

South Jersey Transportation
Planning Organization

**Regional Transportation Plan
2040**

South Jersey Transportation Planning Organization

Regional Transportation Plan 2040

Approved by the SJTPO Policy Board, July 23, 2012



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Introduction

About SJTPO

The South Jersey Transportation Planning Organization (SJTPO) is the [Metropolitan Planning Organization \(MPO\)](#) for the southern New Jersey region. Formed in 1993, SJTPO replaced three smaller MPOs while incorporating other areas not previously served. Covering [Atlantic](#), [Cape May](#), [Cumberland](#), and [Salem](#) counties, the SJTPO works to provide a regional approach to solving transportation problems.

SJTPO coordinates the planning activities of participating agencies and provides a forum for cooperative decision-making among state and local officials, transit operators, and the general public. In addition, the SJTPO adopts long-range plans to guide transportation investment decisions, and maintains the eligibility of its member agencies to receive federal transportation funds for planning, capital improvements and operations.

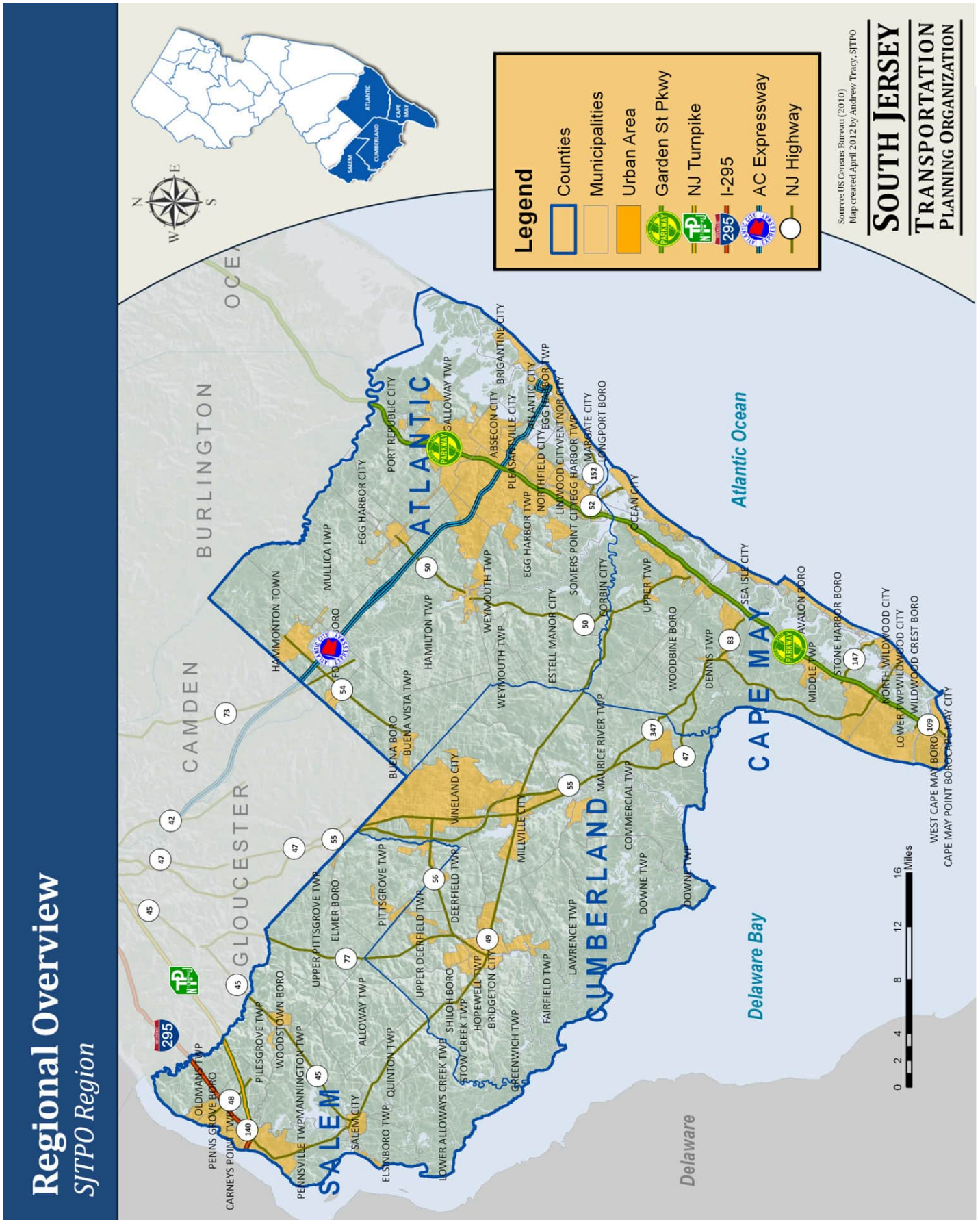
What is a Regional Transportation Plan and Why Do We Need One?

The Regional Transportation Plan serves as the official plan for the SJTPO region and guides the region's transportation decision-making for at least the next 20 years. The Plan advocates the maintenance of the existing transportation infrastructure while addressing future problems and needs of the region. In addition, the Plan provides the basis for coordinated transportation planning around the region and identifies future needs so that more detailed studies may take place. These detailed planning studies provide the technical and environmental analyses needed to enter projects into the federal and state funding pipeline. The Plan also includes a comprehensive review of current transportation resources in South Jersey. It includes highways, transit, bicycle, pedestrian, and intermodal facilities. For each travel mode, the demand for travel is reviewed, needs are assessed, and opportunities and strategies for improvement are discussed.

Study Area

SJTPO is a federally designated MPO. MPOs are agencies responsible for long range regional transportation planning through a collaborative and cooperative decision-making process. SJTPO covers a region comprised of 68 municipalities in the four counties of Atlantic, Cape May, Cumberland, and Salem (Figure 1). The region is about 1,778 square miles in total area, accounting for nearly 20 percent of New Jersey's total area of 8,722 square miles but contains less than 7 percent of the State's population. The demand for travel in southern New Jersey differs from the rest of the state in several key ways, and is influenced by three distinctive characteristics: the importance of the gaming and tourism industries, seasonal variation in travel due to tourism, and the predominance of small cities and rural areas. The [SJTPO Regional Profile is prepared by the SJTPO](#) to provide a snapshot of the SJTPO region; it documents the geographic, transportation, and population characteristics of the four counties that comprise the SJTPO region.

Figure 1. The SJTPO Region.



Plan Requirements and SAFETEA-LU

The elements that must be included in the long-range transportation plan are specified by federal law. The current law that prescribes Plan elements is the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

SAFETEA-LU requires each long range transportation plan to:

- Cover a minimum 20-year period
- Be updated at every four years
- Be 'fiscally constrained' – that is, plan on the basis of likely funding levels rather than unlimited funding levels
- Use up-to-date planning assumptions
- Identify major facilities that should function as an integrated regional system.

SAFETEA-LU also specifies the planning factors that must be addressed in the planning process. The process must:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency
- Increase the safety of the transportation system for motorized and non-motorized users
- Increase the security of the transportation system for motorized and non-motorized users
- Increase the accessibility and mobility of people and freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operation
- Emphasize the preservation of the existing transportation system.

Regional demographic and economic context

Long-range transportation planning requires understanding the demographic and economic characteristics that combine to create the demand for travel. In addition, to be considered are the unique challenges and influencing factors that shape the region. The Plan examines the context for transportation planning and decision-making in South Jersey.

Demographic characteristics of an area influence the demand for travel and understanding the region's population and economy is key to planning for future travel needs. Changes in the population along with shifts in the number, type and location of jobs can affect the number, length, and distribution of trips that must be made and consequently the need for transportation facilities and services.

The demand for travel in southern New Jersey differs from the rest of the state in several key ways. Southern New Jersey is more rural, its population and jobs are more widely dispersed, the greatest concentration of employment is in one location – Atlantic City – and tourism is an important industry. In particular, tourism in the region follows seasonal patterns resulting in significant increases in the number of residents and visitors during warmer weather. The southern four counties that comprise the planning area for the SJTPO offer a wide range of land uses, and particular care must be taken to protect the natural resources that characterize the region, making it an attractive and desirable tourist destination. The current year-round population of the SJTPO region is 594,795, 46.2% of whom live in Atlantic County, as shown in Figure 2.

The nature of tourism in the region, however, means that the population fluctuates widely depending on the time of year and even time of week. Weekends bring a large influx of tourists to Cape May and Atlantic Counties in particular; as shown in Figure 3, the weekend population increases by an average of 11% in Cape May County and 3% in Atlantic County. These rapid weekly and seasonal population changes can increase the stress on the regional transportation network and create regionally specific patterns of congestion. Seasonal changes are similarly concentrated in these two counties (Figure 4).

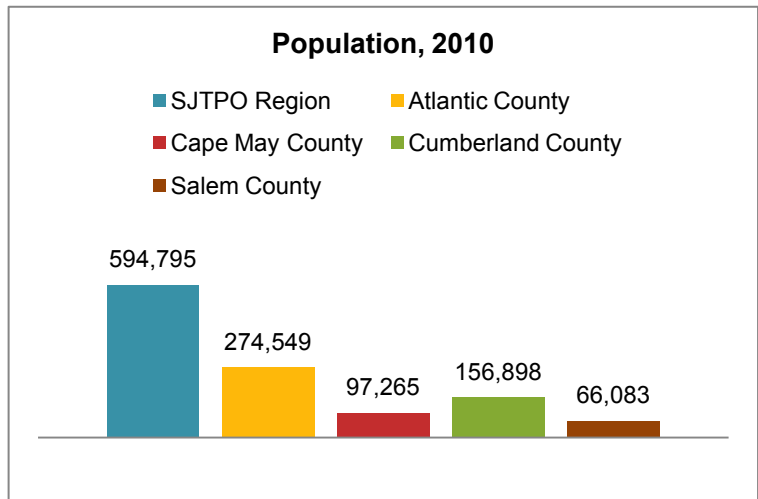


Figure 2. SJTPO Region Population. Source: US Census 2010.

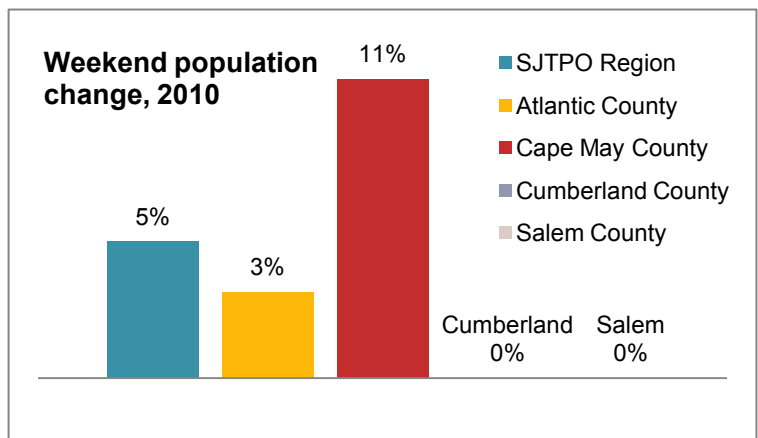


Figure 3. Weekend Population Change. Source: SJTPO Demographic Forecast Report prepared by the Center for Regional and Business Research at Atlantic Cape Community College, November 2011.

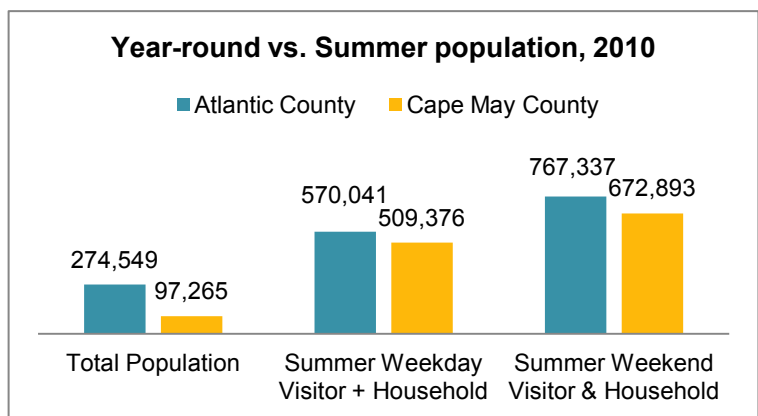


Figure 4. Seasonal Population Change in Atlantic and Cape May Counties. Source: SJTPO Demographic Forecast Report prepared by the Center for Regional and Business Research at Atlantic Cape Community College, November 2011.

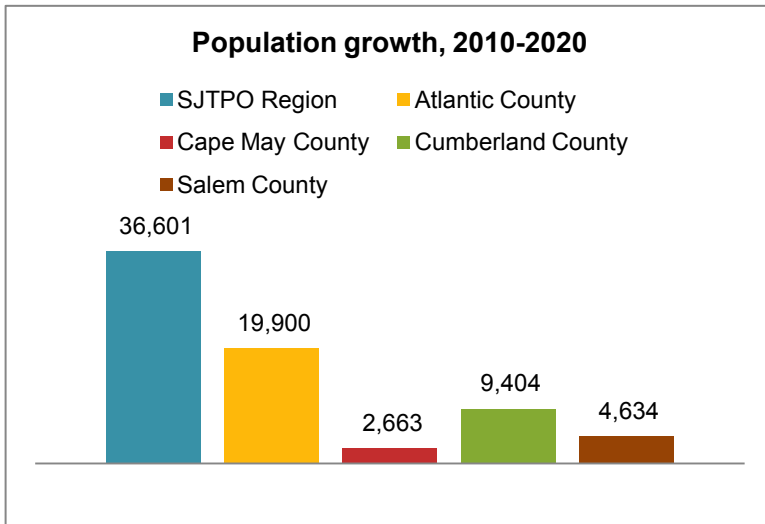


Figure 5. SJTPO Region Population Growth, 2010-2020. Source: SJTPO *Demographic Forecast Report* prepared by the Center for Regional and Business Research at Atlantic Cape Community College, November 2011.

