

2021

10-YEAR DELIVERY PLAN

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INTRODUCTION

INTRODUCTION

ORDINANCE AND EXPENDITURE PLAN

STRATEGIC PLAN

Introduction

In November 1989 County voters approved Measure I, supporting a half-cent sales tax in the incorporated and unincorporated areas of the County for the 20-year period between April 1, 1990, and March 31, 2010.

Early in the second decade of Measure I, it became apparent that continuation of the half-cent sales tax would be critical to maintaining funding for transportation projects in San Bernardino County. Ultimately the voters of San Bernardino County approved San Bernardino County Transportation Authority Ordinance 04-01 on November 4, 2004, extending the half-cent sales tax for 30 years to March 31, 2040. The Ordinance is referred to as Measure I 2010-2040 to distinguish it from the 20-year half-cent sales tax measure that took effect in April 1990.

On April 1, 2009, the SBCTA Board approved a Strategic Plan to define the policy framework for delivery of the projects and programs referenced in the Measure. The Strategic Plan is the official guide and reference for the allocation and administration of the combination of Measure I funds, State and Federal transportation revenues, and private fair-share contributions from new development to regional transportation facilities. One of the key requirements of the Strategic Plan was the preparation of a 10-Year Delivery Plan.

The purpose of the 10-Year Delivery Plan is to provide a transparent list of projects that will be developed during the next ten years and to define the scope, schedule, and budget for these projects, given current information and assumptions. The 10-Year Delivery Plan establishes a common understanding among members of the SBCTA Board, SBCTA staff, member jurisdictions, and citizens of San Bernardino County; sets a baseline upon which future changes in revenues, costs, scopes, and schedules are measured; enables SBCTA to meet the requirements of bond rating agencies for the future sale of bonds; serves as a SBCTA commitment to fund specific projects; and provides the basis for the preparation of the SBCTA annual budgets for capital projects.

The 10-Year Delivery Plan is a living document that is revised as revenue and project information change. The 10-Year Delivery Plan was first adopted by the SBCTA Board in January 2012 and is updated every two years to capture revisions and updates and to stay current. This 2021 Update has incorporated project changes that have occurred since 2019 as well as significant SBCTA Board actions affecting the projects to be implemented over the next ten years.

Major changes from the 2019 Update include reflection of full funding plans for the first phase of express lanes on I-15 and for the I-10 Truck Climbing Lane and West Valley Connector Phase 1 projects and a new strategy for extension of express

lanes on I-10. Additionally SBCTA will begin the next phase of widening and safety improvements on US 395 in the Victor Valley and has adopted priorities for regional/interregional improvements in the each of the Mountain/Desert Subareas of the County. Finally, SBCTA has expanded work in innovative transit solutions outside of the Measure I Programs that, because of their significance, have been incorporated into the 2021 Update, such as the conversion of Diesel Multiple Unit rail vehicles to Zero Emission Multiple Unit vehicles for the future Arrow passenger rail service that will operate between the City of Redlands and the City of San Bernardino and planning for a tunnel connection from the Metrolink Cucamonga Station in the City of Rancho Cucamonga to the Ontario International Airport.

SBCTA and its member jurisdictions are in the midst of one of the largest delivery programs ever with Measure I investing \$409 million of the almost \$2 billion in projects currently under construction, including:

- I-10 Corridor Express Lanes from Los Angeles County line to I-15 including the interchanges at Monte Vista Avenue, Euclid Avenue, and Vineyard Avenue and the Fourth Street Bridge Undercrossing
- SR 210 Widening from Highland Avenue to I-10, including the interchange at Base Line
- I-215/Mt Vernon/Washington Bridge Replacement
- Interchanges along I-10 at Alabama and University
- Interchanges along SR 60 at Central and Archibald
- Mount Vernon Viaduct Replacement
- Redlands Passenger Rail
- Apple Valley Road and SR 18 Realignment
- Ranchero Road Corridor Widening
- Green Tree Boulevard Extension
- Bear Valley Road Overhead at BNSF
- Moonridge Road Realignment and Roundabouts
- US 95 Colorado River Bridge Rehabilitation

This is in addition to the almost \$2 billion in projects that have been completed since 2010 with only a \$384 million investment required from the Measure I Programs. A comprehensive list of Projects that have been completed with Measure I 2010-2040 Program funds is contained in Section 12.

1.1 ORDINANCE AND EXPENDITURE PLAN

The Measure I Ordinance contains maintenance-of-effort (MOE) provisions that state that funds provided to government agencies by Measure I are to supplement and not replace existing local revenues being used for transportation purposes. In 2016, SBCTA instituted a formal process to monitor MOE on the part of local agencies as required by the Measure I Ordinance. This process includes adoption by resolution of the governing bodies of MOE base year level amounts that are equivalent to the Fiscal Year 2008/2009 General Fund expenditures for street and highway purposes. Jurisdictions annually provide a statement in the resolution of the governing body adopting the Measure I Local Street Projects Program Five-Year Capital Improvement Plan that acknowledges the jurisdiction will maintain the required MOE base year level in that fiscal year. A similar requirement is in place for transit operators to ensure the Measure I Senior and Disabled Transit Service Program funds do not supplant Federal, State, and local funds used for operating purposes.

In addition, Measure I 2010-2040 revenues are not to replace requirements for new development to provide for its own road needs. The Ordinance further states that Measure I funding priority should be given to addressing current road needs, easing congestion, and improving roadway safety. Eligible expenditures include those for planning, environmental reviews, engineering and design costs, related right-of-way acquisition, and construction. Eligible expenditures also include debt service on bonds and expenses in connection with issuance of bonds.

Measure I has a return-to-source provision that states that funds will be allocated to Subareas, which are reflected in Figure 1.1.1, in accordance with the actual revenue collected in each Subarea. In addition to the Subareas, the Expenditure Plan established a funding mechanism known as the Cajon Pass Expenditure Plan for transportation improvement projects in the Cajon Pass. The Cajon Pass serves as a major transportation corridor linking the two major urbanized areas of San Bernardino County; therefore, the funding is provided by the San Bernardino Valley and the Victor Valley Subareas. Three percent of the revenue generated by the two Subareas is assigned to the Cajon Pass. Based on the current revenue forecast and demographic projections, the Measure I estimated to be allocated among the Subareas and Cajon Pass is as follows:

1. Cajon Pass 2.85%
2. Colorado River .15%
3. Morongo Basin 1.35%
4. Mountains 1.16%
5. North Desert 2.43%
6. San Bernardino Valley 81.46%
7. Victor Valley 10.60%

*Percentages are adjusted annually based on actual revenue.

FIGURE 1.1.1

SAN BERNARDINO COUNTY SUBAREAS



The Colorado River, Morongo Basin, Mountains, and North Desert Subareas are commonly referred to as the Rural Mountain/Desert Subareas.

Revenues are allocated to specified project categories in each of the Subareas. These project categories are called Programs. Figure 1.1.2 shows the percentage distribution of revenue allocations for the San Bernardino Valley Subarea. Note that in April 2020, the Major Street Projects Program reduced from 20% to 17% and the Express Bus/Bus Rapid Transit Service Program increased from 2% to 5% of the San Bernardino Valley Measure I revenue. Revenue for the Programs in the Victor Valley and Rural Mountain/Desert Subareas are allocated per Figure 1.1.3. Note that in the Victor Valley Subarea, beginning in Fiscal Year 2015/2016 and every five years thereafter, the Local Street Projects Program decreases by 0.5% and the Senior and Disabled Transit Service Program increases by 0.5% up to a total of 7.5% of the Measure I revenue unless each local jurisdiction within the Subarea makes a finding that such increase is not required to address unmet transit needs of senior and disabled transit users. As such, in April 2020, the Local Street Projects Program decreased to 67% and the Senior and Disabled Transit Service Program increased to 6% of Victor Valley Subarea Measure I revenue. Jurisdictions in the Rural Mountain/Desert Subareas have the option to increase the revenue to the Senior and Disabled Transit Service Program in a similar manner, although that has not been done to date.

FIGURE 1.1.2

DISTRIBUTION OF MEASURE I REVENUE FOR SAN BERNARDINO VALLEY SUBAREA PROGRAMS

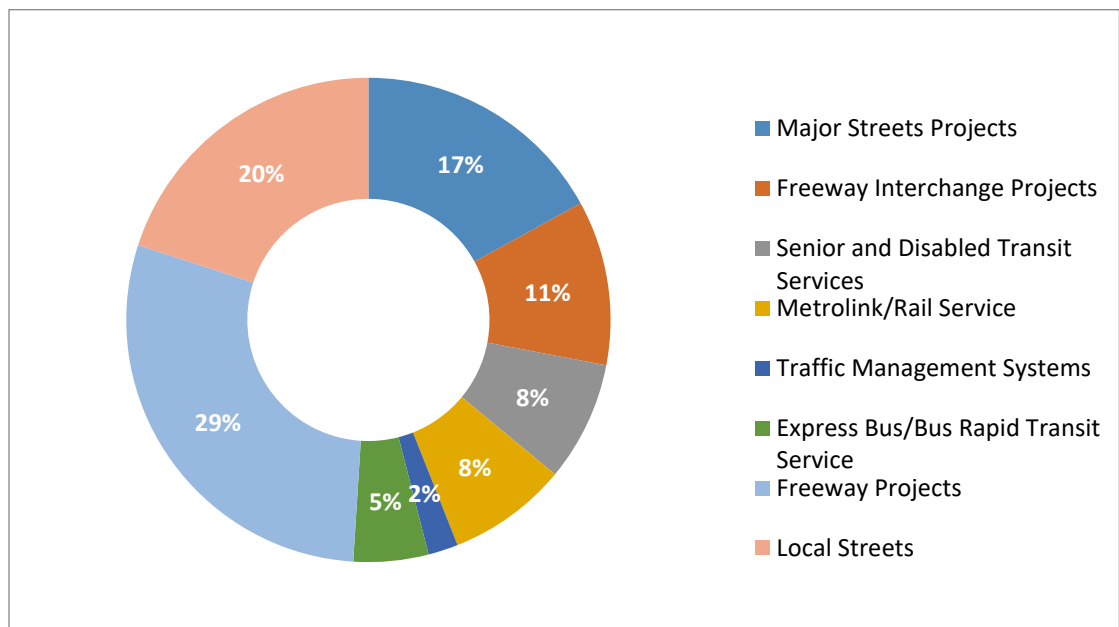
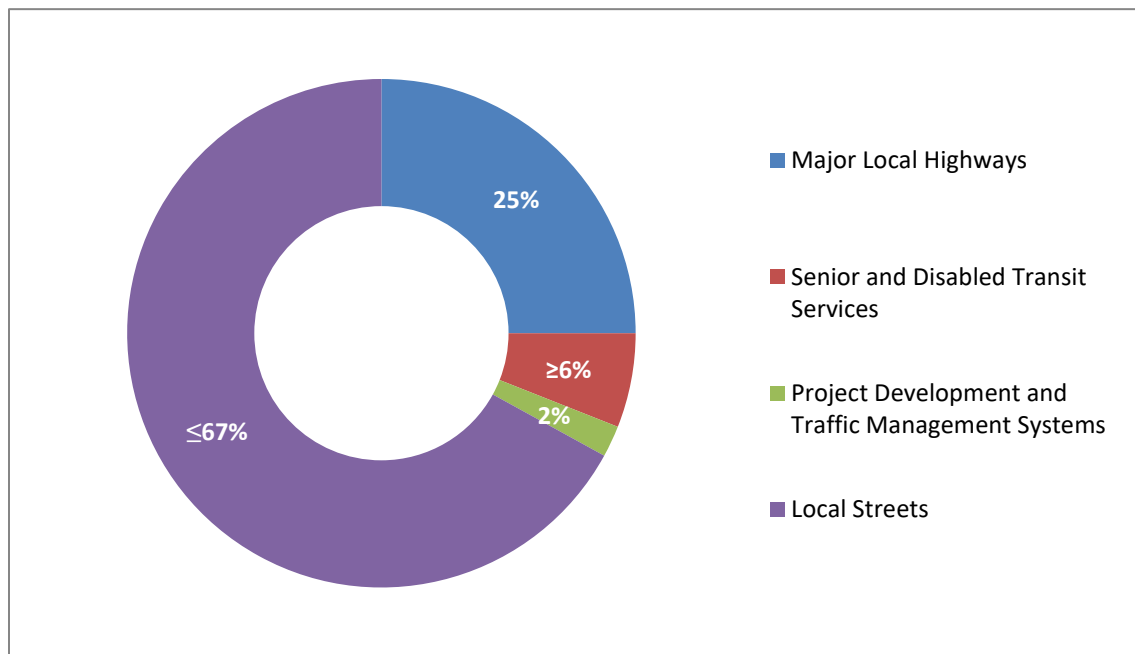


FIGURE 1.1.3

DISTRIBUTION OF MEASURE I REVENUE FOR VICTOR VALLEY AND RURAL MOUNTAIN/DESERT SUBAREAS PROGRAMS



1.2 STRATEGIC PLAN

In April 2009, the SBCTA Board of Directors approved a Strategic Plan to provide a policy manual for the delivery of Measure I Programs by SBCTA and its member jurisdictions for the 30-year life of the Measure. The Strategic Plan addresses significant policy, fiscal, and institutional issues associated with the administration and implementation of Measure I 2010-2040, including managing the different goals and priorities among the San Bernardino Valley, Victor Valley, and Rural Mountain/Desert Subareas of the County. By approving the Strategic Plan, SBCTA set a course for implementation through a measured, comprehensive, and strategic planning process. The Strategic Plan is the official guide and reference for the allocation and administration of a combination of funding sources, including sales tax, State and Federal transportation programs, and private fair-share contributions from new development. The Strategic Plan is organized by Subarea and establishes the scope and financial analysis for each Program, including revenue constraints, funding shortfalls, and Program constraints. Policies and implementation actions were also established from those findings. The Strategic Plan is intended to be updated periodically to reflect changes in project costs, revenues, economic conditions, and project priorities that occur over the 30-year life of the Measure. In September 2017, a comprehensive update was approved by the SBCTA Board to make the financial and project data more current, to adopt policy wording changes needed to be more consistent with current practice, and to reflect the change in entity from SANBAG to SBCTA. Although changes to the findings are further discussed in the “Background” section of each Program, highlights are listed below:

Cajon Pass Program

- The I-15/I-215 Devore Interchange was fully funded with a combination of Measure I, State, and Federal funds and was open to traffic in June 2016.
- Remaining Program funds are anticipated to be used beyond the 2021 Update on improvements through the Cajon Pass as part of the I-15 Express Lanes project from the Riverside County Line to US 395. It is assumed the project will be heavily funded with toll revenue.

San Bernardino Valley Local Street Projects Program

- Expenditures based on Five-Year Capital Improvement Plans adopted by local jurisdictions.
- Funding allocations on a per-capita basis.

San Bernardino Valley Freeway Projects Program

- Reduced project scopes and innovative funding are required to address anticipated funding shortfall.
- Project delivery sequence may need to be adjusted.
- Bond financing recommended to accelerate delivery of Freeway Program.

San Bernardino Valley Freeway Interchange Projects Program

- Continue to leverage State and Federal appropriations to maintain full funding.
- Bonding was required for the interchanges in the Trade Corridors Improvement Fund (TCIF) Program (I-10/Cherry, I-10/Citrus, I-10/Riverside).

San Bernardino Valley Major Street Projects Program

- Measure I revenue to be split 80% to the Arterial Sub-program and 20% to the Rail-Highway Grade Separation Sub-program.
- Program includes 400 projects, including 19 grade separation projects.
- A funding shortfall is anticipated.
- Funding gap can be bridged by State and Federal revenue and higher private participation.
- Bonding was required for the rail-highway grade separation projects included in the TCIF Program.

San Bernardino Valley Metrolink/Rail Service Program

- A funding shortfall is anticipated.
- Shortfall addressed by re-scoping and reprioritizing capital investments.
- Bond financing recommended to accelerate delivery of passenger rail projects.

San Bernardino Valley Express Bus/Bus Rapid Transit Service Program

- A funding shortfall is anticipated.
- The E Street corridor was selected as the first Bus Rapid Transit (BRT) corridor.
- Nine other potential BRT corridors were identified with the West Valley Connector Phase 1 being the first to be studied in detail.
- Bond financing recommended to accelerate delivery of BRT projects and can likely only fund one more project.

San Bernardino Valley Senior and Disabled Transit Service Program

- Requires formation of the Valley Consolidated Transportation Services Agency (CTSA), which is operated by Omnitrans.
- Program treated as a pass-through contribution to Omnitrans for fare subsidies or enhancements to transit service provided to seniors and persons with disabilities.
- Program treated as pay-as-you-go.

San Bernardino Valley Traffic Management Systems Program

- Funded on a case-by-case basis.
- Program treated as pay-as-you-go.

Victor Valley Local Street Projects Program

- Expenditures based on Five-Year Capital Improvement Plans adopted by local jurisdictions.
- Funding allocations based on a 50% population/50% return to source basis.

Victor Valley Major Local Highway Projects Program

- Several projects may be bond-funded and others pay-as-you-go.
- Requires Project Funding Agreement between local jurisdiction and SBCTA.

Victor Valley Senior and Disabled Transit Service Program

- Program treated as a pass-through contribution to Victor Valley Transit Authority for fare subsidies or enhancements to transit service provided to seniors and persons with disabilities.
- Program treated as pay-as-you-go.

Victor Valley Project Development and Traffic Management Systems Program

- Funded on a case-by-case basis.
- Program treated as pay-as-you-go.

Rural Mountain/Desert Local Street Projects Program

- Expenditures based on Five-Year Capital Improvement Plans adopted by local jurisdictions.
- Funding allocations based on a 50% population/50% return to source basis.

Rural Mountain/Desert Major Local Highway Projects Program

- Program treated as pay-as-you-go.
- Funds used to leverage other State and Federal funds.
- Requires Project Funding Agreement between local jurisdiction and SBCTA.

Rural Mountain/Desert Senior and Disabled Transit Service Program

- Programs are treated as pass-through contributions to the transit operators in the Subareas for fare subsidies or enhancements to transit service provided to seniors and persons with disabilities.
- Program treated as pay-as-you-go.

Rural Mountain/Desert Project Development and Traffic Management Systems Program

- Funded on a case-by-case basis.
- Program treated as pay-as-you-go.



2

DEVELOPMENT OF THE 10-YEAR DELIVERY PLAN

REVENUE PROJECTIONS

PROJECT COST, SCOPE AND SCHEDULE

INFLATION AND ESCALATION

P6 AND ECOSYS

FINANCIAL STRATEGY

BONDING ANALYSIS

The preparation of the first 10-Year Delivery Plan in 2012 required an iterative process of evaluating an extensive amount of data to produce a list of recommended projects and corresponding funding levels. The subsequent updates to the 10-Year Delivery Plan expand on the initial plan to update revenue projections and project details and to include actions taken by the SBCTA Board since its adoption. The first step in this process is revenue projection. Revenue sources include Measure I (cash and bond), local contributions, and State and Federal funds. The second step is cost estimation for each candidate project. Since most projects span multiple years, project escalation and inflation factors must also be applied. Lastly, since the timing of both revenues and costs substantially influences the ability to fund and deliver projects, two sophisticated programs, EcoSys and Primavera P6, along with Excel workbooks for less complex and locally-led projects and bonding scenarios, are used to manage all of the data and test multiple timing and funding scenarios.

2.1 REVENUE PROJECTIONS

The 10-Year Delivery Plan includes revenue forecasts in order to scale the Measure I Programs to revenue expectations. Measure I revenue is based on the half-cent sales tax applied to purchases within San Bernardino County. Given the recent recovery from the Great Recession and the uncertainty around the final impacts of the COVID-19 pandemic, revenue forecasts have been volatile, creating challenges for planning the implementation of Measure I. For example, in 2006, the 30-year revenue projection estimated \$8 billion (2006 dollars) in Measure I funds. Since then the estimate has dropped to a low of \$4.5 billion (2010 dollars) and then increased to the current estimate of \$6.1 billion (2021 dollars) or an escalated estimate of \$6.9 billion.

Based on the current funding projections, the estimated Measure I revenue available over the next ten years is \$2.3 billion (escalated). Table 2.1.1 summarizes Measure I 2010-2040 revenues by Subarea received to date and projected to be available over the next ten years and beyond the next ten years. The revenue forecasts are estimated by Subarea in accordance with the current return to source proportions, revenue history, and estimated Subarea growth projections.

TABLE 2.1.1

MEASURE I ESCALATED FORECAST REVENUE (1,000s)

FISCAL YEAR	CAJON PASS	SB VALLEY	COLORADO RIVER	MORONGO BASIN	MTNS	NORTH DESERT	VICTOR VALLEY	TOTAL MEASURE I
2010/2011 to 2020/2021*	\$48,503	\$1,387,606	\$2,595	\$24,530	\$21,106	\$56,447	\$180,737	\$1,721,525
2021/2022	\$5,660	\$163,150	\$312	\$2,665	\$2,256	\$4,090	\$19,867	\$198,000
2022/2023	\$5,916	\$170,405	\$325	\$2,781	\$2,359	\$4,292	\$20,884	\$206,963
2023/2024	\$6,122	\$176,220	\$335	\$2,875	\$2,443	\$4,461	\$21,734	\$214,190
2024/2025	\$6,336	\$182,234	\$345	\$2,971	\$2,530	\$4,636	\$22,620	\$221,671
2025/2026	\$6,556	\$188,451	\$356	\$3,070	\$2,620	\$4,817	\$23,541	\$229,412
2026/2027	\$6,785	\$194,879	\$367	\$3,173	\$2,713	\$5,006	\$24,500	\$237,423
2027/2028	\$7,021	\$201,526	\$378	\$3,279	\$2,810	\$5,202	\$25,497	\$245,714
2028/2029	\$7,266	\$208,400	\$390	\$3,389	\$2,909	\$5,406	\$26,536	\$254,295
2029/2030	\$7,519	\$215,505	\$402	\$3,503	\$3,013	\$5,617	\$27,616	\$263,175
2030/2031	\$7,758	\$222,186	\$413	\$3,607	\$3,109	\$5,821	\$28,670	\$271,564
10-Year Delivery Plan Total	\$66,941	\$1,922,957	\$3,623	\$31,313	\$26,762	\$49,348	\$241,464	\$2,342,407
2031/2032 to 2039/2040	\$81,930	\$2,336,462	\$4,257	\$37,679	\$32,824	\$62,876	\$312,620	\$2,868,649
Total	\$197,374	\$5,647,025	\$10,475	\$93,522	\$80,692	\$168,671	\$734,821	\$6,932,581

*Actuals through Fiscal Year 2019/2020 plus the estimated Fiscal Year 2020/2021

State and Federal funding continues to be an important component in the delivery of Measure I projects. The availability of State and Federal funding had been steadily declining over the past twenty years; however, the passage of Senate Bill 1 (SB1) in 2017 created opportunities to compete for state grant funds in specific transportation categories. The bill provides a comprehensive and multi-modal funding package with revenue set-asides for highways, local streets and roads, goods movement projects, active transportation projects, and transit projects through a variety of formula and competitive programs managed by numerous State departments and agencies. SBCTA is aggressive in pursuing grants through the SB1 competitive programs, has been successful in securing numerous grants to date, and is actively pursuing funding from the following sources:

- Solutions for Congested Corridors Program (SCCP) for projects that implement specific transportation performance improvements and are part of a comprehensive corridor plan designed to reduce congestion in highly traveled corridors by providing more transportation choices while preserving the character of local communities and creating opportunities for neighborhood enhancement;
- Local Partnership Program (LPP) for regional transportation agencies and local jurisdictions that have passed sales tax measures, developer fees, or other imposed transportation fees to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects;
- Trade Corridor Enhancement Program (TCEP) for projects that more efficiently enhance the movement of goods along corridors that have a high freight volume; and
- Transit and Intercity Rail Capital Program (TIRCP) for transformative capital improvements that modernize California's transit systems.

Through the mid-1990s, State and Federal transportation revenues in California accounted for almost 75% of total transportation funding; local agencies contributed approximately 25%. In this plan, local funding is approximately 43% of the total project funding, as compared with 50% in the 2019 Update. This is largely due to SBCTA's success in securing nearly \$639 million of competitive awards from State and Federal programs. The Measure I Expenditure Plan requires that a proportional share of State and Federal funds be programmed within each of the Subareas. While State and Federal funds are not proposed to be used proportionally by Subarea through the term of this 2021 Update, shares are tracked so that a proportional distribution is achieved over time, and significant effort has been made to move closer to the overall proportional shares during this ten-year period.

With the exception of the Local Transportation Fund, which is a general sales tax, it is conservatively assumed that State and Federal revenues will remain at current funding levels. Given that, it is estimated that \$1.6 billion in new State revenue, including Federal funds under State discretion, and \$906 million of new Federal revenue will be apportioned through formula programs over the next ten years. The balances available for new projects after commitments are completed for the projects in this 2021 Update are estimated to be \$498 million (\$272 million of State funds and \$226 million of Federal funds), and not including funds dedicated to transit purposes, like the Local Transportation Fund, the State Transit Assistance Fund, Low Carbon Transit Operations Program funds, Federal Transit Administration 5307 and 5337 funds, and a portion of Congestion Mitigation and Air Quality funds that continue to be a major source of funding for new transit bus purchases and rideshare programs. The recent 2021 Interim Update to the Countywide Transportation Plan (CTP) discussed a shift in the transportation landscape from a focus on mobility and congestion relief to sustainability and multimodal mobility. This includes a managed system for both people and goods, with priority for transit and shared-ride modes that reduce greenhouse gases, criteria pollutants, and vehicle miles travelled (VMT). The next major CTP update, estimated to be initiated later in Fiscal Year 2021/2022, is expected to address corridor priorities, phasing, technology, and funding options that will guide Board decisions on the allocation of available funds dedicated to transit purposes.

While the 10-Year Delivery Plan incorporates formula funds and discretionary funding that has already been awarded to projects in the revenue forecast, it does not include an assumption of future discretionary funding. Table 2.1.2 below summarizes the State and Federal revenue sources that are anticipated to deliver the projects in this 2021 Update.

TABLE 2.1.2

STATE AND FEDERAL REVENUES FORECAST IN THE 2021 UPDATE (1,000s)

STATE REVENUE	Prior Allocated*	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	TOTAL	AVAILABLE BALANCE
Hydrogen Infrastructure Partnership Program		\$1,662										\$1,662	\$0
California Transit Security Grant Program	\$5,245											\$5,245	\$0
Local Transportation Fund	\$0	\$108,818	\$120,105	\$121,036	\$118,153	\$117,480	\$119,713	\$123,187	\$127,995	\$133,115	\$138,440	\$1,228,041	\$143,626
Local Partnership Program - Competitive	\$19,181											\$19,181	\$0
Local Partnership Program - Formula	\$25,533	\$6,181	\$5,856	\$5,856	\$5,856	\$5,856	\$5,856	\$5,856	\$5,856	\$5,856	\$5,856	\$84,418	\$11,792
Local Seismic Safety Retrofit Program- Prop 1B	\$388	\$1,835	\$1,617									\$3,840	\$0
Low Carbon Transit Operations Program	\$1,900	\$4,010	\$4,010	\$4,010	\$4,010	\$4,010	\$4,010	\$4,010	\$4,010	\$4,010	\$4,010	\$41,997	\$0
Public Transportation Modernization Improv. & Service Enhancement Account	\$23,027											\$23,027	\$0
Public Utilities Commission	\$5,000											\$5,000	\$0
Regional Improvement Program	\$81,529	\$73,342	\$19,716	\$26,072	\$55,288	\$33,546	\$0	\$25,000	\$0	\$25,000	\$0	\$339,492	\$100,000
Solutions for Congested Corridors Program	\$65,000	\$65,000										\$130,000	\$0
State Highway Operations & Protection Program	\$187,322											\$187,322	\$0
State Transit Assistance Fund	\$60,794	\$14,100	\$5,249	\$15,045	\$16,276	\$17,430	\$18,130	\$18,130	\$18,130	\$18,130	\$18,130	\$219,543	\$16,530
Trade Corridor Enhancement Program	\$117,831	\$24,074	\$118,739									\$260,644	\$0
Trade Corridor Improvement Funds	\$14,921											\$14,921	\$0
Transit and Intercity Rail Program	\$75,704	\$19,500										\$95,204	\$0
State Total	\$678,131	\$316,860	\$275,291	\$172,019	\$199,582	\$178,322	\$147,708	\$176,182	\$155,990	\$186,110	\$166,435	\$2,652,631	\$271,949
FEDERAL REVENUE													
Congestion Mitigation and Air Quality Coronavirus Response and Relief Supplemental Appropriations Act**	\$173,535	\$31,864	\$31,854	\$31,844	\$31,844	\$31,844	\$31,844	\$31,844	\$31,844	\$31,844	\$31,844	\$492,003	\$34,940
Federal Earmarks	\$21,206											\$21,206	\$0
FTA Section 5307***	\$70,259	\$23,720	\$23,720	\$23,720	\$24,906	\$24,906	\$24,906	\$24,906	\$24,906	\$24,906	\$24,906	\$315,757	\$41,910
FTA Small Starts/Stimulus		\$112,839										\$112,839	\$0
Highway Bridge Program	\$62,582	\$49,244	\$128,867	\$82,526	\$20,046							\$343,265	\$0
Highway Infrastructure Program	\$35,497		\$2,578									\$38,075	\$0
Highway Safety Improvement Program	\$0											\$0	\$0
Interstate Maintenance Discretionary	\$3,754											\$3,754	\$0
Surface Transportation Program	\$151,388	\$28,081	\$28,071	\$28,059	\$28,059	\$28,059	\$28,059	\$28,059	\$28,059	\$28,059	\$28,059	\$432,015	\$148,773
TIGER	\$8,678											\$8,678	\$0
Federal Total	\$526,899	\$267,657	\$215,089	\$166,149	\$104,855	\$84,809	\$84,809	\$84,809	\$84,809	\$84,809	\$84,809	\$1,789,501	\$225,623
State & Federal Total	\$1,205,030	\$584,517	\$490,380	\$338,168	\$304,437	\$263,131	\$232,517	\$260,991	\$240,799	\$270,919	\$251,244	\$4,442,132	\$497,572

* Prior year funds previously allocated for projects in this 10-Year Delivery Plan.

** Does not include Transit COVID-19 stimulus funds programmed for operations.

*** Only includes San Bernardino Valley Subarea FTA 5307; Hesperia urbanized area funds are not within SBCTA discretion to allocate.

2.2 PROJECT SCOPE, COST, AND SCHEDULE

The 10-Year Delivery Plan includes all project costs to determine future funding needs. A cost validation is completed for each of the projects considered for inclusion. During the cost validation exercise, assumptions and rules are applied and documented for each of the projects. Local area bid results and contract cost data from Caltrans and other sources are routinely consulted to validate project costs. The following validation rules are typically applied as cost estimates are reviewed:

- Estimates are adjusted to a baseline cost expressed in current dollars.
- Unit prices are validated using a combination of state-wide Caltrans cost data and local area bid results.
- Escalation factors are applied to the baseline estimate to determine project costs at the midpoint of design, right of way, or construction phases. These midpoint costs are used to determine project funding needs.
- Project quantities are not validated during this type of review.

Project Funding Summaries are developed with input from project managers and local agencies to document schedule milestones, cost, scope, and project funding sources reasonably expected to be available or as approved by the Board through the 10-Year Delivery Plan and agreements with Caltrans and local agencies. Assumptions used in the development of the data are also included. Revised funding summaries are developed to capture changes to a project, which provides a documented history of the project.

2.3 INFLATION AND ESCALATION

The 2021 Update assumes a combination of inflation and real growth in calculating Measure I revenue growth and escalates construction costs in the first four years consistent with current market conditions and thereafter at a rate just slightly more conservative than the historic Consumer Price Index, which averaged 2.4% from 1991 to 2020. The real growth data is based on a study completed in April 2021 by Dr. John Husing, a regional economic expert, with inflation rates set at a rate that creates a reasonable estimate of overall revenue. Cost escalation rates typically follow inflation rates, but a recent change in the way sales tax is collected and distributed for online sales, better known as the Wayfair decision, coupled with an increase in online shopping due to the pandemic, has had positive impacts on Measure I revenue, which is exceeding inflation rates. For projects not yet in the construction phase, the 2021 Update assumes that cost escalation rates will be 4.00% per year to the mid-year of construction for estimates through the next four years and 2.75% thereafter.

The 2019 Update assumed that revenue would be increasing between 3.3% and 3.6% per year through Fiscal Year 2028/2029, and between 3.0% and 3.5% through 2040. In Fiscal Year 2017/2018, SBCTA recorded a 0.5% decrease in Measure I revenue, followed by a 12.7% increase in Fiscal Year 2018/2019, and then a 2.5% decrease in Fiscal Year 2019/2020. SBCTA's sales tax consultant, HdL Companies, reviewed the sales tax collection information and determined that the revenue recognition was off between fiscal years as a result of SBCTA's repayment of prior years' overpayments, followed by a delay in revenue recognition caused by a new tax collection system instituted by the California Department of Tax and Fee Administration. By analyzing the data, HdL assessed an average annual increase close to 3%, compounded. Taking into account these anomalies, and being cautiously conservative, an estimate of revenue growth is used that is consistent with April 2021 estimates for Fiscal Years 2020/2021 and 2021/2022 provided by HdL Companies and Dr. John Husing's forecast beginning in Fiscal Year 2022/2023, as shown in Table 2.3.1. While the cumulative effects of the applied percentages are not much different from the 2019 Update, the 2021 Update starts with a higher base value as a result of higher current dollar point of sales volumes, and therefore, the cumulative collections are estimated at \$6.9 billion total Measure I revenue compared to \$6.5 billion projected in the 2019 Update. It should be noted that the 2021 Update includes \$195 million for the Measure I revenue estimate in Fiscal Year 2020/2021, but year-end revenue information shows actual revenue could exceed that amount by 14%, which is thought to be caused by the Wayfair decision and continued online shopping fueled by the pandemic resurgence.

