

Transportation

Section Highlights

Average Commute Time 32 Minutes

Residents Who Work at Home 5.0%

Traffic Collision Victims 14,801

Rail Ridership Down 1%

Bus Ridership Down 4%

Measure I Funds Available in 2018 \$163 Million

A Success Story

Regular maintenance is critical to longer lasting roads and the efficient movement of traffic, and San Bernardino County is on top of its game! The Department of Public Works developed a systematic, cost-efficient, and effective preventative maintenance program to achieve and sustain an overall pavement condition index rating of “good or above” using a variety of technologies to reduce costs and raise efficiency. The pavement condition index for more than 2,175 miles of County-maintained roads is 81.5, one of the highest in the state.

This replicable program reduces road improvement costs from as much as \$1.5 million per two-lane road mile using traditional reconstruction to \$195,000 per two-lane road mile using road preparation and chip sealing. For this innovative program, the Department of Public Works won a Merit Award from the California State Association of Counties in 2018 and an Achievement Award from the National Association of Counties in 2017.

Commute Times Steady Despite Increase in Freeway Congestion

Tracking commuter trends and transportation system demand helps gauge the ease with which residents, workers, and goods can move within the county. Traffic congestion adversely affects the efficient movement of goods, contributes to the expense of operating a car, and increases air pollution. Transit use is likely significantly impacted by the sheer size of the county, the distances between destinations within the county, and low-density land use, which may result in lengthy transit trips. Residents may choose to trade off longer commute times for housing affordability or other quality of life factors. This indicator tracks average commute times, residents' primary mode of travel to work, and hours of delay on freeways in the region.

How is San Bernardino County Doing?

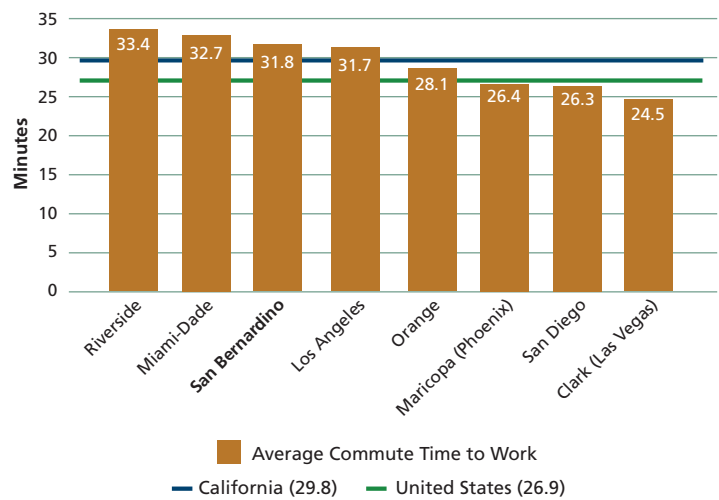
San Bernardino County commute times remain largely unchanged:

- In 2017, the average commute time to work for San Bernardino County residents was 31.8 minutes, compared with 31.9 in 2016.
- San Bernardino County's average commute time is longer than both California (29.8 minutes) and the U.S. (26.9 minutes) and is exceeded only by Riverside and Miami-Dade counties among regions compared.
- At 79.6%, most of San Bernardino County commuters drove to work alone in 2017.
- Carpooling comprised 11.3% of all trips while 5% of residents worked at home.
- Only 1.2% of residents took public transportation and another 1.8% walked to work.

Congestion worsened on San Bernardino County freeways:

- In 2017, there were more than 3.9 million annual hours of delay due to severe congestion (3,969,507 hours at speeds of less than 35 miles per hour). This is an increase of 10% from 2016.

