

***TransNet* Independent Taxpayer Oversight Committee**

***TransNet* Triennial Performance Audit**

June 2015

Submitted To:

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Executive Summary

In 2004, San Diego residents voted to extend an existing half-cent sales tax for an additional forty years funding \$14 billion of transportation, transit, and environmental programs through the *TransNet* Extension Ordinance. As part of the *TransNet* measure, safeguards were put into place requiring a triennial performance audit of the program through its sunset in 2048. In June 2014, the Independent Taxpayer Oversight Committee (ITOC) selected Sjoberg Evashenk Consulting, Inc. (SEC), to conduct the required performance audit. Objectives of the audit include evaluating implementation of prior audit recommendations, assessing organizational structure and processes, determining the efficiency and effectiveness of project delivery practices including contracting and controls, and reviewing ITOC activities and adherence to its bylaws. This report provides the results of the third performance audit of the *TransNet* program focused on changes implemented during the three-year period between Fiscal Years 2011-2012 and 2013-2014 as well as operational processes and functional performance for *TransNet* programs.

Audit Results

In general, SEC's review reveals there continues to be strong practices in place at the San Diego Association of Governments (SANDAG) and its partner agencies to guide and implement the wide-variety of complex programs envisioned under the *TransNet* Extension Ordinance and to continually improve operations and proactively address recommendations for improvement. SEC's review found SANDAG and its transportation partners continue to employ a solid framework of practices, controls, activities, management, and oversight to sustain and deliver a viable 40-year transportation system. Our audit revealed that SANDAG and its regional partners are operating a well-run *TransNet* program that encompasses many best and leading practices related to program development and delivery, environmental mitigation, cost and schedule control, contracting and construction, and general management and oversight. All parties involved with *TransNet* activities seem highly focused on collaborative relationships, goals and accomplishments, and continual improvement.

Audit highlights include:

- While the Major Corridor Capital Improvement Program has experienced some project delays and budget increases, nearly 30 percent of Early Action Program projects have been opened to traffic since 2007. Additionally, SANDAG and Caltrans exercise solid project delivery practices, although some enhancements should be made and potential risks associated with the new Construction Manager/General Contractor approach should be closely monitored.
- Similar to the 2011 audit, Local Street and Road Program performance related to congestion relief, mobility, and safety still cannot be assessed—primarily due to the lack of an arterial traffic detection infrastructure and available funding dedicated for building the infrastructure. While SANDAG has made strides to capture performance data for local streets and roads through development of an annual report, more can be done in this area. Additionally, deteriorating local streets and roads may warrant a reexamination of congestion relief and maintenance project definitions.

- The Environmental Mitigation Program continues to be well-run. Since the prior audit, SANDAG has implemented strategic plans with goals and objectives, defined the concept of Economic Benefit, and developed an Environmental Mitigation Program Dashboard to provide the public and stakeholders with financial and performance data. Still, additional work is required to utilize available local mitigation program monies, formally measure results of mitigation efforts, and create a methodology to quantify how much economic benefit has actually been achieved thus far.
- Transit service operators continue to have solid on-time performance and improved reliability. Further, services provided by the Metropolitan Transit System (MTS) and North County Transit District (NCTD) continue to outperform peers for fixed route and all rail modes. Additionally, operators are making improvements to provide user-friendly transit dashboard performance data.
- While grant activities are diligently monitored by SANDAG staff, there is limited performance data captured to summarize what has been achieved toward overall program goals and objectives for several of the programs. However, SANDAG has made progress in tracking grant performance through stronger monitoring and grantee progress reporting. Additionally, minor adjustments could be made to enhance performance monitoring. On a positive note, average grant processing timelines have decreased by several months since the 2011 audit.
- While it is still too early to fully assess Active Transportation capital project activities as few projects have been completed, the audit found that several projects reflected schedule delays. Additionally, associated emerging project management practices could be improved and plans should be developed to capture performance results.
- The ITOC continues to comply with the *TransNet* Extension Ordinance and fulfill its taxpayer responsibilities.

To assist SANDAG and its *TransNet* partners in the quest for continual improvement in terms of efficiency, effectiveness, and accountability to the taxpayers of the San Diego region, ITOC should suggest that SANDAG and its partners consider the following series of recommendations. SEC believes these recommendations could be implemented without significant use of resources, and that no significant barriers exist to impede that implementation. Key recommendations include:

- Enhancing practices over the Major Corridor capital projects by formalizing certain project management protocols, closely monitoring risks associated with the implementation of the Construction Manager/General Contractor approach, and implementing related leading practices of the Construction Manager/General Contractor approach as well as implementing project delivery performance metrics;
- Improving Local Street and Road Program performance by implementing one of the suggested options for regional arterial detection and summarizing currently reported performance data as well as capturing local pavement condition index information;

- Assisting local jurisdictions with managing future needs for roadway maintenance by revisiting the *TransNet* Extension Ordinance and Expenditure Plan's provision definitions between congestion relief and maintenance categories to allow local jurisdictions the ability to better identify projects to meet local street and road needs;
- Strengthening the Environmental Mitigation Program by continuing efforts to market local mitigation program money available for locals, beginning to focus on formally measuring results of mitigation efforts against strategic goals and objectives, and creating a methodology to quantify how much economic benefit has been actually achieved to compare against what was released to identify funding deficits or surpluses;
- Building upon the successful transit program by working collaboratively with transit partners to build user-friendly transit operations performance dashboards that report MTS and NCTD transit performance data and results;
- Beginning to capture, track, and report performance outcome data to measure whether grant activities are meeting stated goals and objectives as well as making minor adjustments to improve certain grant progress reporting and monitoring processes; and
- Improving project management practices and performance monitoring for the Active Transportation Early Action Program capital projects by developing project delivery and management plans, ensuring practices are consistent with other *TransNet* capital projects, and establishing performance indicators to measure performance.

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Introduction and Background

To relieve traffic congestion and improve highways, transit, streets, and environmental services in the San Diego region, voters passed Proposition A in November 2004 calling for a continuation of an existing *TransNet* half-cent sales tax for an additional 40-year period from 2008 through 2048. This proposition, implemented through the San Diego Association of Governments Board of Directors' adoption of the *TransNet* Extension Ordinance and Expenditure Plan, paved the way for dedicated local funds to be leveraged through state and federal matching dollars for improving regional systems. SANDAG is ultimately responsible for administering the *TransNet* program and projects funded through the *TransNet* Extension Ordinance in coordination with several *TransNet* partner entities.

TransNet Extension Ordinance of 2004

Recognizing the continued need for transportation and transit improvement projects in the region and the importance of minimizing their environmental impacts, the SANDAG Board of Directors prepared and authorized the *TransNet* Extension Ordinance and Expenditure Plan to expand upon the foundation and projects completed under the original *TransNet* program approved by voters in 1987. The Ordinance and Expenditure Plan, a legal document that formally enacts the sales tax measure, provided for the implementation of the region's transportation improvement program and identified an estimated \$14 billion for transportation improvement projects to be funded by tax revenues over the 40-year period. *TransNet* revenues are distributed among a mix of transportation and environmental projects in accordance with established percentages. Some programs planned under *TransNet* are grant based, and others are project-based—still others are more regionally-focused.

Funding Allocations Under TransNet

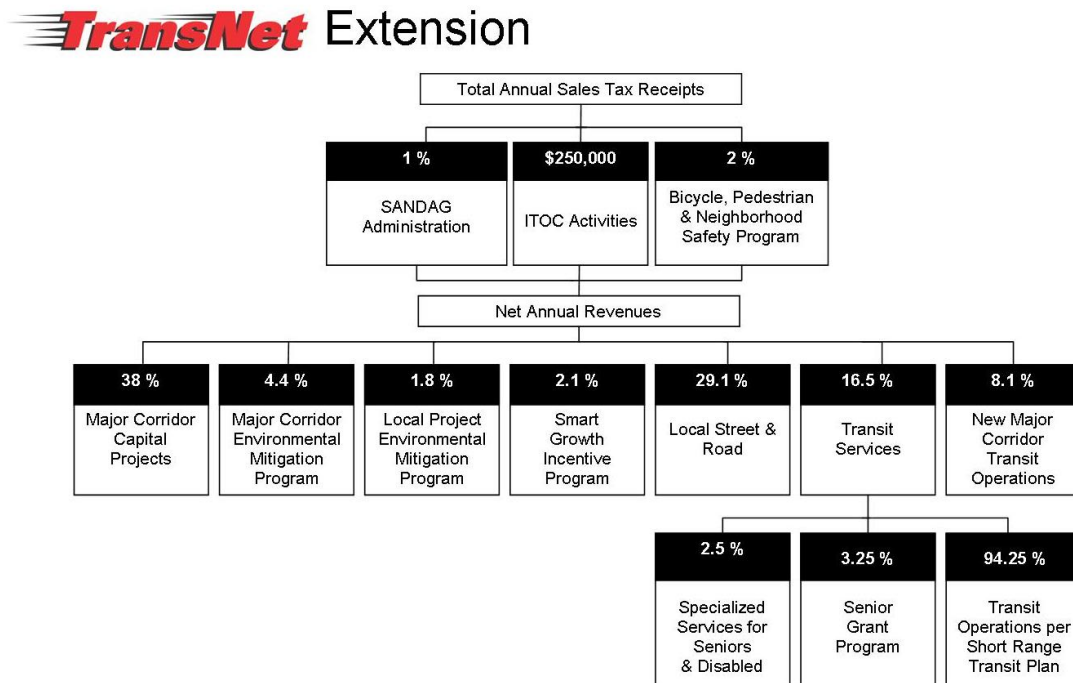
Under provisions of the *TransNet* Extension Ordinance, funds generated must be allocated to each program using a specified percentage or amount as shown in Figure 1.

Nearly 75 percent of funds are dedicated to major corridor capital projects for highways and transit in addition to local streets and roadways. The remaining 25 percent is mostly spent on transit services, environmental mitigation, and Active Transportation capital projects as well as various grant programs. Additionally, up to one percent of annual *TransNet* revenues is available for SANDAG administration as well as another \$250,000 a year (with inflationary adjustments) set-aside for ITOC oversight activities.

Moreover, *TransNet* monies are leveraged with a variety of state, federal, and local funds—such as state Transportation Development Act funding, local street funding, and Federal Highway Administration and Federal Transit Administration funding—to accomplish the program vision for the San Diego region.

Approximately \$5.4 billion of the *TransNet* Extension Ordinance's estimated \$14 billion program has been spent as of June 30, 2014 or committed to be spent over the next five years.

Figure 1: *TransNet* Sales Tax Funding Allocation



Early Action Program

Prior to the start of the *TransNet* Extension in 2008, SANDAG and its partners took the initiative to launch an “Early Action Program” to accelerate the start and completion of certain projects. Mostly, the Early Action Program focused on major capital corridor construction of freeways and transit facilities with additional funds spent on the Environmental Mitigation Program. Using innovative financing including commercial paper and bonding, the Early Action Program started in 2005—three full years before the first *TransNet* Extension sales tax revenues were generated.

After the *TransNet* Extension became effective in 2008, additional programs were initiated and funded such as local streets and roads, environmental project mitigation, transit services, and grant programs including Smart Growth Incentive, Senior Mini-Grants, and Active Transportation. Although the “early” period prior to the effective date of the *TransNet* Extension Ordinance has passed, all current projects, grants, and activities related to Major Corridors and the Active Transportation capital projects are still considered part of the Early Action Program.

Entities Involved with *TransNet*

While SANDAG is the primary entity responsible for the *TransNet* program, several others partner together in the San Diego region to cooperatively share responsibilities for planning, implementing, and monitoring projects and programs funded through the *TransNet* Extension Ordinance as shown in Figure 2.

Figure 2: Responsibilities of Entities Involved with *TransNet* Programs



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Scope and Methodology

In accordance with the *TransNet* Extension Ordinance, the Independent Taxpayer Oversight Committee has the responsibility for conducting triennial performance audits of the agencies involved in the implementation of *TransNet*-funded projects and programs.

Audit Scope

In June 2014, ITOC hired Sjoberg Evashenk Consulting, to conduct the third triennial performance audit for the three-year period covering Fiscal Years 2011-2012 and 2013-2014. Specifically, ITOC asked SEC to examine the performance of SANDAG, Caltrans, MTS, NCTD, the City of San Diego, the County of San Diego, and a representative sample of the other cities of the region that have been involved in *TransNet*-funded projects. Of particular note, the review was required to focus on changes that have occurred since the second triennial audit to *TransNet* programs including Major Corridor Capital Projects, Environmental Mitigation Program, Local Street and Road, Transit Operations for both existing and new corridors, Smart Growth Incentive Program, Senior Mini-Grant, and Active Transportation Programs.

Audit Objectives

Five primary objectives were identified for this performance audit as follows:

1. Evaluate the status of implementation of recommendations from the second triennial performance audit and effectiveness of these prior recommendations.
2. Determine whether the organizational structure and operational processes allow for effective and efficient project delivery, cost control, and schedule adherence.
3. Identify process changes in contracting, construction, permitting, and other procedures that could improve the efficiency and effectiveness of the *TransNet* program.
4. Evaluate the efficiency and effectiveness of ITOC, including adherence to its bylaws.
5. Identify and evaluate any potential barriers to and opportunities for proposed changes.

As part of fulfilling these audit objectives, SEC reviewed operational processes and organizational structures that had changed since the second audit as well as assessed program activities and analyzed the performance of each program.

Audit Methodology

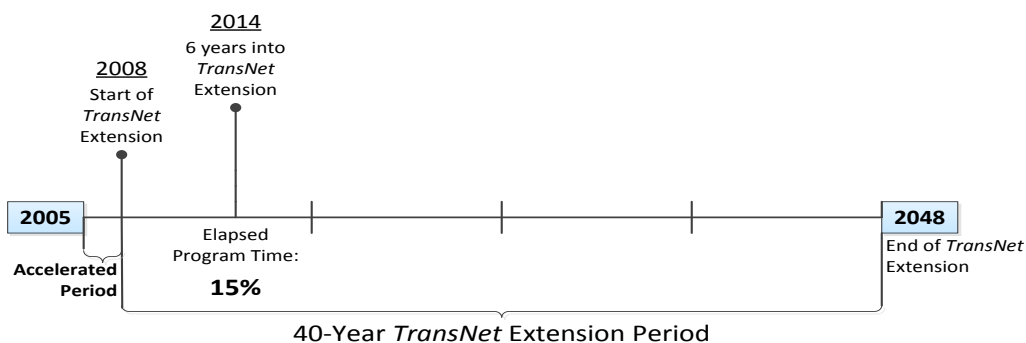
To fulfill these objectives, SEC conducted a series of in-depth audit tasks involving data mining and analysis, documentary examinations, peer comparisons, source data verification, and one-way interviews. Appendix A provides the detailed methodology employed on this audit. SEC conducted this audit in accordance with generally accepted government auditing standards. Those standards require that SEC plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. SEC believes that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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Chapter 1: Progress and Changes Since Prior Audit

With the *TransNet* program in the early phases of its 40-year duration, it is challenging to draw conclusions on ultimate project delivery efficiencies or performance effectiveness given that many projects are still in preliminary scoping or environmental phases. As shown in Figure 3, only 15 percent of the 40-year timeline has elapsed; thus, the vast majority of the program has not yet been launched. However, SANDAG and its partners have performed many activities and made significant strides in the short time since the *TransNet* Extension Ordinance began in 2008 spending and committing \$5.4 billion of the estimated \$14 billion *TransNet* Program.

Figure 3: Timeline Showing Critical *TransNet* Dates and Time Elapsed



Strong Practices Continue, While Certain Processes have Been Enhanced

While certain changes and process improvements have been made since 2011, the same solid foundation that *TransNet* was built upon continues to exist. Specifically, SEC found:

- Strong governance and oversight structure continues to be employed relying on cooperation, collaboration, and communication between the many different entities involved with *TransNet* with significant input at the project and overall program level.
- Financial strategies incorporated into the *TransNet* Plan of Finance continue to be reasonable and in line with similar financing structures at peer entities. Assumptions behind revenue and cost projections included in the model seem sound. While adjustments could be made to tweak components based on individual philosophy and rationale, the current model has been vetted by project team experts, economists, management, and external financial specialists. Moreover, current debt service coverage ratios at 3.1 times indicate strong financial strength to repay debt.
- Additionally, the current 2014 Plan of Finance demonstrates that total capital costs may be funded in a way to maintain positive fund balances and ample debt service coverage in the Major Corridor Program through Fiscal Year 2048—the *TransNet* Extension Ordinance sunset date. However, there is still another 25 years where circumstances and situations may change warranting revisions to the model at that time. As the end date draws near, more will be known as to whether all promised projects can be delivered or whether significant modifications may be necessary. Thus, it is essential for SANDAG to continue vigorously monitoring results and fine-tuning its model on an on-going basis.

While the solid *TransNet* framework remains the same, several processes have been improved, including shortening grant award timelines, implementing environmental mitigation program strategic plans, and establishing an early action program for bike facility capital projects as described more in subsequent report chapters.

Prior Audit Recommendations were Addressed, Although Improvements can be Made

In 2011, the prior audit offered 22 recommendations to improve on the strong practices in place over the various *TransNet* program areas. For instance, some recommendations increased efficiencies such as those related to streamlining grant processes; while other suggestions strengthened effectiveness through performance measurement and reporting. Recommendations were also made in various *TransNet* areas such as revising administrative rules and practices surrounding the Local Street and Road program and employing checklists and standardized documentation over grant site visits. Other recommendations strengthened oversight and accountability to ensure the foundation surrounding the program continues to be solid.

Following the issuance of the second performance audit report, SANDAG staff immediately began addressing the audit recommendations as described in their initial response to the audit report. As of November 2014, SANDAG indicated all recommendations were addressed and implemented.

Continued Effort is needed on Performance Outcomes

While SANDAG and its *TransNet* partners have incorporated the recommendations in some manner, additional efforts are needed to better address the initial audit concerns related to performance tracking over local streets and roads, as well as grants. Currently, there are numerous documents produced by SANDAG and its partners reporting on major capital project performance and transit operations including annual State of the Commute reports, biennial Regional Comprehensive Plan Monitoring Reports, Quarterly *TransNet* Progress Reports, and Environmental Mitigation Program status as well as transit operator produced information. SANDAG also uses its public Dashboard for communicating budget and schedule progress for *TransNet* capital projects in addition to travel delay data for three highway corridors only—the I-15, I-5 North, and SR 52.

However, while some performance data is available for certain *TransNet* categories such as major corridors and transit services, SEC was unable to assess performance for other *TransNet* areas such as the Local Street and Road Program outcomes related to congestion relief, mobility, and safety as well as several grant-funded programs' progress towards meeting overall grant program goals as described in Chapters 3 and 6 in this report. Recently, SANDAG has made strides to capture some performance data for local streets and roads through development of an annual report as well as tracks individual grant performance through stronger monitoring and grantee progress reporting; although, more can be done in this area.

Additionally, one peer entity combines project delivery metrics with system performance outcomes together in a quarterly report. Using a single page “Performance Dashboard,” the

Washington Department of Transportation provides a concise view of how highway performance tracks against its goals and targets as shown in Figure 4.

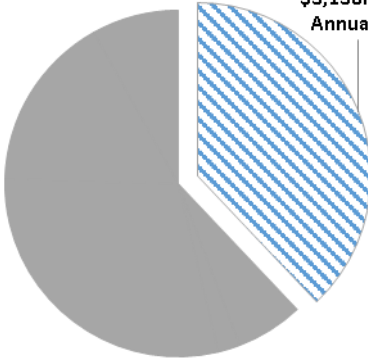
SANDAG and its partners might want to consider a similar comprehensive, one-stop report card to summarize *TransNet* major corridor performance—or consider expanding the report card to include other *TransNet* areas. Much of the data is readily available, so it would likely just require summarizing and assembling information into a comprehensive format. Other data, such as the project delivery statistics, would require some effort to establish a mechanism for capturing data and reporting results—although the resources required should not be operationally significant. With more emphasis being placed on performance measurement with the federal Moving Ahead for Progress in the 21st Century Act (MAP-21) and the pending 10-year comprehensive program review required by the *TransNet* Extension Ordinance to evaluate performance, a comprehensive tool like Figure 4 may assist in addressing those mandates.

Figure 4: Example of Washington Department of Transportation Performance Tracker

Performance Dashboard

Policy goal/Performance Measure	Previous Reporting Period	Current Reporting Period	Goal	Goal Met	Progress	Comments
Safety						
Rate of traffic fatalities per 100 million vehicle miles traveled (VMT) statewide (annual measure, calendar years: 2008 & 2009)	0.94	0.87	1.00	✓	↑	The rate of highway fatalities continues to decline
Rate of strains and sprains / hearing-loss injuries per 100 WSDOT workers (calendar quarterly measure: Q4 2010 & Q1 2011)	2.5/ 0.5	3.4/ 0.5	2.4/ 0.4	—	↓	Both strains/sprains and hearing loss were well over their goals for the quarter and for the year
Preservation						
Percentage of state highway pavements in fair or better condition (annual measure, calendar years: 2008 & 2009)	94.7%	93.0%	90.0%	✓	↔	Recovery Act-funded projects helped with backlog, but does not address all long-term needs
Percentage of state bridges in fair or better condition (annual measure, fiscal years: 2009 & 2010)	97.0%	98.0%	97.0%	✓	↑	Recovery Act funds contributed to increase in Good/Fair rating
Mobility (Congestion Relief)						
Highways: annual weekday hours of delay statewide at maximum throughput speeds (annual measure: calendar years 2007 & 2009)	32 million	25 million	N/A	N/A	↑	Reduction of 21% driven by both reduced demand due to the economy and increased capacity
Highways: Average clearance times for major (90+ minute) incidents on 9 key western Washington corridors (quarterly: FY11 Q1, FY11 Q2)	168 minutes	159 minutes	155 minutes	—	↑	Two extraordinary (6+ hour) incidents and seasonal weather affected the program's average clearance time this quarter
Ferries: Percentage of trips departing on time (quarterly, year to year: FY10 Q3, FY11 Q3)	91.5%	95%	90%	✓	↑	Performance is lower than one year ago, higher than previous quarter
Rail: Percentage of Amtrak Cascades trips arriving on time (quarterly, year to year: FY10 Q2, FY11 Q2)	59.1%	53.7%	80%	—	↓	WSDOT and Amtrak continue to evaluate projects and other means to improve on-time performance
Environment						
Cumulative number of WSDOT stormwater treatment facilities constructed or retrofitted (annual measure: calendar years 2008 & 2009)	Over 800	Over 1,037	N/A	N/A	↑	Stormwater facilities will now be constructed under a new permit, with new requirements
Cumulative number of WSDOT fish passage barrier improvements constructed since 1990 (annual measure: calendar years 2008 & 2009)	226	236	N/A	N/A	↑	Ten additional retrofits were completed in 2009
Stewardship						
Cumulative number of Nickel and TPA projects completed, and percentage on time (quarterly: FY11 Q1, FY11 Q2)	296/ 90%	300/ 89%	90% on time		↑	Performance decreased slightly from previous quarter, did not meet goal
Cumulative number of Nickel and TPA projects completed and percentage on budget (quarterly: FY11 Q1, FY11 Q2)	296/ 94%	300/ 94%	90% on budget	✓	↔	Competitive bidding and construction environment contribute to controlling costs
Variance of total project costs compared to budget expectations (quarterly: FY11 Q1, FY11 Q2)	under-budget by 1.0%	under-budget by 1.0%	on budget	✓	↔	Total Nickel and TPA construction program costs are within 1% of budget

Chapter 2: Major Corridor Capital Improvement Program

CHAPTER SUMMARY	
Implement identified major highway and transit congestion relief projects. - <i>TransNet Extension Ordinance – Major Transportation Corridor Improvement Program</i>	
 <p style="text-align: center;">Major Corridor Capital Projects \$5,150M (38% of Net Annual Revenues)</p>	<p>Program Performance</p> <p>With over \$1.8 billion in <i>TransNet</i> funds spent on major transportation corridor improvements as of June 30, 2014, the major corridor capital improvement program is the largest <i>TransNet</i> category.</p> <ul style="list-style-type: none"> ✓ Projects in this program are making progress and being completed, although many show schedule delays in the Dashboard. ✓ Annual hours of traffic delay per traveler decreased between 2005 and 2009 system-wide and have remained stable since then at 37 hours. ✓ In 2013, freeway delay increased 24 percent from 2012.
<p>Audit Results Highlights</p> <ul style="list-style-type: none"> ▪ Dashboard schedule and cost performance data indicates some delays and budget increases. <ul style="list-style-type: none"> ○ More than 58 percent of the 74 early action projects register a caution or critical status for schedule delays—although circumstances appear reasonable; and ○ Budgets have increased 57 percent since 2007, mainly due to additional projects and phases. ▪ Nearly 30 percent of EAP projects have been opened to traffic since 2007. ▪ Solid project delivery exists, although improvements can be made and the new construction manager/general contractor approach risks should be closely monitored. ▪ Internal project efficiency should be measured by metrics such as: <ul style="list-style-type: none"> ○ Percent of projects delivered on schedule and ready for construction; ○ Percent of change orders against original contract amount; and ○ Percent of projects delivered on budget. ▪ Change orders as a percent of contracts seem reasonable. For instance: <ul style="list-style-type: none"> ○ SANDAG and Caltrans issued nearly 990 change orders worth \$57.8 million for 19 completed projects that were selected for review. These change orders averaged between 13 percent for SANDAG and 17 percent for Caltrans of the original contract bid value. 	
<p>Recommendations</p> <ul style="list-style-type: none"> ▪ Improve SANDAG transit capital project management practices by finalizing SANDAG’s Construction Management Manual. ▪ Manage CM/GC risks by establishing and tracking performance, employing risk management, ensuring consistent data for cost estimates, and implementing communication protocols. ▪ Track and measure project delivery performance. 	

