

APPENDIX N

Performance-Based Targets



Appendix N – Performance Based Planning Target Setting and SJCOG’s Efforts Toward Supporting MAP-21 Performance Measures

Introduction: Map-21 and Performance Based Planning

The Moving Ahead for Progress in the 21st Century Act (MAP-21, 2012) established new requirements for metropolitan planning organizations (MPOs) to coordinate with transit providers, set performance targets, and integrate those performance targets and performance plans into their planning documents by specified dates. The most recent federal transportation legislative package, the Infrastructure Investment and Jobs Act of 2021 (IIJA), carries forward these performance-based planning requirements. Beginning in 2018, federal rules required that state departments of transportation and MPOs implement federally defined transportation system performance measures. In response, FHWA and FTA worked with state, regional, and transit agencies to identify performance measures that meet the requirements. These performance measures align with the national goal areas below:



In California, the state department of transportation (e.g. Caltrans) is directly responsible for submitting statewide performance targets and periodic progress reports to federal agencies. MPOs are required to establish targets for the same performance measures for their respective metropolitan planning areas within 180 days after the state establishes each target. MPOs may elect to support the statewide targets, establish alternative quantitative targets specific to their region, or use a combination of both approaches. Furthermore, each MPO must incorporate these short-range performance targets into their planning and programming processes, including the regional transportation plan (RTP) and federal transportation improvement program (FTIP).

FHWA Performance Measures

The federal performance measures defined by the Federal Highway Administration (FHWA) are categorized into three performance management (PM) focus areas. Each focus area includes an associated set of metrics for which statewide and regional targets must be set.

PM 1: Transportation Safety

Motor Vehicle Collisions

- Number of motor vehicle collision fatalities
- Rate of motor vehicle collision fatalities per 100 million VMT
- Number of motor vehicle collision serious injuries
- Rate of motor vehicle collision serious injuries per 100 million VMT

Non-Motorized Fatalities and Serious Injuries

- Number of non-motorized fatalities and serious injuries

PM 2: National Highway System (NHS) Pavement and Bridge Condition

NHS Pavement Condition

- Percentage of Interstate System pavement in 'good' condition
- Percentage of non-interstate NHS pavement in 'good' condition
- Percentage of Interstate System pavement in 'poor' condition
- Percentage of non-interstate NHS pavement in 'poor' condition

NHS Bridge Condition

- Percentage of NHS bridges in 'good' condition
- Percentage of NHS bridges in 'poor' condition

PM 3: NHS Performance, Interstate System Freight Movement, and CMAQ Program Performance

NHS Performance

- Percent of Interstate System mileage reporting reliable person-mile travel times
- Percent of non-interstate NHS mileage reporting reliable person-mile travel times

Interstate Freight Movement

- Percent of Interstate system mileage reporting reliable truck travel times

CMAQ Program Performance

- Annual hours of peak-hour excessive delay per capita
- Total emissions reduction by criteria pollutant (PM10, PM2.5, Ozone, CO)
- Percent of non-single occupancy vehicle (SOV) travel

FTA Performance Measures

In addition to the three PM focus areas defined by FHWA, the Federal Transit Administration (FTA) established performance measures and reporting requirements for transit asset management (TAM) and transit safety.

Performance metrics for TAM focus on the maintenance of our regional transit system in a state of good repair. Transit safety performance monitoring is focused on assessment of the number of transit incidents resulting in fatalities or serious injuries and transit system reliability.

FTA issued the TAM Final Rule (49 CFR §625 et seq.), effective October 1, 2016, to implement MAP-21 transit asset management provisions. This final rule mandates a National TAM System, defines ‘State of Good Repair’ (SGR), and requires transit providers to develop TAM plans. The Metropolitan Transportation Planning Final Rule (23 CFR §450.206) outlines the timelines and processes by which states, MPOs, and transit providers must coordinate in the target setting process.

The FTA PM focus areas and associated metrics are as follows:

Transit Asset Management (TAM)

- Equipment: Share of non-revenue vehicles that meet or exceed useful life benchmark
- Rolling Stock: Share of revenue vehicles that meet or exceed useful life benchmark
- Infrastructure: Share of track segments with performance restrictions
- Facilities: Share of transit assets with condition rating below 3.0 on FTA Transit Economic Requirements Model (TERM) scale

Transit Safety

- Number of transit-related fatalities
- Number of transit-related injuries
- Number of transit system safety events
- Transit system reliability

Public Transit Agency Safety Plan

On July 19, 2018, the FTA published the Public Transportation Agency Safety Plan (PTASP) Final Rule (49 CFR §673.15) regulating how Chapter 53 grantees would have to implement federally mandated safety standards. The rule’s effective date was July 19, 2019, and the compliance date was initially set for July 20, 2020. Considering the extraordinary operational challenges presented by the COVID-19 public health emergency, FTA issued a Notice of Enforcement Discretion effectively extending the PTASP compliance deadline from July 20, 2020 to December 31, 2020. The MPO’s initial transit safety targets are to be set within 180 days of receipt of the safety performance targets from the transit agencies. The MPO then

revisits its targets based on the schedule for preparation of its system performance report that is part of the Metropolitan Transportation Plan (MTP). The first MTP or FTIP update or amendment to be approved on or after July 20, 2021, is required to include the MPO’s transit safety targets. See FTA’s COVID-19 FAQs page for more information about the Notice.

The final rule specifically requires transit agencies receiving federal funds to develop a safety plan and annually self-certify compliance with that plan. The National Public Transportation Safety Plan identifies four performance measures that must be included in the transit agency safety plans: number of fatalities, number of injuries, safety events, and system reliability. Each transit agency must make its safety performance targets available to MPOs to assist in the planning process and to coordinate, to the maximum extent practicable, with the MPO in selecting regional transit safety targets.

Each of the federal performance management focus areas include an associated set of metrics for which statewide and regional targets must be set. The specific performance measures for each include:

Transportation Safety (PM 1)

FHWA issued the Safety Performance Management Final Rule (Safety PM) as an implementation of the Highway Safety Improvement Program (HSIP), effective April 15, 2016. The Safety PM identified the core federal safety goal “to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.” To that end, the Safety PM establishes five performance measures to carry out the HSIP, defined as the five-year rolling averages for: (1) Number of Fatalities; (2) Rate of Fatalities per 100,000,000 VMT; (3) Number of Serious Injuries; (4) Rate of Serious Injuries per 100,000,000 VMT; and (5) Number of Nonmotorized Fatalities and Nonmotorized Serious Injuries. These safety performance measures are applicable to all public roads regardless of ownership or functional classification.

The Caltrans target-setting process was guided by the Safety PM, the Caltrans Strategic Highway Safety Plan (SHSP) and Strategic Management Plan (SMP). Caltrans set safety performance targets in August 2021 for the 2022 calendar year as shown in Table below.

Performance Measure	Data Source	5-Yr. Rolling Average Target for 2022	Annual Percentage Change for 2022
Number of Fatalities	FARS	3,491.8	-3.61%
Rate of Fatalities (per 100M VMT)	FARS & HPMS	1.042	-2.00%
Number of Serious Injuries	SWITRS	16,704.2	1.66%
Rate of Serious Injuries (per 100M VMT)	SWITRS & HPMS	4.879	1.66%
Number of Non-Motorized Fatalities and Non-Motorized Severe Injuries	FARS & SWITRS	4,684.4	-3.61% for Fatalities and 1.66% for Serious Injuries

Note: The targets highlighted in gray are set in coordination with Office of Traffic Safety (OTS).

SJCOG Target-Setting

MPOs have two options to implement the Federal Performance Management rules: supporting the statewide target or adoption region-specific numerical targets. SJCOG has elected to support the state target rather than establishing a region-specific numerical target. SJCOG will highlight projects and programs in the RTP and RTIP that help the state achieve the statewide targets. Also, SJCOG will continue researching ways of integrating safety performance measures into our planning and programming efforts.

SJCOG Efforts

Safety is integral to the SJCOG planning and programming process. The RTP is built around eight policies and 30 supportive strategies, which include safety as one of the primary building blocks of the plan:

Policy: Maximize Mobility and Accessibility	
Strategy No. 9:	Promote safe and efficient strategies to improve the movement of goods by water, rail, or truck.
Policy: Increase Safety and Security	
Strategy No. 10:	Facilitate projects that reduce the number and severity of traffic incidents.
Strategy No. 11:	Support local and state efforts for transportation network resiliency, reliability, and climate adaptation.

