CHAPTER 2 TRANSPORTATION PLANNING POLICIES

Introduction

The 2011 Regional Transportation Plan is Kern County's blueprint to address the mobility challenges created by the region's growth. This long-range plan contains an integrated set of public policies, strategies and investments to maintain, manage, and improve Kern's transportation system through 2035.

The Policy Element addresses legislative, planning, financial, and institutional issues and requirements, as well as areas of regional consensus (e.g., land use policies). This Element provides guidance to decision-makers regarding the implications, impacts, opportunities and foreclosed options that will result from implementation of the Regional Transportation Plan. In addition, the Policy Element is a resource that provides input and promotes consistency of actions taken by state, regional and local agencies, such as transit agencies, congestion management agencies, and the California Highway Patrol.

The policies of the RTP by goal and transportation mode are provided in Table 2.1. This table is followed by a Performance Monitoring section containing a system-wide set of measures to monitor progress toward these goals. A description of the issues, needs, and actions is included in Chapter 4 – Strategic Investments -- for each transportation mode.

Goals, policies, actions and performance measures are defined as follows:

A "**goal**" is the end toward which effort is directed; it is general in application and timeless.

A "**policy**" is a direction statement that guides present and future decisions on specific actions. Policies support the attainment of goals. In this document policies have been merged with objectives to streamline the policy element.
An "**action**" is a specific activity in support of the policy. Actions are detailed in Chapter 4 – Strategic Investments (Action Element).

A "**performance measure**" is a quantitative system level indicator of how actions in the plan support the goals.

In accordance with Government Code 65080(b)(1), all policy/objectives are relevant for both the near- (6-year) and long-term (20-year). Short- and long-range actions implementing these policies are identified in Chapter 4.

Goals/Policies

At the core of the 2011 RTP are seven goals:

1. **Mobility** – Improve the mobility of people and freight;
2. **Accessibility** – Improve accessibility to, and the economic well being of, major employment and other regional activity centers;
3. **Reliability** – Improve the reliability and safety of the transportation system;

4. **Efficiency** – Maximize the efficiency and cost effectiveness of the existing and future transportation system;
5. **Livability** – Promote livable communities and satisfaction of consumers with the transportation system;
6. **Sustainability** – Provide for preservation and expansion of the system while minimizing effects on the environment;
7. **Equity** – Ensure an equitable distribution of the benefits among various demographic and user groups.

While all goals are considered interrelated and important, mobility is considered the Plan's highest goal**.** Identified in Table 2.1 are policy objectives categorized by the goals they help to advance.

Table 2.1 Destination 2030 Goals and Policies

	Goal(s)	Policy	Mode(s)
1	Mobility, Accessibility	Encourage additional air carrier service at Meadows Field and Inyokern Airport.	Aviation
2	Mobility, Accessibility	Assist Kern County Airports in expanding facilities to meet growing general aviation demands.	Aviation
3	Mobility, Accessibility	Work with privately owned airports and local jurisdictions to support their operations and to maintain compatible uses within the airport area of influence.	Aviation
4	Mobility, Accessibility	Identify opportunities for truck-to-rail and truck-to-intermodal mode shifts, and evaluate the contributions of truck traffic on regional air quality.	Freight, Highways
5	Mobility, Accessibility, Sustainability	Seek additional funding to help maintain existing bikeways.	Bike, TCM
6	Mobility, Accessibility, Sustainability	Seek funding for new bicycle projects from local, state and federal sources.	Bike, TCM
7	Mobility, Sustainability	Upgrade the present highway maintenance system whenever feasible.	Highways

	Goal(s)	Policy	Mode(s)
8	Mobility, Sustainability	Investigate new federal, state and local funding opportunities to maintain the current transportation system and promote future transportation development.	Highways
9	Mobility, Accessibility	Encourage Kern COG member jurisdictions to implement their adopted local bicycle plans and to incorporate bicycle facilities into local transportation projects.	Bicycle, TCM
10	Mobility, Accessibility	Periodically update the Kern Regional Bicycle Plan.	Bicycle, TCM
11	Mobility, Accessibility	Provide technical and planning assistance to local jurisdictions for industrial and commercial land use and transportation planning.	Freight, Highways
12	Mobility, Accessibility	Encourage the use of rail and air for goods movement to reduce impacts to state and inter-county routes and lessen air quality impacts.	Freight, Highways
13	Mobility, Accessibility	Encourage coordination and consultation between the public and private sectors to explore innovative and efficient goods movement strategies. .	Freight, Highways
14	Mobility, Accessibility	Identify additions and alternatives that would improve the overall quality of transit service in Kern County.	Transit, TCM
15	Mobility, Accessibility	Identify alternatives to traditional transit that address Kern County's regional rural mobility needs.	Transit, TCM
16	Mobility, Accessibility	Develop coordination alternatives that would realize improvements over current transit operations	Transit, TCM
17	Mobility, Accessibility	Review, identify, and discuss alternative administrative and oversight models for transit services in Kern County.	Transit, TCM
18	Mobility, Accessibility	Create strategies to increase the visibility and importance of transit in Kern County	Transit, TCM

	Goal(s)	Policy	Mode(s)
19	Mobility, Accessibility	Create partnerships between transit and social services agencies in addressing Kern County's transit needs.	Transit, TCM
20	Mobility, Accessibility	Improve intercity connections and provide new services to expand the transportation alternatives in the Eastern Sierra region.	Transit, TCM
22	Mobility, Accessibility, Efficiency	Advocate programs and projects for the intermodal linkage of all freight transportation.	Freight, Highways
23	Mobility, Accessibility, Efficiency, Livability	Coordinate planning efforts to ensure efficient, economical and environmentally sound movement of goods.	Freight, Highways
24	Mobility, Accessibility, Equity	Work with other agencies to create an effective Central Valleywide truck model to track regional commodity flows and to identify critical economic trends that will drive truck flows on regionally significant truck routes.	Freight
25	Mobility, Accessibility, Livability	Review and analyze available rest areas, layover lots, and truck stops to determine needs for additional parking related to long-distance travel.	Freight, Highways, TCM
26	Mobility, Accessibility, Reliability	Support a higher safety level requirement for hazardous material transport on Interstates, state highways, and local roads.	Freight, Highways
27	Mobility, Accessibility, Sustainability	Maintain existing roadway infrastructure and provide for its efficient use.	Highways
28	Mobility, Accessibility, Sustainability	Work with Caltrans, COG member agencies and other interested parties to prepare environmental studies and design engineering plans.	Highways

