Elizabeth, Union County ▶

7

Financing Plan 2050

NORTH JERSEY FACES transportation infrastructure needs and funding challenges, which Plan 2050 describes in detail. This chapter provides a financial plan for implementing identified projects and programs, ensuring a balanced vision for investment in the transportation system. ■ Plan 2050's financial assumptions and identified improvements were developed in part considering emerging trends and potential significant changes in demographics, economics, the environment, user behavior, and technology. A key consideration is COVID-19's impact, which the NJTPA projects will affect transportation financing in the near to mid-term as funding sources slowly recover. In the long-term, most economic indicators, including gross domestic product (GDP) and unemployment, are projected to return to historical averages. To address the uncertainty inherent with long-range transportation funding spanning decades, the NJTPA developed three funding

Notable Factors Affecting the Financial Element

Climate Change

Increased expenditures to fortify the existing transportation network and construct future infrastructure to be more resilient and provide redundancy.

Electric Vehicles

Changes in policy to focus less on taxes levied on gasoline sales and more on VMT or other assessed user-based fees or taxes.

Increased infrastructure investments by the public sector in EV infrastructure and conversion of transit agencies' fleets to zero emissions vehicles.

Teleworking

Increased telecommuting and altered commuting patterns as a result of COVID-19 are likely to continue post pandemic, likely resulting in reduced transit use and associated revenues; vehicle miles traveled (VMT) and auto-related fees and taxes; among other possible impacts.

scenarios to assess resources available under differing futures.

The Financial Element described in this chapter was developed following the guidance of the NJTPA Board of Trustees, in collaboration with planning partners and using sound analytical data driven methods. It identifies traditional and non-traditional funding sources to implement a program of infrastructure investments to improve roads, rail, non-motorized and other infrastructure, thereby supporting a strong and sustainable regional economy for the benefit of all.

Regional Outlook

Historic and current economic trends play a large role in estimating the funding available for transportation through 2050. The Financial Element takes a conservative approach when forecasting the later years of the planning horizon, basing funding growth on projected inflation and within the historical average annual funding growth rate, with additional federal funds for anticipated critical projects. This approach reflects reasonable future expectations for key revenue sources, including state and federal gas excise taxes. It must be stressed that the gas tax, the major source of funding for transportation infrastructure, is not keeping pace with the region's transportation needs due to several factors including the increasing fuel efficiency of vehicles and adoption of electric vehicles. Both trends are expected to dramatically increase over Plan 2050's 30-year planning period.

New Jersey's economic strength in trade, corporate and financial services, pharmaceuticals, information technology and other areas, as discussed in Chapter 3, should continue to contribute to sustained funding growth that can support the investment needs in this plan. Projections for population and employment, also outlined in Chapter 3, point to increases in travel demand on all aspects of the transportation network. Technological advances such as ITS and autonomous vehicles will make the system more efficient and able to accommodate some increased demand. However, the region will still need to address potentially greater congestion, wear to roads and bridges, insufficient transit capacity, and other challenges, as outlined in Chapter 4, System Performance. These increasing needs provide the context for the funding scenarios discussed in this chapter.

Long-term economic projections are particularly important in preparing the Financial Element because of federal requirements that the plan be based on year-of-expenditure dollars (YOE $). This means that future expenditures and funding must be adjusted to reflect the impact of inflation. The annual rate of consumer inflation for North Jersey is expected to be 2.3 percent per year over the Plan 2050 30-year period. This rate of inflation is based on the historical growth in the larger New York-New Jersey-Connecticut metropolitan region and is consistent with Rutgers University's R/ECON forecasts for New Jersey.

Although the Financial Element is largely informed by economic and demographic projections and historical transportation funding levels, many other factors will impact and possibly disrupt future funding levels and transportation investment needs. These factors are varied—notably changes in climate change impacts, technology innovation, travel options and preferences, and land use.

However, predicting how these factors will evolve over a 30-year planning horizon, how they might interact with one another, and how significantly they might impact transportation funding and expenditures is highly uncertain. Therefore, it is important to monitor and reassess how these factors develop over time and what impacts they generate.