Overall population growth in the region averaged 0.52% per year between 2000 and 2010 and is projected to increase slightly to 0.62% per year between 2010 and 2040. In absolute numbers, as shown in Figure 5 and Figure 6 this means that 115,459 residents will be added to the four counties between 2010 and 2040. Consistent with past growth, Atlantic County is projected to add the most residents in both decades, followed by Cumberland County.

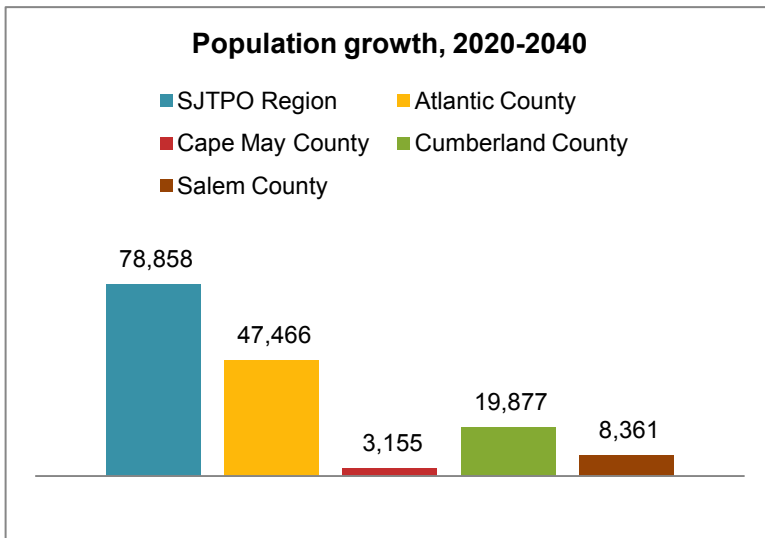


Figure 6. SJTPO Region Population Growth, 2020-2040. Source: SJTPO *Demographic Forecast Report* prepared by the Center for Regional and Business Research at Atlantic Cape Community College, November 2011.

Over the next 30 years, the SJTPO region is expected to grow at a significantly slower rate than the country as a whole, but the region will keep pace with population growth within the state of New Jersey (Figure 7). Due to the prevalence of second homes at the shore, it is expected that there will be a significant increase in the residents over 60 years old as retirees move to their second homes permanently. This trend will be especially prominent in Cape May County due to its high seasonal population gain (Figure 3).

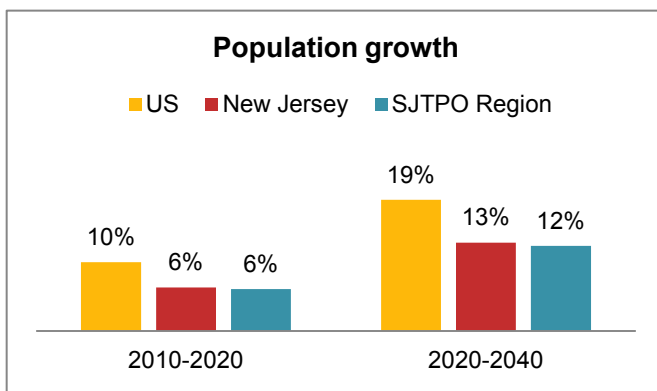


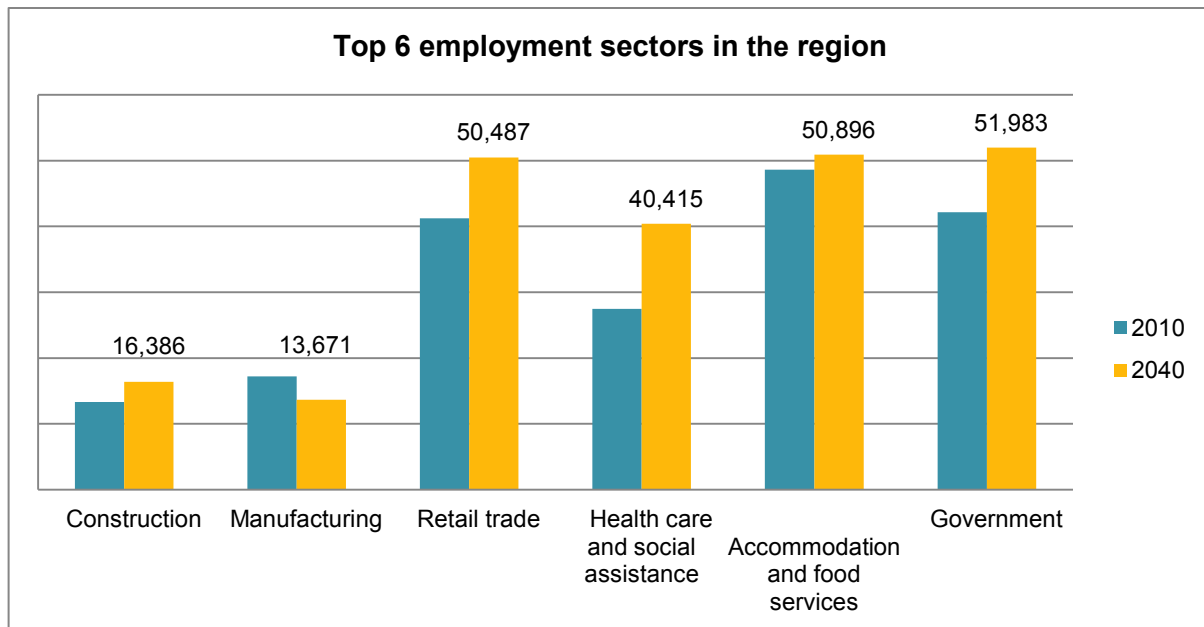
Figure 7. Population Growth, National, Statewide and Regional. Source: Woods and Poole, Washington, D.C. Copyright 2011. SJTPO Region data, SJTPO *Demographic Forecast Report* prepared by the Center for Regional and Business Research at Atlantic Cape Community College,

While an increase in an older population can be expected to increase jobs in the healthcare sector, overall sectoral change is projected to be minor. That is, the distribution of jobs will remain largely the same as it is today. Economic activity in the SJTPO region is dominated by two sectors: retail, and accommodation and food services (Figure 8). Given the seasonal and

tourist orientation of the region, it is not surprising that these sectors will continue to be the major source of jobs into 2040.

The SJTPO region has been closely linked to tourist and seasonally-based population and economic flows and it is clear that this connection will continue over the next three decades.

Figure 8. Top Employment Sectors in the SJTPO Region. Source: NAICS, 2008.



Environmental Justice

The planning process must pay special attention to issues of environmental justice in order to comply with the mandates of Title VI of the Civil Rights Act of 1964, Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994 and FHWA guidelines on environmental justice. However, SJTPO recognizes that the intent of environmental justice is to ensure the inclusion of minority, low-income and other disadvantaged populations in the planning process. As such, SJTPO has added three additional population groups to its environmental justice considerations: the elderly (any individual age 65 years old and over); zero-vehicle households; and limited-English proficiency (LEP) populations.

The SJTPO uses the three fundamental environmental justice principles outlined by FHWA¹:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

¹ US DOT, Federal Highway Administration, *An Overview of Transportation and Environmental Justice*, www.fhwa.dot.gov/environment/environmental_justice/overview/, accessed April 27, 2012.

- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Public Involvement in the Regional Transportation Plan

SJTPO has created a [Public Involvement Program](#) to ensure that input from both the public and key regional decision makers and transportation service providers is incorporated, in keeping with Federal planning factor guidelines. Public involvement has been solicited at critical milestones and has been designed to accommodate a wide range of participant access and input.

Outreach efforts during the planning process included meetings of the [Citizens Advisory Committee](#), the [Technical Advisory Committee](#), the [SJTPO Policy Board](#), and the general public, through public meetings.

Citizens' Advisory Committee (CAC): represents a broad cross-section of civic and business groups, environmental interests, and private provider and user groups.

Technical Advisory Committee (TAC): a fourteen member committee providing input to the Policy Board.

The Plan Vision and Goals

The SJTPO 2040 Regional Transportation Plan will plan for a safe, efficient, appropriate, responsible, integrated, multimodal transportation system throughout the South Jersey Metropolitan Planning Area over the next 28 years. The transportation system will be:

- **Safe:** reduce injuries and improve the sense of safety for all users
- **Efficient:** move the most people and goods in a cost effective manner, while using the least amount of resources
- **Accessible:** serve a wide variety of customers within the 4-county SJTPO region
- **Appropriate:** contribute to the quality of life and character of the region through proper design
- **Responsible:** protect existing investments and limit environmental and social impacts
- **Integrated:** link with other transportation and land use plans as well as future infrastructure investments
- **Multimodal:** provide a choice of modes for most trips.

SJTPO Policy Board

The governing body of the SJTPO is the Policy Board. It consists of eleven voting members: one elected official from each county government, one municipal elected official from each county (specifically including the Mayors of Atlantic City and Vineland), and one representative each from the New Jersey Department of Transportation, New Jersey Transit, and the South Jersey Transportation Authority.

Setting Goals

Transportation planning and decision-making for the SJTPO region are guided by a series of goals and policies. A direct outgrowth of the Plan Vision, these goals and policies reflect the priorities, needs, and values of the region's citizens, decision-makers, and business community. Input was solicited from members of the SJTPO Policy Board and Technical Advisory Committee on the 2040 RTP Goals and Policies. Based on the responses, SJTPO has set the following goals and policies to guide the regional transportation decision making process.

2040 Plan Goals	Policies
Promote transportation choices for the movement of people and goods	<ul style="list-style-type: none"> • Expand and improve non-auto transportation systems as needed. These systems include aviation, passenger rail, marine, rail freight, bicycle, pedestrian and public transit systems. • Provide for affordable mobility options to all segments of the transportation disadvantaged and support welfare-to-work transportation subsidies. • Support transit operating subsidies to ensure affordable mobility options.
Support the regional economy	<ul style="list-style-type: none"> • Advance projects to interconnect the transportation system across modes and for all users. • Improve access to areas of major employment and tourism. • Improve the efficiency and operations of the existing transportation system.
Improve transportation safety	<ul style="list-style-type: none"> • Ensure the safety of all users of highway, transit, bicycle, pedestrian and freight systems. • Fully integrate emergency evacuation issues into the regional planning, corridor planning and project development activities as appropriate. • Continue and enhance support of the South Jersey Traffic Safety Alliance and integrate traffic and pedestrian safety considerations into the SJTPO's policies and programs.
Improve security	<ul style="list-style-type: none"> • Ensure the security of users of highway, transit, bicycle, pedestrian and freight systems. • Fully integrate emergency evacuation issues into the regional planning, corridor planning and project development activities as appropriate.
Mitigate traffic congestion	<ul style="list-style-type: none"> • Improve the efficiency and operations of the existing transportation system. • Develop and implement innovative technologies.
Protect and enhance the environment	<ul style="list-style-type: none"> • Encourage cooperative land use and transportation planning activities. • Encourage the use of alternative transportation modes. • Mitigate negative environmental and social impacts of transportation improvements and augment positive impacts. • Promote community design and site planning that accommodate and promote transportation choices.
Enhance the integration and connectivity of the transportation system	<ul style="list-style-type: none"> • Encourage cooperative land use and transportation planning activities. • Advance projects to interconnect the transportation system.
Restore, preserve and maintain the existing transportation system	<ul style="list-style-type: none"> • Secure dependable, reliable sources of transportation funding. • Ensure that the key elements of the transportation system are restored, preserved and maintained. • Explore alternative financing for transportation improvements to supplement fuel and property taxes.

The Region's Existing and Proposed Transportation System

This section presents a review of transportation resources in the SJTPO region by travel mode. It begins with aviation and continues with bicycle and pedestrian movement, freight, and transit, concluding with an examination of the road network. This section also provides an overview of facilities and services, demand for travel, condition and state of repair of infrastructure, as well as an assessment of needs and problems, concerns, and influencing factors. Finally, strategies for improvement are reviewed.

1. Aviation

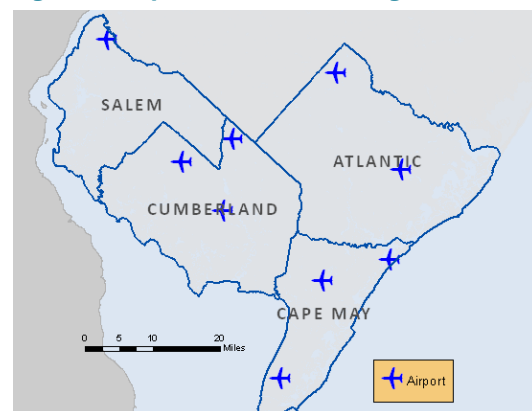
In spite of its relatively small size, the SJTPO region has a variety of general and commercial service aviation facilities (Figure 9). The only commercial service aviation facility in the region is the Atlantic City International Airport (ACY) located in Egg Harbor Township. It serves to facilitate tourism into the region, as well as to link the region to other aviation hubs for business and leisure travel.

In May 2009, a study commissioned by the Casino Reinvestment Development Authority of Atlantic City laid out the plans for a 75,000 square foot, \$25 million expansion to the airport. The project began in December 2010 and is on schedule to be completed by May 2012. The facilities added include three passenger gates, an expanded baggage claim area and a federal inspection station that would allow for international flights. The airport has added demonstrable economic growth and holds strong potential for drawing visitors from across the nation and internationally.

An assortment of smaller airports serves general aviation needs for business travel and recreational flying. These airports include:

- Bucks Airport
- Cape May County Airport
- Hammonton Municipal Airport
- Kroelinger Airport
- Millville Airport
- Ocean City Municipal Airport
- Spitfire Aerodrome
- Woodbine Municipal Airport

Figure 9. Airports in the SJTPO region.



