

2020 Project Performance Assessment beta indicators guide

Background

In response to board direction and input as well as federal and state emphasis on performance-based transportation planning and programming, SACOG staff has continued to enhance tools and methods to analyze transportation investments at the project-level.

The Project Performance Assessment (PPA) tool is a major component of SACOG's practice to provide quantitative indicators and other information that help inform regional decision making. The tool draws on multiple data sources to give a consistent and transparent baseline to measure performance for different transportation projects across the region, is online and open for any to use, and has been used as part of the 2018 and 2019 funding rounds to both streamline the data component for applicants as well as improve transparency in performance-based programming. See the [2018 version PPA documentation](#) for a full explanation of the tool, and its use to date.

Since its initial rollout in the 2018 funding round SACOG staff conducted a self-assessment of the first iteration of the PPA tool. This review has also incorporated valuable comments provided by project sponsors and other users of the tool. SACOG has recently completed updates to its Project Performance Assessment tool and is seeking comments on the 2020 version through an open beta period. The beta period closes on May 15, 2020.

This guide first discusses at a high level the changes to the 2020 version of the tool, and then provides a description of each of the beta indicators by program. SACOG will release full documentation of the tool following the beta period (and incorporating comments from the beta period).

Part 1. Major changes to PPA tool

The largest change for a project sponsor is that the 2020 PPA tool now reports different data indicators based on project type and funding program, as reported in the tables below. The Regional Program allows the user to choose from three possible categories: 1) freeways, 2) road maintenance and complete streets, or 3) transit or road expansion (Note that transit state of good repair projects, such as bus or light rail vehicle replacements, do not use the PPA tool, as there is not a geographic component to these projects. Transit state of good repair projects instead use the separate Transit Asset Management). Sponsors using PPA for the Community Design program will use a separate application of the tool with its own performance outcomes. This new functionality responds to feedback from users of the 2018 tool to better account for different project types, in particular, freeway projects which have vastly different travel sheds.

2020 Project Performance Assessment: Beta Indicators by Project Type for Regional Program

	Freeways	Maintenance and Complete Streets	Transit and Road Expansion
Performance Outcome	Indicators by Project type		
Reduce VMT/capita	-transit trips -avg vehicle occupancy on project	-density -land use diversity -point of interest (POI) accessibility	-change in jobs + DUs -change in land use diversity -POI accessibility
Reduce congested VMT/ capita	- congestion severity - travel reliability	- congestion severity - travel reliability	- congestion severity - travel reliability -growth in project corridor
Increase multi-modal travel	-transit person-trips on segment	-street connectivity -bike network connection -transit activity	-street connectivity -bike network connection -transit activity
Econ prosperity (jobs)	-job access	-job access	-job access -job growth
Econ prosperity (schools)	-school access -school enrollment	-school access -school enrollment	-school access -school enrollment
Econ prosperity (agriculture)	-ag intensity near project	-agricultural intensity near project	-agricultural intensity near project
Improve freight movement	-STAA truck route -truck mode share	-STAA truck route -industrial jobs share	-STAA truck route -industrial jobs share -industrial job growth
Safety	-total collisions -collision rate	-total collisions -collision rate -bike/ped rate	-total collisions -collision rate -bike/ped rate
Maintain State of Good Repair	-SHOPP program	-PCI -volumes -Complete Street index	-PCI -volumes
Socioeconomic Equity	-Replica post-processing indicators	-EJ population -EJ percent -EJ accessibility	-EJ population -EJ percent -EJ accessibility

2020 Project Performance Assessment: Beta Indicators for Community Design program

Blueprint Principle	Indicator
Transportation Choice	Transportation mode split for residents within half mile of corridor, 2016 and 2040
Compact Development	Combined jobs and housing units within half mile of project location, 2016 and 2040
Mixed-Use Development	Land Use Diversity Index within 1 mile of project location, 2016 and 2040
Housing Choice	Housing type mix within 1 mile of project location, 2016 and 2040
Use Existing Assets	Travel time accessibility to neighborhood amenities by transportation mode, 2016 only Infill/greenfield project location
Preserve Natural Resources	Combined acres of forest, agricultural land and park/open space within half mile of project location, 2016 and 2040
Quality Design	No quantitative indicators

Brief explanation of the different tool applications

The current framing for the beta tool is that sponsors applying to SACOG’s Regional Funding Program would select one of the three project types (freeway, maintenance/complete streets, expansion). These three project types use different indicators to measure the program’s performance outcomes. Projects applying to Community Design would use the separate Community Design version of the tool regardless of project type.