Capital Funding Sources

FEDERAL FUNDING SOURCES

The federal government provides transportation funding for the State of New Jersey through numerous programs and grants administered by the FHWA and the FTA. Federal and state motor fuel taxes are the primary revenue sources for funding the region's transportation investment. Federal motor fuel taxes, along with other taxes and federal general fund contributions, are deposited into the Highway Trust Fund (HTF) and the Mass Transit Account (MTA). The NJTPA region receives a portion of these funds pursuant to the federal Surface Transportation Program currently authorized by the FAST Act, which was adopted in 2015, expired in 2020 and was extended an additional year through September 30, 2021.

From 1998 to 2018, the FHWA and FTA funds apportioned to New Jersey have grown on average by 3.0 percent and 3.9 percent per year, respectively, outpacing the consumer price index (CPI) growth of 2.3 percent per year over the same period. While the federal administration is proposing a significant increase in funding over the near and mid-term, NJTPA is taking a reasonably conservative position by projecting that funding will grow at a somewhat slower rate than the historical average given the inherent uncertainties of forecasting fiscal conditions over an extended period.

WHAT WE HEARD

"Maintenance of New Jersey roads is supported primarily by the gasoline tax. As all electric vehicles become more predominant in the future, how will the funding for maintenance of highways be provided? All electric vehicle tires wear out the roads just as quickly as an internal combustion engine vehicle."

—UNION COUNTY RESIDENT, ONLINE SURVEY

STATE OF NEW JERSEY FUNDING SOURCES

The New Jersey Transportation Trust Fund (TTF) funds capital improvements for the state's transportation system. It provides required matching funds, which vary across programs, necessary to receive federal funds. The TTF receives annual appropriations from the state Petroleum Products Gross Receipts Tax, State Motor Fuel Tax, State Sales & Use Tax on vehicle purchases, vehicle registration fees, and Toll Road Authority revenues. The state has periodically raised the rate of taxes that fund the TTF to keep pace with the program's needs. State legislation enacted in 2016 raised the motor fuel tax and Petroleum Products Gross Receipts Tax from a combined 14.5 cents per

Freehold, Monmouth County

gallon to 37.1 cents per gallon. This was a significant funding increase that helps the state and the NJTPA region put resources towards much needed investments to address the backlog of needs. In addition, by voter approval, all motor fuels tax revenues are now constitutionally dedicated for transportation purposes.

The TTF is protected from declining gas tax collections, pursuant to the 2016 legislation, which requires the gas tax to be annually adjusted, if required, to provide at least $2.0 billion in annual funding through 2024. The gas tax was increased in 2020 by approximately 22 percent to 50.7 cents per gallon due to the drastic drop in motor fuels taxes and other fees resulting from pandemic related lower levels of travel. Prior to 2016, New Jersey had the second-lowest fuel tax in the country. The state now has the fourth-highest fuel tax behind California, Pennsylvania, and Illinois. Total TTF funding has grown by 5.7 percent per year on average from 2000 to 2020, largely driven by the Petroleum Products Gross Receipts Tax in the last few years.

Funding Challenges and Opportunities

While the FAST Act and its expected successor provide predictable federal transportation funding, the federal program still faces significant challenges. Motor fuel tax collections have not kept up with the program's needs in large part because the federal gasoline tax has not been raised since 1997 and motor fuel consumption continues to decline, as noted previously. This trend is projected to increase as factors such as electric, hybrid, and other alternatively powered vehicles proliferate; many residents continue to prefer denser, transit accessible places to live—despite short-term pandemic patterns; and teleworking increases. In recent years, Congress has used appropriations from the General Fund and selected non-transportation funding sources to cover the federal funding gap.

To help mitigate pandemic-related, near-term fiscal stresses, the American Rescue Plan Act appropriated $43.2 billion primarily to transit agencies, aviation, and Amtrak. For New Jersey, the American Rescue Plan includes an estimated $2 billion for NJ TRANSIT, an additional $77 million for the Portal North Bridge and resources to support New Jersey's airports. The Biden administration is proposing a longer-term, broad-based infrastructure program which could include as much as $312 billion for transportation out of a total of $579 billion, which also includes funding for broadband access and resiliency.

