

Support Material for Agenda Item No. 5

Board of Directors Metro Valley Study Session

February 13, 2025

*****Start Time: 9:20 AM*****

Location

San Bernardino County Transportation Authority
First Floor Lobby Board Room
1170 W. 3rd Street, San Bernardino, CA 92410

TELECONFERENCING WILL BE AVAILABLE AT THE FOLLOWING LOCATION:

**Hesperia City Council Chambers
9700 Seventh Avenue
Hesperia, CA 92345**

DISCUSSION ITEMS

Regional / Subregional Planning

5. Long Range Multimodal Transportation Plan - Final Report

That the following be reviewed and recommended for final approval by the Board of Directors, acting as the San Bernardino County Transportation Authority, at a regularly scheduled Board meeting:

Approve the Final Long Range Multimodal Transportation Plan for purposes of input to the next Regional Transportation Plan/Sustainable Communities Strategy to be prepared by the Southern California Association of Governments.

The Long Range Multimodal Transportation Plan is being distributed separately from the agenda.



Final Report

San Bernardino County Long Range Multimodal
Transportation Plan

San Bernardino, CA

February 5, 2025



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Contents

1	Introduction	1
1.1	SBCTA Background	1
2	San Bernardino County Today	1
2.1	County Overview	1
2.2	Existing Multimodal System	3
2.2.1	Transit	3
2.2.2	Highways and Roads	4
2.2.3	Active Transportation	5
2.2.4	Goods Movement	7
2.3	Travel Patterns	8
2.4	State Policy and Funding Landscape	9
3	Future Trends and Challenges	9
3.1	San Bernardino County in 2050	9
3.2	Opportunities and Challenges	10
3.2.1	Managing Growing Demand	10
3.2.2	Congestion and Long Travel Distances	10
3.2.3	Equity	10
3.2.4	Balancing Passenger and Goods Movement	10
3.2.5	Air Quality, Emissions Reduction, and Regulatory Compliance	11
3.2.6	Revenue and Funding	11
3.2.7	Network Resiliency	11
3.3	Planning for Change	11
4	Vision for the County's Future	12
4.1	Where do we want to go?	12
4.2	How will we get there?	13
5	Community and Stakeholder Engagement	16
5.1	Project Website	16
5.2	Stakeholder Engagement	16
5.2.1	Stakeholder Working Group Meetings	17
5.2.2	Other Stakeholder Meetings	16
5.3	Public Engagement	16
5.3.1	Virtual Public Meetings	16
5.3.2	Pop-Up Meetings	17
5.4	Online Survey	17
6	LRMTP Priority Areas	18
6.1	Transit	18
6.2	Highways	21
6.3	Active Transportation	22
6.4	Goods Movement	25
6.5	Equity	26
6.6	Safety	26
6.7	Health	27

6.8	Land Use	27
6.9	Sustainability	29
6.10	Environment and Air Quality	29
7	Planning for Alternative Futures	31
7.1	Scenarios and Sensitivity Tests	31
7.2	Modeling Results and Key Findings	33
8	Funding Future Projects and Programs	37
8.1	Overview.....	37
8.2	Projects, Funding, and Their Relationship to Other SBCTA Plans.....	38
8.3	Observations about Funding for Transit Operations	48
9	Key Issues and Strategic Priorities	49
9.1	Multimodal Mobility and Connectivity	49
9.2	Goods Movement	51
9.3	Climate Adaptation and Resiliency	51
9.4	Disadvantaged Communities	52
9.5	Funding.....	53
10	Action Plan	53
11	Key Funding and Strategic Observations.....	59

Tables

Table 1:	Households and Employment by Subarea, 2019	8
Table 2:	Projected Households and Employment by Subarea, 2050	9
Table 3:	Goals, Objectives, and Performance Measures	14
Table 4:	Summary of Modeling Assumptions	32
Table 5:	Modeling Results by Scenario	35
Table 6:	Ten-Year Delivery Plan Projects.....	39
Table 7:	Projects Included in the Baseline Level of Funding	43
Table 8:	Planned Active Transportation Projects.....	44
Table 9:	Projects Included in the Aggressive Level of Funding	47
Table 10:	Key Actions for Mobility.....	53
Table 11:	Key Actions for Goods Movement	55
Table 12:	Key Actions for Climate Adaptation and Resiliency.....	56
Table 13:	Key Actions for Disadvantaged Communities.....	58
Table 14:	Key Actions for Funding	58

Figures

Figure 1:	Measure I Subareas.....	2
Figure 2:	Low-Income and Disadvantaged Communities	3
Figure 3:	Service Areas of the San Bernardino County Public Transit Systems	4

Figure 4. San Bernardino County Highway Network 5
Figure 5. Existing Countywide Bicycle Network..... 6
Figure 6. Existing Bicycle Network, Valley Subarea 6
Figure 7. Existing Bicycle Network, Victor Valley..... 7
Figure 8. LRMTTP Project Website 16
Figure 9. Trendlab+ Exercise..... 16
Figure 10. Social Media Virtual Public Meeting Notification 17
Figure 11. Example Survey Results..... 18
Figure 12. Countywide Promotion of SBCTA's K-12 Free Fare Policy..... 19
Figure 13. Omnitrans Priority Transit Corridors 20
Figure 14. Transit Vision 20
Figure 15. Planned Countywide Bicycle Network 23
Figure 16. Planned Bicycle Network, Valley Subarea 24
Figure 17. Planned Bicycle Network, Victor Valley Subarea 24
Figure . 2021 California Greenhouse Gas Emissions by Economic Sector 29
Figure 19. Allocation of SBCTA Revenue by Mode for FY 2023-2024..... 37
Figure 20. Projected Omnitrans Systemwide Operating Costs with Increasing Frequency 48

Appendices

- Appendix A. Community and Stakeholder Engagement Summary
- Appendix B. Countywide Transit Vision
- Appendix C. Scenario Modeling Memo

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1 Introduction

The Long-Range Multimodal Transportation Plan (LRMTP) intends to ensure the safe and efficient management, operation, and development of a regional multimodal transportation system that, when linked with appropriate land use planning, will efficiently serve the mobility needs of San Bernardino County residents, businesses, and visitors, with robust connectivity to the regional system. The LRMTP will be integrated with local land use planning to address community and regional goals as well as state and federal goals. In addition, the LRMTP will assist local and regional agencies in developing and implementing multimodal transportation policies, programs, and projects.

1.1 SBCTA Background

The San Bernardino County Transportation Authority (SBCTA) is the agency statutorily designated to serve in the following capacities for San Bernardino County:

- **County Transportation Commission (1976)** – Allocates and programs State and Federal funds for regional transportation projects throughout the county and conducts countywide transportation planning.
- **Service Authority for Freeway Emergencies (1986)** – Manages the system of call boxes on major highways throughout the county.
- **County Transportation Authority (1989)** – Administers the voter-approved half-cent transportation sales tax and provides major transportation improvements within the county.
- **Congestion Management Agency (1990)** – Implements the plan for addressing congestion and air quality related to transportation facilities throughout the county. It also manages the SBCTA Development Mitigation Nexus Study.

The San Bernardino Council of Governments (SBCOG) covers the entire county as well and operates under the same Board of Directors as SBCTA but is a separate entity. SBCTA supports train and bus transportation, freeway construction projects, regional and local road improvements, railroad crossings, call boxes, ridesharing, congestion management efforts, active transportation efforts, and long-term planning studies. SBCTA also administers Measure I, the half-cent transportation sales tax approved by county voters in 1989.

SBCTA collaborates with the Southern California Association of Governments (SCAG), the metropolitan planning organization for the six county Southern California region, on regional transportation and land use planning. This LRMTP will feed into the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) prepared by SCAG.

2 San Bernardino County Today

2.1 County Overview

San Bernardino County is large and diverse both geographically and demographically. It contains areas ranging from dense urban communities in the San Bernardino Valley to rural communities in the desert and mountains and vast deserts with interstate travel, resulting in unique travel needs across

the County. To account for the different needs of each region, the County is divided into 6 subareas for the purpose of administering Measure I funds, as shown in Figure 1.

Figure 1. Measure I Subareas



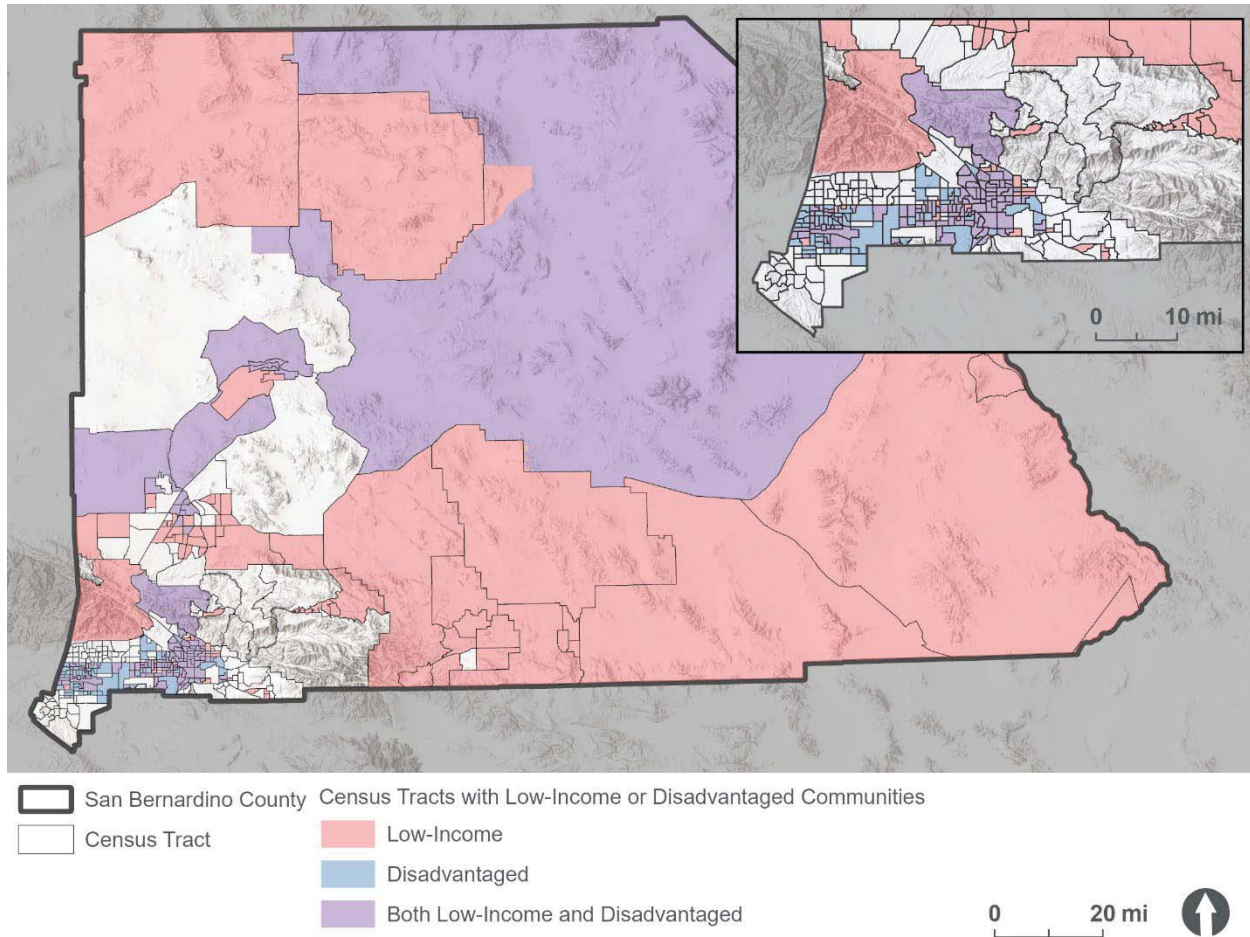
The County includes 24 incorporated cities with the population focused primarily in the Valley Subarea. Existing development of the County's transportation infrastructure and land use is rooted in the County's varying topography. The San Bernardino Mountains separate the Valley from the desert areas, and much of the transportation system and land development grew around the rail infrastructure as it followed the topography.

While less densely developed than neighboring coastal counties, the County is growing rapidly as a more affordable alternative to Los Angeles and Orange Counties. Developed areas of the county are primarily characterized by single-family residential development and clusters of commercial and industrial uses along major freeway and rail corridors, with pockets of multifamily housing in the Valley and Victor Valley subareas. Outside the Valley and Victor Valley subareas and the smaller communities in the Mountains, North Desert, Morongo Basin, and Colorado River subareas, land is

undeveloped, with large areas of preserved open space for environmental protection and recreational uses.

Many communities in the County are considered disadvantaged by the state due to socioeconomic factors and environmental conditions, as shown in Figure 2.¹ Many residents of these communities often are more dependent on public transportation and can face disproportionate burdens from the negative impacts of transportation infrastructure.

Figure 2. Low-Income and Disadvantaged Communities



2.2 Existing Multimodal System

2.2.1 Transit

Omnitrans and Victor Valley Transit Authority are the two largest transit providers. They cover the County's two large urban areas with expanded services provided via two designated Consolidated Transportation Service Agency (CTSA) programs. Mountain Transit, Basin Transit, and Needles Transit Services are the providers for three rural communities in the County. These providers, coupled

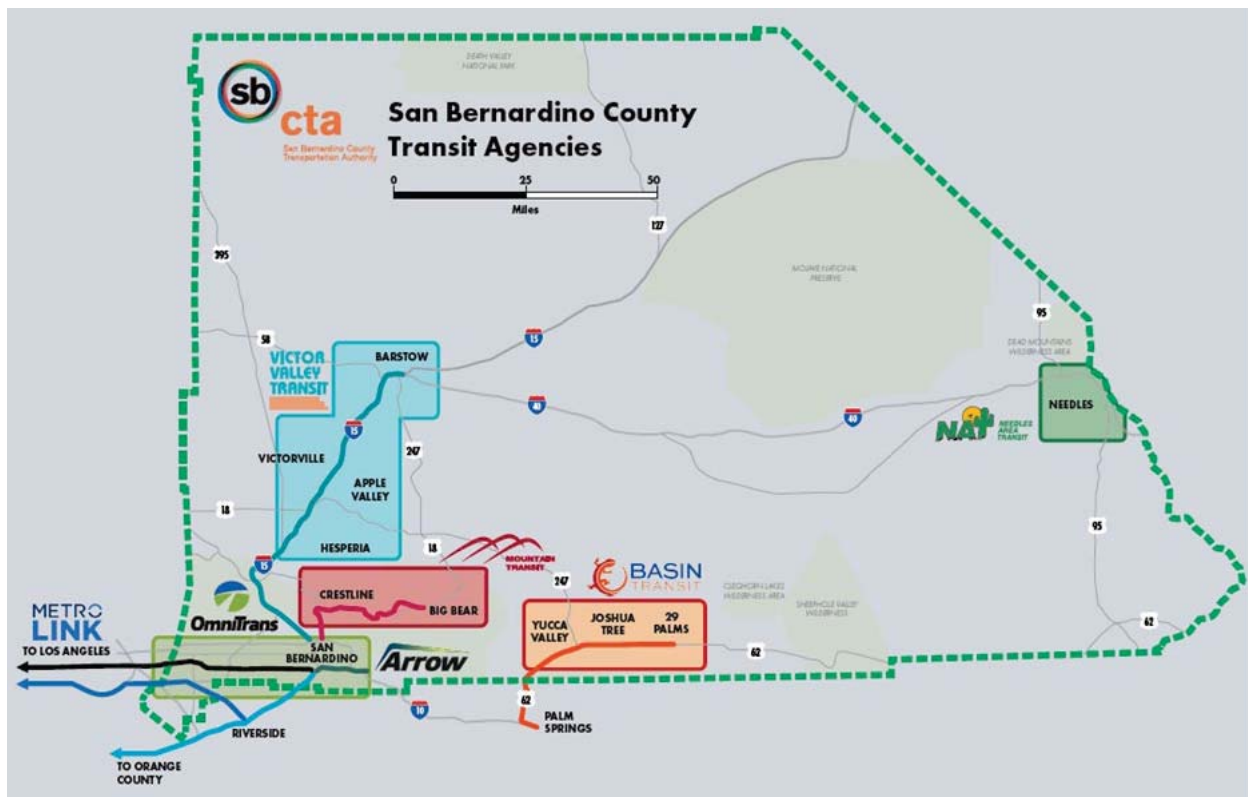
¹ Low-income communities are defined by Assembly Bill 1550 as census tracts having median incomes below 80% of the statewide median. Disadvantaged communities are defined per Senate Bill 535 and include tribal lands and census tracts that score highly on CalEnviroScreen, a tool that measures pollution and socioeconomic burdens.

with vanpool and rideshare services, form the public transit network that operates with the funding assistance of SBCTA but with separate Boards of Directors.

Currently, this transit network generates 4,441 route miles of fixed-route bus service, delivering more than 7.6 million bus trips to County residents in fiscal year (FY) 2023. Fixed-route service is supported by five paratransit programs that provide almost 300,000 annual complementary demand-response trips to those with barriers to using fixed-route services. The commuter rail system provided by Metrolink across 547 unduplicated route miles throughout its six-county service area includes 48 unduplicated route miles within San Bernardino County serving more than 2.1 million annual rail passenger trips.

Vanpool programs assist commuters with subsidized alternatives to driving alone at more than 500,000 paratransit trips per year. Specialized transportation providers serve vulnerable populations and fill in the public transit network, providing almost 300,000 trips.

Figure 3. Service Areas of the San Bernardino County Public Transit Systems

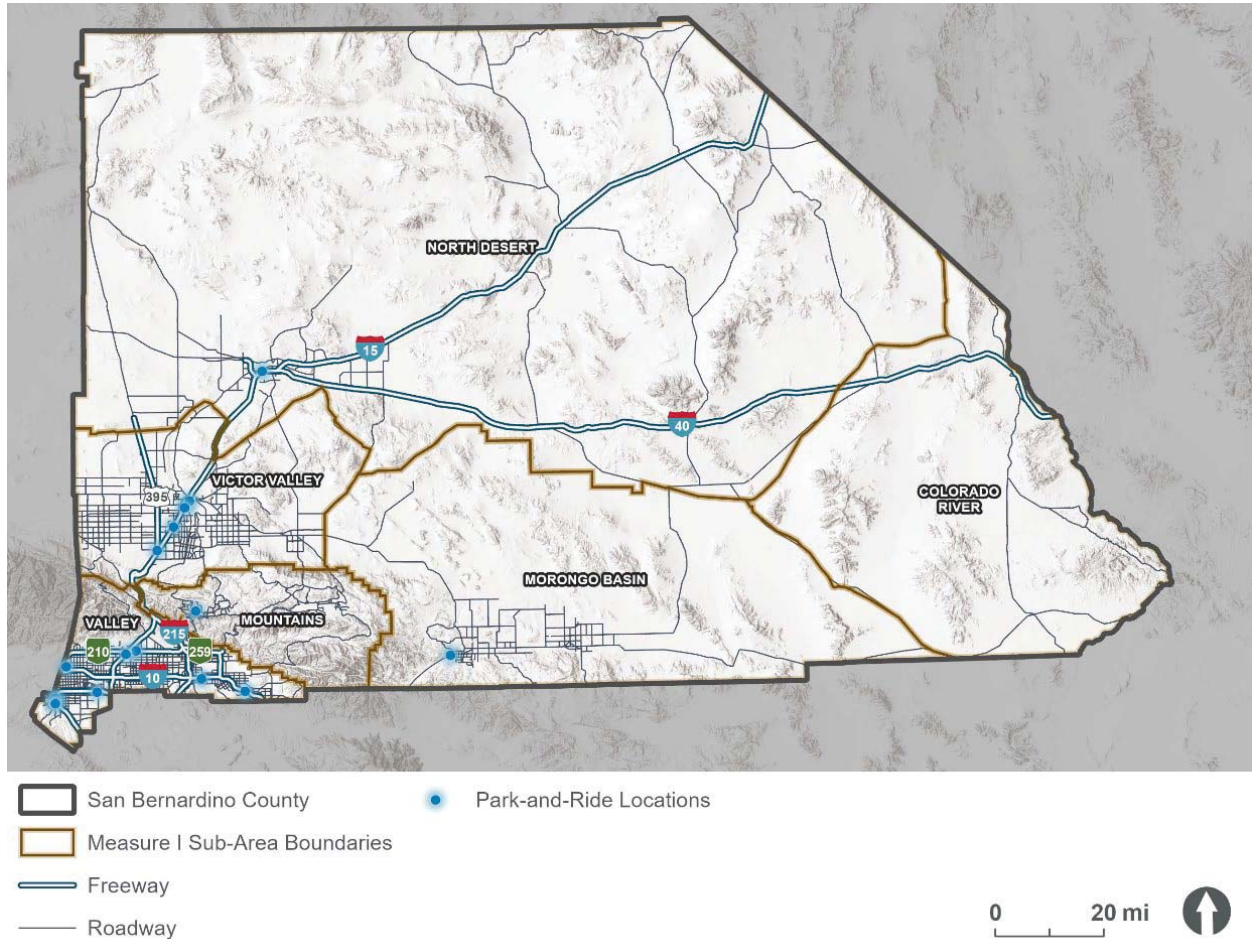


2.2.2 Highways and Roads

Several key Interstate and State Highways traverse the County, serving travel within the County and connecting to neighboring counties in California, Nevada, and Arizona. The freeway system is complemented by a network of arterial highways to facilitate local and regional travel. As of 2021, the County had over 12,000 centerline miles of highways and roads, including 459 centerline miles of freeways. To address freeway congestion, the County has a growing system of managed lanes consisting of 39 lane-miles of High-Occupancy Vehicle (HOV) lanes and 10 miles of tolled express lanes that opened in August 2024. To facilitate carpooling, vanpooling, and access to transit, there are 21 park-and-ride lots in the County. These lots, located at transit hubs or along major highway

corridors, allow travelers to make multimodal trips by providing a designated place for drivers to leave vehicles when connecting to another mode.

Figure 4. San Bernardino County Highway Network



2.2.3 Active Transportation

While the county has a limited number of off-street Class I multi-use paths, sidewalks and on-street Class II bicycle lanes make up the bulk of the county’s active transportation infrastructure. These networks are focused in the populated areas of the county and only a portion of planned infrastructure has been built. The County has 645 miles of bikeways compared to over 11,400 miles of roads.

Figure 5. Existing Countywide Bicycle Network

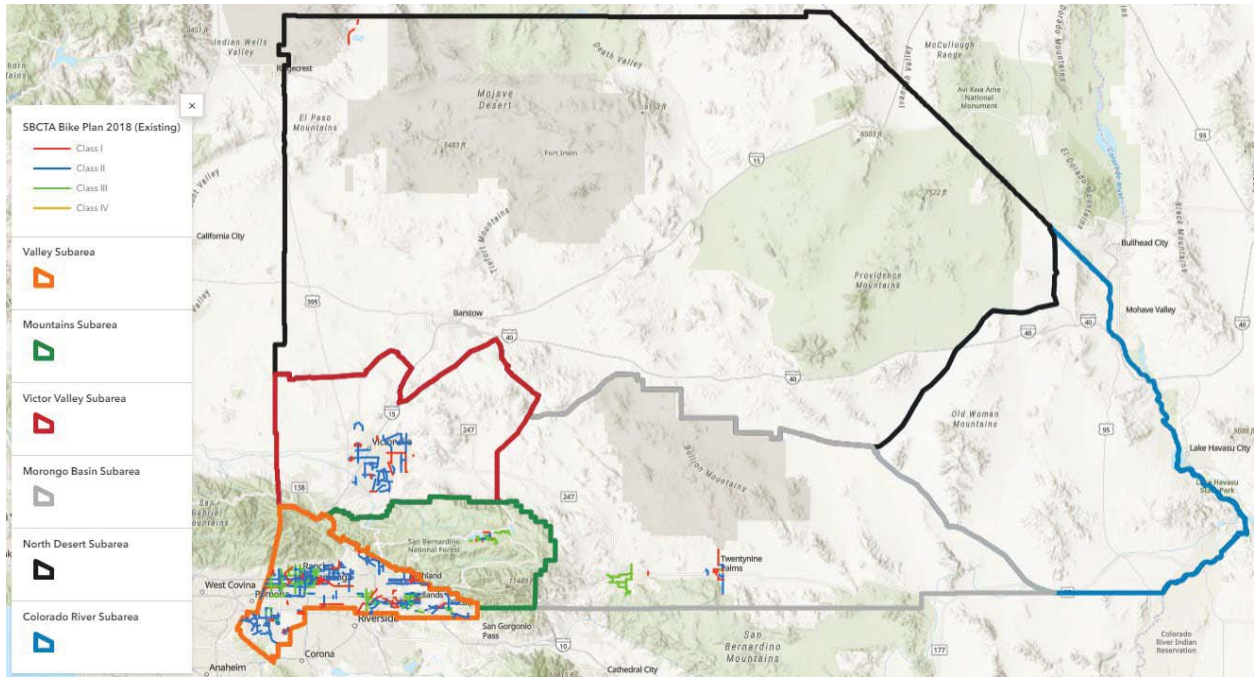


Figure 6. Existing Bicycle Network, Valley Subarea

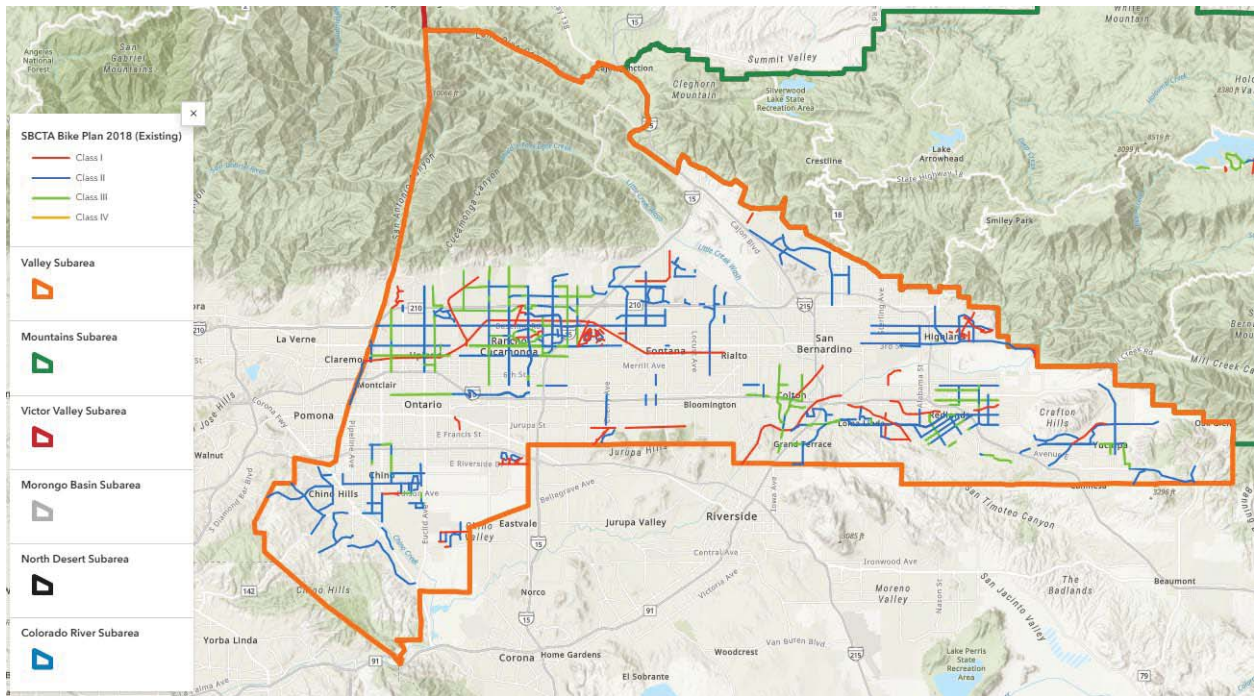
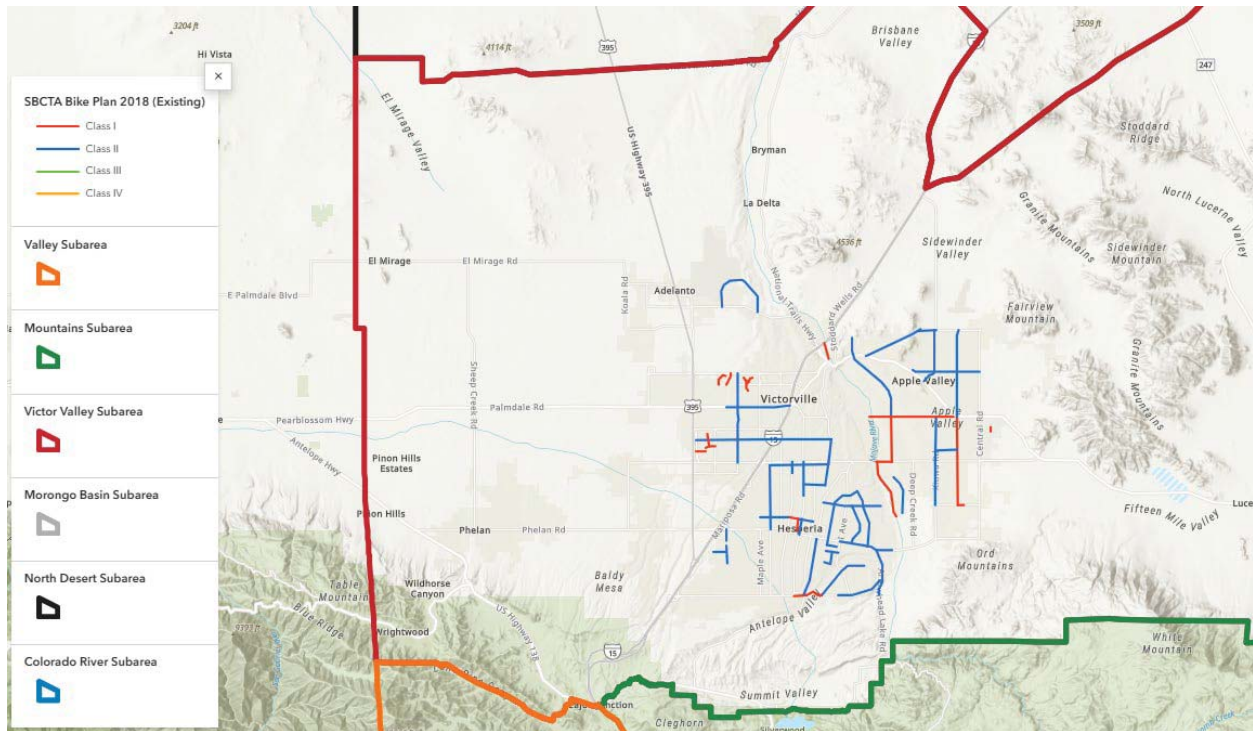


Figure 7. Existing Bicycle Network, Victor Valley



2.2.4 Goods Movement

Goods movement plays an outsized role in the economy and transportation system of San Bernardino County due to the county’s location as a gateway between the Ports of Los Angeles and Long Beach and the rest of the nation. The transportation and warehousing sector alone accounts for approximately 15 percent of employment in the county. Trucks share the roadway system with passenger vehicles. To reduce conflict between slow moving trucks and other vehicles on traveling uphill on eastbound Interstate (I) 10, dedicated truck climbing lanes are provided through the Redlands portion of I-10, and a second eastbound truck climbing lane will be complete through the City of Yucaipa by late 2025. Caltrans has also constructed truck climbing lanes on northbound I-15 in the Cajon Pass, and an extension is being planned on northbound I-15 from Kenwood Drive to State Route (SR) 138.

Two Class I freight railroads serve the region: BNSF Railway (BNSF) and the Union Pacific Railroad (UP). Additionally, two short-line railroads, the Trona Railway and the Arizona and California Railroad, operate in San Bernardino County, providing connections to the Class I railroads.²

UP’s Yuma Subdivision extends from Colton to Riverside County and ultimately Arizona. The Los Angeles and Alhambra subdivisions start at UP’s Los Angeles intermodal facility and stretch east toward Riverside and Colton, respectively. The Mojave subdivision runs from Colton to Mojave via the Cajon Pass. The UP has established a “pop-up” intermodal facility on its Alhambra Line in Fontana, which it is planning to expand. UP’s West Colton Yard serves as a major rail classification yard.

² Short-line railroads are small rail companies that operate over a relatively short distance, generally connecting to connecting to larger freight rail networks.

BNSF’s Cajon, San Bernardino, and Needles subdivisions form part of the Southern Transcon route from Los Angeles to Chicago, which connects to the Ports of Los Angeles and Long Beach through the Alameda Corridor. BNSF operates a major freight intermodal facility in San Bernardino just west of I-215 and south of Fifth Street, which focuses on the transloading of domestic freight. BNSF also operates a large rail classification yard in Barstow.

In addition to the truck and rail goods movement, Ontario International Airport (ONT) has the second largest share of air cargo traffic in Southern California, and the Southern California Logistics Airport (SCLA) in Victorville is set to develop into major domestic and international air cargo hub.

The elements of the regional goods movement system are described in detail in [Goods Movement Technical Report](#) included in SCAG’s RTP.

2.3 Travel Patterns

The developed areas of the county are primarily suburban or rural in character, and the county has relatively fewer jobs per household than the SCAG region, resulting in many residents needing to commute to neighboring counties for employment. That said, the Valley subarea is steadily densifying and is home to the county’s largest job centers. The Valley exceeds the SCAG average for jobs per household, drawing workers from other counties as well as other subareas within the County, all of which have less than one job per household.

Table 1: Households and Employment by Subarea, 2019

Subarea	Number of Households (HH)	Number of Jobs	Jobs per HH
Valley Subarea	463,153	704,495	1.52
Mountains Subarea	22,050	10,876	0.49
Victor Valley Subarea	122,934	106,438	0.87
Morongo Basin Subarea	26,527	16,894	0.64
North Desert Subarea	19,346	16,884	0.87
Colorado River Subarea	2,974	2,189	0.74
County Total	656,984	857,776	1.31
SCAG Region Total	6,333,000	8,965,000	1.42

Source: SBCTA, 2023.

Although there are many inter-county trips, all the subareas see the majority of trips remaining internal to their subareas. The Valley subarea shows strong travel links to Los Angeles, Orange, and Riverside Counties, while other subareas see more connections to subareas within the county. The North Desert subarea has a strong travel link with the Victor Valley subarea. The Colorado River subarea has a significant share of trips leaving the state to access jobs and services in Arizona. Travel patterns and extensive demographic data for each subarea can be found within the LRMTTP Storymap at: [SBCTA: Long Range Multimodal Transportation Plan](#).

2.4 State Policy and Funding Landscape

This plan is being developed in the context of new state policy initiatives. Prepared by Caltrans in 2021, the California Transportation Plan 2050 lays out the state’s vision for transportation in the next three decades. Later in 2021, the California State Transportation Agency (CalSTA) developed the Climate Action Plan for Transportation Infrastructure (CAPTI), which details how the state will direct discretionary transportation investment to aggressively combat climate change. These plans establish a vision for transportation statewide that is more multimodal in nature and reduces the number of single occupancy vehicle trips made on California’s highways and roads.

Funding for building and operating the transportation system comes from a variety of local, state and federal sources. SBCTA administers Measure I, a voter-approved county-wide half-cent sales tax dedicated to transportation. This provides regionally controlled funds that can be used to fund the region’s priorities and can be leveraged as matching funds for state or federal grant programs. Measure I was passed in 1989 and extended in 2004, with an end date of 2040 if not extended again.

State and federal transportation funding is distributed through formula and discretionary grant programs. Formula funds are allocated to agencies based on population or other factors, whereas discretionary programs require agencies to submit applications to compete for the available funds. At both the state and federal levels, discretionary grant programs are increasingly oriented toward multimodal solutions that tend to focus on transit, active transportation, and freight. Guidelines for these competitive programs are more closely scrutinizing projects that expand roadway capacity.

Senate Bill (SB) 743, which went into effect in 2020, also changed the way that traffic impacts are assessed for projects subject to environmental review. In particular, projects that add new general purpose or managed lanes must now measure and mitigate increases in vehicle miles traveled (VMT) induced by the project.

3 Future Trends and Challenges

3.1 San Bernardino County in 2050

Overall, San Bernardino County is projected to continue growing rapidly, with growth in both households and employment projected to outpace the overall growth rates for the SCAG region as a whole, as shown in Table 2. In absolute numbers, the majority of this growth will occur in the Valley subarea, and the Victor Valley subarea is projected to experience the fastest growth in percentage terms. As discussed further below, this growth presents both opportunities and challenges.

Table 2: Projected Households and Employment by Subarea, 2050

Subarea	Number of Households (HH) (% Growth)	Number of Jobs (% Growth)
Valley Subarea	610,850 (32%)	856,109 (22%)
Mountains Subarea	22,089 (0%)	11,980 (10%)
Victor Valley Subarea	197,550 (61%)	153,699 (44%)
Morongo Basin Subarea	37,165 (40%)	23,306 (38%)

North Desert Subarea	26,521 (37%)	22,297 (32%)
Colorado River Subarea	3,487 (17%)	2,507 (15%)
County Total	897,662 (37%)	1,069,898 (25%)
SCAG Region Total (2045)	7,633,000 (21%)	10,049,000 (12%)

Source: SBCTA, 2023.

3.2 Opportunities and Challenges

3.2.1 Managing Growing Demand

A growing population and economy present both opportunities and challenges. Economic growth brings the prospect of better jobs for residents and new resources for transportation. If concentrated near existing transit corridors, population growth could spur increased transit ridership. On the other hand, if new development is low density and located on the fringes of the region, it could mean more cars driving longer distances on increasingly congested roads.

3.2.2 Congestion and Long Travel Distances

The County is large, and development is dispersed, and though most trips stay within the subarea as noted in section 2.3, many trips are long, and most of the urban freeways are congested during the morning and afternoon peak periods. Though significant investments are being made in transit connectivity and encouragement of ridesharing, long commute distances make it difficult to connect travelers to destinations via frequent transit or active transportation, leading to auto-dependence and long travel times on a congested roadway network. In San Bernardino County, 76 percent of working residents drive alone to work, 11 percent carpool, and 9 percent work regularly from home. In addition to time, the financial costs of owning and operating motor vehicles create an affordability challenge for the County’s residents, particularly low-income communities.

3.2.3 Equity

As noted in section 2.1, many communities in the County are considered disadvantaged compared to statewide averages due to socioeconomic factors and environmental conditions. These communities often have limited transportation options and can face disproportionate burdens from the negative impacts of transportation infrastructure. While the county faces a challenge in addressing inequity, state and federal funding programs increasingly emphasize equity as a selection criterion, providing an opportunity to close mobility gaps and reduce disparate impacts.

3.2.4 Balancing Passenger and Goods Movement

Due to the county’s location as gateway between the Ports of Los Angeles and Long Beach and the rest of the nation, goods movement and warehousing play an outsized role in the county’s economy. Trucks share roads with buses and cars, and freight trains share tracks with commuter and intercity trains. This can create safety concerns and contributes to congestion that causes delay for passengers and increases shipping times. With continued economic and population growth, demand for both goods and passenger movement will only increase.