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supports development of the aviation sector; and in particular, plans for improved transit connections to the airport to give travelers and employees other options besides driving to the airport. For more details, see *Technical Appendix 4*.

2. Bicycle and Pedestrian

SJTPO makes bicycle and pedestrian mobility and safety a high priority by planning future initiatives and conducting safety campaigns. Each county has been active in planning efforts to foster the

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development of bicycle and pedestrian facilities. Moreover, many municipalities in the SJTPO region require bicycle and pedestrian facilities in new development and nearly every municipality has existing or planned bicycle and pedestrian facilities for both commuting and recreational purposes (see Table 1 and Figure 10).

Table 1. SJTPO Region, Existing and Proposed Bike Lane Miles. Source: Cross County Connection TMA, *Bicycle Facilities Inventory: Summary Report, 2008*.

	Existing bike lane miles	Proposed bike lane miles
Atlantic County	37	213
Cape May County	39	79
Cumberland County	75	116
Salem County	7	114

Although existing roadways may hold the potential to safely accommodate bicyclists, factors such as roadway width, space, and surface conditions, traffic volume and motorized vehicle operating speeds need to be examined in order to determine bicycle compatibility. For pedestrians, a further challenge is the inconsistent availability and condition of sidewalks, crosswalks, signals, overpasses, underpasses, malls, trails and greenway paths. For example, while sidewalks are common and in good condition in more urbanized areas; in suburban and rural areas, they are often not continuous or well-maintained, making pedestrian use unattractive.

Like the rest of New Jersey, these impediments to bicycle and pedestrian travel are common and widespread throughout the region. If bicycling and walking are to become more widespread in the region, a more bicycle friendly and pedestrian friendly environment must be created. Creating these more friendly environments requires improvements in the engineering and operation of streets and highways and creating more compact land use forms.

Since the last Regional Transportation Plan Update, SJTPO's counties have proposed a number of new bicycle and pedestrian projects. These are outlined in more detail in *Technical Appendix 4*.

3. Freight

Findings from the Southern New Jersey Freight Transportation and Economic Development Assessment report, published in 2010, indicated that the overwhelming mode of freight transport within the region and state is truck. While the overall amount of truck traffic in the SJTPO region is modest, it is forecast to grow. Trucks are also the dominant mode of transport in the intermodal freight business: truck to rail, truck to ship, and truck to air.

Figure 10. Bike Lanes in the SJTPO Region.



Rising diesel and gasoline prices as well as increasing interest in reducing greenhouse gas emissions have prompted greater consideration of alternative freight modes. Rail may be a viable alternate mode; however, the report identified several gaps in the region's rail infrastructure that must be addressed first. Currently, short line railroad operators in the region link area industry and businesses to the Class I railroad system; this is done through the Conrail network which provides access primarily to Norfolk Southern (NS) and CSX railroads. However, the rail infrastructure is in a poor state of repair, unable to support standard interstate rail capacity and speeds, resulting in slow speeds and frequent derailments. Investing in improvements to the rail infrastructure would greatly increase rail freight capacity.

Maritime freight transport is of particular interest to Atlantic and Cape May counties; the latter is the fourth largest fishing port in the nation. The market for seafood products originating at this fishing port is both national and international. The sector is currently constrained by limited truck routes and the narrow width of the Middle Thorofare at Ocean Drive that restricts vessel size. Adding truck capacity and wider maritime navigation channels could assist the growth of the fishing industry.

Intermodal connections should be improved in the SJTPO region to facilitate the movement of goods through the region. Improving connections between truck, rail, and maritime traffic would allow goods produced in the region to have greater access to state and national markets.

The SJTPO supports a comprehensive assessment of freight needs and issues in the SJTPO region. The following intermodal and freight movement actions are recommended:

- Improve intermodal connections, especially to areas of major employment and tourism and the AC airport
- Improve access of local rail carriers to regional and interstate systems
- Maintain and upgrade rail facilities
- Examine potential transit options to improve accessibility to AC Airport
- Conduct a comprehensive assessment of freight needs and issues in the SJTPO region, including an analysis of the Delair Bridge as well as identification of intersections at which turning radius may be a problem for trucks.

For more details on freight assets in the SJTPO region, see *Technical Appendix 4*.

4. Public Transportation

Although transit service is available in every county of the SJTPO region (Figure 11), it is generally sparse due to low population densities. Most of the region's transit service is concentrated in Atlantic County, specifically within Atlantic City. However, there are many unmet transit needs in the region amongst transit-dependent and rural populations. Additionally, as employment continues to spread out along highway corridors, new bus services may be needed and expansions of existing services may be warranted.

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It is critical to build upon the transit services that currently operate in the region so that the mobility offered by these essential services is maintained and improved. The SJTPO will work with NJ TRANSIT to assess and identify necessary transit service enhancements in the region, including an examination of existing bus routes and service levels.

Currently, the only rail corridor offering commuter rail service in the SJTPO region is the Atlantic City Rail Line. The South Jersey Regional Rail Study provides the basis for more detailed planning to reactivate one or more abandoned rail lines for passenger service. Another option that should be considered is a bus rapid transit (BRT) system. BRT offers advantages of generally lower costs than fixed rail systems; and, depending on the alignment, they can utilize exclusive right of way or share right of way with other vehicles. SJTPO will engage with NJ TRANSIT to determine if there are potential BRT opportunities in the SJTPO region.

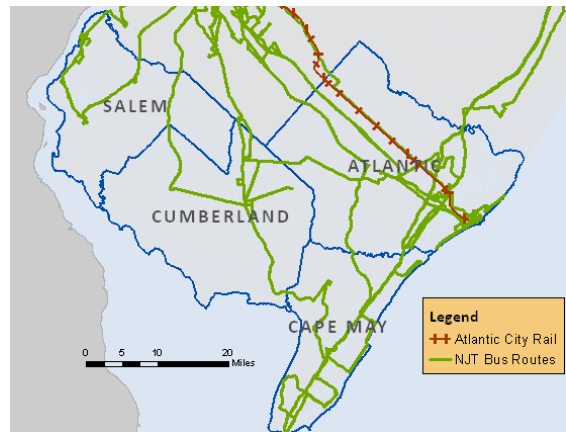
A BRT system connecting Philadelphia to Gloucester and Camden counties is currently under consideration by NJTransit; if adopted, it is expected to be in place by 2020. While these developments are taking place outside the SJTPO region, an NJTransit BRT report included Salem, Atlantic and Cumberland counties as part of the extended study area that would be impacted by BRT lines. Decreasing commute times from adjacent counties into Philadelphia could encourage more trips originating in the SJTPO region and connecting to Philadelphia via BRT nodes in neighboring Camden and Gloucester counties.

In addition, the Delaware River Port Authority (DRPA) is investigating the feasibility of a light rail transit line (LRT) between Camden and Glassboro. An environmental impact study (EIS) will be conducted over the next two years. SJTPO will closely monitor the results of this study as a Glassboro-Vineland link is likely to become more feasible if a Camden-Glassboro LRT is implemented.

Specialized and demand-responsive paratransit services in the SJTPO region include NJ TRANSIT's region-wide Access Link service, NJ TRANSIT's paratransit service. Additional service is provided by public agencies, county, and municipal governments, as well as a mixture of primarily non-profits or hospitals to serve their own client needs. While there is some level of coordination among a few providers within each of the counties, each agency operates its own transportation program independently. Most of this service is restricted to passengers who meet specific eligibility requirements that usually pertain to disability or senior citizen status or as a client to a human-service agency or organization.

Human Service Transportation programs and services are provided by a range of state, county and local agencies as well as private, non-profit organizations to serve the needs of populations such as senior

Figure 11. Bus routes and passenger rail in the SJTPO region.



citizens and the disabled, who are transit dependent. While there is some coordination of services among the various providers, it is generally insufficient, and providers operate their own transportation programs independently and for their own clients.

The Federal "United We Ride" initiative was created to address the need to coordinate Human Service Transportation in order to reduce costs and increase service efficiency. In response, SJTPO completed the four-county 2010 Human Service Transportation Plan (HSTP) Update which identifies service needs and gaps, and recommends service improvements. As a condition for eligibility, grant proposals from government and private agencies that seek funding for service operations and vehicular purchases must be compatible with the current SJTPO HSTP Update. Recommendations from the 2010 SJTPO HSTP Update and related issues are discussed in *Technical Appendix 4*.

The following transit actions are recommended:

- Assess and identify potential transit service enhancements and expansion in the SJTPO region, including an examination of existing routes, service levels, and gaps; affordable mobility options; and potential rail corridors including Pleasantville
- Continue exploring the option of reactivating one or more of the abandoned rail lines evaluated by the South Jersey Regional Rail Study for passenger service
- Determine if there are potential bus rapid transit (BRT) opportunities in the SJTPO region, especially to and within Atlantic City because of its high volumes of bus traffic. Enhance regional access to the proposed BRT catchment areas in Gloucester and Camden counties, as described above.

5. Road Network

The dominant mode of travel in the SJTPO region is via roadway. Highway and other road facilities in the region are subject to seasonally-based stressors because of the centrality of seasonal tourism and gambling to the regional economy.

Two major roadways accommodate tourist traffic from Pennsylvania, New York and the rest of New Jersey: the Garden State Parkway and the Atlantic City Expressway (Figure 12). Both are limited access toll roads. The Garden State Parkway is managed by the New Jersey Turnpike Authority (NJTA), while the Atlantic City Expressway is managed by the South Jersey Transportation Authority. The 2009 Atlantic City Regional Transportation Plan (ACRTP), developed by the Casino Reinvestment Development Authority (CRDA) of Atlantic City recommended widening the Garden State Parkway in order to accommodate current and future growth in this heavily used corridor. The ACRTP also recommended adding an additional lane to the westbound segment of the Atlantic City Expressway between the Garden State Parkway interchange and Atlantic City to relieve congestion. The SJTA began work on this lane in May 2011 and it is scheduled to be completed in July 2012.

The western part of the SJTPO region is served by the New Jersey Turnpike which is also managed by the NJTA. The Turnpike is a limited access toll road that runs from Bergen County in northern New

Jersey and terminates in Salem County. It connects the region to the Greater Philadelphia region, to northern New Jersey and the New York City metropolitan area.

The SJTPO region is also served by U.S., state and county roads (Figure 12). Major arterials include US 40, NJ 47 and NJ 55. US 40 is mostly a two-lane highway that runs east-west, from Salem County to Atlantic County. NJ 55 is a four-lane limited access freeway that allows north-south travel through Cumberland County; the termination of this route in Cumberland County complicates travel to and from Cape May County from points west. The extension of NJ 55 into Cape May County could ease congestion to and from the shore; currently, local roads are forced to serve a regional need to facilitate seasonal tourists travelling to shore points.

As noted in the Financial Plan of this document, due to funding limitations, most planned roadway projects for the Regional Transportation Plan period involve system preservation rather than capacity increases.

Safety Strategies

The SJTPO incorporates safety considerations into the planning process in two key ways: through safety project implementation and the South Jersey Traffic Safety Alliance.

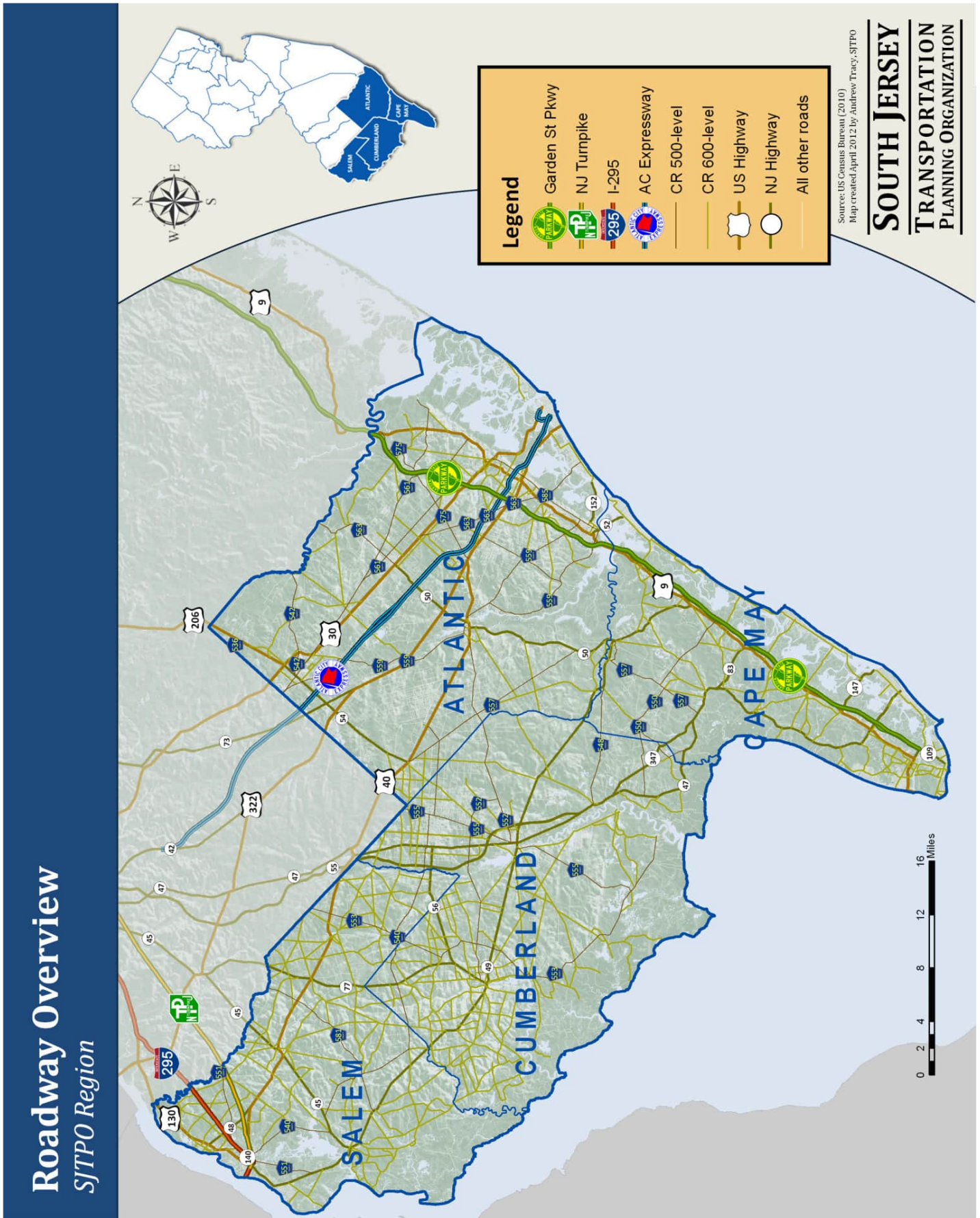
SJTPO advances safety by needs identification, project development, project selection and programming. SJTPO periodically conducts Road Safety Audits (RSAs) and network screening to generate improvement recommendations for roadway segments or intersections demonstrating a history of, or potential for, a high incidence of motor vehicle crashes.