- Freeway project type (first of three project types in Regional Program). Any project primarily on a highway or freeway would use this category. As explained below, the indicators in this category look much more at the facility itself, and less at the surrounding land uses.
- State of Good Repair/Maintenance project type (second of three project types in Regional Program). This includes road rehabilitation projects, projects adding bike lanes and other active transportation amenities to existing facilities, other complete streets projects. As the project serves to maintain and enhance existing communities and networks, most of the indicators draw on data for existing conditions. As discussed above, the PPA does not assess transit vehicle replacement projects.

- Transit or arterial expansion project type (third of three project types in Regional Program). This includes any project that adds roadway capacity (i.e., adding an additional lane to a road, or building a new facility) or any new transit service (both bus and rail). As these projects add to the regional transportation network, the PPA brings in data both on existing conditions as well as projected change in the project corridor.
- Community Design. Sponsors applying to the Community Design program use this category regardless of project type, as Community Design has a separate set of performance outcomes and indicators.

Other changes to beta 2020 version

- More visualization of data upfront that allows project sponsors to explore different data layers prior to running the tool. This responds to user feedback to have a testing phase of different projects
- Augmented observed data, including congestion, reliability, safety, and land use
- Improvements to project buffer approach and indicators based on project type (especially freeway, arterial and complete streets)
- Expanded number of place types, allowing for fuller comparisons to projects in similar contexts (e.g., rural main street projects compared to other rural main street projects, suburban corridors compared to other suburban corridors, etc)
- Optional ability to test pilot functionality, such as observed data on project travel sheds or how travel times change to jobs or other amenities. This additional functionality is not included in the beta version, but will be available as an optional component later in the year
- Improvements to the online tool stability, continuing the ability of anyone with an internet browser to run the tool and see the data results
- Limited number of indicators by performance outcome (moving from up to 5 per outcome to 2 or 3). Part 2 of this document describes each of the indicators in the beta version.

Project sponsors also expressed the desire for the tool to provide better information on how more regionally-serving projects relate to parallel facilities. The tool can be used to bring forward the data on parallel facilities through a series of runs. In the beta period staff is seeking feedback on how to best demonstrate this functionality and any other suggestions from project sponsors.

Part 2. Description of Beta Indicators

This section describes the performance outcomes and data indicators in the 2020 beta version.

The Regional Program has seven performance outcomes:

- Reduce regional VMT per capita
- Reduce regional congested VMT per capita
- Increase Multimodal Travel/Alternative Travel/Choice of Transportation options
- Provide long-term economic benefit within the region, recognizing the importance of sustaining urban, suburban, and rural economies
- Improve Goods Movement, including Farm-To-Market travel, in and through the region
- Significantly improve safety and security
- Demonstrate ‘State of Good Repair’ benefits that improve the efficiency of the existing transportation system.
- The program also includes equity indicators as a cross-cutting measure.

The Community Design program has a separate set of performance outcomes, based on the blueprint principles:

- Transportation choice
- Compact development
- Mixed-use development
- Housing choice
- Use existing assets
- Preserve natural resources
- Quality design

After the project sponsor inputs the project information into the online interface, the PPA tool will calculate data indicators for each of the above outcomes, based on project category.

Note for beta release: the beta version of the tool will report an excel file with all seven performance outcomes. The final version of the tool will report just the subset selected by the applicant. Projects will only be evaluated on the outcomes selected.

Definitions

<i>Performance Outcome:</i> one of the seven outcomes used in the funding round to support MTP/SCS implementation

<i>Indicator:</i> specific data to evaluate performance on the given outcome. Each outcome has two to three data indicators

Importantly, the PPA tool provides regional and place type averages on each indicator. The community type average is an important part of the evaluation framework, where projects are compared relative to size and community type. The 2020 version has expanded the number of community types to better reflect the diversity of the region.

Regional Program Performance Outcomes

Performance Outcome #1. Regional Reduction in VMT Per Capita

A vehicle mile traveled, or VMT, is one vehicle traveling on a roadway for one mile. Each vehicle traveling on a roadway within the Sacramento region generates one VMT for each mile it travels, regardless of how many people are traveling in the vehicle.

