPOSED DITCHES ADJACENT TO THE TRACKS SHALL MATCH THE PROFILE OF THE PROPOSED TRACKS UNLESS OTHERWISE NOTED.

CONSTRUCTION NOTES:

(89) CONSTRUCT RSP LINED DITCH (TYPE 5) PER DETAIL ON SHEET SEL-DT07

(101) CONSTRUCT CUTOFF WALL PER DETAIL ON SHEET SEL-DT07

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

DESIGNED BY D. M./R. A.
DRAWN BY J. MAY/W. STEBOK
CHECKED BY V. HAGHDOUST
APPROVED BY G. ROSCA
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San Diego's Regional Planning Agency

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NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

GRADING AND DRAINAGE PLAN
MT-1 STA 115+00 TO STA 137+00

Exhibit 7, p. 3
CC-0004-15
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Figure 7a. USACE and CCC Jurisdictional Areas

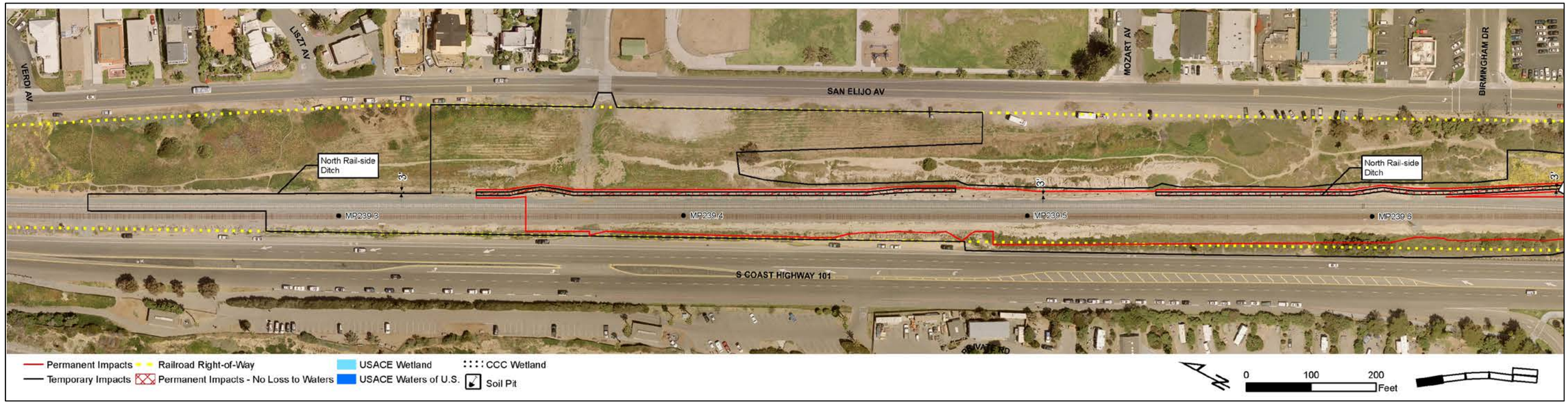

Figure 7b. USACE and CCC Jurisdictional Areas

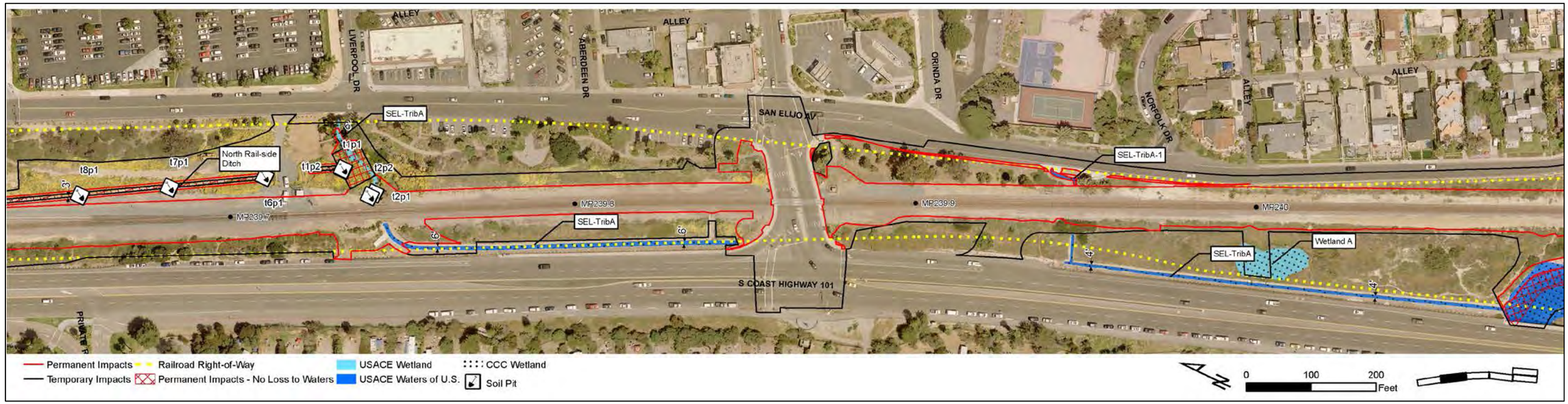

Exhibit 8
CC-0004-15
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Figure 7c. USACE and CCC Jurisdictional Areas

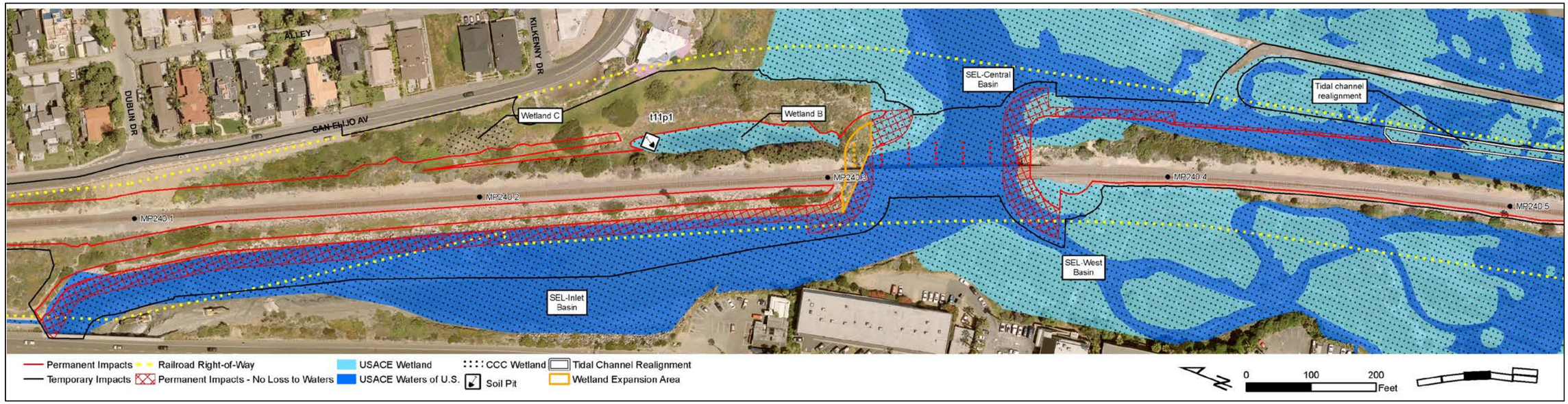

Figure 7d. USACE and CCC Jurisdictional Areas

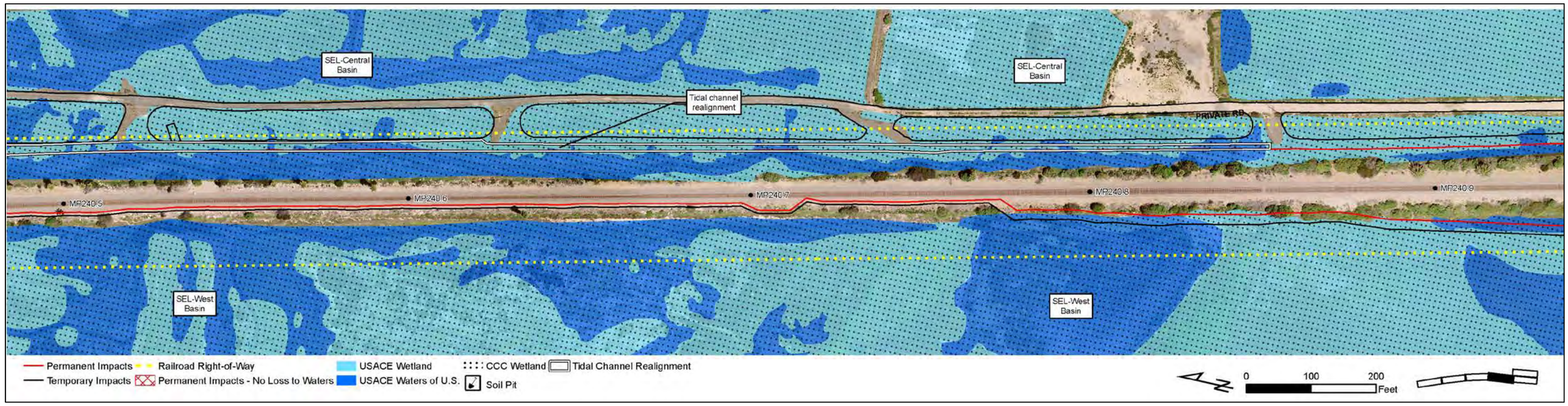

Exhibit 8, p. 2
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Figure 7e. USACE and CCC Jurisdictional Areas