SJTPO assists member agencies with the safety analysis required for the Federal Highway Safety Improvement Program (HSIP) funding. SJTPO will continue to work closely with project sponsors, NJDOT and FHWA to maximize HSIP funding in the SJTPO region.

The South Jersey Traffic Safety Alliance (SJTSA) is headed by an Executive Board made up of twelve members, three from each county, who direct SJTSA policy. The SJTSA is a unique traffic safety organization with the goal of creating an alliance with traffic safety professionals from law enforcement, community education, fire, rescue, engineering and planning. The SJTPO and SJTSA conduct an annual regionwide seatbelt observational survey. Survey findings show that general public seatbelt use is over 90%; whereas seatbelt use for teens is only 85%; for seniors, only 76%; and for commercial vehicle drivers it is 75%. The SJTSA will continue to make education and instruction for these users a priority, with the goal of increasing seatbelt use. The FY2012 seatbelt survey will also gather information on backseat belt use and child restraint use for children under 18. National studies indicate that backseat belt use is between 50% and 75% and booster seat use for children 5 to 8 years old is less than 50%. The SJTSA will continue to educate motorists on the importance of buckling up in the backseat and promote booster seat use.

For more details, on roadway assets and strategies in the SJTPO region, see *Technical Appendix 4*.

Figure 12. Roadways in the SJTPO region.



6. Transportation Systems and Demand Management

Congestion Management Process (CMP)

Per the Federal Planning Rule, §450.320, Transportation Management Areas (TMAs) such as the SJTPO must construct and implement a CMP as part of their overall regional transportation planning process. The SJTPO implemented a CMP in 2012 that was based on the precursor SJTPO Congestion Management System (CMS). A Congestion Management Process is a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meet state and local needs.”²

Table 2, below, depicts congestion on SJTPO roads on a typical non-summer weekday. These results are based on data produced from the NJDOT (CMS), a computerized database consisting of more than 4,000 two-directional links with congestion information for all the interstate, state roads and some major county roads in New Jersey. According to the latest version of the CMS (2009), the percentage of SJTPO roadways experiencing at least one hour of congestion per 24-hour weekday period increased from 4.50% in 2005 to 4.95% in 2009, the latest year for which the NJCMS data is available.

Table 2. Number of Congested Hours* Per 24-Hour Weekday in the SJTPO as reported by the NJCMS.

Hours	2005		2009		Change (miles), 2005-2009
	Miles	% of Total	Miles	% of Total	
0 to 1	514.87	95.50	512.27	95.05	-0.50%
1 to 2	17.34	3.20	15.41	2.86	-11.13%
2 or more	7.16	1.30	11.26	2.09	57.26%
Total	539.37	100.00	538.94	100.00	-0.08%

Source: 2005 data derived from 2009 NJDOT Congestion Management System, version 4.04.90, 2009 data derived from 2012 NJDOT Congestion Management System, version 4.04.90.

*“Congested” hour defined as any hour with a Volume/Capacity (V/C) >= 0.90 in either direction.

A more detailed explanation of the CMP and SJTPO’s activity for FY 2012 can be found in Appendix 5. It is our intention to build upon this initial version of the CMP with additional data and performance measures in the coming years.

Travel Demand Management

Although the SJTPO region does not have the traffic volume and congestion problems experienced in other parts of the State, there are still opportunities to enact travel demand management (TDM) measures, particularly during peak periods. TDM strategies can help to maximize the efficiency of existing roadway capacity and transportation resources, to mitigate traffic congestion, and improve mobility, accessibility and air quality. Improvement can be achieved in part by increasing travel choices

² US DOT. *Congestion Management Process: A Guidebook*. April 2011.

and reducing reliance on single occupancy vehicles and can be implemented through a cooperative effort between SJTPO, NJDOT, its Transportation Management Association (TMA), local governments and public and private transportation providers.

Examples of specific strategies include increasing transit services, encouraging mass transit use, car and van pooling (for example, by providing park and ride lots), employee flextime, telecommuting and promoting smart growth. There are other strategies that have at least marginal TDM benefits: for example, the expansion and improvement of human service transportation services for elderly, disabled, and low income persons. Another strategy is the provision of bikeway lanes and facilities.

SJTPO works closely with NJDOT and its TMA, Cross County Connection (CCCTMA), to implement TDM strategies. SJTPO has assisted in the development of NJDOT's statewide bicycle map, the State Bicycle and Pedestrian Master Plan and various activities (such as a state road sidewalk need survey) that implement the State's Complete Streets policy. CCCTMA has assisted SJTPO in a survey of regional Human Service Transportation (HST) providers (an element of the SJTPO HST Plan), identified HST need and gaps in Salem County, and has provided rideshare-matching services to employers and employees in the SJTPO region. In addition to this, numerous TDM-related plans and studies have been completed as part of SJTPO's technical and subregional programs, including several county bikeway plans, a county rails-to-trails study, an NJ Transit Bus Ridership Survey, and two regional Human Service Transportation Plans. SJTPO will continue to promote TDM strategies as described throughout this Plan.

7. Environmental Considerations

Regional Environmental Context

In the ongoing process of maintaining and improving the transportation system, consideration must be given to avoiding or minimizing negative impacts on air and water quality, climate, and other natural resources, including:

- Coastal and freshwater wetlands
- Wildlife habitat areas
- Prime Farmland
- Forested Areas
- Natural Scenic Areas
- Unique natural areas such as the Pinelands and the coastal environment

Federal and state regulations often require an environmental assessment or a comprehensive Environmental Impact Statement (EIS) where a proposed project would involve an increase in the carrying capacity of a transportation facility. The findings of these statements may require mitigation strategies to minimize negative impacts or they may suggest significant project modifications. Despite this specific level of protection, a general understanding of the natural resources and significant environmental features in the SJTPO region is an essential part of the long range transportation

process. Figure 13 shows the boundaries of the Coastal Area Facilities Review Act area (CAFRA) and Pinelands, protected natural areas.

Transportation systems have been identified as a major contributor to global warming, especially through vehicle emissions, but transportation systems are themselves also vulnerable to the impacts of global warming, such as damage caused by rising sea levels. Given this, government agencies at all levels have recognized the need to develop plans and strategies to reduce greenhouse gas emissions. SJTPO has worked in cooperation with NJDOT and the North Jersey Transportation Planning Authority (NJTPA) in preparing a study of climate change impacts on infrastructure on a statewide basis and will complete a regional Greenhouse Gas Emissions Inventory in FY 2014. Evaluation of the vehicular emission increase resulting from any new major transportation project is an integral part of the SJTPO's project impact analysis.

Environmental Mitigation

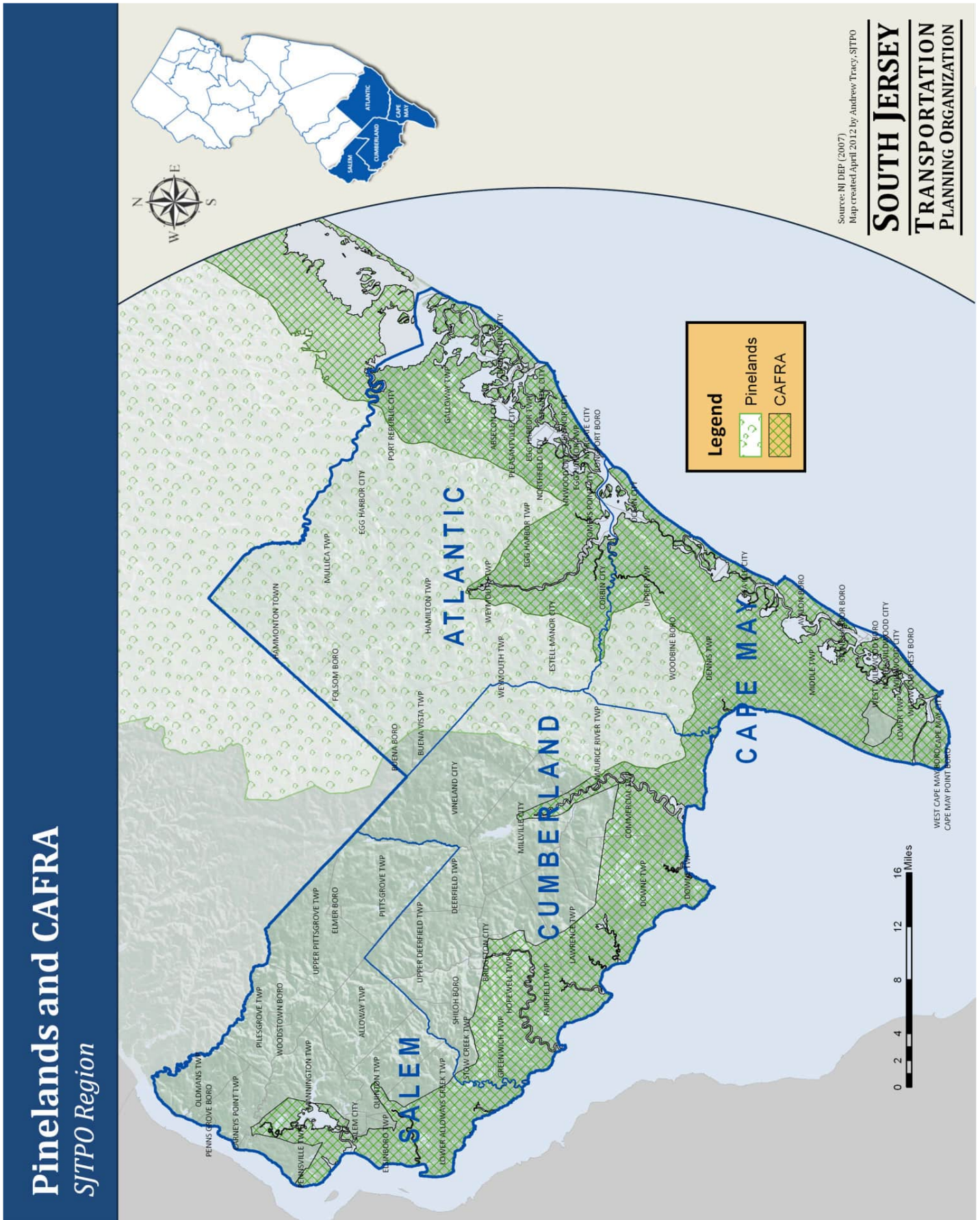
The SJTPO is committed to minimizing and mitigating the negative effects of transportation projects on the natural and built environments in order to preserve the region's quality of life. "Protect and improve the environment" is one of the criteria in SJTPO's Project Selection Process and Ranking System.³ In doing so, SJTPO recognizes that not every project will require the same type or level of mitigation. Some projects, such as new roadways and roadway widening, involve major construction with considerable earth disturbance. Others, like intersection improvements, traffic signal synchronization and resurfacing projects, involve minor construction and minimal, if any, earth disturbance. The mitigation efforts used for a project will vary depending on the type of project and severity of the potential impact. As the project moves from inception to Problem Statement to actual project, SJTPO will work with the project sponsors and the appropriate regulatory and resource agencies to identify specific mitigation efforts most appropriate for that particular project

Air Quality Conformity Assessment

The SJTPO must assure conformity of transportation decisions with the State Implementation Plan (SIP) and the Federal 1990 Clean Air Act Amendments. To achieve the required Air Quality Conformity, an assessment process was conducted based on federal guidelines and with the participation of both FHWA and EPA. The process is based on the latest planning assumptions (including adopted SJTPO demographics projections) and utilizes the South Jersey Travel Demand Model (SJTDM) to examine the air quality impacts of the region's proposed transportation plans, projects, and programs. The regional emissions analysis performed for this conformity determination was run in July 2011. Although the regional emissions analysis was based on the 2035 Regional Transportation Plan, because there have been no additions in the 2040 Regional Transportation Plan that would affect the existing regional emissions analysis, per §40 CFR 93.122(g) of the Transportation Conformity Regulations, SJTPO is relying on the July 2011 analysis to demonstrate conformity of the 2040 Regional Transportation Plan with the SIP.

³ Available on the SJTPO website at www.sjtpo.org/Documents/TIP/TIP_Project_Selection_Process.pdf.

Figure 13. Pinelands and Coastal Area Facility Review Act areas.