The State TTF is also primarily reliant on the motor fuels tax and has kept pace with program needs better than federal funding programs due to periodic rate increases. Current funding legislation expires in 2024, at which time it is expected the legislature will reauthorize the TTF. Nevertheless, TTF funding is projected to be increasingly impacted by many of the same factors affecting federal transportation funding sources.

One of the biggest funding challenges facing the region is the need to support ongoing NJ TRANSIT operations and to substantially increase resources available for enhancing and expanding transit services. In addition to funding needed for the Gateway Program and supportive projects to realize its full capacity (see Chapter 5), initiating the many worthwhile and needed transit improvements for the region will require more stable and predictable funding at a level to meet increasing demand. NJ TRANSIT is the largest public transit operator in the country and has made strides to improve its financial stability in recent years, yet still has continued financial constraints.

The Plan 2050 planning period will include multiple reauthorizations for federal and state transportation funds. It is anticipated that federal and state elected officials will continue to support funding for the region's transportation needs given the long-term history of support for these projects and programs. It is also likely that, over the long run, project delivery methods and funding sources will evolve to include more public-private partnerships. There will be less reliance on fossil fuel-based revenues and other innovative approaches will emerge to meet critical transportation needs. Potential funding sources may include the application of a VMT tax, carbon tax, value capture, toll revenue capture, or other sources of revenue. New Jersey, along with many other states, is studying and piloting alternative funding and financing mechanisms. In 2020-2021, New Jersey participated in a multi-state study of VMT-based funding to evaluate its potential impact on travelers and funding levels.

Other examples of alternative funding include a Congressional proposal to monetize toll credits, where states with a surplus of credits can sell them to states in need of credits to meet federal match requirements. At the state level, increasing use of the New Jersey Transportation Infrastructure Bank (I-Bank), which provides low interest transportation financing for local and regional public entities, can fill the gap for local transportation improvement needs.

Project and program development and implementation are highly complex and costly within the NJTPA region. Cost-effective use of funds will depend on continuing efforts to streamline project delivery from the planning stage to construction, including reducing unnecessary delays and exploring new approaches to project implementation, such as design-build and design-build-operate-maintain contracts. In addition, effective use of the latest technologies (including advanced materials) will maximize the benefits achieved. Over the life of the plan, new technologies, if applied effectively, may contribute to increased efficiencies and cost reduction.

Revenue Assumptions

The state's FY 2022 Transportation Capital Program (TCP) allocates $29.1 billion in state and federal funding to the NJTPA region over ten years, through 2031. The region receives about $600 million in additional funds from various sources to support its portion of NJ TRANSIT operating costs.

Hoboken, Hudson County

Seaside Park, Ocean County

The NJTPA has worked closely with NJDOT, NJ TRANSIT, the Port Authority of New York & New Jersey, the New Jersey Turnpike Authority, and other partner agencies to assess the long-term funding and expenditure needs for the region and to determine the appropriate assumptions about future transportation funding.

Three funding scenarios were developed for this Financial Element to examine impacts of various potential capital funding levels, as follows: Plan 2050 (the fiscally constrained scenario), a Limited Scenario, and an Aspirational Scenario. The impacts of these three scenarios on various initiatives—such as trans-Hudson rail improvements and reducing the backlog of road and bridge projects—are addressed in the expenditures section later in the chapter.

Common Assumptions for Funding Scenarios

The funding forecast covers the period from FY 2022 through FY 2050. All three scenarios incorporate the funding assumptions from the TCP for the first ten years, which corresponds to the near and mid-term time periods. The combination of state and federal funding in the TCP averages $2.9 billion (YOE$) annually ($1.4 billion federal funding with $1.5 billion state funding) and includes funding for the Gateway Program's Portal North Bridge project. In addition to funding from the TCP in the near- to mid-term, there is also funding for possible future projects from the Study and Development Program, further Gateway Program capital investments, and additional transit capacity expansion from the FTA's Capital Investment Grant (CIG) Program, all of which vary greatly depending on the scenario. The Study and Development program includes concept development studies that assess potential project needs—including alternatives, feasibility, and environmental concerns—which may justify future funding.