Specifically, SJCOG begins most transportation planning efforts with a preliminary analysis of the challenges facing the transportation system within the project area. In almost all cases, this ongoing effort continually identifies new issues and feeds them into the planning process. For example, SJCOG initiates corridor studies (or Project Study Reports-PSRs) that provide details on the types of challenges and system deficiencies found in a portion of the region. Within these reports, SJCOG sets out a goal to improve overall transportation safety along the corridor. Data analyses focus on identifying intersections, accident information, or existing design features that can benefit from safety enhancements. This is then followed by more detailed investigation of the types of strategies that can be used to reduce the number and severity of accidents. SJCOG's Unmet Transit Needs (UTN) Report provides the general public opportunities to raise any safety and security issues on public transit. Cumulatively, SJCOG's planning studies suggest strategies and recommend capital projects for the long-range Regional Transportation Plan (RTP) and the Transportation Improvement Program (TIP). Safety and security improvements to major state highway corridors in the region, including but not limited to I-5, SR-99, I-205, and SR-12, were outcomes of this regional planning process.

SJCOG also operates a transportation demand management program (called **dibs**) that covers a three-county area comprised of San Joaquin, Stanislaus and Merced counties. It is common when working with the general public as part of this program for SJCOG to receive input or feedback on safety concerns or suggestions to improve safety on roadways and transit systems. Through this feedback, SJCOG can implement safety performance improvements that address major public safety issues and the specific concerns of raised by the interest groups.

Communication and Coordination

SJCOG strives to improve communication and coordination between public agencies and the public by identifying and engaging key transportation planning stakeholders. Through these stakeholder groups, SJCOG often identifies safety issues critical to their interests. For example, SJCOG works closely with our member agencies (cities and county) and the California Department of Transportation in nominating projects for the State Highway Operation and Protection Program and the Highway Safety Improvement Program. We have an active SJCOG Citizen Advisory Committee and Goods Movement Task Force that meet regularly. SJCOG planning staff regularly engage with these committees, public health agencies and bicycle coalitions interested in transportation safety issues specific to their missions. We also work closely with public transit operators, the SJCOG Interagency Transit Committee, and the Social Services Transportation Advisory Committee to identify transit safety and security improvements and have financed those projects through the Public Transportation Modernization, Improvement and Service Enhancement Program (PTMISEA).

Although safety is holistically integrated into SJCOG’s regional transportation planning and programming process, as described above, the following highlighted projects in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) specifically address documented safety issues:

- **SR 99/SR 120 Operational Improvements¹**– This project will improve the capacity and recurring traffic congestion of the eastbound to southbound and northbound to westbound connector ramps and eliminate weaving and merging between SR-99/120 and SR-99/Austin Road interchanges. The SR 99/120 freeway interchange is currently subject to significant congestion, delays, and high accident rates.
- **SR 99 at Turner Road** – Reconstruct interchange to provide operational and safety improvements.
- **Grant Line Road Corridor Improvements** – Realign roadway and widen from two to four lanes with operational and safety improvements.
- **Eleventh Street** – Operational and safety improvements along corridor and at intersections.
- **Roth Road Grade Separation** – Four-lane grade separation between Roth Road and UPRR tracks.
- **Transit Facility Safety and Security Projects** – RTD, Lodi and Manteca systems.
- **Altamont Corridor Express Speed and Safety Upgrades** – Including signal upgrade to automatic train stop increase train speed from 79 to 90 mph and several track realignment projects.

¹ SR-99/SR-120 Operational Improvements project also in the draft 2022 Regional Transportation Improvement Program (RTIP).

- **Active Transportation and Community Enhancement Projects** – Most projects in this category would increase the safety of pedestrians and/or bicyclists.

Many of the projects programmed in the FTIP serve to improve transportation safety to some extent. For some projects, safety is the primary objective, and for others, safety may be a single component of a more expansive scope.

Three statewide funding programs dedicated to transportation safety are employed by SJCOG including:

1. Active Transportation Program (ATP)
2. Highway Safety Improvement Program (HSIP)
3. State Highway Operations & Protection Program (SHOPP) Collision Reduction

ATP

The ATP provides funding for bicycle and pedestrian projects. Since people are more vulnerable to safety risk while walking or biking as compared to traveling in a motor vehicle, any project that promotes the safe use of bicycling or pedestrian modes is likely to generate safety benefits. The ATP further emphasizes safety by allotting points for project applications that specifically seek to reduce the rate or number of pedestrian and bicyclist fatalities and injuries.

HSIP

The HSIP directly addresses transportation safety. The program’s stated purpose is to “achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal land.” Successful project applications specifically seek to reduce collision related fatalities and injuries. The program is designed to focus local investments to locations and corridors that demonstrate the greatest need for safety improvement to implement lower cost countermeasures.

SHOPP Collision Reduction

SHOPP is the State Highway System’s “fix-it-first” program that funds roadway repairs and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System (SHS). SHOPP funding is limited to capital improvement projects that do not add new roadway capacity (no new highway lanes) to the SHS, though some new auxiliary lanes may be eligible for SHOPP funding.

The Collision Reduction program is one of eight categories that make up the SHOPP, and its objective is to reduce the number or severity of collisions. The SHOPP Collision Reduction category consists of two sub-programs:

- *201.010 - Safety Improvements*: Reactive approach based on analysis of collision history
- *201.015 - Collision Severity Reduction*: Proactive approach targeted to reduce the potential for traffic collisions based on past performance of roadway characteristics

201.010 – Safety Improvements

The SHOPP Collision Reduction Safety Improvements sub-program is designed to reduce the number or severity of collisions on the SHS. Projects with a safety index above 200 qualify as a safety improvement project. Projects may be individual locations where the collision history indicates a pattern potentially correctable by a targeted safety improvement, such as unsafe traffic (school zone signals included), wet

pavement corrections, curve corrections, shoulder widening, left-turn channelization, etc. All proposed projects will be verified by the Caltrans Office of Traffic Safety Programs in the Division of Traffic Operations before being certified as a safety improvement project.

This program also provides funding for safety improvements at sites identified in regional monitoring programs for the reduction of motor vehicle collisions, such as locations at high risk for wrong-way, multilane, cross-median, cross-centerline, and run-off-the-road collisions. The program also provides funding for non-motorized safety improvements, such as pedestrian and bicycle facilities.

The Safety Improvements program does not provide funding for relocating existing highways or projects that would add new through lanes or upgrade existing highways to a higher classification, such as conventional to expressway, regardless of the safety benefits. This program also does not include projects where the prime purpose is reducing congestion.

Highway improvement projects along an existing alignment to improve standards of width, grade, alignment, or other geometric improvements, are considered new highway construction and are included in the Caltrans STIP programs.

201.015 - Collision Severity Reduction

This sub-program is focused on upgrading existing highway safety features within the roadbed's clear recovery area to reduce the number and severity of collisions. Eligible projects may include new guardrail end treatments and crash cushions, rumble strips, glare screen, rock fall mitigation, overcrossing pedestrian fencing, crosswalk safety enhancements, and improvements that prevent roadway departure.

The Collision Severity Reduction program is designed to be proactive in enhancing safety on the State Highway System. As such, this program is not subject to a safety index analysis but will define projected collision severity reduction performance quantitatively. Projects will be prioritized based on the projected collision severity reduction benefits provided.

2022 SHOPP Collision Reduction Numbers (Statewide)

A total of 733 projects are included in the 2022 SHOPP that was adopted by the CTC in March 2022. The 2022 SHOPP is valued at \$17.9 billion, which includes reservation amounts for several programs, including the Collision Reduction Program. The SHOPP Collision Reduction Program currently has 116 programmed safety projects totaling \$1,447,532,000. The SHOPP reserves \$1,188,000,000 for the 201.010 Safety Improvement program. The reserved amount will address future safety improvements as they are identified.

SJCOG's Funding Programs

Active Transportation Program (ATP)

SJCOG typically issues a call for projects for its ATP regional funding program every 2 years. The guidelines may change from cycle to cycle to reflect the goals and values of SJCOG's RTP/SCS, to implement goals of the board, and to respond to the comments from the public and potential applicants.

In March 2021, SJCOG released a call for projects for our most recent funding round, the Regional Active Transportation Program of the 2022. We estimate we will be programming \$18.3 million from ATP, CMAQ, and Measure K Smart Growth Incentive Program & Bicycle, Pedestrian, and Safe Routes to School in the

competitive program. The 2022 Regional Program, consistent with the 2022 RTP/SCS, achieves the objectives of the “Increase Safety and Security” policy. Applicants seeking funding based on this performance objective must provide qualitative narrative information and quantitative data to support their application.

Measure K

Voters first approved Measure K in 1990 for a 20-year period. Their trust was rewarded by more than \$735 million in transportation improvements in San Joaquin County. After experiencing the success and progress of Measure K, nearly 78% of San Joaquin voters renewed the sales tax in November 2006 for an additional 30 years.