Performance Results are Available for Major Capital Corridors

As mentioned previously, there are several tools used to track and report performance data for the San Diego transportation network. Data is analyzed by SANDAG staff and reported to decision makers and the public related to the entire system and not just the isolated impacts of *TransNet* program projects.

According to SANDAG’s 2012-2013 Regional Comprehensive Plan Biennial Performance Monitoring Report, annual hours of traffic delay per traveler has remained fairly stable since 2005 with 37 hours per traveler in 2013 as described in Table 1. Travel volumes have remained fairly stable on certain corridors from 2005 to 2013 as well, while other corridors have seen big increases such as on the I-15 (Escondido to Downtown) with volumes growing from 276,000 to 309,000 and on the SR 52 with growth from 82,000 to 110,000 over the eight-year period between 2005 and 2013. Although volume has increased on the I-15, travel times have decreased for the morning commute from 46 minutes in 2005 to 32 minutes in 2013 and from 38 minutes in 2005 to 32 minutes in 2013 for the evening commute due in part to the economic downturn as well as completed managed lanes funded with *TransNet* money.

Table 1: Performance Reports on Major Transportation Corridors

Document	Relevant Indicators	Results Provided
RCP Biennial Performance Monitoring Report (2012-2013)	<ul style="list-style-type: none"> ✓ Annual Transit Ridership ✓ Travel Time ✓ Travel Volume ✓ Annual Hours Traffic Delay per Traveler 	<ul style="list-style-type: none"> ✓ Transit Ridership is stable since 2007 with 96 million boardings in 2013, and operator-reported data showing growth to 107.6 million riders in 2014 as discussed in Chapter 5. ✓ Travel time mostly unchanged majority of corridors, although several corridors realized decreases since 2005. ✓ Travel volume is relatively consistent, other than some corridors registering increases. ✓ Annual Hours Traffic Delay per Traveler is currently 37 hours—down from 44 hours per traveler in 2005.
Annual State of the Commute Report (2013)	<ul style="list-style-type: none"> ✓ Travel Volume ✓ Travel Time ✓ Peak Period Freeway Delay 	<ul style="list-style-type: none"> ✓ Weekday travel increased from 8.8 billion to 9.3 billion vehicle miles between 2012 and 2013. ✓ In 2013, freeway delay increased 33 percent for the morning commute and 20 percent in the evening compared to 2012. ✓ However, delays have decreased since 2006 by more than 26 percent.

Source: RCP Biennial Performance Monitoring Report, p. 7, 12, 14, and 17; Annual State of the Commute Report p.4 and 9.

Looking at a more recent time period, the 2013 State of the Commute report showed increased use of the transportation system and increased peak delays since the prior year report from 2012. Travel times remained fairly stable in some corridors, but showed increases in other corridors such as the I-805 impacted by construction between SR 52 and Mira Mesa Boulevard.

Additionally, in September 2014, Caltrans issued its first District 11 Mile Marker report intended to provide an assessment of its performance on both *TransNet* and non-*TransNet* projects towards goals such as safety, system performance, stewardship, and efficiency. As shown in Table 2, Caltrans exceeded goals for maintaining a healthy highway and limiting fatal accidents. Additionally, all planned projects were delivered according to planned schedules.

Table 2: Examples of Caltrans District 11 Capital Project Performance

Performance Measure	Goal	Current Period	Goal Met
Safety			
Number of Fatal Accidents in 2011 for every 100 million vehicle miles	1 or less	0.61	Yes
Delivery			
Percentage of planned projects delivered on schedule and ready for construction in Fiscal Year 2012-2013	100	100	Yes
Maintenance			
Percentage of District 11 highway system pavement that is healthy	90	94	Yes

Source: District 11 Mile Marker 11.0, September 2014, page 6

Although Some Project Schedules are in Caution Status, Dashboard Data Indicates Projects are Being Completed

Since 2006, SANDAG has used a “Dashboard” concept to provide certain project information to taxpayers and detailed information to assist internal program staff with managing projects. This interactive tool allows the public to obtain timely information about an early action program corridor or individual project status, budgets, and schedules at a level of detail commensurate with their personal interest. The Dashboard not only provides transparency to the public, but also promotes greater accountability within its organization through its encouraged use as a program management vehicle promoting awareness on ensuring accuracy of publically-distributed data. Data is organized by the 11 Early Action Program corridors and at the individual segment, or project, level within the Dashboard.

One of the Dashboard’s central features is a project performance indicator tool divided into three distinct colors or sections—green, yellow, and red. If a *TransNet* project is over-budget by 10 percent or unlikely to meet schedule milestones, the Dashboard arrow in the particular gauge will be in the yellow zone. Budget variances greater than 20 percent or missed schedule deadlines would change the indicator to red. If all project indicators are on target, the indicator will

register in the green zone. Generally, these project performance indicators provide a quick view of status and highlight where budgets or key milestones appear to be in jeopardy.

Although Schedule Status Shows Several Delays, Circumstances Seem Reasonable

As shown in Table 3, only three corridors are on schedule while most are delayed later than expected—with some end dates extending several years past expected baseline end dates. Additionally, more than 58 percent, or 43 projects, of the 74 project segments within the *TransNet* corridors were in a caution or critical status as of September 2014.

Table 3: Comparison of Corridor-Level Baseline Schedules with Current Completion Dates

Early Action Program Corridors	Baseline Start Date	Baseline End Date	Current plan Start Date	Current Plan End Date	Reported Status
I-5 South Corridor	11/24/2003	06/01/2018	11/24/2003	12/23/2024	Y
I-15 Corridor	01/01/1998	07/31/2017	01/01/1998	12/28/2018	Y
SR 52 Corridor	04/07/1987	06/30/2014	04/07/1987	08/13/2019	G
SR 76 Corridor	06/01/2000	12/01/2018	06/01/2000	06/30/2022	Y
Orange/Blue Line Corridor	07/07/2007	06/30/2015	07/06/2007	04/28/2016	Y
SR 94/SR 125 Corridor	07/23/2010	12/31/2013	07/23/2010	07/05/2015	R
SR 78/SPRINTER Corridor	01/01/1996	06/30/2011	01/01/1996	06/30/2011	G
I-5 North Corridor	01/01/2001	12/01/2019	01/01/2001	04/20/2026	Y
Mid-City Corridor	06/23/2008	12/31/2012	06/23/2008	06/02/2015	Y
I-805 Corridor	01/28/2005	12/31/2016	07/01/2005	07/23/2020	Y
Border Access Corridor	01/01/1994	06/30/2016	07/31/2001	07/29/2016	G

Source: *TransNet Dashboard Schedules as of September 30, 2014*

To understand the circumstances surrounding delays in start times and completion dates, SEC reviewed selected projects in corridors that reported some of the greater delays. For example, SEC found delays on a Caltrans-led project constructing two high occupancy vehicle lanes on the SR 94 from I-805 to downtown. These delays were caused by redesign needed based on public concerns on freeway transitions and access to a Market Street off-ramp as well as new design solutions that were needed for bike paths and pedestrian overcrossings that added work and extensive public outreach. While these combined activities significantly increased the schedule, the rationale behind the schedule changes is reasonable.

Many Projects Have Been Completed

While the Dashboard shows schedule delays, SANDAG and Caltrans have completed 22 projects since 2007—nearly 30 percent of the 74 current Early Action Program projects that are open to traffic as shown in Table 4.

Table 4: TransNet Major Corridor Capital Projects Completed, as of November 2014

#	Segment Name	Date Open to Traffic
I-5 South Corridor		
1	SuperLoop	06/27/2012
I-15 South Corridor		
2	I-15 BRT Stations: Rancho Bernardo, Sabre Springs, Del Lago	03/23/2009
3	I-15 Express Lanes Middle Segment	03/31/2009
4	I-15 Express Lanes North Segment	12/10/2010
5	I-15 Express Lanes South Segment	06/28/2011
6	I-15 FasTrak	01/16/2012
7	SR 78 Nordahl Road Interchange	11/07/2012
8	I-15 BRT Sabre Springs Parking Structure	03/03/2014
9	I-15 Bus Rapid Transit	06/09/2014
SR 52 Corridor		
10	SR 52 Widening: I-15 to Mast Blvd	08/07/2007
11	SR 52 Extension	03/29/2011
12	SR 76 Middle	11/21/2012
Orange Line-Blue Line Corridor		
13	Orange and Blue Line Platforms	04/15/2013
14	Blue Line Crossovers and Signals	11/18/2013
15	Low-Floor Light Rail Transit Vehicles	02/21/2014
I-5 North Corridor		
16	I-5 HOV Extension & Lomas Santa Fe Interchange	02/07/2009
17	Carlsbad Double-Track	01/09/2012
18	Tecolote to Washington Crossovers	10/14/2013
19	Sorrento to Miramar Phase 1	03/17/2014
I-805 Corridor		
20	I-805 E Street Auxiliary Lane	02/07/2009
Border Access Corridor		
21	I-805/SR 905 Connectors	02/10/2012
22	SR 905: I-805 to Britannia Boulevard	04/28/2014

Source: TransNet Dashboard Data as of September 2014

Because the Dashboard does not register a project “end date” until the claim and warranty period are complete, if a project or segment within a corridor is materially complete and open to traffic, the Dashboard schedule could still show an “end date” that would be months or years out to account for the claim and warranty period. Further, when projects or segments are summarized

at the corridor level, the Dashboard uses the most distant calendar date as the overall end date for the entire corridor. For instance, while the I-5 North Corridor shows an end date that is seven years after expected baseline, there have been four projects within that corridor that are complete and open for traffic.

Most Corridor Budget Increases Result from Additional Projects Added

Throughout the lifecycle of a corridor, segment, or project, costs can vary significantly with scope changes, cost overages and cost savings, and the addition of new budgeted phases within a project—all activity that is typically documented in detailed project files. Dashboard budget data for the 11 EAP corridors shows growth from \$4.4 billion in expenditures originally anticipated in Fiscal Year 2006-2007 to \$6.9 billion currently budgeted as of Fiscal Year 2013-2014 for a 57 percent increase.

As such, more than half of the 11 corridors experienced a significant budget increase between Fiscal Year 2006-2007 and Fiscal Year 2013-2014 as shown in Table 5—although much of the increase seems to be attributable to new projects or phases added to the corridors since Fiscal Year 2006-2007 that were not originally anticipated to start during those early years of the *TransNet* Extension Ordinance. Additionally, because the timeframes on capital projects can extend over several years, actual current cost and prices can greatly fluctuate from early expectations.

Table 5: Comparison of Historical and Current Total Budget by Corridor, FY 2007 to FY 2014

Corridor	Total Budget ¹ (in millions)			Change Over Time
	FY 2007	FY 2011	FY 2014	
I-5 South	\$1,285	\$1,283	\$1,857	\$605
I-15	\$1,253	\$1,380	\$1,416	\$140
SR 52	\$719	\$571	\$489	(\$230)
SR 76	\$400	\$373	\$373	(\$27)
Orange Line – Blue Line	\$0	\$454	\$569	\$569
SR 94/SR 125	\$0	\$0	\$11	11
SR 78/SPRINTER	\$478	\$478	\$480	\$2
I-5 North	\$126	\$313	\$960	\$834
Mid-City	\$0	\$45	\$45	\$45
I-805	\$153	\$295	\$539	\$386
Border Access	N/A	\$225	\$192	\$192
Total	\$4,414	\$5,417	\$6,931	\$2,517

Source: *TransNet* Dashboard, September 2014 Budget History and Segment Budget Detail

Note: ¹Budget includes non-*TransNet* funds in capital improvement program as well.

For instance, between Fiscal Years 2011 and 2014, the Orange Line – Blue Line (Trolley Rehab) capital improvement project budget increased from \$454 million to \$569 million—an increase of

25 percent due to several factors. First, the project was originally programmed to procure 57 low-floor vehicles; however, a total of 65 low-floor vehicles were purchased increasing costs by \$36 million, or a third of the budget. The largest rise was related to the Blue Line station rehabilitation project where the budget was increased by \$69 million to include the project management aspects and consolidate all blue line infrastructure work under this project.

Moreover, these types of budget changes are typical for large scale, major capital construction projects throughout the nation. Budgets are typically funded in phases as the projects progress through their lifecycle. Given the uncertainty of conditions that could be encountered during a longer term construction project, such as environmental requirements or construction price fluctuations, costs are often more than originally anticipated. What is important is that all significant changes to funding must be communicated, discussed, and approved by SANDAG and Caltrans management as well as the SANDAG Board of Directors. Prior to that approval, it appears that staff provide detailed reports discussing rationale for overruns, options or alternatives considered, and impact of changes to the overall program budget or schedule, among other items.

Solid Project Delivery Exists, Although New Approach Should be Closely Monitored

For highway and transit capital projects, the *TransNet* program continues to employ good management practices over project documentation, monitoring and oversight, and on-going formal and informal meetings with project team members and senior and executive level management. These aspects help expedite problem-solving and provide opportunity for discussion and buy-in on project direction from staff at all levels. Caltrans, with assistance from SANDAG-hired consultants, is still responsible for delivering freeway capital projects, while SANDAG is responsible for transit capital construction.

For instance, the foundation for Caltrans' project delivery and management processes has remained relatively stable since the prior audit. Project delivery manuals and project specific guidelines are followed, and detailed protocols are in place related to budget and schedule control, change control, and document retention practices. More recently, emphasis is being placed on task management practices where individuals are assigned to manage the production and completion of a discrete deliverable within a project with goals including improved accountability, facilitated communication, and reduced budget and schedule change requests. Responsibilities are defined and formalized in writing.

For SANDAG led transit capital projects, staff indicated that there continues to be a strong working relationship with MTS and NCTD including regular communication, collaboration, and project status meetings. However, according to SANDAG, there is no formal project delivery manual for the oversight and management of transit capital projects—instead, project management practices can vary depending on the project corridor directors and assigned project manager. While there is a strong foundation in place that is functioning effectively over the capital construction projects, there are no agency-wide delivery manuals guiding SANDAG-managed transit projects on best practices, uniform protocols, and project delivery file retention. Rather, SANDAG Board Policies No. 015: Records Management and No. 019: Project Plans, Specifications, and Estimates outline record management requirements and provide direction for

the design of major transit projects and preparation and approval of contract plans, specifications, and cost estimates.

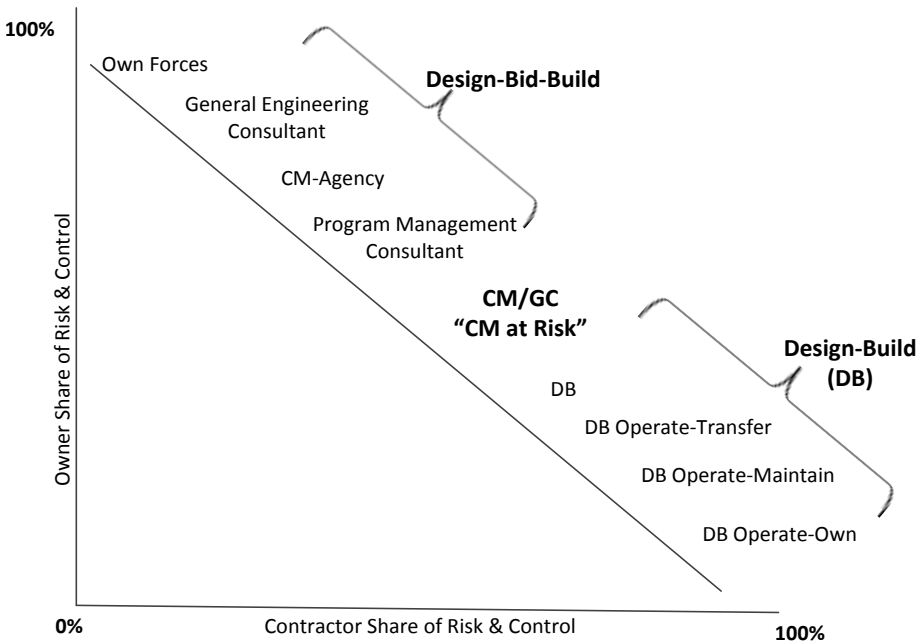
To enhance project management and delivery practices, SANDAG implemented a prior audit recommendation to develop and formalize certain project management and delivery guidelines. Specifically, SANDAG established corridor specific Configuration Management Plans and Document Control Plans for the Mid-Coast and LOSSAN corridors outlining processes and controls for document changes and the storage and tracking of documents. While SANDAG indicated during the last audit that it was in the process of developing a Construction Management Manual, this manual is still in draft format and has not been finalized.

New Delivery Model should be Closely Monitored

Recently, SANDAG and Caltrans have employed a new construction model—known as the Construction Manager/General Contractor (CM/GC) model—for two of its *TransNet* capital construction projects. Specifically, this new approach is being used on the I-5 North Coast Corridor program managed by Caltrans and the Mid-Coast Corridor Trolley Project managed by SANDAG. Both projects are still in the early design phase.

The model relies on commitments from a construction manager to deliver projects within a guaranteed maximum price under an integrated approach where the CM/GC is involved in each stage of the project delivery acting as consultant to the owner in the development and design phases and as a general contractor during the construction phase. This differs from traditional approaches where separate consultants are used for design and construction phases. As illustrated in Figure 5, the owner generally bears a greater proportion of the risk and control with the traditional industry Design-Bid-Build project delivery method, than the CM/GC project delivery method. Yet, once a Guaranteed Maximum Price is established, the CM/GC is generally contractually obligated to complete the project within the established price and, as such, assumes a greater share of the risk.

Figure 5: Comparison of Capital Project Delivery Methods



Source: US Department of Transportation/Federal Highway Administration "CMGC 101 Workshop," 2012 CMGC Peer Exchange

Under the CM/GC project delivery method, the contractor is awarded two contracts—one for pre-construction services during the design phase and another for the construction phase. During the pre-construction services phase, the CM/GC provides support with design review, feasibility studies, value engineering, cost-risk analysis, schedule-risk analysis, and prequalifying subcontractors. The second contract will set the guaranteed maximum price including subcontracts, CM/GC general conditions, CM/GC fee, and CM/GC contingency. Once established, the guaranteed maximum price is generally modified if there is a change in scope of the project or changes due to latent conditions or other factors beyond the control of the CM/GC.

As illustrated in Figure 6, national research available cites many benefits and challenges as well as associated risks that must be considered when using the CM/GC project delivery method.

Figure 6: Benefits, Challenges, and Risks of Using CM/GC Approach

Benefits	Challenges	Risks
<ul style="list-style-type: none"> • Selection Process - Balances contractor qualifications with project costs • Time Savings - Ability to accelerate schedule • Design Control - Flexibility during design/construction • Innovation - Constructor design input • Risk management - risks mitigated during project development • Cost Management- Early knowledge of costs • Cost Certainty - Higher final cost certainty earlier in the project • Design Savings - May reduce design costs • Focus on quality and value 	<ul style="list-style-type: none"> • Determining a fair and reasonable Guaranteed Maximum Price • Determining the public owner's contingency for the project • Determining the CM/GC construction contingency for the project • Determining what constitutes a change order to the Guaranteed Maximum Price versus what change orders should come out of the CM/GC construction contingency • Determining at what point to establish the Guaranteed Maximum Price 	<ul style="list-style-type: none"> • Transparency – Contractor selection process based on qualifications may be more subjective than a quantifiable low bid amount • Cost Validation – Negotiated versus bid contract • Culture– New process for SANDAG and Caltrans staff • Risk – Guaranteed Maximum Price may include a large contingency and disputes could arise over the completeness of the design and contract changes • Value & Quality - CM/GC input may not translate into better design quality

Source: Auditor-Generated from other government agency's CM/GC documents and national CM/GC research

As SANDAG and Caltrans move forward with the two projects, they should closely monitor the risks of the new approach and consider implementing leading practices identified by peer agencies' lessons learned analysis and publications, including the "CM/GC Guidelines for Public Owners," such as:

- ✓ **Establish Performance Goals and Track Performance.** For example, compare "traditional" time to CM/GC model, compare original cost estimates to actual, and determine the value-added and cost savings attributed to CM/GC value engineering and recommendations;
- ✓ **Employ Risk Management Practices.** Identify and manage risk through formal tools such as risk registries;
- ✓ **Ensure Consistent Data Is Used for Cost Estimates.** For Independent Cost Estimates, Engineer Estimate, and Contractor discussions, discuss the means and methods, materials, and sources, but only discuss dollar ranges. This will help ensure estimates are independent, but use the same criteria and methodology. Further, ensure the independent cost estimator is involved during the pre-construction phase; and
- ✓ **Implement Strong Communication Practices.** Communication is key to success during pre-construction and construction phase. Co-location of work sites during pre-construction helps improve collaboration and communication between project team members.

