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SPECIAL MEETING
VALLEY VISION STANISLAUS (VVS) STEERING COMMITTEE
STANCOG BOARD ROOM
1111 I STREET, SUITE 308
MODESTO, CA
TUESDAY, SEPTEMBER 5, 2017
1:00 PM

NOTICE, CALL AND AGENDA

1.   **CALL TO ORDER**

2.   **ROLL CALL**

3. **PUBLIC COMMENTS**
These matters may be presented only by interested persons in the audience. Discussion is limited to five minutes or at the discretion of the Chair.

4. **CONSENT CALENDAR**

A. Motion to Approve VVS Minutes of 8-1-17

5. **DISCUSSION/ACTION ITEMS**

A. Motion to Recommend Policy Board Approve the 2018 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) Regional Demographic Forecasts and Performance Measures

B. Scenario 4 Follow Up (Verbal Report)

6. **EXECUTIVE DIRECTOR REPORT**

7. **MEMBER REPORTS**

8. **ADJOURNMENT**

Next VVS Meeting:
September 26, 2017 (Tuesday) @ 1:00 pm
StanCOG Board Room
1111 I Street, Suite 308
Modesto, CA

CONSENT CALENDAR

VALLEY VISION STANISLAUS STEERING COMMITTEE MEETING
StanCOG Board Room
1111 I Street, Suite 308
Modesto, CA

Minutes August 1, 2017 (Tuesday)
1:00 pm

MEMBERS PRESENT: James Michaels (City of Ceres); Jaylen French (City of
Hughson); Patrick Kelly (City of Modesto); Joel Andrews (City
of Patterson); Donna Kenney (City of Riverbank); Debbie
Whitmore (City of Turlock); Richard O'Brien (Policy Board
Representative); Chris Esther (Citizens Advisory Committee
Representative); Edgar Garibay (Environmental Justice
Representative); Sara Lytle-Pinhey (LAFCO)

ALSO PRESENT: Miguel Galvez (Stanislaus County); Rosa De León Park,
Elisabeth Hahn, Stephen Hanamaikai, Isael Ojeda, Debbie
Trujillo, Steve VanDenburgh (StanCOG); Jim Damkowitch
(Kimley Horn & Associates, Inc.); Chelsey Payne (Mintier
Harnish); Justin Adams (Encina Advisors); Matt Maddox (Rincon
Consultants); Kendall Flint (Regional Government Services);
Veronica Tovar (Catholic Charities)

1. **CALL TO ORDER**
    Chair Richard O'Brien called the meeting to order at 1:02 p.m.

2. **ROLL CALL**

3. **PUBLIC COMMENTS - None**

4. **CONSENT CALENDAR**

    A. **Motion to Approve Special VVS Minutes of 7-20-17**

        *By Motion (City of Riverbank/City of Turlock), and a unanimous vote, the
        Committee approved the minutes of 7-20-17.

5. DISCUSSION/ACTION ITEMS

A. Motion to Nominate FY 2017/18 Valley Vision Stanislaus Steering Committee Chair and Vice-Chair

Elisabeth Hahn provided members with a quick overview of the process to nominate a chair and vice-chair.

*By Motion (Sara Lytle-Pinhey/City of Turlock), and a unanimous vote, the Committee nominated Richard O'Brien and Patrick Kelly to continue as Chair and Vice-Chair for FY 2017/18 of the Valley Vision Stanislaus Steering Committee.

B. Motion to Recommend Policy Board Approve the Demographic Forecasts, Goals and Objectives, and Land Use Scenario Concepts for Development of the 2018 Regional Transportation Plan/Sustainable Communities Strategy

Elisabeth Hahn requested input from the Chair and members of the Committee on the process to review and approve each of the items for discussion that would be presented. Chair O'Brien suggested that each topic (Demographic Forecasts, Goals and Objectives, and Land Use Scenario Concepts) be presented along with discussion and then approval at the end. Elisabeth Hahn then introduced Jim Damkowitch to present the items up for discussion.