By the year 2041, Measure K is estimated to deliver an additional \$2.552 billion worth of transportation improvements to the region. Major improvements target San Joaquin County freeways, streets and roads, public transit networks, pedestrian, and bicycle friendly programs. It will protect and enhance our transportation system today and well into the future. Through the Measure K program, San Joaquin County and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon and Lathrop share 35% of the sales tax revenue for local street repairs & roadway safety and 2.5% share for railroad crossing safety projects. In addition, safe routes to school expenditures can be pulled from the 30% share for passenger rail & bus service. These funds must be used to augment current transportation spending and cannot be used to replace general fund expenditures.

National Highway System (NHS) Pavement & Bridge Condition (PM 2)

The second grouping of performance measures developed by FHWA in response to the requirements of Map-21 is known as PM 2: Transportation Asset Management. The objective of this set of performance measures is to assess the overall health of the transportation system and identify investments to maintain highways, roadways, and bridges in a state of good repair. The benefits of a properly maintained transportation system include multiple direct and indirect effects on safety, economic vitality and quality of life:

- Increased safety, as poor roadways can lead to a higher accident rate.
- A reduction in incident-related congestion leading to greater travel time reliability.
- Reduced maintenance costs over time. Since roadways become increasingly more expensive to repair as the condition deteriorates, investing in continual maintenance is the best approach for long-term fiscal health.
- Less wear and tear on vehicles, resulting in economic benefits for roadway users.
- Indirect reductions in other environmental impacts, including polluted run-off, GHG emissions (due to lower congestion and improved MPG for vehicles), and noise.

To this end, FHWA published the Bridge and Pavement Performance Management Final Federal Rule establishing performance measures for state DOTs to use in assessing the performance of the Interstate Highway System (IHS) and non-IHS portions of the National Highway System (NHS). The federally mandated performance measures are (1) Percent of IHS pavement in Good condition; (2) Percent of IHS pavement in Poor condition; (3) Percent of non-IHS NHS pavement in Good condition; (4) Percent of non-IHS NHS pavement in Poor condition; (5) Percent of NHS bridges (by deck area) in Good condition; and (6) Percent of NHS bridges (by deck area) in Poor condition. Good condition is defined as, “Suggests no major investment is needed.” Poor condition is defined as, “Suggests major reconstruction investment is

needed.” Further guidance on assessing bridge and highway condition is provided in the Final Federal Rule.

To implement the PM 2 framework established by FHWA, Caltrans developed the Draft Transportation Asset Management Plan (TAMP) in December 2021. This second draft TAMP assesses the current conditions of California’s transportation assets, establishes performance measures, and identifies statewide investment strategies to achieve the performance measures. Transportation assets in California subject to the new performance measures include 57,699 lane miles of pavement and 10,936 bridges. As of January 2022, the Draft TAMP is currently under review and is expected to be certified by FHWA in September 2022. Below are Caltran’s two-year targets, identified in the Draft TAMP, between 1/1/2022 and 12/31/2023.

NHS Pavement and Bridge Condition (PM 2) Targets

Performance Measure	Target
Percentage of Interstate System pavement in ‘Good’ condition	44.5%
Percentage of non-interstate NHS pavement in ‘Good’ condition	29.9%
Percentage of Interstate System pavement in ‘Poor’ condition	3.8%
Percentage of non-interstate NHS pavement in ‘Poor’ condition	7.2%
Percentage of NHS bridges in ‘Good’ condition	70.5%
Percentage of NHS bridges in ‘Poor’ condition	4.4%

SJCOG Target-Setting

During the development of the Caltrans’ original PM 2 targets in 2018, MPOs had multiple options: (1) adopt statewide targets for pavement and bridges; (2) adopt statewide targets for pavement and establish regional bridge targets; (3) establish regional targets for pavement and adopt statewide bridge targets; or (4) establish regional pavement and bridge targets. In 2020, Caltrans established regional targets that align with their statewide targets. MPOs were required to redesignate their intent to either: (1) maintain Caltrans regional pavement and bridge targets; (2) maintain Caltrans regional pavement targets and adjust regional bridge targets; (3) adjust regional pavement targets and maintain Caltrans regional bridge targets; or (4) adjust regional pavement and bridge targets. SJCOG elected to maintain Caltrans regional targets for pavement and bridges through Dec. 31, 2021.

SJCOG will highlight projects and programs in the RTP and RTIP that help the state achieve the statewide targets. Also, SJCOG will continue researching ways of integrating asset management performance measures into our planning and programming efforts.

SJCOG Efforts

Asset management is integral to the SJCOG planning and programming process. The RTP is built around eight policies and 30 supportive strategies, which include safety as one of the primary building blocks of the plan:

Policy: Maximize Mobility and Accessibility

Strategy No. 6: Encourage infill development and development near transit, including transit-oriented development to maximize existing transit investments

Policy: Preserve the Efficiency of the Existing Transportation System

Strategy No. 12: Prioritize projects that make more efficient use of the existing road network.

Strategy No. 13: Support the continued maintenance and preservation of the existing transportation system.

SJCOG begins most transportation planning efforts with a preliminary analysis of the challenges facing the transportation system within the project area. In almost all cases, this ongoing effort continually identifies new issues and feeds them into the planning process. For example, SJCOG initiates corridor studies (or Project Study Reports-PSRs) that provide details on the types of challenges and system deficiencies found in a portion of the region. Within these reports, SJCOG sets out a goal to improve overall regional pavement and bridge conditions. Data analyses focus on identifying intersections, accident information, or existing design features that can be made safer. This is then followed by more detailed investigation of the types of strategies that can be used to reduce the impact on pavement and bridge conditions. For example, I-205, I-5, SR120 and SR99 Congested Corridor Plan (CCP) is a comprehensive multimodal study that will assess conditions along the I-205, I-5, State Route 120, and State Route 99 corridor, including parallel passenger rail, bus transit, and bicycle and pedestrian facilities. The plan will identify improvements that will help improve safety, congestion, accessibility, economic development, and air quality.

SJCOG also expands its transportation planning efforts with its regional congestion management program (RCMP), a core program that addresses system reliability, freight movement, and air quality. The most recent update to the RCMP follows steps directly pulled from the federal congestion management process (i.e., federal legislative requirements (23 CFR 450.323 (a) and 450.323 (b)). These steps include (1) Develop Regional Objectives; (2) Define CMP Network; (3) Develop Multimodal Performance Measures; (4) Collect Data/Monitor System Performance; (5) Analyze Congestion Problems and Needs; (6) Identify and Assess Strategies; (7) Program and Implement Strategies; and (8) Evaluate Strategy Effectiveness. One of the key goals of the federal congestion management process is reducing single-occupant-vehicle (SOV) travel while minimizing the need for increasing SOV roadway capacity. SJCOG's RCMP serves as a way of informing the RTP/SCS and programming efforts.

As previously mentioned, SJCOG strives to improve communication and coordination between public agencies and the public by identifying and engaging key transportation planning stakeholders. Through these stakeholder groups, SJCOG often identifies asset management issues critical to their interests. For example, SJCOG works closely with our member agencies (cities and county) and the California Department of Transportation in nominating projects for the State Highway Operation and Protection Program (SHOPP) and the Highway Safety Improvement Program. We have an active SJCOG Citizen Advisory Committee and Goods Movement Task Force that meet regularly. SJCOG planning staff regularly engage with these committees, public health agencies, and bicycle coalitions interested in transportation safety issues specific to their missions. We also work closely with public transit operators, the SJCOG Interagency Transit Committee, and the Social Services Transportation Advisory Committee to identify

transit operational improvements and have financed those projects through the Public Transportation Modernization, Improvement and Service Enhancement Program (PTMISEA).

Although asset management is holistically integrated into SJCOG's regional transportation planning and programming process, as described above, the following highlighted projects in the RTP/SCS specifically address documented asset management issues:

- **Stockton Avenue** – Rehabilitate and widen roadway from two to four lanes between Second Street and Doak Boulevard.
- **SHOPP** – Caltrans SHOPP roadway preservation grouped projects throughout San Joaquin County.
- **I-5 at Louise Avenue** – Reconstruct interchange.
- **I-5 at Lathrop Road** – Reconstruct interchange.
- **SR-120 at Yosemite Avenue/Guthmiller Road** – Reconstruct interchange.
- **SR-99 at SR-12 West (Kettleman Lane)** – Reconstruct interchange and widen to free-flowing interchange.
- **SR-99 at Harney Lane** – Reconstruct interchange to provide four through lanes on SR-99, four lanes on Harney between Reynolds Ranch Pkwy and SR-99, and modify onramps and off-ramps.
- **SR-99 at Turner Road** – Reconstruct interchange to provide operational and safety improvements on SR-99 at Turner Road.
- **SR-120 at Union Road** – Reconstruct interchange.
- **SR-120 at Airport Way** – Reconstruct interchange.
- **SR-120 at Main Street** – Reconstruct interchange.
- **SR-99 at Eight Mile Road** – Reconstruct interchange.
- **SR-99 at Morada** – Reconstruct interchange.
- **I-580 at International Parkway/Patterson Pass Road** – Reconstruct interchange.
- **I-205 at Mountain House/International Parkway** – Reconstruct interchange.

