

San Diego LOSSAN Rail Realignment Project Post Value Analysis Study Assessment

May 8, 2025

SANDAG

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Acronyms/Abbreviations

Acronym	Definition
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
I-	Interstate
LOSSAN	Los Angeles–San Diego–San Luis Obispo
mph	miles per hour
NCTD	North County Transit District
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
SANDAG	San Diego Association of Governments
SDLRR	San Diego LOSSAN Rail Realignment
VA	Value Analysis

Terms and Definitions

Term	Definition
private subsurface easement	The right to use privately owned land below the ground surface (see definition for subsurface easement). Types of privately owned land uses include, but are not limited to, residential, office, light industrial, and commercial.
residential subsurface easement	The right to use residential zoned land below the ground surface (see definition for subsurface easement).
reversing curves	A series of two or more consecutive curves that turn in opposite directions to form an “S” shape.
shoofly track	Temporary track used to maintain service.

Term	Definition
soft costs	Costs that are not directly tied to the physical construction of a project. These costs typically include, but are not limited to, expenditures related to project development, environmental reviews, engineering and design services, project management, permits, and legal services.
subsurface easement	The right to use land below the ground surface. For example, the construction and operation of trains in a tunnel could require subsurface easements from parcels located above the tunnel. Subsurface easements for bored tunnels typically do not require owners and occupants to relocate from the property.
Value Analysis (VA)	A systematic process used by a multidisciplinary team, led by a qualified Value Methodology Facilitator, to improve the value of a project, product, process, service, or organization through the analysis of functions.
Value Analysis (VA) Study	A structured effort to improve the value of a project, product, process, service, or organization through the application of the Value Methodology by a multidisciplinary team facilitated by one who is competent in Value Methodology techniques.
Value Analysis (VA) Team	Individuals who were directly involved in the various phases of the VA Study. The VA Team comprised representatives from the cities of Carlsbad, Del Mar, Encinitas, San Diego, and Solana Beach; the 22nd District Agricultural Association; California Department of Transportation; and North County Transit District. Subject matter experts were also part of the VA Team.

The San Diego Association of Governments (SANDAG) initiated formal environmental review of the San Diego LOSSAN Rail Realignment Project (Project) under the California Environmental Quality Act (CEQA) on June 4, 2024, with the release of the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Project. SANDAG's release of the NOP initiated a Draft EIR scoping period under CEQA. The CEQA environmental review process is ongoing.

Pursuant to the direction of the SANDAG Board of Directors, SANDAG sponsored a Value Analysis (VA) Study to provide a venue for technical discussion of the potential alternatives identified in the NOP.

The findings of the VA Study were presented to the SANDAG Board of Directors on February 28, 2025. The VA Study is not intended as, and does not include, an analysis of environmental impacts, or a discussion of the relative merits and feasibility of project alternatives under CEQA. These, and other topics, will be addressed in the Draft EIR, in accordance with CEQA.

1 Introduction

A Value Analysis (VA) Study, sponsored by the San Diego Association of Governments (SANDAG) and facilitated by Value Management Strategies, Inc., was conducted for the San Diego LOSSAN (Los Angeles–San Diego–San Luis Obispo) Rail Realignment (SDLRR) Project located in San Diego County, California. The VA Study was a collaborative process leveraging the knowledge of the multidisciplinary VA Team¹ to brainstorm ideas for potential project alignments and other refinements to the project. The outcomes of the VA Study helped shape SANDAG staff considerations of potential alternative concepts and refinements. This document summarizes the SANDAG staff recommendations, based on information gained during the VA Study.

1.1 Background

SANDAG initiated formal environmental review of the SDLRR Project under the California Environmental Quality Act (CEQA) on June 4, 2024, with the release of the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the project. The NOP identified three proposed build alternatives for consideration in an EIR, in addition to a No Project Alternative. SANDAG's release of the NOP initiated a Draft EIR scoping period under CEQA, which lasted through July 19, 2024, and sought to solicit public and stakeholder input on the alternatives identified.

In response to feedback received during the scoping period and feedback from the SANDAG Board of Directors, SANDAG initiated a VA Study comprised of representatives from potentially affected jurisdictions and SANDAG member agencies to gain additional input on the proposed alternatives included in the NOP and collaboratively brainstorm ideas for potential project alignments. The VA Study was completed via a series of workshops and meetings with representatives from the cities of Carlsbad, Del Mar, Encinitas, San Diego, and Solana Beach; the 22nd District Agricultural Association; the California Department of Transportation; and the North County Transit District (NCTD) from September through December 2024. The San Diego Metropolitan Transit System (MTS) and City of Oceanside were invited but declined to participate in the VA Study, though a representative of MTS attended the December 20, 2024, Feedback Meeting to observe the discussion. The VA Study was collaborative and technically driven with the goal of providing a fresh look at alternative concepts that would address the challenges that climate change and the eroding Del Mar Bluffs pose to the reliability of passenger and freight service on the bluffs.

1.2 VA Study

The VA Study consisted of eight phases:

- Phase 1—Preparation Phase
- Phase 2—Information Phase
- Phase 3—Function Analysis Phase
- Phase 4—Creativity Phase

¹ The VA Team includes individuals who were directly involved in the various phases of the VA Study. The VA Team was comprised of representatives from the cities of Carlsbad, Del Mar, Encinitas, San Diego, and Solana Beach; the 22nd District Agricultural Association; California Department of Transportation; and NCTD. Subject matter experts were also part of the VA Team.

- Phase 5—Evaluation Phase
- Phase 6—Development Phase
- Phase 7—Presentation Phase
- Phase 8—Implementation Phase

Throughout this process, over 200 ideas were initially generated by the VA Team. During the evaluation phase, an initial screening was conducted to reduce the number of ideas down to about two dozen, which was followed by an evaluation to further consider the pros and cons of each idea. Some ideas were substantially similar and therefore were grouped by the project team to streamline the screening process. At the end of this phase, a Mid-Point Review Meeting was conducted to review a refined short list of 16 ideas (13 new alternative concepts plus the three proposed alternatives from the NOP). These alternative concepts are summarized in Table 1 and illustrated in Figure 1. The process also resulted in the identification of additional ideas for further consideration in later phases of the project’s design development process.

The final implementation phase focused on determining how the findings of the VA Study will be implemented. A Feedback Meeting was conducted on December 20, 2024, to receive feedback on the Draft VA Study Report, including the alternative concepts that could warrant further consideration or refinement. The feedback received is summarized in the Final Value Analysis Study Report.

Throughout this process, the VA Team stressed the desire to minimize property acquisitions, including subsurface easements from private properties; risks from climate change; and negative effects on biological resources, communities, and economic generators, including the Del Mar Fairgrounds. The VA Team also stressed the importance of public stewardship, including preserving prior and ongoing investments in the LOSSAN corridor and considerations on the cost of constructing and maintaining the project. Information was also gathered that could inform refinements to the locations of project elements. Additionally, a number of design refinements and other ideas were identified by the VA Team, many of which are applicable during the environmental clearance phase as design is advanced, environmental analyses are completed, and mitigation is identified to address impacts under the National Environmental Policy Act (NEPA) and/or CEQA for those alternatives that advance into the Draft EIR/Environmental Impact Statement (EIS).

Table 1. VA Study Alternative Concepts

VA Alternative Concept No. and Description	Estimated Cost (\$ Billions) ¹
1. Locate North Portal at David Way following under Crest Canyon with 90-mph curves	\$3.8–\$5.0
2. Keep the tunnel profile above projected flooding elevations and provide positive drainage	\$3.4–\$4.6
3. Locate the Southern Portal south of the existing pump station at Carmel Mountain Road	\$4.5–\$6.0
4. Realign intersection at Jimmy Durante Boulevard and Camino Del Mar	Not developed ²
5. Locate North Portal within Camino Del Mar	\$3.9–\$5.2

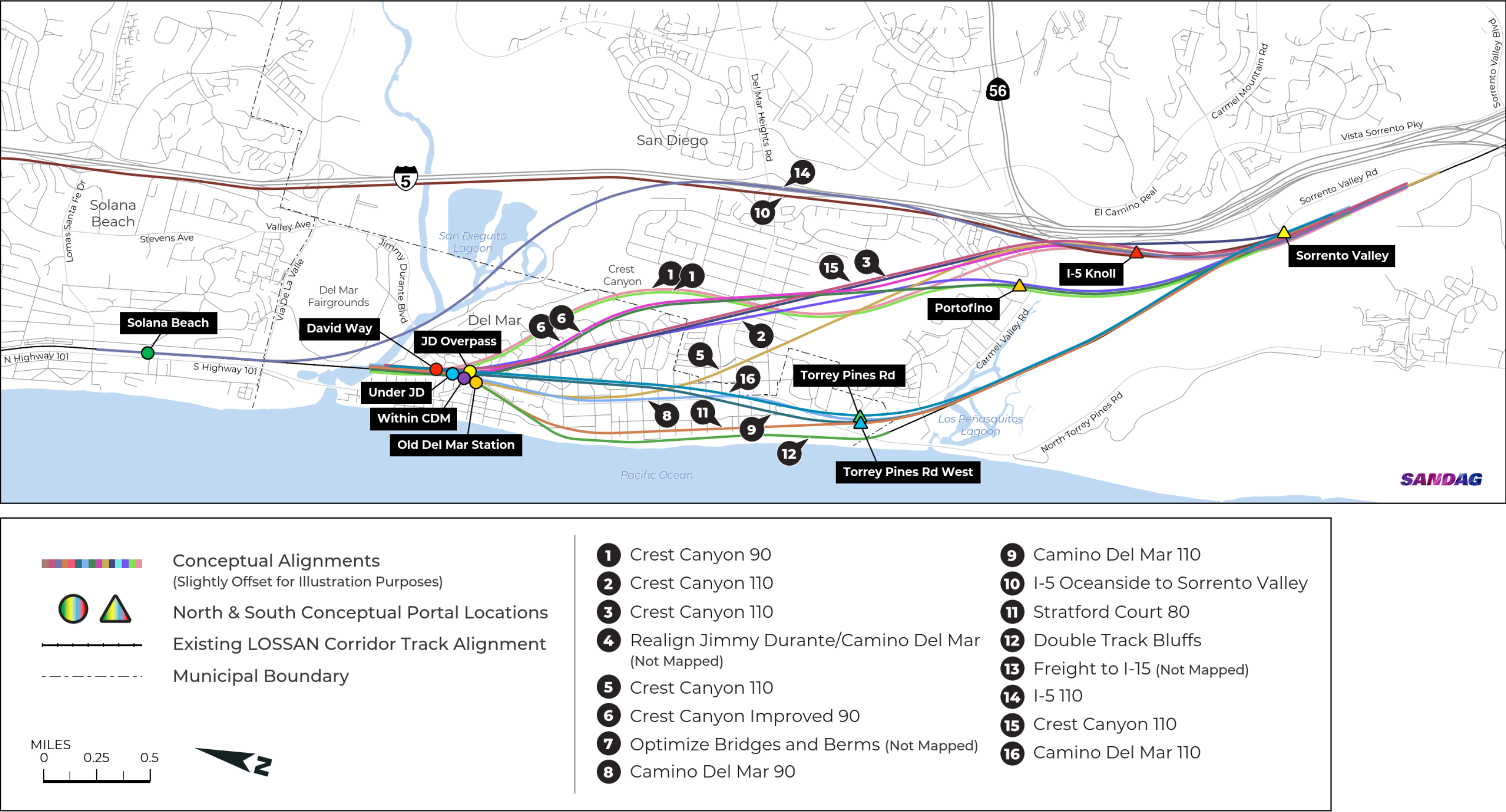
VA Alternative Concept No. and Description	Estimated Cost (\$ Billions) ¹
6. Locate North Portal Under Jimmy Durante Boulevard following under Crest Canyon with 90-mph curves	\$3.7-\$4.9
7. Optimize the use of bridges and berms of Los Peñasquitos Lagoon	Not developed ²
8. Locate alignment under Camino Del Mar with 90-mph curves	\$3.6-\$4.8
9. Locate the bored tunnel transition south of Carmel Valley Road	\$3.3-\$4.4
10. Relocate LOSSAN corridor along I-5 from Oceanside to Sorrento Valley	\$34-\$45
11. Locate the bored tunnel transition at the old Del Mar Train Station	\$4.1-\$5.4
12. Stabilize bluffs and widen existing alignment to accommodate a second track	\$1.9-\$2.5
13. Relocate all freight rail along I-15 corridor	\$118-\$158
14. Locate North Portal in Solana Beach Trench to South Portal at I-5 Knoll with bored tunnel under Fairgrounds and I-5 (Proposed NOP Alternative Alignment A – I-5 Alignment)	\$6.9-\$9.2
15. Locate North Portal Under Jimmy Durante Boulevard to South Portal at I-5 Knoll (Proposed NOP Alternative Alignment B – Crest Canyon Alignment)	\$3.7-\$4.9
16. Locate North Portal at Under Jimmy Durante Boulevard to South Portal at Torrey Pines Road (Proposed NOP Alternative Alignment C – Camino Del Mar Alignment)	\$3.3-\$4.4

Notes: ¹ The preliminary rough order magnitude project cost estimates include construction, right-of-way, soft costs, and cost escalation. The estimates reflect initial project costs and do not include ongoing operations or maintenance costs. The estimates also include cost escalation for the year of estimated completion of construction based on current market trends. VA alternative concepts with anticipated construction durations similar to the seven-year durations of previously studied alternatives are provided in year 2036 dollars. The costs are in 2044 dollars for VA Alternative Concept No. 10 and in year 2055 dollars for VA Alternative Concept No. 13, as these alternatives have substantially longer construction durations.

² Preliminary rough order of magnitude cost estimates were not developed for VA Alternative Concept Nos. 4 and 7, as these alternative concepts could be incorporated into several of the other alternative concepts that are under consideration.

I- = Interstate; LOSSAN = Los Angeles-San Diego-San Luis Obispo; mph = miles per hour; NOP = Notice of Preparation; VA = Value Analysis

Figure 1. Conceptual Portal and Alignment Options



1.3 Staff Recommendations and Next Steps

The outcomes of the VA Study helped shape SANDAG staff considerations of potential alternative concepts and refinements. Using the staff recommendation approach outlined in Section 2, SANDAG further assessed the VA Study alternative concepts to inform the recommendations. Through this process, opportunities to optimize and refine alternative concepts were also identified, using the evaluation, feedback, and lessons learned during the VA Study. Key themes considered during the refinement process include:

- Minimizing effects to private properties, including subsurface easements
- Minimizing disruptions to economic generators
- Demonstrating public stewardship by minimizing conflicts with prior and ongoing investments

SANDAG staff also considered feedback from stakeholders; prior public comments, including comments received on the June 2024 NOP; and lessons learned from prior studies.