	Goal(s)	Policy	Mode(s)
29	Mobility, Accessibility, Sustainability	Provide input to neighboring counties conducting Corridor Studies for those routes with significance to the Kern region.	Highways
30	Mobility, Accessibility, Sustainability, Livability	Oppose higher axle load limits for the trucking industry on general purpose roadways.	Freight, Highways,
31	Mobility, Efficiency	Build upon the momentum and stakeholder coalition generated through the San Joaquin Valley Goods Movement Study to pursue ITS commercial vehicle projects.	ITS
32	Mobility, Efficiency	Investigate how ITS can support efforts to improve east/ west travel between the inland areas and coastal communities.	ITS
33	Mobility, Efficiency	Use momentum from the Valleywide ITS planning effort in conjunction with federal rules (ITS architecture and standards conformity and statewide and metropolitan planning) to expand ITS actions.	ITS
34	,Mobility, Efficiency	Build upon the existing Caltrans District 6 Traffic Management Systems to fill gaps and complete coverage on major facilities, including expansion of their highway closures and restrictions database, to include other agencies.	ITS, TCM
35	Mobility, Efficiency	Capitalize on the extensive ITS technology testing and standards development conducted by Caltrans by using, where appropriate, Caltrans approaches for local traffic management systems.	ITS, TCM
36	Mobility, Efficiency	Build upon lessons learned from past and current transit ITS deployment experience in the San Joaquin Valley (Fresno Area Express, GET, San Joaquin Regional Transit).	ITS, TCM

	Goal(s)	Policy	Mode(s)
37	Mobility, Efficiency	Build upon Caltrans District 6 experience with sharing facilities, equipment and information between traffic management and Highway Patrol staff.	ITS, TCM
38	Mobility, Efficiency	Provide traveler information for commercial vehicle operators at truck rest stops.	ITS, TCM
39	Mobility, Efficiency	Improve visibility and access to existing Caltrans' Valleywide alternate route plans.	ITS, TCM
40	Mobility, Efficiency	Coordinate Bakersfield area Transportation Management Center with Caltrans' District 6 Transportation Management Center via satellite.	ITS, TCM
41	Mobility, Efficiency	Integrate the ITS capabilities being implemented at Golden Empire Transit (GET) with Bakersfield's traffic management system, including sharing information between the two centers during emergencies.	ITS, TCM
42	Mobility, Efficiency	Facilitate the transfer of lessons learned from GET ITS deployment, to other area transit operators, and look for opportunities for those agencies to better coordinate with GET using its ITS capabilities.	ITS, TCM
43	Mobility, Efficiency	Expand the accident reduction campaigns on Kern's rural highways.	ITS, TCM
44	Mobility, Reliability, Livability	Provide heavy truck access planning guidance, including a review of the current Surface Transportation Assistance Act route system, review of geometric issues and signaling for all routes identified as major local access routes, as well as the development of performance standards.	Freight, TCM
45	Accessibility, Efficiency, Livability, Sustainability	Encourage land use decisions by local government member agencies that promote the Kern Regional Blueprint Program, (See Table 2-2 Kern Regional Blueprint Matrix.)	Land use, TCM

	Goal(s)	Policy	Mode(s)
46	Accessibility, Efficiency, Livability, Sustainability	Promote land use patterns that support current and future investments in public transit and that might support future commuter- and high-speed rail alternatives.	Land use, TCM
47	Accessibility, Efficiency, Livability, Sustainability	Promote increased communication with neighboring jurisdictions on interregional land use issues, including the coordination of land use decisions and transportation systems.	Land use, TCM
48	Livability	Support goals contained in city and county general plans that strive to enhance urban and community centers, promote the environmentally sensitive use of lands in Kern County, revitalize distressed areas, and ensure that new growth areas are planned in a well-balanced manner.	TCM
49	Livability	Achieve national and state air quality standards for healthy air by the mandated deadlines.	TCM
50	Livability	Coordinate with all necessary responsible agencies to implement l feasible transportation control measures that limit harmful air emissions.	TCM
51	Livability	Delay the need for future increases in highway capacity and congestion through the implementation of transportation control measures.	TCM, Highways
52	Livability	Promote sustainable community design that supports transit use and increases nonmotorized transportation while still meeting the mobility needs of residents and employees.	Transit, Bike, TCM
53	Equity	Avoid, minimize and/or mitigate disproportionately high and adverse human health or environmental effects, including social and economic impacts, on traditionally disadvantaged communities, especially racial minority and low-income communities.	Environ. Justice

	Goal(s)	Policy	Mode(s)
54	Equity	Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.	Environ. Justice
55	Equity	Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.	Environ. Justice

Relationship of Goals to the Kern Regional Blueprint Principles

In November 2008, the Kern COG Board adopted the Kern Regional Blueprint, which represented the culmination of 34 town hall meetings with more than 1,100 participants and 2,400 phone survey respondents. The participants set out a vision and principles for how the Kern region should grow. These principles support the goals, policies and actions of this Regional Transportation Plan. Table 2-2 provides a comparison of the Kern Blueprint Principles and the Regional Transportation Plan goals. The Regional Transportation Plan is an extension of the broader Blueprint process and provides for the actions that will be taken to implement the Blueprint goals in the transportation arena.

The blueprint is not a static document. The Blueprint public involvement process began in 2006 when the economy fared considerably better than it does in 2010. The blueprint public input process included two 1,200-person quality-of-life phone surveys. Since the initial Blueprint process,, Kern COG has completed a third quality-of-life phone survey (Spring 2010) to track changes in public opinion. The most recent survey found that providing job opportunities is now the highest ranking issue on which local governments should be focused. Kern COG is planning to revisit the Kern Regional Blueprint as part of the next four-year RTP process beginning in 2011. Any changes to the Blueprint Principles as a result of that process will be re-analyzed regarding their linkages to RTP goals in future RTP cycles.

Table 2-2 Kern Regional Blueprint Principles/RTP Goals Comparison Matrix

LINKS BETWEEN BLUEPRINT PRINCIPLES AND RTP GOALS	RTP Goals						
	1. Mobility Improve the mobility of people and freight	**2. Accessibility** Improve accessibility to major employment and other regional activity centers	**3. Reliability** Improve the reliability and safety of the transportation system	**4. Efficiency** Maximize the efficiency of the existing and future transportation system	**5. Livability** Promote livable communities	**6. Sustainability** Minimize effects on the environment	**7. Equity** Ensure an equitable distribution of the benefits among various demographic and user groups
Blueprint Principles							
A. Use compact, efficient development and/or mixed land uses	◆ 1A	◆ 2A	◆ 3A	◆ _	◆ 5A	◆ _	◆ 7A
B. Provide a variety of housing choices				◆ 4B	◆ _	◆ 6B	◆ _
C. Provide efficient and equitable public services	◆ 1C	◆ 2C	◆ 3C	◆ 4C	◆ _	◆ 6C	◆ _
D. Use and improve existing community assets and infrastructure	◆ 1D	◆ 2D	◆ 3D	◆ _	◆ 5D	◆ 6D	◆ 7D
E. Provide a variety of transportation choices	◆ _	◆ _	◆ _	◆ _	◆ 5E	◆ 6E	◆ 7E
F. Enhance economic vitality	◆ 1F	◆ 2F	◆ 3F	◆ 4F	◆ 5F	◆ 6F	◆ 7F
G. Conserve energy and natural resources, and develop alternatives	◆ 1G	◆ 2G	◆ 3G	◆ _	◆ 5G	◆ _	◆ 7G
H. Preserve undeveloped land and spaces				◆ 4H	◆ _	◆ _	◆ 7H
I. Increase civic and public engagement			◆ 3I		◆ 5I		◆ _

Notes:

[1A]Improving mobility can include reducing the distances required to travel between destinations created by more compact development patterns and providing adequate housing in close proximity to jobs, shopping and amenities.