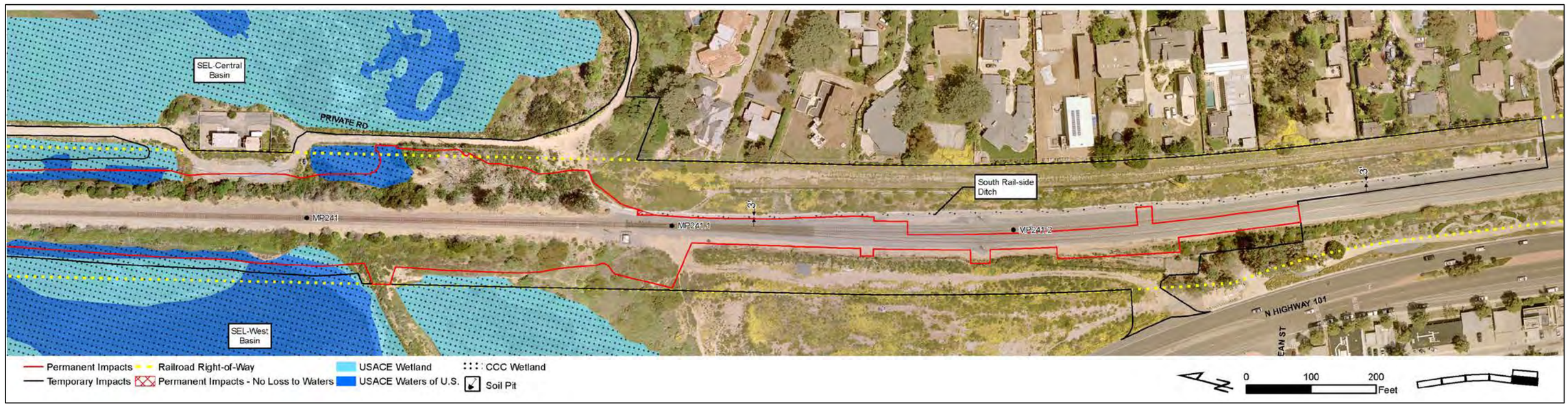

Figure 7f. USACE and CCC Jurisdictional Areas

Exhibit 8, p. 3
CC-0004-15
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Table 10. Loss of CCC Wetlands by Project Component

Project Component	Aquatic Feature Name	Temporary Loss (acres)	Permanent Loss (acres)	Total Loss (acres)
Culvert 239.7	SEL - Trib A	--	0.01	0.01
Outfall Improvements	SEL - Trib A	--	0.01	0.01
ACB	SEL - Trib A	0.01	--	0.01
ACB	North Rail-Side Ditch	0.07		0.07
Concrete-Lined Ditch	North Rail-Side Ditch		0.01	0.01
Storm Drain 239.94	SEL - Trib A1	--	0.01	0.01
Track Embankment Grading	North Rail-Side Ditch		0.04	0.04
	Wetland B	--	0.17	0.17
	Wetland C	0.08	0.00	0.08
	SEL - West Basin	0.48	0.23	0.71
	SEL - Central Basin	1.41	2.36	3.77
Inlet Channel Scour Protection	SEL - Inlet Channel	1.72	0.03	1.75
Bridge 240.4	Inlet Channel	0.18	--	0.18
	SEL - West Basin	0.34		0.34
	SEL - Central Basin	0.59	<0.01	0.59
Staging and Access	Wetland B	0.00	0.15	0.15
	SEL - Central Basin	0.45	0.00	0.45
Public Access Tunnel	SEL - Central Basin	0.00	0.05	0.05
Concrete Ditch Realignment	SEL - Trib A	0.02	--	0.02
Gas Line Realignment	Wetland A	0.04	--	0.04
Sewer Realignment	SEL - Central Basin	0.01	--	0.01
Channel Realignment	South Rail - Side Ditch	0.01	--	0.01
Total[1]		5.40	3.06	8.46
Establishment resulting from Bridge Replacement	Inlet Channel	--	[+0.05]	[+0.05]
Net Impacts		5.40	3.01	8.41

[1] The sum of individual rows overestimates total impacts as a resulting of rounding. The reported total is based on more precise values presented in Appendix F.

Exhibit 9
CC-0004-15
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4.1 Design Alternatives

4.1.1 Alignment Alternatives

The railroad through San Elijo Lagoon is a historical use that dates back to the turn of the 20th Century. The existing railroad bridge (BR 240.4) and the railroad berm predate environmental regulations that were promulgated in the 1970s. This existing infrastructure constitutes an important investment by the people of the State of California and the United States. For this reason there are no practicable alternatives to provide a replacement bridge and a double tracked railroad between Solana Beach and Encinitas without impacting waters of the U.S. associated with San Elijo Lagoon.

SANDAG met with the resource agencies during preliminary design to identify an environmentally preferred track alignment that would be used during subsequent final design. The discussion focused on expanding the railroad berm to the west or to the east with the goal of locating the required improvements in non-special aquatic sites to the extent practicable. It was unanimously agreed that expansion to the east was environmentally preferred because the wetlands and other waters of the U.S. that occur to the east of the berm are isolated from the lagoon by the existing railroad berm and the existing SDG&E utility corridor that roughly parallels the railroad berm through the lagoon. The SDG&E utility corridor includes an improved access road, overhead electrical distribution and transmission lines and an underground natural gas line. The wetland strip between the berm and SDG&E utility corridor is approximately 75 feet to 300 feet wide, widening as it goes further to the north. On the west side, the distance between the berm and western edge of wetlands is approximately 200 feet to 600 feet wide (widening as it goes further south). To the north of Bridge 240.4, widening to the west would result in the railroad berm being widened into the lagoon inlet channel. This would restrict tidal exchange, which would limit the ability to maintain the current and future resources in the lagoon and would restrict floodwaters exiting the lagoon.

4.1.2 Railroad Berm Elevation Alternatives

The elevation of the railroad berm is directly related to the width of the railroad berm at the ground surface; and therefore, to the amount of fill to be placed into waters of the U.S. (through the lagoon, waters of the U.S. occur at the base of the railroad berm for the majority of the berm's length). Per the geotechnical report, 2:1 slopes are required for fill slopes in the lagoon. For every additional foot in elevation of the berm, an additional four feet of fill, measured in a direction perpendicular to the berm, is required.

The elevation of the railroad berm is dictated by several factors. Trains can only operate within a small range of vertical curves. For this project, there is an existing vertical curve that was considered in developing the elevation alternatives. Another factor is protection from storm events. Standard engineering practice for railroads and other public facilities is to protect the facility from a 100-year storm event. This is more complicated for locations near the coast because predicted sea level rise changes the currently modeled 100-year storm event water surface elevation. Current sea level rise guidance provides a range of potential future levels through the year 2100 and the Project is designed to have a 100-year life. Therefore the uncertainty of future sea levels and the potential for sea level rise beyond 2100 was also considered in the elevation alternatives developed.

Hydraulic modeling of the lagoon system was performed to determine water surface elevation (WSE) with and without the project. Bridge 240.4 has experienced historical flooding and is generally considered to have less-than-adequate

flood protection. The hydrology analysis added the projected year 2100 sea level rise of 4.6 feet (55 inches) to the Mean Higher High Water level to establish the controlling water surface. Impacts of wave dynamics are likely to be significantly diminished by Highway 101 and were not deemed critical for the purpose of the hydrology analysis.