TABLE 2.3.1
INFLATION, REAL GROWTH, AND ESCALATION

FISCAL YEAR	REVENUE			COST ESCALATION**
	INFLATION	REAL GROWTH	TOTAL	
2020/2021*			8.93%	4.00%
2021/2022*			2.56%	4.00%
2022/2023	1.50%	3.03%	4.53%	4.00%
2023/2024	1.50%	1.99%	3.49%	4.00%
2024/2025	1.50%	1.99%	3.49%	2.75%
2025/2026	1.50%	1.99%	3.49%	2.75%
2026/2027	1.50%	1.99%	3.49%	2.75%
2027/2028	1.50%	1.99%	3.49%	2.75%
2028/2029	1.50%	1.99%	3.49%	2.75%
2029/2030	1.50%	1.99%	3.49%	2.75%
2030/2031	1.50%	1.69%	3.19%	2.75%

*Fiscal Years 2020/2021 and 2021/2022 estimated revenue from SBCTA/HdL projections and thereafter from Dr. Husing's April 2021 report.

**Escalation to the mid-point of right of way and construction for projects not yet in construction or finished with right of way.

2.4 P6 AND ECOSYS

All of the SBCTA departments collaborate on a comprehensive review of a large amount of data pertaining to revenue projections, project costs, and the identification of risk elements associated with each project. The immense scale of the data, which includes 64 projects and hundreds of contracts and fund sources, presents a major challenge. Two sophisticated programs are used so that the data can be effectively managed, organized, and evaluated in the preparation of the 10-Year Delivery Plan.

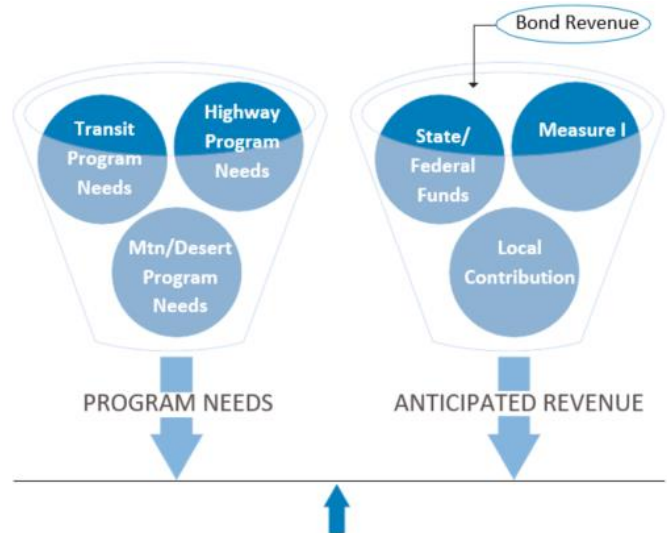
The first program, Primavera P6 (P6), is a critical path scheduling tool. P6 schedules are developed by incorporating data from the project funding summaries and input from project managers. Project schedules are loaded with project costs and contracts at the phase and fund level. Resource curves spread project costs over time. The information from P6 is directly loaded into the second program, EcoSys. Using these two compatible programs allows staff to run “what if” scenarios and test the effect of scheduling or cost changes on fund balances, revenue streams, and bonding needs.

EcoSys manages the data input directly or imported from P6 by project, phase, contract, fund source, and fiscal year. Revenue sources and actual expenditures are entered into EcoSys. Once the information is in EcoSys, starting with current Board-approved projects, a detailed analysis is performed by allocating funds to identified projects and reviewing the resulting fund balances by fiscal year. When usable fund balances remain, more projects can be added for evaluation in the priority order established by the Strategic Plan.

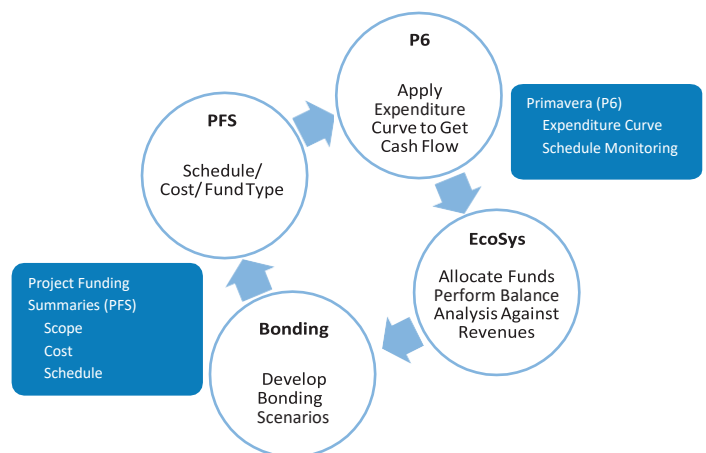
EcoSys is an effective means to analyze the data from different perspectives, including by fund, project, and cumulative revenue balance. The program also provides an innovative means to develop a plan by allowing the creation and evaluation of different delivery scenarios. This results in information needed to strike a balance between the needs and revenues for the 10-Year Delivery Plan. Consistent with the Strategic Plan, a bonding analysis was completed to identify opportunities to accelerate projects, and EcoSys provides all of the information in the necessary format for use in bonding models.

Figure 2.4.1 summarizes the process by which EcoSys is used to develop and maintain the Plan. Figure 2.4.2 depicts the iterative “scenario” process used to evaluate scenarios for the 10-Year Delivery Plan.

**FIGURE 2.4.1
METHODOLOGY**



**FIGURE 2.4.2
P6/ECOSYS ANALYSIS**



2.5 FINANCIAL STRATEGY

The financial strategy used in the development of the 10-Year Delivery Plan includes:

- Apply ordinance and policy criteria.
- Preserve existing grants.
- Maximize available funds.

Apply ordinance and policy criteria. The 10-Year Delivery Plan is built off of the Measure I Ordinance and Board Policies.

Key Ordinance requirements are:

- Measure I revenues shall be allocated by formula to Subareas and Programs.
- State and Federal funds shall be allocated proportionally to Subareas over time.

Key Board Policies are:

- State and Federal funds shall be allocated to maintain geographic equity.
- Congestion Mitigation and Air Quality funds for the San Bernardino Valley shall be allocated in the following priority: i) regional programs, ii) transit capital projects, iii) freeway HOV projects. There is no established policy for the Mountain/Desert Subareas.
- Surface Transportation Program funds for the San Bernardino Valley shall be allocated to the Freeway Projects Program. There is no established policy for the Mountain/Desert Subareas.
- A Measure I Program that benefits from bonding shall accommodate the debt service within the Program's revenue.

Preserve existing grants. Numerous existing grants have to be used by a certain date or the grant is rescinded. The 10-Year Delivery Plan is developed to ensure these funds are not lost. This strategy is critical in the development of each 10-Year Delivery Plan to allow SBCTA to meet the delivery deadlines and make full use of grant awards that have allocation and award deadlines, like many of the competitive SB1 programs.

Maximize available funds. With SBCTA facing transportation funding challenges as cost escalation is expected to outpace revenue growth, maximizing all available funds is critical. State and Federal funds are subject to rescission if the funds are not used in a timely manner. The 10-Year Delivery Plan allows for the better management of all funds across Programs and Subareas, minimizing the potential for funds to be rescinded and minimizing costs associated with bonding.

2.6 BONDING ANALYSIS

Consistent with the direction included in the Strategic Plan, borrowing against Measure I revenue can be used to accelerate project delivery. Currently, the cost of borrowing has remained low, even while project cost escalations are outpacing inflation, making bonding an attractive option. Bond financing can also leverage significant levels of State, Federal, or private funding that might not otherwise be available if borrowing were not to occur.

To assist SBCTA in the bonding analysis, the financial expertise of the consulting firm PFM is employed using a bonding model that uses the project and revenue information from EcoSys to determine the bonding needs for each of the Programs. Once the EcoSys data is incorporated, the model produces cash flows by Subarea Program that account for the timing of bonds, bond amounts, and associated debt service costs. Additional information on the bonding, including criteria for debt coverage ratios, as well as past and future anticipated bond issuances by Program, is included in Section 11.



CAJON PASS PROGRAM

CAJON PASS PROGRAM

3.1 BACKGROUND

The Measure I Expenditure Plan included improvements for three projects within the Cajon Pass Program. The total cost for these improvements was estimated at \$230 million, to be funded with a combination of Measure I, State, and Federal funds. The Strategic Plan analysis found that the projected Measure I revenue would only fund the I-15/I-215 Devore Interchange project. An alternative funding source would need to be identified for the other improvements in the Cajon Pass.

3.2 CURRENT STATUS

The I-15/I-215 Devore Interchange was fully funded with a combination of Measure I, State, and Federal funds and was open to traffic in June 2016. Other improvements contemplated in the Cajon Pass include two express lanes in each direction on I-15 but will need to be heavily funded with an alternative funding source, such as toll revenue bonds. Additionally, SBCTA is coordinating with Brightline West as plans are developed to move forward with a privately-funded high speed rail connection between Apple Valley and Las Vegas with a potential extension through the Cajon Pass to the Metrolink Cucamonga Station in the City of Rancho Cucamonga. This high speed rail connection through the Cajon Pass could provide needed relief to this heavily-traveled corridor while still providing an opportunity for future extension of one express lane in each direction on I-15 into the Victor Valley. The estimated uncommitted Measure I balance through 2040 is \$95 million for this Program. There are projected needs for small amounts of short-term cash flow borrowing in the Measure I Valley Freeway Interchange, Valley Express Bus/Bus Rapid Transit Service, and Valley Metrolink/Rail Service programs. All cash flow borrowing between Measure I programs includes repayment the following fiscal year, including interest, to the loaning fund. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.



4

SAN BERNARDINO VALLEY SUBAREA PROGRAMS

**LOCAL STREET PROJECTS
PROGRAM**

**FREEWAY PROJECTS
PROGRAM**

**FREEWAY INTERCHANGE PROJECTS
PROGRAM**

**MAJOR STREET PROJECTS
PROGRAM**

**METROLINK/RAIL SERVICE
PROGRAM**

**EXPRESS BUS/BUS RAPID TRANSIT
SERVICE PROGRAM**

**SENIOR AND DISABLED TRANSIT
SERVICE PROGRAM**

**TRAFFIC MANAGEMENT SYSTEMS
PROGRAM**

4.1 SAN BERNARDINO VALLEY LOCAL STREET PROJECTS PROGRAM

4.1.1 BACKGROUND

The Measure I Expenditure Plan estimated \$904 million of Measure I revenue would be available for local street repair and improvements. Funds under this Program are distributed to cities and the County on a per capita basis. The Strategic Plan established policies for eligible expenditures, the adoption and development of the local jurisdictions' Five-Year Capital Improvement Plans, and funding allocations. Detailed policy information can be found in the San Bernardino Valley policy section of the Strategic Plan.

Local Street Projects Program funds can be used flexibly for any eligible transportation purpose determined to be a local priority, including local streets, major highways, state highway improvements, freeway interchanges, and other improvements/programs to maximize the use of transportation facilities. For example, Local Street Projects funding can be used for the widening of streets, installation of traffic signals, road maintenance efforts, median landscaping, sidewalk installations, storm drain facilities, and upgrades to Americans with Disabilities Act (ADA) standards.

4.1.2 CURRENT STATUS

In accordance with the Expenditure Plan and Strategic Plan, the Measure I funds apportioned to the San Bernardino Valley Local Street Projects Program are included in the 10-Year Delivery Plan with the funds passed through monthly to the local jurisdictions. No individual projects are included in the 10-Year Delivery Plan. The current estimate for the Program over the next ten years is \$385 million.

4.2 SAN BERNARDINO VALLEY FREEWAY PROJECTS PROGRAM

4.2.1 BACKGROUND

The Measure I Expenditure Plan included improvements for six San Bernardino Valley freeway corridors. The total cost for these improvements was estimated at \$1.4 billion, to be funded from a combination of Measure I, State, and Federal funds. The six projects originally proposed were:

- I-10 Widening from I-15 to Riverside County Line
- I-15 Widening from Riverside County Line to I-215
- I-215 Widening from Riverside County Line to I-10
- I-215 Widening from SR 210 (formerly SR 30) to I-15
- SR 210 Widening from I-215 to I-10
- Carpool Lane Connectors

During the preparation of the Strategic Plan, it was determined that the projected revenue for the Freeway Program over the life of the Measure would not be adequate to fund all the improvements included in the Expenditure Plan. To obtain a financially balanced plan, the scope of some of the corridor improvements was reduced and an alternative funding source was assumed. The I-10 widening from I-15 to the Riverside County line scope was defined as

a combination of high occupancy vehicle (HOV) lanes to west of Ford Street in the City of Redlands and an eastbound truck climbing lane east of Live Oak Canyon Road in the City of Yucaipa. The SR 210 Widening from I-215 to I-10 was reduced to adding an additional lane in each direction only for the segment from Highland Avenue in the City of San Bernardino to I-10. Lastly, the Carpool Lane Connectors were not included. The Strategic Plan included a bonding strategy to accelerate the completion of the freeway improvements. The following Freeway Program improvements, at an estimated total cost of \$2.8 billion, were included in the Strategic Plan:

- I-10 Widening from I-15 to Riverside County Line
 - Add one HOV lane in each direction from Haven Avenue in the City of Ontario to Ford Street in the City of Redlands.
 - Add an eastbound truck climbing lane from Live Oak Canyon Road to Riverside County line.

- I-15 Widening from Riverside County Line to I-215
 - Add two express lanes in each direction. Assumed 75% of project costs will be funded with toll revenue.
- I-215 Widening from Riverside County Line to I-10
 - Add one HOV lane in each direction. The ultimate project, which adds an additional mixed-flow lane, is scheduled to commence project development near the end of the Measure.
 - Reconstruct I-215 and Barton Road interchange.
 - Reconstruct I-215 and Mount Vernon/Washington Street interchange.
- I-215 Widening from SR 210 to I-15
 - Add one lane in each direction.
- SR 210 Widening
 - Add one lane in each direction from Highland Avenue in the City of San Bernardino to I-10.

4.2.2 CURRENT STATUS

The development of the Freeway Program resulted in some unique features in prior 10-Year Delivery Plans as two alternatives for the I-10 and I-15 corridors were evaluated. The first alternative included the addition of an HOV lane in each direction on I-10 from Haven Avenue to Ford Street with no improvements on I-15. The second alternative included the addition of one or two express lanes on I-10 from the Los Angeles County line to Ford Street and on I-15 from SR 60 to the I-15/I-215 Devore Interchange.

Ultimately the express lanes alternatives were selected for the I-10 and I-15 corridors. SBCTA has awarded a design-build contract for I-10 Corridor Contract 1, which provides for two express lanes in each direction from the Los Angeles County line to I-15. A Transportation Infrastructure Finance and Innovation Act (TIFIA) loan was secured in April 2019 for the project and was recently refinanced for a savings of \$53.4 million in future debt service payments.

SBCTA has evaluated options for the next express lanes project to be developed for construction. By constructing where the demand is currently greatest on I-10 and I-15, SBCTA will potentially be able to leverage toll revenue for the financing of the next projects, with the timing driven by the actual demand experienced on each corridor. Significant construction cost increases over the last several years have led to a sequenced approach to construction on I-10 and I-15. In response to the robust market, construction cost and potential for toll revenue generation were analyzed for a variety of segments on I-10 and I-15, taking into account available funding over the next ten years. The south segment of I-15, which would connect with the recently completed I-15 express lanes in Riverside County and continue to about Foothill Boulevard, was determined to be

the most feasible project to follow the I-10 Corridor Contract 1 Project.

The next segment on I-10 was envisioned to be a continuation of dual express lanes from I-15 to Sierra Avenue and would begin construction approximately three years after the initial I-10 Corridor Contract 1 express lanes open to traffic. However, after evaluating the estimated cost and projected traffic demand on the next segment of I-10, the I-10 Contract 2 project was revised to construct a single express lane in each direction from I-15 to Pepper Avenue. The revised single express lane project balances the need for additional managed lane capacity with the State's investment principles in the new Climate Action Plan for Transportation Infrastructure. Additionally, constructing a single express lane in lieu of dual express lanes enables the project limits to extend approximately five miles further east from Sierra Avenue to Pepper Avenue with this next I-10 project.

Since the adoption of the 2019 Update, full funding has been achieved for the I-15 Corridor Contract 1 and I-10 Truck Climbing Lane projects through construction, largely through competitive grants totaling \$143 million from the California Transportation Commission. The I-215/Barton Road Interchange project was also completed. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

The current revenue estimate for the next ten years is \$558 million. Consistent with the Strategic Plan, bonding is used to accelerate the projects. Freeway projects included in the 2021 Update and the overall cost and revenue requirements for the Freeway Projects Program are shown in Table 4.2.1. Project details are presented in Section 4.2.3. The estimated uncommitted balance through 2040 is \$338 million for this Program. There are projected needs for small amounts of short-term cash flow borrowing in the Measure I Valley Freeway Interchange, Valley Express Bus/Bus Rapid Transit Service, and Valley Metrolink/Rail Service programs. All cash flow borrowing between Measure I programs includes repayment the following fiscal year, including interest, to the loaning fund. The estimated uncommitted balance of State and Federal funds through 2040 is \$585 million for the San Bernardino Valley Subarea, which is generally shared between this Program and the San Bernardino Valley Metrolink/Rail Service and San Bernardino Valley Express Bus/Bus Rapid Transit Service Programs. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today.

TABLE 4.2.1

SAN BERNARDINO VALLEY FREEWAY PROJECTS PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)

PROJECT	COST	FUNDING SOURCE	REVENUE
① I-215 Bi-County Landscaping	\$11,035	Measure I	\$873,324
② SR 210 Widening	\$156,701	State/Federal Formula Funds	\$504,984
③ I-10 Corridor Contract 1	\$929,097	State/Federal Grant Funds	\$449,639
I-10 Contract 1 Measure I Investment	\$25,656	Toll Revenue	\$225,000
④ I-10 Truck Climbing Lane	\$35,848	Measure I Interchange/Arterial	\$45,658
⑤ I-15 Corridor Freight and Express Lanes Project - Contract 1	\$317,685	Local/Private Funds	\$21,805
⑥ I-10 Corridor Freight and Express Lane Project - Contract 2*	\$796,000	Unfunded	\$180,000
⑦ I-215/Mount Vernon/Washington Bridge	\$28,388		
TOTAL:	\$2,300,410	TOTAL:	\$2,300,410

*Project is not fully funded.

The project locations are depicted in Figure 4.2.1. The project schedules are included as Figure 4.2.2.

FIGURE 4.2.1

SAN BERNARDINO VALLEY FREEWAY PROJECTS PROGRAM MAP

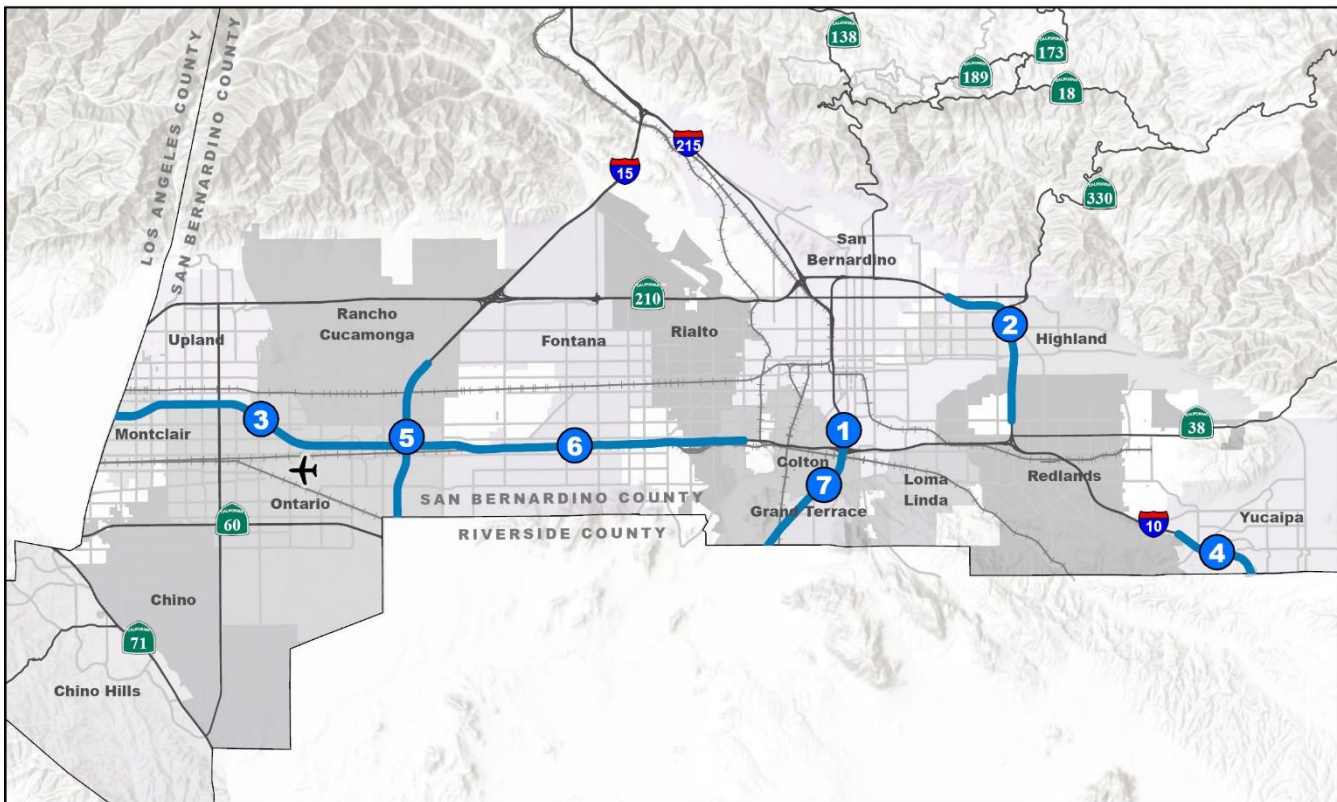
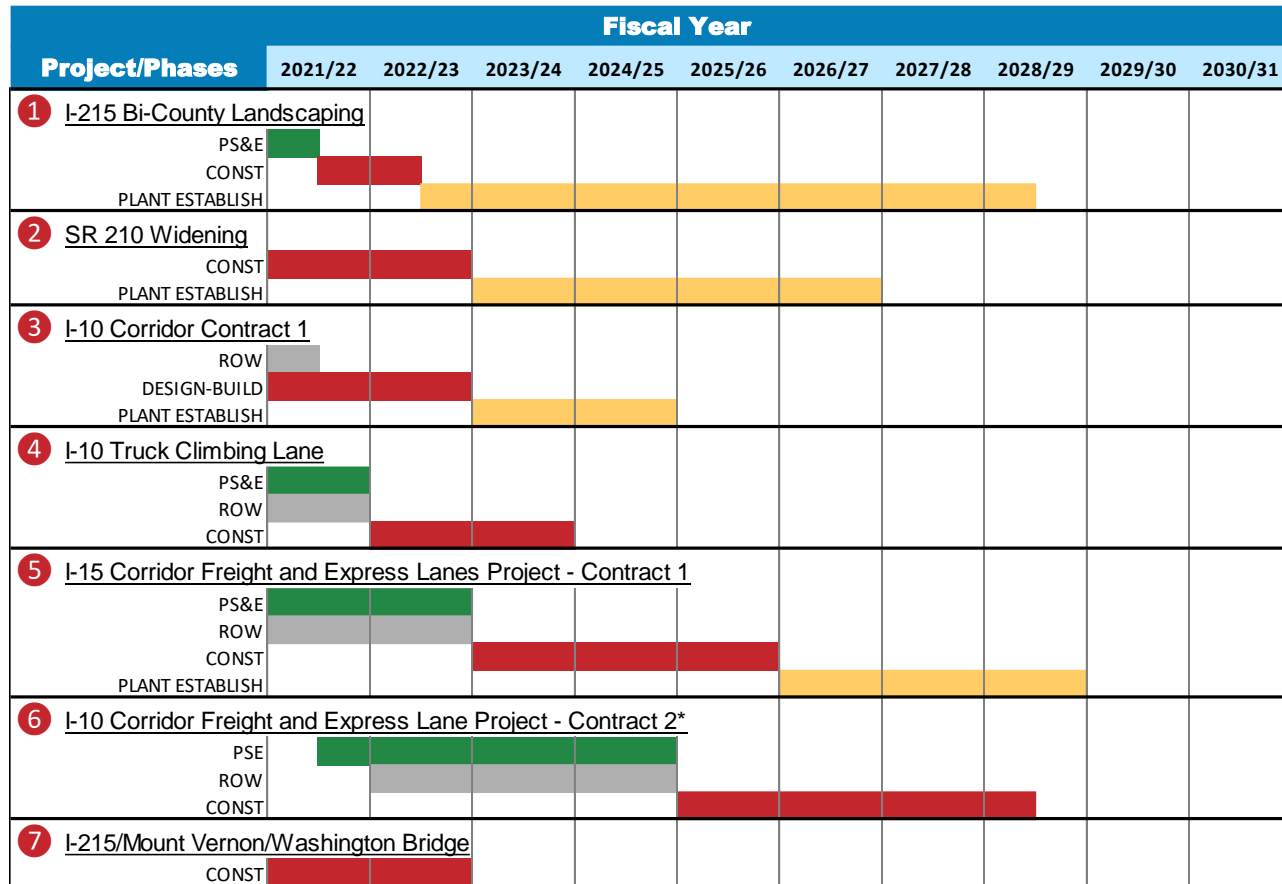


FIGURE 4.2.2

SAN BERNARDINO VALLEY FREEWAY PROJECTS PROGRAM SCHEDULE

* Schedule is contingent on securing grant funding for construction.

4.2.3 PROJECT DETAILS

1 I-215 BI-COUNTY LANDSCAPING

Project Description: The I-215 Bi-County HOV Gap Closure project was opened to traffic in June 2015. The project completed an HOV system along the I-215 Corridor between the SR 60/SR 91/I-215 Interchange in Riverside County and the Orange Show Road Interchange in the City of San Bernardino by adding an HOV lane in each direction on I-215, resulting in three general-purpose lanes and one HOV lane in each direction. Follow up corridor landscaping is scheduled for completion in 2023 and will have a four-year extended plant establishment period ending in 2027.

- The corridor landscaping project includes a one-year plant establishment period for replacement landscape planting and a four-year extended plant establishment period.

Project Lead Agency: SBCTA

Current Development Phase: PS&E

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.2

I-215 BI-COUNTY LANDSCAPING (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$420	\$582	\$689	\$31	\$8,500	\$813	\$11,035
TOTAL	\$420	\$582	\$689	\$31	\$8,500	\$813	\$11,035

2 SR 210 WIDENING

Project Description: The project will add one mixed-flow lane in each direction from Highland Avenue in the City of San Bernardino to San Bernardino Avenue in the City of Redlands, auxiliary lanes between Base Line and 5th Streets, and an acceleration lane at the 5th Street eastbound ramp.

- As the SR 210 Widening and SR 210/Base Line Interchange projects align geographically and share similar delivery schedules, they have been combined for the design, right of way, and construction phases to save cost and expedite the schedule. The costs associated with the interchange are reflected in Section 4.3.
- Caltrans pavement rehabilitation work has been added through a cooperative agreement with Caltrans that includes new concrete pavement between 5th Street and Lugonia Avenue and is funded with State Highway Operation and Protection Program funds.
- The project includes widening of four bridges over Sand Creek, City Creek, Plunge Creek and the Santa Ana River.
- The construction contract was awarded in November 2019.

Project Lead Agency: SBCTA

Current Development Phase: Construction

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.3

SR 210 WIDENING (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$2,863	\$2,573	\$9,078	\$5,500	\$70,897	\$500	\$91,411
SHOPP			\$2,732		\$37,558		\$40,290
STIP					\$25,000		\$25,000
TOTAL	\$2,863	\$2,573	\$11,810	\$5,500	\$133,455	\$500	\$156,701

3 I-10 CORRIDOR CONTRACT 1

Project Description: The project will provide two express lanes in each direction for ten miles from the Los Angeles County line to just east of I-15 in the City of Ontario. The Record of Decision was approved in July 2017 for the entire I-10 Corridor Project from the Los Angeles County line to Ford Street in the City of Redlands. A Project and Construction Management services consultant has been procured to manage the project through completion. Design-build contracts for both the express lanes construction and the toll services provider were awarded by the SBCTA Board in June 2018. A toll revenue-backed federal Transportation Infrastructure Finance and Innovation Act (TIFIA) loan was secured for construction of the project in April 2019 and refinanced in June 2021 with interest cost savings of \$53.4 million over the life of the loan.

- SBCTA has contracted with the Transportation Corridor Agencies for shared customer service center services.
- The geometric alternative included in the 10-Year Delivery Plan includes both standard and nonstandard features, primarily to minimize community impacts while accommodating the project improvements.
- Caltrans pavement rehabilitation and safety lighting work has been added through a cooperative agreement with Caltrans that is funded with State Highway Operation and Protection Program funds.
- The cost for interchange and arterial improvements resulting from this project will be paid by the Measure I Freeway Interchange Projects Program and Major Street Projects Program, respectively, and required local contributions. Details of those improvements are included in Sections 4.3 and 4.4 and funding is shown in table below.
- The Board has approved an estimated \$93 million Measure I investment for debt service and operations costs through 2040 or the TIFIA loan repayment period, whichever is sooner, which allowed SBCTA to maximize the TIFIA loan amount. Any use of these investment funds will be repaid with interest from toll revenue.
- The 10-Year Delivery Plan bond model includes an assumption that \$26 million is required for investment without repayment over the next ten years, per the severe downside scenario of traffic and revenue projections; however, it is not expected this investment will actually be used without repayment.
- The cost estimate includes a contingency of \$51.9 million.

Project Lead Agency: SBCTA

Current Development Phase: ROW and Design-Build

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.4

I-10 CORRIDOR CONTRACT 1 (1,000s)

FUNDING	PHASE							TOTAL
	PM	PA/ED	PCM	ROW	DESIGN-BUILD	Plant Establish	Financing/Reserves	
MEASURE I	\$16,879	\$7,945	\$7,577	\$15,425	\$29,760	\$4,200	\$7,214	\$89,000
TIFIA LOAN					\$225,000			\$225,000
STP	\$21,300		\$40,995		\$78,000			\$140,295
CMAQ			\$3,561	\$30,201	\$87,104			\$120,866
STIP					\$39,745			\$39,745
LPP (FORMULA)					\$6,169			\$6,169
TCEP					\$117,831			\$117,831
TCIF					\$4,973			\$4,973
SHOPP			\$11,000		\$106,755			\$117,755
MEASURE I IC	\$1,354	\$670	\$1,095	\$7,674	\$22,874			\$33,667
MEASURE I ART	\$527		\$780	\$1,035	\$9,649			\$11,991
DIF CITY	\$1,823	\$213	\$292	\$2,165	\$17,312			\$21,805
TOTAL	\$41,883	\$8,828	\$65,300	\$56,500	\$745,172	\$4,200	\$7,214	\$929,097

* The PM phase includes SBCTA and CT oversight and project development costs

4 I-10 TRUCK CLIMBING LANE

Project Description: The project will construct a truck climbing lane on eastbound I-10 from west of the 16th Street Bridge in the City of Yucaipa through east of County Line Road Bridge at the San Bernardino and Riverside County lines. This project will extend the existing eastbound truck climbing lane. The addition of the truck climbing lane will separate slow moving trucks climbing the steep grade from general traffic.

- The final environmental document and final project report were approved in November 2020.
- Full funding for construction was achieved with the award of a Trade Corridor Enhancement Program grant in December 2020.
- The Preliminary Engineer's Estimate is based on the approved November 2020 Project Report. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: PS&E

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.5

I-10 TRUCK CLIMBING LANE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$886	\$1,979	\$398		\$5,621		\$8,884
TCEP					\$24,074		\$24,074
STIP			\$2,890				\$2,890
TOTAL	\$886	\$1,979	\$3,288		\$29,695		\$35,848

5 I-15 CORRIDOR FREIGHT AND EXPRESS LANES PROJECT - CONTRACT 1

Project Description: The initial Express Lane Study includes the entire scope of the I-15 Corridor project from SR 60 through the Cajon Pass to US 395. The final environmental document for the portion of the study area from Cantu Galleano Ranch Road to 1.2 miles north of Duncan Canyon Road was approved in December 2018. The project proposed for delivery in the next ten years is from the north terminus of the Riverside County Transportation Commission's express lanes project at Cantu Galleano Ranch Road in Riverside County to about Foothill Boulevard in the City of Rancho Cucamonga. The preliminary design includes the addition of two express lanes through most of the entire length of the project.

- The scope, cost, and schedule are based on a preliminary design. The preliminary design includes non-standard geometrics that have received approval from Caltrans.
- The design-bid-build delivery method will be used for this project.
- Discussions are on-going with Riverside County Transportation Commission regarding reimbursement of capital costs for work in Riverside County as well as responsibility for operations and maintenance.
- The Preliminary Engineer's Estimate is dated November 4, 2021. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: PS&E

Complete for Beneficial Use: 2026

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.6

I-15 CORRIDOR FREIGHT AND EXPRESS LANES PROJECT - CONTRACT 1 (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$3,350	\$10,373	\$27,579	\$2,679	\$70,379	\$759	\$115,118
STIP					\$72,274		\$72,274
TCEP					\$118,739		\$118,739
LPP (FORMULA)					\$11,554		\$11,554
TOTAL	\$3,350	\$10,373	\$27,579	\$2,679	\$272,946	\$759	\$317,685

6 I-10 CORRIDOR FREIGHT AND EXPRESS LANE PROJECT - CONTRACT 2

Project Description: The project will provide one express lane in each direction from just east of I-15 to Pepper Avenue in the City of Colton, connecting to the I-10 Corridor Contract 1 express lanes currently under construction. The Record of Decision was approved in July 2017 for the entire I-10 Corridor Project from the Los Angeles County line to Ford Street in the City of Redlands.