The table below depicts the results of the action scenarios testing versus the budgets established for each emission level for the analysis years. Emissions generated are a result of both the future year demographic inputs and the new projects, or actions, added to the base network. Emissions are then compared to the corresponding analysis year emission budgets. Analysis demonstrates that the 2040 Regional Transportation Plan will conform to the Statewide Implementation Plan (SIP) with respect to the established motor vehicle emissions budgets and will meet all requirements under the 8-hour Ozone, and the Carbon Monoxide (CO) National Ambient Air Quality Standard (xNAAQS) tests.

Table 3. SJTPO Budget Tests, FY 2012-2021.

Budget Tests – SJTPO FY 2012-2021 Conformity Assessment VOC Budget Test, SJTPO (tons per day)				
	2020	2030	2035	2040
Budget	13.04	13.04	13.04	13.04
Action	5.68	5.35	5.62	5.74
Budget-Action	7.36	7.69	7.42	7.30
Pass/Fail	Pass	Pass	Pass	Pass
NOx Budget Test, SJTPO (tons per day)				
	2020	2030	2035	2040
Budget	29.64	29.64	29.64	29.64
Action	6.69	4.31	4.39	4.51
Budget-Action	22.95	25.33	25.25	25.13
Pass/Fail	Pass	Pass	Pass	Pass

Additional Resources

SJTPO works with numerous agencies in New Jersey which provide information and mapping of regulated wetlands and coastal areas, protected farmland, Pinelands, wildlife habitat areas and endangered species. Further information on each agency’s initiatives and plans can be accessed at their websites, below.

- New Jersey Pinelands, www.state.nj.us/pinelands – Includes the Pinelands Land Capability Map and the Pinelands Management Plan.
- Department of State – Office for Planning Advocacy, www.nj.gov/state/planning/ – Includes the State Plan map, showing the location of Environmentally Sensitive Planning Areas and protected natural areas.
- Department of Environmental Protection, www.state.nj.us/dep/ – Includes information on wetlands and other natural features, CAFRA mapping and an update on climate change activities at the State level.
- SJTPO, <http://www.sjtpo.org/Environment.html%20>– Includes the report: *Climate Change Vulnerability and Assessment of New Jersey’s Transportation Infrastructure* (2011).

Financial Plan

1. Introduction

This Financial Plan demonstrates that the proposed transportation investment agenda contained in the 2040 Regional Transportation Plan is consistent with reasonably available sources of funds.

Federal transportation planning requirements assert that financial plans are a required element of regional transportation plans for Metropolitan Planning Organizations (MPO). However, MPO plans may include, for illustrative purposes, additional projects beyond identified resources of the financial plan if additional resources were to become available.

The transportation requirements of the region go far beyond those listed in the annual Transportation Improvement Program (TIP), which can only address the most pressing needs because of funding limitations. Because of severe funding constraints and no real dollar growth in projected revenue sources for the foreseeable future, all SJTPO funds have to be used for maintenance and improvements in order to preserve our present infrastructure. No funds are available for system expansion.

2. Transportation Improvement Program (TIP)

Current funding for transportation improvements in the SJTPO region is dedicated through FY 2021. The actual budgeting of federal and state funds for projects within the MPO is a product of the development of regional TIP, the State Transportation Improvement Program (STIP) and the Annual Capital Program. There may be significant variations in the amount of funds actually programmed within an MPO as needs and specific project implementation schedules dictate.

The TIP for the SJTPO lists state and federally funded state and local highway projects, public transit projects and statewide transportation programs scheduled for implementation within the next ten fiscal years (2012 through 2021). The TIP provides for approximately \$9.4 billion in Year of Expenditure (YOE) dollars of transportation investments in southern New Jersey for this period and it includes a detailed description and funding schedule for each project and program.

The FY2012-2021 TIP is constrained to currently available funding. The FY2012-2021 TIP was developed over a number of months by NJDOT, NJTRANSIT, and the SJTPO. To develop the TIP, projects are screened for feasibility of advancement to implementation, including a verification of scope and cost. Projects that pass this initial screening are placed in the project pool for further evaluation and review.

Since the TIP is fiscally constrained, many proposed and necessary projects cannot be adopted for the TIP. This leads to future challenges as the region continues to develop and transportation needs increase. Insufficient funding means these needs will continue to grow, especially as the region's existing transportation system ages.

Continued federal and state funding is required to support the SJTPO's short-term investment program. Although adequate funding levels are in place to support this plan's short-term investments, ongoing planning studies will identify additional short and long-term investments needed in the region.

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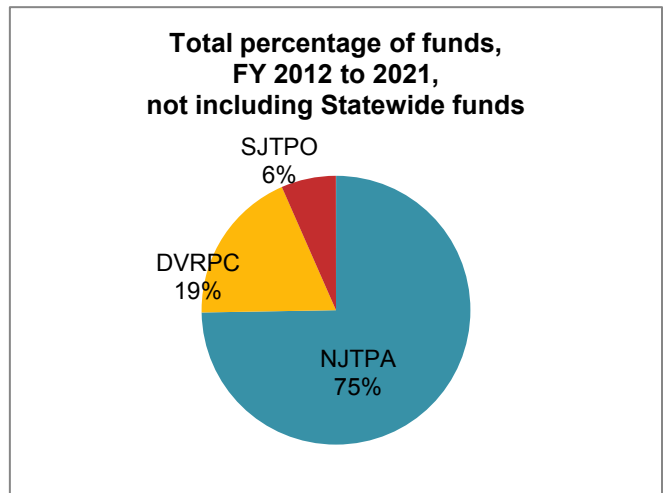
Allocation of funds will be a product of the planning process that includes needs analysis, prioritization, project selection and the TIP negotiation process. Regional Transportation Plan updates and the requirements of a fiscally constrained TIP will ensure that investments are economically feasible for the region.

The SJTPO is faced with the enormous task of maintaining the existing transportation infrastructure while addressing future needs by undertaking significant improvements designed to increase efficiency of the infrastructure. The scale of existing maintenance needs has necessitated targeting most resources and efforts to making necessary repairs. The need to maintain the existing highway system in a state of good repair is of paramount importance to the SJTPO region. In particular, there are many bridges throughout the region that are either structurally deficient or functionally obsolete. This backlog of bridge projects must be systematically addressed to bring all bridges into a state of good repair. Funds needed to maintain and preserve the system must be made available; deferring maintenance leads to increased long-term maintenance cost and shortened useful lifecycles. SJTPO funds have also been used to make the existing system more efficient, safer, and more secure. A large portion of the expenditures in the 2040 Regional Transportation Plan are focused on system preservation and maintenance.

New Jersey's Transportation Trust Fund has provided a stable source of funding for the state's transportation system and was last renewed in 2011 for a period of five years. However, enhancing the SJTPO's infrastructure requires additional investments. Even with this anticipated funding, the SJTPO may require adequate levels of funding to preserve the existing transportation infrastructure.

Historically the SJTPO region has received between 4% and 6% of available funds (excluding statewide programs). In FY 2010, the percentage increased to 11%, and in FY 2011, to 13%, excluding statewide programs. For FY2012-2021, the SJTPO region is expected to receive 6.6% of the \$11.67 billion transportation program (excluding statewide programs), while NJTPA, the MPO for northern New Jersey, is expected to receive 74.7% and DVRPC, the MPO for central New Jersey, is expected to receive approximately 18.7% (Figure 14). Figures 15 and 16, below, show the distribution of funds amongst the three New Jersey MPOs on a percentage basis and dollar basis, respectively.

Figure 14. NJ MPOs Share of Funds, 2012-2021. Source: FY 2012-2021 TIP.



The following table from the FY 2012 TIP (Table 9 in the TIP) includes a detailed breakdown by year and funding category for the SJTPO FY 2012-2021 TIP. The revenue estimates shown in these tables are a result of extensive collaboration among NJDOT, NJTransit and New Jersey's MPOs. Federal guidance

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allows for the use of historical apportionments including a growth rate estimated on the basis of previous authorizations.⁴

Table 4. NJDOT and NJTRANSIT regional expenditures. Source: FY 2012-21 TIP.

Expenditures, NJDOT and NJTransit (millions)											
Funding Category	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2012-2021
<i>NJDOT</i>											
Federal	\$1,202.7	\$972.6	\$954.5	\$937.2	\$944.0	\$986.4	\$986.4	\$986.4	\$986.4	\$986.4	\$9,943.0
Other	\$543.8	\$468.0	\$461.0	\$375.0	\$370.5	\$150.0	\$150.0	\$100.0	\$0.0	\$0.0	\$2,618.3
Trans. Trust Fund	\$635.0	\$625.0	\$602.0	\$603.0	\$610.0	\$878.0	\$878.0	\$878.0	\$878.0	\$878.0	\$7,465.0
Subtotal NJDOT	\$2,381.5	\$2,065.6	\$2,017.5	\$1,915.2	\$1,924.5	\$2,014.4	\$2,014.4	\$1,964.4	\$1,864.4	\$1,864.4	\$20,026.3
<i>NJTransit</i>											
Federal	\$492.6	\$492.6	\$492.6	\$492.6	\$492.6	\$467.6	\$467.6	\$467.6	\$467.6	\$467.6	\$4,801.0
JARC	\$4.0	\$4.0	\$4.0	\$4.0	\$4.0	\$4.0	\$4.0	\$4.0	\$4.0	\$4.0	\$40.0
Match Funds	\$10.3	\$10.3	\$10.3	\$10.3	\$10.3	\$10.3	\$10.3	\$10.3	\$10.3	\$10.3	\$103.0
Other	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$35.0	\$350.0
Trans. Trust Fund	\$622.0	\$622.0	\$622.0	\$622.0	\$622.0	\$672.0	\$672.0	\$672.0	\$672.0	\$672.0	\$6,470.0
Subtotal NJTransit	\$1,163.9	\$1,163.9	\$1,163.9	\$1,163.9	\$1,163.9	\$1,188.9	\$1,188.9	\$1,188.9	\$1,188.9	\$1,188.9	\$11,764.0
Total	\$3,545.4	\$3,229.5	\$3,181.4	\$3,079.1	\$3,088.4	\$3,203.3	\$3,203.3	\$3,153.3	\$3,053.3	\$3,053.3	\$31,790.3

3. Federal Funding Sources

The major federal funding sources for transportation in the SJTPO region are described in Tables 5 and 6 as authorized through SAFTEA-LU. There are additional sources of funding as well, including discretionary and demonstration funds, which are awarded on a competitive basis to projects that meet Federal Highway Administration or the Federal Transit Administration criteria. Congressional earmarks have also been another source of funding.

⁴ "When the horizon year for the metropolitan transportation plan...extends beyond the current authorization period for federal program funds, 'available' funds may include an extrapolation based on historic authorizations of federal funds that are distributed by formula" and "a growth rate estimated on the basis of previous authorizations can be used to approximate the future annual growth rate of Federal authorizations." Also, "the Federal funding reflected in the TIP and STIP (and the supporting financial plan) for projects...may be based on authorization levels for each year, although obligation authority limitations may be utilized for a more conservative approach." US DOT, Federal Highway Administration, *Financial Planning and Fiscal Constraint for Transportation Plans and Programs Questions & Answers*, www.fhwa.dot.gov/planning/guidfinconstr_qa.htm, accessed April 27, 2012.

Figure 15. Distribution of Funds. Source: FY 2012-2021 TIP.