In addition, **over \$2,200,000,000** was programmed in the RTP/SCS for rehabilitation of various streets and roads in the cities and county of San Joaquin.

The following section describes the funding sources and programs that have been used to fund PM 2 related projects in the SJCOG region.

Local Funds

Cities and counties spend billions of dollars each year maintaining local roads and bridges. Funding for these efforts is derived from a myriad of sources. In a survey of California jurisdictions, for local funds alone, there are more than a hundred different sources of taxes and fees reported that are used on pavement improvement projects.¹ Some examples of local funding sources include:

- Local sales taxes
- Development impact fees
- General funds
- Various assessment districts – lighting, maintenance, flood control, special assessments, community facility districts

- Traffic impact fees
- Traffic safety/circulation fees
- Utilities (e.g., stormwater, water, wastewater enterprise funds)
- Transportation mitigation fees
- Parking and various permit fees
- Flood control districts
- Enterprise funds (solid waste and water)
- Investment earnings
- Parcel/property taxes
- Indian reservation roads
- Indian gaming funds
- Vehicle registration fees
- Vehicle code fines
- Underground impact fees
- Transient occupancy taxes
- Capital Improvement Program (CIP) reserves/capital funds

Local Funds are typically used for non-regionally significant road maintenance, safety, and bridge projects. Even so, some of the PM 2 projects in the FTIP are funded through Local Funds.

State Funds

HUTA

The Highway Users Tax Account (HUTA), more commonly known as the state gas tax, is still the single largest funding source for cities and counties.

SB 1

California doubled down on PM 2 when it approved Senate Bill 1 on April 28, 2017. SB 1 increased several taxes and fees to raise more than \$5 billion annually in new transportation revenues. Moreover, SB 1 provides for inflationary adjustments, so that purchasing power does not diminish as it has in the past. SB 1 prioritizes funding towards maintenance, rehabilitation, and safety improvements on state highways, local streets and roads, and bridges and to improve the state's trade corridors, transit, and active transportation facilities.

Many SB 1 funds are not captured in the FTIP because this document focuses on federally funded and regionally significant projects, while SB 1 is a non-federal fund source that tends to pay for non-regionally significant road maintenance, safety, and bridge projects. Even so, some of the PM 2 projects in the FTIP are funded through SB 1.

Federal Funds

HBP

The Highway Bridge Program (HBP) provides federal aid to local agencies to replace and rehabilitate deficient, locally owned, public highway bridges. The HBP is intended to remove structural deficiencies, the Bipartisan Infrastructure Law (BIL) revises the terminology to "classified in poor condition," from existing local highway bridges to keep the traveling public safe.ⁱⁱ The HBP provides about \$288 million annually for bridge projects. Off-system bridges are usually funded at 100% HBP, while on system bridges

are funded at 88.53% HBP. An exception to the federal participating rate is “high-cost” bridges, in which sponsors enter into agreements with Caltrans Local Assistance and agree on a federal participating rate which may not equal 100% or 88.53%.

BFP

Bridge Formula Program (BFP) is a new program established under the Bipartisan Infrastructure Law (BIL) to provide funding to replace, rehabilitate, preserve, protect, and construct bridges. It is a complement to the discretionary Bridge Investment Program (see below). The Bridge Formula Program under BIL provides 4.25 Billion to the State of California, of which States are required to reserve 15 percent of their formula funds under this program for use on off-system bridges. For funds used on locally owned off-system bridges, the Federal share is 100%.

SHOPP

The SHOPP was described in the section above under PM 1. Two of the eight categories of the SHOPP that address PM 2 are Bridge Preservation and Roadway Preservation.

Although the SHOPP is a program, it is often thought of as a fund source as well. The FTIP lists the fund source for most SHOPP projects as “SHOPP Advance Construction.” Caltrans blends funds from HUTA, SB 1, and federal highway funds into SHOPP, and the “SHOPP Advance Construction” designation serves as a placeholder for what may be federal or state funds.

SHOPP Roadway Preservation

The SHOPP Roadway Preservation category includes the following programs:

- 201.120 – Roadway Rehabilitation
- 201.121 – Pavement Preservation
- 201.122 – Pavement Rehabilitation
- 201.150 – Roadway Protective Betterments
- 201.151 – Drainage System Restoration
- 201.170 – Signs and Lighting Rehabilitation

The 2022 SHOPP has 306 Roadway Preservation projects totaling \$9,874,173,000 which includes future need/contingency dollars. The SHOPP does not have a reservation for Roadway Preservation.

SHOPP Bridge Preservation

The SHOPP Bridge Preservation category includes the following programs:

- 201.110 – Bridge Rehabilitation and Replacement
- 201.111 – Bridge Scour Mitigation
- 201.112 – Bridge Rail Replacement and Upgrade
- 201.113 – Bridge Seismic Restoration
- 201.119 – Capital Bridge Preventative Maintenance Program
- 201.322 – Transportation Permit Requirements for Bridges

The 2022 SHOPP has 117 Bridge Preservation projects totaling \$2,422,402,000 which includes future need/contingency dollars. The SHOPP does not have a reservation for Bridge Preservation.

Other Funding Sources

Regional Transportation Impact Fee (RTIF)

SJCOG's Regional Transportation Impact Fee (RTIF) program is one local funding program where the information from the RCMP may help in updating its programming efforts. The RTIF program's objective is to generate funding from new development projects that impact the Regional Transportation Network and integrate these funds with federal, state, and other local funding to make transportation improvements identified in the RTIF Program. Within the RTIF program, there is funding made available for the Jobs Balancing Investment Fund (JBIF), an economic incentive program that provides the SJCOG Board, in conjunction with the San Joaquin Partnership and other economic development specialists, with a more tactical tool to attract employers to the region. Investments in transportation infrastructure will be made from this fund to supplement or enhance capital or capacity enhancing operational improvements needed by firms to locate in the area.

Measure K

Voters first approved Measure K in 1990 for a 20-year period. Their trust was rewarded by more than \$735 million in transportation improvements in San Joaquin County. After experiencing the success and progress of Measure K, nearly 78% of San Joaquin voters renewed the sales tax in November 2006 for an additional 30 years.

By the year 2041, Measure K is estimated to deliver an additional \$2.552 billion worth of transportation improvements to the region. Major improvements target San Joaquin County freeways, streets and roads, public transit networks, pedestrian, and bicycle friendly programs. It will protect and enhance our transportation system today and well into the future. Through the Measure K program, San Joaquin County and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon and Lathrop share 35% of the sales tax revenue for local street repairs and roadway safety. These funds must be used to augment current transportation spending and cannot be used to replace general fund expenditures.

Surface Transportation Block Program

Surface Transportation Block Program (previously known as the Regional Surface Transportation Program) is a federally managed program that can fund roadway and bridge preservation, pedestrian and bicycle infrastructure, and transit capital projects.

NHS Performance, Interstate System Freight Movement, and CMAQ Program Performance (PM 3)

Performance Management 3 (PM 3) consists of NHS performance measures from the National Highway Performance Program (NHPP); a measure of freight performance on the interstate system; and measures to assess traffic congestion and on-road mobile source emissions for the purpose of carrying out the Congestion Mitigation and Air Quality (CMAQ) Improvement Program.

Caltrans assembled a PM 3 Technical Advisory Group to meet with MPOs and held in-person and webcast workshops in 2017 and 2018 while preparing statewide targets for the six performance measures. In addition, Caltrans held one-on-one discussions with MPOs with urbanized areas (UA) over 1 million residents on statewide performance measures: (1) annual hours of peak-hour excessive delay per capita; and (2) percent of non-single occupancy vehicle travel. These UA included Sacramento, San Francisco-Oakland, San Jose, Los Angeles-Long Beach-Anaheim, Riverside-San Bernardino, and San Diego. As the

Stockton-Lodi UA (the only UA in San Joaquin County) does not include a population over 1 million residents, the two associated performance measures are not referenced in the remainder of this appendix.