SANDAG and Caltrans staff seem aware of the potential risks of the CM/GC project delivery method. As the projects move forward, it appears that SANDAG and Caltrans are taking steps in

accordance with recommended practices across the nation. For instance, Caltrans indicated that it has established a baseline for estimating and scheduling purposes for the North Coast Corridor project based on traditional contract procurement. Further, SANDAG indicated that it plans to use risk registries, has an agreement in place for co-location, and plans to establish goals that can be used to assess project performance for the Mid-Coast Trolley Project.

Project Delivery Efficiency Should be Measured

Regardless of what project delivery approach is used, enhancements should be made to measure and report on SANDAG's internal performance and efficiency of delivering *TransNet* capital projects. While performance data exists on what projects have achieved such as reduced travel delay, SANDAG could improve its practices by capturing and analyzing metrics related to project management's performance delivering projects on schedule and budget. Specifically, SEC believes that setting meaningful goals and tracking performance against those goals can help highlight potential areas in need of improvement, hold project owners accountable and economical, and demonstrate performance to the public. Moreover, several departments of transportation—including Caltrans—use some type of project delivery performance indicators to track organizational efficiency and effectiveness. Capturing and tracking similar data for transit capital projects should not take a significant amount of resources.

For instance, Caltrans has been tracking and reporting on a series of performance measures for its statewide operations and District 11 performance for a number of years. SEC believes that the same or similar metrics would be useful for SANDAG to track for its transit capital projects to assess performance. Metrics include:

- Percent of projects delivered on schedule and ready for construction;
- Percent of project awards not exceeding more than 10 percent of estimates;
- Percent of change orders against original contract amount;
- Percentage of support costs as a percent of budget; and/or
- Percent of projects delivered on budget.

Other transportation entities across the country are finding that efficiency performance measurement is a critical tool used at the project level allowing stakeholders to evaluate the benefits of highway and transit improvements. Examples can be found in Washington, Missouri, Virginia, and Florida where agencies are more focused and accountable to stewardship goals through project delivery performance.

Task Order Amendments and Change Orders as a Percent of Contract Value Appear Reasonable

While the dollar value of task orders and construction contracts are significant for most, if not all of the *TransNet* projects, amendments and change orders are standard practice for capital projects when unfolding circumstances require changes to scope, schedule, or cost. These modifications may be caused by unforeseen circumstances, weather, emergencies, inadequate service or quality, or insufficiently defined scope of work.

Amendments Average 29 Percent of Original Task Order Value, but Are Reasonable

As of December 2014, SANDAG and Caltrans combined had established 40 contracts with architectural and engineering consulting firms with 405 related task orders and 259 amendments totaling \$221.5 million, as shown in Table 6.

Table 6: Task Order Amendments as a Percentage of Consulting Contracts, as of December 2014

Contract Number	Number of Task Orders	Value (incl. amendments)	Number of Task Order Amendments	Amendment Value	Amendment Value %
SANDAG On-Call Environmental Planning & Architect & Engineering Design Services					
5001900	17	\$4,647,992	10	\$493,883	10.6%
5001901	14	\$7,706,032	4	\$0	N/A
5001902	7	\$13,660,009	6	\$916,624	6.7%
5001903	6	\$10,616,439	9	\$3,488,230	32.9%
5001904	6	\$67,591,071	6	\$35,257,999	52.2% ^A
5001905	0	\$0	0	N/A	N/A
5001906	13	\$24,412,605	9	\$787,150	3.2%
5001907	11	\$2,417,808	5	\$0	N/A
5001908	14	\$6,078,947	14	\$1,668,937	27.5%
5001909	1	\$6,507,202	3	\$6,329,557	97.3% ^B
5001910	3	\$1,302,519	1	\$0	N/A
5001911	2	\$1,365,314	1	\$8,000	0.6%
5001912	3	\$735,654	2	\$0	N/A
5001913	6	\$822,077	4	\$0	N/A
5001914	7	\$1,822,859	6	\$289,785	15.9%
SANDAG Sub-Total:	110	\$149,686,528	80	\$49,240,165	32.9%
Caltrans On-Call Architect & Engineering Design Services					
11130000019	1	\$77,450	0	N/A	N/A
11A1190	23	\$8,121,319	55	\$1,255,333	15.5%
11A1526	5	\$4,807,361	2	\$1,324,340	27.5%
11A1529	12	\$24,741,297	10	\$10,933,778	44.2% ^C
11A1625	26	\$4,365,087	7	\$464,884	10.7%
11A1749	2	\$318,174	3	N/A	0.0%
11A1793	24	\$392,915	3	\$19,744	5.0%
11A1897	17	\$39,050	3	\$1,750	4.5%
11A1940	1	\$188,279	0	N/A	N/A
11A1963	4	\$129,379	8	\$5,551	4.3%
11A1967	14	\$481,536	8	\$30,670	6.4%
11A1969	34	\$4,185,427	13	-\$756,903	-18.1%
11A1974	9	\$26,245	2	\$2,980	11.4%
11A1978	7	\$378,320	7	\$136,355	36.0%
11A1991	12	\$2,156,900	4	\$187,900	8.7%
11A1992	14	\$2,290,916	10	\$108,459	4.7%
11A1996	23	\$1,594,554	7	\$49,746	3.1%
11A2024	5	\$188,009	2	N/A	0.0%

Contract Number	Number of Task Orders	Value (incl. amendments)	Number of Task Order Amendments	Amendment Value	Amendment Value %
11A2026	10	\$10,003,124	21	\$304,045	3.0%
11A2043	1	\$1,413,123	2	\$632,660	44.8% ^c
11A2047	30	\$4,622,102	5	\$170,239	3.7%
11A2077	4	\$1,209,716	2	\$176,918	14.6%
11A2108	9	\$41,000	1	\$500	1.2%
11A2121	8	\$89,812	4	\$4,840	5.4%
CA118314	N/A	N/A	N/A	N/A	N/A
Caltrans Sub-Total:	295	\$71,861,095	179	\$15,053,789	20.9%
Grand Total:	405	\$221,547,623	259	\$64,293,954	29.0%

Source: Caltrans and SANDAG TransNet Staff, December 2014

^A = SANDAG determined efficiencies could be achieved by combining common tasks—such as potholing—for three projects sharing same corridor and footprint into one consultant contract resulting in higher percentage.

^B = According to SANDAG, amendments were made for each additional work phase on the LOSSAN San Diego River Bridge project such as initial background information, 30% design, etc.

^C = According to Caltrans, they cannot have geographical overlapping A&E contracts; because the contracted firm is the only one eligible to perform the work, scope is added via amendments.

While total amendment value as a percentage of the original task order varied from -18 percent to 97 percent, amendments were 29 percent of the original task order value, on average. While this percent is more than double the 14 percent rate noted during the first *TransNet* Triennial Performance Audit, SEC’s limited review on the current audit for a sample of amendments mostly seemed reasonable in that they aligned with the original scope of work and were modifying the agreement to add on similar work.

Specifically, SEC reviewed 10 task orders in depth to understand the rationale behind amendments and determine reasonableness. While the documentation provided by SANDAG discussed the nature of the amendment and provided justification for most of the amendments tested, documentation provided by Caltrans did not always allow SEC to determine whether the increased funding was related to additional work and projects or just added more resources for the same projects. However, even without detailed written justification, some Caltrans amendments still appeared reasonable such as adding another vernal pool location on an initial task order to maintain vernal pool habitats.

Change Orders Average 16.5 Percent of Contract Value, but Are Reasonable

Additionally, over the three-year audit period, SANDAG and Caltrans awarded 49 construction contracts for projects worth more than \$827 million using *TransNet* funds. Of those, 989 change orders worth \$57.8 million were issued for 19 projects completed and selected for review. For these completed projects, SANDAG’s 221 change orders averaged 13 percent of the original contract bid value; while Caltrans’ 767 change orders averaged 17.4 percent of the original contract bid value as shown in Table 7.

Table 7: Change Orders Performance Percentages for Completed *TransNet* Construction Contracts

Contract					Change Orders		
Segment/ Project	Contract No.	Contract Bid/Value	Total Payment	% Paid over Value	No. of COs	Total CO Value	CO % of Contract Bid/Value
SANDAG's Construction Contracts at 100% Completion							
Tecolote & Washington Crossovers & Signals	5001573	\$6,107,283	\$6,128,774	0%	10	\$21,491	0.4%
Sorrento to Miramar Double Track, Phase 1	5001827	\$24,747,777	\$26,409,221	7%	40	\$1,950,443	7.9%
Santa Fe Drive Pedestrian Underpass	5001828	\$3,077,888	\$3,460,350	12%	16	\$382,462	12.4%
San Luis Rey Transit Center	5001829	\$1,802,368	\$2,981,827	65%	21	\$1,581,539	87.7% ^A
Orange Line Station Platform Modifications Rebid	5001840	\$12,782,513	\$15,137,793	18%	59	\$2,544,448	19.9%
Coastal Rail Trail Phase 2B	5001916	\$1,179,404	\$1,561,253	32%	19	\$645,521	54.7% ^B
Orange Line Substation Rehab	5001932	\$1,744,652	\$1,808,663	4%	3	\$69,011	4.0%
I-15 Ultimate BRT Stations (Rancho Bernardo & Del Lago)	5001935	\$2,594,002	\$2,741,524	6%	15	\$280,205	10.8%
Sabre Springs/Penasquitos Transit Station Parking Structure & Station Reconfiguration	5001600	\$11,231,850	\$11,984,989	7%	38	\$811,360	7.2%
SANDAG Sub-Total:		\$65,267,737	\$72,214,394		221	\$8,286,480	13%
Caltrans's Construction Contracts at 100% Completion							
805 HOV Lanes South Segment	11-2T1814	\$29,181,080	\$32,326,640	11%	106	\$4,192,420	14.4%
805 HOV Lanes North Segment	11-2T1804	\$14,246,086	\$17,675,665	24%	47	\$4,227,267	29.7% ^C
Nordahl Bridge Replacement	11-259804	\$9,271,985	\$9,559,443	3%	38	\$512,355	5.5%
SR-78 WB Aux Lane	11-293104	\$2,230,238	\$2,433,607	9%	12	\$224,951	10.1%
905 Phase 1B	11-288804	\$57,095,736	\$64,006,458	12%	134	\$8,211,754	14.4%
SR-76 Middle	11-080104	\$61,023,992	\$72,454,989	19%	124	\$13,040,599	21.4%
I-15 ML Middle – Unit 2 Landscape	11-260724	\$1,223,761	\$1,225,407	0.1%	11	\$139,433	11.4%
I-15 ML North – Unit 1	11-2T0814	\$46,599,284	\$50,213,372	8%	117	\$3,840,398	8.2%
I-15 ML South – Unit 2	11-2T0924	\$60,545,000	\$71,812,555	19%	168	\$14,878,360	24.6%
I-15 ML Middle – Unit 1 Landscape	11-260714	\$2,446,027	\$2,350,207	N/A	10	\$219,761	9.0%
Caltrans Sub-Total:		\$283,863,189	\$324,058,343		767	\$49,487,298	17.4%
Grand Total:		\$349,130,926	\$396,272,737		988	\$57,773,778	16.5%

Source: Caltrans and SANDAG Contracts staff, Caltrans data as of December 2014, SANDAG Data as of January 2015

Table Footnotes and Explanations

^A = According to SANDAG, a new building had to be added to the project to allow for adequate security personnel and proper indoor space necessary for system equipment for electronic security and surveillance in a climate controlled environment.

^B = Budget increases were due to unforeseen conditions related to contaminated soil identified during the construction excavation, resulting in additional time and costs for the removal and disposal of the contaminated soil.

^C = According to Caltrans, an adjacent I-805 Carroll Canyon project had an unforeseen utility relocation and geotechnical issue requiring redesign of a wall that caused delays and required adjustments to the I-805 HOV lane project.

Typically, Caltrans estimates a 10 percent contingency for roadway construction projects consistent with targets set by peers; although the 17.4 percent range is higher than that target. Yet, in the end, contractors were only paid 14 percent more than the initial contract bid amount. While the change order percentages appear somewhat higher than benchmarks, it is not as significant when put in perspective with the overall payment amounts. In addition, these results are only slightly higher than the 13 to 14 percent range noted in the first *TransNet* Triennial Performance Audit.

To understand the circumstances surrounding the contracts with higher change order percentages, SEC reviewed a sample of 15 change orders from five contracts managed by Caltrans and three contracts managed by SANDAG. Results of Caltrans change orders reveal compliance with its review and approval process that now delegates authority for change order approval to Corridor Directors; further, this changed approval process appears reasonable and has the necessary controls in place. Moreover, all change orders were mainly for unforeseen conditions or added scope due to changing requirements that seemed reasonable. Similarly, the SANDAG managed change orders appeared to comply with its change order process and were for reasonably unforeseen conditions or changing requirements as well.

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Chapter 3: Local Street and Road Performance

CHAPTER SUMMARY

Relieve congestion by constructing, expanding, rehabilitating, and maintaining local roadways.

-TransNet Ordinance - Local Street & Road Program



Local Street & Road Program Performance

With nearly \$378 million in *TransNet* funds spent on local streets and roads through June 30, 2014, the Local Street and Road program is the second largest *TransNet* category after major corridor capital projects.

Six years into the program, limited performance data is available to inform the San Diego taxpayer on the impact of their sales tax investment on local streets and roads.

Audit Results Highlights

- Local Street and Road Program performance still cannot be assessed because:
 - Lack of local traffic detectors and inconsistent use of before and after studies to measure traffic speed and travel time prohibit a performance analysis of how local street and road projects are affecting congestion or impacting traffic flow.
 - Annual reports submitted by local jurisdictions have data such as outputs and pavement condition that should be summarized for reporting on performance.
- Deteriorating local streets and roads may warrant a reexamination of congestion relief and maintenance definitions. For instance:
 - Pavement in the San Diego region has deteriorated from a “good” to “at risk” grade between 2008 and 2014.
- Local jurisdictions continue to deliver local street and road projects following standard industry practices.

Recommendations

- Consider implementing one of the options from the Regional Arterial Detection System Development Plan, or develop and implement other alternative mechanisms to measure performance outcomes.
- Expand on existing available local street and road performance output data to summarize improvements made to the network.
- Revisit the *TransNet* Extension Ordinance and Expenditure Plan provisions pertaining to 70 percent congestion relief and the 30 percent maintenance categories to determine whether definitions are still relevant.

Local Street and Road Program Performance Still Cannot Be Assessed

As required by the *TransNet* Extension Ordinance, SANDAG allocates 29.1 percent of *TransNet* net annual revenues to the Local Street and Road Program, which makes it the second largest *TransNet* funded category after major corridor capital projects to relieve congestion by constructing, expanding, rehabilitating, and maintaining local roadways.

While the Regional Transportation Improvement Plan shows that local jurisdictions have used *TransNet* funds for numerous projects on the arterial and local street network over the past six years, demonstrating how those projects actually help relieve congestion seems to still pose a challenge to SANDAG and its local *TransNet* partners.

Challenges still Exist for Measuring Congestion Relief

Local street and road performance in terms of congestion relief can be measured with metrics such as travel times, delays, or peak congestion. However, as described in the last *TransNet* performance audit in 2011, there is no system in place that allows SANDAG to capture these types of performance outcome measures. Challenges such as a lack of local or regional traffic detectors and inconsistent use of before and after studies at the local level to measure traffic volumes, speed, and travel time may prohibit region-wide determination of how *TransNet* funded local street and road projects help relieve congestion or impact traffic flow.

While SANDAG has looked into an arterial traffic detection infrastructure, it may require significant investment from SANDAG or the local jurisdictions to install more data collection tools that provide the ability to measure and monitor congestion relief performance of the local streets and roads network. Specifically, in 2012, a SANDAG consultant prepared a Regional Arterial Detection System Development Plan that suggested three different collection and monitoring options to capture data related to travel times, speeds, delays, and level of service. Options range from less expensive vehicle probe technology for \$500,000 to more costly permanent detection stations in the \$43 to \$48 million range.

While there are varying benefits, impacts, and limitations with each option, SANDAG should consider implementing one of the deployment options or derive some other method that would allow it to measure and report on street and road performance. According to SANDAG, a detection system would be implemented only as local agency priorities dictate and based on the funding availability. If arterial detection is not the desired option, SANDAG should still develop and implement some alternate system that would measure outcomes such as travel times and delays for the local street and road program.

Some Performance Output Data is Available from Local Jurisdictions

While performance outcome measures such as increased mobility (travel time, speed, or delays) or safety (accidents or fatalities) are difficult to obtain at this point, several other output measures are already available as discussed. These output measures should not pose a significant burden on local jurisdictions to provide, nor on SANDAG to compile for reporting the Local Street and Road program's performance to the public.

Specifically, in response to the last performance audit, SANDAG worked with representation from the local jurisdictions via the Cities/County Transportation Advisory Committee to develop an “Annual Report” highlighting accomplishments on local streets and roads. The first annual report was finalized in May 2014 containing information for all 19 local jurisdictions. Although a Cities/County Transportation Advisory Committee working group put considerable effort into gathering feedback from all local jurisdictions on available and consistent data for the report, SEC finds that the report in its current format could be improved with more concrete performance output data. While additional reporting requirements come at an additional cost and effort to the local jurisdictions and SANDAG, a few minor changes to the existing annual report could provide greater transparency over the accomplishments in the Local Street and Road Program—effort SEC believes worthwhile given that an assessment of local performance is still not possible.

In fact, the data SEC proposes for an updated annual report is mostly already available and, thus, should not add significant extra burden on local jurisdictions or SANDAG. Local Street and Road Program achievements would be easier to identify and understand if SANDAG built upon and expanded data existing in the annual report into a concise and summarized document. While local jurisdictions still provide the underlying data, SANDAG should consolidate the information into a single “report card” synopsis of outcome statistics for all jurisdictions. Such a report card could provide quick “at-a-glance” information on select statistics such as miles paved, feet of sidewalk installed, or number of traffic signals upgraded. An example report card is shown in Table 8.

Table 8: Example Summary Annual Report Card for the Local Street and Road Program

TransNet Annual Local Street & Road Program Performance Report Card						
	City 1		City 2		Region-Wide	
Total <i>TransNet</i> \$ Received	\$2M		\$8		\$10M	
Total <i>TransNet</i> \$ Spent	\$1.8M		\$7		\$8.8M	
Total Local Street and Road Network (miles)	185		250		435	
Pavement Rehab & Repair	No.	Cost	No.	Cost	No.	Cost
1) Miles Paved	10	\$500	0	\$ -	10	\$ 500
2) Number of Potholes Repaired	250	\$100	300	\$150	550	\$ 250
3) PCI (latest available)	66		70		68	
Pedestrian Improvements	No.	Cost	No.	Cost	No.	Cost
1) Feet of Sidewalk Installed/Repaired	500	\$ 50	600	\$ 70	1100	\$ 120
2) Number of Pedestrian Ramp Upgrades	0	\$ -	25	\$200	25	\$ 200
Traffic Operations	No.	Cost	No.	Cost	No.	Cost
1) Number of New Traffic Signals	30	\$ 10	80	\$ 30	110	\$ 40
2) Number of New Light Bulbs	50	\$ 2	120	\$ 5	170	\$ 7

Source: Auditor-Generated

Pavement Condition Could be Captured and Reported

In addition to measures such as miles paved or potholes repaired, another measure that may be available for the local roads as means for reporting the health of roadway pavement conditions is the use of a Pavement Condition Index (PCI). PCI is captured in categories ranging from a low of 0 to a high of 100 to indicate the general condition of pavement as shown in Figure 7.

Figure 7: Pavement Condition Index (PCI) Thresholds

70 - 100	• Good/Excellent Condition
50 - 70	• At Risk Condition
25 - 50	• Poor Condition
0 - 25	• Failed Condition

Source: California Local Streets & Roads Needs Assessment 2014

For example, the City of Vista indicated in its Annual Report that its PCI registered at-risk at 61 about 10 years ago, but now pavement conditions have significantly improved to a 76.2 PCI for arterials and a 70.1 PCI for local streets. While this type of information could be used to augment the measures for understanding how *TransNet* funds helped improve the condition of local roads, there are varying methods and tools to calculate pavement conditions. Based on input received by local Cities/County Transportation Advisory Committee representatives to SANDAG staff, such efforts would require the establishment of a regional standard for calculating and reporting PCI that will need to be considered among all jurisdictions to determine if PCI reporting is a viable measure and indicator for meeting local *TransNet* needs based on a regional approach. According to SANDAG, the effort would include the assessment and/or revision of existing methods and tools for calculating pavement conditions within each local area and establishment of regional pavement conditions surveying and reporting standards.

Once a PCI baseline year or “Year 1” has been established based on a regional standard approach, SANDAG could summarize the data and provide general region-wide information such as “region-wide, the PCI was 66 in 2014, but the PCI has improved to 70 with *TransNet* contributions.” The baseline year does not have to be the same for all jurisdictions, but having several years of data available will allow for the tracking of pavement improvement or deterioration in correlation to maintenance or rehabilitation investments—and serve as a performance measure for the Local Street and Road Program.

Deteriorating Local Streets and Roads May Warrant a Reexamination of Congestion Relief and Maintenance Category Definitions

Since 2008, the Metropolitan Transportation Commission has administered the contract for a biennial statewide local street and road needs assessment studies. In the most recent 2014 report, the California Metropolitan Transportation Commission found that the average pavement condition for California streets and roads has deteriorated from 2008 when the statewide average

PCI was 68 to the current rating of 66 in 2014—which is classified as “at risk.” This trend is also being felt in the San Diego region. With PCIs ranging from a low 33 for Amador County to a high 77 for Orange County, San Diego’s PCI of 66 is in line with statewide averages. However, over the past six years, the region’s road conditions have deteriorated from a “good/excellent” condition of 74 to an “at risk” condition as shown in Table 9—yet, neighboring counties were able to maintain their roads in good condition.

