

THE NJTPA AND ITS REGION



The NJTPA

The North Jersey Transportation Planning Authority is the federally authorized Metropolitan Planning Organization (MPO) for the 13-county northern New Jersey region. The federal government requires each urbanized region of the country to establish an MPO to provide local guidance over the use of federal transportation funding and ensure it is spent cost-effectively to improve mobility, support economic progress and safeguard the environment.

The NJTPA oversees over \$2 billion in transportation investments every year. It analyzes transportation needs, approves proposed transportation improvement projects and provides a forum for interagency cooperation and public input into funding decisions. It also sponsors and conducts studies, assists county planning agencies and monitors compliance with national air quality goals.

The NJTPA Board consists of one elected official from each of the region's 13 counties; Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren, and its two largest cities, Newark and Jersey City. The Board also includes a Governor's Representative, the Commissioner of the NJ Department of Transportation, the Executive Directors of NJ Transit

and the Port Authority of NY & NJ and a Citizens' Representative appointed by the Governor.

NJTPA Board meetings are held bi-monthly and are open to the public. The meeting schedule is at NJTPA.org.

The NJTPA Region

The NJTPA serves the fourth most populous MPO region in the nation, with over 6.7 million people and 3.2 million jobs. The 13-county region covers 4,200 square miles which is half the state's land area and includes 384 municipalities.

Key features of the regional transportation system serving the region include the following:

- The region is home to 2,000 miles of freeways/expressways, 6,000 miles of arterial highways and 15,000 miles of county and local roads.
- NJ Transit provides some 250 bus routes throughout the region.
- NJ Transit's rail system in the region includes 10 commuter rail lines, two light rail lines, 150 stations and 390 miles of track.
- The 14-mile PATH commuter rail service connects Newark, Harrison, Kearny, Hoboken and Jersey City with

Lower and Midtown Manhattan.

- There are more than 4,800 bridges in the region.

- Three ferry companies operate routes between New Jersey and New York City from 19 piers.

- The region is home to the largest container port on the Atlantic seaboard, which also is the third largest in the U.S. and the 14th largest in the world.

- The region also is home to Newark Liberty International Airport, which handled 35 million passengers and more than 1 million tons of air cargo a year.

- The region has an extensive trucking industry that handles nearly 400 million tons of freight annually.



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INTRODUCTION AND SUMMARY

Northern New Jersey has always adapted to meet the demands of a changing economy and a growing population. As the nation industrialized in the late 19th century, the region evolved from a by-way between two major cities to become a major population center producing goods for the nation. Later, with shifts in national and global commerce, it became the east coast's largest platform for freight distribution, a site for corporate campuses and headquarters and the home of world-class education and research facilities.

These shifts have occurred in an incredibly diverse landscape that includes the famed Jersey Shore, dense urban centers, wide open suburban townships, rural farming communities as well as the rugged hills in the region's northwest. Stitching together this landscape is the region's extensive transportation system—an intricate network of roads, rail lines, river crossings, marine channels, walkways and bike-ways—which has continually been upgraded and expanded to meet the needs of the evolving economy (Maps 1-1 and 1-2).



Creating and enhancing livable communities is a key goal of Plan 2035. Madison, Morris County.

Today, the region, like the nation, is facing an uncertain and challenging future. The economic growth that has buoyed employment and the quality of life in the region for much of the last two decades has been disrupted. Many sectors of the economy are in decline. But the region's many economic assets are intact and no doubt will provide the foundation for a strong recovery as national and international conditions improve. Along with an educated workforce and a diverse business sector, these assets importantly include the region's multi-modal transportation system, developed over more than a century.

Plan 2035, developed by the North Jersey Transportation Planning Authority (NJTPA), the federally authorized Metropolitan Planning Organization (MPO) for this 13-county region, once again looks to adapt and shape the transportation system to steer the region through the near-term economic downturn to a positive long-term future. It also seeks to address other critical challenges over the next 25 years—not the least of which is the need to use transportation investment to help avert the threat of global warming and achieve greater energy efficiency.