The WSE criteria for Bridge 240.4 (in the following ascending priority as approved by SANDAG), based on direction from NCTD and American Railway Engineering and Maintenance-of-Way Association (AREMA) recommended practices, are shown below.

1. 100-year WSE below low-chord;
2. 100-year energy gradeline (EGL) elevation below top of subgrade and 50-yearwater surface (hydraulic gradeline [HGL]) elevation below low-chord;
3. 50-year water surface HGL elevation below low-chord; and,
4. No increase of water surface elevations within Project area.

Based on the 100-year expected life of the Project and that there are no alternative rail routes into or out of San Diego County, anything less than the protection afforded by criteria No. 1 above is not practicable.

The Project meets all of the criteria outlined above. Below is a summary of hydraulic results for the Project.

Table 4.1-1
Hydraulic Modeling Results
(Double-Track to East, Low Chord=14.41 ft)

Criterion	Standard	Model Results	Criterion Met?
1. 100-yr WSE < Low-chord	Low-chord = 14.41	100-yr WSE = 13.40	Yes (-1.01)
2. 100-yr EGL < Top of SBGD	Top of SBGD = 13.62	100-yr EGL = 13.53	Yes (-0.09)
50-yr WSE < Low-chord	Low-chord = 14.41	50-yr WSE = 11.85	Yes (-2.56)
3. 50-yr WSE < Low-chord	Low-chord = 14.41	50-yr WSE = 11.85	Yes (-2.56)
4. Proposed WSE ≤ Existing WSE	Existing 100-yr WSE =16.69	Proposed 100-yr WSE =13.40	Yes (-3.29)

WSE = water surface elevation (ft), EGL = energy gradeline elevation (ft), SBGD = subgrade. All elevations are feet NGVD 1929. All water surface elevations are taken from the first cross section upstream of the bridge, except where comparing against Top of SBGD, these values were taken from the sag near the Mid Lagoon.

With regard to the railroad embankment, the current low point will be raised with the Project. The lowest top of rail in the lagoon will be 17.84 feet. The subgrade would be about 3.24 feet below top of rail or at 14.60 feet. The modeled 100-year WSE, including the effects of predicted sea level rise is 13.4 feet. This provides a modest freeboard 1.2 feet above the modeled 100-year storm event WSE with sea level rise in the year 2100. Given the uncertainty in future sea levels, and the 100 year life of the Project, this additional freeboard is prudent planning.

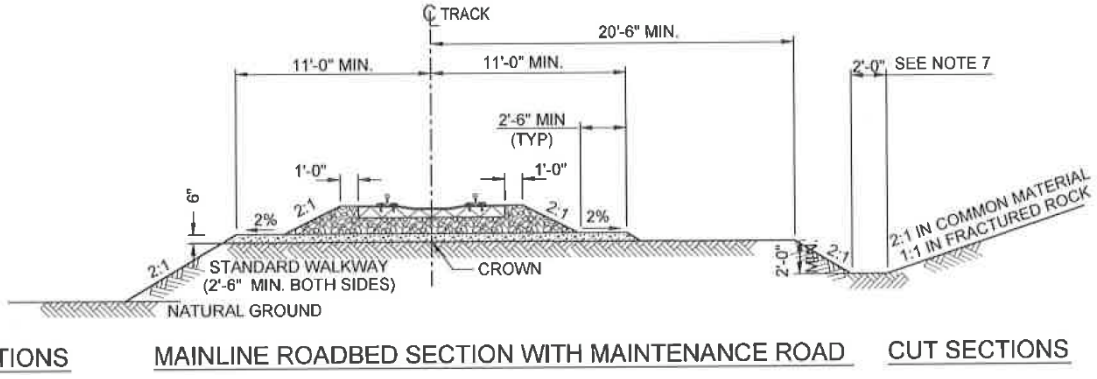
4.1.3 Access Road Alternatives

Access roads have been required by NCTD in new construction for the safety and accessibility of its maintenance operations and the likely need for future maintenance given the 100-year life expectancy of the proposed improvements. The access roads allow for maintenance vehicles to inspect and repair railroad infrastructure such as track, and its associated components, without the need of bringing equipment and materials in by high-rail or by blazing trails through habitat areas adjacent to the tracks. This reduces impacts to train operations and reduces maintenance

times. According to the Southern California Regional Rail Authority (SCRRA) Design Criteria Manual, *Section 8.11.2 SCRRA Maintenance Vehicle Access* states that "Maintenance vehicle access, particularly turnouts, signals, and curve lubricators, shall be provided." It is certain maintenance will be required during the 100-year life of the Project. Providing an all-weather access road would eliminate or substantially reduce future temporary impacts to waters of the U.S. in San Elijo Lagoon that would otherwise be necessary to perform future maintenance.

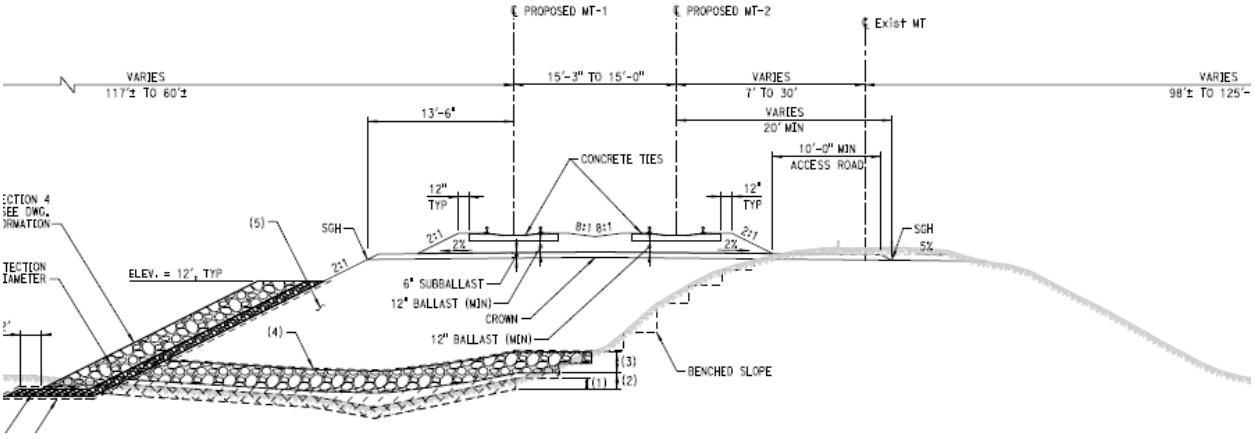
The figure below shows the standard cross section with a maintenance road from the Draft NCTD/LOSSAN Engineering Standards.

Draft LOSSAN Engineering Standard Drawing ESD-2002

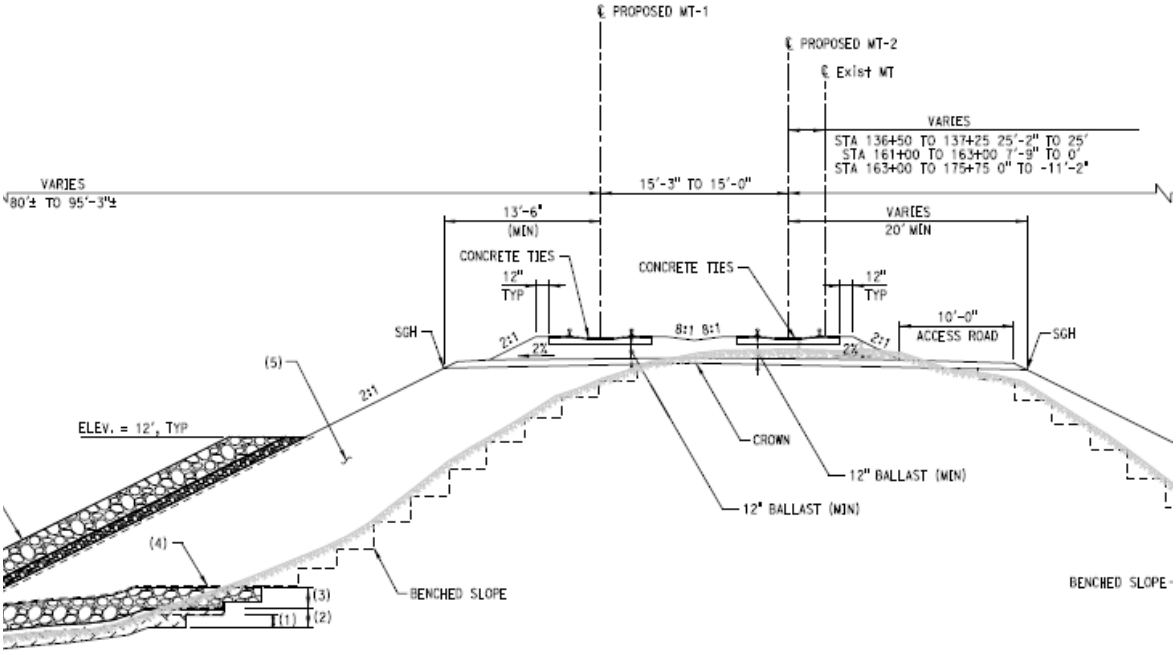


For the Project, construction of a permanent access road is proposed on the west side of the tracks through the San Elijo Lagoon. The access road width has been minimized to 10-feet, and does not include additional area for a walkway (i.e., the access road will serve the function of an FRA-required walkway and access road). The access road was designed to the minimum width required for vehicular access in an attempt to reduce the Project footprint and associated impacts to the lagoon habitat. Below are the typical SELDT cross sections within the lagoon.