Table 9: PCI Data for San Diego and Comparable Counties, 2008 through 2014

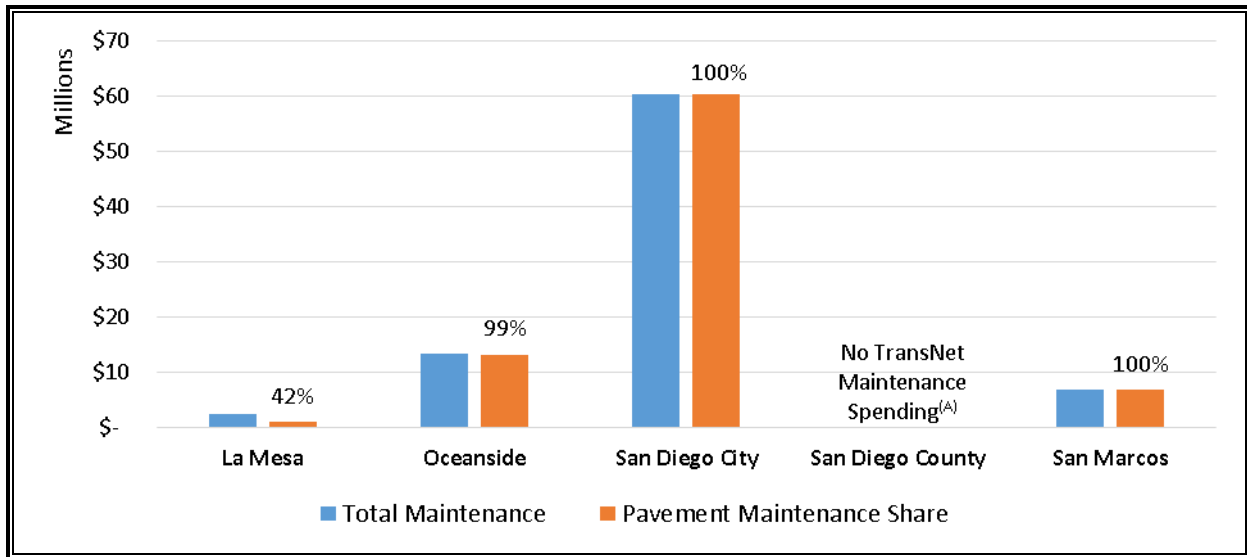
County	Center Line Miles	Lane Miles	Area (square yards)	Average PCI			
				2008	2010	2012	2014
San Diego	7,814	18,596	170,696,012	74	69	67	66
Riverside	7,561	16,835	149,403,177	71	72	70	70
Orange	6,601	16,808	150,276,239	78	76	77	77

Source: California Local Streets & Roads Needs Assessment 2014

The overall declining condition of the region’s pavement suggests that, while the roads were in good in condition in 2008, they may not have been sufficiently maintained and pavement has started to deteriorate. While multiple reasons may have contributed towards this decline, SEC believes SANDAG could revisit definitions for allocating funds between congestion relief and maintenance projects to help local jurisdictions in their efforts to improve driving conditions on local roads. Specifically, one requirement of the *TransNet* Ordinance with regard to the Local Street and Road Program relates to the allocation of at least 70 percent of *TransNet* funds on congestion relief projects and no more than 30 percent to maintenance projects—commonly referred to as the “70/30 Split Rule.” Building new or widening roads, rehabilitating roadways and bridges, or overlaying pavement at greater than 1-inch thickness are typical congestion relief projects. Conversely, pothole repairs, less than 1-inch pavement overlay, existing median landscaping, or light bulb replacements are examples of projects considered maintenance. As such, pavement funds can be considered congestion relief or maintenance depending on the thickness of the overlay. Compliance with the 70/30 Split Rule is determined annually by the *TransNet* financial audit and not assessed by this review; however, Board Policy No. 31: *TransNet* Ordinance and Expenditure Plan Rules provides a mechanism for local agencies to request an exemption to the 30 percent maintenance limitation by providing justification.

Within the 70 percent congestion relief and 30 percent maintenance categories, local jurisdictions have discretion over the types of projects to fund using *TransNet* dollars. Thus, a local jurisdiction can opt to spend all *TransNet* maintenance monies on pavement maintenance or share the pool amongst pavement, landscaping, or traffic calming. For the five sample local jurisdictions SEC reviewed during the current audit, pavement projects appear to be the most common maintenance projects completed or planned for completion. The five sample local jurisdictions have allocated 98 percent of total maintenance expenses, on average, to pavement projects for the Fiscal Year 2012-13 to Fiscal Year 2016-17 period as shown in Figure 8. For example, the City of San Diego listed one Regional Transportation Improvement Program maintenance project worth \$60.5 million—all of which is going towards pavement repairs. By contrast, La Mesa chose to spread its maintenance funds among four projects with one project related to pavement maintenance totaling an approximate 42 percent of total maintenance costs.

Figure 8: Planned Pavement Maintenance Allocations as a Percent of Total Maintenance Allocations, FY 2012-2013 to FY 2016-2017

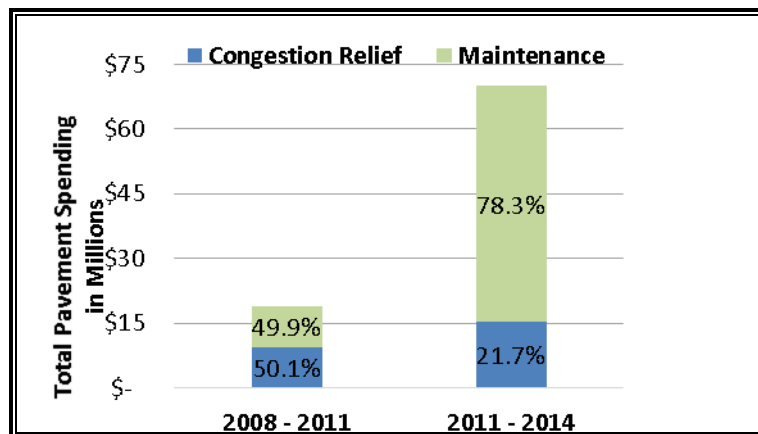


Source: 2012 RTIP, Amendment 18

Notes: (A) For the County of San Diego, the 2014 RTIP (Amendment 0) shows \$7 million in TransNet Funds allocated towards pavement maintenance between FY 2015-2016 and FY 2018-2019, which represents 100% of the costs the County allocated towards the TransNet maintenance category.

Additionally, over the last three years, total pavement spending for the five local jurisdictions reviewed has increased regardless of overlay thickness and categorization as congestion relief or maintenance. Of this amount, funds spent on pavement maintenance were three times greater than pavement congestion relief costs as shown in Figure 9.

Figure 9: TransNet Pavement Spending for 5 Sample Local Jurisdictions FY 2008-2009 to FY 2013-2014



Source: ProjectTrak TransNet Payment Reports FY 2008-2009 to FY 2013-2014

Most noticeably, the City of San Diego’s pavement spending increased from \$6.4 million to more than \$52 million between the FYs 2008-2011 period and the FYs 2011-2014 period. While a city may have additional pavement needs, the jurisdiction may be limited on the types of

pavement projects funded with *TransNet* money to remain compliant with the 70/30 Split Rule outlined in the *TransNet* Ordinance.

With the majority of maintenance funds spent on pavement repairs, the five sample local jurisdictions in the San Diego region align with national discussions that suggests spending on thin maintenance overlays rather than thick congestion relief overlays is a better use of limited funding. For instance, the Metropolitan Transportation Commission study suggests that seals including slurry, chip, or cape seals are good options since durability for these types of treatments has improved in recent years. Moreover, these types of seals cost significantly less than congestion relief overlays as shown in Table 10.

Table 10: Cost and Durability for Different Pavement Rehabilitation Types

	<i>TransNet</i> Maintenance (30%)		<i>TransNet</i> Congestion Relief (70%)					
	Preventative Maintenance		Thin AC Overlay		Thick AC Overlay		Reconstruction	
Major Roads/Arterials	\$4.85	3-7 years	\$18.82	5-10 years	\$29.73	10-15 years	\$68.48	20+ years
Local Roads	\$4.61		\$18.04		\$28.44		\$60.31	

Source: California Local Streets & Roads Needs Assessment 2014; Caltrans Maintenance Technical Advisory Guide-Flexible Pavement Preservation; American Association of State Highway and Transportation Officials (AASHTO)

Notes: Costs are \$ per square yard.

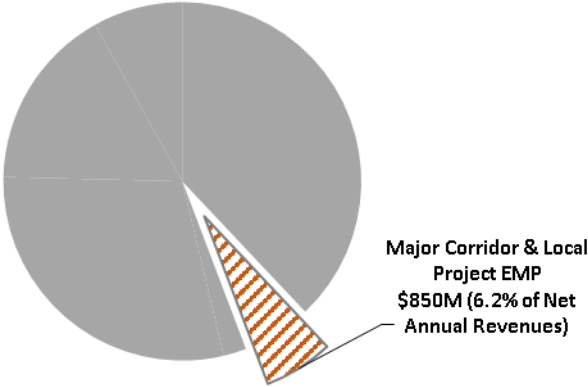
Yet, while pavement maintenance spending shows growth, the region’s pavement conditions are deteriorating. To help local jurisdictions best determine which projects are needed to best meet their pavement needs without unnecessarily restricting their options, SANDAG should revisit and possibly revise its 70/30 percent categorical definitions between congestion relief and maintenance. A revision to the definition of projects eligible under the 70 or 30 percent categories may grant local jurisdictions more flexibility on how to spend their *TransNet* monies, especially for pavement maintenance projects. For example, without actually changing the split, SANDAG could consider modifying the requirement for pavement overlay congestion relief thickness from currently 1-inch to for example ½-inch. This would mean that seal projects such as chip and cape seals ranging from ¾ - ½-inch in thickness could be paid from the congestion relief pool—while slurry seals averaging ¼-inch would still remain in the maintenance category.

Local Jurisdictions Continue to Deliver Local Street and Road Projects Following Standard Industry Practices

Since the start of the program in 2008, the 18 local cities and the County have expended nearly \$378 million in funds towards improving local streets and roads through a wide-range of projects including, but not limited to building new roads, bridges, sidewalks, correcting roadway drainage issues, repairing potholes, and rehabilitating pavement. While SANDAG is responsible for calculating each local jurisdiction’s share of the sales tax formula, the decision on which projects to prioritize and fund with *TransNet* local street and road monies is vetted at the local level and captured in the Regional Transportation Improvement Program.

SEC's high-level review of local project management and delivery processes as well as select project files did not reveal any significant deviations from what is common practice in public construction. Local project managers follow purchasing procedures to competitively procure contractors, carefully review contractor invoices and progress reports, track milestones, deliverables, and change order requests. Delays and cost increases for sample local projects reviewed, were due to reasonably unforeseen circumstances such as environmental conditions, third party actions, and policy changes.

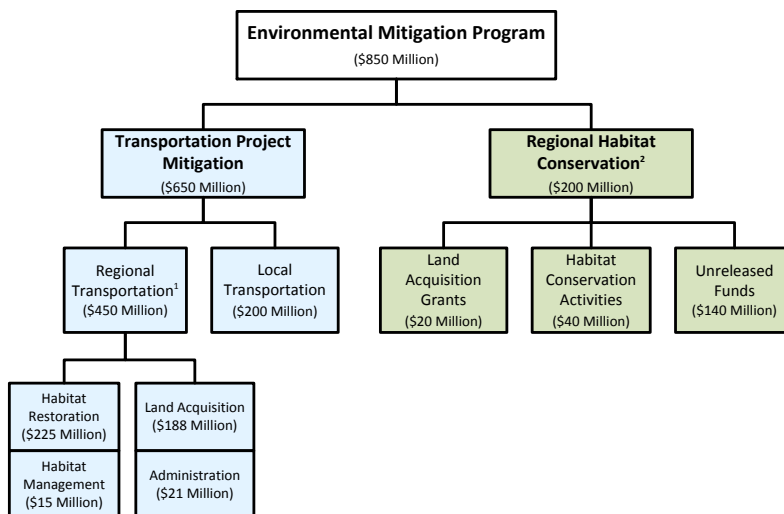
Chapter 4: Environmental Mitigation Efforts

CHAPTER SUMMARY	
<p>Fund habitat-related environmental mitigation activities related to major highway, transit and regional arterial and local street and road improvements identified in the Regional Transportation Plan.</p> <p style="text-align: center;">- TransNet Ordinance – Transportation Project Environmental Mitigation Program</p>	
 <p style="text-align: center;">Major Corridor & Local Project EMP \$850M (6.2% of Net Annual Revenues)</p> <p><i>Note: Amounts include EMP Grant funds.</i></p>	<p>Program Performance</p> <p>More than \$153 million in <i>TransNet</i> funds have been spent on environmental mitigation efforts as of June 30, 2014. Key activities include:</p> <ul style="list-style-type: none"> ✓ Land acquisitions are nearly complete with more than 3,300 acres. ✓ Habitat conservation activities, which to date, \$20.5 million (out of an expected \$200 million) has been spent. ✓ However, it is still too early to measure results of overall mitigation efforts as restoration and land management activities have just begun.
<p>Audit Results Highlights</p> <ul style="list-style-type: none"> ▪ Land acquisitions are nearly complete with more than 3,300 acres purchased. ▪ Program continues to run well as it transitions from acquisition to restoration. ▪ Almost all of the \$200 million local mitigation funds are still available. ▪ Strategic plans implemented, so focus should shift to performance monitoring. ▪ Developed process to define economic benefit and distribution method, but need approach to define and compare against actual achievements. 	
<p>Recommendations</p> <ul style="list-style-type: none"> ▪ Continue efforts to market local mitigation program with money available for locals. ▪ Begin focus on measuring results of mitigation efforts, such as restoration and management, against goals. ▪ Create methodology to quantify how much economic benefit has actually been achieved to compare against what was released to identify funding deficits or surpluses. 	

Land Acquisitions are Nearly Complete as Focus Shifts to Restoration and Conservation

In general, the Environmental Mitigation Program (EMP) efforts are focused in two major areas—(1) the mitigation of direct environmental impacts caused by the regional and local transportation projects, and (2) the conservation and monitoring of habitats and endangered species. Most of the effort over the last six years has focused on acquiring land to be restored and conserved. Figure 10 below illustrates estimated budgets for key EMP activities.

Figure 10: Estimated Budgets for Key EMP Activities



Note: (1) Figures may not sum to total due to rounding.

(2) Funding released through achieving economic benefits associated with transportation mitigation.

Transportation Project Mitigation

The *TransNet* Extension Ordinance set aside \$650 million over the 40-year period to mitigate the impacts of transportation projects, activities include land acquisition, habitat restoration, and parcel-specific land management of uplands, freshwater wetlands, and coastal wetlands. Once land is acquired, restoration efforts, if necessary, are commenced after significant preliminary work is complete, including developing design plans and obtaining construction permits. After restoration activities are complete, long-term management is established with the regulatory agencies indicating which entities will own and manage the site.

As of June 30, 2014, the SANDAG EMP has expended nearly \$127 million to fund key EMP activities as shown in Table 11.

Table 11: Spending by EMP Activity as of June 30, 2014 (Amounts in Millions)

EMP Activity	Budget	Actual Costs
Regional Mitigation Admin Support	\$21.5	\$4.2
Regional Mitigation Land Acquisitions	\$188.1	\$108
Regional Mitigation Habitat Restoration	\$225.2	\$11
Regional Mitigation Habitat Management	\$15.2	\$1.4
Local Transportation Mitigation	\$200	\$1.9 ^A
Total Amounts	\$650	\$126.5

Source: *TransNet Extension Ordinance, One Solution Reports, Project Management Tracking Reports*
A = Approximately \$7.9 million has been earmarked for local project mitigation, of which \$1.9 million has been utilized.

Land Acquisition Activities

Since the inception of the program, the vast majority of expenditures relate to land acquisitions purchased to mitigate the regional transportation project impacts. As of June 30, 2014, the EMP has acquired more than 3,300 acres of land in total and is nearing completion of the expected acquisitions. While per acre acquisition cost estimates totaled approximately \$209.9 million in 2002, SANDAG has only spent approximately \$108 million to secure the land—a significant savings. According to SANDAG, the savings is largely the result of favorable land prices due to the economic recession.

As described in the 2011 audit, SANDAG had struggled to acquire sufficient coastal wetlands for regional transportation project mitigation to comply with needs outlined in the *TransNet Ordinance* due to the lack of large-scale opportunities for coastal wetland creation that meet the requirements of the regulatory agencies. As of June 30, 2014, SANDAG had acquired about 24 percent of the Ordinance’s estimated required coastal wetlands as shown in Table 12.

Table 12: Percent of Land Acquired for Mitigation as of June 30, 2014

Habitat Acres	Habitat Types (Post Mitigation)			Total
	Coastal wetlands	Freshwater wetlands	Uplands	
Estimated Required Acres	225	495	1598	2318
Total Habitat Acres Acquired	54.89	339.18	2,940.54	3,334.61
Less Acres Acquired to Complete SR 76 “Net Benefit”			80.34 ^A	80.34
Acres Acquired Available for Regional Mitigation	54.89	339.18	2,860.20	3,265.99
Percent of Land Acquired	24 percent	69 percent	179 percent	141 percent

Source: 2002 *TransNet Ordinance, EMP Project Management Files*

Note: (A) 80.34 acres of uplands does not go towards mitigation; rather, these areas are related to the Jeffries Ranch purchase for meeting the “net-benefit” obligation for SR 76.

To address this situation, SANDAG and Caltrans worked with the regulatory agencies as part of the overall coastal wetland strategy to prepare a package that meets the regulatory requirement of “no-net-loss” where the nearly 55 acres of coastal wetland already acquired will complete the mitigation of coastal wetland impacts. The regulatory agencies accepted the package and the strategy was incorporated in a strategic plan approved by the California Coastal Commission in August 2014.

Conversely, SANDAG has been able to purchase an abundance of uplands for mitigation purposes. As shown in Table 12, as of June 30, 2014, SANDAG has purchased 179 percent of the upland acres required by the *TransNet* Extension Ordinance. According to SANDAG, the additional land has allowed SANDAG to create a buffer of upland acres available for future mitigation needs, including mitigation for local transportation projects if needed.

Habitat Restoration Activities

As the land acquisition phase of the EMP is nearing completion, SANDAG and Caltrans are shifting focus and effort to restoration activities of wetlands, particularly related to the North Coast Corridor. However, because the EMP has just recently begun to concentrate on these activities, it is still too early to gauge the effectiveness of the EMP’s habitat restoration efforts.

Of the \$450 million earmarked to mitigate the regional transportation improvement projects, the *TransNet* Extension Ordinance estimated \$225.3 million would be required for all land restoration of approximately 2,300 acres throughout the 40-year program. To date, the EMP has only spent a fraction of these estimates on restoration activities as much of the early focus of the EMP has been on land acquisitions. As of June 30, 2014, the EMP program has spent \$11 million, or about 5 percent of the 2002 restoration estimate, on restoration activities. According to SANDAG, restoration costs will go up dramatically as the focus of the EMP begins to shift from land acquisition efforts to restoration, particularly related to the upcoming restoration efforts associated with the North Coast Corridor projected to cost approximately \$160 million over the next five years as well as restoration activities associated with the acquired properties.

Land Management Activities

A final step of the *TransNet* mitigation effort is the habitat management and monitoring of parcel-specific land that has been acquired and restored. While these activities are used to maintain the environmental integrity of the acquired land through actions such as installing fencing and signage as well as removing debris and invasive vegetation, this management and monitoring occurs after the land is restored. As of June 30, 2014, only \$1.4 million, or about 9 percent of the 2002 estimate, has been spent on land management activities since the inception of the EMP program. However, land management spending is expected to increase once restoration of the acquired mitigation land is completed and management responsibilities are turned over to local jurisdictions.

Local Mitigation Activities

In addition to the \$450 million allocated for regional projects, the *TransNet* Extension Ordinance also earmarked another \$200 million for mitigation activities associated with the impact from portions of six local projects. However, as of June 30, 2014, the EMP program has only utilized \$1.9 million of the \$200 million, or 1 percent, on local mitigation related to a small 12-acre piece of property in the San Marcos Redevelopment area. Portions of six properties (approximately 327 acres in total) purchased through regional efforts have been set aside in a local mitigation bank that are worth approximately \$7.9 million.

According to SANDAG, there has not been much interest or demand in these funds earmarked for local mitigation because local entities have not focused on projects due to the economic recession and extra funding available for mandated developer environmental fees. SANDAG indicated that an increased marketing effort will be undertaken, including reaching out to public works and planning directors in the region, to educate and encourage the local jurisdictions to take advantage of this available funding source.

Habitat Conservation

The second major component of the EMP relates to \$200 million set aside for habitat management, monitoring, and coordination activities necessary to implement regional conservation plans. As part of conservation efforts, SANDAG must work with local jurisdictions to coordinate with the local habitat and species conservation plans.

Of the \$200 million set aside for the 40-year period, the Board allocated \$40 million over ten years (\$4 million per year) for habitat conservation efforts such as invasive plant and animal species management, vegetation mapping, wildlife corridor linkages monitoring, open space enforcement, and rare plant and invertebrate monitoring and recovery. SANDAG administers these activities through direct contracts as well as through 70 individual competitive land management grants. Recently, another \$20 million was set aside for land acquisition grants. The remaining funding is for other management or biological monitoring activities needed for conservation efforts. Through the end of October 2014, nearly \$20.5 million—or 10 percent of expected habitat conservation funds—has been spent.

With EMP Strategic Plans in Place, Focus Should Shift to Performance Monitoring

Since the 2011, SANDAG has worked with its partners to develop strategic plans focused on mitigation associated with major highway projects as well as focused on regional habitat conservation efforts as activities shift between phases from land acquisition to restoration activities. There are two main plans—the Public Works Plan and the Management Strategic Plan for Conserved Lands. Because the strategic plans have only recently been developed and are in the initial stages of implementation, it is too soon to measure performance and accomplishments. However, over the next three years, staff should have data to compare results against plan goals as well as be able to demonstrate monitoring efforts once the monitoring plan component is developed and implemented.

Public Works Plan for Regional Mitigation

Jointly developed by SANDAG and Caltrans, the North Coast Corridor Public Works Plan/Transportation Resource Enhancement Program is a single comprehensive regulatory document providing a blueprint for all rail, highway, environmental, and coastal access improvements along the North Coast Corridor previously contained in separately adopted regional and city plans. For example, part of this plan includes a mitigation component related to natural resource establishment, restoration, and preservation/enhancement opportunities to mitigate impacts of the North Coast Corridor transportation and community enhancement projects. Approximately \$166 million in funding is allocated to regionally significant lagoon restoration opportunities and long-term resource maintenance activities including:

- Creation of new coastal wetlands;
- Large scale lagoon enhancements of existing wetlands;
- Upland preservation; and
- Endowments for lagoon management.

In August 2014, the California Coastal Commission approved the plan, allowing SANDAG and its partners to proceed with implementation. If the EMP fulfills the related plan actions, all transportation impact mitigation requirements will be accomplished for the three projects.

Management Strategic Plan for Conserved Lands

In addition to the mitigation strategic plan for coastal wetlands, the EMP program also created a technical Management Strategic Plan for Conserved Lands in Western San Diego County that focused on habitat conservation with goals to promote key sensitive species, native vegetation communities, and regional collaboration in addition to improve wildlife movement. The plan also includes high priority areas of emphasis and near-term achievement milestones. In September 2014, these goals and milestones were tied to the EMP's conservation funding plan for the first time. Results will be published in EMP status reports published annually each January.

Additionally, a Monitoring Plan component is planned for inclusion in the overall conservation strategic plan; however, development has been postponed until September 2015 due to the severe drought in Southern California restricting scientists' ability to test techniques that will be incorporated within the plan.

EMP Economic Benefit is Defined, but More Will Need to be Done

A critical aspect of funding the \$200 million of habitat conservation efforts centers on an "economic benefit" concept. In theory, economic benefits are derived from cost savings associated with the regional and local transportation improvement projects. Established in the *TransNet* Extension Ordinance, the EMP Principles state that this habitat conservation funding stream is allocated upon the achievement of "economic benefits" associated with transportation projects by encouraging the purchase of land to meet mitigation requirements in advance of the start of a project—and, hopefully, taking advantage of lower land costs. To release the estimated

\$200 million, transportation projects must achieve and demonstrate these “economic benefits,” or cost savings, as determined by the SANDAG Board.

As recommended in the 2011 *TransNet* audit, SANDAG recently developed a process to define economic benefit, methodology to distribute and allocate economic benefit among transportation projects, and procedure to release economic benefit for habitat conservation efforts. In August 2014, the Board approved \$60 million in economic benefit to be allocated through grants—land management and land acquisition—as follows:

- \$40 million authorized for regional management and monitoring activities—\$4 million per year over a 10-year period between 2008 and 2018.
- \$20 million authorized in land acquisition grants. As of the end of October 2014, none of the \$20 million had been budgeted or expended as the initial grant process is still underway.