Jim Damkowitch introduced Chelsey Payne and Amy Yang of Mintier Harnish. He mentioned that meetings would be set up with each of the agencies in August to review development that had occurred since the 2014 RTP/SCS for development of the scenarios. He presented on the demographic forecasts that were developed by the University of Pacific (and that were distributed to the local jurisdictions in 2015 for their review) for use in the land use allocation and Envision Tomorrow analysis. He mentioned that the forecasts introduced the control totals for each jurisdiction, which was important in moving forward. He also said that the land use and health based performance metrics would be generated from the Envision Tomorrow analysis. He said the demographic projections would be put into the travel demand model which would generate the travel activity forecasts which would then generate on-road mobile source emissions. He said these forecasts would also provide input into the Environmental Justice Equity analysis.

Jim Damkowitch also mentioned that households, housing units, and employment would be discussed in the presentation. He said that the numbers which were provided were vetted through each of the jurisdictions to receive input. He then provided a comparison from the 2014 RTP and the development of the 2018 RTP. The City of Turlock representative stated that the figures were aggressive regarding growth in the City of Turlock and Chair O'Brien stated that Riverbank was not growing as fast either. Member b Esther who resides in the City of Waterford stated that the employment growth came in high. Members requested the numbers be corrected and asked what source the data was coming from. Mr. Damkowitch stated that his staff would make corrections for the outer years for the rate of growth and provide that information back to members at the next meeting.

He then went over the proposed changes of the Goals and Objectives. He mentioned that the 2017 Regional Transportation Plan Guidelines had been released by the California Transportation Commission (CTC). He said that due to the updates in the guidelines, staff was proposing additional goals and some modifications to a few existing goals. He mentioned that the proposed additions would include Smart Infrastructure, Reliability and Congestion, and Project Delivery. He went over the goals and any proposed edits on each. He stated the importance to augment Goal Three, Goods Movement and how the RTP could support the goal.

Member Garibay commented on Goal Two Social Equity and suggested to rearrange the goal to make it a little less confusing: Promote and provide equitable opportunities for all populations and ensure all populations share in the benefits of transportation improvements and provide a range of transportation and housing choices, such as access to transportation services. Staff agreed to consider his comments for revising the goal statement.

Veronica Tovar asked if the language under Goal 2 would specifically address disadvantaged communities and active transportation. She also asked if active transportation infrastructure could be added to the list under Goal 8 Smart Infrastructure. Jim Damkowitch responded by saying that the words "all populations" implied that disadvantaged communities were included.

The City of Turlock representative suggested it would be beneficial that the goal statements include "promote alternative modes". Jim responded by saying this comment could be addressed in Goal 1 Mobility and Accessibility.

Chair O'Brien suggested that Goal 1 include the words "by modes of transportation".

Chelsey Payne presented the land use scenario concepts and proposed themes. She mentioned that staff was proposing to carry forward the new trend scenario from the 2014 RTP/SCS, which was the baseline to the theme General Plan Trend. She then went over each of the themes and stated that Scenario 3 Intensified Infill and Alternative Mode Investments was a new concept that would further infill development with a slightly more compact footprint compared to Scenario 2. She said staff was requesting confirmation of the 2018 Proposed Scenario Themes so that staff could meet with local agency planning staff of each jurisdiction to go over the details of each of the scenarios.

Discussion amongst members took place regarding infill and redevelopment along the 99 Corridor and the jobs housing balance, and limited expansion of the cities. The City of Turlock representative suggested changing the focus of Scenario 4 to a job housing balance theme. Chelsey Payne responded that in place of Scenario 4, staff could consider a better jobs housing balance with the emphasis on the placement of jobs next to housing. She also said staff would take another look at the demographic projections and make adjustments to achieve a better jobs housing balance. Chair O'Brien commented that the goals should still be based on those adopted by the Policy Board from the 2014 RTP/SCS with additions and updates based on the

changes since the 2014 RTP/SCS. Ms. Payne responded that all the scenarios would be modified to reflect the changes in development over the past four years.

Chair O'Brien suggested that the discussion regarding the scenarios be continued to the next meeting in September. Ms. Payne responded that it would be important to continue the scheduled meetings with the local jurisdictions so that staff could come back with refined scenarios.