Statewide PM 3 Performance Targets applicable to SJCOG are:

Performance Target	2-Year Target	Target
Percent of the person-miles traveled on the interstate that are reliable	65.1%	65.6%
Percent of person-miles traveled on the noninterstate NHS that are reliable	-	74.0%
Percentage of interstate system mileage providing for reliable truck travel time [Truck Travel Time Reliability (TTTR) Index]	1.68	1.67
Total emissions reductions by applicable pollutants under the CMAQ program		
Volatile Organic Compound (VOC)	961.35	970.87
Carbon Oxide (CO)	6,931.90	7,000.54
Nitrous Oxide (NOx)	1,770.89	1,788.43
Particulate Matter (PM) 10	2,455.52	2,479.83
Particulate Matter (PM) 2.5	913.29	922.34

Caltrans Adopted Performance Targets

SJCOG Target Setting

SJCOG has elected to support the state target. SJCOG will highlight projects and programs in the RTP and RTIP that help the state achieve the statewide targets. Also, SJCOG agrees to plan and program projects so that they contribute toward the accomplishment of the state DOT system performance target for each respective performance measure.

SJCOG Efforts

System reliability, freight, congestion and air quality are integral to the SJCOG planning and programming process. The RTP is built around eight policies and 30 supportive strategies, which include these performance measures as one of the primary building blocks of the Plan:

Policy: Enhance the Environment of Existing and Future Generations and Conserve Energy	
Strategy No. 3	Enhance the connection between land use and transportation choices through projects supporting energy and water efficiency.
Strategy No. 4:	Improve air quality by reducing transportation-related emissions.
Policy: Maximize Mobility and Accessibility	
Strategy No. 5:	Optimize the public transportation system to provide efficient and convenient access for users of all income levels.
Strategy No. 6:	Encourage infill development and development near transit, including transit-oriented development to maximize existing transit investments.
Strategy No. 7:	Provide transportation improvements to facilitate nonmotorized travel, including incorporation of complete streets elements as appropriate.
Strategy No. 8:	Improve freight access to key strategic economic centers

Strategy No. 9:	Promote safe and efficient strategies to improve the movement of goods by water, rail and truck.
Policy: Support Economic Vitality	
Strategy No. 19:	Encourage and/or strengthen small business while supporting large employer recruitment
Strategy No. 20:	Invest in high-speed internet infrastructure to support e-business and reduce commuting
Policy: Improve the Quality of Life for Residents	
Strategy No. 30:	Enhance public health through active transportation projects.

As previously stated in PM 2, SJCOG begins most transportation planning efforts with its regional congestion management program (RCMP), a core program that addresses system reliability, freight movement, and air quality. The most recent update to the RCMP follows steps directly pulled from the federal congestion management process (i.e., Federal legislative requirements 23 CFR 450.323 (a) and 450.323 (b)). These steps include (1) develop regional objectives; (2) define CMP network; (3) develop multimodal performance measures; (4) collect data and monitor system performance; (5) analyze congestion problems and needs; (6) identify and assess strategies; (7) program and implement strategies; and (8) evaluate strategy effectiveness. One of the key goals of the federal congestion management process is reduce single-occupant vehicle (SOV) travel while minimizing the need for increasing SOV roadway capacity. SJCOG’s RCMP serves as a way of informing the RTP/SCS and programming efforts.

Additional transportation planning efforts begin with a preliminary analysis of the challenges facing the transportation system within the project area. In almost all cases, this ongoing effort continually identifies new issues and feeds them into the planning process. For example, SJCOG initiates corridor studies (or Project Study Reports-PSRs) that provide details on the types of challenges and system deficiencies found in a portion of the region. Within these reports, SJCOG sets out a goal to improve overall congestion levels, freight movement, and air quality along the corridor. Data analyses focus on identifying intersections, accident information, or existing design features that can benefit from safety enhancements. This is then followed by more detailed investigation of the types of strategies that can be used to reduce the number and severity of accidents. SJCOG’s Unmet Transit Needs (UTN) Report provides the general public opportunities to raise accessibility gaps in public transit. Cumulatively, SJCOG’s planning studies suggest strategies and recommend capital projects for the long-range Regional Transportation Plan and (RTP) for the Transportation Improvement Program (TIP). System reliability improvements to major state highway corridors in the region, including but not limited to I-5, SR-99, I-205, and SR-12, were outcomes of this regional planning process.

SJCOG also operates a transportation demand management program called dibs that covers a three-county area comprised of San Joaquin, Stanislaus and Merced counties. The vanpool program, one of dibs’ most successful TDM programs, has over 5,000 members. In San Joaquin County alone, dib’s vanpool program reduced an average of 215 VMT per weekday per van between Fiscal Year 2018-19 and FY 2020-21. Combined with alternative modes of transportation, the annual reduction in VMT was approximately 274,000 in 2018-19. Due to the COVID 19 pandemic, dibs could not coordinate in-person events and many businesses established remote work policies to limit commuting to a physical

workplace. Expectedly, this resulted in a decrease of logged dib smart trips and lower VMT reduction benefit to 228,330 in 2019-20 and 137,520 in 2020-21. As businesses transition back to the office, it is anticipated that future logged alternative mode trips will begin to increase to 2018-19 levels.

As previously mentioned, SJCOG strives to improve communication and coordination between public agencies and the public by identifying and engaging key transportation planning stakeholders. Through these stakeholder groups, SJCOG often identifies asset management issues critical to their interests. For example, SJCOG works closely with our member agencies (cities and county) and the California Department of Transportation in nominating projects for the SHOPP and the Highway Safety Improvement Program. We have an active SJCOG Citizen Advisory Committee and Goods Movement Task Force that meet regularly. SJCOG planning staff regularly engage with these committees, public health agencies, and bicycle coalitions interested in transportation safety issues specific to their missions. We also work closely with public transit operators, the SJCOG Interagency Transit Committee, and the Social Services Transportation Advisory Committee to identify transit operational improvements and have financed those projects through the Public Transportation Modernization, Improvement and Service Enhancement Program (PTMISEA).

Although PM 3 is holistically integrated into SJCOG’s regional transportation planning and programming process, as described above, the following highlighted projects in the RTP/SCS specifically address documented PM 3 performance measures issues:

- **SR-99/SR-120 Connector Project Phase 1A²**– Widen the eastbound SR-120 to southbound SR-99 connector ramp from one-lane to two-lanes. Remove the Austin Road overcrossing and replace with a new four lane structure spanning SR-99 and UPRR. Add a new connecting road from Austin Road to Woodward Avenue and Moffat Boulevard and modify the existing UPRR gated crossing at Woodward Avenue. Temporarily close the Austin Road northbound entrance and southbound exit ramps, resulting in a partial interchange.
- **SR-99/SR-120 Connector Project Phase 1B⁴** – Widen the northbound SR-99 to westbound SR-120 connector ramp from one-lane to two-lanes. Add an auxiliary lane in the existing median of westbound SR 120 from Main Street to SR-99. Convert the existing 99/120 separation structure to two lanes and construct a new separation structure to serve the eastbound SR-120 to northbound SR-99 connector ramp.
- **I-205 Managed Lanes*** – Widen from six to eight lanes between Alameda County Line to I-5.
- **I-5 HOV Mossdale** – Widen to add HOV lanes with HOV Connector Ramps to I-205 and SR-120.
- **SR-120** – Widen four to six lanes between I-5 and Main Street.
- **SR-99 HOV** – Widen six to eight lanes, including reconstruction of SR-99/Main Street and SR-99/Wilma Avenue interchanges and pedestrian overcrossing between SR-120 and Stanislaus County Line.
- **I-5 HOV** – Widen six to eight lanes between Louise Avenue and north of Eight Mile Road.

Projects categorized in areas, applicable to PM 3 performance measures, were also programmed into the 2022 RTP/SCS.

² SR-99/SR-120 Connector Project Phase 1A/1B and I-205 Managed Lanes Project also in the draft 2022 Regional Transportation Improvement Program (RTIP).

- **Over \$843,000,000 in widen, extension, and reconstruction regional roadway category projects.** For the list of projects, please refer to the Regional Roadway Improvements Category of the Plan Project List appendix.
- **Over \$1,500,000,000 in Caltrans, San Joaquin Regional Rail Commission (SJRRRC), and Tri-Valley San Joaquin Regional Rail Authority projects.** For the list of projects, please refer to the Rail Corridor Improvements Category of the Plan Project List appendix.
- **Over \$120,000,000 in improvements to Stockton Metropolitan and Tracy airports.** For the list of projects, please refer to the Public Airport-Aviation Projects Category of the Plan Project List appendix.
- **Over \$350,000,000 in bicycle/pedestrian and related improvements.** For the list of projects, please refer to the Active Transportation and Community Enhancement Projects Category of the Plan Project List appendix.
- **Over \$4,700,000,000 in operation, maintenance, and related improvements.** For the list of projects, please refer to Operations and Maintenance Projects Category of the Plan Project List appendix.