3.2.5 Air Quality, Emissions Reduction, and Regulatory Compliance

San Bernardino County's geography results in air pollutants being trapped in its air basins, resulting in some of the worst air quality in the country. Zero-emission technology provides an opportunity to improve air quality and combat climate change, but reduced range, higher cost, and inconvenience factors present challenges to adoption. Trucking is a major contributor to pollution, but the distances traveled and loads carried by trucks are particularly challenging for zero-emission vehicles. Transit agencies face state mandates to transition to zero-emission operations, which presents a challenge to maintain or expand service while transitioning to range-limited, higher-cost vehicles.

3.2.6 Revenue and Funding

Need for capital and operating funds to deliver all proposed improvements exceeds available resources. A significant portion of state and federal transportation funding is derived from taxes on gasoline and diesel fuels. The federal gas tax is not indexed to inflation and loses purchasing power each year. The SB 1 Road Repair and Accountability Act increased state gas and diesel taxes and indexed those to inflation in 2017, but revenues will decline in real (inflation-adjusted) terms as fuel efficiency and zero-emission vehicle adoption increases. The state is conducting additional pilot programs to test the feasibility of a mileage-based road user charge. At the local level, Measure I is set to expire in 2040 unless extended again by voters.

3.2.7 Network Resiliency

San Bernardino County faces a number of hazards and challenges due to a changing climate. The frequency and severity of extreme weather events, including heat, wildfire, flooding, mudslides, and winter weather, are projected to increase in San Bernardino County. In these extreme weather events, infrastructure subjected to prolonged heat, cold, moisture, or dryness may deteriorate faster than planned. Flooding, mudslides, wildfire, or winter weather may force temporary or prolonged closures of roadways and railways. High volumes of heavy truck traffic in the county compound the challenge of maintain the county's roads in a state of good repair.

3.3 Planning for Change

Several factors drive change for San Bernardino County. Continued growth will drive overall travel demand, but the pattern in which the county develops will determine where and how the public will travel. Technology and its adoption also influence travel demand. Increased telework has the potential to reduce commute trips while increasing home-based trips to other destinations and can influence people's choice of where to live. Legislative changes, such as zero-emission requirements and new potential revenue sources also affect the transportation system. Some of these factors were modeled and are described in Section 7. SBCTA will continue to monitor emerging transportation trends and adjust strategies throughout the implementation of the LRMTTP.

4 Vision for the County's Future

4.1 Where do we want to go?

The SBCTA Long-Range Multimodal Transportation Plan is guided by a vision, developed collaboratively with key stakeholders and community members, that encompasses the key elements that the plan aims to achieve.

LRMTP Vision Statement

“San Bernardino County’s integrated, multimodal transportation system strengthens the health of our communities, the environment, and our economy by providing safe, reliable, and equitable connectivity for people and goods.”

Transportation is vitally important to San Bernardino County’s communities, helping to sustain the economy, deliver goods and services, and connect people with each other. We are also in an era of rapid change, including technological advancement, shifting travel patterns, and climate change. Delivering an effective and resilient transportation system requires the joint efforts of multiple agencies and communities working together towards common goals. The vision for the transportation system in San Bernardino County builds on what makes the County unique and encourages us to work together to solve our current and future challenges.

Given the challenges and opportunities faced by residents, businesses, and visitors of San Bernardino County, the LRMTP is guided by the vision and six primary goals:

- **Connectivity.** The transportation system’s primary purpose is to connect our communities, enabling people and goods to get where they need to go. In this large and diverse county, many people travel long distances for jobs, school, medical services, or other reasons. The transportation system should provide reliable, integrated, and multimodal access to origins and destinations.
- **Equity.** Compared with California as a whole, many San Bernardino County communities are considered disadvantaged based on incomes levels and environmental conditions. The transportation network should help alleviate burdens by providing clean, safe, and affordable access to jobs, education, services, and recreation while actively promoting environmental justice.
- **Economy.** San Bernardino County boasts a vibrant economy integrated with the Southern California region. Increased economic activity, including warehousing and logistics, brings jobs and economic opportunity but can also cause issues with traffic congestion, safety, and air quality. The transportation system should support economic growth while addressing the challenges stemming from increased freight and automobile traffic.
- **Environment.** San Bernardino County includes a large range of ecosystems, including mountain forests, plains and valleys, and expansive deserts. Due to climate change, it is also increasingly likely to suffer extreme heat, wildfires, or floods. The transportation system should be resilient to maintain mobility in challenging conditions and contribute to preserving the quality of the county’s environment for future generations.
- **Quality of Life and Public Health.** San Bernardino County enjoys mild weather and ample recreation opportunities; however, many areas suffer from poor air quality, and spread-out development patterns require most people to drive to their destinations. This in turn causes

more traffic congestion and emissions, and limits opportunities for physical activity. The transportation system should strengthen the health of our communities by reducing vehicle-related emissions and supporting development patterns that allow people to walk, bike, and use transit.

- **Safety.** San Bernardino County residents, workers and visitors need to feel safe using the transportation system. This involves making improvements to reduce conflicts between vehicles, trucks, bicyclists, and pedestrians, and providing safe access routes to schools and waiting areas at transit stops and stations.

4.2 How will we get there?

The LRMTTP's goals set a course for SBCTA and its partners to carry out programs and projects with a long-term vision in mind. The goals of the LRMTTP are broadly consistent with state and local transportation plans including California Transportation Plan 2050, CAPTI, and build on prior San Bernardino Countywide Transportation Plans. The LRMTTP supersedes those plans.

For each of the six LRMTTP goals, several objectives have been identified through engagement with key stakeholders. The goals and objectives, shown in Table 3, have guided the development and evaluation of alternatives throughout the LRMTTP process.

The LRMTTP will involve scenario planning to understand how the transportation network performs in different contexts. The performance measures shown in Table 3 were developed to assess how well each scenario contributes to achieving the goals and objectives.

The performance measures are intended to further the LRMTTP process by distinguishing between scenario outcomes. Other measures may be valuable for SBCTA to track and measure progress over time but are less helpful for evaluating scenarios. Examples of "tracking measures" may include:

- Number of fatalities and serious injuries on the transportation system by mode
- Number of electric vehicles and electric vehicle charging stations throughout the County
- Total miles of bicycle paths and lanes by class
- Pavement condition by facility type
- Transit ridership by system
- Congestion levels on the roadway network

Performance measures were chosen based on available data and the metrics' ability to capture the impact of implementing multimodal transportation improvements across different scenarios. Many measures apply to multiple goals and objectives.

Table 3. Goals, Objectives, and Performance Measures

Goals	Objectives	Performance Measures
<p>Connectivity: Improve multimodal mobility and safe access to destinations for all users</p>	<ul style="list-style-type: none"> Improve multimodal mobility and access to jobs, housing, and key destinations Improve connectivity between modes and services Better integrate transit and bicycle/ pedestrian facilities with land use planning 	<ul style="list-style-type: none"> Total VMT and vehicle hours traveled (VHT) (by truck and by passenger vehicles) Average passenger vehicle VMT per capita Person-hours traveled for work and non-work trips Annual hours of delay (total and per capita) Mode share for work trips and non-work trips Transit ridership Share of population, population in disadvantaged communities, and employment within half mile of transit stop Share of population, population in disadvantaged communities, and employment in high quality transit areas (as defined by SCAG) GHG emissions (total and per-capita) Criteria pollutant emissions Truck delay by facility type (freeway, arterial)
<p>Equity: Reduce transportation burdens for low-income communities, communities of color, people with disabilities, and other disadvantaged groups</p>	<ul style="list-style-type: none"> Reduce transportation cost burden to underserved communities Improve access to mobility options for disadvantaged groups 	
<p>Economy: Support a vibrant, resilient economy</p>	<ul style="list-style-type: none"> Support access to employment, educational institutions, and businesses via all modes, with special emphasis on transit, shared-rides, and non-motorized Improve freight's economic competitiveness and efficiency Maintain infrastructure in a state of good repair Deploy resources in a cost-effective manner 	
<p>Environment: Enhance environmental health and reduce negative transportation impacts</p>	<ul style="list-style-type: none"> Reduce VMT, greenhouse gas (GHG) emissions, and air pollution Strengthen the transportation system's resiliency to withstand and recover from disruptions brought about by natural disasters, climate change, and other factors Support clean mobility technology, including the freight sector 	
<p>Quality of Life and Public Health: Enable vibrant, healthy communities</p>	<ul style="list-style-type: none"> Manage the impact of freight traffic in neighborhoods Reduce sources of delay on the transportation system Increase the share of people carpooling, bicycling, walking, and taking transit Improve the convenience and comfort of using bicycle, pedestrian, and transit networks 	
<p>Safety: Provide a safe and secure transportation system</p>	<ul style="list-style-type: none"> Reduce fatalities and serious injuries on the transportation system 	

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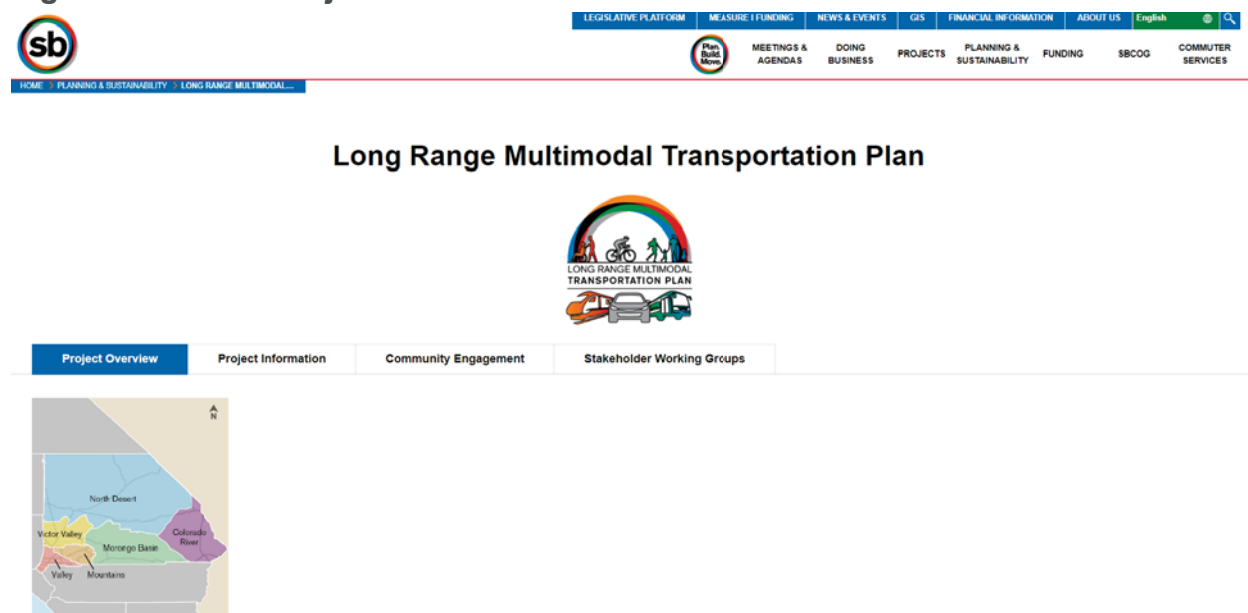
5 Community and Stakeholder Engagement

Community and stakeholder engagement played a crucial role in developing the LRMTMP. Community input was vital to understanding the County’s needs and challenges, as well shaping the goals, objectives, and strategic priorities. Stakeholders and community members were engaged throughout the process and provided input through multiple channels, including online surveys, in-person events, and stakeholder working group meetings. Project materials were available in English and Spanish and Spanish translation was available at all public events. Full summaries of engagement materials and input received are included in Appendix A.

5.1 Project Website

A project website, gosbcta.com/lrmtmp, was created and hosted on SBCTA’s main site. This website served as a clearinghouse for project information and provided information on upcoming meetings and events. The project website hosted fact sheets, the Existing Conditions Story Map, registration links for public meetings, and meeting notes and recordings.

Figure 8. LRMTMP Project Website



5.2 Stakeholder Engagement

SBCTA convened two Stakeholder Working Groups made up of representatives from key partner agencies, transportation providers, Community-Based Organizations, advocates, and other groups. These groups met regularly throughout the planning process to provide input at key milestones. Due to the size of the County and the number of stakeholders, members were divided into a municipality-focused Community Working Group and transportation-focused Mobility Working Group; however, each group received the same meeting materials and participants were invited to join the working group meeting that best fit their schedules.

Community Working Group members:

- Arts Connection Network
- Center for Community Action and Environmental Justice
- City of Adelanto
- City of Barstow
- City of Big Bear Lake
- City of Montclair
- City of Needles
- City of Rancho Cucamonga
- City of Redlands
- City of Twentynine Palms
- City of Victorville
- City of Yucca Valley
- El Sol Neighborhood Educational Center
- Inland Action
- Reach Out
- San Bernardino County
- SBCTA
- SCAG

Mobility Working Group members:

- Active transportation advocates
- Caltrans
- City of Rancho Cucamonga
- City of Victorville
- Omnitrans
- Morongo Basin Transit Authority
- Mountain Transit
- Needles Area Transit
- Southern California Regional Rail Authority (Metrolink)
- SBCTA
- SCAG
- South Coast Air Quality Management District
- Victor Valley Transit Authority

5.2.1 Stakeholder Working Group Meetings

A series of meetings were held during key points in the project process. Two meetings were held during each round, with identical agendas. Due to the size of the County and the number of stakeholders involved, all working group meetings were held virtually.

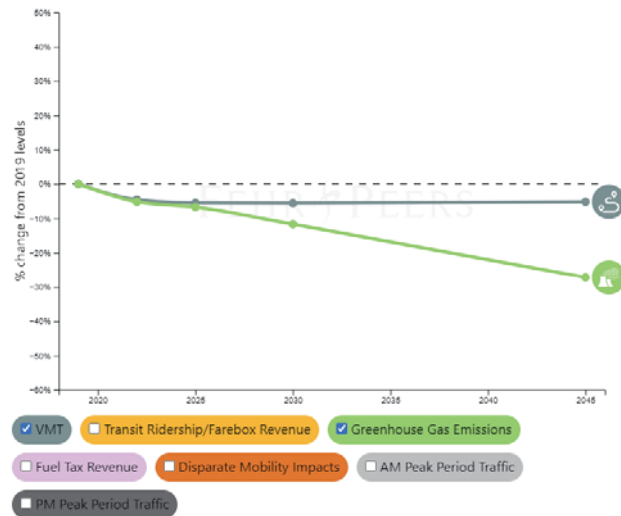
Round 1. The first round of working group meetings took place in July 2023, and provided an overview of the project effort, existing conditions analysis, and a visioning discussion. Participants were asked to provide their opinions on polling questions regarding key concerns, goals, and priorities.

Round 2: The second round of meetings were held in October 2023. Participants gave input on the proposed LRMTTP vision statement, goals and objectives, and performance measures. They also participated in an interactive discussion on future trends and drivers of change that could affect the County’s transportation system over next few decades, including an exercise using the Trendlab+ tool to visualize impacts of these changes (Figure 9).

Round 3: The third round of meetings in March 2024 covered a series of LRMTTP Priority Areas, including all transportation modes and key issues including equity, sustainability, and land use. Participants were invited to weigh on these topics, their importance to the LRMTTP, and how they related to each other.

Round 4: The fourth round of meetings in August 2024 focused on discussing the results of the scenario planning process as well as the LRMTTP's proposed Strategic Priorities. Participants were asked whether these priorities were sensible, whether any were missed, and how the priorities related to each of the County's geographic subareas.

Figure 9. Trendlab+ Exercise



5.2.2 Other Stakeholder Meetings

Aside from the Stakeholder Working Groups, the project team held discussions and briefings on the LRMTTP with other stakeholder groups, including:

- SBCTA Transportation Technical Advisory Committee (TTAC) – May 1, 2023 and September 9, 2024
- Inland Southern California Climate Collaborative (ISC3) – July 12, 2023

5.3 Public Engagement

Two rounds of public meetings were held at key milestones – one early in the process (fall 2023) to gather input on needs and concerns, and the second (fall 2024) to provide input on plan recommendations.

5.3.1 Virtual Public Meetings

Due to the vast size of the County, virtual public meetings were held to provide opportunities for participation throughout the region. These virtual public meetings were held using Zoom and included Spanish translation, presentation, and facilitated Q&A sessions. They were advertised via e-blasts, social media, the project website. Members of the Stakeholder Working Groups were encouraged to advertise the virtual public meetings amongst their networks and communities.

Round 1. The first round of virtual public meetings took place on September 27 and October 3, 2023, from 6-7 p.m. These meetings covered project introduction and process, existing conditions, and a

series of polling questions designed to gather input on key concerns with the County's transportation system and priorities for improvements.

Round 2. The second round of virtual public meetings were held on September 17 and 19, 2024, from 6-7 p.m. Project team members discussed project progress, scenario planning, and LRMTTP Strategic Priorities. Participants were invited to respond to polling questions on priority topics for the LRMTTP.

During each meeting, participants could submit questions using the Zoom Q&A function or could ask questions verbally during the Q&A. Project team members and SBCTA staff provided answers to questions on the LRMTTP as well as other transportation-related topics.

Figure 10. Social Media Virtual Public Meeting Notification



5.3.2 Pop-Up Meetings

During each round of public engagement, pop-up meetings were held in various County locations to gather input from community members in person. These events involved setting up a kiosk in a busy location, such as a farmer's market or transit station and having conversations with individuals regarding their transportation concerns and needs. Fact sheets were provided, as well as physical surveys and links to online materials.

Round 1

- North Fontana Farmer's Market, October 1, 2023
- Rialto Farmer's Market, October 4, 2023

Round 2

- Victor Valley High Desert Farmer's Market, September 5, 2024
- San Bernardino Transit Center, September 9, 2024

5.4 Online Survey

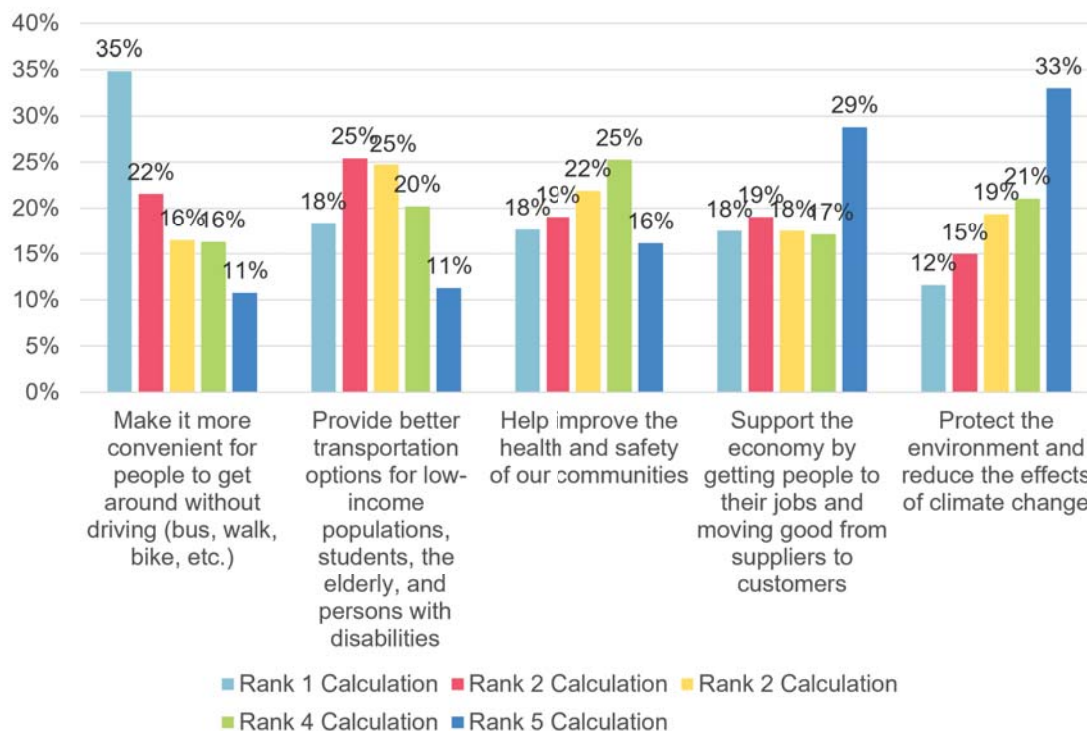
An online survey was advertised and available in English and Spanish from August 22 – October 31, 2023 to collect input from community members throughout San Bernardino County. Over 600 responses were collected. Questions included transportation mode choice, concerns, challenges, and priorities, as well as demographic information. Open-ended questions provided opportunities for participants to write in specific comments. A sample of results is shown below, and a full description of survey results is included in Appendix A.

Key insights from the survey included:

- Approximately two thirds of respondents used a car as their primary mode of transport for work or school trips
- Delay was the top mobility challenge among respondents, including both car and transit users
- Respondents reported that making it easier to get around without a car was the top overall priority

Figure 11. Example Survey Results

Aside from basic mobility, it is most important for the County’s transportation system to (rank by priority):



6 LRMTTP Priority Areas

In developing the LRMTTP, several Priority Areas were identified, consisting of the core elements of the transportation network and issues that cut across all modes. Core modal elements include Transit, Highways, Active Transportation, and Goods Movement. In addition, it was important to consider priority issues that cut across modes, including Equity, Safety, Health, Land Use, Sustainability and the Environment and Air Quality.

6.1 Transit

Reflecting the challenges and opportunities of a maturing public transportation network, numerous issues affect this pandemic recovery period as well as future years. The immediate past has focused on hiring and retaining sufficient drivers and restoring services. Going forward, opportunities may be characterized within three overarching areas:

- **Growing Transit Ridership** to expand rider-centric, customer-facing strategies, including use of technology, countywide transit promotional campaigns, targeted free fares, and innovative services to connect current and potential riders with jobs, services, and experiences.
- **Improving Frequency, Connectivity, and Accessibility** to improve the quality of public transit, making it easy and convenient by improving access to high frequency, faster service that is well coordinated, with attention to areas where need is greatest.
- **Improving Safety while Ensuring Environmental and Regulatory Compliance.** Addressing safety includes improving riders' perceptions and experiences of a safe ride, improving the physical environment with attention to transit's infrastructure for pedestrian access and at bus stops, and ensuring a sufficiency of drivers and a motivated workforce. At the same time, ensuring compliance with local, State, and federal law will support both rider safety and California's efforts to combat climate change.

Growing transit ridership continues as a key SBCTA agency focus, heightened by pandemic experiences. Initiatives instituted by SBCTA and its operators with measurable results must continue. These must expand and adapt to changing conditions and opportunities. Initiatives to grow ridership include:

- Improving the Rider Experience
- Student and General Public Fare Innovations
- Special Fare Promotions
- Introducing New Services and Service Innovations
- Strengthening Vanpool Programs

Major transit service initiatives to increase frequency, connectivity, and accessibility include:

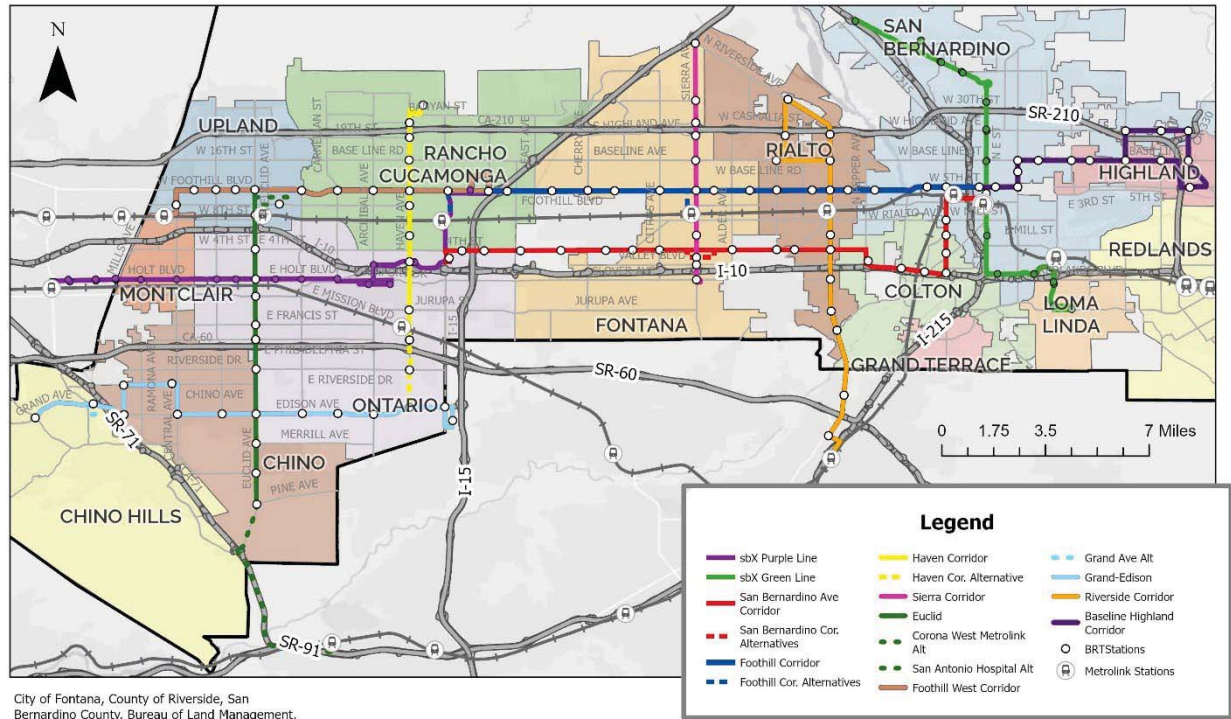
- Advancing transit priority treatments for the Omnitrans Priority Bus Corridors identified in Figure 13
- Completion of the nation's first high-speed rail service between Las Vegas and Rancho Cucamonga, with connections to the Metrolink San Bernardino Line
- Creating a dedicated connection between the Rancho Cucamonga Metrolink Station (also the future Brightline West station) and Ontario International Airport terminals
- Increasing Metrolink San Bernardino Line frequency to every 30-minutes each direction and increasing weekend service
- Extending the Metro A Line to San Bernardino County
- Future Arrow expansion with infill stations and potential operations on the San Bernardino Line

SBCTA's countywide transit vision is further detailed in Appendix B.

Figure 12. Countywide Promotion of SBCTA's K-12 Free Fare Policy

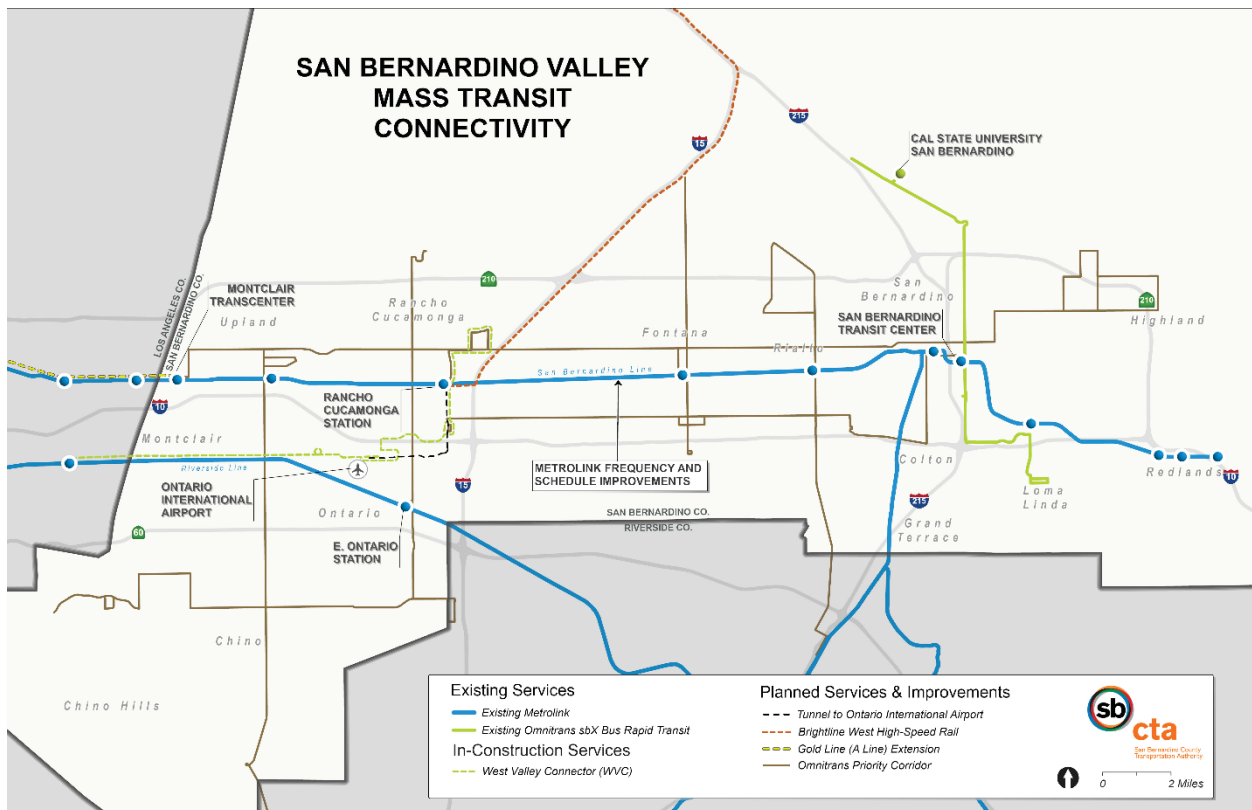


Figure 13. Omnitrans Priority Transit Corridors



The transit vision for the San Bernardino Valley is shown in Figure 14.

Figure 14. Transit Vision



Compliance with law, particularly in relation to California’s Climate Action Plan and the California Transportation Plan 2050, requires multiple strategies for aggressively combating climate change. Chief among these is implementation of zero-emission plans for buses and rail. North America’s first federally compliant self-powered, zero-emission passenger train arrived in San Bernardino County on June 20, 2024. The conversion to zero-emission buses will include both electric and hydrogen-powered fleets.

Addressing safety is a current and likely continuing mandate. SBCTA and transit operators are undertaking an anti-harassment and safety campaign with rider-focused tools aimed at improving both perceptions and experiences of a safe ride for transit users.

Areas of focus related to safety and rules compliance include improving pedestrian access for safe walking, physical infrastructure investment at bus stops/transit centers to promote safety, and human infrastructure investment in the transit workforce, transit ambassadors, travel training, and train-the-trainer roles.

This LRMTTP incorporates the Short-Range Transit Plans or Comprehensive Operational Analyses of each of the region’s transit operators. The most recent plans for each agency can be found at the following web links:

- [Omnitrans Short-Range Transit Plan FY2023-2030](#)
- [Victor Valley Transit Authority \(VVTA\) Comprehensive Operations Analysis - June 2021](#)
- [Mountain Transit Short Range Transit Plan FY 2021-22 to FY 2025-26](#)
- [Basin Transit Short Range Transit Plan FY2020-2024](#)
- [Needles Transit Services Short Range Transit Plan 2020-2025](#)

6.2 Highways

Recent polling regarding the potential extension of Measure I found that the public’s top transportation concern was repairing roads, followed by traffic congestion. Roads that are in poor condition impact the safety of users and can increase wear and tear on vehicles, increasing maintenance costs for drivers. As San Bernardino County’s population and economy grow, so too will travel demand, placing increasing pressure on the highway system in terms of both wear and tear and congestion.

Automobiles and trucks on the County’s highway network are a major source of greenhouse gas emissions that cause climate change and air pollutants that harm human health. To mitigate these impacts, California has set ambitious targets for reducing emissions, which are supported by fuel efficiency standards and policies to reduce VMT. Even as SBCTA works to improve alternative modal options, driving is likely to continue to be the dominant travel mode in the County, and declines in per capita VMT can be offset by growth in population and employment. Congestion will continue to impact not only single-occupant vehicles, but goods movement, carpoolers, and bus riders. In developing and implementing the LRMTTP, SBCTA must balance environmental goals and regulatory compliance with the need to ensure smooth movement of multiple vehicle types on the region’s highway network.

Travel demand modeling conducted for the LRMTTP using the future network with improvements that are currently planned indicates that congestion will occur throughout the San Bernardino Valley, particularly on freeways. However, both I-10 and I-15 are transitioning over time to a priced, managed lane system, which means that congestion can mostly be avoided for transit and incentivized shared rides (HOV 3+) and that others can “buy into” a more reliable trip when they believe it to be important. The 60 and 210 freeways already have managed lanes in the sense that they are unpriced HOV lanes,

and they also play an important role for multimodal mobility. Strategies to address issues on the highway network include:

- Delivering on commitments in the Measure I 10-Year Delivery Plan.
- Securing new funding for capital projects and ongoing maintenance, such as through discretionary grant funds, a new sales tax measure, tolling managed lanes, or a new statewide vehicle mileage-based fee to offset projected declines in revenue.
- Managing travel demand through tolling of new highway capacity additions and linking transportation and land use planning to enable origins and destinations to be located closer together.
- Identifying and funding improvements to the highway network or providing alternative modal options to address congestion hotspots projected to remain after delivering currently anticipated improvements.
- Providing strategic highway improvements to promote efficient truck operations and safety, to include improvements to freeway interchanges and operational strategies that address first/last mile freight access to local distribution centers and intermodal freight hubs.
- Providing accommodations for other modes on local roads and arterial highways, improving safety and addressing congestion and emissions through a multimodal, complete streets approach.
- Strategically investing in projects and educational outreach to minimize conflict between trucks and other road users and support safe, efficient movement of both passengers and goods.
- Improving traffic flow through Transportation Systems Management and Operations strategies and deployment of Intelligent Transportation Systems

6.3 Active Transportation

Active transportation plays a vital role in the integration of multimodal mobility and is consistent with the goals of promoting sustainability, advancing equity, and improving air quality outlined in this LRMTTP. There are several approaches to achieve a successful active transportation network, including balancing the travel needs of other modes with Complete Streets and pairing transit access with closure of first/last mile gaps.

Providing a layered network of modes and land uses is one strategy that allows for roadways to have an identified primary mode that is prioritized, where a high-quality experience is attainable on specific roadways instead of an average experience on the entire network. Roadway design can be specified to accommodate the primary mode, such as wider lanes for truck routes or narrower streets for bike routes. Typical measures of performance, such as Level of Service (LOS), can be modified to the street's primary mode in the form of multimodal LOS or transit travel time.

Infrastructure and policies that close the gap in first/last mile travel also support transit ridership as riders have an improved experience reaching their destination from a transit stop through improved safety, comfort, and convenience and the removal of barriers to active modes. Mobility hubs can provide centralized locations to chain trips made on transit and active modes through the ease of access to shared mobility.

Strategies to address gaps in the active transportation network include:

- Development, prioritization, and implementation of projects to close gaps and provide access along major routes and to key destinations such as transit, schools, other public buildings, and major employment centers. SBCTA developed a robust Safe Routes to School program that can be expanded upon to implement the recommendations described.
- Providing protected bikeways such as off-street (Class I), buffered bike lanes (Class II+), or cycle tracks (Class IV) to provide enhanced safety and comfort to bicycle users as appropriate; installing sidewalks and multi-use paths that link key destinations and provide access along areas with high vehicle speeds or volumes, using the existing inventory of sidewalks across the County as a launch point; and providing protected and frequent crossings across high-volume and high-speed roadways. Regular maintenance of these facilities will be critical in ensuring the investment in infrastructure lasts and user comfort is maintained. Amenities such as shade, benches, bicycle repair stations, bicycle stalls or storage lockers, and wayfinding signs can further increase the comfort and user experience. The planned bikeway network is shown in Figure 15, Figure 16, and Figure 17.
- Development of a coordination program among local agencies and community organizations to prioritize funding and assist with funding pursuits for active transportation projects. Fee programs can be developed to raise funds for infrastructure to be installed or maintained and help provide a consistent funding source. Regional funding programs can assist rural or unincorporated communities that might not see regular streams of funding.