Now that economic benefit has been defined and estimated savings released for activities, the next step is to create and define an approach for quantifying how much economic benefit was actually achieved to compare against what was released and identify funding deficits or surpluses. The creation of such an approach is required by the Memorandum of Agreement signed by SANDAG, Caltrans, and the wildlife agencies which states that a review of actual expenditures to estimates could take place in conjunction with the 10-year *TransNet* comprehensive review.

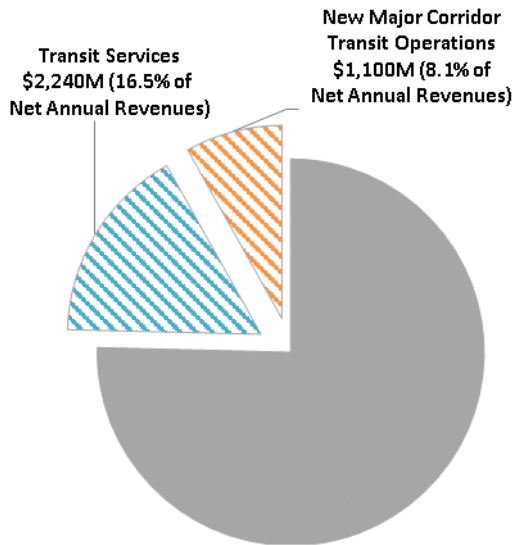
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Chapter 5: Transit Service Performance

CHAPTER SUMMARY

Provide ongoing support for the reduced-price monthly transit programs for seniors, persons with disabilities, and students and for the continuation and expansion of rail, express bus, local bus, community shuttles, and dial-a-ride services, including specialized services for seniors and persons with disabilities, and related capital improvements.

- TransNet Ordinance – Transit System Service Improvements and Related Programs



Note: Amounts include \$72.8M for Senior Mini-Grants.

Program Performance

Nearly \$225 million in *TransNet* funds have been spent on transit services and new transit operations as of June 30, 2014.

- ✓ Annual transit ridership has grown since the prior audit to 107.6 million riders.
- ✓ Most NCTD route categories meet or exceed target on-time performance, with on-time performance ranging from 88 percent to 99 percent in 2014.
- ✓ Similarly, almost half of MTS route categories met on-time performance targets in 2014, with actual on-time performance ranging from 81 percent to 91 percent.
- ✓ San Diego bus and rail services continue to outperform peers in on-time performance, farebox recovery ratio, and operating expense per mile.

Audit Results Highlights

- Operators have solid on-time performance and improved reliability.
 - For instance, significant improvements in miles between mechanical loss were made by NCTD light rail and MTS directly operated bus services improving the reliability of the transit system.
- San Diego transit still outperforms peers for fixed route bus and all rail modes as follows:
 - System-wide Fixed Route farebox recovery ratios of nearly 34 percent in 2012 outpaced the peer average of 22 percent;
 - Light rail operating cost per revenue mile ranged from \$7.87 in 2010 to \$8.39 in 2012, which were significantly less than the peer averages of \$14.05 and \$13.50 over the same period;
 - The newly categorized Hybrid Rail reported significantly lower operating costs per boarding, with operating costs per boarding of \$5.71 in 2012 compared to the \$16.09 peer average; and
 - Commuter rail farebox recovery ratio was greater than peer averages in both 2010 and 2012, at roughly 40 percent both years.

Recommendations

- Continue development of Transit Performance Dashboards on each agency's respective website and provide a link to the Dashboard on SANDAGs website once complete.

TransNet Funds Only a Small Portion of Transit Operations

As part of the *TransNet* Extension Ordinance, a sizable portion of sales tax revenues is dedicated to transit programs shared between MTS and NCTD. Using these monies and other leveraged funds, the main services operated by these two entities include:

- ✓ Fixed route, rapid transit, express, and circulator bus
- ✓ Paratransit/Americans with Disabilities Act services
- ✓ Blue, Orange, and Green Line Light Rail
- ✓ COASTER Commuter Rail
- ✓ SPRINTER Hybrid Rail
- ✓ FLEX Rides by Reservation

From the *TransNet* program, 16.5 percent of the annual net revenues are available for transit services with the majority spent on operational costs, minor capital expenses, passes, and subsidies. A small portion of the 16.5 percent funds is designated for senior and American with Disabilities Act services (2.5 percent) and the Senior Mini-Grant program managed by SANDAG (3.25 percent). Additionally, another 8.1 percent of *TransNet* monies is reserved for the operation of new or expanded *TransNet* services in San Diego County. Although a significant share of the sales tax revenue is available, these *TransNet* funds represent a small fraction of the transit operators' Fiscal Year 2013 total revenue at 10 percent for MTS and 12 percent for NCTD.

Transit Operators Show Strong Performance

Transit performance is generally not captured by specific funding source, but rather tracked for the system as a whole, by route category, and/or individual routes—although performance indicators for routes funded by the 8.1 percent *TransNet* New Major Corridor Operations funds will be tracked and separately reported in the future. Performance is tracked and reported through a variety of mechanisms including annual performance reports to each agencies respective Boards, Quarterly Performance Monitoring Reports submitted to SANDAG, and annual reporting to the National Transit Database among others. Results within these documents may vary due to the self-reported nature of performance elements and the data collection methods used, as well as the time period of data being captured and reported. Yet, regardless of reporting source, San Diego continues to experience strong ridership levels, on-time performance, and reliability.

For instance, ridership is up from 2005 levels and has increased from the prior audit period to more than 107.6 million riders as of Fiscal Year 2014. MTS data shows growth from nearly 85 million in 2011 to more than 95 million in 2014, realizing an approximate 12 percent increase. Most of the growth was related to MTS' light rail services. Similarly, NCTD data shows ridership grew from 11.5 million in Fiscal Year 2011 to its highest ever reported ridership of 12.6 million in Fiscal Year 2014—a nearly 10 percent growth.

In terms of on-time performance, both San Diego transit operators continue to realize strong rates of timely service. NCTD's performance has held steady or improved in certain modes with services provided between 94 and 99 percent on-time as shown in Table 13. Since 2008, the COASTER has increased its timeliness from 96 to 97 percent in 2014. Moreover, the

SPRINTER service improved from 97 to more than 99 percent of trips completed on time between 2008 and 2014. NCTD's fixed route service, the BREEZE, experienced a decline in timely performance with levels declining from 97 percent in 2012 to 88 percent in 2014. The drop in performance is the result of more accurate reporting when NCTD changed from less reliable manual counts to computerized counts using its new Automatic Vehicle Location system.

Table 13: NCTD On-Time Performance by Route Category FY 2008 to FY 2014

Route Category	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	Goal
Fixed Route – BREEZE	96.5%	95.5%	95.9%	95.1%	96.8%	85.0%	88.3%	86%
Commuter Rail – COASTER	95.7%	97.0%	96.3%	95.8%	95.6%	97.9%	96.8%	95%
Hybrid Rail – SPRINTER	97.3%	99.7%	99.3%	98.6%	99.2%	98.5%	99.3%	98%
ADA/Paratransit – LIFT	94.0%	94.0%	94.2%	94.7%	91.6%	92.3%	93.8%	95%

Source: NCTD Fiscal Year 2007-2009 Transportation Development Act Audit Report & NCTD On-Time Performance Reports

Similarly, MTS also realized solid on-time performance rates system-wide with increased timeliness from 83 percent to 85 percent between 2012 and 2014, as shown in Table 14. For instance, between 2012 and 2014, the Express Bus service has increased performance from 73 percent to 83 percent of stops completed on-time. With targets set at 90 percent on-time service for most of its routes and 85 percent on-time service for urban frequent routes, almost half of its eight route categories in 2014 met targets as shown in the table. According to MTS, on-time performance for its Light Rail was impacted by Blue Line Trolley Renewal construction; while performance of its urban frequent bus routes carrying the greatest number of passengers were heavily impacted by construction and traffic in the high density corridors serviced. Moreover, many route categories have increased on-time performance over the three-year period.

Table 14: MTS On-Time Performance by Route Category FY 2012 to FY 2014

Route Category	Jun-12	Jun-13	Jun-14	Goal
Premium Express ¹	99.5%	98.8%	-	90.0%
Rapid Express (Routes 280, 290)	-	-	85.7%	90.0%
Rapid (SuperLoop)	95.2%	90.0%	90.8%	85.0%
Express	73.4%	81.8%	83.3%	90.0%
Light Rail	86.4%	95.2%	88.0%	90.0%
Urban Frequent	81.7%	79.6%	81.2%	85.0%
Urban Standard	80.7%	83.1%	86.1%	90.0%
Circulator	95.5%	91.6%	90.5%	90.0%
System On-Time Performance	83.4%	84.1%	85.0%	

Source: MTS Policy 42 Performance Monitoring Report Fiscal Years 2013 & 2014

Note: (1) Premium service was replaced by Rapid Express

Another indicator of system reliability is miles between mechanical loss which measures service quality calculated by capturing the number of total scheduled miles traveled between each mechanical breakdown that result in a loss of service to the public. As illustrated in Table 15, half of the route categories experienced improvement in the number of miles between

mechanical loss such as MTS directly operated bus which improved its miles between mechanical failures by nearly 28 percent—likely due to the purchase of new buses.

Conversely, NCTD’s fixed route average miles between mechanical loss declined by 37 percent. According to NCTD, this decrease is due to a combination of its aging fleet and contractor performance. NCTD states it is actively working with the contractor to identify trends and failures in order to improve fleet maintenance. Similarly, NCTD SPRINTER service improved its miles between mechanical loss by 257 percent with recent enhancements to its maintenance program, while MTS light rail miles between mechanical loss declined by nearly 10 percent. As both agencies replace older vehicles, the miles between mechanical loss will continue to improve the reliability of the San Diego transit system.

Table 15: Miles between Mechanical Loss, FY 2012 to FY 2014

	Fiscal Year			
	2012	2013	2014	% Change 2012 - 2014
NCTD BREEZE Fixed Route	26,733	17,774	16,760	-37%
NCTD SPRINTER Light Rail	12,224	24,877	43,651	257%
NCTD COASTER Commuter Rail	22,804	19,146	24,252	6%
MTS Directly Operated Bus	9,706	11,167	12,405	28%
MTS Contract Services	10,908	10,190	9,265	-15%
MTS Light Rail	476,369	325,354	430,189	-10%

Source: MTS Policy 42 Performance Monitoring Report Fiscal Years 2013 & 2014; NCTD Monthly Performance Reports

Finally, although San Diego system-wide operating costs increased between 2009 and 2012, from \$282.5 million to \$294.7 million, this is a modest increase of roughly 4 percent when compared to the nearly 6 percent increase in the consumer price index over the same period.

MTS and NCTD Continue to Improve Performance Tracking

Both operators report performance data through a variety of mechanisms that help ensure management and the public are informed of transit performance. For instance, MTS has developed a robust performance reporting system with established targets to measure performance. Metrics captured include service availability, in-service hours, route headway, and accidents per 100,000 miles. Similarly, NCTD tracks and provides performance information on their website for several recent fiscal years and provides monthly performance reports to their Board of Directors. NCTD also establishes annual performance goals to track performance. Performance data reported includes ridership, on-time performance, miles between mechanical losses, accidents per 100,000 miles, valid complaints, compliments, and farebox recovery.

Both entities also indicated that they were creating Transit Operations Performance dashboards; however, these dashboards are not expected to be completed until 2015. While current information provided by both transit operators allows customers and the general public to obtain a snapshot of the systems performance and generates some historical data for comparison,

providing the data in an easily accessible location for comparison purposes would be beneficial. As such, NCTD and MTS should continue efforts to create dashboards that provide transit operation performance in a convenient location for taxpayers to assess performance over time.

Further, as part of the Coordinated Plan developed by SANDAG that guides the implementation of public transit and social service transportation concepts, the transit operators have worked with SANDAG to outline performance guidelines and targets for performance and track actual results against metrics such as access to transit services, the number of trips completed, average percent of seats occupied, and farebox recovery, as well as many others illustrated in Figure 11.

Figure 11: Examples of 2014 - 2018 Coordinated Plan Transit Performance Measures

<p>Financial</p> <ul style="list-style-type: none"> • Farebox recovery should exceed the minimum TDA targets and demonstrate a reasonable effort to prevent regression over a three-year period 	<p>Productivity</p> <ul style="list-style-type: none"> • Average percentage of seats occupied (load factor) at or above the set threshold 	<p>Access</p> <ul style="list-style-type: none"> • 80% of residents or jobs within one-half mile of a bus stop or rail station in urban areas • 100% of transit stations & bus stops accessible 	<p>Convenience</p> <ul style="list-style-type: none"> • Percentage of stops that have transit service within the specified timeframes for each zone and day of week that are at or above established thresholds
<p>Reliability & Speed</p> <ul style="list-style-type: none"> • Percentage of trips on time at departure, arrivals, and en route timing points • 97.5% of trips completed 	<p>Environmental Justice</p> <ul style="list-style-type: none"> • Percentage of minority and low-income must not be disparately impacted when compared to the average level of service for other non-minority census tracts 	<p>Comfort</p> <ul style="list-style-type: none"> • Occupancy on board vehicles should be appropriate for the distance, speed, fare, and type of service being operated 	<p>Senior Mini-Grant Program Measures</p> <ul style="list-style-type: none"> • Actual or estimated number of rides • Operating cost in dollars per passenger

San Diego Transit Service Still Outperforms Peers

Using standard industry performance metrics such as farebox recovery ratios and operating cost per boarding, SEC’s review revealed that MTS and NCTD’s fixed route and rail systems outperformed peer systems throughout the nation including Los Angeles, Orange County, Denver, and Dallas over the most recent three-year period—a positive trend continuing from the prior audit. Specifically, SEC compared San Diego County performance as reported in the National Transit Database against peers identified based on area size, services provided, geographical characteristics, and boardings for fixed route, light rail, commuter rail, and hybrid rail. It is important to note, the data reported in the National Transit Database is self-reported by operators; as a result, there is an inherent risk that data reported may not be accurate. However, this is the best comparable data widely available. While the following sections summarize the performance comparisons, details on individual peer performance can be found in Appendix B.

Fixed Route Performs Better than its Peers

As illustrated in Table 16, San Diego County’s system-wide fixed route—MTS (including Chula Vista Transit) and NCTD—generally performs better than ten of its national peers over the most recent three-year period where data are available between Fiscal Year 2010 and 2012. For example, the San Diego system-wide farebox recovery ratio was approximately 33.7 percent, or 11.3 percent higher than the 22.4 percent ten peer average—meaning San Diego offset 33.7 percent of its operating costs through fare revenues. In another instance, San Diego’s average operating cost per revenue mile was \$8.06 and \$2.35 less than the \$10.41 peer average. Further, although San Diego’s farebox recovery ratios has declined slightly between 2010 and 2012, most of the other performance indicators are showing positive changes. These results are similar to trends noted in the prior audit.

Table 16: Comparison of San Diego 2010 & 2012 Fixed Route Performance with 10 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
San Diego (System-wide)	33.8%	33.7%	\$3.02	\$2.86	\$2.00	\$1.90	\$7.67	\$8.06	2.5	2.8
10 Peer Average	21.3%	22.4%	\$4.48	\$4.56	\$3.59	\$3.61	\$9.52	\$10.41	2.3	2.5

Source: NTD 2010 & 2012 Transit Profiles

- Note:
- 1 Farebox Recovery Ratio = Fare Revenue/Operating Expenses
 - 2 Operating Cost Per Boarding= Operating Expenses/Total Boardings
 - 3 Subsidy per Boarding = (Operating Expenses net Fare Revenue)/ Total Boardings
 - 4 Operating Cost per Revenue Mile = Operating Expenses/Annual Revenue Miles
 - 5 Passenger Trips per Revenue Mile = Total Revenue Miles/Passenger Trips

Similarly, MTS’ Light Rail Outperforms Peers

SEC compared MTS’ light rail performance against nine national peers based on performance information reported in the 2010 and 2012 National Transit Database Reports, and found MTS’ Light Rail 55.6 percent farebox recovery ratio was the highest amongst its peers and more than 24.3 percent higher than the nine peer average of 31.3 percent as shown in Table 17. In addition, MTS’ operating cost per boarding at \$1.94 was the lowest amongst its peers—at \$1.50 less than the \$3.44 nine peer average. MTS trends between 2010 and 2012 show positive results with higher farebox recovery and lower operating costs per boarding. Additionally, one difference to note when analyzing the trend between the 2010 and 2012 National Transit Database reporting years is that NCTD services were reclassified from Light Rail to Hybrid Rail as guided by the National Transit Database to account for differences between the operating characteristics of the diesel multiple unit vehicles versus traditional light rail vehicles; thus, that performance is analyzed separately.

Table 17: Comparison of San Diego 2010 & 2012 Light Rail Performance with 9 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
San Diego (MTS)	54.3%	55.6%	\$2.00	\$1.94	\$0.91	\$0.86	\$7.87	\$8.39	3.9	4.3
9 Peer Average	27.5%	31.3%	\$3.58	\$3.44	\$2.71	\$2.49	\$14.05	\$13.50	4.1	4.1

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

Note: See Notes from Table 16.

NCTD’s Newly Categorized Hybrid Rail Generally Outperforms Peers

With the reclassification of its Light Rail services to Hybrid Rail, NCTD joins only three other entities nationwide providing Hybrid Rail services. As illustrated in Table 18, NCTD farebox recovery ratio was the second highest at 19.2 percent and higher than the 11.5 percent peer average between 2011 and 2012. Additionally, NCTD’s operating cost per revenue mile was the lowest amongst its peers at \$20.72, compared to the \$38.29 three-peer average. This indicates NCTD is able to provide its Hybrid Rail operations at a lower cost per revenue mile than its peers. Moreover, trends over the two-year period shown strong positive performance in lowering operating costs and subsidies while increasing recovery rates.

Table 18: Comparison of San Diego 2011 & 2012 Hybrid Rail Performance with 3 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
San Diego (NCTD)	18.3%	19.2%	\$5.87	\$5.71	\$4.79	\$4.61	\$24.07	\$20.72	4.1	3.6
3 Peer Average	8.4%	11.5%	\$17.35	\$16.09	\$15.86	\$14.02	\$40.26	\$38.29	2.3	2.4

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

Note: See Notes from Table 16.

Commuter Rail Performs Better than Most Peers

Like the other transit modes, San Diego Commuter Rail COASTER system also appears to generally operate better than six identified peers reported in the National Transit Database. For instance, not only was NCTD Commuter Rail’s 39.5 percent farebox recovery ratio higher than the peer average of 33 percent, but also it was among the highest of its peers in 2012. In addition, NCTD \$10.84 operating cost per boarding was one of the lowest amongst its peers and \$2.75 less than the \$13.59 six peer average as shown in Table 19.

Table 19: Comparison of San Diego 2010 & 2012 Commuter Rail Performance with 6 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
San Diego (NCTD)	40.0%	39.5%	\$12.10	\$10.84	\$7.26	\$6.56	\$12.50	\$12.57	1.0	1.2
6 Peer Average	31.2%	33.0%	\$14.33	\$13.59	\$10.26	\$9.52	\$16.82	\$18.39	1.3	1.4

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

Note: See Notes from Table 16.

Audit Results Indicate Strong and Compliant Operations

Transit operational efficiency and performance effectiveness is heavily audited and reviewed by external oversight groups looking at administration, management, planning, and regional coordination, among other areas. These audits determine compliance with laws and regulations, evaluate performance monitoring systems, and analyze system-wide and functional area performance trends. Recent audits of the San Diego transit agencies and SANDAG for Fiscal Years 2010-2012 found that all entities were compliant with state regulations.

Chapter 6: Grant Activities

CHAPTER SUMMARY	
<p><u>EMP Grants:</u> Fund regional land management and monitoring activities.</p> <p><u>Senior-Mini Grants:</u> Provide specialized transportation services for seniors.</p> <p><u>Smart Growth Incentive Grants:</u> Provide funding for a broad array of transportation-related infrastructure improvements that will assist local agencies in better integrating transportation and land use.</p> <p><u>Active Transportation Grants:</u> Provide funding for bikeway facilities and connectivity improvements, pedestrian and walkable community projects...safety projects and programs, and traffic calming projects.</p> <p style="text-align: right;">- TransNet Ordinance Various Programs</p>	
<ul style="list-style-type: none"> ▪ Active Transportation Grants: 2% of Gross Annual TransNet Revenues ▪ Smart Growth Incentive Grants: 2.1% of Net Annual TransNet Revenues ▪ Senior Mini-Grants: 3.25% of 16.5% of Transit Services Net Annual TransNet Revenues ▪ Environmental Mitigation Land Management Grants: Part of the 6.2% of Net Annual TransNet Revenues 	<p><u>Grant Performance</u></p> <p>Nearly \$57 million in TransNet funds have been awarded with half of the monies spent on the grant programs as of June 30, 2014.</p> <ul style="list-style-type: none"> ✓ Performance data is not available for the Active Transportation Grant and Smart Growth Incentive programs, but SANDAG has recently implemented processes to gather data for capital projects. ✓ For the EMP and Senior Mini-Grant programs, available performance data indicates that individual grantees are making progress toward their grant objectives.
<p><u>Audit Results Highlights</u></p> <ul style="list-style-type: none"> ▪ Limited data is captured to measure grant performance, except for the Senior Mini-Grant Program. ▪ Grant practices were enhanced, including strengthened performance monitoring. ▪ Small adjustments could be made to monitoring tools and processes. ▪ Average grant processing timelines have decreased by several months on average. 	
<p><u>Recommendations</u></p> <ul style="list-style-type: none"> ▪ Capture, monitor, and validate grant performance data once available. ▪ Make minor improvements to grant monitoring tools. ▪ Date stamp grant applications to allow for confirmation that grantees meet required timeframe. 	

Limited Data is Captured to Measure Grant Performance

While grant activities are diligently monitored by SANDAG staff, there is limited performance data captured to summarize what has been achieved toward overall program goals and objectives through the grant activities. Because many changes to SANDAG’s grant monitoring processes have only been recently implemented with the latest call for projects, data is not yet available to measure grant results for most of the grant programs. However, there have been nearly 200 grants awarded totaling nearly \$57 million—with 50 percent of funds spent as of June 30, 2014 as shown in Table 20.

Table 20: TransNet Grant Program Awards and Spending as of June 30, 2014

Grant Programs	Purpose	Total # of Grants Awarded	Total Amount Awarded	Total Amount Spent
EMP Land Management	Habitat management and monitoring through land management	70	\$11.3 million	\$9.5 million ¹
EMP Land Acquisition ²	Habitat management and monitoring through land acquisitions	N/A	N/A	N/A
Smart Growth Incentive	Fund transportation related infrastructure improvements to assist locals in integrating transportation and land use	27 ³	\$19 million ³	\$8.4 million
Active Transportation	Improve bike facilities and connectivity, pedestrian projects and safety	56 ³	\$17.4 million ³	\$4.7 million
Senior-Mini	Improve mobility for persons age 60 and older	42	\$8.9 million	\$5.7 million
Total		195	\$56.6 million	\$28.3 million

Source: SANDAG IFAS Reports, various Call for Projects, and SANDAG Board meeting minutes.

Note: ¹ Total amount spent through October 28, 2014.