Foundation

Creating a transportation plan with a 25-year horizon is greatly complicated by the depth of the current uncertainties—economic, environmental and otherwise. But failure to make choices today that will guide the long-term development of the transportation system is not an option. There must be a steady stream of investments moving through the pipeline towards construction in anticipation of future infrastructure needs. Without it, the region could find itself lacking the ability to move both people and goods with the efficiency needed to sustain a robust near-term economic recovery and reap new economic opportunities over the long term. A similar case applies even more strongly to climate change—lack of steady progress beginning today could leave the region, nation and world facing an unprecedented environmental crisis.

Northern New Jersey must make its contribution to solving these and other critical challenges. Congress has recognized the importance of long-range transportation planning by creating federal mandates for urbanized regions to create and update long-range plans like Plan 2035.

The NJTPA did not have to start from scratch in building Plan 2035. Its previous long-range plan, Access & Mobility 2030, adopted in September 2005, provided the basis for fashioning a new transportation vision for the region. That plan was organized around eight principles that

formed a “Regional Capital Investment Strategy,” which is carried forward in Plan 2035. These principles, listed in full in the back of this plan, focus on the following objectives:

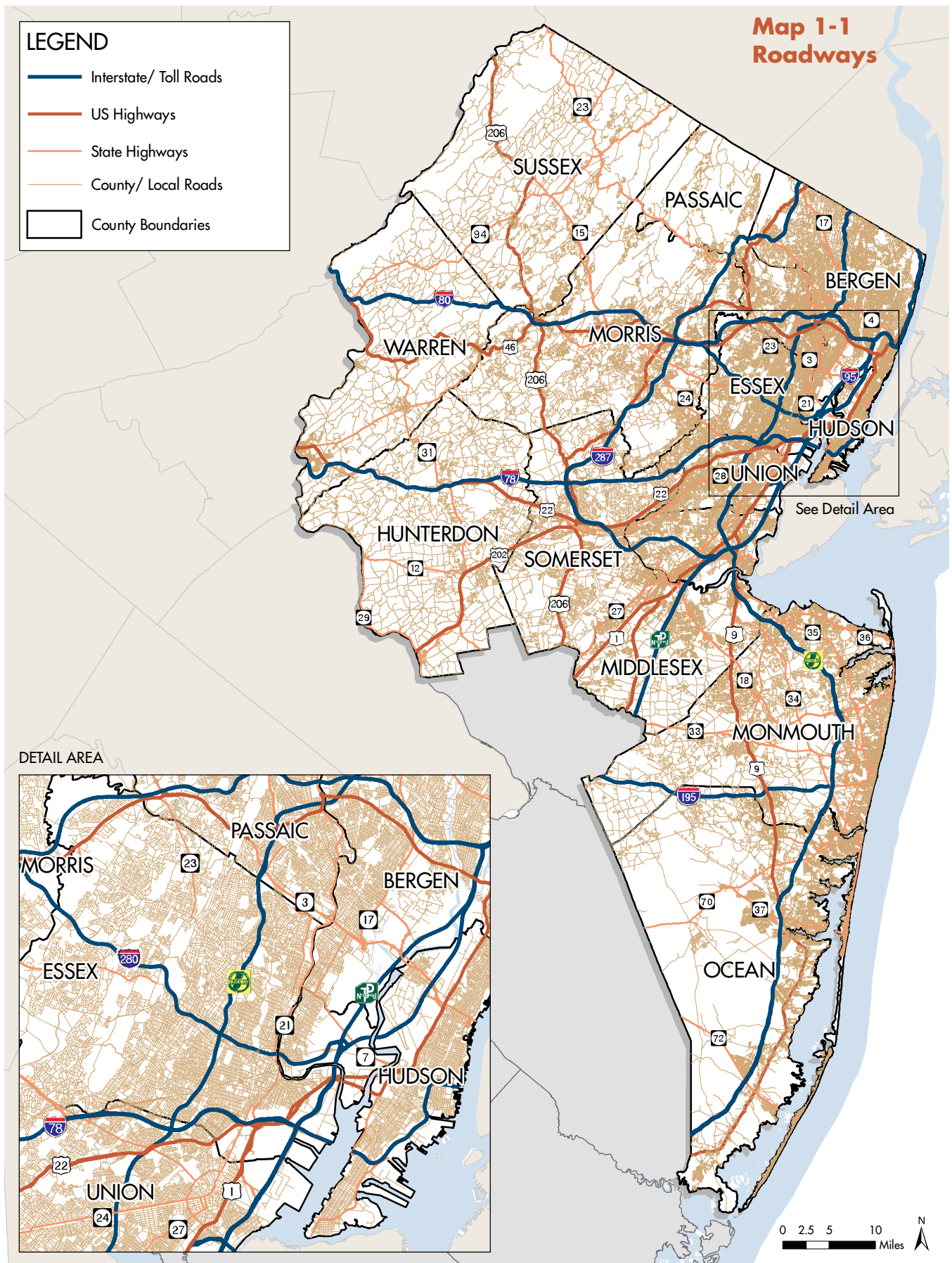
- Promote smart growth rather than continued sprawl.
- Make travel safer and more secure.
- Give highest funding priority to maintaining and repairing existing infrastructure.
- Expand public transit where possible
- Improve roads but limit capacity expansions.
- Move freight more efficiently
- Better manage incidents and apply new transportation technologies
- Support walking and bicycling