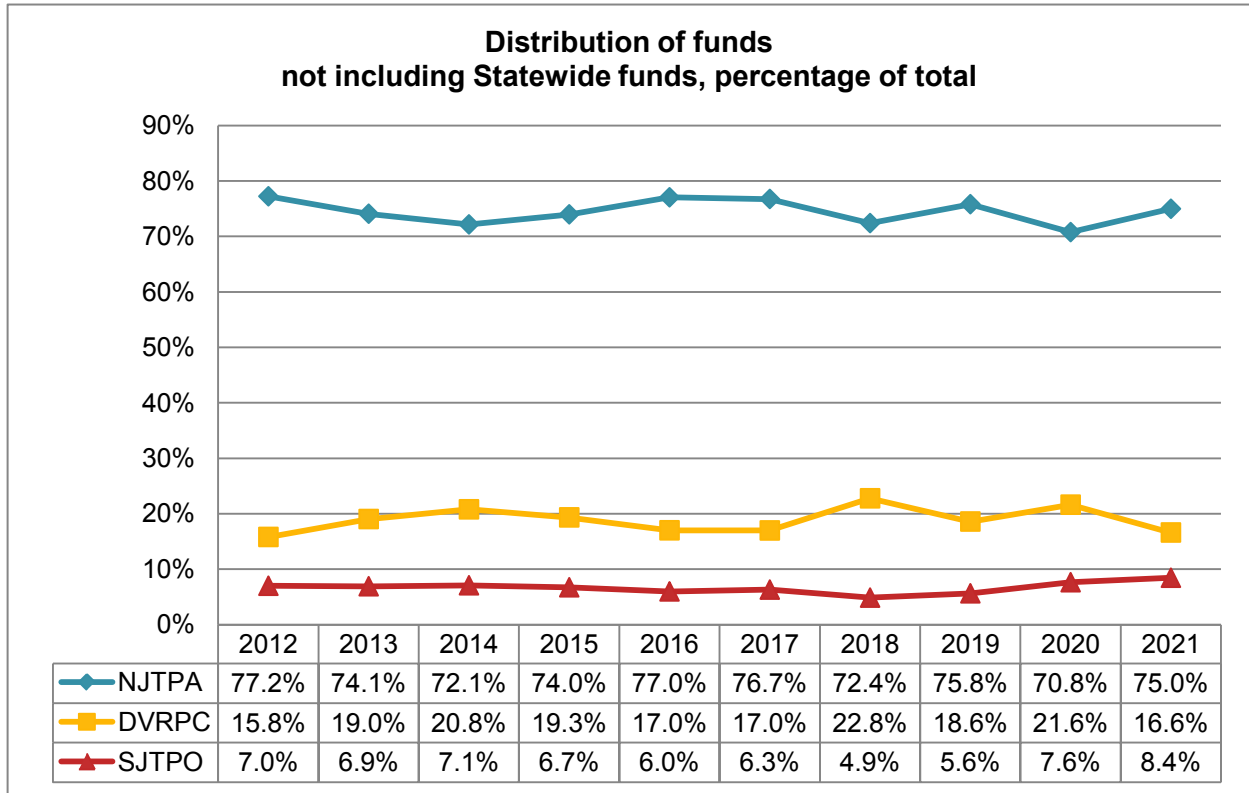
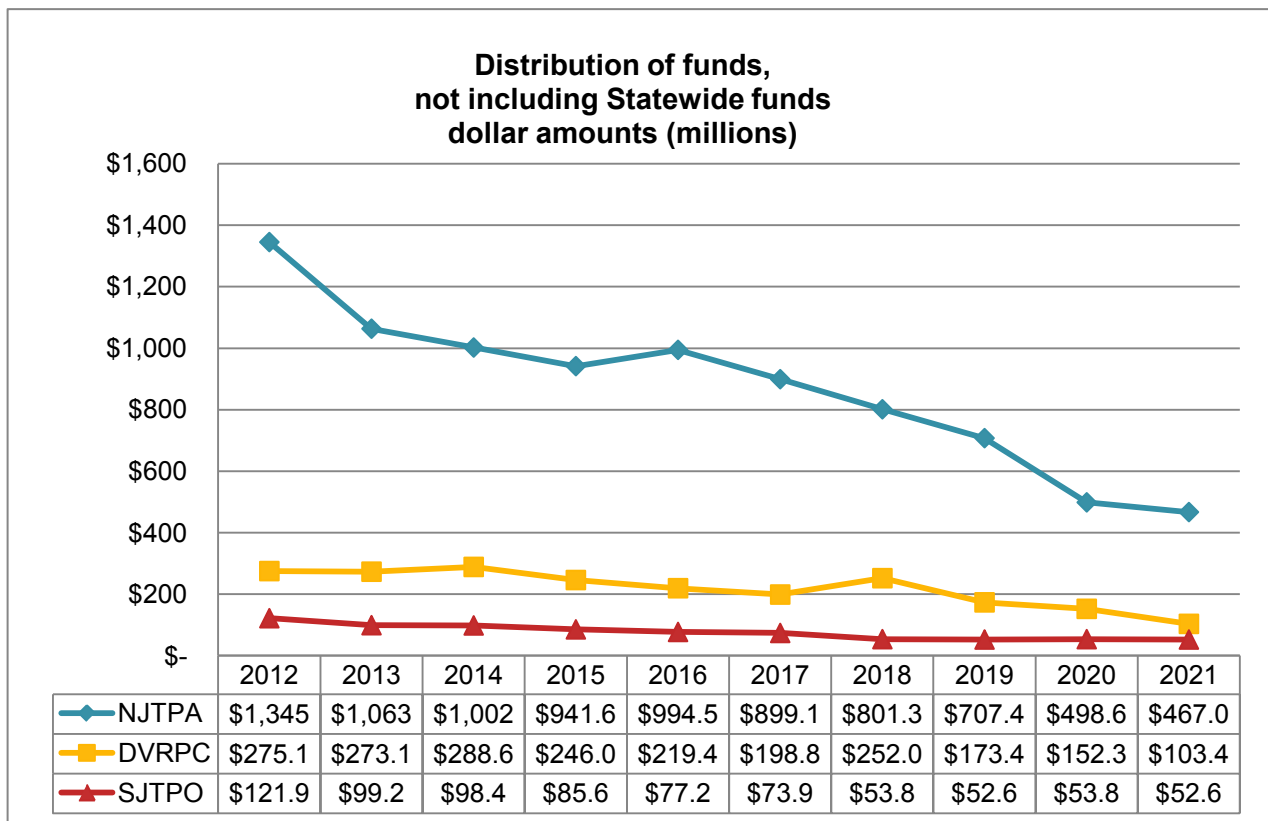


Figure 16. Distribution of Funds in Dollars. Source: FY 2012-2021 TIP.



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Table 5. SJTPO Region Distribution of Funds. Source: FY 2012-2021 TIP.

SJTPO Distribution of Funds (Note: Does not include expenditures from "Statewide" Programs within region) NJDOT and NJTransit (millions)											
Funding Category	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2012-2021
<i>NJDOT</i>											
FHWA: CMAQ	\$0.9	\$3.1	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$1.9	\$19.2
FHWA: Bridge	\$29.2	\$35.2	\$34.2	\$17.4	\$25.7	\$17.4	\$3.8	\$2.5	\$3.8	\$2.5	\$171.7
FHWA: Equity Bonus	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$10.0
FHWA: High Priority	\$29.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$29.5
FHWA: NHS	\$8.1	\$0.0	\$4.2	\$27.8	\$16.5	\$10.0	\$15.0	\$15.0	\$15.0	\$15.0	\$126.6
FHWA: Rail-Hwy Crossing	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$2.0	\$20.0
FHWA: SPR/PL	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$14.6
FHWA: STP-SJTPO	\$11.0	\$10.1	\$10.0	\$10.1	\$10.0	\$10.1	\$10.0	\$10.1	\$10.0	\$10.1	\$101.5
FHWA: STP-Statewide	\$11.2	\$0.3	\$8.4	\$5.2	\$0.0	\$8.6	\$0.0	\$0.0	\$0.0	\$0.0	\$33.7
FHWA: Safety	\$1.4	\$1.4	\$2.0	\$1.5	\$1.4	\$4.2	\$1.4	\$1.4	\$1.4	\$1.4	\$17.9
Other Funds	\$6.7	\$27.0	\$16.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$49.7
Trans. Trust Fund	\$19.4	\$17.2	\$17.2	\$17.2	\$17.2	\$17.2	\$17.2	\$17.2	\$17.2	\$17.2	\$174.5
<i>Total NJDOT</i>	\$121.9	\$98.8	\$98.4	\$85.6	\$77.2	\$73.9	\$53.8	\$52.6	\$53.8	\$52.6	\$768.7

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Table 6. Federal Funding Sources.

Formula Funds	Eligible Uses
Highway Programs	
Surface Transportation Program	<ul style="list-style-type: none"> • Roadway or transit rehabilitation • Transportation system operational improvements • Highway construction • Transit facilities • Intermodal port facilities
National Highway System	<ul style="list-style-type: none"> • Interstate routes, major urban and rural arterials, connectors to major intermodal facilities
Interstate Maintenance	<ul style="list-style-type: none"> • Resurfacing, restoring and rehabilitating roads on interstate highway system • No new capacity except HOV lanes or auxiliary lanes in nonattainment areas
Highway Bridge Replacement and Rehabilitation Program	<ul style="list-style-type: none"> • Replacement or rehabilitation of bridges • Up to 15% "off-system"
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	<ul style="list-style-type: none"> • Pedestrian/bicycle facilities • Transit (new system/service expansion or operations), infrastructure, clean fuel fleet programs and conversions, vehicle inspection and maintenance (I/M) programs, intermodal freight, telework/telecommuting programs, fare/fee subsidy programs (operating subsidies have a 3-year limit) • HOV programs, including HOT lanes • Diesel retrofits • Truck-stop electrification
Transportation Enhancement Program	<ul style="list-style-type: none"> • Bicycle, pedestrian, transit, landscaping, public art or historic projects linked to transportation
American Recovery and Reinvestment Act of 2009 (ARRA) (also applies to transit)	<ul style="list-style-type: none"> • Restoration, repair, construction and other activities under Surface Transportation Program • Passenger and freight rail transportation and port infrastructure projects as described under TIFIA
Transit Programs	
Metropolitan and Statewide Planning - 5303, 5304, 5305	<ul style="list-style-type: none"> • Planning activities
Federal Transit Act Section 5307	<ul style="list-style-type: none"> • Purchase of buses, trains, ferries, vans and support equipment, Americans With Disabilities Act –required paratransit service
5309 Rail and Fixed Guideway Modernization Funds	<ul style="list-style-type: none"> • Capital projects to modernize or improve existing fixed guideway systems (includes portion of bus service on exclusive or controlled rights of way or HOV)
Federal Transit Act Section 5310- Elderly and Disabled	<ul style="list-style-type: none"> • Purchase of paratransit vans and related equipment
Federal Transit Act Section 5311, Rural/Intercity	<ul style="list-style-type: none"> • Purchase of buses and related equipment • Bus operations in rural areas

4. State Highway and Transit Funding

In addition to the Federal funding described above, the State of New Jersey provides funding through the New Jersey Transportation Trust Fund (TTF), which was created in 1984 to provide a stable source of funding for transportation improvement projects. The most recent renewal occurred in January 2011. The 2011 reauthorization provides \$1.8 billion annually for FY 2012-2016. Revenues for the TTF come from motor fuel taxes, appropriations from the General Fund, bonding, heavy truck and diesel fees, and contributions from toll road authorities. The TTF revenue estimates assume no growth until FY2017, when the existing TTF is scheduled to run out, after which we are assuming that revenues remain flat (except for an increase due to inflation), until FY 2040. This is in contrast to the historical growth rate in capital program appropriations of over 6% from the inception of the TTF in FY 1985 to FY 2012. However, given this historical growth rate in the previous TTF and the fact that the State as a whole has been spending much more than it currently takes in revenue, SJTPO believes this assumption is reasonable. However, the State has not yet identified long term funding sources required to meet the projected future needs of the Trust Fund.

As noted earlier, the majority of funding will be targeted toward investments that preserve, maintain, and improve our region's existing transportation facilities. The bulk of the region's future transportation system is already in place and must be maintained and preserved so it can continue to serve both current and future needs. Deferring maintenance cannot continue, or the system will lose its ability to satisfy travel demand in a safe and efficient manner. As such, there are no funds currently programmed for future system expansion.

5. Investment Package – Future Year Build Scenario (RTP Action Plan)

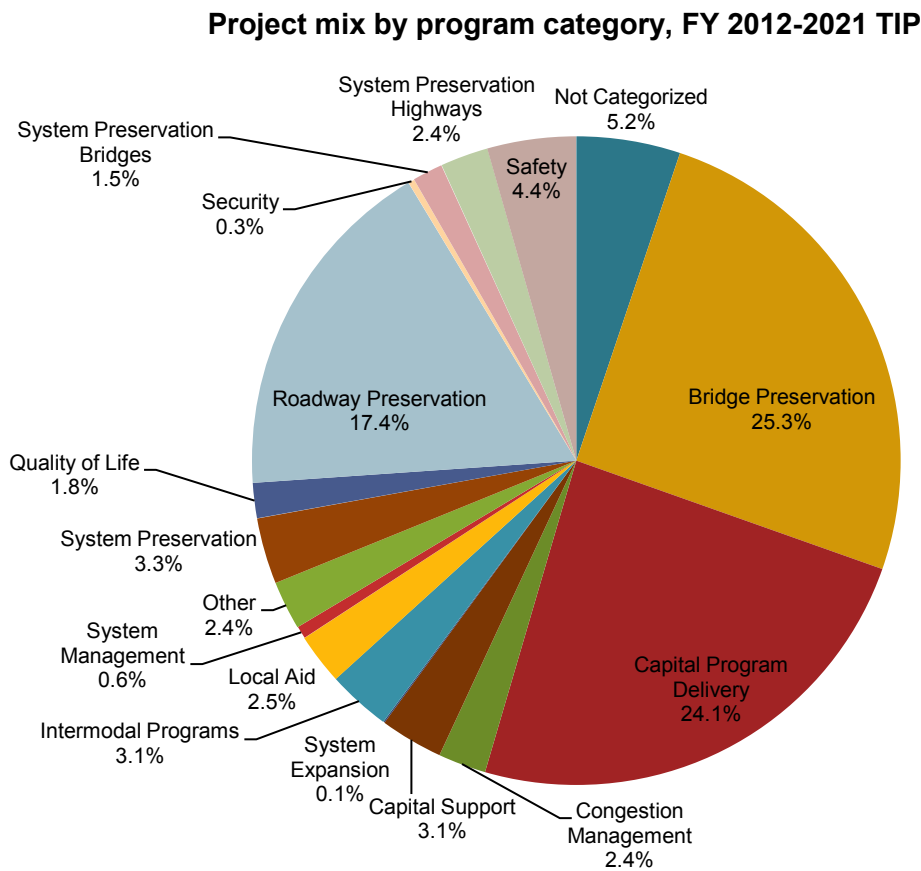
For the 2040 Regional Transportation Plan, two scenarios are assumed based on changes in the transportation network that are a direct function of funding apportionments, and projected demographics. The first scenario is a baseline or "business as usual" scenario, in which funding is assumed to remain flat for the duration of the Regional Transportation Plan. This assumes already committed funding as represented by the FY 2012-2021 TIP and the same funding level for the next 18 years of the Plan. The investment package for this scenario consists of all federal and state projects funded through the FY 2012-2021 TIP. A complete list of these projects, as well as a map showing existing and potential future project locations can be found in *Technical Appendix 7*.

The funding amount expected for the first 10 years of the RTP can be found in the FY 2012-21 TIP. Cost estimates for State projects utilize the inflation estimation techniques embedded in Trns•port, a suite of software modules that supports the NJDOT construction programs and is used by NJDOT, consultants and contractors. Trns•port was developed by the American Association of State Highway and Transportation Officials (AASHTO) and it is used by more than 40 states. The software manages the construction program from cost estimation through to proposals, bids, awards and construction and materials management. Trns•port accounts for the anticipated percentage of inflation per year until work begins on the job; if that number is not known, a program default based on historical data is used. The assumptions used for the SJTPO region include an annual funding inflation rate of 3% and an

expenditure inflation rate of 3% for FY 2022 through 2040. Funding levels for the period from 2012 through 2040 begin at a level that is equal to the TIP period average (2012-2021). The anticipated funding increases from there based on the inflation rate.