[1C]Improving mobility by reducing travel distances can improve the efficiency and cost for providing public services. For example, one fire station can service more households, reducing the cost per household for providing fire protection.

[1D]Improving mobility can include maximizing the use of existing infrastructure such as freeway or parking lot capacity.

[1F]Improving mobility will reduce the cost of doing business in the region, enhancing economic vitality.

[1G]Improving mobility can include the addition of alternative fuels and modes the would help conserve energy and natural resources.

[2A]Improving accessibility can include providing a balanced mix of compact land uses that make walk and other alternative travel modes more accessible to get to regional/neighborhood shopping and employment areas. Additionally, it includes providing balanced mix of affordable workforce housing, shopping and amenities in outlying communities closer to strategic resource employment areas such as: wind/solar/bio/hydrogen/oil energy resource areas, farming, military, prisons, travel/recreation, aerospace testing, warehousing/distribution centers, etc.

[2C]Improving accessibility to regional employment centers can make it more efficient to access and provide public services to these areas.

[2D]Improving accessibility to existing community assets and infrastructure in major employment areas and regional centers can help ensure more efficient use of those areas and maximize the use of existing infrastructure.

[2F]Improving accessibility to major employment and regional centers will make it more convenient to do business in Kern, enhancing our region's economic vitality.

[2G]Improving accessibility to regional and rural activity areas can help develop natural resources and alternative resource opportunities.

[3A]Improving reliability by creating compact/mixed developments that can support and have access to transit/HOV, ensure alternative modes when for getting around when traveling by car is slowed by congestion, making travel more reliable.
[3C]Improving reliability and safety of the transportation system can increase the efficiency of transportation infrastructure by reducing delays caused by accidents and congestion.
[3D]Improving reliability and safety of the existing transportation system through safety retrofits can greatly improve existing community transportation infrastructure assets.
[3F]Improving reliability and safety of the transportation system during peak periods can make it more convenient to do business in Kern, enhancing our region's economic vitality.
[3G] Improving reliability safety to regional and rural activity areas can help develop natural resources and alternative resource opportunities.
[3I] Improving reliability and safety by providing public education on safe travel habits can increase civic and public involvement.
[4B]Maximizing efficiency of the transportation system can be improved by providing a variety of housing types and densities that are distributed to take optimum advantage of transit, and highway infrastructure.
[4C]Maximizing efficiency by reducing travel distances can improve the efficiency and cost for providing public services. For example, one fire station can service more households, reducing the cost per household for providing fire protection.
[4F]Maximizing efficiency of the transportation system will reduce the cost of doing business in the region, enhancing economic vitality.
[4H]Maximizing efficiency of the transportation system by providing alternative modes requires more compact development patterns that can preserve undeveloped land and spaces.
[5A]Promoting more livable communities can be assisted by providing a locally appropriate, self-policing mix of traditional and more compact, walkable, transit oriented developments that promote investment, jobs and vibrant community cohesion better than walled, auto-dependant subdivisions.
[5D]Promoting livability can be assisted by building on a community's historic assets.
[5E]Promoting livability can be assisted by promoting alternative transportation modes such as walking, biking, and transit.
[5F]Promoting livability can increase investment and the community and retention of jobs.
[5G]Promoting livability can including providing more efficient housing and transportation infrastructure that conserves energy.
[5I]Promoting livability can create increase sense of ownership in a community that increases civic and public participation.
[6B]Promoting Sustainability can include providing a mix of housing that can absorb changes in demand over the long term.
[6C]Promoting Sustainability by reducing travel distances can improve the efficiency and cost for providing public services.
[6D]Promoting Sustainability by can include improving and enhancing existing developed areas and assets.
[6E]Promoting Sustainability can be assisted by promoting alternative transportation modes such as walking, biking, and transit that reduce energy consumption, dependence on foreign oil, and impact to the environment.
[6F]Promoting Sustainability can reduce long term operating costs, enhancing economic viability of a region.
[7A]Ensuring equity can be assisted by providing a mix of housing that is affordable.
[7D]Ensuring equity can be assisted by building and improving existing assets in disadvantage areas.
[7E]Ensuring equity can be assisted by providing affordable transportation options such as bike, walk and transit.
[7F]Ensuring equity can be assisted by providing job opportunities for all in a vibrant economy.
[7G]Ensuring equity can be assisted by providing lowering costs through efficient and affordable energy use.
[7H]Ensuring equity can be assisted by promoting development in disadvantage areas rather than undeveloped land and spaces.

Measuring Performance

Performance measures: (1) provide information on how well the transportation system is performing compared to the base year and/or future no-build scenario; (2) identify opportunities for system improvements to meet the plan's goals; and (3) assess the system-wide impacts of future improvements.

System-wide performance measures should not be applied unilaterally, but should only be used as an indicator that the plan's policies and actions are headed in the same direction as the

goals. Often progress shown in one performance measure can show a negative effect in another area.

Demonstrating improvements in all performance measures may be nearly impossible to achieve. For example, improvements in congestion may increase travel speeds and negatively affect air quality. In addition, improvements under a specific performance measure may take several planning cycles to achieve. The existing activity in the Plan has a certain level of inertia created by previously adopted RTPs. Projects that have completed environmental review need to move to right-of-way acquisition and construction fairly quickly, before the environmental work is out- of-date and more resources are needed to update the environmental work. The performance measure process is designed to provide feedback on areas upon which the region should focus in the 2014 Plan update, while minimizing disruptions to the project delivery process.

The Kern Regional Transportation Model is the primary tool for measuring system-level performance of the plan. Kern COG uses an integrated one-model approach for its performance measures analysis. The model uses monitoring data and growth assumptions to compare the performance measures for the Regional Transportation Plan. The two primary categories of performance measures used are the Sustainable Mobility Framework, and Environmental Justice. The Environmental Justice measures have been in place since 2001 and have been adapted for use with the Sustainable Mobility Framework performance measure category.