Average Commute Time to Work in Minutes
County Comparison, 2017



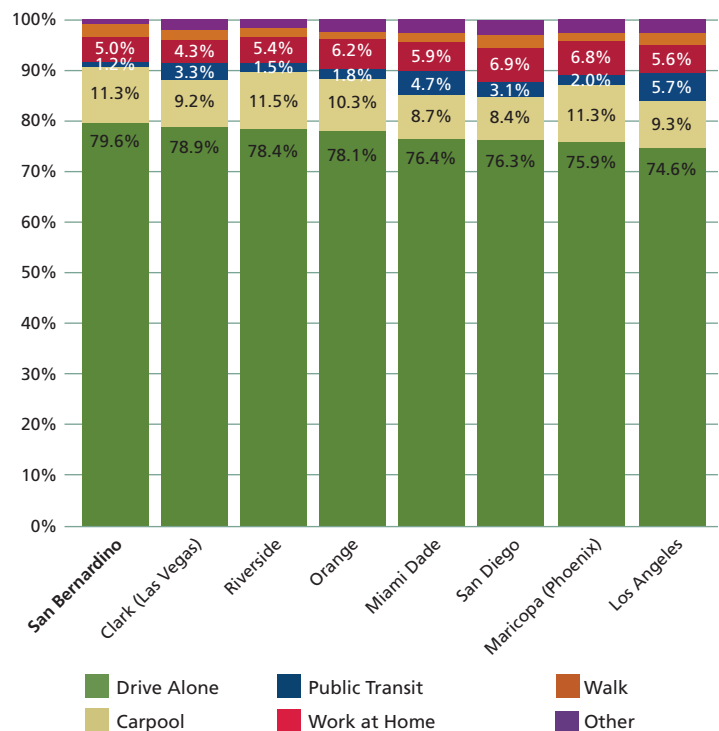
Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates (<https://factfinder.census.gov>)

Arterial Pavement Condition Slips into the "At Risk" Category

The California Local Streets and Roads Needs Assessment, which has been conducted biennially since 2008, rates pavement condition on a scale of zero (failed) to 100 (excellent). The 2018 assessment included a total of 22,161 lane miles of pavement in San Bernardino County, which are maintained by local jurisdictions. In 2018, San Bernardino County's average pavement condition index (PCI) was 70, which is one point below the "good to excellent" range, but higher than the statewide average PCI of 65. Ratings between 71 and 100 are considered good to excellent, while ratings of 50 to 70 are considered at risk. San Bernardino County has maintained a PCI rating between 70 and 72 since tracking began. Only 54.7% of California's local streets and roads were in good condition in 2018.

Source: California Statewide Local Streets and Roads Needs Assessment, 2018 (www.savecaliforniastreet.org)

Primary Mode of Travel to Work
County Comparison, 2017



Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates (<https://factfinder.census.gov>)

Vehicle Registrations Grow

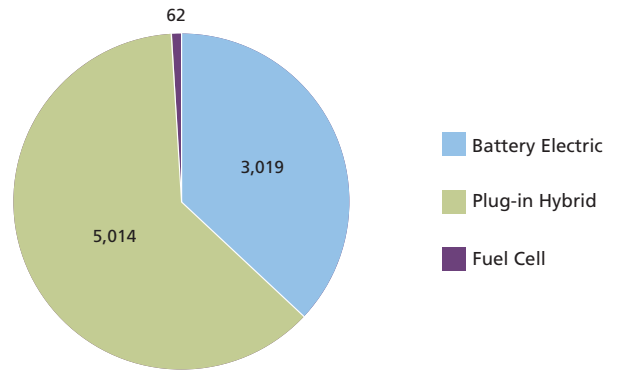
Tracking vehicle registrations can help a community understand its reliance on cars and the potential for traffic congestion and air quality impacts. Tracking the growth in alternatively fueled cars helps illustrate the region’s contribution to statewide goals for reducing pollution and greenhouse gas emissions. It also may reveal the need for infrastructure to support the growth of alternatively fueled cars, such as electric vehicle charging stations or hydrogen fuel stations. This indicator measures selected vehicle registrations including alternative fuel vehicles.

How is San Bernardino County Doing?

The number of vehicles registered annually in San Bernardino County continues to grow:

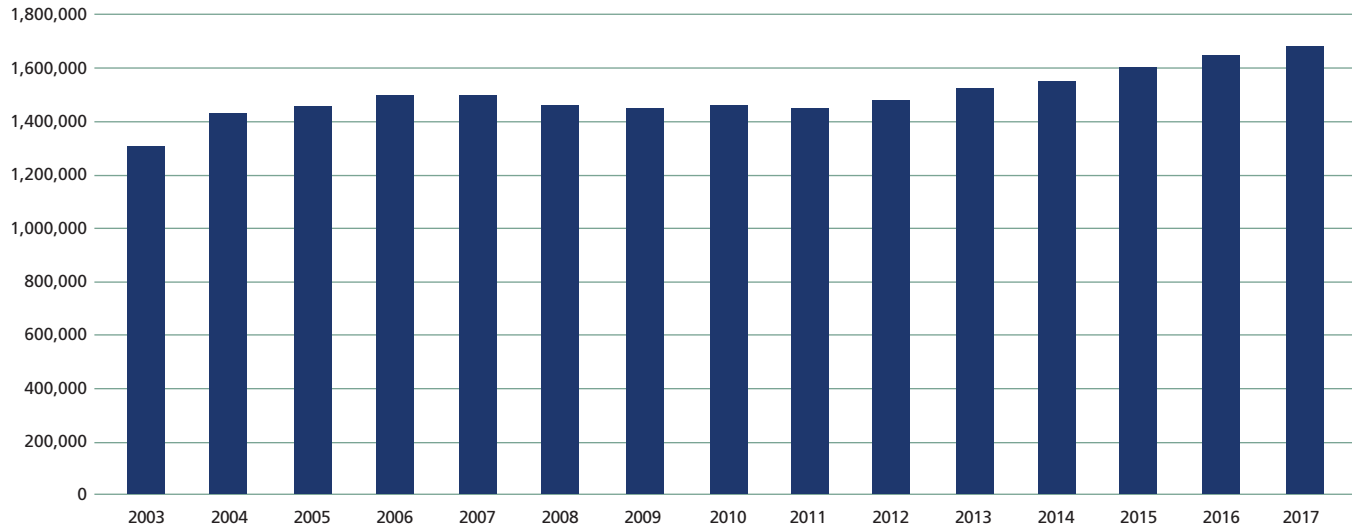
- In 2017, there were nearly 1.7 million vehicles registered (1,689,333), including autos, trucks, and motorcycles.
- This is approximately 236,000 registrations more than the 10-year low in 2009 due to the recession (1,453,448 registrations).
- The number of registered vehicles has increased consistently each year since 2011, growing a total of 16% between 2011 and 2017, outpacing the statewide increase of 11% during the same period.
- Among all vehicles registered in San Bernardino County in 2017, one-half of one percent (0.5% or 8,095 vehicles) were plug-in hybrid, battery electric, or fuel cell vehicles. The remainder of registered vehicles used gasoline, diesel or another form of fuel.

Alternative Fuel Vehicles by Type
San Bernardino County, 2017



Source: California Department of Motor Vehicles

Vehicle Registrations
San Bernardino County, 2003-2017



Source: California Department of Motor Vehicles

Alternative Fuel Vehicle Definitions

Plug-in hybrid: A plug-in hybrid electric vehicle has both an electric motor and internal combustion engine, and therefore uses battery-powered electricity and gasoline in tandem for power. Unlike conventional hybrids, the batteries can be charged by plugging into an outlet.

Battery electric: These vehicles run exclusively on electricity via on-board batteries that are charged by plugging into an outlet or charging station. They have longer electric driving ranges compared to plug-in hybrids. They have no gasoline engine and do not produce tailpipe emissions (though there are emissions associated with charging these vehicles).

Fuel cell: A fuel cell electric vehicles uses an electric-only motor like a battery electric vehicle, but stores energy differently. Instead of recharging a battery, fuel cell electric vehicles store hydrogen gas in a tank. The fuel cell combines hydrogen with oxygen from the air to produce electricity. The electricity from the fuel cell then powers an electric motor, which powers the vehicle. The only byproduct of fuel cell electric vehicles is water.

Source: Goldman, Josh. "Comparing Electric Vehicles: Hybrid vs. BEV vs. PHEV vs. FCEV." Union of Concerned Scientists, 26 Feb. 2015, blog.ucsusa.org/josh-goldman/comparing-electric-vehicles-hybrid-vs-bev-vs-phev-vs-fcev-411.