Over the long-term, beginning in FY 2032, funding and expenditures for scenarios continue to diverge markedly based on the assumed general funding growth rates, funding from the Study and Development Program, further Gateway Program capital investments, and additional funding for transit capacity expansion from the FTA's CIG Program. Funding growth rates are applied to all programs in the current TCP (NJDOT regionwide and statewide projects and programs and NJ TRANSIT projects and programs), which are carried forward into the long-term, as well as to the CIG Program. The forecast utilizes three different time periods to illustrate changes throughout the duration of the 2050 plan. The time periods are:

- Near-term (FY 2022—FY 2025)
- Mid-term (FY 2026—FY 2031)
- Long-term (FY 2032—FY 2050)

The near and mid-term time periods of the capital funding projections are largely based on NJDOT and NJ TRANSIT funding assumptions for the NJTPA region. Federal and state funds will continue to provide most of the resources for the region's transportation needs. A small portion of funding is made up of other sources, including programmed contributions from the Port Authority, New Jersey Turnpike Authority and Metro-North, which provides funding support for shared commuter rail services with NJ TRANSIT.

Funding Scenarios Overview

Funding levels and assumptions for the three Financial Element funding scenarios are summarized in Table 7-1.

PLAN 2050 SCENARIO CAPITAL FUNDING LEVELS AND ASSUMPTIONS

The Plan 2050 Scenario is a reasonable and well-grounded financing plan for underwriting the projects, programs, and investments called for in this plan. The Plan 2050 Scenario is fiscally constrained, only relying on reasonably anticipated funding and is intended to be politically feasible. It supports a level of funding to maintain the transportation network in a state of good repair and provides capacity for targeted transit, highway, and nonmotorized improvements and capacity expansion projects.

The total capital funding available under this scenario is YOE $120.6 billion (Table 7-3) over the plan period, averaging YOE $4.2 billion annually. In this scenario, state and federal transportation funding levels are based predominantly on the FY 2022 TCP in the near to mid-term, which includes funding for Gateway Program's Portal North Bridge project, as noted under the Common Assumptions section. Funding is also included for all planned regional projects in the Study and Development Program, as well as work on the Gateway Program's projects, including the construction of the new Hudson River Tunnel, initiation of the modernization and rehabilitation of the North River Tunnel, replacement of the Sawtooth Bridge, rehabilitation of the Dock Bridge, and construction of the Harrison Fourth Track.

Over the long-term (FY 2032 to FY 2050), state and federal transportation funding is projected to increase at an average rate of 2.3 percent per year (Table 7-1). This annual rate is consistent with the long-term inflation forecast for New Jersey over the Plan 2050 period. Funding for NJDOT and NJ TRANSIT programs in the FY 2022 TCP is carried forward into the long-term. Funding for transit capacity expansion from the FTA's Capital Investment Grant Program starts at a base of $110 million per year (with equal non-federal match) in FY 2032. The anticipated annual funding from the FTA is equivalent with that assumed under the previous Long Range Transportation Plan, Plan 2045, adjusted for inflation in year of expenditure (YOE) dollars.

While the most heavily traveled roads and bridges in North Jersey are under the state's jurisdiction, county and local governments are responsible for maintaining and upgrading more than 90 percent of road miles and about 40 percent of bridges. To assist with this responsibility, NJDOT and NJ TRANSIT statewide and regionwide programs in the TCP provide significant transportation funding to county and local governments in the NJTPA region within all three scenarios. Illustrative examples include the Local Municipal Aid, Local County Aid, and Local Bridges programs, which are projected to provide YOE $3.4 billion, YOE $3.4 billion, and YOE $1.1 billion