*By Motion (City of Modesto/Edgar Garibay), and a unanimous vote, the Committee approved the Goals and Objectives with the modification/rewording of Goals 1 and 2.

Jim Damkowitch presented the four scenario themes of 1) General Plan Trend, 2) Infill and Redevelopment, 3) Intensified Infill and Transit Investment, and 4) City Centric.

*By Motion (City of Riverbank/City of Patterson), and a unanimous vote, the Committee approved the four Scenario Themes presented.

6. **EXECUTIVE DIRECTORS REPORT - None**

7. **MEMBER REPORTS**
   Chair O'Brien reminded members that the next meeting would be held on September 5, 2017 at 1:00 p.m.

8. **ADJOURNMENT**
   Chair O'Brien adjourned the meeting at 2:35 p.m.

Next Regularly Scheduled VVS Meeting:
October 31, 2017 (Tuesday) @ 1:00 p.m.
StanCOG Board Room
1111 I Street, Suite 308
Modesto, CA

Minutes Prepared By:

Debbie Trujillo, Planning Technician

DISCUSSION & ACTION ITEMS

StanCOG
Stanislaus Council of Governments

TO:	Valley Vision Stanislaus Steering Committee (VVS)	**Staff Report**
		Motion
THROUGH:	Rosa De León Park, Executive Director	
FROM:	Elisabeth Hahn, Principal Planner	
DATE:	August 29, 2017	
SUBJECT:	2018 RTP/SCS Regional Demographic Forecasts and Performance Measures	

Recommendation

By Motion:

Recommend that the Policy Board review and approve for incorporation into the 2018 Regional Transportation Plan & Sustainable Community Strategy (RTP/SCS) the:

- Regional Demographic Forecast for Stanislaus County
- 2018 RTP/SCS Performance Measures

Background

Regional Demographic Forecast

Demographic forecasts are a key input to travel demand models used by regional agencies to inform and analyze the circulation and environmental implications of future transportation investments. As such, a requisite step towards developing the 2018 Regional Transportation Plan & Sustainable Community Strategy for the Stanislaus region is establishing the demographic forecast for the county.

The 2018 Demographic Forecasts were presented to the Valley Vision Stanislaus (VVS) Steering Committee at the August 1, 2017 committee meeting. Additional information was provided following the meeting to provide the members with an opportunity to further review the forecasts in greater detail and to consider the methodology that the University of Pacific employed for developing the projections. The 2016 Demographic Forecasts are being revisited at the September 5, 2017 meeting of the VVS Steering Committee for further discussion, with the aim of obtaining Steering Committee approval to proceed with employing the forecasts in

development of the 2018 RTP/SCS. The updated demographic forecasts will form the basis for the VMIP2 travel demand model land use inputs and provide local jurisdiction control totals in the EnvisionTomorrow land use allocation tool used for developing the 2018 RTP/SCS future year scenarios.

2018 RTP/SCS Performance Measures

A significant part of the reforms made by MAP-21 included transitioning to a performance-based program, including establishing national performance goals for Federal-aid highway programs. The FAST Act supports and continues this overall performance management approach, within which States and MPOs invest resources in projects that collectively will make progress toward national goals.

As explained in the California Transportation Commission's 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations, States and MPOs invest resources in projects to achieve individual targets that collectively make progress toward national goals.

National Goals & Performance Measures

The national performance goals for the Federal highway programs as established in MAP-21, in 23 U.S.C. Section 150(b), are as follows:

- Safety - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- Infrastructure Condition - To maintain the highway infrastructure asset system in a state of good repair.
- Congestion Reduction - To achieve a significant reduction in congestion on the National Highway System.
- System Reliability - To improve the efficiency of the surface transportation system.
- Freight Movement and Economic Vitality - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- Environmental Sustainability - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- Reduced Project Delivery Delays - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

National performance measures, employed to assess the progress toward the national goals, include:

1. Pavement conditions on the Interstate system and remainder of the National Highway System (NHS)
2. Bridge conditions on the NHS
3. Performance of the Interstate system and remainder of the NHS
4. Number and rate per vehicle mile traveled of fatalities
5. Number and rate per vehicle mile traveled of serious injuries

6. Traffic congestion
7. On-road mobile source emissions
8. Freight movement on the Interstate system
9. State of good repair
10. Safety

FHWA has issued separate rules for Safety Performance Measures; Pavement and Bridge Condition Measures; and, System Performance Measures that in turn establish a set of performance measures for Caltrans and MPOs to use as required by MAP-21.