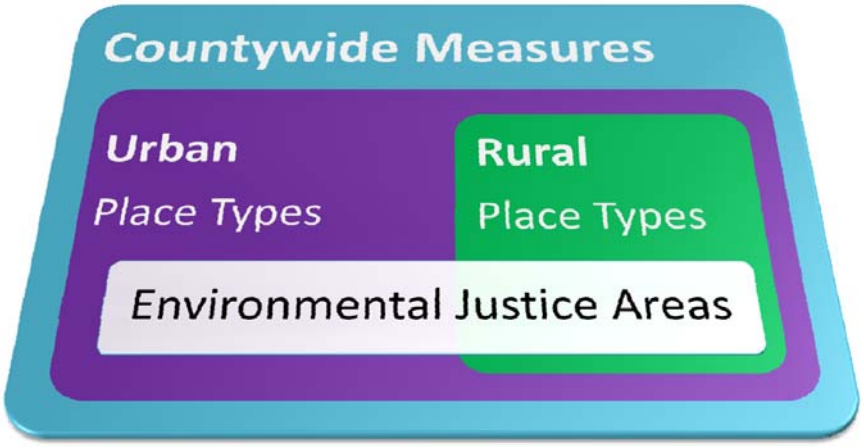
In February 2010, Caltrans released the *Smart Mobility 2010: A Call to Action for the New Decade* that establishes performance measures based on place type in recognition of a "one-size does NOT fit all" philosophy. Kern has been split into two broad place-types. The first is the Metropolitan Bakersfield or urban place-type. The second is made up of the outlying communities or rural place-type. The RTP performance measure analysis differs somewhat for these two place-types.

The performance measure for sustainability/environment uses a slightly different modeling method to analyze air quality on a per-capita basis. This measure differs from the other performance measures in that a second model, EMFAC, developed by the California Air Resources Board, uses the output vehicle travel from the Regional Transportation Model to generate Nitrogen Oxide (NOx) by air basin analysis areas rather than urban and rural. NOx is a precursor gas that contributes to ozone and particulate matter, Kern's two worst pollutants that violate federal standards.

Performance Measures Analysis Methodology

Kern COG has developed an integrated framework of performance measures to demonstrate consistency of the Regional Transportation Plan with its seven established goals.

Figure 2-1 Integrated Performance Measures Framework



This figure illustrates the overlap among the seven performance measures used for countywide analysis, the two smart mobility framework place types, and environmental justice areas. For example, some measures are the same for Environmental Justice, Urban and Rural place types, and countywide while other measures may only be used in two of the three categories. The following table contains a breakdown of which measure apply to which categories and goals.

Table 2-3 RTP Goals, Performance Measures and Smart Mobility Framework Place Types Adapted for Kern County

	RTP Goal(s)	Measure Description	Applicability by Place Types
1	mobility, livability, sustainability, congestion	Average Travel Time – Peak Highway Trips, Peak Transit Trips	EJ, Urban
2	Accessibility, livability, sustainability, congestion	Average Travel Time to Job Centers – Highway Trips, Transit Trips	EJ, Urban
3	Reliability, livability, congestion	Average Level of Congestion in Hours	EJ, Urban, Countywide
4	Reliability, safety, livability	Annualized Accident Statistics for Annual Average Daily Traffic	EJ, Urban/Rural, Countywide
5	Efficiency, cost effectiveness, sustainability	Average Daily Investment per Passenger Mile Traveled – Highways, Transit	EJ, Urban/Rural, Countywide
6	livability, customer Satisfaction, sustainability, congestion	Average Trip Delay Time in Hours	EJ, Urban/Rural, Countywide
7	Sustainability, environment	Percent Change NOx/PM by air basin	Air Basins
8	Sustainability, preservation	Percent Change in Maintenance Dollars Per Lane Mile	Countywide
9	Equity	Percent of Expenditures versus Passenger Miles Traveled in 2035 – Highways, Transit	EJ, Urban/Rural, Countywide

The above table demonstrates that some of the performance measures comply with as many as five goals. The geographic area of analysis varies for the environmental justice and smart mobility framework place type performance measures, while the environmental justice analysis

uses all seven measures and compares countywide performance with performance in environmental justice areas. The Smart Mobility Framework establishes the use different performance measures based on place type. Kern has divided the region into two place types and uses different performance measures for each place type. Urban place type uses all the performance measures while the rural place type excludes the ones related to congestion. Although congestion occurs in the County's rural areas, other factors such as safety are primary concerns.

Performance Measure Results

After the release of the 2000 Census, Kern COG convened an Environmental Justice Task Force, which identified low income, minority, elderly, and disabled people as the target populations for analyzing federal Title VI Environmental Justice (EJ) efforts. Areas with higher than average concentrations of the target populations were identified and mapped by census block groups. Kern COG used the transportation model output stratified by EJ areas and the urban and rural place types to determine whether the goals of the RTP were being met.

The process involved preparing and testing a series of "scripts" or small programs that allow the model to run projections for the 2006 base year and future years on measures established for environmental justice criteria. Specific model scripts requested were:

- **Mobility** – Calculates average trip time by mode (auto and transit) from environmental justice Traffic Analysis Zones (TAZs) and countywide.
- **Accessibility/Economic Well Being** – Calculates average trip time by mode (auto and transit) to major job centers from a group of approximately 1700 (AZs. Accessibility also provides an economic measure by indicating the level of congestion around major job centers that may affect freight movement.
- **Reliability/Congestion** – Calculates the distance of level of service D through F links inside environmental justice TAZs and countywide.
- **Reliability/Safety** – Calculates the percentage increase between property damage, injury and fatal accident rates between base year 2006 and 2035.
- **Efficiency/Cost-effectiveness** – Calculates the planned expenditure per passenger miles traveled. Calculate passenger miles traveled by both vehicle and transit networks for current and planned transit projects (increased headway, new routes) and capacity increasing road projects links in future years, inside EJ TAZs and countywide. These figures are divided by the total investment in these projects and used to calculate their cost-effectiveness.
- **Livability/Consumer Satisfaction** – Calculates the average trip delay after feedback between constrained and unconstrained roadways on links inside EJ TAZs and countywide.[1]
- **Sustainability/Environment** – Vehicle emissions of NOx per person for the valley and mountain/desert portions of Kern.
- **Sustainability/Preservation** – Provides for maintenance as the system expands.
- **Equity** – Calculates the passenger miles travel and compare to the percent of investment in EJ areas and urban and rural place types.