TABLE 7-1: Scenario Funding Levels and Assumptions

PLAN 2050			LIMITED			ASPIRATIONAL		
Capital Funding Levels (year of expenditure in billions)								
	Total	Avg. Annual		Total	Avg. Annual		Total	Avg. Annual
Federal:	$60.875	$2.099	Federal:	$49.329	$1.701	Federal:	$76.380	$2.634
State:	$58.119	$2.004	State:	$50.942	$1.757	State:	$69.484	$2.396
Other:	$1.574	$0.054	Other:	$1.534	$0.053	Other:	$1.681	$0.058
Total:	$120.568	$4.158	Total:	$101.805	$3.511	Total:	$147.546	$5.088
Underlying Inflation: 2.3%								
Revenue and Expenditure Growth Rates								
2.3%			1.9%			3.5%		
Supports a Transportation Network in a State of Good Repair								
Additional Capacity for Transit, Highway, Non-Motorized Improvements and Expansion Projects								
Moderate			**Limited**			**Substantial**		

Fort Lee, Bergen County

respectively, through 2050 for the Plan 2050 Scenario. While this maintains the spending power of local aid with respect to inflation, fully meeting growing needs will likely require additional funding—at the level of the Aspiration Scenario.

LIMITED SCENARIO CAPITAL FUNDING LEVELS AND ASSUMPTIONS

The Limited Scenario is the most conservative of the three scenarios, providing a level of transportation funding significantly less than the Plan 2050 Scenario. The total capital funding available under this scenario is YOE $101.8 billion (Table 7-5) over the plan period, averaging YOE $3.5 billion per year, which is 16 percent less than the Plan 2050 Scenario funding level. Under the Limited Scenario, the region would continue to make investments in the transportation network at levels sufficient to maintain the network in a state of good repair, but not enough to fund targeted transit, highway, and nonmotorized improvements and capacity expansion projects. Over the near- to mid-term, state and federal transportation funding consists almost entirely of the FY 2022 TCP, with limited funding (only in the near-term) for planned regional projects in the Study and Development Program and no funding for additional Gateway Program projects aside from the Portal North Bridge project, which is already included in the FY 2022 TCP.

Over the long-term (FY 2032 to FY 2050), state and federal transportation funding increases at an average rate of 1.9 percent per year. This annual growth rate falls below the forecasted rate of long-term inflation (2.3 percent) and approximates the inflation rate observed during the 2005—2015 period, which included historically low rates during and after the Great Recession, followed by a period of economic recovery. Long-term funding consists entirely of NJDOT and NJ TRANSIT programs in the FY 2022 TCP that are projected over the long-term. No funding is included from the Study & Development Program, FTA's Capital Investment Grant Program, or the Gateway Program.

ASPIRATIONAL SCENARIO CAPITAL FUNDING LEVELS AND ASSUMPTIONS

The Aspirational Scenario reflects a fiscal environment where economic conditions and policy decisions support a level of transportation funding significantly greater than what the Plan 2050 Scenario affords, providing additional capacity for transit, highway, and nonmotorized improvements and targeted capacity expansion projects. The total capital funding available under this scenario is $147.5 billion (Table 7-7) over the plan period, averaging YOE $5.1 billion per year, which is 22 percent greater than the Plan 2050 Scenario. Over the near- to mid-term, in addition to the FY 2022 TCP, this scenario includes funding for all planned regional projects in the Study & Development Program and for the full Gateway Program. Funding for two Gateway Program projects, including the modernization and rehabilitation of the North River Tunnel and construction of the NJ TRANSIT Storage Yard, will carry over into the long-term period. The numerous individual projects that make up the Gateway Program are outlined in Chapter 5.

There is also funding for additional transit capacity expansion from the CIG Program, which starts at a base of $140 million per year (with equal non-federal match) in FY 2025 and continues through the remainder of the plan period. This level of annual funding is equivalent with that assumed for the Aspirational Scenario in Plan 2045, adjusted for inflation in year of expenditure (YOE) dollars.

Over the long-term (FY 2032 to FY 2050), state and federal transportation funding increases at a rate of 3.3 percent per year. Although higher than in the other two scenarios, this annual growth rate is nonetheless a reasonably conservative figure, in between the projected inflation rate of 2.3 percent per year and the historical transportation funding growth rate of 4.3 percent per year (including federal and state funding sources) observed between 1998 and 2018. Funding for NJDOT and NJ TRANSIT programs in the FY 2022 TCP is carried forward into the long-term. Also included is funding for all planned projects in the NJTPA region in the Study & Development Program and the completion of the Gateway Program.

