



TransNet Independent Taxpayer Oversight Committee Agenda

**Wednesday, January 8, 2025
9:30 a.m.**

Welcome to SANDAG. The TransNet Independent Taxpayer Oversight Committee (ITOC) meeting scheduled for Wednesday, January 8, 2024, will be held in person in the SANDAG Board Room. While ITOC members will attend in person, members of the public will have the option of participating either in person or virtually.

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Persons who wish to address the members on an item to be considered at this meeting, or on non-agendized issues, may email comments to the Clerk at clerkoftheboard@sandag.org (please reference ITOC meeting in your subject line and identify the item number(s) to which your comments pertain). Comments received by 4 p.m. the business day before the meeting will be provided to members prior to the meeting. All comments received prior to the close of the meeting will be made part of the meeting record.

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Mission Statement: *We are the regional agency that connects people, places, and innovative ideas by implementing solutions with our unique and diverse communities.*

Our Commitment to Equity: *We hold ourselves accountable to the communities we serve. We acknowledge we have much to learn and much to change; and we firmly uphold equity and inclusion for every person in the San Diego region. This includes historically underserved, systemically marginalized groups impacted by actions and inactions at all levels of our government and society.*

We have an obligation to eliminate disparities and ensure that safe, healthy, accessible, and inclusive opportunities are available to everyone. The SANDAG equity action plan will inform how we plan, prioritize, fund, and build projects and programs; frame how we work with our communities; define how we recruit and develop our employees; guide our efforts to conduct unbiased research and interpret data; and set expectations for companies and stakeholders that work with us.

We are committed to creating a San Diego region where every person who visits, works, and lives can thrive.



Independent Taxpayer Oversight Committee

Wednesday, January 8, 2025

Comments and Communications

1. Non-Agenda Public Comments/Member Comments

Members of the public shall have the opportunity to address the TransNet Independent Taxpayer Oversight Committee (ITOC) on any issue within the jurisdiction of the ITOC that is not on this agenda. Public speakers are limited to three minutes or less per person. Public comments under this agenda item will be limited to five public speakers. If the number of public comments under this agenda item exceeds five, additional public comments will be taken at the end of the agenda. ITOC members and SANDAG staff also may present brief updates and announcements under this agenda item.

Consent

+2. Approval of Meeting Minutes

Approve

Francesca Webb, SANDAG

The ITOC is asked to approve the minutes from its November 13, 2024, meeting.
[Meeting Minutes.pdf](#)

+3. TransNet Triennial Performance Audit: Completion Forms

Approve

Adrian Paniagua, Vanessa Leon, SANDAG

The ITOC is asked to approve the TransNet Triennial Performance Audit Completion Forms that were presented at the last ITOC meeting on November 13, 2024.
[TransNet TPA Completion Forms.pdf](#)
[Att. 1 - Implementation of TPA Recommendations - Completion Forms.pdf](#)

+4. TransNet ITOC Member Reappointment and Appointment Process

Information

Adrian Paniagua, Vanessa Leon, SANDAG

This report provides an overview of the reappointment process for ITOC members as well as the solicitation and appointment process for new members.
[TransNet ITOC Member Reappointment and Appointment Process.pdf](#)
[Att. 1 - Current Membership of TransNet ITOC.pdf](#)
[Att. 2 - Excerpt from the TransNet Extension Ordinance.pdf](#)

Reports

+5. TransNet Major Corridor Projects Update: State Route 67

Information

Sam Amen, Miyoko Nakajima, Karina Cantero-Angel, Caltrans

Caltrans staff will present an update on the State Route 67 Highway Improvements Project.
[TransNet Major Corridor Projects Update State Route 67.pdf](#)
[Presentation.pdf](#)

+6. 2025 Regional Transportation Improvement Program Amendment No. 1

Discussion

Richard Radcliffe, SANDAG

The ITOC is asked to review and discuss Amendment No. 1, focusing its review on the TransNet-funded projects.

[2025 RTIP Amendment No. 1.pdf](#)

[Att. 1 -Table 1 - Summary of Changes Report.pdf](#)

[Att. 2 -Table 2 - 2025 RTIP Amendment No. 1.pdf](#)

[Att. 3 -TransNet Eligibility Analysis .pdf](#)

+7. Vision Zero Action Plan Updates and Performance Measure 1 Safety Targets

Information

Sam Sanford, Jacqueline Sisk, SANDAG

Staff will present the final regional Vision Zero Action Plan and supporting safety tools, regional safety statistics, and federal performance safety target setting.

[Vision Zero Action Plan Updates and Perf Measure 1 Safety Tgts .pdf Presentation.pdf](#)

Adjournment

8. Adjournment

The next ITOC meeting is scheduled for Wednesday, February 12, 2025, at 9:30 a.m.

+ next to an agenda item indicates an attachment

January 8, 2025

November 13, 2024, Meeting Minutes

[View Meeting Video](#)

Chair Maryam Babaki (Finance/Budgeting) called the meeting of the TransNet Independent Taxpayer Oversight Committee (ITOC) to order at 9:39 a.m.

1. Non-Agenda Public Comments/Member Comments

Public Comments: None.

Member Comments: None.

Agency Updates: Chief Executive Officer Mario Orso.

Consent

2. Approval of Meeting Minutes

The ITOC was asked to approve the minutes from its September 11, 2024, meeting.

3. FY 2025 ITOC Meeting Calendar

The ITOC was asked to approve the meeting schedule for the 2025 calendar year.

4. Draft FY 2025 Schedule of ITOC Meeting Agenda Topics

The ITOC was asked to review the upcoming draft schedule of agenda topics.

5. Quarterly TransNet Financial Reports for the Period Ending September 30, 2024, and Other Financial Data

This report provided an overview of the financial status of the TransNet Program.

6. Overview of Developments in the Financial Markets, Quarterly Finance Report as of September 30, 2024

This report provided an update on the latest developments in the financial markets, economy, sales tax revenues, and strategies being explored and implemented to minimize possible impacts to the TransNet Program.

7. TransNet Major Corridor and Regional Bikeway Program of Projects: Quarterly Status Report

This report provided an update on TransNet Major Corridor and Regional Bikeway Program projects.

Public Comments: None.

Action: Upon a motion by Sunnie House (CEO/Private Sector) and a second by Vice Chair Frank Rivera (Licensed Civil / Traffic Engineer), the ITOC voted to approve the Consent Agenda.

The motion passed.

Yes: Chair Babaki, Vice Chair Rivera, Lorraine Ahlquist (Biology/Environmental), and Sunnie House.

No: None.

Abstain: None.

Absent: Contractor/Construction, Licensed Engineer, and Real Estate/Right-of-Way Acquisition.

Reports

8. TransNet Major Corridor Projects Update

8A. North Coast Corridor

Director of Program/Project Management Clint Peace and Caltrans staff Victor Mercado and Wameedh Tozy presented an update on the North Coast Corridor program of projects.

8B. State Route 78

Clint Peace, Victor Mercado, and Wameedh Tozy presented an update on the State Route 78 Corridor program of projects.

Public Comments: None.

Action: Information.

9. TransNet Smart Growth Incentive Program

Grants Program Manager Jenny Russo and Senior Grants Program Analyst Goldy Herbon presented the item.

Public Comments: None.

Action: Upon a motion by Sunnie House, and a second by Lorraine Ahlquist, the ITOC voted to recommend that the Board of Directors approve the evaluation criteria and release the Cycle 6 Call for Projects for the Smart Growth Incentive Program, with the exception that TransNet funding should be a permitted cash matching funds source.

The motion passed.

Yes: Chair Babaki, Lorraine Ahlquist, and Sunnie House.

No: Vice Chair Rivera.

Abstain: None.

Absent: Contractor/Construction, Licensed Engineer, and Real Estate/Right-of-Way Acquisition.

10. FY 2015, 2018, 2021, and 2024 TransNet Triennial Performance Audits Recommendations: Quarterly Update

Senior Financial Programming and Project Control Analyst Adrian Paniagua and Financial Analyst Vanessa Leon presented an overview of progress made to date on recommendations from the FY 2015, FY 2018, FY 2021, and FY 2024 TransNet Triennial Performance Audits (third, fourth, fifth, and sixth Triennial Performance Audits).

Public Comments: None.

Action: Discussion.

11. FY 2025 ITOC Goals

Adrian Paniagua and Vanessa Leon presented the ITOC goals for the remainder of FY 2025.

Public Comments: None.

Action: Discussion.

12. Adjournment

The next ITOC meeting is scheduled for Wednesday, January 8, 2025, at 9:30 a.m.

Chair Babaki adjourned the meeting at 10:17 a.m.

DRAFT

Confirmed Attendance at TransNet Independent Taxpayer Oversight Committee Meeting

Jurisdiction	Name	Attend
Biology/Environmental	Lorraine Ahlquist	Yes
CEO/Private Sector	Sunnie House	Yes
Contractor/Construction	Vacant	
Finance/Budgeting	Maryam Babaki, Chair	Yes
Licensed Civil/Traffic Engineer	Frank Rivera, Vice Chair	Yes
Licensed Engineer	Les Hopper	No
Real Estate/Right-of-Way Acquisition	Vacant	
Advisory Members		
San Diego County Auditor's Office	Tracy Drager	Yes



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2018

Item Number: 7

Audit Recommendation:

Enhance the Story Map tool, TransNet project status listing (shown in Appendix A), or develop a different tool to capture project output details and track TransNet accomplishments over time by implementing the following:

a. Developing a comprehensive universe of TransNet projects completed, underway, and planned. Reconcile universe back to TransNet Extension Ordinance and what was expected to be delivered. Once universe is reconciled for historic projects, update universe as new projects are started and continue reconciliation of those new projects to the TransNet Extension Ordinance.

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at:

<https://transnetdashboard.sandag.org/>. It will continue to be updated quarterly and upon completion of the 2025 Regional Plan.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2018

Item Number: 8

Audit Recommendation:

Update and refine the project listing started in the 10-Year Look-Back Review to ensure all major corridor projects are tracked back to those in the TransNet Extension Ordinance. Regularly report on project and financial status using the project listing developed in 10-Year Look-Back Review as a foundation or develop an alternate tool to accomplish the goal of tracking against the TransNet Extension Ordinance.

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>. It will continue to be updated quarterly and upon completion of the 2025 Regional Plan.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales* Date 9/17/24

Director Signature: *Susan Huntington* Date:

ITOC Approval: Yes: ☒ No: ☐

Meeting Date: 9/11/24 Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2018

Item Number: 9

Audit Recommendation:

Gather data on whether the CM/GC method used on the Mid-Coast Corridor Transit project is delivering on expectations for cost savings, efficiencies, better quality, or collaboration to solve problems rather than using a typical silo-approach between design, construction, contractors, and owners.

Justification for Completion:

Benefits of the CM/GC method were evaluated utilizing design review, value engineering (VE) and innovation logs for the SANDAG Mid-Coast Corridor Transit Project (MCCTP) and Caltrans North Coast Corridor (NCC) Projects. Both agencies analyzed the CM/GC method to evaluate benefits including cost reduction, construction efficiency and collaboration. SANDAG also compared two Trolley extension projects, MCCTP and Mission Valley East (MVE) using CM/GC and low bid (silo-approach) contracting methods, respectively. This evaluation was documented in the attached benefit evaluation report. Information from project documents were used to prepare the benefit evaluation including the comparison of the CM/GC to low bid contracting delivery, the benefits of CM/GC collaboration, and the development of key lessons and best practices.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature:	DocuSigned by: 8729F020E7714A1... Signed by:	DocuSigned by: 6D4240E59077473 Date: 9/13/2024
Director Signature:	 64B2FD8F1E5545D...	Date: 9/16/2024

ITOC Approval: Yes: ☐ No: ☐

Meeting Date: Agenda number:

Meeting Link:



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2018

Item Number: 10

Audit Recommendation:

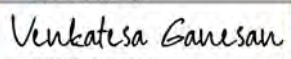
Gather and store documents to support "benefit" statistics tracked for the North Coast Corridor and the Mid-Coast Corridor whether using the innovations log utilized by Caltrans or another method used by SANDAG. Maintain supporting documentation, such as cost comparisons, in a centralized repository that is linked or reconciled with the log or summary statistics.

Justification for Completion:

The Mid-Coast Corridor Transit Project (MCCTP) benefit evaluation and project documentation is maintained on SANDAG servers including construction documents and the attached benefits evaluation report. In addition, SANDAG reviewed the benefits statistics tracked for NCC and their innovations log and determined the MCCTP tracked similar statistics and innovation logs.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

DocuSigned by:	DocuSigned by:
	
PM Signature: 8729F020E7714A1...	6D4240E59077473 Date 9/13/2024
Signed by:	
	Date: 9/16/2024
Director Signature: 64B2FD8F1E5545D...	

ITOC Approval: Yes: ☐ No: ☐

Meeting Date: Agenda number:

Meeting Link:



MID-COAST CORRIDOR TRANSIT PROJECT

Construction Manager/ General Contractor Benefit Evaluation Report

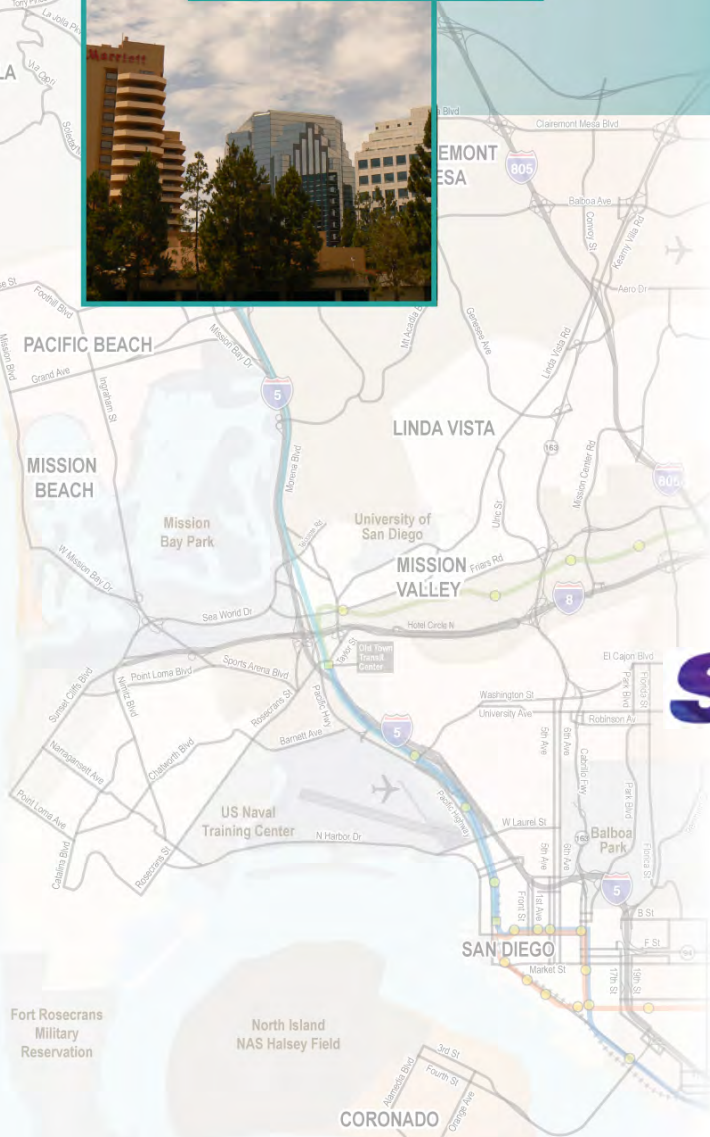
September 10, 2024

Prepared by

SANDAG



California
San Diego



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MID-COAST CORRIDOR
TRANSIT PROJECT

**Construction Manager/General Contractor (CM/GC)
Benefit Evaluation Report
prepared for
Independent Taxpayer Oversight Committee (ITOC)
September 10, 2024**

Prepared for:
The San Diego Association of Governments (SANDAG)



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Version Control Table

Revision No.	Date of Revision	Revisions Made

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1.0 EXECUTIVE SUMMARY

The San Diego Association of Governments (SANDAG) Mid-Coast Corridor Transit Project (Mid-Coast) extended the San Diego Metropolitan Transit System's (MTS) San Diego Trolley, Inc. (SDTI) UC San Diego Blue Line Trolley (Blue Line) to the north of the Old Town Transit Center (OTTC). The new alignment extends 10.9 miles along the I-5 Corridor through the University of California San Diego (UC San Diego) to the UTC Transit Center Station and includes nine new stations.

The Mid-Coast Project was completed within the capital budget of \$2.17 billion approved by the Board in FY 2017. The Project budget included funds from the Federal Transit Administration (FTA) through a Full Funding Grant Agreement (FFGA). The FFGA made up slightly less than half the project budget, with TransNet sale tax revenue and state funds making up the other half.

In the preliminary engineering phase of Mid-Coast, the SANDAG team assessed alternative construction delivery methods and recommended the Construction Manager General Contractor (CMGC) contracting method given the size, complexity and risk profile of the Mid-Coast corridor and the perceived advantages of CMGC to enhance project delivery.

Selection of the CMGC was through a proposal process where experience, personnel and cost are factors used to select the best proposer. The joint venture builder Mid-Coast Transit Constructors (MCTC) was the selected CMGC firm. Successful negotiations concluded with an agreed guaranteed maximum price (GMP) to construct the Mid-Coast Project. The GMP was the price MCTC was to build the project at based on the plans, specifications, and assumptions when the GMP was negotiated.

The Independent Taxpayer Oversight Committee (ITOC) requested a report to examine if SANDAG derived value from the CMGC construction method on Mid-Coast based on expected:

- cost savings,
- efficiencies,
- collaboration to solve problems, and
- improved quality.

CMGC preconstruction services were expected to deliver savings benefits to the project because SANDAG would gain earlier and better design, value engineering and innovation, cost, and schedule information directly from the builder.

The preconstruction services phase was also intended to improve efficiency. One aspect is the collaboration between the CMGC, SANDAG and its designer and stakeholders. During the preconstruction phase, MCTC worked with SANDAG, MTS, North County Transit District (NCTD), Caltrans, City of San Diego (City) and UC San Diego to explain construction access needs, work and equipment space needs, and the impacts of working limitations on construction with the goal of achieving efficiencies while minimizing impacts. Another aspect is review of the design to identify changes that support more efficient construction methods through design or material choices. As an example, MCTC in collaboration with the design team made changes to retaining wall and bridge type selections that led to more efficient construction.

Another efficiency within the CMGC method is the opportunity to negotiate early work packages prior to completing final design to relocate utilities, clear construction sites and procure long lead materials so that major construction activities start early, reducing overall construction time. MCTC attended early meetings with stakeholders including operators, utilities, the City, Caltrans, Navy, UC San Diego and community groups to explain what, when and where construction would happen. MCTC listened to these stakeholders and adjusted where possible to mitigate concerns. This collaboration also informed MCTC and SANDAG about potential cost impacts and mitigations.

CMCG delivered on the potential to improve design and construction quality. MCTC quality control plan submittals required in preconstruction and implemented in construction established a baseline for assessing and documenting quality. Quality control and quality assurance inspection, testing, and documentation demonstrated that quality of construction on the Mid-Coast project met or exceeded specification requirements described in contract documents.

Analysis indicates that CMGC delivery method was successful in achieving SANDAG's goals. MCTC was proactively involved in design and throughout construction by identifying and resolving problems that resulted in on-time delivery of this complex project. Specific examples are included in this report. The SANDAG Mid-Coast project team successfully collaborated with MCTC, project design consultants, and stakeholder teams to facilitate a "project first" approach. This cooperation resulted in actions that improved construction efficiency with a high level of safety for the public and workers to deliver a quality project without any claims. The CMGC delivery provided the benefit of having the contractor develop a schedule and initiate early work and procurement packages before major construction, thereby reducing the risk of delays to core construction activities. Overall, the Operations within the project limits commenced one year ahead of the FFGA revenue service date and within budget, and construction changes were successfully negotiated and implemented.

2.0 INTRODUCTION AND BACKGROUND

2.1 Project Description

The San Diego Association of Governments (SANDAG) Mid-Coast Corridor Transit Project (Mid-Coast) extended the San Diego Metropolitan Transit System's (MTS) San Diego Trolley, Inc. (SDTI) UC San Diego Blue Line Trolley (Blue Line) starting rail construction at the Old Town Transit Center (OTTC). The new alignment extends 10.9 miles along the I-5 Corridor through the University of California San Diego (UC San Diego) to the UTC Transit Center Station and includes nine new stations, as shown in Figure 1. The Project also included track, signal and intersection improvements between Santa Fe Depot and Old Town, and off-site and on-site environmental mitigation. The Mid-Coast Project light rail extension was the flagship project in the Mid-Coast Corridor that also included Coaster double tracking, bike improvements and street and highway improvements. The Mid-Coast Project opened for revenue service in November 2021 providing a one-seat ride from San Ysidro to UC San Diego and UTC.

Figure 1 - Mid-Coast Trolley Extension Map



The Mid-Coast Project was completed within the capital budget of \$2.17 billion, approved by the Board in FY 2017. The Project budget included funds from the Federal Transit Administration (FTA) through a Full Funding Grant Agreement (FFGA). The FFGA made up slightly less than half the project budget, with TransNet sale tax revenue and state funds making up the other half. Mid-Coast opened for revenue service a year ahead of the FFGA schedule and within the approved budget.

Table 1 - Mid-Coast Funding Sources

Fund Source	Amount	Percent
FTA FFGA Grant	\$1,043,380,000	
FTA Grant	\$129,000	
Federal Subtotal:	\$1,043,509,000	48%
TransNet	\$921,255,000	
Other Local, Finance	\$206,437,000	
Local Subtotal:	\$1,127,692,000	52%
Total:	\$2,171,201,000	

2.2 Evaluation Criteria

The Independent Taxpayer Oversight Committee (ITOC) requested this report to examine if SANDAG derived value from the CMGC construction method on Mid-Coast based on expected:

- cost savings,
- efficiencies,
- collaboration to solve problems, and
- improved quality.

CMGC, including preconstruction services, was expected to deliver savings benefits to the Project because SANDAG would gain an earlier and better design, value engineering and innovation, cost, and schedule information with input directly from the builder.

2.3 CMGC Delivery Method

In the preliminary engineering phase of Mid-Coast, the SANDAG team assessed three contracting delivery methods: Design-Bid-Build (DBB) (also known as low bid), Design-Build (DB) and Construction Manager General Contractor (CMGC). SANDAG staff recommended the CMGC contracting method given the size, complexity and risk profile of the Mid-Coast Corridor and the perceived advantages of CMGC to enhance project delivery including improved design and constructability, contractor innovation and value engineering, contractor informed cost and schedule information prior to construction, and better cooperative relationships between SANDAG, the contractor and stakeholders throughout the project.

Selection of a CMGC is through a proposal process where experience, personnel and cost are factors used to select the best proposer. The joint venture builder Mid-Coast Transit Constructors (MCTC) was the selected CMGC firm. Both preconstruction services and construction were separately negotiated prices and contracts. Negotiating the construction price was an open-book

process with SANDAG developing an independent cost estimate (ICE) by its ICE consultant. The ICE consultant developed separate detailed cost assumptions and pricing as a basis for negotiation. Successful negotiations concluded with an agreed guaranteed maximum price (GMP) for Mid-Coast. The GMP was the price MCTC was to build the project based on the plans, specifications, and assumptions when the GMP was negotiated. The GMP is subject to change if owner-initiated design, scope or assumptions change during construction.

3.0 EVALUATION

3.1 Cost Savings and Efficiencies

Cost saving and construction efficiencies that reduced time and improved production were anticipated with MCTC participation starting in preconstruction services and continuing through construction in the areas listed below.

- Design Development Reviews,
- Quantity and Cost Estimating,
- Risk Management,
- Value Engineering (VE) & Innovation, and
- Accelerated Start of Construction Utilizing Early Work Packages

3.1.1 Design Development Reviews

MCTC provided input through the review and comment process for the plans and specifications at 65% and 80% design reviews. The 80% design, after review comments were addressed, became a fixed set of plans and specifications used as the basis for GMP negotiations (80% GMP set). The plan set designations were an estimated average level of design across all disciplines. As an example, track alignment, civil work, and cast-in-place bridges were further in design; while retaining walls, station electrical, elevators, and the Nobel parking structure were at a lower level of design in the 65%, and 80% GMP design submittals.

MCTC comment review was interactive and continuous between 65%, 80% GMP and 100% issued for construction documents. MCTC and the designer addressed physical and dimensional conflicts, material and equipment questions and clarified contract requirements. The process included written comments and mark-ups of the plans and specifications followed with design review meetings at the discipline level to reach a final disposition. Below are examples of changes that resulted from MCTC design review input.

- Retaining Walls: The Mid-Coast Corridor included retaining walls in the LOSSAN segment between the Tecolote Road and Gilman Drive. MCTC worked directly with designers, SANDAG and MTS, to eliminate more costly cast-in-place walls for lower cost slope paving between Tecolote Road and the Clairemont Drive stations. Cast-in-place walls and mechanically stabilized earth (MSE) walls were replaced with precast counterfort walls at the Balboa overcrossing and north to the Rose Creek overcrossing. The counterfort walls are faster to construct, have less excavation and reuse on-site soil

for backfill. Between SR-52 and Gilman Drive, MCTC and its drilling subcontractor collaborated with the designer on soil nail walls in lieu of standard retaining walls to minimize excavation and forming costs.

- **Bridge Type Selection:** Bridge selection was another example where input by MCTC reduced cost, improved efficiency or reduced construction impacts. At the “flyover” bridge where the Trolley crosses from east of the Coaster tracks to the west, MCTC provided staging and construction sequencing input that resulted in the selection of a precast girder bridge in lieu of a cast-in-place bridge to reduce cost and impact to rail service. For the Genesee viaduct, MCTC proposed precast solutions to avoid extensive falsework that would have extended the schedule by months and impacted traffic and business access. MCTC initiated workshops to address design parameters for the precast viaduct including aesthetics, weight and transportation size limits and erection methods and sequencing acceptable to SANDAG.
- **Elevators:** Mid-Coast has four elevated stations with a minimum of two elevators per station. MTS required visibility into the elevator cabs for security. The 65% design was similar to the MTS Grantville Station with a glass clad steel frame elevator tower, glass elevator cab and overhead hoist. MCTC pursued this concept with the elevator industry. From this industry review, MCTC was unable to find an elevator supplier willing to bid the proposed design. In a low bid process, this situation would have been realized after the design was complete and the project bid. However, SANDAG, designers and MCTC worked directly with elevator suppliers to address their design, specification, and commercial issues.
- **Insurance:** In the CMGC model the contractor participates in reviewing the specifications. One advantage to SANDAG was in developing a construction insurance program. Construction can be insured with standard construction insurance, owner-controlled insurance program (OCIP), and contractor-controlled insurance program (CCIP). CCIP was proposed by MCTC. With CCIP, MCTC could extend coverage to its subcontractors including qualified DBE subcontractors that may not have been insurable to the limits SANDAG requires in standard contract. With CCIP, MCTC supported coverage for small businesses, supporting SANDAG DBE goals.

MCTC review and input into the detailed construction plans and specifications benefited construction efficiency and reduced SANDAG exposure to constructability claims for differing interpretation of plans and specifications including scope of work, site conditions and third-party requirements.

3.1.2 Quantity and Cost Estimating

The Mid-Coast preconstruction services included cost estimating and final pricing. MCTC provided cost estimates at 65% design, and a cost proposal at the 80% GMP design level. All estimating started with developing and reconciling quantities, followed by developing costs and then reconciling costs. SANDAG had three resources providing cost estimates, the designer, the ICE consultant, and the Construction Manager (CM). The designer provided Engineer’s Estimates at 65%, 80% and final design. The ICE consultant is part of the SANDAG Project Management team. The ICE consultant, Stanton, specializes in construction estimating for owners using estimators with construction industry experience. The ICE and MCTC costs were “bottom-up” estimates using detailed labor, equipment, material, and overhead rates. Both used the same construction industry estimating software. At the 80% GMP design level the CM also prepared a separate cost estimate.

At 65% design, the Engineer's Estimate, ICE and the MCTC estimates were based on a "frozen" set of 65% plans to develop uniform quantities and estimates while design continued. These estimates provided three cost data points to inform early Project construction budgeting and contingency. Table 2 shows the 65% construction estimates. The Engineer's Estimate was based on historic unit cost data, and assumptions about material and subcontractor cost. The ICE and MCTC cost estimates were "bottoms-up" estimates with estimated "plug" amounts for subcontractor work.

Table 2 – Mid-Coast 65% Design Estimates

Source	Amount
Engineer's Estimate	\$942 Million
ICE	\$951 Million
MCTC Estimate	\$1,043 Million

The 65% estimates allowed SANDAG to compare early cost differences and drivers within the three estimates. SANDAG was then able to analyze the estimates to evaluate pricing and adjust or initiate larger value engineering efforts to reduce cost. Below are examples implemented after the 65% design that improved efficiency or reduced exposure to unanticipated costs.

- Spoils: Due to the constrained alignment, Mid-Coast had large quantity of excess excavated soil "spoils" to haul off and dispose of during retaining wall and site grading operations. At the time, few locations in San Diego County were accepting soil. The cost for hauling, dumping, and disposing of the spoils depended on the distance to the haul site and dump fee at the disposal site. Prior to the GMP, SANDAG and MCTC worked collaboratively to identify cost effective options for spoils disposal at both public and private sites. During construction SANDAG, MCTC and the CM worked collaboratively to utilize the lowest cost spoil disposal options. In addition, MCTC and the CM reduced the quantity of haul by finding locations to spread soil within the project limits, adding to slopes and minimizing excavation where possible.
- Vibration Mitigation at La Jolla Colony: The design of the at-grade track adjacent to the La Jolla Colony Condominiums included vibration reduction elements. The cost of the mitigation based on initial design plans was expensive due to complex construction and expensive materials. The designer collaborated with MCTC and evaluated other mitigation options that resulted in a new design that reduced cost and time while meeting the mitigation criteria.

The 80% GMP process was like the 65% cost estimates, except that the MCTC estimate was the GMP cost proposal. At 80% MCTC had received most of its subcontractor pricing. At 80%, SANDAG had its CM prepare an estimate using a force account approach. The MCTC GMP proposal included several higher cost items for subcontractor work. The higher costs resulted from design complexities or a limited subcontractor market. After reviewing the GMP proposal, SANDAG and MCTC collaborated with designers and subcontractors to improve pricing. Below are two examples.

- Elevators, Cabs and Hoists: As indicated earlier in this report, the elevators were a source of concern from design and cost standpoints. Subcontractor pricing from the steel fabricators, glazers, and elevator suppliers at the time of GMP carried risk amounts for

incomplete design and constructability challenges. SANDAG, the designer and MCTC met with these subcontractors and gained a better understanding of the cost drivers including code requirements, availability of materials, fabrication limitations and market escalation. SANDAG design team clarification and revisions of design requirements, configuration, and materials improved elevator manufacturer interest in the work, increased price certainty and lowered contractor risk.

- **Aerial Station Fall Protection:** The four aerial stations include stainless-steel wire mesh protection fences around the stations' perimeter. The stainless mesh was selected to allow visibility to the station platforms to enhance safety, reduce maintenance cost and reduce the visual impact of the station. The fabricator/installer selected by MCTC submitted an unexpectedly higher price for steel support fabrication and wire mesh. In addition, the supplier was unable to find a mesh that met FTA Buy America requirements. SANDAG, the designer and MCTC worked with the supplier to reduce the fabrication and installation challenges. The designer and MCTC worked with the fabricator to identify Buy America compliant material suppliers.

Table 3 shows the GMP estimates, the MCTC cost proposal and negotiated GMP. CMGC preconstruction collaboration in developing quantities and negotiating costs and understanding cost drivers on the Project was key to reaching a fair GMP on the 80% design.

Table 3 - Mid-Coast GMP Estimates

	Amount	% Difference from ICE
Independent Cost Estimate	\$906 million	
Force Account Estimate	\$934 million	3.1%
MCTC Proposal	\$981 million	8.3%
Recommended	\$927.5 million	2.4%

3.1.3 Risk Management

With CMGC, SANDAG expected MCCTC to collaborate with SANDAG and its stakeholders to identify and mitigate risks. SANDAG had a running risk process and Risk Register to identify known and anticipated risks with the goal of mitigation. Appendix A shows pages from the Risk Register with highlighted risks where MCTC had responsibility to manage or collaborate on specific risks.

MCTC actively supported the risk management process and helped quantify cost and time impacts for construction risks.

Below are examples of risks from Appendix A where MCTC participation was important in identifying, scoping and mitigating a risk.

- Genesee Viaduct: The Genesee viaduct was a complex structure with safety, phasing, traffic control and public relation risks. MCTC analyzed building a cast-in-place viaduct and identified schedule and constructability risks that were mitigated by a precast beam solution.
- LOSSAN Corridor: MCTC participated in the management of specific risks in the register related to Trolley construction directly adjacent to the LOSSAN NCTD Coaster tracks. NCTD was responsible for maintaining operations and on-track construction safety. MCTC participation during preconstruction and construction was vital to achieving all NCTD track return to service obligations. Proof of safety and return to service commitments were keys to building trust with NCTD and led to improved work zone limits and hours. The Improved work limits and time allowed MCTC to be more efficient, limiting cost and schedule risk.
- Stakeholders: The risk register includes risk items driven by stakeholders. MCTC developed relationships with key stakeholders to manage risks by clarifying construction operations and working with them on mitigation or avoidance. This included working with UC San Diego, Caltrans, the City, and NCTD to develop construction solutions and execute the solutions to build confidence that MCTC could manage timely construction under difficult and constrained conditions.

In addition to the Risk Register, the CMGC contract included a Risk Matrix defining specific construction risk responsibilities. Risks, either known or potential, had a value and responsible party that was negotiated and assigned to either SANDAG or MCTC and was reflected in the GMP. The Mid-Coast Project Risk Matrix, Appendix B, proved to be an effective means of resolving cost responsibility during construction, including questions on:

- Storm water control
- GMP to IFC changes
- Obtaining Permits and Right of Way
- Utility relocations

The MCTC participation in the Mid-Coast risk process provided the forum for SANDAG and MCTC to collaboratively work to avoid or mitigate other risks in the register.

3.1.4 Value Engineering (VE) and Innovation

A benefit SANDAG expected from CMGC was contractor driven VE and innovation savings opportunities. Appendix C is the Value Engineering Study conducted by SANDAG prior to MCTC starting on the Project. During preconstruction, MCTC was tasked with reviewing this study and providing recommendations. Appendix D, is MCTC's response including VE's to pursue out of the SANDAG report. The MCTC recommendations became the basis for continued VE analysis and implementation of SANDAG accepted VE concepts. In addition, MCTC also maintained a value

engineering log of VE ideas proposed during the design review process. Appendix E is the MCTC VE log listing and tracking disposition of the innovations that were developed as a part of design review process.

Table 4 below is a Preconstruction and Construction VE/Innovation Summary prepared by the CM that lists the VE concepts implemented out of the design process and additional VE concepts implemented during construction. The complete innovation log which included VE concepts and innovations not implemented is included as Appendix F Mid-Coast Corridor Transit Project Innovation Log.

Table 4 – Mid-Coast Preconstruction and Construction VE Summary

Mid-Coast Corridor Transit Project Preconstruction				
Item	Description	Phase	Status	Cost Savings
1	1.1 Revised bridges from cast-in-place to precast girders at selected bridges	Preconst	Implemented	-\$12,102,000
2	3.0 Post grouting instead of ground improvements	Preconst	Implemented	-\$7,301,000
3	7.0 Shift Balboa Station	Preconst	Implemented	-\$2,346,000
4	8.0 Use standard barrier railing at platform edge and ped bridge	Preconst	Implemented	-\$1,260,000
5	11.0 Use soldier pile walls instead to Type 1 retaining walls	Preconst	Implemented	-\$672,000
6	11.1 Use soil nail walls instead of Type 1 retaining walls at selected walls.	Preconst	Implemented	\$0
7	13.0 Use slope paving in selected areas n Morena Blvd instead of Type 1 walls	Preconst	Implemented	-\$952,000
8	15.0 Use Counterfort retaining walls in fill vs MSE walls	Preconst / Const	Implemented	\$1,456,000
9	17.0 Use precast girders on the LOSSAN fly over bridge	Preconst	Implemented	-\$1,294,000
10	18.0 Revise viaduct hinges to minimize falsework and traffic impacts	Preconst	Implemented	\$0

11	24.0 Use precast girders instead of cast-in-place for the viaduct.	Preconst	Implemented	-\$35,603,000
12	Advanced relocation contract work	Preconst	Implemented	\$0
item		Preconst	Subtotal:	-\$60,074,000
Mid-Coast Corridor Transit Project Construction				
Item	Description	Phase	Status	Cost Savings
1	Eliminate Tecolote Access Road and Bridge	Preconstruction / Construction	Implemented	-\$1,700,000
2	Green Line/Blue Line Tie-In - Converting Direct Fixation Track to Ballasted Track	Construction Change	Implemented	-\$575,632
3	Delete Contract Work on Morena and Balboa that would be demolished in near-term by the City's Pure Water and Alvarez Pipeline Projects	Construction Change	Implemented	-\$336,981
4	Change RW B300-B500 and B600-B900 from CIP to Counterfort to reduce the impacts to traffic on Balboa Ave and manage constructability challenges for the switch back ramp walls B600-B900.	Construction Change	Implemented	-\$246,939
5	Modify Tecolote Creek Bridge Approaches from geofoam to lightweight cellular concrete	Construction Change	Implemented	-\$244,211
6	Removal of Tecolote Station Communication Room - Radio transmission moved to Mount Soledad	Construction Change	Implemented	-\$205,871
7	Tecolote Ped Ramp Removal (North) - Redundant Ramp not needed	Construction Change	Implemented	-\$203,742
8	Damon Yard Excavation Reduction	Construction Change	Implemented	-\$137,151

9	Knoxville Ramp - Direct ramp vs. Switchback with walls	Construction Change	Implemented	-\$76,782
10	Morena/Ariane Drive Modifications - Minimize barrier and driveway changes	Construction Change	Implemented	-\$40,000
11	Change RW 500 to Slope Paving	Construction Change	Implemented	-\$25,788
12	Change RW762 to Slope Paving	Construction Change	Implemented	-\$185,402
13	UTC TPSS Civil Modifications	Construction Change	Implemented	-\$12,504
14	Revisions to Pepper Canyon Access Road - Pervious Concrete to ACP	Construction Change	Implemented	-\$81,626
15	South Guideway and Inter-Track Fence Revisions	Construction Change	Implemented	-\$206,000
16	North Fence Revisions	Construction Change	Implemented	-\$80,649
17	Pepper Canyon Station Plaza Revisions	Construction Change	Implemented	-\$650,000
18	Revised 2" DCW Service at UTC	Construction Change	Implemented	-\$46,300
		Construction	Subtotal:	-\$5,055,578

The preconstruction VE savings in Table 4 are estimates based on early designs and assumptions about site working conditions and limitations. Saving from preconstruction VE concepts were realized through design changes and GMP cost negotiations. The construction savings listed in Table 4 are the actual cost reductions through change orders.

Within Table 4, Construction VE's, several items are changes proposed during preconstruction that could not be implemented before construction started because designs were not complete or third-party approvals were required. Two examples are the changes at the Old Town Wye and LOSSAN retaining walls. The Old Town Wye was redesigned from direct fixation to ballasted track. The redesign extended past the GMP because technical concerns required detailed analysis to address the designer's, MCTC and MTS concerns. In the segment shared with the Coaster, NCTD and San Diego Gas and Electric each required agency review and approval of the precast counterfort and soil nail walls. These approvals were obtained after MCTC started construction. MCTC collaboratively sequenced other work and maintained schedule while the walls were approved and released for construction.

Also, several VE's that were implemented in construction led to other savings and efficiencies in addition to the change order savings in Table 4. As an example, Construction Item 2 in Table 4 captures the construction savings to SANDAG from revising the Old Town Wye from a direct fixation track slab to ballasted track. What is not captured is the savings to the Project for reduced MTS single tracking and busing needed through the work area. Ballasted track allowed faster construction and accommodated single tracking through the work zone reducing single track from months to 6 weeks and reduced weekend busing to three weekends.

Another example is the Trolley viaduct in the center of Genesee Avenue. The Genesee viaduct was changed from cast-in-place to a precast concrete girder structure. This change reduced the need for extensive erection and removal of falsework, reduced overall construction time and limited impact to the community. A key example of reduced impact was placing all the bridge beams across La Jolla Village Drive in a single weekend closure. A cast-in-place viaduct would have required at least two long closures of this intersection to erect and remove falsework seriously impacting a dense commercial and residential area. The precast girder innovation also saved time and community objections by reducing falsework that would have blocked turning movements and limited business access.

3.1.5 Accelerated Start of Construction Utilizing Early Work Packages

Another efficiency benefit of CMGC is the ability to have the CMGC start construction and procurement early to clear major work areas and procure long lead time materials. Early construction and procurement through low bid contracting requires separate contracts for advanced work. In a low-bid scenario, advanced contracts shift risk to SANDAG for timely completion of early work to meet follow-on construction. On Mid-Coast, SANDAG implemented a separate GMP with MCTC for advanced utility relocation work as the first supplement to the MCTC CMGC contract including MCTC responsibility for the schedule and interface risk. Starting utility relocations ahead of starting the core Trolley construction was critical to keeping the planned revenue service date. The advanced utility package relocated water, sewer and storm drain facilities, while the core Project final design and pricing was being completed. Early relocation not only cleared tracks and streets for major construction but also resolved unanticipated utility conflicts early when the conflicts could be resolved without delaying core construction.

3.2 Collaboration and Problem Solving

CMGC is intended to be a more collaborative method of contracting compared to low-bid. Preconstruction services include tasks and deliverables that call for contractor participation and active collaboration. Tasks, such as cost estimating, design review, value engineering and early schedule development are typical CMGC preconstruction requirements. These tasks and deliverables drive collaboration with stakeholders, subcontractors, and operators earlier and at a level not available in a low bid process. In the case of Mid-Coast, SANDAG also included scope for Disadvantage Business Enterprise outreach, public communication and stakeholder support. MCTC supported SANDAG in these areas by hosting subcontractor outreach events in collaboration with the SANDAG Office of Diversity and Equity. MCTC also collaborated with SANDAG Communication Department on public notifications of bike lane, street and highway closures, and participated with SANDAG in meetings with UC San Diego, Caltrans and private property owners on staging, access, and noise control.

In addition to good collaboration, co-location with the owner and designer was considered a best practice. Co-location for Mid-Coast preconstruction took the form of the SANDAG project management team locating in expanded SANDAG offices and the designer and MCTC expanding or locating their offices in the building with SANDAG at 401 B Street. In construction, SANDAG resident engineers and construction management consultants co-located at the MCTC field office in University City and at adjacent or nearby offices on Santa Fe Street. Measuring the collaborative benefits of co-location is subjective. The qualitative benefits included immediacy for SANDAG and MCTC key personnel to quickly address concerns by arranging meetings and having immediate one-on-one discussions.

Collaboration started with a CMGC orientation program. The program was meant to develop relationships and a collaborative environment between SANDAG, MTS and NCTD with a “project first approach.” MCTC brought in a facilitator and held several workshops aimed at team building. The result was integration of management and discipline teams, familiarization with organizational structures, contact lists and resolution ladders for the team. Follow-on workshops were held again at the start of construction with a focus on developing collaborative relationships between the CM and MCTC.

An example of a non-technical collaborative benefit to SANDAG and the region from CMGC was outreach to the disadvantaged business enterprise (DBE) contractors and suppliers. MCTC worked closely with SANDAG to co-sponsor DBE outreach events that connected DBE contractors with MCTC. This outreach supported the SANDAG Project DBE goal and the MCTC contract DBE goal. Through this collaboration, MCTC was able to exceed its DBE goal and help local DBE contractors grow their businesses.

Below are examples of collaboration experienced on Mid-Coast that would not necessarily be expected on low-bid projects.

- Private Property: MCTC’s superintendent for utility and street work on Genesee Avenue, was the face of the Project to property owners and managers. He met with owners and coordinated street and driveway closures to minimize impacts including advance notice, street signage, and working with businesses to schedule construction in front of properties during days and hours of least impact.
- LOSSAN Corridor: NCTD, had safety requirements at the start of construction that required all work to stop, and equipment and workers pulled back 25 feet from the tracks from SR 52 to the San Diego River every time a LOSSAN trains transited this approximately 6.5-mile segment. In this segment, MCTC was working in multiple separate areas on various construction activities. To reduce halting work for the entire time trains moved through this segment, MCTC coordinated with NCTD to add fencing to separate trains from workers and equipment, and segmented the track into separate work zones to reduce work restrictions to when trains were in an individual work zone. These coordinated safety measures increased the work time available near the railroad and significantly improved production efficiency and on-time completion of Mid-Coast construction in the LOSSAN corridor.
- UC San Diego, City and Caltrans: MCTC was in preconstruction meetings with operating stakeholders to address concerns, adjust construction methods and dates and times of work to minimize impacts to their operations. Once in construction, MCTC developed a track record of performing work on time to the stakeholder requirements. This performance supported MCTC in collaborating with these stakeholders to expedite approvals and revise work limitations to improve MCTC efficiency.
- Signals and Rail Activation: SANDAG and MCTC collaborated with MTS side-by-side to develop a testing plan and schedule to verify the quality and operational integrity of the railroad signals and communication systems and in developing and implementing a highly successful rail activation and testing program prior to revenue service. Out of this collaboration, the team early on identified a delay to project opening if the MCTC implemented system testing on the entire line with a linear approach. The team decided

that the best way to start testing on time was to break the line into a southern and northern segment. MCTC started and concentrated work in the completed southern segment while construction continued in the northern segment. MCTC worked with MTS to revise its work sequence and to coordinate MTS inspection and acceptance. Final testing and commissioning started on time in the southern segment and transitioned to the northern segment to complete on schedule. The “project first” approach resulted in a collaborative effort to overlap the critical path testing and commission activities to ensure MTS could start pre-revenue service in time to support Project opening.

3.3 Quality Improvement

CMGC preconstruction services were expected to improve the quality of the design, cost estimates, schedule, and risk profile of a project. Previous discussion demonstrated MCTC input improved the quality of cost estimates, schedule, and risk assessment with detailed contractor information particularly in verification of quantities, material availability and production rates. The quality of the design’s constructability and clarity were improved by MCTC participation.

Quality verification in construction has two main components. The contractor is expected to perform quality control (QC) which is front line verification and documentation of quality including dimensions, clearances, material origin, compliance to specifications, and functional operability. The second component is quality assurance (QA), a verification function that QC activities and documentation are being performed. QA and QC functions are similar in CMGC and low-bid construction; however, complex projects such as Mid-Coast have more detailed QC and QA requirements.

As an FTA funded project, SANDAG was required to prepare a QA plan (QAP) that included FTA’s fifteen-points of quality. Because of the size and complexity of Mid-Coast, the SANDAG team included a QA and Buy America Manager. The QA Manager oversaw the development of the SANDAG QAP and led audits of the QA and QC implementation. QA during construction was implemented by the CM. A QC plan (QCP) was developed by MCTC, accepted by SANDAG, and then implemented by MCTC.

Appendix G is extracted of pages from the Mid-Coast Construction Program Management Report, September 2021 showing the tracking of quality statistics and status. Appendix G shows tracking of Non-Conformance Reports (NCRs) and Quality Action Items (QAIs). NCRs were initiated and prepared by MCTC for work out of compliance with the plans or specifications, such as an excessive ADA ramp slope, work out of dimensional tolerance, failed tests or incorrect certifications or other nonconformance issues. NCRs were closed after acceptance of corrective action or through documented mitigation and acceptance by SANDAG. A QAI is a quality issue that if uncorrected could lead to an NCR. Appendix G also shows the testing statistics and status highlights for this CM report. Before final contract acceptance all NCRs and QAIs were closed.

Overall construction quality was at or above the contract requirements. The implementation of the QCP and day-to-day QC was executed well. Coordination with the CM consultant’s QA team and SANDAG QA Manager was cooperative. Quality issues that required design support were resolved with MCTC, the designer, and the CM’s QA team including developing corrective options. If responsibility for a QC issue was in question, MCTC was willing to move forward with implementing solutions while responsibility was determined. This level of cooperation and

commitment to moving the project forward was typical for MCTC but is not always expected with low-bid or for all CMGC contractors. A measure of the success of the quality of MCTC's work is that the Project had no claims.

4.0 LOW-BID VS CMGC DELIVERY COMPARISON

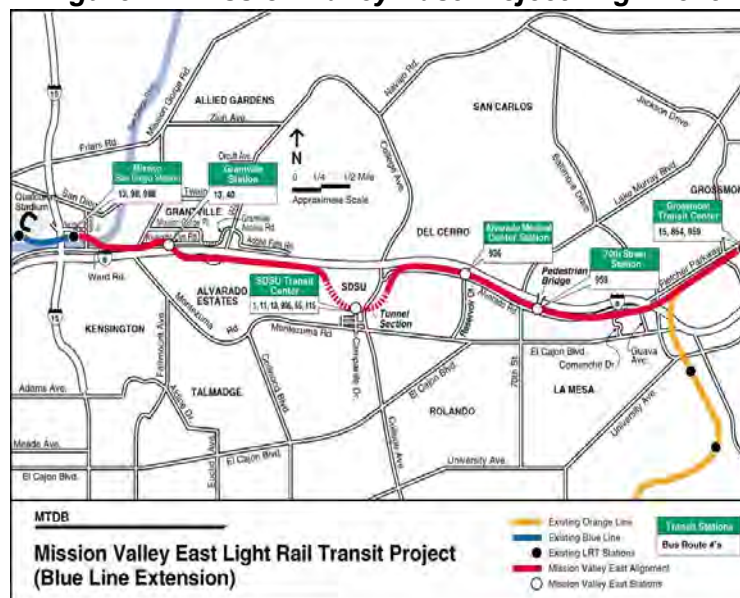
Another analysis of savings and efficiency is to compare CMGC and low bid projects. Although such a comparison is imperfect as large rail transit projects are always unique with project specific scope and challenges, such a comparison provides insight into the effectiveness of CMGC. Therefore, this report has compared changes in cost at the budget level between the Mid-Coast and Mission Valley East (MVE) projects. A comparison at the budget level provides for reasonable comparison. Comparison at a more detailed level isn't feasible because of significant differences in scope, scale, design requirements and stakeholders.

4.1 Mission Valley East Background

MVE was built by MTS and opened in 2005. MVE was an approximately 5.8-mile extension of the MTS Trolley system from Mission San Diego Station connecting to the Orange Line in La Mesa. MVE was about half the length of Mid-Coast and at FFGA a quarter of the cost. MVE was constructed using five low-bid construction contracts (utility relocations, Grantville Segment, SDSU Segment, La Mesa Segment, Track and Systems).

Mid-Coast and MVE are the closest comparable projects in the region. Both were federally funded light rail extensions with complex structures and stations, similar track and systems design, and both have extensive structure and stations on public university campuses. Figure 2 shows the Mission Valley East Project starting in Mission Valley including the tunnel under the San Diego State University campus.

Figure 2 – Mission Valley East Project Alignment



Both projects were budgeted in each agency's Capital Improvement Program (CIP). MTS and SANDAG CIP budgets are divided into major line-item categories with a budget amount for each line item. Appendix H is the FY22 Mid-Coast CIP Budget which shows the line-item budget categories, which would be typical of large SANDAG CIP projects.

4.2 Mid-Coast Mission Valley East Line-Item Comparison

Table 5 is a budget level comparison of relevant line items between Mid-Coast and MVE with the same starting point, the budget at FFGA, and ending point, construction completion. Table 5 only compares the Construction line-item and three other line-items: Construction Management, Engineering (design) and Project Management. These three line-item amounts are tied to the value or change in value of the Construction line-item. Other budget line items such as Environmental, Vehicle, Right of Way, Contingency are project specific amounts that aren't comparable for this assessment. As an example, MVE included 11 new Trolley vehicles and Mid-Coast 36.

In Table 5, the percentage increases in Engineering line-item amount for Mid-Coast compared to MVE indicates that CMGC preconstruction design review was effective at improving design quality and reducing the level of design and CM support needed in construction. The comparison looked at percentage change in line-item amounts to try and normalize the comparison. Table 5 shows Mid-Coast had a 3% lower total percent increase than MVE for the four line-items compared. However, Mid-Coast had a 10% larger percent change in the Construction line-item than MVE. Mid-Coast experienced a slightly 4% higher percent increase in Administration cost than MVE. MVE had significantly larger 80% increases in Engineering and Construction Management.

Table 5 - Mid-Coast – Mission Valley East Budget Change Comparison

Mid-Coast - Mission Valley East Budget Change Comparison		
Items	Mid-Coast	Mission Valley East (MVE)
CONSTRUCTION		
Budget at FFGA	\$927,500,000	\$265,900,000
Budget at Complete	\$1,168,199,174	\$308,547,400
Budget Change	\$240,699,174	\$42,647,400
% Budget Change	26%	16%
ADMINISTRATION (PROJECT MANAGEMENT)		
Budget at FFGA	\$71,560,828	\$14,900,000
Budget at Complete	\$86,392,019	\$17,400,000
Budget Change	\$14,831,191	\$2,500,000
% Budget Change	21%	17%
ENGINEERING		
Budget at FFGA	\$139,393,848	\$21,300,000
Budget Complete	\$166,847,048	\$42,900,350
Budget Change	\$27,453,200	\$21,600,350
% Budget Change	20%	101%
CONSTRUCTION MANAGEMENT		
Budget at FFGA	\$92,608,935	\$21,300,000
Budget Complete	\$131,615,670	\$48,050,000
Budget Change	\$39,006,735	\$26,750,000
% Budget Change	42%	126%
Line Item Totals		
Budget at FFGA	\$1,231,063,611	\$323,400,000
Budget at Complete	\$1,553,053,911	\$416,897,750
Budget Change	\$321,990,300	\$93,497,750
% Budget Change	26%	29%
* MVE Budget Changes Table 7 ** Adjusted per Table 6		

The Mid-Coast Construction line-item includes owner directed scope that SANDAG initiated after the GMP was approved and not in the budget at FFGA. The Mid-Coast Construction amount in Table 5 has the owner directed scope subtracted out to provide a level comparison

with MVE by comparing the original construction cost at FFGA for both projects. The items and cost subtracted are shown in Table 6. The added scope included special trackwork south of Old Town requested by MTS, a parking structure at UTC as part of a right-of-way agreement, unbudgeted unsuitable soils quantities, expanded scope for elevators and fall protection at the four aerial stations, reconstruction of the Old Town Transit Center bus platforms, changes at the request of various stakeholders, and late sports fields and street improvements added as mitigations on the UC San Diego campus.

Table 6 – Mid-Coast Owner Directed Scope

Added Scope	Amount
Miscellaneous Access and Track Improvements	\$1,306,893
UTC Parking Structure	\$24,008,336
Unsuitable Soil	\$8,600,408
Aerial Station Fall Protection	\$12,129,515
Old Town Transit Center Bus Improvements	\$5,827,867
Agency Changes (MTS, City, NCTD, Caltrans)	\$3,884,680
UCSD	\$14,348,538
Total	\$70,106,237

The expectation is that Mid-Coast using the CMGC method should have resulted in a smaller Construction line-item increase than MVE. Several factors account for the larger Mid-Coast increase. One factor was the Mid-Coast design was incomplete when the GMP was negotiated. The items with incomplete design were included in the GMP as provisional sums, where the amount of the provisional sum was estimated based on the design level at the time of negotiation. Provisional sums were subject to renegotiation if there were significant changes when the final design was issued to MCTC. Several high value provisional sum items ultimately increased in scale and cost with final design. The provisional sums that increased in cost were landscaping and habitat restoration, an increase in the size of the Nobel Station parking structure, increase in electric substation site work, and higher than anticipated station site utility and electrical quantities and work.

In the future, project teams should advance the level of design prior to negotiating a GMP or include provisions in the construction contract to issue final plans and convert provisional sums within a short period time following GMP to mitigate costly changes in construction. This recommendation is included in the Mid-Coast Lessons Learned Reports Appendices I and J. Maintaining provisional sums well into the construction schedule should be avoided since cost

of inflation could significantly impact cost to complete construction and create a risk to project budget and completion schedule.

In this comparison, Engineering and Construction Management (CM) increases are closer to expectations for CMGC. MVE with low bid contracting, did not include contractor collaboration and needed more design and CM support in construction to resolve issues. It is not unusual for engineering costs to continue throughout construction to resolve unanticipated issues such as buildability constraints, utility conflicts, unanticipated site conditions and dimensional conflicts. Early participation by the CMGC in design review is expected identify more of these issues in design and reduce the level of reactive engineering needed in construction. This appears to be borne out in this comparison.

MVE Construction Management cost also increased more than Mid-Coast. The CMGC method is meant to shift more responsibility and risk to the contractor. On Mid-Coast, MCTC was tasked with developing a schedule, and phasing, quality and safety plans during preconstruction. In this comparison, CMGC preconstruction participation seems to support the expectation that CMGC reduces owner construction management. On the Mid-Coast Project, MCTC coordinated directly with stakeholders including Caltrans, UC San Diego and the Genesee Avenue community resulting in reduced construction management time and staff burden for coordinating with these stakeholders as would typically be done with low-bid construction contracts. In this regard, MCTC had early and active engagement with stakeholders to mitigate concerns such as nightwork, noise, traffic handling and access. On MVE, MTS and the CM consultant managed coordination with stakeholders while the contractor was in a more reactive secondary role with stakeholders.

4.3 Comparison Conclusions

In the Mid-Coast/MVE comparison, CMGC did not result in less construction change order cost versus low bid; however, SANDAG was able to evaluate construction cost and risk as SANDAG was setting construction and project budgets and included adequate contingencies. Thus, Mid-Coast finished within the total project budget at FFGA. The MVE budget was increased from \$424 million at FFGA to \$495.6 million over the life of the project, of which \$42.6 million were budget increases for construction. Table 7, Mission Valley East Budget Total Change shows the MVE budget change as approved by MTS in April 2006.

Table 7 – Mission Valley East Budget Total Change

Mission Valley East Budget Line Item Changes April 2006				
Budget Line Items	@FFGA	@Complete*	Change	% Change
Administration**	\$14,900,000	\$17,400,000	\$2,500,000	17%
Design**	\$21,300,000	\$42,900,350	\$21,600,350	101%
Construction Management**	\$21,300,000	\$48,050,000	\$26,750,000	126%
Professional Services	\$2,400,000	\$4,200,000	\$1,800,000	75%
Right of Way	\$31,200,000	\$33,150,000	\$1,950,000	6%
Construction**	\$265,900,000	\$308,547,400	\$42,647,400	16%
Vehicles	\$30,000,000	\$37,850,000	\$7,850,000	26%
Fare Collection	\$1,100,000	\$10,000	(\$1,090,000)	-99%
Communications	\$1,100,000	\$290,000	(\$810,000)	-74%
Start-Up	\$2,400,000	\$2,400,000	\$0	0%
Contingency	\$31,400,000	\$0	(\$31,400,000)	-100%
Contaminated Soils	\$1,000,000	\$1,050,000	\$50,000	5%
Total:	\$424,000,000	\$495,847,750	\$71,847,750	

* Project Completion Prior to Close-out

** Compared Construction Related Line Items

This comparison indicates that CMGC preconstruction cost estimating and GMP pricing supported SANDAG in establishing an adequate construction and contingency budget line items. Mid-Coast may have reduced its construction change order increases below MVE had the level of design at GMP supported more accurate pricing and fewer provisional sums. In future projects, CMGC should be expected to reduce change order increases over low bid contracting if the design level at GMP negotiations is closer to 100%.

5.0 LESSONS LEARNED

Appendix I Final Design Phase Lessons Learned and Appendix J Construction Phase Lessons Learned were prepared by SANDAG to document CMGC best practices on Mid-Coast that were either applied during the project or should be considered in future CMGC projects.

In the design phase lessons learned, several recommendations proposed:

- Focus on early CMGC coordination of utility work and agreements. Early utility agreements facilitate early relocation that reduces the risk of utility conflicts during core project construction.
- SANDAG built Mid-Coast and eight additional corridor projects (Rose Creek Bikeway, San Diego River Bridge, Elvira to Morena Double Track, Voigt Drive Improvement, I-5 and Gilman Drive Improvements, I-5 Auxiliary Lane, Old Town Transit Center Improvements, and Lyman Roundabout) under one CMGC master contract with each project built as a supplement to

the master contract with its own GMP and technical specifications. Should SANDAG use this approach in the future, it is recommended that additional attention be paid to clarifying the specifications and differences/conflicts within the contract language between projects. Also, place emphasis on determining the cost allocation for shared resources such as offices, laydown areas and management and QA fairly in preconstruction.

- Another recommendation is engaging the ICE consultant earlier in preconstruction and clarifying the cost breakdown structure. For FTA funded projects, the FTA requires reporting in its Standard Cost Categories (SCC) such as stations, bridges and trackwork. Contractors and the ICE consultant develop costs based on quantities, crew size, equipment, materials, and production rates which don't readily match the SSC's. The CMGC and ICE estimates and payments need to be converted to SCCs per grant requirements. The recommendation is to determine the conversions to SCC in the preconstruction and carry through into construction.
- A recommendation implemented on Mid-Coast is documenting all value engineering costs including all SANDAG soft cost in evaluating VE proposals.

Recommendation 11 in Appendix I is a key lesson. Mid-Coast used provisional sums to advance to the GMP to meet critical dates. Provisional sums were placeholder prices used on specific project elements where designs were not sufficient for final pricing. As a result, final provisional sums were, in cases, renegotiated and exceeded the amounts estimated in the GMP. Therefore, to the extent possible, design should be advanced and provisional sums should be avoided or consider using unit pricing or other payment methods to limit renegotiating lump sum provisional prices in the GMP after executing the contract.

Other recommendations were to clarify the boilerplate, technical specifications, and definitions to avoid confusion on roles and responsibilities and better definition of agency versus contractor responsibilities for safety certification. Also, within the specifications, it was recommended that additional qualifications for the contractor QC staff be included.

SANDAG also reviewed CMGC evaluation documents from the Caltrans North Coast Corridor (NCC) Project which is adding HOV lanes on I-5 from Solana Beach to SR 78. This project is being constructed using the CMGC method. Caltrans District 11 developed an innovation log and processes to evaluate benefits and issues with CMGC for ITOC as part of the triennial review. There were similarities between the SANDAG Mid Coast and Caltrans NCC CMGC innovation log, cost tracking and payment methods, and Caltrans CMGC project management guidance and best practices could be incorporated into management practices used on future CMGC projects.

6.0 CONCLUSION

SANDAG considers CMGC to be a success for the Mid-Coast Corridor Project. Mid-Coast was completed within the project budget and prior to the revenue start date in the FFGA with no claims or pending construction litigation. FTA Region 9 Administrator, Ray Tellis, had called Mid-Coast the Region's gold star project. CMGC had specific benefits for the Mid-Coast that could be expected on other large, complex, or risky projects including:

- Ability to selection an experienced and proven contractor
- Contractor input into the design for value engineering and constructability
- Support with risk identification, avoidance, and mitigation
- Avoiding SANDAG coordination of multiple contractors to deliver a project
- Improved and early coordination and collaboration with operators, utilities, and stakeholder
- Improved cost and schedule information early and with better certainty

CMGC may not be appropriate for small or less complex projects where low bid may be more cost effective. For small and simpler projects, the cost of preconstruction services may not be offset by the design, constructability and risk avoidance benefits or the cost of the ICE consultant and negotiation process. CMGC may not be the best alternative for simple construction of parking structures, buildings or yard and maintenance facilities where design-build may be a preferable option. A contracting decision process and memorandum should be considered for major capital projects to select the contracting method that best fits the project scope, budget and objectives. CMGC should be considered for high value and complex projects where contractor input would improve design, and cost and schedule certainty.



Appendix A

Mid-Coast Risk Register

DRAFT PROJECT RISK REGISTER											Mid-Coast Classifications				FTA Risk Categories		Impact Scoring Breakdown				
SANDAG Mid-Coast Project											CON = Construction		STA = Stations		R = Requirements		Impact Scores Legend				
ALL RISKS											ENG = Engineering/Design		SYS = Systems		D = Design		LOW 1				
Date Issue: June 21, 2023											ENV = Environmental		TP = Third Party		M = Market		MEDIUM 2				
Revision: 62											MC = Management Capacity		UTL = Utility		C = Construction		HIGH 3				
											ROW = Right-of-Way						(P) Probability				
																	<10%				
																	>10% <50%				
																	>50%				
																	(C) Cost Impact				
																	< \$1 M				
																	> \$1M but < \$5M				
																	> \$5M				
																	(S) Schedule Impact				
																	< 1 month				
																	> 1 month but < 4 months				
																	> 4 months				
																	Rating				
																	<= 6				
																	7 - 12				
																	13 - 15				
																	Score = (Cost + Schedule) * Probability				
Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)
2			10.01	C	S1		Closed	6/1/2011	7/11/2013	771.00	The need to maintain service during track and platform modifications at Santa Fe. (Confirmed Closed on 07/11/13)	Could impact construction sequence or schedule							AVOIDED Santa Fe Depot not part of Project scope.		
6.1	6.1, 347, 356, 424	CON, CP, ENG	10.02	C	S2	R6, R7, R8, R9	Closed	6/1/2013	4/27/2017	1426.00	NCTD is requesting additional maintenance access along the right of way for Bridge access at Tecolote and West access road. (Confirmed Closed on 04/27/17) - Link to Closed Risk #347, #356, & #424	Additional cost for access road.							ACCEPTED Will be paid for by Mid-Coast.		
9.1	7.1, 9.1, 9.2, Z16, Z17		10.04	C	S1		Closed	11/1/2011	7/11/2013	618.00	High traffic volumes at Taylor Street requires mitigation. Full grade separation required with bridge over Taylor St. (Confirmed Closed on 07/11/13) - Link to Closed Risk #7.1, #9.2, #Z16, & #Z17							REPLACED See Risk #9.2.			
21.1	17, 21.1, 235	CP, ENV	10.04	C	S1, S2, S3		Closed	11/1/2011	9/25/2013	694.00	There is potential for environmental impacts to endangered species at San Diego River Crossing, Rose Creek Canyon, SR52, and along I-5 near La Jolla Colony. The worst case could be that an endangered species is found in the San Diego River crossing that could require a Section 7 process that could take up to 120 days to complete, delaying construction for that long. (Confirmed Closed on 09/25/13) - Link to Closed Risk #17 & #235	Potential delays and or costs in mitigating during construction.							REPLACED See Risk #235.		

DRAFT PROJECT RISK REGISTER

SANDAG Mid-Coast Project

ALL RISKS

Date Issue: June 21, 2023

Revision: 62

Mid-Coast Classifications

CON = Construction
ENG = Engineering/Design
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MC = Management Capacity
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UTL = Utility

FTA Risk Categories

R = Requirements
D = Design
M = Market
C = Construction

Impact Scoring Breakdown

Impact Scores Legend	LOW 1	MEDIUM 2	HIGH 3
	<10%	>10% <50%	>50%
(P) Probability	<10%	>10% <50%	>50%
(C) Cost Impact	< \$1 M	> \$1M but < \$5M	> \$5M
(S) Schedule Impact	< 1 month	> 1 month but < 4 months	> 4 months
Rating	<= 6	7 - 12	13 - 18
Score = (Cost + Schedule) * Probability			

Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)
25.1	25, 25.1, 29.1, 217	CON, TP	10.04	C	S4	R14	Closed	10/22/2013	11/29/2016	1134.00	The traffic plans and street improvements along Genesee Ave need to be reviewed and accepted by City of San Diego. (Confirmed Closed on 11/29/16) - Link to Closed Risk #25, #29.1, & #217	City's review may result in additional restrictions or modifications to the construction plan which will cause cost and schedule delays.							MITIGATED Traffic plans and street improvements have been reviewed and accepted by the City.		
27.1	27.1, 244, 307, 218	ENV, STR	10.04	C	S4		Closed	6/1/2013	10/22/2013	143.00	Aerial Structure - UCSD Viaduct: The elevated LRT encroaches on UCSD East property (Baseball Field). There is also a potential for archeological finds in the area. This also relates to UCSD refining sports	Potential delays.							MITIGATED Geotechnical boring have been completed.		
28.1	28.1, 217, 218		10.04	C	S4		Closed	11/1/2011	9/25/2013	694.00	Aerial Structure - Genesee Viaduct: Constructability issues on Genesee given permanent and temporary lane reductions may increase the cost of the structures. The base assumption is that the project can take 1 lane in each direction and left turn pockets during construction. (Confirmed Closed on 09/25/13) - Link to Closed Risk #217& #218	May increase the cost of the structures.							REPLACED See Risk #217.		
40			10.12	C	S1		Closed	6/1/2011	9/25/2013	847.00	Coordination of Santa Fe Depot Modifications to maintain existing rail service during construction has serious cost and schedule risks. This item addresses Special Trackwork. (Item #2 addresses guideway)	Cost and schedule risks.							MITIGATED Design has advanced.		
42			10.12	C	S1		Closed	6/1/2011	12/11/2013	924.00	Installation of turnout for Operational Enhancement of the MTS system at Santa Fe Depot is required to be in place prior to opening day of Mid-Coast. (Confirmed Closed on 01/22/13)	Possible delay to revenue service opening.							AVOIDED No changes are required for Mid-Coast operations.		
62			40.01	C	S3		Closed	11/1/2011	9/25/2013	694.00	One or two structures from STA 573+00 to 574+00 may be demolished. (Confirmed Closed on 09/25/13)	Demo/ relocation / legal costs may be incurred.							MITIGATED Design has advanced.		
63.1		CON, ENG, UTL	40.02	C	S1	R5	Closed	3/1/2013	8/15/2016	1263.00	There is potential for a construction impact to the 72" sewer line that runs parallel to tracks at the south end of the Claremont Station. (Confirmed Closed on 08/15/16)	May require more protection than initially designed.							TRANSFERRED Risk was transferred to MCTC in the GMP.		
71	71, 263		40.03	C	All		Closed	11/1/2011	2/18/2015	1205.00	The environmental database allowed for a limited area on either side (400 feet) of the route and did not meet the recommended ASTM Phase I/IIAI standards for radius of review. The potential that an offsite source of contamination has migrated to the alignment and is not found until construction could affect project cost/schedule. (Confirmed Closed on 02/18/15) - Link to Closed Risk #263	If not found until construction could affect project cost/schedule.							REPLACED See Risk #263.		
72	72, 263		40.03	C	All		Closed	4/1/2013	9/25/2013	177.00	Numerous hazardous materials/waste locations along the alignment have not been reviewed in any detail to determine if any of the sites pose a concern from contaminated materials from either on-site or off-site sources.							REPLACED See Risk #263.			
84.1	84.1, 223, 223.1, 229	TP	40.07	C	S4		Closed	4/1/2013	9/25/2013	177.00	(I) UTC Transit Center may not be completed by the time the Mid-Coast Corridor Transit Project begins operation. (Confirmed Closed on 09/25/13) - Link to Closed Risk #223,	Thereby lacking the required (estimated 400) parking spaces.							REPLACED See Risks #223, #223.1, & #229.		
85.1		TP	40.08	C	S4		Closed	3/1/2013	9/24/2013	207.00	Difficult construction operations surrounding Pepper Canyon Station, especially in the constrained Pepper Canyon site. (Confirmed Closed 09/24/13)	May require additional mitigation from construction impacts, increasing contractor price or causing delay.							ACCEPTED Will be paid for by Mid-Coast.		
88	88, 399, 401	SU, SYS	50	C	All	All	Closed	9/24/2013	12/16/2021	3005.00	The duration specified in the schedule to perform system related tasks is considered optimistic. (Operational testing). (Confirmed Closed on 12/16/21) - Link to Closed Risk #399 & #401	The schedule may be affected.							MITIGATED Turnover is complete.		
110	110, 272, 350, 384, 395, 396, 400	ROW	60.01	C	All	All	Closed	11/1/2011	7/12/2017	2080.00	Acquisition through condemnation may take longer than anticipated in the project schedule. (Confirmed Closed on 07/12/17) - Link to Closed Risk #272, #350, #384, #395, #396, & #400	Schedule may be affected.							AVOIDED OPs are being obtained in a timely fashion.		
113.2	113.1, 113.2	CON, CP, ROW	60.02	C	S1	R2, R3, R4	Closed	3/22/2018	2/13/2019	328.00	The private rail car located adjacent to the existing commuter rail at the San Diego River Aerial Structure has not been moved and could affect schedule if not moved by mid-January 2019. (Confirmed Closed on 02/13/19)	There is a potential cost impact associated with relocation.							AVOIDED Private rail car was moved on January 7, 2019 and spur was out/removed subsequently.		
132			10	C	All		Closed	4/1/2013	8/14/2013	135.00	With the proposed strategy of procurement of individual civil contracts based on geography and one Systems (all System elements) the systems contractor would need to coordinate with up to 8 civil contractors. (Confirmed Closed on 08/14/13)	This is expected to result in significant number of coordination and scheduling issues.							MITIGATED SANDAG Board approved the CMGC Project Delivery Method on 4/26/13.		
205	65, 205, 205.1, 205.2, 205.3, 205.4, 205.5, 205.6, 206, 219, 234, 250, 254, 350, 393, 394	UTL	40.02	C	All	All	Closed	9/24/2013	8/23/2018	1794.00	There could be delays in reaching an agreement between SANDAG and SDG&E regarding the liability determination and cost sharing relocations. (Confirmed Closed on 08/23/18) - Link to Closed Risk #65, #205.1, #205.2, #205.3, #205.4, #205.5, #205.6, #206, #219, #234, #250, #254, #350, #393, & #394	This may result in cost increases.							MITIGATED Liability determination agreement with SDG&E was executed REPLACED See Risks #205.5 & #205.6		
205.1	205, 205.1, 205.2, 205.3, 205.4, 206, 219, 234, 250, 254	UTL	40.02	C	All	All	Closed	2/4/2016	9/19/2017	593.00	There could be delays in reaching an agreement between SANDAG and Verizon regarding the liability determination and cost sharing of relocations. (Confirmed Closed on 09/19/17) - Link to Closed Risk #205, #205.2, #205.3, #205.4, #206, #219, #234, #250, & #254	This may result in project delays.							MITIGATED Agreement with Verizon has been signed.		