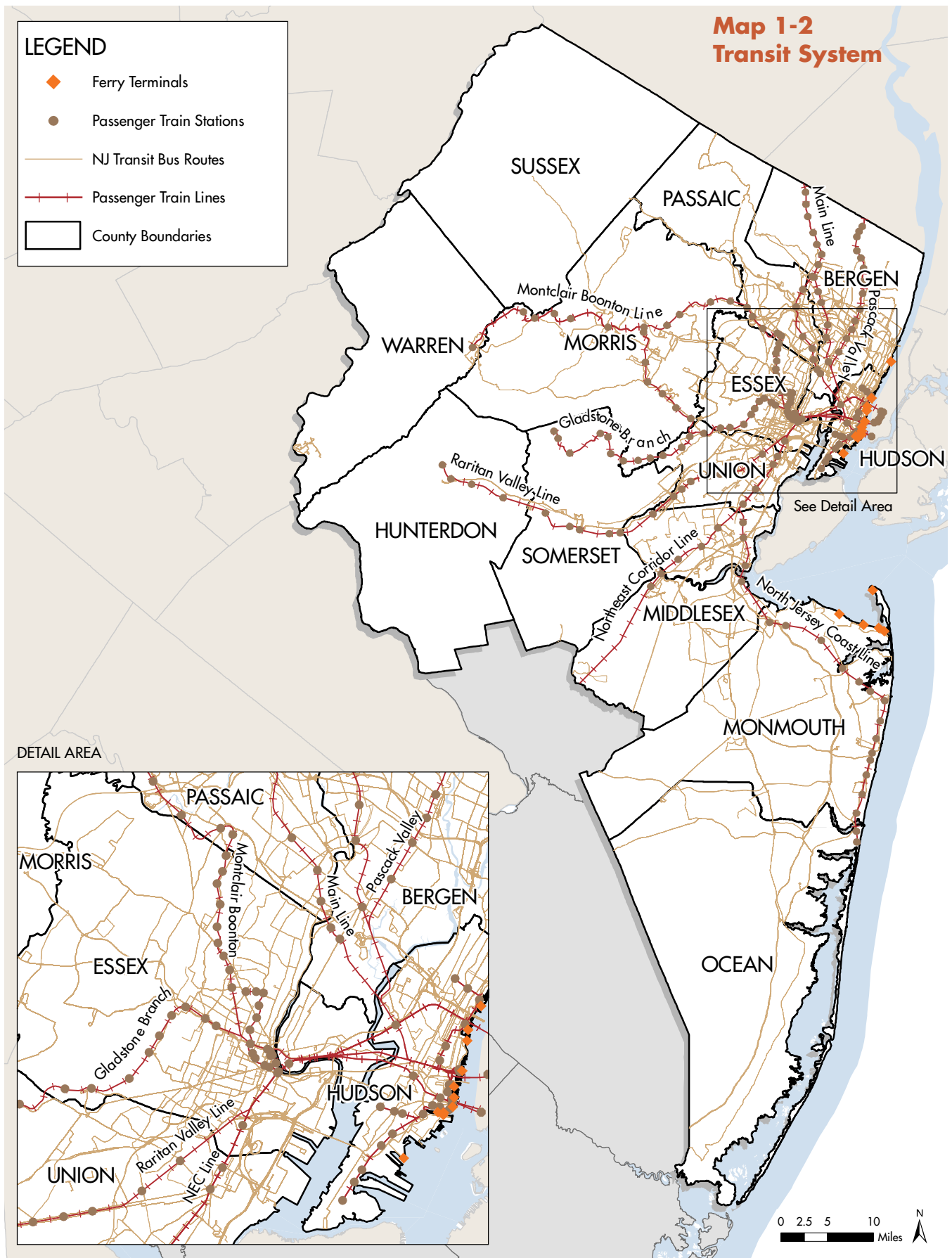
In developing Plan 2035, the NJTPA sought to explore new strategies and projects to implement these principles in keeping with changing conditions and the new unprecedented challenges facing the region. In doing so, it drew upon insights from extensive outreach to the region's citizens, elected officials, the business community and others, conducted as part of a wide ranging “visioning” process. The process (described in Chapter 2) gathered views from nearly a thousand individuals in every corner of the region and called on experts from around the state and nation to lead discussions on key issues. The NJTPA also engaged in extensive technical analysis, with a continuing focus on how well the transportation system performs and how potential transportation investments can improve that performance. Evaluation of specific improvement strategies throughout the region (discussed in Chapter 4) was one such performance-based study, as was a future scenarios analysis which forecasted trends and conditions using computer modeling (summarized in Chapter 5). Throughout the development of Plan 2035, an active and committed Board of Trustees composed of local elected officials and representatives of state agencies directed the process.