Achieving the substantial increase in transportation funding outlined in the Aspirational Scenario is not unprecedented. Between 1998 and 2018, there were eight years in which transportation funding met or exceeded the 3.3 percent Aspirational growth rate. Legislation underwriting the interstate highway system and the creation of state and federal transportation trust funds occurred during periods of economic expansion when elected officials and the public recognized the importance of providing adequate and stable funding sources for transportation. Future economic expansion could reasonably underwrite a new era of state and federal commitments to transportation investment at the level of the Aspirational Scenario. Current discussions at the federal level about major infrastructure investments, which may or may not come to fruition, indicate a recognition of needs and an ongoing willingness to address them.

Expenditures and Investments

OPERATING EXPENDITURES

While capital funding is critical for the repair and upgrade of the existing transportation network and for targeted capacity increases, NJDOT and NJ TRANSIT also require and receive appropriations from the state General Fund for ongoing operations. Any capacity increases will also need operating resources.

State General Fund appropriations cover NJDOT's direct maintenance and operations expenses, including snow removal, road surface upkeep, maintenance of roadside lighting, vegetation, inspections, technical studies and general and administrative services. The FY 2021 appropriation is $30.7 million per year. If adjusted at 2.3 percent annually to keep pace with projected inflation, the appropriation for NJDOT's annual operating expenses would total $59.5 million

Jersey City, Hudson County

per year by 2050. Actual appropriations have declined in recent years due to ongoing constraints on the state budget. Continued reductions in funds to cover operating expenses over time could affect NJDOT's ability to monitor and maintain the roadway and bridge network and lead to higher capital costs, longer-term capital costs, or both.

As the third largest transit agency in the country, NJ TRANSIT'S operating funding needs are substantial. The extensive transit services provided by the agency are described in Chapter 5. Providing the best possible customer service is a major emphasis of NJ TRANSIT, along with being careful stewards of tax-payer dollars which are annually appropriated by the NJ State Legislature. NJ TRANSIT is constantly pursuing initiatives to maximize system-generated funding to reduce dependence on taxpayer supported funding. Expenses are controlled in a similar fashion to ensure the most cost-effective means of delivering service. NJ TRANSIT also aggressively pursues being in a state of-good-repair.

Partnering with other public agencies, communities and the private sector is a common practice that is needed and encouraged in these financially challenging times. Such partnering extends to operating services since farebox revenues do not fully cover operating costs.

NJ TRANSIT continues to be one of the most efficient transit operators, with almost 50 percent of its operating budget prior to the pandemic supported by passenger fares and other system-generated revenues (such as parking fees and advertising payments). NJ TRANSIT's 2021 operating budget projects an expenditure of about $2.6 billion to provide public transit services on the current system. The NJTPA region accounts for approximately 80 percent of these costs, or about $2.1 billion (Table7-2). The expenses that are not covered by system revenues are supported by yearly appropriations from the State and by various federal funding sources.

Reliance on capital funding for operations must also be reduced and NJ TRANSIT is making progress on the issue. The FY 2022 capital budget calls for $360 million in state and federal capital funding to be used each year to support NJ TRANSIT operations, principally involving major repair and rehabilitation projects for bus and rail vehicles, down from $480 million per year in previous years. Part of this shortfall is being met through greater contributions from the NJ Turnpike Authority, which is increasing its support of NJ TRANSIT to $350 million in FY 2022 to up to $500 million in future years. Over the long-term, this plan calls for the adoption of state policies and funding mechanisms that would allow the use of capital funds for operating expenses to be phased out, with the diverted capital funding redirected to other needs.

NJ TRANSIT's projected annual operating costs will increase to $6.2 billion per year by 2050, or nearly $5.0 billion per year within the NJTPA region (Table 7-2). These NJ TRANSIT projections are based on existing services and projected growth and include allowances for inflation, growth in service to accommodate a moderate rate of growth in ridership demand, and limited initiation of new services beyond the current system.