DRAFT PROJECT RISK REGISTER

SANDAG Mid-Coast Project

ALL RISKS

Date Issue: June 21, 2023

Revision: 62

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205.2	205, 205.1, 205.2, 205.3, 205.4, 206, 219, 234, 250, 254	UTL	40.02	C	All	All	Closed	2/4/2016	7/12/2017	524.00	There could be delays in reaching an agreement between SANDAG and AT&T regarding the liability determination and cost sharing of relocations. (Confirmed Closed on 07/12/17) - Link to Closed Risk #205, #205.1, #205.3, #205.4, #206, #219, #234, #250, & #254	This may result in project delays because AT&T may delay Mid-Coast construction.								MITIGATED Agreement has been signed.		
205.3	205, 205.1, 205.2, 205.3, 205.4, 206, 219, 234, 250, 254	UTL	40.02	C	All	All	Closed	6/23/2016	4/27/2017	308.00	There could be delays in reaching an agreement between SANDAG and Cox regarding the liability determination and cost sharing of the super trench. (Confirmed Closed on 04/27/17) - Link to Closed Risk #205, #205.1, #205.2, #205.4, #206, #219, #234, #250, & #254	This may result in increases in project costs and schedule delays.								MITIGATED Agreement has been signed.		
205.4	205, 205.1, 205.2, 205.3, 205.4, 206, 219, 234, 250, 254	UTL	40.02	C	All	All	Closed	6/23/2016	4/27/2017	308.00	There could be delays in reaching an agreement between SANDAG and Charter (Time Warner) regarding the liability determination and cost sharing of the super trench. (Confirmed Closed on 04/27/17) - Link to Closed Risk #205, #205.1, #205.2, #205.3, #206, #219, #234, #250, & #254	This may result in increases in project costs and schedule delays.								MITIGATED Agreement has been signed.		
205.5	205, 205.5, 234, 394	UTL	40.02	C	All	All	Closed	8/22/2018	6/21/2023	1764.00	SDG&E relocation costs could exceed the budget. (Confirmed Closed on 6/21/23) - Link to Closed Risk #205, #234, & #394	This would require use of contingency funds.							AVOIDED SDG&E final reconciliation complete and within budget.			
205.6	205, 205.6, 234	UTL	40.02	C	All	All	Closed	8/22/2018	2/13/2019	175.00	AT&T relocation costs could exceed the budget. (Confirmed Closed on 02/13/19) - Link to Closed Risk #205 & #234	This would require use of contingency.							AVOIDED AT&T completed relocation work within budget.			
206	205, 205.1, 205.2, 205.3, 205.4, 206	UTL	40.02	C	All	All	Closed	12/12/2013	8/15/2016	977.00	Out-of-town telecommunication companies may pose a risk to project schedule based upon timely feedback, designs, and agreement approvals. (Verizon) (Confirmed Closed on 08/15/16) - Link to Closed Risk #205, #205.1, #205.2, #205.3, & #205.4	Pose a risk to project schedule.							REPLACED See Risk #205.1.			
207	207, 239, 271.1, 271.2, 271.3, 271.4, 285	TP	80.06	C	All		Closed	3/1/2013	9/25/2013	208.00	There is a potential for late concurrence and processing by third parties. (Confirmed Closed on 09/25/13) - Link to Closed Risk #239, #271.1, #271.2, #271.3, #271.4, & #285	This could delay the schedule.							REPLACED See Risks #271.1, #271.2, #271.3, #271.4, & #285			
208	208, 290, 360, 417	CON, CP	10.01	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	3/1/2013	1/27/2021	2889.00	Limited issuance of Form Bs & flagging resources on active railroads with the numerous other construction projects along the LOSSAN Corridor. (Confirmed Closed on 01/27/21) - Link to Closed Risk #290, #360, & #417	This may create unforeseen work constraints and/or inefficiencies for the contractor which could potentially reduce construction productivity, increase costs, and overall construction duration.							MITIGATED Only minimal NCTD flagging resources are needed going forward.			
210	210, 210.1, 210.2, 221	CON, SAF, STA, SYS	50.02	C	S4	R14	Closed	7/1/2013	6/7/2018	1802.00	Delays in obtaining CPUC concurrence for pedestrian treatment at Executive Dr. and UTC Stations. (Confirmed Closed on 06/07/18) - Link to Closed Risk #210.1, #210.2, & #221	May impact schedule and/or design.							MITIGATED Project received action from ALJ in May 2018.			
210.1	210, 210.1, 210.2	ENG, SYS	20	C	S1, S2, S3, S4	All	Closed	11/30/2016	4/27/2017	148.00	Delay to obtaining CPUC Resolution on acceptance of SSCP. (Confirmed Closed on 04/27/17) - Link to Closed Risk #210 & #210.2	This could affect RSD.							MITIGATED CPUC has approved the SSCP.			
210.2	210, 210.1, 210.2	CON, SAF, STA, SYS	20	C	S4	R14	Closed	11/30/2016	12/19/2018	749.00	Delays to obtaining CPUC grade separation approval (Campus Point). (Confirmed Closed on 12/19/18) - Link to Closed Risk #210 & #210.1	This could affect RSD.							AVOIDED CPUC approval obtained on 11/29/2018.			

DRAFT PROJECT RISK REGISTER												Mid-Coast Classifications				FTA Risk Categories		Impact Scoring Breakdown																													
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213	105, 213, 213.1	CON, OP, ROW, UTL	40.02	C	S1	R4	Closed	3/1/2013	11/14/2017	1719.00	Coordination with the Navy for relocation of the jet fuel line near Tecolote Creek. (Confirmed Closed on 11/14/17) - Link to Closed Risk #105 & #213.1	This could delay project schedule and increase cost.							AVOIDED Coordination is complete. Remaining risk is completing the relocation. See Risk #213.1.																												
213.1	213, 213.1	CON, ENG, ROW, UTL	40.02	C	S1	R4	Closed	11/13/2017	7/10/2019	604.00	Costs could exceed the budget for completing the relocation of the Navy fuel line near Tecolote Creek. (Confirmed Closed on 07/10/19) - Link to Closed Risk #213	This could increase costs.							MITIGATED Navy fuel line work completed and CCO executed.																												
214	104, 137, 214, 214.1, 410	CON	40.08	C	All	All	Closed	7/1/2013	11/14/2017	1597.00	Timely access to laydown or staging areas along the corridor. (Confirmed Closed on 11/14/17) - Link to Closed Risk #104, #137, #214.1, & #410	This may impact schedule and cost.							ACCEPTED Change order has been negotiated for \$9M for laydown and office space. \$4M over provisional sum.																												
215		CON, ENG	40.08	C	All	All	Closed	9/24/2013	2/15/2017	1240.00	Limited parking opportunities in the corridor. (Estimated construction workers on the project at the peak is 3,500 workers.) (Confirmed Closed on 02/15/17)	May impact community outreach and/or schedule.							TRANSFERRED Risk was transferred to MCTC in the GMP.																												
217	25.1, 28.1, 217, 275, 415	CON, ENV	10.04	C	S4	R14	Closed	8/22/2013	1/29/2020	2351.00	The cost of mitigating construction related impacts (noise, vibrations, etc.) along Genesee and I-5 may exceed current project budget allowance (Confirmed Closed on 01/29/20) - Link to Closed Risk #25.1, #28.1, #275, & #415	Additional mitigation may be required. There could be cost and schedule impacts associated with staging.							MITIGATED No major public complaints have been received related to noise and vibrations. Work has been completed around the soundwall that would cause vibration and heavy noise.																												
218	218, 253, 253.1, 253.2, 278, 281, 322, 375	UTL	40.02	C	All	All	Closed	12/12/2013	12/16/2021	2926.00	Unknown dry utility relocations may be necessary to accommodate the construction process. (Confirmed Closed on 12/16/21) - Link to Closed Risk #253, #253.1, #253.2, #278, #281, #322, & #375	Resulting in additional project costs and schedule delays.							AVOIDED Work is complete.																												
223	84.1, 223, 223.1, 229, 229.1, 230.9, 278, 363	STA, TP	40.08	C	S4	R14	Closed	7/1/2013	10/28/2015	849.00	If UTC constructs the bus transit center ahead of Mid-Coast. (Confirmed Closed on 10/28/15) - Link to Closed Risk #84.1, #223.1, #229, #229.1, #230.9, #278, & #363	Then construction staging impacts would occur between the Bus transit center and new LRT station (vertical circulation).							AVOIDED Construction is in progress and should be completed by June 2016.																												
223.1	84.1, 223, 223.1, 229, 229.1, 408, 408.1	STA, TP	40.08	C	S4		Closed	7/1/2013	1/13/2015	561.00	If UTC does not construct the bus transit center in time for Mid-Coast. (Confirmed Closed on 01/13/15) - Link to Closed Risk #84.1, #223, #229, #229.1, #408, #408.1	Mid-Coast will need to include the transit center and first floor access.							MITIGATED Construction to start in April 2015.																												
224		TP	40.08	C	S4		Closed	3/1/2013	8/15/2013	167.00	If the Monte Verde vacant lot on the southwest quadrant of Genesee and La Jolla Village Dr. develops prior to construction of Mid-Coast, a valuable laydown/staging area will not be available. (Confirmed Closed on 08/15/13)								AVOIDED Design no longer incorporates Monte Verde as a laydown area.																												
225.3	225.2, 225.3	CON, SU, SYS, UTL	50.03	C	S4	R14	Closed	1/26/2021	12/16/2021	324.00	There is a risk of not completing construction of TPSS #15 (Fez St) in time for RSD. (Confirmed Closed on 12/16/21) - Link to Closed Risk #225.2	There would be limited TPSS redundancies if TPSS #15 is not online during operations.							AVOIDED TPSS #15 is complete.																												

DRAFT PROJECT RISK REGISTER											Mid-Coast Classifications				FTA Risk Categories				Impact Scoring Breakdown											
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Revision: 62																														
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233	4, 233	STR	40.05	C	S2		Closed	9/24/2013	1/13/2015	476.00	Proposed retaining wall and channel improvements at SR 52 potential conflicts with existing bridge foundation. (Confirmed Closed on 01/13/15) - Link to Closed Risk #4	Potential design modifications and/or increased costs for construction.							MITIGATED Type selection is complete and bridge footing locations have been verified.											
234	205, 205.1, 205.2, 205.3, 205.4, 205.5, 205.6, 234, 234.1, 234.2, 394, 433	CON, UTL	10.01	C	All	All	Closed	3/1/2013	4/22/2021	2974.00	Coordination with utilities companies (relocations) fails to maintain project schedule creating delays. (Confirmed Closed on 04/22/21) - Link to Closed Risk #205, #205.1, #205.2, #205.3, #205.4, #205.5, #205.6, #234, #234.1, #234.2, #394 & #433	The resulting delays may impact construction schedule and cost.							AVOIDED Relocations complete that are required for operations. Small amount of work remains.											
234.1	234, 234.1	CON, UTL	40.02	C	S4	R14	Closed	11/14/2017	6/7/2018	205.00	Coordination and construction of the super trench on Genesee fails to maintain project schedule creating delays. (Confirmed Closed on 06/07/18) - Link to Closed Risk #234	The resulting delays may impact construction schedule and cost.							AVOIDED Super trench construction complete and utility companies have cutover.											
234.2	234, 234.2	CON, SU, SYS, UTL	50.03	C	All	All	Closed	8/22/2018	12/16/2021	1212.00	There could be a delay in service connections by SDG&E. - Link to Closed Risk #234	This could affect construction schedule and increase costs.							AVOIDED Work is complete.											
235	21.1, 235, 235.1	CON, ENV	40.04	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	3/1/2013	10/23/2019	2427.00	If Western Mastiff Bats are found within the construction area during construction, implementation of the mitigation, minimization and avoidance measures may affect the construction schedule and cost. - Link to Closed Risk #21.1 & #235.1	Construction schedule and cost may be affected.							AVOIDED All bat surveys have been completed.											
235.1	235, 235.1, 235.2, 235.3	CON, ENV	40.04	C	All	All	Closed	10/28/2015	12/16/2021	2241.00	Implementation of the mitigation, minimization, and avoidance measures for bird nesting events may affect the construction schedule and cost. (Confirmed Closed on 12/16/21) - Link to Closed Risk #235, #235.2 & #235.3	Construction schedule and cost may be affected.							AVOIDED All major construction work is complete.											
235.2	235.1, 235.2, 235.3	CON, ENV	40.04	C	All	All	Closed	10/28/2015	11/14/2017	748.00	Seasonal restrictions on clearing & grubbing specific vegetation types. (Confirmed Closed on 11/14/17) - Link to Closed Risk #235, #235.2 & #235.3	May delay certain construction activities.							MITIGATED Entire project is cleared and grubbed.											
235.3	235.1, 235.2, 235.3	CON, ENV	40.04	C	S1	R4	Closed	7/16/2020	1/27/2021	195.00	Ospreys are building a nest on top of the A1 Storage Sign that may need to be removed. (Confirmed Closed on 01/27/21) - Link to Closed Risk #235.1 & #235.2	This could cause a delay in finishing construction at the intersection.							AVOIDED Sign will be left in place. If sign will be removed that will be coordinated in the future between MTS and owner.											
236	122, 236, 356	CON, ENV	90	C	All	All	Closed	8/22/2013	11/29/2016	1195.00	There could be delay in obtaining FF&A (Sept 14, 2016). (Confirmed Closed on 11/29/16) - Link to Closed Risk #122 & #356	Which could delay the NTP for construction activities.							MITIGATED FF&A executed.											
240	81.1, 240	CON, SAF	50	C	All	All	Closed	9/24/2013	8/15/2016	1056.00	Additional measures to address Safety and Security risks associated with construction areas. (Confirmed Closed on 08/15/16) - Link to Closed Risk #81.1	May cause impacts to budget.							MITIGATED MCTC's Construction Safety Plan submittal has been approved.											
241		CON	10.04	C	S2		Closed	12/12/2013	4/29/2015	503.00	Construction staging/false work over rail traffic may be complex. (Confirmed Closed on 04/29/15)	Negative consequences associated with inefficiencies in construction.							MITIGATED This structure has been changed to pre-cast.											

DRAFT PROJECT RISK REGISTER

SANDAG Mid-Coast Project

ALL RISKS

Date Issue: June 21, 2023

Revision: 62

Mid-Coast Classifications

CON = Construction
ENC = Engineering/Design
ENV = Environmental
MC = Management Capacity
ROW = Right-of-Way

STA = Stations
SYS = Systems
TP = Third Party
UTL = Utility

FTA Risk Categories

R = Requirements
D = Design
M = Market
C = Construction

Impact Scoring Breakdown

Impact Scores Legend	LOW 1	MEDIUM 2	HIGH 3
	<10%	>10% <50%	>50%
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Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)
244	27.1, 76, 244, 279, 307	CON, ENV	40.04	C	All	All	Closed	3/1/2013	12/16/2021	3212.00	Archeological resources could be present in the Area of Potential Effect (APE) and may be detected during construction. (Confirmed Closed on 12/16/21) - Link to Closed Risk #27.1, #76, #279, & #307	Which may have impacts to the project construction schedule.							MITIGATED Underground work is complete.		
245		CON, ENV, SAF	40.03	C	S4	R13	Closed	3/1/2013	11/14/2017	1719.00	Potential risk of encountering unexploded ordnance on former Camp Matthews (UCSD campus). (Confirmed Closed on 11/14/17)	Could require further remedial actions that would increase cost and schedule.							AVOIDED Construction has progressed to the point where future subsurface impacts in this area are minor.		
249	105, 249, 340	UTL	40.02	C	S2	R6, R7, R8, R9	Closed	7/1/2013	10/28/2015	849.00	Long lead times for SDG&E gas transmission line relocation. (Confirmed Closed on 10/28/15) - Link to Closed Risk #105 & #340	May cause schedule impacts.							MITIGATED There is no seasonal restriction on the SDG&E gas transmission line. Long lead items should be ordered by 11/01/15.		
250	105, 205, 205.1, 205.2, 205.3, 205.4, 250, 344	UTL	40.02	C	S1, S2	R2, R3, R4	Closed	7/1/2013	6/29/2016	1094.00	Long lead times for SDG&E 69 kV electrical transmission lines may cause schedule impacts. (Confirmed Closed on 06/29/16) - Link to Closed Risk #105, #205, #205.1, #205.2, #205.3, #205.4, & #344	Schedule impacts.							AVOIDED Materials have been procured.		
251		SYS, UTL	40.02	C	All	All	Closed	8/22/2013	12/16/2021	3038.00	There is a risk for potential delays and costs associated with compliance with the Buy America regulations. (Confirmed Closed on 12/16/21)	This could have a cost and schedule impact.							AVOIDED No issues have been identified. All procurements have been made.		
253	218, 253, 253.1, 253.2, 278, 322	UTL	40.02	C	All		Closed	3/1/2013	11/19/2014	628.00	Delayed private utility company relocations. (Confirmed Closed on 11/19/14) - Link to Closed Risk #218, #253.1, #253.2, #278, & #322	Could cause construction scheduling delays.							REPLACED See Risks #253.1 & 253.2.		
253.1	218, 253, 253.1, 253.2, 254, 278, 322	CP, MC, UTL	40.02	C	All	All	Closed	1/22/2014	11/29/2016	1042.00	Limited SDG&E design and/or field resources. (Confirmed Closed on 11/29/16) - Link to Closed Risk #218, #253, #253.2, #254, #278, & #322	May delay utility relocations.							MITIGATED Resources were made available.		
253.2	218, 253, 253.1, 253.2, 254, 278, 322	CP, MC, UTL	40.02	C	All	All	Closed	1/23/2014	6/29/2016	888.00	Limited telecom design (AT&T, Cox) and/or field resources. (Confirmed Closed on 06/29/16) - Link to Closed Risk #218, #253, #253.1, #254, #278, & #322	May delay utility relocations.							MITIGATED Design has coordinated and negotiating shared work.		
254	205, 205.1, 205.2, 205.3, 205.4, 253.1, 253.2, 254	UTL	40.02	C	All	All	Closed	12/12/2013	6/29/2016	930.00	Private utility company manpower availability for the relocation process and service connections. (Confirmed Closed on 06/29/16) - Link to Closed Risk #205, #205.1, #205.2, #205.3, #205.4, #253.1, & #253.2	May result in construction schedule delays.							REPLACED See Risks #205.1, #205.2, #205.3, #205.4.		
258	258, 259	CP	10.04	C	S1	R3	Closed	3/1/2013	4/6/2016	1132.00	If delayed, the LOSSAN San Diego River Bridge project would delay Mid-Coast bridge construction start date. (Confirmed Closed on 04/06/16) - Link to Closed Risk #259	This could impact and delay the Mid-Coast bridge which is scheduled to begin construction.							MITIGATED SDRB is environmental cleared.		
259	258, 259	CP, TP	10.04	C	S2		Closed	3/1/2013	1/13/2015	683.00	Modification/staging/blackout period of LOSSAN PTC. (Confirmed Closed on 01/13/15) - Link to Closed Risk #258	May impact shoofly and construction schedule for Mid-Coast.							MITIGATED NCTD's change configuration procedures are known.		
262		ENV	80.06	C	All	All	Closed	9/24/2013	6/7/2018	1717.00	Unanticipated delays could be caused by resource permitting agencies. (Confirmed Closed on 06/07/18)	Affect the construction schedule and cost							AVOIDED USACE & Coastal Commission granted permission to proceed in May 2018.		

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263	71, 72, 263, 425	CON	40.03	C	All	All	Closed	12/12/2013	1/29/2020	2239.00	Hazardous materials such as undocumented underground storage tanks, contaminated soil, or asbestos-cement pipes may be encountered during construction. (Confirmed Closed on 01/29/20) - Link to Closed Risk #71, #72, & #425	Implementation of required best management practices may affect construction schedule and cost. Unforeseen conditions during construction.							AVOIDED Major in-ground construction complete.																											
266	266, 297	CON, ENG, TP	10.02	C	S2, S3	R6, R11, R12	Closed	7/1/2013	4/27/2017	1396.00	Difficulties in timely plan preparation and processing for the Caltrans Encroachment Permit. (Confirmed Closed on 04/27/17) - Link to Closed Risk #297	May delay construction.							MITIGATED Encroachment Permit was received in April 2017.																											
271.3	207, 271, 271.1, 271.2, 271.3, 271.4, 296, 323	ROW, TP	60.01	C	S3	R13	Closed	6/1/2013	11/29/2016	1277.00	Potential delays associated with processing easement documents for the VA Medical Center property, including aerial and ground easement, and access. (Confirmed Closed on 11/29/16) - Link to Closed Risk #207, #271, 271.1, 271.2, #271.4, #296, & #323	Delays to start of service							MITIGATED Obtained Construction License.																											
271.4	207, 271, 271.1, 271.2, 271.3, 271.4, 323	CON, ROW, TP	60.01	C	S3	R13	Closed	6/29/2016	8/15/2016	47.00	Potential delays to obtaining Revocable License for Non-Federal Use of Real Property on VA Medical Center property. (Confirmed Closed on 08/15/16) - Link to Closed Risk #207, #271, 271.1, 271.2, #271.3, & #323	Delay to start of construction on the VA Medical Center property.							MITIGATED Revocable License Agreement is processing signatures the week of 08/12/16.																											
275	217, 275		10.04	C	S4		Closed	7/1/2013	9/24/2013	85.00	Mitigation costs for construction impacts on Genesee Avenue may exceed planned budget (businesses and residents). (Confirmed Closed on 09/24/13) - Link to Closed Risk #217	Potential increase in costs for construction.							REPLACED See Risk #217.																											
278	218, 223, 225.2, 253, 253.1, 253.2, 278, 322	CON, UTL	40.02	C	S3, S4		Closed	9/24/2013	4/29/2015	582.00	If Segments 3&4 design is delayed (project alignment, profile & catenary information) or delivered late to Utility Companies. (Confirmed Closed on 04/29/15) - Link to Closed Risk #218, #223, #225.2, #253, #253.1, #253.2, & #322	This may cause a delay in relocation designs and contract preparation, and may also affect the project's construction dates due to resource constraints.							MITIGATED Files have been transmitted to utility companies.																											
281	218, 281	UTL	40.02	C	All	All	Closed	9/24/2013	4/22/2021	2767.00	There is a risk that field changes associated with dry utility relocation construction (particularly within the constrained locations) could result in design changes. (Confirmed Closed on 04/22/21) - Link to Closed Risk #218	This could result in construction delays.							AVOIDED The remaining utility work will not result in design changes.																											
286	59, 106, 230.4, 286, 447	ROW, STR	30.01	C	S3		Closed	7/1/2013	1/22/2014	205.00	Shopping Center at Nobel Drive Station may not agree to a surface parking arrangement for transit patrons. (Confirmed Closed on 01/22/14) - Link to Closed Risk #59, #106, #230.4, & #447	This could result in ROW issues, design delays and delayed access and possession of the Nobel Station, parking and viaduct within the Shopping Center property.							ACCEPTED Cost included in the budget.																											
290	208, 290, 356, 357, 360, 361	CON, CP, TP	40	C	S1, S2		Closed	7/1/2013	9/3/2015	794.00	The project needs to coordinate with NCTD to develop agreed upon absolute work windows (AWW) and approval of "Form B" protection. (Confirmed Closed on 09/03/15) - Link to Closed Risk #208, #356, #357, #360, & #361	This may affect the planned construction duration.							REPLACED See Risks #356, #357, & #361.																											
297	266, 297	ENG, STR, TP	10.04	C	S1, S2, S3, S4	All	Closed	9/24/2013	4/27/2017	1311.00	Late acceptance of plans by Caltrans. (Confirmed Closed on 04/27/17) - Link to Closed Risk #266	Could impact schedule and budget.							MITIGATED Caltrans has accepted the plans.																											

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309		CP	10.04	C	All	All	Closed	8/22/2013	10/28/2015	797.00	Potential impact of delayed procurement of long-lead items such as steel girders, turnouts, and signal houses for CP Rose for the LOSSAN projects. (Confirmed Closed on 10/28/15)	Could create delays to the construction of Mid-Coast.							MITIGATED Items are purchased and in place.		
320	320, 320.1, 321, 354	CP, ENV, UTL	40.02	C	S1		Closed	10/22/2013	4/29/2015	554.00	Permitting of utility relocation by San Diego River Bridge project could delay Mid-Coast Construction. (Confirmed Closed on 04/29/15) - Link to Closed Risk #320.1, #321, & #354	Delay in schedule.							MITIGATED Master Utility Plan has been finalized.		
320.1	320, 320.1, 321, 354	CP, ENV, UTL	40.02	C	S2		Closed	10/22/2013	2/18/2015	484.00	Permitting of utility relocation by Elvira project could delay Mid-Coast Construction. (Confirmed Closed on 02/18/15) - Link to Closed Risk #320, #321, & #354	Delay in schedule.							MITIGATED Coordinating with SDG&E on the relocation of the 12kV route.		
322	218, 253, 253.1, 253.2, 278, 322	CON, ROW, UTL	60.01	C	All	All	Closed	10/22/2013	2/15/2017	1212.00	Potential utility relocations may require new utility right-of-way on various Genesee parcels. (Confirmed Closed on 02/15/17) - Link to Closed Risk #218, #253, #253.1, #253.2, & #278	May delay the start of construction and add potentially costs to ROW.							MITIGATED Relocations are reflected in appraisal maps and revised offers have been sent to owners.		
324	103.1, 324	SU, SYS	50.07	C	All	All	Closed	10/22/2013	12/16/2021	2977.00	Delays in Rail Operations Control Center upgrades. (Confirmed Closed on 12/16/21) - Link to Closed Risk #103.1	Could delay revenue service.							AVOIDED This did not delay revenue service.		
325	225.2, 325, 325.1, 325.2, 325.3, 325.4, 370, 371	ENG, ROW, SU, SYS, TP, UTL	60.01	C	All	All	Closed	10/22/2013	1/27/2021	2654.00	Obtaining easements for substation feeds, power drops (stations & signal houses), and other power supply needs. (Confirmed Closed on 01/27/21) - Link to Closed Risk #225.2, #325.1, #325.2, #325.3, #325.4, #370, & #371	This could increase costs or affect schedule.							MITIGATED All easements obtained except Fez St. and DGS, which are covered under separate risks. REPLACED See Risk #225.3 and #325.1.		
325.1	325, 325.1	ROW, SU, SYS, TP, UTL	60.01	C	S1	R1	Closed	8/22/2018	12/16/2021	1212.00	There could be a delay in SANDAG / SDG&E obtaining an easement to provide service to TPSS #5 on DGS property. (Confirmed Closed on 12/16/21) - Link to Closed Risk #325	Which could result in a schedule delay.							MITIGATED All easement / payment processed, awaiting the easement record.		
325.2	325, 325.2	ENG, ROW, STA, SYS, TP, UTL	60.01	C	S3, S4	R12, R13	Closed	8/23/2018	4/23/2020	609.00	There could be a delay SANDAG obtaining easement for conduit for AT&T to provide service to LRT stations at UCSD and VA stations. (Confirmed Closed on 04/23/20) - Link to Closed Risk #325	Which could result in rework/change order.							MITIGATED AT&T has ability to use conduit on both UCSD and VA sites.		
325.3	325, 325.3	CON, ENG, ENV	40.04	C	S1	R4	Closed	7/9/2019	4/23/2020	289.00	There could be a delay in obtaining environmental clearance for TPSS #6 (Friars Road). (Confirmed Closed on 04/23/20) - Link to Closed Risk #325	This would require conduit workarounds.							AVOIDED Environmental clearance obtained.		

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325.4	325, 325.4	ENG, ROW, SU, SYS, TP, UTL	60.01	C	S2	R7	Closed	7/10/2019	1/27/2021	567.00	There could be a delay in SANDAG / SDG&E obtaining an easement to provide service to TPSS #9 on Avati property. (Confirmed Closed on 01/27/21) - Link to Open Risk #325	This could result in a schedule delay.							AVOIDED Easement obtained.		
329	242, 268.1, 268.3, 329	CP, SAF	10.02	C	S2		Closed	12/13/2013	9/3/2015	629.00	Additional mitigation for track separation. (Confirmed Closed on 09/03/15) - Link to Closed Risk #242, #268.1, & #268.3	Likely will result in additional costs.							MITIGATED Track separation has been presented to NCTD and there are no ongoing issues.		
330		TP	80.04	C	S1, S2		Closed	12/13/2013	9/3/2015	629.00	Requirements to implement NCTD's change control process for PTC elements are in development. (Confirmed Closed on 09/03/15)	Lack of accepted implementation procedures may delay construction.							MITIGATED The change control process has been established.		
339	339, 339.1, 400	ROW	60.01	C	All	All	Closed	3/19/2014	9/19/2017	1280.00	The duration in the master project schedule for approval of administrative settlements may be exceeded. (Confirmed Closed on 09/19/17) - Link to Closed Risk #339.1 & #400	Which will increase the duration of property acquisition.							MITIGATED FTA has been approving settlements in a timely fashion.		
354	320, 320.1, 321, 354	CP, ENV, UTL	40.02	C	S1		Closed	2/19/2015	4/29/2015	69.00	There may be a need for temporary relocation (or alternative permanent solution) for the 69 kV line at the south bridge abutment at Balboa Avenue. (Confirmed Closed on 04/29/15) - Link to Closed Risk #320, #320.1, & #321	Delay in schedule.							MITIGATED Master Utility Plan has been finalized.		
356	6.1, 236, 239, 290, 356, 385	ENG, CON	10	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	2/19/2015	4/27/2017	798.00	NCTD's timely approval of work plans to support construction schedule. (Confirmed Closed on 04/27/17) - Link to Closed Risk #5.1, #236, #239, #290, & #385	Delay to construction schedule.							MITIGATED NCTD has accepted the design except for MSE walls. REPLACED See Risk #239 & #385.		
360	208, 290, 350, 360, 417	CON, CP	10.01	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	6/29/2015	1/27/2021	2039.00	The project may need to coordinate with NCTD to develop additional AWW which NCTD may not approve. (Confirmed Closed on 01/27/21) - Link to Closed Risk #208, #290, #350, #360, #417	This may affect the construction duration.							MITIGATED In previous years, project was able to obtain additional AWWs from NCTD. No extra AWWs will be requested.		
364		SU, SYS	50.06	C	All	All	Closed	9/2/2015	12/16/2021	2297.00	New fare collection system equipment (TVM) may not be available in time for RSD. (Confirmed Closed on 12/16/21)	This may require the implementation of a contingency plan.							AVOIDED TVMs have been deployed.		
368		CON, CP	80.04	C	S1, S2	R2, R3, R4, R7, R8, R9	Closed	10/28/2015	11/29/2016	398.00	If the start of Mid-Coast construction is delayed, MCTC & CM Team may not achieve efficiencies in construction with multiple SANDAG projects. (Confirmed Closed on 11/29/16)	The costs may be higher than anticipated.							TRANSFERRED Risk was transferred to MCTC in the GMP.		
369	263, 369, 403, 409, 425	CON, ENV	40.03	C	All	All	Closed	10/28/2015	6/7/2018	953.00	Uncertainty in soil hauling location for excess material. (Confirmed Closed on 06/07/18) - Link to Closed Risk #263, #403, #409 & #425	This could create a potential schedule delay during construction and cost increase.							TRANSFERRED / ACCEPTED Risk was transferred to MCTC in the GMP to IFC negotiations.		

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370	325, 370	ENG, ROW, SU, SYS, TP, UTL	60.01	C	S3	R13	Closed	10/28/2015	1/27/2021	1918.00	There could be a delay in SANDAG / SDG&E obtaining an easement to provide service to TPSS #13 and Station at VA. (Confirmed Closed on 01/27/21) - Link to Closed Risk #325	Which could result in a schedule delay.							AVOIDED Easement obtained. VA site to be energized following final coordination with SDG&E and is expected to occur in March 2021		
371	325, 371	ENG, ROW, SU, SYS, TP, UTL	60.01	C	S4	R13	Closed	10/28/2015	7/16/2020	1723.00	There could be a delay in SANDAG / SDG&E obtaining an easement to provide service to the TPSS #14 and stations on UCSD property. (Confirmed Closed on 07/16/20) - Link to Closed Risk #325	Which could result in a schedule delay.							MITIGATED SDG&E and UCSD have finalized agreement. SDG&E can pull and energize at the conclusion of conduit work.		
372		CON, TP	60.01	C	S3, S4	R13, R14	Closed	10/28/2015	8/15/2016	292.00	A delay in obtaining the Construction License Agreement with UCSD could potential delay the start of construction on UCSD property. (Confirmed Closed on 08/15/16)	The schedule may be affected.							MITIGATED UCSD Construction License Agreement was fully executed 06/13/16.		
374	333, 374	CON, SU, SYS	50.03	C	All	All	Closed	10/28/2015	10/22/2020	1821.00	Schedule coordination between contractor and supplier for TPSS delivery. (Confirmed Closed on 10/22/20) - Link to Closed Risk #333	This could affect the testing and start-up schedule.							AVOIDED All TPSS have been delivered except TPSS #15 which is covered under Risk 225.2.		
375	218, 375	CON, ENG	40.03	C	All	All	Closed	10/28/2015	1/29/2020	1554.00	Geotechnical conditions may be different than anticipated. (Confirmed Closed on 01/29/20) - Link to Closed Risk #218	This could result in increased costs and/or schedule delays.							AVOIDED Major in-ground construction complete.		
376		CON, ENG	10.01	C	S3	R13	Closed	10/28/2015	10/22/2020	1821.00	Coordination with the Concurrent VA Projects (Confirmed Closed on 10/22/20)	Could result in increased costs and/or schedule delays.							AVOIDED All facilities are in place.		
377		CON, ENG	10.04	C	S3	R10	Closed	10/28/2015	4/27/2017	547.00	Coordination with the Gilman Drive Project (Flatiron) (Confirmed Closed on 04/27/17)	Could result in increased costs and/or schedule delays.							TRANSFERRED MCTC has control of the Gilman Drive project.		
380		ENG, ENV, ROW, STA	40.03	C	S1	R5	Closed	4/6/2016	4/27/2017	386.00	Contaminated soils may be identified at Clairemont Station parking lot. (Confirmed Closed on 04/27/17)	Clean up of contaminated soil could create delays.							MITIGATED Agreement signed with property owner that owner's developer will provide parking and will address contaminated soils.		

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381	359, 381, 388, 389, 398, 424	CON, ENG, ENV	80.02	C	All	All	Closed	4/6/2016	7/22/2021	1933.00	If there are changes (design or methodology) during construction from the environmentally approved project definition. (Confirmed Closed on 07/22/21) - Link to Closed Risk #359, #388, #389, #398, & #424	This could require additional environmental analysis. This may require circulation of supplemental environmental documentation, with new or increased environmental impact. This would affect the schedule.							AVOIDED Nothing foreseen that would require environmental document recirculation.		
382	382, 386, 397	CON	80.04	C	S1, S2	All	Closed	4/6/2016	2/15/2017	315.00	Coordination with new NCTD MOW vendor. (Confirmed Closed on 02/15/17) - Link to Closed Risk #386 & #397	May increase flagging and other costs							ACCEPTED Flagger costs are known and have been budgeted.		
386	382, 386, 397	CON, CP	80.06	C	S1, S2	All	Closed	6/30/2016	4/27/2017	301.00	Increased costs associated with the safety training. (Confirmed Closed on 04/27/17) - Link to Closed Risk #382 & #397							ACCEPTED Will be paid for by Mid-Coast.			
387		CON, MC, QA	80.04	C	All	All	Closed	8/3/2016	4/22/2021	1723.00	Inadequacies in contractor's quality control plan and implementation resulting in quality deficiencies. (Confirmed Closed on 04/22/21)	A quality issue may arise, which would require additional staff.							AVOIDED Most QA/QC testing has been completed and MCTC is moving into Acceptance.		
388	381, 388	CON, MC, UTL	80.04	C	All	All	Closed	8/3/2016	4/27/2017	267.00	SANDAG and/or MCTC field personnel lacking a clear understanding of the GMP and contract terms. (Confirmed Closed on 04/27/17) - Link to Closed Risk #381	This could result in schedule delays or added costs.							MITIGATED A process has been established and implemented to validate construction risk and potential CCOs.		
389	381, 389, 398	CON, ENV	40.04	C	All	All	Closed	8/3/2016	12/16/2021	1961.00	The coordination of environmental monitoring activities may be inadequate. (Confirmed Closed on 12/16/21) - Link to Closed Risk #381 & #398	This could create excess monitoring costs.							AVOIDED All major construction work is complete.		
390	390, 390.1, 403	CON, ENG, ENV	40.04	C	All	All	Closed	8/3/2016	4/25/2019	995.00	The IFC set may include items that affect permitting and environmental compliance. - Link to Closed Risk #390.1 & #403 (Confirmed Closed on 04/25/19)	This could affect project schedule							AVOIDED All IFC sets have been issued.		
390.1	390, 390.1	CON, CP, ENG, ENV	40.04	C	S1	R1	Closed	8/22/2018	10/23/2019	427.00	USACE could delay construction based on resolution of 408 permit stipulations concerning the SDRB levee. - Link to Closed Risk #390 (Confirmed Closed on 10/23/19)	Mid-Coast project is covered under this permit and therefore could delay Mid-Coast construction in the affected SDRB area.							AVOIDED All levee construction work complete. USACE sent email to City on August 23, 2019 stating levee repairs are acceptable		
391	301, 391	CON	80.03	C	All	All	Closed	8/3/2016	6/7/2018	673.00	The Prolog system is not sufficiently developed to support document requirements and contract administration (submittal reviews, etc.) (Confirmed Closed on 06/07/18) - Link to Closed Risk #301	This could create administrative delays.							AVOIDED Prolog is up and running. Cost module is ready for implementation.		

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392		CON	80.04	C	All	All	Closed	8/3/2016	8/15/2016	12.00	Insufficient documenting and tracking of Mid-Coast costs, specifically the environmental monitoring TO. (Confirmed Closed on 08/15/16)	This could result in unallowable costs to the FFGA.							AVOIDED			
393	205, 393, 394	ENG, UTL	40.02	C	S2		Closed	8/12/2016	4/27/2017	258.00	There could be a delay in the removal and relocation of SDG&E high-pressure gas lines. (HPG WO 4&5). (Confirmed Closed on 04/27/17) - Link to Closed Risk #205 & #394	This may delay the construction of Shoofly 1.							MITIGATED Work is progressing on HPG lines.			
394	205, 205.5, 234, 393, 394, 394.1, 433	CON, ENG, UTL	40.02	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	8/12/2016	10/23/2019	1167.00	There could be a delay in the removal and/or relocation of SDG&E electrical distribution lines. (ED WO11 A-E) (Confirmed Closed on 10/23/19) - Link to Closed Risk #205, #205.5, #234, #393, #394.1 & #433	This may result in schedule delays.							AVOIDED All relocations on WO11 A-E are complete.			
394.1	394, 394.1	CON, UTL	40.05	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	6/6/2018	8/23/2018	78.00	Delays to construction of RW 609 and RW 614 due to utility conflicts with the HPG. (Confirmed Closed on 08/23/18) - Link to Closed Risk #394	This could cause delays to construction.							MITIGATED Approval received from SDG&E			
395	110, 272, 364, 395, 395.1	CON, ROW	60.01	C	S3	R12	Closed	10/19/2016	8/23/2018	673.00	Access for the contractor to La Jolla Village Square for the Viaduct may be delayed. (Confirmed Closed on 06/07/18) - Link to Closed Risk #110, #272, #384, #395.1, & #395.1	This could cause delays to construction.							MITIGATED Order of Possession was received on 07/02/2018 and access occurred on 08/13/2018.			
395.1	395, 395.1	CON, ENV, ROW	60.01	C	S3	R12	Closed	6/6/2018	12/19/2018	196.00	Site access and construction of the Nobel parking structure may require both NEPA clearance and ROW access for the contractor to begin construction. (Confirmed Closed on 12/19/18) - Link to Closed Risk #395	This could cause delays to construction and increase costs.							MITIGATED Order of Possession was received on 10/04/2018 and NEPA clearance occurred in November 2018.			
396	110, 272, 396	CON, ROW	60.01	C	S2	R7	Closed	10/19/2016	9/19/2017	335.00	Access for the contractor to Rose Canyon Business Park property may be delayed. (Confirmed Closed on 09/19/17) - Link to Closed Risk #110 & #272	This could cause delays to construction.							MITIGATED Contractor has access to property.			
397	382, 386, 397	CON	80.04	C	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	10/19/2016	3/22/2018	519.00	Lack of available flagging resources. (Confirmed Closed on 03/22/18) - Link to Closed Risk #382 & #386	Could create delays and additional cost to the construction of Mid-Coast.							AVOIDED Bombardier is fulfilling their side of the agreement.			
398	381, 389, 398	CON, ENV	40	C	All	All	Closed	10/19/2016	12/16/2021	1884.00	Construction activities are performed outside of permit requirements. (Confirmed Closed on 12/16/21) - Link to Closed Risk #381 & #389	Increased cost associated with fines and delays.							AVOIDED All major construction work is complete.			

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Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)
399	88, 399, 401	CON, ENG, SYS	80.04	C	S1, S2, S3, S4	All	Closed	11/30/2016	4/27/2017	148.00	Delay in delivery and acceptance of MCTC's baseline schedule. (Confirmed Closed on 04/27/17) - Link to Closed Risk #88 & #401	This could delay project forecasting and updating of contingency drawdown curves. Project could be at a disadvantage for time related claims.							MITIGATED SANDAG accepted the final MCTC baseline construction schedule in January 2017.		
402	402, 418	CON, MC	10.01	C	All	All	Closed	4/26/2017	6/21/2023	2247.00	Complete negotiation of all CCOs. (Confirmed Closed on 6/21/23) - Link to Closed Risk #418 & #453	This could increase costs due to retained resources beyond contract date.							AVOIDED SANDAG and MCTC reached agreement on final CCO.		
403	368, 390, 401, 403, 411, 418, 421, 421.1, 421.2	CON, CP, ENG	10.01	C	All	All	Closed	4/26/2017	1/29/2020	1008.00	Reconciling differences between GMP and IFC (except provisional sums). (Confirmed Closed on 01/29/20) - Link to Closed Risk #368, #390, #401, #411, & #418, #421, #421.1, & #421.2	This will increase costs.							ACCEPTED Completed the GMP to IFC process and CCO signed on 11/22/2019.		
404		CON, TP, UTL	40.02	C	S1	R5	Closed	4/26/2017	9/19/2017	146.00	Timely completion of JUA or Consent to Common Use Agreement between SDG&E and Caltrans for Electrical Distribution WO7. (Confirmed Closed on 09/19/17)	This could delay schedule and create increased costs.							AVOIDED SDG&E will proceed with relocations prior to fully executed JUA with concurrence from Caltrans.		
405	405, 413	TP	80.06	C	All	All	Closed	4/26/2017	2/13/2019	658.00	There could be a delay in obtaining the MTS/City of San Diego MOU for LRT Street Use. (Confirmed Closed on 02/13/19) - Link to Closed Risk #413	This could delay project final completion.							AVOIDED City Council approved on January 30, 2019.		
406	406, 407, 422, 423	TP	80.06	C	S3	R13	Closed	4/26/2017	12/16/2021	1695.00	There could be a delay in obtaining the MTS O&M Agreement with the VA. (Confirmed Closed on 12/16/21) - Link to Closed Risk #407, #422, & #423	This could delay revenue service.							AVOIDED Agreement has been finalized.		
407	406, 407, 422, 423	TP	80.06	C	S3, S4	R13	Closed	4/26/2017	7/22/2021	1548.00	There could be a delay in obtaining the MTS O&M Agreement with UCSB. (Confirmed Closed on 07/22/21) -Link to Closed Risk #406, #422, & #423	This could delay revenue service.							AVOIDED Agreement obtained		
408	223.1, 408, 408.1	CON, ENG	80.04	C	S4	R14	Closed	4/26/2017	11/14/2017	202.00	If UTC does not open the completed transit center in time to move the buses off Genesee, the widening on Genesee would not be able to proceed. (Confirmed Closed on 11/14/17) - Link to Closed Risk #223.1 & #408.1	This could delay construction and increase costs.							AVOIDED Transit center is open, and all bus routes have been switched except for one.		
408.1	223.1, 408, 408.1, 408.2, 437	CON, ENG, ENV, ROW, TP	80.04	C	S4	R14	Closed	11/13/2017	6/7/2018	206.00	Ongoing construction coordination with UTC. (Confirmed Closed on 06/07/18) - Link to Closed Risk #223.1, #408, #408.2, & #437	This could create schedule delay.							REPLACED See Risk #408.2.		
408.2	408.1, 408.2, 437, 437.1, 447	CON, SU, TP	20.06	C	S4	R14	Closed	1/9/2018	12/16/2021	1437.00	There could be a delay in the construction of the parking structure at UTC to provide the required 260 parking spaces. (Confirmed Closed on 12/16/21) - Link to Closed Risk #408.1, #437, #437.1, & #447	This could delay schedule and increase costs.							AVOIDED Parking structure is open for operations.		

DRAFT PROJECT RISK REGISTER

SANDAG Mid-Coast Project

ALL RISKS

Date Issue: June 21, 2023

Revision: 62

Mid-Coast Classifications

CON = Construction
ENC = Engineering/Design
ENV = Environmental
M/C = Management Capacity
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STA = Stations
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FTA Risk Categories

R = Requirements
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Impact Scoring Breakdown

Impact Scores Legend	LOW 1	MEDIUM 2	HIGH 3
(P) Probability	<10%	>10% <50%	>50%
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Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)
409	369, 409	CON, TP	40.03	C	All	All	Closed	4/26/2017	1/9/2018	258.00	Reaching agreement with Caltrans on acceptance of soil outside the Caltrans right-of-way. (Confirmed Closed on 01/09/18) - Link to Closed Risk #369	OPPORTUNITY This could decrease cost and improve schedule.							REPLACED See Risk #369.		
410	214, 410	CON, ROW, TP	60.01	C	All	All	Closed	4/26/2017	9/19/2017	146.00	There could be a delay in receiving formal approval from the Port for site use as a laydown site. (Confirmed Closed on 09/19/17) - Link to Closed Risk #214	This could increase cost and create a delay to schedule.							AVOIDED Port site laydown area no longer required.		
411	29.1, 226, 361, 403, 411, 418, 421, 421.1, 421.2	CON, STA, STR	10.04	C	S3, S4	R14	Closed	7/11/2017	12/19/2018	526.00	Genesee Viaduct's provisional sum for pre-cast segments could increase costs. (Confirmed Closed on 12/19/18) - Link to Closed Risk #29.1, #226, #361, #403, & #418, #421, #421.1, & #421.2	This could create increased costs.							ACCEPTED Change order has been negotiated.		
412	412, 414	CON, ENV, ROW, TP	60.01	C	S2	R7	Closed	7/11/2017	1/9/2018	182.00	Obtaining City Council approval for added ROW at City Operations Yard. (Confirmed Closed on 01/09/18) - Link to Closed Risk #414	This could result in delay to start of construction to retaining wall #488.							AVOIDED Additional ROW not required.		
413	405, 413, 424.1	ROW, TP	40.06	C	S1	R4	Closed	7/11/2017	10/22/2020	1199.00	Delay in obtaining ROW clearance from the City of San Diego for the pedestrian ramp across from Tecolote Station. (Confirmed Closed on 10/22/20) - Link to Closed Risk #405 & #424.1	This would either require payment for additional ROW or Reverting to prior design and change order to the GMP.							AVOIDED Process is complete and awaiting mayoral signature.		
414	412, 414	CON, ENV, ROW, TP	60.01	C	S2		Closed	9/18/2017	1/9/2018	113.00	The change in footprint, at City Operations Yard, is not approved by City Council. (Confirmed Closed on 01/09/18) - Link to Closed Risk #412	This would require a return to previous design.							AVOIDED City concurrence received on soil nails.		
415	217, 415	CON	80.04	C	S3		Closed	9/19/2017	1/9/2018	112.00	There could be a delay in receiving and approving MCTC's noise control plan. (CON1 mitigation measure) (Confirmed Closed on 01/09/18) - Link to Closed Risk #217	The Contractor will be unable to proceed with night work.							AVOIDED MCTC noise control plan received and approved.		
416	416, 417	CON, TP	80.04	C	All	All	Closed	11/13/2017	12/16/2021	1494.00	Coordination with Community becomes strained. - Link to Closed Risk #417	This could degrade the relationship between SANDAG and Community, in effect increasing costs or delaying schedule.							AVOIDED All major construction work is complete.		
417	208, 360, 416, 417	CON, TP	80.04	C	All	All	Closed	11/14/2017	1/27/2021	1170.00	Coordination with Operators (NCTD, Amtrak, BNSF, and MTS) becomes strained. (Confirmed Closed on 01/27/21) - Link to Closed Risk #208, #360, & #416	This could degrade the relationship between SANDAG and Operators, in effect increasing costs or delaying schedule.							AVOIDED Risk was written to cover coordination during construction which is complete (or minimal remaining) with NCTD, Amtrak, and BNSF. MTS coordination is covered under separate risks. REPLACED See Risk #364, #406, #407, #441, #442, & #445.		

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418	402, 403, 411, 418, 421, 421.1, 421.2	CON, MC	10.04	C	All	All	Closed	11/14/2017	1/29/2020	806.00	The relationships between SANDAG and MCTC could degrade over cost negotiation and affect the team. (Confirmed Closed on 8/12/20/20) - Link to Closed Risk #402, #403 & #411, #421, #421.1, & #421.2	This could delay schedule and create increased costs.							AVOIDED Settlements with MCTC have proceeded well and in a timely manner.		
419	419, 421	CON, CP, SYS	10.01	C	All	All	Closed	1/8/2018	12/16/2021	1438.00	A shortage of labor, especially skilled labor, in a competitive construction market. (Confirmed Closed on 12/16/21) - Link to Closed Risk #421	Could increase cost and create delay.							AVOIDED This did not delay revenue service.		
420		CON, ENG	10.04	C	S4	R14	Closed	1/8/2018	6/7/2018	150.00	Genesee Avenue void discovered under pavement south of La Jolla Village Drive. (Confirmed Closed on 06/07/18)	Additional subsurface work may be required by the City which may impact Mid-Coast schedule.							AVOIDED Column has been installed unaffected by void.		
421	403, 411, 418, 419, 421, 421.1, 421.2	CON	10.04	C	All	All	Closed	1/9/2018	7/22/2021	1290.00	Provisional sums (except Genesee Viaduct provisional sums Risk #411 and Soil Hauling provisional sums Risk #369) may exceed the budgeted amount. (Confirmed Closed on 07/22/21) - Link to Closed Risk #403, #411, #418, #419, #421.1, & #421.2	This could create increased costs.							MITIGATED Pricing has been agreed to. Landscaping (Risk #421.2) is the last remaining provision sum.		
421.1	403, 411, 418, 421, 421.1, 421.2	CON	40.06	C	All	All	Closed	10/22/2019	12/16/2021	786.00	Provisional sums for landscaping may exceed the budgeted amount. (Confirmed Closed on 12/16/21) - Link to Closed Risk #403, #411, #418, #421, & #421.2	This could create increased costs.							ACCEPTED CCO has been initiated for landscaping and included in EAC.		
421.2	403, 411, 418, 421, 421.1, 421.2	CON, ENG	20	C	All	All	Closed	10/22/2019	7/22/2021	639.00	Provisional sums for misc. metals may exceed the budgeted amount and may not be executed in a timely manner. (Confirmed Closed on 07/22/21) - Link to Closed Risk #403, #411, #418, #421, & #421.1	This could create increased costs and delay construction.							MITIGATED Costs are agreed to. Misc. metals constructed for one (1) whole station. Understand current design is good and feasible. MCTC has bought schedule and some design risk.		
422	406, 407, 422, 423	STA, TP	80.06	C	S3	R11	Closed	1/9/2018	12/16/2021	1437.00	There could be a delay in obtaining the MTS O&M Agreement with private property owners (Nobel Station). (Confirmed Closed on 12/16/21) - Link to Closed Risk #406, #407, & #423	This could delay revenue service.							AVOIDED Agreement is obtained. SANDAG is continuing to operate under RON. Further risk is transferred if MTS.		
423	406, 407, 422, 423	STA, TP	80.06	C	S4	R14	Closed	1/9/2018	6/28/2022	1631.00	There could be a delay in obtaining the MTS O&M Agreement with private property owners (UTC Station) (Confirmed Closed on 6/28/2022) - Link to Closed Risk #406, #407, & #422	This could delay project close-out.							AVOIDED SANDAG has completed all agreements.		
424	6.1, 361, 424	CON, ENG, ENV	40.04	C	S1	R4	Closed	3/21/2018	4/23/2020	764.00	There could be a delay in obtaining environmental clearance for Tecolote Access Road. (Confirmed Closed on 04/23/20) - Link to Closed Risk #6.1 & #361	Temporary access to heavy rail tracks would be required.							AVOIDED Environmental clearance obtained.		

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424.1	413, 424, 424.1	CON, ENG, ENV, ROW	40.07	C	S1	R4	Closed	7/16/2020	4/22/2021	280.00	The construction of the Tecolote Access Road needs to begin by March 2021. (Confirmed Closed on 04/22/21) - Link to Closed Risk #413, #424, & #424.1	Revision to the Coastal Commission CDP amendment will be required if construction is delayed beyond March 2021.							AVOIDED Permit extension was submitted in March. Work began on TAR in April 2021 around high-rail pad.																																
425	263, 369, 425	CON, ENV, TP	40.03	C	S3	R13	Closed	3/21/2018	8/23/2018	155.00	There could be a delay in the environmental clearance of the Pepper Canyon soil placement site. (Confirmed Closed on 08/23/18) - Link to Closed Risk #263 & #369	Soil would need to be transported offsite.							MITIGATED Environmental clearance has been obtained.																																
427	427, 427.1	CON, CP, ENG, STA, TP	20.02	C	S4	R13	Closed	8/22/2018	12/16/2021	1212.00	UCSD's multiple ongoing construction projects (i.e. Engineering and Innovation Building / Bike Path / Retention Basin) could interfere with station construction activities. (Confirmed Closed on 12/16/21) - Link to Closed Risk #427.1	This may affect project schedule							AVOIDED Station construction work is complete.																																
427.1	427, 427.1	CON, CP, ENG, STA, TP	20.02	C	S4	R13	Closed	4/25/2019	7/22/2021	819.00	Construction of Lyman Lane bus turnaround & roundabout may not be completed by revenue service. (Confirmed Closed on 07/22/21) - Link to Closed Risk #427	Temporary access to station would be required.							AVOIDED Road has been opened.																																
428	428, 432	CON, CP, TP	40.07	C	S4	R13	Closed	8/22/2018	7/22/2021	1065.00	Construction of the Voigt Drive project could interfere with Mid-Coast construction activities. (Confirmed Closed on 07/22/21) - Link to Closed Risk #432	This may affect Mid-Coast construction schedule and the opening of Voigt Drive Station due to Campus Point realignment.							AVOIDED Road has been opened.																																
429		CON, CP, STA, ROW, TP	20.01	C	S1	R4	Closed	8/23/2018	2/13/2019	174.00	Processing of street vacations on Tecolote Road could delay revenue service. (Confirmed Closed on 02/13/19)	This may affect project schedule							AVOIDED Street vacations are not required prior to construction.																																
430		CON, CP, STA, ROW, TP	20.01	C	S2	R6	Closed	8/23/2018	2/13/2019	174.00	Processing of street vacations on Balboa Ave could delay revenue service. (Confirmed Closed on 02/13/19)	This may affect project schedule							AVOIDED Street vacations are not required prior to construction.																																
431		CON, CP, STR	10.04	C	S2	R10	Closed	9/27/2018	10/23/2019	391.00	Construction of Bridge 257.2 for EMDT could interfere with Mid-Coast construction activities and affect MCTC access points. (Confirmed Closed on 10/23/19)	This may affect project schedule							AVOIDED MCTC will have work complete and out of the area well prior to NTP for Bridge 257.2.																																
432	428, 432	CON, CP, TP	40.07	C	S4	R13	Closed	12/19/2018	10/23/2019	308.00	Construction of the I-5 SB Aux Lane (Voigt to LjVD) could interfere with Mid-Coast construction activities. (Confirmed Closed on 10/23/19) - Link to Closed Risk #428	This may affect project schedule							AVOIDED IFC Plans issued and MCTC excavation in this area is complete.																																

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433	234, 394, 433	CON, ENG, ROW, STA, UTL	40.02	C	S1, S2	R5, R6, R7	Closed	2/12/2019	10/22/2020	618.00	Electrical Transmission (ET) W06 may affect the construction sequencing for Balboa Station parking lot and walls. (Confirmed Closed on 10/22/20) - Link to Closed Risk #234 & #394	This may result in a schedule delay.							AVOIDED Work has been completed.																															
434		CON, ROW, SYS	40.02	C	All	All	Closed	2/12/2019	4/25/2019	72.00	There is a risk that the Federal Govt closure could affect permitting and ROW needed to construct various components of Mid-Coast. (FAA Permit, FCC License, ROW Agreements) (Confirmed Closed on 04/25/19)	This may result in a schedule delay.							MITIGATED FCC License obtained and FAA Permit for Olive Street obtained.																															
435		CON, STA, STR	20.02	C	S4	R13	Closed	2/13/2019	10/23/2019	252.00	The contractor asserts that there are specification deficiencies for the transverse beams at Voigt Station. (Confirmed Closed on 10/23/19)	This could result in reimbursement to MCTC.							MITIGATED Issue resolved with MCTC.																															
436		SU, SYS, TP	80.08	C	All	All	Closed	7/10/2019	12/16/2021	890.00	There could be a delay in obtaining CPUC approval for system operations. (Confirmed Closed on 12/16/21)	This would result in a delay to revenue operations.							AVOIDED CPUC approval for revenue service obtained.																															
437	408.2, 437, 437.1, 447	CON, ENG, TP	20.06	C	S1	R5	Closed	10/22/2019	6/21/2023	1338.00	There could be a delay in the construction of the Clairemont Station parking by the private developer. (Confirmed Closed on 6/21/23) - Link to Closed Risk #408.2, #437.1, & #447	This could increase capital costs. Lack of parking availability at this station could result in passengers traveling to nearby stations.							ACCEPTED SANDAG continues to monitor Developer progress. SANDAG could choose to construct parking, and has funds to construct, if Developer incurs financial hardship.																															
437.1	408.2, 437, 437.1, 447	CON, ENG, ENV, SU, TP	20.06	C	S1	R5	Closed	4/23/2020	4/22/2021	364.00	The private developer may not proceed with the construction of the Clairemont Station parking lot. (Confirmed Closed on 04/22/21) - Link to Closed Risk #408.2, #437, & #447	This could increase capital costs.							ACCEPTED See Risk #437 to track future impacts.																															
438		CON, ENV	40.04	C	S1	R1	Closed	10/23/2019	4/23/2020	183.00	MTS OTTC improvement project could impact Mid-Coast mitigation plan. (Confirmed Closed on 04/23/20)	This would require a modification to the mitigation plan.							AVOIDED Analysis complete and shows no adverse impacts.																															
439		SAF, SU	80.08	C	All	All	Closed	4/23/2020	12/16/2021	602.00	There could be a delay in Safety & Security Certification activities and/or delay in producing required documentation that will need to be reviewed and/or approved by FTA prior to revenue operations. (Confirmed Closed on 12/16/21)	This could delay revenue service.							AVOIDED OP-54 Readiness obtained.																															
440	440, 440.1	SU	80.08	C	All	All	Closed	4/23/2020	1/27/2021	279.00	There could be a delay in producing Pre-revenue Operations (PRO) Plans and documentation that will need to be reviewed by FTA and then accepted by CPUC prior to revenue operations. (Confirmed Closed on 01/27/21) - Link to Closed Risk #440.1	This could delay revenue service.							AVOIDED CPUC has reviewed SIT PRO plans.																															
440.1	440, 440.1	SU	80.08	C	All	All	Closed	4/23/2020	12/16/2021	602.00	There could be a delay in producing Public Awareness and Grand Opening Plans that will need to be reviewed by FTA prior to revenue operations. (Confirmed Closed on 12/16/21) - Link to Closed Risk #440	This could delay revenue service.							AVOIDED OP-54 Readiness obtained.																															
441		SU, SYS	80.08	C	All	All	Closed	4/23/2020	12/16/2021	602.00	There could be a delay in handover of completed construction segments from MCTC to MTS. (Confirmed Closed on 12/16/21)	This could delay SIT and driver training.							AVOIDED Turnover is complete.																															

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442		SU	80.08	C	All	All	Closed	4/23/2020	12/16/2021	602.00	There may not be sufficient MTS O&M support to accommodate all start-up and integration testing activities as well as operations. (Confirmed Closed on 12/16/21)	This could delay SIT and/or revenue service.							AVOIDED SIT testing for revenue service is complete.																															
443	443, 443.1	CON, SYS	80.08	C	All	All	Closed	4/23/2020	3/29/2022	705.00	Issues may arise during SIT that delay project close-out. (i.e. civil to systems handover, QA terms of traceability, transfer of care & custody). (Confirmed Closed on 3/29/22) - Link to Closed Risk #443.1	This could delay project close-out.							MITIGATED SIT test concluded 3/11/22 with CPUC concurrence. Issues identified have been resolved or transferred to MTS.																															
443.1	443, 443.1	CON, SU, SYS	80.08	C	All	All	Closed	4/22/2021	12/16/2021	238.00	There could be a delay in contractor acceptance testing. (Confirmed Closed on 12/16/21) - Link to Closed Risk #443	This could delay turnover to MTS to begin SIT.							AVOIDED Work is complete. Turnover occurred to MTS in July. SIT completed that allowed MTS to proceed train operator training ahead of RSD.																															
444		CON, STA	20.07	C	S3, S4	R12, R13, R14	Closed	4/23/2020	3/29/2022	705.00	Elevators arrive onsite and could be non-compliant with expected field requirements. (Confirmed Closed on 3/29/22)	This could delay substantial completion of stations.							AVOIDED Elevators are operational and permitted.																															
445		STA, SU	20	C	S1, S3, S4	R1, R2, R3, R4, R5, R12, R13, R14	Closed	4/23/2020	12/16/2021	602.00	Coordination with MTS on re-signing of entire MTS system, as well as vehicle signage, could create delays. (Confirmed Closed on 12/16/21)	This could delay substantial completion of stations.							AVOIDED Signage is complete																															
446		CON, ENV, SAF, SU, UTL	90	C	All	All	Closed	4/23/2020	12/16/2021	602.00	There could be potential impacts to schedule and cost due to the COVID-19 pandemic. (Confirmed Closed on 12/16/21)	This could delay material transportation & delivery, construction completion, and/or systems construction completion. This could result in a claim.							AVOIDED All major construction work is complete. Procurements have been made. COVID-19 did not present significant impact.																															
447	59, 230.4, 286, 408.2, 437, 437.1, 447	CON, ROW, TP	20.06	C	S3	R12	Closed	4/23/2020	6/28/2022	796.00	There could be a delay in the completion of work within the TCE in vicinity of the Nobel Station parking lot. (Confirmed Closed on 6/28/2022) - Link to Closed Risk #59, #230.4, #286, #408.2, #437, & #437.1	This could increase costs.							AVOIDED Work in area is complete.																															
448		CON, SYS, UTL	90	C	All	All	Closed	4/22/2021	6/21/2023	790.00	Completion of punchlist items in a timely manner (non-City items). (Confirmed Closed on 6/21/23) - Link to Closed Risk #461	This could delay project close-out.							MITIGATED All MCTC punchlist complete except minor striping.																															
449	449, 450	CON, SU, STA, SYS, UTL	20.01	C	All	R4, R5, R13, R14	Closed	4/22/2021	12/16/2021	238.00	There could be a delay in AT&T connecting the Tecolote station communications. (Confirmed Closed on 12/16/21) - Link to Closed Risk #450	This would delay operations							AVOIDED Tecolote station stations connected.																															
450	449, 450	CON, SU, STA, SYS, UTL	20.02	C	All		Closed	4/22/2021	12/16/2021	238.00	There could be a delay in AT&T connecting the UTC station & parking garage communications. (Confirmed Closed on 12/16/21) - Link to Closed Risk #449	This could delay elevator certification & OSHA concurrence.							AVOIDED UTC station & parking garage are connected to achieve elevator certification and satisfy OSHA.																															
451		CON, ENV	40.04	C	S1	R3, R4	Closed	4/22/2021	9/29/2022	525.00	Reestablishment of vegetation under bridges. (Confirmed Closed on 09/29/22)	This could increase costs to maintain SWPPP in the area.							MITIGATED. EMP Contractor now maintaining these areas.																															
452		CON, ENG, ENV, ROW	40.07	C	S1		Closed	4/22/2021	12/16/2021	238.00	There could be a delay in reaching conclusion with FTA on either equipment purchase or construction of TAR. (Confirmed Closed on 12/16/21)							AVOIDED FTA has approved equipment purchase.																																

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453		CON, UTL	20	C	All	All	Closed	7/22/2021	3/23/2023	609.00	Costs for completion of station electrical work may increase pending resolution between MCTC and subcontractor. (Confirmed Closed on 3/23/23) - Link to Closed Risk #402	This could increase costs.							MITIGATED GMP for station electrical finalized.		
454		CON, ENG, STA	90	C	All	R4, R5, R6, R12, R13, R14	Closed	7/22/2021	9/29/2022	434.00	ADA and Accessibility Review of the stations could identify items that require rework. (Confirmed Closed on 09/29/22)	This could increase costs.							AVOIDED. ADA review of stations is complete.		
455		CON, STA	20.02	C	S3		Closed	7/22/2021	12/16/2021	147.00	There could be a delay in the construction of the emergency egress stairwell at Pepper Canyon station. (Confirmed Closed on 12/16/21)	This would delay operations.							AVOIDED Stairwell is complete.		
456		CON, ENV, TP, ROW, UTL	60.01	C	S1		Closed	7/22/2021	6/28/2022	341.00	If SDG&E does not agree to easement for joint trench along LOSSAN then the trench may need to be relocated. (Confirmed Closed on 6/28/2022)	This would increase cost. No risk to schedule.							MITIGATED SDG&E has committed to an easement. Continuing to work on easement language with SDG&E.		
457		CON, ENV	40.05	C	All	All	Closed	7/22/2021	3/29/2022	250.00	Noise mitigation testing of sound walls may identify areas that require rework. (Confirmed Closed on 3/29/22)	This could increase cost.							AVOIDED Noise mitigation testing complete. No issues identified.		
458		CON, MC, ROW, TP	80.04	C	All	All	Closed	12/15/2021	6/21/2023	553.00	As the project reaches conclusion, staff attrition / reduction could result in inefficiencies in administrative activities and/or loss of knowledge to respond to open items in a qualified manner. (Confirmed Closed on 6/21/23)	This could delay project close-out.							AVOIDED Project close-out is virtually complete.		
459		CON, ENG, STA, SYS	20.07	C	S1, S3, S4	R4, R5, R6, R12, R13, R14	Closed	3/29/2022	12/13/2022	259.00	Modifications are required to the conduits for FAIDs in the elevator tower. (Confirmed Closed on 12/13/22)	This could delay renewal of elevator permits in November 2022.							MITIGATED. Modifications to conduits are complete.		
460		CON, ENG, STA	20.07	C	S4	14	Closed	3/29/2022	6/28/2022	91.00	Elevator 9-2 requires the addition of an intermediate landing. (Confirmed Closed on 6/28/2022)	This could increase costs.							ACCEPTED CCO has been executed.		
460.1		CON, ENG, STA	20.07	C	S4		Closed	6/28/2022	12/13/2022	168.00	There could be a delay in completing the modifications to Elevator 9-2. (Confirmed Closed on 12/13/22)	There could be a delay in the renewal of elevator permits in November 2022.							AVOIDED. Elevator 9-2 is in operations.		
461		CON, MC	80.06	C	All	All	Closed	3/29/2022	6/21/2023	449.00	The City of San Diego acceptance process takes longer than anticipated. (Confirmed Closed on 6/21/23) - Link to Closed Risk #448	This could increase costs through identified rework and delay project close-out.							AVOIDED City accepted S1,2,&3. Will accept S4 after striping. Remaining coordination with City is within remaining contingency.		
1.1	1.1, 204		10.01	D	All		Closed	3/1/2013	2/18/2015	719.00	Design not yet sufficiently progressed to ensure ADA. (Confirmed Closed on 02/18/15) - Link to Closed Risk #204	May result in additional design elements.							MITIGATED Design will include all ADA requirements.		
1.2		SAF	10.01	D	S1, S2, S3, S4	All	Closed	3/1/2013	8/15/2016	1263.00	Design not yet sufficiently progressed to ensure fire/life/safety (FLS). (Confirmed Closed on 08/15/16)	Modifications to the design							MITIGATED GMP design set complete.		
3.1			10.01	D	S2		Closed	11/1/2011	7/11/2013	618.00	Rose Creek North (middle) Aerial Structure: eliminate need to double track SDNR by providing NCTD access across LRT tracks (Confirmed Closed on 07/11/13)							MITIGATED Double tracking of LOSSAN tracks is now a separate project and will be funded in time for construction to occur concurrently with Mid-Coast			
4	4, 233	STR	10.01	D	S2		Closed	4/1/2013	12/11/2013	254.00	Interference of alignment under SR 52 with ramp piers and proposed multi-barrel culvert structures. (Confirmed Closed on 12/11/13) - Link to Closed Risk #233								REPLACED See Risk #233.		
8			10.04	D	All		Closed	11/1/2011	5/7/2014	918.00	If loading diagram is not consistent with equipment that will be purchased or work train loading (i.e. track laying train; ballast cars). (Confirmed Closed on 05/07/14) - Link to Closed Risk #209	Increased structure capacity may be needed.							MITIGATED Design criteria was issued on 03/14/14.		

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10.1		CP	10.04	D	S1		Closed	11/1/2011	9/25/2013	694.00	Proposed tie-in of new LRT track to existing Green Line track near San Diego River (I-8) may require minor change in alignment to avoid encroaching on existing SDNR track, requiring modifications to track and proposed turnout. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
11.1	11.1, 300, 319		10.04	D	S1		Closed	6/1/2013	5/7/2014	340.00	Adding an additional light rail line in between existing light rail (Green Line) and heavy rail line may require minor realignment and an additional turnout for the existing light rail line on the current flyover. Will need to construct plinths and inserts. (Confirmed Closed on 05/07/14) - Link to Closed Risk #300 & #319	Redesign the special trackwork.							AVOIDED Geometry has been reviewed.		
12	12, Z20, Z21	CP	10.04	D	S1		Closed	11/1/2011	9/25/2013	694.00	San Diego River box-girder bridge Drwgs TL-102 and TX-101 is approximately 910-ft long over the flood plain/channel of San Diego River, an environmentally sensitive area. Expected multiple-span bridge has no indication of bridge type, depth of structure, spans lengths, pier locations, foundation type, environmental / recreational / navigational approvals. (Confirmed Closed on 09/25/13) - Link to Closed Risk #Z20 & #Z21							MITIGATED Design has advanced.			
13.1		CP	10.04	D	S1		Closed	11/1/2011	9/25/2013	694.00	Potential for unforeseen environmental impacts and/or liquefaction at San Diego River crossing, increasing cost of the structure. (Confirmed Closed on 09/25/13)	Expensive foundation improvement.							MITIGATED Design has advanced.		
14	14, Z11, Z24		10.04	D	S1		Closed	11/1/2011	9/25/2013	694.00	Drawings TL106 and TC-103 do not clearly identify Clairemont Drive bridge widening above the proposed Station. (Confirmed Closed on 09/25/13) - Link to Closed Risk #Z11 & #Z24	If design indicates need for significant improvements to bridge, station would be moved and need for bridge widening deleted.							MITIGATED Design has advanced.		
15			10.04	D	All		Closed	11/1/2011	9/25/2013	694.00	Tracks cross over multiple existing drainage ditches (e.g. Sta 185, 202, 225, 254, 261, 270, 311, etc.) that are up to 55-ft wide and 8-ft deep. Although there are no structures indicated, it appears that either structural culverts or bridges may be necessary. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			
16	16, Z20, Z21		10.04	D	S1		Closed	6/1/2013	7/11/2013	40.00	Single-span box-girder bridge approximately 220-ft long over Balboa Avenue has no indication of bridge type, depth of structure, or clearance above Balboa Avenue. A bridge type study may determine that a two-span bridge with pier in the median of Balboa Avenue may be more effective. (Confirmed Closed on 07/11/13) - Link to Closed Risk #Z20 & #Z21							MITIGATED APS has been completed.			
18	18, Z20, Z21		10	D	S2		Closed	11/1/2011	7/11/2013	618.00	Curved box-girder bridge approximately 235-ft long over Rose Creek expected to be a multiple-span bridge, has no indication of bridge type, depth of structure, spans lengths, pier locations, or foundation type in the area spanned. (Confirmed for Closure on 07/11/13) - Link to Closed Risk #Z20 & #Z21	Final design could impact environmental mitigation required (assumed to be an environmentally sensitive area)							MITIGATED Bridge type has been clarified.		
19	19, Z42, Z68.1, Z02, Z03		10.04	D	S2, S3, S4		Closed	11/1/2011	9/25/2013	694.00	Throughout NCTD single-tracked region, coordinate future heavy rail constructability with NCTD. (Confirmed Closed on 09/25/13) - Link to Closed Risk #Z42, #Z68.1, #Z02, & #Z03							REPLACED See Risks #242 & #268.1			
20.1	20.1, 45.4, 133, 243	STR	10.04	D	S2		Closed	11/1/2011	5/7/2014	918.00	Rose Creek South: Based upon existing but limited knowledge of the Rose Canyon Fault Zone there is a possibility that there are faults located at the locations of the bridge structures. (Confirmed Closed on 05/07/14) - Link to Closed Risk #45.4, #133, & #243	Further investigation is required, but could result in increased cost for the structures. Unknown conditions at this time could result in more expensive foundations.							AVOIDED Fault Rupture study concluded that the primary fault is not under Rose Canyon. SANDAG is proceeding with design to accommodate secondary faulting.		
21.2		CP, ENV	40.04	D	S1		Closed	9/24/2013	12/1/2013	78.00	There is a potential risk in identifying habitat for Light-footed Clapper Rail in LOSSAN Environmental Document. (Confirmed Closed on 12/11/13)	Conflicting findings may create an opportunity to challenge the conclusions.							MITIGATED Mid-Coast Environmental document has been modified.		
23.1			10.04	D	S3		Closed	6/1/2013	7/11/2013	40.00	Nobel Viaduct: There is some concern regarding the constructability of the structure where it crosses I-5 due to the required false work over the active highway. There is additional concern that the structure may need larger curvature when crossing I-5 (current radius is 350', may need 500'). (Confirmed Closed on 07/11/13)	Increased curvature would increase span length and cost.							ACCEPTED APS for Nobel Viaduct addresses vertical clearance below falsework and the cost of the viaduct has been included in the overall cost of the project.		
24.1	24.1, Z92, Z19	TP	10.04	D	S3		Closed	11/1/2011	8/15/2013	653.00	Voigt Drive and UCSD (not Nobel) Viaduct: The project may be impacted by the planned HOV lanes (Direct Access Ramps) and could require the elevated structure to be longer. 30% premium on the crossing included. (Confirmed Closed on 08/15/13) - Link to Closed Risk #Z92 & #Z19							AVOIDED Worked out geometrics with Caltrans on LRT structure.			
25	25, 25.1	STR	10.04	D	S4		Closed	11/1/2011	12/1/2013	771.00	Aerial Structure Over Genesee Avenue is shown as a symmetric single-pier structure in the grass median strip. There are several intersections (Eastgate, Executive, La Jolla Village, Esplanade Ct) with single and double left turn lanes that will not allow this typical section. It is likely that a "twin-pier portal type" structure and foundation will be necessary. (Confirmed Closed on 12/11/13) - Link to Closed Risk #25.1	We would have to have more massive single columns and deeper superstructure.							MITIGATED Design advanced to accommodate the left turn lanes.		