- The scope, cost, and schedule are based on preliminary engineering plans.
- Construction is scheduled to begin approximately three years after I-10 Corridor Contract 1 opens to traffic, enabling potential toll revenue leveraging for this project.
- Funding is currently planned through the ROW phase so that the project can be a viable candidate for potential future State and/or Federal grant funding.
- The design-bid-build delivery method will be used for this project.
- The Preliminary Engineer's Estimate is dated July 2021. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: Project Development

Complete for Beneficial Use: 2028, pending funding availability

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.7

I-10 CORRIDOR FREIGHT AND EXPRESS LANE PROJECT - CONTRACT 2 (1,000s)

FUNDING	PHASE						TOTAL
	PM*	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$18,000		\$39,051	\$6,000	\$466,758		\$529,809
STIP					\$54,242		\$54,242
STP			\$20,000				\$20,000
STIP-CRRSAA			\$11,949				\$11,949
UNFUNDED**					\$180,000		\$180,000
TOTAL	\$18,000		\$71,000	\$6,000	\$701,000		\$796,000

* The PM phase includes SBCTA oversight and project development costs

** Project is not fully funded

7 I-215/MOUNT VERNON AVENUE/WASHINGTON STREET BRIDGE

Project Description: The project will replace the Washington Street Overcrossing over I-215 to correct minimum vertical clearance standards and reduce the possibility of being struck by oversized vehicles, while providing sufficient width to span the ultimate I-215 freeway configuration and improving the safety of the traveling public. This improvement widens the structure to 108 feet, improves circulation, and increases the storage capacity on the local street to provide an acceptable level of service for the projected traffic volumes expected in the year 2040.

- SBCTA participation is part of a larger Caltrans State Highway Operation and Protection Program project. SBCTA is only participating in the cost to widen the new structure to 108 feet and increase the storage capacity on the local street.
- The SBCTA contribution to the project is a fixed, lump sum contribution.

Project Lead Agency: Caltrans

Current Development Phase: Construction

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.2.8

I-215/MOUNT VERNON AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE					Funding Contribution	TOTAL
	PM	PA/ED	PS&E	ROW	CON		
MEASURE I						\$2,411	\$2,411
SHOPP		\$1,125	\$2,870	\$4,022	\$17,960		\$25,977
TOTAL		\$1,125	\$2,870	\$4,022	\$17,960	\$2,411	\$28,388

4.3 SAN BERNARDINO VALLEY FREEWAY INTERCHANGE PROJECTS PROGRAM

4.3.1 BACKGROUND

The Measure I Expenditure Plan included, but was not limited to, improvements for 31 freeway interchanges along I-10, I-15, SR 60, I-215, and SR 210 corridors. The total cost for these improvements was estimated at \$862 million. Funding consisted of a combination of Measure I, development fees, and State and Federal funds. Through the development of the Strategic Plan, the interchange project list was further defined to a total of 38 interchanges.

The Expenditure Plan requires that new development pay its fair share of interchange projects. The fair share for each interchange project was established by the Nexus Study adopted by the Board in 2005. The Nexus Study is updated occasionally based on amendments approved by the Board with the most recent update approved in October 2020.

Forty percent of the Measure I San Bernardino Valley Freeway Interchange Projects Program revenue was allocated toward the reimbursement to jurisdictions that entered into Project Advancement Agreement (PAA) commitments for the advancement of three interchange projects until the PAA obligation was fulfilled. The three interchanges were I-10/Live Oak, I-10/Riverside (Phase 1), and I-10/Pepper (Phase 1). The total PAA commitment was \$17.5 million.

The Strategic Plan identified that bonding was required to meet the Measure I obligation for the I-10/Cherry, I-10/Citrus, and I-10/Riverside Interchange projects to avoid loss of other State grant funds. The remaining interchanges were to be developed on a pay-as-you-go basis. However, more recently the Board has been supportive of plans to advance delivery of the top interchanges, which requires bonding.

4.3.2 CURRENT STATUS

All PAA commitments have been repaid, and consistent with Board direction, project development has commenced on the ten highest priority interchanges with public share funding available through construction. Additionally, the Board approved an exception to policy to allow the lower-ranked I-10/Pepper Interchange Phase 2 to proceed with the majority of funding coming from a federal earmark. In addition to the top ten interchanges, several Tier 2 interchanges were added to the 10-Year Delivery Plan in the 2017 Update with the construction of the I-10 Corridor Contract 1 Project, which will result in improvements to the I-10/Monte Vista, I-10/Euclid, and I-10/Vineyard Interchanges. The Board approved Advance Expenditure Agreements (AEA) with the City of Ontario for the SR 60/Euclid Interchange, the City of Rancho Cucamonga for the I-15/Base Line Interchange, and the County of San Bernardino for the I-15/Sierra Interchange, which allowed the projects to proceed using local funds with

a guarantee of future Measure I reimbursement prior to beginning construction on a lower ranked interchange. Because the I-10/Vineyard Interchange is ranked lower than these interchanges, reimbursement of these AEAs has occurred as project reconciliation information is available. Information regarding completed projects is included in Section 12.

The 2019 Update included a \$21 million reserve for an interchange phasing program adopted in 2016. Since adoption of the program, the City of Yucaipa has begun preliminary studies on partial improvements that could be made toward a future I-10/Wildwood Canyon Interchange. Additionally SBCTA is beginning development of improvements to the SR 210/Waterman Avenue Interchange to complement improvements funded by Caltrans at the interchange, and the City of Highland is beginning development of improvements to the SR 210/5th Street Interchange. A \$40 million reserve continues to be maintained in the 2021 Update through 2040, with the list of eligible projects included in Section 4.3.4; however, the magnitude of the Freeway Interchange Projects Program being delivered over the next five years could require further implementation of the Phasing Program to be delayed.

In developing the interchange project schedules, it was assumed that the local agency would pay its fair share of the project costs. If the local agency cannot commit its fair share when project development of the interchange project is scheduled, project development will commence on the next highest priority project on which a local agency can commit its fair share.

The current revenue estimate for the next ten years is \$212 million. Consistent with the Strategic Plan, cash flow borrowing between Programs and bonding are used to accelerate the projects. Assurance of the availability of local share funding for capital phases will be considered before future bond issuances. Freeway interchange projects included in the 2021 Update and the overall cost and revenue requirements for the San Bernardino Valley Freeway Interchange Program are shown in Table 4.3.1. Project details are presented in Section 4.3.3. The estimated uncommitted balance through 2040 is \$161 million for this Program.

TABLE 4.3.1

SAN BERNARDINO VALLEY FREEWAY INTERCHANGE PROJECTS PROGRAM (COST AND REVENUE REQUIREMENTS) (1,000s)

PROJECT	COST	FUNDING SOURCE	REVENUE
1 I-10/Cedar Avenue Interchange	\$109,834	Measure I	\$260,098
2 SR 210/Base Line Interchange	\$32,070	State/Federal Formula Funds	\$12,752
3 SR 60/Central Avenue Interchange	\$36,034	State/Federal Grant Funds	\$26,056
4 I-10/University Street Interchange	\$5,843	Local/Private Funds	\$130,064
5 I-215/University Parkway Interchange	\$18,568	Unfunded	\$22,360
6 I-10/Alabama Street Interchange	\$14,379	TOTAL:	\$451,330
7 SR 60/Archibald Avenue Interchange	\$27,701		
8 I-10/Mount Vernon Avenue Interchange	\$71,590		
9 SR 210/Waterman Avenue Interchange	\$5,885		
10 SR 210/5th Street Interchange	\$15,827		
11 I-10/Wildwood Canyon Road Interchange	\$1,750		
12 I-10/Riverside Avenue Interchange Phase 2*	\$37,952		
13 I-15/Base Line Road Interchange - AEA	\$48,974		
14 I-10/Euclid Avenue Interchange**	\$0		
15 I-10/Monte Vista Avenue Interchange**	\$0		
16 I-10/Vineyard Avenue Interchange**	\$0		
Interchange Phasing Program	\$24,923		
TOTAL:	\$451,330		

*Project is not fully funded.

**Project costs are included in the I-10 Corridor Contract 1 project.

FIGURE 4.3.1

SAN BERNARDINO VALLEY FREEWAY INTERCHANGE PROJECTS PROGRAM MAP

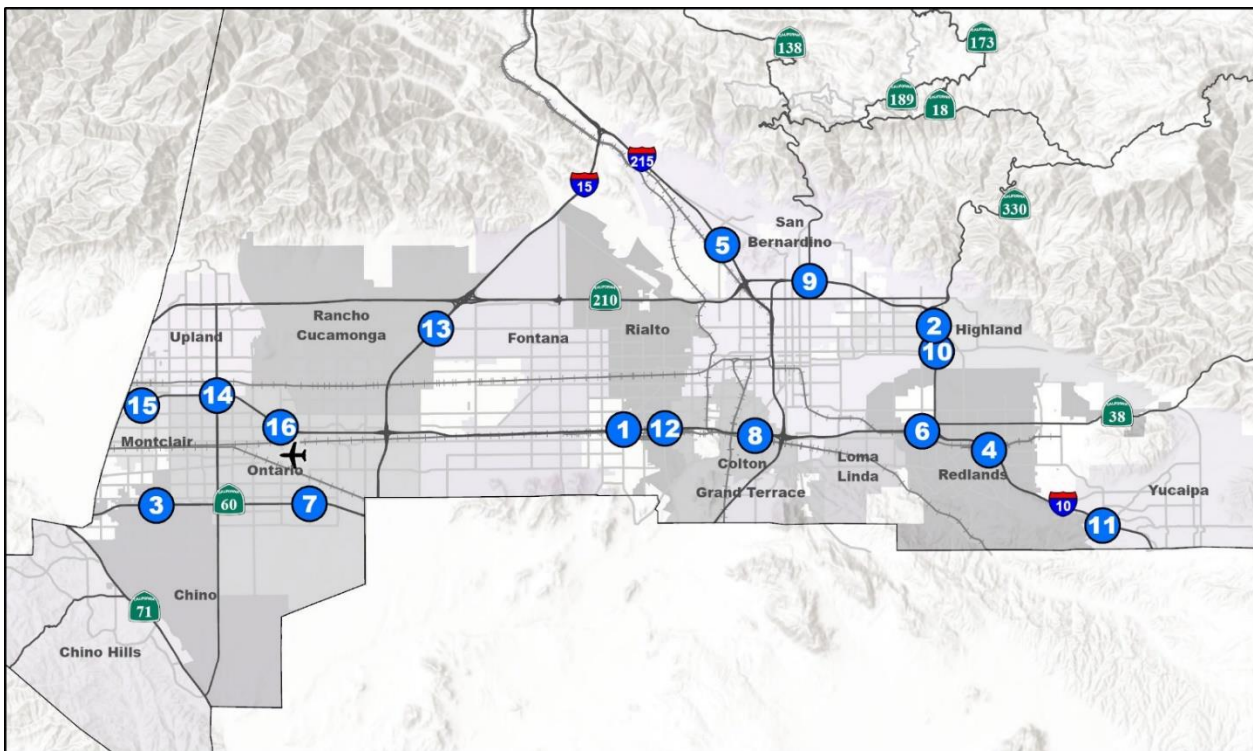
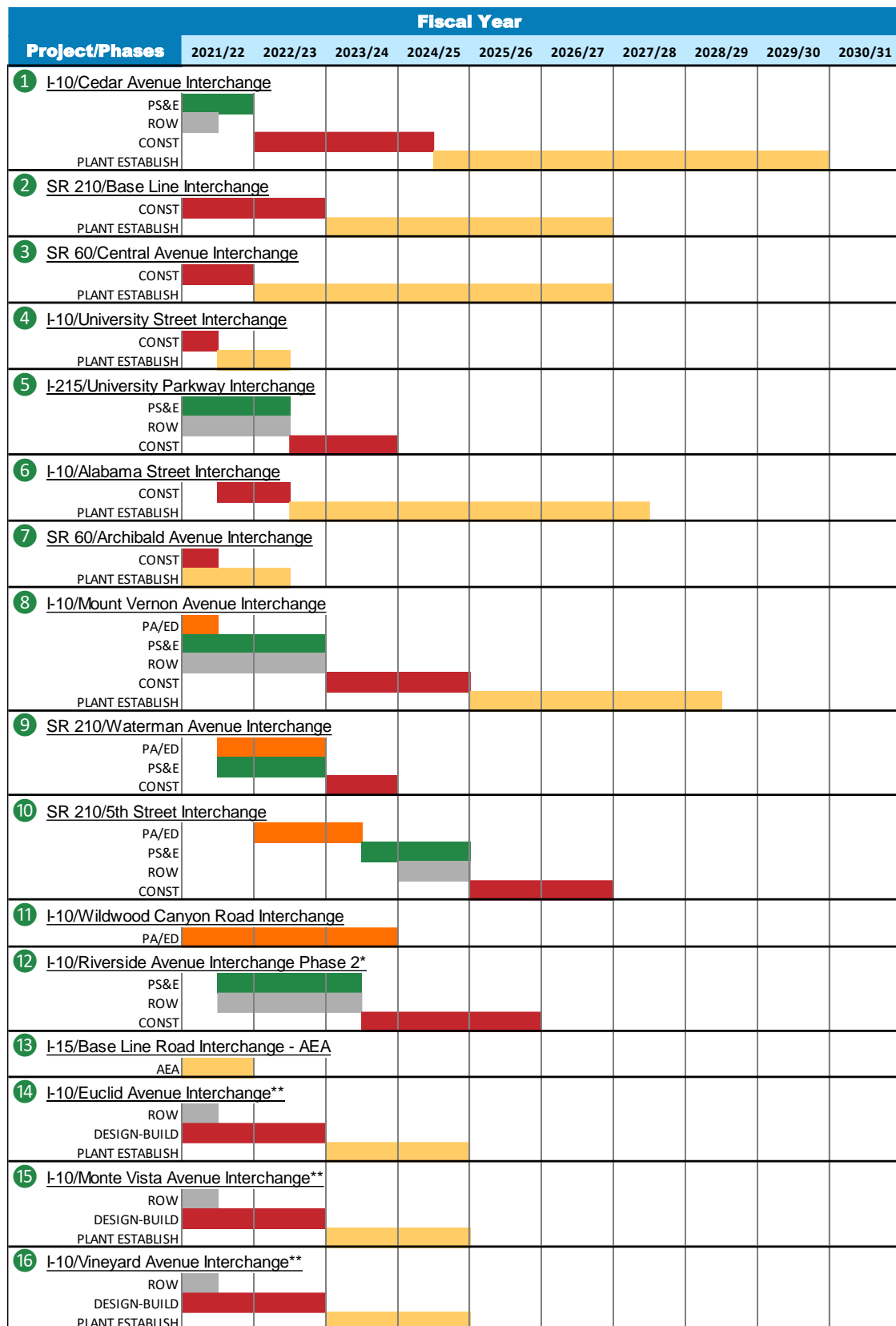


FIGURE 4.3.2

SAN BERNARDINO VALLEY FREEWAY INTERCHANGE PROJECTS PROGRAM SCHEDULE

*Schedule is contingent on securing grant funding for construction.

**Schedule is consistent with the I-10 Corridor Contract 1 project.

4.3.3 PROJECT DETAILS

1 I-10/CEDAR AVENUE INTERCHANGE

Project Description: The project will reduce congestion and improve traffic operations along Cedar Avenue and the on/off-ramps of the I-10 Interchange. The project will improve Cedar Avenue generally between Slover Avenue and Bloomington Avenue, including left and right turn lanes, and modify the existing entrance and exit ramps. The project is located in the unincorporated area of Bloomington in the County of San Bernardino.

- Interchange Program Priority Rank 1
- The cost estimate was updated based on the preliminary cost estimate provided by Caltrans in November 2020. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: County of San Bernardino (PS&E) / SBCTA (ROW and Construction)

Current Development Phase: PS&E and ROW

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.2

I-10/CEDAR AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$90		\$1,000	\$8,196	\$63,347	\$350	\$72,983
HIP			\$3,552				\$3,552
DIF COUNTY	\$537	\$559	\$175		\$27,678	\$150	\$29,099
STP			\$4,000	\$200			\$4,200
TOTAL	\$627	\$559	\$8,727	\$8,396	\$91,025	\$500	\$109,834

2 SR 210/BASE LINE INTERCHANGE

Project Description: This project will widen the Base Line overcrossing and improve interchange ramps and locally impacted streets.

- Interchange Program Priority Rank 2
- As the SR 210/Base Line Interchange and SR 210 Widening projects align geographically and share similar delivery schedules, they will be combined for the design, right of way, and construction phases to save cost and expedite the schedule.
- The construction contract was awarded in November 2019.

Project Lead Agency: SBCTA

Current Development Phase: Construction

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.3

SR 210/BASE LINE INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$446	\$611	\$809	\$604	\$15,585	\$378	\$18,433
DIF CITY	\$175	\$434	\$139	\$315	\$3,778		\$4,841
DIF LOAN	\$147		\$445	\$121	\$7,460	\$272	\$8,445
CITY LOCAL					\$351		\$351
TOTAL	\$768	\$1,045	\$1,393	\$1,040	\$27,174	\$650	\$32,070

3 SR 60/CENTRAL AVENUE INTERCHANGE

Project Description: The project will improve local traffic operations by widening the Central Avenue overcrossing to improve the left turn movement for vehicles entering SR 60 from Central Avenue. The improvements will clear the queue that currently impacts through traffic on Central Avenue in addition to improving freeway access. The project will also add standard shoulders and sidewalks along the Central Avenue overcrossing.

- Interchange Program Priority Rank 3
- The construction contract was awarded in December 2020.

Project Lead Agency: SBCTA

Current Development Phase: Construction

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.4

SR 60/CENTRAL AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$60	\$446	\$787	\$252	\$9,290	\$137	\$10,972
DIF CITY	\$850	\$637	\$1,123	\$361	\$13,258	\$195	\$16,424
TCIF					\$8,638		\$8,638
TOTAL	\$910	\$1,083	\$1,910	\$613	\$31,186	\$332	\$36,034

4 I-10/UNIVERSITY STREET INTERCHANGE

Project Description: The project will reduce congestion and improve traffic operations along University Street between Citrus Avenue and Central Avenue in the City of Redlands. The proposed project will reconfigure travel lanes on University Street, widen eastbound off-ramp and westbound on-ramp, install traffic signals on University Street at the eastbound I-10 off-ramp and westbound I-10 on-ramp intersections, and modify the signal at the intersection of University Street and Citrus Avenue.

- Interchange Program Priority Rank 4
- The construction contract was awarded in September 2020.

Project Lead Agency: SBCTA

Current Development Phase: Construction

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.5

I-10/UNIVERSITY STREET INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$31	\$287	\$509		\$3,282		\$4,109
DIF CITY	\$345	\$62	\$111		\$716		\$1,234
SHOPP					\$500		\$500
TOTAL	\$376	\$349	\$620		\$4,498		\$5,843

5 I-215/UNIVERSITY PARKWAY INTERCHANGE

Project Description: The project will improve freeway access from University Parkway and improve local street traffic operations through a reconfiguration of the existing tight diamond interchange to a Diverging Diamond Interchange (DDI) configuration. The project includes ramp improvements, driveway modifications, new traffic signals, overhead signs, drainage improvements, and aesthetic improvements.

- Interchange Program Priority Rank 5
- The Engineer's Estimate is based on the 65% Design Plans. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: PS&E and ROW

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.6

I-215/UNIVERSITY PARKWAY INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$83	\$148		\$1,952	\$8,156		\$10,339
DEMO		\$735					\$735
HIP					\$2,578		\$2,578
STP		\$264	\$994	\$488	\$676		\$2,422
DIF CITY	\$570	\$28		\$366	\$1,530		\$2,494
TOTAL	\$653	\$1,175	\$994	\$2,806	\$12,940		\$18,568

6 I-10/ALABAMA STREET INTERCHANGE

Project Description: The project will improve Alabama Street between Orange Tree Lane and Industrial Park Avenue to enhance traffic operation and alleviate traffic congestion. In addition, the interchange eastbound and westbound off-ramps will be widened. The project is located in the City of Redlands.

- Interchange Program Priority Rank 6
- The construction contract was awarded in September 2021.

Project Lead Agency: SBCTA

Current Development Phase: Construction

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.7

I-10/ALABAMA STREET INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$32	\$392	\$519	\$22	\$5,139	\$248	\$6,352
DIF CITY	\$330	\$400	\$530	\$22	\$5,243	\$252	\$6,777
SHOPP					\$1,250		\$1,250
TOTAL	\$362	\$792	\$1,049	\$44	\$11,632	\$500	\$14,379

7 SR 60/ARCHIBALD AVENUE INTERCHANGE

Project Description: The project improved Archibald Avenue between East Oak Hill Drive and Monticello Place in order to relieve congestion and improve traffic flow. The project also addressed existing interchange geometric deficiencies and the anticipated increased travel due to planned developments in the City of Ontario and surrounding areas. Plant establishment will extend into 2022.

- Interchange Program Priority Rank 9
- The construction contract was awarded in December 2019.

Project Lead Agency: SBCTA

Current Development Phase: Plant Establishment

Complete for Beneficial Use: 2021

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.8

SR 60/ARCHIBALD AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$27	\$275	\$458	\$1,927	\$4,364		\$7,051
TCIF					\$1,310		\$1,310
DIF CITY	\$655	\$535	\$893	\$3,757	\$11,064		\$16,904
CITY LOCAL					\$2,436		\$2,436
TOTAL	\$682	\$810	\$1,351	\$5,684	\$19,174		\$27,701

8 I-10/MOUNT VERNON AVENUE INTERCHANGE

Project Description: The project will improve local traffic operations associated with the I-10/Mount Vernon Avenue Interchange in the City of Colton. Improvements include lane additions, restriping, signal retiming, and the widening of the overcrossing, which will accommodate additional modes of travel.

- Interchange Program Priority Rank 8
- The project is in the early stages of delivery, and the budgetary estimate could be impacted by right of way and utility relocation costs, impacts to area businesses, and increases in construction costs.
- The cost estimate is based on the Draft Project Report dated July 2021. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: PA/ED

Complete for Beneficial Use: 2025

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.9

I-10/MOUNT VERNON AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I	\$901	\$2,200	\$2,259	\$5,042	\$56,968	\$569	\$67,939
DIF CITY	\$48	\$118	\$121	\$271	\$3,062	\$31	\$3,651
TOTAL	\$949	\$2,318	\$2,380	\$5,313	\$60,030	\$600	\$71,590

9 SR 210/WATERMAN AVENUE INTERCHANGE PHASED IMPROVEMENTS

Project Description: The project will improve local traffic operations associated with the SR 210/Waterman Avenue Interchange in the City of San Bernardino. Improvements include widening the eastbound on-ramp to two lanes and re-striping the Waterman Avenue overcrossing to provide for dual left turn lanes in both the northbound and southbound directions at 30th Street and at the eastbound entrance ramp. Concurrently Caltrans will widen the eastbound off-ramp to provide for a right turn lane.

- Initiated through the Interchange Phasing Program
- The cost estimate is preliminary as project work has not begun. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: Planning

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.10

SR 210/WATERMAN AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I		\$156	\$376		\$3,955		\$4,487
DIF CITY	\$400	\$34	\$84		\$880		\$1,398
TOTAL	\$400	\$190	\$460		\$4,835		\$5,885

10 SR 210/5TH STREET INTERCHANGE PHASED IMPROVEMENTS

Project Description: The project will improve local traffic operations associated with the SR 210/5th Street Interchange in the City of Highland. Improvements include widening the eastbound and westbound on/off-ramps and widening 5th Street to ultimate width from the City Creek Bridge to the westbound ramps.

- Initiated through the Interchange Phasing Program
- SBCTA contribution is capped at the public share (55.9%) of a \$10 million project cost.
- The cost and schedule is based on the City of Highland's Capital Project Needs Analysis submitted September 2021.

Project Lead Agency: City of Highland

Current Development Phase: PA/ED

Complete for Beneficial Use: 2027

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.11

SR 210/5TH STREET INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I		\$259	\$890	\$56	\$4,385		\$5,590
DIF CITY		\$260	\$703	\$44	\$7,980		\$8,987
SHOPP					\$1,250		\$1,250
TOTAL		\$519	\$1,593	\$100	\$13,615		\$15,827

11 I-10/WILDWOOD CANYON ROAD INTERCHANGE PHASED IMPROVEMENTS

Project Description: The new I-10/Wildwood Canyon Interchange is conceptually anticipated to be constructed in two construction phases. The first phase is to add westbound on and off-ramps to provide access to areas north of the freeway and is the scope of this phased improvement. Ultimately the second phase would construct a bridge spanning I-10 and add eastbound on and off-ramps.

- Initiated through the Interchange Phasing Program
- SBCTA contribution is capped at the public share (50%) of a \$10 million project cost.

Project Lead Agency: City of Yucaipa

Current Development Phase: PA/ED

Complete for Beneficial Use: TBD

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.12

I-10/WILDWOOD CANYON ROAD INTERCHANGE (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I		\$875					\$875
DIF CITY		\$875					\$875
TOTAL		\$1,750					\$1,750

12 I-10/RIVERSIDE AVENUE INTERCHANGE PHASE 2

Project Description: The second phase of the I-10/Riverside Avenue Interchange project includes widening of the existing Riverside Avenue bridge structure over the UPRR railway to match the configuration of the recently completed I-10/Riverside Avenue Interchange Phase 1 project. The project will add two lanes in the northbound direction to connect to the existing two left turn lanes on the overcrossing as well as provide for sidewalks and a Class II bike lane in each direction.

- The cost estimate and schedule is based on the preliminary project cost estimate dated March 2021 provided by the City of Rialto. The cost estimate was escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: City of Rialto

Current Development Phase: PS&E

Complete for Beneficial Use: 2026

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.13

I-10/RIVERSIDE AVENUE INTERCHANGE PHASE 2 (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	Plant Establish	
MEASURE I			\$1,961	\$3,232			\$5,193
DIF CITY			\$740	\$1,220	\$8,439		\$10,399
UNFUNDED*					\$22,360		\$22,360
TOTAL			\$2,701	\$4,452	\$30,799		\$37,952

*SBCTA will seek grant funding for public share of construction phase

13 I-15/BASE LINE ROAD INTERCHANGE – ADVANCE EXPENDITURE AGREEMENT

Project Description: The project widened Base Line Road from four to six lanes (including bridges), widened East Avenue from two to four lanes, realigned and widened southbound and northbound diamond ramps from one to two lanes, added a southbound loop on-ramp, and constructed auxiliary lanes on I-15. An AEA was executed between SBCTA and the City of Rancho Cucamonga in which the City advanced the funds necessary to complete the project with the understanding that SBCTA would repay its contribution when sufficient San Bernardino Valley Freeway Interchange Projects Program funds became available. The total AEA amount is for \$20,853,000 and is expected to be paid in Fiscal Year 2021/2022 after final project costs are reconciled.

- Interchange Program Priority Rank 7

Project Lead Agency: SBCTA

Current Development Phase: Close-out

Complete for Beneficial Use: 2016

Funding Plan: The project was funded as shown in the table below. Final cost reconciliation will occur before reimbursement.

TABLE 4.3.14

I-15/BASE LINE ROAD INTERCHANGE - AEA (1,000s)

FUNDING	PHASE						TOTAL
	PM	PA/ED	PS&E	ROW	CON	AEA	
MEASURE I						\$20,853	\$20,853
LOCAL DIF		\$124	\$2,105	\$714	\$12,805		\$15,748
FED EARMARK			\$419				\$419
DEMO				\$3,600	\$3,600		\$7,200
SLPP					\$1,000		\$1,000
IMD		\$752			\$3,002		\$3,754
TOTAL		\$876	\$2,524	\$4,314	\$20,407	\$20,853	\$48,974

14 I-10/EUCLID AVENUE INTERCHANGE

Project Description: The project will widen the existing ramps, widen Euclid Avenue, reconstruct the Euclid Avenue overcrossing structure, and provide additional turn lanes to accommodate the interchange, ramp, and local street movements.

- Interchange Program Priority Rank 13
- The project is being delivered with the I-10 Corridor Contract 1 project.
- A cooperative agreement with the Cities of Upland and Ontario has been executed for all phases of project delivery in accordance with the Measure I San Bernardino Valley Freeway Interchange Projects Program.

Project Lead Agency: SBCTA

Current Development Phase: ROW and Design-Build, as part of the I-10 Corridor Contract 1 project.

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.15

I-10/EUCLID AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE					TOTAL
	PM	PA/ED	PCM	ROW	DESIGN-BUILD Plant Establish	
MEASURE I	\$330	\$198	\$377	\$820	\$5,687	\$7,412
UPLAND DIF	\$42	\$25	\$47	\$104	\$719	\$937
ONTARIO DIF	\$28	\$17	\$32	\$69	\$479	\$625
TOTAL	\$400	\$240	\$456	\$993	\$6,885	\$8,974

15 I-10/MONTE VISTA AVENUE INTERCHANGE

Project Description: The project will reduce congestion and improve traffic operations along Monte Vista Avenue, Palo Verde Street and the on/off-ramps in the vicinity of the I-10 Interchange in the City of Montclair. The project improvements include widening the eastbound and westbound on/off-ramps, Monte Vista Avenue, and Palo Verde Street as well as reconstructing the bridge undercrossing structure.

- Interchange Program Priority Rank 10
- The project is being delivered with the I-10 Corridor Contract 1 project.
- A cooperative agreement with the City of Montclair has been executed for all phases of project delivery, in accordance with the Measure I San Bernardino Valley Freeway Interchange Projects Program.

Project Lead Agency: SBCTA

Current Development Phase: ROW and Design-Build, as part of the I-10 Corridor Contract 1 project.

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.16

I-10/MONTE VISTA AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE					TOTAL
	PM	PA/ED	PCM	ROW	DESIGN-BUILD Plant Establish	
MEASURE I	\$607	\$671	\$1,341	\$3,036	\$19,396	\$25,051
MONTCLAIR DIF	\$142	\$213	\$257	\$708	\$4,527	\$5,847
UPLAND DIF	\$51		\$169	\$256	\$1,632	\$2,108
MONTCLAIR LOCAL			\$20		\$119	\$139
TOTAL	\$800	\$884	\$1,787	\$4,000	\$25,674	\$33,145

16 I-10/VINEYARD AVENUE INTERCHANGE

Project Description: The project will reduce congestion and improve traffic operations along Vineyard Avenue and the on/off-ramps in the vicinity of the I-10 Interchange. The project will widen portions of Vineyard Avenue, including left and right turn lanes and modify the existing entrance and exit ramps.

- Interchange Program Priority Rank 22
- The project is being delivered with the I-10 Corridor Contract 1 project.
- A cooperative agreement with the City of Ontario has been executed for all phases of project delivery in accordance with the Measure I San Bernardino Valley Freeway Interchange Projects Program.

Project Lead Agency: SBCTA

Current Development Phase: ROW and Design-Build, as part of the I-10 Corridor Contract 1 project.

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.3.17

I-10/VINEYARD AVENUE INTERCHANGE (1,000s)

FUNDING	PHASE					TOTAL
	PM	PA/ED	PCM	ROW	DESIGN-BUILD Plant Establish	
MEASURE I	\$40	\$32	\$64	\$111	\$956	\$1,203
DIF CITY	\$60	\$48	\$97	\$166	\$1,434	\$1,805
TOTAL	\$100	\$80	\$161	\$277	\$2,390	\$3,008

4.3.4 INTERCHANGE PHASING PROGRAM

In December 2016, the Board approved an Interchange Phasing Program (Phasing Program). The Phasing Program is a result of the Board's direction to re-examine the San Bernardino Valley interchange priority list and evaluate lower-cost phased improvements to stretch resources to a greater number of interchanges. The 2019 Update included \$21 million for interchange phasing improvements, with \$40 million expected to be available through 2040. The 2021 Update continues to include funding for the Phasing Program; however, the magnitude of the Freeway Interchange Projects Program being delivered over the next five years could require implementation of the Phasing Program to be delayed.

Since its adoption, the Phasing Program has prompted discussions on several interchanges for possible phased improvements. As identified in Section 4.3.3, three projects have been initiated to date: I-10/Wildwood Canyon Interchange in the City of Yucaipa, SR 210/Waterman Avenue Interchange in the City of San Bernardino, and SR 210/5th Street Interchange in the City of Highland. The Caltrans State Highway Operations and Protection Program is also helping to fill funding gaps for other phased interchange improvements. SBCTA expects to allocate more of the interchange phasing funding in the future. Specific allocation requests will be brought to the Board for approval, consistent with Policy 40005/VFI-36.

The list of eligible projects under the Interchange Phasing Program is shown below.