Figure 15. Planned Countywide Bicycle Network

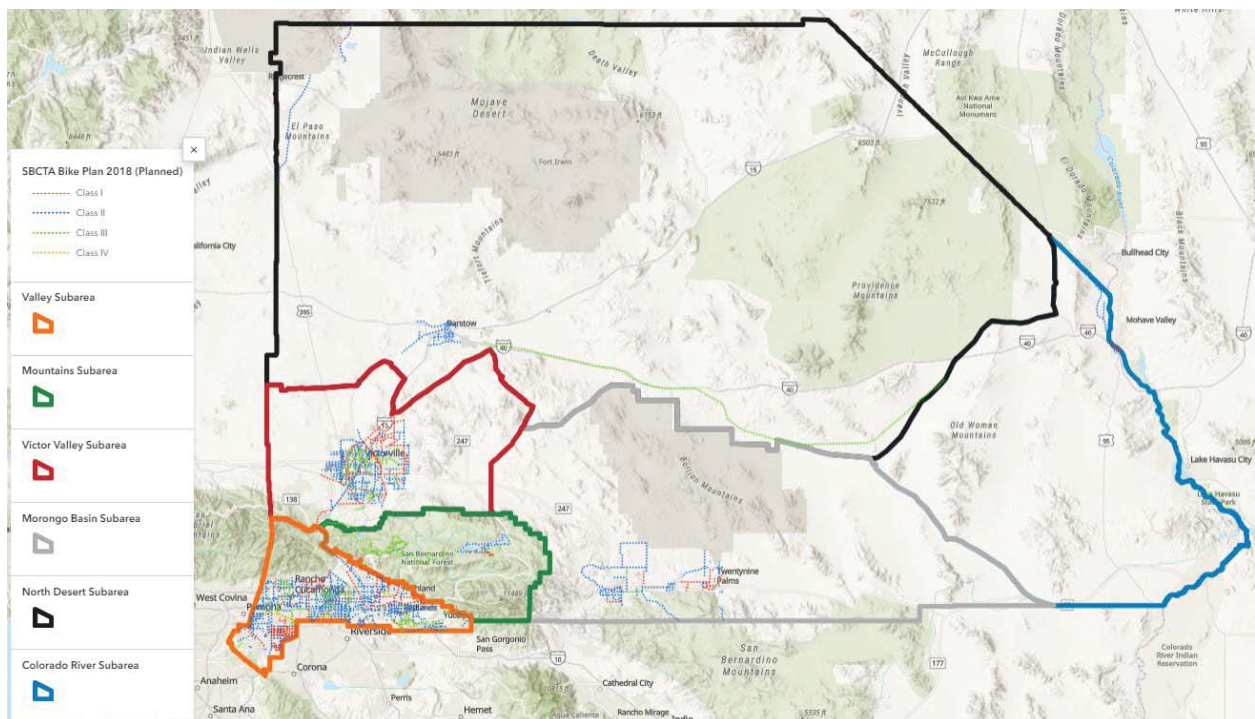


Figure 16. Planned Bicycle Network, Valley Subarea

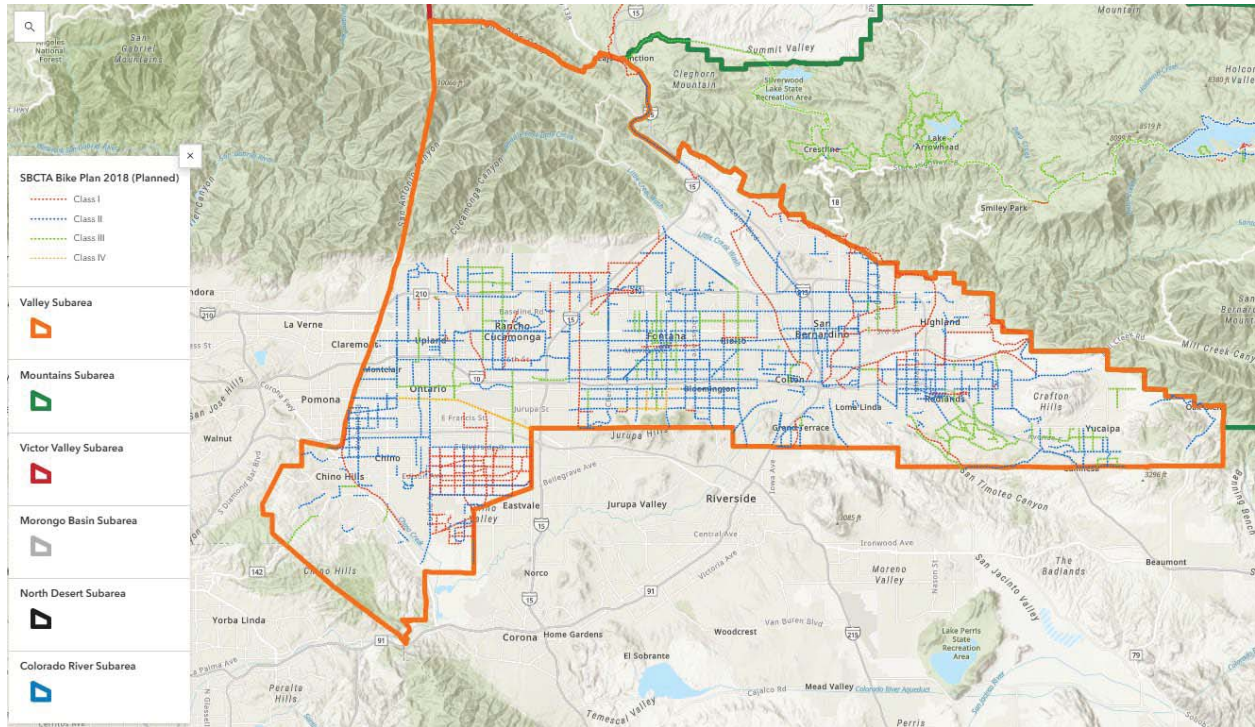
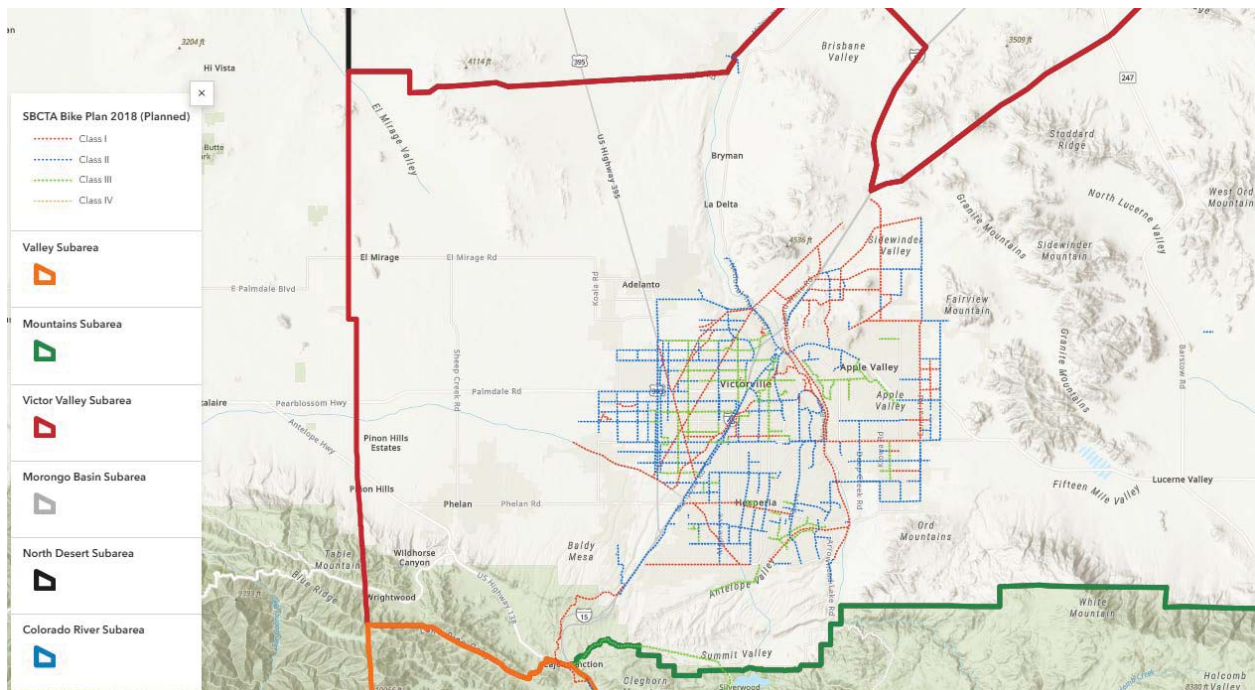


Figure 17. Planned Bicycle Network, Victor Valley Subarea



6.4 Goods Movement

With its importance to the regional and local economy, goods movement also affects land use planning and other mobility modes. Local governments should work collaboratively to develop regional trucking routes and regulations focusing on safety, avoiding low-volume wide streets where speeding can become an issue, and sensitive receptors such as schools and parks. Furthermore, as the demand for short-haul trucking increases due to e-commerce and home delivery trends, the use of electric and hydrogen-based vehicles to deliver cargo in dense urban areas have been identified as options to reduce truck-related fuel consumption and emissions. Developing a reliable and frequent public transportation network and encouragement of mode shift to public transportation can open up additional capacity for goods movement, but even robust added transit ridership growth is not enough to keep up the growth in the need for freight transportation.

Goods movement also positively impacts many communities directly and indirectly through the relatively high percentage of freight-related jobs in the region. At least a third of San Bernardino County employment can be attributed to the logistics sector. There will continue to be opportunities to enhance goods movement efficiency in the region through improved matching of needs and skills for these types of jobs.

Resiliency should be considered systematically as long-range freight transportation plans are developed. Additionally, the importance of shared rail corridors for passenger rail must not be overlooked. These corridors are critical for providing efficient passenger transportation options, and balancing their use between freight and passenger services can maximize the utility of existing infrastructure, reduce congestion, and support environmental sustainability goals. Ensuring these shared corridors are optimized for both freight and passenger use can enhance overall transportation efficiency and connectivity in the region.

Strategies to improve goods movement include:

- Conducting additional follow up with local jurisdictions on implementation of the principles and practices contained in the Healthy Communities and Healthy Economies Toolkit. Bring the Toolkit up to date with more current data and practices.
- Collaborating across State, County, federal, and local jurisdictions to identify and leverage funding opportunities for sustainable freight transport and emission reduction programs, including zero-emission charging and fueling infrastructure for medium and heavy-duty trucks.
- Developing, prioritizing, and implementing interchange improvements for first/last mile freight access, grade-separation projects, truck climbing lanes, and strategic auxiliary and merge lane improvements on major corridors (I-10, I-15, SR 60) to reduce congestion and enhance safety, while minimizing impacts to disadvantaged communities and the environment.
- Positioning SBCTA and local jurisdictions to succeed in goods movement-related grant applications at the regional, state, and federal level. This would include grants for both highway infrastructure and zero-emission infrastructure through sites identified at the local level and by the private sector.
- Supporting workforce development for the logistics industry, including truck drivers and technicians to maintain zero-emission vehicles and install and maintain electric charging and hydrogen fueling infrastructure.

6.5 Equity

To address mobility needs and gaps in connectivity, SBCTA has published several plans, such as the Non-Motorized Transportation Plan (2018), Points of Interest Pedestrian Plan (2017), the Regional Safe Routes to School Plan (2017), Public Transit – Human Service Transportation Coordination Plan (2021), and the Customer-Based Ridesharing and Transit Connectivity Plan (2018) that include general and site-specific recommendations; however, they are not all funded. Most of the plans include federal and state funding opportunities for agencies to pursue. SBCTA can work with the jurisdictions and transit operators to implement prioritized recommendations.

SBCTA can work with jurisdictions to conduct an impact analysis of goods movement to expand the region's understanding of its impact on nearby neighborhoods and the region. Each of the case studies presented in the Healthy Communities and Healthy Economies: A Toolkit for Goods Movement had a Technical Advisory Committee of experts and a Community Feedback Group to quantify community impacts from freight facilities and operations. The Community Feedback Group included goods movement industry representatives, planning professionals, and residents from communities who have experienced goods movement-related issues. This effort can be elaborated on to create tailored recommendations to the unique conditions of each community.

The Senate Bill 1000 Equity Toolkit produced by SBCTA and SBCOG as part of the Regional Equity Study, the Priority Equity Community map produced by SCAG, and the Atlas Equity mapping tool in development by Metro can be used with CalEnviroScreen to help agencies understand challenges faced by specific disadvantaged communities. This can ensure that improvements to the transportation system address barriers to mobility, health, and safety, while prioritizing investments and programs intended to benefit disadvantaged communities. SBCTA recently procured a consultant to develop funding strategies for equity and inclusivity initiatives.

6.6 Safety

Safe and secured environments allow the public to access the transportation system confidently and encourages behavior changes that lead residents to consider alternative transportation modes. Improving active transportation infrastructure increases mobility choice options and can improve connectivity to open spaces in which people can be active. Safe and accessible sidewalks and bike lanes near a variety of amenities and destinations can encourage walking and bicycling for recreation or commuting. This can improve physical and mental health. Perceived and actual safety at stops and stations are barriers to accessing health services. Amenities at stops and stations, specifically lighting, benches, and shade structures can improve safety for transit riders.

Existing transportation plans at the state, regional, and local levels have general strategies and more subarea or jurisdiction focused recommendations that are not necessarily or funded. Several of the plans have similar recommendations such as assessing access and safety near transit stations. SBCTA developed a Station Technical Advisory Committee (STAC), which meets on a semi-annual basis and focuses on implementing improved and consistent safety and security measures at Metrolink stations located within San Bernardino County. Further, SBCTA has completed a series of first and last-mile bicycle and pedestrian improvements to improve transit access and safety at the Metrolink stations on the San Bernardino Line, which was largely funded through a competitive State grant program. Similar safety and security efforts can be expanded to other key destinations and transit centers in the region, particularly in areas of high use by commuters and students or where high accident rates occur.

Bus stops and Metrolink stations are generally the property and responsibility of local jurisdictions. As such, SBCTA can support coordination between cities and transit agencies to secure funding for the installation of amenities and improvements. Coordination among agencies is also necessary to identify, prioritize, and implement safety improvements for non-motorized transportation and goods movement projects. SBCTA can serve in an advisory capacity and coordinate activity where necessary. The pursuit of grant application opportunities is one of the areas identified in several plans where substantial improvement is possible; the Non-Motorized Transportation Plan notes that San Bernardino County has been underrepresented in the share of non-motorized grant funds that have been awarded in the past.³ To document the outcomes of safety improvements, indicators can be developed to track progress over time, such as number of fatalities and serious injuries on the transportation system by mode and surveying to understand feelings of perceived safety.

6.7 Health

Coordination among agencies is necessary to prioritize and implement non-motorized transportation projects and to analyze the effects of goods movement on the health of communities. SBCTA can serve in an advisory capacity and coordinating activity where necessary. For the case studies in the Healthy Communities and Healthy Economies: A Toolkit for Goods Movement, a Technical Advisory Committee of experts and a Community Feedback Group of community representatives assisted in quantifying community health impacts from freight facilities and operations; this effort can be elaborated on to develop a profile for each jurisdiction.

Implementing prioritized active transportation routes that improve connections to major corridors and provide access to key destinations such as transit, schools, and healthcare services will expand the active transportation network to promote a mode shift from automobiles for short-distance trips and increase physical activity. The recommendations and guidelines from the Regional Safe Routes to School and Points of Interest Pedestrian plans can be expanded upon and used to develop more site-specific strategies, and jurisdictions can pursue funding to implement the recommendations described in the plans.

SBCTA and transit operators can collaborate to build resource capacity and partnerships to implement prioritized strategies to expand mobility for underserved populations, especially to increase access to health services. These partnerships include public transit agencies, human service agencies, educational institutions, and municipalities. In addition to improving mobility options, coordination with these agencies can address roadway safety and connectivity between quality housing options and essential services. Many of the recommendations described in the Public Transit – Human Service Transportation Coordination Plan will require securing additional funding and coordination between partnerships is vital to prioritize and pursue funding opportunities.

6.8 Land Use

SBCTA can focus on improving coordination and collaboration between cities and transit agencies, particularly within subareas. Coordination of land use and transportation investment can help align the transportation system with the places to which people want to go, ultimately improving sustainability and air quality by making transit and other alternatives more convenient. Additionally, improving market conditions for transit-oriented development (TOD) projects is a key step regional agencies can take. Strategies to better integrate land use and transportation planning include:

³ SBCTA, Non-Motorized Transportation Plan, Chapter 7 pg.2.

- Develop a planning framework that explains how to best serve existing land use patterns with transit while encouraging transit-oriented development in high priority areas. This framework would identify key stakeholders, their roles, and lay a foundation for developing specific plans around major transit stations. This also includes exploring where strategies like mixed-use development, TOD, densification, and focused affordable housing development are most likely to improve transportation system performance. Some of the emerging opportunities were highlighted in Section 4.2.
- Recognize that each subarea has different characteristics and will require different solutions, on both the land use and transportation sides of the issue. Serving rural communities and less dense areas with transit will require a different approach than urbanized areas where creating transit-oriented development is possible.
- Review existing practices for evaluating land use changes and ensure they consider all travel modes and future transportation investments in the County. New development projects should be consistent with broader goals to grow transit and active transportation mode share and create walkable, mixed-use communities.
- Identify clear roles for stakeholders including cities, transportation agencies (e.g., SBCTA), transit operators (e.g., Metrolink, Omnitrans, and Brightline), and developers. Determine how to accommodate conflicting priorities, such as preserving community character with the need for new housing. For example, SBCTA and transit agencies can identify regional corridors where transit services will be expanded and collaborate with cities to encourage consideration of zoning changes and new developments.
- Look to how other peer agencies have coordinated improving transit, ridership, and TOD implementation through an integrated land use/transportation assessment and consider a similar exercise for additional transit nodes in San Bernardino County. A possible approach could be similar to the Sustainable Transportation Land Use Integration Study (ST-LUIS) completed by the Maricopa Association of Governments (MAG) several years ago.
- Create incentives and leverage available grant funding to improve market conditions for transit-centered development. State funding for affordable housing projects and locally administered development incentives around transit areas can support private development of multifamily housing, commercial development, and other facilities that would attract people to transit stations. SBCOG is proceeding with implementation of a Housing Trust, and coordinating this effort with transit system development could yield dividends for both.
- Unlock land around major transit stations by redeveloping parking lots and underutilized public facilities. This land can be made available to developers and should be consistent with station-area specific plans that promote walkable, transit centered areas. This could be an ideal place to increase the availability of affordable housing for the region.
- Adjust development standards to require consideration of all transportation modes and reduce parking minimums. These changes will ensure that development near transit stations is directly accessible by transit and will reduce vehicle trips.
- Establish truck routes to connect warehouses with the state highway system as required by Assembly Bill 98

6.9 Sustainability

Sustainability and resiliency intersect all elements of the transportation system, from active transportation to transit to freight. Disruptions to the transportation network due to climate-related incidents can have many downstream effects. Transit operations, in particular, can experience significant disruptions due to the fixed-route nature of bus and rail lines.

One of the important strategies to reduce GHG emissions from the transportation sector is shifting travel modes from single-occupancy vehicles to more sustainable modes such as transit or active transportation. Other key issues are heavily influenced by land use, where more dense and walkable communities can increase the number of trips made by active modes, and TOD can generate increased transit ridership. As agencies develop their plans, sustainability and resiliency planning should include equity components to ensure disadvantaged communities are not disproportionately burdened by a changing environment.

Sustainability and resiliency are not limited to a single department and will require coordination and planning across a number of sectors, agencies, businesses, and community groups. Initiatives such as Resilient IE and the Inland Southern California Climate Collaborative will set the County up with a foundation to continue these efforts into the future.

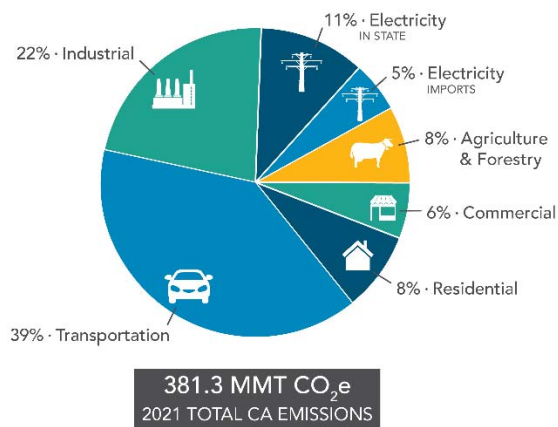
The technologies that support zero-emission vehicles are undergoing rapid changes and development. SBCTA should develop and implement programs to support agencies in incorporating alternative fuel technologies into their fleets, to include buses, autos, trucks, and municipal service vehicles (waste collection, street sweepers, step vans, etc.), and to partner with member agencies and the private sector entities to implement publicly available charging and fueling infrastructure. Collaboration between agencies and utility providers will be essential to accelerate this transition.

A wide variety of funding sources exist. SBCTA could develop a process to assist local jurisdictions in the identification and application of appropriate funding mechanisms. Incentives for pooling resources among agencies, businesses, and community organizations should also be explored. New funding sources should continue to be tracked and pursued to improve resiliency and sustainability in the County.

6.10 Environment and Air Quality

Collaboration across jurisdictions and level of governments can identify areas of common actions to mitigate emissions and pollutants from transportation sources. SBCTA can work with jurisdictions to develop a comprehensive framework for emissions inventory and recordkeeping. SBCTA can identify funding programs and incentives that provide resources and assistance for cities to prepare for and adapt to environmental issues.

Figure 18. 2021 California Greenhouse Gas Emissions by Economic Sector



Source: California Air Resources Board, 2023

To meet the expected electric vehicle (EV) demand, the majority of EV infrastructure should continue to be sited in the heavily populated urban areas of the County, including at public agencies, workplaces, destinations, transit stations, and multi-unit dwellings with a focus on disadvantaged communities. Caltrans and Electrify America have proposed charging stations along I-15 and I-10; however, there are gaps along I-40, SR 18, SR 62, and SR 247 that can be considered for charging station siting. Understanding different incentives can reduce barriers to zero-emission infrastructure deployment. There are several local, state, and federal funding opportunities and incentive programs recommended in the Zero-Emission Vehicle Readiness and Implementation Plan and the San Bernardino Countywide Zero-Emission Bus Study Master Plan to support stakeholders' and transit operators' vehicle procurement and infrastructure construction.

SBCTA has compiled zero-emissions rollout plans specific to each of the transit agency's specific needs and policy choices to determine which technology is most feasible. Before implementation, transit agencies should review the rollout plan and determine if the feasibility has changed based on costs, service requirements, and availability of technology. Additionally, it is important for agencies to discuss with their energy providers to ensure that zero emission bus-supporting infrastructure, delivery of buses, and potential energy enhancements are coordinated. There are funding opportunities, such as the Environmental Protection Agency's Carbon Pollution Reduction program and Caltrans' Sustainable Transportation Planning and Adaptation Planning Grants, to implement zero-emission technologies in transit and goods movement. SBCTA has applied for zero-emissions funding in the past and continues to prioritize zero-emissions vehicles.

Coordination among agencies is necessary to prioritize and implement non-motorized transportation projects and to analyze the effects of goods movement on the health of communities. SBCTA can serve in an advisory capacity and coordinating activity where necessary.

Reducing emissions from truck fleets is of critical importance to the future of air quality and GHG reduction for SB County. Private fleets are at the very front end of transitioning to zero-emission. Currently, diesel fueling can occur either on fleet property or at commercial fueling stations. Diesel is fast, efficient, and reliable, and given the uncertainties and cost associated with alternative fuels, securing federal and state grant funding is paramount to gaining momentum for the path to zero-emissions for the freight industry.

Most grant programs focused on zero-emission trucks require a public agency to be the lead and for the charging/fueling facilities to be publicly available. However, the facility can be privately owned and operated as long as the public agency provides oversight of the construction and initial operation (often a minimum of five years). This has been the path SBCTA has followed in the SB 1 Trade Corridor Enhancement Program funding secured for three truck charging/fueling facilities associated with SBCTA's Interstate 10 Contract 2 and US Route (US) 395 Contract 2 projects. Another funding opportunity is through the Regional Clean Hydrogen Hubs Program, which is funded through the Bipartisan Infrastructure Law with the goal to establish regional clean hydrogen hubs across America. In California, this program has funded the Alliance for Renewable Clean Hydrogen Energy Systems, which may support hydrogen fueling needs of San Bernardino fleets.

The California state government have set lofty goals for the path to zero-emission. Typically, the burden to accomplish these goals falls primarily on the private sector capabilities to build and operate and on the local governments that must enable them and provide permits for their operations. Local governments are also becoming the partners with private vendors as the channel for state/federal funding to incentivize this major transition into green transportation so that vendors are accountable, and that the geographic distribution is fair.

San Bernardino County, with its large logistics industry, as the largest county in the continental United States, and with more miles on the United States Primary Freight Network than any other county in the United States, is in a unique position to help the zero-emission transportation industry to take root, particularly the hydrogen industry. The county has large truck sales and maintenance operations and schools/colleges/universities that are tied into training the future zero-emission work force. SBCTA and its 25 local government members have partnered on zero-emission projects in the past. Examples include SBCTA's zero-emission multiple unit (ZEMU) hydrogen-fueled train, bringing the Brightline West zero-emission high speed rail to the I-15 corridor, and partnerships already established with zero-emission truck charging/fueling vendors.

7 Planning for Alternative Futures

To inform the development of the LRMTTP, several scenarios were developed and modeled using the latest version of SBCTA's San Bernardino Transportation Analysis Model, SBTAM+. SBTAM+ is a travel forecasting model based on the regional model developed by the Southern California Association of Governments (SCAG) and allows analysis of future travel patterns with new infrastructure and land use assumptions. Through scenarios with different assumptions regarding the transportation network, travel patterns, or land use, SBCTA can test how investment strategies perform against each other in multiple potential futures.

7.1 Scenarios and Sensitivity Tests

The development of scenarios to be modeled considered changes in both the transportation network and the factors that influence travel demand. Two levels of transportation investment were modeled, providing insight into how additional investment changes performance of the system:

- **Baseline:** The Baseline Scenario includes transportation improvements that can be funded with known funding sources: Measure I, mitigation fees, gas tax funds, tolls, and reasonably expected discretionary grants.
- **Enhanced (SCAG RTP "Plan" network):** This scenario assumes more availability of new funding sources, such as a renewal of Measure I, statewide vehicle mile fees, and significant discretionary grants. This scenario corresponds to the fiscally constrained scenario for the SCAG RTP.

In addition to varying transportation investment, three "background contexts" were considered with variations in where and how much people travel:

- **Return to Normal:** This scenario represents the baseline in SBTAM+, which is calibrated to 2019 travel patterns and does not assume on-going impact from pandemic. However, the scenario does include planned projects in future year transportation network and future growth in employment and population. In other words, this scenario represents a future where projects are built and the county grows, but travel behavior reverts to pre-pandemic conditions.
- **Virtual Future:** In contrast to the Return to Normal, this scenario represents magnification of the changes in travel patterns after the pandemic, with telecommuting continuing to surge, thus changing the number and types of trips workers make.
- **Smart Growth:** This scenario represents a change in land use away from dispersed, low-density suburban and exurban development to an approach focused on compact communities

oriented around transit corridors to support higher transit use and shorten trips by homes, employment, services, and other destinations in closer proximity.

To understand the potential impacts of transportation system or policy changes, two additional scenarios were developed as sensitivity tests:

- **Transit Expansion:** This scenario tests the possible effects of substantially expanding transit service in the region. It assumes doubling of frequency on all bus routes as well as planned passenger rail improvements consistent with Metrolink’s existing capital program.
- **Pricing:** Road pricing has emerged as potential strategy both to reduce congestion and VMT and as a potential replacement for gas tax funding as vehicles become increasingly electrified. Caltrans is currently conducting a road user charge pilot. This scenario assumes that a pricing scheme is implemented at the state or SCAG region level.

The scenarios and sensitivity tests referenced above do not represent recommendations; rather, they are intended to test what types of interventions result in significant changes in transportation system performance. These scenarios were constructed so as to hypothetically test the degree to which key performance indicators might change in response to a transportation or land use strategy without limiting the strategy to what might be legislatively, politically, or financially feasible or by any negative economic consequences that might occur. Therefore, it should not be assumed that these scenarios are possible to implement but may provide guidance regarding general policy directions that could or should be explored further over the long term.

Table 4 summarizes the assumptions for each modeling scenario. The methodology and assumptions are described in further detail in Appendix C.

Table 4. Summary of Modeling Assumptions

Scenario	Transportation System Assumptions	Background Context Assumptions
2050 Baseline	<ul style="list-style-type: none"> • Completion of planned projects that are likely to be funded 	<ul style="list-style-type: none"> • Travel patterns return to pre-pandemic patterns
Virtual Future	<ul style="list-style-type: none"> • Completion of planned projects that are likely to be funded 	<ul style="list-style-type: none"> • All workers with jobs that can be done remotely chose to telework
Smart Growth	<ul style="list-style-type: none"> • Completion of planned projects that are likely to be funded 	<ul style="list-style-type: none"> • All future growth in the Valley is concentrated along transit corridors
Enhanced Network	<ul style="list-style-type: none"> • Completion of planned projects that are likely to be funded • New funding sources allow additional projects to be completed 	<ul style="list-style-type: none"> • Travel patterns return to pre-pandemic patterns
Smart Growth + Transit Expansion	<ul style="list-style-type: none"> • Completion of planned projects that are likely to be funded • Bus frequency is doubled across the SCAG region 	<ul style="list-style-type: none"> • All future growth in the Valley is concentrated along transit corridors

<p>Road Pricing</p>	<ul style="list-style-type: none"> • Completion of planned projects that are likely to be funded • New funding sources allow additional projects to be completed • A statewide per-mile road user charge is implemented 	<ul style="list-style-type: none"> • Travel patterns return to pre-pandemic patterns
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7.2 Modeling Results and Key Findings

Modeling results for each context scenario, the Enhanced Network scenario, and the Transit Expansion sensitivity test are shown in Table 5. The impact of road pricing on VMT is described below, but it is excluded from the results table because the test was conducted to estimate an elasticity for VMT, not specific forecasts for each performance measure. Relative to a return to pre-pandemic conditions, both the Virtual Future and Smart Growth scenarios result in modest reductions in VMT. The Virtual Future sees substantial decline in overall travel time, delay, and transit ridership as a result of removing commute trips that are especially likely to occur at congested times of day. The Smart Growth scenario results in a significant percentage increase in transit ridership within San Bernardino, but because baseline ridership is low, the impact on vehicle travel is muted.

The Enhanced transportation network achieves travel time savings and an increase in transit ridership relative to the Baseline network with return to normal conditions. However, VMT increases slightly as drivers are willing to take longer trips on less congested roads. The Transit Expansion sensitivity test increased transit ridership to the greatest degree and also showed large decreases in total travel time and VMT.

The road pricing sensitivity test showed an elasticity of -0.17, meaning that each 10 percent increase in auto operating costs would be expected to reduce VMT by 1.7 percent. In 2024 dollar terms, an increase equivalent to one dollar per gallon of gasoline would be expected to reduce VMT by 1.9 percent, assuming average fuel economy of 25 miles per gallon (Bureau of Labor Statistics 2024). Imposing such a cost increase would represent more than doubling the current state and federal gas taxes.

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Table 5. Modeling Results by Scenario

All Performance Measures	2050 Baseline		Virtual Future		Smart Growth		Enhanced Network		Smart Growth + Transit Expansion	
	Value	%Δ*	Value	%Δ*	Value	%Δ*	Value	%Δ*	Value	%Δ*
Total VMT	90,759,248	-4%	87,251,407	-4%	89,096,205	-2%	91,172,483	0%	81,520,239	-10%
Truck VMT	12,805,961	0%	12,759,831	0%	12,742,465	0%	12,914,432	1%	12,589,982	-2%
Total VHT	2,130,922	-7%	1,992,203	-7%	2,089,892	-2%	2,008,779	-6%	1,826,424	-14%
Truck VHT	242,181	-3%	234,534	-3%	239,982	-1%	232,517	-4%	229,884	-5%
Passenger VMT per Capita	29.8	-4%	28.5	-4%	29.4	-1%	29.9	0%	26.5	-11%
PHT, work trips	888,256	-30%	621,599	-30%	867,617	-2%	842,286	-5%	784,639	-12%
PHT, non-work trips	1,511,292	8%	1,626,937	8%	1,470,405	-3%	1,424,281	-6%	1,343,048	-11%
Total delay	244,074	-28%	174,774	-28%	240,029	-2%	133,520	-45%	154,634	-37%
Delay per capita (minutes)	5.6	-28%	4.0	-28%	5.5	-1%	3.1	-45%	3.6	-36%
Drive alone mode share, work trips	80.2%	0%	80.3%	0%	79.1%	-1%	79.2%	-1%	69.5%	-11%
Drive alone mode share, non-work trips	39.6%	0%	39.9%	0%	39.4%	0%	39.0%	-1%	35.9%	-4%
Transit ridership	137,385	-32%	93,625	-32%	166,003	21%	195,955	43%	499,977	264%
Truck delay	22,831	-29%	16,177	-29%	21,948	-4%	12,160	-47%	15,056	-34%
Share of population within half mile of transit stop	71.4%	0%	71.4%	0%	73.5%	2%	72.7%	1%	73.5%	2%
Share of population in disadvantaged communities within half mile of transit stop	88.1%	0%	88.1%	0%	89.0%	1%	88.9%	1%	89.0%	1%
Share of employment within half mile of transit stop	74.5%	0%	74.5%	0%	79.8%	5%	76.2%	2%	79.8%	5%
Share of population within HQTAs	30.3%	0%	30.3%	0%	37.6%	7%	30.3%	0%	37.6%	7%
Share of population in disadvantaged communities within HQTAs	48.0%	0%	48.0%	0%	55.6%	8%	48.0%	0%	55.6%	8%
Share of employment within HQTAs	42.5%	0%	42.5%	0%	56.9%	14%	42.5%	0%	56.9%	14%
GHG emissions	35,482	-4%	34,111	-4%	34,832	-2%	35,644	0%	31,870	-10%

Notes:

VMT = vehicle miles traveled, VHT = vehicle hours traveled, PHT = person hours traveled, HQTAs = high quality transit area, GHG = greenhouse gas

* Compared with 2050 Baseline

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8 Funding Future Projects and Programs

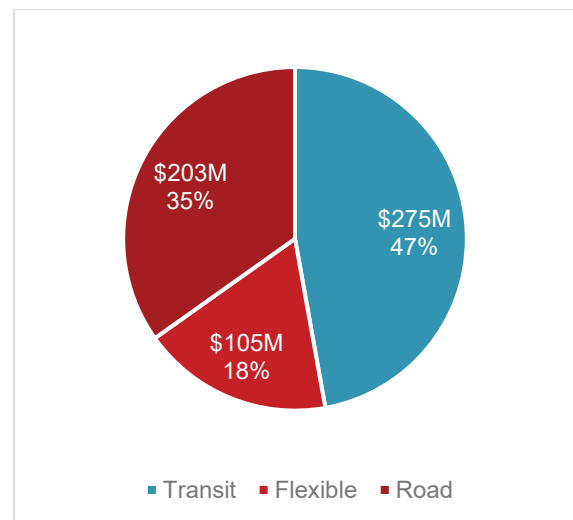
Ultimately, the LRMTMP is all about moving people and goods to where they need to go in an expeditious manner at reasonable cost. It is about giving people opportunities and choices to connect with jobs, schools, recreational and social activities and access the goods and services needed to function day-by-day in a very large region. This section of the LRMTMP highlights the process of funding projects, providing for their operations, and the overall funding challenges being faced in the future.

8.1 Overview

The reality is that the funds available to pay for transportation projects and their operation are not unlimited, and difficult decisions can be involved in determining where the available local, state, and federal funds should be invested. SBCTA's Measure I 2010-2040 half-cent sales tax is one of SBCTA's primary sources of revenue for capital projects, with some funding available for transit operations. The Measure is highly structured, with some of the funding going directly to the jurisdictions for local streets and transit operators for senior and disabled transit (often referred to as "pass-through" funding), and other parts of Measure I being apportioned to sub-programs, such as Major Streets, Freeways, Interchanges, Metrolink/Rail, and Express Bus/Bus Rapid Transit (BRT). These programs are all delineated in the [Measure I 2010-2040 Ordinance and Expenditure Plan](#), which extended the half-cent sales tax to 2040. The Expenditure Plan identifies how the Measure I revenue is to be allocated by subarea and program.

State and federal revenues are also an essential part of the funding portfolio for San Bernardino County transportation projects. These are all delineated in the SBCTA Annual Budget. The Local Transportation Fund (LTF), derived from a ¼ cent of the general sales tax collected statewide, is the largest part of how the operation of transit systems is funded, with additional state and federal funding available for capital projects, a significant portion of which is now competitive funding through grant applications. This has made funding streams more unpredictable and the programming of projects more difficult than in the past. Multiple funding sources must be aligned for capital projects to come to fruition, and transit projects must have a secure source of operating funds. Figure 19 shows the general distribution of funding for which SBCTA has allocation responsibility, taken from the FY 2023-2024 budget. As indicated, a significant percentage of the revenue budgeted for allocation (47 percent) is dedicated to transit, with an additional 18 percent being able to flex between transit and highway.

Figure 19. Allocation of SBCTA Revenue by Mode for FY 2023-2024



8.2 Projects, Funding, and Their Relationship to Other SBCTA Plans

The LRMTTP has a structure for classifying projects at three levels: 1) near-term projects that have clearly identified funding sources as contained in the SBCTA 10-Year Delivery Plan, 2) projects that are beyond the 10-year horizon but are likely to have funding from known state, federal, and local sources within the 2040 timeframe, and 3) projects that will likely need to draw from sources beyond 2040. Note that projects in the Baseline and Aggressive Levels are subject to change, pending an update to the 10-Year Delivery Plan in early 2025.

1. **Projects in the SBCTA 10-Year Delivery Plan** – These are projects for which full funding has been identified, except for the grant funding needed to fill remaining gaps. The 2025 10-Year Delivery Plan also includes projections of Measure I revenue through 2040. Projects included in the new 2025 10-Year Delivery Plan are listed in Table 6.
2. **Projects in the Baseline Funding Level** – This level of funding incorporates projects in the Delivery Plan plus projects that can be funded with traditionally available local, Measure I, state, and federal revenue sources through 2040. What is unknown at this time is whether additional revenue could come in through state and federal sources or through an extension of Measure I, which currently sunsets in 2040. A new Measure I could begin on this sunset date or be structured to overlap with the current Measure I by several years. Revenue streams would have to grow significantly between now and 2040 for more projects beyond the baseline level to be funded. For purposes of the LRMTTP, a new Measure I is assumed to begin on the 2040 sunset date of the current Measure and that bonding could occur or Project Advancement Agreements (PAAs) with local jurisdictions could be executed so as to access a portion of that funding prior to 2040. The current Measure used PAAs to allow jurisdictions to get an early start on some of their projects. Projects in the baseline level beyond those in the 10-Year Delivery Plan are listed in Table 7. The funding assumptions are listed on the right side of the table. A separate table (Table 8) is provided showing active transportation projects that are either underway or a high priority to fund within the Baseline timeframe. The projects listed as priorities were selected in consultation with SBCTA’s Transportation Technical Advisory Committee and a range of prior reports and unawarded funding applications. This table should be viewed as a “work in progress.” It does not mean that projects not on the list are not a priority nor does it mean all projects on the list can, or will be, funded. It does indicate that a priority is being placed on building out the countywide active transportation system. However, implementation responsibility for the large majority of these is in the hands of the jurisdictions in which the projects are located. The second part of Table 8 is the list of active transportation projects that are in the Transportation Development Act (TDA) Article 3 Program and are already underway. This plus the list of other priority projects in the first part of the table show a broad-based emphasis on bicycle and pedestrian improvements throughout the county.
3. **Projects in the Aggressive Funding Level** – This is a needs-based level of projects assuming additional sources of revenue could be established. The Aggressive Level is generally consistent with the RTP/SCS “financially constrained” plan. This includes SCAG’s “innovative revenue sources” contained in the 2024 RTP/SCS and represents a substantial increase over traditionally available funding streams. There is no attempt in the LRMTTP to estimate what a future increase in revenue “could be” for San Bernardino County. The needs identified by local jurisdictions and transportation agency partners far outstrip even the most

generous assumptions of future revenue. The Aggressive Level includes all projects in the Baseline Level plus the additional projects listed, as shown in Table 9.

Some observations about the projects and transportation funding for San Bernardino County are listed at the end of this LRMTTP. The following is provided as background of SBCTA’s key funding and policy documents:

- The Measure I 2010-2040 Strategic Plan, originally approved by the SBCTA Board in April 2009 specifies the policies by which the funds are to be managed. These policies are updated by the SBCTA Board on an as-needed basis. The Strategic Plan also provides an overall funding and management strategy for Measure I. The Strategic Plan can be reviewed at: [Measure I Strategic Plan](#). The Measure I Program Policies can be reviewed at: [Measure I Policies](#).
- The Measure I Strategic Plan required the development of a 10-Year Delivery Plan. The purpose of the 10-Year Delivery Plan is to define the project-level scope, schedule, and budget for individual projects to be developed and delivered in the next 10 years of Measure I 2010-2040 and represents a near-term view of funding needs. The 10-Year Delivery Plan was first approved by the Board in early 2012 and since then has been updated four times, with the most recent update being 2025.
- The Development Mitigation Nexus Study, originally approved by the SBCTA Board in 2005, estimates the funding forecast to be generated from new development over the course of Measure I 2010-2040. These funds, generated primarily from transportation impact fees on new development, are used as part of the funding package for three types of projects in the Valley and Victor Valley: freeway interchanges, regional arterials, and rail/highway grade separations. The Nexus Study identifies the shares of funding for which local jurisdictions are responsible. The Nexus Study is available as Appendix G of the [Congestion Management Plan](#) and can be directly accessed at: [2023 Nexus Study](#).
- The [Federal Transportation Improvement Program](#) (FTIP) is a short-term listing of all transportation projects proposed over a six-year period for the SCAG region. SBCTA submits the San Bernardino County portion of the FTIP to SCAG, with major updates scheduled every even year.
- The RTP/SCS is prepared by SCAG every four years, with substantial input from County Transportation Commissions and local governments. The San Bernardino County LRMTTP is one of the sources of input to the RTP/SCS, along with direct input from local jurisdictions and transportation agencies. The current RTP/SCS (branded [Connect SoCal](#)) was prepared for the 2024-2050 timeframe.