Number of Traffic Collision Victims Increases

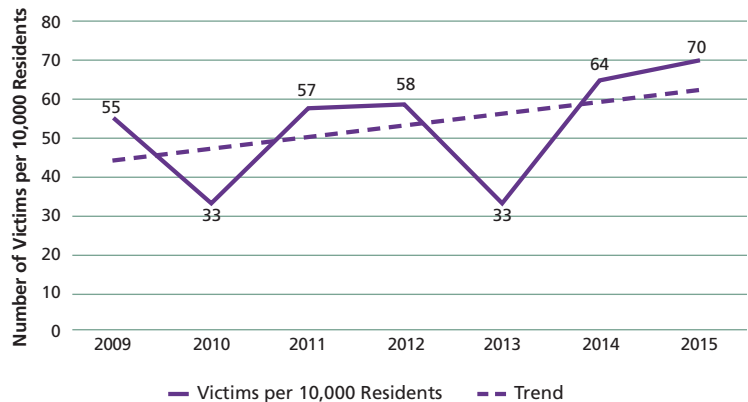
Traffic safety is an important element of a livable community that supports convenient and safe transportation choices including driving, transit, bicycling and walking. Yet, there are thousands of victims of traffic collisions each year, and many of those injuries or fatalities were potentially preventable. According to the National Highway Traffic Safety Administration, there were 37,133 traffic fatalities in the United States in 2017. Factors that influence traffic safety include road design, posted traffic speed, and road and sidewalk quality, as well as driver behaviors like speeding, distracted driving, and driving under the influence of drugs and/or alcohol. By assessing traffic safety data, communities can identify opportunities to improve roadway, bicycle and pedestrian safety. This indicator tracks vehicle collisions that resulted in injuries or fatalities, including pedestrian and bicyclist injuries by age.

How is San Bernardino County Doing?

While the numbers vary from year to year, vehicle collisions with injuries or fatalities are trending upward:

- There were 14,801 people (or 70 victims per 10,000 residents) injured or killed in vehicle collisions in San Bernardino County in 2015, an increase of 32% since 2009.
- Bicyclists and pedestrians made up 6% of all traffic collision victims in 2015.
- Pedestrian injuries and fatalities increased 27% between 2009 and 2015, from 447 victims to 568 victims.
- Bicyclist injuries and fatalities increased 46% over the same period from 252 victims to 367 victims.
- These increases in roadway crashes mirror a national trend, which may be partly attributed to distracted driving and walking.

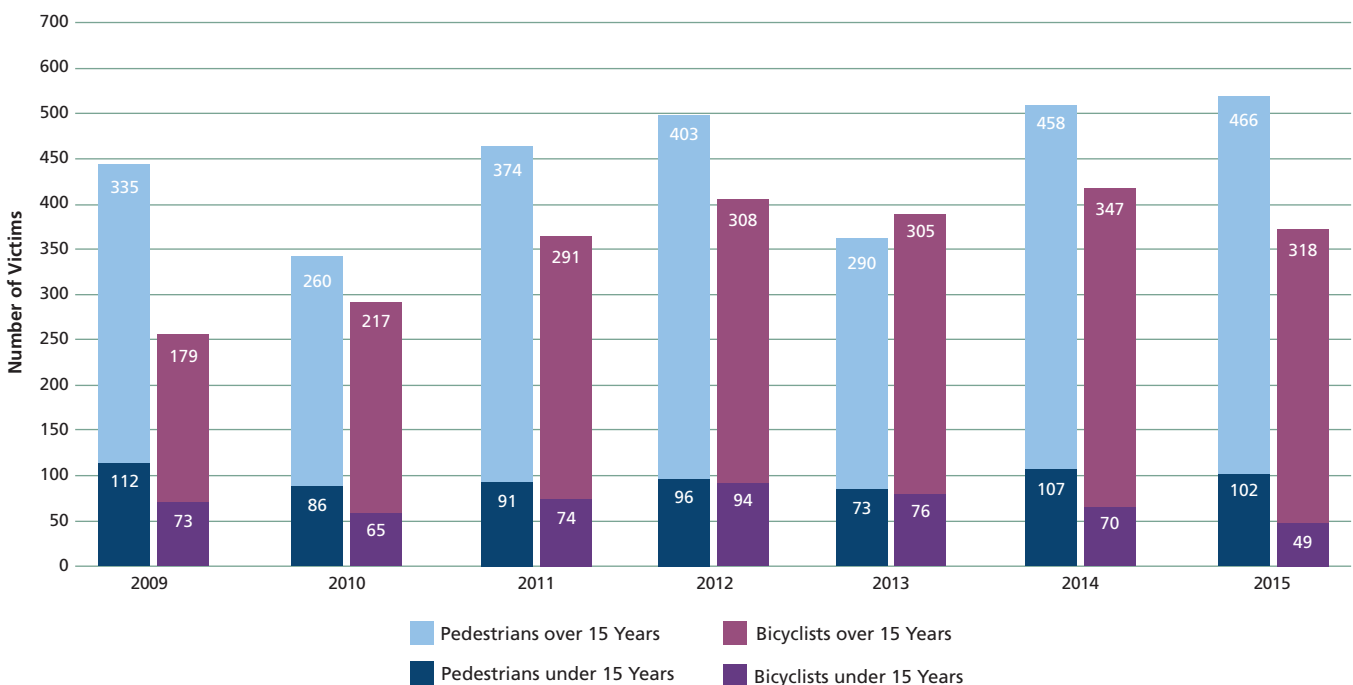
Victims Injured or Killed in Vehicle Collisions
San Bernardino County, 2009-2015