Freeway VMT Indicators

Indicator: Daily Transit Person-Trips

Facility or Buffer: Facility

Year: 2016 and 2040

Description: This indicator estimates daily transit trips on the facility, both for current conditions (2016) and future conditions (2040).

Indicator: Average Weekday Vehicle Occupancy

Facility or Buffer: Facility

Year: 2016 and 2040

Description: This measure estimates the average number of travelers per passenger vehicle, using the SACSIM travel model. The indicator reports for current conditions (2016) as well as future conditions in the MTP/SCS (2040) with the project built. Elements such as HOV lanes can increase the number of passengers per vehicle and thus reduce VMT/capita.

Maintenance/Complete Streets VMT Indicators

Indicator: Combined jobs and dwelling units per acre of project travel shed

Facility or Buffer: Buffer

Year: 2016

Description: This indicator measures current density (combined jobs and dwelling units per acre) of the land uses surrounding the project, compared to those in a similar place type. Projects serving areas of higher relative density can support lower VMT/capita. As the projects within the maintenance/ complete streets category focus on serving existing communities, indicators in this outcome focus primarily on current conditions.

Indicator: Land Use Diversity index (0 to 1, with a higher score more reflective of diverse land uses)

Facility or Buffer: Buffer

Year: 2016

Description: The land use diversity index measures an area's ratio of households compared to neighborhood activities (K-12 enrollment, park acreage, and employment in the retail, service and food sectors). A score of 1 indicates an 'ideal' ratio of households to amenities that people use on a daily basis like shopping, restaurants, schools, etc. Areas with a mix of land uses increase the likelihood that vehicle trips are shorter per capita and can also be served by active transportation modes. The land use diversity uses a buffer of 1 mile, instead of the shorter 0.5 mile buffer used in other buffer metrics.

Indicator: Point of Interest Accessibility

Facility or Buffer: Facility

Year: 2019

Description: The point of interest accessibility measure quantifies some of the land use characteristics shown in the above measure. This metric estimates the number of neighborhood services a user can access on the facility, by different travel modes. The metric defines these “points of interest” as parks, K-12 schools, higher education facilities, libraries, hospitals, other medical facilities, pharmacies, grocery stores, retail clothing stores and banks.

Road/Transit Expansion VMT Indicators

Indicator: Combined jobs and dwelling units per acre of project travel shed

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: This indicator measures current density (combined jobs and dwelling units per acre) of the land uses surrounding the project, as well as the projected density in the horizon year of the current MTP/SCS (2040). This helps show if the project is serving an area that is increasing its density over time.

Indicator: Land Use Diversity index (0 to 1, with a higher score more reflective of diverse land uses)

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: The land use diversity index measures an area’s ratio of households compared to neighborhood activities (K-12 enrollment, park acreage, and employment in the retail, service and food sectors) for both current and forecast conditions. A score of 1 indicates an ‘ideal’ ratio of households to amenities that people use on a daily basis like shopping, restaurants, schools, etc. Areas with a mix of land uses increase the likelihood that vehicle trips are shorter per capita and can also be served by active transportation modes. The land use diversity uses a buffer of 1 mile, instead of the shorter 0.5 mile buffer used in other metrics.

Indicator: Point of Interest Accessibility

Facility or Buffer: Facility

Year: 2019

Description: The point of interest accessibility measure quantifies some of the land use characteristics shown in the above measure. This metric estimates the number of neighborhood services a user can access on the facility, by different travel modes. The metric defines these “points of interest” as parks, K-12 schools, higher education facilities, libraries, hospitals, other medical facilities, pharmacies, grocery stores, retail clothing stores and banks.

Performance Outcome #2. Regional Reduction in Congested VMT Per Capita

Freeway Congestion Indicators

Indicator: Traffic congestion ratio (lower the ratio, higher the congestion issue)

Facility or Buffer: Facility

Year: 2018

Description: This indicator uses observed speed data to compare travel speed on the facility during its slowest four-hour period to its free-flow speed. Often this slowest period overlaps with peak period travel, but not all facilities have their slowest travel during peak period. The tool will use the slowest four-hour segment regardless of it is in the peak period or not. The tool defines free-flow speed as the 85th percentile speed between the hours of 8pm and 6am, which is meant to reflect conditions where there is no traffic congestion. The lower the ratio of congested speed to free-flow speed, the more severe the congestion during the slowest time of day. For example, if a facility has a free-flow speed of 60mph, and its slowest speed during the day is 50mph, its congestion score would be .83 (50/60). A facility that has a free-flow speed of 60mph and its slowest speed is 30mph would have a congestion score of 0.5, and would thus have a higher congestion severity in the PPA tool.