Refinements to alternative concepts are consistent with the intent identified by the VA Team while also considering the themes identified above, operational and maintenance costs, and performance of the alignment. The alignments identified as staff recommendations are based on the trade-offs among the alternative concepts and the themes and lessons learned from the VA Study. The recommendations are shown on Figure 2 and are as follows (in no particular order):

- San Dieguito Bridge to Interstate (I-) 5 Knoll (described in Section 4.2.1.1)
- Under Crest Canyon (Under Jimmy Durante to I-5 Knoll) (described in Section 4.2.1.2)
- Under Camino Del Mar (Under Jimmy Durante to Torrey Pines Road West) (described in Section 4.2.1.3)
- Del Mar Bluffs Double Track Reinforced (described in Section 4.2.1.4)
- No Project Alternative (also referred to as a No Build Alternative) (described in Section 4.2.1.5)

The VA Study assessment is summarized in Table 2 and the staff recommendations are summarized in Table 3. The staff recommendations summarized in Section 4 of this report also include refinement of the revised draft objectives and the additional ideas that would be applicable during the environmental clearance phase.

SANDAG presented to various boards and councils in February 2025 to provide an overview of the VA Study, themes and lessons learned, and staff recommendations. During the presentations, comments were received from members of the public and SANDAG staff responded to questions from board/councilmembers. Additionally, SANDAG held office hours in the cities of Solana Beach and Del Mar in February 2025, during which staff answered questions from members of the public. The presentations and office hours are as follows:

- February 11, 2025: SANDAG presentation to 22nd District Agricultural Association (i.e., Del Mar Fairgrounds) Board Meeting
- February 12, 2025: SANDAG presentation to Solana Beach City Council
- February 13, 2025: Solana Beach Office Hours
- February 18, 2025: SANDAG presentation to Del Mar City Council
- February 19, 2025: Del Mar presentation and Office Hours

- February 20, 2025: SANDAG presentation to Torrey Pines Community Planning Board
- February 28, 2025: SANDAG Board of Directors meeting

As part of the February 28, 2025, presentation to the SANDAG Board of Directors, comments were received from members of the public. Board members were asked to provide feedback on the project goal and objectives and provide direction to staff on the alternative alignments to analyze in the Draft EIR. The Board of Directors members voted in support of the staff recommendations.

The four Build Alternatives and No Project Alternative will be included in an Updated NOP that will be issued in 2025, initiating an additional CEQA scoping period. SANDAG will also continue efforts to identify a federal partner and initiate environmental clearance pursuant to NEPA.

Figure 2. Staff Recommended Alignments for the Environmental Clearance Phase

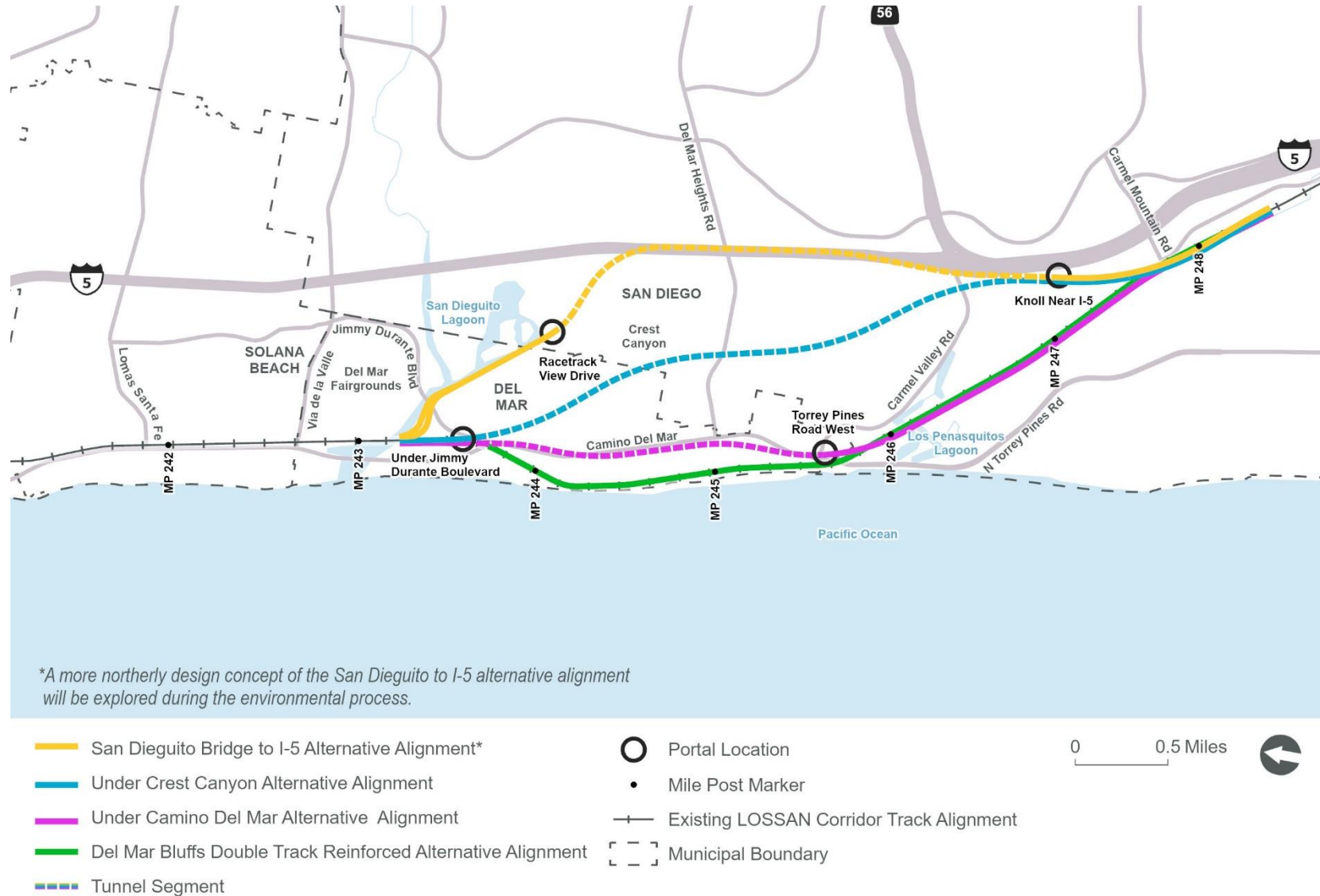


Table 2. VA Study Assessment

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 1: Locate North Portal at David Way following under Crest Canyon with 90-mph curves	yes	yes	no	<ul style="list-style-type: none"> • The north portal could result in substantial traffic and roadway effects that could also affect additional residential and commercial properties compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C). • Additional maintenance needs are required compared to alternative concepts with a straighter alignment. • Construction phasing would be more difficult than Proposed NOP Alternatives B and C. • Third most expensive of the Alternative Concepts in Step 2. • Reduction in residential subsurface easements compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B) (estimated 18% reduction with the I-5 Knoll portal).

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 2: Keep the tunnel profile above projected flooding elevations and provide positive drainage	yes	yes	no	<ul style="list-style-type: none"> Results in a moderate reduction in residential subsurface easements (estimated 12%). Increase in permanent and temporary surface impacts to residential properties near the north portal by an estimated five to seven times compared to VA Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C). Increased biological effects at the Portofino south portal compared to other south portal locations. Portal also received a lack of support in prior outreach efforts. Substantial traffic and roadway effects due to the raising of Jimmy Durante Boulevard that could also affect additional residential and commercial properties.
VA Alternative Concept No. 3: Locate the Southern Portal south of existing pump station at Carmel Mountain Road	yes	yes	no	<ul style="list-style-type: none"> Slightly increased private subsurface easements (estimated 4%) compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B). Increased permanent and temporary effects to commercial and industrial properties at the south portal. Significant modifications at Sorrento Valley Road and Carmel Mountain Road. Less efficient south portal at Sorrento Valley for potentially importing and exporting construction materials by rail compared to the I-5 Knoll south portal.

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 4: Realign intersection at Jimmy Durante Boulevard and Camino Del Mar	no ¹	-	-	Not considered in Step 2
VA Alternative Concept No. 5: Locate North Portal within Camino Del Mar	yes	no ²	-	Not considered in Step 2
VA Alternative Concept No. 6: Locate North Portal Under Jimmy Durante Boulevard following under Crest Canyon with 90-mph curves	yes	yes	no	<ul style="list-style-type: none"> Increased maintenance needs compared to alternative concepts with a straighter alignment. Reduction in residential subsurface easements compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
VA Alternative Concept No. 7: Optimize the use of bridges and berms of Los Peñasquitos Lagoon	no ¹	-	-	Not considered in Step 2

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 8: Locate alignment under Camino Del Mar with 90-mph curves	yes	yes	no	<ul style="list-style-type: none"> Substantial effects to the roadway network, including requiring the reconstruction of the existing Camino Del Mar Bridge, construction of a temporary bridge, and reconstruction of Jimmy Durante Boulevard and Camino Del Mar. Results in greatest reduction in residential subsurface easements compared to other tunnel alternative concepts (estimated 67% reduction compared to VA Alternative Concept No. 16 [Proposed NOP Alternative C]).
VA Alternative Concept No. 9: Locate the bored tunnel transition south of Carmel Valley Road	no¹	-	-	Not considered in Step 2
VA Alternative Concept No. 10: Relocate LOSSAN corridor along I-5 from Oceanside to Sorrento Valley	yes	yes	yes³	Not considered in Step 2
VA Alternative Concept No. 11: Locate the bored tunnel transition at the old Del Mar Train Station	yes	no²	-	Not considered in Step 2

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 12: Stabilize bluffs and widen existing alignment to accommodate a second track	yes	yes	no	<ul style="list-style-type: none"> No tunnel segment or subsurface easements. Least costly of the alternative concepts considered in Step 2. Less climate resilient than other alternative concepts; would require routine beach replenishment if the beach is to be preserved and could require ongoing or emergency bluff stabilization maintenance. Inconsistent with past permitting in the coastal zone. Less effective at minimizing points of interaction with the alignment compared to other alternative concepts. Grade separation of the Coast Boulevard at-grade crossing.
VA Alternative Concept No. 13: Relocate all freight rail along I-15 corridor	yes	yes	yes³	Not considered in Step 2

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 14: Locate North Portal in Solana Beach Trench to South Portal at I-5 Knoll with bored tunnel under Fairgrounds and I-5 (Proposed NOP Alternative Alignment A – I-5 Alignment)	yes	yes	no	<ul style="list-style-type: none"> • Highest cost of the alternative concepts considered in Step 2. • Reduced effects in the City of Del Mar and reduced subsurface easements from private properties. • Results in effects to Solana Beach Trench and the Del Mar Fairgrounds. • Requires removal of the future San Dieguito Bridge and Del Mar Fairgrounds Special Events Platform and introduces an underground special events platform at the Fairgrounds that would require additional construction cost and maintenance. • More challenging construction associated with the trench and maintaining current rail operations.
VA Alternative Concept No. 15: Locate North Portal Under Jimmy Durante Boulevard to South Portal at I-5 Knoll (Proposed NOP Alternative Alignment B – Crest Canyon Alignment)	yes	yes	no	<ul style="list-style-type: none"> • Greatest number of residential subsurface easements of alternative concepts considered in Step 2, along with VA Alternative Concept No. 3. • More conducive to importing and exporting construction materials by rail compared to VA Alternative Concept No. 16 (NOP Alternative C). • North portal location (Under Jimmy Durante Boulevard) would minimize impacts to roadways. • South portal location (I-5 Knoll) would result in fewer biological effects compared to NOP Alternative C.

VA Alternative Concept	VA Study Assessment Step 1			VA Study Assessment Step 2
	Is Distinct, Rather than a Design Refinement	Meets Stated Intent	Results in Extraordinary Impact or Cost	Trade-Offs and Other Considerations
VA Alternative Concept No. 16: Locate North Portal at Under Jimmy Durante Boulevard to South Portal at Torrey Pines Road (Proposed NOP Alternative Alignment C – Camino Del Mar Alignment)	yes	yes	no	<ul style="list-style-type: none"> • Lowest cost of all alternative concepts with a tunnel segment. • Greatest number of subsurface easements from residential properties among the alternative concepts evaluated in Step 2, after VA Alternative Concept Nos. 3 and 15. • North portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways.

*Notes:*¹ The alternative concept features elements that are applicable to multiple other alternative concepts and, therefore, will be considered as design advances during the environmental clearance phase. Refer to Section 3.1.1.

² The alternative concept does not meet the stated intent and was therefore removed from further consideration. Refer to Section 3.1.2.

³ The alternative concept would not be reasonable or practicable and would jeopardize delivery of the project. Refer to Section 3.1.3.

I- = Interstate; LOSSAN = Los Angeles–San Diego–San Luis Obispo; mph = miles per hour; NOP = Notice of Preparation; VA = Value Analysis

Table 3. Staff Recommended Alternative Concepts

Staff Recommended Alternative Concept	Description	Reasons for Recommendation
Recommendation 1: San Dieguito Bridge to I-5 Knoll	Refinement of June 2024 Proposed NOP Alternative A <u>North Portal:</u> Racetrack View Drive <u>South Portal:</u> I-5 Knoll	<ul style="list-style-type: none"> During the VA Study and prior outreach efforts, interest was received in exploring an alignment that would be located under or adjacent to I-5, similar to alignments identified in prior studies (e.g., 2007 LOSSAN Programmatic EIR/EIS, 2023 Alternatives Analysis). Staff sought to refine Alternative A to preserve the future San Dieguito Bridge and/or Del Mar Fairgrounds Special Events Platform and minimize construction effects to the Del Mar Fairgrounds and direct effects to City of Del Mar residences. The refined alignment provides additional benefits by eliminating the need to tunnel under San Dieguito Lagoon. The refined alignment minimizes roadway effects compared to alternative concepts with the Under Jimmy Durante north portal.
Recommendation 2: Under Crest Canyon (Under Jimmy Durante to I-5 Knoll)	Refinement of VA Alternative Concept Nos. 1 and 6 <u>North Portal:</u> Under Jimmy Durante Boulevard <u>South Portal:</u> I-5 Knoll	<ul style="list-style-type: none"> Participants at the December 20, 2024, Feedback Meeting noted interest in further exploring bored tunnel alignments underneath Crest Canyon Open Space Park and Torrey Pines Natural Reserve to minimize subsurface easements from private properties. Staff explored refinements to the alignment and portals considering subsurface easements; operational performance; and effects to communities, economic generators, and biological resources. The refined alignment and portals would minimize subsurface easements from private properties, including residential properties, compared to Proposed Alternative B from the June 2024 NOP (VA Alternative Concept No. 15).