Plan 2035 thus represents the result of efforts to systematically sort through, assess and prioritize a host of options relating to the future of transportation in the region. The policies, projects and recommendations it presents are the necessary steps anticipated to safeguard the region's future.

Transportation Challenges

Over the next 25 years, the region's transportation system will have to serve a population that is estimated to





grow by 16 percent (1.1 million) to 7.8 million. Employment will increase by 17 percent (515,000) to a total of about 3.7 million. At the same time, the transportation system must continue to support the region's diverse economy. While the economy may grow along a somewhat lower trajectory as a result of the lasting effects of the current downturn, over the next 25 years New Jersey can expect to maintain its position among the nation's largest state economies. Despite its small size, New Jersey ranked eighth in Gross State Domestic Product in 2007. Most of the state's industry and employment is located in the 13 counties of the NJTPA region.

The next two decades are sure to bring shifts in the nature of employment in the region. In the near term, this will include less reliance on the finance, insurance and real estate (FIRE) sector. Over the long term, there will be new opportunities. In addition to jobs supporting new technologies and "green" industries, experts suggest that higher global transport costs could spur new manufacturing operations closer to population centers. Whatever form these shifts take, demands on the transportation system can only be expected to grow and do so in familiar patterns. That is:

- The region's port, air cargo and distribution facilities will continue to require large scale movement of freight via roads, rails and waterways;
- The region's corporate, commercial and industrial facilities located in major cities like Newark and Jersey City, and along major roadway corridors, will continue to require movement of millions of people each day, mostly by car in the suburbs but increasingly by transit in many denser locations;
- The region's participation in the larger metropolitan economy will require substantial commuting across the Hudson River to and from New York City, nearly all by transit; and



Plan 2035 seeks to address key congestion hotspots and to make the region's road system handle traffic more efficiently. Route 3, Passaic County.

- Non-work travel by residents and visitors as well as trips by those traveling through the state will add further burdens to nearly every transportation facility.

The NJTPA and other transportation agencies must prepare to meet these rising demands to avoid exacerbating today's problems, including congested roadways, safety hazards for drivers and pedestrians, delays affecting goods deliveries, lack of access to rail and bus services, accelerating deterioration of the region's aging infrastructure and the ongoing effects on the system of sprawl development. Effectively responding to these challenges in large part will depend on the availability of transportation funding. But funding trends will likely follow the lower trajectory of economic growth itself. In addition, funding mechanisms now relied upon may no longer be adequate in the future. In particular, with an increasingly efficient auto fleet, the gasoline tax likely will yield declining revenues if kept in its current form and at current rates.