The RTP Guidelines also recommend including goals on transportation system preservation. Preservation was not included in the model because it is not a component the model can

[1] Delay refers to the amount of additional time a vehicle spends on the road because of congestion. Constrained and unconstrained roads refer to those streets, highways or freeways where congestion is either typical or atypical.

measure readily. A detailed description of maintenance and preservation funding can be found in the Financial Element.

The model generated several factors, including: travel times, vehicle miles traveled, passenger miles traveled, transit boardings, transit trip hours, transit trip distance and road miles of LOS C or worse for 2006 (base year), 2035 build scenario, and 2035 no-build scenario. The 2035 build scenario assumes all projects listed in Table 4-1 of the 2011 Regional Transportation Plan will have been completed, whereas the No-Build scenario assumes 2035 traffic levels on the same network used in 2006. An additional assumption was that funding sources and technology will remain constant. The model also stratified its factors along three separate lines: All of Metropolitan Bakersfield (urban); all other areas of Kern County, including the ten other incorporated cities (rural); and countywide. Kern COG paid particular attention to the accessibility and mobility criteria because they represented overall system performance now and in the future.

Mobility

Mobility is defined as the ability to move throughout the region and the time it takes to reach desired destinations; it is considered to be the most informative performance measure in the RTP. The criterion is measured by calculating average travel times during the base year 2006, in 2035 when all RTP projects are completed, and in a 2035 no-build scenario where none of the RTP projects are completed. The goal for mobility is to demonstrate that EJ TAZs perform better, or at least no worse, than the countywide average. Peak highway and transit trip periods (evening commute times) were used to demonstrate the worst-case scenario.

Metropolitan Bakersfield's average travel time in 2006 for all trips was 12.67 minutes, compared to a rural time of 20.58, for a countywide average of 16.26. In considering just metro Bakersfield's EJ TAZs, the average travel time was 12.40, versus rural EJ TAZs at 20.31, for a countywide average of 14.14 minutes. During the 2006 base year, EJ TAZs throughout the county enjoyed shorter average travel times than the county as a whole. As depicted in the chart below, that trend is maintained over both the 2035 build and the 2035 no-build scenario. On the whole, people living in EJ TAZs will have shorter average travel times anywhere within the county than the county will have as a whole.

Table 2-4 Average Travel Time – Peak Highway Trips (in minutes)

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	12.67	13.39	14.47
Rural Areas	20.58	20.78	21.37
Countywide	16.26	16.94	18.75

Table 2-5 EJ TAZs Average Travel Time – Peak Highway Trips

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	12.40	13.00	13.51
Rural Areas	20.31	20.69	21.34
Countywide	14.14	14.71	15.23

Because rural transit ridership comprises such a small percentage of trips in the model, and because no data is being forecasted by rural transit agencies regarding trip lengths and travel times, staff is unable to compare the rural transit network to the Golden Empire Transit system in Metro Bakersfield. However, in judging average travel times for transit trips between EJ TAZs in Metro and the rest of Metro as a whole, EJ TAZs also continue to fare better in this category. In 2006, the average peak hour transit trip took 44.77 minutes in Bakersfield. However, transit trips emanating from EJ TAZs were clocked at 43.86 minutes. In 2035, the model estimates the difference to increase from 46.10 minutes in Bakersfield as a whole to 45.38 minutes in Bakersfield EJ TAZs.

Table 2-6 Average Travel Time – Peak Transit Trips[2]

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	44.77	46.10	45.50
Rural Areas	N/A	N/A	N/A
Countywide*	47.54	47.98	49.07

*includes portions of trips outside of Metro that drive to use metro transit

Table 2-7 EJ TAZs Average Travel Time – Peak Transit Trips

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	43.86	45.38	44.14
Rural Areas	N/A	N/A	N/A
Countywide*	48.63	45.65	44.73

*includes portions of trips outside of Metro that drive to use metro transit

Accessibility/Economic Well Being

Accessibility differs from mobility in that it is measured by commuter trip times to major job centers rather than overall trip times. Major job centers are defined as those TAZs containing employment sites with 75 or more workers. Specifically, accessibility is defined as the ease of reaching destinations as measured by the percent of commuters who can get to work within a given period of time. As with mobility, the goal is to ensure that commuters in EJ TAZs throughout the county have average trip times that are shorter, or at least no longer, than the county as a whole. The measure on highways also provides an indicator of the ability of freight to get to major employment sites, providing and measure of economic well being for the region.

In 2006, the average trip length from anywhere in Bakersfield to a major job center was 12.13 minutes. For areas outside Bakersfield, the time was approximately 15 minutes longer – 27.26 minutes. The average commute time to a major job center in Kern County was 19.69 minutes in 2006. This compares to 14.8 minutes for all commutes from EJ TAZs to major job centers throughout the county in 2006.

[2]No data are maintained on average travel times for rural fixed route and dial-a-ride services. The countywide average listed under Average Travel Time – Peak Transit Trips and EJ TAZs Average Travel Time – Peak Transit Trips reflects statistics on the Golden Empire Transit network only. Rural transit ridership is a small percentage of countywide and would result in a negligible increase.

EJ TAZs generally fare better across the board against urban, rural and countywide averages for commutes to major job centers under the 2035 Build and 2035 No-Build scenarios. This is true for both private vehicle trips countywide and transit trips in Bakersfield. Rural transit data are unavailable.

Table 2-8 Average Travel Time to Major Job Centers – Highway

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	12.13	12.12	13.24
Rural Areas	27.26	27.16	27.73
Countywide	19.69	19.39	21.55

Table 2-9 Average Travel Time from EJ TAZs to Major Job Centers – Highway

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	11.85	11.78	12.20
Rural Areas	25.31	24.73	25.27
Countywide	14.80	14.65	15.08

Table 2-10 Average Travel Time to Major Job Centers – Transit [3]

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	43.98	46.23	44.91
Rural Areas	N/A	N/A	N/A
Countywide*	47.07	49.35	49.02

*includes portions of trips outside of Metro for those who drive to use metro transit

Table 2-11 Average Travel Time from EJ TAZs to Major Job Centers – Transit

Place Type	2006	2035 Build	2035 No Build
Urban/Metro	43.88	45.29	44.73
Rural Areas	N/A	N/A	N/A
Countywide*	44.42	45.62	17.1

*includes portions of trips outside of Metro for those who drive to use metro transit

Reliability/Congestion

Reliability is the percentage of on-time arrivals for both transit and highway trips. For highways, it is measured by the number of hours daily that passengers spend in congested traffic. Congestion on roadways is measured by levels of service (LOS) on roadways and also by the amount of time in hours that a vehicle is not able to reach the speed limit on a given roadway segment. LOS also affects the reliability of transit service in metropolitan Bakersfield. The Metro transit system lacks any facilities immune to congestion such as carpool lanes, bus lanes or rail. The level of congestion is not a significant measure for rural place type areas based on

[3] No data are maintained on average travel times for rural fixed route and dial-a-ride services. The countywide average listed under Average Travel Time – Peak Transit Trips and EJ TAZs Average Travel Time – Peak Transit Trips reflects statistics on the Golden Empire Transit network only.

the smart mobility framework analysis; however, the numbers are provided for comparison purposes.