Staff Recommended Alternative Concept	Description	Reasons for Recommendation
Recommendation 3: Under Camino Del Mar (Under Jimmy Durante to Torrey Pines Road West)	Refinement of VA Alternative Concept No. 8 <u>North Portal</u> : Under Jimmy Durante Boulevard <u>South Portal</u> : Torrey Pines West	<ul style="list-style-type: none"> • The refined alignment, inclusive of the modifications to the north and south portal locations, incorporates feedback obtained from VA Study participants, prior stakeholder coordination and public input, and lessons learned from prior studies. • The refinement at the north portal location would reduce effects to roadways and private properties compared to the north portal originally depicted with VA Alternative Concept No. 8 (Within Camino Del Mar). • The refined south portal location incorporates a design refinement developed during the VA Study. • The refined alignment would locate a greater percentage of the bored tunnel underneath Camino Del Mar compared to the alignment for Proposed NOP Alternative C (VA Alternative Concept No. 16) and would reduce subsurface easements from residential properties by over 40% compared to that alternative concept.
Recommendation 4: Del Mar Bluffs Double Track Reinforced	VA Alternative Concept No. 12: Stabilize bluffs and widen existing alignment to accommodate a second track <u>North Portal</u> : N/A <u>South Portal</u> : N/A	<ul style="list-style-type: none"> • During the VA Study, participants noted an interest in exploring an alternative concept that would double track the existing alignment, maintaining both sets of tracks on the bluffs. • The alignment would avoid the need for portals and a bored tunnel alignment and eliminate the need for subsurface easements under private properties, including residences. • The alignment is responsive to feedback received during the CEQA scoping period and prior public outreach. • The alignment has a lower estimated cost compared to other alignments that include tunnel segments. • The alignment would include railroad maintenance practices similar to those on other parts of the NCTD system.

Notes: CEQA = California Environmental Quality Act; EIR = Environmental Impact Report; EIS = Environmental Impact Statement; I- = Interstate; LOSSAN = Los Angeles-San Diego-San Luis Obispo; mph = miles per hour; NCTD = North County Transit District; NOP = Notice of Preparation; VA = Value Analysis

2 Staff Recommendation Approach

Following the VA Study, a two-step approach was used to develop a staff recommendation related to the 16 alternative concepts, including the three proposed alternatives from the NOP. The following sections describe each step of the staff recommendation approach.

2.1 Step 1: Preliminary Considerations

The following process was used to determine the alternative concepts most suitable for additional assessment in support of developing the staff recommendation. Alternative concepts that did not meet the criteria in this step were not examined further.

1. First, staff considered whether an alternative concept is a discrete concept, as opposed to a design refinement that may apply to multiple concepts. In general, design refinements are considered as applicable as design advances during the environmental clearance phase.
 - If the alternative concept was deemed to be a design refinement, staff will consider the refinement as applicable during the environmental clearance phase.
 - If the alternative concept was deemed a distinct alternative concept, it was considered further for the staff recommendation.
2. Next, staff examined each alternative concept to determine whether it met the stated intent for which it was developed during the VA Study.
 - If the alternative concept did not meet the stated intent, it was not considered further.
 - If the alternative concept met the stated intent, it was considered further for the staff recommendation.
3. Next, staff assessed the alternative concepts from a technical and economic standpoint to determine whether any concept may result in extraordinary impacts or costs, because such alternative concepts may jeopardize the ability to deliver the project.
 - If the alternative concept would result in extraordinary impacts or costs, it was not considered further.
 - If the alternative concept would not result in extraordinary impacts or costs, it was considered further for the staff recommendation.

2.2 Step 2: Trade-Offs and Additional Considerations

Alternative concepts that advanced past the first step were then assessed by staff based on:

- Degree of meeting the stated intent
- Potential trade-offs associated with meeting the intent
- Advantages (beyond meeting the intent) and disadvantages
- Other considerations

Trade-offs for each alternative concept were identified to understand the potential advantages and disadvantages associated with implementation of an alternative concept that otherwise meets its stated intent.

3 Assessment of Alternative Concepts

3.1 Step 1: Preliminary Considerations

3.1.1 Design Refinements

Of the 16 alternative concepts included in the VA Study, VA Alternative Concept Nos. 4, 7, and 9 were determined to be design refinements and were therefore removed from further consideration at this point in the development process. These alternative concepts feature elements that are applicable to multiple alternative concepts and, therefore, will be considered as design advances during the environmental clearance phase.

- **VA Alternative Concept No. 4:** Realign intersection at Jimmy Durante Boulevard and Camino Del Mar.
 - This roadway alternative concept could be accommodated in all alternative concepts with a northern portal within Jimmy Durante Boulevard or Camino Del Mar (i.e., VA Alternative Concept Nos. 1, 2, 3, 5, 6, 8, 9, 11, 15, 16, and potentially 13).
- **VA Alternative Concept No. 7:** Optimize the use of bridges and berms in Los Peñasquitos Lagoon.
 - The intent of this concept is to optimize the locations and lengths of bridges and berms along the alignment where it would travel through the Los Peñasquitos Lagoon. This design optimization would be considered during the environmental clearance phase for any alternative concept that includes a new or modified alignment within a lagoon.
- **VA Alternative Concept No. 9:** Locate the bored tunnel transition south of Carmel Valley Road.
 - This alternative concept is similar to VA Alternative Concept No. 16 but lowers and shifts the south portal 150 feet to the west. This change is an engineering refinement that will be considered as the design progresses beyond a 10% level and would also be applicable to all alternative concepts with a southern portal at Torrey Pines Road or Torrey Pines Road West, which would include VA Alternative Concept Nos. 8, 11, and 16. Application of this refinement is described further in Section 4.2.1.

3.1.2 Intent

The remaining VA Alternative Concept Nos. 1, 2, 3, 5, 6, 8, 10, 11, 12, 13, 14, 15, and 16 were assessed to determine whether they meet the stated intent identified in the VA Study. Table 4 summarizes this determination for each VA Alternative Concept. VA Alternative Concept Nos. 5 and 11 do not meet the stated intent and were therefore removed from further consideration. These alternative concepts are described further in Section 3.3.

For those alternative concepts with a stated intent of reducing subsurface easements, a comparison was made to the Proposed NOP Alternative that most closely approximated that alternative concept.

Table 4. Alternative Concept Intent Assessment

VA Alternative Concept	Intent	Meets Stated Intent?	Assessment
VA Alternative Concept No. 1	Minimize private subsurface easements by locating the bored tunnel segment of the alignment under the Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension, to the extent practicable, using a maximum passenger operating speed of 90 mph within the tunnel.	yes	Meets the intent by reducing the number of private subsurface easements by an estimated 19% with the I-5 Knoll south portal location and an estimated 35% with the Portofino south portal compared to Alternative Concept 15 (Proposed NOP Alternative Alignment B).
VA Alternative Concept No. 2	Provide a tunnel profile that would remain above projected flood levels and sea-level rise and provide positive drainage in the tunnel.	yes	Meets the intent of raising profile above projected flood levels and sea-level rise.
VA Alternative Concept No. 3	Minimize permanent effects to existing wetlands by locating the southern portal south of Los Peñasquitos Lagoon.	yes	Meets the intent to minimize permanent effects in the lagoon.
VA Alternative Concept No. 5	Minimize permanent effects on private properties by locating the transition from cut-and-cover to bored tunnel to be within public right-of-way of the existing roads.	no	Does not meet intent. Compared to VA Alternative Concepts No. 15 and 16 (Proposed NOP Alternatives B and C), this alternative concept would increase the effects to properties along Jimmy Durante Boulevard and Camino Del Mar with the potential to eliminate access to some properties during construction.
VA Alternative Concept No. 6	Minimize private subsurface easements by locating the bored tunnel segment of the alignment under Crest Canyon Open Space Park and Torrey Pines Natural Reserve Extension, to the extent practicable, using maximum passenger operations speeds for 90 mph within the tunnel.	yes	Meets intent by reducing the number of private subsurface easements by an estimated 10% with the I-5 Knoll south portal location and an estimated 32% with the Portofino south portal compared to Alternative Concept 15 (Proposed NOP Alternative Alignment B).

VA Alternative Concept	Intent	Meets Stated Intent?	Assessment
VA Alternative Concept No. 8	Minimize private subsurface easements by locating the bored tunnel segment of the alignment directly under Camino Del Mar, to the extent practicable, using a maximum passenger operating speed of 90 mph.	yes	Meets the intent to reduce the number of private subsurface easements by an estimated 41% compared to Alternative Concept 16 (Proposed NOP Alternative Alignment C).
VA Alternative Concept No. 10	Explore relocating the rail corridor and operations from the existing alignment to a new location along I-5 between Oceanside and Sorrento Valley.	yes	Meets the intent to explore relocating the rail corridor.
VA Alternative Concept No. 11	Minimize private property effects by using the site of the old Del Mar train station and parking lots for construction staging areas and locating the bored tunnel transition to cut-and-cover at the north end within the railroad right-of-way.	no	Does not meet intent. Compared to VA Alternative Concepts No. 15 and 16 (Proposed NOP Alternatives B and C), this alternative concept would result in additional effects to private properties to accommodate the shoofly alignment. Additionally, the old Del Mar train station is located on private property.
VA Alternative Concept No. 12	Maintain the location of the existing rail alignment and add a second track to the east of the existing tracks within the railroad right-of-way.	yes	Meets the intent to maintain the location of the existing rail alignment and double track the alignment.
VA Alternative Concept No. 13	Maintain passenger rail service near the current alignment and shift freight rail service to the I-15 corridor.	yes	Meets intent to shift freight to I-15 corridor, but the location of the passenger rail in the existing corridor was not identified as part of the study.

VA Alternative Concept	Intent	Meets Stated Intent?	Assessment
VA Alternative Concept No. 14	VA Alternative Concept No. 14 is the same as Alternative A from the NOP. It was originally prepared to reach I-5 as quickly as possible while maintaining the existing Solana Beach and Sorrento Valley Stations; minimize surface effects to residential properties, subsurface easements under private properties and effects to the Los Peñasquitos Lagoon.	yes	Meets the intent as developed.
VA Alternative Concept No. 15	VA Alternative Concept No. 15 is the same as Alternative B from the NOP. It was originally prepared to tie into the San Dieguito Double Track project and create a direct route between portals. It was also prepared to minimize effects to private property and Los Peñasquitos Lagoon.	yes	Meets the intent as developed.
VA Alternative Concept No. 16	VA Alternative Concept No. 16 is the same as Alternative C from the NOP. It was originally prepared to tie into the San Dieguito Double Track project and create a direct route between portals. It was also prepared to minimize private property effects at the portals.	yes	Meets the intent as developed.

Notes: I- = Interstate; mph = miles per hour; NOP = Notice of Preparation; VA = Value Analysis

3.1.3 Extraordinary Impact or Cost

Of the remaining VA Alternative Concepts (i.e., Nos. 1, 2, 3, 6, 8, 10, 12, 13, 14, 15, and 16), staff have determined that VA Alternative Concept Nos. 10 and 13 would result in extraordinary impacts and cost. These alternative concepts would not be reasonable or practicable and would jeopardize delivery of the project; therefore, VA Alternative Concept Nos. 10 and 13 were removed from further consideration.

- **VA Alternative Concept No. 10:** Relocate LOSSAN corridor along I-5 from Oceanside to Sorrento Valley
 - **Cost:** \$34-45 billion
 - **Schedule and Funding Considerations:** The anticipated time it would take to plan, coordinate, approve, permit, design, and construct a project of this size, including advancing it through the environmental process, could take decades. Securing sufficient funding to pay for this alternative concept would also be a major

challenge, and the alternative concept could not be easily implemented in phases given the need to maintain rail access between Oceanside and Sorrento Valley.

- **Impacts:** This alternative concept would introduce significant design and constructability challenges. The foundations and sub-structure needed would be substantial and would create significant construction access issues. Significant freeway reconstruction would be required where the alignment travels within the median. Acquisitions would be required for elements of this alternative concept, including the station footprint, transit park-and-ride lots, alignment, freeway widening, and tunnel portals and to accommodate local roadway access. Construction activities would occur within six cities and Camp Pendleton. This alternative concept would also result in the loss of over \$1 billion in recent investment along the existing rail and I-5 corridors and has the potential to result in economic effects to cities as a result of relocating the train stations away from the downtown business districts.
- **VA Alternative Concept No. 13:** Relocate all freight rail along I-15 corridor
 - **Cost:** \$118–\$158 billion
 - **Schedule and Funding:** The magnitude of challenges in delivering an alternative concept of this nature would be significant. A project of this size and cost would take decades to plan, coordinate, approve, permit, design, and construct, including advancing it through the environmental clearance process. Securing sufficient funding to pay for this alternative concept would be a major challenge, and the concept could not be easily implemented in phases. During this time, existing rail service would have to be maintained until freight service could begin on the new I-15 corridor. The California High Speed Rail Authority's planned I-15 corridor is incompatible with freight usage. Therefore, coordination would be required to identify suitable locations where the corridors could be parallel, separated by crash walls resulting in wide cross sections. As developed during the VA Study, this alternative concept only identifies the relocation of freight service to the I-15 corridor. Implementation of the new freight alignment on I-15 is not compatible with the California State Rail Plan and SANDAG's Regional Plan and would also involve additional planning and coordination outside SANDAG's jurisdiction in Riverside County.
 - Maintaining passenger rail service on the existing rail corridor would need to be addressed through other capital projects that address the slope stabilization issues along the Del Mar Bluffs or identify an alternative concept that relocates and double tracks passenger rail service.
 - **Impacts:** This alternative concept would introduce community and ecological effects over a 75-mile-long area.

3.2 Step 2: Trade-Offs and Additional Considerations

The following sections summarize the assessment of trade-offs and additional considerations for VA Alternative Concepts Nos. 1, 2, 3, 6, 8, 12, 14, 15, and 16.

3.2.1 VA Alternative Concept No. 1

Locate North Portal at David Way following under Crest Canyon with 90-mph curves

Estimated Cost: \$3.8 to \$5.0 billion

Intent: Minimize private subsurface easements by locating the bored tunnel segment of the alignment under the Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension to the extent practicable, using a design speed of 90 mph within the tunnel.

Degree of Meeting Intent:

- I-5 Knoll south portal would result in an estimated 19% reduction in private subsurface easements compared to VA Alternative Concept No. 15 (NOP Alternative B).
- Portofino south portal would result in an estimated 35% reduction in private subsurface easements compared to VA Alternative Concept No. 15 (NOP Alternative B).

Advantages (Beyond Meeting Intent):

- Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.
- Reduces residential subsurface easements by an estimated 18% (I-5 Knoll portal) or an estimated 34% (Portofino portal) compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
- I-5 Knoll south portal location would result in fewer biological effects compared to Portofino south portal.
- I-5 Knoll south portal is more conducive to importing and exporting construction materials by rail compared to other south portal options.