Note: Data were unavailable for Crestline, Joshua Tree, Lake Arrowhead, Lucerne Valley, Running Springs, Wrightwood, and Yermo.

Source: California Office of Traffic Safety, data compiled by San Bernardino County Transportation Authority

Pedestrians and Bicyclists Injured or Killed in Vehicle Collisions by Age San Bernardino County, 2009-2015



Notes: Data were unavailable for Crestline, Joshua Tree, Lake Arrowhead, Lucerne Valley, Running Springs, Wrightwood, and Yermo. Biking and walking may be a more prevalent way to travel among children and youth than adults.

Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates (<https://factfinder.census.gov>)

Transit Use Reflects a Downward Trend

The ability of residents and workers to move efficiently within San Bernardino County contributes to a higher quality of life and a more prosperous business climate. An effective public transit system is essential for individuals who cannot afford, are unable, or choose not to drive a car. Having both rail and bus service is important for meeting diverse transit needs, with rail serving mostly longer-distance commuters and buses serving mostly local commuters. This indicator measures ridership on the commuter rail system, as well as ridership and operating costs for San Bernardino County's five bus systems, which offer bus service coverage to more than 90% of the county's population.

How is San Bernardino County Doing?

Rail ridership declined slightly in 2017/18:

- In 2017/18, ridership on all Metrolink lines having at least one station serving San Bernardino County totaled 5.98 million riders, a 1% decline from the previous year.
- Since 2010, ridership on the Inland Empire/Orange County Line and 91 Line increased by 31% and 27%, respectively.
- In contrast, the San Bernardino Line and Riverside Line decreased since 2010, by 14% and 18%, respectively.
- Overall, since 2010, rail ridership has trended downward by 11%.

Bus ridership in San Bernardino County continues to decline:

- In 2017/18, there were 14,006,939 bus passenger boardings, a one-year decrease of 4%. Bus ridership dropped 20% overall since 2010/11.
- Bus boardings for Omnitrans were 8.3 per capita in 2016, compared with 10.5 in 2013, a drop of 21%. The cost per boarding increased to \$4.83 per trip, a 17% increase in one year.
- Victor Valley Transit boardings per capita decreased to 4.5 per capita in 2016 compared with 5.3 in 2013. Cost per trip increased to \$6.07 in 2016, up from \$5.00 the previous year.
- Ridership decreased and cost per trip increased in 2016 for all regions compared.

Bus System Boardings per Capita and Operating Costs Regional Comparison, 2016

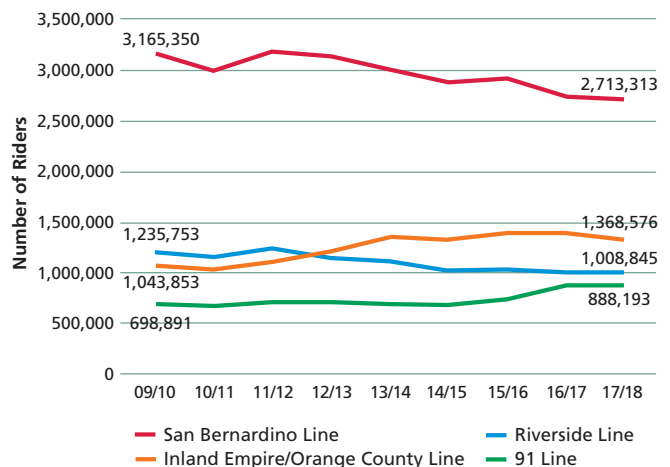
2016	Boardings per Capita	Cost per Trip
Los Angeles County Metropolitan Transportation Authority	36.3	\$3.41
Regional Transportation Commission of Southern Nevada (Las Vegas)	30.5	\$2.26
Miami-Dade Transit	26.1	\$5.34
San Diego Metropolitan Transit System	21.1	\$2.97
Valley Metro (Phoenix)	17.0	\$4.95
Orange County Transportation Authority	14.0	\$4.59
Sunline Transit Agency (Coachella Valley)	10.1	\$5.98
Omnitrans	8.3	\$4.83
Victor Valley Transit Authority	4.5	\$6.07
Riverside Transit Agency	4.2	\$5.35