For transit, reliability is judged by the percent of on-time arrivals for each operator. Golden Empire Transit District has developed its own environmental justice analysis, "Title VI Update" last produced in March 2010. Based on observations through February 2004, GET estimated its on-time arrival rate for July 2009 through February 2010 was 76% of all trips. The report does not stratify by EJ TAZ.

Metropolitan Bakersfield residents will see the number of hours spent in congested traffic rise from 284,056 in 2006 to 500,661 in 2035. Relative to increases regionally, EJ TAZs will be 6% more congested than other areas countywide.

Table 2-12 Average Level of Congestion in Hours

Place Type	2006	2035	Percent increase
Urban/Metro	284,056	500,661	76
Rural Areas	276,468	503,753	82
Countywide	560,524	1,004,414	79

Table 2-13 Average Level of Congestion in Hours – EJ TAZs

Place Type	2006	2035	Percent increase
Urban/Metro	122,791	183,661	50
Rural Areas	64,257	116,046	81
Countywide	187,048	299,896	60

Reliability/Safety

For Kern COG's environmental justice policy purposes, safety is considered to be the minimal risk of accident or injury as measured by reduced accidents. While the model does make predictions regarding the number of accidents that cause property damage, injury and fatalities, it cannot stratify that information specifically by project, as the environmental justice safety goal requires. On new facilities within environmental justice TAZs, projects outlined in the 2011 RTP will demonstrate no more accidents than the countywide average.

Despite the model's inability to predict accident rates on specific projects, it does provide an aggregate look at annual accidents in 2006 compared to 2035. Results show that injury accidents will rise sharply throughout the County by 2035. Meanwhile, EJ TAZs will see a slower increase for injury accidents over the region as a whole. For example, in Metro Bakersfield, the injury accident rate is predicted to rise from 879 in 2006 to 1,636 in 2035, an 86% increase. In urban EJ TAZs, however, the same type of accident will go from 370 to 572, a 55% rise.

Using the Smart Mobility 2010 philosophy, safety is a higher concern in rural place type areas than congestion. Based on this plan's funded project list, accidents in rural areas are forecasted to rise at a slightly lower rate than the countywide average as travel increases on Kern's roadway network.

Table 2-14 Annualized Accident Statistics for Annual Average Daily Traffic

Place Type	2006	2035	Percent increase
Urban/Metro			
Property damage	1,537	2,862	86
Injury	879	1,636	86
Fatality	55	103	87
Rural			
Property damage	2,239	4,092	83
Injury	1,279	2,338	83
Fatality	81	147	81
Countywide			
Property damage	3,776	6,954	84
Injury	2,158	3,974	84
Fatality	136	250	84

Table 2-15 Annualized Accident Statistics for Annual Average Daily Traffic – EJ TAZs

Place Type	2006	2035	Percent increase
Urban/Metro			
Property damage	647	1,001	55
Injury	370	572	55
Fatality	23	36	57
Rural			
Property damage	490	911	86
Injury	280	521	86
Fatality	18	33	83
Countywide			
Property damage	1,137	1,912	68
Injury	650	1,093	68
Fatality	41	69	68

Efficiency/Cost-Effectiveness

Efficiency and cost-effectiveness can be measured by maximized returns on transportation investments. This criterion was measured by dividing the average daily investment from 2011 RTP projects through 2035 by the average number of daily passenger miles traveled (PMT) on the transportation network, both inside and outside of EJ TAZs for urban and rural place types.

In the metropolitan Bakersfield area, the average daily investment in highways will amount to $.009 per PMT versus $.015 per PMT in Bakersfield EJ TAZs. In rural areas outside Bakersfield, the cost is $.004 versus $.006 in rural EJ TAZs. For transit service in Bakersfield, the daily investment per PMT is $.11 versus $.07 in Bakersfield EJ TAZs While the daily investment per PMT for roads indicates that the transportation system will meet the goal of spending more money per PMT in EJ areas than in the county as a whole, *the transit system does not measure up to that criterion, with all factors constant.* However, more funding will be spent per PMT in EJ TAZs than the county as a whole, and mobility and accessibility for EJ TAZs will also be higher.

Because the cost-effectiveness criterion assumes that RTP projects will be built, the no-build scenario is not displayed.

Table 2-16 Average Daily Investment per Passenger Mile Traveled – Highways

Place Type	2035 Build
Urban/Metro	$.009
Rural Areas	$.004
Countywide	$.007

Table 2-17 Average Daily Investment per Passenger Mile Traveled – Highways – EJ TAZs

Place Type	2035 Build
Urban/Metro	$.015
Rural Areas	$.006
Countywide	$.0105

Table 2-18 Average Daily Investment per Passenger Mile Traveled – Transit[4]

Place Type	2035
Urban/Metro	$.11
Rural Areas	N/A
Countywide	$.13

Table 2-19 Average Daily Investment per Passenger Mile Traveled – Transit – EJ TAZs

Place Type	2030
Urban/Metro	$.0723
Rural Areas	N/A
Countywide	$.06

[4] Because Kern COG's regional transportation model cannot estimate passenger miles traveled for rural transit services, estimates for daily investment per PMT countywide are unable to be calculated.

Livability/Consumer Satisfaction

Consumer satisfaction is one potential measure of livability and is defined as the condition where consumers can largely agree that their transportation needs are being met in a safe, reliable, efficient and cost-effective manner. The criterion is measured by the daily amount of trip delay in hours. On roadways, trip delay refers to the difference between the time a trip should take and the time it actually requires, or the difference between free-flow traffic and some level of congestion. Traffic congestion also affects the on-time performance of transit operations, limiting alternative transportation choices during peak periods, impacting the region's livability.

For example, between 2006 and 2035, Kern COG's traffic model estimates the number of daily trip delay hours in the urban metro area will rise from 61,929 to 105,837 – a 71 percent increase. However, in Metro's EJ TAZs, the number would increase from 27,134 to 43,190, a 59% rise. While neither scenario is desirable, EJ TAZs within Metro increase 12 percentage points less than the area as a whole. In rural areas travel delay grows a little faster than the county.