Table 6. Ten-Year Delivery Plan Projects

<i>Measure I Programs</i>
San Bernardino Valley Freeway Program
I-215 Bi-County Landscaping
I-10 Contract 1: Two Express Lanes in Each Direction from Los Angeles County Line to East of I-15
I-15 Contract 1: Express Lanes from Riverside County Line to Foothill Boulevard

I-10 Contract 2A/B: Express Lanes from East of I-15 to Pepper Avenue

I-10 East Bound Truck Climbing Lane from West of 16th Street Bridge to East of Riverside

San Bernardino Valley Freeway Interchange Program

I-10/Cedar Avenue Interchange

I-215/University Parkway Interchange

I-10/Mount Vernon Avenue Interchange

SR 210/Waterman Avenue Interchange

SR 210/5th Street Interchange

SR 60/Euclid Avenue

I-10/Wildwood Canyon Road Interchange

I-10/Riverside Avenue Interchange Phase 2

I-10/Euclid Avenue Interchange

I-10/Monte Vista Avenue Interchange

I-10/Vineyard Avenue Interchange

San Bernardino Valley Major Street Program

Mount Vernon Viaduct

I-10/Fourth Street Bridge Undercrossing

San Bernardino Valley Metrolink/Passenger Rail Program

Arrow Operations

San Bernardino Line Double Track

Gold Line to Montclair Capital

Gold Line to Montclair Operations

Valley Express Bus & Bus Rapid Transit Program

West Valley Connector from Pomona to Rancho Cucamonga (Phase 1 Capital and Operations)

Ontario International Airport Connector

Victor Valley Major Local Highway Program

El Mirage Road from US 395 to Richardson Road

Bartlett Avenue from Aster Road to Richardson Road

Bellflower Street Widening from Chamberlaine Way to Air Expressway

Bellflower Street Widening from Cactus Road to Air Expressway

Bear Valley Road Bridge Over Mojave River

Yucca Loma Road Widening from Apple Valley Rd to 1200' East of Apple Valley Road

Yucca Loma Road Widening from 1200' East of Apple Valley Rd to Navajo Road

Yucca Loma Road Widening from Rincon Road to Navajo Road

Central Road Widening from SR 18 to Bear Valley Road

Dale Evans Parkway Phase 1 (Waalew Realignment)

SR 18, Widen to 6 Lanes Apple Valley Rd to Tao Rd

Deep Creek Road from Bear Valley Rd to Tussing Ranch Rd

Ranchero Road Corridor Widening

Main Street Widening from I-15 to Fuente Avenue and Aqueduct Road

Mojave Drive Widening from 395 to 7th Avenue

Bear Valley Road Widening from Monte Vista Rd to Hwy 395

Rock Springs Road Bridge over Mojave River

Phelan Road Widening from SR 138 to Hesperia City Limits

US 395 - Phase 2 Freight Mobility and Safety Project

SR 18 Safety and Operational Improvements – Project Development

North Desert Major Local Highway Program

North First Avenue Bridges over Mojave River & Overflow

Rimrock Road Rehabilitation from Barstow Road to Avenue J

Baker Boulevard Bridge Replacement over Mojave River

National Trails Highway Bridges Replacements

Mountains Major Local Highway Projects Program

Moonridge Road Realignment and Roundabouts

Stanfield Cutoff Roundabout

Morongo Basin Major Local Highway Projects Program

Split Rock Avenue at Twentynine Palms Flood Control Channel

SR 62 Street Improvements from Encelia Avenue to Larrea Avenue, Phase 2B Widening

SR 62 Widening, Sage Avenue to Airway Avenue

Yucca Trail Widening from Palomar to La Contenta

SR 62 Street Improvements from Larrea Avenue to Star Dune, Phase 3

Colorado River Major Local Highway Projects Program

US 95/Havasu Lake Road Intersection Improvement

Needles Highway Improvements, Segment 1C

River Street from BNSF to North K Street

River Road from North K Street to 600' West of Jack Smith Park

Cajon Pass Program

I-15 Cajon Pass Northbound Freight Corridor Project

Other Projects of Interest

DMU to ZEMU Capital and Operations

ZEMU Vehicle Procurement

Zero-Emission Bus Initiative

Table 7. Projects Included in the Baseline Level of Funding

Projects	Funding
<p>10-Year Delivery Plan Projects <u>Plus</u> Constrained Projects through 2040 (some conditional on grant funding):</p> <ul style="list-style-type: none"> • Brightline High Speed Rail from Rancho Cucamonga to Las Vegas (private and public funding mix – not an SBCTA project) • I-10 Freight and Managed Lane Project from Pepper Avenue to Ford Street (design only) • Valley Interchange Program (no funding available for interchanges beyond those included in 10-Year Delivery Plan) • Key arterials that are inter-county, are on state highways or are connecting to them: <ul style="list-style-type: none"> • Pine Avenue Connector to SR-71 (environmental only) • Reche Canyon Road Operational and Safety Improvement (Bi-County - environmental) • SR-18 Operational and Safety Improvements, Los Angeles County to US 395 (environmental only) • US 395 Phase 3 (Design only) • Valley Arterial and Mountain/Desert Major Local Highway Programs (constrained to revenue – see projects in local Capital Project Needs Analysis (CPNA) submittals) • No additional grade separations • Active Transportation Projects supportable by grants and Transportation Development Act funds (See Table 8). • Transit priority treatments, and possible focus on a new BRT or BRT-lite project in the Valley • Smart Corridors in the Valley, Victor Valley, and Morongo Basin in conjunction with priority transit corridors above. • Continuation of vanpooling, ridesharing, and other transportation demand management (TDM) services at their current level of funding (see Transit/TDM section for descriptions) • Continuation of Freeway Service Patrols, with adjustments made to Freeway Service Patrol Beats due to cost escalation. • Continuation of zero-emission truck and passenger car charging/fueling infrastructure initiatives, based on grant funding. 	<p>Core Revenues, Financially Constrained Traditional sources:</p> <ul style="list-style-type: none"> • Measure I revenue forecast in 10-Year Delivery Plan • State revenues constrained to gas tax collections (including SB 1) and sales tax revenue (such as Local Transportation Fund/LTF) • Federal revenues constrained to congressional allocations for transit and highways • State SB 1 and federal competitive programs • Tolls for managed lane projects • Transit revenue adequate to cover current operations at 3% annual inflation • Development Mitigation fees

Table 8. Planned Active Transportation Projects

City	Project
Priority Active Transportation Projects	
Adelanto	Bartlett Ave SRTS: Harold George Visual and Performing Arts Magnet & Middle School SRTS
Apple Valley	Bear Valley Rd Bicycle and Pedestrian Improvements
Apple Valley	Phoenix Academy SRTS Enhancements on Thunderbird Rd and Dale Evans Parkway
Apple Valley	Bear Valley Rd Bridge Bicycle and Pedestrian Improvements
Apple Valley	Bear Valley Rd Bicycle and Pedestrian Improvements
Apple Valley	Bear Valley Rd Bridge Bicycle and Pedestrian Improvements
Apple Valley	Phoenix Academy SRTS Enhancements on Thunderbird Rd and Dale Evans Parkway
Apple Valley	Granite Hills High School Loop SRTS
Apple Valley	Mojave Riverwalk North
Chino	South Euclid Ave Bicycle/Pedestrian Connector
Colton	Complete Streets Bicycle and Pedestrian Improvements
County	Santa Ana River Trail Phase IV B and C: Class I, II, III, and IV from Orange St to Opal Ave
County	Del Rosa Ave Sidewalk Improvements
County/Fontana	San Sevaine Class I from Banyon St to Pacific Electric Trail and Foothill Blvd to Philadelphia St
Fontana	Sierra Ave Bicycle and Pedestrian Improvements
Fontana	Complete Streets Bicycle and Pedestrian Improvements
Highland/Redlands	Regional Connector Along Orange St and Connecting Roads Class I, II, and IV
Montclair	North ATP Improvements on Monte Vista Ave, Arrow Hwy, Moreno St, and Central Ave
Montclair	San Antonio Creek Channel Class I
Montclair	Adjacent SRTS (6): Kingsley ES, Howard ES, Ramona ES, Lehigh ES, Vernon MS, and Buena Vista AIMS
Montclair	Metrolink Access Complete Streets Bicycle and Pedestrian Improvements
Needles	Sidewalk Improvements (8): A St, B Street, C St, D St, Acoma St, Bazoobuth St, Quivera St, and Palm Way
Ontario	Vista Verde II (affordable housing) Complete Streets Bicycle and Pedestrian Improvements
Rancho Cucamonga	Church St Bicycle and Pedestrian Improvements
Rancho Cucamonga	Hermosa Ave Bicycle and Pedestrian Improvements
Rancho Cucamonga	SW Disadvantaged Communities and SRTS Bicycle and Pedestrian Improvements
Rancho Cucamonga	Banyan St Bicycle and Pedestrian Improvements
Rancho Cucamonga	Haven Ave and Foothill Blvd Complete Streets
Redlands	Lugonia Ave Bicycle and Pedestrian Improvements
Rialto	Riverside Ave Bicycle and Pedestrian Improvements
Rialto	Complete Streets Bicycle and Pedestrian Improvements
San Bernardino	9th Street Bicycle and Pedestrian Improvements
San Bernardino	Baseline Rd Bicycle and Pedestrian Improvements

City	Project
San Bernardino	Shandon Hills Middle School SRTS
San Bernardino	Inland Center Dr Bicycle and Pedestrian Improvements (including right-of-way)
San Bernardino/ Caltrans	Waterman Ave Bicycle and Pedestrian Improvements
Twenty-nine Palms	Joshua Tree Family Apartments (affordable housing) Complete Streets Bicycle and Pedestrian Improvements
Upland	Euclid and Magnolia Villas (affordable housing) Complete Streets Bicycle and Pedestrian Improvements
Victorville	Mojave Dr Complete Streets
Victorville	La Paz Pedestrian Improvements from I-15 to 7th St
Victorville	Ridgecrest Pedestrian Improvements from Bear Valley Rd to Pahute Ave
Yucca Valley	SRTS Access (4): Yucca Valley ES, Onaga ES, La Contenta MS, Yucca Valley HS, Black Rock HS, Paradise Park School Bus Hub, and Walmart Center Transit Hub
Projects in the Transportation Development Act (TDA) Article 3 Program (in progress)	
Adelanto	Transit Improvements on Jonathan St
Apple Valley	Thunderbird Road Bus Turnout - REVISED Bear Valley & Navajo Rd Turnout
Apple Valley	Bear Valley Rd Bridge Connector
Apple Valley	Village North Pedestrian Improvements
Apple Valley	McConnell Park Multi-Use Path
Apple Valley	Central Road Class II Bikeway
Big Bear	Stanfield Marsh Outdoor Recreation & Education Trail Segment II (SMORE II)
Chino Hills	Sierra Vista & Del Norte Improvements
Chino Hills	Montecito Dr Transit Access Improvements Project
Colton	South La Cadena Bicycle Improvement
County	Santa Ana River Trail - Waterman Ave. to California
County	3rd Street at Pedley Westbound
County	Bus Stop Improvements on Pacific Street
Fontana	Alder Middle School SRTS
Fontana	Rectangular Rapid Flashing Beacons
Fontana	Catawba SRTS Sidewalk
Fontana	10 Bus Pads in the City of Fontana
Highland	Baseline, Boulder, 9th Street and Olive Tree
Highland	9th St Transit Stops, Sidewalk, & Bikeway
Ontario	Ontario Improvements - 3 Stops
Omnitrans	Bus Benches and Shelters
Rancho Cucamonga	Haven Sidewalk Improvement
Rancho Cucamonga	Day Creek Channel Bike Trail
Rancho Cucamonga	Cucamonga Creek Channel Maintenance
Redlands	Orange Blossom Trail Phase IV
Rialto	Merrill SRTS (Boyd Elementary School)
Rialto	Sycamore SRTS
Rialto	Frisbie Middle School SRTS

City	Project
Rialto	Bemis Elementary SRTS
San Bernardino	Bus Stop Sidewalk Improvements
Twentynine Palms	Channel Trail Class I
Victorville	Old Town Sidewalk Connectivity - Phase 2
Victorville	Village Drive Sidewalk
VVTA	Hesperia Rd Between Chalan Rd and Sunset Drive
VVTA	13735 Rodeo Dr
VVTA	Apple Valley - Bus Stop Improvements
VVTA	Victorville - Sunhill Drive & Chalon Road
VVTA	Victorville - Nevada Avenue & McCoy Drive
Yucaipa	Transit Stop Access in the City of Yucaipa

Shaded projects are affiliated with Regional Early Action Planning 2.0.

SRTS = Safe Routes to School, ATP = Active Transportation Plan, ES = Elementary School, MS = Middle School, HS = High School

Table 9. Projects Included in the Aggressive Level of Funding

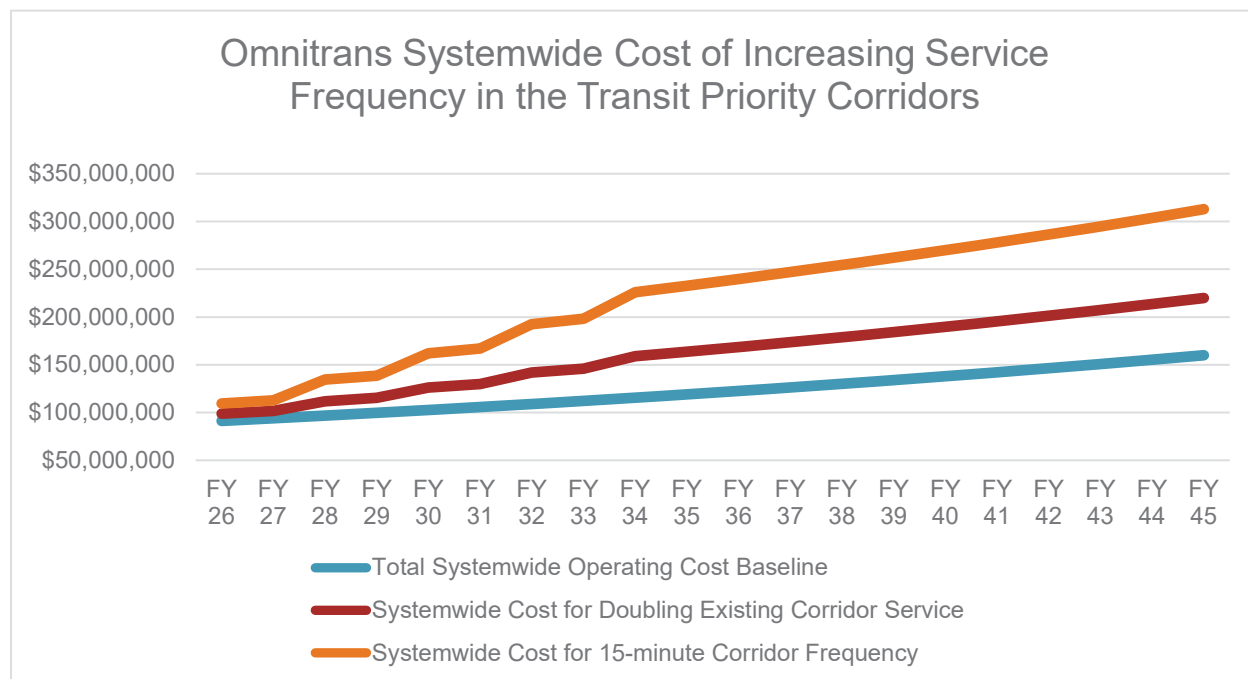
Projects	Funding
<p>Baseline Projects Plus the Following:</p> <ul style="list-style-type: none"> • Metrolink expansion (upgrade to 30-minute headways) on the San Bernardino Line (subject to funding through Metrolink’s Southern California Optimized Rail Expansion [SCORE] program) • Frequency improvements and transit priority treatments on all Priority Transit Corridors in the Valley, and selectively in Victor Valley and Morongo Basin in conjunction with Smart Corridors • Quiet zones at all Metrolink street crossings • Non-Motorized Transportation Plan buildout • Interchange Program Buildout (additional interchanges include I-10/Grove, I-10/Beech, I-10/Alder, I-10/Rancho, I-10 La Cadena Ramps, I-10/Waterman, I-10/California, I-10/Wildwood, I-15/Muscatel, I-15/Eucalyptus, I-15/Bear Valley, SR-60/Euclid, SR-60/Mountain, SR-71/Ramona, SR-71/60 Connector, SR-210/Del Rosa, SR-210/Victoria, I-215/Palm, I-215 Campus Parkway) • Freight and Multimodal Freeway Projects <ul style="list-style-type: none"> • I-10 Freight and Managed Lane Project from Pepper Avenue to Ford Street (Construction) • I-15 Freight and Managed Lane Improvements from Foothill Boulevard to US 395 (express toll lanes) • I-215 Freight and Managed Lane Improvements from SR-210 to I-15 • SR-210 Freight and Managed Lane Improvements from I-215 to I-10 • SR-210 – Freight and Managed Lane Improvements from County Line to 215 (assume HOV conversion to dual lane high-occupancy toll [HOT]) • I-215 Freight and Managed Lane Improvements from I-10 to SR-60 • Selected Managed Lane Connectors (I-10/I-15) 	<p>Funding Increased to Match Increased Need for Capital and Operations Expenditures - Potential options:</p> <ul style="list-style-type: none"> • Supplemental Measure I (MI 3.0) that would include more flexibility for use of tax dollars for transit operations. • Tolls from managed lane projects • Increases in state transit operating funds • Increase in future Federal authorizations (may require indexing gas taxes to be on par with current authorizations to account for inflation) • Regional/State/Federal VMT fee (or equivalent)

8.3 Observations about Funding for Transit Operations

As noted elsewhere in this plan, the ability to increase transit services is limited by the ability to fund ongoing transit operations. Capital projects generally represent one-time expenses, but the large majority of expenditures for a transit agency consists of transit operating costs. For example, in the National Transit Database 2023 Annual Agency Profile for Omnitrans, 94 percent of the expenditures were on transit operations out of their \$86 million budget. Of the operating expenses, 56 percent was for labor. In the San Bernardino Valley, SBCTA has generally been managing major transit capital projects, such as the construction of Arrow and West Valley Connector, so that these do not show up in the Omnitrans budget, and a significant portion of the capital costs have come through state and federal grants. That said, the operating funds must be available to operating agencies to fund the incremental operating costs that result from transit service expansion.

Omnitrans has developed a Corridor Investment Plan that identified nine future Transit Priority Corridors for potential service improvements. Existing transit services in the identified corridors have route frequencies that range from 20-minute headways to 60-minute headways. Doubling service would reduce frequency to between 10-30 minutes on all proposed routes in all nine corridors. The Omnitrans Corridor Investment Plan’s vision for faster and more reliable service will require a significant financial investment to bring the vision to reality. Figure 20 presents Omnitrans systemwide cost estimates over the next 20 years between three scenarios: 1) a constrained baseline cost for maintaining existing service; 2) an expansive scenario that doubles existing bus frequency in the nine corridors; and 3) an unconstrained estimate for improving corridor service to no greater than 15-minute headways. This assumes a phased approach of increasing service by 20% every other year, and cost estimates are based on FY 24 operating statistics for Omnitrans systemwide costs and accounting for inflation of 3 percent annually.

Figure 20. Projected Omnitrans Systemwide Operating Costs with Increasing Frequency



Over 20 years, it is estimated that baseline costs to maintain existing service will increase 70 percent to \$160 million in FY 2045 considering 3 percent annual inflation. Doubling service on the nine corridors would increase annual cost to \$220 million in FY 2045. Further increasing frequency to every 15 minutes would increase cost to \$313 million.

This example illustrates a challenge that faces all transit operators in the county. In the Victor Valley, VVTA has a similar long-range planning effort. VVTA's 2024 Comprehensive Operational Analysis presents a "Vision Plan" that sets forth route level and program level improvements which will require a 156 percent increase in annual revenue hours and doubling the number of vehicles. In addition, the conversion to zero-emission buses is a major investment, but the funds have been accounted for (\$138 million, largely from federal Congestion Mitigation and Air Quality funds) in the 10-Year Delivery Plan under the "Other Projects of Interest" category. New projects such as the Metro A Line extension into San Bernardino County and Ontario Airport Connector will further increase the need for operating funds.

9 Key Issues and Strategic Priorities

During the development on the LRMTMP, five key issues emerged as consistent transportation challenges for the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. These issues affect all six subareas. A number of strategic priorities were identified to address each key issue as described below. The following chapter details an Action Plan for each strategic priority.

9.1 Multimodal Mobility and Connectivity

Though areas of the county are densifying, and transit services are expanding, dispersed development patterns make travel distances too long for commutes by active transportation and make it more difficult to connect destinations with frequent transit. Though the jobs/housing imbalance is decreasing, many San Bernardino County residents and workers still face limited local job opportunities and long commutes. These elements lead to auto-dependence and long travel times on a congested roadway network, which makes VMT reduction more challenging, even though vehicle electrification is helping to reduce GHGs.

Strategic Priorities:

- Update prior plans for a "core network" of enhanced, frequent transit services, particularly within the San Bernardino Valley subarea
- Work with County jurisdictions to incorporate this core network into local land use plans and policies in order to encourage walkable, mixed-use development around high-quality transit
- Identify opportunities for incremental enhancements to transit frequency or coverage in rural areas of the county to serve unmet transit needs
- Develop a coordinated program of first/last mile improvements focused around the core transit network, including supporting, enhancing, and improving bicycle, pedestrian, and transit connections.
- Invest in and promote improvements to multimodal connectivity and the customer experience, including improved safety, frequency, faster trip-making, ease of connections and fare

payment options to encourage transit use among existing and potential riders across the San Bernardino region.

- Manage congestion and improve traffic flow on freeways and arterials
- Continue to actively promote strong vanpool, carpool, and TDM initiatives that provide options for single-occupant auto travel, and encourage employers to permit work-from-home options for employees who are able to work off-site
- Develop a VMT mitigation bank that can mitigate the VMT impacts of land development and strategic highway projects while providing an additional funding source for transit, TDM, and active transportation

“Top Tier” of Priority Transit Corridors for the San Bernardino Valley

Omnitrans prepared their original Systemwide Plan of priority transit routes in 2010. An update to the Systemwide Plan was developed in 2019 and was previously shown in Figure 13. The E Street BRT line (Green Line) has been in service for 10 years. The West Valley Connector BRT (future Purple Line) is under construction. As part of the LRMTTP, Omnitrans and SBCTA have been looking broadly at what investments should be made to other Priority Transit Corridors in the Systemwide Plan and sought input from local jurisdictions in Summer 2024 regarding potential investments on routes serving their jurisdictions. SBCTA has estimated that up to \$125 million in funding could be available from the Measure I Express Bus/BRT Program through 2040. The Express Bus/BRT Program receives 5 percent of Valley Measure I revenue that can be used for both capital and operations. With the right combination of investments, this funding could be leveraged to bring additional State and Federal funds into our area. The types of investments could range from making strategic improvements to transit service on multiple routes to larger investments that are more focused on one or two corridors similar to the Green Line or Purple Line.

On December 4, 2024, the SBCTA Board of Directors approved a recommendation relating to Priority Transit Corridors in the San Bernardino Valley. The recommendation was to “Direct staff to continue collaboration with local jurisdictions to identify the priority of routes for further development of the Bus Rapid Transit (BRT) network as identified in the Omnitrans Systemwide Plan (updated in 2019), to be incorporated into the Long Range Multimodal Transportation Plan.”

Pursuant to this recommendation, staffs from Omnitrans and SBCTA conducted a technical evaluation of the nine remaining (other than Green Line and Purple Line) candidate Priority Transit Corridors in the Omnitrans Systemwide Plan. The intent was to identify a “top tier” of corridors to be included in the Final LRMTTP. This does not represent a funding commitment to a particular route. Rather the top tier of corridors can be seen as a framework for the strategic use of the funds remaining in the Measure I Express Bus/BRT program through 2040. The hope is to leverage those funds to bring in as much outside investment as possible, including state and federal funds as well as potential private investment. A set of seven criteria was used to help guide how the corridors could be prioritized for further development and how to invest in future BRT corridors on the Omnitrans Systemwide Plan. The evaluation panel rated each corridor in a “low-medium-high” format.

The result of the Omnitrans and SBCTA staff evaluation was to recommend incorporation of the following as “top tier” Priority Transit Corridors in the LRMTTP (they are in alphabetical order, not priority order):

- Baseline/Highland Avenues, San Bernardino Transit Center to Greenspot Road
- Foothill Boulevard, Victoria Gardens to San Bernardino Transit Center

- San Bernardino Avenue, Ontario Mills to San Bernardino Transit Center

One concept for “next steps” in the consideration of Priority Transit Corridors would be for jurisdictions in each of the corridors to respond to an SBCTA solicitation of interest in further development of those corridors for priority transit treatments. These could range from BRT concepts similar to the Purple Line or Green Line to lesser levels of priority treatment. In doing so, the jurisdiction partners in each of the top tier corridors could propose variations of those alignments that could be included in a subsequent “Alternatives Analysis” or AA, following the Federal Transit Administration AA process. These variations could potentially incorporate components of the north/south corridors where it makes sense. A similar process occurred in the planning of the West Valley Connector, which originally followed a fully east/west alignment on Holt Boulevard and San Bernardino Avenue but later incorporated the north-south component on Milliken Avenue so as to link up with the Cucamonga Metrolink station.

This approach would mean that portions of the medium and lower priority corridors could remain in the mix if they bolstered network connectivity. As a result, all of the routes on the Priority Transit Corridor map are still included in the Final LRMTTP, and subsequent discussions by the Board will determine whether, when, and where additional investment should be made in premium transit service.

9.2 Goods Movement

The logistics industry is a major economic driver for San Bernardino County. While the strong and growing goods movement and warehousing industry provides economic and employment benefits, it also contributes to poor air quality, roadway congestion, pavement degradation, and safety issues that particularly burden communities around warehouses or along major truck routes. While goods movement is key to the local and regional economy, it relies on highway investment at a time when state policy discourages highway capacity expansion.

Strategic Priorities:

- Develop a strategic plan for freight corridors, including arterial truck routes which can be used to focus freight travel and reduce freight and land use conflicts. The plan should include a program of enhancements for those corridors to facilitate safe and efficient freight movement, consistent with the intent of Assembly Bill 98 (Planning and Zoning: Logistics Use: Truck Routes), which will go into effect in January 2026).
- Collaborate with the private sector on strategic opportunities to shift freight from truck to rail and optimize supply chains to reduce truck travel.
- Collaborate with the private sector to accelerate the transition to clean trucks.
- Prioritize strategic investment in high-volume highway freight corridors and first/last mile freight connections to maximize potential for obtaining funding for needed highway improvements.

9.3 Climate Adaptation and Resiliency

The changing climate and higher chance of severe weather events (extreme heat, wildfires, floods) can disrupt the network, particularly in areas of the County that are dependent on a single major artery (e.g. I-15) or limited arterial network (e.g. the mountains). Zero-emission vehicle adoption is critical to meeting state climate goals and addressing air quality issues.

Strategic Priorities:

- Encourage development of redundancy across the network as well as projects which improve the operational resiliency of major arteries.
- Take advantage of Brightline West as an alternative to I-15 commuting by coordinating connections to San Bernardino Valley and Victor Valley destinations to achieve competitive travel times.
- Collaborate with the private sector to accelerate the transition to clean trucks through zero-emission charging and fueling initiatives.
- Transition bus and other transit services to zero-emission operations in compliance with state mandates
- Support development of hydrogen production hubs in the Inland Empire
- Prioritize state of good repair on major highways and arterials to protect against damage from extreme weather events.
- Establish procedures for evacuations and accessibility in emergency situations

9.4 Disadvantaged Communities

San Bernardino County includes many areas considered disadvantaged according to state and federal criteria, including low-income and limited-English speaking populations as well as areas burdened with unfavorable environmental conditions such as poor air quality. Car ownership can be a financial burden for members of these communities, particularly given recent high inflation rates, but limited, infrequent transit service and the dispersed nature of the County make it difficult to get around without a car. Residents and workers in these communities often contend with high volumes of freight traffic, limited non-auto connectivity, safety concerns, and high housing prices which push people to live far from their jobs.

Strategic Priorities:

- Continue to operate the local bus and demand-responsive transit systems, recognizing their importance to providing basic mobility services to San Bernardino County residents, especially those without access to cars
- Take advantage of state and federal grant programs which highlight equity as a core consideration, including programs for reconnecting communities, zero-emissions transition, and transportation and housing programs.
- Continue, expand and communicate with riders and potential riders about transit fare reduction programs and free fare events for students, seniors, and low-income individuals.
- Prioritize transit, bicycle, and pedestrian improvements to close gaps and provide access along major routes and to key destinations such as transit, schools, other public buildings, and major employment centers which will improve mobility within disadvantaged communities.
- Prioritize inclusive communications strategies that ensure that community-level needs in areas of the County considered disadvantaged can participate in transportation planning processes.

9.5 Funding

Funding is critical to improving networks of transit services, first/last mile connections, and roadway state of good repair. Resources available through gas taxes are declining in purchasing power due to inflation, fuel efficiency, and zero-emissions transition. State policy discourages highway capacity expansion, which limits potential for improvements in more rural communities where alternatives to driving are limited. For transit, funding is generally more available for capital improvements, but limited resources are available for funding ongoing transit operations and additional service frequency, which is crucial for transit service expansion and attracting and maintaining riders.

Strategic Priorities:

- Work with state and regional partners to make additional funding available for transit operations.
- For future funding measures, review allocation priorities according to the vision, goals, and priorities outlined in the LRMTTP.
- Continue to use excess toll revenues for transit projects and zero-emission initiatives.
- Strengthen partnerships with community-based organizations to garner support for discretionary grant applications and to assist in promoting alternatives to single-occupancy vehicle travel.
- Support local agencies in seeking grant funding for projects to improve mobility.

10 Action Plan

Tables 6 through 10 detail the key actions that SBCTA can take to advance each strategic priority, organized by key issue.

Table 10. Key Actions for Mobility

Strategic Priority	Key Actions
Further develop the Core Transit Network	<ul style="list-style-type: none"> • Work with Southern California Regional Rail Authority (SCRRA) to achieve 30-minute daytime headways on the Metrolink San Bernardino Line as a high-frequency transit backbone in San Bernardino Valley and coordinate service planning to provide connections to Brightline West • Complete the West Valley Connector BRT project • Develop an implementation and funding plan for higher service levels and appropriate transit priority treatments (e.g. transit signal priority) on the Omnitrans priority transit network • Invest in Mountain/Desert transit systems based on priorities in the respective Short Range Transit Plans • Position the priority transit network to be competitive for additional state and federal funding • Pursue operating funds for increased service using strategies described in key issue 5

<p>Incorporate Core Network into local land use plans and policies</p>	<ul style="list-style-type: none"> • Position the Omnitrans priority transit network to be attractive for higher density residential and commercial development, coordinating with local jurisdictions on land use planning • Coordinate with transit operators and corridor jurisdictions on land use plans that address state housing targets and local economic development goals along the core transit network
<p>Incremental transit enhancements in rural areas</p>	<ul style="list-style-type: none"> • Identify unmet or underserved needs in rural communities, such as connections from Needles to Arizona for grocery and pharmacy access • Secure funding to implement new/enhanced service to meet rural travel needs
<p>Develop coordinated program of first/last mile improvements</p>	<ul style="list-style-type: none"> • Build on the Non-Motorized Transportation Plan to define an active transportation priority list and advance project development to position for funding • Deliver priority improvements • Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that co-locates transit and active transportation amenities such as bike sharing • Coordinate with the US Forest Service on developing trails within the San Bernardino National Forest and connecting those trails to the greater transportation system
<p>Invest in multimodal connectivity and customer experience</p>	<ul style="list-style-type: none"> • Continue to coordinate service planning between transit providers to schedule convenient connections between modes • Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes • Invest in physical improvements at bus stops and rail stations to improve rider safety and comfort, such as shelters, benches, and lighting
<p>Manage congestion on freeways and arterials</p>	<ul style="list-style-type: none"> • Transition Valley freeways into a truly managed system by implementing the San Bernardino County portion of the regional multimodal managed lane system, with dynamic pricing, as included in the RTP/SCS • Work with local jurisdictions to maintain the San Bernardino Valley Coordinated Traffic Signal System • Implement the Smart Intersection and Smart Corridor recommendations from the Smart County Master Plan • Coordinate overall signal system improvements with priority treatments for the Core Transit Network • Define and deliver priority highway/rail grade separations

Promote strong vanpool, carpool, and TDM initiatives

- Continue and expand partnerships with large and medium-sized employers to promote multimodal alternatives to single-occupancy vehicle commutes, including telecommuting
- Continue partnering with regional partners such as Riverside County Transportation Commission to share data and technology tools to support shared-ride opportunities for long-distance commuters
- Review transit fare structures and carpool/vanpool programs to provide flexibility that encourages hybrid workers to use alternative modes on days they must travel to an office
- Promote awareness of mobility alternatives and communicate the quality-of-life benefits of bus and rail transit, vanpool, and carpool as alternatives to driving alone

Develop VMT mitigation bank

- Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT
- Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects

Table 11. Key Actions for Goods Movement

Strategic Priority	Key Actions
Develop plan for designated freight corridors	<ul style="list-style-type: none"> • Identify potential routes within and between major logistics hubs such as the areas around Ontario International Airport, Southern California Logistics Airport, San Bernardino International Airport, the Union Pacific West Colton Yard, and BNSF San Bernardino Intermodal facility • Assist jurisdictions with guidelines for implementation of Assembly Bill 98, to include identification of corridors that may be designated as truck routes • Identify improvements to improve safety and operational efficiency along these corridors • Work with Caltrans and California Highway Patrol to enhance current incident management and monitoring systems to actively manage traffic along key freight corridors, such as the Cajon Pass • Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by Assembly Bill 98
Collaborate with logistics industry to shift freight from truck to rail, where practical and cost-effective	<ul style="list-style-type: none"> • Prioritize connections to intermodal facilities in development of designated highway freight corridor plan • Collaborate with BNSF and Union Pacific to address key bottlenecks in the freight rail network to increase rail capacity

Accelerate transition to clean trucks

- Partner with logistics and zero-emission charging/fueling companies to accelerate the transition to zero emission (ZE) truck operations and supporting infrastructure needs consistent with the California Transportation Commission’s SB 671 designated zero-emission corridors
- Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations
- Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario metropolitan statistical area Priority Climate Action Plan
- Collaborate with state, regional, and local partners to locate and fund hydrogen production hubs and an affordable H2 fueling supply chain to support both the logistic industry and transit needs

Prioritize investments in high-volume highway freight corridors

- Deliver key highway improvements in the Measure I 10-Year Delivery Plan, such as the I-10 and I-15 Corridor Freight and Managed Lane Projects, and strategic improvements on other state highways such as SR-18, SR-62, and US 395
- Strategically invest in improvements to key highway freight bottlenecks and that minimize conflict between trucks and other road users, such as the Cajon Pass I-15 Northbound Truck Climbing Lane Extension.

Table 12. Key Actions for Climate Adaptation and Resiliency

Strategic Priority	Key Actions
<p>Encourage redundancy across the transportation network and improve operational resiliency on major arterials</p>	<ul style="list-style-type: none"> • Implement recommendations from the forthcoming State Route 247/62 Emergency Bypass Study and the Emergency Evacuation Network Study (EENR) • Extend the I-15 truck climbing lane through the Cajon Pass • Continue development of managed lanes on major corridors such as I-10 and I-15, consistent with regional plans • Continue and expand transit partnerships with mountain area resorts to provide an alternative to driving congested routes to, from, and within the mountains
<p>Coordinate connections to Brightline West</p>	<ul style="list-style-type: none"> • Coordinate with Metrolink and Brightline West to ensure east-west regional connectivity via the Metrolink San Bernardino Line • Complete the West Valley Connector and coordinate other public and private bus connectivity to the Rancho Cucamonga, Hesperia, and Apple Valley Brightline stations • Deliver the Ontario Airport Connector to create a direct transit connection between the station and the airport • Coordinate with Rancho Cucamonga, Ontario, and local employers to implement first/last mile improvements for access to employers and attractions in the West Valley • Partner with VVTA to coordinate feeder service to the Apple Valley and Hesperia stations, such as new fixed routes or expansion of Micro-Link on-demand service as appropriate

Accelerate transition to clean trucks

- Partner with trucking and zero-emission fueling/charging companies to accelerate the transition to zero-emission in the SB 671 corridors and for local logistics operations. Seek grant funding for ZE trucking and transit

Transition transit operations to zero-emissions

- Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies, in particular regarding operating zero emission vehicles long distances and in hot conditions in the county’s rural areas and with steep grades in the Mountain subarea
- Collaborate with Metrolink to explore technology options for their transition to zero-emission

Support development of hydrogen hubs and fueling

- Complete conversion of Arrow service from diesel to hydrogen fuel cell multiple units
- Partner with Metrolink, Omnitrans, and VVTA to identify opportunities for leveraging economies of scale in the sourcing of hydrogen fuel
- Partner with the state and utility industry to site green hydrogen production in accessible Inland Empire locations

Prioritize state-of-good-repair on highways and arterials

- Reinvest new toll revenue into maintaining the managed lane system as well as excess revenue on transit, zero-emission and affordable housing
- Replace key rural bridges to restore and maintain access, such as those on the National Trails Highway and in Baker
- Collaborate with Caltrans and local jurisdictions on criteria such as pavement condition index for prioritizing maintenance of alternate routes and need for incident traffic management and emergency evacuation

Establish emergency procedures

- Complete the Emergency Evacuation Network Resilience Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study
- Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.
- Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information

Table 13. Key Actions for Disadvantaged Communities

Strategic Priority	Key Actions
Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars	<ul style="list-style-type: none"> • Analyze potential impacts of major transit investments on transit service to disadvantaged communities • Provide adequate maintenance, security, schedule information and cleanliness at local bus stops • Consider needs of all users as electronic fare payment systems are further developed
Take advantage of available funding focused on disadvantaged communities	<ul style="list-style-type: none"> • Deliver transit priorities identified in the LRMTTP that particularly benefit disadvantaged communities • Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed • Take advantage of equity-oriented programs like the Reconnecting Communities Pilot • Continue to leverage state GHG reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and SB 1 funds such as Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition
Free and reduced fare programs	<ul style="list-style-type: none"> • Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals • Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass • Communicate fare incentives to the public
Prioritize multimodal improvements to improve mobility in disadvantaged communities	<ul style="list-style-type: none"> • In developing the Core Transit Network, prioritize corridors that connect disadvantaged communities to key destinations • Invest in high-comfort off-street active transportation corridors such as the Santa Ana River Trail, Pacific-Electric Trail, and San Sevaine Bicycle/Pedestrian Trail • Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities
Prioritize inclusive communications	<ul style="list-style-type: none"> • Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience • Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices. • Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.