The following are funding sources and programs that help fund Non-Interstate and Interstate improvement projects:

SHOPP Mobility

The SHOPP Mobility category includes following three programs:

201.310 – Operational Improvements

201.315 – Transportation Management Systems

201.321 – Weigh Stations & Weigh-In-Motion Facilities

201.310 – Operational Improvements

The primary purpose of this program element is to improve traffic flow on existing State highways by reducing congestion and operational deficiencies at spot locations. Operational improvement projects do not expand the design capacity of the system.

Examples of Operational Improvements projects include, but are not limited to:

- Interchange modifications (not to accommodate traffic volumes significantly larger than what the existing facilities were designed for)
- Ramp modifications (acceleration - deceleration/weaving)
- Auxiliary lanes for merging or weaving between adjacent interchanges
- Curve corrections/improve alignment
- Signals and/or intersection improvements
- Two-way left-turn lanes
- Channelization
- Turnouts
- Shoulder widening

201.315 – Transportation Management Systems

The primary purpose of this program element is to improve traffic flow on existing State highways by addressing system-wide congestion through system management techniques. Transportation Management Systems facilitate the real time management of the State highway system by providing accident and incident detection, verification, response, and clearance. These systems provide State highway system status information to travelers.

Examples of Transportation Management System projects include, but are not limited to:

- Traffic sensors
- Changeable message signs
- Close circuit television cameras
- Ramp meters
- Communications systems
- Highway advisory radio
- Traffic signal interconnect projects
- Traffic management systems housed in Transportation Management Centers (TMCs), including the necessary software and hardware (excluding facilities)
- TMC interconnect projects

201.321 – Weigh Stations & Weigh-in-Motion Facilities

The primary purpose of this SHOPP Mobility program element is to provide for Commercial Vehicle Enforcement Facilities (commonly called Weigh Stations) and Weigh-in-Motion (WIM) systems. The Weigh Stations are needed to support the Commercial Vehicle Enforcement Plan; Truck safety, size and weight regulations are enforced by the California Highway Patrol reducing truck related accidents or incidents and protection our highways from premature damage. The WIM sites provide data for federally required data systems and special studies, design and maintenance strategies, size and weight policies, enforcement and planning strategies, and the traffic and truck volumes publications.

The 2022 SHOPP features 65 Mobility projects programmed totaling \$1,748,406,000 which includes future need/contingency dollars. The SHOPP does not have a reservation for Mobility.

SB 1 Trade Corridor Enhancement Program (Including National Highway Freight Program)

The purpose of the Senate Bill 1 (SB 1) Trade Corridor Enhancement Program (TCEP) is to provide funding for infrastructure improvements on federally designated Trade Corridors of National and Regional Significance, on California's portion of the National Highway Freight Network as identified in California Freight Mobility Plan, and along other corridors that experience high volumes of freight movement. The Trade Corridor Enhancement Program also supports the goals of the National Highway Freight Program, the California Freight Mobility Plan, and the guiding principles in the California Sustainable Freight Action Plan.

This statewide, competitive program will provide approximately \$300 million per year in state funding and approximately \$515 million in National Highway Freight Program funds if the federal program continues under the next federal transportation act.

Eligible applicants apply for program funds through the nomination of projects. All projects nominated must be identified in a currently adopted regional transportation plan (RTP). The Commission is required to evaluate and select submitted applications based on the following criteria:

- Freight System Factors – Throughput, Velocity, and Reliability
- Transportation System Factors – Safety, Congestion Reduction/Mitigation, Key Transportation Bottleneck Relief, Multi-Modal Strategy, Interregional Benefits, and Advanced Technology
- Community Impact Factors – Air Quality Impact, Community Impact Mitigation, and Economic/Jobs Growth
- The overall need, benefits, and cost of the project
- Project Readiness – ability to complete the project in a timely manner
- Demonstration of the required 30% matching funds
- The leveraging and coordination of funds from multiple sources
- Jointly nominated and/or jointly funded

Truck Travel Discussion

Truck travel mobility, and the goods movement that it provides, is essential to the economic vitality in the central San Joaquin valley. Nearly all freight movement in the Central Valley is provided by trucks. Therefore, a reliable and efficient good movement systems is necessary to support economic vitality in San Joaquin County and the greater San Joaquin Valley. As such, transportation projects that support efficient truck travel, such as shoulder improvements, auxiliary lanes, traffic flow improvement, and intelligent transportation systems (such as signal synchronization of the urban areas) have been included on the 2021 FTIP to support our freight mobility. SJCOG continually looks for ways to prioritize investment improvements and strategies to increase the efficiency and reliability of the region’s goods movement system.

CMAQ

The Congestion Mitigation and Air Quality (CMAQ) program supports improving air quality and relieving roadway congestion. The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide (CO), and particulate matter (both PM10 and PM2.5).

Other Funding Sources

Regional Transportation Impact Fee (RTIF)

SJCOG’s Regional Transportation Impact Fee (RTIF) program is one local funding program where the information from the RCMP may help in updating its programming efforts. The RTIF program’s objective is to generate funding from new development projects that impact the Regional Transportation Network and integrate these funds with federal, state, and other local funding to make transportation improvements identified in the RTIF Program. Within the RTIF program, there is funding made available for the Jobs Balancing Investment Fund (JBIF), an economic incentive program that provides the SJCOG Board, in conjunction with the San Joaquin Partnership and other economic development specialists, with a more tactical tool to attract employers to the region. Investments in transportation infrastructure will be made from this fund to supplement or enhance capital or capacity enhancing operational improvements needed by firms to locate in the area.

Measure K

Voters first approved Measure K in 1990 for a 20-year period. Their trust was rewarded by more than \$735 million in transportation improvements in San Joaquin County. After experiencing the success and progress of Measure K, nearly 78% of San Joaquin voters renewed the sales tax in November 2006 for an additional 30 years.

By the year 2041, Measure K is estimated to deliver an additional \$2.552 billion worth of transportation improvements to the region. Major improvements target San Joaquin County freeways, streets and roads, public transit networks, pedestrian, and bicycle friendly programs. It will protect and enhance our transportation system today and well into the future. Through the Measure K program, San Joaquin County and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon and Lathrop share 32.5% of the sales tax revenue for congestion relief and 30% share for passenger rail & bus service. These funds must be used to augment current transportation spending and cannot be used to replace general fund expenditures.

Transit Asset Management

The table below provides a summary of the performance measures designated for Transit Asset Management (TAM).

<i>Transit Asset Management Performance Measures</i>		
Asset Category	Performance Measurement	Asset Class Examples
Rolling Stock - (revenue service vehicles) (Age)	Percentage of revenue vehicles within a particular asset class that have met or exceeded useful life benchmark (ULB).	40-foot bus, 60-foot bus, vans, automobiles, locomotives, rail vehicles
Equipment – (non-revenue) service vehicles (Age)	Percentage of vehicles that have met or exceeded their ULB.	Cranes, prime movers, vehicle lifts, tow trucks, vans, automobiles
Infrastructure-rail fixed-guideway track, signals, and systems (Condition)	Percentage of track segments, signal, and systems with performance restrictions.	Signal or relay house, interlockings, catenary, mechanical, electrical and IT systems
Stations/Facilities (Condition)	Percentage of facilities within an asset class, rated below 3 on the Transit Economic Requirements Model scale.	Stations, depots, administration, parking garages, terminals, shelters

The TAM targets provided below were produced collaboratively with transit agencies based on their agency TAM plans and local targets. In establishment of their TAM targets, transit agencies’ performance measures and their calculations align with the TAM Final Rule and FTA guidance. In developing the targets, SJCOG reviewed and considered the various local and regional transit operators’ TAM plans (including identified goals, objectives, measures, and targets), thereby incorporating them into the

metropolitan planning process. This section presents the TAM performance measures and targets adopted by City of Lodi Grapeline, City of Manteca Transit, City of Tracy Tracer, Regional Transit District (RTD), and Altamont Corridor Express (ACE) in the SJCOG region.