Disadvantages:

- Traffic and roadway effects at the north portal would be substantial and could affect additional residential and commercial properties compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C).
- Additional maintenance needs would be required due to reversing curves ((or “S” curves) compared to alternatives with a straighter alignment.
- Construction phasing to avoid affecting access to residential streets would be more difficult compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C).
- Third most expensive alternative concept of those considered in Step 2 of the assessment.
- Would increase travel time compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
- Portofino south portal did not receive public support in prior outreach efforts because of its proximity to residences (compared to I-5 Knoll) and potential effects to wildlife.
- Portofino south portal would result in increased biological effects compared to some other south portals, including the I-5 Knoll south portal.

Other Considerations:

- 90-mph maximum speed through curves is less than the 110-mph maximum speeds identified in the 2021 Regional Plan.
- Alignments underneath Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension received interest during the December 20, 2024, Feedback Meeting held as part of the VA Study.

3.2.2 VA Alternative Concept No. 2

Keep the tunnel profile above projected flooding elevations and provide positive drainage

Estimated Cost: \$3.4 to \$4.6 billion

Intent: Provide a tunnel profile that would remain above projected flood levels and sea-level rise and provide positive drainage in the tunnel.

Degree of Meeting Intent: Intent is met.

Advantages (Beyond Meeting Intent):

- Higher profile could increase potential for beneficial reuse of spoils for beach sand replenishment.
- Reduces residential subsurface easements by an estimated 12% compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
- Third lowest cost of all alternatives and second lowest of the tunnel alternatives considered in Step 2 of the assessment.
- Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.

Disadvantages:

- Compared to the north portal associated with VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C, respectively), this alternative concept would increase permanent and temporary surface effects to residential land uses, including effects to an estimated five to seven times more residential land uses.
- Requires significant raising of Jimmy Durante Boulevard. Traffic and roadway effects would be substantial and could affect additional residential and commercial properties compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C).
- Portofino south portal did not receive public support in prior outreach efforts because of its proximity to residences (compared to I-5 Knoll) and potential effects to wildlife.
- Portofino south portal would result in increased biological effects compared to some other south portals.

Other Considerations:

- 110-mph maximum speed.

3.2.3 VA Alternative Concept No. 3

Locate the South Portal south of existing pump station at Carmel Mountain Road

Estimated Cost: \$4.5 to \$6.0 billion

Intent: Minimize permanent effects to the existing wetlands by locating the southern portal south of Los Peñasquitos Lagoon.

Degree of Meeting Intent: Intent is met.

Advantages (Beyond Meeting Intent):

- Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.

Disadvantages:

- Increases permanent and temporary effects to commercial and industrial properties at south portal compared to other south portal options.
- Require significant modifications at Sorrento Valley Road and Carmel Mountain Road.
- The south portal site would be less ideal/efficient for potentially importing and exporting construction materials by rail compared to I-5 Knoll south portal.
- Second most expensive alternative concept evaluated in Step 2.
- Would not reduce residential subsurface easements and would slightly increase private subsurface easements (estimated 4%) compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).

Other Considerations:

- 110-mph maximum speed.

3.2.4 VA Alternative Concept No. 6**Locate North Portal Under Jimmy Durante Boulevard following under Crest Canyon with 90-mph curves**

Estimated Cost: \$3.7 to \$4.9 billion

Intent: Minimize private subsurface easements by locating the bored tunnel segment of the alignment under the Crest Canyon Open Space Park and Torrey Pines Natural Reserve Extension to the extent practicable, utilizing a design speed of 90 mph within the tunnel.

Degree of Meeting Intent:

- I-5 Knoll south portal would result in an estimated 10% reduction in private subsurface easements compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
- Portofino south portal would result in an estimated 32% reduction in private subsurface easements compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).

Advantages (Beyond Meeting Intent):

- Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.
- Reduces residential subsurface easements by an estimated 10% (I-5 Knoll portal) or an estimated 30% (Portofino portal) compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
- North portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways and private properties compared to the Within Camino Del Mar north portal.
- I-5 Knoll south portal location would result in fewer biological effects compared to Portofino south portal.
- I-5 Knoll south portal is more conducive to importing and exporting construction materials by rail compared to other south portal options.

Disadvantages:

- Additional maintenance needs would be required due to reversing curves compared to alternatives with a straighter alignment.
- Increases travel time compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).

- Portofino south portal did not receive public support in prior outreach efforts because of its proximity to residences (compared to I-5 Knoll) and potential effects to wildlife.
- Portofino south portal would result in increased biological effects compared to some other south portals.

Other Considerations:

- 90-mph maximum speed through curves is less than the 110-mph maximum speeds identified in the 2021 Regional Plan.
- Alignments underneath Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension received interest during the December 20, 2024, Feedback Meeting held as part of the VA Study.

3.2.5 VA Alternative Concept No. 8

Locate alignment under Camino Del Mar with 90-mph curves

Estimated Cost: \$3.6 to \$4.8 billion

Intent: Minimize private subsurface easements by locating the bored tunnel segment of the alignment directly under Camino Del Mar to the extent practicable, utilizing a design speed of 90 mph.

Degree of Meeting Intent: an estimated 41% reduction in private subsurface easements compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C)

Advantages (Beyond Meeting Intent):

- Opportunity to minimize residential effects at south portal by using the Torrey Pines Road West portal location.
- Greatest reduction in residential subsurface easements compared to all other tunnel alternative concepts (an estimated 67% reduction compared to VA Alternative Concept No. 16 [Proposed NOP Alternative C]).
- Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.

Disadvantages:

- Results in substantial effects to the roadway network. This north portal option would require reconstruction of the existing Camino Del Mar Bridge and construction of a temporary bridge to divert traffic across the railroad and to accommodate portal and track shoofly construction. Access to private properties along Grand Avenue would be affected by construction activities. Additionally, the north portal would require reconstruction of Jimmy Durante Boulevard and Camino Del Mar.
- Increases travel time compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).

Other Considerations:

- 90-mph maximum speed through curves is less than the 110-mph maximum speeds identified in the 2021 Regional Plan.
- Alignments underneath Camino Del Mar received interest during the December 20, 2024, Feedback Meeting held as part of the VA Study.

3.2.6 VA Alternative Concept No. 12

Stabilize bluffs and widen existing alignment to accommodate a second track

Estimated Cost: \$1.9 to \$2.5 billion

Maintain the location of the existing rail alignment and add a second track to the east of the existing tracks within the railroad right-of-way.

Degree of Meeting Intent: Intent is met.

Advantages (Beyond Meeting Intent):

- Least costly of all alternative concepts considered in step 2.
- Does not include a tunnel segment and, therefore, would not require subsurface easements for a tunnel.
- Does not require specialized maintenance practices associated with tunnels.
- Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.

Disadvantages:

- Requires more challenging construction associated with activities to construct the railroad trench and Coast Boulevard grade separation while maintaining existing rail operations. The grade separation would also result in temporary roadway effects on Coast Boulevard.
- Concept requires construction of new seawalls that are approximately 18 feet in height, or increasing the height of existing seawalls, which would be damaging to the existing bluffs and require challenging construction and staging on the beach.
- Less climate resilient than other alternative concepts.
- Routine beach replenishment/beach sand mitigation could be required after construction of the seawalls.
- Would be inconsistent with past permitting in the coastal zone.
- The additional tracks would bring trains closer to homes adjacent to the existing right-of-way.
- Would not be as effective at minimizing points of interaction between the rail and all other modes of transportation compared to other alternative concepts.
- Proximity of construction to residential properties would be distributed over a longer area compared to other alternative concepts.
- Could require ongoing or emergency bluff stabilization maintenance.

Other Considerations:

- As designed in the VA Study, this concept would not improve upon current speeds or travel time.
- Exploring alignments that did not require portals received interest during the December 20, 2024, Feedback Meeting held as part of the VA Study.

3.2.7 VA Alternative Concept No. 14

Locate North Portal in Solana Beach Trench to South Portal at I-5 Knoll with bored tunnel under Fairgrounds and I-5 (Proposed NOP Alternative Alignment A – I-5 Alignment)

Estimated Cost: \$6.9 to \$9.2 billion

Intent: Reach I-5 as quickly as possible while maintaining the existing Solana Beach and Sorrento Valley Stations; minimize surface effects to residential properties, subsurface easements under private properties, and impacts to the Los Peñasquitos Lagoon.

Degree of Meeting Intent (Beyond Meeting Intent): Intent is met.

Advantages:

- Reduces permanent and temporary effects in the City of Del Mar.
- Results in the lowest number of subsurface easements from private properties, including residential properties, compared to all other alternative concepts with tunnel segments.
- South portal location (I-5 Knoll) would result in fewer biological effects compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).
- More conducive to importing and exporting construction materials by rail compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).

Disadvantages:

- Would result in permanent and temporary effects to the Solana Beach Trench and the Del Mar Fairgrounds (a regional economic generator).
- Has the greatest cost of all alternative concepts considered in Step 2.
- Does not demonstrate public stewardship as it would not use the future San Dieguito Bridge and Del Mar Fairgrounds special events platform.
- Introduces an underground special events platform, which would increase construction and maintenance costs.
- Results in more challenging construction associated with activities within the existing Solana Beach Trench and maintaining existing rail operations.

Other Considerations:

- 110-mph maximum speed.
- Input received during prior public outreach and the VA Study indicated interest in exploring an alignment near I-5.
- The alternative received opposition because of surface effects associated with the north portal and points north and due to conflicts with the future San Dieguito Bridge and Del Mar Fairgrounds special events platform.

3.2.8 VA Alternative Concept No. 15

Locate North Portal Under Jimmy Durante Boulevard to South Portal at I-5 Knoll (Proposed NOP Alternative Alignment B – Crest Canyon Alignment)

Estimated Cost: \$3.7 to \$4.9 billion

Intent: Tie into the San Dieguito Double Track project and create a direct route between portals. Minimize private property impacts and impacts to the Los Peñasquitos Lagoon.

Degree of Meeting Intent: Intent is met.

Advantages (Beyond Meeting Intent):

- North portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways and private properties compared to the Within Camino Del Mar north portal.

- South portal location (I-5 Knoll) would result in fewer biological effects compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).
- More conducive to importing and exporting construction materials by rail compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).

Disadvantages:

- Requires a greater number of subsurface easements from private properties compared to VA Alternative Concept Nos. 1, 2, 6, 8, 14, and 16.
- Along with VA Alternative Concept No. 3, would require the greatest number of residential subsurface easements of all alternative concepts with a tunnel section that were considered in step 2.

Other Considerations:

- 110-mph maximum speed
- Alignments underneath Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension received interest during the December 20, 2024, Feedback Meeting held as part of the VA Study.

3.2.9 VA Alternative Concept No. 16

Locate North Portal at Jimmy Durante Boulevard to South Portal at Torrey Pines Road (Proposed NOP Alternative Alignment C – Camino Del Mar Alignment)

Estimated Cost: \$3.3 to \$4.4 billion

Intent: Tie into the San Dieguito Double Track project and create a direct route between portals. Minimize private property effects at the portals.

Degree of Meeting Intent: Intent is met.

Advantages (Beyond Meeting Intent):

- North portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways and private properties compared to the Within Camino Del Mar north portal.
- Lowest cost of the alternative concepts with a tunnel segment.

Disadvantages:

- After VA Alternative Concept Nos. 3 and 15, would require the next greatest number of subsurface easements from residential properties among alternative concepts evaluated in Step 2.

Other Considerations:

- 110-mph maximum speed.

3.3 Assessment Summary

Each VA Alternative Concept is summarized below based on the assessment in Steps 1 and 2 of the staff recommendation approach:

- **VA Alternative Concept No. 1** met the stated intent. This alternative concept would result in substantial traffic and roadway effects at the north portal that could affect additional residential and commercial properties compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C). Additional maintenance needs would be required due to the reversing curves compared to alternative concepts with a straighter alignment,

and construction phasing would be more difficult than Proposed NOP Alternatives B and C. This concept is the third most expensive of the alternative concepts considered in Step 2. However, this alternative concept would reduce residential subsurface easements compared to Proposed NOP Alternative B.

- **VA Alternative Concept No. 2** met the stated intent. This alternative concept would result in only a moderate reduction in residential subsurface easements (estimated 12%) but would increase permanent and temporary surface effects to residential properties near the north portal by an estimated five to seven times compared to VA Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C). The Portofino south portal would result in increased biological effects compared to other south portal locations and did not receive support in prior outreach efforts. Traffic and roadway effects would be substantial due to the raising of Jimmy Durante Boulevard and could affect additional residential and commercial properties.
- **VA Alternative Concept No. 3** met the stated intent. This alternative concept would slightly increase private subsurface easements (estimated 4%) compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B). This alternative concept would increase permanent and temporary effects to commercial and industrial properties at the south portal and would require significant modifications at Sorrento Valley Road and Carmel Mountain Road. The south portal at Sorrento Valley would also be less efficient for potentially importing and exporting construction materials by rail compared to the I-5 Knoll south portal.
- **VA Alternative Concept No. 4** could be accommodated in all alternative concepts with a northern portal within Jimmy Durante Boulevard or Camino Del Mar. This alternative concept was determined to be a design refinement and will be considered during the environmental clearance phase as applicable as design advances.
- **VA Alternative Concept No. 5** does not meet the stated intent of minimizing permanent effects when considering the construction phasing limits required for the intersection of Jimmy Durante and Camino Del Mar. The north portal structure within Camino Del Mar could extend into commercial and residential properties, and the temporary construction area may be expanded beyond the portal structure limits. A temporary bridge to replace the existing Camino Del Mar Bridge would be anticipated, along with effects to adjacent local roadways to provide the necessary footprint to construct the portal facilities. Compared to VA Alternative Concepts No. 15 and 16 (Proposed NOP Alternatives B and C), this alternative concept would increase the effects to properties along Jimmy Durante Boulevard and Camino Del Mar with the potential to eliminate access to some properties during construction. Additionally, a new roadway to provide access to Grand Avenue would be necessary.
- **VA Alternative Concept No. 6** met the stated intent. This alternative concept would increase maintenance needs due to the reversing curves compared to alternative concepts with a straighter alignment. However, this alternative concept would minimize residential subsurface easements compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B).
- **VA Alternative Concept No. 7** would be considered during the environmental clearance phase for any alternative concept that advances because its intent is to optimize the locations and lengths of bridges and berms along the alignment passing through a lagoon.
- **VA Alternative Concept No. 8** met the stated intent. This alternative concept would result in substantial effects to the roadway network, including requiring the reconstruction of the

existing Camino Del Mar Bridge, construction of a temporary bridge, and reconstruction of Jimmy Durante Boulevard and Camino Del Mar. However, this alternative concept would result in the greatest reduction in residential subsurface easements compared to all other tunnel alternative concepts.