Scenario Planning

In building Plan 2035, the NJTPA conducted modeling to assess the performance impacts of various levels of funding and investments in three future scenarios (Chapter 5):

- A Baseline Scenario that continues current trends and carries forward current funding levels;
- A Plan 2035 Scenario that includes funding increases and changes to regional land use to emphasize smart growth; and
- An Aspirational Scenario with substantial funding increases and more extensive land use changes.

The Plan 2035 Scenario, which has been adopted as the required, fiscally constrained investment plan for the region, will be sufficient to maintain and moderately improve the “state of good repair” of the existing transportation system and achieve improvements in performance needed to safeguard future economic growth. Yet even this scenario will require significant additional revenue from current or new funding sources. It calls for increasing state funding during the plan period by an average of 4.2 percent per year (1.2 percent above the assumed inflation of 3 percent per year). Together with assumed periodic increases in federal funding that average 5 percent per year (2 percent above the rate of inflation), total funding to the region would increase from the current \$2.6 billion per year to over \$7 billion per year by 2035. This will yield \$141 billion in inflation-adjusted dollars over the life of the plan, compared to \$92 billion in the Baseline Scenario. In 2009 dollars, these funding assumptions translate into \$91 billion for the Plan 2035 Scenario, compared to \$63 billion for the Baseline Scenario.

Plan 2035 discusses options for achieving this funding level (Chapter 8)—extending the gas tax, instituting a mileage tax, using congestion pricing approaches, tolling more, and others. Generating this revenue will be neither simple nor easy—while participants in Plan 2035 visioning workshops recognized the need for added funding to support their chosen investments, they showed little agreement on the options.

Ultimately, the hard choices about how to fund the region’s long-term needs will be the responsibility of elected officials at the state and federal levels. Plan 2035 assumes that, as was done repeatedly in the past, national and state leadership will meet these responsibilities. Relying on investment at the level of the Baseline Scenario—that is, continuing current funding levels—is not a realistic option. With declining purchasing power over time due to inflation, the Baseline would result in steady erosion of the performance of the region’s extensive transportation network, in effect squandering the many, many billions of dollars invested in the past in creating

and maintaining the network and jeopardizing the region’s economy.

The NJTPA’s scenario analysis does, however, provide the region with clear alternatives for the future. If a dim economic future comes to pass, the Baseline Scenario may become the default course of action given dire financial constraints affecting all sectors of government. The scenario testing helps demonstrate the likely consequences in terms of failing to meet regional needs and declining investment in the system. On the other hand, the Aspirational Scenario features a plan that can be implemented should funding levels unexpectedly improve in the future.

Plan 2035 Scenario—A Realistic Vision

The investment agenda in the Plan 2035 Scenario makes progress towards meeting the eight investment principles outlined above. Above all, maintenance, preservation and repair of the region’s extensive infrastructure already in place will receive top priority—and nearly two-thirds of available funding. This includes addressing needed maintenance—particularly on the region’s bridges—that accumulates each year and removing safety hazards where they exist.

To address the rising demands on the system with constrained funding, Plan 2035 emphasizes achieving greater efficiency from the existing transportation network. Application of new technologies—Intelligent Transportation Systems (ITS) measures—offer great promise in the long term. In addition, careful study to prepare for capital projects—such as clearing roadway bottlenecks, modernizing traffic signal systems, redesigning intersections, completing partial highway interchanges or creating new park and rides—can enhance the throughput of the system and speed travel. Modeling suggests that the investments and strategies under the Plan 2035 Scenario can reduce average daily vehicle delay by 5 percent, a small but significant amount given the projected increase in travel demand over coming decades.

The NJTPA’s Strategy Evaluation process (described in Chapter 4) systematically examines needs in the region’s varied “place types,” tying land use to transportation to help identify needed projects and strategies. Beyond capital projects, new policies and incentives created in cooperation with the state and private sector can make use of latent capacity in the system, for instance, shifting goods movement to off-peak hours.