² As of September 2014, the new EMP Land Acquisition program had not awarded any grants.

³ Includes two Active Transportation and three Smart Growth Incentive Program Grants that were withdrawn and/or transferred to the Regional Bike Early Action Program totally close to \$2 million.

Individual grant program efforts toward capturing performance results are detailed below.

EMP Land Management and Land Acquisition Grants

Grants awarded under this program are for widely varied functions such as designing databases for tracking conservation efforts, erecting fences to protect habitats, restoring degraded habitats, and controlling invasive non-native plant species, among others. While all these activities make strides toward fulfilling the goals of the EMP, until restoration and conservation efforts are implemented, it is challenging to measure how well this area has performed in relation to overall habitat conservation goals. As discussed in Chapter 4, performance data will begin to be captured over the next three-year audit period.

Smart Growth Incentive Program

While the Smart Growth Incentive Program has goals and detailed project scopes of work included in each grant agreement with measurable objectives, there has not been an established method for assessing whether the grant performed as expected to meet desired goals. However, SANDAG has recently required that a portion of funds for construction projects be used to gather data that will become a baseline for performance measurement once grants are completed. Baseline data is still being gathered and comparison data will not be available until the next triennial audit when projects are completed and impact on surrounding areas can be assessed. When available, SANDAG plans to compare and analyze before and after data collected to fully assess project performance in meeting goals.

Active Transportation Grant Program

With program objectives such as increasing community support for bicycling, encouraging the development of a cohesive network of complete streets, and creating safe environments through traffic calming, SANDAG will start to track baseline performance data for its capital grant projects as mentioned above. Baseline data will be gathered for bicycle and pedestrian projects that can be compared against actual results and the objectives of the Active Transportation Grant Program.

Senior Mini-Grant Program

To provide an indication of what was received for the *TransNet* investment in the Senior Mini-Grant Program, performance data is available for the Senior Mini-Grant program such as number of senior trips provided, operating cost per trip, and number of clients educated. For instance, between 2011 and 2013, rides for seniors grew 72 percent from 64,000 rides to 110,000 using grant funds. Other output data—such as passenger seat utilization and operation cost per vehicle service hour—is provided by grantees on quarterly progress reports where applicable, but is not currently tracked or verified.

With several changes made to strengthen monitoring and performance tracking across all of the various *TransNet* grant programs, additional performance results should be available by the next ITOC triennial audit cycle to compare actual results against expected results over time. Thus, SANDAG staff should continue to capture results by monitoring the submission of performance data, validating information, analyzing results, and communicating with decision makers.

Many Grant Practices Were Strengthened During the Audit Period; However, Other Improvements Would Enhance Performance Monitoring Processes

All grant program practices are governed by Board Policy No. 035: Competitive Grant Program Procedures updated in November 2014 which outlines administrative procedures. While goals and objectives of each grant program may be different, this policy standardizes many processes across all grant programs.

As found in recent years, SANDAG continues to use leading practices over its solicitation, award, and implementation of grant activities. Moreover, several improvements have been implemented to enhance consistency in the administration and management of *TransNet* grant

programs. Specifically, SANDAG has standardized several practices into a grant guidelines document and made board reports consistent. Other improvements to strengthen grant management and monitoring include more regular on-site reviews, identification of performance measures for grant monitoring, quarterly progress/status reporting, and use of “watch lists” to track grantees at risk of failing to meet grant requirements, as shown in Figure 12.

Figure 12: Tools Used to Manage Grants



While these improvements to grant practices are commendable, SANDAG can enhance its grant monitoring practices by implementing minor enhancements related to grantee progress reports, site visits, and monitoring checklists. For instance, because individual grant scopes of work widely vary for EMP Land Management grants, the progress reports submitted by grantees provide varied results that are hard to analyze and summarize. As such, staff could implement a basic progress reporting template containing desired information including challenges, setbacks, and plans for resolution. Similarly, for the Senior-Mini Grant progress reports reviewed, SEC found some grantees do not provide complete information as requested by SANDAG. Thus, staff should work with grantees to ensure information

provided is accurate and complete especially related to performance data such as cost per passenger trip and passenger seat utilization, where applicable.

Additionally, SEC found that while site visit processes employed by the EMP and Senior Mini-Grant staff are effective tools for monitoring grant progress, certain enhancements are needed to ensure performance is adequately reviewed. For example, while EMP Land Management grant site visit reports noted if required grant tasks were being accomplished, none of the reports reviewed discussed the budget or schedule status, or contained an overall analysis or conclusions on the project being examined. Thus, it is difficult to determine whether the activities complied with grant requirements and deliverables. In addition, none of the reports or other documentation available explained why the grantee was chosen for a site visit under the risk-based selection approach. Further, site visit reports should identify how the grantee was selected for visit using the risk-based approach as well as conclude whether the grantee is on track for meeting expectations, deliverables, budget, and schedule. Having this information in the report would provide helpful context on what grant areas have experienced challenges and should be more closely monitored.

Similarly, for Senior Mini-Grant program, the site visit monitoring checklist template could include standard information such as grantee name, date of site visit, and staff that performed the site visit. Additionally, when staff identified an issue during a site visit, in most cases additional information, explanation, or plans for resolution were not provided making it difficult to know the extent of any issues. Thus, SANDAG should expand its checklist to include this useful information.

Grant Processing Timelines have Improved since Last Audit

When reviewing timelines between the receipt of a grant application and execution of a grant agreement for 8 grants selected for review, SEC found that it took between 7 months and 26 months to process the awards as shown in Table 21. Half of the 8 grants tested required approximately 7 months for processing, with others taking longer than one year—although two Senior Mini-Grants had to be delayed until the grantees’ prior grants expired. The longest delays commonly occurred between the Board of Directors’ approval of the individual grant awards and execution of the resulting grant agreements.

Table 21: Total Processing Time for Sampled Grants FY 2011 to FY 2014

Grant Number	Grantee Name	Grant Fiscal Year	Grant Project Name	DURATION (in months)			
				Project Scoring (1)	Reviews & Approvals (2)	Grant Agreement (3)	Total Processing Time
ACTIVE TRANSPORTATION GRANTS							
5001732	Carlsbad	2012	Coastal Rail Trail – Reach 1	1.5	1.0	4.6	7.1^A
5001744	San Diego (City)	2012	Linda Vista CATS	1.5	1.0	4.9	7.3^A
ENVIRONMENTAL MITIGATION GRANTS							
5001760	Conservation Biology Inst.	2013	South County Grasslands, Phase 2	1.0	2.9	3.3	7.2^B
5001970	Chula Vista	2011	Salt Creek Canyon	0.5	4.7	5.5	10.7^B
SENIOR MINI-GRANTS							
5001693	ElderHelp	2012	Seniors A-Go-Go	1.0	2.5	10.3	13.8^C
5001695	FACT	2012	MedRide	1.0	2.5	22.5	26.0^C
SMART GROWTH INCENTIVE PROGRAM GRANTS							
5004283	National City	2013	Downtown-Westside Community Connections	1.1	4.2	1.6	7.0^D
5004293	Imperial Beach	2013	Palm Avenue Mixed-Use & Commercial Corridor Master Plan	1.1	4.2	7.0	12.4^D

Source: Auditor-generated using grant file documentation and meeting minutes.

Note: (1) Project Scoring = Application Due to Scoring Completion
 (2) Reviews & Approvals = Scoring Completion to Board Approval
 (3) Grant Agreement = Board Approval to Grant Execution

Table Explanations:

^A = Decisions were made to postpone execution of grants while Technical Services Department conducted an independent review of application scoring data when errors noted; process changed to prevent future errors.

^B = According to SANDAG, the 2011 EMP Land Management Grant timelines were not outside the normal contract processes; however, for the 2013 grant cycle, changes were made to have draft documents ready once Board approved.

^C = Execution of grant agreements intentionally delayed for Senior Mini-Grants until previously awarded grant terms terminated in order to avoid overlaps in funding. Additionally, 2012 grant agreements were delayed after the Board approval to include measurable performance indicators and recovery plan requirements.

^D = According to SANDAG, Smart Growth Incentive grants were affected by needed Regional Transportation Improvement Program amendments that took longer than expected.

Moreover, these timelines are improved from those noted in the prior triennial audit. As shown in Table 22, SANDAG has reduced its typical processing time for grant awards since the prior audit despite adding additional steps in the process for a Quality Control Review and second presentation to Policy Advisory Committees starting with Fiscal Year 2013 grants.

**Table 22: Changes in Total Processing Time for Sampled Grants
FY 2011 to FY 2014 (in months)**

	FY 2011 Audit ¹ (A)	FY 2014 Audit ² (B)	Decrease Since Last Audit (A)-(B)
Average	11.6	9.9	1.7
Median	11.6	9.0	2.6

Note: All amounts are in months. (1) Sample size = 22 grants. (2) Sample size = 8 grants

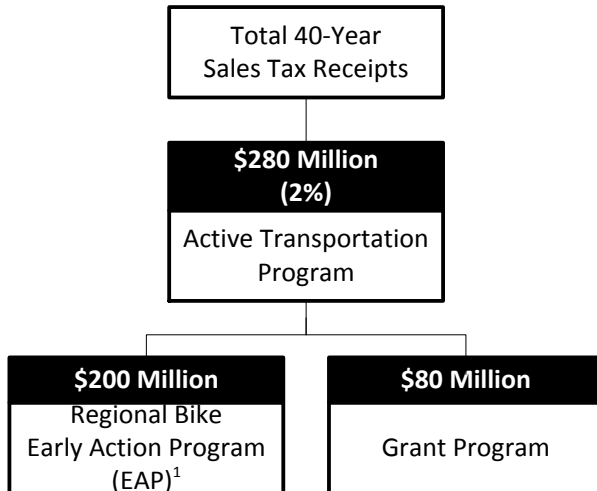
However, one process improvement needed is that SANDAG cannot identify the date on which any given grantee submitted its grant application because there is no date stamp on the grant applications or other evidence demonstrating when the application was received. As a result, SANDAG cannot confirm that all grant applications were submitted by the deadline specified in an individual call for projects.

Chapter 7: Active Transportation Capital Projects

CHAPTER SUMMARY

Provide funding to expand the regional bicycle network to make it easier for people to ride to school, work, transit centers, and other destinations.

- *TransNet Ordinance and SANDAG Board of Director 9/13/13 meeting*



Note: ¹Includes TransNet and State Transportation Development Act Funding

Program Performance

Nearly \$13.7 million in *TransNet* funds have been spent on the Active Transportation program as of September 19, 2014.

- ✓ Two of the 19 approved and funded early action projects have been completed to date.
- ✓ Performance cannot be assessed without having metrics and tracking processes in place.

Audit Results Highlights

- Project schedule and costs have been incorporated into Dashboard.
- Dashboard results show several projects with schedule delays.
- Emerging project management practices can be improved.
- Too early in program to have performance outcome results, but specific plans should be made to capture data.

Recommendations

- Use Dashboard as a tool to monitor schedule and cost.
- Develop project delivery and management practices consistent with other *TransNet* capital projects that include:
 - Using automated tools to monitor cost and schedule milestones;
 - Conducting and documenting regular project development team meetings;
 - Managing task order amendments and change orders;
 - Timely reporting of status and issues to decision makers; and
 - Retaining appropriate project documentation.
- Set performance indicators and capture performance data.

Part of *TransNet* funds are earmarked for bikeway facilities and connectivity improvements, pedestrian and walkable community projects, bicycle and pedestrian safety projects, and traffic calming projects. These efforts were consolidated into an Active Transportation Program to encourage the increased use of active modes of transportation such as biking and walking. In 2014, SANDAG reorganized its activities to separate out Early Action Program capital projects related to Active Transportation from the grant activities related to Active Transportation as previously discussed. Although SANDAG’s first bike plan was adopted in May 2010, it did not identify individual active transportation improvement projects. Projects were not identified and approved until the fall 2013 when approximately \$200 million was designated for specific Active Transportation Program EAP projects over a 10-year time span through a combination of *TransNet*, State, and local monies. This funding is expected to add roughly 77 miles of new bikeways throughout the region. Currently, there are 79 EAP and 24 non-EAP ranked projects included in the Regional Bike Plan Network.

Schedule and Cost Performance is Being Tracked in Dashboard

Like other regional construction projects, the *TransNet* Dashboard is being used to track schedule, budget, and expenditure information for the regional bikeway program against original baselines and budgets. Currently, there are 19 individual bike segments from the Regional Bikeway Plan tracked in the Dashboard as shown in Table 24. To date, two small early action projects have been completed—the Palomar Street and H Street section of the Bayshore Bikeway was completed in March 2012, while the Coastal Rail Trail Phase 2B, Oceanside Blvd to Wisconsin was completed in April 2014. For the remaining 17 projects, the majority indicate a caution or critical schedule status.

To review project performance, SEC reviewed one of the two completed projects—namely, the Coastal Rail Trail Phase 2B from Oceanside Boulevard to Wisconsin that is part of a planned 44-mile bike trail from the City of Oceanside to the City of San Diego. As illustrated in Table 23, the project experienced both budget increases from \$2 million to nearly \$2.5 million and schedule delays where the project was completed April 2014 instead of October 2013—seven months after expected completion.




















Table 23: Oceanside Rail Trail Phase 2B

Initial Budget	Revised Budget	Expenditures as of 10/27/14	Initial Open to Public Date	Revised Open to Public Date	Actual Date Open to Public
\$2,054	\$2,448	\$2,227	October 2013	February 2014	April 2014

Note: Amounts reflected in thousands.

However, SEC’s high-level review found the variances were reasonable and that staff appropriately communicated the project delay and additional costs to the SANDAG Board of Directors. The project delays and budget increases were due to unforeseen conditions related to contaminated soil identified during the construction excavation that was not identified during the environmental phase, resulting in additional time and costs for the removal and disposal of the contaminated soil.

Table 24: Regional Bikeway Program Corridor Segment Schedules, As of September 2014

#	REGIONAL BIKEWAY SEGMENTS	BASELINE START DATE	BASELINE END DATE	CURRENT PLAN START DATE	CURRENT PLAN END DATE	REPORTED STATUS
1	Bayshore Bikeway: 8B Main Street to Palomar	07/01/2012	03/30/2016	07/01/2012	06/30/2018	
2	Bayshore Bikeway: Segments 4 & 5	07/01/2010	07/31/2014	07/01/2010	12/05/2017	
3	Bayshore Bikeway: Segments 7 & 8A	04/01/2010	06/30/2015	04/01/2010	06/30/2015	
4	Sweetwater Bikeway: Plaza Bonita Segment	07/01/2011	06/30/2015	07/01/2011	01/29/2016	
5	SR 15 Commuter Bike Facility	07/01/2011	10/14/2014	07/01/2011	04/30/2015	
6	Coastal Rail Trail San Diego: Rose Creek	07/01/2011	07/31/2016	07/01/2011	05/31/2016	
7	Coastal Rail Trail Encinitas: E Street to Chesterfield Drive	07/01/2011	06/30/2016	07/01/2011	05/31/2016	
8	Coastal Rail Trail Encinitas: Chesterfield Drive to Solana Beach	Data Not Available at Time of Analysis				
9	Bicycle Facilities: La Mesa to North Park (1223020)	07/01/2012	01/31/2014	07/01/2012	09/30/2015	
10	Bicycle Facilities: Old Town to San Diego	07/01/2011	04/30/2015	07/01/2011	03/31/2015	
11	Inland Rail Trail	07/01/2011	12/31/2017	07/01/2011	06/29/2018	
12	Coastal Rail Trail: Phase 2B - Oceanside	07/01/2011	06/30/2014	07/01/2011	12/31/2014	
13	San Diego River Trail: Qualcomm Stadium Segment	07/01/2014	12/31/2014	07/01/2014	12/31/2015	
14	San Diego River Trail: Carlton Oaks Segment	07/01/2014	12/31/2014	07/01/2014	12/30/2016	
15	SR 15 Bike Path: Adams Ave to Landis Street	07/01/2014	06/30/2015	07/01/2014	10/30/2015	
16	Bayshore Bikeway: Barrio Logan	07/01/2014	06/30/2016	07/01/2014	06/30/2016	
17	San Ysidro to Imperial Beach Parkway	07/01/2014	12/31/2016	07/01/2014	12/30/2016	
18	North Park to Downtown/ Balboa Park Bikeway	05/01/2016	12/31/2016	07/01/2014	12/30/2016	
19	Southeast to Downtown Bikeway	07/01/2014	03/31/2017	07/01/2014	03/31/2017	

Source: TransNet Dashboard as of September 2014

Emerging Project Management Practices Can be Improved

To manage and oversee the EAP projects, SANDAG hired three new project managers who will be responsible for implementing the projects from design through construction. While SANDAG has not established formal policies and protocols for managing Active Transportation projects, SANDAG indicated it is in the process of developing a formal monitoring and management plan for overseeing and managing Active Transportation EAP projects—the plan is expected to be completed in 2015. Given that SANDAG project managers will be responsible for managing complex project issues, including land acquisition, right-of-way, and community concerns, SANDAG should work to develop guidelines and policies to help ensure projects are managed consistently and appropriate documentation supporting key project milestones, schedule, budget, and management decisions is retained.

Additionally, these guidelines should align with other SANDAG capital project practices such as using automated industry standard tools to monitor cost and schedule milestones, conducting regular project development team meetings, managing task order amendments and change orders, and reporting status and issues to decision makers. Moreover, while the financial and schedule information are tracked in the Dashboard, Active Transportation staff are not currently using the functionality since most projects are early in the preliminary engineering or design phase.

Future Consideration Should be Given to Capturing Performance Data

SANDAG should also consider establishing and reporting performance metrics for its Active Transportation EAP projects. Performance output metrics captured could include measurements such as miles of bikeways funded with *TransNet* funds completed with actual results compared to the regional bikeway plan goals to report progress.

For instance, to improve connectivity and quality of the regional bicycle network, the 2050 Bike Plan describes several measures that SANDAG could consider for monitoring and evaluating progress such as increasing “the proportion of arterial streets with bicycle facilities...[by] 25 percent by 2017.” The Plan also recommends developing an annual regional progress report to conclude on what progress has been made toward the implementation of bicycle facilities and program implementation. However, at this point, SANDAG is not tracking that information—although metrics for miles of newly constructed bike paths completed would demonstrate progress towards the 2050 goals.

Other entities track that type of performance as part of their bicycle plan. For instance, the City of Rockville, Maryland measures number of miles of bikeways for progress toward total miles proposed as well as number of bicycle spaces added on city streets. In another example, the City of Portland, Oregon established a performance measure in its Bicycle Plan for 2030 to track percent reduction in rate of serious or fatal of bicycle crashes. Further, as part of a 2011 conference on performance measures for transportation and livable communities, the National Cooperative Highway Research Program suggested quantifying and tracking level of service for bikeways in the Highway Capacity Manual. This measure, along with others, was reiterated in a Guide to Sustainable Transportation Performance Measures issued by the Environmental Protection Agency in August 2011 as well.

SANDAG is currently developing performance measures for bicycling and walking in the region as well as identifying corridors to track bicyclist and pedestrian activity over time. According to SANDAG, work on quantifying bicycle and pedestrian travel trends is expected to be incorporated into the State of the Commute report in 2016. Moreover, as projects are completed and bike facilities become operable, SANDAG should consider other tracking and reporting on some or all of the items described in the previous paragraph including the condition of the bikeways and number of accidents on the bike paths.

Additionally, similar to delivery of Major Corridor capital projects, internal performance and efficiency of delivering the EAP projects should be measured as well. Goals can be established to track performance and make adjustments to practices as warranted. As such, SEC would recommend that staff use Dashboard data or other vehicles and consider metrics such as:

- ✓ Percent of projects delivered on schedule and ready for construction;
- ✓ Percent of project awards not exceeding more than 10 percent of estimates;
- ✓ Percentage of support costs and a percent of budget; and/or
- ✓ Percent of projects delivered on budget.

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Chapter 8: ITOC Practices

CHAPTER SUMMARY	
<p><i>Provide an enhanced level of accountability for expenditure made under the Expenditure Plan[,] help ensure that all voter mandates are carried out as required [and] develop recommendations for improvements to the financial integrity and performance of the program.</i></p> <p style="text-align: right;"><i>- TransNet Ordinance – Independent Taxpayer Oversight Committee</i></p>	
<p style="text-align: center;">Total 40-Year Sales Tax Receipts</p> <p style="text-align: center;">\$10 Million (\$250,000/Year)</p> <p style="text-align: center;">ITOC Activities</p>	<p><u>ITOC Performance</u></p> <p>Just over \$1 million in <i>TransNet</i> funds have been spent on the Independent Taxpayer Oversight Committee as of June 30, 2014. SEC found:</p> <ul style="list-style-type: none"> ✓ Members possess the requisite skills and experience to carry out ITOC's responsibilities as outlined in the <i>TransNet</i> Extension Ordinance. ✓ Committee continues to provide a valuable and constructive role in ongoing program improvement and enhancement. ✓ <i>TransNet</i> partners treat ITOC as valuable members of the process.
<p><u>Audit Results Highlights</u></p> <ul style="list-style-type: none"> ▪ ITOC continues to comply with the <i>TransNet</i> Extension Ordinance and function effectively as follows: <ul style="list-style-type: none"> ○ The Committee fulfills its responsibilities; ○ Members possess requisite expertise; ○ Conflict of interest provisions followed; ○ Meeting frequency adheres to Ordinance, although some meetings were cancelled; ○ Attendance is steady at monthly meetings; and ○ ITOC uses leading practices. 	
<p><u>Recommendations</u></p> <ul style="list-style-type: none"> ▪ Revisit the method used to alternate the ending terms for members so that no more than two terms end in any given year—thus, maintaining the strong level of historical knowledge among the committee members. 	

ITOC Continues to Comply with Ordinance and Function Effectively

One of the key safeguards established by the 2004 *TransNet* Extension Ordinance is the creation of the Independent Taxpayer Oversight Committee providing an increased level of accountability over the *TransNet* revenues. Several documents guide the function of the committee including a “Statement of Understanding Regarding the Implementation of the ITOC for the *TransNet* program,” ITOC Bylaws, and Implementation Procedures in addition to the *TransNet* Extension Ordinance itself. Combined, these documents provide the framework for member experience and resumes, meeting protocols and function, and member conduct and responsibilities to help ensure voter mandates are carried out.

Members Possess Required Expertise

Per ITOC bylaws, there are seven voting members representing seven areas of expertise with two ex-officio members—the SANDAG Executive Director and the San Diego County Auditor. These two ex-officio members are bound by the requirements of the bylaws, but do not have voting authority. Overall, SEC found the ITOC members possess the requisite skills and experience to carry out ITOC's responsibilities as outlined in the *TransNet* Extension Ordinance, and continue to provide a valuable and constructive role in the ongoing improvement and enhancement of the *TransNet* program.

Terms of Service are Staggered

Currently, ITOC members serve staggered four-year terms and are chosen through an application process by a selection committee panel of city mayors and county supervisors. Alternating service terms is a good practice to ensure continuity of methods and processes. However, SEC noticed that the current staggering of membership terms will result in four seats ending at the same time in 2015. With more than half of the full seven committee member terms ending, the ITOC, technical screening committee, and selection committee may want to consider using a different method to alternate the ending terms so that no more than two terms end in any given year—thus, maintaining the strong level of historical knowledge among the committee members.