Transit Asset Management (TAM) Targets (RTD)								
Reporting Entity	Rolling Stock				Equipment		Facility	
	% of revenue vehicles > ULB				% of non-revenue vehicles > ULB		% of facilities < TERM scale 3	
	AR - Articulated Bus	BR - Over-the-road Bus	BU - Bus	Cutaway	Automobiles	Trucks & other Rubber Tire Vehicles	Passenger / Parking Facilities	Administrative / Maintenance Facilities
Regional Transit District (RTD)	0%	17.64%	20%	0%	5%	50%	0%	0%

Source: National Transit Database

Transit Asset Management (TAM) Targets (City of Tracy)					
Reporting Entity	Rolling Stock			Equipment	Facility
	% of revenue vehicles > ULB			% of non-revenue vehicles > ULB	% of facilities < TERM scale 3
	BU - Bus	Cutaway	Minivan	Automobiles	Passenger / Parking Facilities
Tracy Tracer	0%	12.5%	0%	0%	0%

Source: National Transit Database

Transit Asset Management (TAM) Targets (City of Lodi)				
Reporting Entity	Rolling Stock		Equipment	Facility
	% of revenue vehicles > ULB		% of non-revenue vehicles > ULB	% of facilities < TERM scale 3
	BU - Bus	Cutaway	Trucks & other Rubber Tire Vehicles	Passenger / Parking Facilities
Lodi Grapeline	0%	0%	0%	0%

Source: National Transit Database

Transit Asset Management (TAM) Targets (City of Manteca)			
Reporting Entity	Rolling Stock	Equipment	Facility
	% of revenue vehicles > ULB	% of non-revenue vehicles > ULB	% of facilities < TERM scale 3
	Cutaway	Automobiles	Passenger / Parking Facilities
Manteca Transit	0%	0%	0%

Source: National Transit Database

Transit Asset Management (TAM) Targets (ACE)							
Reporting Entity	Rolling Stock		Equipment			Facility	
	% of revenue vehicles > ULB		% of non-revenue vehicles > ULB			% of facilities < TERM scale 3	
	RL - Commuter Rail Locomotive	RP - Commuter Rail Passenger Coach	Automobiles	Steel Wheel Vehicles	Trucks & other Rubber Tire Vehicles	Administrative / Maintenance Facilities	Passenger / Parking Facilities
ACE	0%	0%	25%	0%	40%	0%	0%

Source: National Transit Database

SJCOG Efforts

Transit asset management are integral to the SJCOG planning and programming process. The RTP is built around eight policies and 30 supportive strategies, which include these performance measures as one of the primary building blocks of the Plan:

Policy: Maximize Mobility and Accessibility	
Strategy No. 5	Optimize the public transportation system to provide efficient and convenient access for users of all income levels
Strategy No. 6:	Encourage infill development and development near transit, including transit-oriented development to maximize existing transit investments
Strategy No. 7:	Provide transportation improvements to facilitate non-motorized travel, including incorporation of complete streets elements as appropriate
Policy: Preserve Efficiency of the Existing Transportation System	
Strategy No. 13:	Prioritize projects that make more efficient use of the existing roadway network.
Strategy No. 16	Promote electric power, alternative fuels, and autonomous technologies for public transit

Transportation planning efforts begin with a preliminary analysis of the challenges facing the transportation system within the project area. In almost all cases, this ongoing effort continually identifies new issues and feeds them into the planning process. For example, SJCOG’s Regional Transit Systems Plan (RTSP) is a long-range transit plan that looks at bus and rail transit needs, their related costs, and details a financial forecast of anticipated funding through year 2024. The bus/rail transit operators in the county are as follows: San Joaquin Regional Transit District, San Joaquin Regional Rail Commission, and the cities of Escalon, Lodi, Manteca, Ripon, and Tracy. SJCOG’s Unmet Transit Needs (UTN) Report provides the general public opportunities to raise accessibility gaps in public transit. Cumulatively, SJCOG’s planning studies suggest strategies and recommend capital projects for the long-range Regional Transportation Plan and (RTP) for the Transportation Improvement Program (TIP). Multiple bus and rail improvements were outcomes of this regional planning process.

As previously mentioned, SJCOG strives to improve communication and coordination between public agencies and the public by identifying and engaging key transportation planning stakeholders. Through these stakeholder groups, SJCOG often identifies transit asset management issues critical to their interests. For example, SJCOG works closely with our member agencies (cities and county) and the California Department of Transportation in nominating projects for the SHOPP and the Highway Safety Improvement Program. We have an active SJCOG Citizen Advisory Committee that meet regularly. SJCOG planning staff regularly engage with these committees, public health agencies, and bicycle coalitions interested in transportation safety issues specific to their missions. We also work closely with public transit operators, the SJCOG Interagency Transit Committee, and the Social Services Transportation Advisory Committee to identify transit operational improvements and have financed those projects through the Public Transportation Modernization, Improvement and Service Enhancement Program (PTMISEA).

Many of the projects programmed, under the 2022 RTP/SCS Bus Transit Improvements and Rail Corridor Improvements Categories, help improve transit asset management-related conditions. For more information, please see Appendix F.

Examples of the fleet procurement programmed into 2022 RTP/SCS projects includes:

- Etrans (City of Escalon) - \$1,000,000 for bus replacements, passenger amenities, and miscellaneous equipment
- Grapeline (City of Lodi) - \$30,000,000 to purchase replacement buses
- Manteca Transit (City of Manteca) - \$3,875,000 for enhancements for Manteca Transit buses
- Blossom Express (City of Ripon) - \$4,200,000 to purchase of replacement and expansion buses
- Regional Transit District (City of Stockton & San Joaquin County) - \$252,601,279 to purchase of replacement buses for all RTD services
- Tracer (City of Tracy) - \$6,000,000 to purchase replacement buses
- Altamont Corridor Express (San Joaquin Regional Rail Commission) - \$9,593,211 to purchase rail cars for ACE service expansion

The bulk of funding for bus and rail improvements are expected to come from local, state, and federal funds.

Transportation Development Act (TDA) – The Mills-Alquist-Deddeh Act (SB 325) was enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination. Known as the TDA of 1971, this law provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans.

TDA established two funding sources: the Local Transportation Fund (LTF), and the State Transit Assistance (STA) fund. Providing certain conditions are met, counties with a population under 500,000 (according to the 1970 federal census) may also use the LTF for local streets and roads, construction and maintenance. The STA funding can only be used for transportation planning and mass transportation purposes.

- LTF is derived from a ¼ cent of the general sales tax collected statewide. The State Board of Equalization, based on sales tax collected in each county, returns the general sales tax

revenues to each county's LTF. Each county then apportions the LTF funds within the country based on population.

- STA funds are appropriated by the legislature to the State Controller's Office (SCO). The SCO then allocates the tax revenue, by formula, to planning agencies and other selected agencies. Statute requires that 50% of STA funds be allocated according to population and 50% be allocated according to transit operator revenues from the prior fiscal year.

FTA 5307 / 5939 – FTA 5307 and 5939 account for most of the FTA funding for transit.

- 5307 - The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census.
- 5339 - As authorized by 49 United States Code (U.S.C) Section 5339, the 5339 Program provides capital funding to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities. FTA apportions a discretionary component and a small urban (population 50,000 to 200,000) formula component to governors of each State annually. The California State Department of Transportation, Division of Rail and Mass Transportation (DRMT) has been delegated the designated recipient responsibilities by the Governor and is the direct recipient for these funds. DRMT administers these funding components to eligible sub-recipients which include: public agencies and private nonprofit organizations engaged in public transportation.

CMAQ - With passage of the Clean Air Act Amendments of 1990, the Congress made great strides in America's efforts to attain the National Ambient Air Quality Standards (NAAQS). The 1990 amendments required further reduction in the amount of allowable vehicle tailpipe emissions, initiated more stringent control measures in areas that still failed to meet the NAAQS-known as nonattainment areas-and provided for a stronger, more rigorous link between transportation and air quality planning. Congress passed the Intermodal Surface Transportation Efficiency Act-the ISTEA of 1991. The CMAQ program was created to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief.

Measure K - Voters first approved Measure K in 1990 for a 20-year period. Their trust was rewarded by more than \$735 million in transportation improvements in San Joaquin County. After experiencing the success and progress of Measure K, nearly 78% of San Joaquin voters renewed the sales tax in November 2006 for an additional 30 years.

Public Transportation Agency Safety Plans (PTASP)

Transit safety targets must be set every four years and be included in the MPO Regional Transportation Plan (RTP). The goals, objectives, performance measures, and targets from the transit providers' safety plans must also be integrated into the RTP, either directly or by reference.

The National Public Transportation Safety Plan identifies four performance measures that must be included: fatalities, injuries, safety events, and system reliability. Definitions for transit safety

performance measures are as described in the NTD Safety and Security Manual. Transit agencies based their performance measures and calculations off of FTA’s National Public Transportation Safety Plan and guidance. Each transit agency, except SJRRC, is required to make its PTASP performance targets to MPOs to assist in the planning process and coordinate, to the maximum extent practicable, with SJCOG in selecting its targets for TAM. SJCOG’s Interagency Transit Committee (ITC) was the platform for transit agencies to discuss their PTASPs; including targets. In addition, transit agencies provided adequate opportunities for SJCOG to review and comment on their PTASP-related materials, with the final product being made available to SJCOG.