TABLE 4.3.18

INTERCHANGE PHASING PROGRAM (in alphabetical order)

INTERCHANGE	PHASE IMPROVEMENT
I-10/California	Widen eastbound off-ramp
I-10/Euclid	Median southbound left turn (& restripe eastbound off-ramp)
I-10/Mountain View-A	Add side-by-side single left turn lanes
I-10/Mountain View-B	Widen eastbound off-ramp
I-10/Wildwood*	Construct partial interchange, remove rest stop
I-215/Palm-A	Widen northbound right turn ramp
I-215/Palm-B	Add westbound left turn pocket
SR-210/5th-A*	Widen northbound off-ramp
SR-210/5th-B*	Improve westbound between northbound & southbound intersections
SR-210/Del Rosa-A	Dual northbound left turn & widen westbound on-ramp & widen Del Rosa between Date & eastbound ramps
SR-210/Del Rosa-B	Widen eastbound off-ramp
SR-210/Waterman-A*	Add right turn to eastbound off-ramp
SR-210/Waterman-B*	Add 2 nd southbound right turn on Waterman approaching 30 th
SR-210/Waterman-C*	Restripe southbound at eastbound ramp & widen eastbound ramp
SR-60/Euclid-A	Widen eastbound off-ramp
SR-60/Euclid-B	Add northbound dual left turn at westbound ramps & northbound thru lane at eastbound ramps
SR-60/Euclid-C	Add southbound dual left turn at eastbound ramps
SR-60/Grove-A	Widen eastbound off-ramp
SR-60/Grove-B	Widen westbound off-ramp
SR-60/Grove-C	Northbound & southbound dual left turn lanes
SR-60/Mountain-A	Widen westbound off-ramp
SR-60/Mountain-B	Add southbound right turn lane at westbound ramps
SR-60/Ramona-A	Widen eastbound off-ramp
SR-60/Ramona-B	Add northbound left turn at westbound on-ramp
SR-60/Vineyard-A	Widen eastbound off-ramp
SR-60/Vineyard-B	Widen westbound off-ramp
SR-60/Vineyard-C	Northbound & southbound dual left turns

*Phasing improvements under development.

4.4 SAN BERNARDINO VALLEY MAJOR STREET PROJECTS PROGRAM

4.4.1 BACKGROUND

The Measure I Expenditure Plan included improvements to major streets that connect communities, serve major destinations, and provide freeway access. The total cost for the anticipated major street project improvements in the Measure I Expenditure Plan was estimated at \$1.3 billion, which would be funded from a combination of Measure I, development fees, and State and Federal funds. Projects eligible to receive funding allocations must be included in the current adopted SBCTA Development Mitigation Nexus Study, and the local jurisdiction must have the project included in their development mitigation program.

The Program initially receives 20% of revenue collected in the San Bernardino Valley until March 31, 2020. Beginning ten years after initial revenue collection, the Measure I Expenditure Plan requires the SBCTA Board to increase the amount of Measure I revenue dedicated to the Measure I San Bernardino Valley Express Bus/Bus Rapid Transit (BRT) Service Program to at least 5%, but no more than 10%, of the San Bernardino Valley Subarea funding with the Major Street Projects Program being reduced by a like amount. On January 9, 2019, the Board took action to reduce the Major Street Projects Program to 17% effective April 1, 2020, to allow for a 5% allocation to the San Bernardino Valley Express Bus/BRT Service Program.

Through the development of the Strategic Plan, the Major Street Projects Program was further divided into an Arterial Sub-program and a Rail-Highway Grade Separation Sub-program. These sub-programs consist of approximately 400 projects, including 19 grade separations, with a total estimated cost of \$1.6 billion.

The Strategic Plan policies defined the reimbursement to jurisdictions that entered into a Project Advancement Agreement (PAA) commitment for the advancement of major street projects. Forty percent of the revenue was allocated to the reimbursement of PAA commitments until the PAA obligation was fulfilled. The Strategic Plan policies also defined the split of Measure I revenue between the two sub-programs. After the PAA allocation, 80% of the balance is apportioned to the Arterial Sub-program and 20% is apportioned to the Grade Separation Sub-program. In 2006, the passage of Proposition 1B brought additional State grants for goods movement projects. Six grade separation projects in San Bernardino County received Proposition 1B Trade Corridors Improvement Fund (TCIF) funds totaling \$50

million. The stakeholders, including SBCTA, local jurisdictions, and State entities, entered into project Baseline Agreements to demonstrate their commitment to the delivery of these projects. The California Transportation Commission (CTC) TCIF guidelines required all TCIF projects to be under construction no later than December 2013. Because TCIF funds would be lost if deadlines were not met, the Strategic Plan determined that bonding was required. Substantial construction award savings have occurred in the TCIF program; therefore, the CTC extended this deadline to December 2019 so that additional projects could be delivered.

The 2012 10-Year Delivery Plan initial financial analysis was performed based on the 80%-20% split between the sub-programs established in the Strategic Plan. This initial analysis determined that the amount of revenue for the Grade Separation Sub-program expenditure plan would not support the bonds required to deliver the grade separation projects on schedule so as not to jeopardize the TCIF funds. Keeping SBCTA's PAA reimbursement commitment, options were considered to address the funding shortfall, including the cancellation of projects, which would result in the loss of State and Federal grants; supplementing revenue with additional local funding; and the adjustment of distribution percentages between the two sub-programs. Ultimately the Board amended Policy 40006, San Bernardino Valley Major Street Program Measure I 2010-2040 Strategic Plan to reflect the revenue funding splits described below:

- After the 40% PAA distribution, the Arterial Sub-program will receive 67% of Measure I Major Street Projects Program funds for the first ten years, 70% for the second ten years, and 78% for the last ten years.
- After the 40% PAA distribution, the Rail-Highway Grade Separation Sub-program will receive 33% for the first ten years, 30% for the second ten years, and 22% for the last ten years.
- The revenue funding splits described above are limited to the completion of the grade separation projects funded with TCIF funds. Any additional revenues or savings that are not required for the completion of these grade separations shall be transferred to the Arterial Sub-program until the Arterial Sub-program reaches 80% of the revenue allocated to the Major Street Projects Program.

4.4.2 CURRENT STATUS

SBCTA and other project sponsors successfully delivered all of the initial TCIF projects by the December 2013 deadline. Phase 1 of the Glen Helen Grade Separation has been completed and closed out, but \$3 million of Rail-Highway Grade Separation Sub-program funds remain programmed for Phase 2 construction necessary to tie in the completed grade separation with the future Glen Helen Parkway Bridge replacement project over Cajon Wash. Additionally, savings in the initial program allowed the addition of the Monte Vista Grade Separation to the program, which was completed in 2019. Bonding was necessary to support the matching requirements of the TCIF program and the Proposition 1B State-Local Partnership program funds that have played a large role in the ability to fully fund these projects. Based on favorable bid results where most bids came in below the engineer's estimate and current revenue projections, there is no further adjustment between sub-programs and the split between sub-programs has returned to 80% for the Arterial Sub-program and 20% for the Rail-Highway Grade Separation Sub-program on an annual basis with possible further reductions to the Rail-Highway Grade Separation Sub-program after 2030 to ensure no more than 20% is allocated to that sub-program through 2040. All PAA commitments have been fulfilled, and no other agreements are outstanding under this program.

In 2016 a cooperative agreement with the City of San Bernardino was approved to have SBCTA take over lead agency status of the Mount Vernon Viaduct bridge replacement project.

After extensive negotiation with Caltrans, a High Cost Agreement was executed in July 2021 to provide funding through Caltrans that covers a large share of the \$225 million project cost, including up to \$5 million in financing costs to cover the deferred reimbursement from Caltrans. The bridge was completely deconstructed in 2021 and is expected to be complete in 2024.

The current revenue estimate for the next ten years is \$327 million, with \$65 million available for the Rail-Highway Grade Separation Sub-program and \$262 million available for the Arterial Sub-program. No further bonding is expected for the Rail-Highway Grade Separation Sub-program as most of the future revenue is dedicated to debt service on prior bonds. The estimated uncommitted balance through 2040 is \$54 million for this sub-program. The Arterial Sub-program is a pay-as-you-go, reimbursement program with project selection consistent with the Nexus Study but at the local level. Only projects where SBCTA is acting as the lead agency are included in the 10-Year Delivery Plan at this time. The overall cost and revenue requirements for the projects included in this 2021 Update are shown in Table 4.4.1. Project details are presented in Section 4.4.3. More information about Rail-Highway Grade Separation Sub-Program projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

TABLE 4.4.1

SAN BERNARDINO VALLEY MAJOR STREET PROJECTS PROGRAM (COST AND REVENUE REQUIREMENTS) (1,000s)

PROJECT	COST
① Mount Vernon Viaduct	\$228,000
② I-10/Fourth Street Bridge Undercrossing*	\$0
TOTAL:	\$228,000

* Project costs are included in the I-10 Corridor Contract 1 project.

FUNDING SOURCE	REVENUE
Measure I	\$11,440
State/Federal Grant Funds	\$179,332
Local/Private Funds	\$37,228
TOTAL:	\$228,000

The project locations are depicted in Figure 4.4.1. The project schedules are included as Figure 4.4.2.

FIGURE 4.4.1
SAN BERNARDINO VALLEY MAJOR STREET PROJECTS PROGRAM MAP

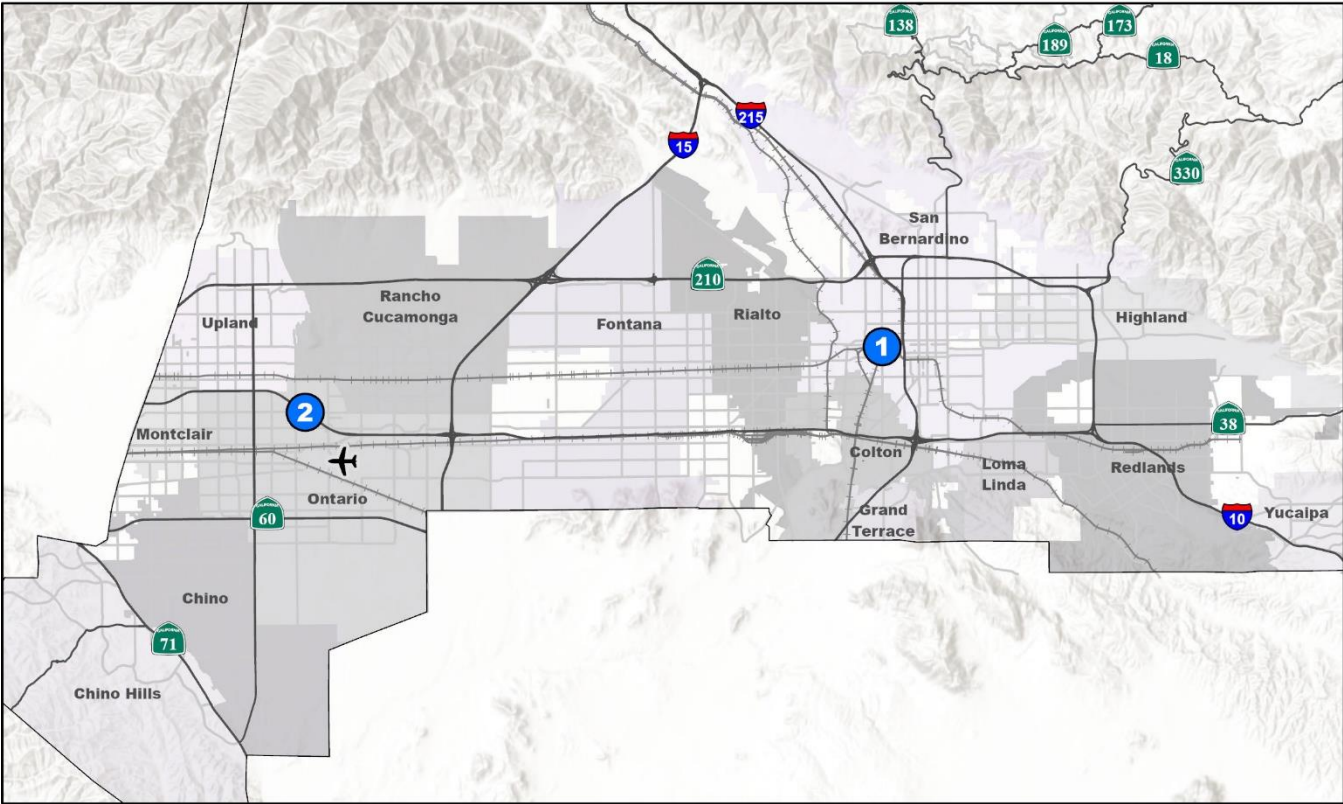


FIGURE 4.4.2
SAN BERNARDINO VALLEY MAJOR STREET PROJECTS PROGRAM SCHEDULE

		Fiscal Year									
Project/Phases		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
① Mount Vernon Viaduct	PCM										
	ROW										
	DESIGN-BUILD										
② I-10/Fourth Street Bridge Undercrossing*	PCM										
	ROW										
	DESIGN-BUILD										
	PLANT ESTABLISH										

*Schedule is consistent with the I-10 Corridor Contract 1 project.

4.4.3 PROJECT DETAILS

1 MOUNT VERNON VIADUCT

Project Description: The project will replace the Mount Vernon Avenue Bridge over the BNSF tracks and intermodal facility and Metrolink tracks from Rialto Avenue to 5th Street in the City of San Bernardino.

- A contract with a design-builder was executed in June 2020.
- Deconstruction of the existing bridge started at the end of 2020 and was completed in May 2021.
- The Highway Bridge Program (HBP) will fund up to \$5 million in short-term financing costs due to HBP deferred reimbursement.

Project Lead Agency: SBCTA

Current Development Phase: ROW and Design-Build

Complete for Beneficial Use: 2025

Funding Plan: The project is funded as shown in the table below.

TABLE 4.4.2

MOUNT VERNON VIADUCT (1,000s)

FUNDING	PHASE					TOTAL
	PM	PA/ED	PCM	ROW	DESIGN-BUILD	
MEASURE I	\$9	\$7,107	\$372	\$1,095	\$2,857	\$11,440
DIF CITY	\$2,250	\$3,406	\$178	\$525	\$1,369	\$7,728
HBP		\$8,490	\$14,318	\$54,932	\$74,644	\$152,384
BNSF			\$1,521	\$10,166	\$17,813	\$29,500
PROP 1B					\$3,453	\$3,453
HIP			\$1,123		\$22,372	\$23,495
TOTAL	\$2,259	\$19,003	\$17,512	\$66,718	\$122,508	\$228,000

2 I-10/FOURTH STREET BRIDGE UNDERCROSSING

Project Description: The project will reconstruct the I-10/Fourth Street undercrossing bridge structure in the City of Ontario and provide related roadway, drainage, and operational improvements to widen Fourth Street for an additional lane in each direction, including traffic signal modifications and related turning lanes.

- The project is being delivered with the I-10 Corridor Contract 1 project.
- A cooperative agreement with the City of Ontario has been executed for all phases of project delivery in accordance with the Measure I San Bernardino Valley Major Street Projects Program.

Project Lead Agency: SBCTA

Current Development Phase: ROW and Design-Build, as part of the I-10 Corridor Contract 1 project.

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 4.4.3

I-10/FOURTH STREET BRIDGE UNDERCROSSING (1,000s)

FUNDING	PHASE					TOTAL
	PM	PA/ED	PCM	ROW	DESIGN-BUILD	
MEASURE I	\$222	\$348	\$610	\$1,163	\$9,648	\$11,991
DIF CITY	\$178	\$277	\$487	\$928	\$7,705	\$9,575
CITY LOCAL			\$77		\$693	\$770
TOTAL	\$400	\$625	\$1,174	\$2,091	\$18,046	\$22,336

4.5 SAN BERNARDINO VALLEY METROLINK / RAIL SERVICE PROGRAM

4.5.1 BACKGROUND

The Measure I Expenditure Plan identified two rail projects, the extension of passenger rail to Redlands and Gold Line Extension to Montclair, and other expansions of the current Metrolink service estimated at \$692 million to be funded with a combination of Measure I, State, and Federal funds. During development of the Measure I Strategic Plan in 2008, the SBCTA Transit Committee (formerly the Commuter Rail and Transit Committee) recommended approving the use of bonding, re-scoping, and prioritization of the Metrolink/Rail Service Program based on funding availability. The Measure I Expenditure Plan and Strategic Plan identify the Metrolink line and facility improvements necessary to increase service for San Bernardino County, the purchase of expansion commuter rail passenger cars and locomotives, the Redlands Passenger Rail Project, and the Gold Line Extension to Montclair as projects to be funded from this Program. In February 2014, the SBCTA Board approved maintaining commitment to the following projects: the extension of passenger rail to Redlands, Metrolink San Bernardino Line Double Track – control point (CP) Lilac Avenue to CP Rancho Avenue, and the Gold Line Extension to Montclair.

4.5.2 CURRENT STATUS

Since approval of the 2019 Update, construction has been substantially completed on the Redlands Passenger Rail Project, and the Foothill Gold Line Construction Authority (GLA) began construction on the Gold Line Extension Project, although a funding shortfall means they will only complete the project to Pomona in Los Angeles County.

With completion of the Redlands Passenger Rail Project will come the introduction of the Arrow service, nine miles of new passenger rail service that is anticipated to start in the summer of 2022. The diesel multiple unit (DMU) rail vehicles purchased for the Arrow service are powered via a diesel engine “generator” providing power to electric motors at the wheels. While DMU technology is cleaner than traditional heavy rail locomotives, SBCTA recognized an opportunity to convert the power generator to an alternative propulsion technology in an effort to produce a zero emission vehicle, better known as a ZEMU. The DMU to ZEMU project and status is further described in Section 10, Other Projects of Interest.

Bids for the Gold Line Extension between Glendora and Montclair came in hundreds of millions of dollars above the funding that had been secured for the project, prompting the GLA to re-bid options for a phased construction approach. Construction on the portion from Glendora to Pomona started in July 2020; however, a funding gap of over \$540 million remained in order to get the project from Pomona to Montclair. During development of the 2019 Update, SBCTA

showed the total cost for the portion within San Bernardino County as \$95 million, including a \$15 million funding gap due to the high construction bids received. Since that time, the GLA was unsuccessful in securing additional funding for the project and will not exercise the bid option to complete the project from Pomona to Montclair that was set to expire in October 2021 under the current contract. Prior to the decision not to continue under the current design-build contract, SBCTA had been notified of a cost increase for right of way estimated at \$2.8 million and the State's desire to include a center platform between the existing Metrolink service and the proposed Metro “L” Line service that was estimated at \$5 million. Plus, in recent discussions with the GLA, it was discovered they did not account for funds allocated to the project approval and environmental phase in the \$95 million total project cost they were attributing to the San Bernardino County portion. Taking these items into account, it was anticipated SBCTA's share could have increased between \$5.6 million and \$10.6 million, depending on the construction of the center platform. However, due to the delay in starting construction and that the remainder of the project must be re-estimated, repackaged and re-bid, it is anticipated that costs will be significantly higher. SBCTA did not have enough information from the GLA to present an updated construction cost estimate at the time of publishing of the 2021 Update, so only the estimated right of way increase has been included. SBCTA's communications with the GLA indicate that funding requests for the project will include SBCTA's portion above the \$80 million committed in the funding plan.

It was previously estimated that additional bonding would be required for the capital investments needed in order to deliver the Downtown San Bernardino Passenger Rail, Redlands Passenger Rail, and Gold Line extension projects. However, higher Measure I revenue and revenue estimates coupled with strategically spending other funding sources prior to Measure I revenue on the Redlands Passenger Rail Project has made future bonding unnecessary in this Program. A portion of the estimated Metrolink/Rail Service Program balance for the 2021 Update has been added to the design phase of the San Bernardino Line Double Track project. And while not fully funded, getting the project designed and shelf-ready will better position the project for the competitive grant funding for which SBCTA will be applying.

Per the Measure I Strategic Plan, bonding is only used for capital investments. SBCTA is proactive to identify appropriate funding sources for long-term operations and maintenance when considering the funding of capital projects and the sustainability of fund sources. New transit service operating costs are eligible for Congestion Mitigation and Air Quality (CMAQ) funding for up to the first five years, and the bond model was developed to take advantage of

CMAQ funds for a portion of initial operating costs on the new Arrow service, in addition to using Low Carbon Transit Operations Program (LCTOP) funds to contribute to fare subsidies while establishing ridership on the new service. Outside of the initial CMAQ and LCTOP infusions, the Arrow service is anticipated to be funded by Measure I Metrolink/Rail Service Program funds. The 2021 Update includes \$9 million for Gold Line operations between Fiscal Year 2027/2028 and 2030/2031, although SBCTA is unsure exactly when operations will start due to the construction delays, and continues to anticipate that Local Transportation Funds (LTF) will be the primary funding source.

The current revenue estimate for the Measure I Metrolink/Rail Service Program for the next ten years is \$154 million. Rail projects included in the 2021 Update and the overall cost and revenue requirements for the San Bernardino Valley Metrolink/Rail Service Program are shown in Table 4.5.1. Project details are presented in Section 4.5.3. The estimated uncommitted balance through 2040 is \$9.7 million for this Program, but is dependent on final operating costs for the Arrow service and the actual ridership and

associated farebox recovery compared to the current estimates. Based on estimates in this 2021 Update, there may be a need for a small amount of short-term cash flow borrowing of approximately \$1.2 million from other Measure I programs during the capital phase for the Gold Line to Montclair project. Estimates show the funds would be available from the Cajon Pass Program or Valley Freeway Projects Program and, if required, would be repaid the following fiscal year, including interest, to the loaning fund. The estimated uncommitted balance of State and Federal funds through 2040 is \$585 million for the San Bernardino Valley Subarea, which is generally shared between this Program, the San Bernardino Valley Freeway Projects Program, and the San Bernardino Valley Express Bus/Bus Rapid Transit Service Program, and excludes State and Federal funds dedicated solely to transit purposes. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

TABLE 4.5.1

**SAN BERNARDINO VALLEY METROLINK/RAIL SERVICE PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT		COST	FUNDING SOURCE		REVENUE
①	Redlands Passenger Rail - Capital	\$375,113		Measure I	\$235,799
	Arrow - Operations	\$152,071		State/Federal Formula Funds	\$235,302
②	San Bernardino Line Double Track*	\$90,152		State/Federal Grant Funds	\$134,713
③	Gold Line to Montclair*	\$97,800		Local/Private Funds	\$6,935
	Gold Line to Montclair - Operations	\$11,049		Unfunded	\$96,675
TOTAL:		\$726,185		Fare Revenue	\$16,761
				TOTAL:	\$726,185

*Project not fully funded

The project locations are depicted in Figure 4.5.1. The project schedules are included as Figure 4.5.2.

FIGURE 4.5.1
SAN BERNARDINO VALLEY METROLINK/ RAIL SERVICE PROGRAM MAP

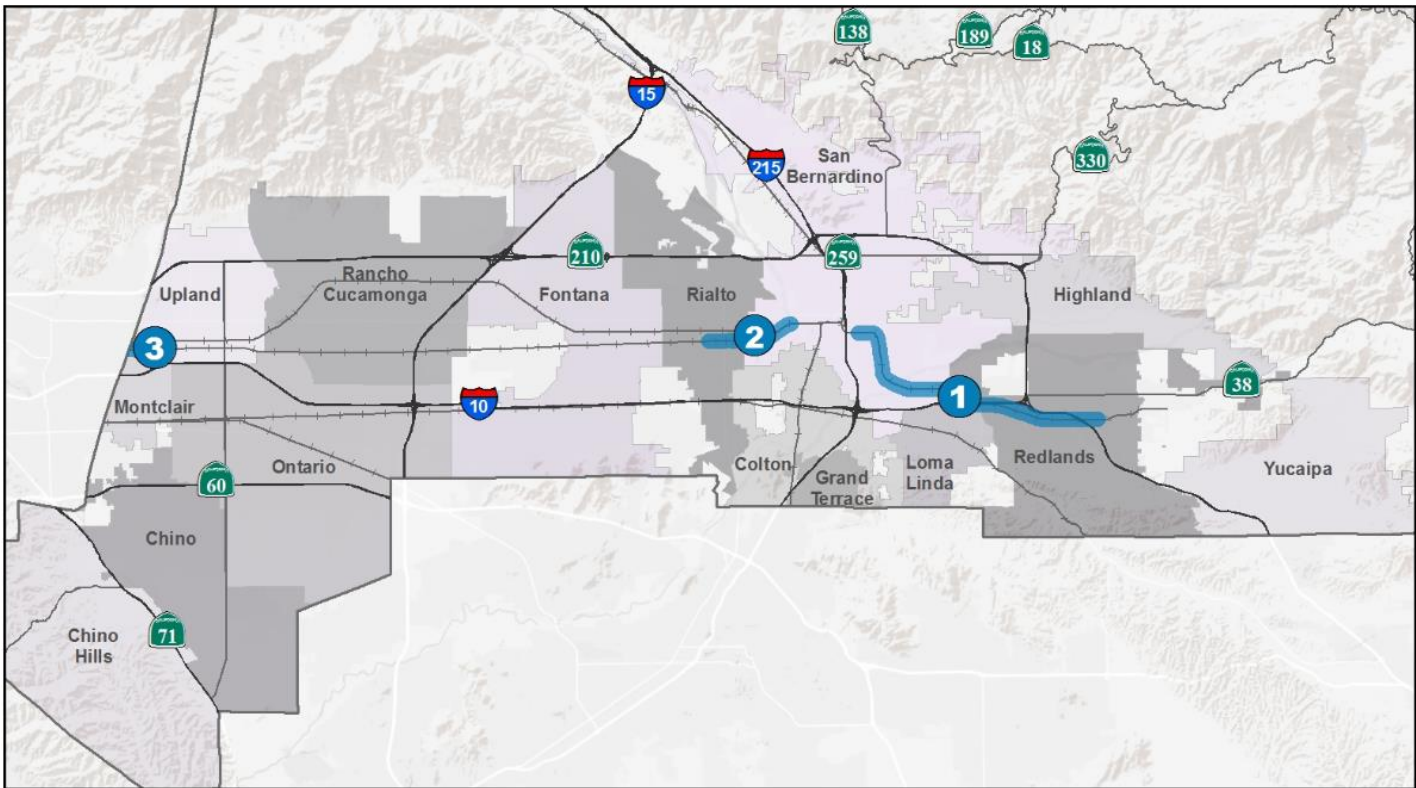


FIGURE 4.5.2
SAN BERNARDINO VALLEY METROLINK/RAIL SERVICE PROGRAM SCHEDULE

		Fiscal Year									
Project/Phases		2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
1 Redlands Passenger Rail - Capital	CONST										
2 San Bernardino Line Double Track*											
	PS&E										
	ROW										
	CONST										
3 Gold Line to Montclair**											
	ROW										
	DESIGN-BUILD										

* Schedule is dependent on securing grant funding for construction.
 **Schedule is contingent on GLA securing approximately \$680 million to close the funding gap for the Pomona to Montclair segment.

4.5.3 PROJECT DETAILS

1 REDLANDS PASSENGER RAIL

Project Description: The project includes construction of approximately nine miles of rail improvements and will employ Diesel Multiple Unit (DMU) rail vehicles, also known as Hybrid-rail vehicles, to implement the Arrow commuter rail service from the San Bernardino Transit Center at Rialto Avenue and E Street in the City of San Bernardino to the University of Redlands in the City of Redlands. Metrolink will also provide up to two round-trip express trains serving the Downtown Redlands Station during the commute hours. The project uses right of way acquired by SBCTA from the Santa Fe Railway in 1992, replacing the entire infrastructure along the corridor. Additional safety enhancements are being completed along the entire Arrow service corridor allowing the cities to implement quiet zones where the routine sounding of locomotive horns will not occur. SBCTA has partnered with: Esri, who will fund the entire station at New York Street and Redlands Boulevard adjacent to their campus; the City of Redlands for enhancements to the Downtown Redlands Station; and the University of Redlands for enhancements at the University Station location. SCRRRA, who operates the Metrolink service, will operate the Arrow commuter rail service, maintain the Hybrid-rail vehicles, and provide dispatching and maintenance-of-way services.

- Operating costs are still being negotiated with SCRRRA. Measure I Metrolink/Rail Service Program funds are expected to fund operating costs, augmented during the initial five years with CMAQ and LCTOP for fare subsidies.
- Fare revenue is calculated based on the minimum, and most conservative, estimate from the fare policy alternatives options.
- Construction of the mainline is scheduled to be completed in December 2021.
- Assembly of the DMUs is substantially complete and delivery of DMUs to California is scheduled to begin December 2021.
- Revenue service is projected to commence in summer 2022, but is dependent on approval from the Federal Railroad Administration.

Project Lead Agency: SBCTA

Current Development Phase: Construction

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 4.5.2

REDLANDS PASSENGER RAIL (1,000s)

FUNDING	PHASE								TOTAL
	PM	PA/ED	PS&E	ROW & UTILITIES	CON	ROLLING STOCK	CAPITAL TOTAL	OPERATIONS*	
MEASURE I	\$22,427	\$11,584	\$24,897	\$9,902	\$29,740	\$3,146	\$101,696	\$111,388	\$213,084
STA	\$78		\$10,890	\$13,280	\$17,806		\$42,054		\$42,054
CITY/PRIVATE			\$1,016	\$2,349	\$3,570		\$6,935		\$6,935
TIGER					\$8,678		\$8,678		\$8,678
CMAQ					\$34,850		\$34,850	\$25,000	\$59,850
TIRCP					\$9,204		\$9,204		\$9,204
PROP 1B SECURITY						\$5,245	\$5,245		\$5,245
PTMISEA						\$21,444	\$21,444		\$21,444
LPP COMPETITIVE					\$10,831		\$10,831		\$10,831
LPP FORMULA					\$6,169		\$6,169		\$6,169
SCCP					\$65,000		\$65,000		\$65,000
FTA 5307					\$50,181		\$50,181		\$50,181
STIP					\$12,826		\$12,826		\$12,826
FARE REVENUE								\$14,883	\$14,883
LCTOP								\$800	\$800
TOTAL	\$22,505	\$11,584	\$36,803	\$25,531	\$248,855	\$29,835	\$375,113	\$152,071	\$527,184

* Operations costs represent the costs of startup and operations between Fiscal Years 2021/2022 and 2030/2031.

2 SAN BERNARDINO LINE DOUBLE TRACK

Project Description: The project entails construction of approximately three miles of second mainline track along the Metrolink San Bernardino Line from Control Point (CP) Lilac to CP Rancho and includes ten at-grade crossings, quiet zone-ready safety enhancements, and the addition of a second platform and underpass at the Rialto Metrolink Station. Once constructed, this project will provide for increased service reliability, support future expansion of service, and make it more feasible to run peak hour express service as stipulated by the Metrolink Strategic Plan. Preliminary engineering and CEQA clearance is complete. While not funded as part of the initial wave of the Metrolink Southern California Optimized Rail Expansion (SCORE) Program, Metrolink has identified a substantial portion of this segment as a possible initial phase, from Lilac Avenue to Sycamore Avenue, as a priority in the multi-year SCORE Program.

- Project is part of the Metrolink SCORE Program, which could affect prioritization of the project and the ability to secure grant funding as the State looks at the SCORE Program as a whole.
- The project cost is based on 2019 construction estimates and has been escalated as described in Sections 2.2 and 2.3; delays will increase the cost.
- The design-build delivery method may be considered for this project.

Project Lead Agency: SBCTA or SCRRA depending on grant funding.

Current Development Phase: Design anticipated to commence in 2021/2022

Complete for Beneficial Use: 2025, pending funding availability

Funding Plan: The project is funded as shown in the table below.

TABLE 4.5.3

SAN BERNARDINO LINE DOUBLE TRACK (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I		\$4,455			\$4,455
PTMISEA	\$1,584				\$1,584
STA	\$738	\$3,000			\$3,738
LCTOP		\$1,500			\$1,500
UNFUNDED			\$450	\$78,425	\$78,875
TOTAL	\$2,322	\$8,955	\$450	\$78,425	\$90,152

3 GOLD LINE TO MONTCLAIR

Project Description: The project includes a 0.67 mile extension of the Metro Gold Line, now known as the “L” Line, from the Los Angeles County line to the Montclair Metrolink Station in the City of Montclair. The Foothill Gold Line Construction Authority (GLA) is the entity tasked with delivery of the entire Gold Line Extension from Azusa to Montclair with funding provided by Los Angeles County Metropolitan Transportation Authority (Metro) for the Los Angeles County portion and SBCTA for the San Bernardino County portion.

- Design-build and annual operating estimates are consistent with the amounts used in the 2019 Update. New estimates are not yet unavailable after the October 2021 expiration of the design-build option for the section from Pomona to Montclair.
- Costs include possible right-of-way increases per GLA, but not the State-desired center platform between the existing Metrolink service and the proposed Metro “L” Line service that was not previously included in the project.
- The project is not currently federalized, which limits the types of funding available to fund the project.
- Cost increases are anticipated due to construction delays related to repackaging and rebidding the portion east of Pomona.
- GLA communications indicate future funding requests will include SBCTA’s portion above the \$80 million of committed funding shown below.
- SBCTA staff will bring information to the SBCTA Board as project decisions need to be made.

Project Lead Agency: Foothill Gold Line Construction Authority

Current Development Phase: Design-Build of the Los Angeles County portion from Glendora to Pomona

Complete for Beneficial Use: Current schedule unknown; assumes one year delay from previous 2026 date from GLA

Funding Plan: The project funding shown in the table below does not include an updated construction estimate.

TABLE 4.5.4

GOLD LINE TO MONTCLAIR (1,000s)

FUNDING	PHASE				CAPITAL TOTAL*	OPERATIONS**	TOTAL
	SBCTA PM	PA/ED	ROW	DESIGN-BUILD			
MEASURE I	\$800	\$2,000		\$15,460	\$18,260		\$18,260
LTF			\$5,000	\$10,740	\$15,740	\$9,171	\$24,911
LCTOP				\$5,000	\$5,000		\$5,000
TIRCP				\$41,000	\$41,000		\$41,000
UNFUNDED				\$17,800	\$17,800		\$17,800
FARE REVENUE					\$0	\$1,878	\$1,878
TOTAL	\$800	\$2,000	\$5,000	\$90,000	\$97,800	\$11,049	\$108,849

*Total cost impacts unknown since it is unclear when construction and service will begin.