NJ TRANSIT will place a continued emphasis on future partnerships and efficiencies to hold down expenses. NJ TRANSIT estimates that expenses related to increases in service levels to accommodate projected growth in demand is about 1.1 percent per year for rail service and 0.6 percent for both bus and light rail. Expansion of NJ TRANSIT'S existing light rail services are included, such as the Hudson Bergen Light Rail extensions into Bergen County on

TABLE 7-2: NJ TRANSIT Annual Operating Budget Projections for the NJTPA Region (year of expenditure in millions)

EXPENSES	FY 2021 FINAL BUDGET	FY 2050 PROJECTIONS*
Labor & Fringes	$1.230	$3.086
Services	$0.156	$0.543
Fuel & Power	$0.093	$0.093
Materials & Supplies	$0.218	$0.409
Purchased Transportation	$0.225	$0.445
Tolls, Taxes & Other Operating Expenses	$0.187	$0.385
Total Operating Uses of Funds	**$2.101**	**$4.961**

* Note: The budget projection provides for growth in labor and services expenses at a rate averaging approximately 3 percent per year over the life of the long-range plan. Costs for energy is expected to grow at approximately 2 to 3 percent per year, as are costs for purchased transportation. Other expenses, such as utilities, claims, and insurance are expected to grow at approximately 2 to 3 percent. Overall, total expenses are expected to grow at approximately 3 percent per year, on average.

Lambertville, Hunterdon County

the Northern Branch and west of Route 440 in Jersey City.

There are several active initiatives to determine the future service needs and capacity expansion of the major public transit connections from New Jersey to Midtown Manhattan which will have implications for transit operating budgets and needs. The Federal Railroad Administration (FRA), Amtrak and Port Authority are each advancing different initiatives to guide future development of the rail and bus systems.

CAPITAL EXPENDITURES

Decisions about how funding will be allocated among transportation investment types for the Plan 2050 Scenario are guided by the Regional Capital Investment Strategy (RCIS). The RCIS considers a long-term horizon and sets allocation targets for twelve categories of capital investment with a balanced approach to future transportation spending in the region that enhances mobility, economic development, quality of life, resiliency, and social equity. While the Plan 2050 Scenario's transportation expenditures approximate the RCIS allocation targets, expenditures for the Limited and Aspirational Scenarios differ where appropriate. Further information on the RCIS is in Appendix C.

It should be noted that although investments are assigned a single category in the RCIS, there is inevitable overlap between the categories. As a result, the level of investment in each RCIS category is only approximate. Of particular note, investments in road or bridge projects normally include improvements that benefit freight and pedestrian/bicyclists, even though funds for these purposes are not categorized as such. The freight and pedestrian/bicycle RCIS categories only include projects dedicated to improving those modes.

Plan 2050 Scenario Capital Expenditures

Guided by the RCIS, the Plan 2050 Scenario is intended as a realistic and balanced approach for making future transportation investments. To match projected funding, total expenditures are projected to be YOE $120.6 billion (Table 7-3) over the plan period, averaging YOE $4.2 billion per year. While most investments are focused on maintaining the existing transportation network in a state of good repair, the Plan 2050 Scenario includes select upgrades and improvements to the transportation network to enhance system capacity, performance, resiliency, and

TABLE 7-3: Plan 2050 Scenario (billions of year of expenditure dollars)

SOURCES	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
All Federal	7.841	13.386	39.648	**60.875**
All State	6.813	11.571	39.735	**58.119**
Other*	0.279	0.325	0.970	**1.574**
Total	**14.934**	**25.281**	**80.353**	**120.568**

EXPENDITURES (RCIS CATEGORIES)	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
Bridges	2.389	5.051	13.652	**21.092**
Road Preservation	2.223	3.434	12.275	**17.932**
Road Enhancement	0.216	1.474	1.471	**3.160**
Road Expansion	0.134	0.200	0.720	**1.055**
Transit Preservation	4.927	6.620	26.429	**37.976**
Transit Enhancement	0.601	0.882	2.735	**4.218**
Transit Expansion	3.032	5.705	10.560	**19.297**
Freight	0.362	0.354	2.451	**3.167**
ITS	0.364	0.459	3.400	**4.224**
TDM	0.122	0.187	1.804	**2.113**
Safety	0.436	0.748	3.037	**4.221**
Bike/Ped	0.128	0.166	1.819	**2.113**
Total	**14.934**	**25.281**	**80.353**	**120.568**

*Other includes Port Authority of New York and New Jersey, New Jersey Turnpike Authority and Metro-North contributions. Overhead expenses are proportionally allocated across Uses.