- **VA Alternative Concept No. 9** reflects a refinement that will be considered as design advances for all alternative concepts with a southern portal at Torrey Pines Road or Torrey Pines Road West.
- **VA Alternative Concept No. 10** would significantly increase costs compared to other alternative concepts and would take decades to plan, coordinate, approve, permit, design, and construct. Securing funding sufficient to pay for this alternative concept would also be a major challenge. There would be significant design and constructability challenges, as well as acquisitions and coordination of construction activities across several jurisdictions. This alternative concept would also result in the loss of over \$1 billion dollars in investment along the existing rail corridor. Given the degree of impacts and cost, this alternative concept is not reasonable or practicable.
- **VA Alternative Concept No. 11** does not meet the stated intent of minimizing private property effects considering the permanent and temporary construction phasing limits required for the Jimmy Durante and Camino Del Mar intersection and the shoofly alignment. The shoofly anticipated to support this alternative concept requires a lengthy temporary alignment that includes a new at-grade crossing at Coast Boulevard. Compared to VA Alternative Concepts No. 15 and 16 (Proposed NOP Alternatives B and C, respectively), the proposed shoofly would result in additional effects to private properties on the west side of the railroad right-of-way, a new at-grade crossing at Coast Boulevard, and reduced operating speeds. Additionally, this alternative concept would require reconstruction of the Camino Del Mar overpass bridge to accommodate the cut-and-cover tunnel construction.
- **VA Alternative Concept No. 12** met the stated intent. This alternative concept would not include a tunnel segment and, therefore, would not result in subsurface easements for a tunnel. This alternative concept would also be the least costly of all other alternative concepts. VA Alternative Concept No. 12 would be less climate resilient than other alternative concepts, would require routine beach replenishment if the beach is to be preserved, and could require ongoing or emergency bluff stabilization maintenance. It would be inconsistent with past permitting in the coastal zone. This alternative concept would also not be as effective at minimizing points of interaction with the alignment as other alternative concepts and would require a grade separation of the existing Coast Boulevard at-grade crossing.
- **VA Alternative Concept No. 13** would significantly increase cost compared to other alternative concepts. The magnitude of challenges in delivering an alternative concept of this size and cost would be significant and take decades to plan, coordinate, approve, permit, design, and construct. Securing funding sufficient to pay for this alternative concept would also be a major challenge. Given the degree of impacts and cost, this alternative concept is not reasonable or practicable.
- **VA Alternative Concept No. 14** met the stated intent. This alternative concept would result in the highest cost of the alternative concepts considered in Step 2. VA Alternative Concept No. 14 (Proposed NOP Alternative A) would reduce effects in the City of Del Mar and would reduce subsurface easements from private properties. However, this alternative concept would result in effects to the Solana Beach Trench and the Del Mar Fairgrounds. This alternative concept would remove the future San Dieguito Bridge and Del Mar Fairgrounds special events platform and would introduce an underground special events platform at

the Fairgrounds that would require additional construction costs and maintenance. VA Alternative Concept No. 14 would result in more challenging construction associated with the trench and maintaining current rail operations.

- **VA Alternative Concept No. 15** met the stated intent. This alternative concept would require the greatest number of residential subsurface easements of all alternative concepts considered in Step 2, along with VA Alternative Concept No. 3. VA Alternative Concept No. 15 (NOP Alternative B) would be more conducive to importing and exporting construction materials by rail compared to VA Alternative Concept No. 16 (NOP Alternative C). The north portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways, and the south portal location (I-5 Knoll) would result in fewer effects compared to NOP Alternative C.
- **VA Alternative Concept No. 16** met the stated intent. This alternative concept would result in the lowest cost of all alternative concepts with a tunnel segment. After VA Alternative Concept Nos. 3 and 15, VA Alternative Concept No. 16 (NOP Alternative C) would have the greatest number of subsurface easements from residential properties among all alternative concepts evaluated in Step 2. The north portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways.

4 Staff Recommendation

The following sections summarize staff recommendations for (1) alternative concepts, (2) the goal and objectives, and (3) additional ideas and refinements that should advance into the environmental clearance phase. This section also summarizes the themes and lessons learned from the VA Study that, along with the assessment summarized in Section 3, informed the staff recommendations.

4.1 Themes and Lessons Learned from the VA Study

The VA Study was a collaborative process leveraging the knowledge of the multidisciplinary VA Team, including subject matter experts and stakeholders, to allow for a fresh look at the project objectives and alternative concepts and identify other ideas and design refinements. Throughout this process, the VA Team stressed the desire to minimize property acquisitions, including subsurface easements from private properties; risks from climate change; and negative effects on biological resources, communities, and economic generators including the Del Mar Fairgrounds. The VA Team also stressed the importance of public stewardship, including preserving prior and ongoing investments in the LOSSAN corridor and considerations on the cost of constructing and maintaining the project. Collectively, these themes and input were incorporated into the draft revised objectives and the alternative concepts developed as part of the VA Study.

Regarding the location of project elements, interest was noted for alignments located under Crest Canyon or Camino Del Mar, with a focus on minimizing subsurface easements from private properties. Additionally, there was interest in exploring alignments that did not require portals, including an option that would keep the railroad tracks on the bluffs, as well as alignments with slower design speeds. There was also interest, consistent with feedback received during outreach efforts in 2023, to continue to study an I-5 alignment that is similar to alignments identified in prior studies (e.g., 2007 LOSSAN Programmatic EIR/EIS, 2023 Alternatives Analysis). Related to a potential I-5 alignment, feedback was received during the VA Study regarding minimizing or avoiding effects to the Del Mar Fairgrounds and to prior investments related to the San Dieguito Double Track project.

Additionally, the VA Team identified several design refinements and other ideas, as described in Section 4.2 of the Final VA Study Report. Many of these ideas are applicable during the environmental clearance phase as design is advanced, environmental analyses are completed, and mitigation is identified to address impacts under NEPA and/or CEQA for those alternatives that advance. The alternative concepts and additional ideas reflect the knowledge and experience of the VA Team and helped shape SANDAG staff considerations.

4.2 Staff Recommendations

4.2.1 Alternative Concepts

The alignments described in the following sections are recommended to advance from the VA Study process. These recommendations are based on the trade-offs among the alternative concepts, as summarized in Section 3.2 and the themes and lessons learned described in Section 4.1. Some of the alignments described in the sections that follow include refinements to the alternative concepts described in Section 3.2 that seek to integrate lessons learned and themes from the VA Study, stakeholder coordination, prior public comments received on the

June 2024 NOP, and prior studies while also maintaining the original intent of that alternative concept, as defined during the VA Study. The sections that follow also present estimated costs for each recommended alignment and an assessment of trade-offs. The recommended alignments, inclusive of portal locations as applicable, will be presented to the SANDAG Board of Directors for consideration.

It should be noted that discussions with a federal lead agency pursuant to NEPA are still forthcoming and additional refinements and/or recommendations could result as part of that process.

The recommendations that follow are listed in no particular order.

4.2.1.1 Recommendation 1: San Dieguito Bridge to I-5 Knoll

Description

Intent: Proposed NOP Alternative A (VA Alternative Concept No. 14) was developed prior to release of the June 2024 NOP and therefore did not have an intent developed during the VA Study. However, it was originally prepared to reach the I-5 freeway as quickly as possible while maintaining the existing Solana Beach and Sorrento Valley Stations; accommodating 110-mph design speeds; and minimizing surface impacts to residential properties, subsurface easements under private properties, and impacts to the Los Peñasquitos Lagoon.

During the VA Study, participants noted interest in exploring an “I-5” alternative that would preserve the future San Dieguito Bridge and limit project effects on Del Mar Fairgrounds operations, which is a regional economic generator. Participants also identified an idea related to refining project assumptions that sought to “consider changing project limits to begin on the south side of new San Dieguito Bridge to Sorrento Valley Station” (Additional Idea DC-01, described in Section 4.2.3.1 of the Final VA Study Report). However, none of the 13 new alternative concepts developed during the VA Study met these parameters (i.e., an alignment underneath I-5 that starts south of the future San Dieguito Bridge). Specifically, VA Alternative Concept Nos. 10 (Relocate LOSSAN corridor along I-5 from Oceanside to Sorrento Valley) and 14 (Locate North Portal in Solana Beach Trench to South Portal at I-5 Knoll with bored tunnel under Fairgrounds and I-5 [Proposed NOP Alternative Alignment A—I-5 Alignment]) were the only two alternative concepts evaluated during the study that had an alignment adjacent to I-5 and neither of these would preserve the future San Dieguito Bridge.

The intent of this refined alignment is to locate the bored tunnel alignment underneath I-5 while minimizing private subsurface easements and effects to the City of Del Mar, the Del Mar Fairgrounds, and the future San Dieguito Bridge to the extent practicable.

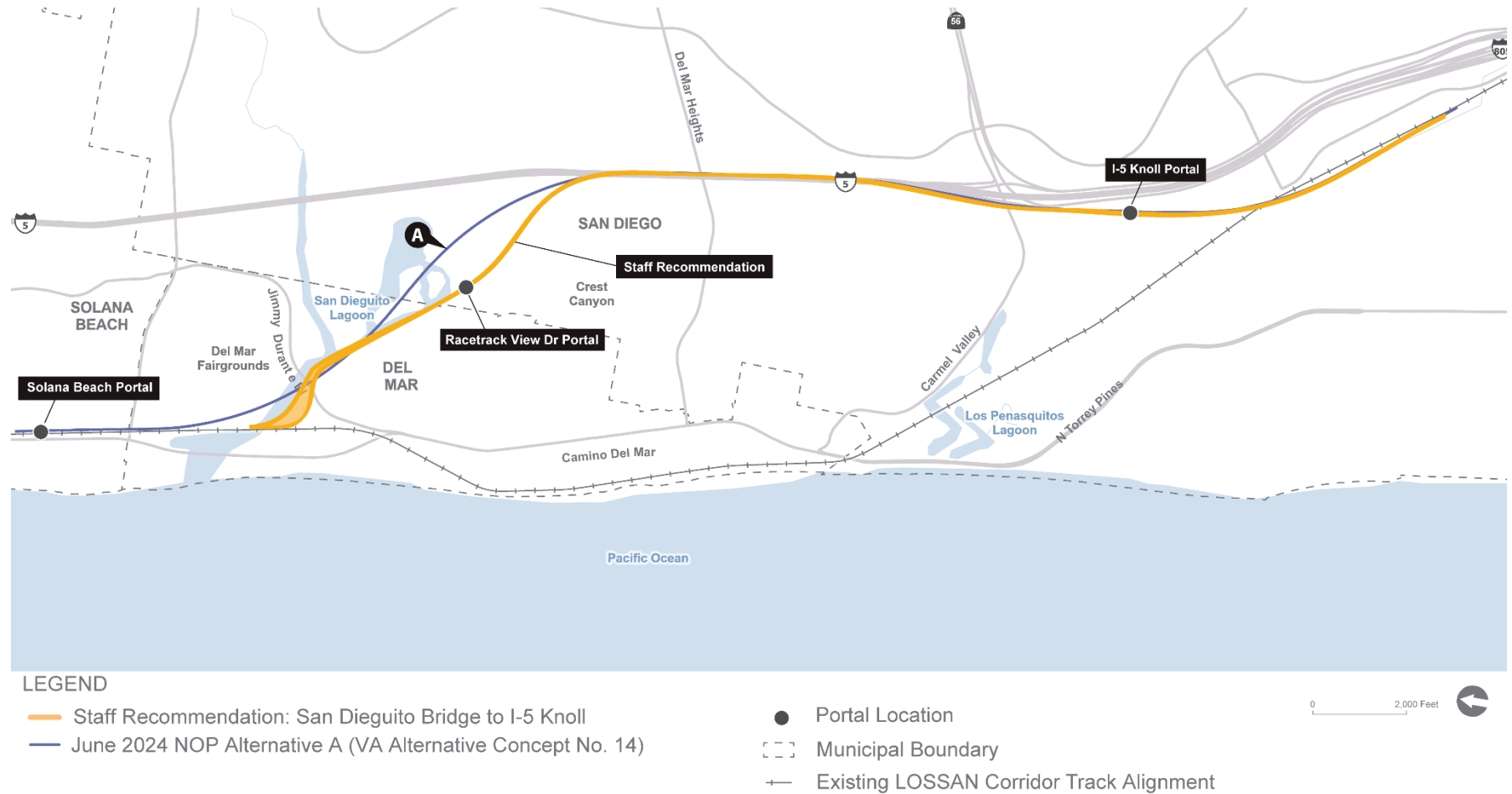
Alignment and Portals: After the conclusion of the VA Study, staff sought to refine Proposed NOP Alternative Alignment A to meet the intent described above. To preserve as much of the future San Dieguito Bridge as practicable, transition the alignment to be under I-5 as quickly as possible, and avoid private subsurface easements, the alignment would have a 30-mph design speed through the curves that would start at the south end of the bridge, followed by 70-mph curves before ultimately reaching a 110-mph design speed. The refined alignment would be located on a bridge structure that would be located adjacent to the south side of San Dieguito Lagoon. The alignment would pass over Jimmy Durante Boulevard and continue over Racetrack View Drive on a bridge structure and then enter a north portal east of Crest Canyon Trail (**Racetrack View Drive north portal**). The portal was located to minimize effects to residential properties. The alignment would then turn to follow under I-5 in approximately the same location as the Proposed NOP Alternative A alignment. From that point, the refined

alignment would be the same as Proposed NOP Alternative Alignment A, inclusive of the **I-5 Knoll south portal** location. The south portal would be located at a knoll south of Carmel Valley Road between I-5 and the segment of Sorrento Valley Road Trail that is closed to public vehicular traffic but open for bicycles, pedestrians, and authorized vehicles. The tracks would then rise as they transition back into the existing railroad alignment north of the Sorrento Valley Station. During the environmental clearance phase, SANDAG will also explore a design option that would begin the alignment south of the future special events platform instead to improve design speeds through the curves. During the post VA study period, SANDAG also conducted outreach in stakeholder communities. During those events, stakeholders described a more northerly variation of this alternative alignment. Staff will explore this design concept during the environmental clearance process.

The refined alignment, referred to as San Dieguito Bridge to I-5 Knoll, and alignment for Proposed NOP Alternative A are shown on Figure 3. An exhibit for the refined alignment is also included in Appendix A.

Estimated Cost: \$3.8 to \$5.1 billion

Figure 3. Recommendation 1: San Dieguito Bridge to I-5



SANDAG

Trade-Offs

The following describes the preliminary assessment of the advantages and disadvantages of the San Dieguito Bridge to I-5 Knoll alignment based on information known at this time. Additional analysis and design will occur during the environmental clearance phase.