SELDT Typical Section Within Lagoon North of STA 159+50



SELDT Typical Section Within Lagoon South of STA 159+50



The track alignment within the lagoon is largely dictated by both the placement of Bridge 240.4 and the track raise needed to protect from a 100 year storm event and future sea level rise. The proposed bridge would be built completely offline from the existing bridge for constructability purposes and to reduce construction impacts and construction duration within the lagoon. As a result of the offline construction approach, the nearest proposed track must be offset a minimum of 25 feet from the existing track to avoid impacts to the existing bridge during construction. Additionally the track within the lagoon is being raised 4.33 feet at its maximum. In order to accommodate this raise, the proposed MT1 track must be built far enough eastward so that the raised embankment does not interrupt the existing track and train service, which must remain in service during proposed MT1 construction. After its completion, train service would be switched onto MT1 and the existing track would be raised to the proposed MT2 location and elevation.

These two criteria require a significant offset east of the existing track through the majority of the lagoon. This creates an opportunity for additional embankment space on the west side of the track which lends itself to an access road that requires no additional impacts to the west side of the existing embankment. Access road impacts only result from the turnaround at Bridge 240.4, and toward the southern extent of the lagoon as the proposed track ties back into the existing track location. These impacts are limited between STA 159+50 to 175+00. Without the access road, impacts on the west side of the embankment in this station range are still required due to the nature of the track alignment tying into the existing double track. Removing the access road would decrease the Project footprint between STA 159+50 to 175+00 by roughly 7 feet, as a walkway is still required on both sides of the track by CPUC. This would result in a reduction in permanent impacts to waters of the U.S. by under 0.25 acre (1,550 feet x 7 feet / 43,560 sq ft/ac). Given the benefits accrued by having an access road, the predictable need for future maintenance and inspections during the 100 year life of the Project, the sensitivity of the surrounding habitat areas that would be impacted in the future should an access road not be provided, and the relatively minor impact to 0.25 acre of waters of the U.S., it would not be practicable to remove the access road from the proposed project.

During the site visit on September 18, 2015, several resource agency attendees questioned the need for two access roads through the lagoon (Proposed railroad and existing SDG&E). There are several reasons a joint access road is not practicable as discussed below.

Joint Use of Proposed Railroad Access Road.

The proposed railroad access road is at the top of the railroad berm. This location is necessary so that NCTD has access to both sides of the berm and also because the proposed access road would provide all weather access in the event of flooding and extreme high tides. SDG&E's overhead power lines and underground gas line are between 75 feet and 300 feet away from the bottom of the railroad berm. With joint use of the railroad access road, they would be even farther away from the access road, which would be at the top of the berm.

In order to use the proposed railroad access road, SDG&E's personnel and/or contractors would need to be railroad safety trained (four hours of training on a yearly basis at a current cost of $80 per trainee), and a railroad flagman would be required to protect SDG&E's personnel and/or contractors. SDG&E would have to pay NCTD for the flagman, and flagmen are not always available. In addition, NCTD requires Right of Entry (ROE) permits to gain access to its ROW and railroad protective liability insurance is a requirement to obtain the ROE. The ROE permit must be reapplied for every 12 months. These procedures would be problematic for SDG&E, especially if emergency access to SDG&E infrastructure is required. Also, SDG&E would have no means to get from the railroad berm over to their seven power lines and gas line because there is no permanent connection proposed between the railroad berm and SDG&E easement. Seven permanent access ramps would be required from the top of the railroad berm down into the lagoon to provide access to the power poles. The railroad access road would not provide access to SDG&E's infrastructure without additional impacts to waters of the U.S. from these ramps. For these reasons, SDG&E would be very unlikely to give up their current access road in their historic easement in favor of NCTD's proposed access road.

There are other utility providers that use the SDG&E access road, including the City of Solana Beach and the Joint Powers Authority. These agencies would be subject to the same requirements for access to the railroad ROW, and the NCTD access road would not provide access to their infrastructure without additional impacts to waters of the U.S.

For these reasons the proposed NCTD access road would not provide a practicable alternative access to SDG&E's and other utility provider's utilities that cross through San Elijo Lagoon in the vicinity of the railroad ROW.

Joint Use of SDG&E's Existing Access Road

SDG&E's access road is between 75 feet and 300 feet away from the bottom of NCTD's railroad berm. It is also substantially lower in elevation than NCTD's existing and proposed railroad berm. SANDAG would have to build permanent access ramps from SDG&Es access road up to the level of the tracks. These ramps would result in additional permanent loss of waters of the U.S. within San Elijo Lagoon. NCTD would have access to its infrastructure in the vicinity of where these ramps would tie into the railroad berm (for SELDT's construction these ramps would be approximately every 500 feet and would coincide with the rock projections from SDG&E's access road that provide access to SDG&E's guy wires that support the electrical poles). NCTD would not have access to infrastructure that occurs in between these ramps, making this alternative not practicable.

SDG&E's access road is near sea level and is subject to inundation during even common storm events, especially during times of extreme high tides. For this reason SDG&E's access road would not provide all weather access into the lagoon and to NCTD's infrastructure.

The public uses the SDG&E access road to gain access to the lagoon, and wildlife crosses the road. Use of the SDG&E access road could result in conflicts between NCTD maintenance vehicles and the public/wildlife. As an example of this conflict, during a site visit on September 18, 2015 a dead endangered Ridgeway's rail was found on the side of the SDG&E access road.

For these reasons, the SDG&E access road would not be a practicable alternative to the proposed NCTD access road on top of the railroad berm.

San Elijo Lagoon Double Track Maintenance Road Alternatives

Safe maintenance access to a railroad's infrastructure is vital to the operability of the railroad. Access is required for the following purposes:

- Perform inspections of the tracks, ballast, ties, embankment, drainage, bridge and other infrastructure components as required by law;
- Perform security inspections, which has become an even greater focus since 9/11/2001;
- Conduct maintenance and repair activities as necessary to ensure the safe operation of passenger and freight trains using the corridor:
    - bridge maintenance;
    - rip rap/slope maintenance;
    - track maintenance;
    - pre- and post-storm maintenance; and,
    - signal and fiber optic line maintenance.
- Provide emergency access; and,
- Provide an evacuation route in the event of a derailment or other accident.

In order to provide safe access to conduct these tasks, railroads have established standard design elements. These elements are dependent on the degree of access available from adjacent lands to the railroad infrastructure. In the case of the San Elijo Lagoon Double Track Project as it crosses through San Elijo Lagoon, access from the adjacent lands in the lagoon is extremely limited by the following:

- The presence of sensitive coastal wetlands occupied by the endangered Ridgeway's clapper rail;
- The presence of critical habitat for the western snowy plover, which presently does not provide suitable nesting habitat. After restoration of this currently degraded habitat, the area is expected to contain the physical or biological features essential to the conservation of the species;
- The presence of high water, especially during flood periods and king tides;
- The presence of an elevation difference of approximately 15 to 20 feet between the adjacent ground the top of the embankment; and,
- A lack of ownership of or perpetual access agreements to adjacent lands.

For these reasons, all access to the embankment, tracks, and associated infrastructure and to the southern abutment of the proposed bridge has to be from the top of the railroad embankment.