Transit providers may choose to establish additional targets for safety performance monitoring and measurement. The following table documents existing performance targets set by transit operators in the SJCOG region. RTD, City of Lodi’s Grapeline, City of Manteca’s Transit, and City of Tracy’s Tracer each provided their PTASP targets. SJRRC falls under the Federal Railroad Jurisdiction’s Safety Jurisdiction designation; thus, is exempt from establishing a PTASP.

Public Transportation Agency Safety Plan (PTASP) Targets (Lodi Grapeline)							
Mode of Service	Fatalities	Fatalities (per 10 million VRM)	Injuries	Injuries (per 10 million VRM)	Safety Events	Safety Events (per 10 million VRM)	System Reliability
Fixed Route Bus Mode (MB)	0	0	0	0	0	0	14,648
Demand Response / ADA Paratransit Mode (DR)	0	0	0	0	0	0	6,258

Source: Grapeline PTASP

Public Transportation Agency Safety Plan (PTASP) Targets (Manteca Transit)							
Mode of Service	Fatalities	Fatalities (per 10 million VRM)	Injuries	Injuries (per 10 million VRM)	Safety Events	Safety Events (per 10 million VRM)	System Reliability
Motor Bus (MB)	0	0	0	0	0	0	4.51 per 100,000 miles
Demand Response / Paratransit (DR)	0	0	0	0	0	0	4.12 per 100,000 miles

Source: Manteca Transit PTASP

Public Transportation Agency Safety Plan (PTASP) Targets (Tracy Tracer)							
Mode of Service	Fatalities	Fatalities (per 10 million VRM)	Injuries	Injuries (per 10 million VRM)	Safety Events	Safety Events (per 10 million VRM)	System Reliability
Fixed Route Bus Mode (MB)	0	0	0	0	0	0	40,329
Demand Response / ADA Paratransit Mode (DR)	0	0	0	0	0	0	22,807

Source: Tracer PTASP

Public Transportation Agency Safety Plan (PTASP) Targets (RTD)							
Mode of Service	Fatalities	Fatalities (per 10 million VRM)	Injuries	Injuries (per 10 million VRM)	Safety Events	Safety Events (per 10 million VRM)	System Reliability
Motor Bus (Fixed Route)	0	0	12	97	171	1,385.1	6,096.4
Commuter Bus (Commuter Service)	0	0	0	0	13	22.8	387,539
Mobility Response (Mobility on Demand)	0	0	0	0	3	192	155,915.8
Demand Taxi (ADA / Paratransit)	0	0	1	47.4	1	47.4	211,191.9

Source: RTD Agency Safety Plan

SJCOG Efforts

Transit asset management are integral to the SJCOG planning and programming process. The RTP is built around eight policies and 30 supportive strategies, which include these performance measures as one of the primary building blocks of the Plan:

Policy: Maximize Mobility and Accessibility	
Strategy No. 5	Optimize the public transportation system to provide efficient and convenient access for users of all income levels
Strategy No. 6:	Encourage infill development and development near transit, including transit-oriented development to maximize existing transit investments

Strategy No. 7:	Provide transportation improvements to facilitate non-motorized travel, including incorporation of complete streets elements as appropriate
Policy: Increase Safety and Security	
Strategy No. 10:	Facilitate projects that reduce the number and severity of traffic incidents
Policy: Preserve Efficiency of the Existing Transportation System	
Strategy No. 13:	Prioritize projects that make more efficient use of the existing roadway network.
Strategy No. 16	Promote electric power, alternative fuels, and autonomous technologies for public transit

Transportation planning efforts begin with a preliminary analysis of the challenges facing the transportation system within the project area. In almost all cases, this ongoing effort continually identifies new issues and feeds them into the planning process. For example, SJCOG’s Regional Transit Systems Plan (RTSP) is a long-range transit plan that looks at bus and rail transit needs, their related costs, and details a financial forecast of anticipated funding through year 2024. The bus/rail transit operators in the county are as follows: San Joaquin Regional Transit District, San Joaquin Regional Rail Commission, and the cities of Escalon, Lodi, Manteca, Ripon, and Tracy. SJCOG’s Unmet Transit Needs (UTN) Report provides the general public opportunities to raise accessibility gaps in public transit. Cumulatively, SJCOG’s planning studies suggest strategies and recommend capital projects for the long-range Regional Transportation Plan and (RTP) for the Transportation Improvement Program (TIP). Multiple bus and rail improvements were outcomes of this regional planning process.

As previously mentioned, SJCOG strives to improve communication and coordination between public agencies and the public by identifying and engaging key transportation planning stakeholders. Through these stakeholder groups, SJCOG often identifies transit asset management issues critical to their interests. For example, SJCOG works closely with our member agencies (cities and county) and the California Department of Transportation in nominating projects for the SHOPP and the Highway Safety Improvement Program. We have an active SJCOG Citizen Advisory Committee that meet regularly. SJCOG planning staff regularly engage with these committees, public health agencies, and bicycle coalitions interested in transportation safety issues specific to their missions. We also work closely with public transit operators, the SJCOG Interagency Transit Committee, and the Social Services Transportation Advisory Committee to identify transit operational improvements and have financed those projects through the Public Transportation Modernization, Improvement and Service Enhancement Program (PTMISEA).

Many of the projects programmed, under the 2022 RTP/SCS Bus Transit Improvements and Rail Corridor Improvements Categories, help improve transit asset management-related conditions. For more information, please see Appendix F.

Examples of the fleet procurement programmed into 2022 RTP/SCS projects includes:

- Etrans (City of Escalon) - \$1,000,000 for bus replacements, passenger amenities, and miscellaneous equipment
- Grapeline (City of Lodi) - \$30,000,000 to purchase replacement buses
- Manteca Transit (City of Manteca) - \$3,875,000 for enhancements for Manteca Transit buses

- Blossom Express (City of Ripon) - \$4,200,000 to purchase of replacement and expansion buses
- Regional Transit District (City of Stockton & San Joaquin County) - \$252,601,279 to purchase of replacement buses for all RTD services
- Tracer (City of Tracy) - \$6,000,000 to purchase replacement buses
- Altamont Corridor Express (San Joaquin Regional Rail Commission) - \$9,593,211 to purchase rail cars for ACE service expansion

The bulk of funding for bus and rail improvements are expected to come from local, state, and federal funds.

Transportation Development Act (TDA) – The Mills-Alquist-Deddeh Act (SB 325) was enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination. Known as the TDA of 1971, this law provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans.

TDA established two funding sources: the Local Transportation Fund (LTF), and the State Transit Assistance (STA) fund. Providing certain conditions are met, counties with a population under 500,000 (according to the 1970 federal census) may also use the LTF for local streets and roads, construction and maintenance. The STA funding can only be used for transportation planning and mass transportation purposes.

- LTF is derived from a ¼ cent of the general sales tax collected statewide. The State Board of Equalization, based on sales tax collected in each county, returns the general sales tax revenues to each county's LTF. Each county then apportions the LTF funds within the country based on population.
- STA funds are appropriated by the legislature to the State Controller's Office (SCO). The SCO then allocates the tax revenue, by formula, to planning agencies and other selected agencies. Statute requires that 50% of STA funds be allocated according to population and 50% be allocated according to transit operator revenues from the prior fiscal year.

FTA 5307 / 5939 – FTA 5307 and 5939 account for most of the FTA funding for transit.

- 5307 - The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census.
- 5339 - As authorized by 49 United States Code (U.S.C) Section 5339, the 5339 Program provides capital funding to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities. FTA apportions a discretionary component and a small urban (population 50,000 to 200,000) formula component to governors of each State annually. The California State Department of Transportation, Division of Rail and Mass Transportation (DRMT) has been delegated the designated recipient responsibilities by the Governor and is the direct recipient for these funds. DRMT administers these funding components to eligible sub-recipients which include: public agencies and private nonprofit organizations engaged in public transportation.

CMAQ - With passage of the Clean Air Act Amendments of 1990, the Congress made great strides in America's efforts to attain the National Ambient Air Quality Standards (NAAQS). The 1990 amendments required further reduction in the amount of allowable vehicle tailpipe emissions, initiated more stringent control measures in areas that still failed to meet the NAAQS-known as nonattainment areas-and provided for a stronger, more rigorous link between transportation and air quality planning. Congress passed the Intermodal Surface Transportation Efficiency Act-the ISTEA of 1991. The CMAQ program was created to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief.

Measure K - Voters first approved Measure K in 1990 for a 20-year period. Their trust was rewarded by more than \$735 million in transportation improvements in San Joaquin County. After experiencing the success and progress of Measure K, nearly 78% of San Joaquin voters renewed the sales tax in November 2006 for an additional 30 years.