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26.1	26.1, Z18		10.04	D	S4		Closed	11/1/2011	9/25/2013	694.00	(I) I-5 Crossing at Voigt Drive: Encroachment on the ball field along Voigt Dr. based on a required widening of Voigt Dr. or the location of the light rail adjacent to the road. This includes physical encroachment of the structure as well as issues relating to the retaining walls. UCSD ball fields would not be a 4F issue therefore the risk is minimal. May require some modifications to the ball field for protection of the LRT. (Confirmed Closed on 09/25/13) - Link to Closed Risk #Z18								MITIGATED Design has advanced.		
29.1	25.1, 29.1, 411, Z18	CON, STA	10.04	D	S4		Closed	3/1/2013	12/11/2013	285.00	Aerial Structure - Genesee Viaduct: Genesee Viaduct crossing La Jolla Village Drive poses difficult conditions (span and constructability) and may increase the cost of the structures. (Confirmed Closed on 12/11/13) - Link to Closed Risk #25.1, #411, & #Z18	Doubling the cost would add about \$3 million to this structure.							REPLACED See Risk #25.1.		
30.1	30.1, 226, Z18	STR	10.04	D	S4		Closed	3/1/2013	11/19/2014	628.00	Aerial Structure - Genesee Viaduct: Opportunity for segmental construction of Genesee Viaduct elements could reduce cost and shorten the construction schedule. (Confirmed Closed on 11/19/14) - Link to Closed Risk #226 & #Z18							AVOIDED CM/GC has reviewed the plans and has concurred with cast in place concrete for Genesee.			
31.1	31.1, Z18		10.04	D	S4		Closed	11/1/2011	8/14/2013	652.00	Aerial Structure - Genesee Viaduct: Potential for a landmark structure to be required at La Jolla Village Dr. (suspension bridge or other structure) (Confirmed Closed on 08/14/13) - Link to Closed Risk #Z18							MITIGATED No comments from UCPG.			
33			10.06	D	S4		Closed	11/1/2011	9/25/2013	694.00	Cut and Cover Structure at Gilman Drive (Sta 458); not clear why cut and cover tunnel (approximately 179-ft long) with boat structure transitions on both ends was selected as compared to aerial structure over Gilman Drive. Design has potential to change in response to additional studies to confirm the track profile, structure type and community impacts. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			
34			10.06	D	S4		Closed	11/1/2011	9/25/2013	694.00	Cut and Cover Structure at Gilman Drive (Sta 559-565); not clear why a cut and cover tunnel (approximately 565-ft long) with retaining wall section and boat structure transitions was selected as compared to an aerial structure over Gilman Drive and adjacent parking lot. Cost and schedule design and construction risks include drainage, utilities, roadway and parking lot closure during construction, community concerns. Design has potential to change in response to additional studies to confirm the track profile, structure type and community impacts. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
35	35, Z07, Z12		10.06	D	S4		Closed	11/1/2011	9/25/2013	694.00	Cut and Cover Structure north of UCSD West Station (Sta 572-575); not clear why cut and cover tunnel (approximately 272-ft long) with boat transition section at both ends was selected as compared to a raised track profile. Design has potential to change in response to additional studies to confirm the track profile, structure type and community impacts. (Confirmed Closed on 09/25/13) - Link to Closed Risk #Z07 & #Z12								MITIGATED Design has advanced.		
36			10.06	D	All		Closed	11/1/2011	9/25/2013	694.00	Tunnels (cut-and-cover) plans, profiles and sections are defined to a schematic level only. Tunnel features (emergency access and egress, lighting, systems elements such as ventilation, communications and traction power, construction access and laydown are not well defined. Tunnel drawings do not depict the static/dynamic envelope for the either the existing vehicles or new vehicles. Sight distances for the design speeds should be checked for adequacy at all tunnels on curves. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
37		STR	10.08	D	All		Closed	11/1/2011	1/22/2014	813.00	Retaining Structures (TX-101, TX-102, and TX-104) show standard cantilever retaining walls and other partially portrayed wall systems; however, LRT Design Criteria Manual (1999) may require alternative wall systems such as MSE. Design has potential to change (with costs/schedule impacts) in response to additional studies to determine the most appropriate and effective retaining systems to be used for various cut and fill conditions. (Confirmed Closed on 01/22/14)	Potential increase in costs for construction.							MITIGATED Design has advanced.		
38		STR	10.08	D	S2, S3		Closed	11/1/2011	1/22/2014	813.00	Retaining Structures in Steep Cuts: (TX-104) shows a retaining wall with steep existing slope (in excess of 50-deg) that appears to be in excess of 30-ft above grade. Design has potential to change in response to additional geotechnical, structural, drainage, and site conditions studies to confirm portrayed solution vs. benching of existing slopes to reduce the height of retaining structures. (Confirmed Closed on 01/22/14)	May result in positive or negative cost and schedule impacts.							MITIGATED Design has advanced.		
39			10.12	D	S4		Closed	11/1/2011	9/25/2013	694.00	Changing double crossover proposed on the aerial structure between UCSD East and Executive Stations to two single crossovers may result in positive cost and schedule risk advantages (fewer frogs, special trackwork, lower signal costs, etc.).							MITIGATED Design has advanced.			
41			10.12	D	All		Closed	11/1/2011	9/25/2013	694.00	Special trackwork is defined to a schematic level only. Likely that changes to alignment, profile, and operational concerns that occur as P.E. progresses may result in changes to special trackwork as well. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			

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43	43, 228		10	D	All		Closed	11/1/2011	7/11/2013	618.00	LRT Design Criteria Manual (dated March 25, 1999) contains criteria for new facilities and systems design. However, the Manual is more than 10 years old and does not reflect current code requirements. SANDAG intends to update the Manual during PE. Uncertainties in platform length, loading diagrams, static and dynamic envelopes, geotechnical test type-location-frequency, bridge type studies, load factors for bridges, ballasted vs. DF track on aerial structures, design criteria for tunnels and underground structures, use of latest issue of California Building Code (Confirmed Closed on 07/11/13) - Link to Closed Risk #228								REPLACED See Risk #228.		
44	44, 239		10	D	All		Closed	6/1/2013	7/11/2013	40.00	Project limits not yet clearly shown on the plans. (Any work "Not in Project" should be clearly labeled). (Confirmed Closed on 07/11/13) - Link to Closed Risk #239	Uncertainty of scope results in uncertainty of cost and schedule							MITIGATED		
45.1	45.1, 45.2, 45.3		10.04	D	S1, S2		Closed	3/1/2013	1/13/2015	683.00	Drawings/documents do not provide any boring data. There is risk that drilled shaft depths may increase as boring results become available. (Confirmed Closed on 01/13/15) - Link to Closed Risk #45.2 & #45.3	Modifications to the design, depth of foundations.							MITIGATED Borings are complete.		
45.2	45.1, 45.2		10.04	D	All		Closed	4/1/2013	7/11/2013	101.00	Drawings/documents do not provide any boring data. There is risk that drilled shaft depths may increase as boring results become available. There is also risk that active faults may be found in areas of aerial structures. (Confirmed Closed on 07/11/13) - Link to Closed Risk #45.1								REPLACED See Risk #45.1.		
45.3	45.1, 45.3		10.04	D	All		Closed	4/1/2013	7/11/2013	101.00	Drawings/documents do not provide any boring data. There is risk that drilled shaft depths may increase as boring results become available. There is also risk that active faults may be found in areas of aerial structures. (Confirmed Closed on 07/11/13) - Link to Closed Risk #45.1								REPLACED See Risk #45.1.		
45.4	20.1, 45.4, 133, 134		10.04	D	S2		Closed	7/1/2013	9/25/2013	86.00	There is also risk that active faults may be found in areas of aerial structures. (Confirmed Closed on 09/25/13) - Link to Closed Risk #20.1, #133, & #134								REPLACED See Risks #20.1 & #134.		
46.1	46.1, 46.2, 229	UTL	40.02	D	All		Closed	4/1/2013	8/14/2013	135.00	There is risk that alignment, drilled shaft spacing, pier type and utility relocation may increase as utility exploration and drawings are developed. (Confirmed Closed on 08/14/13) - Link to Closed Risk #46.2 & #229								MITIGATED Existing utilities have been mapped from record drawings and field surveys of surface features.		
46.2	46.1, 46.2, 229	UTL	40.02	D	All		Closed	4/1/2013	1/22/2014	296.00	Not much dry utility information provided. There is risk that alignment, drilled shaft spacing, pier type and utility relocation may increase as utility exploration and drawings are developed. (Confirmed Closed on 01/22/14) - Link to Closed Risk #46.1 & #229	Potential delay to utility relocation.							MITIGATED Verified mapping with utilities and initiated potholing		
47			10.09	D	All		Closed	4/1/2013	9/25/2013	177.00	Trackwork has been advanced to the level of single line schematics of track layout, plan and profile drawings, proposed location of turnouts and crossovers, and tabulation of track geometry (horizontal and vertical curve data). Likely that changes to alignment and profile during P.E. will result in changes to trackwork. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
48	48, 228		20	D	All		Closed	11/1/2011	9/24/2013	693.00	LRT Design Criteria Manual (March 1999) identifies station design criteria; however, in general, architectural details, dimensions, design interfaces and physical interfaces have not been consistently advanced to acceptable levels for this stage of design completion. (Confirmed Closed on 09/24/13) - Link to Closed Risk #228								REPLACED See Risk #228.		
49			20.01	D	S1		Closed	11/1/2011	9/25/2013	694.00	Clairemont Drive at-grade station has center/center track dimensions which results in platform widths being reduced to less than the 15-ft minimum required due to clearance required from the existing Clairemont Drive columns beyond. (Confirmed Closed on 09/25/13)	Cost/schedule impact if cannot be approved by the MTDB Director of Engineering.							MITIGATED Design has advanced.		
50	50, 227		20	D	S4		Closed	11/1/2011	9/25/2013	694.00	No conceptual station site plans provided for the UCSD West and UCSD East Stations. (Confirmed Closed on 09/25/13) - Link to Closed Risk #227								MITIGATED Design has advanced.		
51.1	51.1, 301		20.01	D	S4		Closed	4/1/2013	9/25/2013	177.00	(I) UCSD West Station: The Mid-Coast Project is reliant upon timely acceptance of plans by UCSD. If UCSD approvals are seen as being difficult to achieve, the project may need to accept delays. (Confirmed Closed on 09/25/13) - Link to Closed Risk #301	Delay in Project.							REPLACED See Risk #301.		
52	52, 228	SAF, STA	20	D	All		Closed	4/1/2013	9/3/2015	885.00	Fire, life, safety (FLS) and maintenance requirements for new facilities should be further reviewed as design progresses to assure emergency egress is provided. (Confirmed Closed on 09/03/15) - Link to Closed Risk #228								MITIGATED Emergency egress design was presented at April 2015 FLSSC meeting.		
53.1		CP	20.01	D	S1		Closed	11/1/2011	9/25/2013	694.00	(I) Potential for liquefaction at stations located between San Diego River and Clairemont. Piers or columns would be needed below the station. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		

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54			20.01	D	S1		Closed	11/1/2011	9/25/2013	694.00	There is a significant amount of site work at Balboa Station to add a new access/egress road from Balboa, new signalized intersection on Moreno, a proposed 220-space surface parking and roadway modifications to Moreno. It is not clear why a pedestrian walkway is included on the proposed guideway bridge crossing over Balboa Avenue. It may be more cost effective (positive cost and schedule impacts) to provide stairs and a ramp from Balboa Avenue connecting directly to the platform level (with track crossing between platforms) of the "at-grade" station which is on retained fill just south of Balboa. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
56.1		TP	20.01	D	S3		Closed	3/1/2013	1/22/2014	327.00	Project stakeholders may require a station at the VA Hospital. (Confirmed Closed on 01/22/14)	May add a station at the VA Hospital.							AVIODED VA station is included in the LPA.		
57			20.02	D	S4		Closed	6/1/2013	9/25/2013	116.00	Executive Drive Station Drawings TL123 and TC-111 do not indicate proposed access and egress provisions for the Station. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
58			20.04	D	S1		Closed	6/1/2011	9/25/2013	847.00	Coordination of Santa Fe Depot Modifications (new LRT track, phased relocation of existing MT1, MT2, MT3 and MT4 tracks, platform modifications, new special trackwork) to maintain existing rail service during construction has potential to impact the stations as well as the guideway and special trackwork. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
59	59, 286, 447	ROW	20.06	D	S3		Closed	11/1/2011	9/24/2013	693.00	Shopping center at Nobel Drive Station may not agree to a parking structure/shared parking arrangement on their property. (Confirmed Closed on 09/24/13) - Link to Closed Risk #286 & #447	Potential litigation resulting in significant design and construction cost and schedule risk.					Memories		REPLACED See Risk #286.		
60	60, 204		20.07	D	S1		Closed	4/1/2013	9/25/2013	177.00	There are no elevators indicated at Balboa Station from the platform level on retained fill down to the existing Balboa Avenue sidewalks, which appears to be a difference in elevation of about a 25-ft. This violates the current (1999) design criteria. (Confirmed Closed on 09/25/13) - Link to Closed Risk #204	If required, would result in a cost risk to the project.							REPLACED See Risk #204.		
61			30	D	All		Closed	11/1/2011	9/25/2013	694.00	SCC Code 30: Support Facilities: No risks identified; to be definitively confirmed during PE. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
64		UTL	40.02	D	All		Closed	11/1/2011	9/25/2013	694.00	Locations of major utilities (e.g., high voltage overhead (crossed out in Nov. 2011 text: or underground power, underground major sewer, water, other pipeline, communications lines)) not yet plotted on plans. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
65	65, 205	UTL	40.02	D	All		Closed	6/1/2011	4/12/2013	681.00	Project specific utility agreements remain to be developed/finalized (Confirmed Closed on 04/12/13) - Link to Closed Risk #205								REPLACED See Risk #205.		
66			10	D	All		Closed	4/1/2013	9/25/2013	177.00	Drainage Design Criteria requires top of rail elevation to be above the 100-yr water surface elevation. If verification shows that not all tracks, bridge structures, and finished floor elevations are above the 100-year WSEL, is a potential cost/schedule impact. (Confirmed Closed on 09/25/13)	Potential cost/schedule impact.							MITIGATED Design has advanced.		
67			40.02	D	S1		Closed	11/1/2011	9/25/2013	694.00	Tecolote Creek Drawing TL-104 and prior Final EIS show the 100-year water surface elevation as elevation 12-ft. The track profile shows water surface as 10.00-ft, with bottom of bridge steel at elevation 11.9-ft. The proposed design must satisfy the 100-year flood and freeboard requirement below the structure. (Note: any change in track profile may affect vertical clearances at the existing Tecolote Road bridge located 200-ft south of this creek crossing.) Possible risk to change in design scope and costs (earthwork, structure). (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
68			40.04	D	S1		Closed	11/1/2011	9/25/2013	694.00	Drawing TL-106 indicates a drainage ditch at Sta 202, but there is no box culvert shown in profile. Also, TL-108 indicates several drainage ditches (Sta 254, 261, 270, 311) on the profile but no structure or box culvert is shown. (Confirmed Closed on 9/25/13)								MITIGATED Design has advanced.		
69			40.04	D	S1, S2		Closed	11/1/2011	9/25/2013	694.00	Rose Creek Drawing TL-111 indicates a water surface at elevation at 44-ft and a 3.3-ft dimension. Is this the 100-year water surface elevation and a 3.3-ft minimum freeboard required? (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
70			40.04	D	All		Closed	11/1/2011	9/25/2013	694.00	The impacts of the stormwater regulations enacted since the issuance of the FEIR have not been evaluated at this point. (Confirmed Closed on 09/25/13)	These could impact design and cost/schedule.							MITIGATED Design has advanced.		
78			40.04	D	S2		Closed	11/1/2011	9/25/2013	694.00	The selected alternative requires construction along Rose Creek and the west facing slopes along the east side of I-5, which is indicated as having moderate potential to impact wildlife habitats during construction. Although identified, these actions have not been addressed in any detail. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
79			40.04	D	All		Closed	11/1/2011	9/25/2013	694.00	A number of potential environmental mitigation needs are addressed in the Final Comparative Evaluation of Alternatives. (Confirmed Closed on 09/25/13)	Which could impact project cost and schedule.							MITIGATED Design has advanced.		

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81.1	81.1, 240		50.05	D	S4		Closed	4/1/2013	9/25/2013	177.00	(I) UCSD West Station: Potential for requirement for improvements surrounding UCSD campus. This could include the already discussed addition of air-conditioning units surrounding the UCSD W station or a requirement that the project provide security personnel for the project to protect students from construction activities. (Confirmed Closed on 09/25/13) - Link to Closed Risk #240								REPLACED See Risk #240.		
83	83, 214	TP	40.07	D	All		Closed	11/1/2011	9/25/2013	694.00	Parking demand discrepancies (1,800 spaces per the Final Definition of Alternatives Report, 640 spaces shown in drawings, and as high as 3,000 spaces based on ridership) need to be resolved. (Confirmed Closed on 09/25/13) - Link to Closed Risk #214	Could result in need for more parking.							MITIGATED Design has advanced.		
86			50	D	All		Closed	11/1/2011	9/25/2013	694.00	While running rail size is defined in the Conceptual Plans as 115RE per AREMA standards, the size of most special trackwork (crossovers/double crossovers) is not defined. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
87		SYS	50	D	All		Closed	11/1/2011	12/11/2013	771.00	Major equipment has not been identified and defined for the Control Room, Substations, crossings, tunnel ventilation and traction power. (Confirmed Closed on 12/11/13)								MITIGATED Design has advanced.		
90.1			50.01	D	S4		Closed	11/1/2011	5/7/2014	918.00	Additional signals required around UCSD West Station to accommodate blind spots around curves. (Confirmed Closed on 05/07/14)	Additional signals may be required.							MITIGATED Design revised.		
91	91, 92		50.01	D	S1		Closed	11/1/2011	5/7/2014	918.00	Operational analysis has not been done as yet for the most efficient location of the Crossovers and Interlockings. Braking tables have not been worked out. (Confirmed Closed on 05/07/14) - Link to Closed Risk #92								MITIGATED The location of the crossovers and interlockings have been set.		
92	91, 92		50.01	D	All		Closed	11/1/2011	5/7/2014	918.00	The requirements and control limits of the Interlockings not determined/defined at this stage. (Confirmed Closed on 05/07/14) - Link to Closed Risk #91								MITIGATED The location of the crossovers and interlockings have been set.		
93		SYS	50.01	D	All		Closed	11/1/2011	12/11/2013	771.00	The following have not yet been defined: Signal rail bonding; CIR, CIH and CIL locations and sizes; signal cable routing methodology; power supply and distribution; software and interface requirements; maintenance, testing and training requirements. (Confirmed Closed on 12/11/13)	Potential design changes.							MITIGATED Design has advanced.		
94			50.03	D	S1		Closed	4/1/2013	9/25/2013	177.00	The ratings of substations, distribution circuit of the utility not determined as yet. Adequacy or otherwise of the number and location of existing substation on the Blue Line and for the proposed extension of Blue Line has not determined through either simulation and or design study. May require 2 to 3 more substations to accommodate the project requirements. Approximately \$1M/mile/substation. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
95		SYS	50.03	D	All	All	Closed	3/1/2013	6/29/2016	1216.00	The ratings of SDG&E substations, distribution circuit and redundancy provisions between substations of the utility not determined as yet. (Confirmed Closed on 06/29/16)	Could increase scope.							MITIGATED Issue is resolved in current design.		
96			50.03	D	All		Closed	4/1/2013	9/25/2013	177.00	Project cost estimates should be updated as necessary when traction power requirements are better defined and the design is advanced to an acceptable level. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
97			50.03	D	All		Closed	11/1/2011	9/25/2013	694.00	TPSS layout drawings as submitted show only minimal information. TPSS layouts should be advanced to show overall dimensions, space requirements, and vehicle access provisions for installation and maintenance of equipment. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
98			50.03	D	All		Closed	11/1/2011	9/25/2013	694.00	In general, TL and TC drawings do not identify size and vehicle access requirements for the substation, and contain discrepancies regarding presence/location of the TPSS. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
99.1			50.03	D	S1		Closed	11/1/2011	9/25/2013	694.00	(I) There is an opportunity to relocate the planned McGraw Street Substation to an alternate, less expensive location. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
100		SYS	50.04	D	All		Closed	11/1/2011	12/11/2013	771.00	The OCS has not yet been defined, but is expected to be similar to the existing Blue Line. SANDAG has not, as yet, studied the design requirements for out of service scenario. (Confirmed Closed on 12/11/13)	Additional design.							MITIGATED Plan has been established to replace older systems with newly updated system.		
101			50.04	D	All		Closed	4/1/2013	9/25/2013	177.00	The estimate currently has \$1,250,000 for catenary, which is not considered adequate to meet the project requirements. Cost to be revised as the design progresses. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
102		SYS	50.05	D	All		Closed	4/1/2013	1/22/2014	296.00	The estimated cost of \$500,000 of communication facilities at each station is not realistic to cover all the facilities. The cost would need to be revised upwards as the design progresses. (Confirmed Closed on 01/22/14)								MITIGATED Design has advanced and a more detailed estimate prepared.		
104	104, 214, 214.1	ROW	60.01	D	S2, S3, S4		Closed	11/1/2011	9/25/2013	694.00	Temporary easements for construction access and laydown areas are not defined at this time. (Confirmed Closed on 09/25/13) - Link to Closed Risk #214 & 214.1	Will result in additional cost to the project.							REPLACED See Risk #214.		
105	105, 213, 249, 250	ROW	60.01	D	All		Closed	11/1/2011	9/25/2013	694.00	If SANDAG is responsible for providing replacement easements for utilities that are relocated. (Confirmed Closed on 09/25/13) - Link to Closed Risk #213, #249, & #250	Could result in significant additional cost							REPLACED See Risks #213, #249, & #250.		

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106	106, 271.2, 286, 292, 323	ROW	60.01	D	All		Closed	4/1/2013	12/11/2013	254.00	Current ROW pricing relies on the ability to reach favorable agreements with the City, Caltrans, the shopping center at Nobel Drive, along Genesee Ave., and UCSD. (Confirmed Closed on 12/11/13) - Link to Closed Risk #271.2, #286, #292, & #323								REPLACED See Risks #271.2, #286, #292, & #323.		
107			60.01	D			Closed	11/1/2011	4/12/2013	528.00	SANDAG is considering using existing ROW as "Contribution in Kind". This would increase total project cost (but would offset the amount of local funds needed for the project) (Confirmed Closed on 04/12/13)	Would offset the amount of local funds needed for the project.							ACCEPTED Will be paid for by Mid-Coast and approved by FTA.		
108		ROW	60.01	D	S3		Closed	4/1/2013	9/25/2013	177.00	Public ROW Acquisition Drawing TR-400 is unclear if full taking been included for the new substation shown on drawing TL-120 (at Sta 566-Right). Siting of TPSS is currently for "placeholder" purposes and will likely change; cost can be affected. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			
111.1		ROW	60.01	D	S1		Closed	11/1/2011	9/25/2013	694.00	(I) There is an opportunity for reducing the Tecolote Road Station right-of-way costs at Anderson Nursery by only impacting the City right-of-way. (Confirmed Closed on 09/25/13)	Increased cost if MC needs to build a parking structure.							MITIGATED Design has advanced.		
112.1		ROW	60.01	D	S2		Closed	11/1/2011	9/25/2013	694.00	(I) Easements will be required within the narrow alignment for the Aerial Structure at Rose Creek South. There is likely no permanent loss of use at these properties. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			
113.1	113.1, 113.2	ROW	60.02	D	S1	R2, R3, R4	Closed	3/1/2013	10/28/2015	971.00	The private rail car located adjacent to the existing commuter rail at the San Diego River Aerial Structure has been moved but lingering issues may arise. (Confirmed Closed on 10/28/15) - Link to Closed Risk #113.2	Potential cost impact.							MITIGATED MTS is moving private rail car to MTS property. MTS has settlement agreement with owner.		
115			80.01	D	All		Closed	9/24/2013	12/11/2013	78.00	PE Phase Staffing Plan remains to be fully developed. (Confirmed Closed on 12/11/13)	There are not appropriate resources available to maintain the schedule.							MITIGATED Staffing Plan is current.		
116			80.03	D	All		Closed	11/1/2011	9/25/2013	694.00	PM Consultant not yet contracted. (Confirmed Closed on 09/25/13)	Impacts management of project.							MITIGATED Design has advanced.		
120			80.01	D	All		Closed	11/1/2011	9/25/2013	694.00	FTA Approval for Entry to PE takes longer than scheduled (Confirmed Closed on 09/25/13)					Memories		MITIGATED Design has advanced.			
121		ENG	90	D	All		Closed	11/1/2011	4/29/2015	1275.00	FTA Approval for Entry into Engineering takes longer than scheduled. (Confirmed Closed on 04/29/15)	This could delay the start of final design which could delay the entire project.							MITIGATED The project received Entry into Engineering Approval on 04/02/15.		
122	122, 236		90	D			Closed	11/1/2011	4/12/2013	528.00	FTA Approval of the FFGA takes longer than scheduled. (Confirmed Closed on 04/12/13) - Link to Closed Risk #236	Resulting in impact to schedule and overall project costs.					Memories		REPLACED See Risk #236.		
125			80.06	D	All		Closed	11/1/2011	9/25/2013	694.00	San Diego City regulations, which require filing of a new zoning and planning applications, have not been addressed in the EIR. (Confirmed Closed on 09/25/13)	Could impact schedule.							MITIGATED Design has advanced.		
126			90	D	All		Closed	4/1/2013	5/8/2013	37.00	The MC project has not yet selected a Project Delivery Method. (Confirmed Closed on 05/08/13)					Memories		MITIGATED SANDAG Board approved the CMGC Project Delivery Method on 04/26/13.			
127			40.08	D	All		Closed	3/1/2013	9/29/2014	577.00	The MC project has not yet developed the actual set of project documents that will ultimately form the construction contracts -- to finalize the GC. (Confirmed Closed on 09/29/14)							AVOIDED Draft GC has been circulated.			
129			80	D	All		Closed	11/1/2011	9/25/2013	694.00	SANDAG Construction Manual (April 2008) provides guidelines for administration of construction and procurement contracts. It is anticipated that project specific requirements may result in deviations to the guidelines. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			
133	20.1, 45.4, 133, 134, 243, 243.1		90	D	All		Closed	11/1/2011	9/25/2013	694.00	The Project is located in an area of intense seismic activity and may cross fault lines identified on Caltrans Engineering seismic hazard maps. (Confirmed Closed on 9/25/13) - Link to Closed Risk #20.1, #45.4, #134, #243, & #243.1							REPLACED See Risks #243 & #243.1			
134	45.4, 133, 134	CON. STR	40.03	D	All		Closed	7/1/2013	9/3/2015	794.00	The alignment in particular has many geologic and other subsurface conditions that have the potential to impact the design, construction and serviceability of structures such as bridges, buildings, retaining walls, ground slopes and rail lines. These include geologic faulting, landslide potential and slope stability, expansive and compressible soils, liquefaction potential and structural corrosion potential. Structural approach related to ground conditions, subsidence, etc. is conceptual only, based on Caltrans/local experience. (Confirmed Closed on 09/03/15) - Link to Closed Risk #45.4 & #133	It is not clear that the potential impact of these many issues has been incorporated into the project cost and/or the project design/construction schedule.							MITIGATED Geotech analysis completed, findings incorporated into plans.		
135			10	D	All		Closed	11/1/2011	8/20/2013	658.00	The Basis of Design Report has not yet been finalized. This is scheduled to be complete by May 2013. (Confirmed Closed on 08/20/13)							MITIGATED BOD report is complete.			
136			10.06	D	All		Closed	11/1/2011	9/25/2013	694.00	Design concepts for support in open cut and tunnel sections have not been identified. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced			

DRAFT PROJECT RISK REGISTER												Mid-Coast Classifications				FTA Risk Categories		Impact Scoring Breakdown																														
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137	137, 214	STR	10.04	D	S2, S3, S4		Closed	3/1/2013	1/13/2015	683.00	Selection of structure construction methods is conceptual only. (Confirmed Closed on 1/13/15) - Link to Closed Risk #214	Changes in design could impact cost.							REPLACED See Risk #214.																													
138			10	D	All		Closed	11/1/2011	9/25/2013	694.00	Mass balance diagrams for alignments on fill or cut were reportedly prepared for cost estimating purposes but detailed backup was not available for review. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced																													
139	139, 350		100	D	All		Closed	9/24/2013	1/13/2015	476.00	Funding sources, budget limitations and finance costs can vary (Confirmed Closed on 01/13/15) - Link to Closed Risk #350								REPLACED See Risk #350.																													
200	200, 200.1, 200.2, 271.1, 271.2	ENV. SYS	40.04	D	S4		Closed	3/1/2013	2/12/2014	348.00	There are potential EMF impacts to sensitive equipment on UCSD campus along the alignment. (Confirmed Closed on 02/12/14) - Link to Closed Risk #200.1, #200.2, #271.1, & #271.2	This could result in further design refinements as well as budget and schedule impacts.							MITIGATED Design refined to eliminate the impact.																													
200.1	200, 200.1, 200.2	ENV. SYS	40.04	D	S4		Closed	8/22/2013	1/22/2014	153.00	There are potential EMF impacts to sensitive equipment on Scripps/XIMED along the alignment. (Confirmed Closed on 01/22/14) - Link to Closed Risk #200 & #200.2	This could result in further design refinements as well as budget and schedule impacts.							MITIGATED Alignment refined to avoid the EMF impacts.																													
200.2	200, 200.1, 200.2	ENV	40.04	D	S4		Closed	8/22/2013	9/24/2013	33.00	EMF levels may be higher than anticipated and would result in a change in alignment. (Confirmed Closed on 09/24/13) - Link to Closed Risk #200 & #200.1	The environmental document would need to be recirculated.							REPLACED See Risks #200 & #200.1																													
201		TP	10	D	S4		Closed	3/1/2013	1/22/2014	327.00	There is a potential for delayed concurrence from UCSD on alignment based upon LPA decision by transportation committee. This concurrence needs to be achieved by Fall 2013. (Confirmed Closed on 01/22/14)	Late approval on the LPA would delay the environmental document.							MITIGATED Received verbal approval from UCSD.																													
204	1.1, 60, 204		20.07	D	S1		Closed	3/1/2013	2/18/2015	719.00	If elevators are added to the design of the Balboa Station it will increase costs. (Confirmed Closed on 02/18/15) - Link to Closed Risk #1.1 & #60	Cost increase.							AVOIDED Elevators will not be added to the Balboa Station.																													
209	209, 209.1	CON. SAF. SYS	50.02	D	S1	R1	Closed	3/1/2013	8/15/2016	1263.00	Train Crossing / Grade Crossings: Additional studies related to patrons crossing the tracks at Old Town Transit Center (OTTC) / Taylor St. (Confirmed Closed on 08/15/16) - Link to Closed Risk #209.1	Could result in design changes.							AVOIDED CPUC approval is not required at OTTC.																													
209.1	209, 209.1		50.02	D	S1		Closed	7/1/2013	8/14/2013	44.00	Traffic Crossing/Grade Crossings: Additional studies related to traffic crossing the tracks at OTTC/Taylor St. (Confirmed Closed on 08/14/13) - Link to Closed Risk #209	Could result in delays to the environmental process.							REPLACED See Risk #209.																													
211		STR	40.05	D	S1		Closed	3/1/2013	9/3/2015	916.00	Additional soil improvements (light-weight fill) beyond those planned to support retaining walls, UT Building, adjacent building, and utility crossings. (Confirmed Closed on 09/03/15)	Soil improvements may also impact the foundations of the adjacent buildings which could increase scope and costs.							MITIGATED Soil improvement recommendations have been included in the 65% plans.																													
212			40.04	D	S2		Closed	3/1/2013	1/13/2015	683.00	Inaccurate mapping of current Floodplain conditions at Rose Creek near the Rose Creek LRT Overhead. (Confirmed Closed on 01/13/15)	Could cause delays to Conditional Letter of Map Revisions (CLOMR) approvals.							MITIGATED Approval has been received from FEMA on the existing conditions.																													
226	30.1, 226, 411	CON. STA	10.04	D	S4		Closed	7/1/2013	1/13/2015	561.00	Viaduct spans may increase in length from current design. (Confirmed Closed on 01/13/15) - Link to Closed Risk #30.1 & #411	Therefore increasing cost.							MITIGATED Change control process is currently being prepared to address changes in TPSS location.																													
228	43, 48, 52, 228, 284	QA	10.04	D	S1, S2, S3, S4		Closed	9/24/2013	1/13/2015	476.00	LRT Design Criteria is out of date. (Confirmed Closed on 01/13/15) - Link to Closed Risk #43, #48, #52, & #284	Design modifications may be required.							MITIGATED LRT Design Criteria was issued on 03/14/14 and the General Design Criteria was issued on 09/11/14.																													
229.1	223, 223.1, 229, 229.1	ENG. STA. TP	20.01	D	S4	R14	Closed	7/1/2014	6/29/2016	729.00	UTC's completion of Westfield parking structure and elevators is delayed. (Confirmed Closed on 06/29/16) - Link to Closed Risk #223, #223.1, & #229	This could delay the schedule of the LRT station design and construction.							AVOIDED Westfield project will be completed by June 2017.																													

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SANDAG Mid-Coast Project												CON = Construction		STA = Stations		R = Requirements		Impact Scores Legend				
ALL RISKS												ENC = Engineering/Design		SYS = Systems		D = Design		LOW 1				
Date Issue: June 21, 2023												ENV = Environmental		TP = Third Party		M = Market		MEDIUM 2				
Revision: 62												M/C = Management Capacity		UTL = Utility		C = Construction		HIGH 3				
												ROW = Right-of-Way						(P) Probability				
Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)		RMA Target Finish Date (TFD)	Responsible Party (RP)
232		CP, TP	10.04	D	S2		Closed	8/22/2013	1/22/2014	153.00	Poor coordination of project alternatives between Elvira and Mid-Coast. (Confirmed Closed on 01/22/14)	May impact the design of the Mid-Coast in Segment 2.							MITIGATED Designs have been coordinated			
238			10	D	All		Closed	N/A	8/20/2013	#VALUE!	SANDAG has not prepared or approved a project QA/QC Plan. (Confirmed Closed on 08/20/13)								MITIGATED Quality Plan submitted to FTA.			
239	207, 239, 356, 385	CON, CP, ENG	10.01	D	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	6/1/2013	9/19/2017	1571.00	There is a risk in the lack of timely plan review by NCTD. (Confirmed Closed on 09/19/17) - Link to Closed Risk #207, #356, & #385	This may cause schedule impacts and costs associated with redesign and/or more expensive design solutions.							MITIGATED Project has changed to counterfort walls. No other approvals needed from NCTD.			
243	20.1, 133, 243	STR	50.05	D	S2		Closed	3/1/2013	5/7/2014	432.00	Identification of potential fault rupture under the tracks or structure within the Rose Canyon area. (Confirmed Closed on 05/07/14) - Link to Closed Risk #20.1 & #133	May modify bridge design and may require adding detection components to the systems design.							MITIGATED Fault Rupture Study conclusions have been adopted into the Type Selection.			
243.1	133, 243.1	CP, STR	50.05	D	S1		Closed	7/1/2013	11/19/2014	506.00	Identification of potential fault rupture under the tracks or structure within the Balboa Avenue area. (Confirmed Closed on 11/19/14) - Link to Closed Risk #133	May modify bridge design and/or system design.							MITIGATED Geotech borings are largely complete. Type selection reports are done. Draft foundation report is done.			
255		TP	10.04	D	S4		Closed	N/A	8/15/2013	#VALUE!	UCSD is designing an extension of Gilman Dr. over I-5 and a realignment of Gilman Dr. UCSD's present design is not consistent with the Mid-Coast DSEIS/SEIR design and column locations. (Confirmed Closed on 08/15/13)	Mid-Coast may require design modifications in this area.							AVOIDED Coordination with UCSD has eliminated this risk.			
256	225.1, 230.7, 256	TP	10.04	D	S4		Closed	3/1/2013	9/25/2013	208.00	UCSD has proposed but not approved a design alignment for Voigt Drive and Campus Point that is not consistent with the Mid-Coast DSEIS/SEIR design and column locations. (Confirmed Closed on 09/25/13) - Link to Closed Risk #225.1 & #230.7	MC may require design modifications in this area.							REPLACED See Risks #225.1 & #230.7			
257		CP, STR, TP	10.04	D	S2		Closed	3/1/2013	1/22/2014	327.00	NCTD is installing PTC main fiber line within the Mid-Coast main corridor and will complete construction in June 2013. (Confirmed Closed on 01/22/14)	Mid-Coast will have to incur portion of the expense of relocating what is currently being constructed in the reach of the LOSSAN Overhead to La Jolla Colony Dr.							ACCEPTED Cost included in the budget.			
268	268, 298, 319	CP, STR, TP	10.02	D	S1, S2		Closed	7/1/2013	1/13/2015	561.00	NCTD design coordination with regard to 50mph versus 55mph LOSSAN alignment. (Confirmed Closed on 01/13/15) - Link to Closed Risk #298 & #319	Could result in delays in design and construction, and additional unanticipated cost. Including but not limited to 50 mph vs. 55 mph LOSSAN alignment. May impact current design of the Rose Creek LRT Overhead.							MITIGATED NCTD orally concurred with the 50 mph alignment.			
268.3	268.3, 329	CP	40.05	D	S1, S2		Closed	8/22/2013	9/29/2014	403.00	There is a risk in design coordination with NCTD, including but not limited to crash barrier agreement along the LOSSAN alignment. (Confirmed Closed on 09/29/14) - Link to Closed Risk #329	This could result in delays to design and construction, as well as additional unanticipated cost.							REPLACED See Risk #329.			
288		QA	80.03	D	All		Closed	9/24/2013	9/3/2015	709.00	Quality procedures are not followed when preparing plans. (Confirmed Closed on 09/03/15)	Could result in change orders.							MITIGATED PB has added full-time Quality Manager to the project which has aided the quality procedures oversight.			
289		TP	80.02	D	S1, S2		Closed	7/1/2013	2/12/2014	226.00	Inefficiencies in permitting and preconstruction coordination activities with NCTD. (Confirmed Closed on 02/12/14)	Could delay access to NCTD ROW resulting in delays to design.							MITIGATED Process has been defined and is working.			
291		STR, TP	40.02	D	S3		Closed	8/22/2013	1/22/2014	153.00	Nobel Viaduct I-5 crossing conflicts with 60" Caltrans storm drain. (Confirmed Closed on 01/22/14)	Resolution of this conflict could create additional costs.							ACCEPTED Storm drain has been located and we are designing around it and costs are included in the revised estimate.			
292	24.1, 106, 292	STR, TP	40.05	D	S3		Closed	8/22/2013	1/22/2014	153.00	Caltrans' plans for future projects and wall requirements may conflict with Mid-Coast retaining walls and bridge designs on Caltrans ROW. (Confirmed Closed on 01/22/14) - Link to Closed Risk #24.1 & #106	Therefore Caltrans permitting may be delayed							ACCEPTED Cost is included in estimate and alignment has been worked out with Caltrans so there should be no schedule impacts.			
294		CON, CP, TP	40.04	D	S1, S2		Closed	7/1/2013	9/29/2014	455.00	Potential need for 408 permit near San Diego River & Rose Creek. Delay risk. (Confirmed Closed on 09/29/14)	Low schedule risk							AVOIDED USACE and City was non responsive on need for 408 permit.			

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Date Issue: June 21, 2023																			<10% >10% <50% >50%							
Revision: 62																			< \$1 M > \$1M but < \$5M > \$5M							
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295		ENG, TP	10.03	D		S1, S3, S4	Closed	7/1/2013	11/29/2016	1247.00	Late changes to plans for the roadway improvements. (Confirmed Closed on 11/29/16)	Could impact schedule and budget due to City of San Diego comments.							MITIGATED City signed off all segments.							
298	268, 298, 319	CP	20.06	D		S2	Closed	4/1/2013	9/29/2014	546.00	In SR 52 area, existing LOSSAN rails are below 100yr WSE. (Confirmed Closed on 09/29/14) - Link to Closed Risk #268 & #319	The profile on this section may have to be raised. May require tracks rise to above 100yr.							ACCEPTED Project being designed above the 100yr WSE and is included in the December 2013 estimate.							
301	311, 301, 308, 327, 391	CP	10.04	D		S1, S2	Closed	8/22/2013	11/29/2016	1195.00	Potential complications associated with the impact of evolving concurrent designs; one project's design modifications may affect the design of the other project's plans. (Confirmed Closed on 11/29/16) - Link to Closed Risk #311, #308, & #391	Adding unexpected costs and delays.							MITIGATED Good coordination among the design teams has mitigated this risk.							
307	27.1, 244, 307	ENV, TP	40.04	D		S1, S2	Closed	8/22/2013	12/11/2013	111.00	If archeological borings identify any significant findings. (Confirmed Closed on 12/11/13) - Link to Closed Risk #27.1 & #244	This could result in additional trenching and a Phase 2 investigation for SHPO.							MITIGATED Archeological investigations completed.							
308	301, 308, 349, 351	CP	80.02	D		All	Closed	8/22/2013	10/28/2015	797.00	Design rework to SDRB Double Track and EMDT due to CM/GC input. (Confirmed Closed on 10/28/15) - Link to Closed Risk #301, #349, & #351	This may delay the construction of Mid-Coast and/or require additional environmental analysis.							AVOIDED GMP negotiations are in progress on SDRB.							
310		CP, ENV	40.04	D		S1, S2, S3, S4	Closed	8/22/2013	2/15/2017	1273.00	Complexities associated with the environmental permitting of multiple projects. (Confirmed Closed on 02/15/17)	May affect permitting of the concurrent / sequential projects.							MITIGATED Mid-Coast permitting is not affected by other projects. Conditions met and awaiting final approval.							
311			40.03	D		S1, S2	Closed	9/24/2013	11/19/2014	421.00	There could be difficulty in obtaining access to private property for geotechnical borings. (Confirmed Closed on 11/19/14)	Delay in geotech borings, which would result in delay of the design.							MITIGATED Geotech borings are largely complete.							
312		STA, STR	20.01	D		S1, S3, S4	Closed	9/24/2013	11/19/2014	421.00	Schedule delay due to delay in canopy design selection. (Confirmed Closed on 11/19/14)	65% design of stations will be delayed if a decision on canopy selection is made after July 2014.							MITIGATED MTS board approved canopy design.							
313			20.01	D		S1, S3, S4	Closed	9/24/2013	1/13/2015	476.00	Incorporation of art into the station design at a late stage. (Confirmed Closed on 01/13/15)	Delay to PS&E.							AVOIDED Community and station designs do not include art.							
314		STA	20.01	D		S1, S3, S4	Closed	9/24/2013	11/19/2014	421.00	Delays in obtaining community input to station design. (Confirmed Closed on 11/19/14)	May require modifications to design elements.							MITIGATED Community outreach took place. Concepts need to be formalized and presented to MTS and SANDAG.							
315		ENV	40.04	D		All	Closed	9/24/2013	7/1/2014	280.00	SHPO consultation timeframe could exceed the timing allocated in the schedule. (Confirmed Closed on 07/01/14)	Final environmental document will be delayed.							AVOIDED SHPO concurrence was received on 04/09/14.							
316	316, 333	SYS	50.03	D		All	Closed	9/24/2013	2/12/2014	141.00	There is a risk of delayed procurement of TPSS through MTS' existing contract. (Confirmed Closed on 02/12/14) - Link to Closed Risk #333	May need to add TPSS procurement to CM/GC contract with resulting additional cost and schedule delays.							TRANSFERRED MTS will procure the TPSS.							
317		SYS	50.04	D		All	Closed	9/24/2013	2/12/2014	141.00	Type of fiber cable to be installed between TPSS and Train Control Cases may not be selected in a timely manner. (Confirmed Closed on 02/12/14)	This could delay the advancement of systems design.							MITIGATED Design decision was made to separate fiber cables for TPSS and Comm back to Comm Cabinet at the stations.							
318			10.04	D		S1	Closed	10/22/2013	11/19/2014	393.00	Balboa Avenue width analysis needs to be completed to determine required bridge length for LOSSAN Bridge and Mid-Coast Bridge length. (Confirmed Closed on 11/19/14)	Potential schedule delay for Mid-Coast.							MITIGATED Design alternative has been presented to the City.							
321	320, 320.1, 321, 354	CON, CP, UTL	40.02	D		All	Closed	10/22/2013	10/28/2015	736.00	Within railroad corridor utility relocation design for wet utilities, could impact multiple project designs and dry utility owner relocation design. (Confirmed Closed on 10/28/15) - Link to Closed Risk #320, #320.1, & #354	This could create schedule delays to Mid-Coast.							MITIGATED Relocations have been coordinated.							
323	106, 271.1, 271.2, 271.3, 271.4, 323	ROW	60.01	D		S3, S4	Closed	10/22/2013	1/22/2014	92.00	Current schedule relies on the ability to reach favorable agreements with the VA, and UCSD. (Confirmed Closed on 01/22/14) - Link to Closed Risk #106, #271.1, #271.2, #271.3, & #271.4	Schedule delays							REPLACED See Risk #271.3.							

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SANDAG Mid-Coast Project

ALL RISKS

Date Issue: June 21, 2023

Revision: 62

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Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)
326		CP, STR	10.04	D	S1		Closed	10/22/2013	7/1/2014	252.00	Potential need to modify substructures of San Diego River Bridge and LOSSAN Bridge to mitigate seismic displacement issue due to the poor site soil conditions. (Confirmed Closed on 07/01/14)	Schedule impact due to modification of design to accommodate new substructure type.							MITIGATED SANDAG completed the geotechnical borings and the results of those borings allowed the analysis to be completed and confirmed.		
327	301, 327	CP	10.04	D	S1, S2		Closed	10/22/2013	10/22/2013	0.00	Develop new risk pertaining to the risk of potential alignment between Mid-Coast and ELMO. (Confirmed Closed on 10/22/13) - Link to Closed Risk #301								REPLACED See Risk #301.		
328	328, 328.1, 328.2, 328.3	ROW, TP	60.01	D	S4	R14	Closed	12/13/2013	6/29/2016	929.00	The Mid-Coast design includes widening of Genesee Ave. conflicts with Monte Verde Development plans (parking garage and walls). (Confirmed Closed on 06/29/16) - Link to Closed Risk #328.1, #328.2, & #328.3	Resolving this potential conflict may result in design modifications to the private development, Mid-Coast and/or additional real estate costs.							REPLACED See Risks #328.2 & #328.3.		
328.1	328, 328.1, 328.2, 328.3	ROW, TP	60.01	D	S4	R14	Closed	12/13/2013	4/6/2016	845.00	The Mid-Coast design includes widening of Genesee Ave. the widening of Genesee Ave. may conflict with development plans for the Le Jolla Canyon Condominiums (parking garage and development located at Genesee and Fez). (Confirmed Closed on 04/06/16) - Link to Closed Risk #328, #328.2, & #328.3	Payment of damages to property owner for potential easement.							REPLACED See Risks #328.2 & #328.3.		
328.2	328, 328.1, 328.2, 328.3	ROW	60.01	D	S4	R14	Closed	4/6/2016	8/15/2016	131.00	Redesign needed at Monte Verde, (for Genesee widening) due to changes to site conditions (Confirmed Closed on 08/15/16) - Link to Closed Risk #328, #328.1, & 328.3	This will delay ROW negotiation and potentially increase costs for additional ROW.							AVOIDED No redesign is needed.		
328.3	328, 328.1, 328.2, 328.3	CON, ROW	10.01	D	S4	R14	Closed	4/6/2016	9/19/2017	531.00	Conflict with Monte Verde Development construction project, (for Genesee widening). (Confirmed Closed on 09/19/17) - Link to Closed Risk #328, #328.1, & #328.2	There is potential to increase project costs related to construction phasing.							MITIGATED Agreement reached with Monte Verde.		
331		ROW, STA, TP	20.01	D	S3		Closed	12/13/2013	9/3/2015	629.00	There could be a delay in reaching an agreement with the Owner of the shopping center at Nobel Station and changes to site layout. (Confirmed Closed on 09/03/15)	This could delay the 95% design development for the parking garage and potentially delay start of construction at Nobel.							ACCEPTED Schedule assumes worst case through Order of Possession.		
332		STA, UTL	40.02	D	S1		Closed	12/13/2013	1/13/2015	396.00	Resolution with AT&T on the manhole located under Balboa Ave NB Platform. (Confirmed Closed on 01/13/15)	Delay in completing the 65% design.							MITIGATED Manhole will be relocated outside the platform		
332.1		UTL	40.02	D	S1		Closed	5/7/2014	4/29/2015	357.00	Resolution of the conflict with AT&T 24inch duct system located within abutment for Balboa Ave Bridge. (Confirmed Closed on 04/29/15)	Delay in completing the 65% design.							MITIGATED Project has received preliminary designs from AT&T.		
340	249, 340	CON, TP, UTL	40.02	D	S2	R6	Closed	3/20/2014	8/15/2016	879.00	Caltrans may not grant the Exception of the Longitudinal Encroachment Permit Policy Applications. (Confirmed Closed on 08/15/16) - Link to Closed Risk #249	This would require SANDAG to develop a new relocation approach, which could delay the project.							MITIGATED Obtained Longitudinal Encroachment Permit from Caltrans.		
341		ENV	40.04	D	S1, S2, S3, S4		Closed	5/7/2014	9/29/2014	145.00	As design advances and incorporates CM/GC and VE recommendations, the project could require further limited environmental review for specific modifications. (Confirmed Closed on 09/29/14)	May create a delay to schedule or FFGA.							MITIGATED SANDAG will conduct cost and schedule benefit analysis before pursuing any recommended changes.		
342		ENV	40.04	D	All		Closed	7/1/2014	11/19/2014	141.00	The time to produce and review supplemental and subsequent environmental documents regarding the fairy shrimp impacts. (Confirmed Closed on 11/19/14)	May delay the ROD.							ACCEPTED ROD was delayed. Biological Opinion received on 09/05/2014. Supplement circulation completed on 09/02/2014 with minimal comment.		

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343		CON, CP, UTL	40.02	D	All	All	Closed	7/1/2014	4/6/2016	645.00	If schedule for early wet utility relocation is delayed. (Confirmed Closed on 04/06/16)	Heavy civil construction start may be delayed or require re-sequencing.							AVOIDED Work has started on wet utilities.		
344	250, 344	CP, ENV, UTL	40.02	D	All	All	Closed	7/2/2014	10/28/2015	483.00	There could be a delay in the development of dry utility design (Confirmed Closed on 10/28/15) - Link to Closed Risk #250	This may delay the permit process, which could delay the construction.							AVOIDED Following permits are not required: - USACOE - USF&W - Regional Board 401 - CDFW		
348		CON, CP, MC	80.03	D	S1, S2		Closed	9/30/2014	9/3/2015	338.00	The Configuration Management procedures are not consistent for the three concurrent SANDAG projects. (Confirmed Closed on 09/03/15)	This could result in gaps or duplication in project scope and/or design.							MITIGATED		
349	308, 349, 351	MC, QA	80.03	D	S1, S2, S3, S4		Closed	11/19/2014	9/3/2015	288.00	There is a risk that because of the compressed design schedule there may not be sufficient audit resources in place to carry out the required SANDAG QA audits. (Confirmed Closed on 09/03/15) - Link to Closed Risk #308 & #351	Quality issues may not be identified early enough to adjust the design.							MITIGATED Additional resources were brought on to carry out audits.		
351	308, 349, 351	CON, MC	10	D	S1, S2, S3, S4		Closed	11/20/2014	9/3/2015	287.00	Delays to the 65% design due to slow approval process of the MCTC recommendations. (Confirmed Closed on 09/03/15) - Link to Closed Risk #308 & #349	This could result in an incomplete 65% design and additional GMP risk.							MITIGATED 65% design is complete.		
355		ROW, SYS	60.01	D	S1	R1	Closed	2/19/2015	4/6/2016	412.00	TPSS #5 may need to be reoriented or relocated. (Confirmed Closed on 04/06/16)	This could require additional ROW taking.							MITIGATED Sites have been located.		
358		ENV, UTL	40	D	S1, S2	R1, R2, R3, R4, R5, R6, R7, R8, R9	Closed	6/17/2015	8/15/2016	425.00	The design of the shared trench may result in impacts to fairy shrimp or coastal wetlands. (Confirmed Closed on 08/15/16)	This could increase cost and schedule.							MITIGATED Storm drains redesigned at watershed where fairy shrimp may have been impacted.		
361	290, 361, 411	CON, STR	80.02	D	S3, S4		Closed	6/29/2015	9/3/2015	66.00	Switching the Genessee Viaduct design to pre-cast. (Confirmed Closed on 09/03/15) - Link to Closed Risk #290 & #411	This could delay the 95% design and potentially delay the GMP negotiations.							ACCEPTED Project proceeding with pre-cast.		
362		ROW, SAF, TP	60.01	D	S1, S2, S3, S4		Closed	6/30/2015	9/3/2015	65.00	In order to ensure compliance with CPUC GO 175 (Rules and Regulations Governing Roadway Worker Protection Provided by Rail Transit Agencies and Fixed Guideway Systems) placement of retaining walls is being reviewed. (Confirmed Closed on 09/03/15)	This could potentially result in new ROW takings.							MITIGATED The walls have been moved. There are no new private property takes.		
363	223, 363	ENG, STA	20.06	D	S4	R14	Closed	8/12/2015	4/6/2016	238.00	UTC's improvements do not accommodate future Mid-Coast project. (Confirmed Closed on 04/06/16) - Link to Closed Risk #223	Rework of UTC's facility may be required as part of the Mid-Coast construction and potential disruption to bus service.							MITIGATED MOU completed with UTC and they will construct foundations for elevators and ramps for Mid-Coast work. Their plans accommodate Mid-Coast.		
365		CON, SAF	40.08	D	S2	R8, R9	Closed	9/3/2015	4/6/2016	216.00	The temporary bike path may need to have greater clearance than designed. (Confirmed Closed on 04/06/16)	The construction phasing will be affected by the wider separation.							AVOIDED Presentation was made to NCTD Safety Committee. Proximity to the track was accepted by NCTD.		
379	230.6, 230.7, 379	ENG, STA	20.02	D	S3, S4	R13	Closed	4/6/2016	6/7/2018	792.00	Address or resolve UCSD review comments. (Confirmed Closed on 06/07/18) - Link to Closed Risk #230.6 & #230.7	This could increase costs for the project or create delays to IFC plans.							MITIGATED Resolved all UCSD comments.		
384	110, 384, 395	ENG, ROW	20.04	D	S3	R12	Closed	6/29/2016	2/15/2017	231.00	Timely acquisition of the La Jolla Village Square property. (Confirmed Closed on 02/15/17) - Link to Closed Risk #110 & #395	This could delay construction.							REPLACED See Risk #395.		

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384.1		ENG, ENV, ROW	60.01	D	S3	R12	Closed	6/29/2016	8/15/2016	47.00	Additional ROW may be required for the design solution at La Jolla Village Square. (Confirmed Closed on 08/15/16)	This could exceed ROW budget for this parcel.							AVOIDED Project will not be taking additional property.		
385	239, 356, 385	ENG	40.05	D	S2	R7, R8, R9	Closed	6/29/2016	9/19/2017	447.00	NCTD lack of timely acceptance of MSE or other wall type. (Confirmed Closed on 09/19/17) - Link to Closed Risk #239 & #356	This could impact schedule and cost.							MITIGATED Project has changed to counterfort walls.		
201			10.04	D			Closed	6/1/2011	11/1/2011	153.00	Nobel Viaduct: Construction activity may have an impact to the Whole Foods store located in close proximity to the planned aerial structure. If the alignment is forced to be closer to Whole Foods it may impact deliveries and other operations at the store. Assume this increases the cost of construction for approx. 200 to 500 feet of guideway (Confirmed Closed on 11/01/11)							MITIGATED Residual risk addressed in SCC 60.			
114			70.01	M	All		Closed	11/1/2011	9/25/2013	694.00	Vehicle costs do not appear to include staging and transportation and staging of vehicles during the phases of construction. (Confirmed Closed on 09/25/13)							MITIGATED Design has advanced.			
128			40.08	M	All		Closed	9/24/2013	9/29/2014	370.00	General Conditions, Supplementary Conditions and Division 1 Specifications have not yet been prepared. (Confirmed Closed on 09/29/14)							AVOIDED Draft GC has been circulated.			
130	130, 264, Z37		10	M			Closed	11/1/2011	4/12/2013	528.00	With the U.S. economy currently in recession, market conditions have generally increased competition and availability of trade labor and equipment, while decreased demand for commodities (petroleum, concrete, steel) has created a downward trend in pricing. However, these trends may be short-term and could become mercurial as the project prepares for construction in upcoming years (Confirmed Closed on 04/12/13) - Link to Closed Risk #264 & #Z37							REPLACED See Risk #264.			
131			90	M	All		Closed	N/A	8/20/2013	#VALUE!	Conflicting projects in the SANDAG area could impact the otherwise sufficient and available labor work force. (Confirmed Closed on 08/20/13)							MITIGATED SANDAG Board approved the CM/GC Project Delivery Method on 4/26/13.			
214.1	104, 214, 214.1, #10	CON, ROW	60.01	M	All	All	Closed	11/13/2017	1/29/2020	807.00	Fulfilling contractual obligations to acreage of laydown area. (3 of 7 acres needed) (Confirmed Closed on 01/29/20) - Link to Closed Risk #104, #214, & #410	This could increase costs.						MITIGATED Proceeding forward on CCO for additional laydown. Extended TCE at Clairemont. CCO to include language preventing future claim.			
219	205, 205.1, 205.2, 205.3, 205.4, 219	UTL	40.02	M	All	All	Closed	3/1/2013	8/15/2016	1263.00	Utility company material procurement and installation timing. (All excluding SDG&E) (Confirmed Closed on 08/15/16) - Link to Closed Risk #205, #205.1, #205.2, #205.3, & #205.4	May result in construction delays.						MITIGATED Confirmation the Utility Companies made the Material Orders.			
222	222, 366	CON, ENG, MC	80.04	M	All	All	Closed	9/24/2013	8/15/2016	1056.00	The GMP may take longer to negotiate than planned. (Confirmed Closed on 08/15/16) - Link to Closed Risk #366	Which may take longer and/or be more costly than what has been assumed in the estimate.						MITIGATED Board Approved GMP.			
264	130, 264, 350		10.04	M	All		Closed	9/24/2013	1/13/2015	476.00	Uncertainty in escalation rates. (Confirmed Closed on 01/13/15) - Link to Closed Risk #130 & #350	Cost increase.						REPLACED See Risk #350.			
272	110, 272, 395, 396, 400	ROW	60.01	M	All	All	Closed	9/24/2013	6/21/2023	3557.00	Right-of-Way costs could exceed the budget. (Confirmed Closed on 6/21/23) - Link to Closed Risk #110, #395, #396, & #400	Use of contingency funds above the current assumption.						AVOIDED Final right-of-way cost is within final EAC.			
333	316, 333, 374	SYS	50.03	M	All	All	Closed	3/19/2014	4/27/2017	1135.00	MTS will not be able to exercise the existing option to purchase the additional TPSS. (Confirmed Closed on 04/27/17) - Link to Closed Risk #316 & #374	Additional procurement would happen after FF&GA.						MITIGATED MTS has exercised the option.			
334		MC	80.03	M	All		Closed	3/19/2014	9/29/2014	194.00	Potential lack of adequate capacity to administer contracts and scope changes after the CM/GC comes on board. (Confirmed Closed on 09/29/14)	Delays to construction						AVOIDED A dedicated Contract Administrator was added to the Mid-Coast Project Staff.			

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350	110, 139, 205, 264, 350, 360	CON, MC	10.04	M	S1, S2, S3, S4	All	Closed	11/20/2014	6/29/2016	587.00	If the overall project schedule is extended. (Confirmed Closed on 06/29/16) - Link to Closed Risk #110, #139, #205, #264, & #360	There may be increased costs due to TRO.							REPLACED See Risk #360.			
352		CON, MC, UTL	40.02	M	S1, S2, S3, S4		Closed	2/19/2015	9/3/2015	196.00	Late changes to Sections 1-9 and Design & Construction Specifications (General Conditions) could have impacts to the utility GMP. (Confirmed Closed on 09/03/15)	The budget and schedule may be negatively impacted.							MITIGATED The first GMP is complete and General Conditions have been agreed upon.			
353		CON, MC	80.04	M	S1, S2, S3, S4		Closed	2/19/2015	9/3/2015	196.00	There is a risk of MCTC managing multiple contracts. (Confirmed Closed on 09/03/15)	There may be added administrative costs associated with multiple contracts.							MITIGATED MCTC is currently managing multiple contracts.			
366	222, 366	CON, ENG, MC	10	M	All	All	Closed	9/3/2015	8/15/2016	347.00	Failure to successfully negotiate GMP. (Confirmed Closed on 08/15/16) - Link to Closed Risk #222	This would require the Project to go out for bid.							MITIGATED Board Approved GMP.			
373		SYS, VEH	70.01	M	All	All	Closed	10/28/2015	11/29/2016	398.00	The price of the vehicles may vary from the cost estimate due to escalation and potential modifications. Changes in the market may result in higher pricing than anticipated in the 65% estimate. (Confirmed Closed on 06/29/16)	The costs would increase.							MITIGATED Mid-Coast has the pricing for the vehicles.			
378		CON	10	M	All	All	Closed	10/28/2015	6/29/2016	245.00	Changes in the market may result in higher pricing than anticipated in the 65% estimate. (Confirmed Closed on 06/29/16)	Higher Cost							AVOIDED Project has finalized GMP negotiations.			
400	110, 272, 339, 400	CON, ENG, ROW	60.01	M	S4	R14	Closed	11/30/2016	9/19/2017	293.00	Decision on wall type at La Jolla Country Day School. (Confirmed Closed on 09/19/17) - Link to Closed Risk #110, #272, & #339	Could delay the widening of Genesee in that area and construction of retaining/privacy wall.							MITIGATED Wall has been constructed.			
401	88, 399, 401, 403	CON, SU, SYS	50	M	All	All	Closed	2/15/2017	1/27/2021	1442.00	Lack of specificity in the MCTC schedule regarding systems integration and testing. Clearer dates on required delivery on owner furnished materials is needed for timely delivery. (Confirmed Closed on 01/27/21) - Link to Closed Risk #88, #399, & #403	This could delay owner furnished material procurement, startup & testing, and RSD.							AVOIDED All owner furnished materials are on site.			
426		CON, STR	10.04	M	S3, S4	R10, R11, R12, R13, R14	Closed	6/6/2018	4/25/2019	323.00	The manufacturer of Viaduct Pre-Cast segments fails to meet schedule for delivery. (Confirmed Closed on 04/25/19)	This could delay construction.							AVOIDED All Viaduct Pre-cast segments were installed by mid-April 2019.			
5.1		ENV	10.01	R	S2		Closed	3/1/2013	1/22/2014	327.00	Potential need to mitigate visual and/or environmental impacts at the SR 52 interchange due to comments from community and agencies. (Confirmed Closed on 01/22/14)	Potential for more specific mitigation.							MITIGATED Visual analysis updated.			
7.1	7.1, 9.1, 9.2, 209, Z16, Z17		50.02	R	S1		Closed	11/1/2011	9/25/2013	694.00	Improvements may be required at crossings south of Old Town Station as a result of the increased train intervals required for the 2030 plan. (Confirmed Closed on 09/25/13) - Link to Closed Risk #9.1, #9.2, #209, #Z16, & #Z17								REPLACED See Risk #209.			
9.2	7.1, 9.1, 9.2, Z16, Z17		10.04	R	S1		Closed	11/1/2011	8/14/2013	652.00	High traffic volumes at Taylor Street requires mitigation. Enhanced signalization is required (Confirmed Closed on 08/14/13) - Link to Closed Risk #7.1, #9.1, #Z16, & #Z17								AVOIDED No comments to Taylor Street on EIS document.			
17	17, 21.1, Z20, Z21		10.04	R	S2		Closed	11/1/2011	7/11/2013	618.00	Box-girder bridge approximately 360-ft long over Rose Creek, expected to be a multiple-span bridge, has no indication of bridge type, depth of structure, spans lengths, pier locations, or foundation type in the area spanned. (Confirmed Closed on 07/11/13) - Link to Closed Risk #21.1, #Z20, & #Z21	Final design could impact environmental mitigation required (assumed to be an environmentally sensitive area)								MITIGATED APS has been completed, environmental impacts addressed in Risk #21.1.		
22.1		CP, STR	10.04	R	S2		Closed	11/1/2011	12/11/2013	771.00	The LRT crossover structure is likely to be a high cost, with a lengthy span, difficult access, and must maintain the LOSSAN railway beneath. (Confirmed Closed on 12/11/13)	Construction of this structure could be impacted by any of these constraints and could result in higher cost or delayed completion of the structure.							ACCEPTED Will be paid for by Mid-Coast.			
32		ENV, STR	10.04	R	S2		Closed	11/1/2011	12/11/2013	771.00	In areas where the new guideway would be on an elevated structure, there is a high potential for visual impacts to the surrounding area, especially in areas of high visual quality, e.g., Rose Canyon or Rose Creek. (Confirmed Closed on 12/11/13)	Would be additional cost if visual impacts need to be mitigated.							MITIGATED Visual tech report is complete.			
55			20.01	R	S1		Closed	11/1/2011	9/25/2013	694.00	As currently designed, Clairemont Station is on a curve. Depending on outcome of ADA / Level Boarding approach, station platform location may need to be shifted to tangent track (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.			

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73			40.04	R	All		Closed	11/1/2011	9/25/2013	694.00	The material presented in the FEIR and ROD represents only a portion of the current configuration of the rail line. The environmental impacts of the extension are not clearly defined at this point. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
74			40.04	R	All		Closed	11/1/2011	9/25/2013	694.00	The material presented and available in the AA/DEIS/DEIR and the FEIR are 10-15 years old and do not reflect current conditions or regulations. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
75		ENV	40.04	R	All		Closed	11/1/2011	2/12/2014	834.00	San Diego City has Land Development Manual -- Biology guidelines that have been undergoing an update. The EIR does not address these regulations. (Confirmed Closed on 02/12/14)								AVOIDED The new guidelines were reviewed against 2004 guidelines and SANDAG did not find substantive differences that would affect the project.		
76	76, 244		40.04	R	All		Closed	6/1/2011	4/12/2013	681.00	Native American Heritage Commission identified Native American cultural resources within the Area of Potential Effect (APE) for the project and commented that cultural landscapes should be considered along with other resources evaluated. (Confirmed Closed on 04/12/13) - Link to Closed Risk #244	Avoiding significant cultural resources could impact project cost/schedule.							REPLACED See Risk #244.		
77			40.04	R	S2		Closed	4/1/2013	9/25/2013	177.00	A total of 109 comment submissions, more than for any other environmental topic, were related to parks and parklands. Opposition to the use of the parkland and potential to affect the Rose Canyon Preserve were also noted, and could impact project development. (Confirmed Closed on 09/25/13)	Could impact project development.							MITIGATED Design has advanced.		
80.1			40.05	R	S4		Closed	11/1/2011	9/25/2013	694.00	Noise generated from wheel squeal around UCSD West station curves could exceed acceptable limits. Additionally the station and curves are close to residential buildings and may require improvements (double panel windows together with air conditioning units to diminish noise from the trains). High likelihood that noise mitigations would be required. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
80.2			40.05	R	S4		Closed	11/1/2011	9/25/2013	694.00	(b) Only three noise walls are currently proposed (12/200-4f) which may be inadequate mitigation. Additional walls could be required after analysis. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
80.3			40.05	R	All		Closed	11/1/2011	9/25/2013	694.00	(c) Final Comparative Evaluation of Alternatives, noted requests for sound mitigation in multiple locations not currently addressed. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
80.4			40.05	R	S3		Closed	11/1/2011	9/25/2013	694.00	(f) (d) There is a possibility that a sound wall or berm may be required at the Nobel Viaduct: on the west side of I-5 in order to counteract the planned sound wall on the east side. 1000' wall with 8' height. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
82	82, 213		40.06	R	All		Closed	11/1/2011	1/22/2014	813.00	Further enhancements to pedestrian and bicycle access at the stations as well as recreational trail improvements near the project. (Confirmed Closed on 01/22/14) - Link to Closed Risk #213	Could impact the project cost/schedule.							MITIGATED Draft EIR has been released and comments have been received.		
89			50	R	S1		Closed	11/1/2011	9/25/2013	694.00	It is not clear if the modifications to the system elements in the existing subsection-America Plaza to OTTC are to be executed in part or full by MTS force account forces. (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
103.1	103.1, 324	SYS	50.07	R	All		Closed	11/1/2011	9/3/2015	1402.00	There is a potential risk that additional improvements will be required to the Central Control. The estimate currently has \$1M with a total of 30% contingency, so \$1.3M total. (Confirmed Closed on 09/03/15) - Link to Closed Risk #324	Higher Cost							REPLACED See Risk #324.		
109		ROW	60.01	R	All		Closed	11/1/2011	1/22/2014	813.00	"Additional Services"(ROW soft costs) estimated at 25% of acquisition costs may not be sufficient considering reasonably low overall budget. (Confirmed Closed on 01/22/14)								MITIGATED ROW costs included in estimate.		
117			80	R	All		Closed	9/24/2013	1/13/2015	476.00	Professional Services costs are based on CBR percentages, which may vary when actual staffing plans are prepared. (Confirmed Closed on 01/13/15)	Professional Services costs may vary.							MITIGATED Professional Services are based on a bottoms-up estimate.		
118			40.04	R	All		Closed	4/1/2013	9/25/2013	177.00	The EIS/EIR should address temporary construction impacts including wetlands/wildlife impacts, groundwater and stormwater management. (Confirmed Closed on 09/25/13)	Unanticipated requirements could impact project cost/schedule.							MITIGATED Design has advanced.		
119			90	R	All		Closed	4/1/2013	9/25/2013	177.00	The need to consider transit access for and impacts to low-income and minority populations (Title VI). (Confirmed Closed on 09/25/13)	Could impact project concepts and design.							MITIGATED Design has advanced.		
123			10	R	All		Closed	11/1/2011	9/25/2013	694.00	FTA may not approve Equivalent Facilitation using deployable ramp for Mid-Coast (Confirmed Closed on 09/25/13)								MITIGATED Design has advanced.		
124		ENV	80.06	R	All		Closed	3/1/2013	8/14/2013	166.00	List of required permits - A more detailed plan that addresses all local, state and federal permits and the associated schedule associated with obtaining these permits needs to be developed. (Confirmed Closed on 08/14/13)								MITIGATED Identified permits.		
141	141, 282		80.02	R	All		Closed	3/1/2013	2/12/2014	348.00	Acquisition of project consultant services (management, design, project controls, etc.) via "on-call" agreements, which are established outside of the project, are subject to the cost and time capacity constraints of those agreements. (Confirmed Closed on 02/12/14) - Link to Closed Risk #282	Insufficient time/cost capacity could cause project cost and schedule impacts arising from disruptions in project staffing or turnover of experienced team members and resultant repetitive learning curves.							REPLACED See Risk #282.		

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230.8	230, 230.8	ROW	20.02	R	S4		Closed	8/22/2013	5/7/2014	258.00	Executive Drive Station: The straddle bent associated with this station may not be accepted by the community. (Confirmed Closed on 05/07/14) - Link to Closed Risk #230	Potential delays associated with finalizing station design.							AVOIDED Design is being modified to exclude a straddle bent.			
230.9	223, 230, 230.9	STA, TP	20.01	R	S4		Closed	8/22/2013	9/3/2015	742.00	Westfield UTC Station (Terminus): Delay in final design due to configuration of the station access and egress within Westfield's proposed parking structure and station. (Confirmed Closed on 09/03/15) - Link to Closed Risk #223 & #230	There is a potential to delay final design.							MITIGATED 65% design plan includes the egress and station access and has been coordinated with Westfield architects.			
231		CP, TP	50.01	R	S1		Closed	7/1/2013	9/29/2014	455.00	Nearside station control at OTTC/Taylor St. will require design concurrence from partners and other third parties; (NCTD and CPUC). (Confirmed Closed on 09/29/14)	Which could delay the project schedule.							MITIGATED NCTD has agreed to Taylor St. nearside station control.			
242	19, 242, 268.1, 329	TP	10.02	R	S1, S2		Closed	7/1/2013	2/12/2014	226.00	There is a risk that the current assumptions regarding track separation requirements of different modes have been changed during reviews by various parties. (Confirmed Closed on 02/12/14) - Link to Closed Risk #268.1 & #329	This could result in a redesign or mitigation may be required.							REPLACED See Risks #268.1 & #329.			
246	246, 280	ENV	80.02	R	All		Closed	7/1/2013	2/12/2014	226.00	Design development/refinement may result in significant impacts. (Confirmed Closed on 02/12/14) - Link to Closed Risk #280	If new significant impacts are identified it may require recirculation of the DSEIS/SEIR.							MITIGATED SANDAG has the Final SEIS/SEIR plan set.			
260			10.04	R	All		Closed	3/1/2013	2/12/2014	348.00	New Map 21 Requirements for cost effectiveness require a new method of calculation. (Confirmed Closed on 02/12/14)	To achieve new method of calculation will require new forecast modeling and revision of existing numbers. This effort is time sensitive to meet September, 2013 requisition for funding from FTA.							ACCEPTED			
268.1	19, 242, 268.1, 329	CP, TP	10.01	R	S1, S2		Closed	7/1/2013	9/29/2014	455.00	There is a risk of late concurrence from NCTD on track separation between heavy rail & light rail tracks. (Confirmed Closed on 09/29/14) - Link to Closed Risk #242 & #329	This would delay the project.							REPLACED See Risk #329.			
268.2		TP	10	R	S1, S2		Closed	9/24/2013	1/13/2015	476.00	The risk is a lack of concurrence from NCTD for vertical clearances. (Confirmed Closed on 01/13/15)	This would require a redesign.							MITIGATED NCTD orally concurred with clearances.			
269		TP	10.04	R	All		Closed	3/1/2013	8/16/2013	168.00	Development, negotiation and processing time for stakeholders/partners agreements exceed schedule assumptions. (Confirmed Closed on 08/16/13)								AVOIDED			
270		MC, TP	80.06	R	All		Closed	9/24/2013	9/29/2014	370.00	Limited legal resources. (Confirmed Closed on 09/29/14)	May create possible delays in processing third party agreements.							AVOIDED A dedicated legal position, and contracted legal support for right-of-way was added to the Mid-Coast Project Staff.			
271	271, 271.1, 271.2, 271.3	ROW	60.01	R	All		Closed	6/1/2013	9/25/2013	116.00	The project needs to gain agreement with the City of San Diego, UCSD, and VA for property without compensation. (Confirmed Closed on 09/25/13) - Link to Closed Risk #271.1, #271.2, & #271.3	This process could hold up various MOUs.							REPLACED See Risks #271.1, #271.2, & #271.3.			
271.1	200, 207, 271, 271.1, 271.2, 271.3, 324	ROW, TP	60.01	R	S1, S2, S4		Closed	6/1/2013	9/3/2015	824.00	There are potential delays associated with transfer of the City of San Diego owned property. (Confirmed Closed on 09/03/15) - Link to Closed Risk #200, #207, #271, #271.2, #271.3, #271.4, & #324	This may delay the FFGA. May cause schedule impacts.							MITIGATED City Council took action to transfer properties for project.			
271.2	106, 200, 207, 271, 271.1, 271.2, 271.3, 271.4, 323	CON, ROW, TP	60.01	R	S3, S4	R13, R14	Closed	6/1/2013	4/6/2016	1040.00	There are potential delays associated with the transfer of the UCSD owned property. (Confirmed Closed on 04/06/16) - Link to Closed Risk #106, #200, #207, #271, #271.1, #271.3, #271.4, & #323	This could delay the schedule and could delay the design because the parties have to agree on Gilman, Voigt, and UCSD real property terms.							MITIGATED Design approved by UCSD Design Board.			
274		ENV	80.06	R	S2	R6, R7, R8	Closed	9/24/2013	4/6/2016	925.00	Friends of Rose Canyon litigation. (Confirmed Closed on 04/06/16)	Potential delays, potential changes to the project scope and cost.							ACCEPTED Settlement is complete. Supplemental planting in Rose Creek area added to project. Ongoing monitoring program will be in place. Cost is far less than \$1M.			
279	244, 279	ENV	80.01	R	All		Closed	7/1/2013	12/11/2013	163.00	Additional subsurface archeological investigations could take longer than anticipated. (Confirmed Closed on 12/11/13) - Link to Closed Risk #244	Thereby delaying completion of Section 106 consultation with the SHPO and affecting the timing of the Final SEIS/SEIR.							MITIGATED Archeological investigations completed.			
280	246, 280	ENV	80.02	R	All		Closed	7/1/2013	8/14/2013	44.00	Changes to project design that occur between the Draft SEIS/SEIR and the Final SEIS/SEIR plan set. (Confirmed Closed on 08/14/13) - Link to Closed Risk #246	May result in unforeseen adverse impacts that could trigger the need for an additional round of public/agency review.							REPLACED See Risk #246.			
282	141, 282	CON, MC, ST	80.03	R	All		Closed	7/1/2013	1/13/2015	561.00	Time to execute Professional Service Task Orders could result in delays. (Confirmed Closed on 01/13/15) - Link to Closed Risk #141	This could impact development of 65% design and could affect the FFGA.							MITIGATED Task Orders have been issued.			
284	228, 284		20.01	R	All		Closed	9/24/2013	5/7/2014	225.00	Design criteria/guidelines are not established. (Process and response time). (Confirmed Closed on 05/07/14) - Link to Closed Risk #228	Designs could be delayed or could require redesign.							AVOIDED Design criteria was issued on 03/14/14.			
285	207, 271.1, 271.2, 271.3, 285	TP	80.06	R	All		Closed	6/1/2013	9/25/2013	116.00	Permits and approvals by other agencies may not be provided in a timely manner and delay Project - City of San Diego, UCSD, and USACE. (Confirmed Closed on 09/25/13) - Link to Closed Risk #207, #271.1, #271.2, & #271.3	Delay in Project.							REPLACED See Risks #271.1, #271.2, & #271.3			
293		ROW, SYS	60.01	R	All	All	Closed	12/12/2013	10/28/2015	685.00	ROW requirements for signal systems may require further analysis. (Confirmed Closed on 10/28/15)	Potential needs for more ROW							AVOIDED All properties have been identified and these parcels were included in the 65% plan set.			