** Operations costs based on previous estimates, with an assumption of operating between Fiscal Year 2027/2028 and Fiscal Year 2030/2031.

4.6 SAN BERNARDINO VALLEY EXPRESS BUS/BUS RAPID TRANSIT SERVICE PROGRAM

4.6.1 BACKGROUND

The Measure I San Bernardino Valley Express Bus/Bus Rapid Transit (BRT) Service Program provides specific funding for development, implementation, and operation of express bus and BRT in high density corridors. The Program initially receives 2% of revenue collected in the San Bernardino Valley until March 31, 2020. Beginning ten years after initial revenue collection, the Measure I Expenditure Plan requires the SBCTA Board to increase the amount of Measure I revenue dedicated to the Program to at least 5%, but no more than 10%, of the San Bernardino Valley Subarea funding. On January 9, 2019, the Board took action to set the revenue at 5% effective April 1, 2020, with the offsetting reduction coming from the Major Street Projects Program. The Measure I Expenditure Plan estimated that \$301 million in Measure I, State, and Federal funds would be available to this Program over the life of the Measure.

4.6.2 CURRENT STATUS

SBCTA supports the overall objective of cost effective enhanced transit service throughout the County and specifically the growth of express bus and BRT service. In October 2010, Omnitrans developed a system of ten planned BRT corridors identified as the sbX System Corridors. In 2014 the E Street sbX BRT corridor, or Green Line, in San Bernardino and Loma Linda was the first of the ten corridors implemented. After studying additional BRT corridors with high ridership, Omnitrans began developing the West Valley Connector project, taking into account the highest ridership sections of the Holt and Foothill Corridors, in an effort to provide more frequent and more direct bus service to connect major destinations throughout the western part of the San Bernardino Valley. Omnitrans proceeded with development of a dedicated bus lanes alternative approved by their Board in November 2015, intending to seek a Federal Transit Administration (FTA) Small Starts Grant as a means to fully fund the project. In January 2017, the SBCTA Board designated SBCTA as the lead agency for the project. In May 2017, the SBCTA Board took action to ensure a set-aside of funding needed for operations and maintenance (O&M) prior to fully funding the capital costs. In the 2019 Update, there was an estimated \$157 million unfunded capital cost after the O&M set-aside. Since that time, SBCTA and Omnitrans as co-applicants were successful in securing over \$192 million in competitive grant awards for the capital project, with another \$8.2 million pending in a competitive grant under the Affordable Housing and Sustainable Communities program, scoring high enough to enter the next

phase of competitive reviews. The project is now fully funded as indicated in the project cost details, but not including funds not awarded as of the September 30, 2021, effective date of this 2021 Update. As part of the ratings process for the FTA Small Starts Program, a detailed Operating and Maintenance Plan and Costs Report was prepared, which showed the net annual impact of the introduction of the West Valley Connector BRT at \$4.5 million when escalated to 2025, the anticipated opening year of service. This equated to a 4.7% increase above the cost of the Baseline Alternative, which qualified the project within FTA's 5% threshold for a highly simplified financial evaluation.

The current revenue estimate for this Program for the next ten years is \$96 million. Due to the capital grant awards for West Valley Connector, it is no longer anticipated that bonding will be needed in this Program. There is, however, a projected need for a small amount of short-term cash flow borrowing of approximately \$2.6 million from other Measure I programs. Estimates show the funds would be available from the Cajon Pass Program or Valley Freeway Projects Program and, if required, would be repaid the following fiscal year, including interest, to the loaning fund. Although there is currently an estimated uncommitted balance through 2040 of \$125 million in this Program, funding levels are insufficient to support the capital and operating costs of another BRT corridor. The 2021 Interim Update of the Countywide Transportation Plan (CTP) discusses the need to reevaluate the Express Bus/BRT strategic plan to determine how premium transit should be staged and funded across the Valley. The next major CTP update, estimated to be initiated later in Fiscal Year 2021/2022, is expected to address corridor priorities, phasing, technology, and funding options, providing information for the Board to decide on the appropriate BRT strategy. Express bus service on high performing corridors is an eligible expense that can be explored as part of the CTP. The estimated uncommitted balance of State and Federal funds through 2040 is \$585 million for the San Bernardino Valley Subarea, which is generally shared between this Program and the San Bernardino Valley Freeway Projects and Metrolink/Rail Service Programs and excludes State and Federal funds dedicated solely to transit purposes. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today.

The project detail for the West Valley Connector project is depicted in Figure 4.6.1 and Table 4.6.2. Information regarding the E Street sbX BRT is included in Section 12.

TABLE 4.6.1

**SAN BERNARDINO VALLEY EXPRESS BUS/BUS RAPID TRANSIT SERVICE PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
1 West Valley Connector - Capital	\$287,514	Measure I	\$68,752
West Valley Connector - Operations	\$40,740	State/Federal Formula Funds	\$42,366
TOTAL:	\$328,254	State/Federal Grant Funds	\$192,839
		Local/Private Funds	\$15,902
		Fare Revenue	\$8,395
		TOTAL:	\$328,254

The project location is depicted in Figure 4.6.1. The project schedule is included as Figure 4.6.2.

FIGURE 4.6.1

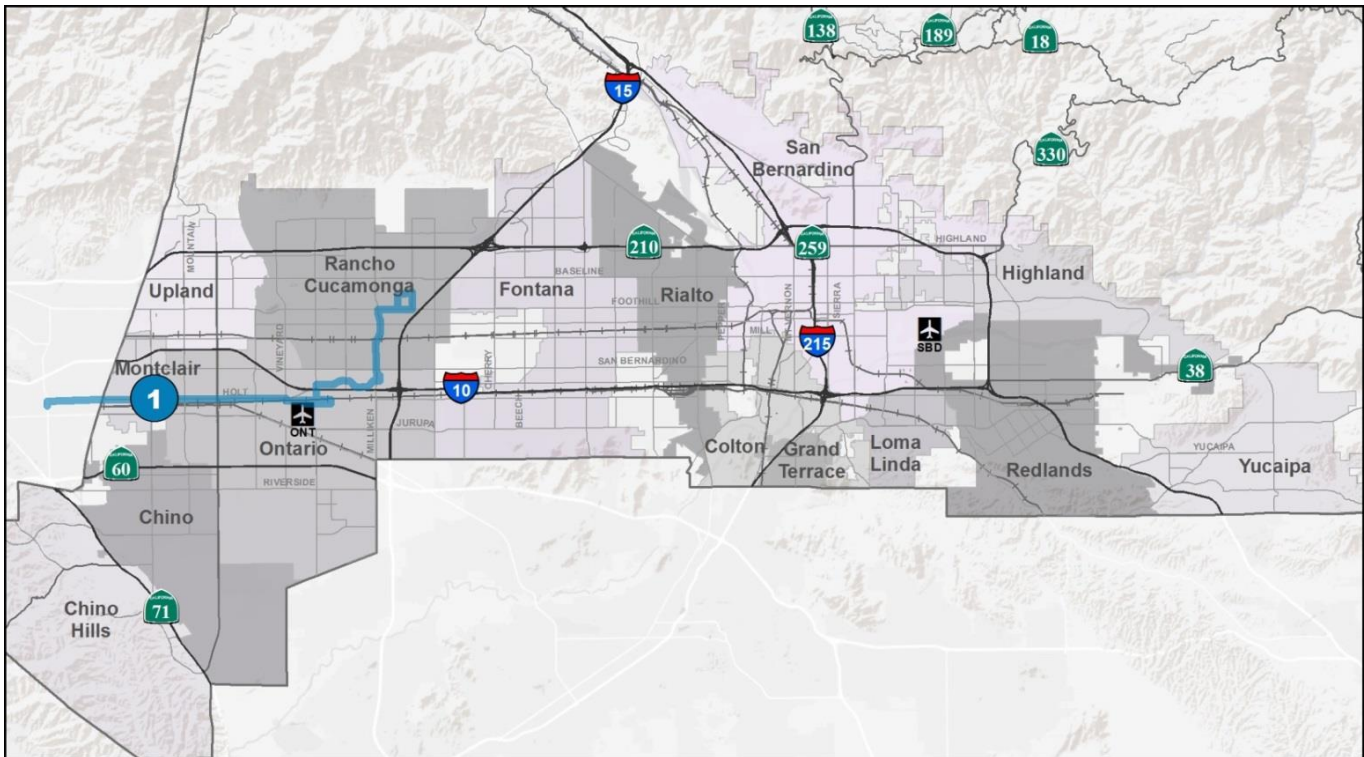
SAN BERNARDINO VALLEY EXPRESS BUS/BUS RAPID TRANSIT SERVICE PROGRAM MAP


FIGURE 4.6.2

SAN BERNARDINO VALLEY EXPRESS BUS/BUS RAPID TRANSIT SERVICE PROGRAM SCHEDULE

Project/Phases	Fiscal Year									
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
1 West Valley Connector - Capital										
PS&E										
ROW										
CONST										

1 WEST VALLEY CONNECTOR

Project Description: The West Valley Connector (WVC) Project is a 19-mile BRT project that proposes limited stops, providing speed and quality improvements to the public transit system within the corridor. The WVC will serve the cities of Pomona, Montclair, Ontario and Rancho Cucamonga; interconnect with two Metrolink stations; provide service to the Ontario International Airport; and link to the Ontario Mills shopping/entertainment complex, Ontario Convention Center, and Victoria Gardens as well as other mixed-use development in Rancho Cucamonga. The proposed project includes the purchase of 18 battery electric buses and improvements to Omnitrans west O&M facility needed to operate and maintain the battery electric buses.

- The project includes a 3.5-mile segment with substantial right of way acquisitions that could impact the overall delivery schedule and capital cost.
- Project delays could result from unforeseen utility conflicts and the actions of third party stakeholders.
- Intersection improvements at Holt Boulevard/Mountain Avenue and Holt Boulevard/Grove Avenue within the City of Ontario are included in the overall project cost, with the City as lead agency for the funding and construction.
- Operational costs are estimated based on the latest project information and will need to be refined as the project progresses to the next phases.
- The Engineer's Estimate reflects the 90% PS&E design. The cost estimate was validated and escalated as part of the FTA's Small Starts risk review process.

Project Lead Agency: SBCTA

Current Development Phase: PS&E and ROW

Complete for Beneficial Use: 2025

Funding Plan: The project is funded as shown in the table below.

TABLE 4.6.2

WEST VALLEY CONNECTOR (1,000s)

FUNDING	PHASE					CAPITAL TOTAL	OPERATIONS*	TOTAL
	PM	PA/ED	PS&E	ROW	CON			
MEASURE I	\$9,191		\$952	\$6,958	\$36,574	\$53,675	\$15,077	\$68,752
FTA SMALL STARTS				\$54,693	\$32,057	\$86,750		\$86,750
FTA ARP STIMULUS			\$3,910	\$22,179		\$26,089		\$26,089
SCCP					\$65,000	\$65,000		\$65,000
TIRCP					\$15,000	\$15,000		\$15,000
CITY LOCAL					\$9,300	\$9,300		\$9,300
OMNITRANS (MID-VALLEY LAND SALE)			\$6,875	\$18,223		\$25,098		\$25,098
OMNITRANS OTHER	\$1,363	\$3,247	\$1,992			\$6,602		\$6,602
CMAQ							\$7,000	\$7,000
LTF							\$5,268	\$5,268
LCTOP							\$5,000	\$5,000
FARE REVENUE							\$8,395	\$8,395
TOTAL	\$10,554	\$3,247	\$13,729	\$102,053	\$157,931	\$287,514	\$40,740	\$328,254

*Operations costs represent the costs of startup and operations between Fiscal Year 2024/2025 and 2030/2031.

4.7 SAN BERNARDINO VALLEY SENIOR AND DISABLED TRANSIT SERVICE PROGRAM

4.7.1 BACKGROUND

Within the San Bernardino Valley Subarea, the amount of Measure I revenue apportioned to the Senior and Disabled Transit Service Program is 8%, of which a minimum of 25% is made available for the creation and operation of a Consolidated Transportation Services Agency (CTSA) that is responsible for the coordination of social service transportation for elderly individuals, individuals with disabilities, and families of limited financial means. The Measure I Expenditure Plan estimated \$362 million of Measure I revenue would be available for the Program, of which \$90.5 million was for the CTSA. In October 2010, Valley Transportation Services (VTrans) was created and designated as the CTSA for the San Bernardino Valley by the SBCTA Board. In November 2015, the Board concluded that consolidation of the CTSA operations under Omnitrans would be more cost-effective, thereby increasing the funding available for programs that benefit senior citizens and persons with disabilities.

The remaining \$271.5 million (75%) of Program revenue may be expended to reduce fares and support existing, new, expanded, or enhanced transportation services, including capital projects, for senior citizens and individuals with disabilities.

4.7.2 CURRENT STATUS

In July 2018, the SBCTA Board approved a revision to Policy 40009 to allow all San Bernardino Valley Senior and Disabled Transit Service Program funds approved for allocation to be passed through monthly to Omnitrans as the transit operator and CTSA for the San Bernardino Valley Subarea. Program funds are used on services and projects identified as eligible expenditures for senior citizens and persons with disabilities, consistent with Omnitrans' Short Range Transit Plan (SRTP). The current revenue estimate for the next ten years is \$154 million.

In addition to these pass through Program funds, SBCTA passes through and/or allocates shares of Senate Bill 1 State of Good Repair funds, Low Carbon Transit Operations Program funds, State Transit Assistance funds, Local Transportation Funds, Federal formula funds, and Congestion Mitigation and Air Quality funds to Omnitrans for additional needs identified in its SRTP as part of annual capital and operating subsidies.

4.8 SAN BERNARDINO VALLEY TRAFFIC MANAGEMENT SYSTEMS PROGRAM

4.8.1 BACKGROUND

The San Bernardino Valley Traffic Management Systems Program is funded by 2% of the revenue collected within the San Bernardino Valley Subarea, which was estimated to be \$90 million in total revenue. The amount is not intended to deliver sizeable infrastructure projects. The Traffic Management Systems Program funds are to provide seed money to support transportation planning, creation of transportation management programs, implementation of traffic operational improvements on regional facilities, and environmental enhancements. The Traffic Management System Program funding can be used to strategically leverage State, Federal, local, and private funding.

Measure I defines a non-comprehensive list of eligible projects under this category that include signal synchronization, systems to improve traffic flow, rideshare and multimodal interconnectivity programs, and the freeway service patrol. Additional project types that are consistent with traffic management systems and environmental enhancement include corridor greenbelts, high occupancy vehicle inducements, bike and pedestrian trails, open space development, and air quality-related inducements, including alternative fuel programs.

4.8.2 CURRENT STATUS

This Program will be managed on a pay-as-you-go basis. This program annually supports SBCTA staff subregional planning and project development, commuter assistance, rideshare, and multimodal interconnectivity efforts as well as commuter assistance, rideshare, and multimodal programs such as freeway service patrol, motorist information, incentives for rideshare commuters, and subsidies for zero-emission vanpools.

Funds from this Program also contributed towards project management costs associated with the coordination of approximately 1,250 signals on major arterial corridors in the San Bernardino Valley, with total investments from all sources that exceeded \$15 million and involved coordination with sixteen separate local agencies and Caltrans.

At system “turn-on” the project showed significant improvements in arterial travel times and reductions in stops and delays. On-going maintenance and operations of the system relies on grants, contributions from local agencies,

and Traffic Management System Program funds, which are primarily used as incentive funds for local agencies that ensure their signals are operational and coordinated.

In July 2021, the Board approved continuing to support on-going maintenance through 2026. Additionally, the Board approved the use of \$1 million in Program funds for a Haven Avenue Corridor Technology Enhancement Pilot Project in coordination with the City of Ontario and the City of Rancho Cucamonga, which will synchronize 39 intersections in the corridor and provide software for monitoring and optimizing signal performance. At the same time the Board approved \$5 million for a competitive application process for other corridor pilot projects subject to local jurisdiction financial contributions and mechanisms to ensure system maintenance, with \$3 million available to East Valley jurisdictions and \$2 million available to West Valley jurisdictions.

The current revenue estimate for the next ten years is \$38 million.



VICTOR VALLEY SUBAREA PROGRAMS

**VICTOR VALLEY
LOCAL STREET PROJECTS
PROGRAM**

**VICTOR VALLEY
MAJOR LOCAL HIGHWAY PROJECTS
PROGRAM**

**VICTOR VALLEY
SENIOR AND DISABLED
TRANSIT SERVICE PROGRAM**

**VICTOR VALLEY
PROJECT DEVELOPMENT AND
TRAFFIC MANAGEMENT SYSTEMS
PROGRAM**

5.1 VICTOR VALLEY LOCAL STREET PROJECTS PROGRAM

5.1.1 BACKGROUND

The Measure I Expenditure Plan estimated \$579 million of Measure I revenue would be available for local street projects. Seventy percent (less 2% retained by SBCTA for the Project Development and Traffic Management Systems Program) of the funds collected in the Subarea would be distributed on a monthly basis to the jurisdictions based on population (50%) and tax generation (50%). Note beginning in Fiscal Year 2015/2016 and every five years thereafter, the Local Street Projects Program decreases by 0.5% and the Senior and Disabled Transit Service Program increases by 0.5% up to a total of 7.5% of the Measure I Revenue in the Victor Valley Subarea unless each local jurisdiction within the Subarea makes a finding that such increase is not required to address unmet transit needs of senior and disabled transit users.

The Strategic Plan established policies for eligible expenditures, funding allocations, and adoption and development of the local jurisdictions' Five-Year Capital Improvement Plans. Detailed information can be found in the Victor Valley Strategic Plan Local Street Projects Program Policy 40012.

5.1.2 CURRENT STATUS

In accordance with the Expenditure Plan and the Strategic Plan, the Measure I funds apportioned to the Local Street Projects Program are included in the 10-Year Delivery Plan with the funds passed through monthly to the local jurisdictions. No individual projects are included in the 10-Year Delivery Plan.

In March 2019, the SBCTA Board accepted direction from the Mountain/Desert Policy Committee that no finding should be made against the increase to the Senior and Disabled Transit Service Program; therefore, beginning April 2020, the Senior and Disabled Transit Service Program increased 0.5% from 5.5% to 6.0% of the Victor Valley Subarea revenue, which caused a decrease in the Local Streets Projects Program of 0.5% from 68% to 67.5% of the Measure I Revenue in the Victor Valley Subarea. The 2021 Update assumes the Program revenues will further decrease to 67% in April 2025. The current estimate for the Program over the next ten years is \$161 million.

5.2 VICTOR VALLEY MAJOR LOCAL HIGHWAY PROJECTS PROGRAM

5.2.1 BACKGROUND

The Measure I Expenditure Plan included contributions to projects along major streets and highways serving as current or future primary routes of travel within the Subarea, which may include interchanges and freeway improvements along I-15, SR 138, US 395, and the proposed High Desert Corridor. The total cost for the contribution was estimated at \$413 million, which will be funded from a combination of Measure I, development fees, and State and Federal funds.

Through the development of the Strategic Plan, candidate project lists were developed with the assistance of the Victor Valley Subarea jurisdiction representatives that included interchange projects, arterial projects, grade separation projects, state highway projects, and highway corridor projects. Measure I allocation to projects within this Program is at the full discretion of Victor Valley Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board. The Advanced Expenditure Program is available for projects meeting the eligibility detailed in the Victor Valley Strategic Plan Policy 40011 and Policy 40013.

5.2.2 CURRENT STATUS

Significant progress is being made in the delivery of the priorities identified for development in Measure I 2010- 2040. Since the 2019 Update the US 395 Widening Phase 1 opened to traffic and the Green Tree Boulevard section of

the Yucca Loma Corridor, Ranchero Road widening, and Apple Valley Road/SR 18 Realignment are under construction. Current projects under development include construction of El Mirage Road, Phelan Road Widening, Phase 2 of US 395 improvements, and Main Street Widening. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

The current estimate for the Program over the next ten years is \$60 million. During the development of the 2021 Update, the Victor Valley Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board established and approved a list of priority projects for inclusion in the 10-Year Delivery Plan as well as a prioritized list of regional/interregional projects for consideration in future plans. The overall cost and revenue requirements for the Major Local Highway Projects Program are shown in Table 5.2.1. Project details are presented in Section 5.2.3. Consistent with the Strategic Plan, bonding has been used in the past to accelerate projects, but no further bonding is anticipated. The estimated uncommitted balance through 2040 is \$92 million for this Program. The estimated uncommitted balance of State and Federal funds through 2040 is \$134 million for this Program. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today.

TABLE 5.2.1

**VICTOR VALLEY MAJOR LOCAL HIGHWAY PROJECTS PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
1 El Mirage Road from US 395 to Koala Road	\$2,531	Measure I	\$54,533
2 Apple Valley Road and SR 18 Realignment	\$9,860	State/Federal Formula Funds	\$103,430
3 Stoddard Wells Road Widening from I-15 to Johnson Road	\$2,655	State/Federal Grant Funds	\$75,938
4 Bear Valley Road Bridge Over Mojave River	\$47,362	Local/Private Funds	\$95,645
5 Central Road Widening from SR 18 to Bear Valley Road	\$2,987	Unfunded	\$53,573
6 Johnson Road Widening from Stoddard Wells Road to Navajo Road	\$3,477	TOTAL:	\$383,119
7 Dale Evans Parkway Phase 1 (Waalew Realignment)	\$1,666		
8 Ranchero Road Corridor Widening	\$52,696		
9 Main Street Widening from US 395 to 11th Avenue - Phase 1	\$13,306		
10 Main Street Widening from US 395 to 11th Avenue - Phase 2	\$29,060		
11 Yucca Loma Corridor - Green Tree Boulevard Extension	\$46,843		
12 Bear Valley Road Overhead at BNSF	\$13,528		
13 Rock Springs Road Bridge over Mojave River	\$21,745		
14 Phelan Road Widening from SR 138 to Hesperia City Limits*	\$60,820		
15 US 395 - Phase 2 Freight Mobility and Safety Project*	\$74,583		
TOTAL:	\$383,119		

* Project is not fully funded.

The project locations are depicted in Figure 5.2.1. The project schedules are included as Figure 5.2.2.

FIGURE 5.2.1

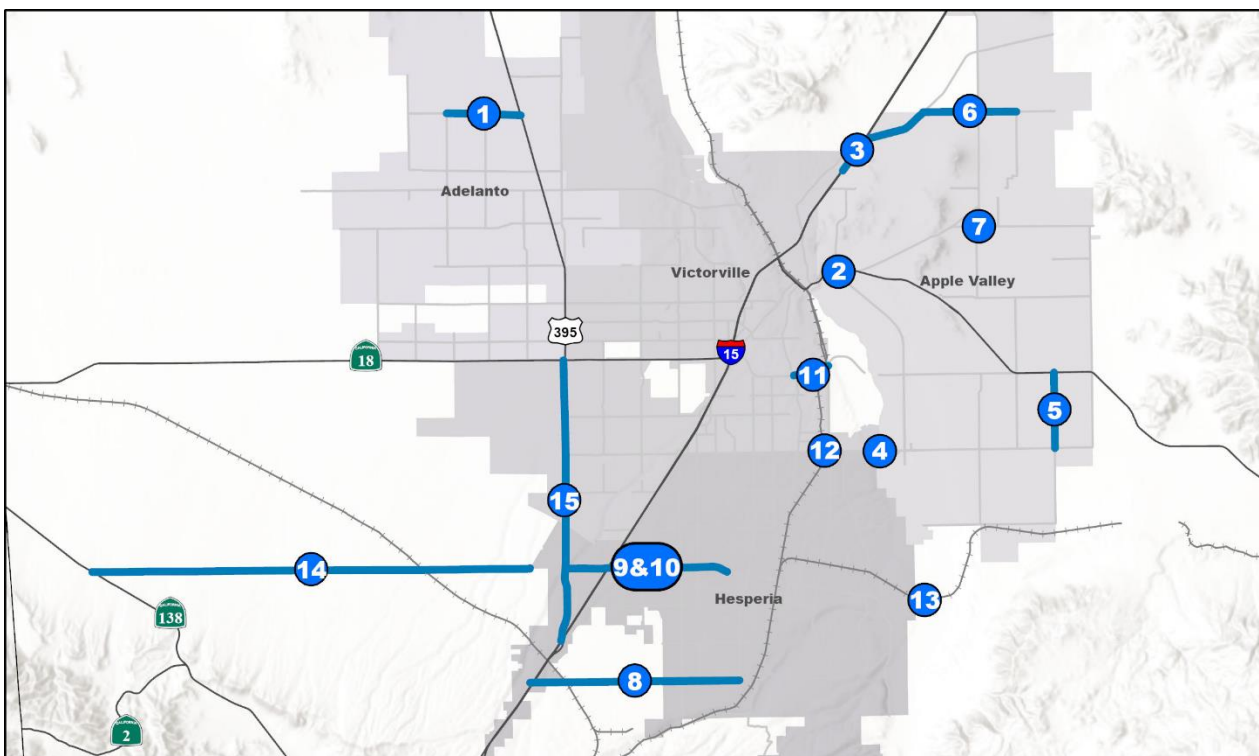
VICTOR VALLEY MAJOR LOCAL HIGHWAY PROJECTS PROGRAM MAP


FIGURE 5.2.2

VICTOR VALLEY MAJOR LOCAL HIGHWAY PROJECTS PROGRAM SCHEDULE

Project/Phases	Fiscal Year									
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
CITY OF ADELANTO										
① <u>El Mirage Road from US 395 to Koala Road</u>										
PS&E										
ROW										
CONST										
TOWN OF APPLE VALLEY										
② <u>Apple Valley Road and SR 18 Realignment</u>										
CONST										
③ <u>Stoddard Wells Road Widening from I-15 to Johnson Road</u>										
CONST										
④ <u>Bear Valley Road Bridge Over Mojave River</u>										
PS&E										
ROW										
CONST										
⑤ <u>Central Road Widening from SR 18 to Bear Valley Road</u>										
PA/ED										
PS&E										
ROW										
CONST										
⑥ <u>Johnson Road Widening from Stoddard Wells Road to Navajo Road</u>										
PA/ED										
PS&E										
ROW										
CONST										
⑦ <u>Dale Evans Parkway Phase 1 (Waalew Realignment)</u>										
ROW										
CONST										
CITY OF HESPERIA										
⑧ <u>Ranchero Road Corridor Widening</u>										
CONST										
⑨ <u>Main Street Widening from US 395 to 11th Avenue - Phase 1</u>										
ROW										
CONST										
⑩ <u>Main Street Widening from US 395 to 11th Avenue - Phase 2</u>										
PA/ED										
PS&E										
ROW										
CONST										
CITY OF VICTORVILLE										
⑪ <u>Yucca Loma Corridor - Green Tree Boulevard Extension</u>										
CONST										
⑫ <u>Bear Valley Road Overhead at BNSF</u>										
CON										
COUNTY OF SAN BERNARDINO										
⑬ <u>Rock Springs Road Bridge over Mojave River</u>										
PS&E										
ROW										
CONST										
⑭ <u>Phelan Road Widening from SR 138 to Hesperia City Limits*</u>										
PA/ED										
PS&E										
ROW										
CONST										
REGIONAL/INTERREGIONAL PROJECTS										
⑮ <u>US 395 - Phase 2 Freight Mobility and Safety Project*</u>										
PS&E										
ROW										
CONST										

*Schedule is contingent on securing additional funding for construction

5.2.3 PROJECT DETAILS

CITY OF ADELANTO PROJECTS

1 EL MIRAGE ROAD FROM US 395 TO KOALA ROAD

Project Description: The project will construct one lane in each direction on El Mirage Road from US 395 to Koala Road in the City of Adelanto.

Project Lead Agency: City of Adelanto

Current Development Phase: Planning

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.2

EL MIRAGE ROAD, US 395 TO KOALA ROAD (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I	\$46	\$139	\$92	\$647	\$924
DIF CITY	\$80	\$241	\$161	\$1,125	\$1,607
TOTAL	\$126	\$380	\$253	\$1,772	\$2,531

TOWN OF APPLE VALLEY PROJECTS

2 APPLE VALLEY ROAD AND SR 18 REALIGNMENT

Project Description: The project will realign and construct intersection improvements at Apple Valley Road and SR 18 in the Town of Apple Valley.

Project Lead Agency: Town of Apple Valley

Current Development Phase: Construction

Complete for Beneficial Use: 2021

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.3

APPLE VALLEY ROAD AND SR 18 REALIGNMENT (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I				\$4,437	\$4,437
DIF CITY				\$973	\$973
LPP (COMP)				\$4,450	\$4,450
TOTAL				\$9,860	\$9,860

3 STODDARD WELLS ROAD WIDENING FROM I-15 TO JOHNSON ROAD

Project Description: The project will widen Stoddard Wells Road from 22 feet to 36 feet from I-15 to Johnson Road.

Project Lead Agency: Town of Apple Valley

Current Development Phase: Construction

Complete for Beneficial Use: 2021

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.4

STODDARD WELLS ROAD WIDENING, I-15 TO JOHNSON ROAD (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED		\$165			\$165
MEASURE I				\$1,120	\$1,120
DIF CITY				\$1,370	\$1,370
TOTAL		\$165		\$2,490	\$2,655

4 BEAR VALLEY BRIDGE OVER MOJAVE RIVER

Project Description: The project will consist of rehabilitation and replacement of Bear Valley Road Bridge over the Mojave River.

Project Lead Agency: Town of Apple Valley

Current Development Phase: PS&E/ROW

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.5

BEAR VALLEY BRIDGE OVER MOJAVE RIVER (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
HBP	\$1,018	\$1,886	\$2,005	\$32,426	\$37,335
CITY FUNDED	\$132	\$244	\$157		\$533
MEASURE I			\$46	\$4,226	\$4,272
DIF CITY			\$57	\$5,165	\$5,222
TOTAL	\$1,150	\$2,130	\$2,265	\$41,817	\$47,362

5 CENTRAL ROAD WIDENING FROM SR 18 TO BEAR VALLEY ROAD

Project Description: The project will widen Central Road to one lane in each direction with a continuous left turn lane and bike paths.

Project Lead Agency: Town of Apple Valley

Current Development Phase: Environmental

Complete for Beneficial Use: 2025

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.6

CENTRAL ROAD WIDENING, SR 18 TO BEAR VALLEY ROAD (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED	\$136	\$425	\$283		\$844
MEASURE I				\$964	\$964
DIF CITY				\$1,179	\$1,179
TOTAL	\$136	\$425	\$283	\$2,143	\$2,987

6 JOHNSON ROAD WIDENING FROM STODDARD WELLS ROAD TO NAVAJO ROAD

Project Description: The project will reconstruct Johnson Road from Stoddard Wells Road to Navajo Road to accommodate higher truck volumes and re-engineer vertical curves.

Project Lead Agencies: Town of Apple Valley

Current Development Phase: Planning

Complete for Beneficial Use: 2026

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.7

JOHNSON ROAD WIDENING, STODDARD WELLS ROAD TO NAVAJO ROAD (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED	\$61	\$126			\$187
MEASURE I				\$1,481	\$1,481
DIF CITY				\$1,809	\$1,809
TOTAL	\$61	\$126		\$3,290	\$3,477

7 DALE EVANS PARKWAY PHASE 1 (WAALEW REALIGNMENT)

Project Description: The project will realign the intersection of Dale Evans Parkway and Waalew Road.

Project Lead Agencies: Town of Apple Valley

Current Development Phase: ROW

Complete for Beneficial Use: 2027

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.8

DALE EVANS PARKWAY PHASE 1 (WAALEW REALIGNMENT) (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED	\$68	\$204	\$141		\$413
MEASURE I				\$564	\$564
DIF CITY				\$689	\$689
TOTAL	\$68	\$204	\$141	\$1,253	\$1,666

CITY OF HESPERIA PROJECTS

8 RANCHERO ROAD CORRIDOR WIDENING

Project Description: The project will widen and reconstruct Ranchero Road from four to six lanes with a center median from 0.3 miles east of Mariposa to 7th Street at various locations. Improvements include widening of the bridge over the California Aqueduct and at-grade UPRR railroad crossing improvements.

Project Lead Agencies: City of Hesperia and County of San Bernardino

Current Development Phase: Construction

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.9

RANCHERO ROAD CORRIDOR WIDENING (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED		\$2,099			\$2,099
COUNTY FUNDED		\$864			\$864
MEASURE I	\$76		\$522	\$11,015	\$11,613
LPP (FORMULA)				\$12,678	\$12,678
DIF CITY	\$21		\$558	\$13,161	\$13,740
DIF COUNTY	\$43		\$94	\$7,665	\$7,802
LPP (COMP)				\$3,900	\$3,900
TOTAL	\$140	\$2,963	\$1,174	\$48,419	\$52,696

9 MAIN STREET WIDENING FROM US 395 TO 11TH AVENUE – PHASE 1

Project Description: Phase 1 of the project is to widen the Main Street Bridge over the California Aqueduct from four to six lanes.

Project Lead Agency: City of Hesperia

Current Development Phase: Planning

Complete for Beneficial Use: 2027

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.10

MAIN STREET WIDENING, US 395 TO 11TH AVENUE - PHASE 1 (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED	\$150	\$1,019			\$1,169
MEASURE I			\$816	\$4,172	\$4,988
DIF CITY			\$1,170	\$5,979	\$7,149
TOTAL	\$150	\$1,019	\$1,986	\$10,151	\$13,306

10 MAIN STREET WIDENING FROM US 395 TO 11TH AVENUE – PHASE 2

Project Description: Phase 2 of the project is to widen and reconstruct Main Street at various locations from four lanes to six lanes with a center median.