Table 14. Key Actions for Funding

Strategic Priority	Key Actions
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Secure additional state and regional funding for transit operations

- Increase availability and flexibility of future Measure I funding for use in transit operations
- Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses

Align future funding sales tax measures with the priorities of the LRMTF

- Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit
- Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs

Use excess toll revenue for transit improvements

- Identify transit needs along planned express lane corridors such as I-10 and I-15 and fund solutions with toll revenue
- Expand use of tolled express lanes to manage congestion while providing additional revenue for investment in alternate modes of travel

Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives

- Maintain relationships with CBO leaders and business sector partners
- Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects
- Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public

Support local agency grant pursuits

- Monitor grant funding opportunities at federal, state, and regional levels and collaborate with local partners on grant pursuits
- Provide technical support for local grant applications

11 Key Funding and Strategic Observations

The overall transportation funding picture and transportation strategy for San Bernardino County can be summarized as follows:

1. The projects and programs in the 10-Year Delivery Plan are fully funded except where it is noted that grant funding will be needed to fill the final funding gaps and subject to contractor bid results.
2. The projects and programs that can be implemented beyond the 10-Year Delivery Plan and with the Baseline Level of funding are relatively limited.
3. While it is assumed in the “Aggressive Level” that a Measure I extension will occur to fund projects and programs beyond 2040, only a limited amount of that funding may be accessible

or able to be committed as part of the Baseline Level of funding (via bonding or Project Advancement Agreements) prior to 2040.

4. While an extension of Measure I in perpetuity beyond 2040 (together with grants) may be able to eventually fund most of the projects identified for the Aggressive Level of funding, the projects will likely need to be spread over a long period of time. Preliminary cost estimates indicate that the funding streams will not be able to fund the magnitude of these projects in a compressed timeframe, such as 20 years.

SBCTA and its local jurisdiction and transit agency partners have made a remarkable amount of progress in expanding transit, shared-ride services, and active transportation over the last 10 years, and that progress will continue. Substantial achievements have also been made in the transition to zero-emission vehicles, including the first hydrogen-fueled trainset in the United States and multiple charging/fueling stations for zero-emission trucks. These advancements in transportation and clean vehicles are important for providing mobility for both disadvantaged communities and for residents and businesses overall. This multimodal and sustainability approach is consistent with the guiding principles of CAPTI and goals of the 2050 California Transportation Plan.

Alongside progress in these alternative modes, it is important to complete the network of freight and managed lane projects identified in the 2024 SCAG RTP/SCS and the preceding three RTP/SCSs. San Bernardino County and the region will continue to grow, and the LRMTTP scenario tests described in Section 7 demonstrate that increases in VMT from growth will outstrip the amount of VMT mitigation that can be accomplished through trip reduction strategies (i.e. telework, transit, shared rides, active transportation, etc.), even with SBCTA's very proactive approach to VMT reduction.

Virtually every freeway project and many interchange projects directly help keep the logistics-based portion of the county's economy moving. It is important that this progress continue for the future mobility of San Bernardino County residents, many of whom work in these industries, and for the success of the region's businesses. It is a balanced approach, with a primary focus on system management and alternate modes. Where freeway capacity is being increased, it is always as a part of the regional managed lane strategy, which also enables incentives for transit and shared rides. These projects will also spin off revenue for transit and zero-emission investments. The freeway projects are a critical part of SBCTA's multimodal strategy, and the state cannot expect that the managed lanes can be created just by converting an existing general-purpose lane. The County's residents and businesses will not tolerate the additional congestion that would result, and sales tax measures that take already-congested general-purpose lanes out of service are not electorally viable.

If SBCTA's multimodal and sustainability advancements are to continue, more attention will need to be given at the state and federal level to funding for transit operations. SBCTA and its partners can build additional transit services only to the extent that there is funding to operate them. This is the primary limitation to achieving the aspirational goals of CAPTI and the 2050 California Transportation Plan. At the same time, mobility must be maintained for the flow of goods within and through San Bernardino County. The global supply chain runs through San Bernardino County, for both exports and imports, and a balanced, multimodal system is critical not only for the future of San Bernardino County, but for the state and the region.



Valley Subarea Plan

San Bernardino County Long Range Multimodal
Transportation Plan

San Bernardino County, CA

February 5, 2025





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Contents

1	Subarea Overview	1
2	Unique Challenges	1
3	Strategic Priorities	2
4	Strategic Priority Action Plan.....	6
5	Conclusion and Next Steps	17
6	References	18

Tables

Table I. Proposed Valley Subarea Projects and Cost Estimates, by Program Through FY 2033/34 (1,000s)	6
Table II. Mobility Action Plan for the Valley Subarea	8
Table III. Goods Movement Plan for the Valley Subarea	11
Table IV. Climate Adaptation and Resiliency Action Plan for the Valley Subarea.....	13
Table V. Disadvantaged Communities Action Plan for the Valley Subarea	15
Table VI. Funding Action Plan for the Valley Subarea	16

Figures

Figure 1-1. Valley Subarea	1
Figure 3-1. Valley Transit Vision	3
Figure 3-2. Omnitrans Priority Transit Corridors	4
Figure 3-3. CalEnviroScreen Percentile for the Valley	5
Figure 3-4. Pollution Burden Percentile, Valley	5

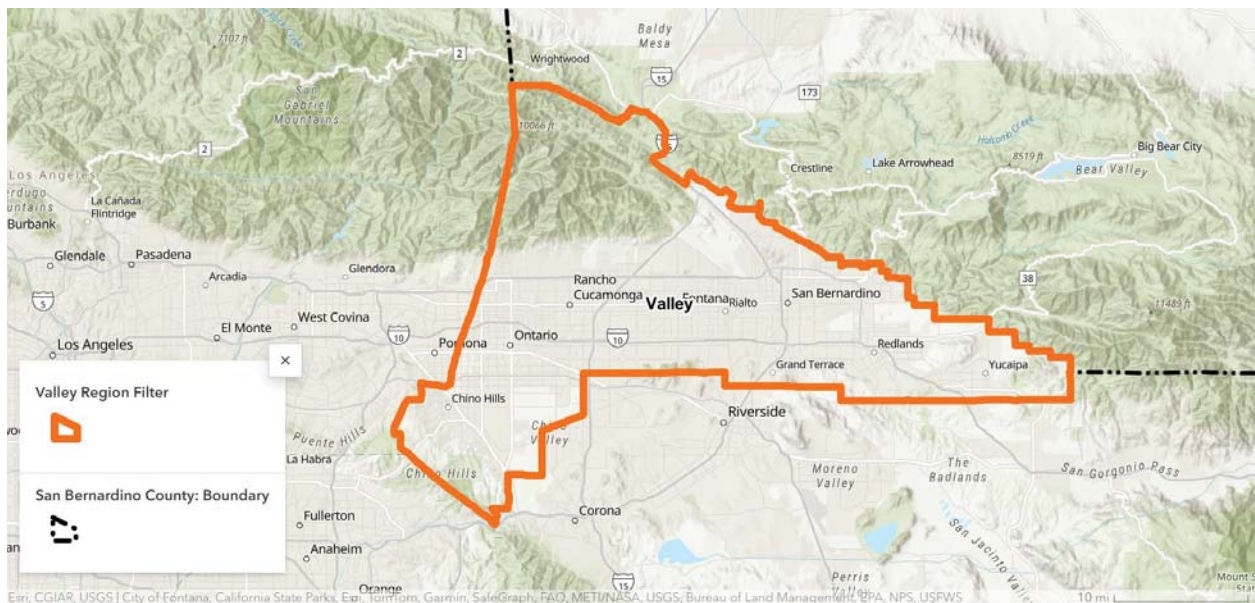
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1 Subarea Overview

As the largest county in the contiguous United States in land area, San Bernardino County is geographically diverse, and each subregion has unique needs. This is recognized in the county's half-cent sales tax for transportation improvements, Measure I, which allocates funding to six subareas. In developing the Long Range Multimodal Transportation Plan (LRMTP), the six subareas identified by Measure I were analyzed to ensure issues facing San Bernardino County's unique geographic areas are adequately addressed. This subarea plan focuses on the Valley subarea (Figure 1-1).

The Valley subarea consists of 15 incorporated communities: the cities of Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa. The subarea had 463,153 households in 2019 and is projected to increase to 563,749 in 2035 and to 610,850 households in 2050 (Southern California Association of Governments [SCAG] 2024). Additionally, the number of jobs in the Valley is expected to increase from 704,495 jobs in 2019 to 799,111 jobs in 2035 and 856,109 jobs in 2050 (SCAG 2024). In 2019 the Valley subarea was home to 70 percent of the households countywide, and 82 percent of the jobs. In the SCAG region, the cities of Montclair and Ontario are the top ten growing jurisdictions in terms of percentage of households, and the cities of Grand Terrace, Highland, Ontario, and Yucaipa are the top 20 fastest growing jurisdictions regarding the percentage of employment (SCAG 2024).

Figure 1-1. Valley Subarea



Source: Existing Conditions StoryMap

2 Unique Challenges

Freight Traffic and Congestion on Highways and Arterials: Many of the County's warehouse and distribution facilities are clustered along the key goods movement highway corridors, including Interstate 10 (I-10), Interstate 15 (I-15), and State Route 60 (SR-60). These corridors provide access

to the major warehouse concentrations and truck terminals in Ontario, Fontana, Chino, Rancho Cucamonga, and San Bernardino. The bottleneck on I-10 at the I-15 interchange in Ontario is ranked 18th in the nation for the most congested bottlenecks (American Transportation Research Institute 2024) and I-10 and SR-60 have the highest annual average truck volume in the Valley subarea (Caltrans 2023). Congestion on these corridors increases the overall cost of transportation service for goods and for passengers in buses or personal vehicles due to travel delay and can also generate emission impact and safety issues.

State of Good Repair: Heavy trucks and freight equipment affect pavement conditions. Roads that are in poor condition impact the safety of users and can increase wear and tear on vehicles, increasing maintenance costs for drivers.

Transit Service and Quality of Bus Stops: Omnitrans is the primary transit provider in the Valley and the San Bernardino Transit Center provides connections to Metrolink, Victor Valley Transit Authority, Mountain Transit, Riverside Transit Agency, Beaumont Transit, and Sunline Transit. Montclair also hosts multiple transit services, with Metrolink, Omnitrans, and Foothill Transit, all providing significant service there. Emerging transit centers are located in Fontana and Rancho Cucamonga Metrolink stations. Service frequency and scheduling can be a challenge for timely connections among the transit agencies. Omnitrans rider survey information was used to identify stops where riders most frequently reported safety concerns which has led the agency to implement several approaches to improving the public's perceptions and experience of safety at bus stops and transfer centers.

Air Quality: The Valley subarea experiences the worse pollution burden in the county, particularly from particulate matter 2.5 (PM2.5), nitrogen dioxide, and diesel particulate matter (Figure 3-4). The South Coast Air Basin is an extreme non-attainment area for ozone. Trucks and trains carrying goods from the Ports of Los Angeles and Long Beach, Los Angeles International Airport, and Ontario International Airport travel to warehouses and railyards located in San Bernardino County, and many of the major freight highway corridors and warehouses are located in the Valley subarea.

Gaps in Active Transportation Network: The Valley is the most urban and dense of the subareas. Given the higher density of this subarea, trips made by active transportation modes are more feasible due to the proximity of key destinations compared to the more rural areas of the county. However, gaps in sidewalks or bike lanes force users to travel on facilities designed for motorized vehicles or seek other modes of travel.

3 Strategic Priorities

In developing the LRMTTP, five areas of concern were identified throughout the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. The areas of concern are related to the goals and objectives of the LRMTTP. This section describes how these areas relate to the Valley subarea.

Mobility: The Valley subarea is the most populated and developed portion of the County. The number of jobs per household for the Victor Valley in 2019 is 1.52, which is higher than the county average (1.31) and the SCAG region's (1.42). The majority of trips remain within the Valley subarea, with some trips extending to the Victor Valley subarea, Los Angeles County, and Riverside County. The Valley subarea is poised to experience future growth in transit-oriented development (TOD) as a result of improved Metrolink frequency, the Arrow Route Project, extension of the Metro Gold Line to Montclair, the planned Brightline West service, expanded bus rapid transit, and the future Ontario International

Airport Connector. These services will attract more employment growth and higher-density housing development into transit station areas and is an opportunity to improve transit connectivity and accessibility within the Valley and to other parts of the region. Figure 3-1 shows the overall transit vision for the Valley subarea. A key initiative is the advancement of priority transit corridors in the Omnitrans System-wide Plan, shown in Figure 3-2. These corridors are candidates for a range of transit investment, from targeted transit priority improvements to more robust BRT similar to the E Street sbX route (Green Line) and the West Valley Connector (Purple Line), currently under construction.

Figure 3-1. Valley Transit Vision

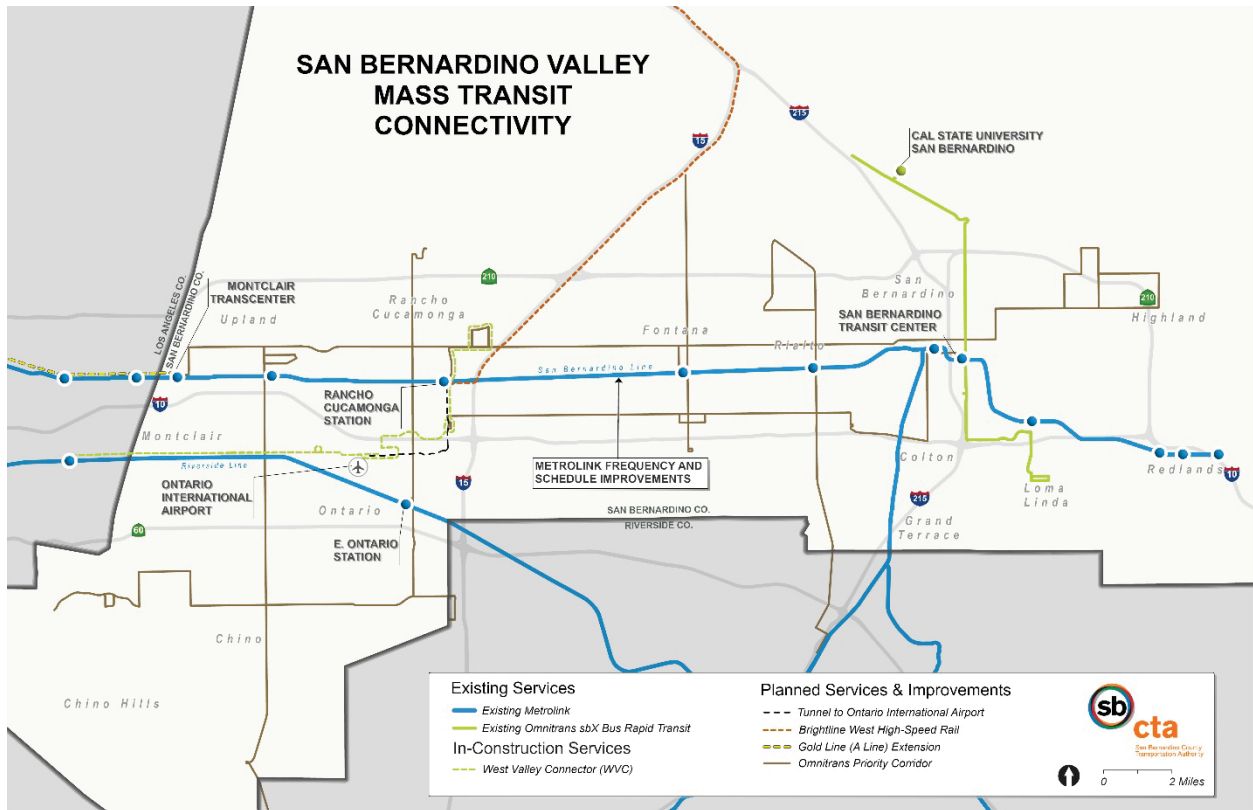
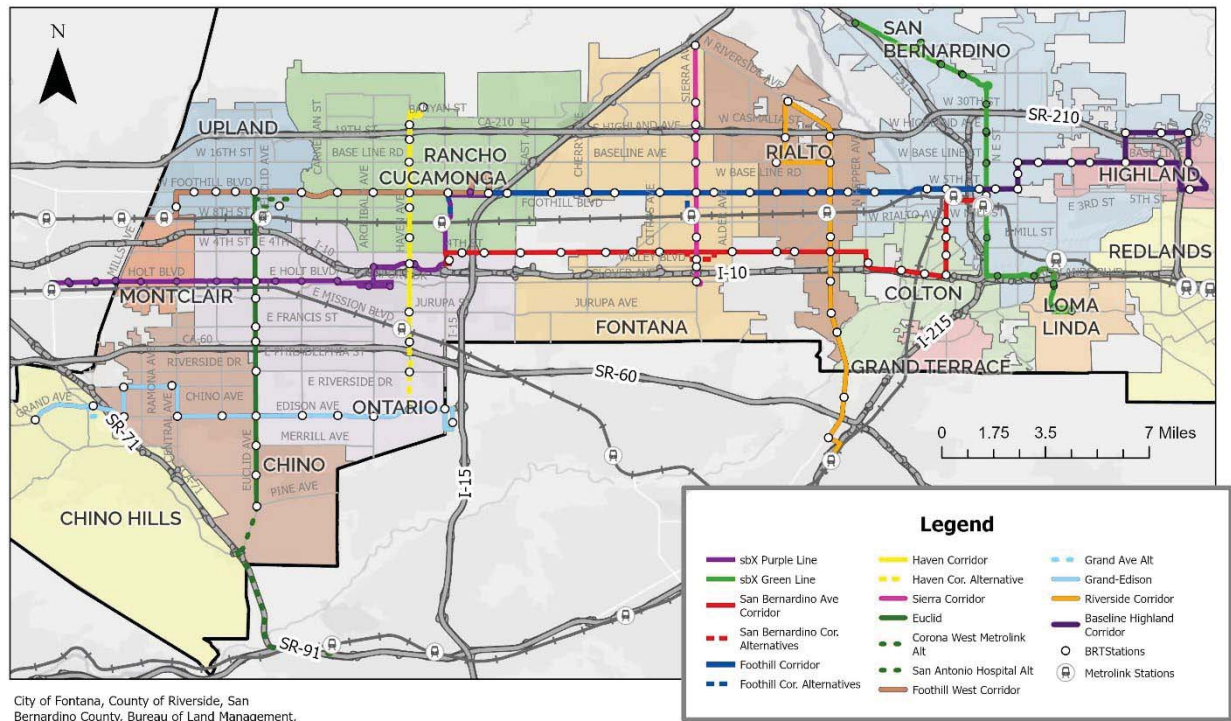


Figure 3-2. Omnitrans Priority Transit Corridors



Goods Movement: Goods movement in the Valley is accommodated through major truck flows on Interstates 10 and 15 and SR-60. Daily truck volumes on these freeways can reach 25,000-30,000 per day, and the SR-210 freeway has taken on added freight flows within the last 10 years. This network is supplemented by designated local truck routes and an extensive rail network (Union Pacific Railroad and BNSF) that transport goods from the Ports of Los Angeles and Long Beach to warehouses in the Valley. There are over 422 million square feet of warehouse/distribution facilities in the Valley Subarea, one of the largest clusters of logistics and industrial development in the United States and near major transportation hubs like Ontario International Airport, San Bernardino International Airport, and the BNSF and UP intermodal facilities in San Bernardino and Fontana (Robert Redford Conservancy for Southern California Sustainability 2024). The subarea experiences historically high pollution burden, and emissions from freight activity has been linked to health impacts such as cancer and a variety of respiratory and cardiovascular problems. This is why a strategic priority in the LRMTF is to collaborate with the private sector, local jurisdictions, and the two air quality management districts (South Coast and Mojave) to locate charging/fueling stations for zero-emission trucks along major freight corridors and to accelerate the transition to clean trucks.

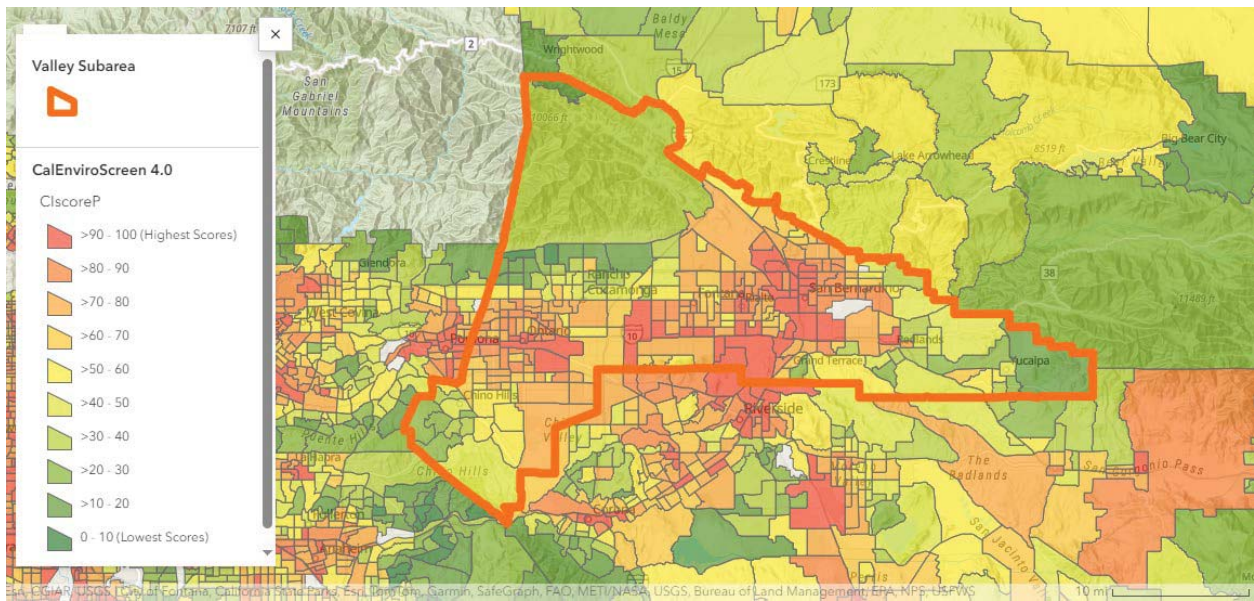
Climate Adaptation and Resiliency: The Valley subarea is projected to experience more extreme heat days, impacting the comfortability and safety of individuals who walk or bike or use public transit. Mountainous and forested terrain is at risk for wildfire in the area, especially at the base of the San Bernardino Mountains, along I-15 near the Cajon Pass and Wrightwood. Infrastructure and operational resiliency against wildfires are essential for the transportation network, especially for the mobility of vulnerable populations, emergency services, and evacuations.

Disadvantaged Communities: Census tracts in Ontario, Rancho Cucamonga, Fontana, Rialto, Colton, Loma Linda, Redlands, San Bernardino have low median household incomes. Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0 are classified as

disadvantaged by Senate Bill 535 (Figure 3-3), indicating higher pollution burden and vulnerability. Sensitive populations in the region have an increased risk of asthma and cardiovascular disease, and experience housing burden and high exposure to PM2.5, nitrogen dioxide, and diesel particulate matter. As shown in Figure 3-4, the pollution burden percentile is higher for communities near I-10, I-15, and I-215.

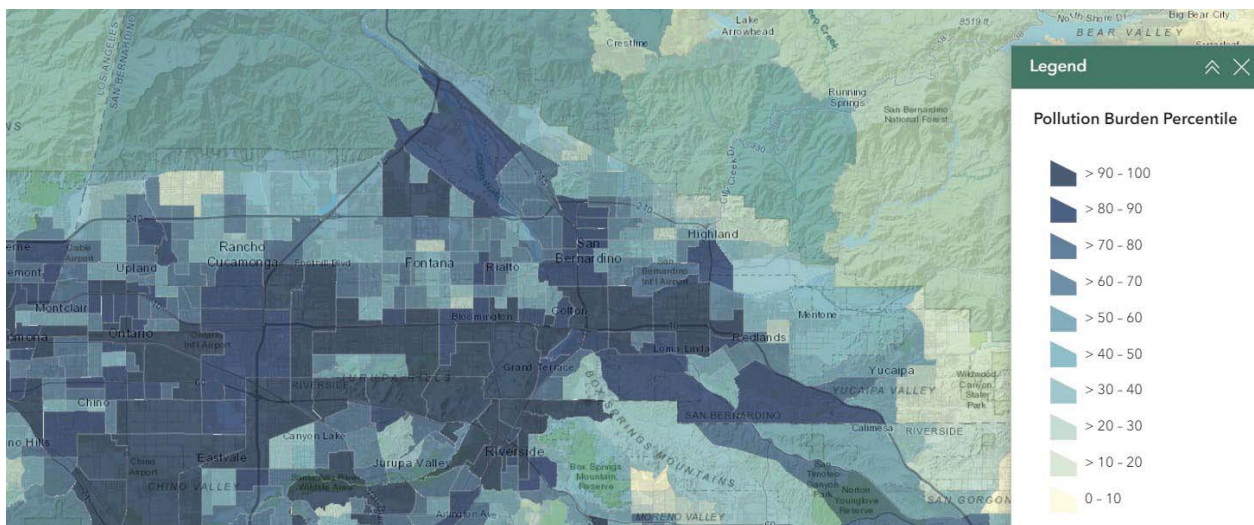
Funding: Funding issues are not restricted to one geographic area, however, securing funding for transit operations, building out the regional managed lane network, making local roadway improvements, and expanding active transportation facilities are priorities for the Valley subarea.

Figure 3-3. CalEnviroScreen Percentile for the Valley



Source: CalEnviroScreen 4.0

Figure 3-4. Pollution Burden Percentile, Valley



Source: CalEnviroScreen 4.0

4 Strategic Priority Action Plan

The final LRMTTP report identifies the projects being considered for the forthcoming San Bernardino County Transportation Authority (SBCTA) 2025 10-Year Delivery Plan, and presents projects listed for the “Baseline Level” of investment and additional projects at the “Aggressive Level” that can be considered with additional revenue for all subareas. Table I shows projects being pursued by local jurisdictions in the Valley Subarea over the next 10 years. Additional detail is available in the SBCTA 2025 10-Year Delivery Plan.

In addition, Omnitrans has conducted its own near-term planning in its Short Range Transit Plan (SRTP) for fiscal year 2023-2030, which can be found at: [Omnitrans Short-Range Transit Plan FY2023-2030](#). Metrolink has presented a draft Service Growth Development Plan through 2031 with the goal of 30-minute frequencies on the San Bernardino Line by 2028 (Omnitrans 2023). This is in draft stage and not yet approved by the Metrolink Board of Directors. However, these upgraded frequencies will be important to support other transit projects such as Brightline West and the Ontario International Airport Connector (ONT Connector). The 218-mile Brightline West passenger rail service will operate from Las Vegas to Rancho Cucamonga, with 96% of its alignment within the median of Interstate 15. Construction is expected to take about 4 years with service beginning in 2028. It will also provide a new means for making the commute from the Victor Valley, down the Cajon Pass, with connections to Metrolink and to other employment destinations in the Valley.

Table II through Table VI summarizes the strategic priority and key actions for each of the issues described in the previous section.

Table I. Proposed Valley Subarea Projects and Cost Estimates, by Program Through FY 2033/34 (1,000s)

Freeway Program		COST
1	I-215 Bi-County / I-215 Segment 5 Landscaping	\$18,500
2	I-10 Corridor Contract 1	\$963,043
	I-10 Contract 1 Measure I Investment	\$29,966
3	I-10 Truck Climbing Lane	\$39,155
4	I-15 Corridor Freight and Express Lanes Project - Contract 1	\$535,002
5	I-10 Corridor Freight and Express Lane Project - Contract 2*	\$980,140
TOTAL:		\$2,565,806
Interchange Program		COST
1	I-10/Cedar Avenue Interchange	\$112,668
2	I-215/University Parkway Interchange	\$25,696
3	I-10/Mount Vernon Avenue Interchange	\$97,487
4	SR 210/Waterman Avenue Interchange	\$9,810
5	SR 210/5th Street Interchange	\$18,827
6	SR 60/Euclid Avenue Interchange	\$6,030

*Project is not fully funded.

7	I-10/Wildwood Canyon Road Interchange	\$3,000
8	I-10/Riverside Avenue Interchange Phase 2*	\$45,316
9	I-10/Eucild Avenue Interchange**	\$0
10	I-10/Monte Vista Avenue Interchange**	\$0
11	I-10/Vineyard Avenue Interchange**	\$0
TOTAL:		\$318,834

*Project is not fully funded.

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

Major Streets Programs		COST
1	Mount Vernon Viaduct	\$244,811
2	I-10/Fourth Street Bridge Undercrossing*	\$0
TOTAL:		\$244,811

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

Rail Programs		COST
1	Arrow - Operations	\$184,890
2	San Bernardino Line Double Track	\$89,750
3	Gold Line to Montclair	\$80,000
	Gold Line to Montclair - Operations	\$13,768
TOTAL:		\$368,408

Bus Rapid Transit Program		COST
1	West Valley Connector - Capital	\$320,333
	West Valley Connector - Operations	\$79,162
2	Ontario International Airport (ONT) Connector - Capital*	\$695,991
	Ontario International Airport (ONT) Connector - Operations	\$28,206
TOTAL:		\$1,123,692

* Project is not fully funded.

Cajon Pass Program		COST
1	I-15 Cajon Pass Northbound Corridor Freight Project*	\$111,000
TOTAL:		\$111,000

* Project is not fully funded.

Table II. Mobility Action Plan for the Valley Subarea

Strategic Priority	Key Actions
Further develop the Core Transit Network	<p>Existing Metrolink and Omnitrans services represent the backbone of transit mobility. Their ability to deliver these services needs to be maintained.</p> <p>Continue to manage and improve other alternate mode initiatives, including vanpool, carpool, and active transportation modes.</p> <p>Work with SCRRA to achieve 30-minute daytime headways on the Metrolink San Bernardino Line as a high-frequency transit backbone in San Bernardino Valley and coordinate service planning to provide connections to Brightline West</p>
Incorporate Core Network into local land use plans and policies	<p>Complete the West Valley Connector BRT project</p> <p>Develop an implementation and funding plan for higher service levels and appropriate transit priority treatments (e.g. transit signal priority) on the Omnitrans priority transit network</p> <p>Position the priority transit network to be competitive for additional state and federal funding</p> <p>Pursue operating funds for increased service using strategies described in key issue 5</p>
Develop coordinated program of first/last mile improvements	<p>Position the Omnitrans priority transit network to be attractive for higher density residential and commercial development, coordinating with local jurisdictions on land use planning.</p> <p>Coordinate with transit operators and corridor jurisdictions on land use plans that address state housing targets and local economic development goals along the core transit network</p> <p>Build on the Non-Motorized Transportation Plan to define an active transportation priority list and advance project development to position for funding</p> <p>Deliver priority improvements</p>

Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that co-locates transit and active transportation amenities such as bike sharing

Continue to coordinate service planning between transit providers to schedule convenient connections between modes

Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes

Invest in physical improvements at bus stops and rail stations to improve rider safety and comfort, such as shelters, benches, and lighting

Transition Valley freeways into a truly managed system by implementing the San Bernardino County portion of the regional multimodal managed lane system, with dynamic pricing, as included in the RTP/SCS

Work with local jurisdictions to maintain the San Bernardino Valley Coordinated Traffic Signal System

Implement the Smart Intersection and Smart Corridor recommendations from the Smart County Master Plan

Coordinate overall signal system improvements with priority treatments for the Core Transit Network

Define and deliver priority highway/rail grade separations

Continue and expand partnerships with large and medium-sized employers to promote multimodal alternatives to single-occupancy vehicle commutes, including telecommuting

Continue partnering with regional partners such as Riverside County Transportation Commission to share data and technology tools to support shared-ride opportunities for long-distance commuters

Review transit fare structures and carpool/vanpool programs to provide flexibility that encourages hybrid workers to use alternative modes on days they must travel to an office

Invest in multimodal connectivity and customer experience

Manage congestion on freeways and arterials

Promote strong vanpool, carpool, and transportation demand management (TDM) initiatives

Promote awareness of mobility alternatives and communicate the quality-of-life benefits of bus and rail transit, vanpool, and carpool as alternatives to driving alone

Develop vehicle miles traveled (VMT) mitigation bank

Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT

Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects.

Table III. Goods Movement Plan for the Valley Subarea

Strategic Priority	Key Actions
Develop plan for designated freight corridors	<p>Identify potential routes within and between major logistics hubs such as the areas around Ontario International Airport, San Bernardino International Airport, the Union Pacific West Colton Yard, and BNSF San Bernardino Intermodal facility</p> <p>Assist jurisdictions with guidelines for implementation of Assembly Bill 98, to include identification of corridors that may be designated as truck routes</p> <p>Identify improvements to improve safety and operational efficiency along these corridors</p> <p>Work with Caltrans and California Highway Patrol to enhance current incident management and monitoring systems to actively manage traffic along key freight corridors</p> <p>Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by Assembly Bill 98</p>
Collaborate with logistics industry to shift freight from truck to rail, where practical and cost-effective	<p>Prioritize connections to intermodal facilities in development of designated highway freight corridor plan</p> <p>Collaborate with BNSF and Union Pacific to address key bottlenecks in the freight rail network to increase rail capacity</p>
Accelerate transition to clean trucks	<p>Partner with logistics and zero-emission charging/fueling companies to accelerate the transition to ZE truck operations and supporting infrastructure needs consistent with the California Transportation Commission's Senate Bill 671 designated zero-emission corridors</p> <p>Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations</p>
Prioritize investments in high-volume highway freight corridors	<p>Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan</p> <p>Collaborate with state, regional, and local partners to locate and fund hydrogen production hubs and an affordable hydrogen fueling supply chain to support both the logistic industry and transit needs</p> <p>Deliver key highway improvements in the Measure I 10-Year Delivery Plan, such as the I-10 and I-15 Corridor Freight and Managed Lane Projects, and strategic improvements on other state highways</p>



Strategically invest in improvements to key highway freight bottlenecks and that minimize conflict between trucks and other road users, such as the Cajon Pass I-15 Northbound Truck Climbing Lane Extension.

Table IV. Climate Adaptation and Resiliency Action Plan for the Valley Subarea

Strategic Priority	Key Actions
Encourage redundancy across the transportation network and improve operational resiliency on major arterials	<p>Implement recommendations from the forthcoming the Emergency Evacuation Network Study (EENR)</p> <p>Extend the I-15 truck climbing lane through the Cajon Pass</p> <p>Continue development of managed lanes on major corridors such as I-10 and I-15, consistent with regional plans</p>
Coordinate connections to Brightline West	<p>Continue and expand transit partnerships with mountain area resorts to provide an alternative to driving congested routes to, from, and within the mountains</p> <p>Coordinate with Metrolink and Brightline West to ensure east-west regional connectivity via the Metrolink San Bernardino Line</p> <p>Complete the West Valley Connector and coordinate other public and private bus connectivity to the Rancho Cucamonga Brightline station</p>
Accelerate transition to clean trucks	<p>Deliver the Ontario Airport Connector to create a direct transit connection between the station and the airport</p> <p>Coordinate with Rancho Cucamonga, Ontario, and local employers to implement first/last mile improvements for access to employers and attractions in the West Valley</p> <p>Partner with trucking and zero-emission fueling/charging companies to accelerate the transition to zero-emission in the Senate Bill 671 corridors and for local logistics operations.</p>
Transition transit operations to zero-emissions	<p>Seek grant funding for ZE trucking and transit</p> <p>Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies</p>
Support development of hydrogen hubs and fueling	<p>Collaborate with Metrolink to explore technology options for their transition to zero-emission</p> <p>Complete conversion of Arrow service from diesel to hydrogen fuel cell multiple units</p> <p>Partner with Metrolink, Omnitrans, and VTA to identify opportunities for leveraging economies of scale in the sourcing of hydrogen fuel</p> <p>Partner with the state and utility industry to site green hydrogen production in accessible Inland Empire locations</p>

Prioritize state-of-good-repair on highways and arterials

Reinvest new toll revenue into maintaining the managed lane system as well as excess revenue on transit, zero-emission and affordable housing

Collaborate with Caltrans and local jurisdictions on criteria such as pavement condition index for prioritizing maintenance of alternate routes and need for incident traffic management and emergency evacuation

Establish emergency procedures

Complete the Emergency Evacuation Network Resilience Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study

Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.

Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information

Table V. Disadvantaged Communities Action Plan for the Valley Subarea

Strategic Priority	Key Actions
<p>Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars</p>	<p>Analyze potential impacts of major transit investments on transit service to disadvantaged communities.</p> <p>Provide adequate maintenance, security, schedule information and cleanliness at local bus stops.</p> <p>Consider needs of all users as electronic fare payment systems are further developed.</p>
<p>Take advantage of available funding focused on disadvantaged communities</p>	<p>Deliver transit priorities identified in the LRMTTP that particularly benefit disadvantaged communities</p> <p>Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed</p> <p>Take advantage of equity-oriented programs like the Reconnecting Communities Pilot</p> <p>Continue to leverage state greenhouse gas reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and Senate Bill 1 funds such as Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition</p>
<p>Free and reduced fare programs</p>	<p>Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals</p> <p>Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass</p> <p>Communicate fare incentives to the public</p>
<p>Prioritize multimodal improvements to improve mobility in disadvantaged communities</p>	<p>In developing the Core Transit Network, prioritize corridors that connect disadvantaged communities to key destinations</p> <p>Invest in high-comfort off-street active transportation corridors such as the Santa Ana River Trail, Pacific-Electric Trail, and San Sevaine Bicycle/Pedestrian Trail</p>
<p>Prioritize inclusive communications</p>	<p>Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities</p> <p>Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience</p> <p>Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices.</p>
<p></p>	<p>Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.</p>

Table VI. Funding Action Plan for the Valley Subarea

Strategic Priority	Key Actions
Secure additional state and regional funding for transit operations	<p>Increase availability and flexibility of future Measure I funding for use in transit operations</p> <p>Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses</p>
Align future funding sales tax measures with the priorities of the LRMTTP	<p>Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit</p> <p>Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs</p>
Use excess toll revenue for transit improvements	<p>Identify transit needs along planned express lane corridors such as I-10 and I-15 and fund solutions with toll revenue</p> <p>Expand use of tolled express lanes to manage congestion while providing additional revenue for investment in alternate modes of travel</p>
Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives	<p>Maintain relationships with CBO leaders and business sector partners</p> <p>Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects</p> <p>Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public</p>
Support local agency grant pursuits	<p>Monitor grant funding opportunities at federal, state, and regional levels and connect collaborate with local partners on grant pursuits</p> <p>Provide technical support for local grant applications</p>

5 Conclusion and Next Steps

SBCTA has placed a particular emphasis on the importance of the transition to clean trucks, given their level of nitric oxide emissions that contribute to ozone non-attainment and to their contribution of a significant amount of regional greenhouse gas emissions. Significant action from South Coast Air Quality Management District, California Air Resource Board, the U.S. Environmental Protection Agency, and federal and state energy departments is being taken to improve air quality from freight activities. One of the major opportunities is to continue SBCTA's and San Bernardino Council of Governments' coordination with private sector vendors and other state and regional agencies who are seeking to implement charging and fueling infrastructure for zero-emission trucks.