Note: Boardings per capita are calculated using the service area population for transit providers, and bus boardings not including demand responsive service.

Source: National Transit Database (www.transit.dot.gov/ntd/transit-profiles-summary-reports)

Commuter Rail Ridership

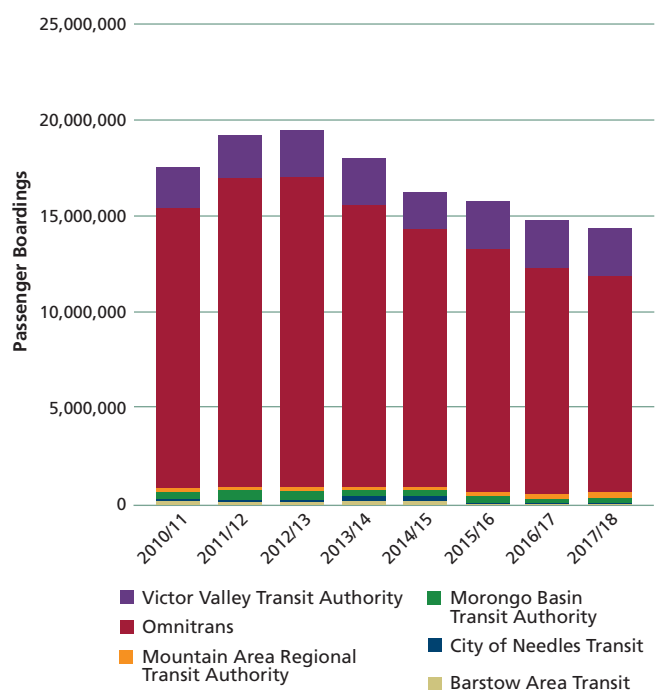
San Bernardino Line, Riverside Line, Inland Empire/Orange County Line, and 91 Line, 2010-2018



Source: San Bernardino County Transportation Authority

Bus Ridership

San Bernardino County, 2011-2018



Note: Beginning 2015/16, the City of Barstow and portions of the county joined the Victor Valley Transit Authority, expanding its service area.

Source: San Bernardino County Transportation Authority

Local Funds Make Up Greatest Proportion of Investment

A comprehensive, well-maintained, and effective road and transit network is important for commuters to get to and from their jobs, for goods movement and freight to flow efficiently through the region, and for visitors and tourists to access the natural and recreational opportunities available throughout the county. Consistent and adequate investment in the county’s transportation system reflects a commitment to supporting the economic vitality and quality of life of the region. This indicator measures planned investment in the county’s transportation system, including investments in state highways, local highways, and transit (bus and rail), as reported in the biennial Federal Transportation Improvement Program.¹ It also tracks investment through the local sales tax for transportation known as Measure I.

How is San Bernardino County Doing?

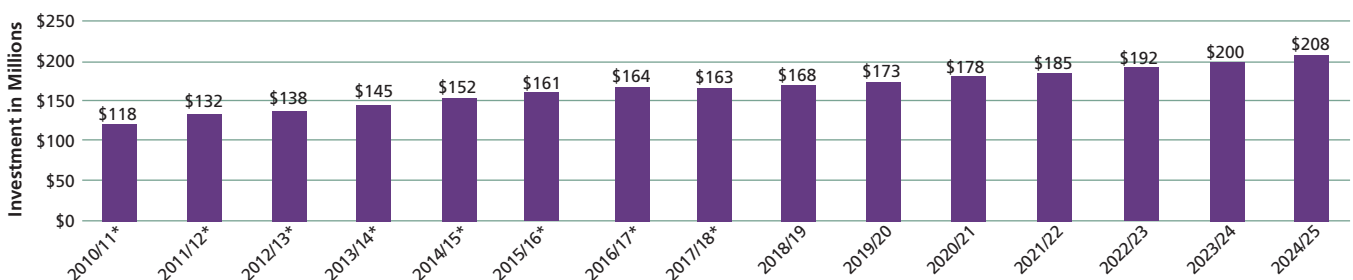
Funding for transportation improvements is expected to be higher over the six-year planning period between 2017 and 2022, compared with the previous six-year cycle:

- Investment in the transportation system in San Bernardino County is planned at \$2,062 per capita for 2017 to 2022, compared with \$1,464 per capita for the previous funding cycle (2015 to 2020).
- This is a 41% increase between the 2015 and 2017 funding cycles, and in line with the peak spending in 2009. While the peak in 2009 was due in large part to the one-time federal American Recovery and Reinvestment Act (stimulus funds) and state Proposition 1B transportation bond funds, the current increase is largely due to the inclusion of the proposed express lane project on I-10, which is scheduled to begin construction in late 2018, and on I-15, which is currently under environmental review.
- The investment of \$2,062 per capita equates to a total of \$4.39 billion invested in San Bernardino County over the six-year period.
- For the 2017 to 2022 funding cycle, San Bernardino County is on the high end of per capita transportation investment compared to neighboring counties.

Local funding of transportation infrastructure through Measure I has increased:

- In 2017/18, Measure I funds available for investment in transportation projects totaled \$163 million.
- Measure I is projected to generate gradually increasing annual transportation revenue through 2024/25, when annual revenue is expected to reach \$208 million.
- From 2010 to 2040, it is estimated that Measure I will generate \$7.6 billion for local transportation projects.
- Through the mid 1990’s, state and federal funding accounted for nearly 75% of total transportation funding in San Bernardino County. Currently, state and federal funding account for 31% of transportation funding with local funds making up the remaining 69%.

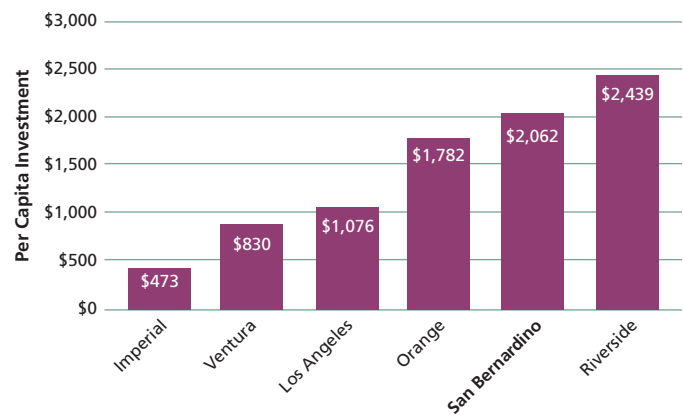
Actual and Planned Measure I Revenue in Millions San Bernardino County, 2010/11 – 2024/25



*Actuals Source: San Bernardino County Transportation Authority

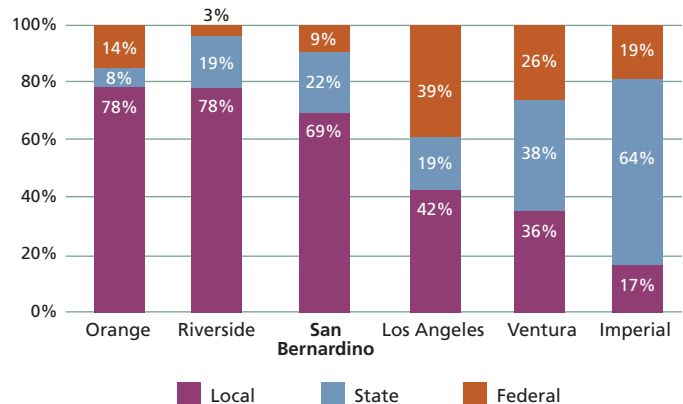
¹ The Federal Transportation Improvement Program (FTIP) is a list of transportation projects to be implemented over a six-year period, including local, state and federally-funded projects. The FTIP is updated every odd-numbered year.

Planned Per Capita Transportation Investment County Comparison, 2017-2022



Source: Southern California Association of Governments

Proportion of Local, State and Federal Transportation Investment County Comparison, 2017-2022 Funding Cycle



Source: Southern California Association of Governments