Table 2-20 Average Trip Delay Time in Hours

Place Type	2006	2035	Percent increase
Urban/Metro	61,929	105,837	71
Rural Areas	24,703	48,163	95
Countywide	86,632	154,000	78

Table 2-21 Average Trip Delay Time in Hours for EJ TAZs

Place Type	2006	2035	Percent increase
Urban/Metro	27,134	43,190	59
Rural Areas	8,905	15,344	72
Countywide	36,039	58,534	62

Sustainability/Environment

This measure is defined as enhancing the existing transportation system while improving the environment. It is the one factor in Kern COG's environmental justice criteria set that the transportation model currently cannot measure. Environmental effects vary among different transportation projects, and can only be determined meaningfully on a project-by-project basis. The goal is for projects in the 2011 RTP to demonstrate no difference in unmitigated impacts between environmental justice populations and the region as a whole. This goal is measured through conformity with the Clean Air Act Amendments of 1990 according to measures of certain pollutants such as nitrous oxide and particulate matter. A greenhouse gas (GHG) measure is currently under development as part of efforts to implement AB 32 and SB 375, and should be available in time for the next major RTP update. In the meantime, measuring current federal criteria pollutants offer an adequate surrogate for GHG because the strategies used to reduce one usually help reduce the other.

Both Kern COG's long-term 2011 RTP and the short-term Federal Transportation Improvement Program (FTIP) require a demonstration of air quality "conformity" prior to being adopted by Kern COG and the federal government. This conformity process is necessary because the San Joaquin Valley air basin is non-attainment for ozone and particulate matter. The process ensures that new transportation projects will either benefit or at least have no negative effect on air quality. Kern COG's conformity analysis for its most recent FTIP amendment was approved by the U.S. Department of Transportation on November 3, 2009. A revised conformity analysis has been undertaken to support the 2011 RTP and the 2011 FTIP.

Table 2-22 Vehicle NOx/PM10 Emissions Decrease

Air Basin (portion of Kern)	**Base 2008/11**	**Horizon 2030/35**	**Percent Decrease**	**Air Standard Met?**
San Joaquin Vly	75.5	22.9	70	YES
Mojave Desert	14.6	4.2	71	YES
Indian Wells Vly.*	1.3	1.1	15	YES

*Indian Wells Valley totals are for all particulate matter 10 microns or smaller, not just the NOx precursor.

For a more detailed discussion of air quality see the 2011 Conformity Analysis up for simultaneous adoption with the 2011 RTP and FTIP.

Sustainability/Preservation

Sustaining and preserving the transportation system can be measured by the total annualized amount of maintenance funding divided by the number of lane miles in the model. Countywide maintained lane miles are calculated from the transportation model. In November 2008 an initiative with 56% voter approval failed to garner the 2/3rds vote required to pass. Had it passed, approximately 40% of the funding was reserved for maintenance. The following tables illustrate the growing problem of maintaining an expanding system and underscore the need for rapid action to provide new funding sources to maintain the system.

Table 2-23 Maintenance Dollars Per Lane Mile for the Transportation System

Countywide	Base 2006	Horizon 2035	Percent Change
Lane Miles	7349	9474	29
Annual Maintenance	$96,000,000	$96,000,000	0
Maintenance Per Mile	$13,063	$10,133	-22

Table 2-24 Maintenance Dollars Per Lane Mile for the Transportation System if the 2008 Transportation Measure Had Passed

Countywide	Base 2006	Horizon 2035	Percent Change
Lane Miles	7349	9474	29
Annual Maint.	$96,000,000	$124,000,000	29
Maint. Per Mile	$13,063	$13,088	0

Equity

Equity is defined as a fair and reasonable distribution of transportation investment benefits (as a share of benefits). Kern COG took a similar approach to equity as with cost-effectiveness, comparing the total investment in roads and transit through 2035 with total passenger miles traveled in Bakersfield, rural areas and the county as a whole. All numbers were converted to percentages for simplicity.

In 2035, Urban/Metro Bakersfield EJ TAZs will account for 52% of all passenger miles traveled in the region. However, approximately 73% of transportation expenditures will go directly into the metropolitan EJ TAZs. Rural EJ TAZs will represent 13% of countywide PMT and 13% of all highway funding will be spent in those areas. Countywide, approximately 28% of all passenger miles traveled will occur in EJ TAZs, which will collect 47% of funding and projects.

Although Kern COG cannot reliably project the number of passenger miles traveled by rural transit agencies in 2035, the model does predict that EJ TAZs in the metro Bakersfield region will make up approximately 68% of transit PMT. Those same TAZs, however, will receive 90% of all transit funding attributable to the metropolitan area. Stratification between metro and rural transit services is impractical because of the rural transit PMT variable. The model currently excludes rural transit because the extremely low volumes are difficult to calibrate.

Table 2-25 Percent of Expenditures Versus Passenger Miles Traveled in 2035 - Highways

Place Type	2035 PMT	Total investment	PMT (percent)	Investment (percent)
Urban/Metro	23,381,541	$2,403,140,132	41	63
Rural Areas	33,427,754	$1,435,741,868	59	37
Countywide	56,809,295	$3,838,882,000	100	100

Table 2-26 Percent of Expenditures Versus Passenger Miles Traveled in EJ TAZs by 2035 - Highways

Place Type	2035 PMT	Total investment	PMT (percent)	Investment (percent)
Urban/Metro	8,179,260	$1,303,108,495	52	73
Rural Areas	7,443,927	$481,971,635	48	27
Countywide	15,623,187	$1,785,080,130	100	100

Table 2-27 Percent of Expenditures Versus Passenger Miles Traveled in 2035 – Transit

Place Type	2035 PMT	Total investment	PMT (percent)	Investment (percent)
Urban/Metro	95,045	$96,000,000	100	85
Rural Areas	N/A	$16,800,000	N/A	15
Countywide	N/A	$112,800,000	100	100

Table 2-28 Percent of Expenditures Versus Passenger Miles Traveled in EJ TAZs by 2035 - Transit

Place Type	2035 PMT	Total investment	PMT (percent)	Investment (percent)
Urban/Metro	64,610	$46,944,000	N/A	90
Rural Areas	N/A	$5,410,000	N/A	10
Countywide	N/A	$52,354,000	100	100

Environmental Justice Conclusions

Ideally, transportation projects not only achieve immediate transportation goals (such as congestion relief) but contribute to the betterment of our physical and socioeconomic environment. It is inevitable, however, that some transportation projects generate negative impacts as well. This chapter identifies the methodology used to determine the 2011 RTP projects' equitability and their overall cost and benefit to the residents of Kern County, including traditionally disadvantaged neighborhoods.

From a public information perspective, Kern COG's commitment to environmental justice and both rural and urban community types is demonstrable through its efforts at gathering public input. These efforts include broadcasting its monthly meetings on television; using display advertising and electronic notices to announce workshops and public hearings; and developing radio advertisements for long-range planning efforts. Kern COG has been visible in every community over the last three years during city council meetings, street fairs and community festivals. Press releases are generated at project milestones. Kern COG's quarterly newsletter is distributed to over 2,000 organizations and individuals.