The West Valley Connector is planned to operate weekday hours only. Omnitrans is working with SBCTA to identify funding to support increased operating hours, particularly on the weekends. Omnitrans is also prioritizing transitioning to a zero-emission bus fleet, improving frequency to attract new riders, and providing real-time bus information and improving bus stop amenities to enhance riders' experience. Future transit investments are detailed in Omnitrans' SRTP.

The LRMTTP report contains a comprehensive list of active transportation projects that have been in development by local jurisdictions, a large number of which are in the Valley subarea. These are either already funded through the Transportation Development Act Article 3 Program, have been submitted as Caltrans Active Transportation Program applications as priority projects, or represent other identified bicycle/pedestrian project priorities. In addition, the active transportation plans (Non-Motorized Transportation Plan, Points of Interest Pedestrian Plan, Regional Safe Routes to School Plan) detail recommendations for a school site or neighborhood for each jurisdiction in the Valley; however, these recommendations are largely unfunded. SBCTA has been collaborating with the San Bernardino Department of Public Health to implement educational campaigns and workshops for students. SBCTA can support coordination between cities for interjurisdictional improvements, if necessary. However, there needs to be a renewed focus on project delivery to bring these active transportation projects to fruition.

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Victor Valley Subarea Plan

San Bernardino County Long Range Multimodal Transportation Plan

San Bernardino County, CA

February 5, 2025





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Contents

1	Subarea Overview	1
2	Unique Challenges	2
3	Strategic Priorities	3
4	Strategic Priorities Action Plan	5
5	Conclusion and Next Steps	14
6	References	15

Tables

Table I. Victor Valley Subarea - Major Local Highway Projects Program Through FY 2033/34 (1,000s)	5
Table II. Mobility Action Plan for the Victor Valley Subarea.....	7
Table III. Goods Movement Action Plan for the Victor Valley Subarea	9
Table IV. Climate Adaptation and Resiliency Action Plan for the Victor Valley Subarea	10
Table V. Disadvantaged Communities Action Plan for the Victor Valley Subarea	12
Table VI. Funding Action Plan for the Victor Valley Subarea	13

Figures

Figure 1-1. Victor Valley Subarea	1
Figure 2-1. VVTA Bus Routes.....	2
Figure 3-1. CalEnviroScreen Percentile for the Victor Valley	4
Figure 3-2. Pollution Burden Percentile, Victor Valley	4

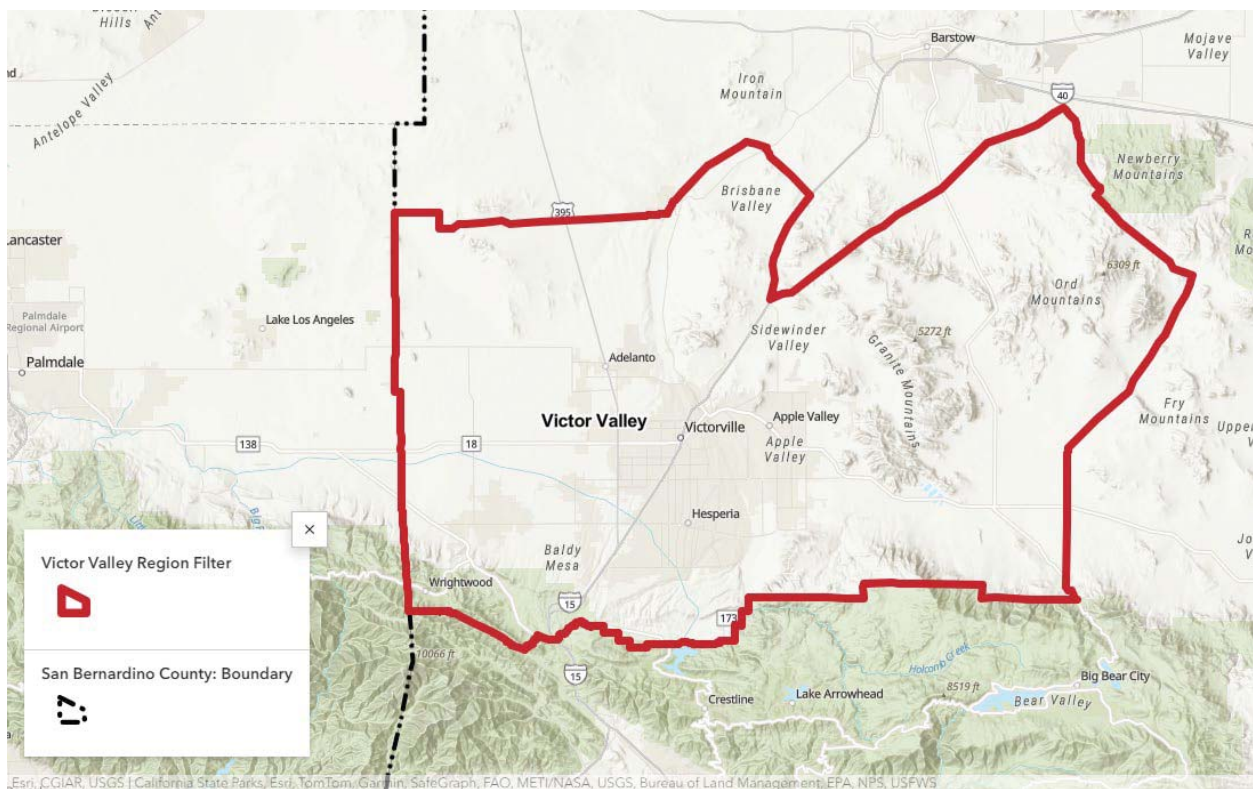
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1 Subarea Overview

As the largest county in the contiguous United States in land area, San Bernardino County is geographically diverse, and each subregion has unique needs. This is recognized in the county's half-cent sales tax for transportation improvements, Measure I, which allocates funding to six subareas. In developing the Long Range Multimodal Transportation Plan (LRMTP), the six subareas identified by Measure I were analyzed to ensure issues facing San Bernardino County's unique geographic areas are adequately addressed. This subarea plan focuses on the Victor Valley subarea (Figure 1-1).

The Victor Valley subarea consists of four incorporated communities: the cities of Adelanto, Hesperia, and Victorville and the Town of Apple Valley. The subarea had 122,934 households in 2019 and is projected to increase to 171,986 in 2035 and to 197,550 households in 2050 (Southern California Association of Governments [SCAG] 2024). Additionally, the number of jobs in the Victor Valley is expected to increase from 106,438 jobs in 2019 to 135,498 jobs in 2035 and 153,699 jobs in 2050 (SCAG 2024). Victor Valley is the fastest growing subarea in terms of percentage growth in households and employment in the county. In the SCAG region, the cities of Adelanto, Victorville, and Hesperia are the top ten growing jurisdictions in terms of percentage of households, and Adelanto and Hesperia are the top five fastest growing jurisdictions regarding the percentage of employment (SCAG 2024).

Figure 1-1. Victor Valley Subarea



Source: Existing Conditions StoryMap

2 Unique Challenges

Rapid Population Growth: Victor Valley is expected to be the fastest growing subarea in San Bernardino County. Between 2019 and 2050, the number of households is expected to increase 38 percent, and the number of jobs is expected to increase by 31 percent, which is at a greater rate than that of San Bernardino (SCAG). Commensurate with these projected relatively high rates of growth for the area's demographics, vehicle hours traveled are expected to disproportionately increase over vehicle miles traveled, indicating increasing delay and congestion in the future due to the projected relatively high growth rates for this subarea.

Limited Transit Options: The Victor Valley Transit Authority (VVTA) provides local transit services for the core cities and towns in the Victor Valley subarea (Figure 2-1). Although Victor Valley Transit Authority (VVTA) provides connections to other regional transit agencies including Mountain Transit, Riverside Transit Agency, Beaumont Transit, and Sunline Transit, riders have to make these transfers at the San Bernardino Transit Center, located in the Valley subarea. Service frequency ranges from 30 minutes to two hours depending on the route and frequency does not vary for peak, weekday, or weekend service. Transit options for longer distances and interregional travel and service for rural communities are limited, though the high-speed rail projects from Brightline West and the High Desert Corridor Joint Powers Agency will further link the Victor Valley to the state's growing rail network.

Figure 2-1. VVTA Bus Routes



Source: *San Bernardino Countywide Zero-Emission Bus Study*

Reliance on Key Arterials and Roadway Congestion: Interstate 15 (I-15) links Victor Valley to destinations in Riverside, Los Angeles, and Orange counties, and well as jobs and services in the county's Mountain and Valley subregions, passing through the Cajon Pass. I-15 is an economic gateway connecting ports on the west coast and the nation and is a key route for those traveling to Las Vegas from Southern California. As there are limited north-south routes to serve as an alternative, the corridor is a major travel route for commuters and truck drivers and experiences significant congestion during peak commuting hours. Preliminary travel demand modeling conducted for the LRMTTP using the future network with improvements that are currently planned and expected to be funded indicated that I-15 through Victor Valley to be a congestion hotspot. The US 395 is a critical

link for goods movement for inland counties and an important agricultural route to and from the Central Valley and experiences congestion in the Victor Valley due to truck volumes, steep grades, roadway design limitations, and a lack of alternative travel options.

3 Strategic Priorities

In developing the LRMTTP, five areas of concern were identified throughout the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. The areas of concern are related to the goals and objectives of the LRMTTP. This section describes how these areas relate to the Victor Valley subarea.

Mobility: Developed areas in the Victor Valley are primarily residential, with limited (but growing) job opportunities for the population. The number of jobs per household for the Victor Valley is 0.87, which is less than that of the county's (1.31) and the SCAG region's (1.42). Many residents must commute outside the subarea to reach job centers in the San Bernardino Valley or further afield in Los Angeles, Orange, or Riverside counties. This creates long commutes and, due to limited transit options, auto-dependency. However, VVTA has one of the more robust vanpool programs in the state, and continuation of that strategy, along with carpool formation, should continue to be a high priority.

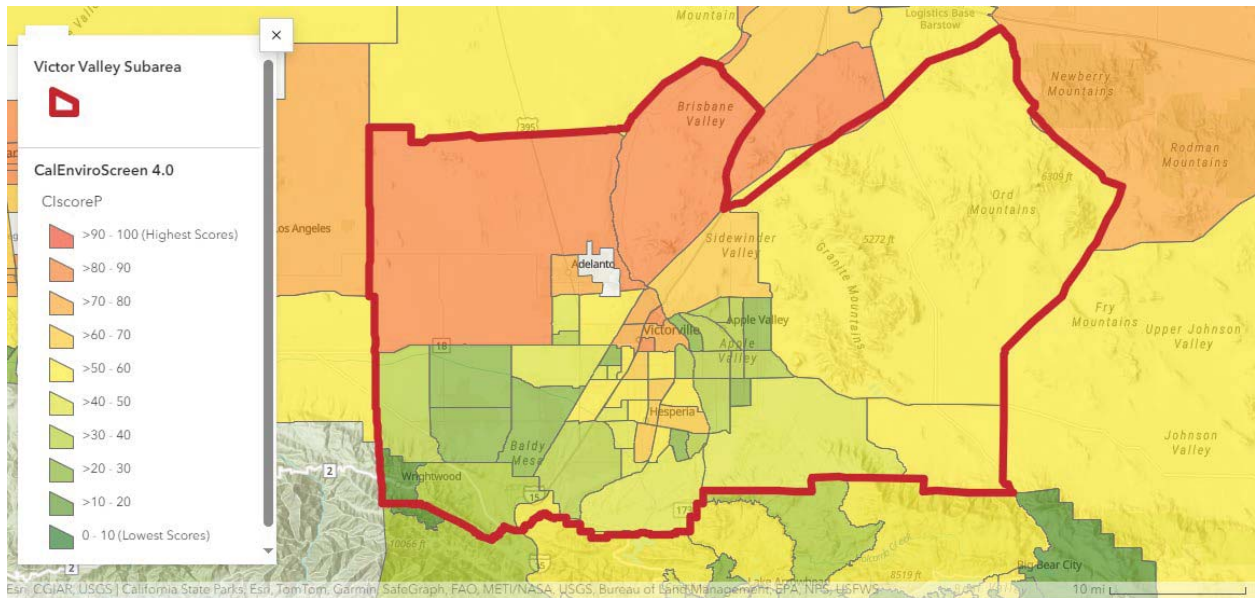
Goods Movement: Goods movement in the Victor Valley is accommodated by designated truck routes (I-15, U.S. Route 395, SR 18, SR 247, SR 138, SR 2, and SR 173) and an extensive rail network (Union Pacific Railroad and BNSF). Commercial and industrial zoning is found along I-15 and the railroads and adjacent to the Southern California Logistics Airport in Adelanto. Warehouse development impacts overall access and non-motorized mobility as these uses generate urban sprawl and large gaps within communities. While these land uses are important for the economy of the region, locating them near transit-heavy areas limits the potential for new transit-oriented and walkable development.

Climate Adaptation and Resiliency: Communities in the Victor Valley experience extreme heat days and areas of Victorville and Hesperia are located in Federal Emergency Management Agency 100-year floodplains, impacting individuals who walk or bike or use public transit. Infrastructure and operational resiliency against the changing climate are imperative for the transportation network, particularly for the mobility of vulnerable populations.

Disadvantaged Communities: Census tracts in Adelanto, Victorville, Apple Valley, Hesperia, and unincorporated areas in the Victor Valley have low median household incomes and/or census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0 (Figure 3-1), indicating higher pollution burden and vulnerability. Census tracts in Victorville and Adelanto are classified as disadvantaged by Senate Bill 535. Sensitive populations in the region have an increased risk of asthma and cardiovascular disease, and experience high exposure to ozone and diesel particulate matter. As shown in Figure 3-2, the pollution burden percentile is higher for communities near Adelanto and the Southern California Logistics Airport.

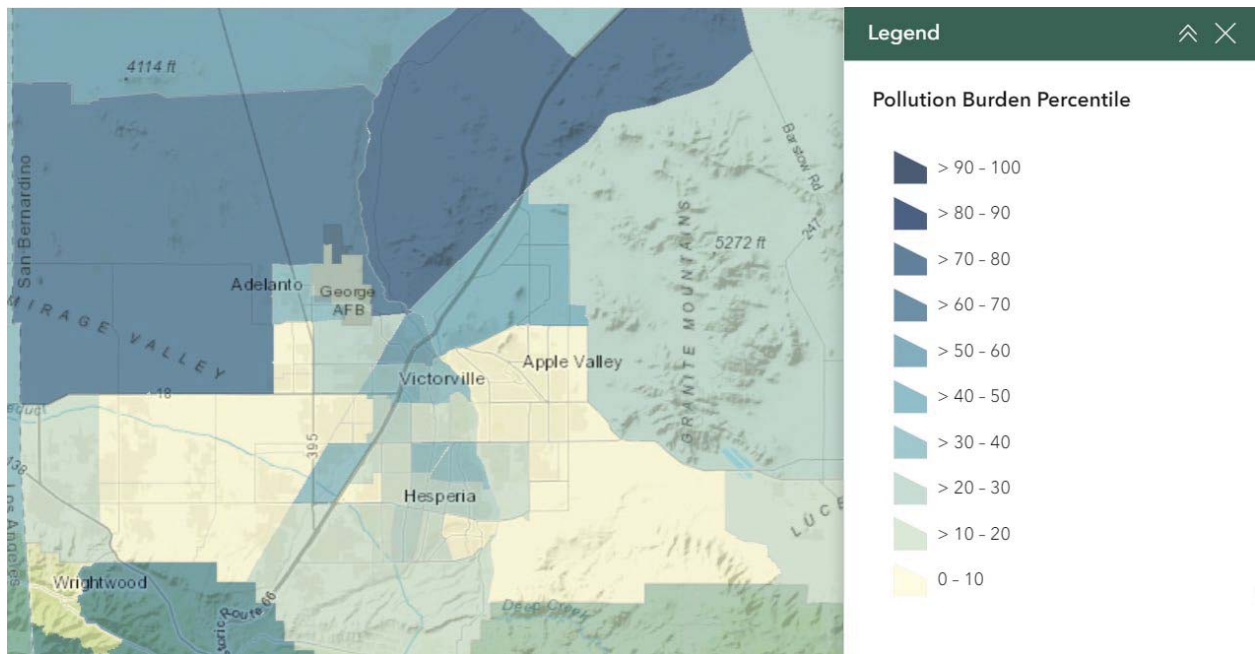
Funding: Funding issues are not restricted to one geographic area, however, securing funding for transit operations and expanding active transportation facilities are priorities for the Victor Valley subarea.

Figure 3-1. CalEnviroScreen Percentile for the Victor Valley



Source: CalEnviroScreen 4.0

Figure 3-2. Pollution Burden Percentile, Victor Valley



Source: CalEnviroScreen 4.0

4 Strategic Priorities Action Plan

The final LRMTTP report identifies the projects being considered for the forthcoming San Bernardino County Transportation Authority (SBCTA) 2025 10-Year Delivery Plan, and presents projects listed for the “Baseline Level” of investment and additional projects at the “Aggressive Level” that can be considered with additional revenue for all subareas. Table I lists highway projects being pursued by local jurisdictions in the Victor Valley over the next 10 years. Additional detail is available in the SBCTA 2025 10-Year Delivery Plan.

Table I. Victor Valley Subarea - Major Local Highway Projects Program Through FY 2033/34 (1,000s)

PROJECT	COST
1 El Mirage Road from US 395 to Koala Road	\$13,586
2 Bartlett Avenue from Aster Road to Richardson Road	\$9,621
3 Bellflower Street from Chamberlaine Way to Air Expressway	\$8,255
4 Bellflower Street from Cactus Road to Air Expressway	\$6,992
5 Bear Valley Road Bridge Over Mojave River	\$50,662
6 Central Road Widening from SR 18 to Bear Valley Road	\$4,318
7 Dale Evans Parkway Phase 1 (Waalaw Realignment)	\$2,891
8 Yucca Loma Road Widening from Apple Valley Road to 1200' East	\$3,250
9 Yucca Loma Road Widening from 1200' East of Apple Valley Road to Rincon Road	\$6,909
10 Yucca Loma Road Widening from Rincon Road to Navajo Road*	\$13,864
11 SR 18 Widening from Apple Valley Road to Tao Road*	\$30,718
12 Deep Creek Road from Bear Valley Road to Tussing Ranch Road	\$4,814
13 Rancho Road Corridor Widening	\$54,696
14 Main Street Widening from I-15 to Fuente Avenue and Aqueduct Bridge	\$16,503
15 Mojave Drive Widening from US 395 to 7th Avenue*	\$41,521
16 Bear Valley Road Widening from Monte Vista Road to US 395*	\$14,131
17 Rock Springs Road Bridge over Mojave River	\$34,938
18 Phelan Road Widening from SR 138 to Hesperia City Limits**	\$5,181
19 US 395 - Phase 2 Freight Mobility and Safety Project	\$102,283
20 SR 18 Safety and Operational Improvements - Project Development**	\$12,000
TOTAL:	\$437,133
* Project is not fully funded.	
** Project development only.	
Cajon Pass Program	
1 I-15 Cajon Pass Northbound Corridor Freight Project*	\$111,000
TOTAL:	\$111,000
* Project is not fully funded.	

In addition, VVTA has conducted a similar long-range planning effort. VVTA's 2024 Comprehensive Operational Analysis (COA) presents a "Vision Plan" that sets forth route level and program level improvements that will represent a 156 percent increase in annual revenue hours and doubling the number of vehicles (VVTA 2024). Part of the plan in the COA includes a restructuring of routes that will feed the new Brightline West high-speed rail stations in Apple Valley and Hesperia. This 218-mile passenger rail service will operate from Las Vegas to Rancho Cucamonga, with 96% of its alignment within the median of Interstate 15. Construction is expected to take about 4 years with service beginning in 2028. It will provide a new means for making the commute from the Victor Valley, down the Cajon Pass, with transit connections to other destinations in the San Bernardino Valley and to Los Angeles. The COA can be found at: [VVTA Comprehensive Operations Analysis - June 2021](#).

Table II through Table VI below summarize the strategic priority and key actions for each of the issues described in the previous section.

Table II. Mobility Action Plan for the Victor Valley Subarea

Strategic Priority	Key Actions
Further develop the Core Transit Network	<p>Existing VTA service represents the backbone of transit mobility. Their ability to deliver these services needs to be maintained.</p> <p>Continue to manage and improve other alternate mode initiatives, including vanpool, carpool, and active transportation modes.</p> <p>Coordinate service planning to provide connections to Brightline West</p> <p>Invest in VTA transit system based on priorities in the Comprehensive Operational Analysis</p> <p>Position the priority transit network to be competitive for additional state and federal funding</p> <p>Pursue operating funds for increased service using strategies described in key issue 5</p>
<p>Incorporate Core Network into local land use plans and policies</p> <p>Incremental transit enhancements in rural areas</p>	<p>Coordinate with transit operators and corridor jurisdictions on land use plans that address state housing targets and local economic development goals along the core transit network</p> <p>Identify unmet or underserved needs in rural communities, such as connections from Needles to Arizona for grocery and pharmacy access</p> <p>Secure funding to implement new/enhanced service to meet rural travel needs</p>
Develop coordinated program of first/last mile improvements	<p>Build on the Non-Motorized Transportation Plan to define an active transportation priority list and advance project development to position for funding</p> <p>Deliver priority improvements</p>
Invest in multimodal connectivity and customer experience	<p>Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that co-locates transit and active transportation amenities such as bike sharing</p> <p>Continue to coordinate service planning between transit providers to schedule convenient connections between modes</p>
	<p>Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes</p> <p>Invest in physical improvements at bus stops to improve rider safety and comfort, such as shelters, benches, and lighting</p>

Manage congestion on freeways and arterials

Implement the San Bernardino County portion of the regional multimodal managed lane system, with dynamic pricing, as included in the RTP/SCS

Implement the Smart Intersection and Smart Corridor recommendations from the Smart County Master Plan

Coordinate overall signal system improvements with priority treatments for the Core Transit Network

Define and deliver priority highway/rail grade separations

Continue and expand partnerships with large and medium-sized employers to promote multimodal alternatives to single-occupancy vehicle commutes, including telecommuting

Continue partnering with regional partners to share data and technology tools to support shared-ride opportunities for long-distance commuters

Review transit fare structures and carpool/vanpool programs to provide flexibility that encourages hybrid workers to use alternative modes on days they must travel to an office

Promote awareness of mobility alternatives and communicate the quality-of-life benefits of bus and rail transit, vanpool, and carpool as alternatives to driving alone

Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT

Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects.

Develop vehicle miles traveled (VMT) mitigation bank

Table III. Goods Movement Action Plan for the Victor Valley Subarea

Strategic Priority	Key Actions
Develop plan for designated freight corridors	Identify potential routes within and between major logistics hubs such as the Southern California Logistics Airport
	Assist jurisdictions with guidelines for implementation of Assembly Bill 98, to include identification of corridors that may be designated as truck routes
	Identify improvements to improve safety and operational efficiency along these corridors
	Work with Caltrans and California Highway Patrol to enhance current incident management and monitoring systems to actively manage traffic along key freight corridors, such as the Cajon Pass
	Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by Assembly Bill 98
Collaborate with logistics industry to shift freight from truck to rail, where practical and cost-effective	<p>Prioritize connections to intermodal facilities in development of designated highway freight corridor plan</p> <p>Collaborate with BNSF and Union Pacific to address key bottlenecks in the freight rail network to increase rail capacity</p>
Accelerate transition to clean trucks	Partner with logistics and zero-emission (ZE) charging/fueling companies to accelerate the transition to ZE truck operations and supporting infrastructure needs consistent with the California Transportation Commission's Senate Bill 671 designated zero-emission corridors
	Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations
	Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan
	Collaborate with state, regional, and local partners to locate and fund hydrogen production hubs and an affordable hydrogen fueling supply chain to support both the logistic industry and transit needs
Prioritize investments in high-volume highway freight corridors	Deliver key highway improvements in the Measure I 10-Year Delivery Plan, such as the I-15 Corridor Freight and Managed Lane Projects, and strategic improvements on other state highways such as SR-18 and US 395
	Strategically invest in improvements to key highway freight bottlenecks and that minimize conflict between trucks and other road users, such as the Cajon Pass I-15 Northbound Truck Climbing Lane Extension.

Table IV. Climate Adaptation and Resiliency Action Plan for the Victor Valley Subarea

Strategic Priority	Key Actions
Encourage redundancy across the transportation network and improve operational resiliency on major arterials	<p>Implement recommendations from the forthcoming State Route 247/62 Emergency Bypass Study and the Emergency Evacuation Network Study (EENR)</p> <p>Extend the I-15 truck climbing lane through the Cajon Pass</p> <p>Continue development of managed lanes on I-15 consistent with regional plans</p>
Coordinate connections to Brightline West	<p>Coordinate public and private bus connectivity to the Hesperia and Apple Valley Brightline stations</p> <p>Partner with VVTA to coordinate feeder service to the Apple Valley and Hesperia stations, such as new fixed routes or expansion of Micro-Link on-demand service as appropriate</p>
Accelerate transition to clean trucks	<p>Partner with trucking and zero-emission fueling/charging companies to accelerate the transition to zero-emission in the Senate Bill 671 corridors and for local logistics operations.</p> <p>Seek grant funding for ZE trucking and transit</p>
Transition transit operations to zero-emissions	<p>Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies, in particular regarding operating zero emission vehicles long distances and in hot conditions</p>
Support development of hydrogen hubs and fueling	<p>Partner with Metrolink, Omnitrans, and VVTA to identify opportunities for leveraging economies of scale in the sourcing of hydrogen fuel</p> <p>Partner with the state and utility industry to site green hydrogen production in accessible Inland Empire locations</p>
Prioritize state-of-good-repair on highways and arterials	<p>Reinvest new toll revenue into maintaining the managed lane system as well as excess revenue on transit, zero-emission and affordable housing</p> <p>Collaborate with Caltrans and local jurisdictions on criteria such as pavement condition index for prioritizing maintenance of alternate routes and need for incident traffic management and emergency evacuation</p>

Establish emergency procedures

Complete the Emergency Evacuation Network Resilience Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study

Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.

Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information

Table V. Disadvantaged Communities Action Plan for the Victor Valley Subarea

Strategic Priority	Key Actions
Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars	<p>Analyze potential impacts of major transit investments on transit service to disadvantaged communities.</p> <p>Provide adequate maintenance, security, schedule information and cleanliness at local bus stops.</p> <p>Consider needs of all users as electronic fare payment systems are further developed.</p>
Take advantage of available funding focused on disadvantaged communities	<p>Deliver transit priorities identified in the LRMTF that particularly benefit disadvantaged communities</p> <p>Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed</p> <p>Take advantage of equity-oriented programs like the Reconnecting Communities Pilot</p> <p>Continue to leverage state greenhouse gas reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and Senate Bill 1 funds such as Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition</p>
Free and reduced fare programs	<p>Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals</p> <p>Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass</p> <p>Communicate fare incentives to the public</p>
Prioritize multimodal improvements to improve mobility in disadvantaged communities	<p>In developing the Core Transit Network, prioritize corridors that connect disadvantaged communities to key destinations</p> <p>Invest in high-comfort off-street active transportation corridors</p> <p>Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities</p>
Prioritize inclusive communications	<p>Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience</p> <p>Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices.</p> <p>Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.</p>

Table VI. Funding Action Plan for the Victor Valley Subarea

Strategic Priority	Key Actions
Secure additional state and regional funding for transit operations	<p>Increase availability and flexibility of future Measure I funding for use in transit operations</p> <p>Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses</p>
Align future funding sales tax measures with the priorities of the LRMTP	<p>Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit</p> <p>Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs</p>
Use excess toll revenue for transit improvements	<p>Identify transit needs along planned express lane corridors such as I-15 and fund solutions with toll revenue</p> <p>Expand use of tolled express lanes to manage congestion while providing additional revenue for investment in alternate modes of travel</p>
Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives	<p>Maintain relationships with CBO leaders and business sector partners</p> <p>Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects</p> <p>Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public</p>
Support local agency grant pursuits	<p>Monitor grant funding opportunities at federal, state, and regional levels and connect collaborate with local partners on grant pursuits</p> <p>Provide technical support for local grant applications</p>

5 Conclusion and Next Steps

VVTA recently revised their bus routes to improve service performance and to address the evolving needs of the Victor Valley region. Future investments are laid out in VVTA's Comprehensive Operational Analysis. As travel demand grows due to projected increase in households and employment, roadway capacity and conditions will be impacted. There is an opportunity for SBCTA and VVTA to maintain rideshare initiatives, particularly for commuting to other subareas and connecting to other transit options like rail. Additionally, SBCTA has developed a high level zero-emission bus (ZEB) rollout plan for the VVTA (SBCTA 2020). VVTA is working with SBCTA to review the rollout plan and determine the optimum form of ZEBs (i.e. combination of electric and hydrogen) based on costs, service requirements, and availability of technology. Additionally, the rapid growth of transit in the Victor Valley, such as the construction of Brightline west with stops in Apple Valley and Hesperia, is an opportunity to integrate land use and transportation planning.

The active transportation plans (Non-Motorized Transportation Plan, Points of Interest Pedestrian Plan, Regional Safe Routes to School Plan) detail recommendations for a school site or neighborhood for each jurisdiction; however, these recommendations are largely unfunded. The implementation of pedestrian and bicycle improvements should prioritize areas of high use by commuters and students or where high accident rates occur. SBCTA has been collaborating with the San Bernardino Department of Public Health to implement educational campaigns and workshops for students. SBCTA can support coordination between cities for interjurisdictional improvements, where necessary. The pursuit of grant application opportunities is one of the areas identified in several plans to bring these projects from concept to reality.

Construction of warehousing and logistics facilities in the Victor Valley has accelerated in recent years. It will be important to locate such facilities adjacent to freight corridors and in designated areas such as the Southern California Logistics Airport and the future Barstow International Gateway (BIG Project) southwest of Barstow. The purpose of BNSF's BIG project is to bring freight directly from the ports of Los Angeles and Long Beach via rail, as much as possible, to reduce the volume of trucks that travel up and down the Cajon Pass and through the Victor Valley. SBCTA is also working with local jurisdictions and the private sector to locate charging/fueling facilities for zero-emission trucks to minimize freight-related impacts to communities.

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Morongo Basin Subarea Plan

San Bernardino County Long Range Multimodal Transportation Plan

San Bernardino County, CA

February 5, 2025





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Contents

1	Subarea Overview	1
2	Unique Challenges	2
3	Strategic Priorities	3
4	Strategic Priorities Action Plan	5
5	Conclusion and Next Steps	12
6	References	13

Tables

Table I. Morongo Basin Subarea - Major Local Highway Program Projects Through FY 2033/34 (1,000s)	5
Table II. Mobility Action Plan for the Morongo Basin Subarea	6
Table III. Goods Movement Action Plan for the Morongo Basin Subarea	8
Table IV. Climate Adaptation and Resiliency Action Plan for the Morongo Basin Subarea	9
Table V. Disadvantaged Communities Action Plan for the Morongo Basin Subarea	10
Table VI. Funding Action Plan for the Morongo Basin Subarea	11

Figures

Figure 1-1. Morongo Basin Subarea	1
Figure 2-1. MBTA Routes	3
Figure 3-1. CalEnviroScreen Percentile for the Morongo Basin Subarea	4

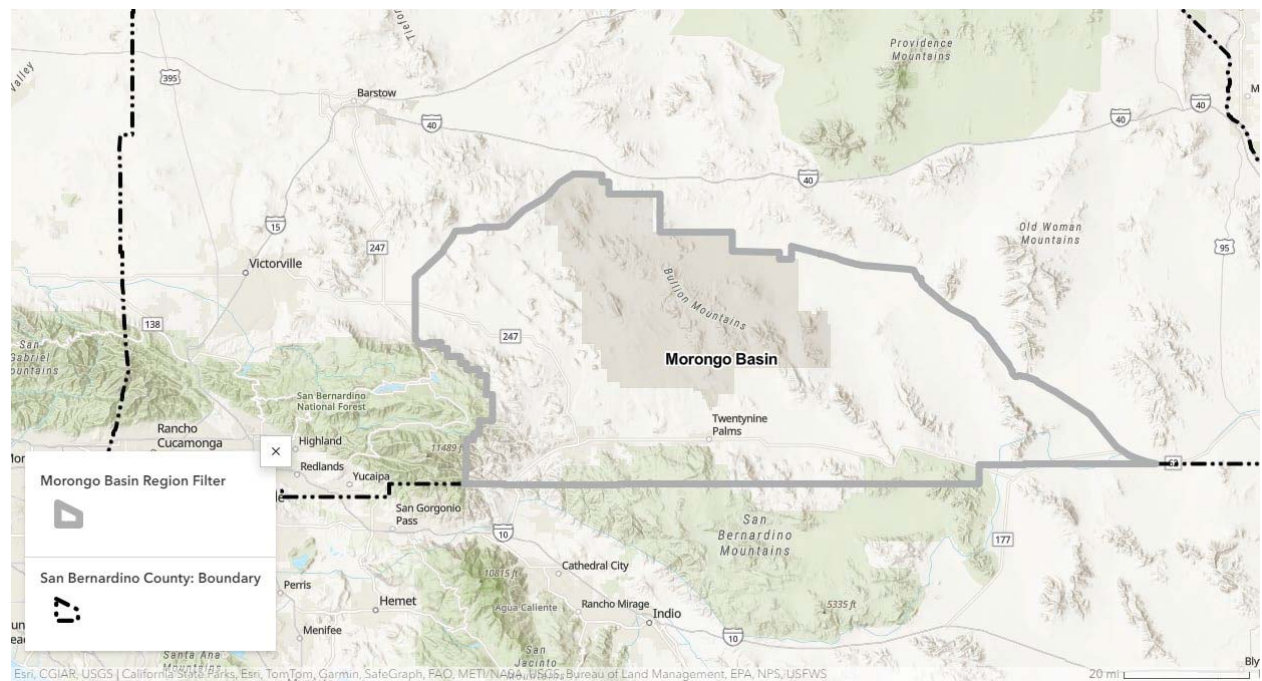
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1 Subarea Overview

As the largest county in the contiguous United States in land area, San Bernardino County is geographically diverse, and each subregion has unique needs. This is recognized in the county's half-cent sales tax for transportation improvements, Measure I, which allocates funding to six subareas. In developing the Long Range Multimodal Transportation Plan (LRMTP), the six subareas identified by Measure I were analyzed to ensure issues facing San Bernardino County's unique geographic areas are adequately addressed. This subarea plan focuses on the Morongo Basin subarea (Figure 1-1).

The Morongo Basin includes the City of Twentynine Palms, Town of Yucca Valley and communities of Joshua Tree, Pioneer Town, Landers and Wonder Valley. The Morongo Basin is the second fastest growing subarea in terms of percentage growth in households and employment in the county. The subarea had 26,527 households in 2019, which is projected to increase by 40 percent in 2050 (Southern California Association of Governments [SCAG] 2024). Additionally, the number of jobs in the Morongo Basin is expected to increase by 38 percent between 2019 and 2050 (SCAG 2024). Morongo Basin is mostly undeveloped with a share being preserved open space for environmental protection and recreational use. Housing is predominantly single-family and rural residential with large lot sizes and significant distances between residential and commercial areas.

Figure 1-1. Morongo Basin Subarea



Source: Existing Conditions StoryMap

2 Unique Challenges

The Morongo Basin Area Transportation Study (MBATS) provides an extensive overview of some of the transportation challenges in the Morongo Basin Subarea (San Bernardino Associated Governments [SANBAG] 2014). The report can be found here: [Microsoft Word - Final MBATS Report.docx](#). A comprehensive list of transportation challenges was identified, as well as potential solutions. State highways are the primary routes through the subarea, and it is SR-62 and SR-247 where the most significant congestion levels can occur, Although the MBATS is from 2014, the nature of the transportation challenges has not significantly changed during that period, and the report can be a source for needs and potential solutions. Unfortunately, funding for this subarea is limited, and Caltrans has limited budgets as well. Several of the projects included in the 10-Year Delivery Plan is shaped by concerns identified in the MBATS. Below is a summary of current challenges.

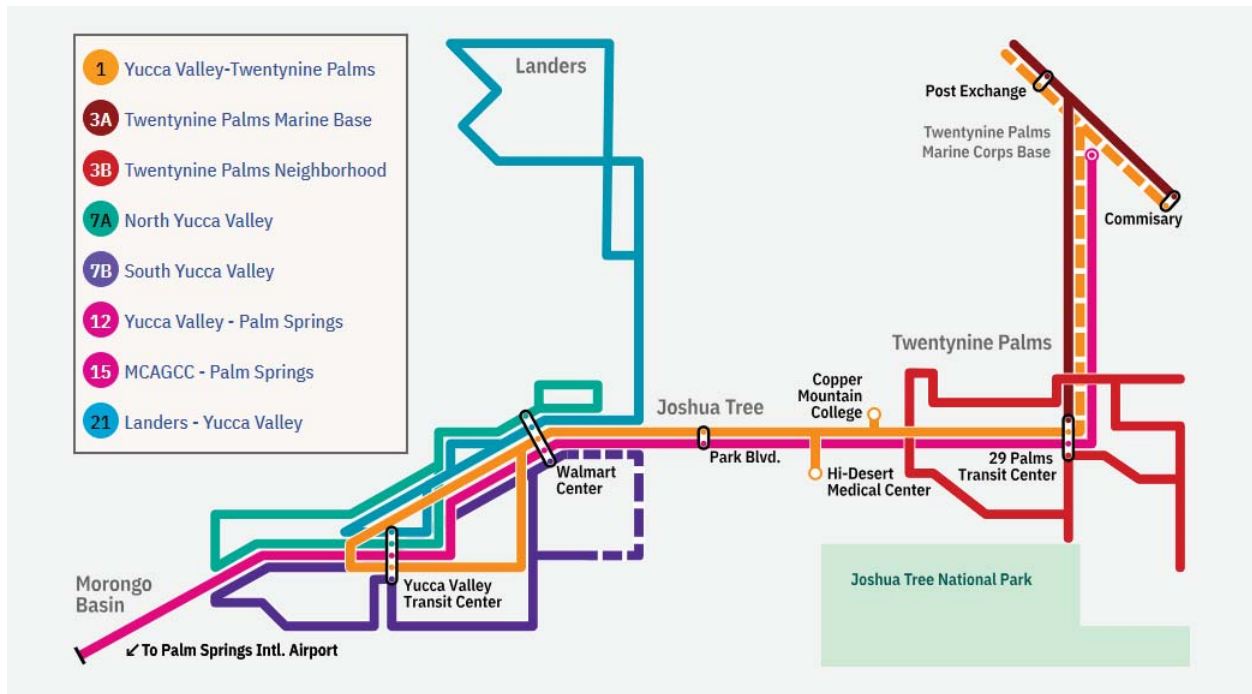
Dependence on Key Arteries: State Route 62 (SR-62), traveling east/west, and State Route 247 (SR-247), traveling north/south, are the two primary arterials connecting the developed areas in the basin to Lucerne Valley in San Bernardino and to Riverside County. Residential and commercial properties are concentrated near SR-62. Since Joshua Tree National Park and the Marine Corps Air Ground Combat Center (MCAGCC) limit north/south connections, local streets distribute traffic from the regional corridors to the more rural areas of the basin. Segments of these key arterials narrows to two lanes, especially in the rural areas. Roadway capacity can be limited during emergencies or closures, and improvements on these highways are constrained by right-of-way and topography.