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To the greatest extent possible safe access must be provided while maintaining rail service on at least one through track. With the access limitation described above, standard design elements to protect worker and passenger safety require a minimum of 25-foot track centers (i.e., 25 feet from the midpoint between the easterly rails and the midpoint of the westerly rails (see lower cross section in Figure 1).

Per the Federal Railroad Administration (FRA) 49 CFR Part 214.336.A.3, "Adjacent track means a controlled or non-controlled track whose track center is spaced less than 25 feet from the track center of the occupied track." This distance allows for on-track inspection and maintenance equipment to safely occupy one track while the other track remains in service. An additional 3-foot trainman's walkway is required by the FRA to be provided on both side of the double track configuration. This requires a minimum embankment width at the top of embankment of 52 feet.

An alternative to this configuration incorporates an access road on one side of the double track configuration. With the access road, NCTD is able to reduce track centers to a minimum of 15-foot track centers. FRA's 3-foot minimum trainman's walkway is required on the side that does not include the access road. This configuration requires a minimum embankment width at the top of embankment of 48 feet, 6 inches (see top cross section in Figure 1).

The access road alternative reduces the width of the top of the embankment by 3 feet, 6 inches. This reduction also reduces the bottom width of the embankment where it daylights onto the neighboring land. Note that the width of the bottom of the embankment will vary depending on the existing elevations on either side of the embankment at ground level. In the case of the proposed San Elijo Lagoon Double Track, this reduction is shown on Figures 2-8. Overall, impacts to wetlands are reduced with the access road alternative as follows:

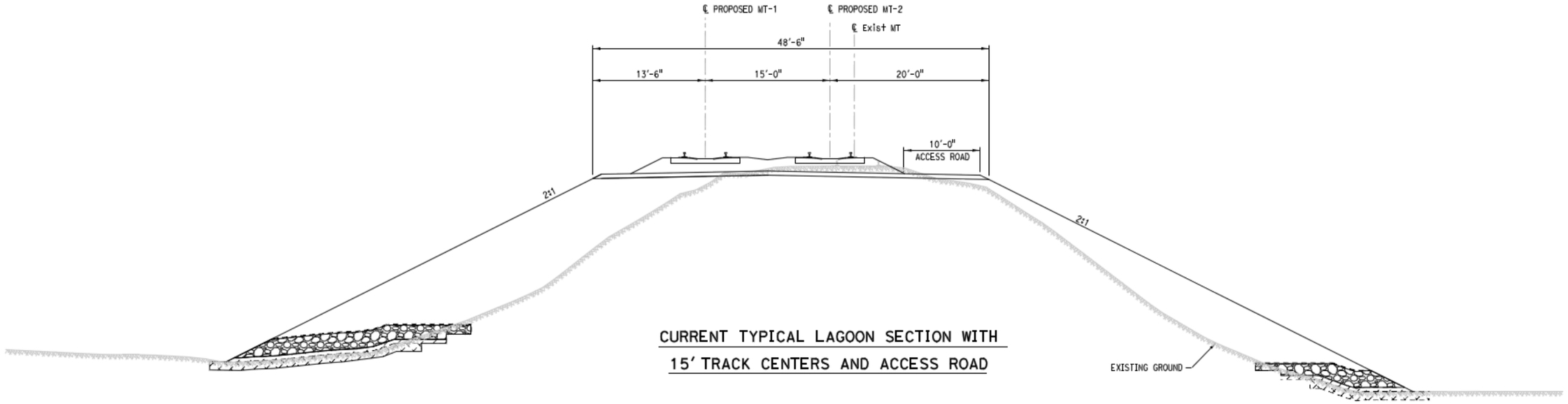
Army Corps of Engineers Jurisdiction

Jurisdictional Area	Access Road Alternative Temporary Impact Reduction Compared to 25-Foot Track Centers Alterative	Access Road Alternative Permanent Impact Reduction Compared to 25-Foot Track Centers Alterative
Wetland WUS	0.41 acre	0.41 acre
Non-wetland WUS	0.05 acre	0.22 acre

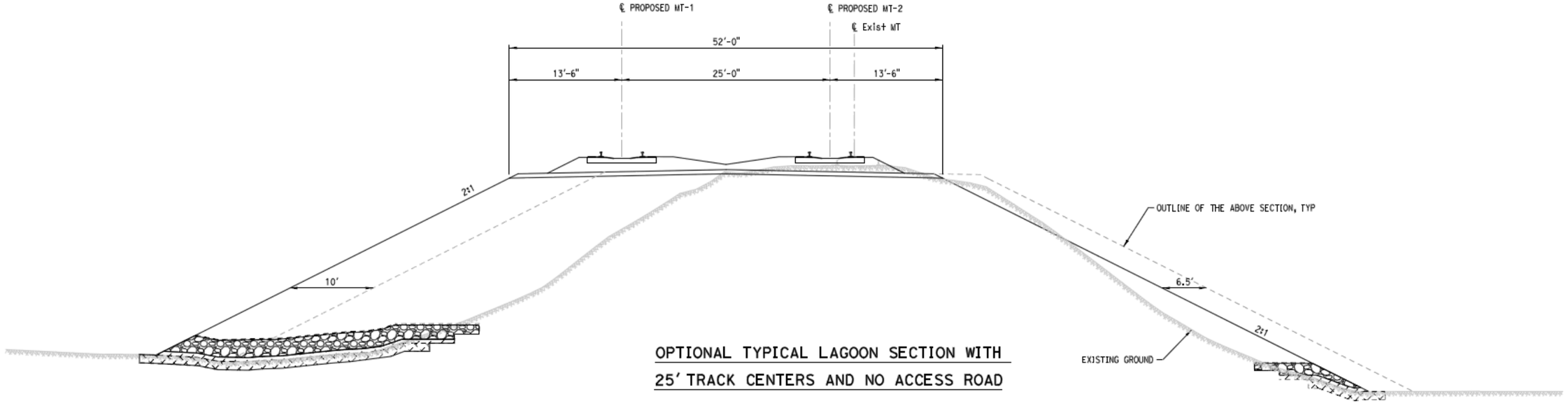
California Coastal Commission Jurisdiction

Jurisdictional Area	Access Road Alternative Temporary Impact Reduction Compared to 25-Foot Track Centers Alterative	Access Road Alternative Permanent Impact Reduction Compared to 25-Foot Track Centers Alterative
Coastal Wetlands	0.46 acre	0.63 acre

Based on this information, the apparent least environmentally damaging practicable alternative is the Access Road Alternative.



CURRENT TYPICAL LAGOON SECTION WITH
15' TRACK CENTERS AND ACCESS ROAD



OPTIONAL TYPICAL LAGOON SECTION WITH
25' TRACK CENTERS AND NO ACCESS ROAD

SOURCE: HDR, 2016

4/21/16

BRG CONSULTING, INC.