Members Follow Diligent Conflict of Interest Protocols

As part of its “Statement of Understanding Regarding the Implementation of the Independent Taxpayer Oversight Committee for the *TransNet* Program,” members must complete a statewide Statement of Economic Interests (Form 700) and a SANDAG required Declaration Concerning Conflicts to disclose any potential conflicts between ITOC activities and member’s non-committee activities. SEC found that these conflict forms were completed by the members as required. Moreover, the review found documentation of members appropriately recusing themselves when a potential conflict of interest existed on a particular voting matter.

Meetings are Regularly Scheduled and Attended

With regularly scheduled ITOC meetings on the second Wednesday of every month, there were 36 possible meetings during the 3-year audit period. Of the 36 meetings, 4 of them, or approximately 13 percent were cancelled—excluding the August and December meetings that are not scheduled since there is typically no pending ITOC business during these months.

Based on SEC’s review, the cancelled meetings did not have any detrimental effect on *TransNet* activities and did not affect schedule or cost of the program. Rather, it appeared that cancellations occurred when there was no critical business items to bring forward to the ITOC for discussion.

Additionally, SEC found that meetings are regularly attended by the ITOC members. Attendance for individual ITOC members ranged from 70 to 100 percent, with an average attendance rate for members of nearly 84 percent over the 3-year period. These results comply with ITOC bylaws.

Committee Responsibilities are Fulfilled

Under the provisions of the *TransNet* Extension Ordinance, ITOC has several responsibilities that SEC found members appropriately and diligently fulfilled as shown in Table 25.

Table 25: Comparison of ITOC Responsibilities with Actions Taken

Responsibilities Per <i>TransNet</i> Ordinance	Actions Taken
Conduct Annual Fiscal and Compliance Audits	Hired an independent audit firm to review local adherence to <i>TransNet</i> Extension Ordinance, Board policies, and maintenance of effort requirements.
Prepare Annual Reports to SANDAG Board of Directors	Developed and issued annual reports that include <i>TransNet</i> program projects’ progress and status and summary of revenues and expenditures.
Conduct Triennial Performance Audits of <i>TransNet</i> Funded Projects	Hired an independent auditor to review performance and opportunities for increased efficiency and effectiveness. The first audit was issued in 2009 and the second audit was issued in 2012. Results of the third audit are presented in this report.
Make Recommendations on Proposed Amendments to <i>TransNet</i> Ordinance	Analyzed and made recommendations on amendments to the <i>TransNet</i> Ordinance and Expenditure Plan.
Provide Recommendations in 10-year Review of <i>TransNet</i> program	Not applicable until Fiscal Year 2019 when the 10-year timeframe has occurred for the <i>TransNet</i> program.
Participate in Ongoing Refinement of Project Evaluation Criteria and Project Prioritization in the RTP and RTIP	Received and reviewed a variety of documentation related to topics in this area.
Provide Independent Analysis of Information in State of the Commute Report	Analyzed annual State of the Commute Reports as part of its standard meeting process as well as through its own Annual ITOC reporting process.
Review and Comment on the Programming of <i>TransNet</i> Revenues in the RTIP	Reviewed, discussed, and made recommendations on programming and changes made to the program.
Review Proposed Debt Financing	Assessed debt service ratios and financing proposals to monitor SANDAG’s ability to pay for <i>TransNet</i> program debt as well as the Plan of Finance on a regular basis.
Quarterly Review of Major Congestion Relief Projects Identified in the Ordinance	Analyzed a variety of quarterly reports from SANDAG and its partners on status, progress, and performance.

Peer Comparisons Indicate ITOC follows Leading Practices

Similar to prior audits, SEC finds that San Diego's ITOC subscribes to many of the best practices employed by similar taxpayer or transportation oversight committees throughout the nation. Specifically, ITOC members must possess a wider breadth of experience than its peers, adhere to more formal operating protocols and attendance requirements, and follow stringent conflict of interest requirements. Review of meeting minutes also demonstrates that ITOC appears to be highly valued by decision makers with the type of information provided to ITOC and that members diligently review, question, and vet the data that comes before them. Only one peer committee in Orange County included one more stringent responsibility than San Diego's ITOC whereby any amendments to Orange County's similar local measure and expenditure plan had to be approved by its taxpayer oversight committee.

Chapter 9: Conclusion and Recommendations

During the three-year audit period, SANDAG and its partners have continued to propel the *TransNet* program through challenges creating a well-run comprehensive transportation, transit, and environmental program. All parties involved with *TransNet* activities demonstrate the necessary commitment, expertise, and focus to ensure the program is transparent in its efforts to accomplish the goals set forth in the *TransNet* Extension Ordinance.

Even though only six years of the 40-year *TransNet* program have elapsed, good practices built into the foundation of the program continue to exist over program development and delivery, environmental mitigation, cost and schedule control, grant activities, and general management and oversight.

To improve efficiency, effectiveness, and accountability to the taxpayers of the San Diego region, ITOC should have SANDAG and its *TransNet* partners consider the following series of recommendations. SEC believes these recommendations could be implemented without significant use of resources, and that no significant barriers exist to impede that implementation.

Recommendation	Report Reference	Priority	
To better enhance project management and performance practices over the Major Corridor Capital Improvement Program, the ITOC should have SANDAG work with its partners to:			
1.	Utilizing data already captured, summarize <i>TransNet</i> performance results in a comprehensive report card type format.	Chapter 1, pages 9-11	Low
2.	Improve SANDAG's transit capital project management practices by finalizing SANDAG's Construction Management Manual.	Chapter 2, pages 18-19	High
3.	Closely monitor the risks associated with the implementation of the CM/GC approach being used on Major Corridor highway and transit projects and consider implementing leading practices, including: <ul style="list-style-type: none"> • Establishing performance goals and measuring results by comparing "traditional" project delivery time and original cost estimates to CM/GC model actuals and determining the value-added and cost savings attributed to CM/GC value engineering and recommendations; • Employing risk management practices to identify and manage risk through formal tools such as risk registries; • Ensuring the same cost development criteria and methodology is utilized for the Independent Cost Estimate, Engineer Estimate, and Contractor estimate; and 	Chapter 2, pages 19-21	High

Recommendation		Report Reference	Priority
	<ul style="list-style-type: none"> Implementing strong communication practices during both the pre-construction and construction phase. 		
4.	<p>Begin to capture data and measure project delivery of transit capital projects on schedule and budget using metrics such as:</p> <ul style="list-style-type: none"> Percent of projects delivered on schedule and ready for construction; Percent of change orders against original contract amount; and Percent of projects delivered on budget. 	Chapter 2, page 22	Medium
<p>To improve Local Street and Road Program performance data and better assist local jurisdictions with managing future needs for roadway maintenance, the ITOC should have SANDAG work collaboratively with the local agencies to:</p>			
5.	Consider implementing one of the deployment options of the Regional Arterial Detection System Development Plan, or develop and implement other alternative mechanisms to measure local street and road performance outcomes.	Chapter 3, page 28	High
6.	Expand on existing available local street and road performance output data to report and summarize on improvements made to the local streets and roads network.	Chapter 3, pages 28-30	High
7.	Revisit the <i>TransNet</i> Ordinance and Expenditure Plan's definitions between congestion relief and maintenance categories to allow local jurisdictions the ability to better program projects to meet local street and road needs.	Chapter 3, pages 30-33	Medium
<p>To continue strengthening the EMP to ensure <i>TransNet</i> funding is utilized in the most effective manner, the ITOC should have SANDAG:</p>			
8.	Continue efforts to market local mitigation program with money available for locals.	Chapter 4, page 39	Medium
9.	Begin focusing on formally measuring results of mitigation efforts to implement the Resource Enhancement and Mitigation Program under the Public Works Plan and the results of efforts to implement the strategic goals and objective of the regional monitoring and management under the Management Strategic Plan and any other EMP efforts.	Chapter 4, pages 39-40	High

	Recommendation	Report Reference	Priority
10.	Create methodology to quantify how much economic benefits have actually been achieved to compare against what was released to identify funding deficits or surpluses as part of the 10-year Comprehensive Review required by the <i>TransNet</i> Extension Ordinance.	Chapter 4, pages 40-41	High
To build upon the successful Transit Program and better communicate transit performance, the ITOC should have SANDAG work collaboratively with its transit partners to:			
	Continue efforts to build user-friendly transit operations performance dashboards that report, MTS and NCTD transit performance data and results. Once MTS and NCTD dashboards are developed, SANDAG should provide a link to each agency's transit operations performance Dashboard in the transit portion of SANDAG's Dashboard.	Chapter 5, pages 45-46	Low
To continue efforts assessing whether Grant Programs are administered efficiently and effectively and whether grant activities are meeting stated goals and requirements, the ITOC should have SANDAG:			
12.	Track and report grant performance data to identify whether grants are achieving program goals, including: <ul style="list-style-type: none"> • For Active Transportation and Smart Growth Incentive Grant programs, implement processes to gather and analyze baseline performance data against actual results to fully assess project performance in meeting goals. • For Senior Mini-Grant Program, capture and report on all other performance metrics captured in the quarterly progress reports, where applicable, and show performance over time. 	Chapter 6, pages 51-52	Medium
13.	Make minor changes to enhance grant site visits and reporting processes, including: <ul style="list-style-type: none"> • For EMP: <ul style="list-style-type: none"> ○ Expand site visit reports to include compliance with why grantee selected for review, budget and schedule, any issues identified and steps to resolve, and whether the grantee is on track to meet expectations and deliverables. ○ Implement a basic grantee progress reporting template to capture information such as a description of challenges and the grantee's corresponding plans for resolution. 	Chapter 6, pages 52-53	Low

	Recommendation	Report Reference	Priority
	<ul style="list-style-type: none"> ● For Senior Mini-Grant Program: <ul style="list-style-type: none"> ○ Expand monitoring checklist to include name, grant number, date of site visit, name of SANDAG staff reviewer and the grantee. ○ Continue to work with grantees to consistently provide accurate and complete performance data such as number of units of service provided, cost per passenger trip or vehicle service hour, and number of clients educated on transit usage, where applicable. 		
14.	Date stamp all grant applications to identify and demonstrate whether applications were received by stated deadlines.	Chapter 6, pages 54-55	Low
To increase the effectiveness of the Active Transportation capital project delivery and management practices and improve performance monitoring and reporting, ITOC should have SANDAG:			
15.	Continue efforts to develop formal project delivery and management plans and ensure practices employed are consistent with other <i>TransNet</i> capital projects.	Chapter 7, pages 59-60	High
16.	Utilize project management tools used by other SANDAG capital project programs to monitor project schedules and costs. Also, validate data reported in the Dashboard for accuracy.	Chapter 7, page 59	High
17.	Set performance indicators and capture data, such as: <ul style="list-style-type: none"> ● Percent of projects delivered on schedule and ready for construction; ● Percent of project awards not exceeding more than 10 percent of estimates; ● Percentage of support costs and a percent of budget; ● Percent of projects delivered on budget; ● Miles of bike paths paved compared to total planned; or ● Rate of serious or fatal bike crashes in areas where bike paths and lanes have been created. 	Chapter 7, pages 59-60	Medium
To improve the effectiveness of ITOC in fulfilling its responsibilities, ITOC should consider:			
18.	Adopting a method to alternate the ending terms of ITOC members so that no more than two terms end in any given year.	Chapter 8, page 62	High

Appendix A: Detailed Audit Methodology

The *TransNet* Extension Ordinance established a requirement that ITOC conduct triennial performance audits of the agencies involved in the implementation of *TransNet*-funded projects. In June 2014, Sjoberg Evashenk Consulting, Inc. was selected by the ITOC to conduct the third in a long series of triennial performance audits of *TransNet*-funded programs. The period covered by this audit was July 2011 through June 2014, except where SEC needed to obtain contextual or underlying support data from periods prior to 2011 or more recent information to fully analyze project activities and practices.

The main audit objectives were to:

1. Evaluate the status of implementation of recommendations from the first triennial performance audit and effectiveness of these prior recommendations.
2. Determine whether the organizational structure and operational processes allow for effective and efficient project delivery, cost control, and schedule adherence.
3. Identify process changes in contracting, construction, permitting, and other procedures that could improve the efficiency and effectiveness of the *TransNet* program.
4. Evaluate the efficiency and effectiveness of ITOC, including adherence to its bylaws.
5. Identify and evaluate any potential barriers to and opportunities for proposed changes.

To understand changes made to the *TransNet* program since the prior audit, SEC reviewed federal, state, local code, and *TransNet* Extension Ordinance updates and amendments in addition to prior audit status of corrective action, annual budgets, fact sheets, and online data, including:

- *TransNet* Extension Ordinance and Expenditure Plan, and amendments;
- Regional Comprehensive Plan of 2004;
- Regional Comprehensive Plan Biennial Performance Monitoring Report for 2012-2013;
- Regional Transportation Improvement Program of 2012 and 2014;
- 2050 Regional Transportation Plan;
- State of the Commute Reports for 2011, 2012, and 2013;
- *TransNet* Quarterly Reports from July 1, 2011 through June 20, 2014
- Prior Year Audit Recommendations Status Matrix; and
- SANDAG's Capital Improvement Program and Overall Work Program for Fiscal Years 2012 and 2014.

To analyze and consider the full complement of challenges and successes surrounding the organizational and operational procedures in the implementation of the *TransNet* program, SEC researched similar programs and current best practices, as well as conducted a wide-range of interviews to ascertain perspectives, insights, challenges, and recommendations on the implementation of the *TransNet* program. Specifically, SEC met with more than 100 executives, officials, managers, staff, consultants, and stakeholders in areas related to transportation and

transit planning, capital construction, environmental mitigation, grant and program management, finance and economics, transit operations, local public works and engineering, and program oversight. SEC focused our efforts on understanding any changes made to processes or practices since the second triennial audit, including performed process walk-throughs (where needed), reviewed policies and practices, assessed documentation in project files, tested grant files and records, reviewed available performance metrics, and studied Dashboard data.

To follow-up on the status of prior audit recommendations, SEC assessed SANDAG's and its *TransNet* partners status of actions to implement the recommendations by reviewing documentation and interviewing staff to verify implementation of the recommendations as of November 2014.

To analyze the performance, efficiency, and effectiveness of practices and processes over the Local Street and Road program, SEC conducted the following procedures:

- ✓ Reviewed changes to SANDAG's management and administration of the program including obtaining applicable policies, rules, and audits associated with the program since the last audit period. Also, SEC reviewed annual financial and compliance audits conducted by external audit firms that assess local agency compliance with Board Policy No. 31: *TransNet* Ordinance Expenditure Plan Rules—Rule 17.
- ✓ Selected a representative sample of local jurisdictions to conduct a more detailed review based on geographical location, size, type of local street and road projects, and dollar value of projects. With the exception of the City and County of San Diego, ensured selection of local agencies did not overlap with jurisdictions reviewed during the prior performance audit.
- ✓ Through interviews and review of project files for a sample of local jurisdictions, determined whether adequate processes were in place to control cost and schedule, ensure appropriate contracting and construction practices, and use effective delivery methods. Interviewed local engineering, public works, finance, and department management staff to gain an overall understanding of local processes and procedures related to project selection, design, right-of-way, environmental, construction, close-out, and contractor/consultant procurement.
- ✓ Using data from the 2012 Regional Transportation Improvement Program (Amendment 18) and SANDAG's ProjectTrak system, compiled a universe of projects funded by the *TransNet* Extension Ordinance monies to select a sample of 15 projects from the City and County of San Diego, cities of La Mesa, Oceanside, and San Marcos for further examination. For each of the projects, SEC interviewed project management staff and conducted high-level evaluations of project file documentation including schedules, budgets, progress payments, progress reports, and change orders.
- ✓ Based on delays and setbacks noted during the interviews and project file review, chose 3 projects from Oceanside, City of San Diego, and San Marcos for detailed review. Interviewed project management as well as identified, gathered, and reviewed available project documentation, such as capital improvement project data; ProjectTrak project reports; relevant Regional Transportation Improvement Plans, consultant and contractor

contracts, amendments, and change orders; staff reports to city councils; and various secondary sources to determine whether *TransNet* monies were spent efficiently and in a timely manner, and whether adequate project delivery processes were in place to control cost and schedule and ensure appropriate contracting and construction practices.

- ✓ Assessed availability of performance output and outcome measures at the local level as well as region-wide and reviewed current performance reporting vehicles such as the new Annual Local Street and Road Program Report.
- ✓ Reviewed the 2014 California Local Streets & Roads Needs Assessment commissioned by the Metropolitan Transportation Commission and identified pavement best practices and statistics relevant to the *TransNet* Local Street and Road Program.

As part of our evaluation of the Environmental Mitigation Program (EMP), SEC performed the following activities:

- ✓ Reviewed various pertinent reports and documents, including *TransNet* Extension Ordinance, updated EMP Memorandum of Agreement between SANDAG and wildlife agencies, EMP policies and guidelines, strategic plans and objectives, EMP status reports, discussion memos to decision makers, and SANDAG Board decisions.
- ✓ Interviewed SANDAG staff involved in the EMP as well as pertinent stakeholders including the EMP Working Group Chairperson, EMP consultants, and EMP external academic experts.
- ✓ Analyzed financial data, including budgeted allocations and actual program expenditures related to acquisitions, restoration, management, and administration activities as well as projected program expenditures.
- ✓ Reviewed EMP funding strategies and approaches for major highway and transit project mitigation and regional habitat conservation efforts and activities.
- ✓ Compared actual land acquisition acres and costs against estimated budget allocations and assessed the status and transition from land acquisition to restoration activities.
- ✓ Determined the methodology used for releasing economic benefit and how SANDAG and its partners will determine the amount of economic benefit actually achieved.

To assess the processes, controls, project management, and delivery of the Major Corridor Capital Construction Program, SEC performed the following:

- ✓ Interviewed SANDAG and Caltrans Corridor Directors and project managers as well as reviewed project documentation to understand changes in project management practices since the second triennial audit.
- ✓ Used budget and schedule data available in the Dashboard to assess current project status. Specifically, SEC reviewed data at the program, corridor, or project segment level to assess cash flow, schedule, trends, and budget history. Additionally, SEC reviewed performance metrics and project status as indicated by red, green, or yellow icons to identify acceptable, cautious, or critical project conditions. For areas of noted delays or budget increases, SEC drilled down on select projects to identify circumstances surrounding the delays.

- ✓ Selected one transit capital improvement project to conduct a high-level assessment of project management budget tools and to assess available policies and protocols guiding project delivery.
- ✓ Reviewed the new CM/GC project delivery method being employed by SANDAG and Caltrans for two *TransNet* capital construction projects and compared against industry leading practices related to project management and delivery that each agency should consider as they move forward with this new model.

To review processes, controls, and oversight exercised over the remaining *TransNet* programs funded during the period of our review, SEC performed the following:

- ✓ Assessed performance of transit services for fixed route and all modes of rail by analyzing common performance metrics used in industry such as farebox recovery ratios, operating costs per boarding, and total boardings that are captured in the National Transit Database. These metrics were compared and assessed with other peer entities in terms of size and operations including Los Angeles, Orange County, San Jose, Santa Clara, Sacramento, and other cities in California as well as entities in Arizona, Oregon, Minnesota, Utah, Colorado, and Texas for National Transit Database Reporting Years 2010 and 2012. Additionally, SEC obtained and reviewed independent Transportation Development Act audits conducted at MTS, NCTD, and SANDAG as well as budgets and performance reports prepared internally by the entities. SEC assessed San Diego transit system-wide and route category performance over a period of time for various performance indicators, including operating costs, passengers per service mile, on-time performance, ridership, miles between mechanical failures, and average fare.
- ✓ Reviewed grant programs including EMP Land Management, Smart Growth Incentive, Senior-Mini, and Active Transportation by analyzing available strategic plans and goals, call for project documentation, ProjectTrak system data, grant evaluation criteria, scoring matrices and scoring sheets, grant applications, quarterly performance reports, site visit documentation, and Board and committee meeting minutes. Further, using non-statistical methods, SEC selected a sample of 8 grants—two EMP Land Management, two Smart Growth Incentive, two Senior-Mini, and two Active Transportation grants—for detailed testing on timeliness of the grant award process and also assessed Senior-Mini and EMP Land Management grants performance monitoring activities.
- ✓ Identified performance of the Active Transportation EAP projects managed by SANDAG by selecting one of the two completed projects for review. SEC compared initial and revised budgets as well as interviewed staff to identify and assess project management and delivery processes.

Finally, SEC conducted the following activities:

- ✓ Evaluated changes made to the overall program and project team structure, including roles and responsibilities, collaboration, and cooperation between *TransNet* partners, since the prior audit to assess the appropriateness of governance and oversight.
- ✓ Assessed the reasonableness of the Plan of Finance and debt structure model to ensure adequate funding is available to finish EAP projects, evaluated revenue forecast and cost projection methodologies, and reviewed the analysis developed by SANDAG's external,

independent financial experts related to the availability of *TransNet* funding for EAP projects.

- ✓ Assessed ITOC's compliance and effectiveness in fulfilling its obligations by reviewing the "Statement of Understanding Regarding the Implementation of the ITOC for the *TransNet* Program," completed conflict of interest forms, member Statements of Economic Interests, and ITOC member resumes in addition to ITOC bylaws and implementation procedures developed in concert with SANDAG. SEC reviewed ITOC meeting agendas and minutes for the months of July 2011 through June 2014, including attendance lists, annual ITOC reports, presentations of information, discussions and recommendations, and special meetings to select new members. Further, SEC compared ITOC experience requirements, activities, and practices with peers in Arizona and other regions within California.

The audit findings and conclusions were presented and discussed with representatives of SANDAG, Caltrans, MTS, NCTD, City of San Diego, County of San Diego, and other local agencies within the county in addition to the ITOC prior to completion of the audit. Management views and comments were considered and incorporated into the audit report as appropriate.

SEC conducted this audit in accordance with generally accepted government auditing standards. Those standards require that SEC plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. SEC believes that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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Appendix B: Transit Performance Peer Analysis Detail

Using National Transit Database information, SEC selected peers for MTS and NCTD based on size of service area, type of services provided, boardings, and geographical characteristics for fixed route, light rail, commuter rail, and hybrid rail. Performance was analyzed against several industry metrics including farebox recovery ratio and operating cost per boarding for the period between 2010 and 2012. Results are summarized in Chapter 5, while detail for each peer is provided in this appendix.

Fixed Route Performs Better than its Peers

Although farebox recovery ratios and operating costs have declined slightly, San Diego's performance far exceeds 10 identified peers as shown in Table 26.