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296	271.3, 296	TP	10.03	R	S4		Closed	9/24/2013	1/13/2015	476.00	Late acceptance of plans by VA Medical Center. (Confirmed Closed on 01/13/15) - Link to Closed Risk #271.3	Could impact schedule and budget.							REPLACED See Risk #271.3.					
299		ENV	40.04	R	All		Closed	4/1/2013	12/11/2013	254.00	Preliminary determination is that Mid-Coast is not grandfathered into Map 21 from previous New Starts requirements. Project may have to be re-rated for cost effectiveness. May require recalibration of the Series 11 model to 2009 survey. Project may or may not rank as high with new Map 21 process. (Confirmed Closed on 12/11/13)								ACCEPTED Will be re-rated during application for Engineering.					
300	11.1, 300, 319	CP, STR	40.04	R	S2		Closed	8/22/2013	5/7/2014	258.00	The required iterative process to complete the hydraulic model (in areas where the two projects run parallel to Rose Creek) and the resulting modification to the vertical design of the heavy rail may delay	May delay design of both projects.							MITIGATED Hydraulic review is complete and SANDAG is proceeding with appropriate design.					
302		CP, ENG, ENV, TP, UTL	40.04	R	All	All	Closed	8/22/2013	6/29/2016	1042.00	New stormwater requirements by the Regional Water Quality Control Board (RWQCB) may have to be met by the project. (Confirmed Closed on 06/29/16)	The project may be required to design to meet new regulations, which would delay final design and increase costs.							AVOIDED SANDAG received approval from City in February 2016 for design standard.					
303		TP	40.04	R	S2		Closed	8/22/2013	9/20/2013	29.00	Delay to obtaining 401 permit from USACE. (Confirmed Closed on 09/20/13)								MITIGATED Design has advanced.					
304		TP	40.04	R	S2		Closed	8/22/2013	9/20/2013	29.00	Delay to obtaining 1600 permit from California Dept. of Fish and Wildlife. (Confirmed Closed on 09/20/13)								MITIGATED Design has advanced.					
305	305, 305.1	ENV	10.01	R	S1		Closed	8/22/2013	9/29/2014	403.00	Additional portions of project may be within Coastal Commission Jurisdiction. (Confirmed Closed on 09/29/14) - Link to Closed Risk #305.1	A delay associated with resolving Coastal Zone Boundary may have an impact on the schedule.							ACCEPTED The project is in the Coastal Zone.					
305.1	305, 305.1	ENV	10.01	R	S1		Closed	10/22/2013	1/22/2014	92.00	Potential requirement for Coastal Commission Construction Permit. (Confirmed Closed on 01/22/14) - Link to Closed Risk #305	Additional design elements and work restrictions to address permit requirements for construction.							REPLACED See Risk #305.					
306		ENV	40.04	R	All		Closed	8/22/2013	12/11/2013	111.00	Schedule extension due to comments received draft SEIS/SEIR. (Confirmed Closed on 12/11/13)	Schedule extension							ACCEPTED Two months have been added to the schedule.					
319	11.1, 268, 298, 300, 319	CP	10.04	R	S2		Closed	10/22/2013	5/7/2014	197.00	Hydraulic for open channel configuration is being assessed (under SR52). (Confirmed Closed on 05/07/14) - Link to Closed Risk #11.1, #268, #298, & #300	Rise in water surface elevation assumptions could change in design of LRT.							MITIGATED Hydraulic review is complete and SANDAG is proceeding with appropriate design.					
335			40.06	R	S1		Closed	3/19/2014	4/29/2015	406.00	Potential enhancements to the pedestrian crossing at Balboa Station, widening the Caltrans ramp, and addition of traffic signals. (Confirmed Closed on 04/29/15)	May increase costs							ACCEPTED Cost will be included in the 65% estimate.					
336		ROW, UTL	60.01	R	All		Closed	3/19/2014	4/29/2015	406.00	Delays to the design of dry utilities may postpone the acquisition of real estate. (Confirmed Closed on 04/29/15)	Not being able to start the property acquisition process							MITIGATED Project has a good understanding of requirements.					
337		MC, ROW	60.01	R	All		Closed	3/19/2014	4/29/2015	406.00	Delay in awarding new on-call real estate appraisal contracts. (Confirmed Closed on 04/29/15)	This could delay the acquisition necessary for the project.							MITIGATED Appraisal contracts are in place.					
345		SAF, STA	20	R	S1, S3, S4		Closed	7/1/2014	9/3/2015	429.00	Station designs to comply with CA Fire Code 433 and NFPA 130. Need to review station designs to ensure compliance. (Confirmed Closed on 09/03/15)	Redesign certain elements of the stations.							MITIGATED Designs are being based on both the CA Fire Code 433 and NFPA 130 whichever one is more stringent.					
346		ENG, ENV, ROW	10.13	R	S3	R11	Closed	9/30/2014	4/6/2016	554.00	OPPORTUNITY The cost of planned mitigation for vibration to existing condominiums at La Paz may be greater than anticipated.	Could necessitate alternative mitigation strategies.							AVOIDED Floating slab has been eliminated.					
347	6.1, 347	CP, ENV, SAF	50.02	R	S1		Closed	9/30/2014	9/3/2015	338.00	There will be a need for active control warning systems at two private at-grade crossings. Between Tecolote & Clairemont at Littlefield St, the other between Clairemont & Balboa at Baker St. (Confirmed Closed on 09/03/15) - Link to Closed Risk #6.1	Additional costs associated and environmental impacts.							MITIGATED Crossings are proposed to be closed.					
357	290, 357	CON	10	R	S1, S2		Closed	2/19/2015	9/3/2015	196.00	Construction may not be able to effectively utilize the agreed upon AWW. (Confirmed Closed on 09/03/15) - Link to Closed Risk #290	Delay to construction schedule.							MITIGATED NCTD has provided more flexibility with the AWWs than originally anticipated.					

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M/C = Management Capacity
ROW = Right-of-Way

STA = Stations
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FTA Risk Categories

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Impact Scoring Breakdown

Impact Scores Legend	LOW 1	MEDIUM 2	HIGH 3
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359	359, 381	CON, ENV, SAF, TP	80.02	R	S1, S2, S3, S4	All	Closed	6/17/2015	6/29/2016	378.00	Changes to project definition may occur between the Final SEIS/SEIR plan set and 95% design plan set. (Confirmed Closed on 06/29/16) - Link to Closed Risk #381	This could require additional environmental analysis and may require circulation of supplemental environmental documentation. If change has new or increased impact, it could affect resource agency permitting and the overall schedule.							REPLACED See Risk #381.		
367		UTL	40.02	R	All	All	Closed	9/22/2015	11/29/2016	434.00	SDG&E Environmental clearance is delayed. (Confirmed Closed on 11/29/16)	There could be a delay in SDG&E relocations.							MITIGATED The project has SDG&E environmental clearance.		
383		CON, CP, ENV	80.06	R	S1	R2, R3	Closed	6/29/2016	11/29/2016	153.00	Delays to issuance of USACE 408 determination. (Confirmed Closed on 11/29/16)	Would delay the issuance of 404 and start of construction in San Diego River area.							MITIGATED 408 determination was achieved.		
140			80				Closed	6/1/2011	6/5/2013	735.00	It is likely that there will be insufficient capacity available with the currently assigned project management staff to address the magnitude of demands of this "mega-project" as it advances from the Planning phase into Preliminary Engineering, Final Design and Construction. Specific capacity concerns regarding the need to add a Senior Project Director and a Risk Manager have been identified. (Confirmed Closed on 06/05/13)						Memories		MITIGATED		
202	19, 202		10.04				Closed	6/1/2011	11/1/2011	153.00	SANDAG Risk Assessment Report (Sept 2010) notes a plan to widen the existing NCTD bridge over Rose Creek to accommodate an additional heavy rail track and install an additional structure for 2 light rail tracks. It is also possible that these could be combined into a single structure for the 4 tracks. (Confirmed Closed on 11/01/11) - Link to Closed Risk #19								REPLACED By Risk #19.		
203	19, 203		10.04				Closed	6/1/2011	11/1/2011	153.00	Rose Creek NCTD: There is an opportunity to replace the existing wooden bridge with a bridge to accommodate 2 light rail and 2 heavy rail tracks. This could aid the environmental process by reducing future impact to Rose Creek. However, this is not likely a direct benefit to the Mid-Coast Corridor Transit Project. (Confirmed Closed on 11/01/11) - Link to Closed Risk #19								REPLACED By Risk #19.		
204			10.04				Closed	6/1/2011	11/1/2011	153.00	I-5 Crossing at Voigt Drive: Running at grade in the median of Voigt Drive might require several safety improvements imposed by PUC and UCSD due to proximity to the high school, and Voigt Dr. becoming a 4 lanes facility when the direct access ramps on I-5 are constructed. Base assumes elevated. No cost impact (Confirmed Closed on 11/01/11)								AVOIDED Running at grade is not selected alternative		
205			10.04				Closed	6/1/2011	11/1/2011	153.00	Genesee Viaduct: The Mid-Coast project is reliant upon Voigt Drive realignment in the current design. There is a schedule risk if the realignment does not take place and redesign and approvals are needed at a later stage in design. (Confirmed Closed on 11/01/11)								AVOIDED Applies to at grade alternative, not selected		
206			10.06				Closed	6/1/2011	11/1/2011	153.00	Cut and Cover Structure north of UCSD West Station: is an opportunity for at-grade track (instead of cut-and-cover, Station 572-575) at future proposed soccer fields (Confirmed Closed on 11/01/11)								MITIGATED No opportunity available.		
207	35, 207		10.06				Closed	6/1/2011	11/1/2011	153.00	USCD W Station: Lack of agreements with UCSD could cause need to redesign the West structure based on the University master plan. May not be a cost increase as the redesign could eliminate the cut and cover structures at both ends of the station. (Confirmed Closed on 11/01/11) - Link to Closed Risk #35								REPLACED By Risk #35.		
208			10.07				Closed	6/1/2011	11/1/2011	153.00	Wetlands: The wetlands crossed in Alternative 5 are considered ecologically sensitive and could cause additional cost in addressing requirements. (Confirmed Closed on 11/01/11)								AVOIDED Applies to at grade alternative, not selected		
209			10.11				Closed	6/1/2011	11/1/2011	153.00	Trackwork may be overpriced in the current estimate (Confirmed Closed on 11/01/11)								MITIGATED Adjustments were already incorporated in latest cost estimate		
210			20.01				Closed	6/1/2011	11/1/2011	153.00	A station could potentially be located at Ashton St, eliminating the need for stations at both Tecolote Rd and Clairemont Dr. The need to accommodate or relocate existing Fire Station and provide a parking structure could result in net increase in cost (Confirmed Closed on 11/01/11)								MITIGATED Scoping has been completed; no additional station to be pursued		

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SANDAG Mid-Coast Project

ALL RISKS

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Impact Scoring Breakdown

Impact Scores Legend	LOW 1	MEDIUM 2	HIGH 3
(P) Probability	<10%	>10% <50%	>50%
(C) Cost Impact	< \$1 M	> \$1M but < \$5M	> \$5M
(S) Schedule Impact	< 1 month	> 1 month but < 4 months	> 4 months
Rating	< 6	7 - 12	13 - 18
Score = (Cost + Schedule) * Probability			

Risk #	Linked Risk #	Mid-Coast Class.	SCC	FTA Risk Cat.	Seg.	Rea.	Status	Date Opened	Date Closed	Days Between	Risk Description (RD)	Consequence	P	C	S	Score	Interim Action	Action Finish Date (AFD)	Risk Mitigating Action (RMA)	RMA Target Finish Date (TFD)	Responsible Party (RP)	
Z11	14, Z11		20.01				Closed	6/1/2011	11/1/2011	153.00	Clairemont Dr. Station requires widening of the Clairemont Drive/Morena Blvd Crossing. Caltrans approval is required for the planned signalization at the bus stop located on Clairemont Drive (WB) / I-5 (NB) on-ramp. This may require redesign if approval is not granted. The Project may need to design new bus loop route to serve the station. (Confirmed Closed on 11/01/11) - Link to Closed Risk #14								REPLACED See Risk #14.			
Z12	35, Z12		20.01				Closed	6/1/2011	11/1/2011	153.00	USCD W Station: Lack of agreements with UCSD could cause need to redesign the West structure and station based on the University master plan. May not be a cost increase as the redesign could eliminate the cut and cover structures at both ends of the station. (Confirmed Closed on 11/01/11) - Link to Closed Risk #35								REPLACED See Risk #35.			
Z13	82, Z13		40.06				Closed	6/1/2011	11/1/2011	153.00	Aerial Structure at Rose Creek North has potential for involvement by bicycle path stakeholders. (Confirmed Closed on 11/01/11) - Link to Closed Risk #82						Memories		REPLACED See Risk #82.			
Z14	83, Z14		40.07				Closed	6/1/2011	11/1/2011	153.00	Project has assumed that the developer at the vacant shopping mall adjacent to the Clairemont Dr. Station will allow parking in a potential new development at this site. No Agreement exists at this time. The unconstrained travel demand model predicts that approximately 250+ parking spaces would be required at this station. (Confirmed Closed on 11/01/11) - Link to Closed Risk #83								REPLACED See Risk #83.			
Z15			60.01				Closed	6/1/2011	11/1/2011	153.00	Right-of-way take and site improvements at the Union Tribune Building are no longer needed immediately North of the San Diego River Crossing. This represents an opportunity to remove these costs from the current estimate. (Confirmed Closed on 11/01/11)								MITIGATED Adjustments were already incorporated in latest cost estimate			
Z16	7.1, 9.1, 9.2, Z16, Z17		10.08				Closed	6/1/2011	11/1/2011	153.00	Potential need to grade separate at Old Town Station to address frequency of service could affect cost and schedule if performed as part of Mid-Coast project (Confirmed Closed on 11/01/11) - Link to Closed Risk #7.1, #9.1, #9.2, & #Z17								REPLACED See Risks #7.1 & #9.1			
Z17	7.1, 9.1, 9.2, Z16, Z17		10.08				Closed	6/1/2011	11/1/2011	153.00	Potential need to grade separate at Old Town Station to address frequency of service could affect interfaces and schedule if performed as separately funded project (Confirmed Closed on 11/01/11) - Link to Closed Risk #7.1, #9.1, #9.2, & #Z16								REPLACED See Risks #7.1 & #9.1			
Z18	26.1, 27.1, 28.1, 29.1, 30.1, 31.1, Z18		10.04				Closed	6/1/2011	11/1/2011	153.00	Aerial Structure - I-5 to UTC Transit Center significant risks include: the need to keep all major arteries (I-5, Voigt Drive, Genesee Ave) in service during construction; possible need for temporary easements; impact to businesses in the area; constructability issues including need for temporary supports, transportation and staging/laydown requirements, possible impact of pier type and location on existing utilities and/or left turn lanes; potential for re-design due to other infrastructure improvements planned in the area, and/or community requirements. (Confirmed Closed on 11/01/11) - Link to Closed Risks #26.1, #27.1, #28.1, #29.1, #30.1, & #31.1						Memories		REPLACED See Risks #26.1, #27.1, #28.1, #29.1, #30.1, & #31.1			
Z19	24.1, Z19		10.04				Closed	6/1/2011	11/1/2011	153.00	I-5 Proposed Direct Access Ramp (Sta 589): Drawing T-121: Is the work for Voigt Drive access ramp to/from I-5 in this contract or "By Others"? What is the timing of both contracts? Will the new LRV bridge piers conflict with the future I-5 access ramps? Ramps may preclude pier locations for the LRV structure. (Confirmed Closed on 11/01/11) - Link to Closed Risk #24.1								REPLACED See Risk #24.1			
Z20	12, 16, 17, 18, Z20		10.04				Closed	6/1/2011	11/1/2011	153.00	Minimal actual design of aerial structures completed to date; cost estimate appears to be based on cast-in-placed post-tensioned concrete box sections. Bridge type studies for aerial structures could indicate alternative structures with possible significant impact to cost and schedule (Confirmed Closed on 11/01/11) - Link to Closed Risk #12, #16, #17, & #18								REPLACED By Risks #12, #16, #17, & #18.			
Z21	12, 16, 17, 18, Z21		10.04				Closed	6/1/2011	11/1/2011	153.00	Structural systems are generally not established and dimensioned to show number of spans, span lengths, substructure design, etc. The structural system concepts will be advanced and better defined during P.E. (Confirmed Closed on 11/01/11) - Link to Closed Risk #12, #16, #17, & #18								REPLACED See Risks #12, #16, #17, & #18.			
Z22			20.01				Closed	6/1/2011	11/1/2011	153.00	Tecolote Road Station Drawing TL-103 indicates a substation east of the Station, but Drawing TC-102 does not indicate the substation. There is cost and schedule risk associated with the discrepancy (Confirmed Closed on 11/01/11)								MITIGATED Corrected by Project Team			
Z23			20.01				Closed	6/1/2011	11/1/2011	153.00	As a safety concern, design should consider adding train crash protection onto the existing bridge columns located on the westerly platform of Tecolote Station, which could affect minimum clearances for the station layout. (Confirmed Closed on 11/01/11)								MITIGATED Considered by Project Team			
Z24	14, Z24		20.01				Closed	6/1/2011	11/1/2011	153.00	Clairemont Drive Station drawings do not clearly identify Clairemont Drive location and vertical clearance for above the proposed Station. If adding lanes to Clairemont Drive bridge, there will be substantial scope, cost and schedule impacts (Confirmed Closed on 11/01/11) - Link to Closed Risk #14								REPLACED See Risk #14.			

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Z25			20.01				Closed	6/1/2011	11/1/2011	153.00	As a safety concern, design should consider adding train crash protection onto the existing bridge columns located between the tracks at Clairemont Drive Station, which could affect minimum clearances for the station layout, cost and schedule risks associated with this (Confirmed Closed on 11/01/11)								MITIGATED Considered by Project Team		
Z26			20.01				Closed	6/1/2011	11/1/2011	153.00	Discrepancies in UCSD West Station: Drawings TX-112 and TL-120 indicate an at-grade station in an area of retained fill less than 12-ft deep, but Drawing TC-108 indicates an at-grade station in an extremely deep cut section with elevator and stair access to a plaza located above the station (Confirmed Closed on 11/01/11)								MITIGATED Corrected by Project Team		
Z27	50, Z27		20.02				Closed	6/1/2011	11/1/2011	153.00	UCSD East Station Drawing TL122 does not indicate the site plan below the aerial station, vehicle and pedestrian access to the area below the Station or accessible access to the Station. (Confirmed Closed on 11/01/11) - Link to Closed Risk #50								REPLACED See Risk #50.		
Z28			20.07				Closed	6/1/2011	11/1/2011	153.00	There are no elevators indicated at UCSD East Station (no site plan provided) for a difference in elevation of about 30-ft from the aerial platform level down to the existing surface parking lot level. If elevators are not provided, it will be a violation of the design criteria, and if provided would result in a cost risk to the project (Confirmed Closed on 11/01/11)								MITIGATED Corrected by Project Team		
Z29	46.1, 46.2, Z29		40.02				Closed	6/1/2011	11/1/2011	153.00	Site specific surveys and identification of buried utilities have not been fully performed. Coordination is required the respective utility companies. (Confirmed Closed on 11/01/11) - Link to Closed Risk #46.1 & #46.2								REPLACED See Risks #46.1 & #46.2.		
Z30			40				Closed	6/1/2011	11/1/2011	153.00	Drawing GE-002 states that the vertical coordinate system is based on City of San Diego Mean Sea Level. LRT Design Criteria states National Geodetic Vertical Datum of 1929, second order accuracy or higher. Could create confusion and errors if design does not clearly identify datum for basis of design (Confirmed Closed on 11/01/11)								MITIGATED Considered by Project Team		
Z31			50.03				Closed	6/1/2011	11/1/2011	153.00	Apparent discrepancies between number of TPSSs on the layout drawings and the cost estimate (Confirmed Closed on 11/01/11)								MITIGATED Corrected by Project Team		
Z32			50.03				Closed	6/1/2011	11/1/2011	153.00	Drawings TL-109 and TC-104 indicate two substations at Balboa Station approximately 950-ft apart (Confirmed Closed on 11/01/11)								MITIGATED Corrected by Project Team		
Z33			60.01				Closed	6/1/2011	11/1/2011	153.00	"Good will" (business damage) claims can be submitted by each individual tenant at the Nobel Dr. shopping center (but are not reimbursable by federal funding) (Confirmed Closed on 11/01/11)								MITIGATED Considered by Project Team		
Z34	83, Z34		60.01				Closed	6/1/2011	11/1/2011	153.00	Additional ROW will be needed if significantly greater number of parking spaces are required to satisfy ridership needs (Confirmed Closed on 11/01/11)								REPLACED See Risk #83.		
Z35			60.02				Closed	6/1/2011	11/1/2011	153.00	California Housing and Community Development Code affects relocation costs that are reimbursable by SANDAG; if less than Uniform Act, budget needs to be increased to provide Uniform Act level (Confirmed Closed on 11/01/11)								MITIGATED Considered by Project Team		
Z36			70.01				Closed	6/1/2011	11/1/2011	153.00	Concern that during peak periods many riders (students) may carry bicycles on board the trolley. The new SDEIS / SFEIS should discuss bicycle ridership, and if the number of bikes can be stored onboard the trolley (Confirmed Closed on 11/01/11)								MITIGATED Considered by Project Team		
Z37	130, Z37		70.01				Closed	6/1/2011	11/1/2011	153.00	Vehicle costs are based on current experience; actual market conditions at time of procurement could vary (Confirmed Closed on 11/01/11) - Link to Closed Risk #130								REPLACED See Risk #130.		
Z38			10				Closed	6/1/2011	11/1/2011	153.00	Final Definition of Alternatives Report (August 2010) shows weekday ridership (On/Off) for each station. Data in Table S-2 is confusing. For example, UTC Transit Center shows daily riders on=3083 but daily riders off =1677. This is an end-of-line station where daily on would normally equal daily off. Another example is UCSD West Station where daily riders on =186+1132=1318, but daily off = 6846+1735 =8581. Clarification is needed. Could impact fare projections, parking requirements, etc. (NOTED IN SCC10) (Confirmed Closed on 11/01/11)								MITIGATED Corrected by Project Team		
Z39	44, Z39		10				Closed	6/1/2011	11/1/2011	153.00	Site boundary and existing conditions have occurred at conceptual level only and reportedly will be updated during P.E. Could impact design and construction. (Confirmed Closed on 11/01/11) - Link to Closed Risk #44								REPLACED See Risk #44.		
Z40	45, Z40		40.03				Closed	6/1/2011	11/1/2011	153.00	Geotech investigations are not completed. Project specific geotechnical data was not available for the current PMOC review. The Project Baseline Schedule (08/30/10) indicates Subsurface exploration and laboratory testing will be performed during PE. (Confirmed Closed on 11/01/11)								REPLACED See Risk #45.		

Appendix B

Mid-Coast Corridor Transit Project Risk Matrix

	RISK ALLOCATION AND CONTINGENCY LIST	ALLOCATED TO		COMMENTS
		SANDAG	Contractor	
	SCHEDULE			
1	<u>Construction Implementation</u> : Cost of acceleration and recovery and any liquidated damages assessed when caused by the Contractor including but not limited to: changes to construction sequences or staging, re-work of rejected or improperly sequenced work, late delivery by suppliers or subcontractors, low production rates, other delays caused by Contractor action or inaction.		X	Typical contractor risk included in standard SANDAG construction contract.
2	<u>Return to Service</u> : Prompt, efficient work during railroad shutdown "all work windows" (AWW's) is imperative in the active railroad corridor. Contractor has the cost and schedule consequences (risk) for any delay in return to service from scheduled AWW shutdowns or rail service delays caused by unscheduled and unapproved delays to regular service including fouling of tracks in the course of construction. This risk includes any and all penalties imposed by MTS or NCTD for return to service delay or cost of service disruption.		X	Typical contractor risk included in standard SANDAG construction contract.
3	<u>Construction Access - Right-of-Way</u> : Risk caused by delays in the delivery of access to property required to implement construction per the permanent easements, temporary construction easements, and property acquisition (ROW) availability indicated in the Mid-Coast supplement. The Contractor shall coordinate with SANDAG and take all reasonable measures to minimize cost and schedule impacts for any property delivered after the dates indicated.	X		Typical SANDAG risk included in standard SANDAG construction contract.
4	<u>Construction Access - SANDAG Acquired Permits</u> : Risk caused by delays in the delivery of access to construction in areas requiring resource agency permits per the permit availability indicated in the Mid-Coast supplement. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for any permits delivered after the dates indicated.	X		Typical SANDAG risk included in standard SANDAG construction contract.
5	<u>Construction Access - SANDAG Acquired Agreements</u> : Risk caused by delays in the delivery of access to construction areas controlled by third parties including but not limited to: UCSD, Caltrans, Veterans Administration and City of San Diego required to implement construction per the agreements availability indicated in the Mid-Coast supplement. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for any agreement delivered after the date(s) indicated.	X		Typical SANDAG risk included in standard SANDAG construction contract.
6	<u>Third Party Utility Relocations</u> : Risk caused by delays in the delivery of access to construction areas required to implement construction or delays to the Contractor's construction per the utility relocation work orders indicated in the Mid-Coast supplement. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for any utility relocation delivered after the date(s) indicated.	X		Typical SANDAG risk included in standard SANDAG construction contract.

MID-COAST CORRIDOR TRANSIT PROJECT RISK MATRIX
Date: 9-12-16

7	<u>Contractor Acquired Permits and Approvals</u> : Risk caused by delays in acquiring permits included in or required by the Mid-Coast supplement including permits and approvals from SANDAG or a third party including but not limited to: UCSD, Caltrans, MTS, NCTD, RWQCB, and City of San Diego for right-of-entry, traffic control, dewatering, SWPPP, and other similar permits and approvals. SANDAG shall take reasonable measures to assist the Contractor in acquiring its permits and minimizing cost and schedule impacts. Where required, SANDAG will sign or approve completed Contractor required permit applications. SANDAG retains risk for failure to provide documents and materials needed to obtain permits.		X	Typical contractor risk included in standard SANDAG construction contract.
8	<u>IFC/NTP Delay</u> : Risk from delays in providing Issued for Construction (IFC) plans and specifications after execution of the Mid-Coast supplement as indicated in the supplement. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for any NTP or IFC plans and specifications delivered after the date(s) indicated.	X		SANDAG has the risk for late issuance of a change order that incorporates IFC plans and specification as indicated in the Mid-Coast supplement SANDAG has the risk to issue additional IFC plans and specification prior to agreed dates in the Mid-Coast supplement. SANDAG is scheduled to have the majority of IFC plans and specification complete prior to NTP and all remaining IFC plans complete in January 2017.
OWNER/ENGINEER RELATIONS				
9	<u>SANDAG Construction Approval Review</u> : Risk caused by delays in the review of required deliverables within the review period specified in the Mid-Coast supplement. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for any deliverable returned after the specified review time limit. This includes, but is not limited to, RFI's, shop drawings, and various required plans. The Contractor has the risk for deliverables that are submitted late, non-compliant or incomplete.	X		Typical SANDAG risk included in standard SANDAG construction contract.
PROJECT STAKEHOLDER RESTRICTIONS				
10	<u>UCSD Campus Restrictions</u> : A Construction License Agreement between SANDAG and UCSD provides terms and conditions for construction on UCSD campus including requirements for: access, exclusive contractor use areas, non-exclusive use areas, work day and hour requirements, UCSD construction activity reviews and approves, housekeeping and work area control requirements and other requirements specific to construction on an active university campus setting. This agreement will be included by reference in the Mid-Coast supplement. The risk for complying with the requirements of this agreement related to the conduct of construction is the Contractor's risk.		X	This agreement is in final draft, the Contractor was involved in resolving terms and work areas with the University and was aware of the requirements in negotiating the GMP.

MID-COAST CORRIDOR TRANSIT PROJECT RISK MATRIX
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11	<u>UCSD West Campus Restrictions:</u> Construction working hours and working days on UCSD from the VA station to the east R/W of I-5 (West Campus) will be restricted by UCSD. Hours and work weeks are 9:00 am to 7:30 pm, Monday through Friday, respectively (regular working days). In addition, work will be shutdown or restricted for six weeks in each calendar year (two full weeks in each of the 3 academic quarters for finals). Relief from these working hours and days restrictions may be granted on a case by case basis by UCSD. Requests for relief from restrictions and for additional Saturday work days are outlined in the Construction License Agreement with the University. The Contractor may prepare, and SANDAG will assist, with requests for additional working hours and days. In the GMP price, SANDAG has the risk that the Contractor will not be provided additional Saturday work days, to offset up to 20 days per calendar year that the Contractor is prohibited from working on UCSD West due to the restrictions reflected as part of this risk. The Contractor shall take all reasonable measures to minimize cost and schedule delays if the final restrictions exceeds 20 regular working days in a calendar year.	X		The University requires all loud construction and maintenance activities on campus to stop for the week prior to and during the week of finals for each of three academic quarters of the school year on the West Campus. SANDAG is in final negotiations with the University for at least ten additional Saturdays per calendar year to compensate for the finals weeks restrictions.
12	<u>VA Medical Center:</u> A Revocable License Agreement between SANDAG and the VA will provide terms and conditions for construction on the VA hospital campus including requirements for: access, contractor use areas work day and hour requirements, housekeeping, work area control requirements and other requirements specific to construction on an active hospital campus setting. This agreement will be included by reference in the Mid-Coast supplement. The risk for complying with the requirements of this agreement related to the conduct of construction is the Contractor's risk.		X	SANDAG has a cooperation MOU with the VA, and will have a license agreement with the VA for access and construction work areas. Additional work areas may be available depending on VA expansion plans and the Contractor will help to define the request of the VA. The work area provided will be as indicated in the draft Revocable License Agreement.
13	<u>Caltrans:</u> SANDAG and Caltrans have a Master Agreement, a Joint Use and Maintenance Agreement, and a signed Project Report (PR), which provide terms and conditions for construction on the I-5 freeway. These agreements and the PR allow the Contractor to acquire construction encroachment permits for access, contractor use areas, work day and hour requirements, housekeeping and work area control requirements, detours and traffic control, and other requirements specific to construction on an operating interstate freeway. These agreements will be included by reference in the Mid-Coast supplement. The risk is for complying with the requirements of these agreements and securing and complying with permits for construction and is the Contractor's risk.		X	Typical contractor risk included in standard SANDAG construction contract. SANDAG has an approved PR and agreements in place with Caltrans for the Project's construction in the I-5 right of way. The Contractor is required to obtain a "dual" permit from Caltrans. The Contractor is required to follow the terms of their Caltrans permits.
	ADJACENT PARTIES TO ALIGNMENT			
14	<u>Adjacent Property Damage:</u> Damage to adjacent private or third party agency property shall be the Contractors risk including the cost for repairs and other damages to make the adjacent owner whole.		X	Typical contractor risk included in standard SANDAG construction contract.

MID-COAST CORRIDOR TRANSIT PROJECT RISK MATRIX
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15	<u>Street Condition and Repair</u> : Risk for repair of damage to any public or private streets and staging areas used by the Contractor and damaged because of: improper loads, use of unapproved haul routes, failure to contain dirt and debris to the construction areas including tire mud and dirt, or other damage caused by construction activity.		X	Typical contractor risk included in standard SANDAG construction contract.
16	<u>Added Street Reconstruction or Repair</u> : Risk for repair of public or private streets outside the limits of street repair included in the GMP and Mid-Coast supplement plans and specifications which is requested by the owner of the street and approved by SANDAG.	X		Typical SANDAG risk included in standard SANDAG construction contract.
PERMITS				
17	<u>New Regulatory and Environmental Resource Agency Requirements</u> : Risk caused by new or revised regulatory requirements not in permit conditions known at time of GMP. The contractor shall take all reasonable measures to minimize cost and schedule delays.	X		Typical SANDAG risk included in standard SANDAG construction contract.
18	<u>Earthwork Export Risk</u> : The GMP price for earthwork export was based on a haul and dispose cost of \$300 per load. The additional cost of hauls over \$300 per load would be at SANDAG expense. SANDAG assumes only the additional cost risk, all other risk is retained by the Contractor. The cost reduction of hauls less than \$300 per load would be credited to SANDAG. The Contractor and SANDAG will coordinate efforts to identify spoil sites and Contractor will evaluate and select the lowest cost, practical site. The Contractor will provide information to SANDAG prior to hauls of the location of the disposal site, mileage, number of loads and estimate of per load cost. SANDAG will monitor haul and disposal sites and based upon Contractor provided open book cost information adjust the price per load and quantity to the haul sites used during project construction.	X	X	Negotiated cost risk split between SANDAG and the Contractor. SANDAG has risk if the cost per load of export soil goes over \$300. SANDAG takes credit for cost per load under \$300. SANDAG assumes no schedule risk. SANDAG and the Contractor agreed to coordinate in identifying a spoil location at less cost than \$300 per load and to reduce the overall export necessary. SANDAG has identified a Caltrans site and a Port of San Diego site that require significant borrow.
19	<u>RWQCB - SWPPP</u> : Risk for compliance with and maintenance of construction stormwater control requirements including changes in water quality laws/regulations or SWPPP requirements.		X	The Risk related to this item was accepted fully by the Contractor during the GMP negotiations and SANDAG bears no risk for this item.
TAXES, FEES				
20	<u>Taxes</u> : Change in tax rate or new assessment		X	This risk was accepted by the Contractor during GMP negotiations.
SCOPE ELEMENTS				
21	<u>Scope Revisions</u> : This item covers the risk for any modifications made to the GMP Plans and Specifications that advances, details, clarifies and further delineates the work reflected in the GMP Plans and Specifications. SANDAG retains the risk related to the addition of entirely new work elements and/or material changes to an item of work from that on which the GMP Item price was originally negotiated.	X	X	SANDAG risk is for added scope or significant changes from the GMP plan set to IFC. Contractor risk is in design refinements from the GMP plan set.

MID-COAST CORRIDOR TRANSIT PROJECT RISK MATRIX
Date: 9-12-16

22	<u>Traffic Management</u> : The Contractor is responsible for traffic management, including preparing detailed traffic control plans to be submitted to the jurisdiction for approval. SANDAG GMP and IFC plans only contain general traffic handling and phasing. This risk is for all project traffic management and implementation including the development of detailed traffic control information required by the jurisdictions to obtain traffic control permits.		X	Typical provisions for MOT is included in the GMP. COZEPP and Freeway Service Patrol will be furnished directly by SANDAG.
23	<u>Vibration</u> : Mitigation of construction vibration and the cost of damage or loss of use due to construction vibration is a Contractor risk at locations and for receptors indicated in the Mid-Coast supplement, except for construction vibration and the cost of damage or loss of use because of unforeseen conditions, which is a SANDAG risk.	X	X	Typical contractor risk for vibration is included in standard SANDAG construction contracts. SANDAG would have the risk for vibration mitigation if unforeseen conditions require pile driving, rock drilling or other vibration generating construction method.
24	<u>Noise</u> : Contractor has the risk for mitigation of construction noise and damages or loss of use due to construction noise at a sensitive receptor at the levels indicated in the Mid-Coast supplement. Control measures to be used by the Contractor include equipment selection, construction methods, work hours, sequencing, or other means. SANDAG retains the risk of additional measures required at sensitive receptors at locations where construction noise, after application of Contractor required noise control measures, are not adequate to meet levels for sensitive receptors.	X	X	Typical contractor risk for noise control is included in standard SANDAG construction contracts and follows the requirements of the local jurisdiction. In areas with residents, schools, or hospitals, SANDAG may determine there is a need to augment noise control.
25	<u>Rock and Soil Conditions</u> : Risk for rock or soil conditions not identified in plans or geotechnical reports provided to the Contractor or for conditions that can be reasonably determined by site investigations is a SANDAG risk. The Contractor shall take all reasonable measures to minimize cost and schedule impacts in the event unforeseen rock or soil conditions are encountered that require changes to construction means and methods.	X		Typical SANDAG risk included in standard SANDAG construction contract. Significant investigative sampling and reports have been provided to the Contractor.
26	<u>Office and Laydown</u> : The cost of the Contractor's construction offices and laydown areas is a SANDAG risk, as negotiated in the GMP. The Contractor will work with SANDAG cooperatively to identify reasonable and functional office and laydown facilities and minimize cost including the use of SANDAG property, private property and third party agency property.	X		Typically, this is a contractor risk item. The cost of offices and yards were removed from the GMP during negotiations. SANDAG will work with the Contractor to identify offices and laydown yards for the project. SANDAG has identified potential sites and is working with the Contractor on locations.
27	<u>Power Connections</u> : Risk for bringing power to connection points indicated on the GMP plans is a SANDAG cost. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for providing power connections.	X		Typical SANDAG risk included in standard SANDAG construction contracts. Power feed designs have not been completed by SDG&E.
	MATERIAL			
28	<u>Escalation, Availability of Material and Equipment</u> : Cost risk from escalation of labor, materials or equipment, and the availability of material or equipment.		X	Typical contractor risk included in standard SANDAG construction contract.

MID-COAST CORRIDOR TRANSIT PROJECT RISK MATRIX
Date: 9-12-16

	SUBCONTRACTORS			
29	<u>Subcontractor Risk:</u> General subcontractor risk for unforeseen default, change in sequence, subcontracting scope gaps, resolution of small changes and issues, unexpected price increases after GMP, and/or underperforming subcontractor.		X	Typical contractor risk included in standard SANDAG construction contract.
	UTILITY RELOCATION & UTILITY SERVICES			
30	<u>Unknown and/or abandoned utility:</u> Contractor's risk is to locate and protect in place utilities not shown on the plans. SANDAG risk is for relocation of unknown utilities that cannot be protected in place and for unknown utilities that require relocation of the utility or redesign of a project element. The Contractor shall take all reasonable measures to minimize cost and schedule impacts related to resolving unknown and/or abandoned utilities encountered.	X	X	Typical contractor risk included in standard SANDAG construction contract. Contractor is to pothole all utilities marked out in the field with sufficient lead time to avoid delays.
31	<u>Concurrent Dry Utility work:</u> Contractor is to coordinate with utility companies to eliminate impacts due to concurrent work. SANDAG retains the risk for delays caused by action or inaction by SANDAG.		X	Typical contractor risk included in standard SANDAG construction contract. Contractor will work with and around and mitigate issues to the extent possible/reasonable.
	ENVIRONMENTAL			
32	<u>Unanticipated Sensitive Resources:</u> Schedule delay to a controlling item of work for unanticipated environmentally sensitive discoveries including archaeological, endangered species, paleontological, biological, etc. The Contractor shall take all reasonable measures to minimize cost and schedule impacts due to this type of discovery.	X		Typical SANDAG risk included in standard SANDAG construction contract. Contractor is to coordinate work to minimize impacts and to accelerate work as practical to minimize impacts. SANDAG responsible for major discoveries and major changes to environmental requirements.
	HAZARDOUS MATERIAL			
33	<u>Contamination:</u> Risk for encountering and mitigating unknown or unanticipated contaminated soils and water, underground storage tanks, lead paint, asbestos or other hazardous substances or contamination. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for proper removal of contamination.	X		Typical SANDAG risk included in standard SANDAG construction contract. SANDAG retained the risk for mitigation of hazardous materials or contamination. Soil sampling and analysis during the FSEIS/FSEIR preparation and experience with contaminated soils and groundwater on other projects indicate SANDAG's risk exposure is low.

MID-COAST CORRIDOR TRANSIT PROJECT RISK MATRIX

Date: 9-12-16

34	<u>Groundwater</u> : Risk for managing ground water as identified in the plans, geotechnical and hydrological reports and logs provided to the Contractor. SANDAG has risk that the Contractor encounters ground water at location and depth other than that shown on plans or in the geotechnical logs and reports provided to the Contractor or as can be reasonably determined by site investigations. The Contractor shall take all reasonable measures to minimize cost and schedule impacts in the event undocumented groundwater conditions are encountered.	X	X	Typical SANDAG risk included in standard SANDAG construction contracts.
	OWNER SUPPLIED MATERIALS /EQUIPMENT			
35	<u>Owner supplied materials and equipment</u> : Risk caused by delays in the delivery of materials or equipment furnished by SANDAG per the delivery dates indicated in the Mid-Coast supplement. The Contractor shall take all reasonable measures to minimize cost and schedule impacts for any materials and equipment delivered after the dates indicated.	X		Typical SANDAG risk included in standard SANDAG construction contracts.



Appendix C

Final Value Engineering Study Report Executive Summary

Final Value Engineering Study Report



Mid-Coast Corridor Transit Project

May 2014

Prepared by
Value Management Strategies, Inc.





"Value Leadership"

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Date: May 23, 2014

John Haggerty
Div. Director Rail
SANDAG
401 B St, Ste. 800
San Diego, CA 92101

Subject: Final Value Engineering Study Report
Mid-Coast Corridor Transit Project

Dear Mr. Haggerty:

Value Management Strategies, Inc. is pleased to transmit this Final VE Study Report for the referenced project. This report summarizes the events of the study conducted March 3 through 7, 2014 in San Diego, California. The implementation disposition for all VE alternatives is also documented in this report.

It was a pleasure working with SANDAG and the project team on this study, and we look forward to future opportunities. If you have any questions or comments concerning this final report, please do not hesitate to contact us at (760) 741-5518 or email Rob@vms-inc.com / Greg@vms-inc.com.

Sincerely,

VALUE MANAGEMENT STRATEGIES, INC.

A handwritten signature in black ink, appearing to read "Robert B. Stewart".

Robert B. Stewart, CVS-Life, FSAVE,
PMP, PMI-RMP
VE Team Leader, President/CEO

A handwritten signature in black ink, appearing to read "Greg Brink".

Greg Brink, CVS, PMP, CCE/A,
PMI-RMP, ENV SP
VE Team Leader, Director

Copy: (PDF) Addressee
(PDF) Harvey Berliner, SANDAG Design Manager

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EXECUTIVE SUMMARY

A value engineering (VE) study, sponsored by San Diego Association of Governments (SANDAG) and facilitated by Value Management Strategies, Inc. (VMS), was conducted for the Mid-Coast Corridor Transit Project in San Diego, California. The study was held March 3-7, 2014 at the offices of Parsons Brinckerhoff in San Diego. This *Executive Summary* provides an overview of the project, key findings, and the alternatives developed by the VE team.

PROJECT SUMMARY

The Mid-Coast Corridor Transit Project will extend the Trolley Blue Line service from the Santa Fe Depot in Downtown San Diego north to the University City community, serving major activity centers such as Old Town, University of California San Diego (UCSD), and Westfield University Towne Center (UTC). The total project length is approximately 14.5 miles, which includes nearly 11 new miles of double track and 3.5 miles of existing Trolley tracks (from the Santa Fe Depot to north of the OTTC and south of the San Diego River). The proposed Refined Build Alternative includes 9 new stations (4 at grade and 5 elevated); 5 park-and-ride facilities with 1,070 parking spaces; 14 new and 2 upgraded traction-powered substations (TPSSs); and 36 new low-floor LRT vehicles. No new maintenance facilities are needed. New stations would be located at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, the VA Medical Center, UCSD West, UCSD East, Executive Drive, and the UTC Transit Center.

The project will connect corridor residents with other Trolley lines serving Mission Valley, East County, and South County. As an extension of the existing Blue Line, the project will offer a one-seat (no transfer) ride from the international border and communities south of Downtown San Diego all the way to University City. This new service will enhance direct public access to other regional activity centers and improve travel options to employment, education, medical, and retail centers for corridor residents, commuters, and visitors.

The San Diego Metropolitan Transit System (MTS) will be the operator, and the project will be funded in partnership by SANDAG and the Federal Transit Administration (FTA). Total project costs are currently estimated at \$1,489,326,244. The VE study excluded all applicable vehicle costs, resulting in the observed costs for the VE study being \$1,319,584,512.

PROJECT PURPOSE AND NEED

Freeways and arterials in the Mid-Coast Corridor are generally congested and traffic congestion is projected to increase as the region grows. The Mid-Coast Corridor Transit Project will expand transportation capacity in the corridor to accommodate existing and future travel demand, particularly for peak-period commute trips.

The project is needed to provide an effective alternative to congested freeways and roadways for travelers and to reduce vehicle miles traveled. The Mid-Coast Corridor Transit Project will provide efficient transit connections to University City, UCSD, and reliable, higher-speed trolley service throughout the corridor. Effective transit that is competitive with the automobile will attract riders to

transit, improve regional mobility, and help maintain and enhance quality of life for San Diego’s residents.

VE STUDY TIMING

The VE study focused on the Final Environmental Impact Statement (FEIS) plan set. The project is expected to obtain a Record of Decision (ROD) in September 2014. Construction is scheduled to begin in November 2015 and be completed in May 2019.

VE STUDY OBJECTIVES

The primary objective of the VE study effort was to identify value-improving alternatives that will reduce project cost, schedule and/or risk, while maintaining or improving performance. Additional objectives of the study included:

- Validate the identified and prioritized project risks
- Validate the current project cost estimate and level of contingency
- Explore options to achieve scheduling efficiencies in delivery

KEY PROJECT ISSUES

The items listed below are the key drivers, constraints, or issues being addressed by the project and considered during this VE study to identify possible improvements.

- Noise and traffic impacts along Genesee Avenue and other major areas in the project should be minimized whenever possible; these impacts will affect residences, shopping, merchants, and UCSD, among others.
- The project will face challenges in relation to permitting with external agencies such as North County Transit District (NCTD), UCSD, and the City of San Diego.
- Utility relocations will be a complex and significant component of this project, further complicated by the Buy America requirements.
- Constructability issues related to the aerial guideway must be carefully considered.
- Maintaining bicycle and pedestrian access during construction must be considered.

EVALUATION OF BASELINE CONCEPT

During the course of the VE study, a number of analytical tools and techniques were applied to develop a better understanding of the baseline concept. A major component of this analysis was Value Metrics which seeks to assess the elements of cost, performance, time, and risk as they relate to project value. These elements required a deeper level of analysis, the results of which are detailed in the *Project*

Performance Attributes

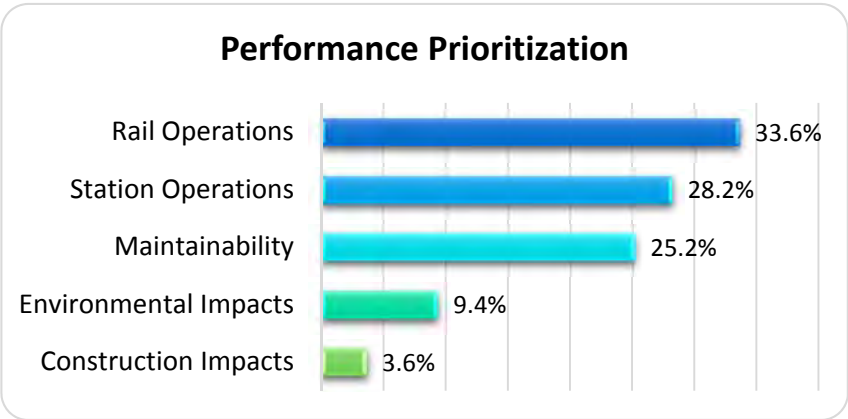
- Rail Operations
 - Station Operations
 - Maintainability
 - Environmental Impacts
 - Construction Impacts
-

Analysis section of this report. The key performance attributes identified for the project are listed in the table, “Performance Attributes.”

Below is a summary of the major observations and conclusions identified during the evaluation of the baseline concept which led the VE team to develop the alternatives and recommendations presented in this report.

A pre-study meeting was held February 3rd, 2014 at the offices of Parsons Brinkerhoff in San Diego, CA. During this meeting, VMS facilitated a performance assessment of the current project. John Haggerty of SANDAG and Tom Tupta of MTS provided their input as the owner/operator representatives for the project. The performance requirements and attributes were discussed during this meeting and definitions and scales were identified. The attributes were then prioritized in terms of their importance to the project. Rail and Station Operations were considered to be the most critical followed by Maintainability.

Following the prioritization, the overall performance of the project was evaluated for each attribute by the SANDAG and MTS representatives to provide a high-level assessment. A summary of these priorities is provided on the right.



Rail Operations: The project is performing fairly well at this stage in terms of rail operations given the existing constraints relative to physical challenges and realistic expectations.

Station Operations: The station locations are satisfactory. There are some concerns remaining about the details related to final station configuration, circulation, and access.

Maintainability: Many elements of the project are perceived as strong with respect to operations and maintenance; however, there are some aspects that have not been completely defined. Areas of concern may include station finishes and fixtures and the 4.5 miles of elevated structure. There are also some long stretches of alignment with limited access from a maintenance perspective (from Gilman Drive to the end of the alignment).

Environmental Impacts: The project is not optimal in terms of biological impacts; however, it is doing about as well as could be expected at this time for a project of this size and scope. The current alignment (both vertical and horizontal) provides a good solution in terms of minimizing human impacts (i.e., use of aerial guideway in highly urbanized areas in Segments 3 and 4; located along I-5 corridor and existing rail alignment in Segments 1-3). The project relates very well to existing land uses; however, it has the potential for impacts and conflicts with existing land uses in Segment 4.

Construction Impacts: Traffic impacts are expected primarily in Segment 4 along Genesee Avenue, and these may be substantial. The rest of the project has fairly limited impacts to existing traffic. Temporary environmental mitigation measures should be effective, feasible, and reasonable for the

project. Bicycle and pedestrian circulation is largely unaffected for the project; however, there are a couple of areas where impacts occur. These include SR 52 in Segment 2 and along Genesee Avenue.

ACCEPTED VE ALTERNATIVES

The VE team developed 29 alternatives for improvement of the project. At the time of this Final VE Report, 5 VE alternatives are accepted for implementation into the project and 8 additional VE alternatives are pending further study. VE alternatives are presented in the following tables, which separate those VE alternatives that have been formally accepted for implementation from those alternatives that are pending further analysis and study. Discussion regarding VE alternative acceptance, rejection, and additional considerations for those VE alternatives pending further study is presented in the *Value Engineering Alternatives* section of this report.

The following table presents the accepted alternatives, along with the associated initial cost savings, change in schedule, and a brief discussion of each. Please note that because the cost data depicted below represent *savings*, a number in parentheses represents a cost *increase*.

Alternative No. and Description	Initial Cost Savings	LCC Savings	Change in Schedule
2.0 Perform load test to optimize depth of piles	\$3,783,000	--	-2 months
The cast-in-drilled-hole (CIDH) pile design for the baseline concept follows Caltrans guidelines for the estimation of CIDH pile resistance. The alternative concept recommends performing O-Cell testing to eliminate excessive conservatism in estimation of CIDH pile resistance. This proposal reduces the cost of foundation by reducing drilled shaft length, reduces construction duration associated with CIDH pile construction, and reduces risk associated with drilled shaft construction.			
3.0 Perform base grouting for piles to eliminate ground improvements	\$7,301,000	--	No change
The alternative concept proposes base grouting below the tip of the CIDH piles to allow the end bearing contribution of the CIDH pile to be considered in the determination of the nominal pile resistance. In addition to providing modest cost savings to the project, this concept would reduce the cost of foundation by reducing drilled shaft length, reduce the schedule associated with CIDH pile construction, reduce the risk associated with drilled shaft construction, and eliminate the need for ground improvement for San Diego River Bridge.			
7.0 Shift Balboa Avenue Station south to improve transit patron access	\$2,346,000	--	No change
The alternative concept moves the Balboa Avenue Station platform approximately 150 feet south to balance patron access from the Bus Transit Center and patron parking. A significant percentage of the ridership will be by bus. The relocated platform balances pedestrian access for bus, park-and-ride, and kiss-and-ride patrons. This alternative will provide more convenient access to the platform from the bus transit center, improve access from ADA parking, move the north station platform entrance closer to a majority of the patron parking, and reduce a lengthy ramp on the north side of Balboa Avenue along with the attached pedestrian bridge.			

Alternative No. and Description	Initial Cost Savings	LCC Savings	Change in Schedule
8.0 Use standard barrier railing at platform edges and pedestrian bridges	\$1,260,000	--	No change

Where adjacent trackway or freeway noise is not an issue, the alternative concept suggests that the use of extensive glass panel be reduced, eliminated or replaced with a more easily maintained material. This alternative recommends metal mesh, pickets or similar, to provide the protection that is required for safety considerations. This alternative removes the more maintenance-intensive and vandalism-prone material from the project and slightly reduces project cost.

18.0 Assess viaduct hinge locations to minimize falsework at traffic intersections	\$0	--	No change
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In the baseline concept, hinges in the viaduct superstructure are located adjacent to spans over intersections at La Jolla Village Drive and Executive Drive in such a way that the falsework in the intersection needs to stay in place after the structure is complete, until the adjacent frame is also complete and the load from the adjacent frame is loaded on the hinge. If the hinge location is moved away from the intersection or to the opposite end of the span in which it is located, this support requirement would be taken out of the intersection, significantly reducing the duration that falsework would need to be placed in the intersection. This alternative recommends alternatives for optimizing the hinge placement in order to reduce the amount of time the falsework is in the intersections to reduce the impacts to traffic.

VE ALTERNATIVES FOR FURTHER STUDY

The following table provides a summary of the 8 VE alternatives that require further study and analysis for possible future implementation into the project. The potential cost savings, change in schedule, and performance impacts will be further evaluated and refined as the project solicits the services and expertise of a Construction Manager/General Contractor (CM/GC) and progresses into the final phase of design. As soon as the following VE alternatives can be sufficiently validated for technical implementation into the project design, the cost savings, change in schedule, and performance impacts will be carried forward in the project cost and schedule estimates.

Alternative No. and Description	Initial Cost Savings	LCC Savings	Change in Schedule
1.1 Use precast girders for bridge structures	\$12,102,000	--	-4 months

The alternative concept proposes the use of precast-prestressed (PC-PS), and post-tensioned spliced girders as an alternative superstructure type for the project bridges and viaducts. Caltrans utilizes PC-PS girders for highway bridges and Union Pacific Railroad (UPRR) and Burlington Northern Santa Fe (BNSF) encourages the use of precast for their superstructures. This method takes advantage of a shorter construction schedule and reduction in the need for falsework in congested areas or waterways. Girder casting can be performed in parallel with other construction phasing items causing less conflict. The proposed method would provide many benefits to the project in addition to the stated cost reduction and schedule improvement.

Alternative No. and Description	Initial Cost Savings	LCC Savings	Change in Schedule
1.2 Use precast segmental box girder for select structures	(\$1,749,000)	--	-6 months
The alternative concept would utilize a precast segmental concrete box superstructure for the viaduct bridges. This type of superstructure has been used successfully on highway bridges and many light rail systems around the world and looks similar to a cast-in-place box girder bridge. The superstructure is constructed off the project site at a precasting yard in short segments, using special formwork that is adjusted to match the alignment and profile of the bridge. Advantages of this concept include improved quality and durability of the concrete, minimized disturbance to traffic, and improvements to the project's construction schedule.			
5.0 Reduce design speed on Genesee Avenue to 40 mph and eliminate crash cushions	\$1,589,000	--	No change
The current design speed for Genesee Avenue is 45 mph. Due to current standards, a crash barrier is in place for this design speed because the columns would be located within the roadway clear recovery zone. This concept proposes to reduce the design speed of Genesee Avenue to 40 mph to allow a reduction in clear recovery zone, therefore eliminating the requirement for concrete barriers.			
6.0 Modify station platform canopies and integrate photovoltaic panels	\$22,025,000	\$23,223,000	No change
The alternative concept recommends constructing 12-foot by 52-foot canopies with an integrated photovoltaic (PV) roof. The basic structural system is similar to the canopy configuration shown on the baseline concept FEIS Plan Set. However, the roof would be formed by PV panels. No additional roofing surface would be required. This system, known as building integrated photovoltaics (BIPV) generates electricity that can be used to offset the cost of electricity consumed by the rail system. The BIPV system will provide savings in materials and electricity costs, reduce the use of fossil fuels and emissions, and generate a positive public image.			
11.0 Utilize soldier pile and lagging wall in lieu of the Type 1 retaining wall at select locations	\$672,000	--	No change
A portion of Retaining Wall No. 402R-C is designed on foundation piles from Sta. 396+60 to 402+39. A temporary shoring system must be designed and installed in order to construct this permanent Type 1 retaining wall. This alternative proposes to construct a soldier beam and lagging (precast concrete panel) retaining wall for this section of wall to eliminate the need for temporary shoring and provide a modest cost savings to the project.			
14.0 Eliminate retaining wall at VA Medical Center Station and build station on elevated structure	(\$2,530,000)	--	No change
The alternative concept would eliminate Retaining Wall No. 648R-F and replace it with a much smaller cut wall along the west side of the station. The station would then be constructed as an elevated structure, similar to the other five elevated stations on the north end of the project. This concept would allow excavated material from under the structure to be used elsewhere since the project is short of fill material.			

Alternative No. and Description	Initial Cost Savings	LCC Savings	Change in Schedule
22.0 Shift the alignment adjacent to I-5 edge of shoulder at Nobel Drive using Caltrans right-of-way	\$19,147,000	--	No change
The alternative concept would move the proposed station eastward from the baseline concept location towards the freeway, and place it entirely within Caltrans right-of-way. Since it is still immediately adjacent to the shopping center parking lot, ingress and egress would be through the parking lot via stairs and elevators accessing the parking lot. Since the viaducts and station would no longer be over the existing parking lot, the impacts of the new facility to the parking lot would be limited to those existing parking spaces impacted by the footprints of the ingress and egress facilities and the newly proposed parking structures. This drastically reduces the number of parking spaces needed in the new parking structures from 800 stalls to roughly 390 stalls. The proposed station is located over the ultimate freeway on-ramp from Nobel Drive. To perform construction in this location, the ultimate freeway on-ramp should be constructed with the station construction. This will require one cut retaining wall adjacent to the shopping center parking lot as shown on the Caltrans ultimate freeway configuration drawings. Lastly, moving the station eastward drastically improves/straightens the LRT alignment and reduces the overall viaduct length by 28 feet. This also opens up the alignment for alternate construction methods and bridge types, such as using precast structures, etc.			
24.0 Evaluate alternative bridge types at viaducts and alignment changes to provide economy of schedule during concurrent construction	\$35,603,000	--	-8 months
A cast-in-place prestressed concrete box girder has been selected as the primary typical superstructure type for the project bridges and viaducts. This is the most common superstructure type in California as it provides effective construction cost, predictable seismic performance, and a desirable visual appearance. In the proposed alternative concept, the structures were evaluated to determine the most effective structure type to provide efficiency in schedule. Three viaducts are recommended for alternate structure type. The Nobel Drive Viaduct is recommended to be constructed as a precast girder superstructure. UCSD is recommended to be constructed as a cast-in-place prestressed box girder superstructure. The Genesee Avenue Viaduct is recommended to be constructed as a precast girder superstructure. The schedule is still recommended to have the viaducts constructed concurrently. By adjusting the alignments to the west at Genesee Avenue and the alignment to the centerline of I-5, 6 stages of construction can be eliminated – therefore allowing more of the project to be constructed in parallel instead of series. This staging change will reduce the overall project schedule by roughly 5 months. This alternative captures the cumulative schedule benefits for a number of the key alternatives included in the “Recommended Alternatives” set, including escalation and time related overhead cost savings.			

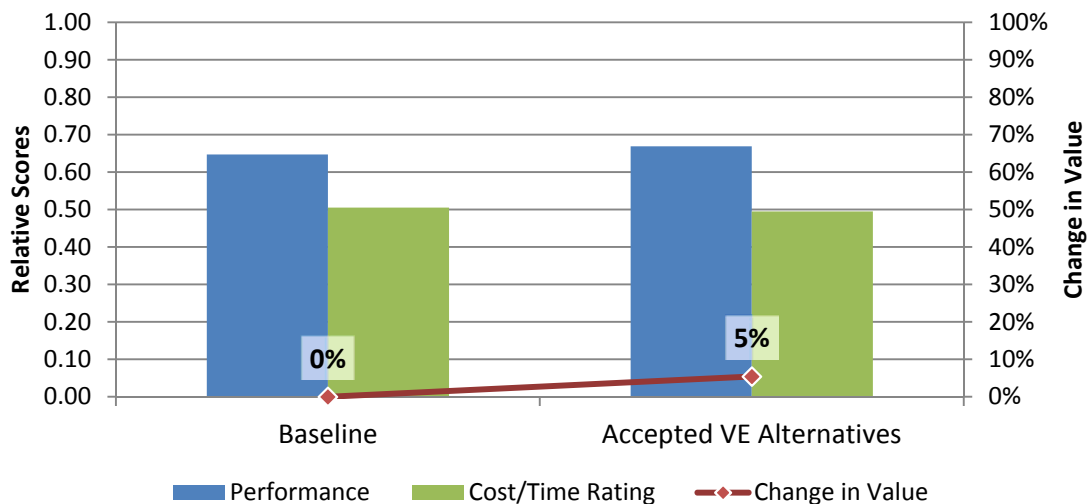
FINAL VE STUDY RESULTS

A summary of the results of the accepted VE alternatives is provided in the following chart and table. The accepted alternatives provide a value improvement of roughly 5%, which includes approximately \$14.7 million in first cost reductions, a 2-month reduction in the critical path project schedule, and modest performance improvements of 3%. Performance benefits are primarily realized in temporary traffic operations during construction through modifying the hinge locations on the viaduct structure, improved station operations via enhanced intermodal connectivity and circulation at the Balboa Avenue Station, and improved maintainability as a result of reducing the extent of glass paneling and standardizing barrier railings at platform and barrier edges at select locations throughout the corridor.

The VE alternatives that were determined to require further study would, if implemented, add an additional cost savings up to \$67.3 million and 6 months in time savings from the project's construction critical path schedule. If all alternatives undergoing further study are combined with the accepted VE alternatives presented above, the net value improvement would yield an approximate 7% increase in overall project performance and a combined reduction in cost and time of roughly 9%. This would result in a potential 17% net value improvement or a 12% *additional* improvement in value.

The chart below illustrates the relative trade-offs between performance (shown by the blue columns) versus cost and schedule (shown by the green columns). The red value line indicates the net percent change in total value for the accepted VE alternatives relative to the baseline concept. Please refer to the *Project Analysis* section of this report for additional details on this analysis.

Comparison of Value – Baseline Concept and Accepted Value Alternatives



Net Effect of Accepted VE Alternatives

Accepted Alternatives	Initial Cost Savings	LCC Savings	Change in Schedule	Performance Change	Value Change
2.0, 3.0, 7.0, 8.0, 18.0	\$14,690,000	\$0	-2 months	+3 %	+5 %

VE TEAM

VE Study Team

Name	Organization	Title
Rob Stewart	VMS, Inc.	VE Team Leader - Segments 1/2
Greg Brink	VMS, Inc.	VE Team Leader - Segments 3/4
Ed Herald	HDR	Track Design/Geometry
Ken Caswell	HDR	Architect
Eric Winters	TY Lin	Railroad Design
Pete Smith	TY Lin	Structural Design
Steve Smith	TY Lin	Civil/Utilities
John Buckley	TY Lin	Constructability
Rob Barton	TY Lin	Structural Design
Jason Lemons	TY Lin	Civil/Traffic
Wade Durant	TY Lin	Constructability
Denis LaClaire	Estrada Land Planning	Urban Planner
Steve O'Neil	Hatch Mott MacDonald	Estimator
Gordon MacDonald	Hatch Mott MacDonald	Systems
Eric Brown	Earth Mechanics	Geotechnical
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Appendix D

Pre-Construction Services Task 08 Deliverable 08 Comments on SANDAG Value Engineering Study Report

Preconstruction Services Task 08
Deliverable 08
Comments on SANDAG Value Engineering Study Report

Prepared by:

Mid-Coast Transit Constructors



Prepared for:

The San Diego Association of Governments (SANDAG)



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Executive Summary

While this report specifically addresses the task set forth in the preconstruction contract it captures only a current snapshot of the ongoing collaboration and list of alternative engineering ideas being developed as the preconstruction partnership phase develops. As the CPM construction schedule process continues new ideas are being discovered to save the project not only money but particularly time on a project hard pressed for it.

The VE report which contains accepted solutions, alternative concepts and other design suggestions has been thoroughly analyzed by MCTC and is addressed in this report in a variety of ways. Structures VE concepts outside of this study are principally captured in a separate VE matrix log submittal that analyzes the type selection of each. This general analysis of the VE study emphasizes the items that provide the most value to the project. There are several alternatives that MCTC felt needed to be further explored before being specifically addressed, these may be addressed in the VE log in the near future. Ideas or features that warrant further discussion are expanded in narrative detail. Presently structures VE workshops and meetings have been established to further develop these structures VE ideas. Additionally, cost analysis of proposed changes will be forthcoming in near term updates to the wall and structures VE Matrices and will be reflected in the monthly progress update of the VE matrix.

Walls and Structures

Many of the VE alternatives have been captured in the ongoing wall and structure matrices/logs that MCTC has developed to help progress the design of these structures.

Retaining Walls

The current retaining wall VE matrix to be submitted as a part of the VE matrix/log shows the current wall type, the newly proposed type and comments on this process. It continues to be progressed and as the baseline construction cost estimate (Task 17) is developed the wall VE matrix will be populated with potential cost and time savings to the project. This information will be useful for three reasons: 1) It will help to establish cost savings and design direction for each wall type 2) It can be used as a tool to show stakeholders such as NCTD the value (cost, schedule, environmental impact, etc) of using a certain wall type 3) It will establish a schedule comparison against currently designed wall types vs those proposed by MCTC to potentially aid reductions in schedule durations.



Accepted VE Alternatives

VE alternatives 2.0, 3.0, 7.0, 8.0 and 18.0 have been accepted as design alternatives and are being incorporated into design progression. MCTC concurs with the acceptance of these alternatives and will continue to provide support as they are further developed. However, some are still expanded upon in the following VE Alternatives section.

VE Alternatives

As mentioned previously, MCTC focused on the largest potential cost and schedule savings to the project as well as components that did not require design support. These are listed below.

1.1 Use precast girders for bridge structures

Baseline Concept:

Typical superstructure types for LRT bridges were identified in the advanced planning study as cast-in-place pre-stressed concrete box girder. It's the most common bridge superstructure type in southern California due to the following factors:

- It is cost effective. The unit cost (\$/SF) is lower than other bridge superstructure types
- It has a preferable and predictable seismic performance
- Proven history of construction success for this bridge type in California
- It has a pleasing and recognizable visual appearance
- Long spans and low depth/span ratio allow reducing substructure elements

Alternative Concept:

Precast pre-stressed girders for the simple-span method is the most economical concept for short spans up to 140 ft. The longest non-spliced precast girders used in Southern California on a Caltrans job were 158 ft long. Advantages of this alternative concept are as follows:

- The fast erection of precast girders can speed up bridge construction and potentially reduce schedule. Precast girders can be cast in advance of placement and simultaneously with constructing bridge substructure to allow further schedule advantages
- Installation in urban areas can occur in off-peak and at night to minimize traffic interruptions



- It eliminates falsework except at pier caps
- Improves safety of traffic and construction workers
- Increase product quality
- Maximize vertical clearance
- Leveling resources, especially at viaduct structures to allow staggering and better distribution of labor and materials (falsework and superstructure forms)

The simple-span girders become very heavy and the handling and transportation are complicated for longer spans and post-tensioned spliced girders have to be considered. Some additional advantages for this concept are as follows:

- Longer spans will reduce the number of bents/CIDH piles.
- Minimize bridge superstructure depth to obtain required vertical clearance for traffic or rail road. For the same span the spliced-girder may have much thinner and lighter sections and each precast element is much shorter versus the simple span girder
- Helpful in eliminating superstructure joints to improve structural performance including seismic performance

The disadvantage of precast girders is seen when matching outside curvature and is aesthetically less pleasing when compared against base line concept CIP structures, especially those bridges to be built in highly visible areas. However, precast bath-tub girders provide a flexible option to match bridge curvature where aesthetics and urban geometrics are a significant design consideration.

Economical consideration for choosing the construction concept:

- **San Diego River Bridge.** This is a low level bridge in a wide open area and proposed cast-in-place construction is the most cost effective approach. Span 1 is very close to the existing LRT bridge and construction access in this area is very tight making the installation of precast girders quite challenging. The proposed cast-in-place concept is the preferred superstructure type.
- **Tecolote Creek Bridge.** The currently proposed CIP slab two-span bridge will require extensive work in the flood control channel and eliminating the center bent will result in a cost savings and reduction in the construction schedule. Using precast elements would accelerate construction and eliminate falsework in the channel. Single span bridge with precast elements (girders or void slabs) is the most constructive and cost effective concept for this structure.
- **Balboa Road Bridge.** Single CIP spans of 134 ft can be replaced with precast girders, making this bridge another viable candidate for the



simple-span precast concept. However there is a constructability issue with the abutments and this needs to be explored and discussed in greater detail prior to selecting the bridge superstructure type. Currently designed abutments consist of typical bents with a single CIDH pile, columns and bent caps with Type 5 retaining walls immediately behind the abutments. Simplifying abutments and constructing a full height seat abutment would lengthen the span and require post-tensioned spliced girders.

- **Rose Creek South & North Bridges.** Short spans on these two bridges, up to 112' in length, can be accommodated with the simple-span precast concept. Advantage of this concept is eliminating falsework in the environmentally sensitive Rose Creek area. However the construction access and sequencing will make it a challenging candidate for delivery and erection of long precast girders and the best concept has to be further analyzed.
- **Rose Creek LRT Overhead.** The proposed cast-in-place box girder concept has the following disadvantages :
 - Extensive and complicated falsework. The entire Frame 3 is a tunnel falsework section over the LOSSAN corridor
 - Working within the environmentally sensitive Rose Creek area
 - The entire bridge is within the prohibited railroad zone and it will cause inefficient productions driving labor costs up.
 - Safety concern for workers and falsework near live trains
 - The construction work within Frame 3 will depend on rail road AWW's as they will be required for each phase of the falsework construction – erection, grading and stripping. There are a limited number of available AWW's and limited seasons that are not controlled by the CM/GC that could impact the schedule in a near critical path area of the project
 - The cast-in-place construction of rail road grade separations is discouraged by the railroad agencies and the proposed construction may require special approval which could impact construction start
 - Falsework will have a negative impact on vertical temporary clearance and it could result in changing profile grades and extending substructure depths
 - An extended construction schedule will have a negative impact on the overall project schedule as preliminary CPM schedules depict this bridge very close to the project critical path

The simple-span precast concept will mitigate or eliminate the above concerns. It will potentially accelerate the construction schedule several months in this area although not necessarily positively impact the critical path. It, eliminate falsework except at outrigger bents, and reduce an impact to the LOSSAN corridor during bridge construction.



Disadvantage of the precast concept is the need for additional CIDH piles and substructure in order to keep spans within 140 ft, the maximum simple span for precast girders. The cost comparison has to be further studied upon receiving preliminary plans for the precast concept.

- **Charmant Drive South & North.** Span lengths are up to 134 ft long and they would allow single girders without splices. Both bridges are in the highly visible area adjacent to I-5 and they lead to the cast-in-place viaducts. They would require a special treatment of the outside girders to match the cast-in-place construction which will drive the construction cost higher than the proposed concept. The proposed cast-in-place concept is the preferred superstructure type.
- **Nobel Drive Viaduct.** Complicated and curved geometry with tight radii as low as 500 ft, long spans over I-5 and on the entire viaduct, tight crane access in some areas will make the precast concept extremely hard to implement. The proposed cast-in-place concept is the preferred superstructure type.
- **UCSD Viaduct.** The proposed cast-in-place concept is the preferred superstructure type for the same reasons listed for the Nobel Drive Viaduct.
- **Genesee Avenue Viaduct.** This viaduct is the best candidate for the precast concept for the following reasons:
 - Bridge geometry with radii equal or greater than 1,000 ft will allow using long linear precast elements
 - Easy access from the freeway to the job site and ability to drive up the bridge will help the installation of precast girders.
 - Falsework is not required and it will maximize temporary vertical clearance over traffic
 - Eliminating the hinge construction which with current design will require keeping falsework in place for an extended period of time
 - Precast girder installation can occur in off-peak and at night to minimize traffic interruptions in this congested traffic area
 - The foot print area below the bridge is reduced and it will allow better traffic flow and keeping turn pockets open
 - Changing the superstructure type will level material and labor resources
 - Accelerating the construction in this reach would potentially create a positive impact on adjacent businesses and schools
 - This viaduct is on the project critical path and faster precast construction could benefit the entire project schedule



Matching the curved shape of the cast-in-place box girder bridge is the biggest challenge here. MCTC is pursuing different precast options to provide an aesthetically pleasing structure in this high profile area:

- Enhancing precast girders with aesthetics features on the outside face such as logos, murals and other details specific to the community.
- Attaching a precast concrete façade as shown in the 35% structural drawings.
- Using precast bath-tub girders to match the cast-in-place bridge curvature.

MCTC will continue pursuing the above listed concepts and will be listed in the VE Matrix/Log to be updated for bi-weekly meetings with designers and constructability reviews of structures plans as they come in. A cost comparison between different bridge concepts will be provided to SANDAG for their review as our continuous effort and commitment to reduce costs on the project.

1.2 Use precast segmental box girder for select structures

Baseline Concept:

Typical superstructure type for LRT bridges were identified in the Advance Planning Study as cast-in-place pre-stressed concrete box girder. It's the most common bridge superstructure type in Southern California due to the following factors:

- Cost effective. Unit cost (\$/SF) is lower than other bridge superstructure types
- Preferable and predictable seismic performance
- Long history of building this type of the bridge in California
- Pleasing and recognizable visual appearance
- Long spans and low depth/span ratio allow reducing substructure elements

Alternative Concept:

Precast segmental concrete box girders for the viaduct bridges is a concept that is not considered for shorter cast-in-place bridges south of the Nobel Drive Viaduct. They are simply too short to justify the large fixed expense of the precast segmental construction that would include numerous mobilizations. There are advantages to using this alternative concept on longer spans, they are as follows:



- The fast erection of precast segments can speed up bridge construction and reduce schedule. Precast segments can be cast in advance of placement and simultaneously with constructing bridge substructure to allow further schedule advantages.
- Installation in urban areas can occur in off-peak times and at night to minimize traffic interruptions
- It eliminates falsework except at pier caps
- Improves safety of traffic and construction workers
- Increased product quality; casting at an off-site facility in controlled environment results in higher concrete quality and durability.
- Maximizes vertical clearance
- Longer spans will reduce the number of bents/CIDH piles

Economic considerations for choosing this construction concept:

- Higher construction cost
- The spliced-girder bridge versus the precast segmental bridge with the same span has a thinner and lighter section and requires much less prestressing. In most cases the spliced-girder bridge will be less expensive than the precast segmental bridge, in addition to having the advantage of thinner super structure.
- The segmental construction requires a large precasting yard with storage capacity. The viaducts are located in the urban area without an open area suited for the precast yard
- This is not typical bridge construction in Southern California and local precast fabricators are not set up for casting precast segments
- Specialized equipment and knowledge for this type of the bridge construction is not available locally and it will drive up the cost
- Precasting segmental units will require a high level of survey accuracy and QC/QA control
- A more complex viaduct design will increase engineering efforts and cost
- Smaller radii curves on the Nobel and UCSD viaducts will be difficult to construct
- Caltrans may have concerns with the precast segmental construction over I-5
- The segmental construction is linear and less flexible and any issues with CIDH piles or substructure will delay the superstructure work
- Significant up front capital expenses make it infeasible to work in several headings



Economical consideration for choosing the construction concept:

The alternative precast segmental bridge concept is not considered as the preferred superstructure option on the project due to the above listed disadvantages.

2.0 Perform load test to optimize depth of piles

Baseline Concept:

The CIDH pile design is based on Caltrans Guidelines given in the 1999 (O'Neill and Reese) method which is the most commonly used method in practice to calculate the side resistance of CIDH piles. The value of the side resistance varies with the soil and construction method. Empirical factors are multiplied into design equations to account for the variability in side resistance. However, factors or equations chosen for design are at the discretion of designers and chosen code and design values will vary and are intentionally left conservative. It is well accepted that the 1999 method provides a conservative ultimate side resistance and for this reason Caltrans typically does not require load testing of CIDH piles when the 1999 method is used to determine side resistance.

Alternative Concept:

It is anticipated that the side resistance of CIDH piles on the project will be greater than the side resistance obtained by the conservative 1999 method. The design length of CIDH piles is dependent on the soils encountered and soil conditions that will be encountered on the project, particularly at the viaduct structures. These soils are expected to have a significantly higher capacity than would be estimated by the 1999 method.