Project Lead Agency: City of Hesperia

Current Development Phase: Planning

Complete for Beneficial Use: 2032

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.11

MAIN STREET WIDENING, US 395 TO 11TH AVENUE - PHASE 2 (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
CITY FUNDED	\$678	\$513			\$1,191
MEASURE I			\$2,090	\$9,364	\$11,454
DIF CITY			\$2,995	\$13,420	\$16,415
TOTAL	\$678	\$513	\$5,085	\$22,784	\$29,060

CITY OF VICTORVILLE PROJECTS

11 YUCCA LOMA CORRIDOR – GREEN TREE BOULEVARD EXTENSION

Project Description: This project is the final segment of the Yucca Loma Corridor and will construct Green Tree Boulevard from Hesperia Road to Ridgecrest Road/Yates Road, a new four-lane road including a bridge over the BNSF railroad.

- The City is borrowing 2/3 of the DIF share from its share of Measure I MLHP, which will be repaid over a 10-year period at the completion of construction.

Project Lead Agency: City of Victorville with County of San Bernardino

Current Development Phase: Construction

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.12

YUCCA LOMA CORRIDOR – GREEN TREE EXTENSION (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
EARMARK (SHARED)				\$4,219	\$4,219
MEASURE I			\$1,255		\$1,255
STP				\$8,903	\$8,903
HIP				\$8,627	\$8,627
EARMARK (PUBLIC)		\$3,188	\$760		\$3,948
DIF CITY			\$995	\$758	\$1,753
DIF COUNTY			\$3	\$564	\$567
APPLE VLY DIF REPAY				\$3,987	\$3,987
COUNTY DIF REPAY				\$325	\$325
DIF LOAN				\$13,259	\$13,259
TOTAL		\$3,188	\$3,013	\$40,642	\$46,843

12 BEAR VALLEY ROAD OVERHEAD AT BNSF

Project Description: This project widens a six lane bridge and approaches to seven lanes to accommodate a median turn lane and seismically retrofits the existing bridge. Improvements at the intersections of Bear Valley Road and Industrial Road and Bear Valley Road and Ridgecrest Road will improve operational efficiency.

Project Lead Agency: City of Victorville

Current Development Phase: Construction

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.13

BEAR VALLEY ROAD OVERHEAD AT BNSF (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
HBP		\$620	\$301	\$7,657	\$8,578
CITY FUNDED		\$80	\$120	\$992	\$1,192
HIP				\$1,917	\$1,917
DIF CITY				\$1,841	\$1,841
TOTAL		\$700	\$421	\$12,407	\$13,528

COUNTY OF SAN BERNARDINO PROJECTS

13 ROCK SPRINGS BRIDGE OVER MOJAVE RIVER

Project Description: The project will replace an existing two-lane low-water crossing with a new two-lane bridge.

Project Lead Agency: County of San Bernardino

Current Development Phase: PS&E

Complete for Beneficial Use: 2025

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.14

ROCK SPRINGS ROAD BRIDGE OVER MOJAVE RIVER (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
HBP			\$498	\$16,958	\$17,456
COUNTY FUNDED	\$1,433				\$1,433
MEASURE I		\$255	\$27	\$940	\$1,222
DIF COUNTY		\$340	\$37	\$1,257	\$1,634
TOTAL	\$1,433	\$595	\$562	\$19,155	\$21,745

14 PHELAN ROAD WIDENING FROM SR 138 TO HESPERIA CITY LIMITS

Project Description: The project is located on Phelan Road from SR 138 to Los Banos Avenue (12.1 miles) in the Phelan area. The project will widen Phelan Road from two to five lanes, which includes one continuous left turn lane, and will mill and overlay the existing pavement with asphalt concrete.

- Funding is currently planned through the PS&E and ROW phases, and the construction phase is partially funded. Total project funding need exceeds the County of San Bernardino's projected share of funding in the Victor Valley through 2040. SBCTA and the County of San Bernardino will continue to work together to achieve a full funding plan for the project.

Project Lead Agency: County of San Bernardino

Current Development Phase: Environmental

Complete for Beneficial Use: 2027, pending funding availability

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.15

PHELAN ROAD WIDENING, SR 138 TO HESPERIA CITY LIMITS (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I	\$4,095	\$2,623	\$2,895	\$0	\$9,613
STP	\$0	\$0	\$0	\$23,400	\$23,400
UNFUNDED	\$0	\$0	\$0	\$23,573	\$23,573
DIF COUNTY	\$0	\$0	\$0	\$4,234	\$4,234
TOTAL	\$4,095	\$2,623	\$2,895	\$51,207	\$60,820

REGIONAL/INTERREGIONAL PROJECTS

15 US 395 – PHASE 2 FREIGHT MOBILITY AND SAFETY PROJECT

Project Description: The project will widen sections of US 395 from two to four lanes between I-15 and Palmdale Road in the Cities of Hesperia and Victorville. Proposed improvements also include a continuous 14-foot paved median, 8-foot shoulders, operational enhancements such as adding left and/or right turn channelization, signal interconnection, and signal upgrades at intersections. Future improvements include Phase 3 widening from Chamberlaine Way to Desert Flower Road. Environmental clearance was approved for all phases in 2009.

- The Subarea has determined this project to be the #1 Regional Priority.
- Funding is currently planned through the PS&E and ROW phases so that the project can be a viable candidate for potential future State and/or Federal grant funding. A set-aside for construction has been established to provide a match for future grant.
- Coordination with the California Department of Water Resources is required for the widening of the bridge structure at the California Aqueduct.
- Environmental Revalidation is required for Phase 2 improvements.
- Partial right-of-way acquisition is required on over 100 parcels.
- The Preliminary Engineer's Estimate is dated March 19, 2019. The cost estimate was validated and escalated as described in Sections 2.2 and 2.3.

Project Lead Agency: SBCTA

Current Development Phase: Planning

Complete for Beneficial Use: 2026, pending funding availability

Funding Plan: The project is funded as shown in the table below.

TABLE 5.2.16

US 395 – PHASE 2 FREIGHT MOBILITY AND SAFETY PROJECT (1,000s)

FUNDING	PHASE				TOTAL
	PM	PS&E	ROW	CON	
MEASURE I	\$625				\$625
CRRSAA		\$8,788	\$1,172		\$9,960
STP			\$11,788	\$3,562	\$15,350
STIP-RIP				\$18,648	\$18,648
UNFUNDED				\$30,000	\$30,000
TOTAL	\$625	\$8,788	\$12,960	\$52,210	\$74,583

5.3 VICTOR VALLEY SENIOR AND DISABLED TRANSIT SERVICE PROGRAM

5.3.1 BACKGROUND

The Measure I Expenditure Plan included \$43 million estimated revenue for the Victor Valley Senior and Disabled Transit Service Program. Note beginning in Fiscal Year 2015/2016 and every five years thereafter, the Local Street Projects Program decreases by 0.5% and the Senior and Disabled Transit Service Program increases by 0.5% up to a total of 7.5% of the Measure I Revenue in the Victor Valley Subarea unless each local jurisdiction within the Subarea makes a finding that such increase is not required to address unmet transit needs of senior and disabled transit users.

Detailed implementation policies can be found in the Victor Valley Strategic Plan Policy 40014.

5.3.2 CURRENT STATUS

In September 2017, the SBCTA Board approved a Strategic Plan update including a revision to Policy 40014 to allow funds approved for allocation to be passed through monthly to the Victor Valley Transit Authority (VVTA) as the transit operator for the Victor Valley Subarea. Program funds are used on services and projects identified as eligible expenditures for senior citizens and persons with disabilities, consistent with VVTA's Short Range Transit Plan. In March

2019, the SBCTA Board accepted direction from the Mountain/Desert Policy Committee that no finding should be made against the Program increase; therefore, beginning April 2020, the Program increased 0.5% from 5.5% to 6.0% of the Victor Valley Subarea revenue. The 2021 Update assumes the Program revenues will increase to 6.5% in April 2025. Unlike the San Bernardino Valley Subarea, there is no set-aside for a Consolidated Transportation Services Agency (CTSA) required in the Victor Valley Subarea, although VVTA is designated as the CTSA for their service area. The current revenue estimate for the next ten years is \$15 million.

In addition to these pass through Program funds, SBCTA passes through and/or allocates shares of Senate Bill 1 State of Good Repair funds, Low Carbon Transit Operations Program funds, State Transit Assistance funds, Local Transportation Funds, and Congestion Mitigation and Air Quality funds to VVTA for additional needs identified in its SRTP as part of annual capital and operating subsidies. Historically a portion of the Local Transportation Funds allocated to VVTA is returned to the local jurisdictions for local streets and roads purposes; however, as the need for fare subsidy increases at a rate higher than the revenue increases, this will likely not be the case in the coming years.

5.4 VICTOR VALLEY PROJECT DEVELOPMENT AND TRAFFIC MANAGEMENT SYSTEMS PROGRAM

5.4.1 BACKGROUND

The Victor Valley Project Development and Traffic Management Systems Program is funded by 2% of the revenue collected within the Victor Valley Subarea, which was estimated to be \$17 million, and reserved in this special account. Allocation to projects within this Program is at the full discretion of Victor Valley Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board. The Program funds may be used for costs associated with corridor studies and project study reports, projects to improve traffic flow and maximize use of transportation facilities, congestion management, commuter assistance programs, and projects that contribute to environmental enhancement associated with highway facilities. Detailed policies such as project eligibility can be found in the Victor Valley Strategic Plan Policy 40015.

5.4.2 CURRENT STATUS

The total cost of the Program is to be covered by the anticipated revenue allowing for the Program to be run on a

pay-as-you-go basis. The current revenue estimate for the next ten years is \$5 million. This program also annually supports SBCTA staff subregional planning and project development efforts. Additionally, \$500,000 of Program funds have been allocated for a SR 18/SR 138 Corridor Study. The Study is a joint effort of SBCTA and Los Angeles Metropolitan Transportation Authority to identify a possible near-term improvement to east-west flows between the Antelope and Victor Valleys while waiting for funding to materialize for the full High Desert Corridor project. Further, Caltrans has recently initiated an update to the I-15 Corridor Plan, and as part of that update, Caltrans will analyze alternative bypass options, including SR 247. Staff of the three Subareas through which SR 247 lies – North Desert, Victor Valley, and Morongo Basin – have agreed that Measure I Project Development/Traffic Management Systems funds from each subarea would be appropriate to fund an initial feasibility study that would examine possible improvements and costs for a future project. The scope of this study has yet to be developed.



NORTH DESERT SUBAREA PROGRAMS

**NORTH DESERT
LOCAL STREET PROJECTS
PROGRAM**

**NORTH DESERT
MAJOR LOCAL HIGHWAY PROJECTS
PROGRAM**

**NORTH DESERT
SENIOR AND DISABLED
TRANSIT SERVICE PROGRAM**

**NORTH DESERT
PROJECT DEVELOPMENT AND
TRAFFIC MANAGEMENT SYSTEMS
PROGRAM**

6.1 NORTH DESERT LOCAL STREET PROJECTS PROGRAM

6.1.1 BACKGROUND

The Measure I Expenditure Plan estimated \$65 million of Measure I revenue would be available for local street projects. Seventy percent (less 2% retained by SBCTA for the Project Development and Traffic Management Systems Program) of the funds collected in the Subarea would be distributed on a monthly basis to the jurisdictions based on population (50%) and tax generation (50%).

The Strategic Plan established policies for eligible expenditures, funding allocations, and adoption and development of the local jurisdictions' Five-Year Capital Improvement Plans. Detailed information can be found in the Rural Mountain/Desert Strategic Plan Policy 40016.

6.1.2 CURRENT STATUS

In accordance with the Expenditure Plan and the Strategic Plan, the Measure I funds apportioned to the Local Street Projects Program are included in the 10-Year Delivery Plan with the funds passed through monthly to the local jurisdictions. No individual projects are included in the 10-Year Delivery Plan. The current estimate for the Program over the next ten years is \$34 million.

6.2 NORTH DESERT MAJOR LOCAL HIGHWAY PROJECTS PROGRAM

6.2.1 BACKGROUND

The Measure I Expenditure Plan included contributions to projects along major streets and highways serving as current or future primary routes of travel within the Subarea, which may include but are not limited to contributions to SR 58 widening and improvements, US 395 widening and improvements, and grade separations at Lenwood Road in Barstow and Vista Road/Shadow Mountain Road in Helendale. The total Measure I available for these projects was estimated at \$24 million, which would need to be supplemented with a combination of development fees and State and Federal funds.

Through the development of the Strategic Plan, candidate project lists were developed with the assistance of the North Desert Subarea jurisdiction representatives that included arterial projects, grade separation projects, and bridge replacement projects. Measure I allocation to projects within this Program is at the full discretion of North Desert Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board.

6.2.2 CURRENT STATUS

The current estimate for the Program over the next ten years is \$12 million. During development of the 2021 Update, the North Desert Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board established and approved a list of priority projects for inclusion in the 10-Year Delivery Plan. Additionally, in 2021 the SBCTA Board adopted a prioritized list of regional/interregional projects for consideration in future plans with the first of these priorities being included in the 2021 Update. The overall cost and revenue requirements for the Major Local Highway Projects Program are shown in Table 6.2.1. Project details are presented in Section 6.2.3. The estimated uncommitted balance through 2040 is \$23 million for this Program. The estimated uncommitted balance of State and Federal funds through 2040 is \$6 million for this Program. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

TABLE 6.2.1

**NORTH DESERT MAJOR LOCAL HIGHWAY PROJECTS PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
1 North First Avenue Bridge over BNSF	\$84,589	Measure I	\$14,986
2 North First Avenue Bridges over Mojave River & Overflow	\$59,780	State/Federal Formula Funds	\$100,943
3 Rimrock Road Rehabilitation from Barstow Road to Avenue J	\$749	State/Federal Grant Funds	\$131,868
4 Irwin Road Rehabilitation from First Avenue to Old Highway 58	\$630	Local/Private Funds	\$844
5 Baker Boulevard Bridge Replacement over Mojave River	\$16,938	TOTAL:	\$248,641
6 National Trails Highway Bridges Replacements	\$85,955		
TOTAL:	\$248,641		

The project locations are depicted in Figure 6.2.1. The project schedules are included as Figure 6.2.2.

FIGURE 6.2.1

NORTH DESERT MAJOR LOCAL HIGHWAY PROJECTS PROGRAM MAP



FIGURE 6.2.2

NORTH DESERT MAJOR LOCAL HIGHWAY PROJECTS PROGRAM SCHEDULE

Project/Phases	Fiscal Year									
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
CITY OF BARSTOW										
1 North First Avenue Bridge over BNSF										
PS&E	■									
ROW	■									
CONST		■	■							
2 North First Avenue Bridges over Mojave River & Overflow										
PS&E	■	■	■							
ROW	■	■	■							
CONST				■	■	■				
3 Rimrock Road Rehabilitation from Barstow Road to Avenue J										
PA/ED		■								
PS&E		■								
ROW		■								
CONST		■	■							
4 Irwin Road Rehabilitation from First Avenue to Old Highway 58										
PS&E				■	■					
CONST					■	■				
COUNTY OF SAN BERNARDINO										
5 Baker Boulevard Bridge Replacement over Mojave River										
PA/ED		■	■	■						
PS&E				■	■					
ROW				■	■					
CONST					■	■	■			
REGIONAL/INTERREGIONAL										
6 National Trails Highway Bridges Replacements										
CONST				■	■	■	■	■	■	■

6.2.3 PROJECT DETAILS

CITY OF BARSTOW

1 NORTH FIRST AVENUE BRIDGE OVER BNSF

Project Description: This project will replace an existing bridge on North First Avenue over the Burlington Northern Santa Fe railroad.

- City of Barstow was lead agency on the Project through the right of way phase and SBCTA will be lead agency for construction.
- The timing of reimbursement of the Highway Bridge Program construction funding is subject to execution of a High Cost Agreement between SBCTA and Caltrans.

Project Lead Agency: City of Barstow/SBCTA

Current Development Phase: PS&E and ROW

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 6.2.2

NORTH FIRST AVENUE BRIDGE OVER BNSF (1,000s)

FUNDING	PHASE					TOTAL
	PM	PA/ED	PS&E	ROW	CON	
HBP		\$2,656	\$4,081	\$10,172	\$54,057	\$70,966
EARMARK (REPURP)				\$2,591		\$2,591
PROP 1B LSSRP					\$305	\$305
MEASURE I	\$50		\$529	\$131	\$4,173	\$4,883
PUC				\$2,106	\$2,894	\$5,000
CITY LOCAL	\$500	\$344				\$844
TOTAL	\$550	\$3,000	\$4,610	\$15,000	\$61,429	\$84,589

2 NORTH FIRST AVENUE BRIDGES OVER MOJAVE RIVER & OVERFLOW

Project Description: This project will replace existing bridges on North First Avenue over the Mojave River and the Mojave River Overflow.

- Currently the bridge over the Mojave River Overflow is not approved for funding through the Highway Bridge Program. The Project cannot proceed without both bridges being replaced. The funding table below assumes that the bridge over the Mojave River Overflow is added to the Highway Bridge Program.

Project Lead Agency: City of Barstow

Current Development Phase: PS&E and ROW

Complete for Beneficial Use: 2026

Funding Plan: The project is funded as shown in the table below.

TABLE 6.2.3

NORTH FIRST AVENUE BRIDGES OVER MOJAVE RIVER & OVERFLOW (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
HBP	\$2,258	\$4,294	\$3,846	\$42,526	\$52,924
PROP 1B LSSRP				\$82	\$82
MEASURE I	\$292	\$556	\$498		\$1,346
STP				\$5,428	\$5,428
TOTAL	\$2,550	\$4,850	\$4,344	\$48,036	\$59,780

3 RIMROCK ROAD REHABILITATION FROM BARSTOW ROAD TO AVENUE J

Project Description: The project consists of pavement rehabilitation and resurfacing on Rimrock Road from Barstow Road to Avenue J.

Project Lead Agency: City of Barstow

Current Development Phase: PA/ED

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 6.2.4

RIMROCK ROAD REHABILITATION, BARSTOW ROAD TO AVENUE J (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I		\$75		\$674	\$749
TOTAL		\$75		\$674	\$749

4 IRWIN ROAD REHABILITATION FROM FIRST AVENUE TO OLD HIGHWAY 58

Project Description: The project consists of pavement rehabilitation and resurfacing on Irwin Road from First Avenue to Old Hwy 58.

Project Lead Agency: City of Barstow

Current Development Phase: Planning

Complete for Beneficial Use: 2026

Funding Plan: The project is funded as shown in the table below.

TABLE 6.2.5

IRWIN ROAD REHABILITATION, FIRST AVENUE TO OLD HIGHWAY 58 (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I		\$43		\$587	\$630
TOTAL		\$43		\$587	\$630

COUNTY OF SAN BERNARDINO

5 BAKER BOULEVARD BRIDGE REPLACEMENT OVER MOJAVE RIVER

Project Description: The project is located 0.2 miles southwest of Death Valley Road in the community of Baker and will replace a two-lane bridge with a four-lane bridge to improve local traffic circulation.

Project Lead Agency: County of San Bernardino

Current Development Phase: PA/ED

Complete for Beneficial Use: 2026

Funding Plan: The project is funded as shown in the table below.

TABLE 6.2.6

BAKER BOULEVARD BRIDGE REPLACEMENT OVER MOJAVE RIVER (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I	\$1,000	\$865		\$5,512	\$7,377
STP				\$9,561	\$9,561
TOTAL	\$1,000	\$865		\$15,073	\$16,938

REGIONAL/INTERREGIONAL

6 NATIONAL TRAILS HIGHWAY BRIDGES REPLACEMENTS

Project Description: The project will replace 33 bridges less than 20 feet in length on National Trails Highway.

- Project anticipated to be constructed in six phases pending funding availability:
 - three bridges between 0.96 miles east of Amboy Road and 0.55 miles east of Kelbaker Road
 - three bridges between 3.25 mile east of Goffs Road and 9.72 miles east of Goffs Road
 - five bridges between 17.74 miles east of Crucero Road and 19.92 miles east of Crucero Road
 - nine bridges between 0.6 miles east of Dagget-Yermo Road and 0.35 miles west of Hidden Springs Road
 - eight bridges between 0.92 miles west of Fort Cady Road and 8.47 miles east of Hector Road
 - five bridges between 2.15 miles east of Crucero Road and 6.75 miles east of Crucero Road

Project Lead Agency: County of San Bernardino

Current Development Phase: Planning

Complete for Beneficial Use: 2024 to 2032

Funding Plan: The project is funded as shown in the table below.

TABLE 6.2.7

NATIONAL TRAILS HIGHWAY BRIDGES REPLACEMENTS (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
STP				\$59,796	\$59,796
LPP (FORMULA)				\$26,158	\$26,158
TOTAL				\$85,954	\$85,954

6.3 NORTH DESERT SENIOR AND DISABLED TRANSIT SERVICE PROGRAM

6.3.1 BACKGROUND

The Measure I Expenditure Plan included \$5 million estimated revenue for the North Desert Senior and Disabled Transit Service Program. The amount of Measure I revenue apportioned to this Program will be 5% initially. Jurisdictions in the Rural Mountain/Desert Subareas have the option to increase the revenue to the Senior and Disabled Transit Service Program, although that has not been done to date. All increases above the initial 5% shall come from the North Desert Local Street Projects Program.

Detailed implementation policies can be found in the Rural Mountain/Desert Strategic Plan Policy 40018.

6.3.2 CURRENT STATUS

In September 2017, the SBCTA Board approved a Strategic

Plan update including a revision to Policy 40018 to allow funds approved for allocation to be passed through monthly to the transit operator and/or Consolidated Transportation Services Agency (CTSA) within each of the Rural Mountain/Desert Subareas. Program funds in the North Desert Subarea are passed through to Victor Valley Transit Authority (VVTA), which provides transit service to Barstow and unincorporated rural areas of the North Desert Subarea, to be used on services and projects identified as eligible expenditures for senior citizens and persons with disabilities, consistent with the operator's Short Range Transit Plans. Unlike the San Bernardino Valley Subarea, there is no set-aside for a CTSA required in the North Desert Subarea, although VVTA is designated as the CTSA for their service area. The current revenue estimate for the next ten years is \$2 million.

6.4 NORTH DESERT PROJECT DEVELOPMENT AND TRAFFIC MANAGEMENT SYSTEMS PROGRAM

6.4.1 BACKGROUND

The North Desert Project Development and Traffic Management Systems Program is funded by 2% of the revenue collected within the North Desert Subarea, which was estimated to be \$2 million, and reserved in this special account. Allocation to projects within this Program is at the full discretion of North Desert Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board. The Program funds may be used for costs associated with corridor studies and project study reports, projects to improve traffic flow and maximize use of transportation facilities, congestion management, commuter assistance programs, and projects that contribute to environmental enhancement associated with highway facilities.

Detailed policies such as project eligibility can be found in the Rural Mountain/Desert Strategic Plan Policy 40019.

6.4.2 CURRENT STATUS

The total cost of the Program is to be covered by the anticipated revenue allowing for the Program to be run on a pay-as-you-go basis. The current revenue estimate for the next ten years is \$1 million. This program also annually supports SBCTA staff subregional planning and project development efforts. Additionally, Caltrans has recently initiated an update to the I-15 Corridor Plan, and as part of that update, Caltrans will analyze alternative bypass options, including SR 247. Staff of the three Subareas through which SR 247 lies – North Desert, Victor Valley, and Morongo Basin – have agreed that Measure I Project Development/Traffic Management Systems funds from each subarea would be appropriate to fund an initial feasibility study that would examine possible improvements and costs for a future project. The scope of this study has yet to be developed.



MOUNTAINS SUBAREA PROGRAMS

**MOUNTAINS
LOCAL STREET PROJECTS
PROGRAM**

**MOUNTAINS
MAJOR LOCAL HIGHWAY PROJECTS
PROGRAM**

**MOUNTAINS
SENIOR AND DISABLED
TRANSIT SERVICE PROGRAM**

**MOUNTAINS
PROJECT DEVELOPMENT AND
TRAFFIC MANAGEMENT SYSTEMS
PROGRAM**

7.1 MOUNTAINS LOCAL STREET PROJECTS PROGRAM

7.1.1 BACKGROUND

The Measure I Expenditure Plan estimated \$81 million of Measure I revenue to be available for local street projects. Seventy percent (less 2% retained by SBCTA for the Project Development and Traffic Management Systems Program) of the funds collected in the Subarea would be distributed on a monthly basis to the jurisdictions based on population (50%) and tax generation (50%).

The Strategic Plan established policies for eligible expenditures, funding allocations, and adoption and development of the local jurisdictions' Five-Year Capital Improvement Plans. Detailed information can be found in the Rural Mountain/Desert Strategic Plan Policy 40016.

7.1.2 CURRENT STATUS

In accordance with the Expenditure Plan and the Strategic Plan, the Measure I funds apportioned to the Local Street Projects Program are included in the 10-Year Delivery Plan with the funds passed through monthly to the local jurisdictions. No individual projects are included in the 10-Year Delivery Plan. The current estimate for the Program over the next ten years is \$18 million.

7.2 MOUNTAINS MAJOR LOCAL HIGHWAY PROJECTS PROGRAM

7.2.1 BACKGROUND

The Measure I Expenditure Plan included contributions to projects along major streets and highways serving as current or future primary routes of travel within the Subarea, which may include but are not limited to contributions to SR 18, SR 38 and SR 330 safety and traffic flow improvements, SR 138 and SR 18 safety and intersection improvements, and realignment and rehabilitation of Daley Canyon Road and Kuffle Canyon Road. The total Measure I available for these projects was estimated at \$30 million, which would need to be supplemented with a combination of development fees and State and Federal funds.

Through the development of the Strategic Plan, candidate project lists were developed with the assistance of the Mountains Subarea jurisdiction representatives that included arterial projects and bridge replacement projects. Measure I allocation to projects within this Program is at the full discretion of the Mountains Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board.

7.2.2 CURRENT STATUS

The stakeholders in the Mountains Subarea completed the Mountain Area Transportation Study (MATS) in 2017. Its goal was to identify the transportation needs of the mountain areas including Wrightwood, Lake Arrowhead, Crestline, Running Springs, and Big Bear Lake. The mountain areas experience different trends in transportation than the rest of the county. This is due to the seasonal nature of the traffic

and to dealing with the mountainous terrain. This study identified deficiencies in the current system and developed potential solutions to these problems. It provided guidelines for local agencies to use in collaboration on funding, responsibility, and project schedules with a list of priority projects for implementation. In 2021 the SBCTA Board adopted a prioritized list of regional/interregional projects from this study for consideration in future plans. Further discussions will occur on these recommendations and some of these projects could ultimately be included in the 10-Year Delivery Plan and/or Caltrans, SBCTA, and local programming documents for implementation. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

The current revenue estimate for the next ten years is \$7 million. During the development of the 2021 Update, the Mountains Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board established and approved a list of priority projects for inclusion in the 10-Year Delivery Plan. The overall cost and revenue requirements for the Major Local Highway Projects Program are shown in Table 7.2.1. Project details are presented in Section 7.2.3. The estimated uncommitted balance through 2040 is \$11 million for this Program. The estimated uncommitted balance of State and Federal funds through 2040 is \$37 million for this Program. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today.

TABLE 7.2.1

**MOUNTAINS MAJOR LOCAL HIGHWAY PROJECTS PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
① Moonridge Road Realignment and Roundabouts - AEA	\$9,318	Measure I	\$7,427
② Stanfield Cutoff Roundabout	\$4,527	State/Federal Grant Funds	\$300
TOTAL:	\$13,845	Local/Private Funds	\$6,118
		TOTAL:	\$13,845

The project locations are depicted in Figure 7.2.1. The project schedules are included as Figure 7.2.2.

FIGURE 7.2.1

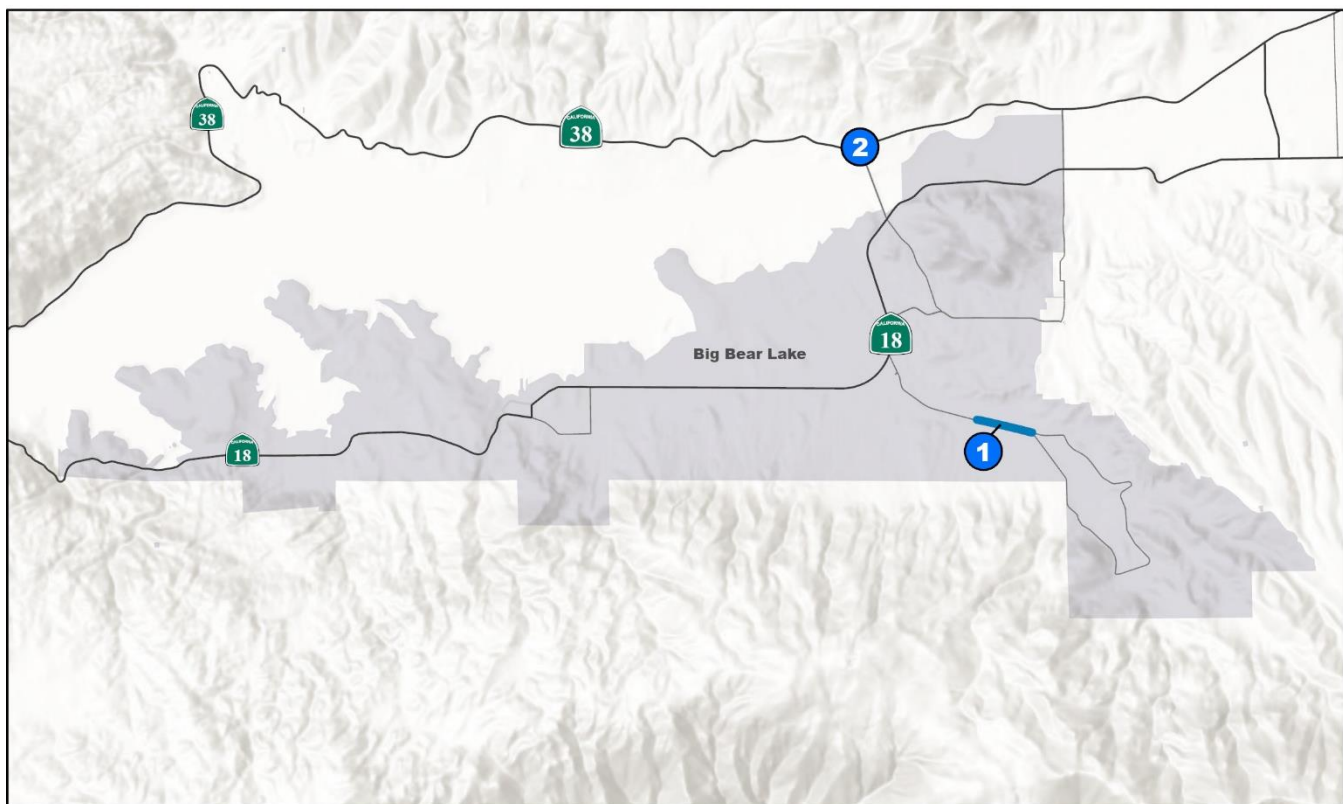
MOUNTAINS MAJOR LOCAL HIGHWAY PROJECTS PROGRAM MAP


FIGURE 7.2.2

MOUNTAINS MAJOR LOCAL HIGHWAY PROJECTS PROGRAM SCHEDULE

Project/Phases	Fiscal Year									
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
CITY OF BIG BEAR LAKE										
① Moonridge Road Realignment and Roundabouts - AEA										
CONST										
AEA Reimbursement										
COUNTY OF SAN BERNARDINO										
② Stanfield Cutoff Roundabout										
PA/ED										
PS&E										
ROW										
CONST										

7.2.3 PROJECT DETAILS

CITY OF BIG BEAR LAKE

① MOONRIDGE ROAD REALIGNMENT AND ROUNDABOUTS – ADVANCE EXPENDITURE AGREEMENT

Project Description: The project is primary arterial reconstruction, including two roundabouts, bicycle and pedestrian facilities, bus stops, and lighting. An Advance Expenditure Agreement (AEA) is executed between SBCTA and City of Big Bear Lake in which the City will advance the funds necessary to complete the project with the understanding that SBCTA will repay its contribution when sufficient Mountains Subarea Major Local Highway Projects Program funds become available. The estimated year of full AEA reimbursement is Fiscal Year 2028/2029.

Project Lead Agency: City of Big Bear Lake

Current Development Phase: Construction

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 7.2.2

MOONRIDGE ROAD REALIGNMENT AND ROUNDABOUTS – AEA (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I					\$3,200
CITY FUNDED		\$300		\$5,818	\$6,118
TOTAL		\$300		\$5,818	\$9,318

COUNTY OF SAN BERNARDINO

② STANFIELD CUTOFF ROUNDABOUT

Project Description: The project is located at the intersection of Stanfield Cutoff and SR 38 (North Shore Drive) in the unincorporated area north of Big Bear Lake and will construct a roundabout at the current offset intersection near the North Shore Elementary School and the Big Bear Animal Shelter to optimize traffic circulation and improve safety. Other project work includes constructing Americans with Disabilities Act compliant ramps on both sides of the marked crosswalk.

Project Lead Agency: County of San Bernardino

Current Development Phase: PA/ED

Complete for Beneficial Use: 2023

Funding Plan: The project is funded as shown in the table below.