San Elijo Lagoon Double Track

Typical Sections / Track Center Spacing

FIGURE
1

Figure 6a. Vegetation Communities

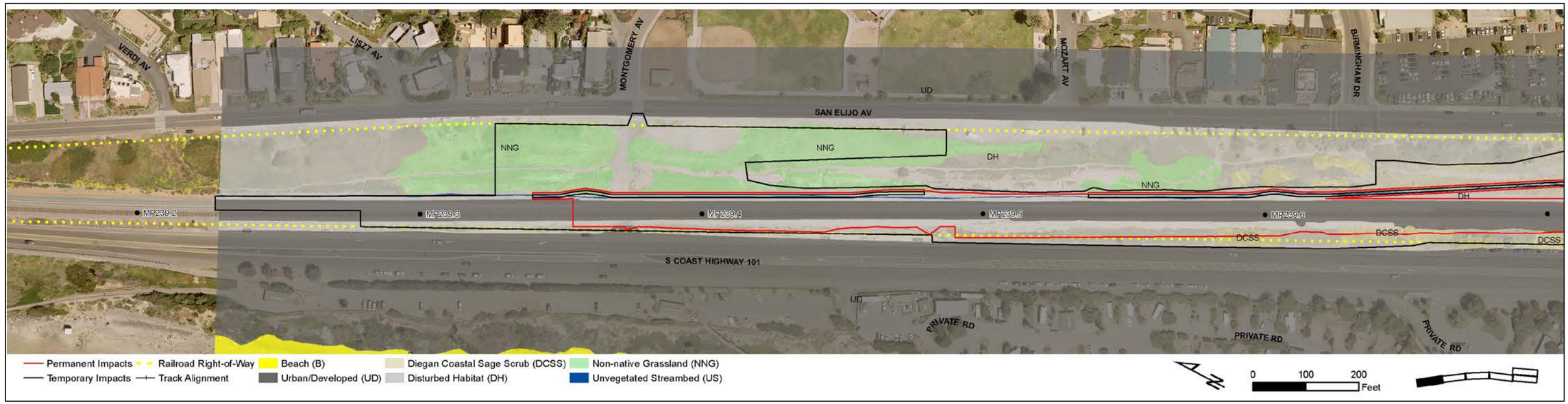


Figure 6b. Vegetation Communities

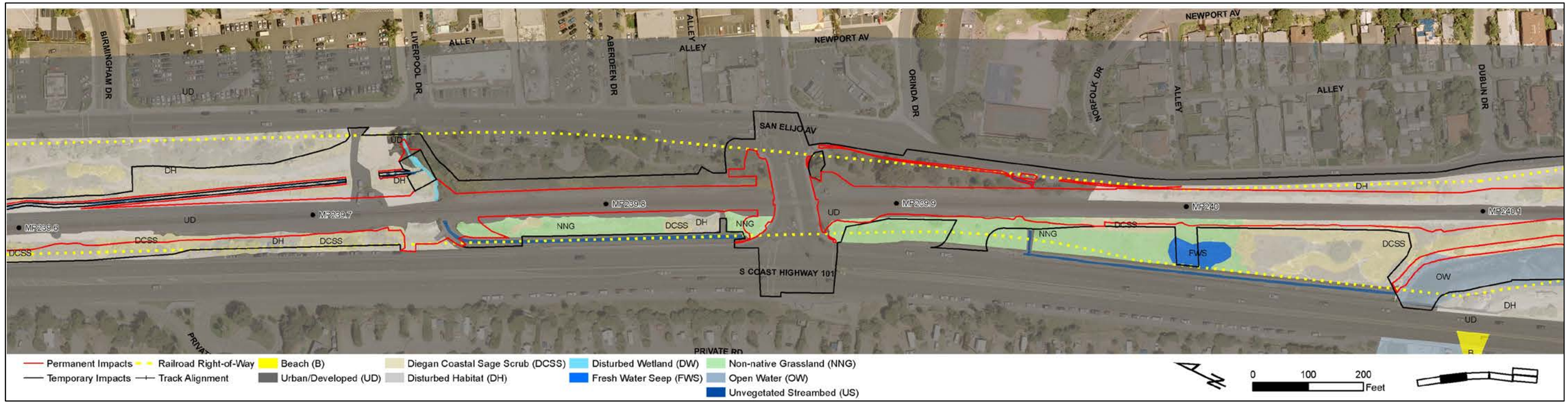


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Figure 6c. Vegetation Communities

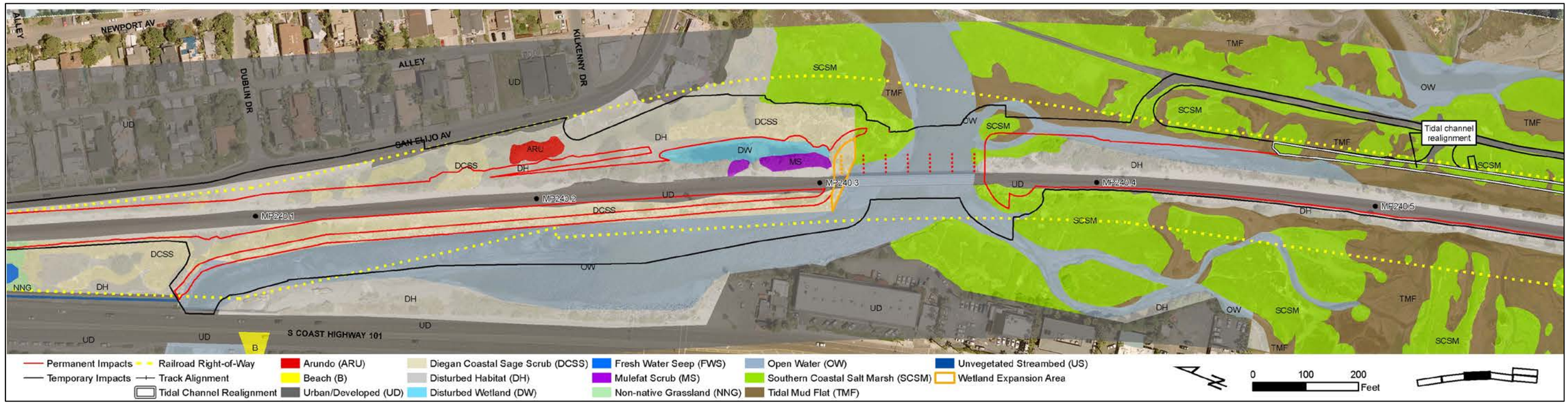

Figure 6d. Vegetation Communities

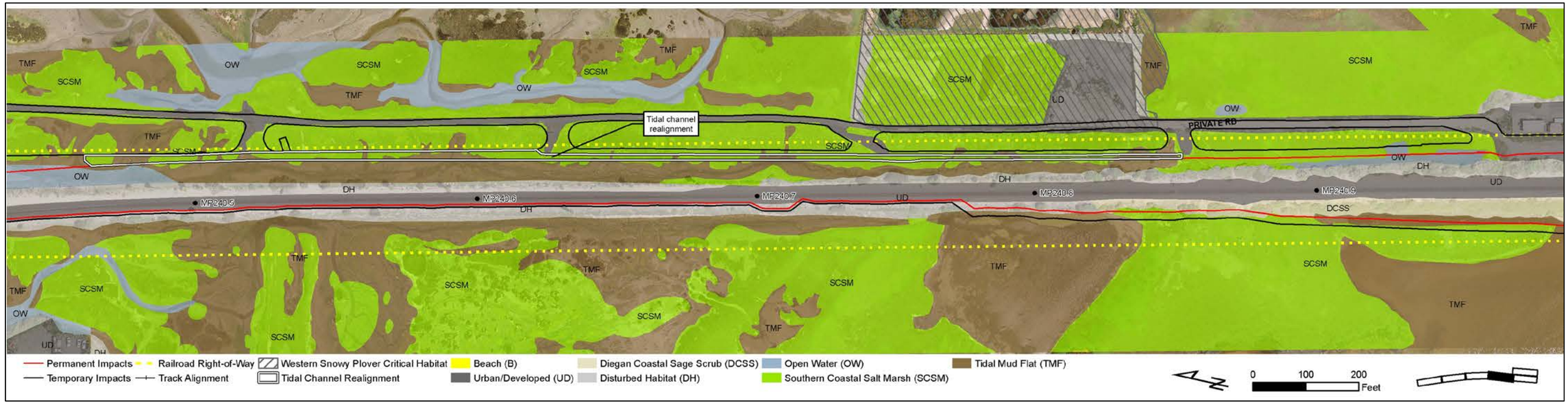

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Figure 6e. Vegetation Communities

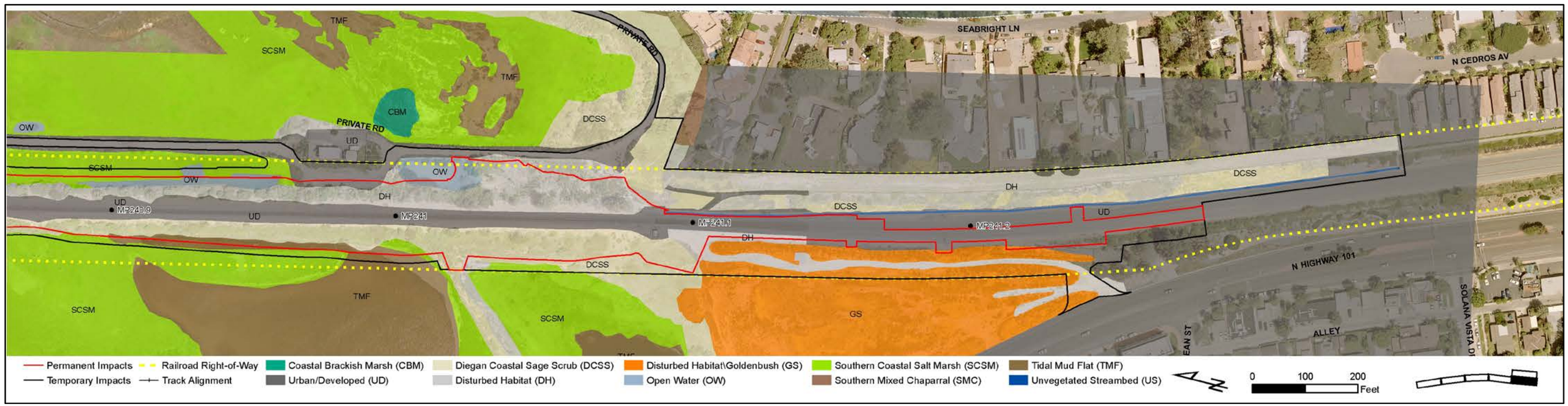

Figure 6f. Vegetation Communities

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Figure 7a. USACE and CCC Jurisdictional Areas