The greatest long-term gains in system efficiency will be realized by modifying land use patterns in the region in



Plan 2035 calls for expanding and enhancing the region's transit system. Hoboken Terminal, Hudson County.

keeping with smart growth goals. As discussed below, this will require a steady and accelerated shift away from the auto-oriented sprawl that has contributed to the length of trips in the region and left large numbers of residents without convenient alternatives to driving.

Even if greater system efficiency can be achieved, some additional capacity will still be needed to meet rising travel. However, participants at visioning workshops almost universally recognized that the region cannot build its way out of congestion. The cost of expanding roads is too high, the environmental impacts are too great, and adding capacity only encourages more driving over the long term. For this reason, Plan 2035 foresees very limited highway expansion.

On the other hand, Plan 2035 gives high priority to enhanced and expanded services on the transit system. Added transit service brings many benefits—removing cars from the road, relieving development pressures on open space, improving air quality, enhancing energy efficiency and reducing greenhouse gas emissions, among others. Workshop participants from every area saw the need for greater access to transit, particularly the rail network.

Completion of the \$8.7 billion Mass Transit Tunnel (MTT), formerly known as the Access to the Region's Core (ARC) rail tunnel under the Hudson River (slated for 2017) will provide an extraordinary boost to regional transit. The MTT will create increased frequency of service on rail lines leading into the tunnel and better connections for

many riders, helping the region achieve a projected 42 percent increase in transit trips by 2035.

In cooperation with NJ Transit, the NJTPA will fund additional enhancements to the transit network. Following the completion of the MTT, funding will be available for at least the initial operating segments of the several proposed rail expansions around the region. These will have to be carefully planned and matched with land use measures such as transit-oriented development to create adequate ridership levels to meet federal funding requirements and ensure cost-effective operations. A stable source of operating funds at the state

and federal levels will also be needed.

Improvements and expansions to the bus network—which carries the majority of transit passengers—must accompany strategic rail expansions. Over the life of the plan, the region should pursue innovative Bus Rapid Transit systems operating along dedicated and semi-dedicated rights of way. As with the highway network, there will also be opportunities to improve the efficiency of the transit network through application of ITS technologies, new rail signal technology and small-scale targeted capital projects.

The region must continue to look to the non-profit and private sector to provide crucial support for the public transit network and additional alternatives to driving. In particular, Transportation Management Associations offer shuttle buses for access to the transit network as well as ridesharing and other services, many of which bridge the “last mile” between transit and employment sites. In addition, private bus carriers provide heavily used express buses and the region's ferry services provide flexible capacity and routes for commuter access to New York City.

If the region could achieve levels of funding at the level of the Aspirational Scenario, then significantly more progress could be made. This would require increasing state funding by an average of 7.9 percent annually and federal funding by nearly 7 percent annually (both well above the assumed inflation rate of 3 percent per year), yielding a total of \$209 billion in inflation-adjusted dollars over the life of the Plan. With this funding, maintenance would con-

sume a smaller portion of available funds, and more resources could be devoted to expansions and improvements to the road and rail systems. Among the impacts would be a 60 percent increase in transit trips and an 8 percent reduction in current daily vehicle delay on the road network. As the hard choices about future funding are made, these impacts and opportunities must be seriously considered.

Smart Growth

As noted, changing regional land use to fulfill smart growth goals holds much promise for improving transportation efficiency. The connection between land use and transportation is a central focus of Plan 2035 (Chapter 7).

In terms of transportation, smart growth means a shift away from the auto-oriented development that has held sway for at least the last 50 years throughout the region. New Jersey was one of the first states to step back from auto-oriented growth policies through the enactment of its State Development and Redevelopment Plan in the 1980s. It sought to move the state in the direction of a more sustainable approach to land use, including channeling development to areas where infrastructure to support it is already in place; creating more compact, mixed-use communities that can be served by rail and bus; and revitalizing declining urban areas.

Achieving smart growth has taken on a new urgency in light of the current trends. In recent years, investment in housing, retail and other land use development helped revitalize many communities and helped fill tax coffers, but it also fueled continued sprawl and artificially inflated real estate prices in many locations. In the future, communities will have to look to locations and forms of development—in keeping with smart growth principles—that will rein in overbuilding, be more sustainable and avoid fiscal, environmental and other impacts.