Performing actual load test with O-cell will providing specific soil data that will establish the value of side resistance mobilized during the load test and the actual level of conservatism of the 1999 method. This concept will provide the following benefits for the project:

- Reducing CIDH lengths and overall foundation cost.
- Dependent upon results, potential reduction in overall viaduct construction schedule due to the shortening of these CIDH piles
- Potential reduction in risk associated with the CIDH construction



Economical consideration for choosing the construction concept:

MCTC recommends implementing the alternative concept and will work closely with designers on developing the load test protocol. MCTC has already forwarded information from UTA's North Temple Bridge to the designers to assist in developing this program. The load testing is a critical early work item that needs to be performed prior to engaging in full construction to allow using load test data to develop design parameters and methodology for the CIDH pile design. Performing the testing early will maximize savings in material procurement, often times the majority of these materials are already purchased prior to production piling so at that time this will be sunk cost.

3.0 Perform base grouting to eliminate load grout improvements

Baseline Concept:

End bearing of CIDH piles is based on Caltrans recommendations for the following types of the CIDH construction:

- "Wet", below groundwater level. End bearing is neglected.
- "Dry". End bearing is limited to a fraction of the total available soil capacity.

This approach is very conservative and neglecting end bearing will extend CIDH pile lengths.

Alternative Concept:

A post grouting of the base of CIDH piles below the tip elevation will decrease displacement and significantly increase the axial capacity. Post grouting will ensure adequate end bearing to be considered in the nominal pile resistance.

Performing actual load test with O-cell will provide specific soil data and it will establish the magnitude of the end bearing and load-deflection curve for the end bearing after post-grouting. This concept will provide the following benefits for the project:

- Reducing CIDH lengths and overall foundation cost.
- Accelerate overall bridge schedule due to shortening CIDH piles.
- Reducing a risk associated with the CIDH construction.
- Eliminating ground improvements at bents for the San Diego River Bridge.



Economical consideration for choosing the construction concept:

MCTC will implement the alternative concept and work closely with designers on developing the post-grouting protocol and provide info from current Caltrans jobs that employ this concept.

4.0 Shift Genesee Avenue Viaduct from centerline of road to southbound side

MCTC agrees with the assessment of VE alternative 4.0. Changing the location of the viaduct on Genesee would cause a major redesign of both dry and wet utilities as well as roadway construction. This would negatively impact the schedule and overall cost of the project. Further review of this alternative shows that the right of way needs would impact a significant amount of properties along the corridor.

5.0 Reduce design speed on Genesee Avenue to 40 mph and eliminate crash cushions

Upon review of proposed VE Alternative 5.0 to eliminate the concrete barrier along Genesee Avenue, MCTC believes that this is a viable VE opportunity that should be further explored. In addition to the cost savings associated with this VE, the general aesthetics along Genesee Avenue would be greatly improved with the removal of the barrier while eliminating future maintenance for the city as these areas over time often collect trash and debris between the barriers that must be periodically removed. With these benefits in mind MCTC recommends that this VE alternative be further discussed to better understand the pros and cons.

6.0 Modify station platform canopies and integrate photovoltaic panels

In reviewing the method for calculating the initial cost savings associated with this VE alternative it appears that there is an error in the cost calculations. Essentially the roofing material which is either a glazed roof or an architectural sheet metal design would be the only thing removed from the cost of shelter structure. These roof styles may range from \$40/SF to \$100/SF. Thus one 12ft x 52ft canopy at a median range of \$70/SF would cost \$43,680 compared to the \$207,000 for Large Shelters and \$352,000 for Large Canopy Glazed Roofs used in the comparison. Please see the following table representing the adjusted initial cost savings per our understanding.



Stations	Unit	Qty	Cost/Unit	Total
Tecolote	Ea	6	\$43,680	\$262,080
Clairemont	Ea	6	\$43,680	\$262,080
Balboa	Ea	6	\$43,680	\$262,080
VA Medical Center	Ea	6	\$43,680	\$262,080
UCSD East	Ea	6	\$43,680	\$262,080
UCSD West	Ea	6	\$43,680	\$262,080
Nobel	Ea	6	\$43,680	\$262,080
Executive	Ea	6	\$43,680	\$262,080
UTC	Ea	6	\$43,680	\$262,080
Subtotal Baseline				\$2,358,720
Proposed Solar Canopies				
Steel Support Frame	Ea	54	\$9,000	\$486,000
Solar Panels	Ea	54	\$17,000	\$918,000
Power Storage Facilities	Ea	9	\$15,000	\$135,000
Subtotal Solar Panels				\$1,539,000
Total Savings				\$819,720

The lifecycle cost savings are subject to the maintenance needs of the solar panels and the infrastructure for storing and changing the energy into usable power. On page 98 of the VE report the cost savings in power costs alone with replacing the panels every 20 years is significant enough to continue to explore this VE alternative although it may add time to the overall CPM schedule.

9.0 Reduce the width of platforms from 15 feet to 13.5 feet

To better analyze this VE alternative it should be split into two categories; at grade platforms and aerial platforms. One difference between the aerial and at grade platforms is that the aerial platforms are only ankle height above tracks that are embedded in the concrete making it simpler to reduce congestion on a 13.5' platform by merely expanding the pedestrian track crossings and ramps. See figure 2.

In the projects current design there are actually four at grade stations (5 listed in VE alternative) and five aerial stations as opposed to the four listed in the VE alternative. MCTC believes that the cost savings may be less than listed in the initial cost estimate as the cost for the aerial substructure is combined in the SF cost savings of the platform. If SANDAG wishes to pursue this VE MCTC would assist in doing a cost estimate to further support an investigation of this alternative.

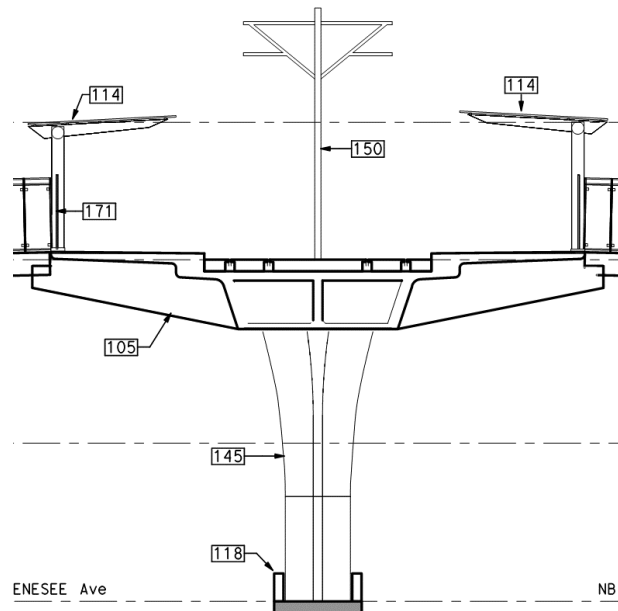


Figure 1 depicts the short platform height and embedded track on an aerial platform

10.1 Integrate Nobel parking station aerial structure with parking structure

MCTC has no additional comment about this concept.

10.2 Locate parking under aerial structure at Nobel Drive Station

MCTC has no additional comment about this concept.

11.0 Utilize soldier pile and lagging wall in lieu of the Type 1 retaining wall at select locations

MCTC believes that a soil nail option is generally preferable in a grade cut situation. This alternative is under evaluation for some of the walls, however, any wall requiring shoring for a Type 1 wall would be considered to change to a soldier pile if a soil nail wall is not feasible. In regards to retaining wall 402R-C, which was changed to wall 500R-C in the 35% documents, the wall was shortened and the piles in the original design were eliminated from the footing.

12.0 Eliminate Type 1 gravity retaining wall at bike path and install fence only

Before concurring with the rejection of this alternative MCTC would like to work with the project teams to investigate if lowering the bike path and eliminating this gravity wall would add an additional row of soil nails in the west walls 609L-C and 614L-C. This has been previously discussed in our Retaining Wall VE



Meetings to date. If final clarification points to additional nails needed than MCTC would agree that it would be better to build the gravity wall.

13.0 Eliminate retaining wall No. 271R-C along Morena Boulevard

From discussions with Parsons Brinckerhoff, this alternative has been partially incorporated into the latest design by using slope paving to reduce the amount of ROW needed and MCTC agrees with this direction of the design and will review the new design once the plans have been completed.

14.0 Eliminate retaining wall at VA Medical Center Station and build station on elevated structure

MCTC is investigating this concept in further detail and will provide comment in the VE matrix update.

15.0 Use T-wall retaining walls in lieu of standard MSE retaining walls in fill situations

This alternative is a concept that should still be considered due to the fact that NCTD concurrence for using MSE designed retaining fill walls for support of the Lossan tracks is yet to be attained. With this fact in mind, T-Walls could be considered for all fill walls supporting LOSSAN Heavy Rail tracks. The cost of T-Walls and cellular fill is more expensive than MSE walls with standard backfill, but if this is the only acceptable alternative it would make sense to use this wall type.

16.0 Shift Rose Creek Channel to the east

This concept would require a major re-design to this area which is a near critical path portion of the project and would potentially cause major delay to the start of work in this area and subsequently the project finish date. MCTC agrees with the rejection of this concept at this stage in the project design.

17.0 Use drop in bridge construction at Rose Creek to allow single stage construction

Baseline Concept:

The proposed superstructure type for the Rose Creek LRT Overhead Bridge was identified in the Type Selection Memo as Cast-in-place pre-stressed concrete box girder. It's the most common bridge superstructure type in Southern California due to the following factors:



- Cost effective. Unit cost (\$/SF) is lower than other bridge superstructure types.
- Preferable and predictable seismic performance
- Long history of building this type of the bridge in California
- Pleasing and recognizable visual appearance
- Long spans and low depth/span ratio allow reducing substructure elements

Alternative Concept:

Using precast pre-stressed girders in Frame 3 for the spans over the LOSSAN tracks. Advantages of this alternative concept are as follows:

- The fast erection of precast girders can speed up bridge construction and potentially reduce schedule. Precast girders can be cast in advance of placement and simultaneously with construction of the bridge substructure to allow for schedule advantages
- Eliminates complicated falsework over the live LOSSAN tracks
- Improves safety of traffic and construction workers
- Maximizes vertical clearance and eliminates a negative impact of the cast-in-place construction on the basis' of vertical temporary clearance
- The precast construction of rail road grade separations is recommended by the Railroad Agencies
- The cost for falsework at this location is significantly higher than average due to the operational considerations which force falsework tunnels. Additionally working around live track will negatively impact production at this location, because of these factors precast girders should not cause a cost increase at this location.

Economical consideration for choosing the construction concept:

The proposed alternative concept is an extension of VE Alternative 1.1 with a limited use of the precast girder construction. MCTC proposed using precast girders on the entire bridge as it was outlined in VE Alternative 1.1.

18.0 Assess viaduct hinge locations to minimize falsework at traffic intersections

Baseline Concept:

Hinges at the viaducts are located adjacent to spans over busy intersections which will require keeping falsework over these intersections for a long period until the hinge construction is completed.



Alternative Concept:

Modify hinge locations by moving them away from intersections to reduce the duration that falsework needs to be in place. Advantages of this alternative concept are as follows:

- Reduces the amount of time that falsework is in place at busy intersections
- Improve safety and flow of traffic

Economical consideration for choosing the construction concept:

Hinge locations selected to be modified in this alternative are located on the Genesee Viaduct. MCTC proposed using precast elements at this bridge as it was outlined in VE Alternative 1.1. This concept will eliminate the construction of hinges and falsework throughout the entire Genesee structure.

MCTC will work closely with designers and provide constructability reviews of hinge locations on upcoming structures plans in order to minimize impacts on busy intersections.

19.1 Elevate alignment over La Jolla Colony Drive

MCTC does not see this as a benefit to the project. The significant change to the alignment of LRT would cause a conflict with existing overhead utilities and not provide any added benefit to the impacted housing complex. This alternative would add a large retaining wall that would limit access to the right of way.

19.2 Elevate alignment over La Jolla Colony Drive and shift Lossan flyover north

This idea was proposed some time ago, and MCTC proposed a similar alternative for shifting the LRT flyover south to Balboa. The current location of the LRT flyover structure is necessary in order to improve track geometry and increase operating speeds in this area on the LOSSAN tracks. MCTC understands the importance of addressing this issue and concurs with the rationale.

20.0 Move Guideway to centerline of I-5 between just south of Gilman to Nobel Drive Station

Although the concept shows significant initial cost savings MCTC concurs that this would be a very difficult concept to sell to Caltrans not only due to impacts during construction but also because the alignment would be a permanent easement potentially limiting future capacity of the freeway. Additionally the



freeway improvement that would be needed, as well as access and constructability issues associated with this space, would add costs that may cut into the potential savings shown. Finally as mentioned in the VE alternative summary, additional noise impacts to the surrounding community would be significant as traffic travel was much closer to communities through the area.

21.0 Lower the grade over Nobel Dr. Station

Although there seems to be some value in this VE alternative the estimated concrete volume savings seem to be based on high calculations and real quantity savings may not be as high as projected. If SANDAG wishes to pursue this VE MCTC can provide additional quantification and pricing when additional information is available.

22.0 Shift the alignment adjacent to I-5 edge of shoulder at Nobel Drive using Caltrans right-of-way

The proposed alternative appears to be an improvement over the base line concept considering it reduces impact to the shopping center and eliminates half of the parking structure. Similar to VE 20.0 this is a complete redesign and it will require Caltrans approval that could delay the project.

23.0 Reduce the vertical profile of Executive Drive Station

MCTC has no additional comment about this concept.

24.0 Evaluate alternative bridge types at viaducts and alignment changes to provide economy of schedule during concurrent construction

Baseline Concept:

The proposed superstructure type for the project bridges was identified in the Advance Planning Study as Cast-in-place pre-stressed concrete box girder. It's the most common bridge superstructure type in Southern California due to the following factors:

- Cost effective. Unit cost (\$/SF) is lower than other bridge superstructure types.
- Preferable and predictable seismic performance
- Long history of building this type of the bridge in California
- Pleasing and recognizable visual appearance
- Long spans and low depth/span ratio allow reducing substructure elements



Alternative Concept:

Using precast pre-stressed girders and adjusting alignments along the viaducts will reduce the overall project schedule.

Economical consideration for choosing the construction concept:

MCTC proposed using precast elements at selected bridges as it was outlined in VE Alternative 1.1 to reduce the project duration.

MCTC will work closely with designers and provide constructability reviews of bridge alignments on upcoming structures plans to further improve the schedule.

25.0 Utilize microwave towers in lieu of PTC fiber optic cable during construction

MCTC has no additional comment about this concept.

26.0 Eliminate plinth and use grout patches for direct fixation

Although this concept might be a good option in conjunction with a precast segmental structure, it doesn't seem to make sense without utilizing that concept. VE Alternatives 1.1 and 1.2 don't recommend precast segmental as the preferable option for any of the bridges or viaducts on the project.

Other Considerations

MCTC also reviewed and commented on several of the other design considerations listed in the VE report. They are discussed in further detail below.

DS-2 Evaluate project impacts due to concurrent construction activities

MCTC agrees that the proposed construction schedule included in the VE Report indicates an aggressive duration that requires work in many areas to start and progress simultaneously, representing elevated risk and a significant resource draw. Our approach to the work will utilize a balanced approach to address this concern including; 1) proposing an optimized overall construction duration 2) utilizing a comprehensive contracting plan to augment our own self-perform crews with subcontract resources for bridge and other work items and 3) employing early work packages where possible to reduced schedule risk.

DS-3 Coordinate work windows and other construction in the corridor

MCTC agrees that the railroad related coordination along the LOSSAN corridor is critical to successfully completing the Mid Coast Segments 1 and 2, SDRDT, and EMDT projects. MCTC has initiated monthly working sessions with SANDAG, NCTD, and TASI to lay the foundation for successful coordination. The intent of the ongoing work session is to create broad understanding of the proposed improvements, the current operating patterns and procedures, and generally foster a team oriented work environment. Discussions include draft staging plans, potential temporary track alignments, projections of flagging needs, adjacent projects, optimization of the AWW opportunities, and innovative solutions such as physical barriers.

DS-4 Fast track the LOSSAN project through early work packages to CM/GC

MCTC agrees that there are several advantages to advancing early work packages including, but not limited to utilities. Advanced work items can benefit critical path work sequences and reduce the ultimate volume of work that must be done concurrently, as stated in DS-2. Intangible benefits include the momentum shift and urgency that is created by beginning to move the project forward. In addition to the utility early work package(s), MCTC is proposing early work including at a minimum

- 1) CP Rose installation,
- 2) Wall installation at Balboa Park and Ride to facilitate embankment and utility work,
- 3) Wall installation and bike trail relocation at 52/5 to facilitate utility relocations,
- 4) Drilled shafts especially at the viaduct,
- 5) SDRBDT and ELMDT – the entire projects as early work, etc.

DS-5 Maximize benefit of CM/GC

MCTC agrees that it is a project goal to maximize the benefits of the CM/GC method including contractor design review, cost certainty through iterative cost estimates, team oriented solutions in all areas, and schedule benefits through early work.

DS-6 Implement a Utility Task Force approach to manage utility relocations

Design Coordination

SANDAG, PMC and the Designers have done a great job performing research via historical records, pothole exploration and coordination with wet and dry utility owners. MCTC supports the recommendations of the VE report to “Elevate the utility coordination position to a high level in order to ensure improved visibility and authority.”

Wet Utilities

MCTC met with the PMC and PB design team to discuss the water and sewer systems and proposed relocations. MCTC made comments and recommendations during the formal constructability reviews to reduce the scope of work for various water and sewer relocations to reduce project cost and schedule. The largest savings opportunities exist for systems S37.1, S50.1, S50.2, S63.1, and S63.2.

Dry Utilities

PB is developing a composite utility plan for wet and dry utilities. MCTC recommends all dry utility relocation drawings are sent to MCTC for constructability reviews, and to the PB/HDR/KSW utility mapping team for composite utility mapping and civil teams for conflict analysis with the permanent railroad infrastructure.

SDG&E electric and/or gas relocations are required for the Mid-Coast project in Segments 1&2, Segments 3&4, EMDT, SDRDT and the Rose Canyon Cycle Track projects. Current SDG&E relocation coordination meetings are attended by team members from SANDAG, PMC, PB/KHA, Dokken, Butsko, and MCTC. MCTC recommends the SANDAG project managers nominate one SDG&E champion to coordinate with the SDG&E designers, PB/HDR/KSW and keep Greg Gastelum, Frank Owsiany, Sharon Humpheries, Pete Dablaing and Chris Carterette informed of the SDG&E relocation progress. A candidate for this champion is Andrew Holmquist from MCTC.

New or relocated electrical services are required for the Mid-Coast, EMDT and SDRDT projects. MCTC recommends the SANDAG project managers nominate Chip



Finch to coordinate with SDG&E for new services for the TPS sites, stations and other low voltage drops.

Construction Coordination

MCTC looks forward to developing a management and supervision org chart for construction with SANDAG.

Wet Utilities

MCTC will self-perform or sub-contract the water and sewer relocations. If SANDAG and MCTC elect to sub-contract all water and sewer relocations, MCTC recommends mobilizing MCTC supervision to manage the wet utility sub-contractors. The wet utility sub-contractors might need some support from MCTC that could include crane picks, pioneering/access, yard development, traffic control, and general support.

Dry Utilities

MCTC recommends mobilizing MCTC supervision to manage the dry utility contractors. MCTC recommends that the project surveys and maps the as-built locations of the dry utility poles and structures installed as a part of the dry utility relocations. If the dry utility relocation will be a ductbank installed under the guideway, MCTC recommends the project provides supervision to ensure the dry utility is installed at a prescribed depth as to not interfere with the heavy rail and light rail guideway section or the joint trench duct bank.

Recommendation

The current utility coordination team is very large and might have trouble effectively managing the constructability review and construction oversight of the utility relocations. MCTC has developed a utility matrix that is inclusive of the priority, description of utility, real estate requirements, scheduled need by dates, environmental clearances, environmental resource agency permits, construction permits, and cost sharing responsibility for each dry utility work order and wet utility system. MCTC is best suited to manage the wet and dry utility relocations via use of this tool and meetings with appropriate persons. MCTC will work with SANDAG to manage the cost and schedule risks. The wet utility early work steps and schedule is included with this submittal, the dry utility matrix is also at the end of this report and will also be included as a part of the VE log/matrix submittal.



Other Coordination

MCTC recommends SANDAG project managers for Mid-Coast Segments 1&2, EMDT, and SDRDT nominate one person to oversee and perform coordination with NCTD.

MCTC recommends SANDAG project managers for Mid-Coast, EMDT, and SDRDT nominate one person to oversee and perform coordination with MTS.

MCTC recommends SANDAG project managers for Mid-Coast Segments 1&2, Mid-Coast Seg 3&4 and the Rose Canyon Cycle Track projects nominate one person to oversee and perform coordination with Caltrans.

MCTC recommends SANDAG project managers for Mid-Coast Segments 1&2, Mid-Coast Segments 3&4 and the Rose Canyon Cycle Track projects nominate one or two people to perform coordination with the City of San Diego water, sewer, storm drain, BMPs, bike paths, roadway, traffic, street lights, street trees, real estate and park & recreation departments.

Idea Evaluation

The idea evaluation section of the VE Report provides a roadmap of the evaluation process, criteria selection and summary of idea valuations. Many of the initial ideas developed in early brainstorming sessions and listed in this section have been accepted and are being incorporated, are being developed as a VE alternative, or have been dismissed as a viable option for the project. MCTC has identified multiple concepts to discuss further or even resurrect as a viable option for a limited piece of work on the project. These ideas are listed below.

GT-2 Consider ballasted track in lieu of direct fixation on structures (DIS)

As noted in the VE idea summary list, ballasted track across bridges is typically more cost effective than direct fixation track on structures less than five hundred feet in length. However, this is not always the case. Direct Fixation track eliminates about 1.5 tons of dead load per track foot and can also save six to twelve inches of head height for traveling rail cars. Utilizing this concept can sometimes allow precast girders to be used to create longer bridge spans and eliminate piers. MCTC recommends this approach be proposed at the Tecolote Creek Bridge to eliminate the center bent in the creek bed. This approach is not



unique to light rail construction. Commuter and freight can use the same principals to reduce dead load on longer bridges. The LB Foster Load Master DF Fastener is rated for commuter and freight applications and a slightly heftier plinth will still eliminate the above stated 1.5 tons per track foot of dead load. If this idea is used in combination with a bulb tee design and slab track style DF track arrangement spans of one hundred feet can be reached while still saving the six inches to 12 inches of head height.

IMCO-7 Reduce number of shooflys by optimizing the construction staging

MCTC agrees with this concept, and it is directly tied to the approach for building a single LOSSAN track in permanent location first. Analyzing existing meet points and control points along this corridor there are 5 places (CP Friar, CP Tecolote, CP Cudahy, CP Morena and CP Elvira) where trains can change tracks to facilitate construction. Upon completion of the LOSSAN improvements through the EMDT contract there are only 2 places (CP Cudahy and CP Rose) within the project limits that would allow trains to change tracks. Subsequently the construction of Mid-Coast LRT must be phased in with the EMDT work to mitigate major impacts to a new double track alignment and avoid impacting headways and major meet points as trains come into Old Town Station and the downtown area.

Conclusion

As ideas are created, explored and fully vetted the process will continue to produce new concepts to shorten schedule and reduce costs while providing a quality product as well as minimizing impacts to the nearby community. In addition to this deliverable MCTC is developing the baseline estimate which will produce valuable information including accurate quantities, production rates, and additional insights that will be incorporated into VE matrix updates. The CM/GC team will continue to partner together with design and owner teams to address newly encountered challenges such as NCTD concurrence of design concepts, difficult project conditions such as constrained ROW and other difficult engineering issues such as scour from adjacent waterways and structures immersed in unsuitable soils. This process will continue to happen on a daily basis to help mature the designs of the various contracts. MCTC understands the importance of prioritizing with the project teams and insuring that feedback regarding past experience, constructability feasibility, cost analyses and other supporting input is incorporated as the teams develop new VE concepts.

EARLY WET UTILITIES WORK STEPS AND SCHEDULE

ESTIMATED START: FEBRUARY 2, 2015

Team	Step	Item	Responsible	Week Starting Date																											
				Before 13-Oct-14	6-Oct-14	13-Oct-14	20-Oct-14	27-Oct-14	3-Nov-14	10-Nov-14	17-Nov-14	24-Nov-14	1-Dec-14	8-Dec-14	15-Dec-14	22-Dec-14	29-Dec-14	5-Jan-15	12-Jan-15	19-Jan-15	26-Jan-15	2-Feb-15	9-Feb-15	16-Feb-15	23-Feb-15	2-Mar-15	9-Mar-15	16-Mar-15	23-Mar-15	30-Mar-15	Down the Road
Env. Clearance	1	MCCTP Environmental Clearance	Leslie																												
	2	SDG&E Environmental Clearance	????																												
	3	SDRDT Environmental Clearance	Cheryle	Env																											
	4	EMDT Environmental Clearance	Cheryle																												
	5	Field Meeting with Resource Agencies	Keith G & Cheryle		Field																										
Resource Agencies	6	California Coastal Commission	Adrianne (LSA), Erich (BRG)																										Approve		
	7	Army Corps of Engineers (404, Individual or Nationwide)	Adrianne (LSA), Erich (BRG)																										Approve		
	8	California Dept of Fish & Wildlife	Adrianne (LSA), Erich (BRG)																										Approve		
	9	Regional Water Quality Control Board (401)	Adrianne (LSA), Erich (BRG)																										Approve		
	10	US Fish & Wildlife	Adrianne (LSA), Erich (BRG)																										Approve		
Design	11	Mitigation Plan	Keith G																												
	12	Seg A1 95% Design to Navy	Dan A & Brad							Mtg																					
	13	Seg A2 (MCCTP) 95% Design to City of SD (S. of Balboa)	Dan A & Brad																												
	14	City of SD 510 Form	Sharon																												
	15	Seg A3 (EMDT) 95% Design to City of SD (Balboa to SR52)	Dan A & Brad																												
	16	City of SD Environmental Approval of 36" Water	Dan A & Brad																												
	17	Seg B 95% to City of SD	Dan A & Brad							B																					
	18	Seg B Design Exemption by SANDAG, MTS, City of SD	Dean, Brett, Tim A, Ziad, Eric R, Dan A & Brad						B																						
	19	Seg C 95% to UCSD	Dan A & Brad						C																						
	20	Seg D (Genesee) 95% Design to City of SD	Dan A & Brad							D																					
	21	MTS Acceptance	Bart & Brett			MTS																									
	22	NCTD Acceptance	Bart & Brett						NCTD																						
23	SANDAG Approved for Construction	Bart & Brett									SANDAG																				
Cost Sharing & Agreements	24	Define Financial Responsibility	Dean, Frank, Laura & Allison																												
	25	Notice to Utility Owners	Dean, Frank, Laura & Allison																												
	26	Cost Allocation Agreements	Dean, Frank, Laura & Allison																												
	27	Submit Purchase Order - Seg A/B	Dean & Laura							PO																					
	28	Submit Purchase Order - Seg D	Frank & Laura						PO																						
	29	Develop Capital Improvement Program (LOSSAN)	Allison & City of SD	CIP																											
	30	Develop Capital Improvement Program (Mid-Coast)	Allison & City of SD									CIP																			
	31	Submit Reimbursement Agreement to City of SD (LOSSAN), Committee Reivew, Council Reivew, Mayoral Veto	Sharon, Allison & City of SD																											City of SD	
	32	Submit Reimbursement Agreement to City of SD (Mid-Coast), Committee Reivew, Council Reivew, Mayoral Veto	Dean, Frank, Allison & City of SD																											City of SD	
	33	Utility Design Oversight Reimbursement Agreement with UCSD	Frank, Patti, Allison & UCSD																	UCSD											
34	Construction Agreement with US Navy	Patti & Navy																											Navy		
Contract/GMP	35	Develop Draft General Provisions	Dan H				GP																								
	36	SANDAG Construction Management Review of General Provisions	Dan H						CM																						
	37	SANDAG Legal Review of General Provisions	Dan H							Legal	Legal	Legal																			
	38	SANDAG Contracts Review of General Provisions	Dan H																												
	39	Develop Contract	Dan H							Contract	Contract	Contract																			
	40	Develop RFI and Product Submittal Process	Dan H																												
	41	Develop Change Management Process	Dan H																												
	42	Sign up ICE - Hatch Mott McDonald	Dan H			ICE																									
	43	Advertise to Subs	Andrew																												
	44	Assemble Sub Bids	Andrew																												
	45	Negotiate GMP	Dan H, ICE, MCTC																												
	46	Execute Contract	John, Greg, Sharon, Angela & Clayton																												
Construction Permits	47	MTS/NCTD Joint Entry Permit	Brett & Andrew																												
	48	City of SD Excavation Permit	Andrew																												
	49	PEER Report to Caltrans	Karen, Nirupa & Allison																												
	50	Caltrans Longitudinal Encroachment Permit	Karen, Allison & Andrew																												
	51	UCSD Construction Agreement	Frank, Patti & Andrew																												
	52	Private Right of Entry (Navy & W58.1 at Santa Fe Cul-du-Sac)	Chip W & Andrew				ROE																								
Construction	53	Construction Schedule	Andrew					Schedule																							
	54	Mobilize Supervision	Terry M.																												
	55	Construction Work Plan	Angel, Brad & Andrew																												
	56	Go to Work	Angel, Brad & Andrew																												



UTILITIES MATRIX

MCTC Priority List				Utility						Description of Work		Proposed Description of Work		Real Estate Agreements		Schedule								Environmental Clearances			Resource Agencies			Construction Permits													Cost Sharing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Andrew	Andrew			Andrew						Brad and Darwin		Andrew		Chip W., Tim, Patti and Allison		Andrew and Allison								Cheryl, Leslie and Adrienne			Cheryl, Leslie and Adrienne			Andrew, Chip W., Patti, and Allison													Andrew, Bart, and Laura E.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
No.	Wet Utility Early Work	Get GMP but Put on Shelf	Dry Utility Priority No.	Segment	Reach	Owner	WO Number	System	Work Performed By	Location	PIB's Description of Work	MCTC Proposed Disposition	MTS/NCTD Real Estate Agreement	Predessor Real Estate Parcel No.	Wet Utility ELB Duration	Wet Utility Total Duration	Required Start Date	Dry Utility EPC Duration (Months)	Dry Utility EPC Duration (Calendar Days)	MCTC Need By Date for Dry Utility Relocation	Predessor Activity	Successor Activity	MCCTP	SDRDT	EMDT	California Coastal Commission	Army Corps of Engineers	California Dept of Fish and Wildlife	MTS/NCTD Joint Entry Permit	NCTD All Work Windows	City of SD Excavation Permit	City of SD Right of Entry Permit	City of SD Parks and Rec.	Caltrans Longitudinal Encroachment Permit	Caltrans Exception to Policy (Access Control)	UCSD Permit	US Navy	Private RW	APN	Cost Responsibility																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1			5	A	4	AT&T	WO-1	Communication	Others	2 Locations; (1) Anna Avenue, (2) Tecolote Station	2 Locations; (1) OH Crossing, Check GO 95 Item Comm and OCS, (2) Move Equipment.						October 2, 2015	9	270	June 28, 2016		(1) RW-xx, RW-xx, RW-xx, Rough Grading, (2) Tecolote Station Parking Lot	X						X		X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</

UTILITIES MATRIX

Counter	MCTC Priority List			Utility						Description of Work		Proposed Description of Work		Real Estate Agreements		Schedule							Environmental Clearances			Resource Agencies			Construction Permits														Cost Sharing				
Andrew	Andrew			Andrew						Brad and Darwin		Andrew		Chip W., Tim, Pat and Allison		Andrew and Allison							Cheryl, Leslie and Adrienne			Cheryl, Leslie and Adrienne			Andrew, Chip W., Pat, and Allison														Andrew, Beth, and Laura E.				
No.	Wet Utility Early Work	Get GMP but Not on Shift	Dry Utility Priority No.	Segment	Reach	Owner	WD Number	System	Work Performed By	Location	PR's Description of Work	MCTC Proposed Disposition	MTS/NCTD Real Estate Agreement	Predessoror Real Estate Parcel No.	Wet Utility ELB Duration	Wet Utility Total Duration	Required Start Date	Dry Utility EPC Duration (Months)	Dry Utility EPC Duration (Calendar Days)	MCTC Need By Date for Dry Utility Relocation	Predessoror Activity	Successor Activity	MCCTP	SDRDT	EMDT	California Coastal Commission	Army Corps of Engineers	California Dept of Fish and Wildlife	MTS/NCTD Joint Entry Permit	NCTD All Work Windows	City of SD Excavation Permit	City of SD Right of Entry Permit	City of SD Parks and Rec.	Caltrans Longitudinal Encroachment Permit	Caltrans Exception to Policy (Access Control)	UCSD Permit	US Navy	Private R/W	APN	Cost Responsibility							
109	X	Wait for Gas and SS in Santa Fe		A3	7	City of SD	W48.1	Water	Water 2	Blum Balboa & End of Santa Fe	Abandon 16" Water		NL-260.28-57		2	15					Construct W37.6, W58.1	Rough Grading			X					X	X												City of SD				
110	X			A3	7	City of SD	W48.2	Water	Water 2	Blum Balboa & End of Santa Fe	New 12" Water				20	30						Construct W55.2			X					X													City of SD				
111	X			A3	7	City of SD	W49.1	Water	Water 2	Blum Balboa & End of Santa Fe	Abandon 8" Water		NL-260.13-59		2	15					Construct W58.1	RW-488R-C, Rough Grading			X					X													City of SD				
112	X			A3	7	City of SD	W51.1	Water	Water 2	Blum Balboa & End of Santa Fe	Abandon 12" Water		NL-259.78-73		2	15					Construct W58.1	Rough Grading			X					X													City of SD				
113	X			A3	7	City of SD	W52.1	Water	Water 2	Blum Balboa & End of Santa Fe	Abandon 12" Water		NL-259.08, 259.53-73		2	15					Construct W58.1	Rough Grading			X		X	X		X													City of SD				
114	X			A3	7	City of SD	W55.1	Water	Water 2	Blum Balboa & End of Santa Fe	Abandon 12" Water		NL-259.08, 259.53-73		2	15					Construct W58.1	Rough Grading			X		X	X		X													City of SD				
115	X			A3	7	City of SD	W55.2	Water	Water 2	Blum Balboa & End of Santa Fe	New 12" Water				20	30						Construct W58.1			X					X														City of SD			
116	X			A3	7	City of SD	W56.1	Water	Water 2	Blum Balboa & End of Santa Fe	Abandon 12" Water		NL-258.80-69		2	15					Construct W58.1	Rough Grading			X		X	X		X														City of SD			
117	X			A3	8	City of SD	W58.1	Water	Water 2	Blum Balboa & End of Santa Fe	New 12" Water	Unknown - review unknowns to reduce rework if Way. Option 2 - extend proposed casing on east side of project to get out of	New	359-010-41-00	12	22					Construct W48.1, W49.1, W51.1, W52.1, W55.1, W56.1			X			X			X										X				City of SD			
118	X			B	8	City of SD	S59.1	Sewer	Sewer 2	Flyover/Strauss Brewery	Relocate 21" Sewer	Protect existing sewer in place. Coordinate with Reversing Wall Designers. Add encasement to protect			8	18					RW-608R-F, Rough Grading	X				X	X	X		X														SANDAG			
119	X			B	9	City of SD	S60.1	Sewer	Sewer 2	U-Channel	Replace 36" Sewer in Place with 18" Sewer	Option 1 - construct encasement existing sewer. Option 2 - Change proposed pipe material to VCP with concrete			18	28					Construct U-Channel	X				X	X	X	X		X		X	X										City of SD			
120	X			B	9	City of SD	S62.1	Sewer	Sewer 2	Blum 52 & Gilman	Abandon 21" Sewer				1	15					RW-629L-F, Rough Grading	X				X	X	X	X		X		X	X										City of SD			
121		Wait for Shooty		B	9	City of SD	S63.1	Sewer	Sewer 2	Blum 52 & Gilman	Relocate 60" Sewer	Protect in place in existing alignment. Abandon Manholes as required by rail configuration. Add offset manholes in City	RR-280942		55	65					2-Stage with Shooty	RW-624R-F, RW-626L-F, Rough Grading	X				X	X	X	X		X		X	X	X									City of SD		
122		Wait for 16" Gas		B	9	City of SD	S63.2	Sewer	Sewer 2	Blum 52 & Gilman	Relocate 42" Sewer	Protect in place in existing alignment. Abandon Manholes as required by rail configuration. Add offset manholes in City			25	35					SDGE GT W05	Drainage 60.1, RW-648L-C, Rough Grading, Bike Path	X					X								X	X								SANDAG		
123	X			B	9	City of SD	S64.1	Sewer	Sewer 2	Blum 52 & Gilman	Modify and Abandon MH	Add Sheet to Segment B 95% Drawings.	NL-257.22-70		2	15						Rough Grading	X					X																	City of SD		
124	X			C	13	UCSD	S96.1	Sewer	Sewer 3	UCSD West Station	Relocate 12" Sewer				8	18						UCSD West Viaduct Sub-Structure	X															X							SANDAG		
125	X			C	13	UCSD	W97.1	Water	Water 3	UCSD Lyman and 6th Ln	Relocate 8" Water				5	15						UCSD West Viaduct Sub-Structure	X															X							SANDAG		
126	X			D	14	City of SD	S106.1	Sewer	Sewer 3	Genesee Avenue at Esplanade Ct	Relocate 6" Sewer Lateral	Move CDH to Miss SS. Or Join Adjacent Laterals at Back of Walk.			10	20						Genesee Viaduct Sub-Structure	X							X															SANDAG		
127	X			D	14	City of SD	S106.2	Sewer	Sewer 3	Genesee Avenue at Esplanade Ct	Relocate 6" Sewer Lateral	Protect in Place			10	20						Genesee Viaduct Sub-Structure	X								X															SANDAG	
128	X			D	14	City of SD	S106.3	Sewer	Sewer 3	Genesee Avenue at Esplanade Ct	Relocate 6" Sewer Lateral	Protect in Place			10	20						Genesee Viaduct Sub-Structure	X								X															SANDAG	
129	X			D	14	City of SD	S107.1	Sewer	Sewer 3	Genesee Avenue at Nobel Dr	Relocate 12" Sewer Lateral	Connect to 18" Pipe by Monte Verde.			5	15						Genesee Viaduct Sub-Structure	X								X															SANDAG	
130	X			D	14	City of SD	W101.1	Water	Water 4	Genesee Avenue and Regents	Relocate 10" Water to 12" Water	Protect integrity of pipeline in place. Coordinate with Bridge Designers for Isolation Casings to Protect Water Line in			35	45						Genesee Viaduct Sub-Structure	X								X															SANDAG	
131	X			D	14	City of SD	W101.2	Water	Water 4	Genesee Avenue and Regents	Relocate 24" Water	Protect integrity of pipeline in place. Coordinate with Bridge Designers for Isolation Casings to Protect Water Line in			3	15						Genesee Viaduct Sub-Structure	X								X															SANDAG	
132		Wait for Road Construction		D	14	City of SD	W103.1	Water	Water 5	Genesee Avenue	Relocate Fire Hydrant				2	15						Roadway Widening	X								X														SANDAG		
133		Wait for Road Construction		D	14	City of SD	W104.1	Water	Water 5	Genesee Avenue at Executive Dr	Relocate Fire Hydrant				2	15						Roadway Widening	X								X															SANDAG	
134		Wait for Road Construction		D	14	City of SD	W104.2	Water	Water 5	Genesee Avenue at Executive Dr	New Backflow Assembly				2	15							Roadway Widening	X								X															SANDAG
135		Wait for Road Construction		D	14	City of SD	W104.3	Water	Water 5	Genesee Avenue at Executive Dr	Relocate Fire Hydrant				2	15							Roadway Widening	X								X														SANDAG	
136		Wait for Road Construction		D	14	City of SD	W104.4	Water	Water 5	Genesee Avenue at Executive Dr	Relocate Fire Hydrant				2	15							Roadway Widening	X								X															SANDAG
137		Wait for Road Construction		D	14	City of SD	W105.1	Water	Water 5	Genesee Avenue at La Jolla Village Dr	Relocate Fire Hydrant				2	15							Roadway Widening	X								X															SANDAG
138	X			D	14	City of SD	W105.2	Water	Water 4	Genesee Avenue at La Jolla Village Dr	Relocate 16" Water	Protect integrity of pipeline in place. Coordinate with Bridge Designers for Isolation Casings to Protect Water Line in			28	38						Genesee Viaduct Sub-Structure	X								X															SANDAG	
139	X			D	14	City of SD	W105.3	Water	Water 4	Genesee Avenue at La Jolla Village Dr	Relocate 30" Water	Protect in Place			8	18						Genesee Viaduct Sub-Structure	X								X																SANDAG
140		Wait for Road Construction		D	14	City of SD	W107.1	Water	Water 5	Genesee Avenue at Nobel Dr	Relocate Fire Hydrant				2	15							Roadway Widening	X								X															SANDAG



Appendix E

Mid-Coast Corridor Value Engineering Log



Mid-Coast Corridor Transit Project Value Engineering Log

VE #	VE Name	Change	Authorization	VE ROM	Items to Resolve	Drop Dead Date	Design Schedule Remaining	Anticipated Redesign Cost	Design Cost Tracking	MCTC Action Item(s)	Design Team Action Item(s)	SANDAG Action Item(s)
WA.9	Wall 767	Change from Soldier Pile w/ Tiebacks and CIP fascia to Ground Anchor Wall w/ sculpted shotcrete fascia	GO	\$1,300,000	IN IFC SET		_____	\$80,000				
STR.5	Viaduct Sidewalk Chase	Change from CIP support/Precast Panel to CIP sidewalk with embedded conduits	GO	\$1,950,000	IN IFC SET FOR NOBEL & UCSD		_____	\$50,000		CONFIRM THIS DETAL ENDS UP IN GENESEE DESIGN		
WA.19	Wall 332	Change from CIP Wall w/ shoring to Slope Paving; address GO175 with maintenance refuges every 300'	GO	\$4,800,000	IN IFC SET		_____	\$100,000				
WA.15	Sculpted Shotcrete Fascia	Change cut walls 488, 609, 614, 767, TP-GEN3 from CIP fascia to sculpted shotcrete fascia	GO	\$600,000	IN IFC SET		_____	\$60,000		DO WE HAVE TP-GEN3 YET?		Decide on Boulderscapes stain color - THRU SUBMITTAL PROCESS
WA.5	Change Wall 750 type	In cut section of the wall (~150' off Gilman Box), change to soil nail wall. Remainder of wall can stay CIP.	GO	\$200,000	IN IFC SET	3/1/2017		\$150,000				
WA.11 &12	Change Wall CL-1 & TP110 type	Wall CL-1 is designed to retain fill for the Clairmont Park-n-Ride parking lot, and Wall TP110 is designed to retain fill for a maintenance driveway to TPSS No.11. Currently CIP walls, change to MSE block wall	GO	\$100,000	WAITING ON TP110 IFC PLANS FROM PB	3/1/2017		\$30,000		REVISED VE ROM WITH CL-1 WALL DELETION (-\$200,000)		
WA.21	Wall 267	Similar to the Wall 332 VE, change Wall 267 from CIP to sculpted slope paving	GO	\$700,000	IN IFC SET			\$50,000				
WA.22	Eliminate Southern Morena/Tecolote Switchback Ramps and Stairs	Eliminate the switchback pedestrian ramp and stairs on the south side of Tecolote overpass of Morena, and replace with stairs on grade and a graded pedestrian ramp up to Tecolote. Maintain the ped ramp and stairs on the north side. Results in deletion of Walls MOR-2-10.	GO	\$550,000	IN IFC SET			\$75,000		CONFIRM ALL WALLS DELETED AS ORIGINALLY PROPOSED		
WA.23	Wall 756	Change wall from CIP w/ shoring to soil nail wall	GO	\$750,000	WAITING ON IFC PLANS FROM PB TRACKING FOR 4/3/17	4/1/2017		\$50,000				
STA.11	Change stainless steel finish	Provide a No.8 glass bead blasting finish on stainless steel in lieu of No.4 brushed finish. Cost savings + maintenance savings	GO	\$100,000	WAITING ON IFC PLANS FROM PB	3/1/2017		\$0		CHECK TO SEE IF IN IFC PLANS OR SPECS YET		
				\$11,050,000								
STA.7a	Change decorative fencing at stations	Use custom Tartan rigid woven mesh 2" x 2" opening in lieu of Tartan 1" x 1" 12 GA wire for BF-2	Work to Do	\$600,000	Buy america issue with keeping Jakobs mesh	10/1/2016		\$25,000		show SANDAG samples to present to MTS for approval	Architectural team approval	MTS approval
STA.7b	Change decorative fencing at stations	Use custom Tartan rigid woven mesh 2" x 2" opening in lieu of Tartan 1" x 1" netting mesh for BF-3, BF-5, BF-6, FP-1, FP-2, FP-3, FP-6, FP-7	Work to Do	\$200,000		10/1/2016		\$25,000		show SANDAG samples to present to MTS for approval	Architectural team approval	MTS approval

WA.24	Wall 592	Change Wall 592 from Soldier Pile/Ground Anchor Wall to Precast Counterfort Wall w/ Secant Wall	Work to Do	\$325,000	*NCTD approval	10/1/2016				need to discuss with PB		SANDAG to propose to NCTD
STR.32	Eliminate Charmant Bridges	Eliminate Charmant North and Charmant South Bridges; instead embank the guideway and retain toe with retaining wall (or daylight if acceptable)	Hold	\$300,000 (CIP on foundations) \$1,100,000 (MSE)	*impacts to environmental footprint? *adjacent residents	we have until March 2017 for decision		\$100,000		Revise price based on PB concept & compare against MSE wall. Also analyze schedule: design change vs dirt flow & adjacent wall schedules	would need to complete a CT structure foundation report for straps in the ROW Look at existing storm drain and how it'd be impacted	
STR.4	Construct Gilman Box in 1 Phase	Shut down the roadway for a longer duration and construct the entire Gilman Box in 1 phase. Savings include temporary traffic signals, traffic control, production efficiencies, etc.	Hold	TBD	*city approval *community approval	9/1/2016		\$10,000		Look at project schedule to see if we have float & Redefine ROM	confirm zero cost for re-design	
WA.20	Eliminate Northern Morena/Tecolote Ramps and Stairs	Eliminate the pedestrian ramp walls and stairs on the north side of Tecolote overpass of Morena. Build the ramp on embankment. Results in deletion of Walls MOR-11, 12, 13, 14, 15, 16, 17, 18 (none of which were shown in the GMP plans, but were all added in 95% plans)	Hold	No VE Savings, rather Design Scope Growth Savings of \$750K	*enviro-doc issue? *already committed to community, if removed there may be contest	4/1/2017		\$50,000		Revise ROM based on PB's conceptual layout	Look at sidewalk connection	Need to ask John H. & Leslie
RO.7	Reduce width/section of RC Bikepath	Reduce width of Rose Creek Bikepath, and minimize AC paving and aggregate base sections	Hold	TBD		43191		20000		Look at reducing from 16' to 14' wide		
R9	Reach 9 / Gas Line	Elevate LRT section underneath SR-52, eliminate/reduce walls, reduce excess material, reduce scope of gas line modification	GO (limited to Structural GP)	\$1,500,000.00	*Caltrans approval of protection slabs *SDG&E approval of gas line-trenched install / leave in place *Schedule changes *gas line inspection/access	4/1/16 (Caltrans structural approval)		\$500,000.00	estimated \$15K for structural GP	What If Schedule	General Plan for structural protection slab; submit to CT	Tim to discuss with Andy (SDG&E)
	"Monte Verde Hole"	Fill in "Monte Verde Hole" with project excess dirt. (Genesee & La Jolla Village)	Work to Do	TBD								



Appendix F

MCTC Innovation Log

Mid-Coast Corridor Transit Project
Innovation Log

Item	Description	Phase	CCO (if applicable)	Realized Cost Savings	Innovative Idea Not Pursued	Status	Notes
1.1	Revised bridges from cast in place to precast girders at selected bridges	Pre-Construction		\$12,102,000		Implemented	The precast girder approach reduced construction cost and reduced construction schedule by 4 months and was applied to specific bridges and viaduct segments.
1.2	Use precast segmental box girder for select structures.	Pre-Construction			Anticipated increase in cost of \$1,749,000	Not Implemented	CM/GC considered this alternative, but found precast girders to be a better solution considering alignment constraints and common construction methods used in California. While this solution may have reduced the schedule by 6 months it would have increased cost by \$1,749,000.
2	Pile load tests	Pre-Construction		\$3,783,000		Implemented	Verify if O-Cell testing at CIDH pile locations were done.
3	Post grouting instead of ground improvements	Pre-Construction		\$7,301,000		Implemented	Verify if pre or post ground improvement were used or if either method was included in the spec's.
4	Shift Genessee Avenue Viaduct from centerline of road to the southbound side.	Pre-Construction			Anticipated increase in project costs and schedule delays	Not Implemented	CM/GC contractor and design team concluded, changing the location of the viaduct on Genessee would cause a major redesign of both dry and wet utilities as well as roadway construction. This would negatively impact the schedule and overall cost of the project. Further review of this alternative showed that significant impacts to properties along the corridor would result in increased right of way accusation of private property not addressed in the Draft SEIS/SEIR.
5	Reduce design speed on Genessee Avenue 40 mph and eliminate crash cushions	Pre-Construction			Estimated at \$1,589,000	Not Implemented	This innovative concept proposed to reduce the design speed of Genessee Avenue to 40 mph to allow a reduction in clear recovery zone, therefore eliminating the requirement for concrete barriers. The reduction in design speed was not supported by the authority having jurisdiction over the roadway, City of San Diego, and thus was not implemented.
6	Modify station platform canopies and integrate photovoltaic panels	Pre-Construction			Anticipated increase in project implementation costs and schedule delays	Not Implemented	Incorporating this concept into the MidCoast project would have generated sustainable renewable energy and would have resulted in increased design, construction, and maintenance costs. It would have also increased viaduct construction complexity, stray current potential, and introduced implementation, schedule and long term maintenance risks. Solar panels on canopy structures would be located in close proximity to bare traction power overhead contact system conductors. Access to solar panel mounted on canopies on aerial structure over surface streets would be difficult once rail operations commenced, likely resulting maintenance activities during non-revenue service hours when overhead conductors could be deenergized. A decision was made not to pursue this VE alternative.
7	Shift Balboa Station south to improve transit patron access.	Pre-Construction		\$1,996,000		Implemented	Balboa Station was shifted to the proposed location. VE also recommended eliminating sidewalk and ADA ramps to north side of Balboa Ave. Pedestrian access to the north side of Balboa Avenue would have been significantly adversely impacted, thus the team did not accept this portion of the VE recommendation. VE Initial cost savings was estimated at \$2,346,000. Ramps cost \$350,000, thus savings was reduced to \$1,996,000.
8	Use standard barrier railing at platform edge and ped bridge	Pre-Construction		\$1,260,000		Implemented	Glass panels were eliminated and standard barrier railings and metal mesh were incorporated at aerial stations at Nobel Drive, UCSD, Executive Drive and UTC Stations.
9	Reduce the width of platforms from 15 feet to 13.5 feet.	Pre-Construction			Less than \$1,500,000	Not Implemented	The VE initial cost savings estimate of \$2,115,00. Designer estimated construction cost savings of about \$1,500,000. 15 feet is the common platform width used at MTS stations. Revising design plans would have increased design costs not accounted for in the construction saving estimate. Concerns were raised regarding circulation at station ADA ramps and deviations from MTS and SANDAG design criteria. Team did not pursue this VE proposal.
10.1	Integrate Nobel Drive Station Aerial Structure with Parking Structure	Pre-Construction			N/A	Not Implemented	This VE proposal was reviewed by the design team. Significant design concerns were raised that related to structural integrity during a seismic event due to the mixing of guideway and building structures and safety and security concerns. The design teams assessment of this proposal concluded it would required significant structural analysis and likely result in increased cost to implement.
10.2	Locate parking structure under aerial structure at Nobel Drive Station	Pre-Construction			N/A	Not Implemented	Design and program office concluded right of way acquisition schedule risks and increased engineering design integration efforts would be required to implement this VE recommendation.
11	Use soldier pile walls instead to Type 1 retaining walls	Pre-Construction		\$672,000		Implemented	Type 1 retaining walls require backcuts and, with the limited MCC right of way, shoring. Soldier piles walls eliminate shoring and reduced the wall cost. Soil nail walls eliminated shoring and were in specific locations more economical than Soldier piles walls.
12	Instead of Type 1 retaining walls at bike path use soil nail walls.	Pre-Construction		\$420,000		Implemented	See comment above.
13	Use slope paving in selected areas n Morena Blvd instead of Type 1 walls	Pre-Construction		\$952,000		Implemented	In locations with sufficient space for slopes and stable soil, slope paving was less expensive and faster than building Type 1 walls.
14	Eliminate retaining wall at VA Medical Center and use aerial structure	Pre-Construction			Anticipated increase in cost of \$2,530,000	Not Implemented	This VE concept was expected to increase the cost of the project and increase the time required to construct the VA Medical Center Station. VE team thought alignment could be improved to enhance operation speed, however, trolleys reduce speeds through stations and thus the operational benefits would not be realized.
15	Use T retaining walls in fill vs MSE walls	Pre-Construction / Construction		\$1,456,000		Implemented	schedule for construction of the VA Medical Center Station,

16	Shift Rose Creek Channel to the east	Pre-Construction			N/A	Not Implemented	Evaluation of the proposed alternative concepts indicate there would be far too many undesirable impacts relating to cost, maintenance, environmental and construction impacts to continue pursuing them.
17	Use pre-cast girders on the LOSSAN fly over bridge	Pre-Construction		\$1,294,000		Implemented	With work restrictions in the operating LOSSAN corridor and limited access the LOSSAN fly over bridge was changed to from cast in place to pre-cast girders.
18	Revise viaduct hinges to minimize falsework and traffic impacts	Pre-Construction		\$0		Implemented	
19.1	Elevate alignment over La Jolla Colony Drive	Pre-Construction			Anticipated Increase in Cost	Not Implemented	While the proposed concept was technically feasible, it would result in many undesirable impacts and environmental challenges that would adversely impact Rose Canyon and result in increased costs. This alternative would add cost, cause greater visual impacts to Rose Canyon, and would require tall retaining walls in order to reduce the length of the bridge. It would still touch grade north of La Jolla Colony Drive, and therefore would not reduce impacts to the La Paz complex housing units. Such a structure would also impact the 69 kV lines that cross the freeway south of La Jolla Colony Drive.
19.2	Elevate alignment over La Jolla Colony Drive and shift Lossan flyover north	Pre-Construction			Anticipated Increase in Cost	Not Implemented	This concept was determined to be technically infeasible, because the clearance requirements for the LOSSAN MT2 track could not be met. The MidCoast teams selected the location of the LRT flyover structure to improve track geometry using larger radius horizontal curves allowing for higher operating speeds on both the LRT and LOSSAN tracks. The CMGC understood the importance of this benefit and concurred with the rationale.
20	Realign alignment to I-5 centerline between Gilman to Nobel Dr. Station	Pre-Construction			Significant Adverse Environmental Impacts	Not Implemented	This VE concept would introduce significant visual and noise impacts that would have adversely affected the Rose Canyon park and communities long the west side of I-5. In addition, alignment would adversely impacted utility transmission lines, constructability, and resulted in complete redesign and other concerns resulting in additional costs not considered as part of initial estimates.
21	Lower the Grade at Nobel Drive Station	Pre-Construction			Significant Technical Challenges with Concept	Not Implemented	The VE alternative concept was not accepted due to the grade requirements of the station and clearance requirements for the crossing over of I-5. In addition, the CMGC estimated concrete volume savings in initial VE study seemed to be based on high calculations and real quantity savings may not be as high as projected.
22	Shift the alignment adjacent to I-5 edge of shoulder at Nobel Drive using Caltrans right-of-way	Pre-Construction			Significant Technical Challenges with Concept	Not Implemented	The proposed alternative appears to be an improvement over the base line concept considering it reduces impact to the shopping center and eliminates half of the parking structure. While this concept appeared to be beneficial to the guideway it would have resulted in a complete redesign requiring Caltrans approval that could delay the project. Caltrans raised material concerns related to planned I-5 widening, thus this concept was not pursued.
23	Reduce the vertical profile of Executive Drive Station	Pre-Construction			Significant Technical Challenges with Concept	Not Implemented	This alternative was not pursued due to minimal savings in cost and prior coordination of the platform elevation with UTC Transit Center Station and UTC Shopping Center. The proposed vertical profile reduction would not result in significant project cost savings due to the ductility requirements of the columns. The existing design requires isolation casings in order to create a more flexible column. By making the columns shorter, the depth of isolation casings must be increased, thus adding costs that were not accounted for by the VE team. The savings in cost is therefore, only associated with the reduced height of stairs and elevators.
24	Use pre-cast girders instead of cast in place for the viaduct.	Pre-Construction		\$35,603,000		Implemented	With work and time restrictions and requirements to maintain traffic operations on Genesee Ave and cross streets the viaduct was changed to pre-cast girders from cast in place to reduce falsework, daily traffic control and reduce construction time.
25	Utilize microwave towers in lieu of PTC fiber optic cable during construction	Pre-Construction			Increase cost over joint ductbank alignment pursued	Not Implemented	Existing fiber optic cable infrastructure owned by both NCTD and Verizon. Savings from this alternative could not be substantiated without significant additional engineering efforts that would result in significant associated costs in engineering development. CMGC and SANDAG project team developed a joint use ductbank alignment alternative that enabled ductbank to be relocated once to its permanent location.
26	Eliminate plinth and use grout patches at direct fixation track	Pre-Construction			Undesirable with type of bridge construction selected	Not Implemented	The CMGC reviewed this alternative concept and thought it might be a good option in conjunction with a precast segmental structure, however, precast segmental bridge construction was not selected as the preferable option for any of the bridges or viaducts on the project. Plynths are desirable for use with cast in place construction.
27	Advanced relocation contract work	Pre-Construction		\$0		Implemented	Prior to final design and GMP, SANDAG issued a construction supplement to the base construction contract to start utility relocations to reduce risk of conflicts that would delay major roadway, track or structure work.
28	Eliminate Tecolote Access Road and Bridge	Pre-Construction / Construction		\$1,700,000		Implemented	Road and Bridge deleted from plan during design review by CMC and MCTC. SANDAG and NCTD agreed to additional maintenance vehicles in lieu of road. Cost shown in approximate amount saved through not implementing the full plan.
29	Green Line/Blue Line Tie-In - Converting Direct Fixation Track to Ballasted Track	Construction	4087	\$575,632		Implemented	
30	Delete Contract Work on Morena and Balboa that would be demolished in near-term by the City's Pure Water and Alvarez Pipe Line Projects	Construction	4194	\$336,981		Implemented	
31	Change RW B300-B500 and B600-B900 from CIP to Counterfort to reduce the impacts to traffic on Balboa Ave and manage constructability challenges for the switch back ramp walls B600-B900.	Construction	4126	\$246,939		Implemented	

32	Modify Tecolote Creek Bridge Approaches from geofoam to lightweight cellular concrete	Construction	4105	\$244,211		Implemented	
33	Removal of Tecolote Station Communication Room - Radio transmission moved to Mount Soledad	Construction	4127	\$205,871		Implemented	
34	Tecolote Ped Ramp Removal (North) - Redundant Ramp not needed	Construction	4165	\$203,742		Implemented	
35	Damon Yard Excavation Reduction	Construction	4069	\$137,151		Implemented	
36	Knoxville Ramp - Direct ramp vs. Switchback with walls	Construction	4165	\$76,782		Implemented	Design was revised to use direct ramp and eliminate walls required for switchback design.
37	Morena/Ariane Drive Modifications - Minimize barrier and driveway changes	Construction	4187	\$40,000		Implemented	
38	Change retaining wall (RW 500) to Slope Paving	Construction	4058	\$25,788		Implemented	
39	Change retaining wall (RW762) to Slope Paving	Construction	4549	\$185,402		Implemented	
40	UTC TPSS Civil Modifications	Construction	4593	\$12,504		Implemented	
41	Revisions to Pepper Canyon Access Road - Pervious Concrete to ACP	Construction	4607.1	\$81,626		Implemented	
42	South Guideway and Inter-Track Fence Revisions	Construction	4750	\$206,000		Implemented	
43	North Fence Revisions	Construction	4750	\$80,649		Implemented	
44	Pepper Canyon Station Plaza Revisions	Construction	4750	\$650,000		Implemented	
45	Revised 2" DCW Service at UTC	Construction	4750	\$46,300		Implemented	
Total Cost Savings Realized				\$71,894,578			



Appendix G

Mid-Coast Quality Control/ Assurance September 21 Monthly Report

Quality Assurance

Work Accomplished this Period

NCR / QUALITY ACTION ITEMS LOGS

Non-Conformance Reports	Open	Closed	TOTAL
NCR's Processed This Month	2	0	2
NCRs To Date	29	394	423
Resolution Time Summary: Since no NCRs were closed this month, no resolution average time to closure data is available for the month; however, the average time to disposition for the 394 NCR's closed on the project to date was 87 days. Average time to closure for all 394 NCR's was 175 days.			
Quality Action Items	Open	Closed	TOTAL
QAIs processed this month	1	0	1
QAIs to date	22	319	341

AUDIT / SURVEILLANCE LOG

Audit / Surveillance No.	Date Issued	Description	Observations	Due Date	Status

Five (5) total three-phase reports completed and transmitted this period:

- South Stations Signage Placement review
- QC Walk to Produce QC Punchlist and QA Spreadsheet at Nobel Plaza
- QC Walk to Produce QC Punchlist and QA spreadsheet at Nobel Parking Lot
- Mid-coast Program-Wide Quality Concerns report/resolution
- UTC Preparatory Meeting for Mechanical

One additional report is nearing completion which is the documentation of safety and security item T-6. Two areas needed re-measuring. It was found that there were design changes during construction that changed the dimensions. A design exception is being written for these two areas so that item T-6 can be completed.

TESTING SUMMARY

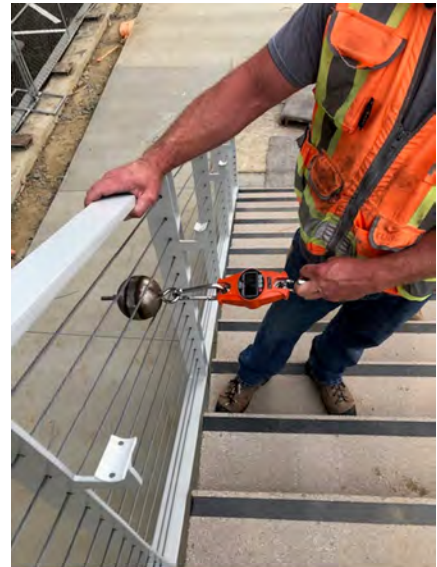
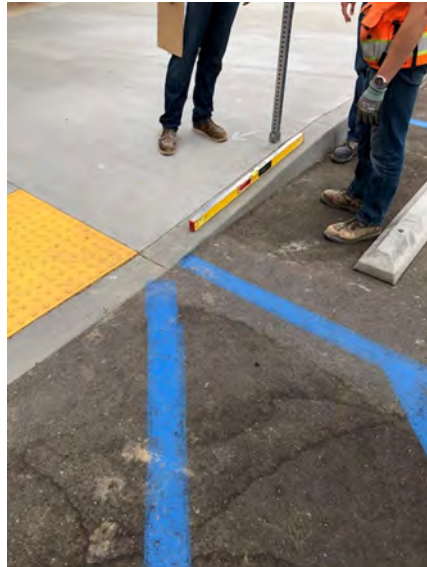
PROJECT	QA TESTS	QC TESTS
MCLRT 3&4	25	61
Gilman	0	0
ADWETN	0	0
ELMODT	0	0
SDRBDT	0	0
MCLRT 1&2	0	15
ADWETS	0	0
Bikeway	0	0
Aux Lane	0	0
Voigt	0	0
<i>RTA, Voight and Lyman</i>	0	5
Total:	25	81
	30.9%	

Minor concrete, asphalt, and soils work for stations parking and sidewalks made up the majority of tests for this period.

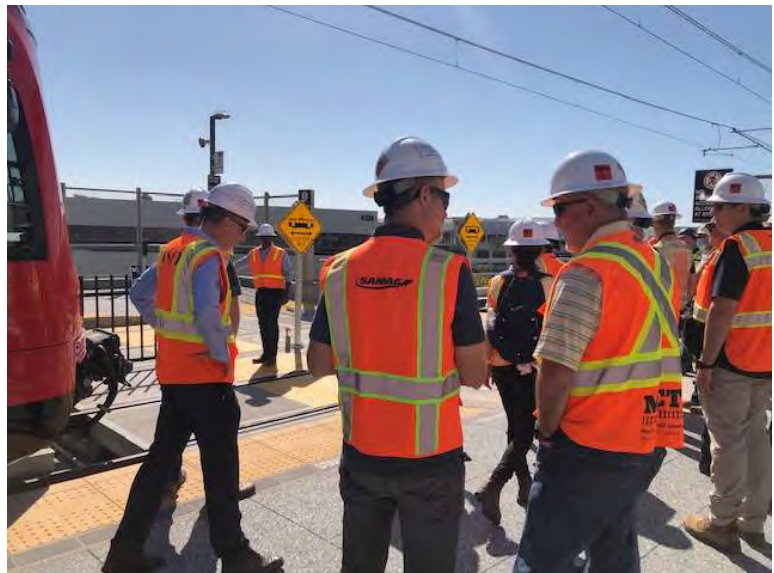
Highlights for the Month:

- QAMs clarifying key elements of closeout process via addendums to the document control plan:
 - New procedure for paper file checks versus electronic prior to recycling/shredding
 - New audit form developed to document checks of paper documents
 - The addendum has been agreed upon by the RE's and SANDAG and is being rolled out.
- First project being focused on for closeout is SDRBDT – QAMS assisting with process:
 - Verifying 170 item checklist of contract requirements as a part of closeout
 - Assisting with adding key support documents not captured on Prolog to RFI's, Submittals, and NCR resolutions.
 - Working with Admin staff on paper file shredding and recycling after verification
- Safety and Security field inspections and task force meetings continued
 - QAMs involved in resolving issues for various certifiable items needing additional measurements or design involvement.
 - QAMs presented at monthly Safety Security/Fire Life Safety meeting updating SANDAG and MTS on status and projection of certifiable item completions
 - Tracking meetings and task force meetings are continuing
- South stations punchlist work progressing, North stations final contract items in process
 - QAMs keeping/updating the CMC punchlist and verifying it matches MCTC punchlist
 - Attending QC punchlist walkdowns as well as both pre-final and final walkdowns and documenting as 3 phase surveillances and/or adding to CMC punchlist
- NCR and Observation closeouts continuing – QAMs keeping master log of status of NCR's
 - Providing weekly log at RE meeting of all open NCRs with whose court they are in
- QAMs coordinating with MTS on turnover documents.
 - 3 large packages of files have been transmitted to MTS. The QAM's have organized the effort of getting all of these documents into Prolog, fully reviewed, and packaged with summary notes for transmitting. These include all ultrasonic test reports on rail, all rail grinding reports, all shop drawing related documents for rail, destress reports, and flash butt weld reports.
- A list of systems related turnover items for MTS is being developed. The plan is for these to be handled the same as the other turnover documents whereby they go through Prolog for full review by the CMC and any summary notes are made before formally transmitting so that they are organized and clear.

- Assisting with design related punchlist items. During punchlist walks there are items that are not true punchlist/unfinished work items but rather need a design change or clarification on how to handle. It was found that MCTC was not tracking these with formal punchlist item numbers. QAM's are coordinating many of these items to ensure they are on a list and get carried out.
- Continuing to add to the lessons learned spreadsheet to capture improvements for future projects.
- QAMS working with SANDAG QA/QC Manager to develop a tracking tool to look at percentage complete of major closeout items



Punchlist walks are ongoing to include marking areas for repair (left), slope and dimensional verifications (center), and testing (right – cable handrail tension test)



9/23/21 - Trolley ride and station review provided for Fire Life Safety and Safety/Security Groups. Stops allowed for review of items and good discussions



Paper File Audit Form (pre-shredding /recycling inspection)

Project: ☐ Mid-Coast North ☐ ADWET N ☐ Aux Lane
☐ Mid-Coast South ☐ ADWET S ☐ Bikeway
☐ SDRBDT ☐ Voigt
☐ EMDT ☐ CP Rose

Paper Folder Name:
☐ Executed CCO's along with Memos, RON, ICE ☐ WSWD ☐ Progress Payments/Q Sheets
☐ Letters ☐ Permits ☐ SWPPP and Amendments
☐ Testing ☐ DEWRs ☐ EWB's and EWB Backup
☐ Other (specify): _____

Server Electronic File Category: _____

Verified that electronic file is now most recent: ☐

Sent any updated electronic files to Roxanne: ☐ Notes: _____

Marked this paper file folder "shred" ☐ Notes: _____
or "recycle" in red ink.

Office Tech Signature: _____ **Date:** _____

RE Verification Signature:** _____ **Date:** _____

*Other file types were not formally required to be kept as hard copy, as long as it can be verified that these have been kept electronically then those files can be shredded with RE and Document Control Manager verbal approval.

**RE or designee

Appendix 1: Paper File Processing

In accordance with SANDAG Board Policy 015, paragraph 2.3 "...all Records subject to retention on a temporary or permanent basis may be retained in an electronic format..."

Some records have been maintained in both paper and electronic format on the Mid-Coast project. The project team has decided to make all the master/final copies of documents in an electronic format as allowed by Board Policy 15. Therefore, the purpose of this instruction is to ensure there is a process for checking the electronic files versus the paper files and updating the electronic files as needed. After it has been confirmed that the electronic files are the most recent, the paper files can then be disposed of by shredding sensitive documents and recycling all other documents as a part of closing out the project.

Step 1: For each of the following folders in the paper document control system (files):

Executed CCO's along with Memos, RON, ICE	WSWD	Progress Payments/Q Sheets
Letters	<u>Permits</u>	SWPPP and Amendments
Testing	DEWRs	EWB's and EWB Backup

Administrative staff will use the "Paper file audit form" to conduct a check of a paper file versus the electronic files, ensure that the electronic files have the most recent version of any files.

Step 2: Once the check is completed and the audit form is filled out, the form will be taken to the Resident Engineer (or designee) for final sign-off.

Step 3: Once signed, that file folder can be marked with a red pen as "shred" or "recycle" and kept separate of unchecked files.

Step 4: The completed/signed Paper File Audit Form will be stored on the server in category 00 "File Categories". These forms are a CMC internal quality/completeness check and do not need to be transmitted to SANDAG.

1 Office Tech checks a given folder in the paper files for completeness. Fill out "Paper file Audit Form"	2 RE (or RE Designee) confirms and signs the form.	3 Folders that have been checked are marked "shred" or "recycle" with red pen	4 Completed/signed Paper File Audit Forms are filed in CMC file category 00
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The 9 categories listed under step 1 above must follow the formal procedure and an audit form filled out. It is understood that other categories may also exist and that these were normally kept just as a matter of preference by the RE and may not need a full audit (at RE discretion). Obtain verbal verification from the RE and Roxanne Betows for these file types before disposal.

Above: New audit form and procedure for paper file processing/recycling and shredding

See attached MCTC's NCR and QAI logs.



Appendix H

Mid-Coast FY22 CIP Budget

Project Number: 1257001		Corridor Director: John Haggerty	
RTIP Number: SAN23		Project Manager: Sharon Humphreys	
Project Name: Mid-Coast Light Rail Transit (LRT)		PM Phone Number: (619) 595-5350	
Project Scope		Site Location	
A new 10.9-mile extension of the Trolley Blue Line with stations at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, Veterans Administration Medical Center, Pepper Canyon and Voigt Drive on the UC San Diego campus, Executive Drive, and University Towne Center (UTC).			
Project Limits		Progress to Date	
On and along existing coastal rail corridor from Old Town Transit Center to Gilman Drive, along I-5 from Gilman Drive to UC San Diego, and along Voigt Drive and Genesee Avenue to UTC		Light rail construction is 95% complete.	
		Major Milestones	
		Draft Environmental Document May-13	
		Final Environmental Document Nov-14	
		Ready to Advertise Jan-16	
		Begin Construction Jun-16	
		Open to Public Nov-21	
		Construction Complete Jun-26	

SANDAG Expenditure Plan (\$000)

SANDAG Expenditure Plan (2006)												
Budget Phase	Prior Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Administration	\$63,665	\$8,940	\$4,457	\$1,000	\$750	\$500	\$250	\$0	\$0	\$0	\$0	\$79,562
Environmental Document	28,411	300	1,650	0	0	0	0	0	0	0	0	30,361
Design	158,293	8,102	2,000	50	50	50	10	0	0	0	0	168,555
Right-of-Way Support	8,516	2,552	700	0	0	0	0	0	0	0	0	11,768
Right-of-Way Capital	107,715	5,000	10,091	0	0	0	0	0	0	0	0	122,806
Construction Support	84,634	32,355	4,699	250	250	250	250	0	0	0	0	122,688
Construction Capital	925,131	218,956	89,140	0	0	0	0	0	0	0	0	1,233,227
Vehicles	142,007	21,972	0	0	0	0	0	0	0	0	0	163,979
Legal Services	1,586	548	235	0	0	0	0	0	0	0	0	2,369
Communications	1,306	210	1,786	0	0	0	0	0	0	0	0	3,302
Project Contingency	0	0	15,000	10,000	575	0	0	0	0	0	0	25,575
Total SANDAG	\$1,521,264	\$298,935	\$129,758	\$11,300	\$1,625	\$800	\$510	\$0	\$0	\$0	\$0	\$1,964,192

Finance Cost	\$62,431	\$29,550	\$18,991	\$17,376	\$14,491	\$11,685	\$51,913	\$0	\$0	\$0	\$0	\$206,437
Total SANDAG	\$1,583,695	\$328,485	\$148,749	\$28,676	\$16,116	\$12,485	\$52,423	\$0	\$0	\$0	\$0	\$2,170,629

Caltrans Expenditure Plan[illegible]

Total SANDAG & Caltrans	\$1,584,237	\$328,515	\$148,749	\$28,676	\$16,116	\$12,485	\$52,423	\$0	\$0	\$0	\$0	\$2,171,201
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TransNet Pass-Through	\$427	\$69	\$76	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$572
Caltrans RE Services	\$6,000	\$2,500	\$1,000	\$148	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,648

Funding Plan (\$000)

Funding Source	Prior Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY 30	Total
Federal												
726000001 FTA FFGA CA-2016-02 ¹	\$530,025	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$13,355	\$0	\$0	\$0	\$0	\$1,043,380
73030001 FTA-CA-03-0784	129	0	0	0	0	0	0	0	0	0	0	129
Local												
910001100 TransNet-MC	478,297	298,965	129,758	11,300	1,625	800	510	0	0	0	0	921,255
910001100 TransNet-MC AC ²	513,355	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)	(13,355)	0	0	0	0	0
Finance Costs	62,431	29,550	18,991	17,376	14,491	11,685	51,913	0	0	0	0	206,437
Total	\$1,584,237	\$328,515	\$148,749	\$28,676	\$16,116	\$12,485	\$52,423	\$0	\$0	\$0	\$0	\$2,171,201

¹Total project cost including finance charge is estimated at \$2.17 billion, the FTA is anticipated to contribute a total of \$1.04 billion over the life of the project but is generally limited to \$100 million on an annual basis. The last year of receipt is anticipated to be 2026.

²The *TransNet*-MC AC line represents the advance of *TransNet* in the form of bond proceeds to cover the difference until the federal contribution is received.