From a planning standpoint, the transportation model indicates that, with few exceptions, Kern COG has and will continue to divide its resources equitably, with no single population group suffering disproportionate and adverse effects from agency activity. Analyses demonstrated some shortcomings that will be addressed, however. For example, Metropolitan Bakersfield will see the number of hours spent in congested traffic rise from 284,056 in 2006 to 500,661 in 2035 – a 76% increase. But metro area EJ TAZs will experience a 50% rise in congestion levels over the same period.

Kern COG's position that it is meeting the rigors of environmental justice is based largely on averages, and in some cases predicated on a worst-case scenario for every portion of the Kern region. The fact that delay times will rise by *only* 62% in EJ Areas versus 78% for the region as a whole over the long-term is nothing to trumpet; however, it does demonstrate that despite substantial financial commitments, and with all issues remaining constant, the Kern region's transportation network will continue to deteriorate for every segment of the population. The model shows that, generally speaking, the transportation network will not deteriorate in EJ areas as quickly as in the county as a whole.

Kern COG expects to re-evaluate its environmental justice policies and procedures with the release of the federal 2010 Census results. In its initial analysis, Kern COG determined that several of the criteria were measured redundantly. For example, consumer satisfaction is measured in delay time whereas reliability is measured in the number of vehicle hours spent in congestion. The two measures, while different, may be similar enough to use one or the other, though not both.

Similarly, cost-effectiveness and equity both attempt to determine how expenditures are being divided between EJ Areas and the region as a whole. While each measure uses a different analysis method, the conclusions appear to be the same. Because environmental issues such as noise, air quality, wildlife disturbances, and context-sensitive design must be addressed through the mitigation process on a project-by-project basis, no substantive means are available to measure these environmental effects as a systemwide criterion in this analysis.

Considering all the analyses as a whole, it is fair to conclude that the 2011 RTP meets the Federal Title VI environment justice requirements by ensuring that all of the population is subject to proportionate benefits and detriments. It also must be understood that environmental justice does not create an entitlement; however, it does attempt to assure that transportation projects do not have discriminatory effects or disparate impacts on any segment of the population, especially those traditionally disadvantaged groups such as racial minorities and low-income communities. The above analyses demonstrate that the 2011 RTP has met those expectations.

Smart Mobility Conclusions

The smart mobility method divided the performance measures into two place types - urban and rural. The measures reveal that a relatively even distribution of resources addresses mobility and accessibility. For example, the greatest improvement in accessibility to job centers is found in rural areas were average travel times are reduced by about six seconds compared to one second in urban areas, despite 63% of the highway investment in the Metro/urban area. Trip delay and congestion increases in rural areas at a faster rate than in Metro; however, congestion is not considered as important a factor as safety where rural place types see a 3-6% reduction in accidents. This is primarily because projects in outlying rural areas are focused less on relieving congestion and more on safety improvements.

The performance measures look at all funding sources, and not just those subject to the 60-40 guideline policy adopted by the Kern COG board. It is interesting to note that more passenger miles are traveled outside of Metro than within. That is because Metro makes up less than 10% of the total area of the county, and through-county trips make up about 25% of all travel in Kern County.

Systemwide Conclusions

Systemwide, the performance measures indicate that Kern is losing ground in its battle with congestion while improving the economy by providing better accessibility to major job centers. Accessibility to major job centers countywide improved by 18 seconds between 2006 and 2035. However, even with the influx of more than $640 million in federal demonstration funds to the region, and a recent increase in traffic impact fees on housing in Metropolitan Bakersfield are forecasted to see an 80% increase in congestion over the next 25 years. With the current housing downturn, it is not likely that another increase in impact fees can absorb the costs needed to accommodate the growth for the region. In addition, many of these future improvements are becoming more expensive. The cheap, easy fixes are no longer available. Changing a six-lane arterial to eight or ten lanes can be costly. Not only does the congestion affect the reliability of our transportation system, it affects transit operations as well.

Transit can only provide a relief for congestion if the express bus service is not stuck in the same traffic as single occupancy vehicles. Investment in carpool and bus lanes on freeways, ramps and arterial streets are not much more expensive than adding free-flow lanes; however, they can provide a vital relief valve during peak travel times. The ability to get around during peak periods is important to ensure the economic vitality of the region, and can stretch the effectiveness of Kern's transportation dollar.

One of the worst performing indicators is the Sustainability/Preservation measure.
Recent polling for both the 2008 local transportation sales tax measure and the Kern Blueprint ranked maintenance of the existing system as the highest priority for transportation funding. However, federal, state and local efforts have failed to provide the funding necessary to maintain the infrastructure that Kern County is building. The 2008 sales tax measure would have provided sufficient funding to maintain the system at current levels to 2030.

Some local successes have occurred for new funding sources. Recently, the City of Bakersfield passed a utility tax for transportation maintenance, and the City of Delano has approved a 1-cent general fund measure that can be used for road maintenance. The national American

Recovery and Reinvestment Act (ARRA) has provided a one-time influx of funding to catch up on maintenance backlogs for more than 80 projects in Kern County. The ARRA II may provide additional funding; however, deficit stimulus spending is not a permanent solution. The state and federal highway trust funds are insolvent and must be fixed as part of the federal surface transportation act re-authorization now underway. Innovative long-term pay-as-you-go solutions, such as a phased in odometer- based gas tax, should be seriously considered.

Future Improvements to Measuring Performance

Performance measures are often driven more by the tools available to measure than by the policies that need to be tracked. Performance measures can be divided into two types. The first includes future performance measures that are used in modeling to compare scenarios such as the ones in this chapter. A second type is a monitoring indicator that measures real world data, such as traffic counts and air quality. The following is a list of potential future performance measures for modeling scenario analysis that may enhance the analysis of progress made toward the RTP goals.

Table 2-29 Potential Performance Measures Under Development

	RTP Goal(s)	Measure Description
1	Accessibility, mobility, livability, sustainability, congestion	vehicle miles traveled per person/employee
2	livability, sustainability, congestion	CO_2 pounds per person
3	livability, sustainability	Acres of resource areas converted to urban use
4	livability, sustainability	Balanced/compact/mixed development
5	Cost Effectiveness, sustainability	Goods movement

In addition to these measures, a monitoring system is needed to track progress toward these goals. The following variables are already tracked annually and may be enhanced:

- Traffic count information;
- Improve truck counts along key corridors;
- Develop a more regular traffic speed survey program;
- Improve transit ridership information.

These datasets are incorporated into the base year validation of the regional transportation model and provide the basis for forecasting future performance measures.