Advantages:

- VA Alternative Concept No. 14 (Proposed NOP Alternative A): Reduces permanent and temporary effects in the City of Del Mar.
 - **San Dieguito Bridge to I-5 Knoll** removes this benefit compared to Proposed NOP Alternative A.
- VA Alternative Concept No. 14 (Proposed NOP Alternative A) and **San Dieguito Bridge to I-5 Knoll**: Results in the lowest number of subsurface easements from private properties, including residential properties, compared to all other alternative concepts with tunnel segments.
- VA Alternative Concept No. 14 (Proposed NOP Alternative A) and **San Dieguito Bridge to I-5 Knoll**: More conducive to importing and exporting construction materials by rail compared to Recommendation 2 with a south portal at Torrey Pines Road West.
- **San Dieguito Bridge to I-5 Knoll**: Minimizes permanent and temporary effects to the Del Mar Fairgrounds compared to VA Alternative Concept No. 14 (Proposed NOP Alternative A).
- **San Dieguito Bridge to I-5 Knoll**: Minimizes direct effects and construction-related effects to residential properties and roadways in the City of Del Mar compared to Recommendations 1 and 2 with a north portal Under Jimmy Durante Boulevard.
- **San Dieguito Bridge to I-5 Knoll**: Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.

Disadvantages:

- VA Alternative Concept No. 14 (Proposed NOP Alternative A): Would result in permanent and temporary effects to the Solana Beach Trench and the Del Mar Fairgrounds.
 - **San Dieguito Bridge to I-5 Knoll** addresses this disadvantage by minimizing effects to the Del Mar Fairgrounds.
- VA Alternative Concept No. 14 (Proposed NOP Alternative A): Has the greatest cost of all alternative concepts considered in Step 2.
 - **San Dieguito Bridge to I-5 Knoll partially addresses this disadvantage** with an estimated cost of \$3.8 to \$5.1 billion, which is less than the \$6.9 to \$9.2 billion estimated for Proposed NOP Alternative A.
- VA Alternative Concept No. 14 (Proposed NOP Alternative A): Does not demonstrate public stewardship as it would not use the future San Dieguito Bridge and Del Mar Fairgrounds Special Events Platform.
 - **San Dieguito Bridge to I-5 Knoll addresses this disadvantage** by preserving the bridge and/or the special events platform.
- VA Alternative Concept No. 14 (Proposed NOP Alternative A): Introduces an underground special events platform, which would increase construction and maintenance costs.
 - **San Dieguito Bridge to I-5 Knoll addresses this disadvantage** and does not require an underground special events platform.

- VA Alternative Concept No. 14 (Proposed NOP Alternative A): Results in more challenging construction associated with activities within the existing Solana Beach Trench and maintaining existing rail operations.
 - **San Dieguito Bridge to I-5 Knoll addresses this disadvantage** as it does not require construction in the existing Solana Beach Trench.
- **San Dieguito Bridge to I-5 Knoll:** Increases construction effects in the City of Del Mar compared to VA Alternative Concept No. 14 (Proposed NOP Alternative A).
- **San Dieguito Bridge to I-5 Knoll:** Requires a set of sharp 30-mph reversing curves at the south end of the future San Dieguito Bridge that would be challenging for rail operations. A design option that begins south of the future special events platform will be explored during the environmental clearance phase to improve design speed. A northerly variation will also be explored during the environmental clearance phase.
- **San Dieguito Bridge to I-5 Knoll:** Alignment introduces several maintenance challenges, including for the curves at the south end of the future San Dieguito Bridge and for the aerial structure, which would be approximately 1 mile in length and up to 55 feet in height.
- **San Dieguito Bridge to I-5 Knoll:** The alignment may not reduce travel times compared to existing conditions between the Solana Beach and Sorrento Valley Stations.

Reason for Recommendation

During the VA Study and prior outreach efforts, interest was received in exploring an alignment that would be located under or adjacent to I-5. Various alignments had been considered in prior studies, including the 2007 LOSSAN Programmatic EIR/EIS and the 2023 Alternatives Analysis. Therefore, the June 2024 NOP included Alternative A, the alignment of which would descend immediately south of the Solana Beach Station toward the north portal. The north portal would be located north of the Fairgrounds within the railroad trench in Solana Beach. The alignment would continue south into the Fairgrounds, where there would be a new underground special events platform. The alignment would continue under the San Dieguito Lagoon and turn to follow under the I-5 freeway, then continue south to the I-5 Knoll south portal. This was the only alignment included in the NOP that would start north of the future San Dieguito Bridge.

Public input was received during the CEQA scoping period and the VA Study noting concerns about construction impacts to the Del Mar Fairgrounds. Additionally, concerns were noted regarding public stewardship, as the alignment would not use the future Del Mar Fairgrounds Special Events Platform and San Dieguito Bridge that would be constructed and in operation prior to the start of construction of the SDLRR Project, if that alignment were ultimately selected as the project. As developed for the NOP, Alternative A also had a greater cost compared to Alternatives B and C, in part due to the longer alignment (6.6 miles compared to 5.3 and 4.9 miles, respectively) and the need for an underground special events platform at the Del Mar Fairgrounds to maintain the planned connection.

Therefore, in light of the feedback received during the VA Study and 2024 CEQA scoping period, staff sought to refine Alternative A to preserve the future San Dieguito Bridge and/or the special events platform, minimize construction effects to the Del Mar Fairgrounds, and minimize direct effects to residences in the City of Del Mar. The refined alignment also provides additional benefits by eliminating the need to tunnel under San Dieguito Lagoon compared to Proposed NOP Alternative A and minimizes roadway effects compared to alternative concepts that use the Under Jimmy Durante north portal. As such, staff recommend advancing this refined alignment into the environmental clearance phase.

4.2.1.2 Recommendation 2: Under Crest Canyon (Under Jimmy Durante to I-5 Knoll)

Description

Intent: VA Alternative Concept Nos. 1 and 6 had the same intent, which was to minimize private subsurface easements by locating the bored tunnel segment of the alignment under the Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension to the extent practicable, using a design speed of 90 mph within the tunnel.

Portals: VA Alternative Concept No. 1 had a different north portal (David Way) than Alternative Concept No. 6 (Under Jimmy Durante Boulevard). As no interest was noted on the David Way portal during the December 20, 2024, Feedback Meeting, and in light of the greater roadway and traffic effects and surface effects to private properties that would result from that portal, the refined alignment uses the **Under Jimmy Durante Boulevard north portal**. To use this north portal, the alignment would descend immediately south of the rail bridge that spans over San Dieguito Lagoon and enter the north portal, which would be located north of the intersection of Camino Del Mar and Jimmy Durante Boulevard. The portal's infrastructure would cross underneath Jimmy Durante Boulevard, which would be raised. The portal structures could extend into commercial and residential properties.

As developed during the VA Study, the south end of the bored tunnel segment for both alternative concept alignments could exit at either the Portofino or I-5 Knoll south portal. Feedback received during the December 20, 2024, meeting and during prior public outreach and planning and design studies indicated stronger support for the I-5 Knoll south portal. Prior studies also indicated that the Portofino south portal could result in greater permanent effects to biological resources. Therefore, the **I-5 Knoll south portal** is assumed as part of the refined alignment. The south portal would be located at a knoll south of Carmel Valley Road between I-5 and the segment of Sorrento Valley Road Trail that is closed to public vehicular traffic but open for bicycles, pedestrians, and authorized vehicles.

Alignment: As developed during the VA Study, the bored tunnel segment differed between VA Alternative Concept Nos. 1 and 6 (Figure 1 and Figure 4). The refined alignment would more closely approximate the alignment of VA Alternative Concept No. 6 after it enters the Under Jimmy Durante Boulevard north portal. Around the location where the bored tunnel would be underneath Del Mar Heights Road, the alignment would then begin to more closely follow the alignment of VA Alternative Concept No. 1, continuing to approximate that alignment until it reaches the I-5 Knoll south portal. The tracks would then rise as they transition back into the existing railroad alignment north of the Sorrento Valley Station.

Although both VA Alternative Concept Nos. 1 and 6 were designed with 90-mph design speeds for the bored tunnel segment during the VA Study, the refined alignment is anticipated to support 110-mph speeds within the bored tunnel. The faster design speed is estimated to result in less subsurface easements from private properties compared to an alignment with a 90-mph design speed. Therefore, the refined alignment also considers operational performance of the alignment while continuing to minimize subsurface easements from private properties.

The refined alignment, referred to as Under Crest Canyon, and alignment for Alternative Concepts 1 and 6 are shown on Figure 4. An exhibit for the refined alignment is also included in Appendix A.

Estimated Cost: \$3.7 to \$5.0 billion

Figure 4. Recommendation 2: Under Crest Canyon (Under Jimmy Durante to I-5 Knoll)



LEGEND

- Staff Recommendation: Under Crest Canyon
- VA Alternative Concept No. 1
- VA Alternative Concept No. 6

- Portal Location
- Municipal Boundary
- + Existing LOSSAN Corridor Track Alignment

0 2,000 Feet



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Trade-Offs

The following is a preliminary assessment of the advantages and disadvantages of the Under Crest Canyon alignment and portals, based on information known at this time, compared to the alternative concepts that it most closely approximates (i.e., VA Alternative Concepts 1, 6, and 15 [Proposed NOP Alternative B]). Additional analysis and design will occur during the environmental clearance phase.

Advantages (Beyond Meeting Intent):

- VA Alternative Concept Nos. 1, 6, 15 (Proposed NOP Alternative B), and **Under Crest Canyon**: Demonstrate public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.
- Compared to VA Alternative Concept No. 15 (Proposed NOP Alternative B), reduces residential subsurface easements:
 - VA Alternative Concept No. 1: by an estimated 18% (I-5 Knoll portal)
 - VA Alternative Concept No. 6: by an estimated 10% (I-5 Knoll portal)
 - **Under Crest Canyon**: by an estimated 22%
- VA Alternative Concept Nos. 6, 15 (Proposed NOP Alternative B), and **Under Crest Canyon**: North portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways and private properties compared to the Within Camino Del Mar north portal.
- VA Alternative Concept Nos. 1, 6, 15 (Proposed NOP Alternative B), and **Under Crest Canyon**: South portal location (I-5 Knoll) would result in fewer biological effects compared to the south portal for VA Alternative Concept No. 16 (Proposed NOP Alternative C) (Torrey Pines Road).
- VA Alternative Concept Nos. 1 (with I-5 Knoll Portal), 6 (with I-5 Knoll Portal), 15 (Proposed NOP Alternative B), and **Under Crest Canyon**: More conducive to importing and exporting construction materials by rail compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).

Disadvantages:

- VA Alternative Concept No. 1: traffic and roadway effects at the north portal would be substantial and could affect additional residential and commercial properties compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C).
 - **Under Crest Canyon addresses the disadvantage**: Alignment would continue to have traffic and roadway effects at the north portal, which would be the same as Proposed NOP Alternative B and C, but less than VA Alternative Concept No. 1.
- VA Alternative Concept Nos. 1, 6, and **Under Crest Canyon**: Additional maintenance needs would be required due to reversing curves compared to alternatives with a straighter alignment.
- VA Alternative Concept No. 1: Construction phasing to avoid affecting access to residential streets would be more difficult compared to VA Alternative Concept Nos. 15 and 16 (Proposed NOP Alternatives B and C).
 - **Under Crest Canyon addresses the disadvantage**: Effects would be the same as Proposed NOP Alternatives B and C, which would be less than VA Alternative Concept No. 1.

- VA Alternative Concept No. 1: Third most expensive alternative concept of those considered in step 2 of the assessment.
 - The estimated cost of the **Under Crest Canyon** is \$3.7 to \$5.0 billion, which could be less than the \$3.8 to \$5.0 billion estimated cost for VA Alternative Concept No. 1.
- VA Alternative Concept Nos. 1 and 6: Would increase travel time compared to Alternative Concept No. 15 (Proposed NOP Alternative B).
 - **Under Crest Canyon addresses the disadvantage:** The design speed in the tunnel is higher for Under Crest Canyon compared to VA Alternative Concept Nos. 1 and 6.
- VA Alternative Concept Nos. 1 and 6: Portofino south portal did not receive public support in prior outreach efforts because of its proximity to residences (compared to I-5 Knoll) and potential effects to wildlife.
 - **Under Crest Canyon** addresses this disadvantage by using the I-5 Knoll south portal.
- VA Alternative Concept No. 1 and 6: Portofino south portal would result in increased biological effects compared to some other south portals, including the I-5 Knoll south portal.
 - **Under Crest Canyon** addresses this disadvantage by using the I-5 Knoll south portal.
- VA Alternative Concept No. 15 (Proposed NOP Alternative B): Requires a greater number of subsurface easements from private properties compared to VA Alternative Concept Nos. 1, 2, 6, 8, 14, and 16.
 - **Under Crest Canyon addresses the disadvantage:** The alignment would decrease subsurface easements from private properties by an estimated 23%.
- VA Alternative Concept No. 15 (Proposed NOP Alternative B): Would require the greatest number of residential subsurface easements of all alternative concepts with a tunnel section that were considered in Step 2.
 - **Under Crest Canyon addresses the disadvantage:** Would decrease subsurface easements from residential properties by an estimated 22%.

Reason for Recommendation

During the December 20, 2024, Feedback Meeting, participants noted interest in further exploring bored tunnel alignments that would be underneath Crest Canyon Open Space Park and Torrey Pines Natural Reserve to minimize subsurface easements from private properties. This interest aligns with feedback received during prior public outreach and stakeholder coordination, as well as results of prior studies. However, the path of the alignment underneath the open space park and reserve varied among the different alternative concepts developed during the VA Study (i.e., Alternative Concepts 1, 2, 3, 5, and 6) and that identified for Proposed Alternative B in the June 2024 NOP (referred to as VA Alternative Concept No. 15 in the VA Study) (Figure 5). These alternative concepts were also composed of various north and/or south portal options, each of which had different trade-offs in terms of advantages and disadvantages.

Therefore, upon conclusion of the VA Study, staff explored ways to refine the alignment and portal locations that considered the need for subsurface easements from private properties; operational performance; and effects to communities, economic generators, and biological resources. The refined alignment and portals would minimize subsurface easements from private properties, including residential properties, compared to Proposed Alternative B from the June 2024 NOP (VA Alternative Concept No. 15) while also providing improved operational performance compared to the alternatives identified in the VA Study. The refined alignment could reduce subsurface easements from private properties and from residential properties by over 20% compared to Proposed NOP Alternative B. The refined alignment is consistent with the north and south portals identified for Alternative B, which were previously identified through studies, stakeholder coordination, and public outreach, as they minimized effects to communities, economic generators, and biological resources compared to other portal locations that would support an alignment underneath Crest Canyon Open Space Park and Torrey Pines Natural Reserve. Consistent with VA Alternative Concept Nos. 1 and 6 and Proposed NOP Alternative B, the refined alignment and portals also demonstrate public stewardship as they would preserve prior and ongoing LOSSAN infrastructure investments. For these reasons, the refined alignment, referred to as Under Crest Canyon, is recommended to advance to the environmental clearance phase.