Appendix I

Lessons learned Design Phase

Mid-Coast Corridor Transit Project – Final Design Phase – Lessons Learned

SANDAG

Appendix A

LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
1	Management	Utility Agreements – Early agreement with franchise utilities on cost sharing for relocations.	Strive for early agreements with franchise utilities that are impacted by the project so that cost sharing agreements can be identified early.
2	Management	Utility Coordination	Need a dedicated team to coordinate utility relocations that have experience with utility requirements.
3	Management	Master Special Provisions	Develop master special provisions that coordinate the technical specifications, either common or specific, between multiple projects that are implemented by the CM/GC. This should minimize the use of different specifications for similar work.
4	Cost	Cost Allocation – Between projects	Develop a cost allocation methodology and report for interfacing projects in the same corridor where scope was designed by one designer (e.g. grading and drainage) and shown on one project, but the costs are borne by the other. This allowed for more efficient design and minimized design conflicts between projects, however additional cost allocation tracking is necessary to ensure costs are charged to the appropriate project.
5	Cost	Cost Estimating – Independent Cost Estimator	Engage an Independent Cost Estimator on board early and with sufficient expertise and resources to price the project along with the CM/GC.
6	Cost	Cost Estimating – Guidelines and Bid List	The Engineer's Estimates and the CM/GC's and Independent Cost Estimator's bottoms-up estimates are difficult to reconcile. Need to spend time and agree on pricing guidelines and pricing items up front. The detailed work breakdown structure for costs can vary, but the rolled up, high level cost categories need to be able to reconcile. Also need to ensure early review and emphasis that cost estimates assign the appropriate FTA Standard Cost Category (SCC) codes to items of work to avoid future transfer of costs from one SCC code to another such that costs can be compared from one milestone to the other.
7	Schedule	Use of CM/GC to implement interfacing projects within the project corridor	Having the same CM/GC construct other projects that interface within the project corridor allowed for streamlined coordination of design and minimized potential conflicts, delays and associated impacts between the interfacing projects.

Mid-Coast Corridor Transit Project – Final Design Phase – Lessons Learned



Appendix A

LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
8	Scope	Document resolution of CM/GC design review comments	During Pre-construction services, CM/GC is involved in the design review. Documentation of the resolution of the CM/GC's comments is important for reference and clarification as design develops and pricing is being evaluated, including for subcontractors that may not have been involved in early pricing efforts. This also provides a reference for supporting the GMP, as well as VE proposal review and tracking.
9	Management	Value Engineering – Early CM/GC involvement	Engage the CM/GC early in VE efforts to develop ideas and validate cost estimates to determine whether potential savings are reasonable to implement.
10	Management	Value Engineering – Design costs	Need to evaluate and include the estimated cost of redesign efforts required to implement the VE. The design costs can offset potential construction savings.
11	Management	Minimize the use of Provisional Sums in CM/GC GMP	Including provisional sums on major elements of work, provides the CM/GC another “bite of the apple” and reduces the amount of leverage an owner may have to negotiate the best price, if there is no opportunity to go in another direction. Agree on the sufficient level of design to properly price the Guaranteed Maximum Price (GMP) to minimize final design risk and avoid provisional sums that defer final pricing. If design level is not deemed sufficient to provide a GMP for certain elements of work, then need to agree on the minimum level to advance the design to in order to avoid use of provisional sums. If provisional sums are used, reserve the use to minor elements of work, to work elements that can be pulled and bid out, or consider additional contingency to cover potential cost increases that exceed typical construction contingency.

Mid-Coast Corridor Transit Project – Final Design Phase – Lessons Learned



Appendix A

LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
12	Scope	Provisions for potential future revisions to ADA design/code standards for transit parking	When designing transit parking, should consider potential for future code revisions that may increase ADA space requirements. Additional ADA spaces for electric vehicle charging stations were needed at two park and ride lots to meet the latest code requirements. The initial parking lot design maximized the number of spaces that the site could accommodate which allowed these spaces to be added with minimal revisions while maintaining the total number of spaces required.
13	Scope	Architectural/Aesthetic Treatment of Retaining Walls	Need to review the wall architectural treatment throughout the project to ensure there is consistency in aesthetics and that the design intent, property agreements, environmental and community commitments are met. Multiple wall designs with different ownership/maintenance, wall types and architectural treatment (patterns and color) created inconsistent and contrasting architectural treatment throughout the project corridor. Including operations and maintenance representatives aided in the final decision-making process.
14	Risk	Project Risk Assessment – Team involvement	Engaging CM/GC, CM and design into risk assessment process helped early risk identification and assign appropriate party to manage
15	Management	CM/GC Risk Analysis	Important for integrated project team to jointly develop and analyze risks, create a risk matrix/register and agree on risk ownership. The risk register was included as part of the contract.
16	Management	Collaboration	Procurement of CM Consultant and CM/GC earlier in the design phase fosters greater opportunities to refine design, enhance project phasing, identify risks, and forces the CM/GC and CM Consultant to take some ownership in the development of design solutions. It creates an environment where collaborative problem solving, and transparency are employed for the greater good of the project.

Mid-Coast Corridor Transit Project – Final Design Phase – Lessons Learned



Appendix A

LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
17	Management	General conditions and technical specifications	Develop boilerplate GC's and technical specification content and formatting early. Solicit input and feedback from others who have blazed a trail before you. If you're an agency with little to no prior experience in developing or administering alternative delivery contracts, and you wait, you may find yourself developing documents that fall short of the standards you are used to.



Appendix J

Lessons Learned Construction Phase



Mid-Coast Corridor Transit Project – Construction Phase – Lessons Learned

LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
1	Management	Specifications - Some language from the Caltrans standard specifications was not modified to accommodate a CMGC delivery method.	This project used Caltrans Standard Specifications as a basis, which are written for a Design/Bid/Build format and have specific responsibilities for what testing will be done by "The Engineer", "METS", "Department", and "Caltrans". Several issues arise from this. First, the special provisions need to outline/define who will do the testing when one of these four terms above is used. Secondly, with the intention of the CMCG project being to shift more responsibility to the contractor, some of these references to testing done by "The Engineer" should be assigned to the contractor. Third, in some instances when Caltrans specifications define tests to be carried out by "The Engineer" it becomes unclear as to who is performing the acceptance testing and who is responsible for managing the risk. Specific examples (not a complete list) of material inspection and testing that are affected: hoops, strand, couplers, PTFE bearings, all structural source inspection, and CBC special inspection and testing. Ensure that the special provisions for alternative delivery projects clearly define roles and responsibility shifts regarding Caltrans Specifications. Specifically, some possible ways to improve the process are: 1) Recommend requiring a Source Inspection Quality Management Plan (SIQMP) as outlined by Caltrans so that methods and frequency of off-site operations by the Contractor are defined. 2) To place the agency and/or CMC in a true oversight role with the Contractor’s QC performing acceptance testing, the terms “Engineer”, “METS”, “Department” and “QA” should either be defined as Contractor Roles, or within the special provisions a statement similar to: “Whenever samples, testing, or inspection are specified to be carried out by the Engineer, METS, the Department, or QA, this sampling, testing, and/or inspection shall be performed by the Contractor with the Contractor’s results being the acceptance tests. These tests are in addition to manufacture/fabricator testing. The CMC will perform inspection and testing at their discretion, and the CMC results being for verification purposes.”
2	Management	Special Provisions (Specifications)	This project had multiple supplements with their own special provisions. However, these separate special provisions were not "stand-alone" and would sometimes refer to a larger supplement special provisions which had numerous non-applicable items and caused confusion in many cases. CMC staff recommend SANDAG require one of the following for future large projects with multiple supplements: 1) Have stand-alone special provisions for each supplement. Examples are that the Aux Lane and Voigt projects which did have their own special provisions, but then referenced Mid-Coast which had numerous items that were not used (i.e. track, bridge specs etc.) but did not have the desired roadway paving specifications. This caused confusion and many RFIs had to be generated which added work. 2) An alternative to having independent special provisions for each supplement would be to have one special provisions for all the whole program. Site specific requirements could be added, but one special provisions would govern. The Mid-Coast Program was planned to use one set of special provisions but due to the varied design stages for each supplement and multiple design teams it was not always clear which specification was to be used. If all the work is known and at the same design stage, this option would be best. This project morphed into something between the two recommendations above where the supplement 4 special provisions were the main specs, but there were smaller supplement standalone special provisions that then referenced the supplement 4 special provision.



LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
3	Management	Contractor Quality Control Program/Responsibilities	1) There have been a few value engineering changes (VECs) that took place during the project. When these occurred, the Contractor provided the design. The specification did not require a quality control plan for the design work. Additionally, several items of work on the project were Design-build. These should also require a design and construction quality control plan. Recommend the FTA 15 element format be required for all QC plans. For the Contractor designed elements we didn't have specifications in place to require the contractor to submit full design quality plans in FTA format so we leaned on FTA requirements and the Contractor cooperated, but the process was challenging and for future projects language to cover the QC plans is recommend. 2) For this project, the parking structures were added as a change order which allowed for a design-build within the CMGC. The special provisions did not account for this scenario. The requirements for the quality program were not defined for a design-build scenario. As a result, the cost, risk, and responsibility for the CBC inspection and testing fell to the owner. 3) QC Staff Qualifications - There were no specific requirements for QC inspection staff who were to be involved in specialized items such as bridge construction or track. As a result, some of the personnel hired by the Contractor were less experienced in these specialty items. It is recommended that for future CMGC, the specifications are more clear with regard to the number of years of experience and qualifications needed to be proposed and used as a QC inspector. In addition, because items like SWPPP and Traffic Control were not specifically called out as needing to be under the QC Program, the Contractor broke them out. So issues related to these specialty items were not subject to the QC Plan and ran separately of that program which created issues. Additionally, requiring a dedicated person on the QC staff who has significant Caltrans Spec and bridge building knowledge would have greatly improved the quality of submittals coming from the contractor. The number of revise and resubmit submittals was not ideal for a CMGC project because of a lack of experience specifically with the Caltrans specifications by those putting together the submittal.
4	Management	Outdated/Unclear Specifications	Several specified items were found to require additional clarification or revisions during the project: 1) Rail tie fabrication for light rail - 134 11 33.13 - Rail tie fabrication specifications are out of date and could use overhaul. LB Foster owns CXT, they have been making rail ties at that location since the 1980's and are heavily involved in specifications with AREMA. They requested some changes from the specifications based upon industry standard and their belief that many of the items in the specifications were outdated. 2) Rail Tie fabrication for Heavy Rail 234 11 33 13 2.02.J.1 - It appears that the Duggan test is outdated and ASTM C1778 will replace it for AREMA concrete tie durability/alkali-aggregate reaction testing in the future. May want to delete Duggan test in future heavy rail specifications or make it optional to supply either Duggan or ASTM C1778. 3) Carbon Equivalency in Steel Piles 49-2.02B(1)(a) - Carbon equivalency is calculated as a general measure of weldability in the piling specifications. There are two different formulas that give different results. The industry indicated they prefer using the ASTM rather than AWS formula. The lesson is that since our specifications call for the more stringent AWS formula, this needs to be communicated before ordering by the Contractor. Alternatively, we could consider a specification change to be in line with using the industry norm of ASTM A709 CE formula. 4) Rail thermite weld specs - The specifications had some contradictory information regarding acceptance criteria. Specifically, the acceptance criteria in the specifications and calibration block were not clear. Different inspectors had different interpretations and we needed design and expert input to make the decision. Also, the specifications need to state that a scan plan is required to prove that the calibration block provides full volumetric coverage.



LL #	CATEGORY Management, Scope, Schedule, Cost, Risk	SUBJECT	LESSON LEARNED
5	Management	CMC Organization	Discuss Contractor and CMC organization during pre-construction phase and align the organizations to allow for maximum efficiency. In the case of this project, since the contractor broke the project into North and South, instead of having multiple REs for each supplement, have 1 RE over the North and 1 over the South, but additional Office Engineers. For future recommend that both the CMC and Contractor set up in a similar way for best communication rather than having the CMC set up differently than the Contractor.
6	Management	Safety and Security Certification	1) More direction could have been provided detailing what the contractor was responsible for in regard to Safety and Security Certification. It was not clear that the contractor was responsible for documenting and submitting certifiable items and running the program in the contract documents. 2) Early preparation of a safety certification plan, as well as a safety and security committee early on led to collaboration between Contractor, CMC, PMC, SANDAG, MTS and CPUC. The verification of all safety and security items was a success. The formation of a safety certification plan near the project beginning which included a spreadsheet of all certifiable items and means of verification was extremely helpful when safety and security checks began. In addition, a sub-committee to discuss methods of tracking the progress was formed over a year before project opening, which helped in deciding to house all records in Prolog, determine how to track via spreadsheets, and in discussing any ambiguities with the means of verification or requirements so they could be tracked to closure and the verifications completed.
7	Management	Preconstruction Involvement by CM Staff: Design and specification constructability reviews, GMP Negotiations	Recommend including CMC staff early in the preconstruction process: 1) Thorough review of specifications and detailed constructability review by CMC staff during preconstruction would have resolved some issues and reduced RFIs/CCOs prior to getting into construction. 2) Including CMC staff in the GMP negotiations would help with a better understanding of what scope and risks were included and excluded. Thorough documentation of all changes, agreements, and discussions are important for change management throughout the project. An additional recommendation for both Contractor and CMC field level staff (Superintended and RE) to be included in constructability reviews. Reviews by this level of staff will provide the full benefit of the CMGC process.



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: FY 2018

Item Number: 25

Audit Recommendation:

Better link TransNet funding to project and program activities for general public awareness by implementing the following:

- a. More prominently featuring the TransNet logo on SANDAG and TransNet partner

Justification for Completion:

In 2019, staff made improvements to SANDAG.org/transnet (previous website) which included links to the TransNet dashboard and TransNet grant program pages. On social media, #TransNetSD was added to posts that referenced TransNet-funded projects. A review of the TransNet logo on partner agency websites was conducted and then provided to the project team in 2021. Additional enhancements to more prominently feature the TransNet program on the SANDAG.org website were integrated into the redesign of the SANDAG.org website which was underway from 2020-2022. Simultaneously, SANDAG underwent a brand redesign, including an updated SANDAG and TransNet logo lockup that was launched consistent with the new brand guide in mid-2022. With the launch of the new SANDAG.org website in December 2022, TransNet was prominently located on the home page of the website under the main "At-a-Glance" call-to-action-grid. It is also listed as a prominent Tier 1 page under the Funding tab of the main site navigation. Since September

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: Andrea Villyard Digitally signed by Andrea Villyard
Date: 2024.09.13 16:26:58 -07'00'

Date 9/13/24

Director Signature: *Robyn J. Wagner*

Date: 9/18/24

ITOC Approval: Yes: ☐ No: ☐

Meeting Date: Agenda number:

Meeting Link:

Supporting Documents

TPA Year: FY 20218

Item Number: 25

Social Media Posts (Sample)

September 5, 2023:



September 12, 2023:



Bayshore Bikeway
Barrio Logan Segment

SANDAG
TransNet Program

sandagregion

sandagregion Edited • 30w
🚲 Hold onto your helmets because #TransNetTuesday is rolling in with some exciting news on our regional bikeway network!

We've made significant progress on 3 projects under construction: Pershing Drive Bikeway, Bayshore Bikeway: Barrio Logan, and Border to Bayshore Bikeway.

🚧 But that's not all—we'll break ground on 3 more bikeway projects in the coming year and are working on 9 projects in the environmental phase and 24 in the design phase.

[View insights](#) [Boost post](#)

👍👎🔗 352 likes
September 12, 2023

S Add a comment... 😊

September 19, 2023:



SANDAG - San Diego Association of Governments

Published by Sprout Social · September 19, 2023 ·

Take a trip down memory lane as we reminisce about the construction of the State Route 52 (SR 52) East extension in Santee!

The SR 52 extension was a collaborative effort funded by local TransNet, state, and federal sources. This project prioritized traffic flow and preserving our environment.

Some of its benefits included:

- ✓ New four lane road between SR 125 and SR 67, with direct connectors
- ✓ A third lane added between I-15 and Mast Boulevard
- ✓ New interchanges at Fanita Drive, Magnolia Avenue, and Cuyamaca Street
- ✓ Direct access to job centers from East County communities

The SR 52 freeway extension through Santee into East County opened on March 29, 2011.

Want to dive deeper into the transformation of SR 52 and more like this? Visit:

<https://transnetmap.sandag.org/>

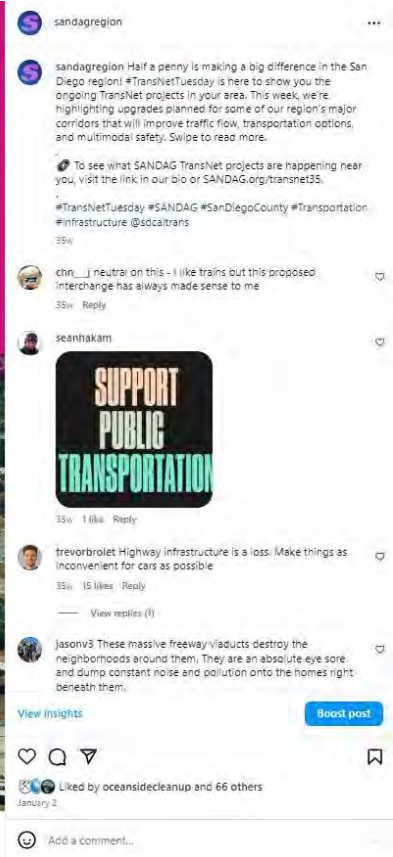
#TransNetTuesday #SR52 #SANDAG #Throwback #Santee



January 2, 2024:

SR 94/SR 125 South to East Connector

A new freeway-to-freeway connector will eliminate the need for vehicles traveling from southbound SR 125 to eastbound SR 94 to exit at Spring Street, and bike lane and sidewalk improvements will make local streets safer.



New miles of bikeways are coming to the San Diego region:

- Eastern Hillcrest
1.7 miles
- Downtown to Imperial
3.5 miles
- Inland Rail Trail (Phase 3)
1 mile
- North Park/Mid-City Bikeways:
University Bikeway
2.8 miles
- Bayshore Bikeway
Barrio Logan
2.3 miles

SANDAG
TransNet Program

sandagregion

Get (your tires) pumped up! New miles of bikeways are on the way to make it safer and easier to cruise throughout the region.

Check out the bikeways that are in progress and other TransNet projects happening in your neighborhood:
sandag.org/transnet35

#SANDAG #TransNetTuesday

oceansidecleanup

trevorbrolet Good job! now MORE!

ahmad_sp

armore18 Wooooo!!!

trevorbrolet A whole network!

elleblazer YES!!! Now do trains!

ericsan777 Let's finish out the Robinson bikeway across to Alabama.

codyasada Are they going to be actually safe? Or just paint?

View insights

Boost post

Liked by sdbikecoalition and 113 others

January 9

Add a comment...

January 24, 2024:



San Diego Association of Governments (SANDAG)

17,186 followers

7mo • Edited •

This [#TransNetTuesday](#), we are shining the spotlight on our Specialized Transportation Grant Program (STGP). With the help of TransNet, this program provides grants to local nonprofit organizations and public agencies that ...more

Specialized Transportation Grant Program

Join our virtual workshop to help us decide which factors we use to prioritize projects that improve mobility for older adults and individuals with disabilities in the San Diego region.



**Wednesday,
February 7**
3–4:30 p.m.
(PST)



Online



17

3 reposts

June 28, 2024:



July 26, 2024:

Pershing Bikeway Grand Opening

Main Event: Bird Park

Group Ride Route

Pit Stop: Pershing Drive Pedestrian Bridge

SANDAG TransNet Program

sandagregion

sandagregion What's more brat than a new bikeway? 🍷❤️ Join us for the grand opening of the Pershing Bikeway this Saturday, July 27, from 10 a.m. to noon.

Bring your bike and helmet to participate in a group bike ride led by @sdbikecoalition, starting at Bird Park (costumes are encouraged).

#SANDAG #PershingBikeway #SanDiego #BalboaPark #ComicCon #Brat

Edited 6w

urbanplanningbesties 🍷❤️❤️❤️❤️

6w · 2 likes · Reply

_Jheck44 This is epic

6w · 3 likes · Reply

huretion I wish this type of investment was spent in Southern San Diego county and on our freeways. The 0.5% that will use this pathway must be stoked. Good for them!

6w · 1 like · Reply

View replies (10)

lizzy619 How long is the ride?

6w · 3 likes · Reply

View replies (2)

jordsnod You love to see it! kylo_ren_moar.gif

6w · 1 like · Reply

kingfranko My daughter lives in North Park and used to commute to her downtown job by bike. I was always worried about her because it was a dangerous ride. This new bikeway provides the thousands who commute daily to downtown jobs a safer way to do it.

6w · 12 likes · Reply

View replies (1)

View insights

Boost post

🍷❤️ Liked by sdbikecoalition and 333 others

July 26

Add a comment...

August 2, 2024:



San Diego Association of Governments (SANDAG)

17,186 followers

1mo • 🌐

Do you have ten or more years of experience in managing large-scale construction projects? Apply to join the SANDAG TransNet Independent Taxpayer Oversight Committee (ITOC) by Wednesday, August 14. ITOC helps ensure ...more



SANDAG TransNet Independent Taxpayer Oversight Committee

August 30, 2024:

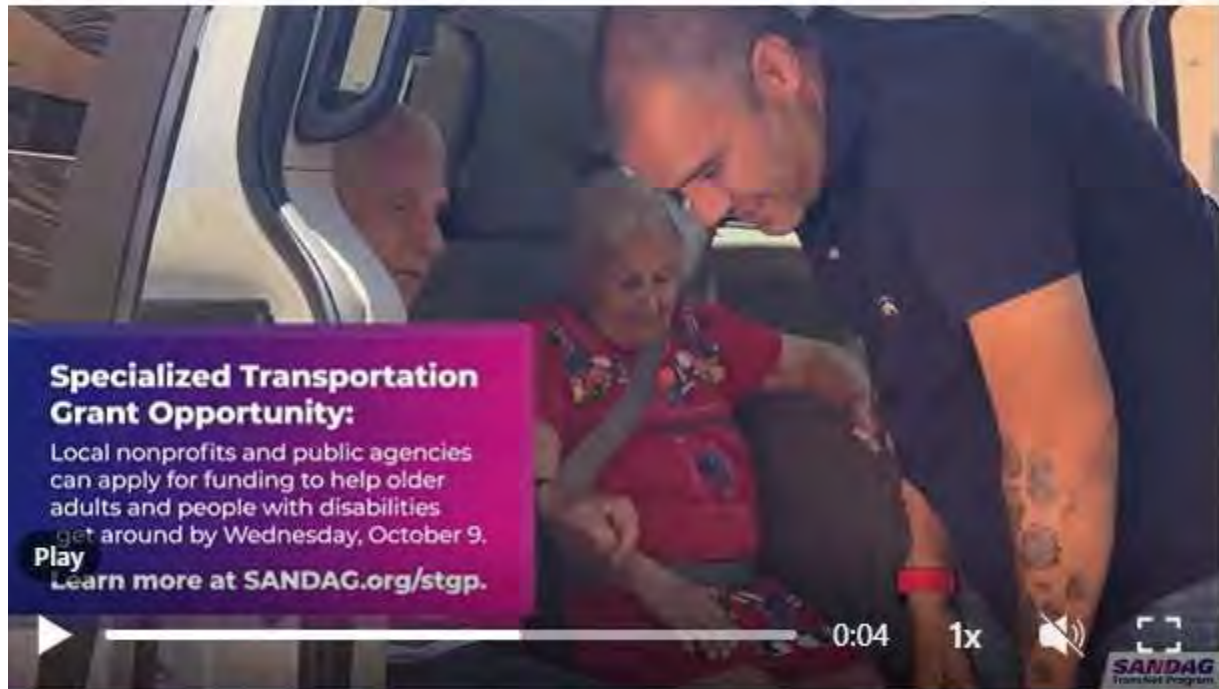


San Diego Association of Governments (SANDAG)

17,186 followers

1w • 🌐

Grant opportunity! ✅ Applications are now open through Wednesday, October 9, for local nonprofit organizations and public agencies. This grant funding supports projects and programs that help older adults and people with disabilities ...more



Specialized Transportation Grant Opportunity

👤 Susan Huntington and 14 others

2 reposts



Like



Comment



Repost

SANDAG Website

Home Page:





[ABOUT](#) [PROJECTS & PROGRAMS](#) [REGIONAL PLAN](#) [DATA & RESEARCH](#) [FUNDING](#) [MEETINGS & EVENTS](#) [NEWS](#) [CAREERS](#)

At A Glance



Del Mar Bluffs & LOSSAN Realignment



SR 11/Otay Mesa East Port of Entry



Airport Transit Connection



Office of the Independent Performance Auditor



TransNet 35th Anniversary



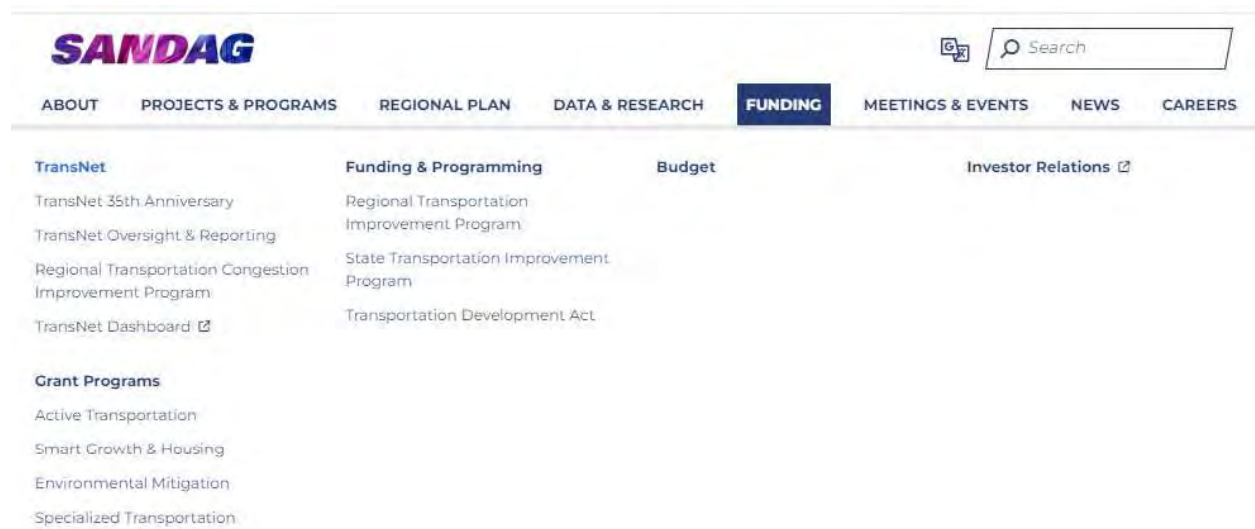
FasTrak

[View All Projects & Programs](#)

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OK

Navigation Menu:



SANDAG Brand Guidelines

Projects & Programs Visual Identity:

Programs

SANDAG leads several regional programs. Use these program tagline lock-ups when a program needs to be identified specifically.

SANDAG
GO by BIKE Program

PANTONE 3597 C
Montserrat Extra Bold

SANDAG
TransNet Program

SANDAG
Guaranteed Ride Home Program

TransNet Program Signage:

TransNet Program Signage

As a TransNet funded project, it is important to notify the public about project construction, responsible parties/funding sources, and where to find more information. TransNet signage has been developed to ensure the public is informed before, during, and for a period after project construction.

See the [TransNet Program Signage Design Guidelines](#) for more details.



Color Palette

	
PANTONE 3590 C	PANTONE 2380 C
#3C57A1	#343A4A
RGB: 60, 87, 161	RGB: 52, 58, 74
CMYK: 96, 82, 9, 1	CMYK: 82, 70, 50, 46



TPA Recommendation Completion Form

Final Audit Report

2024-09-18

Created:	2024-09-13
By:	Andrea Villyard (andrea.villyard@sandag.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAAK_e_BW0KCfkmd2IqGXEaym0TBXIBhy0F

"TPA Recommendation Completion Form" History

-  Document digitally presigned by Andrea Villyard (avil@sandag.org)
2024-09-13 - 11:26:58 PM GMT
-  Document created by Andrea Villyard (andrea.villyard@sandag.org)
2024-09-13 - 11:34:07 PM GMT
-  Document emailed to Robyn Wapner (robyn.wapner@sandag.org) for signature
2024-09-13 - 11:34:50 PM GMT
-  Email viewed by Robyn Wapner (robyn.wapner@sandag.org)
2024-09-16 - 8:02:58 PM GMT
-  Document e-signed by Robyn Wapner (robyn.wapner@sandag.org)
Signature Date: 2024-09-18 - 11:37:56 PM GMT - Time Source: server
-  Agreement completed.
2024-09-18 - 11:37:56 PM GMT



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2021

Item Number: 1

Audit Recommendation:

Clearly identify whether the remaining TransNet Extension Ordinance projects will be part of the 2021 Regional Transportation Plan, before the SANDAG Board approves the 2021 plan, and provide a similar identification for any key changes in future Regional Transportation Plans.

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>. It will continue to be updated quarterly and upon completion of the 2025 Regional Plan.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2021

Item Number: 2

Audit Recommendation:

Develop regular crosswalks to summarize and compare planned major corridor projects outlined in the TransNet Extension Ordinance with current improvement implementation status by identifying project progress in terms of "complete", "in-progress", "cancelled", or "moved beyond 2048 and outside the TransNet Extension Ordinance period". SANDAG should complete this reconciliation annually, at the minimum when it revises its Capital Improvement Program Budget, or when SANDAG makes a major update to the Regional Transportation Plan and explain deviations from the TransNet Extension Ordinance including scope expansions, reductions, or mergers with other project segments through a log that captures all explanations. When performing this reconciliation, SANDAG should utilize a consistent numbering format or key identifier for each project to facilitate the tracking of changes over time

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>. It will continue to be updated quarterly and upon completion of the 2025 Regional Plan.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2021

Item Number: 8

Audit Recommendation:

Clearly and comprehensively report on actual progress and accomplishments (or lack thereof) against the TransNet Extension Ordinance on a regular, periodic basis—such as quarterly or annually—for project scope, costs, schedule, accomplishments, and outcomes against promises

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The crosswalk will be reviewed and updated, as needed, quarterly and maintained on the TransNet Dashboard at:
<https://transnetdashboard.sandag.org/>.

Staff also continues to provide quarterly reports to the ITOC on the TransNet program. Data presented in those quarterly reports includes recent milestone accomplishments, future planned milestones, project expenditures, funds leveraged, and other project and program highlights.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒ No: ☐

Meeting Date: 9/11/24 Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2021

Item Number: 9

Audit Recommendation:

Demonstrate compliance with the TransNet Extension Ordinance by identifying, tracking, and reporting on various requirements and provisions to the Board and ITOC on a regular, periodic basis—such as quarterly or annually

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed.

Staff presented this new matrix to the ITOC in September 2024. Staff will continue making updates quarterly and maintaining the latest version on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2024

Item Number: 2

Audit Recommendation:

Revamp or create new tools or spreadsheets to comprehensively track major corridor project delivery against Ordinance planned pledges at a detailed location boundary and scope level.

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>. It will continue to be updated quarterly and upon completion of the 2025 Regional Plan.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2024

Item Number: 4

Audit Recommendation:

Provide the detailed listing – or highlight just those original TransNet major corridor project boundaries and scopes that were not completed as pledged – to the Board and ITOC for use as part of annual budget conversations as well as the 2025 Regional Plan, and future regional plans.

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>. It will continue to be updated quarterly and upon completion of the 2025 Regional Plan.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2024

Item Number: 10

Audit Recommendation:

Make sure the new tools or mechanisms comparing remaining Ordinance major corridor projects to regional plans at a detailed location boundary and scope level are accurate and supported through links to planning documents, budget information or plans of finance, or other documents as appropriate.

Justification for Completion:

Staff completed a new matrix to map the TransNet Ordinance projects to the respective TransNet Capital Improvement Projects (CIPs) and associated 2021 Regional Plan project(s). The matrix identifies the CIP numbers, RP numbers, scope and boundaries of each Ordinance that have been completed, are still in process, or planned in the future. Information is also included on initial cost estimates, current funding totals, and clarifying comments where needed. The matrix was posted in June 2024 on the TransNet Dashboard at: <https://transnetdashboard.sandag.org/>.

In September, a link was added to the matrix to send the reader directly to Appendix A of the 2021 RP. This revised matrix can be accessed on the TransNet Dashboard link above.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: *Chelsea Gonzales*

Date 9/17/24

Director Signature: *Susan Huntington*

Date:

ITOC Approval: Yes: ☒

No: ☐

Meeting Date: 9/11/24

Agenda number: 9

Meeting Link: <https://d3n9y02raazwpg.cloudfront.net/sandag/a0c04063-8311-11ee-852f-0050569183fa-f2c587d1-16b7-4e64-ab4a-ccb44a00ed21-1725998430>



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2024

Item Number: 20

Audit Recommendation:

Review grantees final close out reports and investigate any items that grantees marked as in-progress.

Justification for Completion:

A new Grant Closeout Checklist was implemented in June 2024 that requires all grants to be reviewed in detail prior to processing the final payment or closing out. Included in the checklist is a review of the final progress report to ensure all items are completed, all deliverables have been provided to SANDAG, and that there are no outstanding issues on the project that need to be resolved. A copy of the checklist is attached. When grantees notify SANDAG that their project is complete and ready to be closed out, Grants staff will utilize the closeout checklist to ensure compliance with this audit recommendation. The completed checklist will be included as an attachment in ERP when the final invoice and retention release requests are routed for approval to ensure that no final payments are made without the completed checklist. This process change will be included in the Standard Operating Procedures that are under develop and will be completed in FY25.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: Jenny Russo

Digitally signed by Jenny Russo
Date: 2024.08.19 12:38:50 -07'00'

Date 8/19/24

Director Signature: Susan Huntington

Digitally signed by Susan Huntington
Date: 2024.08.21 09:53:35 -07'00'

Date: 8/21/24

ITOC Approval: Yes: ☐ No: ☐

Meeting Date: Agenda number:

Meeting Link:

SANDAG

Grant Project Closeout Checklist

The San Diego Association of Governments (SANDAG) has developed this Grant Closeout Checklist to assist in the closeout process for SANDAG grant-funded projects. The Checklist is used by the Program Manager prior to closing out a project to make sure the correct project closure activities are carried out, and the Grantee's performance under the Agreement is documented. **This Checklist is to be completed prior to processing the final invoice for payment and releasing any retention. A copy of this completed and signed Checklist must be included when the final invoice and retention release payment requests are routed for approval.**

PART 1: GRANT AGREEMENT AND PROJECT INFORMATION

Instructions: Complete the table below.

Topic or Question	Response
1. Today's Date	Click or tap to enter a date.
Grant Agreement Information	
2. Grant Program Name	Choose an item.
3. Cycle Number	[Enter cycle number]
4. Agreement Number	[Enter grant agreement number]
5. Grantee Name	[Enter Grantee Name]
6. Project Name	[Enter Project Name]
7. Notice to Proceed Date	Click or tap to enter a date.
8. Agreement Expiration Date	Click or tap to enter a date.
9. Grantee Project Manager Name	[Enter Grantee Project Manager Name]
10. SANDAG Program Manager Name	[Enter Program Manager Name]
Grant Amounts	
11. Total Grant Award	\$(Enter Total Grant Award From The Grant Agreement)
12. Grant Amount Paid To Date	\$(Enter Amount From ERP Plus Any Payments From Onesolution)
13. Grant Amount Held in Retention	\$(Enter Amount From ERP Plus Any Amounts From One Solution)
14. Amount of Grant Remaining (before final invoice and retention release)	\$(Enter Amount From Question 10 Minus The Value From Questions 11 And 12)
Matching Funds	
15. Total Required Matching Funds	\$(Enter Total Matching Funds From The Grant Agreement)
16. Matching Funds Provided To Date	\$(Enter Amount)
17. Amount of Matching Funds Remaining to Be Provided	\$(Enter Amount From Question 14 Minus The Value From Question 15)

PART 2: COMPLETION OF PROJECT TASKS, DELIVERABLES, AND PERFORMANCE MEASURES

Instructions: Complete the tables in each section below using information from the Project reports and other SANDAG records. Then, respond to the questions in each section by selecting a response from the list of options. Any "No" responses to the questions below indicate an area where the Grantee is deficient in its obligations under the Grant Agreement and should be reviewed and discussed with the Grantee.

A. Project Tasks and Deliverables

Instructions: If a Task includes multiple deliverables, list each deliverable in a separate row and indicate whether each deliverable was received (if a tangible item) or completed (if a non-tangible item).

Task No.	Task Description	Was the Task Completed?	Deliverables	Was Deliverable Received/Completed?
1		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
2		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
3		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
4		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
5		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.

6		Choose an item.			Choose an item.
					Choose an item.
					Choose an item.
7		Choose an item.			Choose an item.
					Choose an item.
					Choose an item.
8		Choose an item.			Choose an item.
					Choose an item.
					Choose an item.
9		Choose an item.			Choose an item.
					Choose an item.
					Choose an item.
10		Choose an item.			Choose an item.
					Choose an item.
					Choose an item.

B. Performance Measures

Instructions: Mark the box next to the applicable statement, indicating whether the Agreement included performance measures. If applicable, complete the table outlining the Grantee's performance.

[For Agreements without performance measures only]

- ☐ This Grant did not include any required performance measures, and therefore, this section is not applicable.

[For Agreements with performance measures]

- ☐ This Grant included required performance measures, and the following table illustrates the Grantee's achieved outcomes.

No.	Performance Measure	Baseline Data ¹	Achieved Result	Was the Performance Measure Met?
1				Choose an item.
2				Choose an item.
3				Choose an item.
4				Choose an item.
5				Choose an item.

¹Baseline data as defined in the Agreement.

PART 3: COMPLIANCE ASSESSMENT

Instructions: Each question below is derived from the Grant Agreement, and therefore, a question marked "No" indicates that the Grantee is out of compliance with the terms of the Grant Agreement. For any "No" response, provide additional comments in Part 5.

Topic or Question	Response
Scope of Performance and Project Changes	
1. If substantive changes to the Project occurred, did the Grantee notify SANDAG in writing?	Choose an item.
2. If the Grantee encountered or anticipated difficulty in meeting the Project Schedule, did the Grantee notify SANDAG in writing?	Choose an item.
3. If the Grantee requested an amendment to the Project Schedule in writing, did the notification include the reason(s) for the delay in performance and the date by which the Grantee expected to complete performance or delivery?	Choose an item.

4. If the Grantee needed to transfer more than 10% of the total grant award between tasks in the Project Budget, did the Grantee request the change in advance and adequately justify the need for the change?	Choose an item.
5. If there were any changes to the Grantee's Project Manager, did the Grantee provide SANDAG with updated contact information in a timely manner?	Choose an item.
California Public Utilities Commission (CPUC) Compliance [For AFA-funded projects only]	
6. Did the Grantee provide advance written notice to SANDAG if the Grantee or its third-party contractors would utilize vehicles that have a seating capacity of more than seven passengers?	Choose an item.
7. Did the Grantee and its third-party contractors place the International Symbol of Accessibility on every vehicle as required by the Grant Agreement?	Choose an item.
8. Did the Grantee provide sufficient evidence that it and its third-party contractors perform national criminal background checks on all drivers and do not utilize drivers that are a threat to public safety as described in the Grant Agreement?	Choose an item.
9. Did the Grantee provide sufficient evidence that it and its third-party contractors provide controlled substance and alcohol testing of drivers?	Choose an item.
Complaints [For AFA-funded projects only]	
10. Did the Grantee record and track complaints made by employees, volunteers, clients, or the general public, including complaints related to Title VI, ADA, and service quality, or any other grievance pertaining to the Project?	Choose an item.
11. Did the Grantee report complaints it received to SANDAG on the SANDAG Quarterly Progress Report?	Choose an item.
12. Did the Grantee notify SANDAG in writing within 72 hours of receiving a Title VI or ADA complaint?	Choose an item.
San Diego Management and Monitoring Program (SDMMP) Compliance [For EMP LMG-funded projects only]	
13. Did the Grantee create a Project Page on the San Diego Management and Monitoring Program (SDMMP) webpage, SDMMP.com, prior to submitting billing to the project?	Choose an item.
14. Was State of Preserve and Performance Measures data submitted to SDMMP on a quarterly/annual basis?	Choose an item.

Compliance Information System (CIS) [For EMP LMG-funded projects only]	
15. Did the Grantee report payment details using the SANDAG web-based CIS by the 15th of each month following receipt of payment by SANDAG?	Choose an item.
16. Did the Grantee ensure its third-party contractors and/or subcontractors consistently reported payments or confirmed receipt of payment in the CIS?	Choose an item.
Insurance [For non-governmental grantees only]	
17. Did the Grantee maintain compliance with the insurance requirements throughout the term of the Agreement?	Choose an item.
Third-Party Contracting	
18. Did the Grantee provide evidence of a competitive procurement or obtain prior written approval of SANDAG to utilize a noncompetitive procurement for each third-party contract over \$10,000?	Choose an item.
19. [For HAP, Section 5310, and AFA-funded projects only] Did the Grantee include the funding agency (REAP, FTA, or CPUC) pass-through provisions in each third-party contract over \$10,000?	Choose an item.
Payments/Invoicing [For all projects except STGP vehicle projects]	
20. Did the Grantee typically (at least 80% of the time) submit its invoices in the required format and on time?	Choose an item.
21. Did the Grantee respond in a timely manner to requests to make invoice corrections if errors were found?	Choose an item.
22. If the Grantee was requested to make invoice corrections, did the Grantee take sufficient steps to see that future errors were not made on the same issue?	Choose an item.
23. Were all items included in Grantee invoices eligible under the Grant Agreement?	Choose an item.
24. Were sufficient backup materials, including required documentation, consistently provided with each invoice packet?	Choose an item.
25. If the Grantee invoiced for indirect costs, were they consistent with the indirect cost requirements in the Agreement?	Choose an item.
26. Did the Grantee's invoices include its matching fund contribution, along with supporting, descriptive, and explanatory documentation for the matching funds reported to have been made?	Choose an item.

Quarterly Reports	
27. Did the Grantee typically (at least 80% of the time) submit its quarterly reports in the required format and on time?	Choose an item.
28. Were quarterly reports typically (at least 80% of the time) filled out correctly and free of errors?	Choose an item.
29. Did the quarterly reports sufficiently detail accomplishments and progress, pending issues and actions toward resolution, and the status of the budget, schedule, and Performance Measures?	Choose an item.
30. If applicable to the Scope of Work, did the Grantee provide project milestone information such as presentations to community groups, other agencies, and elected officials to support media and communications efforts?	Choose an item.
31. If applicable to the Scope of Work, did the Grantee provide photo documentation required by the Grant Agreement?	Choose an item.
32. If applicable to the Scope of Work, did the Grantee provide SANDAG with agendas and meeting summaries for all community meetings?	Choose an item.
Vehicle and Other Equipment Purchases	
33. If the Grantee purchased vehicles or other equipment with the grant funding, did the Grantee maintain ownership of the equipment and use the equipment only for the purposes set forth in the Agreement?	Choose an item.
34. If the Grantee purchased vehicles or other equipment with grant funding, did the Grantee keep an inventory record for each item and maintain it in good operating order consistent with the purposes for which it was acquired?	Choose an item.
35. [For STGP-funded vehicle grants only] If a site visit was conducted, did the Grantee resolve any issues that were identified at the site visit?	Choose an item.
Capital Projects Involving Construction [For EMP LMG, ATGP, SGIP, and HAP-funded capital projects only]	
36. Did the Grantee coordinate with SANDAG staff on the development of a baseline data collection plan?	Choose an item.
37. Did the Grantee provide the TransNet signage? Did the signage comply with the Agreement requirements, including specifications, placement, and prior approval by SANDAG?	Choose an item.
38. Was a Capital Project Site Visit completed? Has the Grantee resolved any issues that were identified at the site visit?	Choose an item.

39. Did the Grantee and its subcontractors who are not employees of a public entity comply with all DIR and state/federal labor code requirements, including: • Complete Public Works Contractor Registration and the payment of an annual registration fee to the DIR • Include the payment of prevailing wages to all workers performing prevailing wage work • Use the DIR's Electronic Certified Payroll Reporting (eCPR) System to furnish certified payroll records to the California Labor Commissioner • Keep complete and accurate records and comply with the requirements of the California Labor Code	Choose an item.
40. Did the Grantee provide advanced notification to SANDAG that it was going to begin prevailing wage-covered work so SANDAG could prepare for labor compliance monitoring?	Choose an item.
41. Did the Grantee respond in a timely matter and proactively work to resolve any labor compliance issues raised by SANDAG or its labor compliance consultant?	Choose an item.
42. If the Grantee's project required an investigation by the Department of Industrial Relations (DIR), was the Grantee found to be responsible for any of the issues?	Choose an item.

PART 4: PROJECT COMPLETION AND CLOSEOUT

Instructions: Any question marked "No" below may require resolution by the TransNet Independent Taxpayer Oversight Committee (ITOC), a Policy Advisory Committee, or the Board of Directors before the project can be closed and final payment can be made. Contact the SANDAG Grants Program Manager to identify a recommended resolution.

Agreement Compliance

Question	Response
1. Based on the information provided in Part 2A, did the Grantee complete the entire project as described in the Scope of Work prior to the termination date of the Agreement?	Choose an item.
2. Based on the information provided in Part 2B, did the Grantee meet the Performance Measures included in the Grant Agreement?	Choose an item.
3. If applicable, did the Grantee provide the required match amount?	Choose an item.
4. [For EMP LMG-funded projects only] Has the Contracts & Procurement Department indicated that the Grantee has reported all of its payments and that the project can be closed in the CIS?	Choose an item.

5. [For all projects except STGP vehicle projects] Did the Grantee provide a final invoice of project expenses and a final progress report within 90 calendar days following Project completion or termination by SANDAG?	Choose an item.
6. Did the Grantee and its subcontractors have all necessary licenses, permits, qualifications, and approvals to perform the services under the Agreement?	Choose an item.
7. If this was a capital project involving construction, has SANDAG released all withheld payments that were due to labor compliance issues on the Project? Note: Final payment and release of retention cannot occur until all labor compliance issues are resolved.	Choose an item.
8. If this was a capital project involving construction, was the final constructed project consistent with the Agreement Scope of Work and the original project application?	Choose an item.
9. If this was a capital project involving construction, will the project improvements continue to be used for at least five years after completion of construction?	Choose an item.

PART 5: SUMMARY AND ADDITIONAL COMMENTS

Instructions: Use the space below to provide additional details on any responses to the prior sections where the response was "No."

Part No.	Question No.	Notes

Additional Comments

Instructions: Include in the space below any additional comments regarding the project or the Grantee.

PART 6: GRANTEE SIGNATURE

By signing below, I confirm receipt of this completed Grant Closeout Checklist and acknowledge that this Project Closeout checklist does not invalidate any requirements included in the Agreement.

Grantee Project Manager Name (Print)

Signature

Date



TransNet Triennial Performance Audit Recommendation Completion Form

TPA Year: 2024

Item Number: 21

Audit Recommendation:

Validate that smart growth grantees met all objectives and verify that grantees provided deliverables at project close-out during site visits.

Justification for Completion:

A new Grant Closeout Checklist was implemented in June 2024 that requires all grants to be reviewed in detail prior to processing the final payment or closing out. A copy of the checklist is attached. For construction projects, a site visit is conducted where the Program Manager goes to the project site and verifies that all work was completed per the grant scope of work and documents this on a Capital Project Site Visit Report. The completed checklist and report files are included as an attachment in ERP when the final invoice and retention release requests are routed for approval to ensure that no final payments are made without the required documentation. These process changes will be included in the Standard Operating Procedures that are under development and will be completed in FY25.

* **Supporting Documents:** Please attach any supporting documents or related links.

Approvals

PM Signature: Jenny Russo

Digitally signed by Jenny Russo
Date: 2024.08.19 13:00:25 -07'00'

Date 8/19/24

Director Signature: Susan Huntington

Digitally signed by Susan Huntington
Date: 2024.08.21 09:52:40 -07'00'

Date: 8/21/24

ITOC Approval: Yes: ☐ No: ☐

Meeting Date: Agenda number:

Meeting Link:

SANDAG

Grant Project Closeout Checklist

The San Diego Association of Governments (SANDAG) has developed this Grant Closeout Checklist to assist in the closeout process for SANDAG grant-funded projects. The Checklist is used by the Program Manager prior to closing out a project to make sure the correct project closure activities are carried out, and the Grantee's performance under the Agreement is documented. **This Checklist is to be completed prior to processing the final invoice for payment and releasing any retention. A copy of this completed and signed Checklist must be included when the final invoice and retention release payment requests are routed for approval.**

PART 1: GRANT AGREEMENT AND PROJECT INFORMATION

Instructions: Complete the table below.

Topic or Question	Response
1. Today's Date	Click or tap to enter a date.
Grant Agreement Information	
2. Grant Program Name	Choose an item.
3. Cycle Number	[Enter cycle number]
4. Agreement Number	[Enter grant agreement number]
5. Grantee Name	[Enter Grantee Name]
6. Project Name	[Enter Project Name]
7. Notice to Proceed Date	Click or tap to enter a date.
8. Agreement Expiration Date	Click or tap to enter a date.
9. Grantee Project Manager Name	[Enter Grantee Project Manager Name]
10. SANDAG Program Manager Name	[Enter Program Manager Name]
Grant Amounts	
11. Total Grant Award	\$(Enter Total Grant Award From The Grant Agreement)
12. Grant Amount Paid To Date	\$(Enter Amount From ERP Plus Any Payments From Onesolution]
13. Grant Amount Held in Retention	\$(Enter Amount From ERP Plus Any Amounts From One Solution]
14. Amount of Grant Remaining (before final invoice and retention release)	\$(Enter Amount From Question 10 Minus The Value From Questions 11 And 12]
Matching Funds	
15. Total Required Matching Funds	\$(Enter Total Matching Funds From The Grant Agreement]
16. Matching Funds Provided To Date	\$(Enter Amount]
17. Amount of Matching Funds Remaining to Be Provided	\$(Enter Amount From Question 14 Minus The Value From Question 15]

PART 2: COMPLETION OF PROJECT TASKS, DELIVERABLES, AND PERFORMANCE MEASURES

Instructions: Complete the tables in each section below using information from the Project reports and other SANDAG records. Then, respond to the questions in each section by selecting a response from the list of options. Any "No" responses to the questions below indicate an area where the Grantee is deficient in its obligations under the Grant Agreement and should be reviewed and discussed with the Grantee.

A. Project Tasks and Deliverables

Instructions: If a Task includes multiple deliverables, list each deliverable in a separate row and indicate whether each deliverable was received (if a tangible item) or completed (if a non-tangible item).

Task No.	Task Description	Was the Task Completed?	Deliverables	Was Deliverable Received/Completed?
1		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
2		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
3		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
4		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
5		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.

6		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
7		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
8		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
9		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.
10		Choose an item.		Choose an item.
				Choose an item.
				Choose an item.

B. Performance Measures

Instructions: Mark the box next to the applicable statement, indicating whether the Agreement included performance measures. If applicable, complete the table outlining the Grantee's performance.

[For Agreements without performance measures only]

- ☐ This Grant did not include any required performance measures, and therefore, this section is not applicable.

[For Agreements with performance measures]

- ☐ This Grant included required performance measures, and the following table illustrates the Grantee's achieved outcomes.

No.	Performance Measure	Baseline Data ¹	Achieved Result	Was the Performance Measure Met?
1				Choose an item.
2				Choose an item.
3				Choose an item.
4				Choose an item.
5				Choose an item.

¹Baseline data as defined in the Agreement.

PART 3: COMPLIANCE ASSESSMENT

Instructions: Each question below is derived from the Grant Agreement, and therefore, a question marked "No" indicates that the Grantee is out of compliance with the terms of the Grant Agreement. For any "No" response, provide additional comments in Part 5.

Topic or Question	Response
Scope of Performance and Project Changes	
1. If substantive changes to the Project occurred, did the Grantee notify SANDAG in writing?	Choose an item.
2. If the Grantee encountered or anticipated difficulty in meeting the Project Schedule, did the Grantee notify SANDAG in writing?	Choose an item.
3. If the Grantee requested an amendment to the Project Schedule in writing, did the notification include the reason(s) for the delay in performance and the date by which the Grantee expected to complete performance or delivery?	Choose an item.

4. If the Grantee needed to transfer more than 10% of the total grant award between tasks in the Project Budget, did the Grantee request the change in advance and adequately justify the need for the change?	Choose an item.
5. If there were any changes to the Grantee's Project Manager, did the Grantee provide SANDAG with updated contact information in a timely manner?	Choose an item.
California Public Utilities Commission (CPUC) Compliance [For AFA-funded projects only]	
6. Did the Grantee provide advance written notice to SANDAG if the Grantee or its third-party contractors would utilize vehicles that have a seating capacity of more than seven passengers?	Choose an item.
7. Did the Grantee and its third-party contractors place the International Symbol of Accessibility on every vehicle as required by the Grant Agreement?	Choose an item.
8. Did the Grantee provide sufficient evidence that it and its third-party contractors perform national criminal background checks on all drivers and do not utilize drivers that are a threat to public safety as described in the Grant Agreement?	Choose an item.
9. Did the Grantee provide sufficient evidence that it and its third-party contractors provide controlled substance and alcohol testing of drivers?	Choose an item.
Complaints [For AFA-funded projects only]	
10. Did the Grantee record and track complaints made by employees, volunteers, clients, or the general public, including complaints related to Title VI, ADA, and service quality, or any other grievance pertaining to the Project?	Choose an item.
11. Did the Grantee report complaints it received to SANDAG on the SANDAG Quarterly Progress Report?	Choose an item.
12. Did the Grantee notify SANDAG in writing within 72 hours of receiving a Title VI or ADA complaint?	Choose an item.
San Diego Management and Monitoring Program (SDMMP) Compliance [For EMP LMG-funded projects only]	
13. Did the Grantee create a Project Page on the San Diego Management and Monitoring Program (SDMMP) webpage, SDMMP.com, prior to submitting billing to the project?	Choose an item.
14. Was State of Preserve and Performance Measures data submitted to SDMMP on a quarterly/annual basis?	Choose an item.

Compliance Information System (CIS) [For EMP LMG-funded projects only]	
15. Did the Grantee report payment details using the SANDAG web-based CIS by the 15th of each month following receipt of payment by SANDAG?	Choose an item.
16. Did the Grantee ensure its third-party contractors and/or subcontractors consistently reported payments or confirmed receipt of payment in the CIS?	Choose an item.
Insurance [For non-governmental grantees only]	
17. Did the Grantee maintain compliance with the insurance requirements throughout the term of the Agreement?	Choose an item.
Third-Party Contracting	
18. Did the Grantee provide evidence of a competitive procurement or obtain prior written approval of SANDAG to utilize a noncompetitive procurement for each third-party contract over \$10,000?	Choose an item.
19. [For HAP, Section 5310, and AFA-funded projects only] Did the Grantee include the funding agency (REAP, FTA, or CPUC) pass-through provisions in each third-party contract over \$10,000?	Choose an item.
Payments/Invoicing [For all projects except STGP vehicle projects]	
20. Did the Grantee typically (at least 80% of the time) submit its invoices in the required format and on time?	Choose an item.
21. Did the Grantee respond in a timely manner to requests to make invoice corrections if errors were found?	Choose an item.
22. If the Grantee was requested to make invoice corrections, did the Grantee take sufficient steps to see that future errors were not made on the same issue?	Choose an item.
23. Were all items included in Grantee invoices eligible under the Grant Agreement?	Choose an item.
24. Were sufficient backup materials, including required documentation, consistently provided with each invoice packet?	Choose an item.
25. If the Grantee invoiced for indirect costs, were they consistent with the indirect cost requirements in the Agreement?	Choose an item.
26. Did the Grantee's invoices include its matching fund contribution, along with supporting, descriptive, and explanatory documentation for the matching funds reported to have been made?	Choose an item.

Quarterly Reports	
27. Did the Grantee typically (at least 80% of the time) submit its quarterly reports in the required format and on time?	Choose an item.
28. Were quarterly reports typically (at least 80% of the time) filled out correctly and free of errors?	Choose an item.
29. Did the quarterly reports sufficiently detail accomplishments and progress, pending issues and actions toward resolution, and the status of the budget, schedule, and Performance Measures?	Choose an item.
30. If applicable to the Scope of Work, did the Grantee provide project milestone information such as presentations to community groups, other agencies, and elected officials to support media and communications efforts?	Choose an item.
31. If applicable to the Scope of Work, did the Grantee provide photo documentation required by the Grant Agreement?	Choose an item.
32. If applicable to the Scope of Work, did the Grantee provide SANDAG with agendas and meeting summaries for all community meetings?	Choose an item.
Vehicle and Other Equipment Purchases	
33. If the Grantee purchased vehicles or other equipment with the grant funding, did the Grantee maintain ownership of the equipment and use the equipment only for the purposes set forth in the Agreement?	Choose an item.
34. If the Grantee purchased vehicles or other equipment with grant funding, did the Grantee keep an inventory record for each item and maintain it in good operating order consistent with the purposes for which it was acquired?	Choose an item.
35. [For STGP-funded vehicle grants only] If a site visit was conducted, did the Grantee resolve any issues that were identified at the site visit?	Choose an item.
Capital Projects Involving Construction [For EMP LMG, ATGP, SGIP, and HAP-funded capital projects only]	
36. Did the Grantee coordinate with SANDAG staff on the development of a baseline data collection plan?	Choose an item.
37. Did the Grantee provide the TransNet signage? Did the signage comply with the Agreement requirements, including specifications, placement, and prior approval by SANDAG?	Choose an item.
38. Was a Capital Project Site Visit completed? Has the Grantee resolved any issues that were identified at the site visit?	Choose an item.

39. Did the Grantee and its subcontractors who are not employees of a public entity comply with all DIR and state/federal labor code requirements, including: • Complete Public Works Contractor Registration and the payment of an annual registration fee to the DIR • Include the payment of prevailing wages to all workers performing prevailing wage work • Use the DIR's Electronic Certified Payroll Reporting (eCPR) System to furnish certified payroll records to the California Labor Commissioner • Keep complete and accurate records and comply with the requirements of the California Labor Code	Choose an item.
40. Did the Grantee provide advanced notification to SANDAG that it was going to begin prevailing wage-covered work so SANDAG could prepare for labor compliance monitoring?	Choose an item.
41. Did the Grantee respond in a timely matter and proactively work to resolve any labor compliance issues raised by SANDAG or its labor compliance consultant?	Choose an item.
42. If the Grantee's project required an investigation by the Department of Industrial Relations (DIR), was the Grantee found to be responsible for any of the issues?	Choose an item.

PART 4: PROJECT COMPLETION AND CLOSEOUT

Instructions: Any question marked "No" below may require resolution by the TransNet Independent Taxpayer Oversight Committee (ITOC), a Policy Advisory Committee, or the Board of Directors before the project can be closed and final payment can be made. Contact the SANDAG Grants Program Manager to identify a recommended resolution.

Agreement Compliance

Question	Response
1. Based on the information provided in Part 2A, did the Grantee complete the entire project as described in the Scope of Work prior to the termination date of the Agreement?	Choose an item.
2. Based on the information provided in Part 2B, did the Grantee meet the Performance Measures included in the Grant Agreement?	Choose an item.
3. If applicable, did the Grantee provide the required match amount?	Choose an item.
4. [For EMP LMG-funded projects only] Has the Contracts & Procurement Department indicated that the Grantee has reported all of its payments and that the project can be closed in the CIS?	Choose an item.

5. [For all projects except STGP vehicle projects] Did the Grantee provide a final invoice of project expenses and a final progress report within 90 calendar days following Project completion or termination by SANDAG?	Choose an item.
6. Did the Grantee and its subcontractors have all necessary licenses, permits, qualifications, and approvals to perform the services under the Agreement?	Choose an item.
7. If this was a capital project involving construction, has SANDAG released all withheld payments that were due to labor compliance issues on the Project? Note: Final payment and release of retention cannot occur until all labor compliance issues are resolved.	Choose an item.
8. If this was a capital project involving construction, was the final constructed project consistent with the Agreement Scope of Work and the original project application?	Choose an item.
9. If this was a capital project involving construction, will the project improvements continue to be used for at least five years after completion of construction?	Choose an item.

PART 5: SUMMARY AND ADDITIONAL COMMENTS

Instructions: Use the space below to provide additional details on any responses to the prior sections where the response was "No."

Part No.	Question No.	Notes

Additional Comments

Instructions: Include in the space below any additional comments regarding the project or the Grantee.

PART 6: GRANTEE SIGNATURE

By signing below, I confirm receipt of this completed Grant Closeout Checklist and acknowledge that this Project Closeout checklist does not invalidate any requirements included in the Agreement.

Grantee Project Manager Name (Print)

Signature

Date

SANDAG

Capital Project Site Visit Report

The San Diego Association of Governments (SANDAG) monitors each recipient of TransNet Smart Growth Incentive Program (SGIP) and Active Transportation Grant Program (ATGP) funding, referred to as a “Grantee.” This Capital Project Site Visit Report is used to assess the performance of the Grantee in providing the project included in the Grant Agreement, and the Grantee’s compliance with the terms of the Grant Agreement. The Report will be completed by the SGIP/ATGP Program Manager at three specific timeframes – before construction begins (“Pre-Construction Review”), during construction (“Active Construction Review”), and when construction is nearing completion (“Construction Completion Review”). SANDAG will send the completed Report to the Grantee within one week of the date of the review.

PART 1: GRANT AGREEMENT AND PROJECT INFORMATION

Instructions: Complete the tables below.

Grant Agreement Information

Grant Program Name	Choose an item.
Agreement Number	[Enter grant agreement number]
Grantee Name	[Enter Grantee Name]
Notice to Proceed Date	Click or tap to enter a date.
Agreement Expiration Date	Click or tap to enter a date.
Grantee Project Manager Name	[Enter Grantee Project Manager Name]
SANDAG Program Manager Name	Tracy Ferchaw

Project Information

Project Name	[Enter Project Name]
Project Description/Summary	[Enter Project Description Or Summary From The Grant Agreement]
Project Limit/Location	[Enter Project Location From The Grant Agreement]
Total Grant Award	\$(Enter Total Grant Award From The Grant Agreement]

PART 2: SITE VISIT PREPARATION

Instructions: Complete the tables in each section below using information from the Agreement. Then respond to the questions in each section by selecting a response from the list of options.

Prior to the site visit, the SGIP/ATGP Program Manager reviewed the Grant Agreement (Agreement), amendments to the Agreement (Amendments), quarterly reports, invoices, and correspondence with Grantee. Any “No” responses to the questions below indicate an area in which the Grantee could be deficient in meeting its obligations under the Grant Agreement and should be reviewed and discussed with the Grantee at the site visit.

Project Scope of Work

Task No.	Task Description	Deliverable	Deliverable Met?	Task Status
1	[Enter Task Description]	[Enter Deliverable]	Choose an item.	Choose an item.
2	[Enter Task Description]	[Enter Deliverable]	Choose an item.	Choose an item.
3	[Enter Task Description]	[Enter Deliverable]	Choose an item.	Choose an item.
4	[Enter Task Description]	[Enter Deliverable]	Choose an item.	Choose an item.
5	[Enter Task Description]	[Enter Deliverable]	Choose an item.	Choose an item.

Question	Response
1. Has the Grantee identified any problems that could or have had an impact on the Project?	Choose an item.
2. Has the Grantee provided realistic actions that could resolve problems that could or have impacted the Project?	Choose an item.

Project Schedule

Task No.	Task Description	Anticipated Completion Date	Actual Completion Date	Task Status
1	[Enter Task Description]	[Enter Date Based On NTP]	[Enter Date Or Write TBD]	Choose an item.
2	[Enter Task Description]	[Enter Date Based On NTP]	[Enter Date Or Write TBD]	Choose an item.
3	[Enter Task Description]	[Enter Date Based On NTP]	[Enter Date Or Write TBD]	Choose an item.
4	[Enter Task Description]	[Enter Date Based On NTP]	[Enter Date Or Write TBD]	Choose an item.
5	[Enter Task Description]	[Enter Date Based On NTP]	[Enter Date Or Write TBD]	Choose an item.

Question	Response
1. Have any amendments been issued to extend the original Agreement expiration date?	Choose an item.
2. Has the Grantee indicated that any of the Project tasks are falling behind schedule?	Choose an item.
3. Has the Grantee provided realistic timeframes for when delayed tasks could be completed?	Choose an item.
4. Has the Grantee provided realistic actions that could resolve problems impacting the Schedule?	Choose an item.

5. Does the Grantee anticipate that an amendment to the Project Schedule is needed or could be needed in the future?	Choose an item.
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Project Budget

Current Grant Amount Expended	[\$[Enter Amount From Most Recent Invoice]
Current Grant Amount Remaining	[\$[Enter Amount From Most Recent Invoice]

Question	Response
1. Has the Grantee received approval for transfers of funds between tasks?	Choose an item.
2. Has the Grantee been submitting invoices on time?	Choose an item.
3. Have invoices been filled out correctly and been free of errors?	Choose an item.
4. Have all invoiced items been eligible under the Agreement?	Choose an item.
5. Have sufficient backup materials been consistently provided with each invoice?	Choose an item.
6. If the Grantee has invoiced for indirect costs, have they been consistent with the Grantee's indirect cost allocation plan in effect at the time of invoice?	Choose an item.
7. Have the Grantee's invoices included its matching fund contribution, along with supporting, descriptive and/or explanatory documentation for the matching funds provided?	Choose an item.

Reports

1. Does the Grantee submit quarterly reports on time?	Choose an item.
2. Are the Grantee's reports filled out correctly and free of errors?	Choose an item.
3. Do the Grantee's reports sufficiently detail accomplishments in the quarter, anticipated progress next quarter, pending issues and actions toward resolution, and status of budget, schedule, and Performance Measures?	Choose an item.
4. Does the Grantee provide project milestone information such as presentations to community groups, other agencies and elected officials, groundbreakings, and ribbon-cuttings to support media and communications efforts?	Choose an item.
5. Did the Grantee coordinate with SANDAG staff on the development of a baseline data collection plan?	Choose an item.
6. Does the Grantee provide the TransNet signage and comply with the signage requirements including specifications, placement, and requesting prior approval by SANDAG?	Choose an item.
7. Does the Grantee provide with its reports appropriate photo documentation, including existing conditions photos and project milestone photos?	Choose an item.
8. Does the Grantee provide SANDAG with agendas and meeting summaries for all community meetings?	Choose an item.
9. Has the Grantee provided a timely, written notice to the SANDAG Program Manager if there was a change to the Grantee's Project Manager?	Choose an item.

Other

Question	Response
1. Is the Grantee reporting payment details using the SANDAG Compliance Information System (CIS) by the 15th of each month following receipt of payment by SANDAG?	Choose an item.
2. Does the Grantee ensure its third-party contractors and/or subcontractors consistently report payments and confirm receipt of payment in the CIS?	Choose an item.
3. Does the Grantee provide evidence of a competitive procurement and obtain prior written approval of SANDAG to utilize a noncompetitive procurement for each third-party contract over \$10,000?	Choose an item.
4. Is SANDAG withholding any payments due to labor compliance issues on the Project?	Choose an item.
5. Does the Grantee respond in a timely matter and proactively work to resolve any labor compliance issues raised by SANDAG or its labor compliance consultant?	Choose an item.
6. Has the Grantee maintained ownership of any equipment purchased using Agreement funding and used the equipment only for the purposes set forth in the Agreement?	Choose an item.
7. Does the Grantee keep an inventory record for each piece of equipment purchased under the Agreement and maintain each piece of equipment in good operating order consistent with the purposes for which they were intended?	Choose an item.
8. Did the Grantee submit project design drawings to SANDAG for review and comment at 30 percent, 60 percent, 90 percent, and 100 percent design?	Choose an item.

PART 3: SITE VISIT SUMMARY

Instructions: Complete the table below. Then respond to the questions in the relevant section pertaining to the Type of Review (Pre-Construction, Active Construction, or Construction Completion).

Date of Site Visit	Click or tap to enter a date.
Type of Review	Choose an item.
SANDAG Staff in Attendance	[Enter name], [Enter title]
Grantee Staff in Attendance	[Enter name], [Enter title] [Enter name], [Enter title] [Enter name], [Enter title]
Grantee Prime Contractor Name	[Enter Prime Contractor Name]
Construction Start Date	[Enter Anticipated or Actual Start Date]
Construction End Date	[Enter Anticipated or Actual End Date]

Pre-Construction Review

1. Include in the space below a summary of the items noted in Part 2 of this Report that were discussed with the Grantee, and any other items that were discussed during the Site Visit.

[Enter items discussed]

2. Include in the space below any corrective action measures the Grantee will take to resolve issues identified in Part 2 of this Report, and other issues discussed during the Site Visit.

[Enter corrective actions]

3. Include in the space below a description of the current Project site, including current conditions and future activities that will take place during the Grant period. This section should be complimented by photographs taken by SANDAG staff.

[Enter site observations]

4. Include in the space below whether there are any concerns about the Grantee being able to complete the entire Project and/or provide all required deliverables included in the Agreement.

[Enter concerns]

Active Construction Review

1. Include in the space below a summary of the items noted in Part 2 of this Report that were discussed with the Grantee, and any other items that were discussed during the Site Visit.

[Enter items discussed]

2. Include in the space below any corrective action measures the Grantee will take to resolve issues identified in Part 2 of this Report, and other issues discussed during the Site Visit.

[Enter corrective actions]

3. Include in the space below a description of the current Project site, including current conditions and future activities that will take place during the Grant period. This section should be complimented by photographs taken by SANDAG staff.

[Enter site observations]

4. Include in the space below whether there are any concerns about the Grantee being able to complete the Project and/or provide all required deliverables included in the Agreement.

[Enter concerns]

Construction Completion

1. Include in the space below a summary of the items noted in Part 2 of this Report that were discussed with the Grantee, and any other items that were discussed during the Site Visit.

[Enter items discussed]

2. Include in the space below any corrective action measures the Grantee will take to resolve issues identified in Part 2 of this Report, and other issues discussed during the Site Visit.

[Enter corrective actions]

3. This section should include a description of the final Project, including the amenities built and ready for public use. Quantities of items should be added, when appropriate. This section should be complimented by photographs taken by SANDAG staff.

[Enter site observations]

4. Was the final constructed project consistent with the Agreement?

Choose an item.

5. Is there any indication that continued use of the Project for the purposes stated in Grantee's application for a period of at least five years after completion of construction will not occur?

Choose an item.

PART 4: GRANTEE SIGNATURE

By signing below, I confirm receipt of this completed Site Visit Report.

Grantee Project Manager Name (Print)

Signature

Date

January 8, 2025

TransNet ITOC Member Reappointment and Appointment Process

Overview

The membership of the ITOC consists of seven voting members, each of whom represents a specified area of expertise. The position for a professional in real estate, land economics, and/or right-of-way acquisition is currently vacant. Additionally, the term for two ITOC positions (a chief executive officer or person in a similar senior-level position with experience in leading a large organization and a professional in the management of large-scale construction projects) expires in May 2025 (Attachment 1). The current incumbents are eligible to be reappointed.

Mrs. Sunnie House and Mrs. Jacqueline Appleton-Deane have submitted their applications for reappointment for consideration.

Key Considerations

The TransNet Extension Ordinance requires the establishment of a seven-member Selection Committee of mayors and county supervisors to select ITOC members from a list of qualified candidates. The current members of the ITOC Selection Committee's two-year term expires February 2025. Staff is working on getting the Selection Committee's re-designations or new appointments.

ITOC members shall serve no more than eight years unless the member's first term was less than four years, in which case the member may serve an additional two terms after the partial term. In no case, however, shall any member serve more than ten years on the ITOC.

The ITOC selection process consists of two steps pursuant to the TransNet Extension Ordinance (Attachment 2). First, the Technical Screening Committee reviews applications and recommends candidates for open positions. Second, the Selection Committee considers applications for open positions based on recommendations provided by the Technical Screening Committee.

Applications for the vacant position are being requested from individuals interested in serving on the ITOC through an open, publicly noticed solicitation process through a public notice in the San Diego Union Tribune and social media postings.

Next Steps

Upon receipt, appointment and reappointment applications will be forwarded to the Technical Screening Committee for consideration. Following the Selection Committee's consideration of the appointment and reappointment requests, the applicants will be notified of the final selection results in spring 2025.

The new member is expected to serve as an ITOC member following their nomination by the Selection Committee, with the term limit determined at the time of appointment. Reappointed member will begin their service as ITOC members in June 2025, with their term limits similarly established by the Selection

Action: Information

This report provides an overview of the reappointment process for ITOC members as well as the solicitation and appointment process for new members.

Fiscal Impact:

Costs incurred in administering ITOC activities are paid from TransNet sales tax proceeds and audited annually. ITOC members serve without compensation except for direct expenses, such as parking or mileage for meetings related to the work of the ITOC.

Schedule/Scope Impact:

The ITOC meets on a regular basis, at least quarterly, to carry out its roles and responsibilities, including conducting annual fiscal audits and triennial performance audits.

Committee at the time of appointment. Should the Selection Committee not approve the requested appointment and/or reappointment, the ITOC positions would be considered vacant at the end of the current term, and the same selection process for new members outlined above would be initiated.

Susan Huntington, Director of Financial Planning, Budgets, and Grants

Attachments: 1. Current Membership of TransNet Independent Taxpayer Oversight Committee
 2. Excerpt from the TransNet Extension Ordinance

Current Membership on the TransNet Independent Taxpayer Oversight Committee

Terms Expiring May 2025

Sunnie House

Sunnie is serving in the ITOC position for a chief executive officer or person in a similar senior-level decision-making position, of a major private sector employer with demonstrated experience in leading a large organization. She has over 40 years of experience in the delivery of a wide range of transportation infrastructure projects throughout the Western United States. Her executive leadership roles with large global infrastructure companies have solidified her reputation for excellence.

Jacqueline Appleton-Deane

Jacqueline is serving in the ITOC position for a professional in the management of large-scale construction projects. She has extensive experience working for the California Department of Transportation supervising large-scale transportation projects.

Terms Expiring May 2026

Francisco Rivera, Vice
Chair

Francisco is serving in the ITOC position for a licensed architect, civil engineer or traffic engineer with 38 years of experience in technical and managerial engineering positions with the City of Chula Vista. He was a Principal Civil Engineer/Traffic Engineer for the Chula Vista Engineering Department for the last 18 years of his career. His other relative experience is as a Deputy City Engineer and a Deputy Director of Engineering.

Terms Expiring May 2027

Lorraine Ahlquist

Lorraine is serving in the ITOC position for a professional in biology or environmental science with demonstrated experience in environmental regulations and major project mitigation requirements and/or habitat acquisition and management. She is a principal environmental lead at Mott MacDonald. Lorraine has more than 25 years of experience in environmental regulatory management, including coordinating reviews of technical studies for state and federal compliance and preparation of environmental documents.

Maryam Babaki, Chair

Maryam is serving in the ITOC position for a professional in the field of municipal/public finance and/or budgeting with a minimum of ten years in a relevant and senior decision-making position in the public or private sector. She is currently the Director of Planning and Development for Rancho Santa Fe Association. Maryam has over 30 years of experience in the field of public and private management, engineering, development, and budgeting.

Terms Expiring May 2028

Vacant

Position for a professional experienced in real estate, land economics, and/or right-of-way acquisition.

Les Hopper

Les is serving in the ITOC position for a licensed engineer with appropriate credentials in the field of transportation project design or construction and a minimum of ten years of experience in a relevant and senior decision-making position in the government or private sector. Les is a Principal at Rick Engineering Company and leads the Transportation Infrastructure Practice. He has 40 years of hands-on experience in the management, planning, permitting, and design of both public and private projects from inception through construction.

Excerpt from the TransNet Extension Ordinance

Membership and Selection Process

1. Membership: There shall be seven ITOC voting members with the characteristics described below. The intent is to have one member representing each of the specified areas of expertise. If, however, after a good faith effort, qualified individuals have not been identified for one or more of the areas of expertise, then no more than two members from one or more of the remaining areas of expertise may be selected. For each of the areas of expertise listed below, an individual representing one of the region's colleges or universities with a comparable level of academic experience also would be eligible for consideration.
 - A professional in the field of municipal/public finance and/or budgeting with a minimum of ten years in a relevant and senior decision making position in the public or private sector.
 - A licensed architect, civil engineer or traffic engineer with demonstrated experience of ten years or more in the fields of transportation and/or urban design in government or the private sector.
 - A professional with demonstrated experience of ten years or more in real estate, land economics, and/or right -of-way acquisition.
 - A professional with demonstrated experience of ten years or more in the management of large-scale construction projects.
 - A licensed engineer with appropriate credentials in the field of transportation project design or construction and a minimum of ten years experience in a relevant and senior decision making position in the government or private sector.
 - The chief executive officer or person in a similar senior-level decision making position, of a major private sector employer with demonstrated experience in leading a large organization.
 - A professional in biology or environmental science with demonstrated experience of ten years or more with environmental regulations and major project mitigation requirements and/or habitat acquisition and management.
 - Ex-Officio Members: SANDAG Executive Director and the San Diego County Auditor

The criteria established for the voting members of the ITOC are intended to provide the skills and experience needed for the ITOC to carry out its responsibilities and to play a valuable and constructive role in the ongoing improvement and enhancement of the TransNet program.