Indicator: Travel time reliability (higher the ratio, the less reliable the facility)

Facility or Buffer: Facility

Year: 2018

Description: This indicator uses observed speed data to compare the 80th percentile travel time on the facility to the 50th percentile (or median) travel time. For example, if half of all trips take 10 minutes or fewer on the facility, and 80 percent of all trips take 15 minutes or fewer, the travel time reliability indicator is 1.5 (15/10). The higher the ratio, the less reliable the facility. Both these congestion indicators come from MAP-21 performance rules. MAP-21 considers a corridor “unreliable” if its ratio is more than 1.5

Maintenance/Complete Streets Congestion Indicators

Indicator: Traffic congestion ratio (lower the number, higher the congestion issue)

Facility or Buffer: Facility

Year: 2018

Description: This is the same indicator as that used for freeway projects (see description above). The lower the congestion ratio, the more severe the speed degradation.

Indicator: Travel time reliability (higher the ratio, the less reliable the facility)

Facility or Buffer: Facility

Year: 2018

Description: This is the same indicator as that used for freeway projects (see description above). The higher the reliability ratio, the less reliable the facility given the observed data.

Expansion Congestion Indicators

Indicator: Traffic congestion ratio (lower the number, higher the congestion issue)

Facility or Buffer: Facility

Year: 2018

Description: This is the same indicator as that used for freeway projects (see description above). The lower the congestion ratio, the more severe the speed degradation.

Indicator: Travel time reliability (higher the ratio, the less reliable the facility)

Facility or Buffer: Facility

Year: 2018

Description: This is the same indicator as that used for freeway projects (see description above). The higher the reliability ratio, the less reliable the facility given the observed data.

Indicator: Growth in jobs and dwelling units

Facility or Buffer: Buffer

Year: 2040 compared to 2016

Description: The first two congestion metrics used across all project types (above) speak to existing congestion and reliability needs. For projects applying under the expansion category the PPA tool also brings forward data about the projected growth in the corridor, i.e., future contributing factors of congestion based on the growth of the MTP/SCS.

Performance Outcome #3. Increase in Multimodal Travel/Alternative Travel/Choice of Transportation Options

Freeway Multi-modal Indicators

Indicator: Daily Transit Person-Trips

Facility or Buffer: Facility

Year: 2016 and 2040

Description: This indicator estimates daily transit trips on the facility, both for current conditions (2016) and future conditions (2040). Outcome #1, Reduce VMT per Capita, also uses this same indicator.

Maintenance/Complete Streets Multi-modal indicators

Indicator: Street Connectivity

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the number of 3 and 4-way intersections per acre of the project travel shed. It also gives a comparison to the community and regional average. As projects in this category are about serving existing communities and uses, this measure looks at current conditions.

Indicator: Bike path/lane coverage

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the percent of existing network centerline miles in the project buffer shed that are either off-street bike paths or streets with bike lanes. This quantitative metric, combined with the report's mapping of existing active transportation infrastructure, helps shed light on the network effect/gap closure potential of the project.

Indicator: Transit activity

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports weekday transit 'stop activity' per acre of the project buffer. In this definition, a transit stop is not simply a stop location, but also how frequently transit serves the location. For example, an area with five transit stops with frequencies of 30 minutes each has a higher transit activity indicator than a same-sized area with five transit stops with frequencies of an hour. Note that while the measure gets at existing transit activity, it does not give information on how many individuals use this service.

Expansion Projects Multi-modal Indicators

Indicator: Street Connectivity

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the number of 3 and 4-way intersections per acre of the project travel shed. It also gives a comparison to the community and regional average. As projects in this category are about serving existing communities and uses, this measure looks at current conditions.

Indicator: Bike path/lane coverage

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the percent of existing network centerline miles in the project buffer shed that are either off-street bike paths or streets with bike lanes. This quantitative metric, combined with the report's mapping of existing active transportation infrastructure, helps shed light on the network effect/gap closure potential of the project.