Figure 5. Recommendation 2 Compared to June NOP Alternative B



LEGEND

- Staff Recommendation: Under Crest Canyon
- June 2024 NOP Alternative B (VA Alternative Concept No. 15)

- Portal Location
- [- -] Municipal Boundary
- + Existing LOSSAN Corridor Track Alignment

0 2,000 Feet

SANDAG

4.2.1.3 Recommendation 3: Under Camino Del Mar (Under Jimmy Durante to Torrey Pines Road West)

Description

Intent: The intent for VA Alternative Concept No. 8 was to minimize private subsurface easements by locating the bored tunnel segment of the alignment directly under Camino Del Mar to the extent practicable, using a design speed of 90 mph within the tunnel.

Portals: As developed during the VA Study, VA Alternative Concept No. 8 would use the Within Camino Del Mar north portal and the Torrey Pines Road south portal. The Within Camino Del Mar north portal was previously considered during prior studies and removed from consideration because it would be the most impactful to the roadway network compared to other north portal locations evaluated at that time. Specifically, the north portal would require reconstruction of the existing Camino Del Mar Bridge and construction of a temporary bridge to divert traffic across the railroad and to accommodate portal and track shoofly construction. Access to private properties along Grand Avenue would be affected by construction activities. Additionally, the north portal would require reconstruction of Jimmy Durante Boulevard and Camino Del Mar. Therefore, the refined alignment uses the **Under Jimmy Durante Boulevard north portal**. To use this north portal, the alignment would descend immediately south of the rail bridge that spans over San Dieguito Lagoon and enter the north portal, which would be located north of the intersection of Camino Del Mar and Jimmy Durante Boulevard. The portal's infrastructure would cross underneath Jimmy Durante Boulevard, which would be raised. The portal structures could extend into commercial and residential properties.

During the VA Study, VA Alternative Concept No. 8 was designed to use the Torrey Pines south portal. However, VA Alternative Concept No. 9 explored a south portal at Torrey Pines Road West. This portal location solicited more interest during the December 20, 2024, Feedback Meeting than the Torrey Pines Road portal. Additionally, as noted in Section 3.1.1, VA Alternative Concept No. 9 was deemed a design refinement that would be considered for alignments with a south portal at Torrey Pines Road. Therefore, the refined alignment uses the **Torrey Pines Road West south portal**. The south portal would be located near the intersection of Carmel Valley Road and North Torrey Pines Road. The portal infrastructure would be located on the south side of Carmel Valley Road.

Alignment: As developed during the VA Study, VA Alternative Concept No. 8 would enter a north portal at Within Camino Del Mar and would then be located underneath Camino Del Mar to the extent practicable until it reaches the south portal, with a design speed of 90 mph. The refined alignment includes a modification at the northern end of the alignment because of using the Under Jimmy Durante Boulevard north portal. As a result, to accommodate a 90-mph design speed, the alignment would begin to follow underneath Camino Del Mar around 12th Street until it reaches the Torrey Pines Road West south portal. The alignment would continue south on bridge and berm over Los Peñasquitos Lagoon, then transition back to the existing railroad alignment. The existing railroad alignment within Los Peñasquitos Lagoon would be double tracked, which would require raising and widening the existing berm in the lagoon to address flooding and sea level rise projections.

The refined alignment, referred to as Under Camino Del Mar, and alignment for Alternative Concept 8 are shown on Figure 6. An exhibit for the refined alignment is also included in Appendix A.

Estimated Cost: \$3.3 to \$4.4 billion

Figure 6. Recommendation 3: Under Camino Del Mar (Under Jimmy Durante to Torrey Pines Road West)



LEGEND

- Staff Recommendation: Under Camino Del Mar
- VA Alternative Concept No. 8

- Portal Location
- [] Municipal Boundary
- Existing LOSSAN Corridor Track Alignment

0 2,000 Feet

SANDAG

Trade-Offs

The following is a preliminary assessment of the advantages and disadvantages of the Under Camino Del Mar alignment and portals, based on information known at this time, compared to the alternative concepts that it most closely approximates (i.e., VA Alternative Concepts 8 and 16 [Proposed NOP Alternative C]). Additional analysis and design will occur during the environmental clearance phase.

Advantages (Beyond Meeting Intent):

- VA Alternative Concept No. 8: Opportunity to minimize residential impacts at south portal by using Torrey Pines Road West portal location.
 - **Under Camino Del Mar** incorporates the Torrey Pines Road West portal location.
- VA Alternative Concept No. 8: Greatest reduction in residential subsurface easements compared to all other tunnel alternative concepts (an estimated 67% reduction compared to VA Alternative Concept No. 16 [Proposed NOP Alternative C]).
 - **Under Camino Del Mar** reduces residential subsurface easements by an estimated 44% compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).
- VA Alternative Concept Nos. 8, 16 (Proposed NOP Alternative C), and **Under Camino Del Mar**: Demonstrates public stewardship by preserving prior and ongoing LOSSAN infrastructure investments.
- VA Alternative Concept No. 16 (Proposed NOP Alternative C) and **Under Camino Del Mar**: North portal location (Under Jimmy Durante Boulevard) would minimize effects to roadways and private properties compared to the Within Camino Del Mar north portal.
- VA Alternative Concept No. 16 (Proposed NOP Alternative C): Lowest cost of the alternative concepts with a tunnel segment.
 - The estimated cost of the **Under Camino Del Mar** is \$3.3 to \$4.4 billion, which remains the lowest cost of the staff recommended alignments with a tunnel segment.

Disadvantages:

- VA Alternative Concept No. 8: Results in substantial effects to the roadway network. This north portal option would require reconstruction of the existing Camino Del Mar Bridge and construction of a temporary bridge to divert traffic across the railroad and to accommodate portal and track shoofly construction. Access to private properties along Grand Avenue would be affected by construction activities. Additionally, the north portal would require reconstruction of Jimmy Durante Boulevard and Camino Del Mar.
 - **Under Camino Del Mar addresses the disadvantage:** This alignment would continue to have traffic and roadway effects at the north portal, which would be the same as Proposed NOP Alternatives B and C but less than VA Alternative Concept No. 8.
- VA Alternative Concept No. 8 and **Under Camino Del Mar**: Would increase travel time compared to VA Alternative Concept No. 16 (Proposed NOP Alternative C).
- VA Alternative Concept No. 16 (Proposed NOP Alternative C): After VA Alternative Concept 15 (Proposed NOP Alternative B), would require the next greatest number of subsurface easements from residential properties among alternative concepts evaluated in Step 2.
 - **Under Camino Del Mar addresses the disadvantage:** The alignment would decrease subsurface easements from residential properties by an estimated 44%.

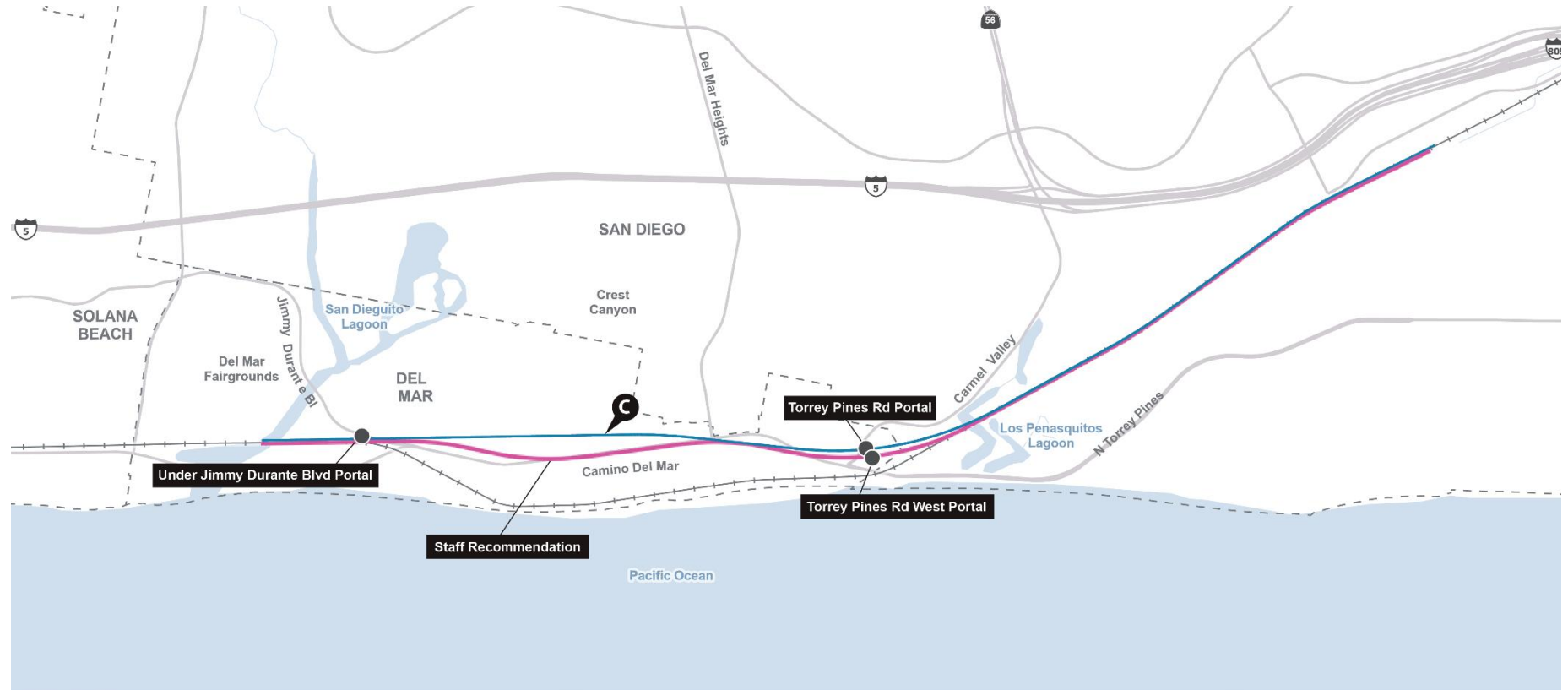
Reason for Recommendation

The refined alignment, inclusive of the modifications to the north and south portal locations, incorporates feedback obtained from VA Study participants, prior stakeholder coordination and public input, and lessons learned from prior studies. The refinement at the north portal location would reduce effects to roadways and private properties compared to the north portal originally depicted with VA Alternative Concept No. 8 (Within Camino Del Mar). Additionally, the refined south portal location (Torrey Pines Road West) is responsive to feedback received during the VA Study and incorporates a design refinement developed during the Study. Based on these portal locations, the bored tunnel alignment would be underneath Camino Del Mar to the maximum extent practicable while also maintaining 90-mph design speeds, which is responsive to feedback from the VA Study that lower speed alignments be considered.

Compared to Proposed Alternative C from the June 2024 NOP (VA Alternative Concept No. 15), the refined alignment would use the same north portal (Under Jimmy Durante Boulevard) and shift the south portal to the west (Figure 7). The refined alignment would locate a greater percentage of the bored tunnel underneath Camino Del Mar compared to the alignment for Proposed NOP Alternative C, which had a more direct path of travel between the two portals. As a result, the refined alignment would reduce subsurface easements from residential properties by over 40% compared to Proposed NOP Alternative C.

Therefore, given that the alignment substantially reduces subsurface easements from private properties, staff recommend that the refined alignment proceed to the environmental clearance phase.

Figure 7. Recommendation 3 Compared to NOP Alternative C



LEGEND

- Staff Recommendation: Under Camino Del Mar
- June 2024 NOP Alternative C (VA Alternative Concept No. 16)

- Portal Location
- - - Municipal Boundary
- + + Existing LOSSAN Corridor Track Alignment

0 2,000 Feet

SANDAG

4.2.1.4 Recommendation 4: Del Mar Bluffs Double Track Reinforced

Description

Intent: The intent for VA Alternative Concept 12 was to: Maintain the location of the existing rail alignment and add a second track to the east of the existing tracks within the railroad right-of-way.

Alignment: This alternative concept would begin south of the Camino Del Mar roadway bridge and descend along the existing railroad alignment to the south and pass under Coast Boulevard, removing the existing at-grade roadway crossing. The grade separation would also require raising Coast Boulevard to provide the necessary clearance. The alignment would continue south along the existing tracks with grading and drainage improvements. This segment would require retaining walls along the eastern boundary. On the western beach frontage, this alternative concept would include slope stabilization, including approximately 1.5 miles of sea walls up to 18 feet in height. The existing Torrey Pines Overhead Bridge at the southern end of the bluffs may require modifications to accommodate the additional track. South of the bridge, the alignment would continue south on the bridge and berm over Los Peñasquitos Lagoon, then transition back to the existing railroad alignment. The existing railroad alignment within Los Peñasquitos Lagoon would be doubletracked, which would require raising and widening the existing berm in the lagoon to address flooding and sea level rise projections.

The alignment, referred to as Del Mar Bluffs Double Track Reinforced, is shown on Figure 8 and an exhibit for the refined alignment is included in Appendix A.

Estimated Cost: \$1.9 to \$2.5 billion

Trade-Offs

The preliminary assessment of advantages and disadvantages described in Section 3.2.6 remain unchanged based on information known at this time. Additional analysis and design will occur during the environmental clearance phase.

Figure 8. Recommendation 4: Del Mar Bluffs Double Track Reinforced



LEGEND

— Staff Recommendation: Del Mar Bluffs Double Track Reinforced

● Portal Location

--- Municipal Boundary

— Existing LOSSAN Corridor Track Alignment

0 2,000 Feet



SANDAG

Reason for Recommendation

During the VA Study, participants noted an interest in exploring an alternative concept that would double track the existing alignment, maintaining both sets of tracks on the bluffs. Such an alignment would avoid the need for portals and a bored tunnel alignment, thereby eliminating the need for subsurface easements for a tunnel under private properties, including residences. This is similar to feedback received during the CEQA scoping period and prior public outreach. This alternative alignment also has a lower estimated cost compared to other alignments that include tunnel segments and would include railroad maintenance practices similar to those on other parts of the NCTD system.

Therefore, staff recommend that this alternative concept advance into the environmental clearance phase.

4.2.1.5 No Project Alternative

Staff is required to evaluate a No Project Alternative during the environmental phase. This alternative would include the continuation of major stabilization efforts that would be required to protect the existing single-track alignment. These ongoing efforts to maintain single-track operations could include installation and maintenance of new and/or expanded retaining walls, drainage improvements, erosion control measures, and/or sea walls.

4.2.1.6 Recommended Alignments

The alignments shown on Figure 9 and summarized in Table 5 are recommended to advance from the VA Study process into the environmental clearance phase.