Applications will be requested from individuals interested in serving on the ITOC through an open, publicly noticed solicitation process.

2. Technical Screening Committee: A technical screening committee will be established to review applications received from interested individuals. This committee will consist of three members selected by the SANDAG Executive Director from high-level professional staff of local, regional, state or federal transportation agencies outside of the San Diego region, or from one of the region's colleges or universities in a transportation-related field, or a combination thereof. The committee will develop a list of candidates determined to be qualified to serve on the ITOC based on the criteria established for the open position(s) on the ITOC. The technical screening committee will recommend two candidates for each open position from the list of qualified candidates for consideration by the Selection Committee.

The recommendations shall be made within 30 days of the noticed closing date for applications.

3. Selection Committee: A selection committee shall be established to select the ITOC members from the list of qualified candidates recommended by the technical screening committee. The selection committee shall consist of the following:
 - Two members of the County of San Diego Board of Supervisors
 - The Mayor of the City of San Diego
 - A mayor from the Cities of Chula Vista, Coronado, Imperial Beach, or National City selected by the mayors of those cities.
 - A mayor from the Cities of El Cajon, La Mesa, Lemon Grove, or Santee selected by the mayors of those cities.
 - A mayor from the Cities of Carlsbad, Del Mar, Encinitas, Oceanside, or Solana Beach selected by the mayors of those cities.
 - A mayor from the Cities of Escondido, Poway, San Marcos, or Vista selected by the mayors of those cities.

The selection of ITOC members shall be made within 30 days of the receipt of recommendations from the technical screening committee. All meetings of the selection committee shall be publicly noticed and conducted in full compliance with the requirements of the Brown Act. Should the selection committee be unable to reach agreement on a candidate from the qualified candidates recommended by the technical screening committee, the selection committee shall request the technical screening committee to recommend two additional qualified candidates for consideration.

January 8, 2025

TransNet Major Corridor Projects Update: State Route 67

Overview

State Route 67 (SR 67) between Maplevue Street, and Highland Valley Road/Dye Road is a conventional highway with segments alternating between 2 to 4 lanes with additional operational lanes at signalized intersections. The transportation network in this area includes SR-67, State Route 78, county roads, local transit, pedestrian trails, and bicycle infrastructure.

The topography of this rural highway consists of steep hillsides, canyons, and private property which limits its capacity for expansion.

In the last 10 years, SANDAG and Caltrans have invested over \$60 million in transportation improvements within the Corridor and nearby communities. The improvements are a combination of broadband, safety, operational, and maintenance projects. Two more projects will begin in 2025 and 2026 investing an additional \$20 million.

The Cedar Fire in 2003 and the Witch Creek Fire in 2007 resulted in significant highway delay on the Corridor during evacuations. Existing evacuation times are limited by bottlenecks created by the two and three lane highway segments, surrounding terrain, limited alternative routes and the need to keep one lane northbound open to support emergency response.

The 2021 Regional Plan and the San Vicente Comprehensive Multimodal Corridor Plan (CMCP) completed in September 2022 propose key investments in the SR-67 corridor to address the evacuation needs.

This report provides an update on the status of project details, progress, and schedule.

Key Considerations

The primary goal of the SR-67 Highway Improvements Project (HIP) is to increase capacity during emergencies to significantly reduce evacuation times. Additional project goals include enhancing traveler safety, maintaining or reducing travel times within the project limits, encouraging multi-modal transportation, facilitating recreational and wildlife movement, and preserving the natural environment and community character.

San Diego County has an emergency evacuation plan that includes SR-67. The San Diego County Sheriff, California Highway Patrol, and CalFire are the lead agencies during emergencies. Caltrans is consulting with these agencies on the SR-67 HIP environmental and technical studies.

In collaboration with the San Diego County Sheriff, California Highway Patrol, CalFire, and public scoping meetings during the pandemic, a Draft Evacuation Analysis Recommendations Report was created and

Action: Information

Caltrans staff will present an update on the State Route 67 Highway Improvements Project.

Fiscal Impact:

\$22 million has been funded from federal, state, and local funds including California Senate Bill 1 (Beall, 2017) Local Partnership program funds for the Highway Improvements Project and Bus Rapid Transit projects. \$30 million have been programmed for the design phase.

Schedule/Scope Impact:

The State Route 67 Highway Improvements Project is tentatively scheduled for Studied Alternatives Analysis in 2025, Draft Report and Draft Environmental Document summer 2026, Public Hearing fall 2026, Final Environmental Document, Alternative Selection and Final Project Report summer 2027 and Begin Design winter 2027. Future phases including completing design, right of way certification and completing construction.

three alternatives were developed that meet evacuation performance goals, introduce multi-use trails in various configurations, and incorporate the above-mentioned goals. Alternative 1 provides four continuous lanes, adds a median/two-way-left-turn-lane (TWLTL) at targeted locations, and a multiuse trail through the project limits; Alternative 2 provides wider than standard shoulders to be used for evacuation purposes only, and a multiuse trail (from Poway Road to Highland Valley Road) which would be utilized for first responders during emergencies; Alternative 3 provides targeted lane widenings, a median/TWLTL for most of the project limits, and a multiuse trail (from Maplevue Street, to Poway Road).

The project continues to be on schedule and within budget. Completed tasks include:

- Preliminary Design plans for all three alternatives have been prepared.
- “Current, Build-Year, and Future,” Traffic Forecasting/Modeling Volumes.
- Final Noise Study Report, Field Surveys for Biological Studies, and Paleontology Study.

Caltrans continues to study operational improvements including, evacuation preparedness and safety needs. The California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA) will guide the Caltrans decisions that follow.

The project is in the Environmental phase, the Draft Environmental Document (DED) and Draft Project Report are scheduled to be completed during the summer of 2026, the DED is scheduled to be circulated for Public Hearing in the fall of 2026. The Final Environmental Document and Final Project Report are scheduled to be approved by summer of 2027. The Design Phase is scheduled to begin by winter 2027.

Next Steps

- Finalize the Evacuation Analysis.
- Complete Draft Geotechnical Report.
- Complete the Bridge Advance Planning Study Report.
- Complete Traffic Studies including VMT Analysis & Mitigation.
- Finalize the Initial Site Assessment (ISA).
- Finalize all environmental studies.
- Prepare the Draft Environmental Document and Draft Project Report.
- Draft Environmental Document Public Hearing.
- Prepare Final Environmental Document and Final Project Report.

Clint Peace, Director of Program/Project Management, SANDAG

Sam Amen, Division Chief of Design, Caltrans D11

Karina Cantero-Angel, Design Manager, Caltrans D11

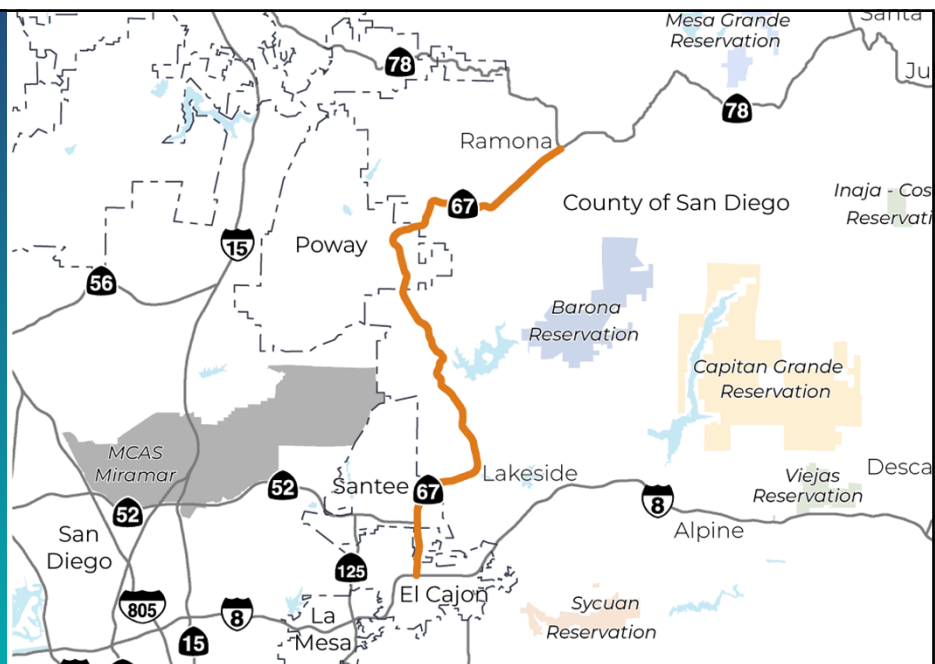
Miyoko Nakajima, Project Manager, Caltrans D11

State Route 67 Corridor Improvements

Independent Taxpayer Oversight Committee | Item 5

January 8, 2025

SR 67 Corridor



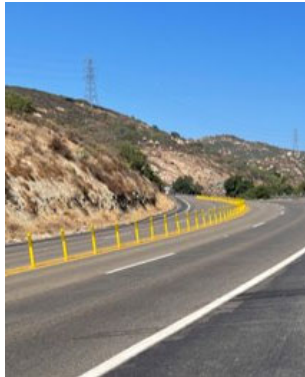
Completed Projects



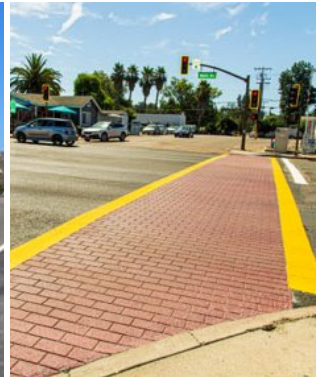
High Friction
Surface Treatment



Highland Valley
Rd/Dye Rd
Intersection
Improvements



Channelizers,
Guardrail, Signing,
and Striping



Clean California

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Upcoming Projects



Culvert
Rehabilitation



Mussey Grade Rd
Intersection Safety
Improvements



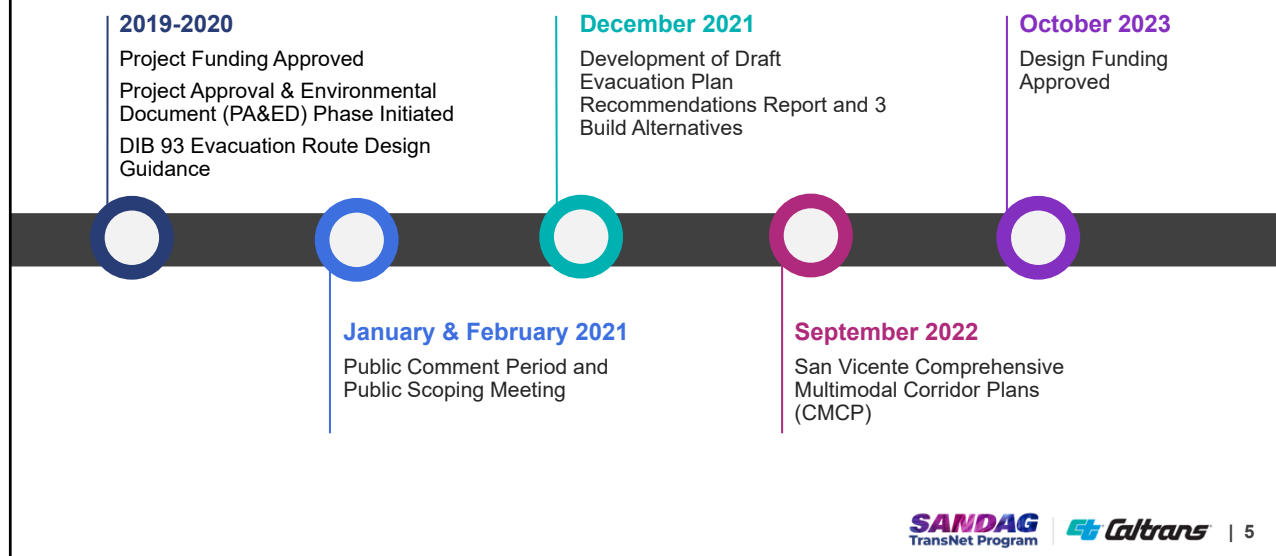
Pavement
Rehabilitation



Bus Rapid Transit

  | 4

SR 67 Highway Improvements Project Progress



SR 67 Highway Improvement Project Objectives



Traveler Safety



Maintain or Reduce Travel Times within the Project Limits



Increase Temporary Emergency Evacuation Capacity



Encourage Multi-Modal Transportation

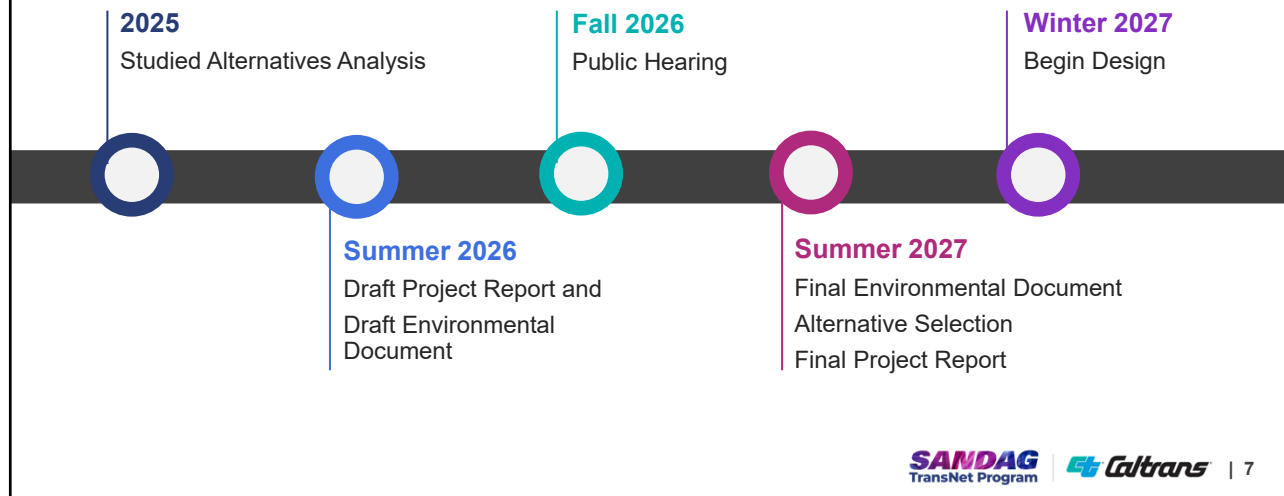


Facilitate Recreational and Wildlife Movement

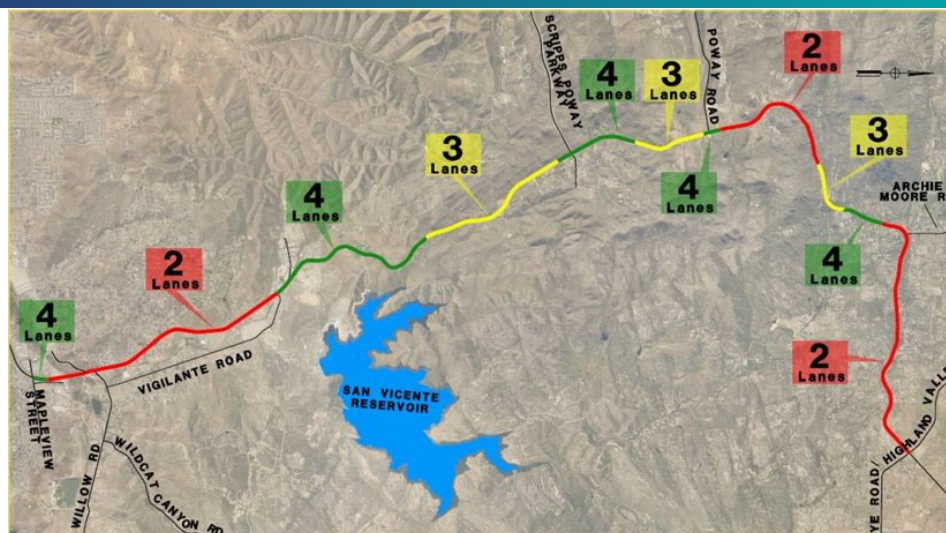


Preserve Natural Environment & Community Character

SR 67 Highway Improvements Project Timeline



Current Configuration of SR 67 Rural Evacuation Plan



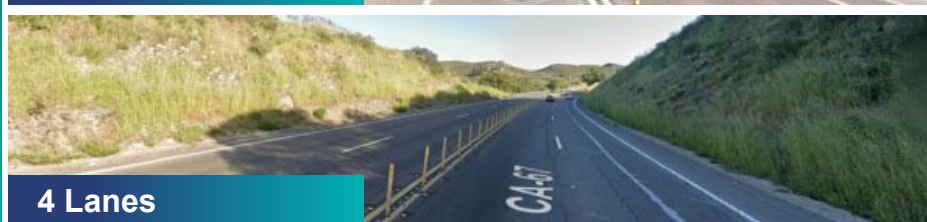
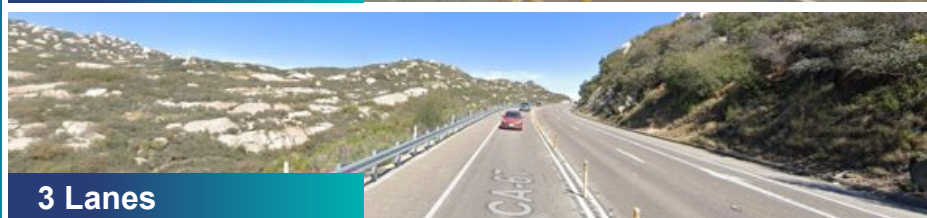
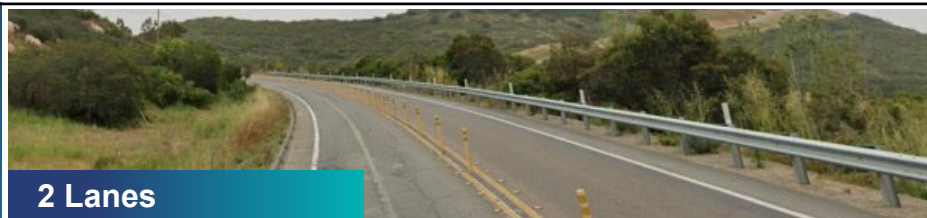
How the Lanes are Used for Evacuation

Eliminates Bottlenecks

2 lanes = 1 out / 1 in

3 lanes = 2 out / 1 in

4 lanes = 3 out / 1 in

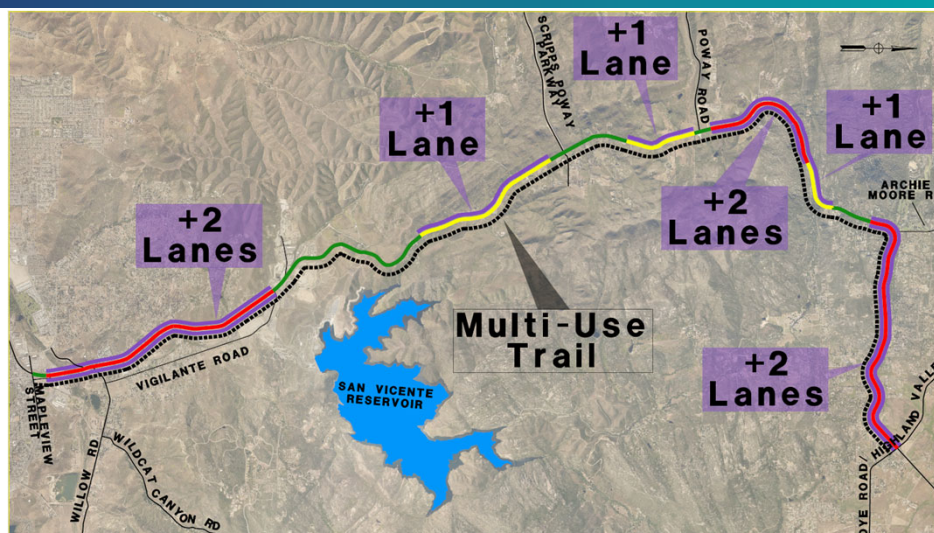


SANDAG
TransNet Program

Caltrans | 9

Studied Alternative 1

Full Widening With Continuous Multi-Use Trail

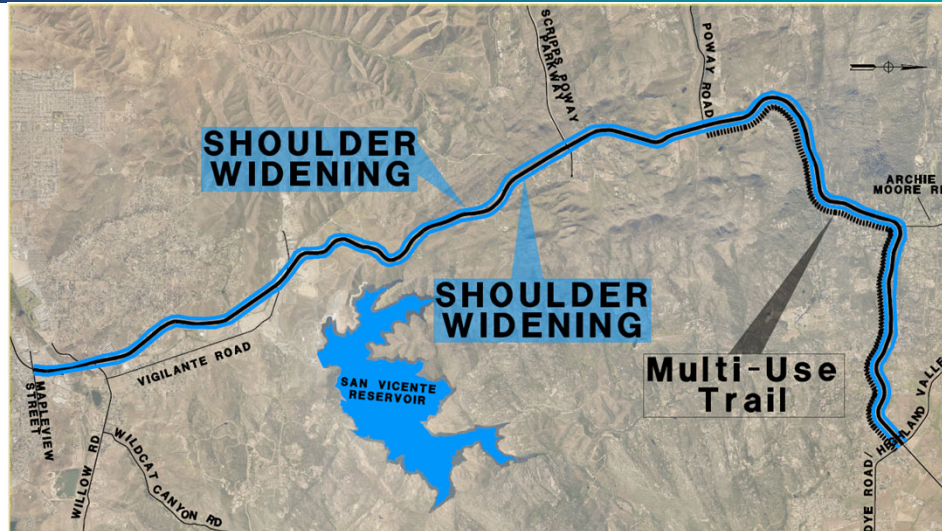


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TransNet Program

Caltrans | 10

Studied Alternative 2

Shoulder Widening and Northern Multi-Use Trail



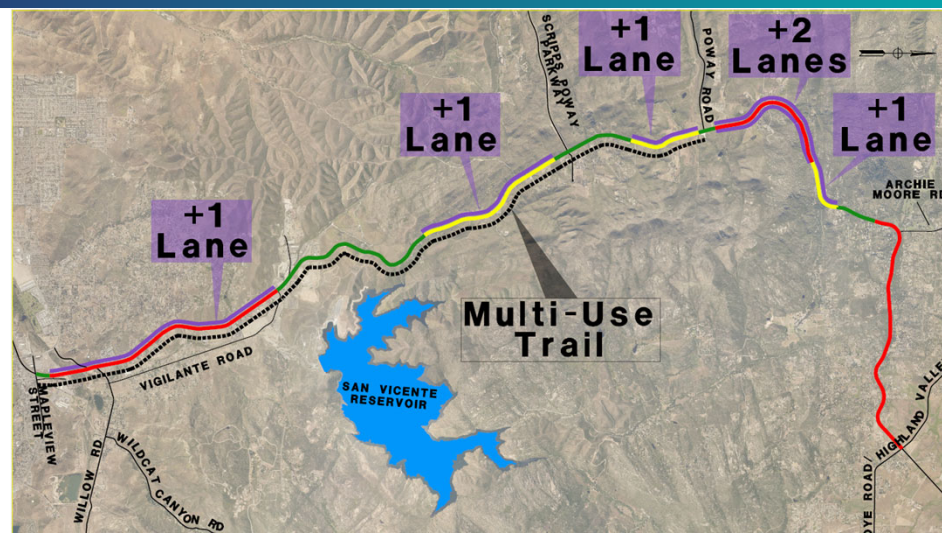
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Studied Alternative 3

Targeted Lane Additions and Southern Trail



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TransNet Program

Caltrans

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Studied Alternative Comparisons

All Three Studied Alternatives

- Meet Evacuation Performance Goals
 - 4 Southbound Evacuation Lanes (Highland Valley Rd/ Dye Rd to Poway Rd)
- 3 Southbound Evacuation Lanes
 - (Poway Rd to Scripps Poway Rd)
- 1 Northbound Lane (Full Project Limits)
- Multi-use Path in Various Configurations

Studied Alternative 1

- Largest Environmental & Community Footprint
- May Require Vehicle Miles Traveled (VMT) Mitigation

Studied Alternative 2

- Smallest Environmental & Community Footprint
- Will provide wider shoulders
- Not likely to require VMT Mitigation

Studied Alternative 3

- Blend of Alt 1 & Alt 2
- May require VMT Mitigation

Considerations

- Emergency Response Effectiveness
- Impact to Community Character
- Impact to Critical Habitats & Cultural Resources
- Active Transportation
- Operational Advantages
- Right of Way Impact
- Cost Effectiveness & Deliverability

Project Process

Completed

- Preliminary Design Plans (for 3 Studied Alternatives)
- Traffic Forecasting/Modeling Volumes
- Final Noise Study Report
- Paleontology Study
- Field Surveys for Biological Studies

Ongoing:

- Draft Evacuation Analysis
- Draft Geotechnical Report, expected completion January 2025
- Bridge Advance Planning Study, expected completion June 2025
- Traffic Studies
- Biological and Wildlife Movement
- Cultural / Ecological / Air Quality / Hazardous Waste / Visual Analysis
- VMT Analysis & Mitigation

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Next Steps



Draft Emergency Response Analysis



Draft Geotechnical Report

Expected completion January 2025



Bridge Advance Planning Study

Expected completion June 2025



Initial Site Assessment (ISA)



Preliminary Wetlands Delineation

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TransNet Program

Caltrans

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Thank you!

January 8, 2025

2025 Regional Transportation Improvement Program: Amendment No. 1

Overview

The Regional Transportation Improvement Program (RTIP) is a five-year document that reflects funding sources, project phases, and fiscal years of implementation for all transportation-related projects in the San Diego region that: (1) use federal, state, or TransNet funds; (2) increase capacity of the transportation system; or (3) are regionally significant. SANDAG develops the RTIP based on projects included in the adopted Regional Plan, as submitted by member agencies (local jurisdictions, transit agencies, Caltrans).

The [2025 RTIP](#) covers FY 2025 – FY 2029 and is fiscally constrained, meaning that enough revenue is committed or reasonably assumed to be available from local, state, and/or federal sources for each phase of the project that is included in the RTIP. Amendments are made to the RTIP on a quarterly (or as-needed) basis.

Key Considerations

The changes in Amendment No. 1 are summarized in Attachment 1, and the project amendments are detailed in Attachment 2. Amendment No. 1 modifies projects in the RTIP that the Independent Taxpayer Oversight Committee (ITOC) previously reviewed for TransNet eligibility. Key changes in Amendment No. 1 include:

- The removal of \$285.9 million of Transportation Infrastructure Finance and Innovation Act (TIFIA) funding from State Route 11 (V11)
- The addition of 1 new project: ESC59 - Escondido General Plan Amendments and Environmental Review (Part of V10)
- Programming updates requested by Local Agencies

Attachment 3 is the TransNet Eligibility Analysis for Amendment No. 1. At the request of the ITOC, staff has reviewed the proposed project amendments included in Amendment No. 1 and considers the changes to be consistent with the TransNet Ordinance.

Next Steps

Any comments provided by the ITOC will be forwarded to the Transportation Committee prior to approval. The Transportation Committee is scheduled to consider approval of Amendment No. 1 to the 2025 Regional Transportation Improvement Program at its meeting on January 17, 2025.

Susan Huntington, Director of Financial Planning, Budgets, and Grants

Attachments: 1. Table 1 - Summary of Changes Report
 2. Table 2 - 2025 RTIP Amendment No. 1
 3. TransNet Eligibility Analysis

Action: Discussion

The ITOC is asked to review and discuss Amendment No. 1, focusing its review on the TransNet-funded projects.

Fiscal Impact:

Amendment No. 1 reflects a decrease of \$6.2 million to TransNet dollars programmed.

Schedule/Scope Impact:

Amendment No. 1 includes 1 new project and 1 completed project.

Table 1 - Summary of Changes Report (\$000) - TransNet Only
2025 RTIP Amendment No. 1

LEGEND:
 ↑ Increase
 ↓ Reduce
 ↔ Revise
 + Add new

Project ID	Lead Agency	Project Title	Total Programmed Before	Total Programmed Revised	Cost Difference	Percent Change	TransNet Change	Change Description
V11	Various Agencies	State Route 11	\$1,208,187	\$922,274	-\$285,913	-24%	\$0	Removed TIFIA funding
SAN114	San Diego Association of Governments	Grouped Projects for Rehabilitation or Reconstruction of Track Structures, Track, and Trackbed in Exisiting Rights-of-Way: Coastal Rail Corridor	\$533,637	\$630,208	\$96,571	18%	\$13	↑ TransNet - MC; ↑ CMAQ; ↑ FTA-5307; ↑ RSTP
CAL46A	Caltrans	Grouped Projects for Safety Improvements - SHOPP Mobility Program	\$111,016	\$139,037	\$28,021	25%	\$676	↑ TransNet - MC; ↑ SHOPP (AC) Mobility; + STIP-RIP AC
SD70	San Diego, City of	West Mission Bay Drive Bridge over San Diego River	\$152,414	\$151,754	-\$660	-1%	-\$660	↓ TransNet - LSI Carry Over
SAN214	San Diego Association of Governments	Grouped Projects for Capital Purchase - FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities	\$7,282	\$12,896	\$5,614	77%	\$13	+ TransNet - SS; ↑ FTA 5310
V10	Various Agencies	Grouped Projects for TransNet Smart Growth Incentive Program	\$39,733	\$45,109	\$5,376	14%	\$273	↑ TransNet - SGIP; ↑ Local Funds; Added new project ESC59
NC03	National City, City of	Street Resurfacing Project	\$30,437	\$35,405	\$4,968	16%	\$4,968	↑ TransNet - LSI
V14	Various Agencies	Grouped Projects for Bicycle and pedestrian facilities - Active Transportation Program (ATP)	\$88,769	\$93,624	\$4,855	5%	\$0	↑ ATP - S
SAN153	San Diego Association of Governments	The Inland Rail Trail	\$97,405	\$94,193	-\$3,212	-3%	\$0	↓ RSTP
V20	Various Agencies	Grouped Projects for Engineering - Complete Corridor Studies	\$25,927	\$29,043	\$3,116	12%	\$0	↑ TransNet - MC; ↑ RSTP
V16	Various Agencies	Grouped Projects for Operating Assistance - TransNet Senior Mini-Grant Program	\$5,146	\$7,484	\$2,338	45%	\$26	↑ TransNet - SS; ↑ Local Funds
CAL29	Caltrans	SR 76 Middle	\$152,078	\$151,028	-\$1,050	-1%	-\$1,050	↓ TransNet - MC and revised between fiscal years
CB43	Carlsbad, City of	ADA Improvements	\$4,935	\$5,623	\$688	14%	\$688	↑ TransNet - LSI Carry Over
SD96	San Diego, City of	Street Resurfacing and Reconstruction Citywide	\$162,623	\$163,283	\$660	0%	\$660	↑ TransNet - LSI Carry Over
SAN163	San Diego Association of Governments	Los Penasquitos Lagoon Bridge Replacement	\$46,004	\$45,394	-\$610	-1%	-\$610	↓ TransNet - MC and revised between fiscal years
CB59	Carlsbad, City of	El Camino Real Widening - Sunny Creek to Jackspar	\$5,010	\$5,610	\$600	12%	\$600	↑ TransNet - LSI; ↑ TransNet - LSI Carry Over

Table 1 - Summary of Changes Report (\$000) - TransNet Only
2025 RTIP Amendment No. 1

LEGEND:
 ↑ Increase
 ↓ Reduce
 ↔ Revise
 + Add new

Project ID	Lead Agency	Project Title	Total Programmed Before	Total Programmed Revised	Cost Difference	Percent Change	TransNet Change	Change Description
IB21	Imperial Beach, City of	SR-75 Signal Interconnection Project	\$0	\$600	\$600	0%	\$0	↔ TransNet - CP between fiscal years
NC04	National City, City of	Traffic Signal Install/Upgrade	\$4,970	\$4,494	-\$476	-10%	-\$476	↓ TransNet - LSI
NC15	National City, City of	Citywide Safe Routes to Schools	\$4,375	\$4,571	\$196	4%	\$196	↑ TransNet - LSI and revised between fiscal years
SAN40	San Diego Association of Governments	Metropolitan Planning	\$86,692	\$86,863	\$171	1%	\$171	↔ TransNet - BPNS between fiscal years; ↔ TransNet - SGIP between fiscal years; ↑ TransNet - SS and revised between fiscal years; ↔ FTA 5307 between fiscal years; ↔ Local Funds between fiscal years; ↔ TDA between fiscal years
SAN26B	San Diego Association of Governments	Downtown BRT Stations	\$20,880	\$20,882	\$2	1%	\$2	↑ TransNet - MC and revised between fiscal years
SAN46	San Diego Association of Governments	Super Loop	\$35,186	\$35,187	\$1	1%	\$1	↑ TransNet - MC
CAL09	Caltrans	Interstate 5 - HOV/Managed Lanes	\$915,540	\$915,540	\$0	0%	\$0	↑ TransNet - MC; ↓ TransNet - MC (AC)
CAL09D	Caltrans	Interstate 5 and 805 - Convert HOV lanes to Express lanes.	\$193,603	\$193,603	\$0	0%	\$0	↑ CMAQ; ↓ RSTP
CAL26	Caltrans	State Route 52 Freeway (E&F)	\$452,117	\$452,117	\$0	0%	\$0	↔ RSTP between fiscal years
CAL68	Caltrans	SR 94/125 Interchange and Arterial Operational Improvements	\$135,240	\$135,240	\$0	0%	\$0	↔ RSTP between fiscal years
CAL78D	Caltrans	I-805 South Soundwalls - Unit 1	\$87,461	\$87,461	\$0	0%	\$0	+ TransNet - MC (AC)
CAL277A	Caltrans	I-5 HOV/SR 78 Connector	\$66,118	\$66,118	\$0	0%	\$0	↔ STIP State Cash-Augmn RIP between fiscal years
CAL278	Caltrans	SR78 HOV/Managed Lanes	\$40,683	\$40,683	\$0	0%	-\$11,124	+ CMAQ; + CMAQ - Conversion; ↓ TransNet - MC
CB32	Carlsbad, City of	El Camino Real Widening - Poinsettia to Camino Vida Roble	\$4,595	\$4,595	\$0	0%	\$0	↔ TransNet - LSI Carry Over and Earmark Repurposing between fiscal years
SAN147	San Diego Association of Governments	Grouped Projects for Bicycle and Pedestrian Facilities - Bayshore Bikeway	\$80,855	\$80,855	\$0	0%	\$500	↑ TransNet - BPNS and revised between fiscal years; ↑ CRP

Table 1 - Summary of Changes Report (\$000) - TransNet Only
2025 RTIP Amendment No. 1

LEGEND:
 ↑ Increase
 ↓ Reduce
 ↔ Revise
 + Add new

Project ID	Lead Agency	Project Title	Total Programmed Before	Total Programmed Revised	Cost Difference	Percent Change	TransNet Change	Change Description
SAN148	San Diego Association of Governments	Grouped Projects for Bicycle and Pedestrian Facilities - Coastal Rail Trail	\$46,457	\$46,457	\$0	0%	\$0	↔ CRP between fiscal years
SAN227	San Diego Association of Governments	Grouped Projects for Bicycle and Pedestrian Facilities - North Park/Mid-City Bikeways	\$92,111	\$92,111	\$0	0%	-\$500	↓ TransNet - BPNS and revised between fiscal years; ↑ CRP and revised between fiscal years
SAN289	San Diego Association of Governments	San Dieguito to Sorrento Valley Double-Track	\$302,718	\$302,718	\$0	0%	\$0	↑ TransNet - MC
SD34	San Diego, City of	El Camino Real	\$65,973	\$65,973	\$0	0%	\$0	↔ HBP between fiscal years; ↔ Local Funds between fiscal years
SD166	San Diego, City of	Bicycle Facilities	\$48,925	\$48,925	\$0	0%	\$0	↔ CPF Highway Infra between fiscal years
SM59	San Marcos, City of	Annual Street Overlay Project #86009	\$138	\$138	\$0	0%	\$0	Complete project
V12	Various Agencies	Grouped Projects for Bicycle and Pedestrian Facilities.	\$56,125	\$56,125	\$0	0%	-\$600	↓ TransNet - BPNS; ↑ CRP
Total TransNet Change=							-\$6,233	

Abbreviation

ATP-S
 CMAQ
 CRP
 Earmark Repurposing
 Fed Disc. - CPF - Highway Infra
 FTA 5307
 FTA 5310
 FTA AOPP
 HBP
 Local Funds
 RSTP
 STIP-RIP-AC
 TIFIA
 TransNet - BPNS
 TransNet - LSI
 TransNet - MC
 TransNet - SGIP
 TransNet - SS

Fund Type

Active Transportation Program - Statewide
 Congestion Mitigation and Air Quality
 Carbon Reduction Program
 DEMO Funds unused on other projects and approved by FHWA to repurpose
 Community Planning Earmark Funds
 Federal Transit Administration Urbanized Area Formula Program
 Federal Transit Administration Elderly & Disabled Program
 Federal Transit Administration Areas of Persistent Poverty Program
 Highway Bridge Program under SAFETEA-LU
 Funds available from other sources such as developer fees, fare revenue or general fund
 Regional Surface Transportation Block Grant
 STIP - Regional Improvement Program AC
 Transportation Infrastructure Finance and Innovation Act
 Prop A Extension - Bicycle, Pedestrian and Neighborhood Safety Program
 Prop A Extension - Local System Improvements
 Prop A Extension - Major Corridors
 Prop A Extension - Smart Growth Incentive Program
 Prop A Extension - Senior Services Program

TransNet Changes

BPNS	(\$600)
LSI	\$5,976
MC	(\$12,092)
SGIP	\$273
SS	\$210
	(\$6,233)

Table 1
2025 Regional Transportation Improvement Program - TransNet Only

Attachment 2

Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL09								RTIP #:25-01			
Project Title:		Interstate 5 - HOV/Managed Lanes						EA NO: 235800, 2T217, 2T218, 2T35U, 2T257, 2T258, 2T359, 2T170, 2T171, 2T172, 2T210, 2T211, 2T212, 2T358 PPNO: 0615CDE, 0615 RTP REF: A-51 (2019) SANDAG ID: 1200511, 1200501, 1200504, 1200510, 1200509			
Project Description:		Interstate 5 - construct High Occupancy Vehicle (HOV)/Managed Lanes on I-5; construct Phase 1: Construct HOV from Lomas Santa Fe to Birmingham and replace San Elijo Bridge; Construct Phase 2: construct HOV lanes and soundwall on private property from Birmingham to Palomar Airport Rd; Construct Phase 3: Construct HOV lanes and soundwalls on private property from Palomar Airport Rd to SR-78									
Change Reason:		Revise Fund Source									
RT:5		Capacity Status:CI		Exempt Category:Non-Exempt							
Est Total Cost: \$1,007,102			Open to Traffic: Phase 1: Mar 2022			Phase 2: Mar 2022		Phase 3: Dec 2022			
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$171,026	\$160,012	\$6,899	\$2,627	\$988	\$254	\$246		\$121,313	\$33,766	\$15,947
CBI	\$416	\$416							\$416		
CMAQ	\$173,751	\$173,750							\$27,721	\$3,645	\$142,385
Earmark Repurposing	\$5,718	\$5,718							\$1,220		\$4,498
IM	\$3,886	\$3,886							\$3,886		
Other Fed - HIP	\$25,654	\$25,654									\$25,654
RSTP	\$102,520	\$102,519							\$48,169	\$10,118	\$44,233
STP	\$751	\$751							\$751		
SB1 - SCCP	\$195,000	\$195,000									\$195,000
STIP-RIP AC	\$229,084	\$229,084							\$9,561		\$219,523
STIP-RIP State Cash	\$6,328	\$628	\$5,700					\$628	\$15	\$5,685	
Local Funds	\$1,406	\$1,406								\$1,406	
TransNet Subtotal	\$171,026	\$160,012	\$6,899	\$2,627	\$988	\$254	\$246		\$121,313	\$33,766	\$15,947
Other Subtotal	\$744,514	\$738,812	\$5,700						\$92,352	\$13,778	\$638,384
TOTAL	\$915,540	\$898,824	\$12,599	\$2,627	\$988	\$254	\$246		\$213,665	\$47,544	\$654,331

\$5.324M programmed in CAL 46A, \$299k provided outside of the RTIP, \$12.035M programmed in CAL 443, \$22.616M programmed in CAL 468, \$6.744M programmed in CAL 491, \$44.482M programmed in CAL 569, and \$63k G-12.

PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$167,411	\$160,012	\$6,899			\$254	\$246		\$121,313	\$33,766	\$12,332
TransNet - MC AC	\$3,615			\$2,627	\$988						\$3,615
CBI	\$416	\$416							\$416		
CMAQ	\$173,751	\$173,750							\$27,721	\$3,645	\$142,385
Earmark Repurposing	\$5,718	\$5,718							\$1,220		\$4,498
IM	\$3,886	\$3,886							\$3,886		
Other Fed - HIP	\$25,654	\$25,654									\$25,654
RSTP	\$102,520	\$102,519							\$48,169	\$10,118	\$44,233
STP	\$751	\$751							\$751		
SB1 - SCCP	\$195,000	\$195,000									\$195,000
STIP-RIP AC	\$229,084	\$229,084							\$9,561		\$219,523
STIP-RIP State Cash	\$6,328	\$628	\$5,700						\$628	\$15	\$5,685
Local Funds	\$1,406	\$1,406									\$1,406
TransNet Subtotal	\$171,026	\$160,012	\$6,899	\$2,627	\$988	\$254	\$246		\$121,313	\$33,766	\$15,947
Other Subtotal	\$744,514	\$738,812	\$5,700						\$92,352	\$13,778	\$638,384
TOTAL	\$915,540	\$898,824	\$12,599	\$2,627	\$988	\$254	\$246		\$213,665	\$47,544	\$654,331

Monday, December 16, 2024

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

MPO ID: CAL09D								RTIP #:25-01			
Project Title:		Interstate 5 and 805 - Convert HOV lanes to Express lanes.						EA NO: 2T367x			
Project Description:		Interstate 5, Interstate 805 - Construct infrastructure to convert HOV lanes to Express lanes on I-805 from SR-52 to the I-5/I805 merge and on I-5/I805 merge to SR-78.						RTP REF: CC046 SANDAG ID: 1200514, 1200515, 1280517			
Change Reason:		Revise Fund Source, Revise funding between fiscal years									
RT:5		Capacity Status:NCI		Exempt Category:Safety - Non signalization traffic control and operating							
Est Total Cost: \$193,603											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$6,403	\$1,516	\$384	\$1,700	\$1,178	\$700	\$925		\$3,473		\$2,930
CMAQ	\$32,590			\$17,590	\$15,000						\$32,590
RSTP	\$32,060			\$16,213	\$15,847						\$32,060
STIP-RIP AC	\$122,550	\$18,350			\$104,200				\$17,100	\$1,250	\$104,200
TransNet Subtotal	\$6,403	\$1,516	\$384	\$1,700	\$1,178	\$700	\$925		\$3,473		\$2,930
Other Subtotal	\$187,200	\$18,350		\$33,803	\$135,047				\$17,100	\$1,250	\$168,850
TOTAL	\$193,603	\$19,866	\$384	\$35,503	\$136,225	\$700	\$925		\$20,573	\$1,250	\$171,780
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$6,403	\$1,516	\$384	\$1,700	\$1,178	\$700	\$925		\$3,473		\$2,930
CMAQ	\$17,590			\$17,590							\$17,590
RSTP	\$47,060		\$12,721	\$16,113	\$18,226						\$47,060
STIP-RIP AC	\$122,550	\$18,350			\$104,200				\$17,100	\$1,250	\$104,200
TransNet Subtotal	\$6,403	\$1,516	\$384	\$1,700	\$1,178	\$700	\$925		\$3,473		\$2,930
Other Subtotal	\$187,200	\$18,350	\$12,721	\$33,703	\$122,426				\$17,100	\$1,250	\$168,850
TOTAL	\$193,603	\$19,866	\$13,105	\$35,403	\$123,604	\$700	\$925		\$20,573	\$1,250	\$171,780

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL26								RTIP #:25-01					
Project Title:		State Route 52 Freeway (E&F)						EA NO: 010611					
Project Description:		In San Diego, Santee and Lakeside, from SR 125 to Cuyamaca Street to SR 67 - construct 4 lane freeway						PPNO: 0260					
								RTP REF: T-5					
								SANDAG ID: 1205203					
								EARMARK NO: CA424/604, HPP 1134/2735					
Change Reason:		Revise funding between fiscal years											
RT:52		Capacity Status:CI		Exempt Category:Non-Exempt									
Est Total Cost: \$460,509				Open to Traffic: Mar 2011									
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON		
TransNet - H	\$44,945	\$44,945							\$671	\$44,274			
TransNet - MC	\$65,029	\$64,773	\$256						\$14,007	\$31,954	\$19,068		
DEMO	\$2,234	\$2,234								\$2,234			
HPP	\$10,409	\$10,409									\$10,409		
RSTP	\$54,738	\$53,238						\$1,500	\$110	\$24,426	\$30,202		
TCSP	\$1,228	\$1,228								\$1,228			
STIP-IIP NHS	\$3,010	\$3,010							\$2,125	\$885			
STIP-IIP State Cash	\$5,355	\$5,355							\$4,732	\$623			
STIP-RIP NHS	\$26,558	\$26,558							\$5,848	\$20,710			
STIP-RIP Prior NHS	\$16,375	\$16,375								\$16,375			
STIP-RIP Prior State Cash	\$802	\$802								\$802			
STIP-RIP State Cash	\$177,501	\$177,501							\$10,825	\$19,274	\$147,402		
TCRP	\$43,700	\$43,700								\$43,700			
Local Funds	\$233	\$233								\$233			
TransNet Subtotal	\$109,974	\$109,718	\$256						\$14,678	\$76,228	\$19,068		
Other Subtotal	\$342,143	\$340,643						\$1,500	\$23,640	\$130,490	\$188,013		
TOTAL	\$452,117	\$450,361	\$256					\$1,500	\$38,318	\$206,718	\$207,081		

* State contributed \$8.392M in additional funds outside of the RTIP

PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - H	\$44,945	\$44,945							\$671	\$44,274	
TransNet - MC	\$65,029	\$64,773	\$256						\$14,007	\$31,954	\$19,068
DEMO	\$2,234	\$2,234								\$2,234	
HPP	\$10,409	\$10,409									\$10,409
RSTP	\$54,738	\$53,238			\$1,500				\$110	\$24,426	\$30,202
TCSP	\$1,228	\$1,228								\$1,228	
STIP-IIP NHS	\$3,010	\$3,010							\$2,125	\$885	
STIP-IIP State Cash	\$5,355	\$5,355							\$4,732	\$623	
STIP-RIP NHS	\$26,558	\$26,558							\$5,848	\$20,710	
STIP-RIP Prior NHS	\$16,375	\$16,375								\$16,375	
STIP-RIP Prior State Cash	\$802	\$802								\$802	
STIP-RIP State Cash	\$177,501	\$177,501							\$10,825	\$19,274	\$147,402
TCRP	\$43,700	\$43,700								\$43,700	
Local Funds	\$233	\$233								\$233	
TransNet Subtotal	\$109,974	\$109,718	\$256						\$14,678	\$76,228	\$19,068
Other Subtotal	\$342,143	\$340,643			\$1,500				\$23,640	\$130,490	\$188,013
TOTAL	\$452,117	\$450,361	\$256		\$1,500				\$38,318	\$206,718	\$207,081

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL29								RTIP #:25-01			
Project Title:		SR 76 Middle						EA NO: 08010, 08017			
Project Description:		SR 76 from Melrose Dr. to So. Mission Rd. Milepost begins at 7.5 ends at 12.5 (4.8 miles) - in San Diego County in and near Oceanside - widen from 2 to 4 lanes						PPNO: 0759 RTP REF: A-9 SANDAG ID: 1207602 EARMARK NO: CA603/2719			
Change Reason:		Reduce funding									
RT:76		Capacity Status:CI		Exempt Category:Non-Exempt							
Est Total Cost: \$165,531				Open to Traffic: Nov 2012							
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - H	\$3,000	\$3,000									\$3,000
TransNet - MC	\$46,968	\$46,967	\$1						\$9,737	\$29,737	\$7,494
TransNet - REMP	\$6,146	\$6,146									\$6,146
DEMO - TEA 21	\$5,519	\$5,519								\$2,680	\$2,839
HPP	\$4,006	\$4,006								\$4,006	
Other Fed - ARRA-RSTP	\$76,613	\$76,613									\$76,613
RSTP	\$6,314	\$6,314							\$6,314		
STP	\$949	\$949							\$949		
Local Funds	\$1,513	\$1,513									\$1,513
TransNet Subtotal	\$56,114	\$56,113	\$1						\$9,737	\$29,737	\$16,640
Other Subtotal	\$94,914	\$94,914							\$7,263	\$6,686	\$80,965
TOTAL	\$151,028	\$151,027	\$1						\$17,000	\$36,423	\$97,605

* State contribution of \$13.452M outside of RTIP

PROJECT LAST AMENDED 18-30											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - H	\$3,000	\$3,000									\$3,000
TransNet - MC	\$48,018	\$48,018							\$9,737	\$29,737	\$8,544
TransNet - REMP	\$6,146	\$6,146									\$6,146
DEMO - TEA 21	\$5,519	\$5,519								\$2,680	\$2,839
HPP	\$4,006	\$4,006								\$4,006	
Other Fed - ARRA-RSTP	\$76,613	\$76,613									\$76,613
RSTP	\$6,314	\$6,314							\$6,314		
STP	\$949	\$949							\$949		
Local Funds	\$1,513	\$1,513									\$1,513
TransNet Subtotal	\$57,164	\$57,164							\$9,737	\$29,737	\$17,690
Other Subtotal	\$94,914	\$94,914							\$7,263	\$6,686	\$80,965
TOTAL	\$152,078	\$152,078							\$17,000	\$36,423	\$98,655

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL46A									RTIP #:25-01		
Project Title:	Grouped Projects for Safety Improvements - SHOPP Mobility Program							SANDAG ID: 1280516			
Project Description:	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories - Railroad/highway crossing, Safer non-Federal-aid system roads, Shoulder improvements, traffic control devices and operating assistance other than signalization projects, Intersection signalization projects at individual intersections, Pavement marking demonstration, Truck climbing lanes outside the urbanized area, Lighting improvements, Emergency truck pullovers										
Change Reason:	Increase funding										
RT:Var	Capacity Status:NCI		Exempt Category:Safety - Shoulder Improvements								
Est Total Cost: \$139,037											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$721	\$148	\$573								\$721
SHOPP (AC)-Mobility	\$49,137	\$25,496		\$23,641							\$49,137
SHOPP-SB1-RMRA	\$76,701		\$4,472	\$5,533	\$54,072	\$12,624					\$76,701
SHOPP-State Cash-Mobility	\$8,278	\$1,746	\$6,532								\$8,278
STIP-RIP AC	\$4,200	\$4,200									\$4,200
TransNet Subtotal	\$721	\$148	\$573								\$721
Other Subtotal	\$138,316	\$31,442	\$11,004	\$29,174	\$54,072	\$12,624					\$138,316
TOTAL	\$139,037	\$31,590	\$11,577	\$29,174	\$54,072	\$12,624					\$139,037
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
SHOPP (AC)-Mobility	\$26,037	\$2,396		\$23,641							\$26,037
SHOPP-SB1-RMRA	\$76,701		\$4,472	\$5,533	\$54,072	\$12,624					\$76,701
SHOPP-State Cash-Mobility	\$8,278	\$1,746	\$6,532								\$8,278
TransNet Subtotal	\$0										
Other Subtotal	\$111,016	\$4,142	\$11,004	\$29,174	\$54,072	\$12,624					\$111,016
TOTAL	\$111,016	\$4,142	\$11,004	\$29,174	\$54,072	\$12,624					\$111,016

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL68									RTIP #: 25-01		
Project Title:		SR 94/125 Interchange and Arterial Operational Improvements							EA NO: 14665		
Project Description:		Interchange on SR 94 at SR 94 and SR125 Milepost begins at 1 ends at 2 - In San Diego County in and near La Mesa on Route 94 from Spring Street Undercrossing to Kenwood Drive Undercrossing and on Route 125 from Spring Street Undercrossing to 0.1 mile north of Murray Drive Undercrossing. Design and Right-Of-Way of southbound 125 to eastbound SR 94 direct connector.							PPNO: 0356 RTP REF: CC108; T-3 (2021) SANDAG ID: 1212501		
Change Reason:		Revise funding between fiscal years, Revise funding between phases									
RT:94	Capacity Status:CI		Exempt Category:Non-Exempt								
Est Total Cost: \$135,240			Open to Traffic: Jan 2028								
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$3,914	\$3,528	\$66	\$90	\$102	\$83	\$16	\$29	\$2,373	\$1,541	
RSTP	\$6,000	\$4,000	\$2,000						\$3,373	\$2,627	
SB1 - LPP Formula	\$4,000	\$4,000								\$4,000	
STIP-RIP Augmentation	\$114,948	\$13,948		\$101,000					\$29,948		\$85,000
State Cash	\$26	\$26								\$26	
TCRP	\$6,352	\$6,352							\$5,000	\$1,352	
TransNet Subtotal	\$3,914	\$3,528	\$66	\$90	\$102	\$83	\$16	\$29	\$2,373	\$1,541	
Other Subtotal	\$131,326	\$28,326	\$2,000	\$101,000					\$38,321	\$8,005	\$85,000
TOTAL	\$135,240	\$31,854	\$2,066	\$101,090	\$102	\$83	\$16	\$29	\$40,694	\$9,546	\$85,000
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$3,914	\$3,528	\$66	\$90	\$102	\$83	\$16	\$29	\$2,373	\$1,541	
RSTP	\$6,000	\$4,000				\$2,000			\$1,673	\$4,327	
SB1 - LPP Formula	\$4,000	\$4,000								\$4,000	
STIP-RIP Augmentation	\$114,948	\$13,948		\$101,000					\$29,948		\$85,000
State Cash	\$26	\$26								\$26	
TCRP	\$6,352	\$6,352							\$5,000	\$1,352	
TransNet Subtotal	\$3,914	\$3,528	\$66	\$90	\$102	\$83	\$16	\$29	\$2,373	\$1,541	
Other Subtotal	\$131,326	\$28,326		\$101,000		\$2,000			\$36,621	\$9,705	\$85,000
TOTAL	\$135,240	\$31,854	\$66	\$101,090	\$102	\$2,083	\$16	\$29	\$38,994	\$11,246	\$85,000

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL78D								RTIP #:25-01			
Project Title:		I-805 South Soundwalls - Unit 1						EA NO: 2T260, 43018, 2T343			
Project Description:		Palomar to SR 54 - construct soundwalls (phase 1 and 2) and design Sweetwater River Bridge improvements.. Toll Credits will be used to match federal funds for the PE phase, ROW phase, and the CON phase						RTP REF: A-5 (2019) SANDAG ID: 1280515 EARMARK NO: CA643; CA604			
Change Reason:		Revise Fund Source, Revise funding between fiscal years									
RT:805		Capacity Status:NCI		Exempt Category:Other - Noise attenuation							
Est Total Cost: \$113,810											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$14,388	\$9,076	\$3,062	\$571	\$1,549	\$71	\$59		\$6,111	\$549	\$7,728
TransNet - MC AC	\$0	\$1,659	\$(1,659)								
HPP Conversion	\$1,080	\$1,080									\$1,080
RSTP	\$71,993	\$70,334	\$1,659						\$14,961	\$2,402	\$54,630
TransNet Subtotal	\$14,388	\$10,735	\$1,403	\$571	\$1,549	\$71	\$59		\$6,111	\$549	\$7,728
Other Subtotal	\$73,073	\$71,414	\$1,659						\$14,961	\$2,402	\$55,710
TOTAL	\$87,461	\$82,149	\$3,062	\$571	\$1,549	\$71	\$59		\$21,072	\$2,951	\$63,438

* SHOPP funding for Sweetwater Bridge Construction is programmed on CAL484 - \$23.4M

PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$14,388	\$9,076	\$3,062	\$571	\$1,549	\$71	\$59		\$6,111	\$549	\$7,728
HPP Conversion	\$1,080	\$1,080									\$1,080
RSTP	\$71,993	\$71,993							\$14,961	\$2,402	\$54,630
TransNet Subtotal	\$14,388	\$9,076	\$3,062	\$571	\$1,549	\$71	\$59		\$6,111	\$549	\$7,728
Other Subtotal	\$73,073	\$73,073							\$14,961	\$2,402	\$55,710
TOTAL	\$87,461	\$82,149	\$3,062	\$571	\$1,549	\$71	\$59		\$21,072	\$2,951	\$63,438

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL277A									RTIP #:25-01		
Project Title:		I-5 HOV/SR 78 Connector							SANDAG ID: 1207803		
Project Description:		In Oceanside and Carlsbad, Intersection of SR 78 and I-5 - environmental studies and preliminary engineering for High-Occupancy Vehicle (HOV)/managed lanes direct connectors at SR 78 to I-5									
Change Reason:		Revise funding between fiscal years									
RT:78		Capacity Status:NCI		Exempt Category:Other - Engineering studies							
Est Total Cost: \$554,100											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$16,118	\$3,197	\$4,668	\$3,846	\$1,976	\$1,198	\$657	\$576	\$16,118		
STIP State Cash-Augmn RIP	\$50,000							\$50,000	\$50,000		
TransNet Subtotal	\$16,118	\$3,197	\$4,668	\$3,846	\$1,976	\$1,198	\$657	\$576	\$16,118		
Other Subtotal	\$50,000							\$50,000	\$50,000		
TOTAL	\$66,118	\$3,197	\$4,668	\$3,846	\$1,976	\$1,198	\$657	\$50,576	\$66,118		
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$16,118	\$3,197	\$4,668	\$3,846	\$1,976	\$1,198	\$657	\$576	\$16,118		
STIP State Cash-Augmn RIP	\$50,000						\$50,000		\$50,000		
TransNet Subtotal	\$16,118	\$3,197	\$4,668	\$3,846	\$1,976	\$1,198	\$657	\$576	\$16,118		
Other Subtotal	\$50,000						\$50,000		\$50,000		
TOTAL	\$66,118	\$3,197	\$4,668	\$3,846	\$1,976	\$1,198	\$50,657	\$576	\$66,118		

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

Caltrans

MPO ID: CAL278								RTIP #:25-01			
Project Title:			SR78 HOV/Managed Lanes					EA NO: 2T241			
Project Description:			SR 78 from I-5 to I-15 Milepost begins at 0 ends at 16.54 (16.54 miles) - environmental studies and preliminary engineering for high-occupancy vehicle/managed lanes					SANDAG ID: 1207801, 1207804			
Change Reason:			Add new funding source, Revise funding between fiscal years								
RT:78			Capacity Status:NCI		Exempt Category:Other - Engineering studies						
Est Total Cost: \$40,683											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$20,559	\$2,979	\$1,600	\$10,036	\$5,944				\$20,559		
CMAQ	\$11,124							\$11,124	\$11,124		
CMAQ - Conversion	\$0		\$11,124					\$-11,124			
RSTP	\$4,000	\$4,000							\$4,000		
SB1 - LPP Formula	\$5,000		\$5,000						\$5,000		
TransNet Subtotal	\$20,559	\$2,979	\$1,600	\$10,036	\$5,944				\$20,559		
Other Subtotal	\$20,124	\$4,000	\$16,124						\$20,124		
TOTAL	\$40,683	\$6,979	\$17,724	\$10,036	\$5,944				\$40,683		
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$31,683	\$2,979	\$1,600	\$10,036	\$12,987	\$3,245	\$836		\$31,683		
RSTP	\$4,000	\$4,000							\$4,000		
SB1 - LPP Formula	\$5,000		\$5,000						\$5,000		
TransNet Subtotal	\$31,683	\$2,979	\$1,600	\$10,036	\$12,987	\$3,245	\$836		\$31,683		
Other Subtotal	\$9,000	\$4,000	\$5,000						\$9,000		
TOTAL	\$40,683	\$6,979	\$6,600	\$10,036	\$12,987	\$3,245	\$836		\$40,683		

2025 Regional Transportation Improvement Program - *TransNet* Only

Amendment No. 1

San Diego Region (in \$000s)

Carlsbad, City of

MPO ID: CB32								RTIP #:25-01			
Project Title:	El Camino Real Widening - Poinsettia to Camino Vida Roble							RTP REF: A-60; C-49 (2021)			
Project Description:	El Camino Real from Cassia Road to Camino Vida Roble (.5 miles) - in Carlsbad, along El Camino Real from Poinsettia Lane to Camino Vida Roble, re-stripe from Poinsettia Lane to Cinnabar Way and widen El Camino Real from Cinnabar Way to Camino Vida Roble, along the northbound/east side of the roadway to provide three travel lanes, sidewalk, and a bike lane in accordance with arterial street standards.							RAS (T2-2)			
Change Reason:	Revise funding between fiscal years							TransNet - LSI: CR			
Capacity Status:CI		Exempt Category:Non-Exempt									
Est Total Cost: \$4,595		Open to Traffic: Jun 2024									
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - LSI Carry Over	\$3,155	\$582	\$2,573						\$582		\$2,573
Earmark Repurposing	\$1,440	\$378	\$1,062						\$378		\$1,062
TransNet Subtotal	\$3,155	\$582	\$2,573						\$582		\$2,573
Other Subtotal	\$1,440	\$378	\$1,062						\$378		\$1,062
TOTAL	\$4,595	\$960	\$3,635						\$960		\$3,635

* Demo ID CA366 repurposed to FHWA transfer number CAT 16-063

PROJECT LAST AMENDED 23-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - LSI Carry Over	\$3,155	\$3,155							\$650	\$500	\$2,005
Earmark Repurposing	\$1,440	\$1,440							\$690		\$750
<i>TransNet</i> Subtotal	\$3,155	\$3,155							\$650	\$500	\$2,005
Other Subtotal	\$1,440	\$1,440							\$690		\$750
TOTAL	\$4,595	\$4,595							\$1,340	\$500	\$2,755

MPO ID: CB43								RTIP #:25-01				
Project Title:	ADA Improvements							TransNet - LSI: CR				
Project Description:	Roadways in the northwest quadrant of the City of Carlsbad adjacent to public facilities including: Carlsbad Blvd, State Street, Roosevelt Street, Carlsbad Village Drive, Oak Ave., Chestnut Ave, Harding Street - in Carlsbad, construct Priority Level 1 and Priority Level 2 ADA Improvements per the City of Carlsbad Transition Plan for Public Rights-of-way											
Change Reason:	Increase funding											
	Capacity Status:NCI		Exempt Category:Air Quality - Bicycle and pedestrian facilities									
Est Total Cost: \$5,623												
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON	
TransNet - LSI Carry Over	\$5,623	\$2,715	\$1,000	\$400	\$715	\$175	\$618		\$1,200		\$4,423	
TOTAL	\$5,623	\$2,715	\$1,000	\$400	\$715	\$175	\$618		\$1,200		\$4,423	
PROJECT LAST AMENDED 23-00												
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON	
TransNet - LSI Carry Over	\$4,935	\$3,155	\$175	\$715	\$175	\$715			\$1,185		\$3,750	
TOTAL	\$4,935	\$3,155	\$175	\$715	\$175	\$715			\$1,185		\$3,750	

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

Carlsbad, City of

MPO ID: CB59									RTIP #:25-01		
Project Title:	El Camino Real Widening - Sunny Creek to Jackspar								RTP REF: A-60; C-49 (2021)		
Project Description:	El Camino Real from Sunny Creek to Jackspar (.3 miles) - In Carlsbad, on El Camino Real from Sunny Creek to Jackspar, widen along the northbound side of the El Camino Real to provide three travel lanes (currently two lanes northbound), sidewalk, and a bike lane.								RAS (T2-2) <i>TransNet</i> - LSI: CR		
Change Reason:	Increase funding										
Capacity Status:CI		Exempt Category:Non-Exempt									
Est Total Cost: \$5,610									Open to Traffic: Oct 2025		
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - LSI	\$1,300		\$1,300								\$1,300
<i>TransNet</i> - LSI Carry Over	\$4,310	\$557	\$3,753						\$467	\$90	\$3,753
TOTAL	\$5,610	\$557	\$5,053						\$467	\$90	\$5,053
PROJECT LAST AMENDED 23-13											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - LSI	\$2,484	\$2,484							\$700	\$100	\$1,684
<i>TransNet</i> - LSI Carry Over	\$2,526	\$2,526							\$411		\$2,115
TOTAL	\$5,010	\$5,010							\$1,111	\$100	\$3,799

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

Imperial Beach, City of

MPO ID: IB21										RTIP #:25-01				
Project Title:		SR-75 Signal Interconnection Project												
Project Description:		SR-75 from Rainbow Drive to I-5 (2 miles) - Installation of a fiber optic traffic signal communication system (including installation of conduit, cable, radios, controllers, and related communication equipment) to improve safety and operations via optimized traffic signal timing and coordination on SR-75 from the I-5 Freeway to the Navy installations in Coronado.												
Change Reason:		Revise funding between fiscal years												
		Capacity Status:NCI		Exempt Category:Other - Traffic signal synchronization projects										
Est Total Cost: \$600														
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON			
TransNet - CP	\$600	\$499	\$101						\$171		\$429			
TOTAL	\$600	\$499	\$101						\$171		\$429			
PROJECT LAST AMENDED 23-15														
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON			
TransNet - CP	\$600	\$303	\$297						\$171		\$429			
TOTAL	\$600	\$303	\$297						\$171		\$429			

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

National City, City of

MPO ID: NC03			RTIP #:25-01									
Project Title:	Street Resurfacing Project							EARMARK NO: CAT 16-065				
Project Description:	Various Streets in the City of National City as attached - provide roadway rehabilitation (grinding and new overlay 1 inch thick or greater) and repair of concrete sidewalks, curb and gutters at multiple locations throughout the City							TransNet - LSI: CR				
Change Reason:	Increase funding											
Capacity Status:NCI			Exempt Category:Safety - Pavement resurfacing and/or rehabilitation									
Est Total Cost: \$35,405												
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON	
TransNet - CP	\$4,500	\$4,500									\$4,500	
TransNet - L	\$5,313	\$5,313									\$5,313	
TransNet - L (Cash)	\$629	\$629									\$629	
TransNet - LSI	\$17,349	\$8,407	\$2,028	\$1,662	\$1,688	\$1,755	\$1,809				\$17,349	
TransNet - LSI (Cash)	\$2,402	\$2,402									\$2,402	
TransNet - LSI Carry Over	\$333	\$239	\$94								\$333	
Earmark Repurposing	\$612	\$612									\$612	
Local Funds	\$4,267	\$4,267									\$4,267	
TransNet Subtotal	\$30,526	\$21,490	\$2,122	\$1,662	\$1,688	\$1,755	\$1,809				\$30,526	
Other Subtotal	\$4,879	\$4,879									\$4,879	
TOTAL	\$35,405	\$26,369	\$2,122	\$1,662	\$1,688	\$1,755	\$1,809				\$35,405	
PROJECT LAST AMENDED 25-00												
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON	
TransNet - CP	\$4,500	\$4,500									\$4,500	
TransNet - L	\$5,313	\$5,313									\$5,313	
TransNet - L (Cash)	\$629	\$629									\$629	
TransNet - LSI	\$12,381	\$7,907	\$1,498	\$1,459	\$1,517						\$12,381	
TransNet - LSI (Cash)	\$2,402	\$2,402									\$2,402	
TransNet - LSI Carry Over	\$333	\$239	\$94								\$333	
Earmark Repurposing	\$612	\$612									\$612	
Local Funds	\$4,267	\$4,267									\$4,267	
TransNet Subtotal	\$25,558	\$20,990	\$1,592	\$1,459	\$1,517						\$25,558	
Other Subtotal	\$4,879	\$4,879									\$4,879	
TOTAL	\$30,437	\$25,869	\$1,592	\$1,459	\$1,517						\$30,437	

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

National City, City of

MPO ID: NC04			RTIP #:25-01								
Project Title:	Traffic Signal Install/Upgrade								RAS (T2-4)		
Project Description:	National City Boulevard (1st Street to 35th Street), Plaza Boulevard (Roosevelt Avenue to Paradise Valley Road), Euclid Avenue (Division Street to Sweetwater Road), 30th Street (National City Boulevard to Euclid Avenue), Harbor Drive (Civic Center Drive to 8th Street), Highland Avenue (Division Street to 30th Street), 8th Street (Harbor Drive to Paradise Valley Road), Division Street (Highland Avenue to Harbison Avenue), DD Avenue (8th Street to 30th Street), Palm Avenue (Division Street to 18th Street), 18th Street (National City Boulevard to Euclid Avenue), 24th Street (Tidelands Avenue to Highland Avenue), Sweetwater Road (Euclid Avenue to Plaza Bonita Center Way) - install and/or upgrade traffic signal/coordination at locations identified by the City's Traffic Monitoring Program in order to reduce congestion and intersection delays; coordinate regional traffic through the Regional Arterial Management System. <i>TransNet</i> - LSI RAMS of \$8 is programmed in FY 2026, <i>TransNet</i> - LSI RAMS of \$8 is programmed in FY 2027								<i>TransNet</i> - LSI: CR		
Change Reason:	Reduce funding										
	Capacity Status:NCI		Exempt Category:Other - Intersection signalization projects								
Est Total Cost: \$4,494											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - L	\$297	\$297									\$297
<i>TransNet</i> - LSI	\$3,647	\$2,823	\$8	\$208	\$208	\$200	\$200		\$92		\$3,555
<i>TransNet</i> - LSI Carry Over	\$500	\$500									\$500
Local Funds	\$50	\$50									\$50
<i>TransNet</i> Subtotal	\$4,444	\$3,620	\$8	\$208	\$208	\$200	\$200		\$92		\$4,352
Other Subtotal	\$50	\$50									\$50
TOTAL	\$4,494	\$3,670	\$8	\$208	\$208	\$200	\$200		\$92		\$4,402
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - L	\$297	\$297									\$297
<i>TransNet</i> - LSI	\$4,123	\$3,323	\$200	\$300	\$300				\$92		\$4,031
<i>TransNet</i> - LSI Carry Over	\$500	\$500									\$500
Local Funds	\$50	\$50									\$50
<i>TransNet</i> Subtotal	\$4,920	\$4,120	\$200	\$300	\$300				\$92		\$4,828
Other Subtotal	\$50	\$50									\$50
TOTAL	\$4,970	\$4,170	\$200	\$300	\$300				\$92		\$4,878

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

National City, City of

MPO ID: NC15									RTIP #:25-01		
Project Title:	Citywide Safe Routes to Schools								TransNet - LSI: CR		
Project Description:	Various locations throughout the City of National City - traffic calming and pedestrian safety/access enhancements for several schools on the eastside of the City										
Change Reason:	Increase funding, Revise funding between fiscal years										
Capacity Status:NCI			Exempt Category:Air Quality - Bicycle and pedestrian facilities								
Est Total Cost: \$4,571											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - LSI	\$4,071	\$3,271		\$200	\$200	\$200	\$200		\$900		\$3,171
TransNet - LSI Carry Over	\$500	\$500							\$500		
TOTAL	\$4,571	\$3,771		\$200	\$200	\$200	\$200		\$1,400		\$3,171
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - LSI	\$3,875	\$3,271	\$204	\$200	\$200				\$900		\$2,975
TransNet - LSI Carry Over	\$500	\$500							\$500		
TOTAL	\$4,375	\$3,771	\$204	\$200	\$200				\$1,400		\$2,975

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN26B										RTIP #:25-01	
Project Title:		Downtown BRT Stations							SANDAG ID: 1201509		
Project Description:		Broadway corridor; Park Blvd, 11th Ave, Kettner Street and India Street - construct new and modify existing transit stations in downtown San Diego for Bus Rapid Transit (BRT) services									
Change Reason:		Increase funding									
		Capacity Status:CI		Exempt Category:Non-Exempt							
Est Total Cost: \$20,882				Open to Traffic: Oct 2016							
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC		\$20,882	\$20,879	\$2					\$4,551	\$16,331	
TOTAL		\$20,882	\$20,879	\$2					\$4,551	\$16,331	
PROJECT LAST AMENDED 23-14											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC		\$20,880	\$20,879						\$4,551	\$16,329	
TOTAL		\$20,880	\$20,879						\$4,551	\$16,329	

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN40									RTIP #:25-01		
Project Title:			Metropolitan Planning						SANDAG ID:		
Project Description:			Countywide - ongoing regional transportation planning as well as administrative oversight for various <i>TransNet</i> and FTA-funded programs. Toll Credits will be used to match federal funds for the PE phase						31020,33201,33203,23000,31007,35040,33107		
Change Reason:			Increase funding, Revise funding between fiscal years								
Capacity Status:			NCI Exempt Category:Other - Non construction related activities								
Est Total Cost: \$86,863											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - BPNS	\$1,007	\$933	\$73						\$1,007		
<i>TransNet</i> - MC	\$395	\$395							\$395		
<i>TransNet</i> - SGIP	\$1,085	\$908	\$178						\$1,085		
<i>TransNet</i> - SS	\$1,080	\$909	\$171						\$1,080		
CBI	\$250	\$250							\$250		
FTA 5307	\$66,021	\$59,240	\$6,781						\$66,021		
FTA 5309TOD	\$239	\$239							\$239		
FTA 5310	\$442	\$442							\$442		
ITS	\$231	\$231							\$231		
RSTP	\$991	\$991							\$991		
Local Funds	\$14,133	\$12,891	\$1,242						\$14,133		
TDA	\$989	\$492	\$497						\$989		
<i>TransNet</i> Subtotal	\$3,567	\$3,145	\$422						\$3,567		
Other Subtotal	\$83,296	\$74,776	\$8,520						\$83,296		
TOTAL	\$86,863	\$77,921	\$8,942						\$86,863		
PROJECT LAST AMENDED 23-11											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - BPNS	\$1,007	\$851	\$155						\$1,007		
<i>TransNet</i> - MC	\$395	\$395							\$395		
<i>TransNet</i> - SGIP	\$1,085	\$825	\$260						\$1,085		
<i>TransNet</i> - SS	\$909	\$809	\$100						\$909		
CBI	\$250	\$250							\$250		
FTA 5307	\$66,021	\$52,459	\$6,781	\$6,781					\$66,021		
FTA 5309TOD	\$239	\$239							\$239		
FTA 5310	\$442	\$442							\$442		
ITS	\$231	\$231							\$231		
RSTP	\$991	\$991							\$991		
Local Funds	\$14,133	\$11,649	\$1,242	\$1,242					\$14,133		
TDA	\$989	\$213	\$279	\$497					\$989		
<i>TransNet</i> Subtotal	\$3,396	\$2,880	\$515						\$3,396		
Other Subtotal	\$83,296	\$66,474	\$8,302	\$8,520					\$83,296		
TOTAL	\$86,692	\$69,354	\$8,817	\$8,520					\$86,692		

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN46										RTIP #:25-01	
Project Title: Super Loop									SANDAG ID: 1041502		
Project Description: In University City along Voigt Drive, Genesee Avenue, Nobel Drive, Gilman Drive, and Executive Drive - new Rapid bus service, traffic signal priority measures, signalized intersections, street modifications, rapid bus vehicles, and enhanced transit stops											
Change Reason: Increase funding											
Capacity Status:CI			Exempt Category:Non-Exempt								
Est Total Cost: \$35,187											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$33,149	\$33,149	\$1						\$9,930	\$595	\$22,624
TransNet - Transit	\$699	\$699							\$699		
FTA 5309 (NS)	\$617	\$617							\$617		
Local Funds	\$722	\$722									\$722
TransNet Subtotal	\$33,848	\$33,848	\$1						\$10,629	\$595	\$22,624
Other Subtotal	\$1,339	\$1,339							\$617		\$722
TOTAL	\$35,187	\$35,187	\$1						\$11,246	\$595	\$23,346
PROJECT LAST AMENDED 23-30											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$33,148	\$33,149							\$9,930	\$595	\$22,623
TransNet - Transit	\$699	\$699							\$699		
FTA 5309 (NS)	\$617	\$617							\$617		
Local Funds	\$722	\$722									\$722
TransNet Subtotal	\$33,847	\$33,848							\$10,629	\$595	\$22,623
Other Subtotal	\$1,339	\$1,339							\$617		\$722
TOTAL	\$35,186	\$35,187							\$11,246	\$595	\$23,345