The allocation of funds is based largely on the allocation in the existing FY 2012-2021 TIP. The SJTPO TIP consists of two types of projects: State Lead and Local Lead. Because some problem statements from which TIP projects evolve come directly from NJDOT’s Capital Investment Strategy (CIS),⁵ the capital projects in the SJTPO TIP are a direct result of NJDOT’s CIS. Further, as depicted in Figure 17 below, almost 50% of SJTPO’s projects fall into the category of preservation (including roadway, bridge or system) which is one of the NJDOT’s Capital Investment Strategy’s Core Mission Areas.⁶

Figure 17. Project Mix, FY 2012-2021. Source: FY 2012-2021 TIP.



For the FY 2012 base year, \$790.5 million in funding is expected. Expenditures are assumed to be the same as the current FY 2012-2021 TIP; SJTPO has determined this to be reasonable based on the guidance previously cited. For FY 2021 to 2040, funding is assumed to be inflation-adjusted only, with no real dollar increase. This assumption is made despite a 1.9% annual growth in federal funding to NJDOT and NJTransit since FY 2007. Assuming a no-growth scenario is doubly conservative when

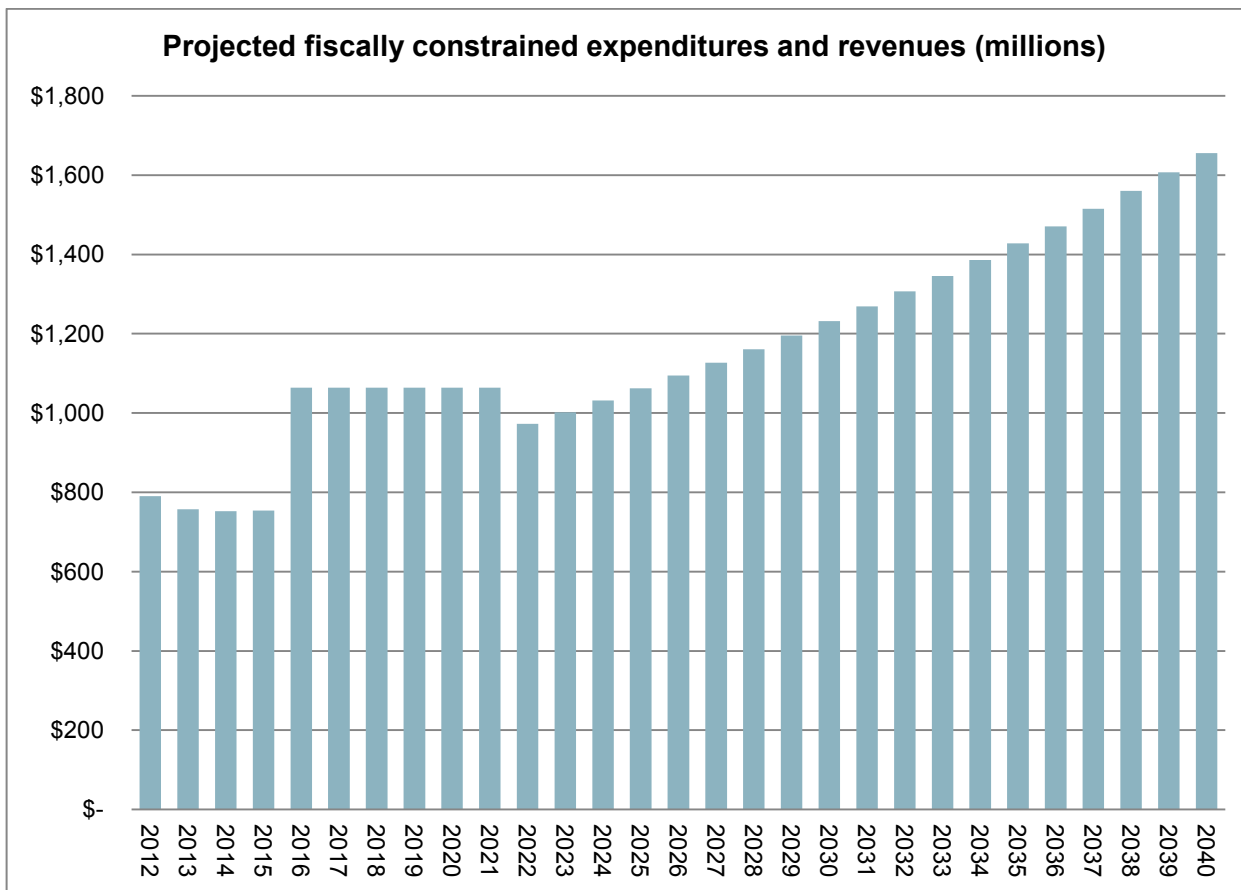
⁵ SJTPO. FY 2012-2021 Transportation Improvement Program, Section I, p. 4.

⁶ NJDOT. FY 2013-2022 Statewide Capital Investment Strategy, p. 1.

viewed against the current revenue forecasts adopted by SJTPO’s neighboring MPO’s ranging from 2% to 3% per year. As seen in Figure 18, below, it is expected that revenue will be the same as expenses each year from FY 2012 to 2040.

The second scenario is an aspirational scenario in which desired projects for which there is not an identified source of funding will be modeled and depicted. The actual projects, as well as transportation impacts of each of these scenarios, and potential responses, including revised funding allocations, will be discussed in the following section, *Scenarios*.

Figure 18. Projected Fiscally Constrained Expenditures and Revenues, 2012-2040. Source: FY 2012-2021 TIP.



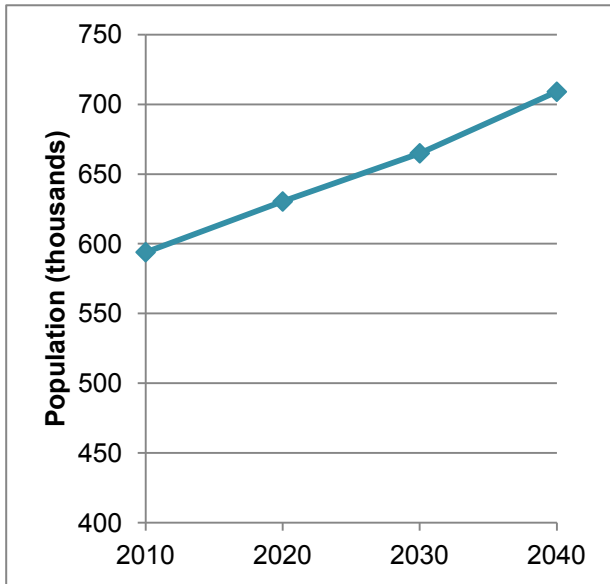
Financial Assessment Summary

NJDOT conducts the transportation budgeting process in collaboration with the state’s three MPOs to develop each MPO’s TIP, the STIP and the Annual Capital Program. The TIP for the SJTPO lists projects, plans, and programs scheduled for implementation within the next 10 fiscal years. For over 20 years, New Jersey’s Transportation Trust Fund has provided a stable source of funding; however, its long-term outlook is unknown. Clearly, additional funding is important to achieve the region’s goals and objectives, as costs to address maintenance needs and to accommodate anticipated regional growth impacts will be considerable.

Scenarios

Significant long-term growth is expected in the SJTPO region. The population is projected to increase by 19% by 2040 to 710,000 residents and there will be a corresponding increase in travel demand.

Figure 19. Projected population growth, 2010-2040.

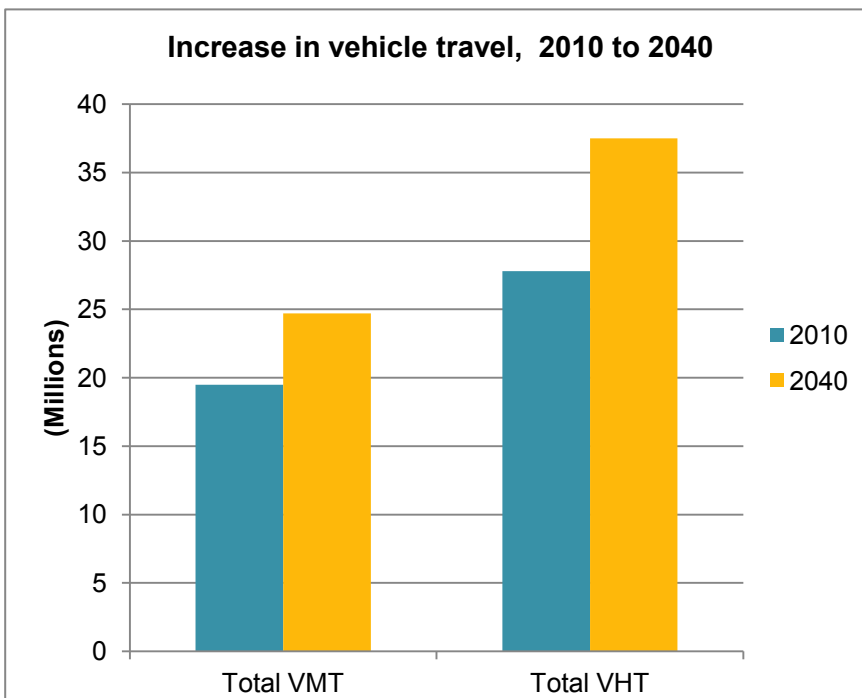


The South Jersey Travel Demand Model (SJTDM) is a software analysis tool used by SJTPO to estimate traffic volumes on all major roads in the region. Ongoing improvements are being made to the SJTDM with the goal of fitting the model as closely as possible to real-world travel conditions. The model runs in the Cube Transportation Modeling Suite with many customizations to adapt the model to the SJTPO region.

The SJTDM has been used to model travel for both a base year (2010), intended to reflect present travel conditions, and a future year (2040), intended to predict travel for the long-range plan. The base-year model uses current regional population and

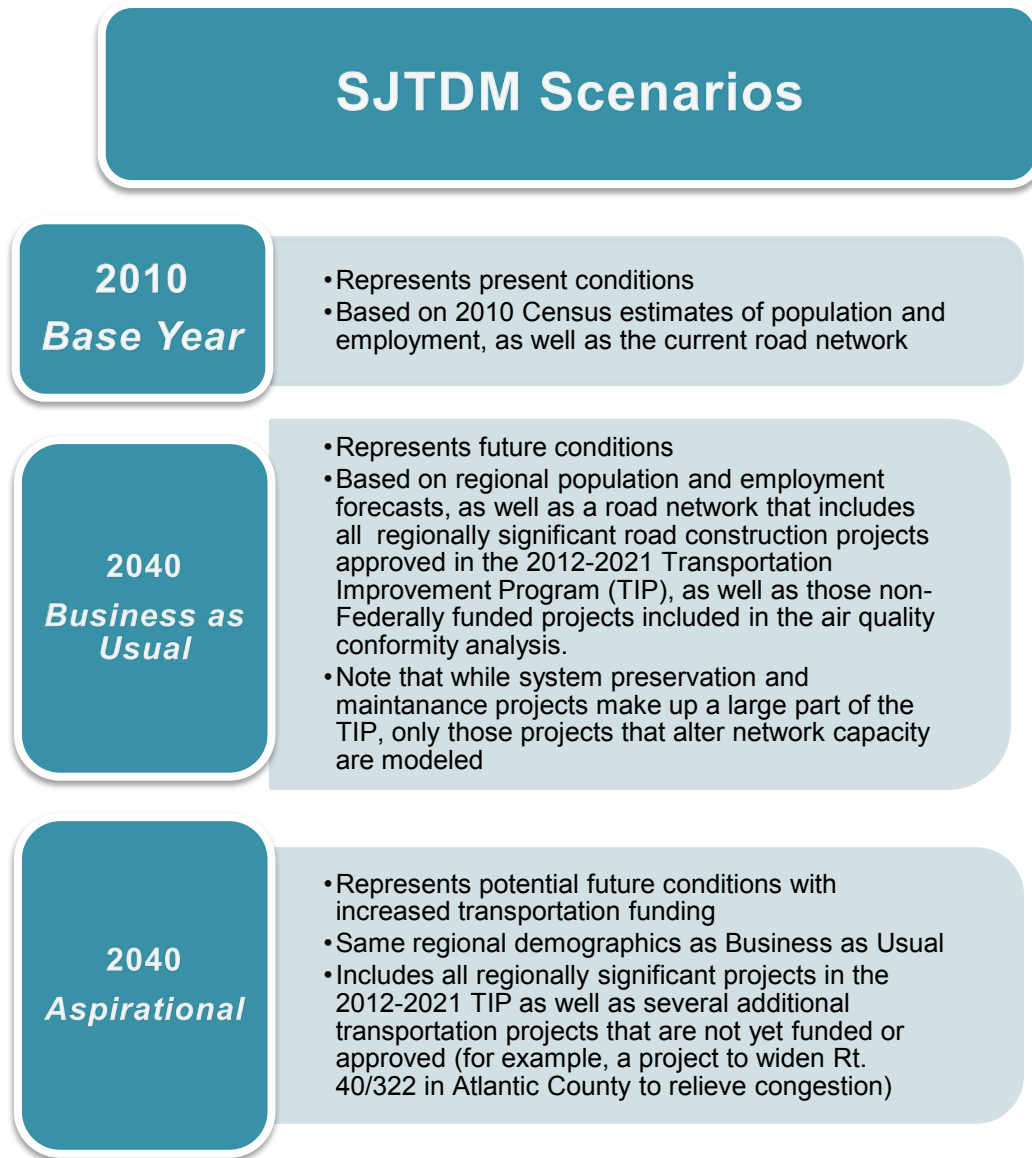
employment data, as well as the current road network. The model can predict hourly traffic volumes on all major roads and calibrate these volumes with recent traffic counts to ensure accuracy. Future-year projections of population, employment and road network changes are then added to this model in

Figure 20. Vehicle Travel Change, 2010-2040. Source: SJTDM.