TABLE 7.2.3

STANFIELD CUTOFF ROUNDABOUT (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
SHOPP			\$50	\$250	\$300
MEASURE I	\$312	\$595	\$328	\$2,992	\$4,227
TOTAL	\$312	\$595	\$378	\$3,242	\$4,527

7.3 MOUNTAINS SENIOR AND DISABLED TRANSIT SERVICE PROGRAM

7.3.1 BACKGROUND

The Measure I Expenditure Plan included \$6 million estimated revenue for the Mountains Senior and Disabled Transit Service Program. The amount of Measure I revenue apportioned to this Program will be 5% initially. Jurisdictions in the Rural Mountain/Desert Subareas have the option to increase the revenue to the Senior and Disabled Transit Service Program, although that has not been done to date. All increases above the initial 5% shall come from the Mountains Local Street Projects Program.

Detailed implementation policies can be found in the Rural Mountain/Desert Strategic Plan Policy 40018.

7.3.2 CURRENT STATUS

In September 2017, the SBCTA Board approved a Strategic Plan update including a revision to Policy 40018 to allow

funds approved for allocation to be passed through monthly to the transit operator and/or Consolidated Transportation Services Agency (CTSA) within each of the Rural Mountain/Desert Subareas. Program funds in the Mountains Subarea are passed through to Mountain Transit to be used on services and projects identified as eligible expenditures for senior citizens and persons with disabilities, consistent with the operator's Short Range Transit Plans (SRTTP). Unlike the San Bernardino Valley Subarea, there is no set-aside for a CTSA required in the Mountains Subarea. The current revenue estimate for the next ten years is \$1 million.

In addition to these pass through Program funds, SBCTA passes through and/or allocates shares of Senate Bill 1 State of Good Repair funds, Low Carbon Transit Operations Program funds, State Transit Assistance funds, Local Transportation Funds, and Congestion Mitigation and Air Quality to Mountain Transit for additional needs identified in its SRTTP as part of annual capital and operating subsidies.

7.4 MOUNTAINS PROJECT DEVELOPMENT AND TRAFFIC MANAGEMENT SYSTEMS PROGRAM

7.4.1 BACKGROUND

The Mountains Project Development and Traffic Management Systems Program is funded by 2% of the revenue collected within the Mountains Subarea, which was estimated to be \$2 million, and reserved in this special account. Allocation to projects within this Program is at the full discretion of Mountains Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board. The Program funds may be used for costs associated with corridor studies and project study reports, projects to improve traffic flow and maximize use of transportation facilities, congestion management, commuter assistance programs, and projects that contribute to environmental enhancement associated with highway facilities.

Detailed policies such as project eligibility can be found in the Rural Mountain/Desert Strategic Plan Policy 40019.

7.4.2 CURRENT STATUS

The total cost of the Program is to be covered by the anticipated revenue allowing for the Program to be run on a pay-as-you-go basis. This program supported the development of the Mountain Area Transportation Study discussed in Section 7.2.2 and also annually supports SBCTA staff subregional planning and project development efforts. The current revenue estimate for the next ten years is \$535,000.



8

MORONGO BASIN SUBAREA PROGRAMS

**MORONGO BASIN
LOCAL STREET PROJECTS
PROGRAM**

**MORONGO BASIN
MAJOR LOCAL HIGHWAY PROJECTS
PROGRAM**

**MORONGO BASIN
SENIOR AND DISABLED TRANSIT SERVICE
PROGRAM**

**MORONGO BASIN
PROJECT DEVELOPMENT
AND TRAFFIC MANAGEMENT SYSTEMS
PROGRAM**

8.1 MORONGO BASIN LOCAL STREET PROJECTS PROGRAM

8.1.1 BACKGROUND

The Measure I Expenditure Plan estimated \$85 million of Measure I revenue would be available for local street projects. Seventy percent (less 2% retained by SBCTA for the Project Development and Traffic Management Systems Program) of the funds collected in the Subarea would be distributed on a monthly basis to the jurisdictions based on population (50%) and tax generation (50%).

The Strategic Plan established policies for eligible expenditures, funding allocations, and adoption and development of the local jurisdictions' Five-Year Capital Improvement Plans. Detailed information can be found in the Rural Mountain/Desert Strategic Plan Policy 40016.

8.1.2 CURRENT STATUS

In accordance with the Expenditure Plan and the Strategic Plan, the Measure I funds apportioned to the Local Street Projects Program are included in the 10-Year Delivery Plan with the funds passed through monthly to the local jurisdictions. No individual projects are included in the 10-Year Delivery Plan. The current estimate for the Program over the next ten years is \$21 million.

8.2 MORONGO BASIN MAJOR LOCAL HIGHWAY PROJECTS PROGRAM

8.2.1 BACKGROUND

The Measure I Expenditure Plan included contributions to projects along major streets and highways serving as current or future primary routes of travel within the Subarea, which may include but are not limited to contributions to SR 62 and SR 247 widening and safety improvements and SR 62 widening and safety improvements between Morongo Basin and the Coachella Valley. The total Measure I available for these projects was estimated at \$31 million, which would need to be supplemented with a combination of development fees and State and Federal funds.

Through the development of the Strategic Plan, candidate project lists were developed with the assistance of the Morongo Basin Subarea jurisdiction representatives that included arterial projects and intersection improvements and signalization. Measure I allocation to projects within this Program is at the full discretion of Morongo Basin Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board.

8.2.2 CURRENT STATUS

The stakeholders in the Morongo Basin Subarea completed the Morongo Basin Area Transportation Study (MBATS) in 2015. This study identified deficiencies in the current system and developed potential solutions to these problems. An implementation schedule was identified that recommends segment prioritization and recommended implementation dates in order to provide sufficient capacity for the future traffic demand. In 2021 the SBCTA Board adopted a prioritized list of regional/interregional projects from this study for consideration in future plans with the first of these priorities being included in the 2021 Update. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

The current revenue estimate for the next ten years is \$8 million. During development of the 2021 Update, the Morongo Basin Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board established and approved a list of priority projects for inclusion in the 10-Year Delivery Plan. The overall cost and revenue requirements for the Major Local Highway Projects Program are shown in Table 8.2.1. Project details are presented in Section 8.2.3. The estimated uncommitted balance through 2040 is \$11 million for this Program. The estimated uncommitted balance of State and Federal funds through 2040 is \$32 million for this Program. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today.

TABLE 8.2.1

**MORONGO BASIN MAJOR LOCAL HIGHWAY PROJECTS PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
① Split Rock Avenue at Twentynine Palms Flood Control Channel	\$3,201	Measure I	\$7,999
② SR 62 Street Improvements from Encelia Avenue to Larrea Avenue, Phase 2A Median Only	\$997	State/Federal Formula Funds	\$38,549
③ SR 62 Street Improvements from Encelia Avenue to Larrea Avenue, Phase 2B Widening	\$4,935	State/Federal Grant Funds	\$2,834
④ SR 62 Widening from Sage Avenue to Airway Avenue	\$35,733	Local/Private Funds	\$17,531
⑤ Yucca Trail Widening from Sage to La Contenta	\$22,047		
TOTAL:	\$66,913	TOTAL:	\$66,913

The project locations are depicted in Figure 8.2.1. The Project schedules are included as Figure 8.2.2.

FIGURE 8.2.1

MORONGO BASIN MAJOR LOCAL HIGHWAY PROJECTS PROGRAM MAP

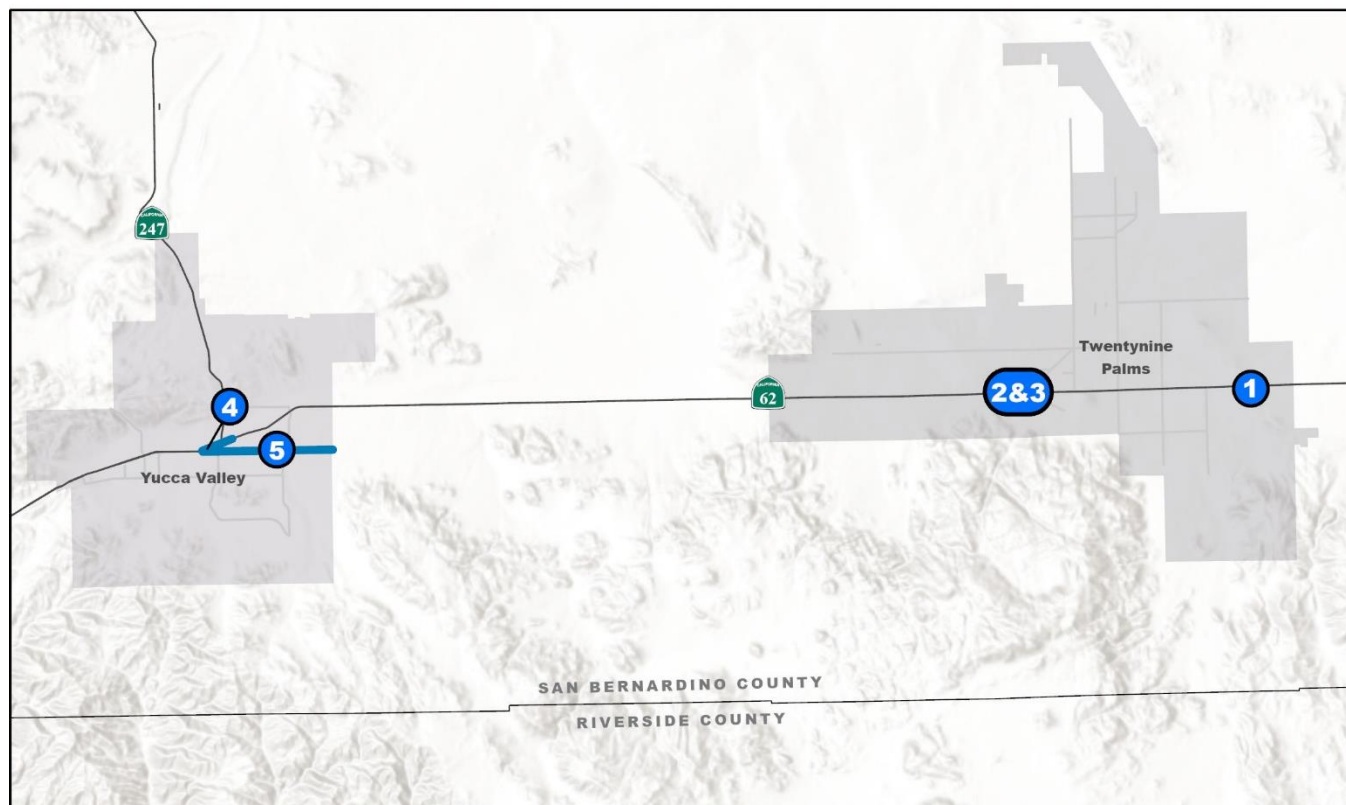


FIGURE 8.2.2

MORONGO BASIN MAJOR LOCAL HIGHWAY PROJECTS PROGRAM SCHEDULE

Project/Phases	Fiscal Year									
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
CITY OF TWENTYNINE PALMS										
① <u>Split Rock Avenue at Twentynine Palms Flood Control Channel</u>										
PS&E	■									
ROW	■									
CONST		■								
② <u>SR 62 Street Improvements from Encelia Avenue to Larrea Avenue, Phase 2A Median Only</u>										
PS&E	■									
ROW	■									
CONST		■								
③ <u>SR 62 Street Improvements from Encelia Avenue to Larrea Avenue, Phase 2B Widening</u>										
PS&E				■						
ROW				■						
CONST					■	■				
TOWN OF YUCCA VALLEY										
④ <u>SR 62 Widening from Sage Avenue to Airway Avenue</u>										
PA/ED				■	■					
PS&E						■	■			
ROW						■	■			
CONST									■	
⑤ <u>Yucca Trail Widening from Sage to La Contenta</u>										
PA/ED										■

8.2.3 PROJECT DETAILS

CITY OF TWENTYNINE PALMS PROJECTS

1 SPLIT ROCK AVENUE AT TWENTYNINE PALMS FLOOD CONTROL CHANNEL

Project Description: The project is to design and construct replacement of existing two-lane low-water crossing with a new two-lane bridge on Split Rock Avenue across the Twentynine Palms flood control channel north of SR 62 from Buena Vista Drive to Bagley Avenue.

Project Lead Agency: City of Twentynine Palms

Current Development Phase: PS&E and ROW

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown the in table below.

TABLE 8.2.2

SPLIT ROCK AVENUE AT TWENTYNINE PALMS FLOOD CONTROL CHANNEL (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
HBP		\$422	\$28	\$2,384	\$2,834
MEASURE I				\$309	\$309
CITY LOCAL		\$55	\$3		\$58
TOTAL		\$477	\$31	\$2,693	\$3,201

2 SR 62 STREET IMPROVEMENTS FROM ENCELIA AVENUE TO LARREA AVENUE, PHASE 2A MEDIAN ONLY

Project Description: The project will add raised medians on SR 62 from Encelia Avenue to Larrea Avenue.

Project Lead Agency: City of Twentynine Palms

Current Development Phase: PS&E

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 8.2.3

SR 62 IMPROVEMENTS, ENCELIA AVENUE TO LARREA AVENUE, PHASE 2A (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I		\$44		\$575	\$619
CITY LOCAL	\$378				\$378
TOTAL	\$378	\$44		\$575	\$997

3 SR 62 STREET IMPROVEMENTS FROM ENCELIA AVENUE TO LARREA AVENUE, PHASE 2B WIDENING

Project Description: The project will construct curbs, gutters, sidewalks, and raised medians on SR 62 from Encelia Avenue to Larrea Avenue. Project includes minor widening on the north side of SR 62 and widening of the box culvert over the San Bernardino County Flood Control District Twentynine Palms wash.

- The Subarea has determined this project to be the #1 Regional Priority.

Project Lead Agency: City of Twentynine Palms

Current Development Phase: Planning

Complete for Beneficial Use: 2027

Funding Plan: The project is funded as shown in the table below.

TABLE 8.2.4

SR 62 IMPROVEMENTS, ENCELIA AVENUE TO LARREA AVENUE, PHASE 2B (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I		\$337	\$117		\$454
STP				\$4,106	\$4,106
CITY LOCAL	\$375				\$375
TOTAL	\$375	\$337	\$117	\$4,106	\$4,935

TOWN OF YUCCA VALLEY PROJECTS

4 SR 62 WIDENING FROM SAGE AVENUE TO AIRWAY AVENUE

Project Description: The project will widen SR 62 from Sage Avenue to Airway Avenue from four to six lanes, install new traffic signals, and relocate SCE utility poles.

- The Subarea has determined this project to be the #2 Regional Priority.

Project Lead Agency: Town of Yucca Valley

Current Development Phase: Planning

Complete for Beneficial Use: 2030

Funding Plan: The project is funded as shown in the table below.

TABLE 8.2.5

SR 62 WIDENING, SAGE AVENUE TO AIRWAY AVENUE (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I	\$1,159	\$2,513	\$680		\$4,352
STP				\$14,797	\$14,797
LPP (FORMULA)				\$14,797	\$14,797
CITY LOCAL	\$61	\$132	\$36	\$1,558	\$1,787
TOTAL	\$1,220	\$2,645	\$716	\$31,152	\$35,733

5 YUCCA TRAIL WIDENING FROM SAGE AVENUE TO LA CONTENTA ROAD

Project Description: The project will widen Yucca Trail from Sage Avenue to La Contenta Road from two to four lanes, install new traffic signals, and relocate SCE utility poles.

Project Lead Agency: Town of Yucca Valley

Current Development Phase: Planning

Complete for Beneficial Use: 2035

Funding Plan: The project is funded as shown in the table below.

TABLE 8.2.6

YUCCA TRAIL WIDENING, SAGE AVENUE TO LA CONTENTA ROAD (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I	\$370	\$764	\$1,131		\$2,265
STP				\$4,849	\$4,849
CITY LOCAL	\$370	\$763	\$1,332	\$12,468	\$14,933
TOTAL	\$740	\$1,527	\$2,463	\$17,317	\$22,047

8.3 MORONGO BASIN SENIOR AND DISABLED TRANSIT SERVICE PROGRAM

8.3.1 BACKGROUND

The Measure I Expenditure Plan included \$6 million estimated revenue for the Morongo Basin Senior and Disabled Transit Service Program. The amount of Measure I revenue apportioned to this Program will be 5% initially. Jurisdictions in the Rural Mountain/Desert Subareas have the option to increase the revenue to the Senior and Disabled Transit Service Program, although that has not been done to date. All increases above the initial 5% shall come from the Morongo Basin Local Street Projects Program.

Detailed implementation policies can be found in the Rural Mountain/Desert Strategic Plan Policy 40018.

8.3.2 CURRENT STATUS

In September 2017, the SBCTA Board approved a Strategic Plan update including a revision to Policy 40018 to allow funds approved for allocation to be passed through monthly to the transit operator and/or Consolidated Transportation Services Agency (CTSA) within each of the Rural Mountain/Desert Subareas. Program funds in the Morongo Basin Subarea are passed through to Morongo Basin Transit Authority (MBTA) to be used on services and projects identified as eligible expenditures for senior citizens and persons with disabilities, consistent with the operator's Short Range Transit Plans (SRTP). Unlike the San Bernardino Valley Subarea, there is no set-aside for a CTSA required in the Morongo Basin Subarea. The current revenue estimate for the next ten years is \$1.6 million.

In addition to these pass through Program funds, SBCTA passes through and/or allocates shares of Senate Bill 1 State of Good Repair funds, Low Carbon Transit Operations Program funds, State Transit Assistance funds, Local Transportation Funds, and Congestion Mitigation and Air Quality funds to MBTA for additional needs identified in its SRTP as part of annual capital and operating subsidies. Historically a portion of the Local Transportation Fund allocated to MBTA is returned to the local jurisdictions for local streets and roads purposes; however as the need for fare subsidy increases at a rate higher than the revenue increases, this no longer occurs.

8.4 MORONGO BASIN PROJECT DEVELOPMENT AND TRAFFIC MANAGEMENT SYSTEMS PROGRAM

8.4.1 BACKGROUND

The Morongo Basin Project Development and Traffic Management Systems Program is funded by 2% of the revenue collected within the Morongo Basin Subarea, which was estimated to be \$3 million, and reserved in this special account. Allocation to projects within this Program is at the full discretion of Morongo Basin Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board. The Program funds may be used for costs associated with corridor studies and project study reports, projects to improve traffic flow and maximize use of transportation facilities, congestion management, commuter assistance programs, and projects that contribute to environmental enhancement associated with highway facilities.

Detailed policies such as project eligibility can be found in the Rural Mountain/Desert Strategic Plan Policy 40019.

8.4.2 CURRENT STATUS

The total cost of the Program is to be covered by the anticipated revenue allowing for the Program to be run on a pay-as-you-go basis. The current revenue estimate for the next ten years is \$626,000. This Program supported the development of the Morongo Basin Area Transportation Study discussed in Section 8.2.2 and also annually supports SBCTA staff subregional planning and project development efforts. Additionally, Caltrans has recently initiated an update to the I-15 Corridor Plan, and as part of that update, Caltrans will analyze alternative bypass options, including SR 247. Staff of the three Subareas through which SR 247 lies – North Desert, Victor Valley, and Morongo Basin – have agreed that Measure I Project Development/Traffic Management Systems funds from each subarea would be appropriate to fund an initial feasibility study that would examine possible improvements and costs for a future project. The scope of this study has yet to be developed.



COLORADO RIVER SUBAREA PROGRAMS

**COLORADO RIVER
LOCAL STREET PROJECTS
PROGRAM**

**COLORADO RIVER
MAJOR LOCAL HIGHWAY PROJECTS
PROGRAM**

**COLORADO RIVER
SENIOR AND DISABLED
TRANSIT SERVICE PROGRAM**

**COLORADO RIVER
PROJECT DEVELOPMENT AND
TRAFFIC MANAGEMENT SYSTEMS
PROGRAM**

9.1 COLORADO RIVER LOCAL STREET PROJECTS PROGRAM

9.1.1 BACKGROUND

The Measure I Expenditure Plan estimated \$40 million of Measure I revenue would be available for local street projects. Seventy percent (less 2% retained by SBCTA for the Project Development and Traffic Management Systems Program) of the funds collected in the Subarea would be distributed on a monthly basis to the jurisdictions based on population (50%) and tax generation (50%).

The Strategic Plan established policies for eligible expenditures, funding allocations, and adoption and development of the local jurisdictions' Five-Year Capital

Improvement Plans. Detailed information can be found in the Rural Mountain/Desert Strategic Plan Policy 40016.

9.1.2 CURRENT STATUS

In accordance with the Expenditure Plan and the Strategic Plan, the Measure I funds apportioned to the Local Street Projects Program are included in the 10-Year Delivery Plan with the funds passed through monthly to the local jurisdictions. No individual projects are included in the 10-Year Delivery Plan. The current estimate for the Program over the next ten years is \$2.5 million.

9.2 COLORADO RIVER MAJOR LOCAL HIGHWAY PROJECTS PROGRAM

9.2.1 BACKGROUND

The Measure I Expenditure Plan included contributions to projects along major streets and highways serving as current or future primary routes of travel within the Subarea, which may include, but are not limited to, contributions to Needles Highway widening and realignment from I-40 to the Nevada State Line, reconstruction of J Street, and construction of a new bridge in Needles connecting I-40 to Arizona. The total Measure I contribution was estimated at \$15 million, which would need to be supplemented with a combination of development fees and State and Federal funds.

Through the development of the Strategic Plan, candidate project lists were developed with the assistance of the Colorado River Subarea jurisdiction representatives that included the projects above. Measure I allocation to projects within this Program is at the full discretion of Colorado River Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board.

cost and revenue requirements for the Major Local Highway Projects Program are shown in Table 9.2.1. Project details are presented in Section 9.2.3. The estimated uncommitted balance through 2040 is \$1.2 million for this Program. The estimated uncommitted balance of State and Federal funds through 2040 is \$16 million for this Program. However, this assumes State and Federal reauthorization and distribution of funding in approximately the same structure and at the same level of funding that exists today. More information about projects completed since the inception of Measure I 2010-2040 can be found in Section 12.

9.2.2 CURRENT STATUS

The current revenue estimate for the next ten years is \$906,000. The reconstruction of J Street in the City of Needles has been completed and improvements to Needles Highway in both the City and the County portions of the Subarea are considered regional priorities in the Subarea. During the development of the 2021 Update, the Colorado River Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board approved the realignment and reconstruction of the first segment of Needles Highway for inclusion in the 10-Year Delivery Plan. Additionally, the SBCTA Board has allocated funding for the rehabilitation of the US 95 bridge over the Colorado River in partnership with the State of California and the State of Arizona. The overall

TABLE 9.2.1

**COLORADO RIVER MAJOR LOCAL HIGHWAY PROJECTS PROGRAM
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
1 US 95 Colorado River Bridge	\$1,775	Measure I	\$998
2 Needles Highway Improvements, Segment 1C	\$9,400	State/Federal Formula Funds	\$8,500
TOTAL:	\$11,175	State/Federal Grant Funds	\$1,677
		TOTAL:	\$11,175

The project location is depicted in Figure 9.2.1. The project schedule is included as Figure 9.2.2.

FIGURE 9.2.1

COLORADO RIVER MAJOR LOCAL HIGHWAY PROJECTS PROGRAM MAP

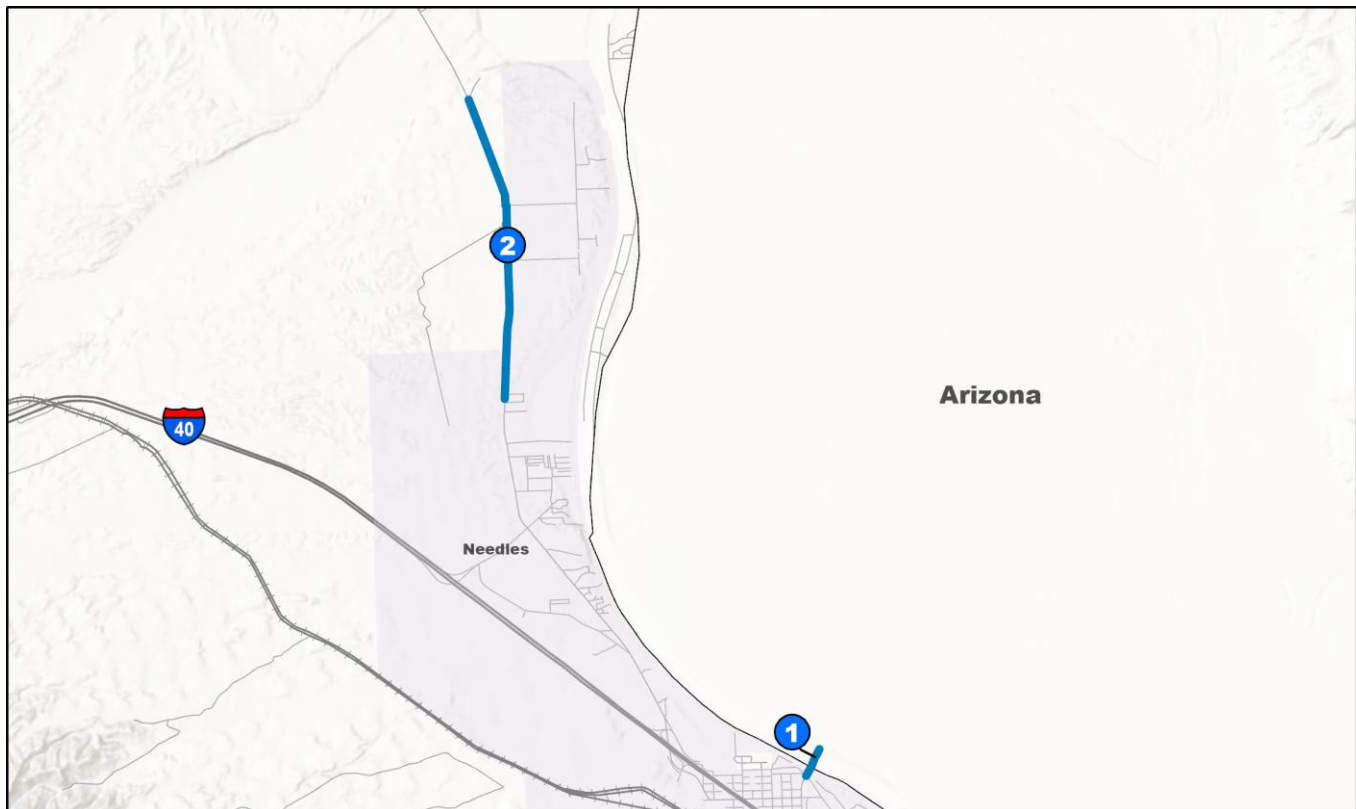


FIGURE 9.2.2

COLORADO RIVER MAJOR LOCAL HIGHWAY PROJECTS PROGRAM SCHEDULE

Fiscal Year											
Project/Phases	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	
COUNTY OF SAN BERNARDINO											
1 US 95 Colorado River Bridge											
CONST											
2 Needles Highway Improvements, Segment 1C											
PA/ED											
PS&E											
ROW											
CONST											

9.2.3 PROJECT DETAILS

CITY OF NEEDLES

1 US 95 COLORADO RIVER BRIDGE

Project Description: The project will rehabilitate the US 95 bridge over the Colorado River from River Street on North K Street in Needles to East Dike Road on Harbor Avenue in Arizona. The lead agency for the project is the Arizona Department of Transportation, and the California Department of Transportation is providing Highway Bridge Program funding with Measure I as the match to that funding.

Project Lead Agency: Arizona Department of Transportation

Current Development Phase: Construction

Complete for Beneficial Use: 2022

Funding Plan: The project is funded as shown in the table below.

TABLE 9.2.2

US 95 COLORADO RIVER BRIDGE (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
HBP	\$130	\$20		\$637	\$787
ARIZONA DOT	\$147	\$22		\$721	\$890
MEASURE I	\$16	\$3		\$79	\$98
TOTAL	\$293	\$45		\$1,437	\$1,775

COUNTY OF SAN BERNARDINO

2 NEEDLES HIGHWAY IMPROVEMENTS, SEGMENT 1C

Project Description: The project will realign and reconstruct Needles Highway, Segment 1C, approximately 2.3 miles in length from David Drive to 0.1 mile north of Not'cho Road. Additionally, drainage improvements and other appurtenant work will be completed. An Advance Expenditure Agreement (AEA) will be executed between SBCTA and the County of San Bernardino in which the County will advance the funds necessary to ready the project for construction with the understanding that SBCTA will repay its contribution when sufficient Colorado River Subarea Major Local Highway Projects Program funds become available. The estimated year of full AEA reimbursement is Fiscal Year 2029/2030.

- The Subarea has determined this project to be the #1 Regional Priority.

Project Lead Agency: County of San Bernardino

Current Development Phase: PS&E

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 9.2.3

NEEDLES HIGHWAY IMPROVEMENTS, SEGMENT 1C (1,000s)

FUNDING	PHASE				TOTAL
	PA/ED	PS&E	ROW	CON	
MEASURE I		\$900			\$900
STP			\$500	\$8,000	\$8,500
TOTAL		\$900	\$500	\$8,000	\$9,400

9.3 COLORADO RIVER SENIOR AND DISABLED TRANSIT SERVICE PROGRAM

9.3.1 BACKGROUND

The Measure I Expenditure Plan included \$3 million estimated revenue for the Colorado River Senior and Disabled Transit Service Program. The amount of Measure I revenue apportioned to this Program will be 5% initially. Jurisdictions in the Rural Mountain/Desert Subareas have the option to increase the revenue to the Senior and Disabled Transit Service Program, although that has not been done to date. All increases above the initial 5% shall come from the Colorado River Local Street Projects Program.

Detailed implementation policies can be found in the Rural Mountain/Desert Strategic Plan Policy 40018.

9.3.2 CURRENT STATUS

In September 2017, the SBCTA Board approved a Strategic Plan update including a revision to Policy 40018 to allow

funds approved for allocation to be passed through monthly to the transit operator and/or Consolidated Transportation Services Agency (CTSA) within each of the Rural Mountain/Desert Subareas. Program funds are passed through to the City of Needles to be used for transit services and projects identified as eligible expenditures for senior citizens and persons with disabilities, consistent with its Short Range Transit Plan (SRTP). Unlike the San Bernardino Valley Subarea, there is no set-aside for a CTSA required in the Colorado River Subarea. The current revenue estimate for the next ten years is \$181,000.

In addition to these pass through Program funds, SBCTA also passes through and/or allocates shares of Senate Bill 1 State of Good Repair funds, Local Transportation Funds, and State Transit Assistance funds to the City of Needles for additional needs identified in its SRTP as part of annual capital and operating subsidies.

9.4 COLORADO RIVER PROJECT DEVELOPMENT AND TRAFFIC MANAGEMENT SYSTEMS PROGRAM

9.4.1 BACKGROUND

The Colorado River Project Development and Traffic Management Systems Program is funded by 2% of the revenue collected within the Colorado River Subarea, which was estimated to be \$1 million and reserved in this special account. Allocation to projects within this Program is at the full discretion of Colorado River Subarea representatives, the Mountain/Desert Policy Committee, and the SBCTA Board. The Program funds may be used for costs associated with corridor studies and project study reports, projects to improve traffic flow and maximize use of transportation facilities, congestion management, commuter assistance programs, and projects that contribute to environmental enhancement associated with highway facilities.

Detailed policies such as project eligibility can be found in the Rural Mountain/Desert Strategic Plan Policy 40019.

9.4.2 CURRENT STATUS

The total cost of the Program is to be covered by the anticipated revenue allowing for the Program to be run on a pay-as-you-go basis. This program also annually supports SBCTA staff subregional planning and project development efforts. The current revenue estimate for the next ten years is \$72,000.



OTHER PROJECTS OF INTEREST

OTHER PROJECTS OF INTEREST

10. OTHER PROJECTS OF INTEREST

10.1 BACKGROUND

As noted in the Introduction section, in April 2009, the SBCTA Board of Directors approved a Strategic Plan to provide a policy manual for the delivery of Measure I Programs by SBCTA and its member agencies for the 30-year life of the Measure. One of the key requirements of the Strategic Plan was the preparation of a 10-Year Delivery Plan. The purpose of the 10-Year Delivery Plan is to provide a transparent list of projects that will be developed during the next ten years and to define the scope, schedule, and budget for these projects, given current information and assumptions. Although the requirement for including projects in the 10-Year Delivery Plan applies to Measure I 2010-2040 Program funds, SBCTA is highlighting other projects of significance in this 2021 Update. To accomplish this, Section 10 Other Projects of Interest, has been added.

10.2 CURRENT STATUS

There are five projects included in this Other Projects of Interest Section: 1) the Ontario International Airport (ONT) Loop Project, 2) the Diesel Multiple Unit (DMU) to Zero or Low Emission (ZEMU) Vehicle Project, 3) the ZEMU Conversion of Three Arrow DMUs Project, 4) the Zero Emission Bus (ZEB) Initiative, and 5) the Enterprise Resource Planning System Project.

The ONT Loop Project, a tunnel connection for zero-emission vehicles, is in the project development stage, linking the Metrolink Cucamonga Station and ONT. With ONT now under local control, there is an opportunity to better connect to the transit system, with new transit accessibility to ONT from Los Angeles and San Bernardino County by 2025. This innovative tunnel approach, similar to one in operation in Las Vegas, will allow the ONT connection to occur years in advance of, and at a dramatically lower cost than, what would have been possible with conventional surface rail technology.

SBCTA was successful in securing a \$30 million Transit and Intercity Rail Capital Program (TIRCP) grant to conduct the research and development efforts necessary to convert a DMU to a ZEMU. Construction of the Redlands Passenger Rail Project is substantially complete, and SBCTA is getting ready to implement the Arrow passenger rail service connecting San Bernardino and Redlands in summer 2022. Service will initially begin using DMU rail vehicles, also known as hybrid-rail vehicles, powered via a diesel engine “generator” providing power to electric motors at the wheels. Although this technology is cleaner than traditional heavy rail locomotives, SBCTA recognized an opportunity to convert the power generator to an alternative propulsion technology in an effort to produce a zero or low emission vehicle with the capability to run on existing heavy rail infrastructure, thus reducing greenhouse gas emissions and improving air

quality while maximizing the use of the existing rail infrastructure. Final design of the ZEMU is nearly complete, manufacturing of the car bodies and power pack body has begun, and SBCTA anticipates awarding the first of two construction contracts necessary to complete the infrastructure for the hydrogen fueling station and the retrofit to support hydrogen vehicle operations in the spring of 2022.