Indicator: Transit activity

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports weekday transit 'stop activity' per acre of the project buffer. In this definition, a transit stop is not simply a stop location, but also how frequently transit serves the location. For example, an area with five transit stops with frequencies of 30 minutes each has a higher transit activity indicator than a same-sized area with five transit stops with frequencies of an hour. Note that while the measure gets at existing transit activity, it does not give information on how many individuals uses this service.

Performance Outcome #4. Provide Long-Term Economic Benefit within the Region, Recognizing the Importance of Sustaining Urban, Suburban and Rural Economies

Outcome #4 has three sub-outcomes: job accessibility, school accessibility, and agricultural economy. Project sponsors can select one of these three to speak to how the project supports the themes of the MTP/SCS and Prosperity Strategy.

Job Accessibility Indicators

Freeway

Indicator: Jobs accessible within 30-minute car trip

Facility or Buffer: Facility

Year: 2019

Description: This measure calculates the average number of jobs reached in within 30 minutes using the facility. Projects that improve accessibility to more jobs are more supportive of the performance outcome.

Maintenance/Complete Streets

Indicator: Jobs accessible by mode

Facility or Buffer: Facility

Year: 2019

Description: This measure calculates the average number of jobs reached using the facility, by transportation mode. Drive, walk and bike trips use a 30 minute threshold while transit trips use a 45 minute threshold. Like all projects in this category, the tool gives a community type and regional average as point of comparison.

Expansion

Indicator: Jobs accessible by mode

Facility or Buffer: Facility

Year: 2019

Description: This measure calculates the average number of jobs reached using the facility, by transportation mode. Drive, walk and bike trips use a 30 minute threshold while transit trips use a 45 minute threshold. The beta tool also gives a community type and regional average as point of comparison.

Indicator: Job growth

Facility or Buffer: Buffer

Year: 2040 compared to 2016

Description: This measure reports the estimated job growth in the project corridor by the horizon year of the MTP/SCS.

Educational Accessibility Indicators

Freeway

Indicator: Educational facilities accessible within 30 minute car trip

Facility or Buffer: Facility

Year: 2019

Description: This measure calculates the average number of educational facilities (k-12 schools plus higher education) reached in within 30 minutes using the facility. Projects that improve accessibility to more locations are more supportive of the performance outcome.

Maintenance/Complete Streets

Indicator: K-12 Enrollment

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the number of K-12 enrollments within 0.5 mile buffer of the facility. It reports the absolute number of students, not the individual facilities.

Indicator: Educational facilities accessible by mode

Facility or Buffer: Facility

Year: 2019

Description: This measure calculates the average number of educational facilities (k-12 schools plus higher education) reached using the facility, by transportation mode. Drive, walk and bike trips use a 30 minute threshold while transit trips use a 45 minute threshold.

Expansion

Indicator: K-12 Enrollment

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the number of K-12 enrollments within 0.5 mile buffer of the facility. It reports the absolute number of students, not the individual facilities.

Indicator: Educational facilities accessible by mode

Facility or Buffer: Facility

Year: 2019

Description: This measure calculates the average number of educational facilities (k-12 schools plus higher education) reached using the facility, by transportation mode. Drive, walk and bike trips use a 30 minute threshold while transit trips use a 45 minute threshold.

Agricultural Economy Indicators

Freeway

Indicator: none

Facility or Buffer: N/A

Year: N/A

Description: Freeway projects do not select the improve agricultural economy sub performance outcome

Maintenance/Complete Streets and Expansion projects

Indicator: Agriculture intensity

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: Both categories uses the same indicator. This indicator reports the share of acreage within 0.5 miles of the project that are in agriculture uses, both currently (2016) and in 2040. Projects with high existing agricultural uses that are preserved moving forward are most supportive of the outcome. Projects serving areas converting agricultural land to other uses do not support this outcome.

Performance Outcome #5. Improve Goods Movement, Including Farm-To-Market Travel, In and Through the Region

Freeway Indicators

Indicator: Percent of project that is on federally-recognized STAA truck route

Facility or Buffer: Facility

Year: 2018

Description: This measure gives the amount of the facility that falls within the STAA truck route network. Generally freeway projects will be 100% on the STAA network.

Indicator: Truck volumes

Facility or Buffer: Facility

Year: 2016

Description: This data comes from the Caltrans 2016 truck counts point file. Projects with higher truck volumes relative to other regional corridors demonstrate a stronger freight need.