State Goals & Performance Measures

In accordance with 23 CFR 450.324(f)(3), every RTP is to include a description of the performance measures and performance targets used in assessing the performance of the transportation system in accordance with §450.306(d), which requires that the long-range planning process provide for the establishment and use of a performance-based approach to transportation decision-making to support national goals.

Additionally, SB 375 requires MPOs to demonstrate how to achieve regional GHG emissions reduction targets, if feasible, established by the California Air Resources Board (ARB).

Pursuant to SB 743, the Governor's Office of Planning and Research is required to provide an alternative to Level of Service (LOS) for analyzing transportation impacts under the California Environmental Quality Act (CEQA) to more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions. MPOs are required to identify performance measures, according to available resources and capacity.

Regional Transportation Plans are developed to reflect regional and local priorities and goals and they are instruments that can be used by federal and state agencies to demonstrate how regional agency efforts contribute to those federal and state agencies meeting their own transportation system goals.

Discussion

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a performance-based plan; performance measures are used to evaluate how well the RTP/SCS addresses the adopted goals and performance outcomes.

A preliminary list of performance measures for the 2018 RTP/SCS has been assembled for discussion (see Attachment). The measures have been identified with consideration of state and federal requirements/rules and are identified in three categories: RTP/SCS, California Environmental Quality Act (CEQA) and SB 375 Compliance.

The 2018 RTP/SCS measures, once finalized, will be employed to integrate a performance-based approach into the broader planning process with the purpose of achieving regional, state, and federal system performance goals.

This meeting of the Valley Vision Stanislaus Steering Committee is being held to solicit input on the proposed performance measures and demographic forecasts, as the information is critical for advancing the 2018 RTP/SCS to the next phase. Once approved by VVS, the proposed approach will be presented for approval by the Policy Board.

Should you have any questions regarding this staff report, please contact Elisabeth Hahn, Principal Planner, by phone at (209) 525-4633 or via e-mail at ehahn@stancog.org.

Attachment:

1. Draft 2018 Valley Vision Stanislaus Performance Indicators

2018 Valley Vision Stanislaus Performance Indicators

Goal	Objective
Mobility & Accessibility	*Improve the ability of people and goods to move between desired locations; and provide a variety of modal and mobility options.*
Social Equity	*Promote equitable access to opportunities by ensuring all populations share in the benefits of transportation improvements and are provided a range of transportation and housing choices.*
Economic & Community Vitality	*Foster job creation, business attraction, retention and expansion by improving quality of life. Facilitate economic development and opportunities through infrastructure investments that support goods movement within and through the region, including but not limited to the county's strategic freight corridors.*
Sustainable Development Pattern	*Provide a mix of land uses and compact development patterns and encourage infill development to preserve agricultural land and natural resources*
Environmental Quality	*Consider environmental impacts when making transportation investments and minimize impacts on clean air and natural resources. Support infrastructure investments that facilitate vehicle electrification and the provision of electrification infrastructure in public and private parking facilities and structures.*
Safety & Health	*Operate and maintain the transportation system to ensure public safety and security; and improve the health of residents by improving air quality and providing more transportation options.*
System Preservation	*Maintain transportation system in a state of good repair; and protect investment by maximizing use of exisiting transportation facilities*
Smart Infrastructure	*Coordinate, monitor, and integrate planning and programming for intelligent transportation system (ITS), smart infrastructure, demand-responsive transportation, and automated vehicles.*
Reliability & Congestion	*Maintain or improve reliability of the transportation network and maintain or reduce congestion.*
Project Delivery	*Efficiently use available transportation funding to expedite project delivery of transportation improvements within the region for the benefit of residents of Stanislaus County and the traveling public in general.*