Long Travel Distances: The geographic location of communities in the Morongo Basin can be a challenge for residents traveling to other areas of San Bernardino County and Riverside County. Situated within the Mojave Desert, the Morongo Basin is east of the San Bernardino Mountains, and north of Joshua Tree National Park, which limits connectivity and necessitates longer driving routes.

Limited Transit Connections: Morongo Basin Transit Authority (MBTA) serves Yucca Valley, Joshua Tree, 29 Palms, Landers, Copper Mountain College and MCAGCC. Most routes operate on weekdays, and service is limited to destinations in the Morongo Basin subarea except for an intercity service to Palm Springs (Figure 2-1). There has been a need for transit service to connect Morongo Basin to the Valley subarea.

Freight Traffic: Interstate 10 (I-10) is a major freight highway to move goods from the Ports of Los Angeles and Long Beach to the warehouses in the Inland Empire. East of San Geronio Pass, I-10 connects to SR-62, which parallels I-10, north of the Coachella Valley. SR-62 and SR-247 have experienced increased freight traffic due to periodic closures and congestion on I-10 and I-15. SR-62 and SR-247 are designated as a terminal access route, which permits specialized Surface Transportation Assistance Act (STTA) vehicles to travel. STTA trucks are typically heavier and larger compared to other trucks.

Figure 2-1. MBTA Routes



Source: MBTA

3 Strategic Priorities

In developing the LRMT, five areas of concern were identified throughout the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. The areas of concern are related to the goals and objectives of the LRMT. This section describes how these areas relate to the Morongo Basin subarea.

Mobility: The primary mode of travel is by personal vehicle, with SR-62 serving as the main roadway for residents and accommodating through traffic. Local roads connect to residential neighborhoods, but commercial and retail spaces are generally along SR-62. The Morongo Basin subarea is sparsely developed and rural with larger lot sizes, limited sidewalks and bike lanes, minimal street crossings, which are challenges to improving connectivity for residents. SR-62 also divides communities in Yucca Valley and Twentynine Palms. Frontage roads exist on some portions of SR-62, and sidewalks are fragmented on both SR-62 and the frontage roads. The Morongo Basin is a pleasant environment for walking and cycling, but bike/ped route continuity is non-existent.

Goods Movement: SR-62 and SR-247 are designated as a terminal access route by Caltrans. Since these state routes are the primary roadways for many communities in the Morongo Basin, increased truck volumes can impact the mobility of residents and visitors. There is a concern that truck volumes are increasing through the Morongo Basin. This is particularly true of times of major delays or closures on I-10 in the Banning Pass and I-15 in the Cajon Pass. The most direct impact is at the intersection of SR-62 and SR-247. When there is a bottleneck on I-10 or I-15, truck traffic may be redirected through Yucca Valley.

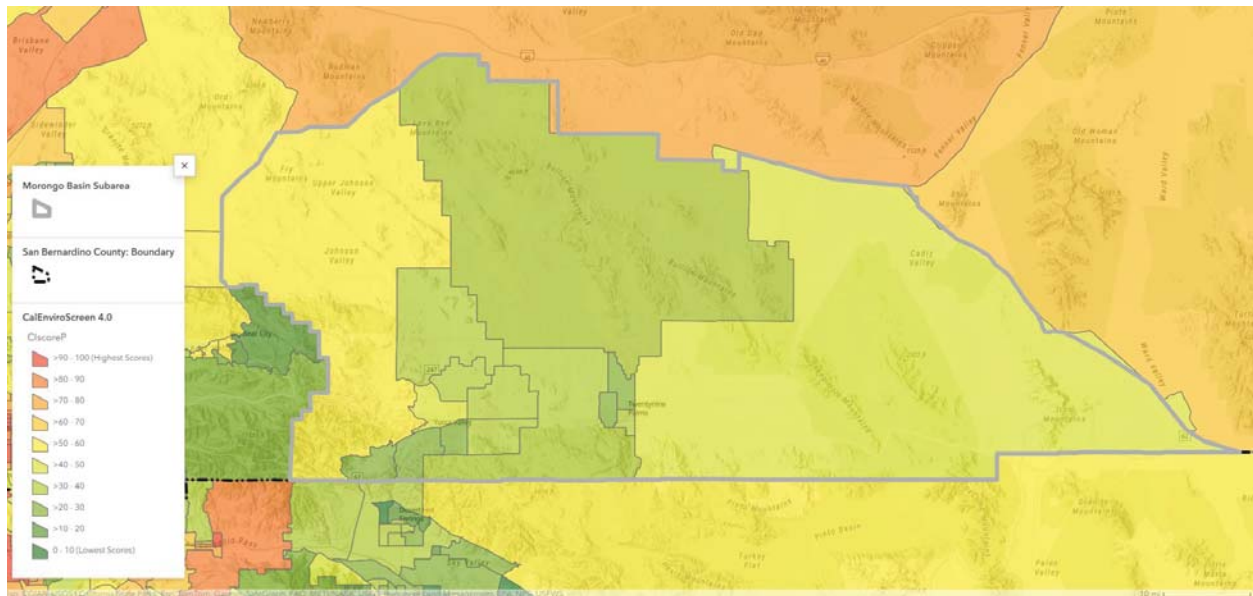
Climate Adaption and Resiliency: Weather conditions and natural events can affect roadway conditions and safety. The Morongo Basin is susceptible to wildfires, flash flooding, and earthquakes,

which can cause road closure and impact pavement conditions. Twentynine Palms, Yucca Valley, and other smaller communities are accessible by SR-62, thereby closures or disruptions limit access and connectivity for these communities.

Disadvantaged Communities: Census tracts in the Morongo Basin subarea have lower CalEnviroScreen scores compared to other subareas (Figure 3-1), suggesting a lower pollution burden and reduced vulnerability to pollution. However, sensitive populations in the area are at risk for asthma and cardiovascular disease.

Funding: Funding issues are not restricted to one geographic area, however, securing funding for transit operations and expanding active transportation facilities to connect communities across SR-62 are priorities for the Morongo Basin subarea. Further, addressing congestion issues at the SR-62/SR-247 intersection is a critical priority, both for commuting, seasonal traffic, and periodic traffic problems on I-10 and I-15.

Figure 3-1. CalEnviroScreen Percentile for the Morongo Basin Subarea



Source: CalEnviroScreen 4.0

4 Strategic Priorities Action Plan

The final LRMTTP report identifies the projects being considered for the forthcoming San Bernardino County Transportation Authority (SBCTA) 2025 10-Year Delivery Plan, and presents projects listed for the “Baseline Level” of investment and additional projects at the “Aggressive Level” that can be considered with additional revenue for all subareas. Table I lists highway projects being pursued by local jurisdictions in the Morongo Basin Subarea over the next 10 years. Additional details are available in the SBCTA 2025 10-Year Delivery Plan. It is notable that three of the five projects listed are for improvements on SR-62, which speaks to the importance of maintaining mobility on this state highway, the “main street” of the Morongo Basin. Basin Transit is in the process of updating its short-range transit plan (SRTP). The most recent plan can be found at: [Basin Transit Short Range Transit Plan FY2020-2024](#).

Table I. Morongo Basin Subarea - Major Local Highway Program Projects Through FY 2033/34 (1,000s)

PROJECT	COST
1 Split Rock Avenue at Twentynine Palms Flood Control Channel	\$4,560
2 Yucca Trail Widening from Palomar to La Contenta	\$5,406
3 SR 62 Street Improvements from Encelia Avenue to Larrea Avenue, Phase 2B Widening	\$5,937
4 SR 62 Widening from Sage Avenue to Airway Avenue*	\$41,700
5 SR 62 Street Improvements from Larrea Avenue to Star Dune, Phase 3*	\$5,978
TOTAL:	\$63,581

* Project is not fully funded.

Table II through Table VI summarizes the strategic priority and key actions for each of the issues described in the previous section.

Table II. Mobility Action Plan for the Morongo Basin Subarea

Strategic Priority	Key Actions
Further develop the Core Transit Network	<p>Existing Morongo Basin Transit Authority services represent the backbone of transit mobility. Their current route coverage locally is good, and the ability to deliver these services needs to be maintained.</p> <p>Continue to manage and improve other alternate mode initiatives, including vanpool, carpool, and active transportation modes.</p> <p>Invest in the MBTA system based on priorities in the Short Range Transit Plan</p> <p>Position MBTA network improvements to be competitive for additional state and federal funding</p> <p>Pursue operating funds for increased service using strategies described in key issue 5</p>
Incremental transit enhancements in rural areas	<p>Identify unmet or underserved needs in rural communities</p> <p>Secure funding to implement new/enhanced service to meet rural travel needs</p>
Develop coordinated program of first/last mile improvements	<p>Build on the Non-Motorized Transportation Plan to define a cohesive active transportation priority list and advance project development to position for funding</p> <p>Deliver priority bicycle/pedestrian improvements to improve continuity on SR-62</p>
Invest in multimodal connectivity and customer experience	<p>Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that co-locates transit and active transportation amenities such as bike sharing</p> <p>Continue to coordinate service planning between transit providers to schedule convenient connections between modes</p>
Manage congestion on freeways and arterials	<p>Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes</p> <p>Invest in physical improvements at bus stops to improve rider safety and comfort, such as shelters, benches, and lighting</p>
	<p>Implement the Smart Intersection and Smart Corridor recommendations on SR-62 from the Smart County Master Plan. Coordinate with SR-62 roadway improvements</p> <p>Develop and construct priority roadway improvements in the 10-Year Delivery Plan</p>

Promote strong vanpool, carpool, and transportation demand management (TDM) initiatives

Continue and expand partnerships with large and medium-sized employers to promote multimodal alternatives to single-occupancy vehicle commutes, including telecommuting

Continue partnering with regional partners such as Riverside County Transportation Commission to share data and technology tools to support shared-ride opportunities for long-distance commuters

Review transit fare structures and carpool/vanpool programs to provide flexibility that encourages hybrid workers to use alternative modes on days they must travel to an office

Promote awareness of mobility alternatives and communicate the quality-of-life benefits of transit, vanpool, and carpool as alternatives to driving alone

Develop vehicle miles traveled (VMT) mitigation bank

Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT

Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects.

Table III. Goods Movement Action Plan for the Morongo Basin Subarea

Strategic Priority	Key Actions
Develop plan for designated freight corridors	<p>Assist jurisdictions with guidelines for implementation of AB 98, to include identification of corridors that may be designated as truck routes</p> <p>Identify improvements to improve safety and operational efficiency along these corridors</p> <p>Work with Caltrans and California Highway Patrol to enhance traffic management and monitoring systems to actively manage traffic along SR-62 and SR-247 during periods of heavy delays on I-10 or I-15 and potential diversion to SR-62/247.</p>
Accelerate transition to clean trucks	<p>Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by AB98</p> <p>Partner with logistics and zero-emission (ZE) charging/fueling companies to accelerate the transition to ZE truck operations and supporting infrastructure needs</p> <p>Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations</p> <p>Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan</p>

Table IV. Climate Adaptation and Resiliency Action Plan for the Morongo Basin Subarea

Strategic Priority	Key Actions
Encourage redundancy across the transportation network and improve operational resiliency on major arterials	Implement recommendations from the forthcoming State Route 247/62 Emergency Bypass Study and the Emergency Evacuation Network Study (EENR)
Accelerate transition to clean vehicles	Partner with zero-emission fueling/charging companies to accelerate the transition to zero-emission. Seek grant funding for ZE vehicle and transit
Transition transit operations to zero-emissions	Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies, in particular regarding operating zero emission vehicles long distances and in hot conditions in the county's rural areas
Prioritize state-of-good-repair on highways and arterials	Collaborate with Caltrans and local jurisdictions on prioritizing maintenance of state highways and need for incident traffic management and emergency evacuation, on which the Morongo Basin is dependent
Establish emergency procedures	Complete the Emergency Evacuation Network Resilience Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study
	Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.
	Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information

Table V. Disadvantaged Communities Action Plan for the Morongo Basin Subarea

Strategic Priority	Key Actions
<p>Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars</p>	<p>Analyze potential impacts of major transit investments on transit service to disadvantaged communities.</p> <p>Provide adequate maintenance, security, schedule information and cleanliness at local bus stops.</p> <p>Consider needs of all users as electronic fare payment systems are further developed.</p>
<p>Take advantage of available funding focused on disadvantaged communities</p>	<p>Deliver transit priorities identified in the LRMTF that particularly benefit disadvantaged communities</p> <p>Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed</p>
	<p>Take advantage of equity-oriented programs like the Reconnecting Communities Pilot</p> <p>Continue to leverage state greenhouse gas reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and Senate Bill 1 funds such as Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition</p>
<p>Free and reduced fare programs</p>	<p>Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals</p> <p>Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass</p> <p>Communicate fare incentives to the public</p>
<p>Prioritize multimodal improvements to improve mobility in disadvantaged communities</p>	<p>Prioritize transit corridors that connect disadvantaged communities to key destinations</p> <p>Invest in high-comfort off-street active transportation corridors</p> <p>Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities</p>
<p>Prioritize inclusive communications</p>	<p>Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience</p> <p>Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices.</p>

Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.

Table VI. Funding Action Plan for the Morongo Basin Subarea

Strategic Priority	Key Actions
Secure additional state and regional funding for transit operations	<p>Increase availability and flexibility of future Measure I funding for use in transit operations</p> <p>Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses</p>
Align future funding sales tax measures with the priorities of the LRMTTP	<p>Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit</p> <p>Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs</p>
Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives	<p>Maintain relationships with CBO leaders and business sector partners</p> <p>Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects</p> <p>Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public</p>
Support local agency grant pursuits	<p>Monitor grant funding opportunities at federal, state, and regional levels and connect collaborate with local partners on grant pursuits</p> <p>Provide technical support for local grant applications</p>

5 Conclusion and Next Steps

Priority projects to improve operations of the transportation network are identified in the 10-Year Delivery Plan and the Morongo Basin Area Transportation Study and projects to improve active transportation facilities are included in the Morongo Basin Active Transportation Plan, Non-Motorized Transportation Plan, Points of Interest Pedestrian Plan, and the Regional Safe Routes to School Plan.

The MBTA SRTP for 2020–2024 establishes a five-year plan to support expansion of service days and frequencies for the Morongo Basin Transit Authority’s transit routes (MBTA 2020). The plan targets 30-minute headways on all segments of Route 1 on weekdays and Saturdays by fiscal year 2025. Further recommendations include replacing MBTA’s neighborhood local fixed routes with dynamically routed and scheduled personal mobility on-demand service offering primarily first/last mile” feeder connections between residential neighborhoods and key bus stops along SR-62. A phased five-year service plan is laid out in the SRTP to standardize routes and more frequent schedules to make transit travel more comparable to personal vehicle travel. The financial plan in the SRTP is projected through fiscal year 2025-26 to support implementation of the recommended service plan. The San Bernardino Countywide Zero-Emission Bus Study Master Plan includes recommendations for the technology and charging/fueling station location based on service needs and site configurations.

6 References

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Mountains Subarea Plan

San Bernardino County Long Range Multimodal
Transportation Plan

San Bernardino County, CA

February 5, 2025





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Contents

1	Subarea Overview	1
2	Unique Challenges	1
3	Strategic Priorities	3
4	Strategic Priorities Action Plan	5
5	Conclusion and Next Steps	12
6	References	13

Tables

Table I. Mountain Subarea - Major Local Highway Program Projects Through FY 33/34 (1,000s)	5
Table II. Mobility Action Plan for the Mountains Subarea	6
Table III. Goods Movement Action Plan for the Mountains Subarea	8
Table IV. Climate Adaptation and Resiliency Action Plan for the Mountains Subarea	9
Table V. Disadvantaged Communities Action Plan for the Mountains Subarea	10
Table VI. Funding Action Plan for the Mountains Subarea	11

Figures

Figure 1-1. Mountains Subarea	1
Figure 2-1. Mountain Transit Big Bear Routes	2
Figure 2-2. Mountain Transit Rim Routes	3
Figure 3-1. CalEnviroScreen Percentile for the Mountains Subarea	4

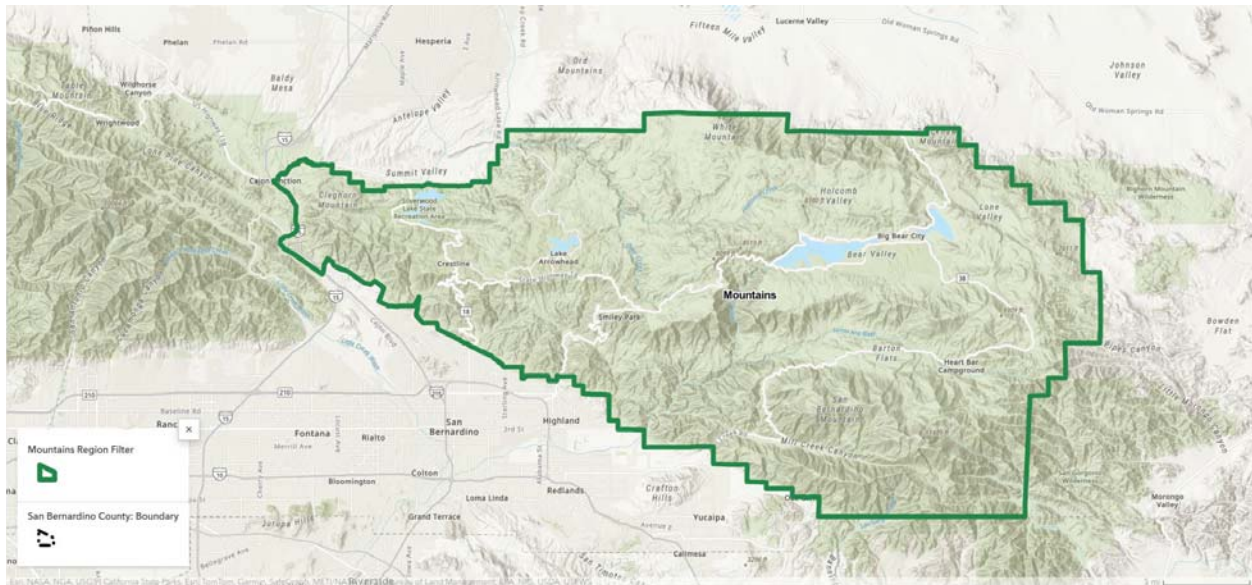
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1 Subarea Overview

As the largest county in the contiguous United States in land area, San Bernardino County is geographically diverse, and each subregion has unique needs. This is recognized in the county's half-cent sales tax for transportation improvements, Measure I, which allocates funding to six subareas. In developing the Long Range Multimodal Transportation Plan (LRMTP), the six subareas identified by Measure I were analyzed to ensure issues facing San Bernardino County's unique geographic areas are adequately addressed. This subarea plan focuses on the Mountains subarea (Figure 1-1).

The Mountains subarea includes the City of Big Bear Lake and has the slowest growth rate in terms of number of households and jobs in the county. The subarea had 22,050 households in 2019 and is projected to increase to 22,076 in 2035 and to 22,089 households in 2050 (Southern California Association of Governments [SCAG] 2024). Additionally, the number of jobs in the Mountains is expected to increase from 10,876 jobs in 2019 to 11,552 jobs in 2035 and 11,980 jobs in 2050 (SCAG 2024). The Mountains subarea is characterized by preserved open space with single-family residential and commercial development primarily concentrated in Big Bear Lake and the unincorporated community of Lake Arrowhead.

Figure 1-1. Mountains Subarea



Source: Existing Conditions StoryMap

2 Unique Challenges

The Mountain Area Transportation Study (MATS) provides an extensive overview of some of the transportation challenges in the Mountain Subarea (San Bernardino County Transportation Authority [SBCTA] 2016). The report can be found here: [MATS-NeedsAssessment.pdf](#). A comprehensive list of transportation challenges was identified, as well as solutions. State highways are the primary routes up and down the mountains and are where the most significant congestion levels can occur. Congestion particularly occurs on weekends in the winter due to the combination of many recreational

visitors as well as drivers ill-prepared for winter conditions. Unfortunately, funding for this subarea is limited, and Caltrans has limited options for improving mountain roadways. But local jurisdiction staff working with Caltrans could prioritize some of the lower-cost improvements.

Tourism and Seasonal Congestion: The primary access roadways to the mountain communities experience unique traffic patterns associated with visitors to the area. While the full-time population and associated employment are relatively low, substantial increases in traffic occur during the peak winter and summer seasons. As a result, traffic congestion occurs for extended periods as visitors and seasonal employees travel to the San Bernardino Mountain communities. Peak conditions, related to traffic congestion or weather, can result in cut-through traffic on local roads. During summer and winter months, particularly near popular snow area and hiking locations, illegal parking impacts traffic conditions.

Limited Roadway Connections: The three main roads to Big Bear Valley and the Rim of the World communities are State Route 330 (through Highland), State Route 38 (through Redlands) and State Route 18 (through Lucerne Valley). Roadway conditions are subjected to weather conditions and natural events like wildfires, floods, and landslides, and connections are geographically constrained. In the case of an emergency or disruption, there are limited route alternatives in the mountain communities.

Limited Transit Options: Mountain Transit provides six local routes that operate throughout the week with free fare in Big Bear Valley and Rim of the World communities and two routes between the San Bernardino Mountain communities and the city of San Bernardino, making connections with Omnitrans, Metrolink, Greyhound (Figure 2-1 and Figure 2-2). The off-the-mountain services are limited to Monday, Wednesday, and Friday. Mountain Transit also operates on-demand service and a Seasonal Weekend Trolley service providing transportation between local restaurants, hotels, ski resorts, and shopping venues throughout the City of Big Bear Lake and RIM Communities in the summer and winter. There are limited transit options for travel between Big Bear Valley and the Rim communities and for connections to other subareas.

Figure 2-1. Mountain Transit Big Bear Routes



Source: Mountain Transit

Figure 2-2. Mountain Transit Rim Routes



Source: Mountain Transit

3 Strategic Priorities

In developing the LRMT, five areas of concern were identified throughout the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. The areas of concern are related to the goals and objectives of the LRMT. This section describes how these areas relate to the Mountains subarea.

Multimodal Connectivity: The rural and geographic characteristics of the Mountains subarea results in larger lot sizes, limited sidewalks and bike lanes, minimal street crossings, which are challenges to improving connectivity for residents and visitors. The primary mode of travel is personal automobile, however, Mountain Transit provides shuttle and trolley service in addition to their fix routes to key destinations in Big Bear Lake and the Rim communities.

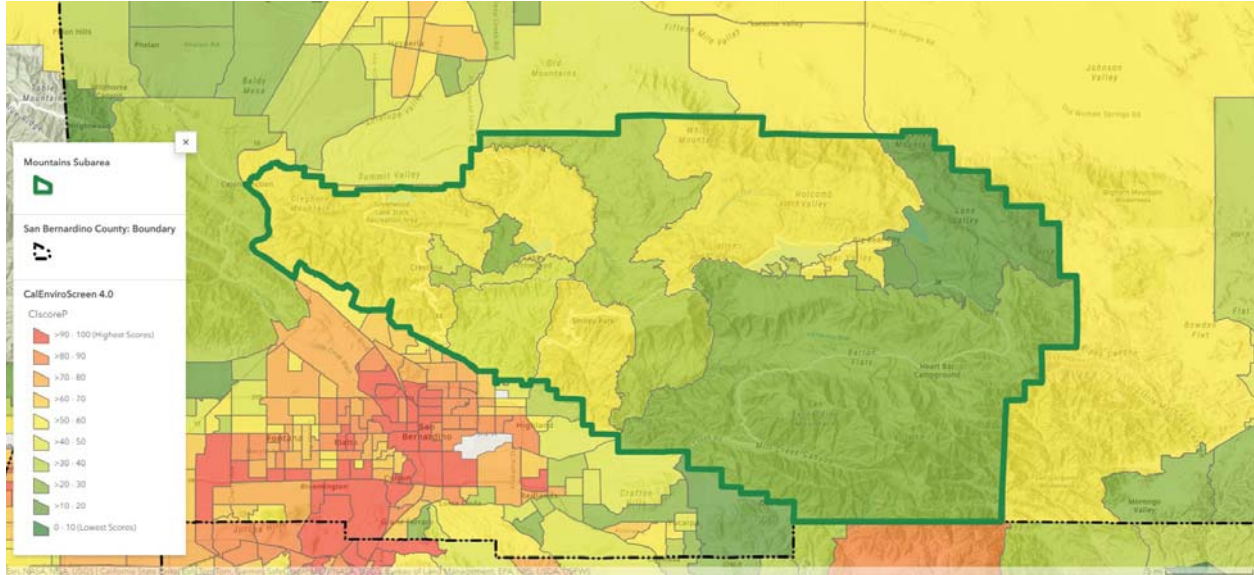
Goods Movement: The three primary routes to travel through the Mountains subarea (State Routes 18, 38, and 330) are also designated as truck routes. Commercial and industrial development tends to be local-serving, with no large warehouses or regional commercial centers in the subarea, so trucks traveling through the Mountains generally serve local retail and resorts. The topography can be difficult for truck drivers to traverse, and trucks can be restricted on Caltrans facilities if the roadway conditions are poor.

Climate Change and Resiliency: As mentioned above, weather conditions and natural events can affect roadway conditions and safety. There are limited route alternatives if there are closures due to snow or landslides.

Disadvantaged Communities: Census tracts in the Mountains subarea have lower CalEnviroScreen scores compared to the county (Figure 3-1), suggesting a lower pollution burden and reduced vulnerability to pollution. Residents do experience high level of ozone in the subarea and sensitive populations are at risk for asthma and cardiovascular disease.

Funding: Funding issues are not restricted to one geographic area, however, securing funding for transit operations, roadway maintenance, and expanding active transportation facilities are priorities for the Mountains subarea.

Figure 3-1. CalEnviroScreen Percentile for the Mountains Subarea



Source: CalEnviroScreen 4.0

4 Strategic Priorities Action Plan

The final LRMTTP report identifies the projects being considered for the forthcoming SBCTA 2025 10-Year Delivery Plan, and presents projects listed for the “Baseline Level” of investment and additional projects at the “Aggressive Level” that can be considered with additional revenue for all subareas. Table I lists highway projects being pursued by local jurisdictions in the Mountain Subarea over the next 10 years. Additional details are available in the SBCTA 2025 10-Year Delivery Plan. No improvements are listed for state highways, but local officials can work with Caltrans to prioritize some of the improvements proposed on those highways and can request Caltrans funding, even though it would be a number of years before the improvements may receive funding attention. Mountain Transit is in the process of updating its short-range transit plan. The most recent plan can be found at: [Mountain Transit Short Range Transit Plan FY 2021-22 to FY 2025-26](#).

Table I. Mountain Subarea - Major Local Highway Program Projects Through FY 33/34 (1,000s)

PROJECT	COST
1 Moonridge Road Realignment and Roundabouts - AEA	\$9,318
2 Stanfield Cutoff Roundabout	\$6,682
TOTAL:	\$16,000

Table II through Table VI summarizes the strategic priority and key actions for each of the issues described in the previous section.

Table II. Mobility Action Plan for the Mountains Subarea

Strategic Priority	Key Actions
Further develop the Mountain Transit Network	Existing Mountain Transit services represent the backbone of transit mobility. Their ability to deliver these services needs to be maintained.
Incremental transit enhancements in rural areas	Continue to manage and improve other alternate mode initiatives, including vanpool, carpool, and active transportation modes.
Develop coordinated program of first/last mile improvements	Invest in the Mountain Transit systems based on priorities in the Short Range Transit Plans
	Position the Mountain Transit's priorities to be competitive for additional state and federal funding
	Pursue operating funds for increased service using strategies described in key issue 5
	Identify unmet or underserved needs in rural communities
	Build on the Non-Motorized Transportation Plan to define an active transportation priority list and advance project development to position for funding
	Deliver priority improvements
	Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that co-locates transit and active transportation amenities such as bike sharing
	Coordinate with the US Forest Service on developing trails within the San Bernardino National Forest and connecting those trails to the greater transportation system
Invest in multimodal connectivity and customer experience	Continue to coordinate service planning between transit providers to schedule convenient connections between modes
	Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes
Manage congestion on freeways and arterials	Invest in physical improvements at bus stops to improve rider safety and comfort, such as shelters, benches, and lighting
	Work with Caltrans to prioritize and eventually fund projects on state highways accessing the mountains, based on the Mountain Area Transportation Study and other input.

Promote strong vanpool, carpool, and transportation demand management (TDM) initiatives

Continue and expand partnerships with employers in the Valley and Victor Valley to promote multimodal alternatives to single-occupancy vehicle commutes for mountain residents, including telecommuting

Promote awareness of mobility alternatives and communicate the quality-of-life benefits of transit, vanpool, and carpool as alternatives to driving alone

Develop vehicle miles traveled (VMT) mitigation bank

Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT

Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects.

Table III. Goods Movement Action Plan for the Mountains Subarea

Strategic Priority	Key Actions
Develop plan for better accommodating trucks	Assist jurisdictions with guidelines for implementation of AB 98, to include identification of corridors that may be designated as truck routes
Accelerate transition to clean vehicles	<p>Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by AB98</p> <p>Partner with zero-emission (ZE) charging/fueling companies to accelerate the transition to ZE vehicles and supporting infrastructure needs</p> <p>Partner with the private sector to seek grant funding for ZE vehicles and charging/fueling stations</p> <p>Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan</p>
Prioritize investments in mountain highways	Deliver key highway improvements in the Measure I 10-Year Delivery Plan. Work with Caltrans to prioritize and eventually fund projects on state highways accessing the mountains, based on the Mountain Area Transportation Study and other input

Table IV. Climate Adaptation and Resiliency Action Plan for the Mountains Subarea

Strategic Priority	Key Actions
<p>Encourage redundancy across the transportation network and improve operational resiliency on major arterials</p>	<p>Implement recommendations from the forthcoming Emergency Evacuation Network Study (EENR)</p> <p>Continue and expand transit partnerships with mountain area resorts to provide an alternative to driving congested routes to, from, and within the mountains</p>
<p>Transition transit operations to zero-emissions</p>	<p>Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies, in particular regarding operating zero emission vehicles long distances with steep grades in the Mountain subarea</p>
<p>Prioritize state-of-good-repair on highways and arterials</p>	<p>Collaborate with Caltrans and local jurisdictions on criteria such as pavement condition index for prioritizing maintenance of alternate routes and need for incident traffic management and emergency evacuation</p>
<p>Establish emergency procedures</p>	<p>Complete the Emergency Evacuation Network Resiliency Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study</p> <p>Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.</p> <p>Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information</p>

Table V. Disadvantaged Communities Action Plan for the Mountains Subarea

Strategic Priority	Key Actions
<p>Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars</p>	<p>Analyze potential improvements in transit service to disadvantaged communities.</p> <p>Provide adequate maintenance, security, schedule information and cleanliness at local bus stops.</p> <p>Consider needs of all users as electronic fare payment systems are further developed.</p> <p>Assist jurisdictions with guidelines for implementation of AB 98, to include identification of corridors that may be designated as truck routes</p>
<p>Take advantage of available funding focused on disadvantaged communities</p>	<p>Deliver transit priorities identified in the LRMTF that particularly benefit disadvantaged communities</p> <p>Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed</p> <p>Continue to leverage state greenhouse gas reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and Senate Bill 1 funds, including Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition</p>
<p>Free and reduced fare programs</p>	<p>Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals</p> <p>Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass</p> <p>Communicate fare incentives to the public</p>
<p>Prioritize multimodal improvements to improve mobility in disadvantaged communities</p>	<p>Prioritize transit corridors that connect disadvantaged communities to key destinations</p> <p>Invest in high-comfort off-street active transportation corridors</p> <p>Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities</p>
<p>Prioritize inclusive communications</p>	<p>Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience</p> <p>Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices.</p> <p>Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.</p>

Table VI. Funding Action Plan for the Mountains Subarea

Strategic Priority	Key Actions
Secure additional state and regional funding for transit operations	<p>Increase availability and flexibility of future Measure I funding for use in transit operations</p> <p>Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses</p>
Align future funding sales tax measures with the priorities of the LRMTTP	<p>Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit</p>
Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives	<p>Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs</p> <p>Maintain relationships with CBO leaders and business sector partners</p> <p>Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects</p>
Support local agency grant pursuits	<p>Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public</p> <p>Monitor grant funding opportunities at federal, state, and regional levels and connect collaborate with local partners on grant pursuits</p> <p>Provide technical support for local grant applications</p>

5 Conclusion and Next Steps

Future land use is expected to remain largely the same and no major transit investments are forecast; as such, determining ways to serve existing development and seasonal visitors with transit is a key priority for this subarea. Mountain Transit's Short Range Transit Plan (SRTP) for 2021–2026 establishes a five-year plan to support continuing ridership growth and sustainable expansion of service days and frequencies, while building facilities to meet current and future vehicle maintenance and administrative needs. The SRTP supports immediate seven-day-a-week service for all Big Bear routes, while continuing to increase service frequencies to 30 minutes on its core route and 60 minutes elsewhere, across a 12-hour operating day. For Rim of the World services, the SRTP provides for increased frequency and more operating days over its five-year horizon. Priority projects to improve operations of the transportation network are identified in the 10-Year Delivery Plan and the Mountain Area Transportation Study and projects to improve active transportation facilities are included in the Non-Motorized Transportation Plan, Points of Interest Pedestrian Plan, and the Regional Safe Routes to School Plan.

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North Desert Subarea Plan

San Bernardino County Long Range Multimodal
Transportation Plan

San Bernardino County, CA

February 5, 2025





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Contents

1	Subarea Overview	1
2	Unique Challenges	1
3	Strategic Priorities	2
4	Strategic Priorities Action Plan	4
5	Conclusion and Next Steps	11
6	References	12

Tables

Table I. North Desert Subarea - Major Local Highway Projects Program Through FY 33/34 (1,000s)	4
Table II. Mobility Action Plan for the North Desert Subarea	5
Table III. Good Movement Action Plan for the North Desert Subarea	7
Table IV. Climate Adaptation and Resiliency Action Plan for the North Desert Subarea	8
Table V. Disadvantaged Communities Action Plan for the North Desert Subarea	9
Table VI. Funding Action Plan for the North Desert Subarea	10

Figures

Figure 1-1. North Desert Subarea	1
Figure 3-1. CalEnviroscreen Percentile for the North Desert Subarea	3

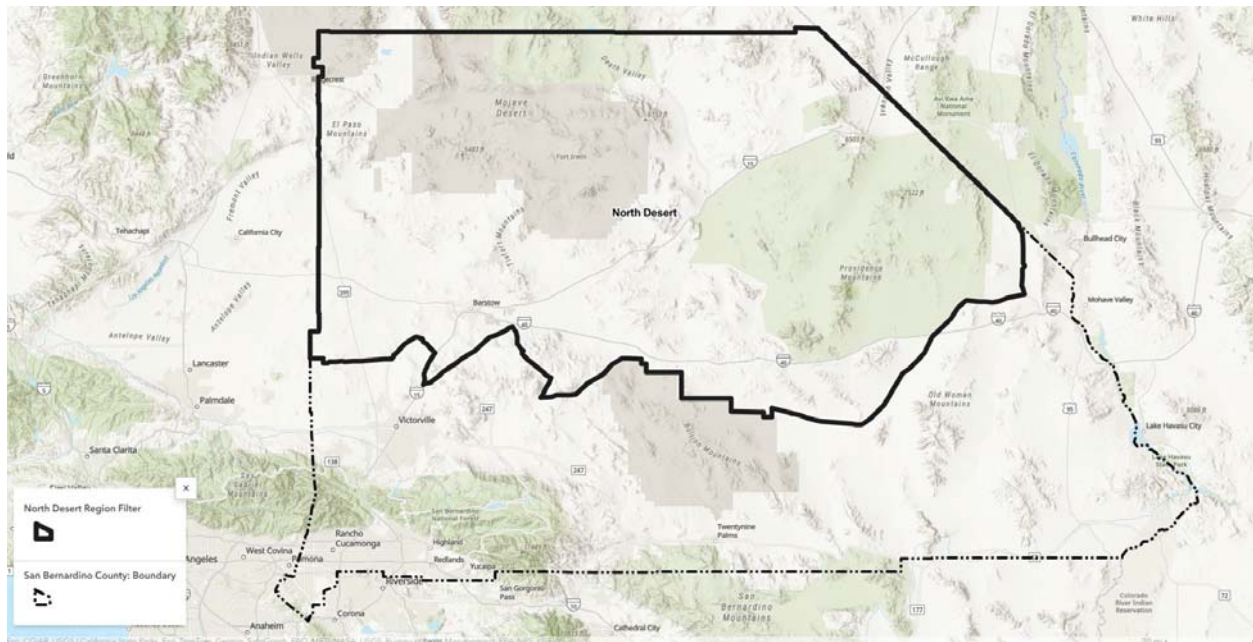
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1 Subarea Overview

As the largest county in the contiguous United States in land area, San Bernardino County is geographically diverse, and each subregion has unique needs. This is recognized in the county's half-cent sales tax for transportation improvements, Measure I, which allocates funding to six subareas. In developing the Long Range Multimodal Transportation Plan (LRMTP), the six subareas identified by Measure I were analyzed to ensure issues facing San Bernardino County's unique geographic areas are adequately addressed. This subarea plan focuses on the North Desert subarea (Figure 1-1).

The North Desert includes the City of Barstow and communities of Fort Irwin, Silver Lakes, Lenwood, and Baker. The North Desert is geographically the largest subarea in the county. The subarea had 19,346 households in 2019, which is projected to increase by 37 percent in 2050 (Southern California Association of Governments [SCAG] 2024). Additionally, the number of jobs in the North Desert is expected to increase by 32 percent between 2019 and 2050 (SCAG 2024). Household and job growth is projected to be concentrated in Barstow, as the surrounding areas consist mostly of open space, designated for solar farms and limited agricultural use.

Figure 1-1. North Desert Subarea



Source: Existing Conditions StoryMap

2 Unique Challenges

Long Commute Distances: Developed areas in the North Desert are mainly residential and focused in Barstow, with commercial and industrial land uses located in the northern part of the city. The number of jobs per household for the North Desert is 0.87 and projected to decrease in 2050. This is less than that of the county's (1.31) and the SCAG region's (1.42) jobs per household, suggesting limited local employment opportunities, forcing residents to commute to job centers in the Victor Valley

and beyond. This results in long commutes and high dependency on automobiles due to limited transit options.