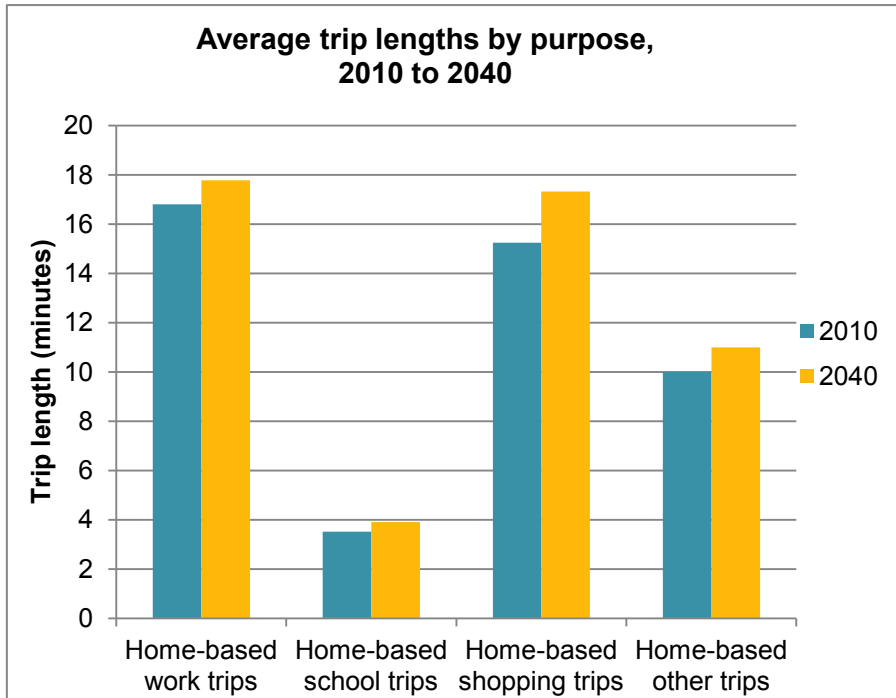
order to estimate regional travel in the year 2040. Figure 20, left, shows the increase in total regional vehicle miles travelled (VMT) and vehicle hours travelled (VHT) estimated by the model for both 2010 and 2040.

Figure 21. SJTDM Scenarios.



One base-year scenario and two future-year scenarios were evaluated by the SJTDM, as summarized in Figure 21. The total number of daily trips in the region is projected by the SJTDM to rise from 2.8 million to 3.4 million by 2040, an increase of 21%. It is notable that VHT is projected to rise by a greater percentage than VMT, indicating greater delay and trip length. This is to be expected if population and employment increase at a greater rate than the regional road network capacity. From 2010 to 2040, the total regional daily VMT is predicted to increase from 19.5 million miles to 24.7 million miles, an increase of 27%, while VHT is predicted to increase from 27.8 million hours to 37.5 million hours, an increase of 35%.

Figure 22. Average Trip Lengths, 2010-2040. Source: SJTDM.



The resulting increase in trip length can be predicted using the SJTDM. The lengths of four types of trips were tabulated: home-based work (HBW) trips, home-based school trips (SCH), home-based shopping (HBS) trips, and home-based other (HBO) trips. Figure 22, left, shows the expected change in trip length for these four trip purposes from 2010 to 2040. Regionally, the average HBW trip will be 1 minute longer, and the average HBS trip will be 2 minutes longer. This difference

can be expected to be greater for trips using roadways that will be significantly more congested in 2040 (such as arterial roads), and less for trips using roadways that will remain uncongested in 2040 (such as local roads).

One common measure of roadway performance is Level of Service, which characterizes roadway congestion and delay with a letter grade, ranging from A to F. Level of Service A indicates virtually no congestion or delays, while Level of Service F indicates very high congestion and delays. The SJTDM can be used to estimate the Level of Service of individual roadways for both the base- and future-year. From 2010 to 2040, more VMT are categorized as D, E, and F, which suggests a general decline in performance.

Figure 23. VMT AM Peak Period. Source: SJTDM.

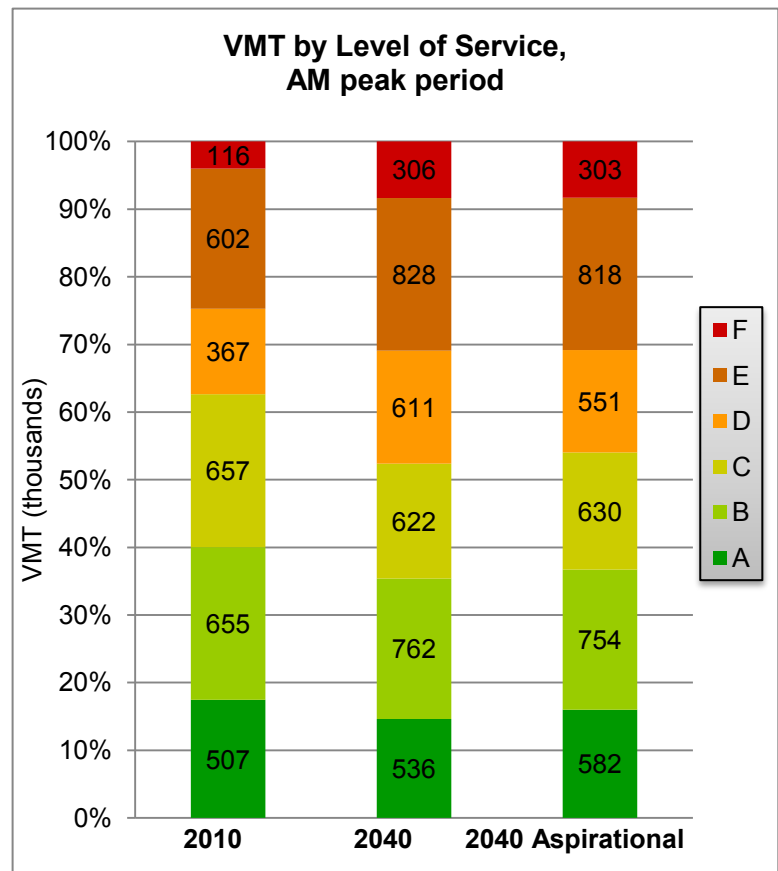
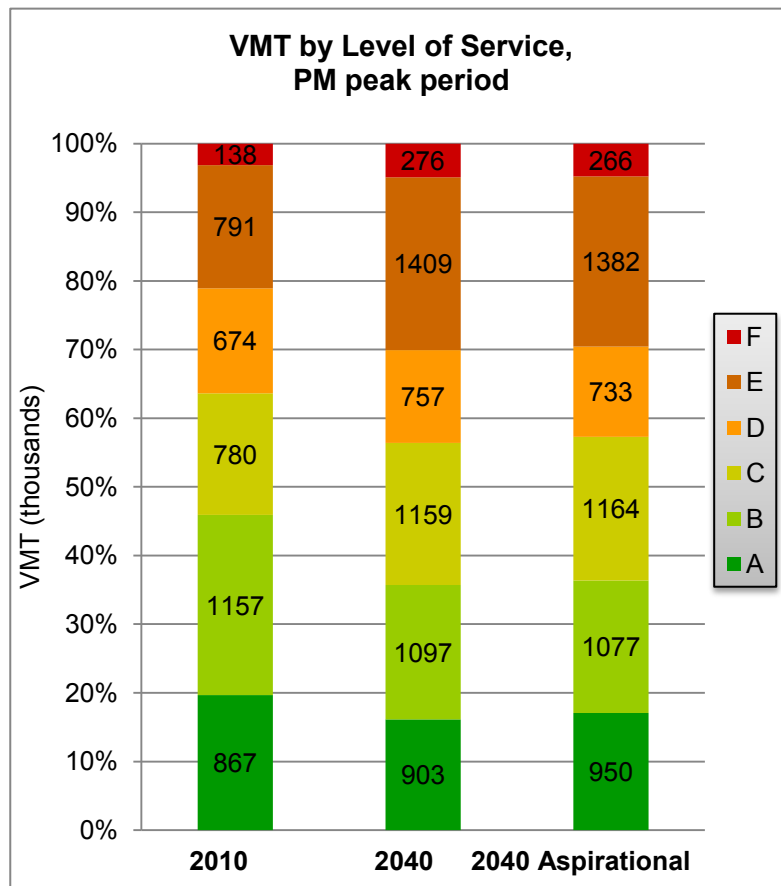


Figure 24. VMT PM Peak Period. Source: SJTDM.



This general decline in Level of Service is mitigated somewhat in the Aspirational Scenario. This scenario includes several “wish-list” transportation projects, including:

1. Route 40/322 widening in Atlantic County
2. North Delsea Drive signal synchronization in Vineland
3. South Delsea Drive widening in Vineland
4. Landis Avenue turning lane in Vineland
5. US 30 drawbridge replacement near Atlantic City
6. Glassboro-Philadelphia commuter rail project
7. Route 55/47 widening in Cumberland County
8. Route 55/Sherman Avenue, partial to full interchange
9. Atlantic City Rail Line improvements
10. Extension of Burns Ave. from Main Rd. (CR 555) to Lincoln Ave. (CR 655).

The addition of these projects does not have a significant effect on total regional VMT. However, the Level of Service distribution for these VMT is impacted somewhat. Figures 23 and 24 show the level of service profiles for both the morning and afternoon peak-hour periods, respectively, as predicted by the SJTDM. The AM Peak Period is defined as 6:00 A.M. to 9:00 A.M., while the P.M. Peak Period is 3:00 P.M. to 7:00 P.M. Note that for the AM peak period, there is a 26% increase in total VMT but a greater

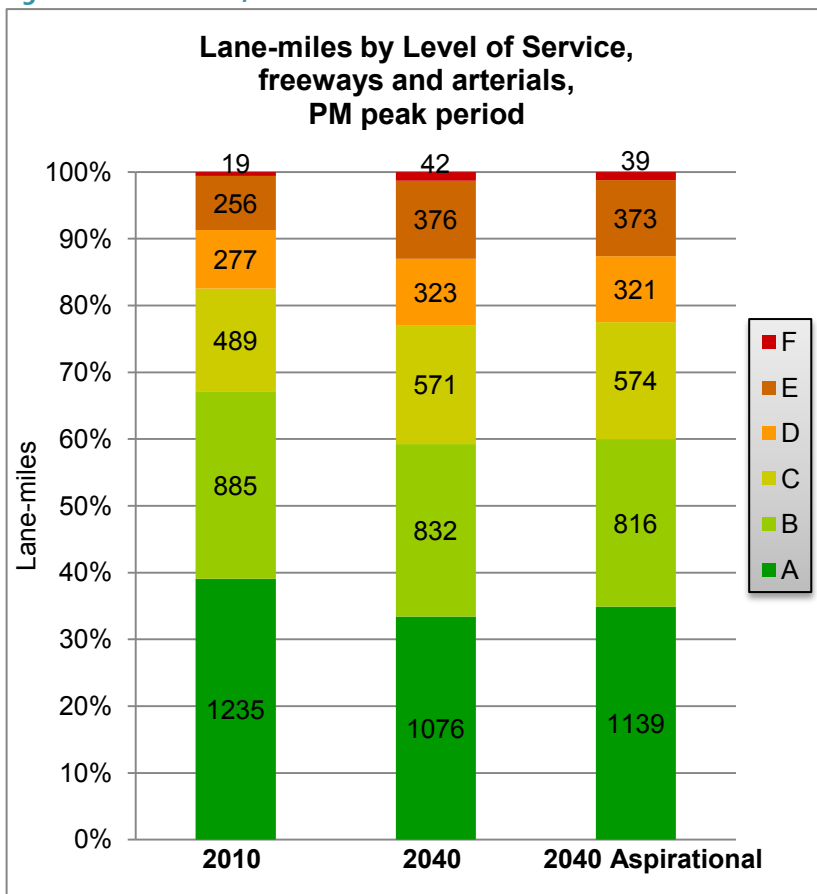
percentage of vehicle miles are travelled on Level of Service D or worse. In particular, the VMT on Level of Service D increases by 66%, by 38% on E, and by 164% on F. A similar level of service decline is present in the PM peak period. For both the AM and PM peak periods, the future-year Aspirational Scenario predicts slight regional-scale improvement in Level of Service over the Business-as-Usual Scenario.

In addition to the demand-side measure of Level of Service by VMT, supply-side network Level of Service statistics can be generated by the SJTDM. Of particular interest is the Level of Service of the most major roadways classified as freeways and arterials. Collectors and local roads typically have very little delay, and are infrequently the targets of congestion management efforts. For the PM Peak Period, the total lane-miles of freeway and arterial roads are displayed in Figure 25.

As seen in Figure 25, for the PM peak period, the roadway network Level of Service is projected to decline. The number of lane-miles of freeway and arterial roads classified as Level of Service D, E, or F by the SJTDM is projected to increase from 552 in the base year to 741 in 2040, an increase of 34%.

From both the demand-side and supply-side perspectives, it is clear that as the SJTPO region continues to grow over the next 30 years, travel delay and congestion can be expected to generally increase. Transportation network improvements are not expected to fully offset the 27% growth in VMT projected by 2040.

Figure 25. Lane-miles, PM Peak Period. Source: SJTDM.



For further details on the information presented in this Plan, refer to the following appendices, available for download on the SJTPO website, www.sjtpo.org:

- Appendix 1 - Demographic Forecasts
- Appendix 2 - Public Involvement Report
- Appendix 3 - Air Quality Conformity Determination
- Appendix 4 - Transportation System Assessment
- Appendix 5 - Congestion Management Process Activity Report
- Appendix 6 - Financial Plan
- Appendix 7 - List of Projects