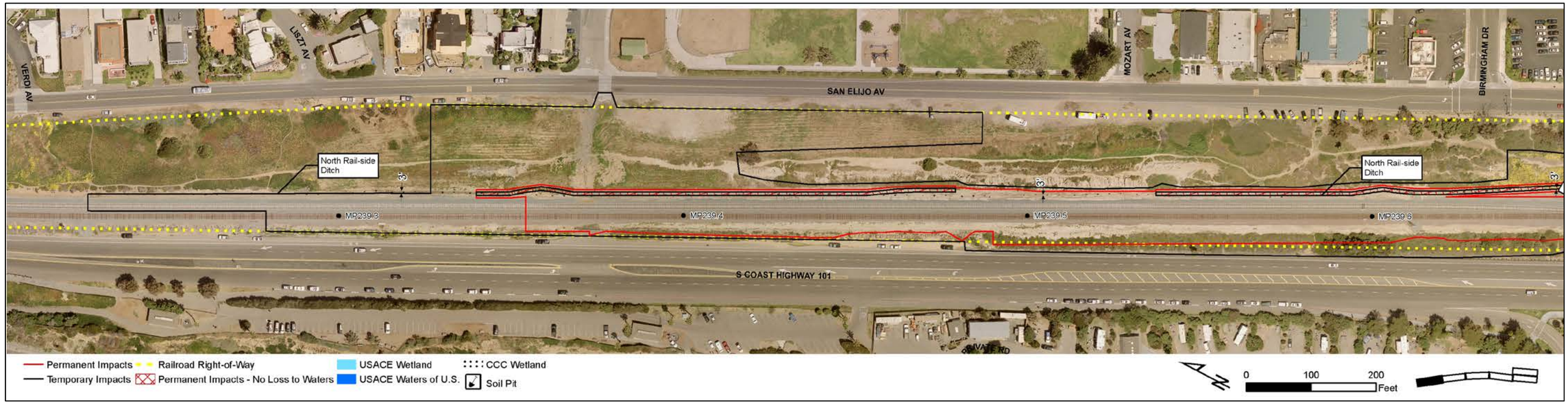
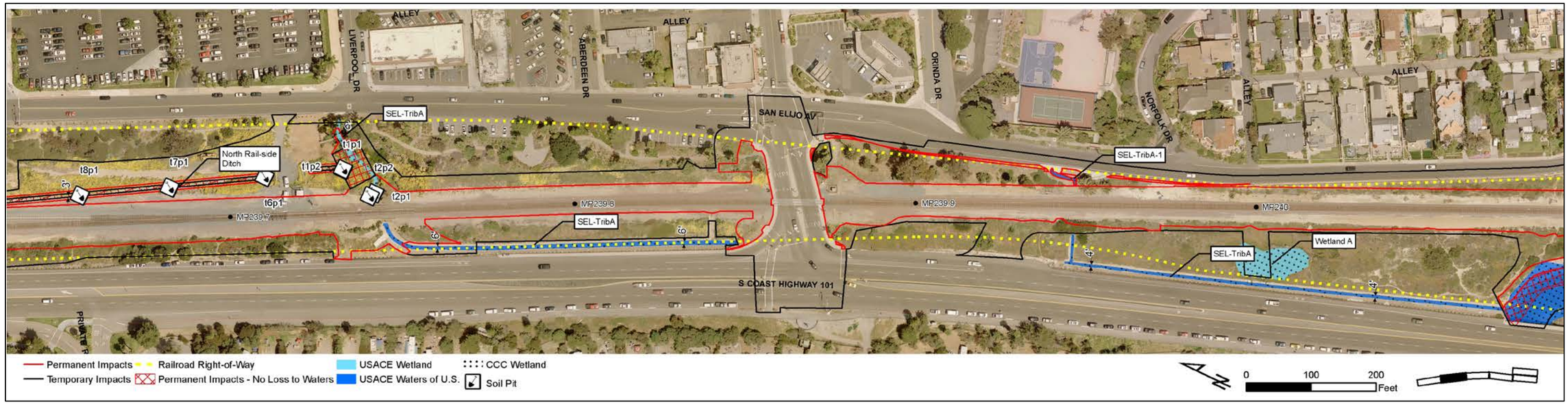


Figure 7b. USACE and CCC Jurisdictional Areas



4 BEST MANAGEMENT PRACTICES

The LRP will be responsible for installing and maintaining BMPs throughout the duration of the project. The QSP will inspect BMPs and provide recommendations for BMP installation and maintenance. Copies of BMP fact sheets specific to this project are located in Appendix E of this SWPPP.

4.1 Erosion and Sediment Control

4.1.1 Erosion Control BMPs

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protects the soil surface by covering and/or binding soil particles. This project will implement the following practices for effective erosion control:

- EC-2: Preservation of Existing Vegetation
- EC-4: Hydroseed

Sufficient erosion control materials, as detailed in Appendix E, will be maintained on site to allow implementation, in conformance with General Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and inactive areas that require deployment before the onset of rain events.

4.1.2 Sediment Control BMPs

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will implement the following practices for effective sediment control:

- SE-1: Silt Fence
- SE-4: Check Dams
- SE-5: Fiber Rolls
- SE-7: Street Sweeping and Vacuuming
- SE-10: Storm Drain Inlet Protection

Sufficient quantities of temporary sediment control materials, as detailed in Appendix E, will be maintained on-site throughout the duration of the project to allow implementation of temporary sediment controls in the event of predicted rain and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

All BMP materials shall be certified weed free in an effort to control the spread of noxious weeds.

4.1.3 Wind Erosion Control

Wind erosion control consists of applying water or other dust palliatives to prevent or minimize dust nuisance. This project will implement the following practices for effective wind erosion control:

- WE-1: Wind Erosion Control

Water trucks and/or a portable tank shall be made available to the field crews with an adequate supply of non-chlorinated water to be used as necessary to mitigate the generation of airborne dust particulates from the construction sites. Water used for dust control will be applied in such a manner to minimize runoff from the site.

4.1.4 Tracking Control

Tracking control consists of preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. This project will implement the following practices for tracking control:

- TC-1: Stabilized Construction Entrance/Exit
- TC-2 Stabilized Construction Roadway

4.2 BMP Implementation Specific for this Project for Non-Storm Water Management and Material Management

4.2.1 Non-Storm Water Management BMPs

Non-storm water management BMPs are source control BMPs that prevent pollution at their source by limiting or reducing potential pollutants at their source or eliminating off-site discharge. These practices involve day-to-day operations of the construction site and are usually under the control of the contractor. These BMPs are also referred to as “good housekeeping practices” which involve keeping a clean, orderly construction site. This project will implement the following practices for effective non-storm water management controls:

- NS-1: Water Conservation Practices
- NS-2: Dewatering Operation
- NS-3: Paving and Grinding Operations
- NS-5: Clear Water Diversion
- NS-6: Illicit Connection/Discharge
- NS-8: Vehicle Cleaning
- NS-7: Potable Water/Irrigation
- NS-9: Vehicle and Equipment Fueling
- NS-12: Concrete Curing

- NS-13: Concrete Finishing
- NS-14: Material and Equipment Use Over Water
- NS-15: Demolition Removal Adjacent to Water

4.2.2 Waste Management and Materials Pollution Controls

Waste management and materials pollution control BMPs, like non-storm water management BMPs, are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water. These BMPs are also referred to as "good housekeeping practices" which involve keeping a clean, orderly construction site.

Waste management consists of implementing procedural and structural BMPs for handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water runoff or discharges through proper management of the following types of wastes: solid, sanitary, concrete, hazardous, and equipment-related washes.