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN114									RTIP #:25-01		
Project Title:	Grouped Projects for Rehabilitation or Reconstruction of Track Structures, Track, and Trackbed in Exisiting Rights-of-Way: Coastal Rail Corridor							SANDAG ID: 1239805, 1239810, 1239813, 1239813, 1239822, 1239824, 1239814, 1239815, 1239816, 1239819, 1239821			
Project Description:	Projects are consistent with 40 CFR Parts 93.126 and 93.127 Exempt Tables 2 and 3 categories: rehabilitation or reconstruction of track structures, track, and trackbed in existing right-of-way (non-capacity increasing)- from Oceanside to San Diego along the Coastal Rail Corridor; design track improvements										
Change Reason:	Increase funding										
Capacity Status:NCI			Exempt Category:Mass Transit - Track rehabilitation in existing right of way								
Est Total Cost: \$630,208											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$72,485	\$48,619	\$2,210	\$1,949	\$11,996	\$4,514	\$2,584	\$614			\$72,485
CMAQ	\$76,754	\$76,754									\$76,754
FTA 5307	\$24,266	\$18,002	\$6,264								\$24,266
FTA 5339	\$2,600	\$2,600									\$2,600
Fed Rail Admin (FRA-PRIIA)	\$7,085	\$7,085									\$7,085
Federal Disc.-CPF-TransInfra	\$54,893	\$1,000			\$53,893						\$54,893
RSTP	\$28,136	\$28,136									\$28,136
CAP-TRADE	\$4,617	\$4,617									\$4,617
Coastal Conservancy	\$103,300	\$103,300									\$103,300
SB1 - LPP Formula	\$4,831	\$4,831									\$4,831
SB1 - TCEP	\$30,528	\$30,528									\$30,528
SB1 - TIRCP	\$100,200	\$200	\$100,000								\$100,200
SB125 - TIRCP	\$36,397			\$36,397							\$36,397
STIP State Cash-Augmn RIP	\$82,800				\$20,800	\$62,000					\$82,800
Local Funds	\$1,316	\$1,316									\$1,316
TransNet Subtotal	\$72,485	\$48,619	\$2,210	\$1,949	\$11,996	\$4,514	\$2,584	\$614			\$72,485
Other Subtotal	\$557,723	\$278,369	\$106,264	\$36,397	\$74,693	\$62,000					\$557,723
TOTAL	\$630,208	\$326,988	\$108,474	\$38,346	\$86,689	\$66,514	\$2,584	\$614			\$630,208

PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$59,014	\$35,160	\$2,196	\$1,949	\$11,996	\$4,514	\$2,584	\$614			\$59,014
CMAQ	\$17,600	\$17,600									\$17,600
FTA 5307	\$19,320	\$13,056	\$6,264								\$19,320
FTA 5339	\$2,600	\$2,600									\$2,600
Fed Rail Admin (FRA-PRIIA)	\$7,085	\$7,085									\$7,085
Federal Disc.-CPF-TransInfra	\$53,893				\$53,893						\$53,893
RSTP	\$10,136	\$10,136									\$10,136
CAP-TRADE	\$4,617	\$4,617									\$4,617
Coastal Conservancy	\$103,300	\$103,300									\$103,300
SB1 - LPP Formula	\$4,831	\$4,831									\$4,831
SB1 - TCEP	\$30,528	\$30,528									\$30,528
SB1 - TIRCP	\$100,200	\$200	\$100,000								\$100,200
SB125 - TIRCP	\$36,397			\$36,397							\$36,397
STIP State Cash-Augmn RIP	\$82,800				\$20,800	\$62,000					\$82,800
Local Funds	\$1,316	\$1,316									\$1,316
TransNet Subtotal	\$59,014	\$35,160	\$2,196	\$1,949	\$11,996	\$4,514	\$2,584	\$614			\$59,014
Other Subtotal	\$474,623	\$195,269	\$106,264	\$36,397	\$74,693	\$62,000					\$474,623
TOTAL	\$533,637	\$230,429	\$108,460	\$38,346	\$86,689	\$66,514	\$2,584	\$614			\$533,637

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN147									RTIP #:25-01		
Project Title:		Grouped Projects for Bicycle and Pedestrian Facilities - Bayshore Bikeway						SANDAG ID: 1223055, 1223096, 1223056			
Project Description:		Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories - Bicycle and pedestrian facilities (both motorized and Non-motorized)									
Change Reason:		Reduce funding									
Capacity Status:		NCI		Exempt Category:Air Quality - Bicycle and pedestrian facilities							
Est Total Cost: \$80,855											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$20,892	\$16,129	\$2,351	\$2,009	\$378	\$25					\$20,892
CRP	\$6,501	\$3,543		\$2,958							\$6,501
CRRSAA	\$10,895	\$10,895									\$10,895
Federal Disc.-CPF-HwyInfra	\$5,650	\$5,650									\$5,650
RSTP	\$11,683	\$11,683									\$11,683
ATP - R	\$21,509	\$21,509									\$21,509
Coastal Conservancy	\$350	\$350									\$350
Local Funds	\$711	\$10	\$701								\$711
TDA - Bicycles	\$2,664	\$2,664									\$2,664
TransNet Subtotal	\$20,892	\$16,129	\$2,351	\$2,009	\$378	\$25					\$20,892
Other Subtotal	\$59,963	\$56,304	\$701	\$2,958							\$59,963
TOTAL	\$80,855	\$72,433	\$3,052	\$4,967	\$378	\$25					\$80,855
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$20,392	\$16,129	\$2,351	\$1,509	\$378	\$25					\$20,392
CRP	\$5,425	\$3,543		\$1,882							\$5,425
CRRSAA	\$10,895	\$10,895									\$10,895
Federal Disc.-CPF-HwyInfra	\$5,650	\$5,650									\$5,650
RSTP	\$11,683	\$11,683									\$11,683
ATP - R	\$21,509	\$21,509									\$21,509
Coastal Conservancy	\$350	\$350									\$350
SB1 - LPP Formula	\$1,576		\$1,576								\$1,576
Local Funds	\$711	\$10	\$701								\$711
TDA - Bicycles	\$2,664	\$2,664									\$2,664
TransNet Subtotal	\$20,392	\$16,129	\$2,351	\$1,509	\$378	\$25					\$20,392
Other Subtotal	\$60,463	\$56,304	\$2,277	\$1,882							\$60,463
TOTAL	\$80,855	\$72,433	\$4,628	\$3,391	\$378	\$25					\$80,855

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN148										RTIP #:25-01	
Project Title:			Grouped Projects for Bicycle and Pedestrian Facilities - Coastal Rail Trail						SANDAG ID: 1223016, 1223017, 3301100		
Project Description:			Projects are consistent with 40 CFR Part 93.126 Exempt Table 2 categories - bicycle and pedestrian facilities (both motorized and non-motorized)								
Change Reason:			Revise funding between fiscal years								
Capacity Status:			NCI		Exempt Category:Air Quality - Bicycle and pedestrian facilities						
Est Total Cost: \$46,457											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$31,220	\$31,153	\$36	\$31							\$31,220
CRP	\$238							\$238			\$238
ATP - R	\$1,025	\$1,025									\$1,025
STIP-RIP Augmentation	\$9,000			\$9,000							\$9,000
STIP-RIP STP TE	\$587	\$587									\$587
STIP-RIP State Cash	\$47	\$47									\$47
Local Funds	\$219	\$219									\$219
TDA - Bicycles	\$4,121	\$4,121									\$4,121
TransNet Subtotal	\$31,220	\$31,153	\$36	\$31							\$31,220
Other Subtotal	\$15,237	\$5,999		\$9,000				\$238			\$15,237
TOTAL	\$46,457	\$37,152	\$36	\$9,031				\$238			\$46,457
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$31,220	\$31,153	\$36	\$31							\$31,220
CRP	\$238		\$238								\$238
ATP - R	\$1,025	\$1,025									\$1,025
STIP-RIP Augmentation	\$9,000			\$9,000							\$9,000
STIP-RIP STP TE	\$587	\$587									\$587
STIP-RIP State Cash	\$47	\$47									\$47
Local Funds	\$219	\$219									\$219
TDA - Bicycles	\$4,121	\$4,121									\$4,121
TransNet Subtotal	\$31,220	\$31,153	\$36	\$31							\$31,220
Other Subtotal	\$15,237	\$5,999	\$238	\$9,000							\$15,237
TOTAL	\$46,457	\$37,152	\$274	\$9,031							\$46,457

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN153									RTIP #:25-01		
Project Title:	The Inland Rail Trail							PPNO: 7421W			
Project Description:	On and along the North County Transit District rail corridor from North Melrose Drive in Oceanside to North Pacific Street in San Marcos - environmental clearance for 7.0 miles of new bike path. Construction of 4.0 miles of new bike path; and final design and construct one new mile of Class I bike path (Phase 3). Construction is funded through phase 3 (3.0 miles in Vista). Phase 4 (Oceanside) will be constructed when funding is identified.. Toll Credits will be used to match federal funds for the CON phase							RTP REF: AT003 (2021) SANDAG ID: 1223023, 1223094, 1223095 EARMARK NO: CA832			
Change Reason:	Reduce funding										
Capacity Status:NCI			Exempt Category:Air Quality - Bicycle and pedestrian facilities								
Est Total Cost: \$94,193											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$25,464	\$22,851	\$793	\$1,099	\$721				\$10,178	\$1,880	\$13,406
CRP	\$3,882	\$3,882									\$3,882
Earmark Repurposing	\$92	\$92									\$92
RSTP	\$6,940	\$6,940									\$6,940
ATP - R	\$17,660	\$6,509	\$330	\$10,821					\$1,236		\$16,424
SB1 - LPP Formula	\$7,126	\$6,201	\$925								\$7,126
STIP-RIP AC	\$16,322	\$16,322									\$16,322
STIP-RIP STP TE	\$1,414	\$1,414							\$1,414		
STIP-RIP State Cash	\$2,298	\$2,298							\$183		\$2,115
Local Funds	\$2,541	\$2,541							\$2,541		
TDA - Bicycles	\$10,454	\$10,454							\$2,025		\$8,429
TransNet Subtotal	\$25,464	\$22,851	\$793	\$1,099	\$721				\$10,178	\$1,880	\$13,406
Other Subtotal	\$68,729	\$56,653	\$1,255	\$10,821					\$7,399		\$61,330
TOTAL	\$94,193	\$79,504	\$2,048	\$11,920	\$721				\$17,577	\$1,880	\$74,736
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$25,464	\$22,851	\$793	\$1,099	\$721				\$10,178	\$1,880	\$13,406
CRP	\$4,394	\$3,882				\$512					\$4,394
Earmark Repurposing	\$92	\$92									\$92
RSTP	\$9,640	\$6,940				\$2,700					\$9,640
ATP - R	\$17,660	\$6,509	\$330	\$10,821					\$1,236		\$16,424
SB1 - LPP Formula	\$7,126	\$6,201	\$925								\$7,126
STIP-RIP AC	\$16,322	\$16,322									\$16,322
STIP-RIP STP TE	\$1,414	\$1,414							\$1,414		
STIP-RIP State Cash	\$2,298	\$2,298							\$183		\$2,115
Local Funds	\$2,541	\$2,541							\$2,541		
TDA - Bicycles	\$10,454	\$10,454							\$2,025		\$8,429
TransNet Subtotal	\$25,464	\$22,851	\$793	\$1,099	\$721				\$10,178	\$1,880	\$13,406
Other Subtotal	\$71,941	\$56,653	\$1,255	\$10,821		\$3,212			\$7,399		\$64,542
TOTAL	\$97,405	\$79,504	\$2,048	\$11,920	\$721	\$3,212			\$17,577	\$1,880	\$77,948

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN163									RTIP #:25-01		
Project Title:	Los Penasquitos Lagoon Bridge Replacement							SANDAG ID: 1145000			
Project Description:	Bridges 246.1, 246.9, 247.1, and 247.7 in the Los Penasquitos Lagoon. - replace three aging timber trestle railway bridges in order to maintain compliance with Federal Railroad Administration (FRA) standards and support intercity, commuter and freight rail services in the second busiest rail corridor in the nation										
Change Reason:	Reduce funding										
Capacity Status:NCI			Exempt Category:Mass Transit - Reconstruction or renovation of transit structures								
Est Total Cost: \$45,394											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$4,756	\$4,755	\$1								\$4,756
FTA 5307	\$12,672	\$12,672									\$12,672
TIGER13	\$14,000	\$14,000									\$14,000
STA	\$3,049	\$3,049									\$3,049
TDA	\$10,917	\$10,917									\$10,917
TransNet Subtotal	\$4,756	\$4,755	\$1								\$4,756
Other Subtotal	\$40,638	\$40,638									\$40,638
TOTAL	\$45,394	\$45,393	\$1								\$45,394
PROJECT LAST AMENDED 23-30											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$5,366	\$5,366									\$5,366
FTA 5307	\$12,672	\$12,672									\$12,672
TIGER13	\$14,000	\$14,000									\$14,000
STA	\$3,049	\$3,049									\$3,049
TDA	\$10,917	\$10,917									\$10,917
TransNet Subtotal	\$5,366	\$5,366									\$5,366
Other Subtotal	\$40,638	\$40,638									\$40,638
TOTAL	\$46,004	\$46,004									\$46,004

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN214			RTIP #:25-01								
Project Title:	Grouped Projects for Capital Purchase - FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities							SANDAG ID: 1271900, 3321400, 3321400			
Project Description:	Projects are consistent with 40 CFR Part 93.126 Exempt Table 2 categories: purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet - purchase of vehicles and various capital equipment for the provision of transit service										
Change Reason:	Increase funding										
	Capacity Status:NCI		Exempt Category:Mass Transit - Purchase new buses and rail cars to replace existing vehicles or minor expansions of fleet								
Est Total Cost: \$12,896											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - SS	\$2,317	\$2,303	\$13								\$2,317
FTA 5310	\$8,302	\$6,124	\$2,178								\$8,302
FTA 5317 - NF	\$580	\$580									\$580
Local Funds	\$1,485	\$1,016	\$469								\$1,485
TDA	\$212	\$212									\$212
TransNet Subtotal	\$2,317	\$2,303	\$13								\$2,317
Other Subtotal	\$10,579	\$7,932	\$2,647								\$10,579
TOTAL	\$12,896	\$10,235	\$2,660								\$12,896
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
FTA 5310	\$5,648	\$3,470	\$2,178								\$5,648
Local Funds	\$1,485	\$1,016	\$469								\$1,485
TDA	\$149	\$149									\$149
TransNet Subtotal	\$0										
Other Subtotal	\$7,282	\$4,635	\$2,647								\$7,282
TOTAL	\$7,282	\$4,635	\$2,647								\$7,282

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN227									RTIP #:25-01		
Project Title:	Grouped Projects for Bicycle and Pedestrian Facilities - North Park/Mid-City Bikeways							SANDAG ID: 1223020, 1223079, 1223081, 1223082, 1223087			
Project Description:	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories - Bicycle and pedestrian facilities (both motorized and Non-motorized)										
Change Reason:	Revise funding between fiscal years										
Capacity Status:	NCI		Exempt Category: Air Quality - Bicycle and pedestrian facilities								
Est Total Cost: \$92,111											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$36,637	\$34,265	\$1,580	\$544	\$144	\$80	\$24				\$36,637
CRP	\$6,100		\$5,600	\$500							\$6,100
RSTP	\$8,590	\$3,182	\$5,408								\$8,590
ATP - R	\$26,187	\$20,474	\$5,713								\$26,187
SB1 - LPP Formula	\$2,000		\$2,000								\$2,000
SB1 - TIRCP	\$9,990	\$9,990									\$9,990
TDA - Bicycles	\$2,607	\$2,607									\$2,607
TransNet Subtotal	\$36,637	\$34,265	\$1,580	\$544	\$144	\$80	\$24				\$36,637
Other Subtotal	\$55,474	\$36,253	\$18,721	\$500							\$55,474
TOTAL	\$92,111	\$70,518	\$20,301	\$1,044	\$144	\$80	\$24				\$92,111
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$37,137	\$34,710	\$1,492	\$587	\$348						\$37,137
CRP	\$5,600		\$5,600								\$5,600
RSTP	\$8,590	\$3,182	\$5,408								\$8,590
ATP - R	\$26,187	\$20,474	\$5,713								\$26,187
SB1 - LPP Formula	\$2,000		\$2,000								\$2,000
SB1 - TIRCP	\$9,990	\$9,990									\$9,990
TDA - Bicycles	\$2,607	\$2,607									\$2,607
TransNet Subtotal	\$37,137	\$34,710	\$1,492	\$587	\$348						\$37,137
Other Subtotal	\$54,974	\$36,253	\$18,721								\$54,974
TOTAL	\$92,111	\$70,963	\$20,213	\$587	\$348						\$92,111

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego Association of Governments

MPO ID: SAN289								RTIP #:25-01			
Project Title:	San Dieguito to Sorrento Valley Double-Track							SANDAG ID: 1239823			
Project Description:	Near tracks in Del Mar - Completion of Project Approval and Environmental Document (PA&ED) phase re-aligning the LOSSAN rail corridor away from the Del Mar Bluffs with a double track system, and the advancement of the design and right-of-way phases.										
Change Reason:	Revise funding between fiscal years										
Capacity Status:NCI			Exempt Category:Safety - Hazard elimination program								
Est Total Cost: \$302,718											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$2,718	\$211	\$780	\$550	\$947	\$230			\$211	\$650	\$1,857
CAP-TRADE	\$300,000	\$152,000	\$148,000						\$152,000		\$148,000
TransNet Subtotal	\$2,718	\$211	\$780	\$550	\$947	\$230			\$211	\$650	\$1,857
Other Subtotal	\$300,000	\$152,000	\$148,000						\$152,000		\$148,000
TOTAL	\$302,718	\$152,211	\$148,780	\$550	\$947	\$230			\$152,211	\$650	\$149,857
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - MC	\$2,718	\$211	\$650	\$550	\$947	\$360			\$211	\$650	\$1,857
CAP-TRADE	\$300,000	\$152,000	\$148,000						\$152,000		\$148,000
TransNet Subtotal	\$2,718	\$211	\$650	\$550	\$947	\$360			\$211	\$650	\$1,857
Other Subtotal	\$300,000	\$152,000	\$148,000						\$152,000		\$148,000
TOTAL	\$302,718	\$152,211	\$148,650	\$550	\$947	\$360			\$152,211	\$650	\$149,857

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego, City of

MPO ID: SD34										RTIP #:25-01					
Project Title:		El Camino Real							RAS (M - 46)						
Project Description:		Bridge 57C0042 - In San Diego on El Camino Real from San Dieguito Road to Via de la Valle - reconstruct & widen from 2 to 4 lanes and extend transition lane and additional grading to avoid biological impacts (CIP 52-479.0/S-00856)							TransNet - LSI: CR						
Change Reason:		Revise funding between fiscal years													
		Capacity Status:CI		Exempt Category:Non-Exempt											
Est Total Cost: \$65,973												Open to Traffic: Jul 2025			
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON				
TransNet - LSI	\$491	\$491							\$491						
TransNet - LSI Carry Over	\$334	\$334							\$334						
HBP	\$36,220	\$3,420		\$32,800					\$1,420	\$2,000	\$32,800				
HBRR	\$1,700	\$1,700							\$1,700						
RSTP	\$2,560	\$2,560							\$2,560						
Local Funds	\$23,668	\$19,418		\$4,250					\$1,955	\$2,165	\$19,548				
Local Funds AC	\$0														
Local RTCIP	\$1,000	\$1,000									\$1,000				
TransNet Subtotal	\$825	\$825							\$825						
Other Subtotal	\$65,148	\$28,098		\$37,050					\$7,635	\$4,165	\$53,348				
TOTAL	\$65,973	\$28,923		\$37,050					\$8,460	\$4,165	\$53,348				
PROJECT LAST AMENDED 25-00															
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON				
TransNet - LSI	\$491	\$491							\$491						
TransNet - LSI Carry Over	\$334	\$334							\$334						
HBP	\$36,220	\$3,420		\$32,800					\$1,420	\$2,000	\$32,800				
HBRR	\$1,700	\$1,700							\$1,700						
RSTP	\$2,560	\$2,560							\$2,560						
Local Funds	\$23,668	\$19,418	\$4,250						\$1,955	\$2,165	\$19,548				
Local Funds AC	\$0														
Local RTCIP	\$1,000	\$1,000									\$1,000				
TransNet Subtotal	\$825	\$825							\$825						
Other Subtotal	\$65,148	\$28,098	\$4,250	\$32,800					\$7,635	\$4,165	\$53,348				
TOTAL	\$65,973	\$28,923	\$4,250	\$32,800					\$8,460	\$4,165	\$53,348				

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego, City of

MPO ID: SD70								RTIP #:25-01			
Project Title:	West Mission Bay Drive Bridge over San Diego River							RAS (M - 41)			
Project Description:	West Mission Bay Drive bridge over San Diego River - In San Diego, this project provides for replacing the existing four-lane West Mission Bay Drive bridge with a six-lane bridge, sidewalk, bike lanes, and shoulder improvements. (CIP #52-643/S00871).							TransNet - LSI: CR			
Change Reason:	Reduce funding										
	Capacity Status:CI		Exempt Category:Non-Exempt								
Est Total Cost: \$151,754 Open to Traffic: Jun 2023											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - L	\$650	\$650							\$650		
TransNet - LSI	\$1,228	\$1,228							\$100		\$1,128
TransNet - LSI Carry Over	\$2,987	\$2,987							\$140	\$494	\$2,353
HBP	\$88,215	\$88,215							\$4,720	\$1,815	\$81,680
HBRR	\$2,600	\$2,600							\$2,600		
Other Fed - HIP	\$32,792	\$32,792									\$32,792
Local Funds	\$10,444	\$10,443	\$1						\$1,040	\$62	\$9,342
Local RTCIP	\$12,838	\$12,838									\$12,838
TransNet Subtotal	\$4,865	\$4,865							\$890	\$494	\$3,481
Other Subtotal	\$146,889	\$146,888	\$1						\$8,360	\$1,877	\$136,652
TOTAL	\$151,754	\$151,753	\$1						\$9,250	\$2,371	\$140,133
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - L	\$650	\$650							\$650		
TransNet - LSI	\$1,228	\$1,228							\$100		\$1,128
TransNet - LSI Carry Over	\$3,647	\$2,987	\$660						\$140	\$494	\$3,013
HBP	\$88,215	\$88,215							\$4,720	\$1,815	\$81,680
HBRR	\$2,600	\$2,600							\$2,600		
Other Fed - HIP	\$32,792	\$32,792									\$32,792
Local Funds	\$10,444	\$10,443	\$1						\$1,040	\$62	\$9,342
Local RTCIP	\$12,838	\$12,838									\$12,838
TransNet Subtotal	\$5,525	\$4,865	\$660						\$890	\$494	\$4,141
Other Subtotal	\$146,889	\$146,888	\$1						\$8,360	\$1,877	\$136,652
TOTAL	\$152,414	\$151,753	\$661						\$9,250	\$2,371	\$140,793

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego, City of

MPO ID: SD96										RTIP #:25-01	
Project Title:			Street Resurfacing and Reconstruction Citywide						TransNet - LSI: CR		
Project Description:			Citywide - This provides for roadway resurfacing, repair, and reconstruction including the repair and reconstruction of concrete streets greater than 1 inch on city streets (CIP # AID00005 and S23006)								
Change Reason:			Increase funding								
Capacity Status:			NCI		Exempt Category:Safety - Pavement resurfacing and/or rehabilitation						
Est Total Cost: \$163,283											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - L	\$4,000	\$4,000									\$4,000
TransNet - L (Cash)	\$149	\$149									\$149
TransNet - LSI	\$121,712	\$42,731	\$16,118	\$14,126	\$15,309	\$16,270	\$17,157				\$121,712
TransNet - LSI (Cash)	\$1,340	\$1,340									\$1,340
TransNet - LSI Carry Over	\$18,835	\$9,118	\$9,716								\$18,835
Local Funds	\$17,247	\$17,247									\$17,247
TransNet Subtotal	\$146,036	\$57,338	\$25,834	\$14,126	\$15,309	\$16,270	\$17,157				\$146,036
Other Subtotal	\$17,247	\$17,247									\$17,247
TOTAL	\$163,283	\$74,585	\$25,834	\$14,126	\$15,309	\$16,270	\$17,157				\$163,283
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - L	\$4,000	\$4,000									\$4,000
TransNet - L (Cash)	\$149	\$149									\$149
TransNet - LSI	\$121,712	\$42,731	\$16,118	\$14,126	\$15,309	\$16,270	\$17,157				\$121,712
TransNet - LSI (Cash)	\$1,340	\$1,340									\$1,340
TransNet - LSI Carry Over	\$18,175	\$9,118	\$9,056								\$18,175
Local Funds	\$17,247	\$17,247									\$17,247
TransNet Subtotal	\$145,376	\$57,338	\$25,174	\$14,126	\$15,309	\$16,270	\$17,157				\$145,376
Other Subtotal	\$17,247	\$17,247									\$17,247
TOTAL	\$162,623	\$74,585	\$25,174	\$14,126	\$15,309	\$16,270	\$17,157				\$162,623

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

San Diego, City of

MPO ID: SD166										RTIP #:25-01	
Project Title:	Bicycle Facilities							EARMARK NO: 317/90			
Project Description:	Citywide including:El Camino Real/State Route 56 Bike Path Connector (S00981); SR56 Bike Interchanges (S00955) Downtown Bicycle Loop; Bikeway Striping Improvements Citywide (AIA00001)including Cycle Tracks - Throughout the City of San Diego, installation of bike facilities including Class I, Class II, Class III, and Class IV bike facilities that are capital in nature (CIP AIA00001) as well as non-capital work related to Bicycle Facilities (various internal orders).							TransNet - LSI: CR			
Change Reason:	Revise funding between fiscal years										
Capacity Status:NCI Exempt Category:Air Quality - Bicycle and pedestrian facilities											
Est Total Cost: \$48,925											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - L	\$15	\$15									\$15
TransNet - L (Cash)	\$136	\$136									\$136
TransNet - LSI	\$37,902	\$5,879	\$1,823	\$7,550	\$7,550	\$7,550	\$7,550		\$15		\$37,887
TransNet - LSI Carry Over	\$7,068	\$4,163	\$2,904						\$241		\$6,827
Federal Disc.-CPF-Hwylnfra	\$3,144			\$3,144							\$3,144
HPP	\$360	\$360							\$53		\$307
Local Funds	\$300	\$300									\$300
TransNet Subtotal	\$45,121	\$10,193	\$4,727	\$7,550	\$7,550	\$7,550	\$7,550		\$256		\$44,865
Other Subtotal	\$3,804	\$660		\$3,144					\$53		\$3,751
TOTAL	\$48,925	\$10,853	\$4,727	\$10,694	\$7,550	\$7,550	\$7,550		\$309		\$48,616
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - L	\$15	\$15									\$15
TransNet - L (Cash)	\$136	\$136									\$136
TransNet - LSI	\$37,902	\$5,879	\$1,823	\$7,550	\$7,550	\$7,550	\$7,550		\$15		\$37,887
TransNet - LSI Carry Over	\$7,068	\$4,163	\$2,904						\$241		\$6,827
Federal Disc.-CPF-Hwylnfra	\$3,144		\$3,144								\$3,144
HPP	\$360	\$360							\$53		\$307
Local Funds	\$300	\$300									\$300
TransNet Subtotal	\$45,121	\$10,193	\$4,727	\$7,550	\$7,550	\$7,550	\$7,550		\$256		\$44,865
Other Subtotal	\$3,804	\$660	\$3,144						\$53		\$3,751
TOTAL	\$48,925	\$10,853	\$7,871	\$7,550	\$7,550	\$7,550	\$7,550		\$309		\$48,616

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

San Marcos, City of

COMPLETED

MPO ID: SM59										RTIP #:25-01			
Project Title:			Annual Street Overlay Project #86009							TransNet - LSI: CR			
Project Description:			Various streets throughout the City, potentially including Rancho Santa Fe Rd., Mulberry Dr. and San Marcos Blvd. - Street overlay greater than 1-inch thick to various streets throughout the city										
Change Reason:			Complete project										
Capacity Status:			NCI		Exempt Category:							Safety - Pavement resurfacing and/or rehabilitation	
Est Total Cost: \$138													
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON		
TransNet - LSI	\$0												
TransNet - LSI (Cash)	\$99	\$99							\$99				
TransNet - LSI Carry Over	\$39	\$39											
Local Funds	\$0												
TOTAL	\$138	\$138							\$99	\$39			
PROJECT LAST AMENDED 21-03													
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON		
TransNet - LSI (Cash)	\$99	\$99							\$99				
TransNet - LSI Carry Over	\$39	\$39											
TOTAL	\$138	\$138							\$99	\$39			

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

Various Agencies

MPO ID: V10								RTIP #:25-01			
Project Title:	Grouped Projects for <i>TransNet</i> Smart Growth Incentive Program							SANDAG ID: 1224060, 1224065, 1224067, 1224068, 1224069, 1224070, 1224072, 1224073			
Project Description:	Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories - Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities)										
Change Reason:	Increase funding										
Capacity Status:		NCI		Exempt Category:Other - Transportation enhancement activities							
Est Total Cost: \$45,109											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - LSI	\$5,035	\$185	\$1,250	\$1,750	\$850	\$500	\$500				\$5,035
<i>TransNet</i> - LSI Carry Over	\$1,715	\$653	\$1,062								\$1,715
<i>TransNet</i> - SGIP	\$16,213	\$8,177	\$6,011	\$2,025							\$16,213
Local Funds	\$22,146	\$8,413	\$13,633	\$100							\$22,146
<i>TransNet</i> Subtotal	\$22,963	\$9,015	\$8,323	\$3,775	\$850	\$500	\$500				\$22,963
Other Subtotal	\$22,146	\$8,413	\$13,633	\$100							\$22,146
TOTAL	\$45,109	\$17,428	\$21,956	\$3,875	\$850	\$500	\$500				\$45,109
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - LSI	\$5,035	\$185	\$1,250	\$1,750	\$850	\$500	\$500				\$5,035
<i>TransNet</i> - LSI Carry Over	\$1,715	\$653	\$1,062								\$1,715
<i>TransNet</i> - SGIP	\$14,397	\$7,419	\$5,856	\$1,122							\$14,397
Local Funds	\$18,586	\$4,853	\$13,633	\$100							\$18,586
<i>TransNet</i> Subtotal	\$21,147	\$8,257	\$8,168	\$2,872	\$850	\$500	\$500				\$21,147
Other Subtotal	\$18,586	\$4,853	\$13,633	\$100							\$18,586
TOTAL	\$39,733	\$13,110	\$21,801	\$2,972	\$850	\$500	\$500				\$39,733

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Various Agencies

MPO ID: V11								RTIP #:25-01										
Project Title:		State Route 11						EA NO: 05631, 05632, 05633, 05634, 05638, 05639 PPNO: 0999 RTP REF: A-5; A-30; B-24 SANDAG ID: 1201101, 1201102, 1201103, 1201105 EARMARK NO: CA393/740										
Project Description:		On new alignment from SR 125 to the U.S.-Mexico Border - Construction of four-lane toll highway facility, CVEF and POE in three segments: Segment 1: SR-11/905 to Enrico Fermi; Segment 2: SR-11 from Enrico Fermi to Siempre Viva; Segment 3: POE from Siempre Viva to Mexico Border.																
Change Reason:		Reduce funding																
RT:11		Capacity Status:CI		Exempt Category:Non-Exempt														
Est Total Cost: \$922,274												Open to Traffic: Phase 1: Mar 2016			Phase 2: Sep 2021		Phase 3: Nov 2022	
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON							
TransNet - Border	\$33,498	\$5,150	\$13,348	\$15,000					\$15,709	\$2,789	\$15,000							
TransNet - MC	\$9,141	\$7,039	\$2,102						\$7,612	\$1,529								
CBI	\$281,287	\$210,287	\$71,000						\$67,139	\$104,091	\$110,057							
HPP	\$800	\$800							\$800									
INFRA	\$199,278	\$49,278	\$150,000								\$199,278							
ITS	\$439	\$439							\$439									
RSTP	\$32,500	\$32,500							\$32,500									
Prop 1B - TCIF	\$73,385	\$73,385									\$73,385							
SB1 - TCEP	\$276,345	\$84,688	\$191,657						\$14,610	\$37,770	\$223,965							
STIP-IIP NHS	\$6,882	\$6,882							\$6,882									
STIP-IIP Prior State Cash	\$5,200	\$5,200							\$5,200									
STIP-IIP State Cash	\$919	\$919							\$919									
Local Funds	\$2,600	\$2,600							\$2,600									
Local Funds AC	\$0																	
TransNet Subtotal	\$42,639	\$12,189	\$15,450	\$15,000					\$23,321	\$4,318	\$15,000							
Other Subtotal	\$879,635	\$466,978	\$412,657						\$131,089	\$141,861	\$606,685							
TOTAL	\$922,274	\$479,167	\$428,107	\$15,000					\$154,410	\$146,179	\$621,685							

PROJECT LAST AMENDED 25-00

	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - Border	\$33,498	\$5,150	\$13,348	\$15,000					\$15,709	\$2,789	\$15,000
TransNet - MC	\$9,141	\$7,039	\$2,102						\$7,612	\$1,529	
CBI	\$281,287	\$210,287	\$71,000						\$67,139	\$104,091	\$110,057
HPP	\$800	\$800							\$800		
INFRA	\$199,278	\$49,278	\$150,000								\$199,278
ITS	\$439	\$439							\$439		
Other Fed -TIFIA	\$285,913			\$285,913							\$285,913
RSTP	\$32,500	\$32,500							\$32,500		
Prop 1B - TCIF	\$73,385	\$73,385									\$73,385
SB1 - TCEP	\$276,345	\$84,688	\$191,657						\$14,610	\$37,770	\$223,965
STIP-IIP NHS	\$6,882	\$6,882							\$6,882		
STIP-IIP Prior State Cash	\$5,200	\$5,200							\$5,200		
STIP-IIP State Cash	\$919	\$919							\$919		
Local Funds	\$2,600	\$2,600							\$2,600		
Local Funds AC	\$0										
TransNet Subtotal	\$42,639	\$12,189	\$15,450	\$15,000					\$23,321	\$4,318	\$15,000
Other Subtotal	\$1,165,548	\$466,978	\$412,657	\$285,913					\$131,089	\$141,861	\$892,598
TOTAL	\$1,208,187	\$479,167	\$428,107	\$300,913					\$154,410	\$146,179	\$907,598

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Various Agencies

MPO ID: V12										RTIP #:25-01	
Project Title:		Grouped Projects for Bicycle and Pedestrian Facilities.							SANDAG ID: 1223054, 1223057, 1223058		
Project Description:		Projects are consistent with 40 CFR Part 93.126 Exempt Table 2 categories - bicycle and pedestrian facilities (both motorized and non-motorized)									
Change Reason:		Revise funding between fiscal years									
		Capacity Status:NCI		Exempt Category:Air Quality - Bicycle and pedestrian facilities							
Est Total Cost: \$56,125											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$26,161	\$24,404	\$1,475	\$266	\$16						\$26,161
CRP	\$9,143	\$8,543		\$600							\$9,143
CRRSAA	\$4,100	\$4,100									\$4,100
RSTP	\$2,813	\$2,813									\$2,813
ATP - R	\$4,450	\$4,450									\$4,450
ATP - S	\$2,834		\$2,834								\$2,834
CAP-TRADE	\$791	\$791									\$791
TDA - Bicycles	\$5,833	\$5,813	\$20								\$5,833
TransNet Subtotal	\$26,161	\$24,404	\$1,475	\$266	\$16						\$26,161
Other Subtotal	\$29,964	\$26,510	\$2,854	\$600							\$29,964
TOTAL	\$56,125	\$50,914	\$4,329	\$866	\$16						\$56,125
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$26,761	\$24,404	\$1,475	\$555	\$327						\$26,761
CRP	\$8,543	\$8,543									\$8,543
CRRSAA	\$4,100	\$4,100									\$4,100
RSTP	\$2,813	\$2,813									\$2,813
ATP - R	\$4,450	\$4,450									\$4,450
ATP - S	\$2,834		\$2,834								\$2,834
CAP-TRADE	\$791	\$791									\$791
TDA - Bicycles	\$5,833	\$5,813	\$20								\$5,833
TransNet Subtotal	\$26,761	\$24,404	\$1,475	\$555	\$327						\$26,761
Other Subtotal	\$29,364	\$26,510	\$2,854								\$29,364
TOTAL	\$56,125	\$50,914	\$4,329	\$555	\$327						\$56,125

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Various Agencies

MPO ID: V14										RTIP #:25-01	
Project Title:		Grouped Projects for Bicycle and pedestrian facilities - Active Transportation Program (ATP)							SANDAG ID: 1223093, 1223097		
Project Description:		Projects are consistent with 40 CFR Part 93.126 Exempt Tables 2 and Table 3 categories - Bicycle and pedestrian facilities (both motorized and Non-motorized)									
Change Reason:		Increase funding									
		Capacity Status:NCI		Exempt Category:Air Quality - Bicycle and pedestrian facilities							
Est Total Cost: \$93,624											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$1,126	\$548	\$98	\$40	\$440						\$1,126
TransNet - LSI	\$4,866	\$4,278	\$588								\$4,866
TransNet - LSI (Cash)	\$50	\$50									\$50
TransNet - LSI Carry Over	\$3,735	\$3,543	\$193								\$3,735
TransNet - MC	\$2,000		\$1,000	\$1,000							\$2,000
ATP - R	\$27,435	\$7,332	\$2,240	\$9,756	\$8,108						\$27,435
ATP - S	\$40,079	\$10,395	\$5,039		\$24,645						\$40,079
Local Funds	\$14,033	\$11,403	\$2,080	\$550							\$14,033
Local RTCIP	\$300	\$300									\$300
TransNet Subtotal	\$11,777	\$8,419	\$1,879	\$1,040	\$440						\$11,777
Other Subtotal	\$81,847	\$29,430	\$9,359	\$10,306	\$32,753						\$81,847
TOTAL	\$93,624	\$37,849	\$11,238	\$11,346	\$33,193						\$93,624
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
TransNet - BPNS	\$1,126	\$548	\$98	\$40	\$440						\$1,126
TransNet - LSI	\$4,866	\$4,278	\$588								\$4,866
TransNet - LSI (Cash)	\$50	\$50									\$50
TransNet - LSI Carry Over	\$3,735	\$3,543	\$193								\$3,735
TransNet - MC	\$2,000		\$1,000	\$1,000							\$2,000
ATP - R	\$27,435	\$7,332	\$2,240	\$9,756	\$8,108						\$27,435
ATP - S	\$35,224	\$6,285	\$4,294		\$24,645						\$35,224
Local Funds	\$14,033	\$11,403	\$2,080	\$550							\$14,033
Local RTCIP	\$300	\$300									\$300
TransNet Subtotal	\$11,777	\$8,419	\$1,879	\$1,040	\$440						\$11,777
Other Subtotal	\$76,992	\$25,320	\$8,614	\$10,306	\$32,753						\$76,992
TOTAL	\$88,769	\$33,739	\$10,493	\$11,346	\$33,193						\$88,769

2025 Regional Transportation Improvement Program - *TransNet* Only
Amendment No. 1
San Diego Region (in \$000s)

Various Agencies

MPO ID: V16								RTIP #:25-01			
Project Title:	Grouped Projects for Operating Assistance - <i>TransNet</i> Senior Mini-Grant Program							SANDAG ID: 1271300, 1272700, 3321400, 1270800			
Project Description:	Projects are consistent with 40 CFR Part 93.126 Exempt Table 2 categories: operating assistance to transit operators - non profit agencies providing transportation programs specializing in services for seniors										
Change Reason:	Increase funding										
Capacity Status:		NCI		Exempt Category:Mass Transit - Transit operating assistance							
Est Total Cost: \$7,484											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - SS	\$5,471	\$5,054	\$417								\$5,471
FTA 5310	\$760	\$760									\$760
FTA 5317 - NF	\$125	\$125									\$125
Local Funds	\$1,128	\$1,030	\$98								\$1,128
<i>TransNet</i> Subtotal	\$5,471	\$5,054	\$417								\$5,471
Other Subtotal	\$2,013	\$1,915	\$98								\$2,013
TOTAL	\$7,484	\$6,969	\$515								\$7,484
PROJECT LAST AMENDED 25-00											
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON
<i>TransNet</i> - SS	\$4,098	\$3,707	\$391								\$4,098
Local Funds	\$1,048	\$950	\$98								\$1,048
<i>TransNet</i> Subtotal	\$4,098	\$3,707	\$391								\$4,098
Other Subtotal	\$1,048	\$950	\$98								\$1,048
TOTAL	\$5,146	\$4,657	\$489								\$5,146

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

Various Agencies

MPO ID: V20									RTIP #:25-01			
Project Title:	Grouped Projects for Engineering - Complete Corridor Studies							SANDAG ID: 1600101,				
Project Description:	Projects are consistent with 40 CFR part 93.126 Exempt Tables 2 and Table 3 categories - Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action; non-capacity increasing. Toll credits are used for the match in the PE Phase.							1600501, 1600503, 1600504, 1600505, 1600801, 1601501, 1605201, 1605601, 1607801, 1609401, 1612501				
Change Reason:	Increase funding											
	Capacity Status:NCI		Exempt Category:Other - Engineering studies									
Est Total Cost: \$29,043												
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON	
TransNet - MC	\$4,413	\$4,061	\$189	\$114	\$50						\$4,413	
FTA 5307	\$1,097		\$1,097								\$1,097	
Fed Rail Admin (FRA-PRIIA)	\$500		\$500								\$500	
RSTP	\$22,635	\$19,395	\$640	\$1,500	\$1,100						\$22,635	
TDA	\$98	\$98									\$98	
Toll - Managed Lanes	\$300		\$239	\$61							\$300	
TransNet Subtotal	\$4,413	\$4,061	\$189	\$114	\$50						\$4,413	
Other Subtotal	\$24,630	\$19,493	\$2,476	\$1,561	\$1,100						\$24,630	
TOTAL	\$29,043	\$23,554	\$2,665	\$1,675	\$1,150						\$29,043	
PROJECT LAST AMENDED 25-00												
	TOTAL	PRIOR	24/25	25/26	26/27	27/28	28/29	FUTURE	PE	RW	CON	
TransNet - MC	\$4,218	\$3,872	\$183	\$114	\$50						\$4,218	
FTA 5307	\$1,097		\$1,097								\$1,097	
Fed Rail Admin (FRA-PRIIA)	\$500		\$500								\$500	
RSTP	\$19,714	\$16,474	\$640	\$2,600							\$19,714	
TDA	\$98	\$98									\$98	
Toll - Managed Lanes	\$300		\$239	\$61							\$300	
TransNet Subtotal	\$4,218	\$3,872	\$183	\$114	\$50						\$4,218	
Other Subtotal	\$21,709	\$16,572	\$2,476	\$2,661							\$21,709	
TOTAL	\$25,927	\$20,444	\$2,659	\$2,775	\$50						\$25,927	

2025 Regional Transportation Improvement Program - TransNet Only
Amendment No. 1
San Diego Region (in \$000s)

RTIP Fund Types

<u>Federal Funding</u>	
BIP/CBI	Border Infrastructure Program/Corridors and Borders Infrastructure Program
CMAQ	Congestion Mitigation and Air Quality
DEMO - TEA 21	High Priority Demonstration Program under TEA-21
DEMO-Sec 115	High Priority Demonstration Program under FY 2004 Appropriations
DEMO-Sec 117/STP	Surface Transportation Program under FHWA Administrative Program (congressionally directed appropriations)
EARREPU	Earmark Repurposing
INFRA/FASTLANE	Infrastructure for Rebuilding America (INFRA) Grant
FRA-PRIIA	Federal Railroad Administration Passenger Rail Investment and Improvement Act of 2008
FTA Section 5307	Federal Transit Administration Urbanized Area Formula Program
FTA Section 5309 (NS)	Federal Transit Administration Discretionary - New Starts Program
FTA Section 5310	Federal Transit Administration Elderly & Disabled Program
FTA Section 5317 (NF)	Federal Transit Administration New Freedom
FTA Section 5339	Federal Transit Administration Bus and Bus Facilities Formula Grant Program
HBP	Highway Bridge Program under SAFETEA-LU
HPP	High Priority Program under SAFETEA-LU
ITS	Intelligent Transportation System
NHS	National Highway System (administered by Caltrans)
CRRSAA	Other Fed - Coronavirus Response and Relief Supplemental Appropriations Act
RSTP	Regional Surface Transportation Program
STP-RL	Surface Transportation Program - Highway Railway Crossings Program (Section 130)
TCSP	Transportation, Community & System Preservation
TE	Transportation Enhancement Program
TIFIA	Transportation Infrastructure Finance and Innovation Act (Federal Loan Program)
TIGER	Transportation Investment Generating Economic Recovery (Federal Stimulus)
CMAQ/RSTP Conversion	Reimbursement of advanced federal funds which have been advanced with local funds in earlier years
<u>State Funding</u>	
ATP	Active Transportation Program (Statewide and Regional)
Coastal Conservancy	California Coastal Conservancy Fund
LBSRA	Local Bridge Seismic Retrofit Account (State Prop. 1B)
SB1 - TCEP	Senate Bill 1 - Trade Corridor Enhancement Program
SB1 - LPP Formula	Senate Bill 1 - Local Partnership Formula Program
SB1 - TIRCP	Senate Bill 1 - Transit and Intercity Rail Program
SHOPP (AC)	State Highway Operation & Protection Program
STA	State Transit Assistance

2025 Regional Transportation Improvement Program - *TransNet* Only
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San Diego Region (in \$000s)

STIP-IIP	State Transportation Improvement Program - Interregional Program
STIP-RIP	State Transportation Improvement Program - Regional Improvement Program
TCIF	Trade Corridor Improvement Fund (State Prop. 1B)
TIRCP	Transit and Intercity Rail Capital Program
TCRP	Traffic Congestion Relief Program
<u>Local Funding</u>	
Local Funds AC	Local Funds - Advanced Construction; mechanism to advance local funds to be reimbursed at a later fiscal year with federal/state funds
RTCIP	Regional Transportation Congestion Improvement Program
TDA	Transportation Development Act
<i>TransNet</i> -Border	Prop. A Extension Local Transportation Sales Tax - Border
<i>TransNet</i> -BPNS	Prop. A Extension Local Transportation Sales Tax - Bicycle, Pedestrian and Neighborhood Safety Program
<i>TransNet</i> -CP	Prop. A Local Transportation Sales Tax - Commercial Paper
<i>TransNet</i> -H	Prop. A Local Transportation Sales Tax - Highway
<i>TransNet</i> -L	Prop. A Local Transportation Sales Tax - Local Streets & Roads
<i>TransNet</i> -L (Cash)	TransNet - L funds which agencies have received payment, but have not spent
<i>TransNet</i> -LSI	Prop. A Extension Local Transportation Sales Tax - Local System Improvements
<i>TransNet</i> -LSI Carry Over	TransNet - LSI funds previously programmed but not requested/paid in year of allocation
<i>TransNet</i> -LSI (Cash)	TransNet - LSI funds which agencies have received payment, but have not spent
<i>TransNet</i> -MC	Prop. A Extension Local Transportation Sales Tax - Major Corridors
<i>TransNet</i> -MC AC	TransNet - Major Corridors - Advanced Construction; mechanism to advance TransNet funds to be reimbursed at a later fiscal year with federal/state funds
<i>TransNet</i> -REMP	Prop. A Extension Local Transportation Sales Tax - Regional Environmental Mitigation Program
<i>TransNet</i> -SGIP	Prop. A Extension Local Transportation Sales Tax - Regional Smart Growth Incentive Program
<i>TransNet</i> -SS	Prop. A Extension Local Transportation Sales Tax - Senior Services

TransNet Eligibility Analysis for 2025 RTIP Amendment No. 1

TransNet Eligibility

The TransNet Extension (Ordinance) and the TransNet Ordinance and Expenditure Plan Rules (Board Policy No. 031) establish guidance and requirements for the use of TransNet. Projects must comply with these rules to be considered eligible for TransNet, and that compliance must be evaluated through the Regional Transportation Improvement Program (RTIP).

Projects programmed in the RTIP must satisfy the following criteria to comply with the Ordinance. They must: (1) be consistent with San Diego Forward: The 2021 Regional Transportation Plan (2021 Regional Plan); (2) be approved by the governing body of a local agency following a public hearing; (3) be on a Regional Arterial to utilize RTCIP funds; (4) include at least 70% of local street and road funds for congestion relief; (5) accommodate bicycles and pedestrians; (6) be financially constrained and (7) follow the Public Participation Policy. Each of these items is tested every time the RTIP is amended, and each amendment must maintain the conformity of the 2025 RTIP to the Ordinance.

Project Eligibility for the 2025 RTIP

All TransNet-funded projects in the 2025 RTIP meet all requirements set forth by the Ordinance and were reviewed by the Independent Taxpayer Oversight Committee on July 13, 2022, and September 14, 2022. ITOC recommended the projects to the San Diego County Regional Transportation Commission. SANDAG has made the following eligibility findings for Amendment No. 1 to the 2025 RTIP under Board Policy No. 031 TransNet Ordinance and Expenditure Plan rules.

Rule #7 – Program of Projects Approval Process and Amendments

An amendment to revise the TransNet Program of Projects (POP) must first be approved by the governing body of the local agency proposing the revision within the preceding 12 months. All projects a local agency wishes to include in its POP must be consistent with the long-range Regional Transportation Plan. A POP amendment which includes but is not limited to, adding a new project, deleting an existing project, revising the project scope, or otherwise changing the TransNet funds programmed, requires that the local agency hold a noticed public hearing with an agenda item that clearly identifies the proposed project amendments and submits a resolution using the language and deadlines prescribed by the Commission as documentation of governing body approval.

- 1) *Finding:* The TransNet projects, through Amendment No. 1, are consistent with the 2021 Regional Transportation Plan (2021 Regional Plan) (policies, programs, and projects). All projects conform to the scope, cost, and schedule included in the 2021 Regional Plan.
- 2) *Finding:* All local agencies submitting project revisions impacting TransNet funding in Amendment No. 1 have submitted a signed resolution attesting to having held a public hearing within the preceding 12 months.

Rule #18 - Use of Local Street and Road Funds for Congestion Relief

As specified in Section 2(C)(1) of the Ordinance 04-01, at least 70 percent of the revenues provided for local street and road purposes should be used for congestion relief purposes and no more than 30 percent for maintenance purposes.

- 3) *Finding:* All projects programmed in Amendment No. 1 using TransNet LSI funding are indicated as either Congestion Relief or Maintenance.

Rule #21 - Accommodation of Bicyclists and Pedestrians

Section 4(E)(3) of the TransNet Extension Ordinance requires that all new projects or major reconstruction projects funded with TransNet shall accommodate travel by pedestrians and bicyclists except where prohibited by law or disproportionate cost.

- 4) *Finding:* All projects programmed in Amendment No. 1 make adequate provisions for bicyclists and pedestrians.

Rule #23: Application of TransNet Extension Ordinance Regional Transportation Congestion Improvement Program (RTCIP) Requirements

- 5) *Finding:* All projects programmed in Amendment No. 1 utilizing RTCIP funds have been verified as Regional Arterials eligible for RTCIP funding.

Financial Constraint

The projects contained within the 2025 RTIP must be reasonable when considering available funding sources.

- 6) *Finding:* The proposed Amendment No. 1 does not exceed the Board of Directors TransNet Revenue forecast approved February 23, 2024, for the current biennial and the five-year period of the RTIP.

Board Policy No. 25 - SANDAG Public Participation Policy

The SANDAG Public Participation Policy requires that a draft of all formal RTIP amendments be provided to all interested parties for a 15-day comment period. SANDAG accomplishes this by posting it in the [Public Notices](#) section of the website.

- 7) *Finding:* The draft Amendment No. 1 was posted for public review and comment on December 18, 2024, ending on January 9, 2025.

January 8, 2025

Vision Zero Action Plan Updates and Performance Measure 1 Safety Targets

Overview

On June 22, 2022, the SANDAG Board of Directors adopted Resolution No. 2023-02 directing staff to seek funding and develop a Regional Vision Zero Action Plan (VZAP) to advance traffic safety goals for the San Diego region. This planning effort is included in the 2021 Regional Plan as a near-term implementation action and safety is a goal area for the proposed 2025 Regional Plan.

In addition, SANDAG is required to include federal performance targets in each Regional Transportation Plan. These requirements are components of performance-based planning and programming and include target setting, performance monitoring, and target achievement support.

Staff will provide an overview of both regional safety planning efforts and seek committee members feedback on trends that inform the target setting process.

Key Considerations

Final Regional Vision Zero Action Plan

Developed in collaboration with local agency staff, the VZAP Technical Advisory Group¹, community-based organizations and the public, the Vision Zero Action Plan identifies local traffic safety challenges and solutions to support Vision Zero. The plan identifies where the most fatal and serious injury crashes occur and provides resources to improve safety in those areas. The plan also details SANDAG's role with implementing safety solutions and how progress toward Vision Zero will be evaluated. With the completion of the VZAP local agencies are eligible for federal Safe Streets and Roads for All implementation grants. The [final VZAP](#) and its [technical appendices](#) are available on SANDAG's [Vision Zero webpage](#).

VZAP Implementation Steps

The Regional VZAP includes implementation steps that are organized under seven focus areas: Coordinate, Advocate, Plan, Fund, Educate, Evaluate, and Implement. Multiple implementation efforts are currently in progress and SANDAG has recently launched three including AB 43 technical support², local agency countermeasure tool development³, and grant criteria updates⁴.

Action: Information

Staff will present the final regional Vision Zero Action Plan and supporting safety tools, regional safety statistics, and federal performance safety target setting.

Fiscal Impact:

Completion of the Vision Zero Action Plan establishes local agency eligibility for federal Safe Streets and Roads for All implementation grants.

There are no penalties for SANDAG if the region does not attain its federal safety targets. FHWA evaluates target setting during regular planning reviews.

Schedule/Scope Impact:

The regional Vision Zero Action Plan was completed on November 15, 2024.

Federal safety targets for calendar year 2025 must be established by February 27, 2025.

¹ The Technical Advisory Group (TAG) consists of multidisciplinary community members with diverse perspectives including local jurisdictions, transit agencies, tribal nations, community-based organizations, Vision Zero advocacy groups, first responders, health professionals, education professionals, and law enforcement.

² AB 43 establishes more flexible speed limit setting for municipalities. SANDAG is developing a Safety Corridor Network for each jurisdiction to identify portions of each jurisdiction's roadway network that can be eligible for a 5-mph speed limit reduction.

³ An online platform for local agencies is being developed to share safety data, resources, support safety project development, and countermeasure selection.

⁴ Regional Active Transportation Program and Smart Growth Incentive Program evaluation criteria are being updated to further safety goals and leverage the regional VZAP analyses.

Federal Performance Safety Targets

Federal Highway Administration requires Metropolitan Planning Organizations (MPO) to establish safety targets for five performance measures annually. The Federal Safety Performance Measures include Total Fatalities, Fatality Rate by 100 million vehicle miles traveled (VMT), Total Serious Injuries, Serious Injury Rate by 100 million VMT, and Total Non-Motorized Fatalities and Serious Injuries. MPOs have the option of supporting statewide targets established by Caltrans or developing and supporting regional targets. SANDAG is evaluating supporting the statewide targets or setting regional targets for calendar year 2025 and will seek input from committee members.

Next Steps

SANDAG will advance implementation steps identified in the Vision Zero Action Plan in coordination with partner agencies. Staff will continue to seek feedback on safety target setting from working groups and policy advisory committees to inform the target submittal in February 2025.

Antoinette Meier, Senior Director of Regional Planning

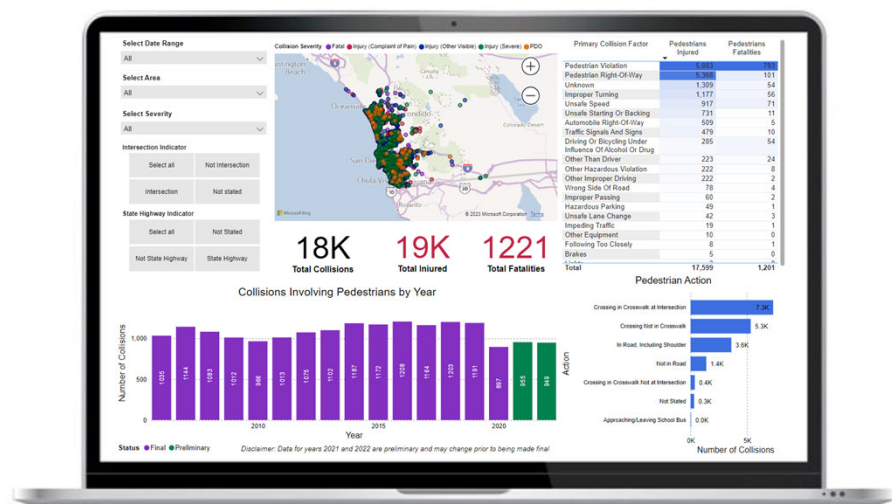


Vision Zero Action Plan Updates and Performance Measure 1 Safety Targets

TransNet Independent Taxpayer Oversight Committee| Item Number 7
Sam Sanford, Senior Regional Planner
Jacqueline Sisk, Associate Regional Planner
Wednesday, January 8, 2025

Traffic Safety Dashboard

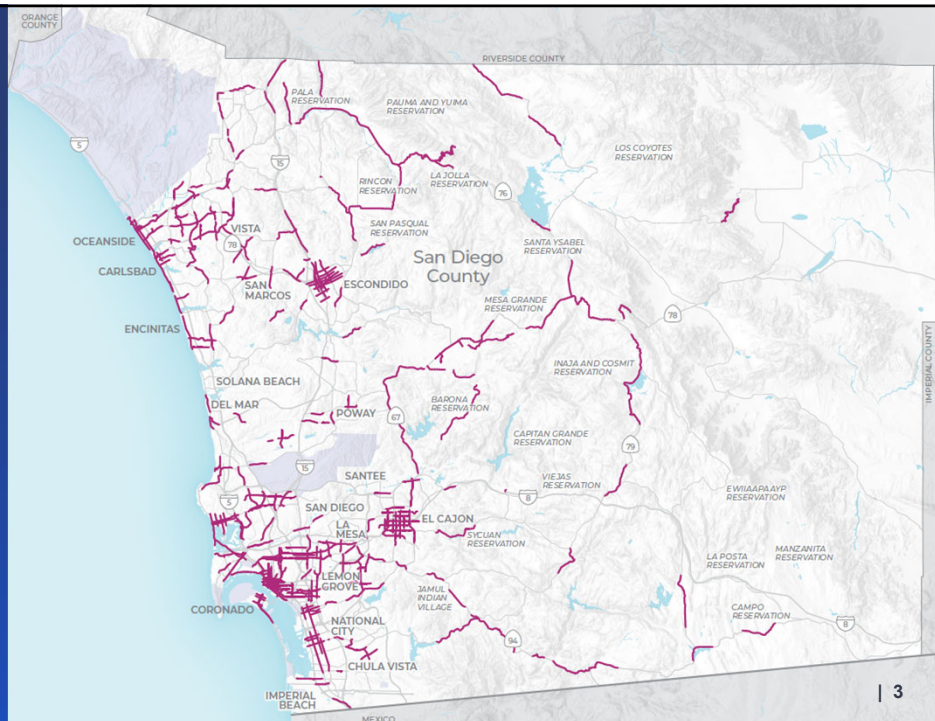
SANDAG.org/trafficsafety



Safety Focus Network

54% of fatal and serious injury crashes occur on just **6%** of our region's local roads

Equity Areas make up only **19%** of the region but account for **44%** of the Safety Focus Network



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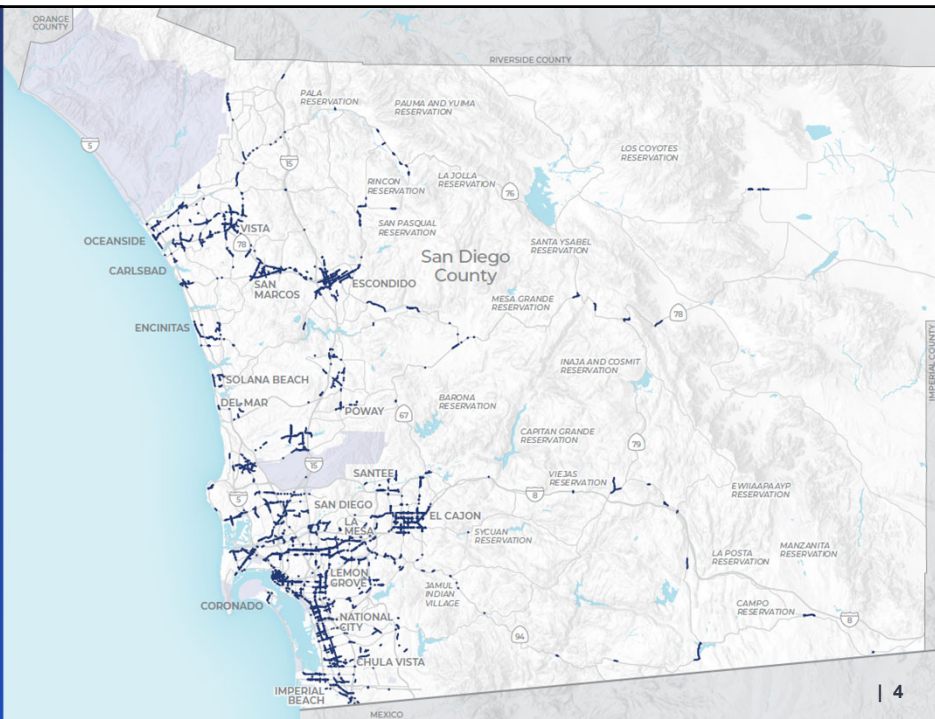
Systemic Safety Network

Road classification: Major roads and freeway ramps

Number of lanes: Roads with two or more lanes per direction

Intersection type: Side-street stop-controlled and signalized intersections on wide, high-speed roads

Proximity to activity generators: Roads or intersections near commercial areas, multi-family housing, transit stops, or schools.



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Public Engagement

- SANDAG Working Group and task force updates
- Digital outreach including interactive map and surveys
- In-person public events
- Community-based organization outreach
- Social media connections
- Technical Advisory Group



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Vision Zero Action Plan - Why This Matters to the Region

4,433 PEOPLE

Died or were Seriously Injured in Crashes on Local Roads
in the San Diego Region Between 2018 and 2022

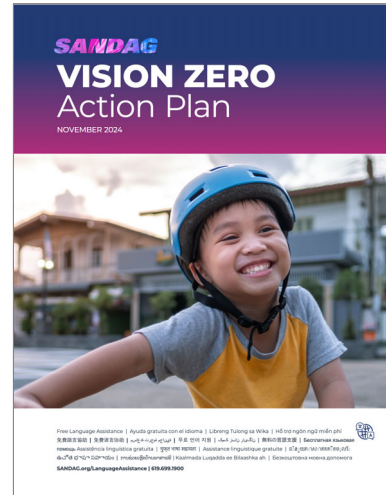
THIS IS WHY SANDAG DEVELOPED THE VISION ZERO ACTION PLAN

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Vision Zero Action Plan - Final Plan Highlights

- **Plan Organization**

- Chapter 1: About Vision Zero
- Chapter 2: Understanding the Problem
- Chapter 3: Developing Solutions
- Chapter 4: How We Get to Zero



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Vision Zero Action Plan Implementation Actions



COORDINATE

Align efforts and ensure a unified approach



ADVOCATE

Advocate for policies, projects, funding, and legislative actions



PLAN

Integrate safety into regional planning efforts and provide resources



FUND

Allocate and prioritize funding



EDUCATE

Raise awareness through diverse methods of information sharing



EVALUATE

Evaluate successes and effectiveness of implemented strategies



IMPLEMENT

Develop projects to deliver on safety goals

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Near-term Action Examples



FUND

Align regional grants managed by SANDAG to prioritize safety investments that advance safety goals.

ATP and SGIP Safety Criteria



PLAN

Support local governments in evaluating posted speed limits and addressing speeding through data-driven assessments, policy recommendations, and targeted interventions that improve roadway safety and crash severity.

AB 43 Implementation Support



IMPLEMENT

Develop resources to facilitate informed decision-making and provide services to support regional safety needs.

Local Agency Vision Zero Resource Hub

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Vision Zero Action Plan - Next Steps



- AB 43 Implementation Support
- 2025 Regional Plan
- Support agency applications for Safe Streets and Roads for All funding
- Performance Measure 1 Target Setting

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Federal Performance Safety Targets

- Annual federally required process
- Two Target Setting Options
 - Supporting statewide targets
 - Developing regional targets
- Performance Measures
 1. Total fatalities
 2. Fatality Rate by 100 million vehicle miles traveled (VMT)
 3. Total Serious Injuries
 4. Serious Injury Rate by 100 million VMT
 5. Total Non-Motorized Fatalities and Serious Injuries

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Caltrans' 2025 Statewide Safety Targets

Performance Measure	2025 Target (5-Year Average)	2025 Target (Annual Number)	Average Annual Reduction
Total Fatalities	4,048.6	3,818	2.84%
Fatality Rate (per 100M VMT)	1.26	1.14	4.61%
Total Serious Injuries	16,630.5	15,404	3.69%
Serious Injury Rate (per 100M VMT)	4.77	4.42	3.69%
Total Non-Motorized Fatalities and Serious Injuries	4,373.3	4,071	2.84% (F) 3.69% (SI)

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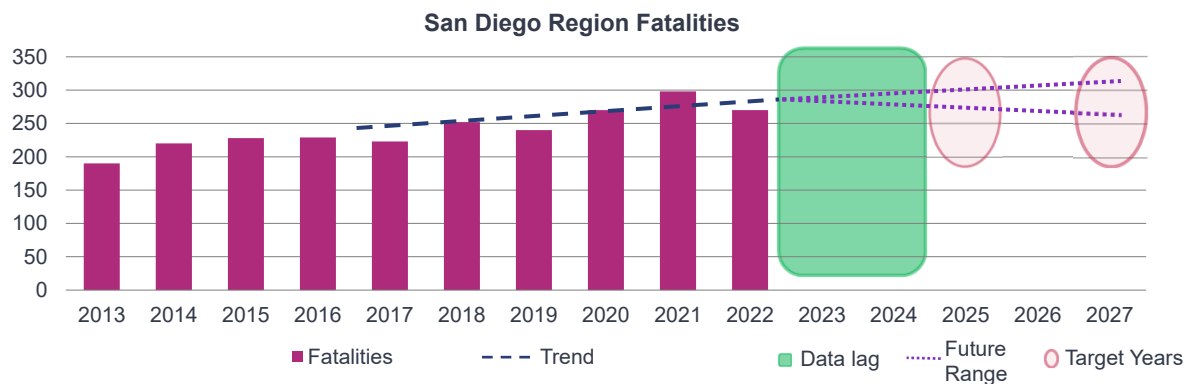
Target Setting - Safety Targets Proposed Methodology

- Process for calendar year 2025 safety targets

- Current trends
- Influencing factors



Missing years
Expected future



Target Setting - What Influences Traffic Safety?

Supporting influences

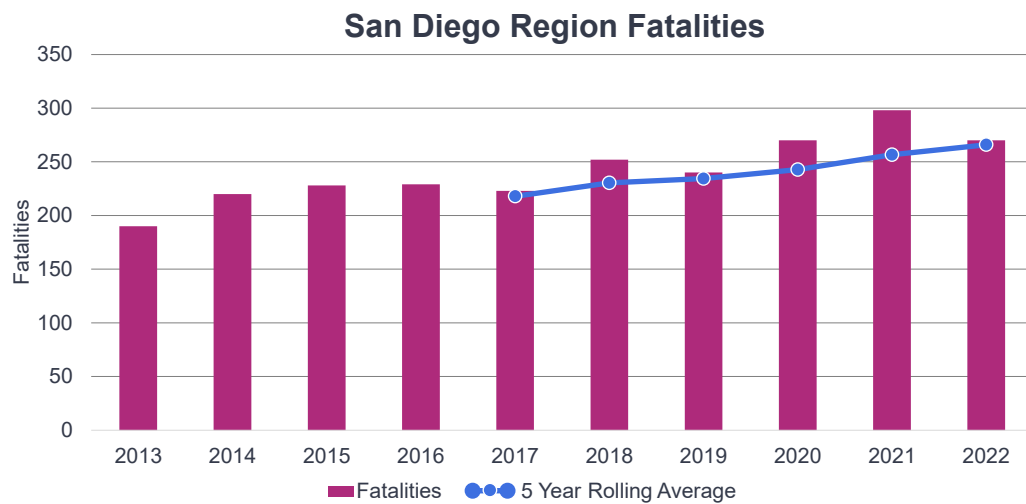
- Speed management (AB43)
- Intersection visibility (AB413)
- Complete streets (SB960)
- Completed projects and programs

Other influences

- Demographics
- Mode share
- Vehicle fleet (age, EV, AV)
- Economy

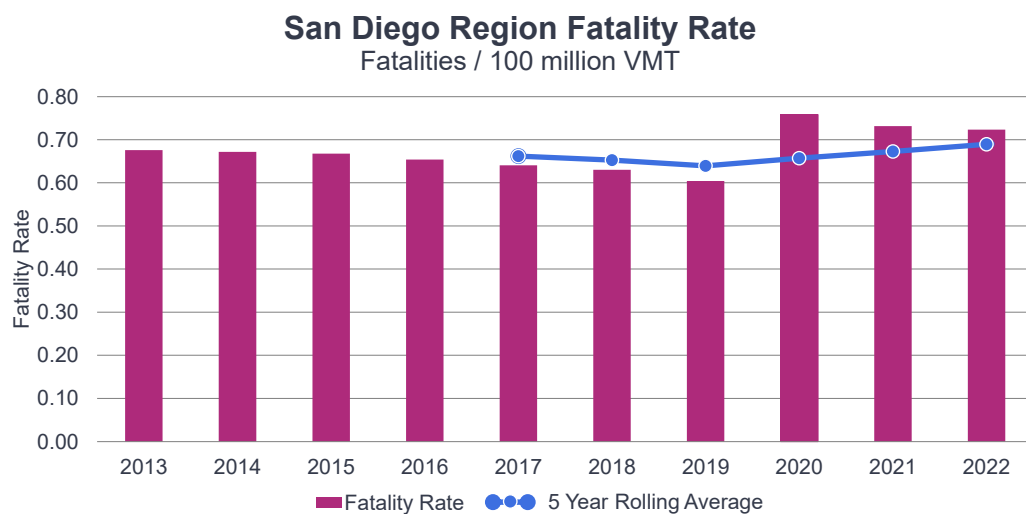


Target Setting - Regional Fatalities



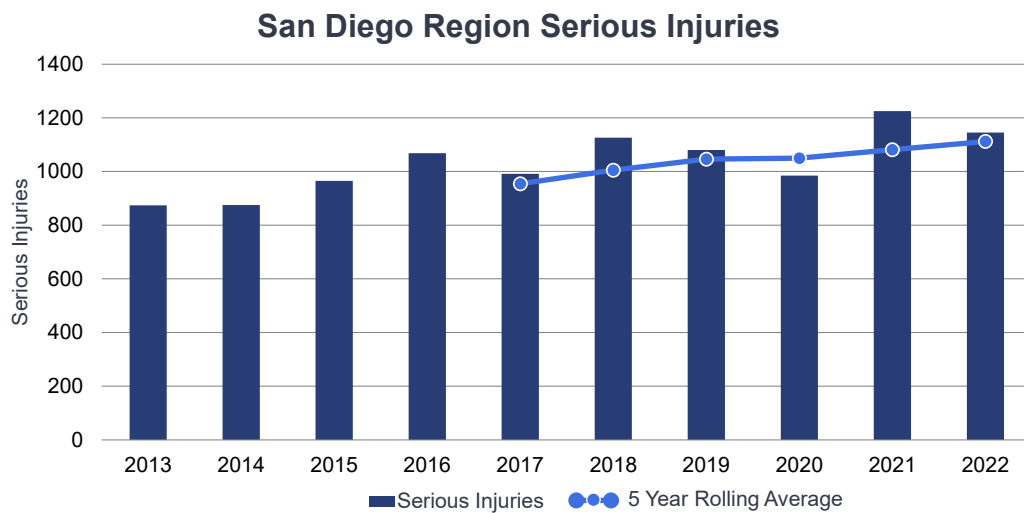
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Target Setting - Regional Fatality Rate



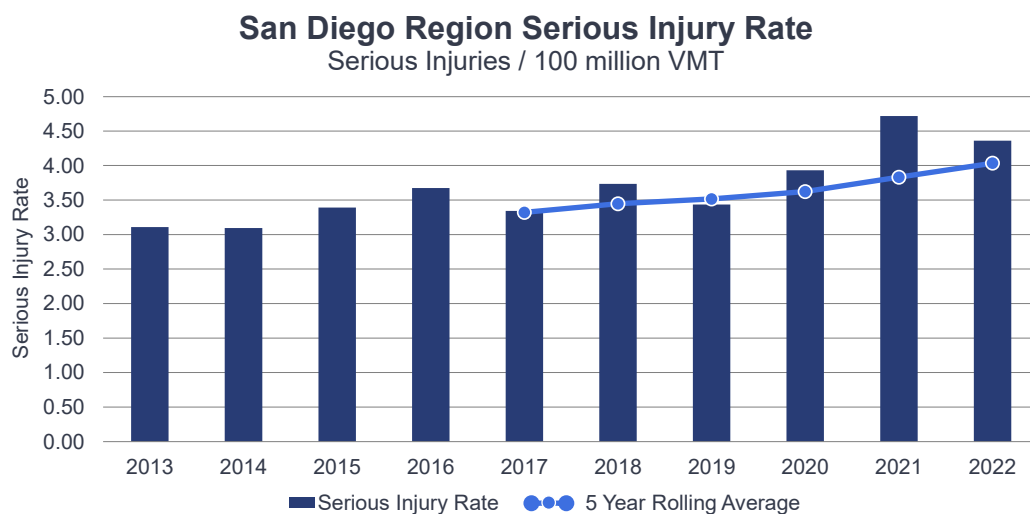
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Target Setting - Regional Serious Injuries



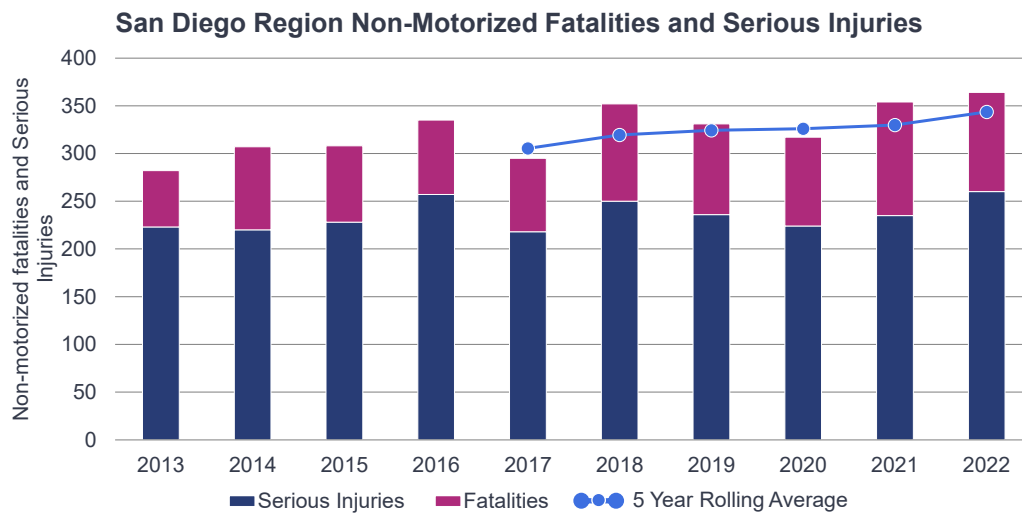
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Target Setting - Regional Serious Injury Rate



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Target Setting - Regional Non-Motorized Fatalities and Serious Injuries



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