2018 Valley Vision Stanislaus Performance Indicators		
Metric	Method/Tool	Method and/or Measure of Effectiveness (MOE)
Mobility & Accessibility		
Improve the ability of people and goods to move between desired locations; and provide a variety of modal and mobility options.		
Average trip length	*Travel Demand Model*	*VMT/Trips by Trip Purpose (scripted)*
Percentage of transit/bike/walk trips per day (Also Environmental Quality and Safety & Health)	*Travel Demand Model*	*Trips by Mode (scripted)*
Daily hours of congestion	*Travel Demand Model*	*VHT Uncontrained Assignment - VHT Capacity Contrained Assignment*
Social Equity		
Promote equitable access to opportunities by ensuring all populations share in the benefits of transportation improvements and are provided a range of		
Percentage of housing/population within 1/2 mile of transit	*Transit Coverage GIS Tool*	*GIS / Land Use Data*
Percent of low/medium/high income population using improved roadways	*Travel Demand Model*	*Select Link Analysis on Major Capacity Increasing Projects (scripted)*
Percent of low/medium/high population seved within 1/2 mile by LOS D or better transit frequency	*Transit Coverage GIS Tool*	*GIS / Land Use Data*
Disparity in countywide housing-type stock	*Envision Tomorrow - GIS Spreadsheet Tool with GIS*	*Housing Forecast Data*
Availability and variety of housing at all economic levels	*Envision Tomorrow - GIS Spreadsheet Tool with GIS*	*GIS / Land Use Data*
Available housing for all forecasted growth by income level	*Envision Tomorrow - GIS Spreadsheet Tool with GIS*	*GIS / Land Use Data*
Average income for single-family housing		
Average income for attached housing		
Economic & Community Vitality		
Foster job creation, business attraction, retention and expansion by improving quality of life. Facilitate economic development and opportunities through		
Jobs-housing balance in region	*GIS / Land Use Data*	*GIS*
Vehicle hours of travel (VHT) on major goods movement corridors	*Travel Demand Model*	*Compute VHT on CMP Network Links (scripted)*
Vehicle hours of travel (VHT) on major goods movement corridors	*Travel Demand Model*	*Compute VHT on CMP Network Links (scripted)*
Sustainable Development Pattern		
Provide a mix of land uses and compact development patterns and encourage infill development to preserve agricultural land and natural resources		
Acres of land consumed per capita	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS / Land Use Spreadsheet Tool*
Percentage of new development as infill	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS / Land Use Spreadsheet Tool*
Overall residential density	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS / Land Use Spreadsheet Tool*
Total acres of land consumed	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS / Land Use Spreadsheet Tool*
Environmental Quality		
Consider environmental impacts when making transportation investments and minimize impacts on clean air and natural resources. Support infrastructure		
Greenhouse gas emissions (GHG) by 5% in 2020 and 10% in 2035 based on 2005 numbers	*Travel Demand Model/EMFAC*	*GHG Emissions / Population*
Total centerline miles of Class I, II and III bike facilities (Also Safety and Health)	*GIS / CIP Lists*	*Calculated within GIS*
Percentage of transit/bike/walk trips per day (Also Safety & Health)	*Travel Demand Model*	*Trips by Mode (scripted)*
Meet countywide emission budgets established for criteria pollutants	*Travel Demand Model/EMFAC*	*Criteria pollutant emissions relative to established emission budgets*
Safety & Health		
Operate and maintain the transportation system to ensure public safety and security; and improve the health of residents by improving air quality and		
Percentage of transit and bike/walk trips per day (Also Environmental Quality)	*Travel Demand Model / GIS*	*Trips by Mode (scripted)*
Percent of Population/Housing within 1/2 mile from Parks and Open Space	*GIS / Land Use Data*	*Park /Open Space Coverage GIS Tool - developed by KAI*
Percentage of households within 500' of major transportation corridor (> 100,000 ADT)	*GIS / Land Use Data*	*Coverage GIS Tool with Street Layer developed by KAI*
Accident rate per 100,000 vehicle miles traveled	*Travel Demand Model*	*Statewide Accident Rates * VMT*
Percent of Population Engaging in Walking for Leisure (Walk)	*Envision TomorrowTM - Health Module*	
Cumulative Total Minutes of Walking for Leisure (Week)	*Envision TomorrowTM - Health Module*	
Percent of Population Engaging in Recreational Activity (Day)	*Envision TomorrowTM - Health Module*	