This project will implement the following practices for effective waste management controls:

- WM-1: Material Delivery and Storage
- WM-2: Material Use
- WM-3: Stockpile Management
- WM-4: Spill Prevention and Control
- WM-5: Solid Waste Management
- WM-6: Hazardous Waste Management (if needed)
- WM-8: Concrete Waste Management
- WM-9: Sanitary Septic Waste Management

4.3 Post-Construction Storm Water Management Measures

4.3.1 Post-Construction Runoff Reduction

The San Elijo Lagoon Double Track is located in an area subject to a Phase II MS4 Permit approved Storm Water Management Plan (SWMP) with North County Transit District (NCTD) as the permittee. Post-construction requirements of the Phase II MS4 Permit are to be effective July 1, 2015.

The NCTD Storm Water Management Program (SWMP) published June, 2014 provides general guidance regarding post construction control requirements. A specific manual has not been published by NCTD as of the date of preparation of this Draft SWPPP. The NCTD SWMP states:

> *"Section F.5.g. of the Phase II MS4 general permit requires NCTD to develop, implement, and enforce a program to address storm water runoff from new development*

5 BMP INSPECTION AND MAINTENANCE

5.1 BMP Inspection and Maintenance

Inspections of active construction areas will be conducted by the Site QSP or their qualified designee who has received project specific SWPPP training as follows:

- Weekly
- Prior to a forecast storm event
- After a rain event that causes runoff from the construction site
- At 24-hour intervals during extended rain events.
- Quarterly non-storm water visual inspections

Daily inspections will be performed by the QSP or a designee with appropriate training to verify that the appropriate BMPs for storm water and non-storm water are being implemented in the following construction site locations:

- Areas where active construction is occurring (including staging areas)
- Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day
- Land areas disturbed during construction are returned to preconstruction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

If deficiencies are identified during BMP inspections, repairs or design changes to BMPs must be initiated within 72 hours of identification and need to be completed as soon as possible. Construction Site Monitoring Program (CSMP) Checklists, located in Appendix F-1, should be utilized to assess the condition of site compliance. See Section 8, Construction Site Monitoring Program, for guidance in filling out the CSMP Checklist. Completed checklists shall be kept in Appendix F-1 of the SWPPP.

TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

MATCHLINE MT-1 STA 126+00
(SEE DWG. SEL-UT09)

MATCHLINE MT-1 STA 137+00
(SEE BELOW LEFT)

SAN ELIJO AVE

R/W

PROTECT IN PLACE

℄ PROPOSED MT-1

℄ PROPOSED MT-2

℄ EXISTING MT

RELOCATED BY OTHERS

TO BE RELOCATED BY OTHERS

SAN ELIJO LAGOON
OUTLET CHANNEL

TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

MATCHLINE MT-1 STA 137+00
(SEE ABOVE RIGHT)

MATCHLINE MT-1 STA 148+00
(SEE DWG. SEL-UT11)

PROTECT EXISTING GASLINE
FOR EQUIPMENT LOADING FROM
TEMPORARY ACCESS ROAD

PROTECT IN PLACE

℄ PROPOSED MT-1

℄ PROPOSED MT-2

℄ EXISTING MT

R/W

EXISTING 30" AC SEWER OCEAN OUTFALL LINE:
MEANS OF PROTECTION OR RELOCATION TO BE DETERMINED.
LINE TO BE INSPECTED FOR STATUS OF INTEGRITY OF LINE.
SEE DWG. No. SEL-UT15 FOR PROFILE

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY / SUB.	APP.

DESIGNED BY D. WIRTH
DRAWN BY M.R. GRANADO
CHECKED BY M. SHAVER
APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
San Diego, California 92101
(619) 231-4865

SANDAG
San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL

NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

PROPOSED/RELOCATION UTILITIES MT-1 STA 126+00 TO STA 148+00

Exhibit 14
CC-0004-15
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TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

MATCHLINE MT-1 STA 148+00
(SEE DWG. SEL-UT10)

MATCHLINE MT-1 STA 159+00
(SEE BELOW LEFT)

PROTECT EXISTING GASLINE
FOR EQUIPMENT LOADING FROM
TEMPORARY ACCESS ROAD

PROTECT EXISTING GASLINE
FOR EQUIPMENT LOADING FROM
TEMPORARY ACCESS ROAD

R/W

℄ PROPOSED MT-1

PROTECT IN PLACE

℄ PROPOSED MT-2

℄ EXISTING MT

R/W

TO CP SWAMI
FULLERTON
(TIMETABLE WEST)

TO CP VALLEY
NATIONAL CITY
(TIMETABLE EAST)

MATCHLINE MT-1 STA 159+00
(SEE ABOVE RIGHT)

MATCHLINE MT-1 STA 170+00
(SEE DWG. SEL-UT12)

R/W

℄ PROPOSED MT-1

PROTECT IN PLACE

℄ EXISTING MT

℄ PROPOSED MT-2

MT-1 STA 169+44.92

MT-2 STA 169+40.84

R/W

40 0 40 80
SCALE IN FEET

REV.	DATE	DESCRIPTION	BY / SUB. / APP.

Information confidential allplans, drawings, specifi-cations, and or information furnished herewith shall remain the property of the San Diego Association of Governments and shall be held confidential and shallnot be used for any purpose not provided for in agreements with the San Diego Association of Governments.

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APPROVED BY G. ROSCA
DATE SEPTEMBER 2015

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San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

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NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

PROPOSED/RELOCATION UTILITIES MT-1 STA 148+00 TO STA 170+00

Exhibit 14, p. 2
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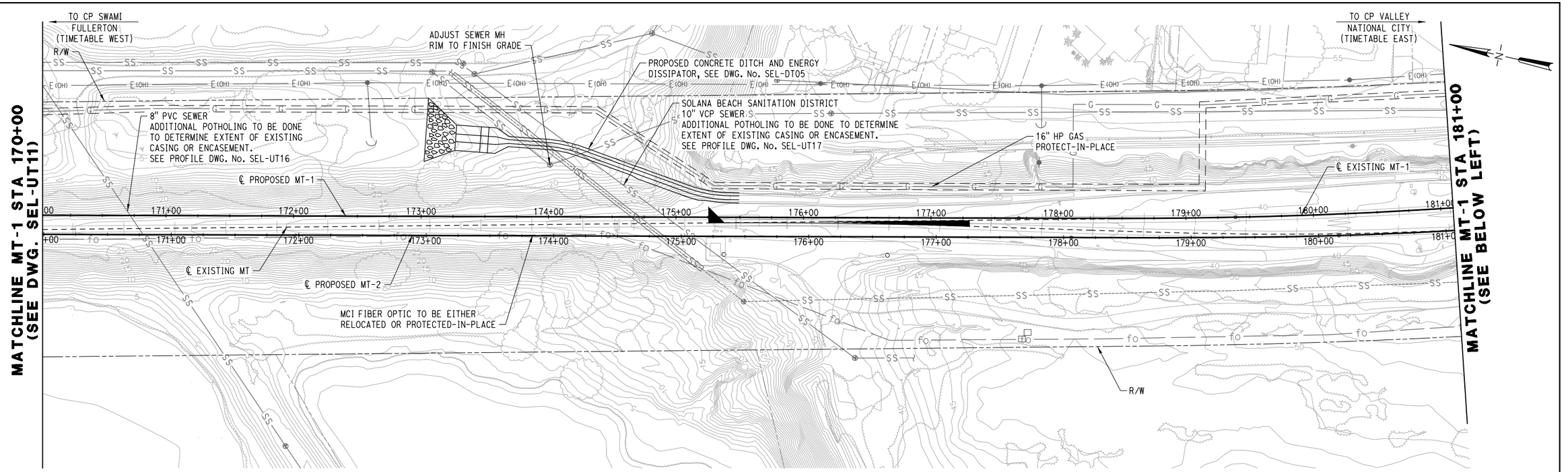

REV.	DATE	DESCRIPTION	BY	SUB.	APP.

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DESIGNED BY	D. WIRTH
DRAWN BY	M.R. GRANADO
CHECKED BY	M. SHAVER
APPROVED BY	G. ROSCA
DATE	SEPTEMBER 2015

HDR Engineering, Inc.
401 B Street, Suite 1110
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San Diego's Regional Planning Agency

APPROVED: _____ DATE: _____

90% SUBMITTAL

NOT FOR CONSTRUCTION

SAN ELIJO LAGOON DOUBLE TRACK

PROPOSED/RELOCATION UTILITIES MT-1 STA 170+00 TO STA 185+00

Exhibit 14, p.3
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