Figure 9. Staff Recommended Alignments for the Environmental Clearance Phase

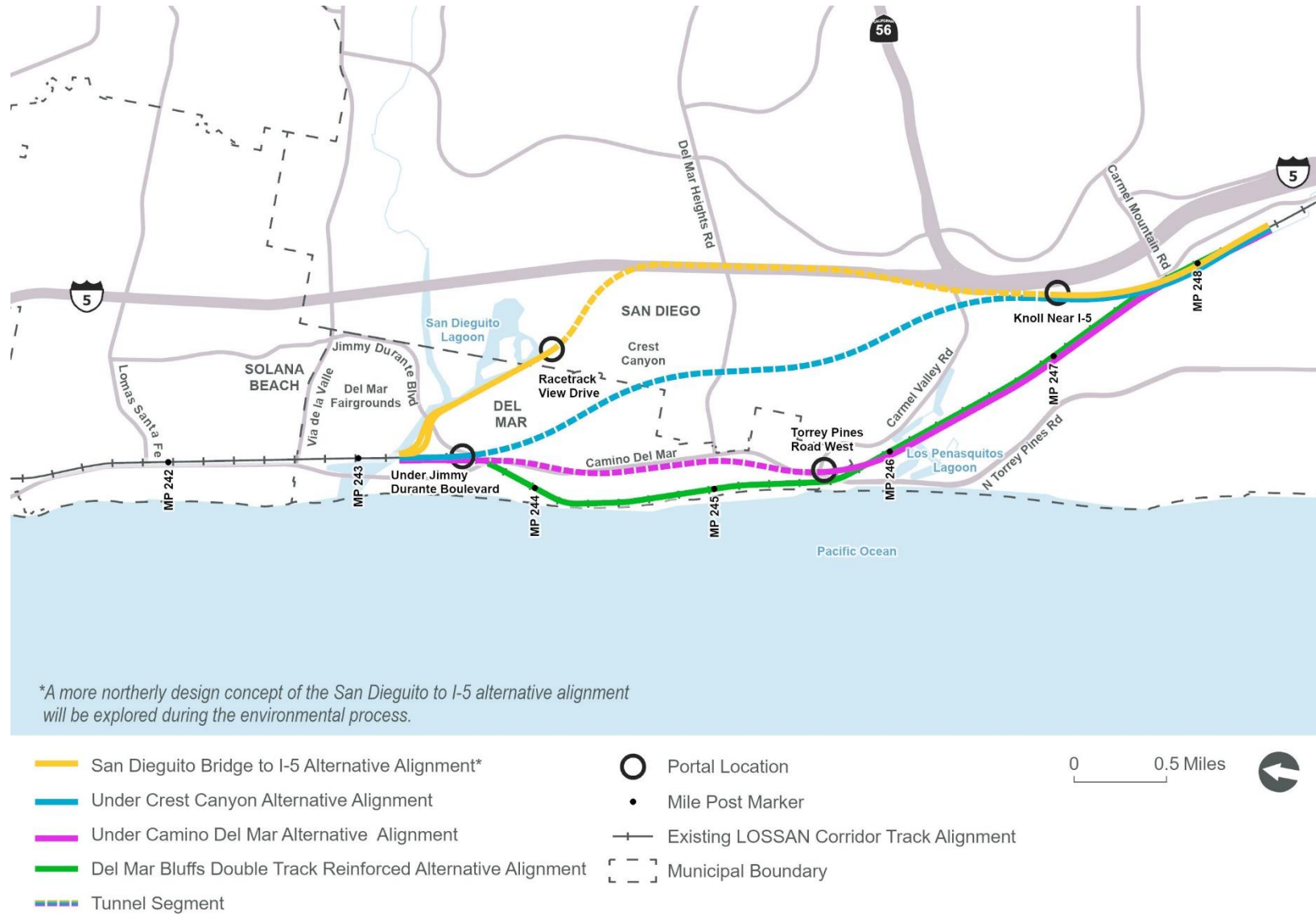


Table 5. Staff Recommended Alignments for the Environmental Clearance Phase (listed in no particular order)

Recommendation	Intent	Design Speed	Length	Estimated Cost (\$ Billions)*	North Portal	South Portal
Under Crest Canyon (Under Jimmy Durante to I-5 Knoll)	Minimize private subsurface easements by locating the bored tunnel segment of the alignment under the Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension to the extent practicable, using a design speed of 110 mph.	110 mph	5.1 miles	\$3.7 to \$5.0	Under Jimmy Durante Blvd	I-5 Knoll
Under Camino Del Mar	Minimize private subsurface easements by locating the bored tunnel segment of the alignment directly under Camino Del Mar to the extent practicable and minimize roadway and residential effects at the north portal, using 90-mph design speeds.	90 mph	4.9 miles	\$3.3 to \$4.4	Under Jimmy Durante Blvd	Torrey Pines Rd West
San Dieguito Bridge to I-5 Knoll	Locate the bored tunnel alignment underneath I-5 while minimizing effects to the City of Del Mar, the Del Mar Fairgrounds, and the future San Dieguito Bridge and minimize subsurface easements under private properties.	30-70 mph through curves, 110 mph along other parts of alignment	5.3 miles	\$3.8 to \$5.1	Racetrack View Dr	I-5 Knoll

Recommendation	Intent	Design Speed	Length	Estimated Cost (\$ Billions)*	North Portal	South Portal
Del Mar Bluffs Double Track Reinforced	Maintain the location of the existing rail alignment and add a second track to the east of the existing tracks within the railroad right-of-way and through Los Peñasquitos Lagoon while reinforcing the bluffs.	55 mph	4.5 miles	\$1.9 to \$2.5	N/A	N/A

Notes: The preliminary rough order magnitude project cost estimates include construction, right-of-way, soft costs, and cost escalation. The estimates reflect initial project costs and do not include ongoing operations or maintenance costs. The estimates also include cost escalation for the year of estimated completion of construction (assumed to be 2036) based on current market trends.

I- = Interstate; mph = miles per hour

4.2.2 Goal and Objectives

During the VA Study, VA Team members noted a desire to establish a project goal. As such, the following goal was identified by the project team during the Study. Staff recommend advancing this goal into the environmental clearance phase:

- To maintain and enhance passenger and freight service along the San Diego segment of the LOSSAN rail corridor.

Additionally, the objectives included in the 2024 NOP were collaboratively refined during the VA Study, with a new objective added. The objectives were shared with VA Team participants at various points during the VA Study. There was consensus on the objectives in general, although not all participants agreed on the wording. Therefore, staff recommends that the following objectives proceed into the environmental clearance phase:

- Improve rail service reliability by minimizing risks from climate change, including consideration of sea level rise, flooding, and the stability of the coastal bluffs.
- Maintain passenger rail service to Solana Beach and Sorrento Valley and accommodate direct rail access to the 22nd District Agricultural Association (Del Mar Fairgrounds) while minimizing disruptions to passenger and freight service during construction.
- Minimize impacts to existing homes, businesses, tourism, and major economic generators, including the Del Mar Fairgrounds, and transportation facilities during and after construction.
- Avoid and/or minimize negative effects, and where possible enhance biological, cultural, and recreational resources of national, state, or local significance, including publicly owned parks, recreational trails, beaches, wetlands, ecological reserves, wildlife or waterfowl refuges, and any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places.
- Help meet the goals of the 2021 Regional Plan and the 2024 California State Rail Plan by increasing passenger and freight train capacity, further reducing travel times, improving reliability, and considering existing and planned investments.
- Improve coastal access and safety by eliminating at-grade railroad crossings and minimizing points of interaction between rail and all other modes of transportation.
- Demonstrate good public stewardship by delivering the project in a timely way that considers prior and ongoing investments, construction, right-of-way, operations, and maintenance costs.

4.2.3 Additional Ideas and Refinements

Staff recommends that the following additional ideas and refinements that were identified during the VA Study be considered as applicable during the environmental clearance phase as design is advanced, environmental analyses are completed, and mitigation is identified to address impacts under NEPA and/or CEQA (listed in no particular order):

- Optimize location of tunnel exhaust vents to minimize air quality concerns.
- Consider ways to minimize impacts to businesses during construction.
- Evaluate impacts to multimodal circulation.
- Coordinate with right-of-way owners to identify potential uses above the cut-and-cover alignment.

- Improve coastal access on bluffs to develop and/or maintain a safe undercrossing (applicable to Alternative Concept No. 12 only).
- Coordinate project with Los Peñasquitos Lagoon restoration.
- Elevate train when crossing over wetlands to maintain the function of the wetland (similar to Alternative Concept No. 7).
- Incorporate landscape improvements around tunnel portals to minimize visual footprint.
- When designing the rail right-of-way, consider habitat corridors (undercrossings) for wildlife in and around lagoons.
- Minimize portal footprints.
- Evaluate regional beach renourishment opportunities utilizing the spoils of the tunnel.

4.3 Post VA Study Activities and Next Steps

After the conclusion of the VA Study, SANDAG provided presentations to various boards and councils in February 2025 to provide an overview of the VA Study, themes and lessons learned, and the staff recommendations. During the presentations, comments were received from members of the public and SANDAG staff responded to questions from board/councilmembers. Additionally, SANDAG held office hours in the cities of Solana Beach and Del Mar in February 2025, during which staff answered questions from members of the public. The presentations and office hours are as follows:

- February 11, 2025: SANDAG presentation to 22nd District Agricultural Association (i.e., Del Mar Fairgrounds) Board Meeting
- February 12, 2025: SANDAG presentation to Solana Beach City Council
- February 13, 2025: Solana Beach Office Hours
- February 18, 2025: SANDAG presentation to Del Mar City Council
- February 19, 2025: Del Mar Office Hours
- February 20, 2025: SANDAG presentation to Torrey Pines Community Planning Board
- February 28, 2025: SANDAG Board of Directors meeting

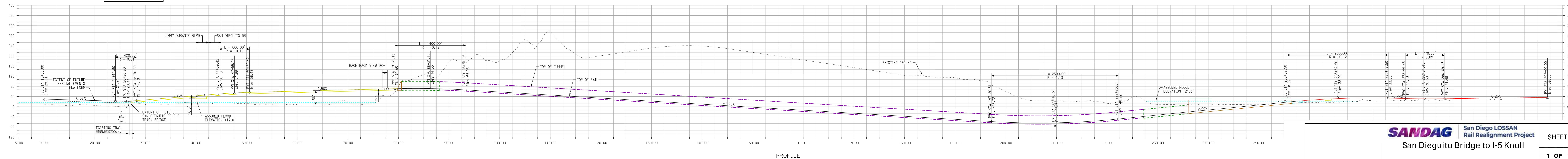
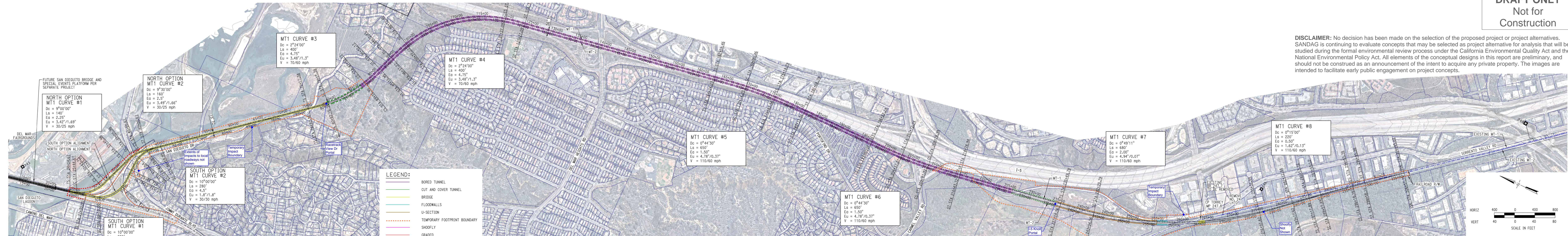
Additionally, as part of the February 28, 2025, presentation to the SANDAG Board of Directors, comments were received from members of the public. Board members were asked to provide feedback on the project goal and objectives and provide direction to staff on the alternative alignments to analyze in the Draft EIR. The Board of Directors members voted in support of the staff recommendations.²

The four Build Alternatives and No Project Alternative will be included in an Updated NOP that will be issued in 2025, initiating an additional CEQA scoping period. SANDAG will also continue efforts to identify a federal partner and initiate environmental clearance pursuant to NEPA.

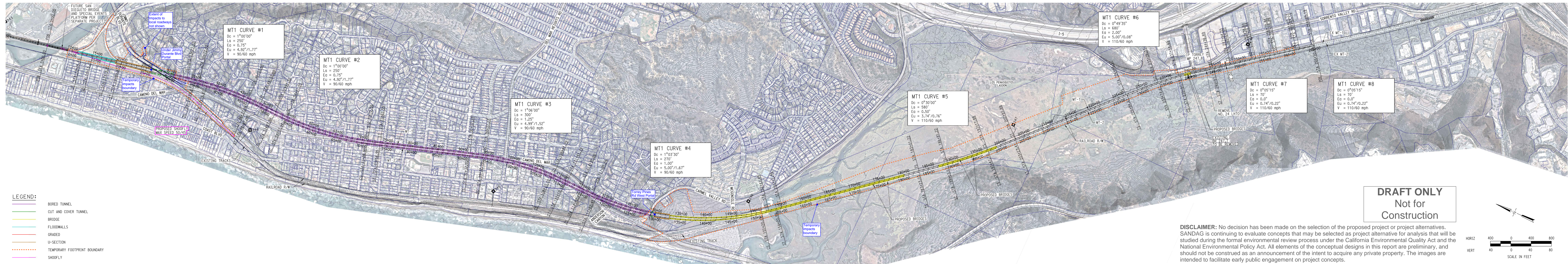
² The Board of Directors agenda packet is available at the following link:
<https://d3n9y02raazwpg.cloudfront.net/sandag/fe0fea28-b3fd-11ef-ab4b-005056a89546-3a383fb0-7365-4b67-b96e-089bf81cce16-1740695095.pdf>.

Appendix A Exhibits of the Staff Recommended Alignments

DISCLAIMER: No decision has been made on the selection of the proposed project or project alternatives. SANDAG is continuing to evaluate concepts that may be selected as project alternative for analysis that will be studied during the formal environmental review process under the California Environmental Quality Act and the National Environmental Policy Act. All elements of the conceptual designs in this report are preliminary, and should not be construed as an announcement of the intent to acquire any private property. The images are intended to facilitate early public engagement on project concepts.



07/2025 1100466410 SAN DIEGO STATION PLAT - UNDER CAMINO DEL MAR (UD) TO TORREY PINES RD (TP) - 1.25-000
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07/2025 1100466410 SAN DIEGO STATION PLAT - UNDER CAMINO DEL MAR (UD) TO TORREY PINES RD (TP) - 1.25-000



DRAFT ONLY
Not for
Construction

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