Metric	Method/Tool	Method and/or Measure of Effectiveness (MOE)
Cumulative Total Minutes of Recreational Activity (Day)	*Envision TomorrowTM - Health Module*	
Average Body Mass Index (BMI)	*Envision TomorrowTM - Health Module*	
Percent of Population Classified as Overweight	*Envision TomorrowTM - Health Module*	
Percent of Population Classified as Obese	*Envision TomorrowTM - Health Module*	
Percent of Population with Poor General Health	*Envision TomorrowTM - Health Module*	
System Preservation		
Maintain transportation system in a state of good repair; and protect investment by maximizing use of exisiting transportation facilities		
Lane miles in need of rehabilitation	*Local Agency PMS / GIS*	*Local Agency PMS / GIS*
Smart Infrastructure		
Coordinate, monitor, and integrate planning and programming for intelligent transportation system (ITS), smart infrastructure, demand-responsive		
TBD		
Reliability & Congestion		
Maintain or improve reliability of the transportation network and maintain or reduce congestion.		
Congestion - Level of Service	*Travel Demand Model*	*Segment LOS Results (% of lane miles at LOS E or worse) - or v/c > .85*
Congestion (Federal Performance Rule) - Speed	*NPMRSD Data Processing*	*Congested Speed 60% or less of Free Flow Speed*
Level of Travel Time Reliability	*NPMRSD Data Processing*	*Buffer Time Index*
Project Delivery		
Efficiently use available transportation funding to expedite project delivery of transportation improvements within the region for the benefit of residents of		
FTIP Project Funding Obligation Status		

2018 Valley Vision Stanislaus Performance Indicators		
Metric	Method/Tool	Method and/or Measure of Effectiveness (MOE)
Environmental Quality		
Comply with CEQA		
Congested VMT, Peak Period Avg	*Travel Demand Model*	*Sgement LOS Results (% of lane miles at LOS E or worse) - or v/c > .85*
Transit Trips (Transit Ridership (Direct Trips))	*Travel Demand Model*	*Trips by Mode (scripted)*
Total VMT (passenger vehicles)	*Travel Demand Model*	
Total VMT (all transportation sources)	*Travel Demand Model*	
Per Capita VMT (passenger vehicles)	*Travel Demand Model*	
Per Capita VMT (all transportation sources)	*Travel Demand Model*	
Average Transit Time	*Travel Demand Model*	
CO2E Emissions (passenger vehicles)	*Emissions Model*	
CO2E Emissions (all transportation sources)	*Emissions Model*	
Smog-forming pollutants (ROG, NOx) (pounds per year)	*Emissions Model*	
PM10 and PM2.5 (pounds/year)	*Emissions Model*	
Diesel PM2.5 and PM10, and diesel NOx and SOx	*Emissions Model*	
Impacts to sensitive habitat areas & open space (acres)	*GIS/Land Use Data*	
Impacts to farmland resources (acres)	*Envision Tomorrow - GIS Spreadsheet Tool*	
Impacts to Williamson Act designated lands (acres)	*GIS/Land Use Data*	
Designated and Eligible State Scenic Highways	*GIS/Land Use Data*	
Distribution of RTP/SCS Investments	*Financial CIP*	
% of Population w/I 1/2 mile of Transit Stop (Income: Low, Med, High)	*GIS/Land Use Data*	*Transit Coverage GIS Tool*
Lane Miles (Classification: Freeway, Highway, Expressway)	*Travel Demand Model*	