Maintenance/Complete Streets Indicators

Indicator: Percent of project that is on federally-recognized STAA truck route

Facility or Buffer: Facility

Year: 2018

Description: This measure gives the amount of the facility that falls within the STAA truck route network. Arterials and other streets will vary in their coverage of the STAA network.

Indicator: Share of jobs in within industrial sectors

Facility or Buffer: Facility

Year: 2016

Description: This measure reports the share of employment within the project buffer that fall within industries heavily reliant on freight. These include manufacturing, logistics and ag-related industries.

Expansion Indicators

Indicator: Percent of project that is on federally-recognized STAA truck route

Facility or Buffer: Facility

Year: 2018

Description: This measure gives the amount of the facility that falls within the STAA truck route network. Arterials and other streets will vary in their coverage of the STAA network.

Indicator: Share of jobs in within industrial sectors

Facility or Buffer: Facility

Year: 2016

Description: This measure reports the share of employment within the project buffer that fall within industries heavily reliant on freight. These include manufacturing, logistics and ag-related industries.

Indicator: industrial job growth

Facility or Buffer: buffer

Year: 2040 compared to 2016

Description: This measure reports the estimated job growth within the project corridor in freight-dependent industries over the course of the MTP/SCS.

Performance Outcome #6. Significantly Improve Safety and Security

Freeway Indicators

Indicator: Total collisions

Facility or Buffer: Facility

Year: 2014-2018

Description: This data comes from TIMS, and reports the total number of collisions on the facility resulting in an injury or fatality (i.e., the data does not include 'property-damage only' incidents which do not involve an injury).

Indicator: Collision rate (total collisions/ 1 million VMT)

Facility or Buffer: Facility

Year: 2014-2018

Description: Following the guidance from the federal performance rules, the PPA also includes a rate-based measure of total collisions on the corridor per 1 million vehicle miles traveled. This data comes from TIMS, also for the years 2014-2018, and reports the total number of collisions on the facility resulting in an injury or fatality (i.e., the data does not include 'property-damage only' incidents which do not involve an injury).

Maintenance/Complete Streets and Expansion Project Indicators

Indicator: Total collisions

Facility or Buffer: Facility

Year: 2014-2018

Description: This is the same indicator as used for freeways, discussed above.

Indicator: Collision rate (total collisions/ 1 million VMT)

Facility or Buffer: Facility

Year: 2014-2018

Description: This is the same indicator as used for freeways, discussed above. Projects in the maintenance/complete streets category also include a rate comparison to the community-type and regional average.

Indicator: Rate of fatal collisions and of collisions involving a pedestrian or cyclist

Facility or Buffer: Facility

Year: 2014-2018

Description: This indicator reports what percentage of all TIMS incidents resulted in a fatality, as well as those involving a pedestrian or bicyclist. It gets at the severity of the facility's collision history.

Performance Outcome #7. Demonstrate 'State of Good Repair' Benefits That Improve the Efficiency of the Existing Transportation System

Freeway Indicators

Indicator: none

Facility or Buffer: N/A

Year: N/A

Description: The PPA tool does not have a state of good repair metrics for freeway projects, as there are separate programs for freeway maintenance.

Maintenance/Complete Streets Indicators

Indicator: Pavement Condition Index

Facility or Buffer: Facility

Year: Sponsor Provided (most current)

Description: The project sponsor provides the most current Pavement Condition Index (PCI) score for the facility.

Indicator: Volumes

Facility or Buffer: Facility

Year: Sponsor Provided (most current)

Description: The project sponsor provides the most current average daily volumes on the facility.

Indicator: Complete Street Index (higher the number higher potential for complete street uses)

Facility or Buffer: Buffer

Year: 2016

Description: Projects applying in the maintenance/complete streets category also have an indicator on complete street characteristics. The complete streets index is based on the densities of students, transit service, jobs, and dwelling units within a half mile of the project location and also draws on the project's posted speed limit. A higher index score means higher densities of these input factors, where many different users (bike, walk, transit, drive) are more likely to use the complete streets treatments. As posted speed limit increases beyond 40mph, the index will fall (all else being equal), as higher vehicle speeds are less conducive to the street serving multiple users.

Expansion Project Indicators

Indicator: Pavement Condition Index

Facility or Buffer: Facility

Year: Sponsor Provided (most current)

Description: The project sponsor provides the most current Pavement Condition Index (PCI) score for the facility.