Table 26: Comparison of San Diego 2010 & 2012 Fixed Route Performance with 10 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
San Diego (System-wide)	33.8%	33.7%	\$3.02	\$2.86	\$2.00	\$1.90	\$7.67	\$8.06	2.5	2.8
Dallas (DART)	11.5%	13.4%	\$6.52	\$6.32	\$5.77	\$5.47	\$9.00	\$8.94	1.4	1.4
Denver (RTD)	26.6%	27.4%	\$3.71	\$3.93	\$2.72	\$2.85	\$7.43	\$9.00	2.0	2.3
Los Angeles (LACMTA)	26.5%	30.2%	\$2.58	\$2.56	\$1.90	\$1.79	\$10.86	\$12.06	4.2	4.7
Minneapolis (Metro Transit)	31.0%	31.6%	\$3.59	\$3.56	\$2.48	\$2.43	\$10.53	\$10.94	2.9	3.1
Orange (OCTA)	24.1%	24.4%	\$3.62	\$3.57	\$2.75	\$2.70	\$9.38	\$9.82	2.6	2.8
Phoenix (RPTA)	16.9%	19.9%	\$5.35	\$4.45	\$4.45	\$3.56	\$6.35	\$6.37	1.2	1.4
Portland (TriMet)	22.8%	24.4%	\$3.95	\$3.88	\$3.05	\$2.93	\$11.28	\$12.04	2.9	3.1
Sacramento (RT)	21.9%	21.0%	\$4.27	\$5.23	\$3.34	\$4.13	\$10.68	\$12.25	2.5	2.3
Salt Lake (UTA)	17.7%	18.1%	\$4.89	\$5.30	\$4.02	\$4.34	\$6.46	\$7.68	1.3	1.5
Santa Clara (VTA)	13.9%	13.1%	\$6.29	\$6.75	\$5.41	\$5.87	\$13.22	\$14.98	2.1	2.2
10 Peer Average	21.3%	22.4%	\$4.48	\$4.56	\$3.59	\$3.61	\$9.52	\$10.41	2.3	2.5

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

1 Farebox Recovery Ratio = Fare Revenue/Operating Expenses

2 Operating Cost Per Boarding= Operating Expenses/Total Boardings

3 Subsidy per Boarding = (Operating Expenses net Fare Revenue)/ Total Boardings

4 Operating Cost per Revenue Mile = Operating Expenses/Annual Revenue Miles

5 Passenger Trips per Revenue Mile = Total Revenue Miles/Passenger Trips

Similarly, MTS' Light Rail Outperforms Peers

MTS' Light Rail continues to outperform its peers as shown in Table 27. One difference when analyzing the trend between the 2010 and 2012 National Transit Database reporting years is that NCTD services were reclassified from Light Rail to Hybrid Rail in concert with National Transit Database guidance.

Table 27: Comparison of San Diego 2010 & 2012 Light Rail Performance with 9 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
San Diego (MTS)	54.3%	55.6%	\$2.00	\$1.94	\$0.91	\$0.86	\$7.87	\$8.39	3.9	4.3
San Diego (NCTD)	16.2%	-	\$6.03	-	\$5.05	-	\$25.62	-	4.3	-
Dallas (DART)	12.6%	12.9%	\$6.29	\$4.92	\$5.50	\$4.28	\$22.66	\$17.98	3.6	3.7
Denver (RTD)	31.1%	41.9%	\$3.56	\$3.32	\$2.45	\$1.93	\$8.96	\$8.10	2.5	2.4
Los Angeles (LACMTA)	18.3%	18.8%	\$3.62	\$3.75	\$2.96	\$3.05	\$17.41	\$18.07	4.8	4.8
Minneapolis (Metro Transit)	40.3%	36.9%	\$2.46	\$2.66	\$1.47	\$1.68	\$12.78	\$13.56	5.2	5.1
Sacramento(RT)	34.7%	31.9%	\$2.51	\$3.45	\$1.64	\$2.35	\$13.06	\$11.91	3.8	3.5
Santa Clara (VTA)	30.2%	14.9%	\$3.12	\$5.95	\$2.18	\$5.06	\$11.75	\$20.00	3.2	3.4
Phoenix (Valley Metro Rail)	15.2%	41.1%	\$5.81	\$2.13	\$4.93	\$1.25	\$18.77	\$11.87	4.6	5.6
Portland (TriMet)	28.1%	43.2%	\$2.72	\$2.36	\$1.96	\$1.34	\$12.43	\$12.88	5.2	5.5
Salt Lake (UTA)	37.2%	39.8%	\$2.09	\$2.42	\$1.31	\$1.46	\$8.62	\$7.11	4.1	2.9
9 Peer Average	27.5%	31.3%	\$3.58	\$3.44	\$2.71	\$2.49	\$14.05	\$13.50	4.1	4.1

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

1 Farebox Recovery Ratio = Fare Revenue/Operating Expenses

2 Operating Cost Per Boarding= Operating Expenses/Total Boardings

3 Subsidy per Boarding = (Operating Expenses net Fare Revenue)/ Total Boardings

4 Operating Cost per Revenue Mile = Operating Expenses/Annual Revenue Miles

5 Passenger Trips per Revenue Mile = Total Revenue Miles/Passenger Trips

Commuter Rail Performs Better than Most Peers

Additionally, San Diego Commuter Rail system also generally operates better than six identified peers reported in the National Transit Database as shown in Table 28.

Table 28: Comparison of San Diego 2010 & 2012 Commuter Rail Performance with 6 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
San Diego (NCTD)	40.0%	39.5%	12.10	\$10.84	\$7.26	\$6.56	12.50	\$12.57	1.0	1.2
Dallas (DART)	37.6%	31.7%	\$10.44	\$11.49	\$6.51	\$7.85	\$20.49	\$23.31	2.0	2.0
Los Angeles (MetroLink)	42.4%	46.6%	13.63	\$13.04	\$7.85	\$6.96	\$15.62	\$14.65	1.1	1.1
Minneapolis (Metro Transit)	15.8%	15.6%	\$21.95	\$23.45	\$18.49	\$19.79	\$26.27	\$31.84	1.2	1.4
Salt Lake (UTA)	10.5%	13.5%	\$14.27	\$10.52	\$12.78	\$9.10	\$9.61	\$10.18	0.7	1.0
San Carlos (Caltrain)	47.0%	56.5%	8.04	\$7.50	\$4.26	\$3.26	\$12.82	\$15.20	1.6	2.0
Stockton (Altamont Commuter)	34.0%	34.4%	17.66	\$15.51	\$11.65	\$10.17	\$16.10	\$15.16	1.0	1.0
6 Peer Average	31.2%	33.0%	\$14.33	\$13.59	\$10.26	\$9.52	\$16.82	\$18.39	1.3	1.4

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

1 Farebox Recovery Ratio = Fare Revenue/Operating Expenses

2 Operating Cost Per Boarding= Operating Expenses/Total Boardings

3 Subsidy per Boarding = (Operating Expenses net Fare Revenue)/ Total Boardings

4 Operating Cost per Revenue Mile = Operating Expenses/Annual Revenue Miles

5 Passenger Trips per Revenue Mile = Total Revenue Miles/Passenger Trips

Hybrid Rail Performs Better than Most Peers

Finally, as shown in Table 29, San Diego Hybrid Rail system also appears to generally operate better than the only other three entities operating hybrid rail systems as reported in the National Transit Database.

Table 29: Comparison of San Diego 2010 & 2012 Hybrid Rail Performance with 3 National Peers

Agency	Farebox Recovery Ratio ¹		Operating Cost Per Boarding ²		Subsidy per Boarding ³		Operating Cost per Revenue Mile ⁴		Passenger Trips Per Revenue Mile ⁵	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
San Diego (NCTD)	18.3%	19.2%	\$5.87	\$5.71	\$4.79	\$4.61	\$24.07	\$20.72	4.1	3.6
Capital Metropolitan Transportation Authority	10.2%	20.0%	\$24.86	\$21.54	\$22.32	\$17.24	\$53.28	\$47.90	2.1	2.2
New Jersey Transit Corporation	8.7%	7.7%	\$10.34	\$11.23	\$9.44	\$10.37	\$23.75	\$27.27	2.3	2.4
Portland (TriMet)	6.2%	6.9%	\$16.86	\$15.51	\$15.82	\$14.44	\$43.74	\$39.70	2.6	2.6
3 Peer Average	8.3%	11.5%	\$17.35	\$16.09	\$15.86	\$14.02	\$40.26	\$38.29	2.3	2.4

Source: NTD 2010 and 2012 transit profiles and Florida Transit Information System data extracted from NTD

1 Farebox Recovery Ratio = Fare Revenue/Operating Expenses

2 Operating Cost Per Boarding= Operating Expenses/Total Boardings

3 Subsidy per Boarding = (Operating Expenses net Fare Revenue)/ Total Boardings

4 Operating Cost per Revenue Mile = Operating Expenses/Annual Revenue Miles

5 Passenger Trips per Revenue Mile = Total Revenue Miles/Passenger Trips

Appendix C: Auditee Response



February 25, 2015

File Number 1500100

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www.sandag.org

Ms. Cathy Brady, Director
Sjoberg Evashenk Consulting, Inc.
455 Capitol Mall, Suite 700
Sacramento, CA 95814

Dear Ms. Brady:

SUBJECT: Transmittal of Responses to Fiscal Year 2015 *TransNet* Triennial Performance Audit Report and Recommendations

We thank you for the opportunity to respond to the Fiscal Year 2015 *TransNet* Triennial Performance Audit report and recommendations as conducted by Sjoberg Evashenk Consulting, Inc., on behalf of the *TransNet* Independent Taxpayer Oversight Committee (ITOC). SANDAG appreciates your firm's efforts and the staff time dedicated to the comprehensive review of the *TransNet* program. The recommendations received will assist SANDAG as we continue to implement processes that improve the overall performance of the program to ensure all voter mandates are carried out as required by the *TransNet* Extension Ordinance.

The Fiscal Year 2015 Triennial Performance Audit is the third performance audit conducted by the ITOC. The audit included a review of the three-year period between FY 2012 and FY 2014 focusing on the changes implemented since the second audit was conducted. Key audit results reveal that SANDAG and its partner agencies continue implementing strong practices across all programs to continually enhance operations and proactively address recommendations for improvement.

We agree in general with the recommendations set forth in the audit report, and our responses to the audit recommendations are attached. SANDAG is committed to working with the ITOC and our partner agencies to address the recommendations and continue implementing best practices for the *TransNet* program.

We are pleased that throughout the audit process, members of your staff were accessible and helpful in clarifying issues raised. We appreciate your efforts in assisting SANDAG and its partner agencies to ensure the continued success of the *TransNet* program.

Sincerely,


GARY L. GALLEGOS
Executive Director

GGA/azu/ais

cc: Kai Ramer, ITOC Chair
Brad Barnum, ITOC Vice Chair

Attachment: Responses to Fiscal Year 2015 *TransNet* Triennial Performance Audit Report Recommendations

MEMBER AGENCIES

Cities of
Carlsbad
Chula Vista
Coronado
Del Mar
El Cajon
Encinitas
Escondido
Imperial Beach
La Mesa
Lemon Grove
National City
Oceanside
Poway
San Diego
San Marcos
Santee
Solana Beach
Vista
and
County of San Diego

ADVISORY MEMBERS

Imperial County
California Department
of Transportation
Metropolitan
Transit System
North County
Transit District
United States
Department of Defense
San Diego
Unified Port District
San Diego County
Water Authority
Southern California
Tribal Chairmen's Association
Mexico

Recommendation	Report Reference	Priority	SANDAG Initial Response
To better enhance project management and performance practices over the Major Corridor Capital Improvement Program, the ITOC should have SANDAG work with its partners to:			
1. Utilizing data already captured, summarize <i>TransNet</i> performance results in a comprehensive report card type format.	Chapter 1, pages 9-11	Low	SANDAG staff will develop a public Dashboard portal for reporting delivery performance on projects scheduled to advertise or open-to-public in the upcoming fiscal year. Lead staff: Richard Chavez
2. Improve SANDAG's transit capital project management practices by finalizing SANDAG's Construction Management Manual.	Chapter 2, pages 18-19	High	The final draft Construction Management Manual is scheduled for completion by fall 2015. Lead staff: Ramon Ruelas
3. Closely monitor the risks associated with the implementation of the CM/GC approach being used on Major Corridor highway and transit projects and consider implementing leading practices, including: <ul style="list-style-type: none"> • Establishing performance goals and measuring results by comparing "traditional" project delivery time and original cost estimates to CM/GC model actuals and determining the value-added and cost savings attributed to CM/GC value engineering and recommendations; • Employing risk management practices to identify and manage risk through formal tools such as risk registries; • Ensuring the same cost development criteria and methodology is utilized for the 	Chapter 2, pages 19 -21	High	A formal risk management program, that includes many standard industry best practices such as risk registers, design change control processes, cost estimate development consistency, lessons learned and strong communication practices, among others, already is part of both the Mid-Coast Corridor Transit Project and the North Coast Corridor Program. SANDAG staff will continue monitoring the risks associated with implementing the CM/GC approach for Major Corridor projects and will consider implementing additional leading practices, as appropriate. Lead staff: John Haggerty/

Recommendation	Report Reference	Priority	SANDAG Initial Response
<p>Independent Cost Estimate, Engineer Estimate, and Contractor estimate; and</p> <ul style="list-style-type: none"> Implementing strong communication practices during both the pre-construction and construction phase. 			Allan Kosup
<p>4. Begin to capture data and measure project delivery of transit capital projects on schedule and budget using metrics such as:</p> <ul style="list-style-type: none"> Percent of projects delivered on schedule and ready for construction; Percent of change orders against original contract amount; and Percent of projects delivered on budget. 	Chapter 2, page 22	Medium	<p>SANDAG staff will develop a public Dashboard portal for reporting delivery performance on projects scheduled to advertise or open-to-public in the upcoming fiscal year. In addition, SANDAG staff will begin capturing data on transit construction and right-of-way status similar to data currently captured on highway projects. This information includes risk and budgetary information used to assess project health during the right-of-way acquisition and construction phases. This will not be a public report as it contains confidential information.</p> <p>Lead staff: Dave Schumacher/ Richard Chavez</p>
<p>To improve Local Street and Road Program performance data and better assist local jurisdictions with managing future needs for roadway maintenance, the ITOC should have SANDAG work collaboratively with the local agencies to:</p>			
<p>5. Consider implementing one of the deployment options of the Regional Arterial Detection System Development Plan, or develop other alternative mechanisms to measure local street and road performance outcomes.</p>	Chapter 3, page 28	High	<p>Arterial detection would have limited benefit in measuring performance of projects currently being built in the Local Streets and Roads Program. However, arterial detection remains an Agency priority and will be installed as</p>

Recommendation	Report Reference	Priority	SANDAG Initial Response
			funds become available as a stand-alone or part of another capital project. Lead staff: Alex Estrella
6. Expand on existing available local street and road performance output data to report and summarize on improvements made to the local streets and roads network.	Chapter 3, pages 28-30	High	Staff has continued working with the ITOC and the Cities/County Transportation Advisory Committee to enhance the existing RTIP reporting software (ProjectTrak) to capture output data. This effort will be complete by late 2015 with full reporting by the local agencies scheduled to commence in 2016. Lead staff: Alex Estrella/ Michelle Smith
7. Revisit the <i>TransNet</i> Ordinance and Expenditure Plan's definitions between congestion relief and maintenance categories to allow local jurisdictions the ability to better program projects to meet local street and road needs.	Chapter 3, pages 30-33	Medium	Staff will discuss this recommendation with the ITOC and Cities/County Transportation Advisory Committee to determine potential changes to the Local Street and Road Program <i>TransNet</i> Ordinance and Expenditure Plan Implementation Guidelines. Lead staff: Alex Estrella
To continue strengthening the EMP to ensure <i>TransNet</i> funding is utilized in the most effective manner, the ITOC should have SANDAG:			
8. Continue efforts to market local mitigation program with money available for locals.	Chapter 4, page 39	Medium	SANDAG staff will continue its outreach efforts to local jurisdictions on the opportunities available under the <i>TransNet</i> EMP. Staff is currently working with two cities on specific mitigation needs. In addition, a

Recommendation	Report Reference	Priority	SANDAG Initial Response
			<p>presentation was made on January 8, 2015, to the SANDAG Technical Working Group to inform them of the program. A similar presentation will be made to the CTAC. Additional direct marketing will be explored, as necessary.</p> <p>Lead staff: Keith Greer</p>
<p>9. Begin focusing on formally measuring results of mitigation efforts to implement the Resource Enhancement and Mitigation Program under the Public Works Plan and the results of efforts to implement the strategic goals and objective of the regional monitoring and management under the Management Strategic Plan and any other EMP efforts.</p>	<p>Chapter 4, pages 39-40</p>	<p>High</p>	<p>Both the Resource Enhancement and Mitigation Program (better known as the Management Strategic Plan) and the Public Works Plan have specific objectives and milestones. Staff will track progress of the plan's implementation and incorporate into existing reporting requirements for annual funding requests and status reports.</p> <p>Lead staff: Keith Greer</p>
<p>10. Create methodology to quantify how much economic benefits have actually been achieved to compare against what was released to identify funding deficits or surpluses as part of the 10-year Comprehensive Review required by the <i>TransNet</i> Extension Ordinance.</p>	<p>Chapter 4, pages 40-41</p>	<p>High</p>	<p>Pursuant to the existing SANDAG Memorandum of Agreement to implement the EMP, the determination of the true economic benefit (actual costs to estimated costs) is to occur prior to 2018 and along with the <i>TransNet</i> 10- year Comprehensive Review. Staff will work on the proposed methodology; however, it will still be a few years in order to gather a larger pool of completed projects necessary to make a valid assessment.</p>

Recommendation	Report Reference	Priority	SANDAG Initial Response
			Lead staff: Keith Greer/ Marney Cox
To build upon the successful Transit Program and better communicate transit performance, the ITOC should have SANDAG work collaboratively with its transit partners to:			
11. Continue efforts to build user-friendly transit operations performance dashboards that report, MTS and NCTD transit performance data and results. Once MTS and NCTD dashboards are developed, SANDAG should provide a link to each agency's transit operations performance Dashboard in the transit portion of SANDAG's Dashboard.	Chapter 5, pages 45-46	Low	SANDAG staff will provide the link to each agency's transit operations performance Dashboard in the transit portion of the SANDAG Dashboard once both the MTS and NCTD dashboards are developed. Lead staff: Brian Lane
To continue efforts assessing whether Grant Programs are administered efficiently and effectively and whether grant activities are meeting stated goals and requirements, the ITOC should have SANDAG:			
12. Track and report grant performance data to identify whether grants are achieving program goals, including: <ul style="list-style-type: none"> • For Active Transportation and Smart Growth Incentive grant programs, implement processes to gather and analyze baseline performance data against actual results to fully assess project performance in meeting goals. • For Senior Mini-Grant Program, capture and report on all other performance metrics captured in the quarterly progress reports, where applicable, and show performance over time. 	Chapter 6, pages 51-52	Medium	For Active Transportation and Smart Growth Incentive Programs, as of the second cycle of funding for both programs, grant recipients are required to collect baseline data, which consists of pedestrian and bicycle counts, observation data, and intercept surveys, for capital projects. SANDAG staff will continue to require baseline data for capital projects. As projects are completed, SANDAG will obtain post-construction data and develop a procedure for analyzing and reporting baseline performance against actual results. Lead staff: Christine Eary/ Suchi Mukherjee

Recommendation	Report Reference	Priority	SANDAG Initial Response
			<p>For the Senior Mini-Grant Program, SANDAG will work to determine which grantees can report on cost/vehicle service hour and passenger load to ensure these grantees begin accurately reporting this information with each invoice.</p> <p>SANDAG also will develop a separate data form for projects where these indicators are not applicable.</p> <p>Lead staff: Danielle Kochman</p>
<p>13. Make minor changes to enhance grant site visits and reporting processes, including:</p> <ul style="list-style-type: none"> • For EMP: <ul style="list-style-type: none"> ○ Expand site visit reports to include compliance with why grantee selected for review, budget and schedule, any issues identified and steps to resolve, and whether the grantee is on track to meet expectations and deliverables. ○ Implement a basic grantee progress reporting template to capture information such as a description of challenges and the grantee’s corresponding plans for resolution. • For Senior Mini-Grant Program: <ul style="list-style-type: none"> ○ Expand monitoring checklist to include name, grant number, dates of site visit 	<p>Chapter 6, pages 52-53</p>	<p>Low</p>	<p>For the EMP, staff will include these items into progress audits. A standard template will be developed to be used accordingly.</p> <p>Lead staff: Keith Greer</p> <p>For the Senior Mini-Grant Program, updates to the monitoring checklist will be incorporated by July 1, 2015. SANDAG also will continue working with grantees to consistently provide accurate performance data. For cost/passenger trip data, SANDAG will ensure that grantees that can report this information do so, as applicable. SANDAG also will develop a separate data form for projects where these indicators are not</p>

	Recommendation	Report Reference	Priority	SANDAG Initial Response
	<p>occurred, name of the SANDAG staff reviewer and the grantee.</p> <ul style="list-style-type: none"> ○ Continue to work with grantees to consistently provide accurate and complete performance data such as number of units of service provided, cost per passenger trip, or vehicle service hour, and number of clients educated on transit usage, where applicable. 			<p>applicable.</p> <p>Lead staff: Danielle Kochman</p>
14.	Date stamp all grant applications to identify and demonstrate whether applications were received by stated deadlines.	Chapter 6, pages 54-55	Low	<p>For the third cycle of Smart Growth Incentive and Active Transportation Grant Program funding, staff is developing an electronic submittal process for applications. This process will track the date and time that an application is received by SANDAG.</p> <p>Lead staff: Carolina Gregor</p> <p>For EMP, this is not applicable. EMP grant applications are already date stamped.</p> <p>Lead staff: Keith Greer</p> <p>For Senior Mini-Grant Program, all submitted grant applications will be date stamped upon receipt during the next call for projects in 2016.</p> <p>Lead staff: Danielle Kochman</p>

Recommendation	Report Reference	Priority	SANDAG Initial Response
To increase the effectiveness of the Active Transportation capital project delivery and management practices and improve performance monitoring and reporting, ITOC should have SANDAG:			
15. Continue efforts to develop formal project delivery and management plans and ensure practices employed are consistent with other <i>TransNet</i> capital projects.	Chapter 7, pages 59-60	High	SANDAG will develop a project management plan for the Active Transportation Capital Improvement Program. Lead staff: Linda Culp
16. Utilize project management tools used by other SANDAG capital project programs to monitor project schedules and costs. Also, validate data reported in the Dashboard for accuracy.	Chapter 7, page 59	High	SANDAG will build upon the financial reporting work initiated in FY 2015 in the Dashboard and validate data. SANDAG will develop project management tools through the program management plan (Recommendation No. 15). Lead staff: Linda Culp/ Richard Chavez
17. Set performance indicators and capture data, such as: <ul style="list-style-type: none"> • Percent of projects delivered on schedule and ready for construction; • Percent of project awards not exceeding more than 10 percent of estimates; • Percentage of support costs and a percent of budget; • Percent of projects delivered on budget; • Miles of bike paths paved compared to total planned; or • Rate of serious or fatal bike crashes in areas where bike paths and lanes have been created. 	Chapter 7, pages 59-60	Medium	SANDAG staff will develop a public Dashboard portal for reporting delivery performance on bikeway projects scheduled to advertise or open-to-public in the upcoming fiscal year. The report will include information on project award amount related to the engineer's estimate and miles of bike path constructed related to total planned. SANDAG staff will assess the availability of accident and fatal bike crash information and investigate options for reporting bikeway system safety. Lead staff: Linda Culp/ Richard Chavez

Recommendation	Report Reference	Priority	SANDAG Initial Response
To improve the effectiveness of ITOC in fulfilling its responsibilities, ITOC should consider:			
18.	Adopting a method to alternate the ending terms of ITOC members so that no more than two terms end in any given year.	Chapter 8, page 62	High SANDAG staff will review this recommendation with the ITOC to determine potential changes to ITOC member ending terms. Lead staff: Ariana zur Nieden