As part of the TIRCP discussion, the State indicated the desire to have SBCTA convert the initial three DMUs purchased for the Arrow service using the same alternative propulsion technology. The 2021 Update includes a new project to convert the three Arrow DMUs, with the ultimate goal of operating the entire Arrow corridor as a zero or low emission revenue operation. The schedule, cost, and funding are preliminary and will be more defined once the initial ZEMU project is complete and operational.

In December 2018, the California Air Resources Board adopted the Innovative Clean Transit (ICT) regulation. The ICT mandate requires all public transit agencies, regardless of size, to transition to a 100% ZEB fleet. Beginning in 2029, 100% of new bus purchases with a gross vehicle weight rating greater than 14,000 pounds must be ZEBs, with a goal for full transition by 2040. While the ZEB procurements and costs to meet the ICT will be expended by the transit operators in San Bernardino County, SBCTA directly receives the majority of transit funding and allocates these funds to the operators. By Board Policy 40001, Federal Congestion Mitigation and Air Quality (CMAQ) funds shall be considered as a significant source to fund transit capital projects and start-up operating expenses in accordance with CMAQ criteria. Allocation of CMAQ funding to transit capital projects is to be made by SBCTA in a manner consistent with the 10-Year Delivery Plan and plans developed by the transit operators and approved by the Board. Since the costs are significant, it is important to include this as a project in the 2021 Update. CMAQ funds have been reserved in SBCTA programming documents for most of this cost, although SBCTA is hopeful that competitive funding may replace a portion of the CMAQ funding.

The final project in this section is the Enterprise Resource Planning System Project. While this capital project is expected to be funded with Measure I 2010-2040 dollars, the funding comes from 1% of the annual net Measure I revenue for administration, prior to revenue allocations to Programs. SBCTA’s current financial system, purchased in 2008, is nearing the end of its life cycle, and the agency will begin procuring for a replacement system. The overall cost and revenue requirements for these projects are shown in Table 10.2.1. Project details are presented in Section 10.3.

TABLE 10.2.1

**OTHER PROJECTS OF INTEREST
(COST AND REVENUE REQUIREMENTS) (1,000s)**

PROJECT	COST	FUNDING SOURCE	REVENUE
1 Ontario International Airport (ONT) Loop - Capital*	\$132,009	Measure I	\$4,205
ONT Loop - Operations	\$15,071	State/Federal Formula Funds	\$225,974
2 DMU to ZEMU	\$37,492	State/Federal Grant Funds	\$31,662
3 ZEMU Conversion of Three Arrow DMUs	\$7,875	Local/Private Funds	\$980
4 Zero Emission Bus Initiative*	\$137,694	Unfunded	\$71,525
5 Enterprise Resource Planning - Capital	\$3,100	TOTAL:	\$334,346
Enterprise Resource Planning - Annual Maintenance	\$1,105		
TOTAL:	\$334,346		

*Project not fully funded

The ONT Loop project location is depicted in Figure 10.2.1. The project schedules are included as Figure 10.2.2.

FIGURE 10.2.1

OTHER PROJECTS OF INTEREST MAP

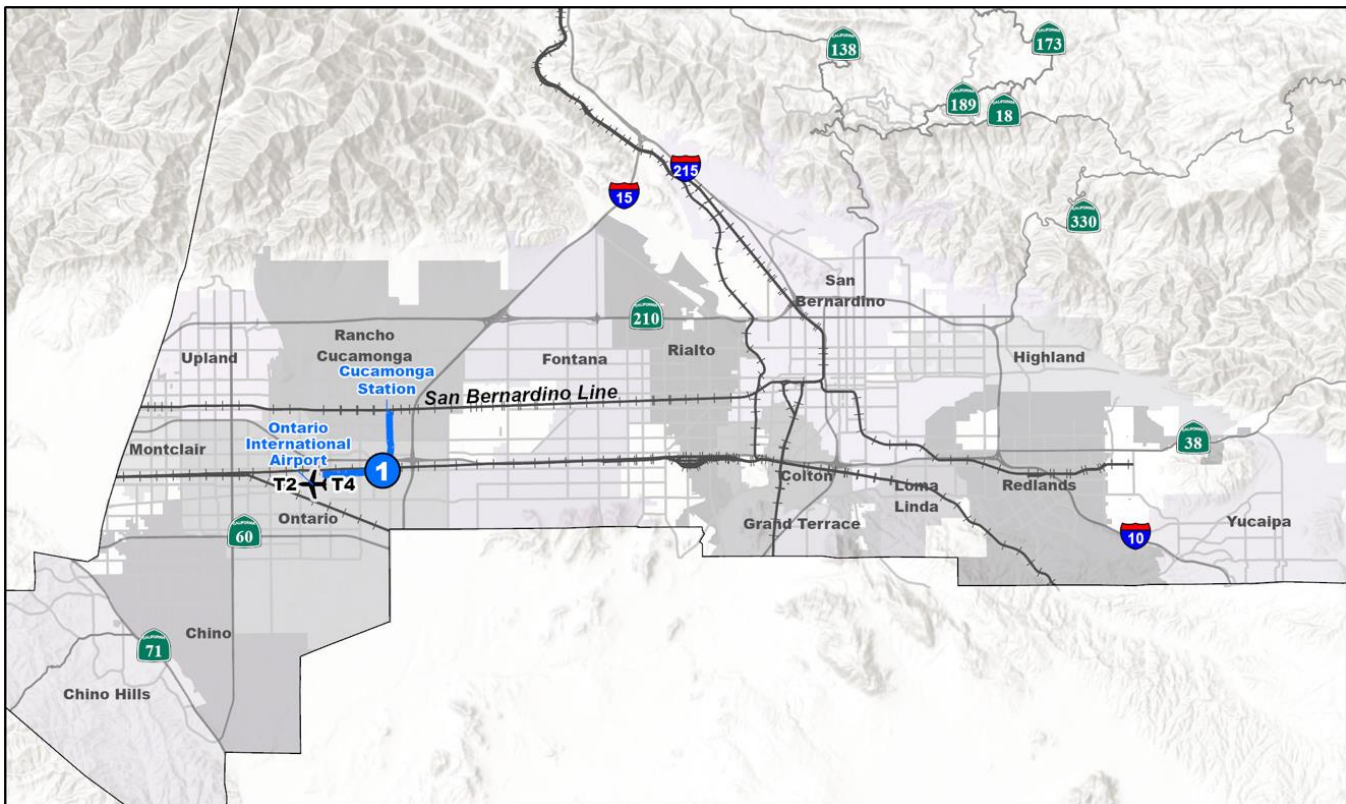


FIGURE 10.2.2

OTHER PROJECTS OF INTEREST SCHEDULE

Project/Phases	Fiscal Year									
	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
1 Ontario International Airport (ONT) Loop - Capital*										
PA/ED										
ROW										
DESIGN-BUILD										
2 DMU to ZEMU**										
PA&ED										
PS&E										
CONST - Infrastructure										
CONST - Rolling Stock										
3 ZEMU Conversion of Three Arrow DMUs										
PM										
CON-Conversion										
4 Zero Emission Bus Initiative										
Ongoing Conversion to ZEB										
5 Enterprise Resource Planning - Capital										
Planning & Analysis										
Software Procurement										
System Implementation										

*Schedule is dependent on securing grant funding for construction.

**Schedule includes commissioning and testing.

10.3 PROJECT DETAILS

1 ONTARIO INTERNATIONAL AIRPORT (ONT) LOOP

Project Description: The project is an approximate four-mile sub-surface bi-directional tunnel system using rubber-tire zero-emission vehicles aspiring to be autonomous that will serve as an on-demand direct connection to ONT from the Cucamonga Station along the Metrolink San Bernardino Line. Construction will primarily use public right-of-way involving coordination with partner agencies, including the cities of Rancho Cucamonga and Ontario, the Ontario International Airport Authority (OIAA), Caltrans, Metropolitan Water District, and Union Pacific Railroad. Construction of this innovative transportation system is to be accomplished by design-build and transitional five-year operate-maintain methodology. It is intended to be turnkey, including the planning, environmental compliance and approval, permitting, design, and construction, which will be implemented using multiple notices to proceed. SBCTA will pursue grant funds to fill the funding gap.

- HNTB Corporation was selected as the Project Management/Construction Management (PCM) team to support SBCTA in the Request for Proposal (RFP) process and oversight of the Project.
- Through the Request for Qualifications process, the SBCTA Board of Directors elected to proceed with The Boring Company as the Infrastructure Developer.
- The RFP process is underway. Contract negotiations could affect the schedule and total project cost.
- SBCTA and Omnitrans are working on a memorandum of understanding for Omnitrans as the Operations Oversight Agency.
- The Project is expected to take approximately four years to complete once the Infrastructure Developer Contract has been awarded.
- A phase-in period using human drivers is likely.
- SBCTA estimates operating costs of \$2.3 million per year, escalated at 3% annually, upon commencement of the service to fund Omnitrans and the contracted operations in accordance with the Infrastructure Developer contract.

Project Lead Agency: SBCTA

Current Development Phase: PA/ED

Complete for Beneficial Use: 2025

Funding Plan: The project is funded as shown in the table below.

TABLE 10.3.1

ONTARIO INTERNATIONAL AIRPORT (ONT) LOOP (1,000s)

FUNDING	PHASE					OPERATIONS*	TOTAL
	PM	ROW	DESIGN-BUILD	CONTINGENCY	CAPITAL TOTAL		
RAIL ASSETS	\$980				\$980		\$980
STA	\$31,612		\$24,250		\$55,862		\$55,862
UNFUNDED		\$7,000	\$40,583	\$12,417	\$60,000		\$60,000
LTF			\$15,167		\$15,167	\$15,071	\$30,238
TOTAL	\$32,592	\$7,000	\$80,000	\$12,417	\$132,009	\$15,071	\$147,080

*Operations costs represent the costs of startup and operations between Fiscal Year 2025/2026 and 2030/2031.

2 DMU TO ZEMU

Project Description: This project will conduct the research and development efforts necessary to develop the technology for a zero emission rail vehicle, including the purchase of a vehicle, conversion of the DMU to a ZEMU vehicle, and construction of the necessary infrastructure to support the alternative propulsion technology. The project also includes testing the converted vehicle on the Arrow service corridor. The ultimate goal of this project is to lead the way to eventually operate the entire Arrow corridor as a zero or low emission revenue operation. This conversion is anticipated as the introduction of ZEMUs in the United States, and possibly the entire continent.

- The project was awarded a \$30 million Transit and Intercity Rail Capital Program (TIRCP) grant.
- ZEMUs are not yet operated in revenue service.
- The schedule is dependent upon progress with the Federal Railroad Administration.
- The hydrogen fuel cell-battery hybrid was chosen as the preferred propulsion technology.
- The project needs specialized maintenance, infrastructure, and fueling facilities and requires modifications to the Arrow Maintenance Facility.
- Additional funding will be required to convert the initial Arrow corridor DMU vehicles to ZEMUs in the future.
- An on-site hydrogen fuel production facility may be necessary if the demand increases beyond the demand of the prototype vehicle.

Project Lead Agency: SBCTA

Current Development Phase: PS&E

Complete for Beneficial Use: 2024, dependent on FRA

Funding Plan: The project is funded as shown in the table below.

TABLE 10.3.2

DMU TO ZEMU (1,000s)

FUNDING	PHASE				TOTAL
	PA&ED	PS&E	CON - INFRASTRUCTURE	CON - ROLLING STOCK	
TIRCP	\$500	\$3,000	\$1,800	\$24,700	\$30,000
HIPP			\$1,662		\$1,662
STA*		\$3,651	\$2,179		\$5,830
TOTAL	\$500	\$6,651	\$5,641	\$24,700	\$37,492

*September 2021 SBCTA Board STA allocation while continuing to seek additional outside grant funding opportunities.

3 ZEMU CONVERSION OF THREE ARROW DMUs

Project Description: This project would convert the initial three DMU railcars purchased by SBCTA for the Arrow service to low or zero emission vehicles. When the State of California awarded a \$30 million Transit and Intercity Rail Capital Program (TIRCP) grant to develop the ZEMU technology, they indicated their excitement for the project and the desire to have SBCTA convert an additional vehicle once the prototype ZEMU project was complete. The ultimate goal of this conversion project would be to operate the entire Arrow corridor as a zero or low emission revenue operation.

- The initial ZEMU vehicle is still being manufactured, and testing has not yet commenced.
- Converting the initial vehicles would require coordination since the vehicles will be operated in revenue service when they are to be converted.
- The project needs specialized maintenance infrastructure, which is being completed as part of the initial DMU to ZEMU project.
- An on-site hydrogen fuel production facility may be necessary if the demand increases beyond the demand of the prototype vehicle.
- The project cost is subject to change as the technology is developed and more is known about the ability to convert a DMU to a ZEMU.

Project Lead Agency: SBCTA

Current Development Phase: Not started

Complete for Beneficial Use: 2029, dependent on the timing of the initial DMU to ZEMU project

Funding Plan: The project is funded as shown in the table below.

TABLE 10.3.3

ZEMU CONVERSION OF THREE ARROW DMUs (1,000s)

FUNDING	PHASE		TOTAL
	PM	CONVERSION	
STIP		\$7,500	\$7,500
STA	\$375		\$375
TOTAL	\$375	\$7,500	\$7,875

4 ZERO EMISSION BUS INITIATIVE

Project Description: This project will replace current transit buses with zero emission buses to meet the California Air Resources Board's Innovative Clean Transit regulation mandate. While not the typical project included in the 10-Year Delivery Plan, it cannot be understated that the costs for vehicles and infrastructure associated with this mandate are significant. Prior to the mandate, \$131 million was being reserved for replacement of buses and infrastructure currently in use, and now the estimated need to meet the mandate is an additional \$138 million, which doubles the funding traditionally reserved for bus purchases and replacements. While technology and costs for clean transit are ever-evolving, the current plan includes a mix of electric and hydrogen fuel cell technologies as the traditional electric vehicles do not meet the unique operating landscape and range needs to meet existing levels of service in all areas, especially in the Victor Valley and Mountain areas. The costs by operator shown below were submitted by the operators specifically for the 2021 Update, and subsequent to the Zero-Emission Bus Study that was completed in 2020.

- Competitive funding may replace a portion of the CMAQ funding, and applying for grant funding has been the focus of discussions with transit operators when meeting to identify funding options.
- Bus and infrastructure procurements will be completed by the transit operators.
- 100% of new bus purchases over 14,000 pounds must be zero-emission by 2029.
- It is unclear if future replacement of zero emission buses with zero emission buses will be eligible CMAQ costs.

Project Lead Agency: Transit Operators (Omnitrans, Victor Valley Transit Authority, Morongo Basin Transit Authority, Mountain Transit and Needles Area Transit)

Current Development Phase: Planning and Procurement

Complete for Beneficial Use: N/A, 2040 goal for full transition

Funding Plan: The project through 2031 is funded as shown in the table below.

TABLE 10.3.4

ZERO EMISSION BUS INITIATIVE (1,000s)

FUNDING	OPERATOR					TOTAL
	OMNITRANS	VVTA	MBTA	MOUNTAIN TRANSIT	NEEDLES TRANSIT	
CMAQ	\$89,981	\$23,730	\$5,575	\$6,882		\$126,168
UNFUNDED	\$11,379				\$147	\$11,526
TOTAL	\$101,360	\$23,730	\$5,575	\$6,882	\$147	\$137,694

5 ENTERPRISE RESOURCE PLANNING SYSTEM

Project Description: This project will deploy a new Enterprise Resource Planning (ERP) system at SBCTA. SBCTA currently has a financial system that supports several manual processes with minimal interfaces with other products. This results in duplicative efforts and staff resources because redundant data entry results in the need to use more than one system to obtain financial data for projects. The current business systems do not effectively support SBCTA's needs for financial management, planning, and analysis. Consequently, SBCTA seeks to implement an ERP system with the assistance of consultants. The consultants will evaluate SBCTA's technical and business needs, define the business requirements of SBCTA, procure and select an ERP solution that can replace both the current financial system and the project controls system, and ensure the successful implementation of that solution. The vision of the project is to implement and sustain an ERP System that will support staff in the delivery of SBCTA services and activities, take advantage of best practices, and significantly improve the efficiency and effectiveness of SBCTA's administrative processes. Meeting the schedule is dependent on the success of:

- Reallocating internal staff resources to the project and backfilling them with temporary staff.
- Managing resistance to change by communicating and informing the users of the new ERP system.
- Maintaining focus on the project scope.
- Implementing consultant partner selection to allow flexibility of selecting key personnel based on experience.
- Ensuring a long-term software maintenance agreement to reduce cost and maintain continuity of service for the selected ERP system.
- Selection of analysts/programmers to support the completion of the implementation.

Project Lead Agency: SBCTA

Current Development Phase: Pre-Planning

Complete for Beneficial Use: 2024

Funding Plan: The project is funded as shown in the table below.

TABLE 10.3.5

ENTERPRISE RESOURCE PLANNING SYSTEM (1,000s)

FUNDING	PHASE			CAPITAL TOTAL	ANNUAL MAINTENANCE	TOTAL
	PLANNING & ANALYSIS	SOFTWARE PROCUREMENT	SYSTEM IMPLEMENTATION			
MEASURE I	\$400	\$700	\$2,000	\$3,100		\$3,100
INDIRECT					\$1,105	\$1,105
TOTAL	\$400	\$700	\$2,000	\$3,100	\$1,105	\$4,205

* Annual maintenance costs represent the projected on-going annual costs between Fiscal Year 2024/2025 and 2030/2031.



BONDING SUMMARY

BONDING SUMMARY

11. BONDING SUMMARY

A total of 64 projects have been identified for inclusion in the 2021 Update at a total estimated cost of \$5.1 billion. The funding includes an estimated \$1.6 billion in Measure I revenue, of which \$401 million is raised by borrowing against future Measure I revenue. The 2019 Update estimated a bonding need of \$155 million in 2022. Because Measure I revenue is higher than previous estimates, and SBCTA was successful in the award of competitive grant funding for the Redlands Passenger Rail and West Valley Connector projects, bonding is no longer required in the San Bernardino Valley Metrolink/Rail Service and Express Bus/Bus Rapid Transit Service programs. In addition, the bonding previously anticipated for the Valley Freeway Interchange Program in Fiscal Year 2021/2022 has been postponed until 2026 due to the increased Measure I revenue, delays in starting construction on various projects, and the strategic use of interim cash flow borrowing.

When all of the project and revenue information has been determined, SBCTA incorporates the data into a complex bond model to analyze the bonding needs for each of the Subarea Programs. The model produces cash flows by Subarea Program that account for the timing of bonds, bond amounts, and associated debt service costs. Using this information, cash flow analyses are performed and debt coverage ratios are calculated.

The bonding analysis is developed with the following criteria:

- Minimum Agency-wide debt coverage ratio: 2.0X
- Individual Programs must have a positive cash flow over the term on the bond
- Bond interest rate: 5% for all future bond issuances
- Latest bond issuance: 2028

To minimize the costs associated with bonding, cash flow may be addressed with interim cash flow borrowing between Measure I Programs and/or commercial paper issuances. These strategies may be used as interim financing where the bonding amount needed in a year is less than \$100 million and could be combined with a future bond issuance. Commercial paper use will generally be restricted to providing interim financing for capital projects programmed for long-term debt or grant funding. Extensive analysis on bonding opportunities was completed for the following Programs that could not support Program costs on a pay-as-you-go basis:

- San Bernardino Valley Freeway Projects
- San Bernardino Valley Freeway Interchange Projects

As part of the bonding analysis, a stress test is usually performed. A stress test is a “what-if” analysis that reduces revenues to see the effect on the bonding scenarios. In the current stress test case, the 2022 projected revenue was reduced by 10%, no growth was assumed in 2023 and 2024, and then the growth rates in Section 2, Table 2.3.1 were applied, beginning in 2025 instead of 2022. This stress test scenario reduced the cumulative escalated Measure I revenue projection through 2040 by \$865 million. The scenario would not impact the ability to pay current debt service, but would increase the bonding amount needed in the 2026 issue in order to meet current program schedules and increase the cash flow borrowing or commercial paper issuance needs in the San Bernardino Valley Freeway Interchange and Express Bus/Bus Rapid Transit Service programs. Additionally, future bond issues would be affected, Measure I funds for operations of the Redlands Passenger Rail would need to be supplemented, less funds would be available for the Interchange Phasing projects, and anticipated ending program balances would be significantly reduced. Table 11.1 provides a summary of bonds already issued and the estimated bonding required to deliver the 2021 Update program of projects.

TABLE 11.1
BONDING SUMMARY SCHEDULE (1,000s)

PROGRAM	FISCAL YEAR OF BOND ISSUE										Estimated 10 YDP Bond Issues	TOTAL BOND ISSUES
	2012	2014	Previous Bonds Issued	2022	2023	2024	2025	2026	2027	2028		
Cajon Pass	\$35,000	\$20,000	\$55,000									\$55,000
Victor Valley Major Local Highway	\$20,000	\$6,000	\$26,000									\$26,000
North Desert Mountains												
Morongo Basin Colorado River												
San Bernardino Valley Programs: Freeway Projects								\$153,068		\$151,235	\$304,303	\$304,303
Freeway Interchange*		\$24,000	\$24,000					\$96,791			\$96,791	\$120,791
Major Street	\$39,000	\$43,000	\$82,000									\$82,000
Local Street												
Metrolink/Rail		\$27,000	\$27,000									\$27,000
Express Bus/Bus Rapid Transit*												
Senior & Disabled Transit												
Traffic Management Systems												
Total Per Issue	\$94,000	\$120,000	\$214,000					\$249,859		\$151,235	\$401,094	\$615,094



COMPLETED PROJECTS

COMPLETED PROJECTS

12.1 BACKGROUND

In the first 11 years of Measure I 2010-2040, from Fiscal Year 2010/2011 to 2020/2021, Measure I has participated in the delivery of projects in a wide range of its programs, totaling \$2 billion, with Measure I contributing \$384 million. Below are listed completed projects by Program.

12.2 PROJECT DETAILS BY MEASURE I PROGRAM

TABLE 12.2.1

SAN BERNARDINO VALLEY FREEWAY PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
I-215 Bi County HOV Gap Closure	Bernardino/ Colton/Grand Teri	\$203,266	\$57,977	2015	Final reconciliation
I-215/Barton Road Interchange	Grand Terrace	\$104,973	\$60,457	2020	\$2,134 Old MSI and \$58,323 New MSI; Final reconciliation
TOTAL		\$308,239	\$118,434		

TABLE 12.2.2

SAN BERNARDINO VALLEY FREEWAY INTERCHANGE PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
I-10/Live Oak Canyon	Yucaipa	\$17,941	\$4,903	2009	
I-10/Riverside Avenue, Phase 1	Rialto	\$31,335	\$6,694	2011	
SR 60/Euclid WB Off Ramp	Ontario	\$519	\$144	2013	SHOPP project, construction contribution only
I-10/Citrus Avenue	Fontana	\$57,734	\$5,663	2014	
I-10/Cherry Avenue	Fontana	\$80,665	\$16,897	2015	
I-15/Sierra Avenue Ramp Signals	SB County	\$3,190	\$389	2015	SHOPP project, construction contribution only
I-10/Tippecanoe Avenue	San Bernardino/Loma Linda	\$79,136	\$19,762	2016	
I-10/Pepper Avenue	Colton	\$9,926	\$354	2017	
TOTAL		\$280,446	\$54,806		

TABLE 12.2.3

SAN BERNARDINO VALLEY MAJOR STREET PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
North Milliken Avenue (UP)	Ontario	\$39,544	\$25,906	2013	
Hunts Lane (UP)	San Bernardino/Colton	\$32,430	\$1,126	2014	\$216 Old MSI and \$910 New MSI
Palm Avenue (BNSF)	San Bernardino	\$23,770	\$2,455	2014	
Glen Helen Parkway (UP&BNSF)	Devore	\$25,685	\$8,930	2015	
Laurel Street (BNSF)	Colton	\$59,854	\$8,897	2016	\$384 Old MSI and \$8,513 New MSI
North Vineyard (UP)	Ontario	\$47,353	\$20,790	2016	
South Milliken (UP)	Ontario	\$74,363	\$8,445	2016	Final ROW settlement in process
Monte Vista Grade Separation (UP)	Montclair	\$23,330	\$3,423	2019	Final claim settlement in process
TOTAL		\$326,329	\$79,972		

TABLE 12.2.4

SAN BERNARDINO VALLEY METROLINK/RAIL SERVICE PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Downtown San Bernardino Passenger Rail	San Bernardino	\$125,400	\$27,056	2017	
TOTAL		\$125,400	\$27,056		

TABLE 12.2.5

SAN BERNARDINO VALLEY EXPRESS BUS/BUS RAPID TRANSIT SERVICE PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
E Street Bus Rapid Transit	San Bernardino	\$188,647	\$5,484	2014	
TOTAL		\$188,647	\$5,484		

TABLE 12.2.6

SAN BERNARDINO VALLEY TRAFFIC MANAGEMENT SYSTEMS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Valley Signal Synchronization		\$15,550	\$184	2015	TMS funds continue to be used for maintenance of the system
TOTAL		\$15,550	\$184		

TABLE 12.2.7

VICTOR VALLEY MAJOR LOCAL HIGHWAY PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
I-15/LaMesa/Nisqualli Interchange	Victorville	\$69,242	\$4,806	2013	
Ranchero Rd / Escondido Ave Traffic Signal	SB County	\$2,652	\$1,006	2014	
I-15/Ranchero Interchange	Hesperia	\$58,913	\$4,016	2015	
SR138, widen 2 to 4 lanes, Phase 1	Caltrans	\$87,181	\$0	2016	SBCTA contributed \$16,245,000 of federal/state funds to project.
Yucca Loma Rd Bridge construction/ Yates Rd widening	Apple Valley/SB County	\$46,477	\$12,839	2016	EEP Work continues until August 2021
Yucca Loma Rd widening, Yucca Loma Bridge to Apple Valley Rd	Apple Valley	\$9,740	\$2,023	2018	
US 395 Phase 1 Widening, Palmdale Rd to Chamberlaine Way	Adelanto	\$55,974	\$1,445	2020	
TOTAL		\$330,179	\$26,135		

TABLE 12.2.8

VICTOR VALLEY PDTMS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
SANBAG Alternative Financing Study	SBCTA	\$120	\$120	2015	
High Desert Corridor	LA Metro	\$500	\$500	2015	
High Desert Corridor Rail Study	HDC JPA	\$200	\$200	2016	
Mountain Area Transportation Study	SBCTA	\$135	\$14	2017	
TOTAL		\$955	\$834		

TABLE 12.2.9

NORTH DESERT MAJOR LOCAL HIGHWAY PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Lenwood Road Grade Separation	Barstow	\$28,386	\$1,382	2015	Project closeout
TOTAL		\$28,386	\$1,382		

TABLE 12.2.10

MOUNTAINS MAJOR LOCAL HIGHWAY PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Village L Project	Big Bear Lake	\$6,110	\$2,400	2013	
TOTAL		\$6,110	\$2,400		

TABLE 12.2.11

MOUNTAINS PDTMS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Mountain Area Transportation Study	SBCTA	\$135	\$121	2016	
TOTAL		\$135	\$121		

TABLE 12.2.12

MORONGO BASIN MAJOR LOCAL HIGHWAY PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
SR62/Rotary Way Traffic Signal	SB County	\$552	\$552	2013	
SR62/Canyon Road to Easy Street	Twentynine Palms	\$2,054	\$300	2013	
National Park Road	Twentynine Palms	\$1,700	\$200	2013	
Lear Ave/Montezuma to Pole Line Study	SB County	\$26	\$26	2014	
SR62/Apache Trail to Palm Ave.	Yucca Valley	\$2,886	\$135	2014	
SR62/LaHonda to Dumosa	Yucca Valley	\$2,594	\$90	2014	
SR62/Dumosa Traffic Signal	Yucca Valley	\$736	\$686	2015	
SR62/Encelia Traffic Signal	Twentynine Palms	\$400	\$200	2016	
SR62/Lear Traffic Signal	Twentynine Palms	\$540	\$280	2018	
SR62/Encelia to Larrea Improvements	Twentynine Palms	\$1,599	\$400	2020	
TOTAL		\$13,087	\$2,869		

TABLE 12.2.13

MORONGO BASIN PDTMS COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Morongo Basin Area Traffic Study	SBCTA	\$65	\$65	2015	
TOTAL		\$65	\$65		

TABLE 12.2.14

COLORADO RIVER MAJOR LOCAL HIGHWAY PROJECTS PROGRAM - COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
Needles I-40 Connector	Needles	\$5,730	\$410	2018	
TOTAL		\$5,730	\$410		

TABLE 12.2.15

CAJON PASS PROGRAM COMPLETED PROJECTS (1,000s)

PROJECT NAME	JURISDICTION	ESTIMATED TOTAL COST	MEASURE I TOTAL COST	COMPLETE FOR BENEFICIAL USE	COMMENTS
I-15/I-215 Devore Interchange	SBCTA/CT	\$325,005	\$64,186	2016	
TOTAL		\$325,005	\$64,186		

Appendix – Acronym List

10 YDP	10-Year Delivery Plan
ADA	Americans with Disabilities Act
AEA	Advance Expenditure Agreement
ARP	American Rescue Plan Act of 2021
ART	Arterial
BNSF	Burlington Northern Santa Fe
BRT	Bus Rapid Transit
CEQA	California Environmental Quality Act
CMAQ	Congestion Mitigation and Air Quality
Const/CON	Construction
CP	Control Point
CRRSAA	Coronavirus Response and Relief Supplemental Appropriations Act
CT	Caltrans
CTC	California Transportation Commission
CTP	Countywide Transportation Plan
CTSA	Consolidated Transportation Services Agency
Design-Build	Design and construction services provided under a single contract
DDI	Diverging Diamond Interchange
DEMO	Federal Demonstration (Earmark) Funds
DIF	Development Impact Fees
DMU	Diesel Multiple Unit
DOT	Department of Transportation
EEP	Establish Existing Planting
ERP	Enterprise Resource Planning
Express Lanes	Express lanes are HOV lanes that also allow vehicles not meeting minimum occupancy requirements to use the lane by paying a toll
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GLA	Foothill Gold Line Construction Authority
HBP	Federal Highway Bridge Program
HDC	High Desert Corridor
HIP	Highway Infrastructure Program
HIPP	Hydrogen Infrastructure Partnership Program
HOV	High Occupancy Vehicle (Carpool)
IC	Interchange
ICT	Innovative Clean Transit regulation
IIP	Interregional Improvement Program
IMD	Federal Interstate Maintenance Discretionary Funds
JPA	Joint Powers Authority
LCTOP	Low Carbon Transit Operations Program
LLP	Local Partnership Program
LTF	Local Transportation Fund

Appendix – Acronym List

LSSRP	Local Bridge Seismic Retrofit Program
MATS	Mountain Area Transportation Study
MBATS	Morongo Basin Area Transportation Study
MBTA	Morongo Basin Transit Authority
Metro/LACMTA	Los Angeles County Metropolitan Transportation Authority
Metrolink	Regional passenger rail system for Southern California
MOE	Maintenance of Effort
MSI	Measure I
O&M	Operations and Maintenance
OIAA	Ontario International Airport Authority
ONT	Ontario International Airport
P6	Primavera 6
PAA	Project Advancement Agreement
PA/ED	Project Approval and Environmental Document
PCM	Project and Construction Manager
PDTMS	Project Development and Traffic Management Systems
PFS	Project Funding Summary
PM	Program Management
PPR	Program Project Report
PR	Project Report
PROP 1B	Proposition 1B Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006
PS&E	Plans, Specifications, and Estimate
PSR/PDS	Project Study Report/Project Development Support
PTMISEA	Public Transportation Modernization, Improvement & Service Enhancement Account
PUC	California Public Utilities Commission
RCTC	Riverside County Transportation Commission
RFP	Request for Proposal
RIP	Regional Improvement Program
ROW	Right of Way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
S&D	Measure I Senior and Disabled Transit Program
SANBAG	San Bernardino Associated Governments
SB1	Senate Bill 1 Road Repair and Accountability Act of 2017
SBCTA	San Bernardino County Transportation Authority
SCAG	Southern California Association of Governments
SCCP	Solutions for Congested Corridors Program
SCE	Southern California Edison
SCORE	Metrolink Southern California Optimized Rail Expansion Program
SCRRA	Southern California Regional Rail Authority (operates Metrolink service)
SGR	State of Good Repair Program
SHOPP	State Highway Operations and Protection Program
SLPP	State-Local Partnership Program
SRTP	Short Range Transit Plan
STA	State Transit Assistance Fund
STP	Surface Transportation Program
STIP	State Transportation Improvement Program
TCEP	Trade Corridor Enhancement Program
TCIF	Traffic Corridors Improvement Fund
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery

Appendix – Acronym List

TIRCP	Transit and Intercity Rail Capital Program
TMS	Traffic Management Systems
UP/UPRR	Union Pacific/Union Pacific Railroad
UZA	Urbanized Area
VMT	Vehicle Miles Traveled
VVTA	Victor Valley Transit Authority
WVC	West Valley Connector
ZEB	Zero Emission Bus
ZEMU	Zero Emission Multiple Unit



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