2018 Valley Vision Stanislaus Performance Indicators		
Metric	Method/Tool	Method and/or Measure of Effectiveness (MOE)
SB 375 Compliance		
Demographics		
Total Population		
Group quarterns population		
Total employment (employees)		
Average unemployment rate (%)		
Total number of households		
Persons per household		
Auto Ownership per household		
Median household income		
Land Use		
Total acres w/I MPO	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total reource area acres (CA GC Section 65080.01)	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total farmland acres (CA GC Section 65080.01)	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total developed acres (Commerical and Residential)	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total housing units	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Housing vacancy rate	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total single-family detached housing units (Small, Conventional, Large)	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total single-family attached housing units	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total multi-family housing units	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total infill housing units	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total mixed use buildings	*Envision Tomorrow - GIS Spreadsheet Tool*	*GIS/Land Use Data*
Total housing units w/I 1/4 mile of transit stations and stops	*GIS/Land Use Data*	*Transit Coverage GIS Tool*
Total housing units w/I 1/2 mile of transit stations and stops	*GIS/Land Use Data*	*Transit Coverage GIS Tool*
Total employment w/I 1/4 mile of transit stations and stops	*GIS/Land Use Data*	*Transit Coverage GIS Tool*

Metric	Method/Tool	Method and/or Measure of Effectiveness (MOE)
Total employment w/I 1/2 mile of transit stations and stops	*GIS/Land Use Data*	*Transit Coverage GIS Tool*
Transportation		
Freeway general purpose lanes - mixed flow lane miles (Highway, Expressway, HOV, Arterial, Collector, Local, Freeway-Freeway)		
Local, express bus, and neighborhood shuttle operation miles		
Bus rapid transit bus operation miles		
Passenger rail operation miles		
Transit total daily vehicle service hours		
Bicycle and pedestrian trail/lane miles	*GIS/CIP Lists*	*Calculated within GIS*
Vanpool (total riders per weeday)		
Trip Data		
Number of trips by trip purpose (Home-based work; Home-based other; Non-home-based work; Non-home-based other)	*Travel Demand Model*	*VMT/Trips by Trip Purpose (scripted)*
Mode Share		
Vehicle Mode Share (Peak Period): % of trips: SOV, HOV, Transit, Non-Motorized	*Travel Demand Model/GIS*	*Trips by Mode (scripted)*
Vehicle Mode Share (Whole Day): % of trips: SOV, HOV, Transit, Non-Motorized	*Travel Demand Model/GIS*	*Trips by Mode (scripted)*
Average weekday trip length (miles): SOV, HOV, Transit, Walk, Bike	*Travel Demand Model/GIS*	*Trips by Mode (scripted)*
Average weekday travel time (minutes): SOV, HOV, Transit, Walk, Bike	*Travel Demand Model*	*VMT/Trips by Trip Purpose (scripted)*
Travel Measures		
Total VMT per weekday for passenger vehicles (ARB vehicle classes of LDA, LDT1, LD2 and MDV) (miles): Total II (Internal), Total IX/XI, Total XX	*Travel Demand Model*	*VMT/Trips by Trip Purpose (scripted)*
Congested Peak Hour VMT on freeways (Lane Miles, V/C ratios > 0.75)	*Travel Demand Model*	*Segment LOS Results (% of lane miles at LOS E or worse) - or v/c > .85*
Congested Peak Hour VMT on all other roadways (Lane Miles, V/C ratios > 0.75)	*Travel Demand Model*	*Segment LOS Results (% of lane miles at LOS E or worse) - or v/c > .85*
CO_2 Emissions		
Total CO_2 emissions per weekday for passenger vehicles (ARB vehicle classes of LDA, LDT1, LD2 and MDV) (miles): Total II (Internal), Total IX/XI, Total XX	*Travel Demand Model/EMFAC*	*GHG Emissions/Population*
Investments (Billions)		
Total RPT Expenditure (Year XXX $)	*CIP List*	
Highway capacity expansion ($)	*CIP List*	
Other road capacity expansion ($)	*CIP List*	
Roadway maintenance ($)	*CIP List*	

Metric	Method/Tool	Method and/or Measure of Effectiveness (MOE)
BRT projects ($)	*CIP List*	
Transit capacity expansion ($)	*CIP List*	
Transit operations ($)	*CIP List*	
Bike and pedestrian projects ($)	*CIP List*	
Vehicle operating costs (Year XXXX $ per mile)	*CIP List*	
Gasoline price (Year XXXX $ per mile)	*CIP List*	
Average transit fare (Year XXXX $)	*CIP List*	
Parking cost (Year XXXX $)	*CIP List*	