Indicator: Volumes

Facility or Buffer: Facility

Year: Sponsor Provided (most current)

Description: The project sponsor provides the most current average daily volumes on the facility.

Cross-cutting outcome: Socioeconomic Equity

Freeway Indicators

Indicator: optional Replica analysis

Facility or Buffer: Facility travel shed

Year: 2019

Description: Freeway projects will have the option to run the Replica tool to estimate how the project serves disadvantaged communities. This Replica functionality is not part of the beta testing of the tool.

Maintenance/Complete Streets and Expansion Project Indicators

Indicator: environmental justice population

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the number of residents within a half mile buffer of the project that fall under SACOG's environmental justice definition.

Indicator: environmental justice proportion

Facility or Buffer: Buffer

Year: 2016

Description: This indicator reports the percentage of residents within a half mile buffer of the project that fall under SACOG's environmental justice definition.

Indicator: Accessibility for disadvantage populations

Facility or Buffer: Facility

Year: 2019

Description: This indicator reports how many different types of activities (all jobs, entry-level jobs, educational facilities and points of interest) members of environmental justice communities can access in a given time threshold using the facility. The measure is weighted based on the population that lives both within a half mile of the project segment and within an environmental justice area.

Community Design Performance Outcomes

The Community Design program uses the seven blueprint principles as its performance outcomes. The beta version of the 2020 tool has produced data indicators within each of these outcomes, except for quality design, which is a more qualitative assessment.

Transportation Choice

Indicator: transportation mode share for residents within half mile of project

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: This indicator estimates the travel characteristics of residents within the project buffer area, split into: walk, bike, drive alone, carpool, transit, and other trips. It reports both for current conditions (2016) as well as what the MTP/SCS envisions for the corridor by 2040. Note that the future year data is not an estimate of the impact of the project. Project sponsors will need to discuss how the proposed project either takes advantage of existing conditions or aligns/helps implement the plan.

Compact Development

Indicator: combined jobs and dwelling units within a half mile of project location

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: This is the same indicator used in the Regional Program. The 2016 data estimates current conditions in the project corridor, and the 2040 provides the MTP's project land use density. Note that the future year data is not an estimate of the impact of the project. Project sponsors will need to discuss how the proposed project either takes advantage of existing conditions or aligns/helps implement the plan.

Mixed-use Development

Indicator: land use diversity index within 1 mile of project location

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: This is the same indicator used in the Regional Program. The higher the value on the land use diversity index, the more evidence of mix of uses.

Housing choice

Indicator: housing product diversity within 1 mile of project location

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: This indicator reports the number of housing units within the project corridor in the following categories: high density, medium-high density, medium density, low density,

very low or rural residential density, and mixed-use. The density classifications come from SACOG's MTP/SCS, i.e., are a regional definition.

Use existing assets

Indicator: travel time accessibility to neighborhood points of interest

Facility or Buffer: Buffer

Year: 2019

Description: This indicator reports the number of different types of activities a user can reach in a given amount of time using the facility, by transportation mode. Drive, walk and bike trips use a 30 minute threshold and transit trips use a 45 minute threshold. The indicator uses the same definition of points of interest as the Regional Program. Since the measure is about existing assets, it does not provide a comparison to the predicted 2040 changes; instead, it provides a comparison to existing accessibility for projects in similar communities and the region as a whole.

Indicator: infill/greenfield community

Facility or Buffer: Buffer

Year: 2016

Description: This indicator draws on the land uses surrounding the project. If over 90 percent of the buffer area is in a developing, agricultural, rural residential or other non-urbanized land use, the project is considered greenfield. If 90 percent or more of the buffer area is in an established community or center and corridor, the project is considered infill. If the project is less in a mix of uses, the outcome reports the project spans both infill and greenfield areas. The land use designations come from the MTP/SCS.

Preserve Natural Resources

Indicator: acres of forest, agricultural land, or park/open space in project shed

Facility or Buffer: Buffer

Year: 2016 and 2040

Description: This indicator reports the combined forest, agricultural, park and other open space acreage in the project area, both currently and given the projected growth envisioned in the MTP/SCS. Projects that decrease the portion of open space do not support the preservation performance outcome.

Quality Design

Indicator: There is no data indicator for quality design, as it is a qualitative assessment