Limited Transit Options: Victor Valley Transit Authority operates five local routes in Barstow and one commuter route, B-V Link. B-V Link connects the city of Barstow with Victorville and Apple Valley and then continues the Valley to medical centers and community facilities. B-V Link operates limited service on weekdays and Saturdays. Victor Valley Transit Authority (VVTA) also subsidizes vanpools, however availability for long-distance trips is dependent on volunteer drivers and their destinations. Although Brightline West will operate through Barstow, there will not be a station in the North Desert to connect the subarea to the high-speed passenger rail system.

Dependence on Key Arteries: Interstate 15 (I-15), Interstate 40 (I-40), and State Route 58 (SR-58) are the key arterials through the North Desert. Smaller arterials and local roads are primarily concentrated in Barstow. I-15 provides regional access between the San Bernardino, Los Angeles, and San Diego areas to the south and Las Vegas, Nevada and Utah to the north. I-40 provides regional access to the east through the Mojave Desert to Needles and northern Arizona, and SR-58 provides access to Bakersfield. I-15 and I-40 are also part of the National Network to support interstate commerce, which further impacts the capacity of key arterials in the North Desert.

Roadway Congestion: I-15 through the North Desert subarea experiences congestion from local and regional travel. Additionally, trips to Las Vegas during holidays and weekends significantly impact the traffic condition.

3 Strategic Priorities

In developing the LRMTTP, five areas of concern were identified throughout the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. The areas of concern are related to the goals and objectives of the LRMTTP. This section describes how these areas relate to the North Desert subarea.

Mobility: As mentioned above, I-15 and I-40 are the two key arterials in the subarea for local and regional travel. Paved local roads are very limited and concentrated in the developed areas of Barstow. The existing bicycle network is only on a segment of Main Street and connected sidewalks are focused near schools and parks in Barstow. There are no existing bike lanes and insufficient sidewalks to connect communities across I-15. However, VVTA has one of the more robust vanpool programs in the state, and continuation of that strategy, along with carpool formation, should continue to be a high priority.

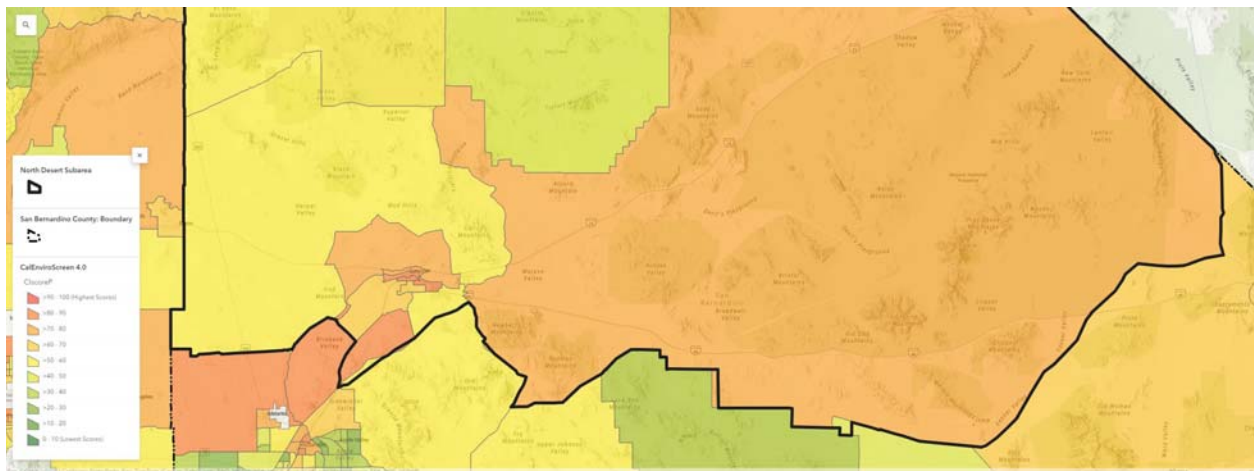
Goods Movement: The Barstow International Gateway (BIG) project, being developed by BNSF, will be the largest railway hub in the western United States. This will include a rail yard, intermodal facility, and warehouses for transloading freight. The intent of the BIG facility is to transport freight from the ports of Los Angeles and Long Beach by rail, sorting and transloading in Barstow before continuing on its eastbound journey by rail. This strategy would help to reduce the number of truck movements on I-15 and through the Cajon Pass by transferring a portion of the truck trips to rail. At the same time, this new facility could adversely impact air quality and pavement conditions because of the increase in local freight activity. It also has high potential to bring more jobs to the area and boost the local economy. In addition, San Bernardino County Transportation Authority (SBCTA) and its private partners are working to place zero-emission (ZE) truck charging and hydrogen fueling stations at strategic locations along I-15 to help accelerate the transition to clean trucks.

Climate Adaption and Resiliency: The North Desert subarea is vulnerable to flash floods following heavy participation, affecting the transportation network, particularly rural roadways. In the summertime, the average daily temperature reaches 102 degrees, with peaks in the 110s, and some VVTA bus stops lack adequate shade and amenities to ensure rider comfort.

Disadvantaged Communities: Most census tracts in the North Desert subarea have lower CalEnvironScreen scores compared to other subareas (Figure 3-1), suggesting a lower pollution burden and reduced vulnerability to pollution. However, census tracts in Barstow and Mojave National Preserve are in the highest 25 percent of overall scores in CalEnviroScreen 4.0 and are classified as disadvantaged by senate Bill 535. Diesel particulate matter is higher in Barstow, near the Marine Corps Logistics Base, and sensitive populations in the area are at risk for asthma, low birth weight, and cardiovascular disease.

Funding: Funding issues are not restricted to one geographic area, however, securing funding to expand bus service between Barstow and the Victor Valley and addressing gaps in the bike lanes and sidewalks are priorities for the North Desert subarea.

Figure 3-1. CalEnviroScreen Percentile for the North Desert Subarea



Source: CalEnviroScreen 4.0

4 Strategic Priorities Action Plan

The final LRMTTP report identifies the projects being considered for the forthcoming SBCTA 2025 10-Year Delivery Plan, and presents projects listed for the “Baseline Level” of investment and additional projects at the “Aggressive Level” that can be considered with additional revenue for all subareas. Table I lists highway projects being pursued by local jurisdictions in the North Desert Subarea over the next 10 years. Additional details are available in the SBCTA 2025 10-Year Delivery Plan.

Table I. North Desert Subarea - Major Local Highway Projects Program Through FY 33/34 (1,000s)

PROJECT	COST
1 North First Avenue Bridges over Mojave River & Overflow*	\$89,895
2 Rimrock Road Rehabilitation from Barstow Road to Avenue J	\$1,244
3 Baker Boulevard Bridge Replacement over Mojave River*	\$29,872
4 National Trails Highway Bridges Replacements*	\$111,631
TOTAL:	\$232,642

* Project is not fully funded.

In addition, VVTA has conducted a similar long-range planning effort, to include its Barstow service area. VVTA’s 2024 Comprehensive Operational Analysis (COA) presents a “Vision Plan” that sets forth route level and program level improvements that will represent a 156 percent increase in annual revenue hours and doubling the number of vehicles (VVTA 20024). Part of the plan in the COA includes a restructuring of routes that will feed the new Brightline West high-speed rail stations in Apple Valley and Hesperia. This 218-mile passenger rail service will operate from Las Vegas to Rancho Cucamonga, with 96% of its alignment within the median of Interstate 15. Construction is expected to take about 4 years with service beginning in 2028. It will provide a new means for making the commute from the Victor Valley, down the Cajon Pass, with transit connections to other destinations in the San Bernardino Valley and to Los Angeles. Barstow is only about 20 miles from the Apple Valley station. The COA can be found at: [VVTA Comprehensive Operations Analysis - June 2021](#).

Table II through Table VI summarize the strategic priority and key actions for each of the issues described in the previous section.

Table II. Mobility Action Plan for the North Desert Subarea

Strategic Priority	Key Actions
<p>Further develop the rural transit network</p>	<p>Existing VTA service represents the backbone of transit mobility. Their ability to deliver these services needs to be maintained.</p> <p>Continue to manage and improve other alternate mode initiatives, including vanpool, carpool, and active transportation modes.</p> <p>Invest in VTA transit system based on priorities in the Comprehensive Operational Analysis</p> <p>Pursue operating funds for increased service using strategies described in key issue 5</p>
<p>Incremental transit enhancements in rural areas</p>	<p>Identify unmet or underserved needs in rural communities</p> <p>Secure funding to implement new/enhanced service to meet rural travel needs</p>
<p>Develop coordinated program of first/last mile improvements</p>	<p>Build on the Non-Motorized Transportation Plan to define an active transportation priority list and advance project development to position for funding</p> <p>Deliver priority improvements in the 10-Year Delivery Plan</p>
<p>Invest in multimodal connectivity and customer experience</p>	<p>Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that co-locates transit and active transportation amenities such as bike sharing</p> <p>Continue to coordinate service planning between transit providers to schedule convenient connections between modes</p> <p>Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes</p> <p>Invest in physical improvements at bus stops to improve rider safety and comfort, such as shelters, benches, and lighting</p>
<p>Manage congestion on freeways and arterials</p>	<p>Coordinate I-15/access improvements associated with the BIG Project with BNSF and Caltrans</p> <p>Define and deliver priority highway/rail grade separations</p>
	<p>Continue and expand partnerships with large and medium-sized employers to promote multimodal alternatives to single-occupancy vehicle commutes, including telecommuting</p>

Promote strong vanpool, carpool, and transportation demand management (TDM) initiatives

Continue partnering with regional agencies such as Riverside County Transportation Commission and LA Metro to share data and technology tools to support shared-ride opportunities for long-distance commuters

Review transit fare structures and carpool/vanpool programs to provide flexibility that encourages hybrid workers to use alternative modes on days they must travel to an office

Promote awareness of mobility alternatives and communicate the quality-of-life benefits of bus and rail transit, vanpool, and carpool as alternatives to driving alone

Develop vehicle miles traveled (VMT) mitigation bank

Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT

Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects.

Table III. Good Movement Action Plan for the North Desert Subarea

Strategic Priority	Key Actions
Develop plan for designated freight corridors	Identify potential routes within and between major logistics hubs such as BNSF’s future Barstow International Gateway
	Assist jurisdictions with guidelines for implementation of AB 98, to include identification of corridors that may be designated as truck routes
	Identify improvements to improve safety and operational efficiency along these corridors
	Work with Caltrans and California Highway Patrol to enhance current incident management and monitoring systems to actively manage traffic along key freight corridors
	Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by AB98
Collaborate with logistics industry to shift freight from truck to rail, where practical and cost-effective	<p>Prioritize connections to intermodal facilities such as the BIG Project</p> <p>Collaborate with BNSF and Union Pacific to address key bottlenecks in the freight rail network to increase rail capacity</p>
Accelerate transition to clean trucks	Partner with logistics and zero-emission charging/fueling companies to accelerate the transition to ZE truck operations and supporting infrastructure needs consistent with the California Transportation Commission’s Senate Bill 671 designated zero-emission corridors
	Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations
	Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan
Prioritize investments in high-volume highway freight corridors	Deliver key highway improvements in the Measure I 10-Year Delivery Plan
	Strategically invest in improvements to key highway freight bottlenecks and that minimize conflict between trucks and other road users

Table IV. Climate Adaptation and Resiliency Action Plan for the North Desert Subarea

Strategic Priority	Key Actions
<p>Encourage redundancy across the transportation network and improve operational resiliency on major arterials</p>	<p>Implement recommendations from the forthcoming Emergency Evacuation Network Study (EENR) as well as the SR-247/62 Emergency Bypass Study. The north end of SR-247 terminates in Barstow.</p>
<p>Accelerate transition to clean trucks</p>	<p>Partner with trucking and zero-emission fueling/charging companies to accelerate the transition to zero-emission in the Senate Bill 671 corridors and for local logistics operations.</p>
<p>Transition transit operations to zero-emissions</p>	<p>Seek grant funding for ZE trucking and transit</p> <p>Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies, in particular regarding operating zero emission vehicles long distances and in hot conditions</p>
<p>Support development of hydrogen hubs and fueling</p>	<p>Partner with the state and utility industry to site green hydrogen production in accessible Inland Empire and High Desert locations</p>
<p>Prioritize state-of-good-repair on highways and arterials</p>	<p>Replace key rural bridges to restore and maintain access, such as those on the National Trails Highway and in Baker</p>
<p>Establish emergency procedures</p>	<p>Collaborate with Caltrans and local jurisdictions on criteria such as pavement condition index for prioritizing maintenance of alternate routes and need for incident traffic management and emergency evacuation</p>
<p>Establish emergency procedures</p>	<p>Complete the Emergency Evacuation Network Resilience Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study</p>
<p>Establish emergency procedures</p>	<p>Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.</p>
<p>Establish emergency procedures</p>	<p>Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information</p>

Table V. Disadvantaged Communities Action Plan for the North Desert Subarea

Strategic Priority	Key Actions
<p>Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars</p>	<p>Analyze potential impacts of major transit investments on transit service to disadvantaged communities.</p> <p>Provide adequate maintenance, security, schedule information and cleanliness at local bus stops.</p> <p>Consider needs of all users as electronic fare payment systems are further developed.</p>
<p>Take advantage of available funding focused on disadvantaged communities</p>	<p>Deliver transit priorities identified in the LRMTTP that particularly benefit disadvantaged communities</p> <p>Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed</p> <p>Take advantage of equity-oriented programs like the Reconnecting Communities Pilot</p> <p>Continue to leverage state greenhouse gas reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and Senate Bill 1 funds such as Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition</p>
<p>Free and reduced fare programs</p>	<p>Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals</p> <p>Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass</p> <p>Communicate fare incentives to the public</p>
<p>Prioritize multimodal improvements to improve mobility in disadvantaged communities</p>	<p>Prioritize transit corridors that connect disadvantaged communities to key destinations</p> <p>Invest in high-comfort off-street active transportation corridors where feasible</p> <p>Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities</p>
<p>Prioritize inclusive communications</p>	<p>Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience</p> <p>Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices.</p>
<p>Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.</p>	<p>Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.</p>

Table VI. Funding Action Plan for the North Desert Subarea

Strategic Priority	Key Actions
Secure additional state and regional funding for transit operations	<p>Increase availability and flexibility of future Measure I funding for use in transit operations</p> <p>Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses</p>
Align future funding sales tax measures with the priorities of the LRMTTP	<p>Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit</p>
Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives	<p>Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs</p> <p>Maintain relationships with CBO leaders and business sector partners</p> <p>Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects</p> <p>Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public</p>
Support local agency grant pursuits	<p>Monitor grant funding opportunities at federal, state, and regional levels and connect collaborate with local partners on grant pursuits</p> <p>Provide technical support for local grant applications</p>

5 Conclusion and Next Steps

Priority projects to improve operations of the transportation network are identified in the 10-Year Delivery Plan. Projects to improve active transportation facilities included in the Non-Motorized Transportation Plan, Points of Interest Pedestrian Plan, and the Regional Safe Routes to School Plan are focused in Barstow.

VVTA recently revised their bus routes to improve service performance and to address the evolving needs of the Barstow region. Future transit investments for Barstow are laid out in VVTA's COA.

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Colorado River Subarea Plan

San Bernardino County Long Range Multimodal Transportation Plan

San Bernardino County, CA

February 5, 2025





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Contents

1	Subarea Overview	1
2	Unique Challenges	1
3	Strategic Priorities	3
4	Strategic Priorities Action Plan	5
5	Conclusion and Next Steps	13
6	References	14

Tables

Table I. Colorado River Subarea - Major Local Highway Program Projects Through FY 2033/34 (1,000s)	5
Table II. Mobility Action Plan for the Colorado River Subarea.....	6
Table III. Goods Movement Action Plan for the Colorado River Subarea	8
Table IV. Climate Adaptation and Resiliency Action Plan for the Colorado River Subarea	9
Table V. Disadvantaged Communities Action Plan for the Colorado River Subarea	10
Table VI. Funding Action Plan for the Colorado River Subarea	12

Figures

Figure 1-1. Colorado River Subarea	1
Figure 2-1. Needles Area Transit Routes	2
Figure 3-1. CalEnviroScreen Percentile for the Colorado River Subarea	4

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1 Subarea Overview

As the largest county in the contiguous United States in land area, San Bernardino County is geographically diverse, and each subregion has unique needs. This is recognized in the county's half-cent sales tax for transportation improvements, Measure I, which allocates funding to six subareas. In developing the Long Range Multimodal Transportation Plan (LRMTP), the six subareas identified by Measure I were analyzed to ensure issues facing San Bernardino County's unique geographic areas are adequately addressed. This subarea plan focuses on the Colorado River subarea (Figure 1-1).

The Colorado River includes the City of Needles and the communities of Big River and Bluewater. The subarea had 2,974 households in 2019, which is projected to increase by 17 percent in 2050 (Southern California Association of Governments [SCAG] 2024). Additionally, the number of jobs in the Colorado River Subarea is expected to increase by 15 percent between 2019 and 2050 (SCAG 2024). In the SCAG region, the City of Needles is one of the top five growing jurisdictions in terms of percentage growth of households, and one of the top 15 growing jurisdictions regarding the percentage of employment (SCAG 2024). Given the rural nature of the subarea, the growth in jobs and households are likely to be concentrated in the City of Needles.

Figure 1-1. Colorado River Subarea



Source: Existing Conditions StoryMap

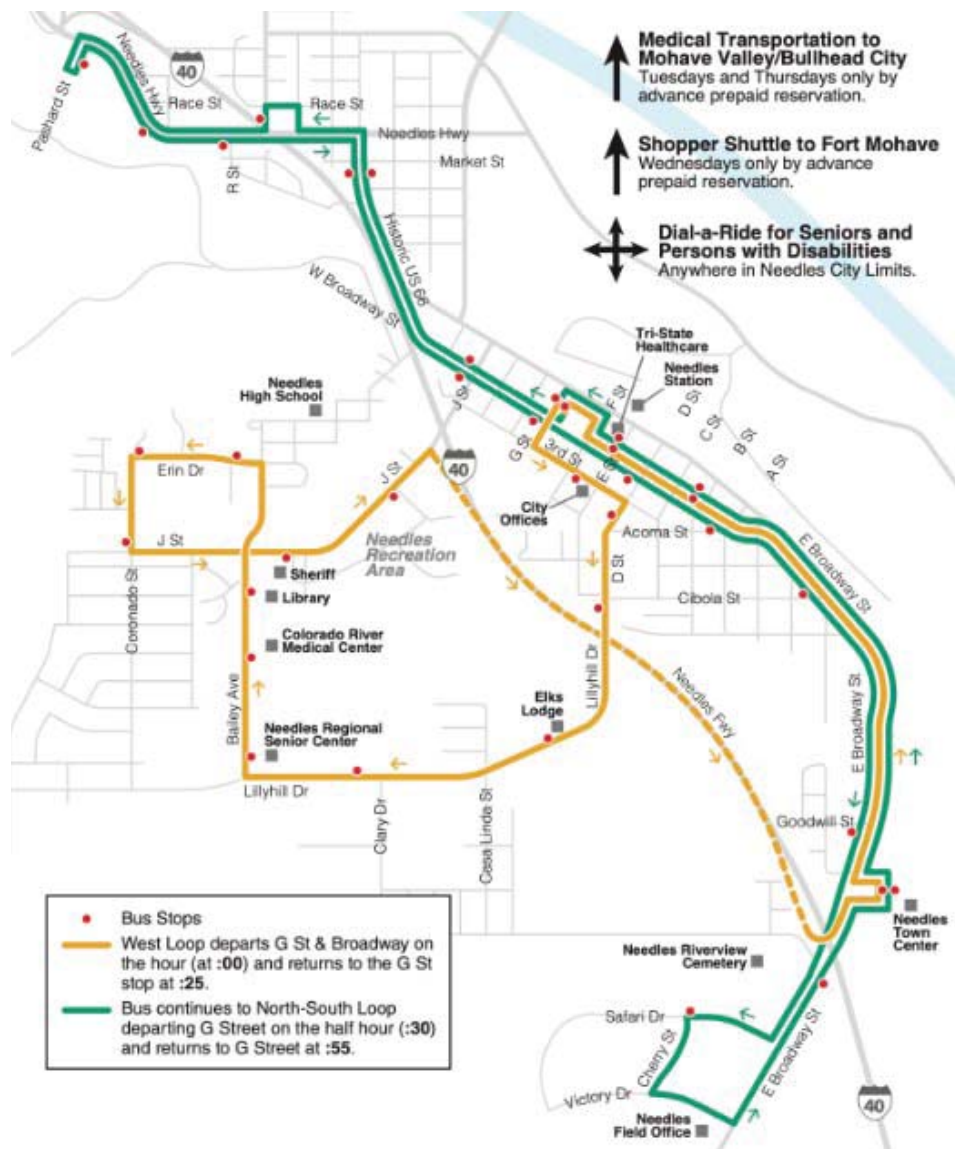
2 Unique Challenges

Long Commute Distances: Development in the Colorado Subarea is primarily focused in Needles, featuring single-family residential, commercial, industrial, and hospitality uses. As the easternmost community in San Bernardino County, residents often face long commute times when traveling to other cities in the county. Additionally, many trips involve crossing state lines into Arizona and Nevada.

Limited Transit Options: Needles Area Transit operates local fixed bus services and very limited shuttle service to medical centers and grocery stores in Fort Mohave and Bullhead City in Arizona (Figure 2-1). Amtrak’s Southwest Chief operates between downtown Los Angeles and Chicago, with a stop in Needles, Barstow, Victorville, and San Bernardino. Victor Valley Transit Authority operated Route 200 Needles Link, connecting Needles, Barstow, and Victorville, but this route was suspended due to impacts from the COVID-19 pandemic.

Dependence on Key Arteries: Interstate 40 (I-40) and State Route 95 (SR-95) are the key arterials through the Colorado River subarea. Smaller arterials and local roads are primarily concentrated in Needles, as the rest of the subarea is undeveloped, with most of the land being preserved as part of the Dead Mountains Wilderness Area. I-40 provides regional access through the Mojave Desert to Needles and northern Arizona, and SR-95 provides access to Bullhead City and Fort Mohave in Arizona.

Figure 2-1. Needles Area Transit Routes



Source: Needles Area Transit

3 Strategic Priorities

In developing the LRMTTP, five areas of concern were identified throughout the county: mobility, goods movement, climate adaptation and resiliency, disadvantaged communities, and funding. The areas of concern are related to the goals and objectives of the LRMTTP. This section describes how these areas relate to the Colorado River subarea.

Mobility: As mentioned above, I-40 and SR-95 are the two key arterials in the subarea for local and regional travel. Paved local roads are very limited and concentrated in the developed areas of Needles, and SR-95 is the only road through Needles to connect residents in Needles to medical care and other services in the Arizona. The SR-95 and I-40 bridges across the Colorado River to Arizona do not have bike lanes or sidewalks. Improvements to Needles Highway in both the city and the County portions of the Subarea and the rehabilitation of the SR-95 bridge over the Colorado River are considered regional priorities in the Subarea.

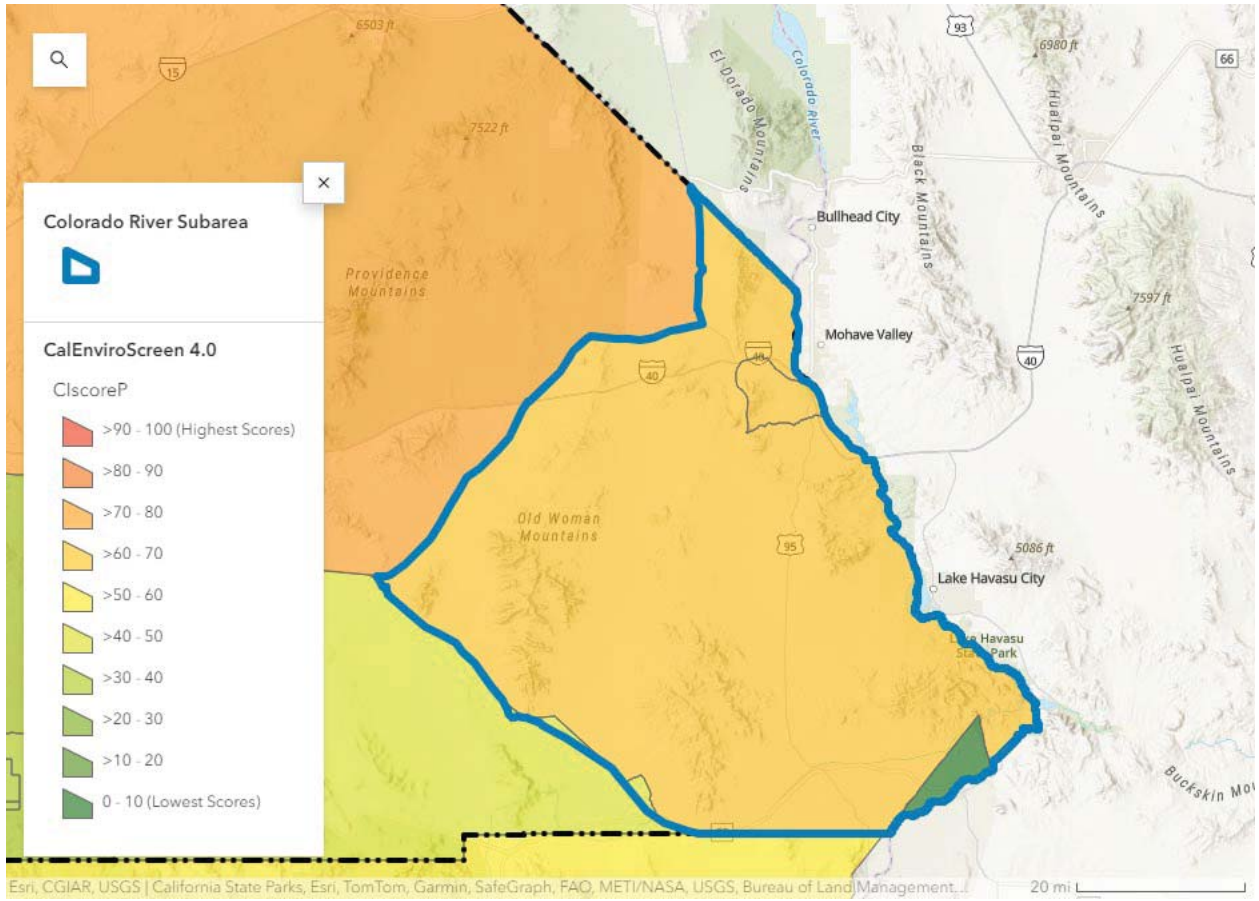
Goods Movement: I-40 is a designated truck route, which was identified to need more truck parking locations from the California Statewide Truck Parking Study. Truck routes should avoid conflicts with safe routes to schools, residential neighborhoods, and noise-sensitive uses. The BNSF Needles Subdivision runs through the northern portion of the Colorado River subarea. BNSF recently constructed a fourth main track through Needles for high-priority trains to pass slower trains at crew-change points.

Climate Adaption and Resiliency: The Colorado River subarea is expected to experience the highest increase of additional extreme heat days in the county. The eastern county borderline, near the City of Needles, is projected to experience an increase in wildfire risk. Extreme heat and poor air quality impacts riders waiting for transit and people who walk or bike.

Disadvantaged Communities: Census tracts in the Colorado River subarea have lower CalEnvironScreen scores compared to other subareas (Figure 3-1), suggesting a lower pollution burden and reduced vulnerability to pollution. Residents have a possibility of exposure to ozone pollutants, and sensitive populations in the area are at risk for asthma and cardiovascular disease. Census tracts in Fort Mojave Reservation, Chemehuevi Reservation, and Colorado River Indian Reservation are designated as disadvantaged by Senate Bill 535.

Funding: Funding issues are not restricted to one geographic area, however, securing funding to improve access and connectivity between Needles and Arizona or with county services in the Victor Valley and the Valley, improve active transportation options, and improving railroad crossings are priorities for the Colorado River subarea.

Figure 3-1. CalEnviroScreen Percentile for the Colorado River Subarea



Source: CalEnviroScreen 4.0

4 Strategic Priorities Action Plan

The final LRMTTP report identifies the projects being considered for the forthcoming San Bernardino County Transportation Authority (SBCTA) 2025 10-Year Delivery Plan, and presents projects listed for the “Baseline Level” of investment and additional projects at the “Aggressive Level” that can be considered with additional revenue for all subareas. Table I lists highway projects being pursued by local jurisdictions in the Colorado River Subarea over the next 10 years. Additional details are available in the SBCTA 2025 10-Year Delivery Plan. Needles is in the process of updating its short-range transit plan. The most recent plan can be found at: [Needles Transit Services Short Range Transit Plan 2020-2025](#).

Table I. Colorado River Subarea - Major Local Highway Program Projects Through FY 2033/34 (1,000s)

PROJECT	COST
1 River Street from BNSF to North K Street*	\$569
2 River Road from North K Street to 600' West of Jack Smith Park*	\$1,946
3 US 95/Havasu Lake Rd. Intersection Improvement*	\$1,173
4 Needles Highway Improvements, Segment 1C	\$8,900
TOTAL:	\$12,588

* Project is not fully funded.

Table II through Table VI summarizes the strategic priority and key actions for each of the issues described in the previous section.

Table II. Mobility Action Plan for the Colorado River Subarea

Strategic Priority	Key Actions
Further develop the Core Transit Network	Existing Needles Area Transit service represent the backbone of transit mobility. The City’s ability to deliver these services needs to be maintained.
Incremental transit enhancements in rural areas	Continue to manage and improve other alternate mode initiatives, including vanpool, carpool, and active transportation modes.
Develop coordinated program of first/last mile improvements	Invest in Needles Area Transit based on priorities in the respective Short Range Transit Plans
Invest in multimodal connectivity and customer experience	Position the priority transit network to be competitive for additional state and federal funding
Promote strong vanpool, carpool, and transportation demand management (TDM) initiatives	Pursue operating funds for increased service using strategies described in key issue 5
Deliver priority improvements	Identify unmet or underserved needs, such as connections from Needles to Arizona for grocery and pharmacy access
Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that locates transit and active transportation amenities such as bike sharing	Secure funding to implement new/enhanced service to meet rural travel needs
Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes	Build on the Non-Motorized Transportation Plan to define an active transportation priority list and advance project development to position for funding
Invest in physical improvements at bus stops to improve rider safety and comfort, such as shelters, benches, and lighting	Deliver priority improvements
Continue and expand partnerships with large and medium-sized employers to promote multimodal alternatives to single-occupancy vehicle commutes, including telecommuting	Build on current efforts by SCAG to develop design guidelines for a tiered mobility hub network that locates transit and active transportation amenities such as bike sharing
Continue partnering with regional partners to share data and technology tools to support shared-ride opportunities for long-distance commuters	Actively promote fare integration and adoption of interoperable fare payment and trip planning technology across San Bernardino County and regional public transportation services and modes
Review transit fare structures and carpool/vanpool programs to provide flexibility that encourages hybrid workers to use alternative modes on days they must travel to an office	Invest in physical improvements at bus stops to improve rider safety and comfort, such as shelters, benches, and lighting

Promote awareness of mobility alternatives and communicate the quality-of-life benefits of bus and rail transit, vanpool, and carpool as alternatives to driving alone

Develop vehicle miles traveled (VMT) mitigation bank

Leverage existing plans and work on strategic priorities to identify multimodal projects that can reduce VMT

Implement the proposed “mode-choice based VMT mitigation bank” to incentivize commuters to reduce their VMT and make VMT credits available for purchase by proponents of highway and development projects.

Table III. Goods Movement Action Plan for the Colorado River Subarea

Strategic Priority	Key Actions
Develop plan for designated freight corridors	Assist jurisdictions with guidelines for implementation of Assembly Bill 98, to include identification of corridors that may be designated as truck routes
Identify improvements to improve safety and operational efficiency along these corridors	Work with Caltrans and California Highway Patrol to enhance current incident management and monitoring systems to actively manage traffic along key freight corridors
Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by Assembly Bill 98	Coordinate with local jurisdictions on a set of guidelines and plans to incorporate proposed truck routes into their circulation elements as required by Assembly Bill 98
Collaborate with logistics industry to shift freight from truck to rail, where practical and cost-effective	Prioritize connections to intermodal facilities in development of designated highway freight corridor plan
Accelerate transition to clean trucks	Collaborate with BNSF to address key bottlenecks in the freight rail network to increase rail capacity
Partner with logistics and zero-emission (ZE) charging/fueling companies to accelerate the transition to ZE truck operations and supporting infrastructure needs consistent with the California Transportation Commission's Senate Bill 671 designated zero-emission corridors	Partner with logistics and zero-emission (ZE) charging/fueling companies to accelerate the transition to ZE truck operations and supporting infrastructure needs consistent with the California Transportation Commission's Senate Bill 671 designated zero-emission corridors
Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations	Partner with the private sector to seek grant funding for ZE trucks and charging/fueling stations
Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan	Continue to coordinate with local jurisdictions and regional partners to build on goods movement decarbonization efforts such as the Riverside-San Bernardino-Ontario MSA Priority Climate Action Plan
Deliver key highway improvements in the Measure I 10-Year Delivery Plan	Deliver key highway improvements in the Measure I 10-Year Delivery Plan
Prioritize investments in high-volume highway freight corridors	Deliver key highway improvements in the Measure I 10-Year Delivery Plan

Table IV. Climate Adaptation and Resiliency Action Plan for the Colorado River Subarea

Strategic Priority	Key Actions
<p>Encourage redundancy across the transportation network and improve operational resiliency on major arterials</p>	<p>Implement recommendations from the forthcoming Emergency Evacuation Network Study (EENR)</p>
<p>Accelerate transition to clean trucks</p>	<p>Partner with trucking and zero-emission fueling/charging companies to accelerate the transition to zero-emission in the Senate Bill 671 corridors and for local logistics operations. I-40 is one of those corridors. Seek grant funding for ZE trucking and transit</p>
<p>Transition transit operations to zero-emissions</p>	<p>Implement transit zero-emission plans, taking advantage of lessons learned as agencies deploy new technologies</p>
<p>Prioritize state-of-good-repair on highways and arterials</p>	<p>Collaborate with Caltrans and local jurisdictions on criteria such as pavement condition index for prioritizing maintenance of alternate routes and need for incident traffic management and emergency evacuation</p>
<p>Establish emergency procedures</p>	<p>Complete the Emergency Evacuation Network Resilience Study in cooperation with Western Riverside Council of Governments and partner to implement key recommendations of the study</p>
	<p>Aid transit agencies, where possible, during periods of emergencies due to extreme events such as fire and flooding, as they support evacuation of local residents (and their pets) to safe centers and evacuation shelters.</p>
	<p>Collaborate with local and state emergency service agencies to establish and maintain strong and clear communication pathways so that in times of emergency, San Bernardino County residents are knowledgeable about where to turn for immediate transportation-related information</p>

Table V. Disadvantaged Communities Action Plan for the Colorado River Subarea

Strategic Priority	Key Actions
Continue to operate the local bus and demand-responsive transit systems that particularly serve residents without access to cars	<p>Analyze potential impacts of major transit investments on transit service to disadvantaged communities.</p> <p>Provide adequate maintenance, security, schedule information and cleanliness at local bus stops.</p> <p>Consider needs of all users as electronic fare payment systems are further developed.</p>
Take advantage of available funding focused on disadvantaged communities	<p>Deliver transit priorities identified in the LRMTF that particularly benefit disadvantaged communities</p> <p>Ensure that transit and TDM programs are highlighted at employment sites where lower-wage workers tend to be employed</p> <p>Take advantage of equity-oriented programs like the Reconnecting Communities Pilot</p> <p>Continue to leverage state greenhouse gas reduction fund sources such as Transit and Intercity Rail Capital Program (TIRCP) and Senate Bill 1 funds such as Trade Corridor Enhancement Program (TCEP) to accelerate the ZE transition</p>
Free and reduced fare programs	<p>Expand targeted programs to improve transit affordability for students, seniors, and low-income individuals</p> <p>Promote electronic fare payment options, particularly to support fare-capping, including for low-income individuals who otherwise pay more for successive trips than the cost of a monthly pass</p> <p>Communicate fare incentives to the public</p>
Prioritize multimodal improvements to improve mobility in disadvantaged communities	<p>In developing the Core Transit Network, prioritize corridors that connect disadvantaged communities to key destinations</p> <p>Invest in high-comfort off-street active transportation corridors such as the River Golf Trail</p> <p>Build on the Non-Motorized Transportation plan to deliver improvements in disadvantaged communities</p>
Prioritize inclusive communications	<p>Translate promotional materials, trip planning information, and other information on SBCTA programs into the most common languages for the targeted audience</p> <p>Develop target-group focused communications strategies – such as to seniors, to rideshare commuters, to potential transit users – that can promote mobility choices.</p> <p>Use the Public & Specialized Transportation Advisory and Coordination Council (PASTACC) to coordinate delivery of services to disadvantaged communities.</p>

Table VI. Funding Action Plan for the Colorado River Subarea

Strategic Priority	Key Actions
Secure additional state and regional funding for transit operations	<p>Increase availability and flexibility of future Measure I funding for use in transit operations</p> <p>Lobby for greater predictability of state and federal transportation revenue streams and flexibility to use new and existing state and federal transportation funding sources for operating expenses</p>
Align future funding sales tax measures with the priorities of the LRMTTP	<p>Ensure that a potential Measure I renewal or additional tax measure would allow the key actions for the strategic priorities as eligible expenditures, including capital investments for all modes and ongoing operating costs for transit</p>
Partner with community-based organizations (CBOs) and the business sector to build support for projects and promote alternatives	<p>Ensure that a potential Measure I renewal provides flexibility in future allocations to allow SBCTA and its partners to adapt to the uncertain future and changing investment needs</p> <p>Maintain relationships with CBO leaders and business sector partners</p>
Support local agency grant pursuits	<p>Leverage CBO and private sector contact networks to disseminate information in a targeted manner and collect feedback from communities and businesses affected by projects</p> <p>Leverage CBO and business sector networks to disseminate information about new and existing multimodal services and incentives available to the public</p> <p>Monitor grant funding opportunities at federal, state, and regional levels and connect collaborate with local partners on grant pursuits</p> <p>Provide technical support for local grant applications</p>

5 Conclusion and Next Steps

Priority projects to improve operations of the transportation network are identified in the 10-Year Delivery Plan. The Non-Motorized Transportation Plan, Points of Interest Pedestrian Plan, and the Regional Safe Routes to School Plan include projects to improve the active transportation network in Needles.

In 2019, SBCTA approved the Needles Short Range Transit Plan (SRTP) 2020-2025, and includes the financially constrained scenario and a financially unconstrained scenario. The financially constrained scenario includes recommendations to expand service to Fort Mohave in Arizona, install bus shelters and amenities, and execute the Zero Emission Bus Rollout Plan. Recommendations in the SRTP that will require additional resources including initiating Sunday service, operating weekday service later than 7:00 p.m. and Saturday service alter than 5:00 p.m., initiating frequent service to Arizona, expanding Dial-a-Ride service hours, and improving service to Barstow and Victorville. Work is currently ongoing to update Needles Area Transit's 2019 Short Range Transit Plan.

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