The need to address climate change and energy independence also has increased the importance of smart growth. Studies have shown that more compact develop-



Maintaining safe, walkable communities will enhance the region's quality of life.
Madison, Morris County.

ment—especially if it provides options for transit use—significantly reduces greenhouse gas emissions. At the same time, it uses energy more efficiently and reduces trip distances and the need for driving. In doing so, it relieves congestion on the roadway network, creating a more efficient transportation system.

In sum, smart growth more than ever is a strategy needed to ensure the long-term health of the region. Participants in outreach meetings voiced generalized support for smart growth measures, including higher density development and a greater mix of land uses, though at the same time not wishing to see changes that would drastically alter the character of communities. Continued, measured but decisive progress towards smart growth in the region appears advisable.

The NJTPA and other transportation agencies do not have direct control over the land use decisions needed to fully realize this approach. New Jersey's home rule tradition puts most land-use power in the hands of municipalities. However, since all development depends on access via the transportation system, transportation investments can help influence development trends. Among other measures, Plan 2035 calls for giving greater priority to investments that support smart growth, providing continued strong support for mass transit, promoting walking and biking, and funding smart growth studies.

Smart growth also encompasses environmental protection. Plan 2035 seeks to preserve open space and natural resources in ways that are consistent with the economic

health of the region. This includes working with regional development agencies charged with stewardship of natural resources including the Highlands Council, the Meadowlands Commission and the Pinelands Commission, ensuring wise and balanced investments.

Climate Change

According to a report by the New Jersey Department of Environmental Protection, transportation represents the largest single source of greenhouse gas (GHG) emissions in New Jersey, accounting for more than a third of New Jersey's total emissions. New vehicle technologies and a switch to alternative fuels may reduce transportation-related greenhouse gas emissions substantially over the next 25 years. Simultaneously, efforts must be made to reduce the miles of vehicle travel. As noted above, smart growth measures offer a means to reduce both the number and length of trips and with them greenhouse gas emissions. Plan 2035 has modified its investment principles to reference its commitment to work with other agencies to fulfill the New Jersey Global Warming Response Act of 2007 and be in a position to address emerging federal direction anticipated in pending energy and transportation legislation.

Yet even with action beginning now to reduce transportation-related greenhouse gas emissions, the region faces the likelihood that global warming will impact its infrastructure over the next 25 years. Rising sea levels and more severe weather could mean that bridges, roads and other infrastructure—much of it along critical evacuation routes—suffer increased flooding and deterioration and must be modified or rebuilt. Plan 2035 looks to prepare for this eventuality through its study and investment plans.

Closely related to the challenge of climate change is the need to improve the region's energy efficiency, including reducing dependence on fossil fuels. The brief spike in

gasoline prices in 2008 gave the public a glimpse of the disruptions and hardships that can result from higher oil prices if energy efficiency is not achieved.

New Jersey has established a goal of meeting 20 percent of the state's energy needs through energy efficiency and conservation gains by 2020. Plan 2035 makes a commitment to supporting that goal within the transportation sector, including through promotion of smart growth, increased transit investments and giving high priority to investments that encourage energy efficiency.

The Future

With a view to the lessons of the past and with wide input from the region's citizens and officials, Plan 2035 seeks to chart a realistic, achievable course through the current economic uncertainties toward renewed growth and progress. Private sector decision makers ultimately will determine the shape of the region's economy over the next 25 years. Yet, as has long been the case, transportation infrastructure will provide the crucial underpinning to allow the region—its businesses, citizens and communities—to pursue new opportunities.

The transportation investments and policies in Plan 2035 offer the prospect of many benefits over the next 25 years: a broad-based and sustainable economic recovery; more energy efficient development in cities, towns and suburbs; support for new technologies and practices that will help meet the challenges of climate change; new employment in green industries; protected environmental resources and many others.

One critical key to all these benefits will be the extensive and adaptable transportation system that for centuries has been one of northern New Jersey's most vital economic assets. The implementation of Plan 2035 will see that it remains so far into the future.