TABLE 7-4: Plan 2050 Scenario Annual Averages (billions of year of expenditure dollars)

SOURCES	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
All Federal	1.960	2.231	2.087	**2.099**
All State	1.703	1.928	2.091	**2.004**
Other*	0.070	0.054	0.051	**0.054**
Total	**4.214**	**4.214**	**4.229**	**4.158**

*Other includes Port Authority of New York and New Jersey, New Jersey Turnpike Authority and Metro-North contributions.

equity. This scenario includes the implementation of projects and programs included in the Project Index (located at the back of this plan) over the near, mid, and long-term.

With regards to transit investments, the Plan 2050 Scenario supports NJ TRANSIT's ten-year strategic plan (https://njtplans.com), which focuses on maintaining the agency's assets in a state of good repair, improving operational performance, enhancing customer experience, improving safety, and making the system more resilient. The Plan 2050 Scenario includes a subset of Gateway Program projects including the construction of the new Hudson River Tunnel, modernization and rehabilitation of the existing 100-year-old North River Tunnel, replacement of the Portal North Bridge and Sawtooth Bridge, rehabilitation of the Dock Bridge, and construction of the Harrison Fourth Track. These projects provide the foundation for the more extensive long-term Gateway Program projects included in the Aspirational Scenario.

In addition, several prospective transit projects in the region, including those that are now undergoing planning and environmental review, may be candidates for future federal and state funding assumed in the Plan 2050 Scenario. Potential future transit projects

TABLE 7-5: Limited Scenario (billions of year of expenditure dollars)

SOURCES	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
All Federal	5.675	8.544	35.110	**49.329**
All State	6.025	9.362	35.554	**50.942**
Other*	0.279	0.325	0.931	**1.534**
Total	**11.979**	**18.231**	**71.595**	**101.805**

EXPENDITURES (RCIS CATEGORIES)	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
Bridges	2.389	5.051	13.652	**21.091**
Road Preservation	2.223	3.434	12.275	**17.932**
Road Enhancement	0.216	0.796	1.328	**2.340**
Road Expansion	0.134	0.010	0.752	**0.896**
Transit Preservation	4.927	6.620	26.429	**37.976**
Transit Enhancement	0.601	0.646	2.045	**3.291**
Transit Expansion	0.078	0.166	4.224	**4.467**
Freight	0.362	0.259	1.962	**2.583**
ITS	0.364	0.293	2.822	**3.479**
TDM	0.122	0.137	1.490	**1.749**
Safety	0.436	0.748	3.037	**4.221**
Bike/Ped	0.128	0.073	1.578	**1.779**
Total	**11.979**	**18.231**	**71.595**	**101.805**

*Other includes Port Authority of New York and New Jersey, New Jersey Turnpike Authority and Metro-North contributions. Overhead expenses are proportionally allocated across Uses.

TABLE 7-6: Limited Scenario Annual Averages (billions of year of expenditure dollars)

SOURCES	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
All Federal	1.419	1.424	1.848	**1.701**
All State	1.506	1.560	1.871	**1.757**
Other*	0.070	0.054	0.049	**0.053**
Total	**2.995**	**3.038**	**3.768**	**3.511**

*Other includes Port Authority of New York and New Jersey, New Jersey Turnpike Authority and Metro-North contributions.

are outlined in Chapter 5. However, as discussed in Chapter 5, most transit expansion projects focused on increasing access to New York City cannot proceed until additional rail capacity is created through the Gateway Program.

Limited Scenario Capital Expenditures

The Limited Scenario is the most conservative of the three scenarios, with significantly less transportation expenditures than the Plan 2050 Scenario. The scenario focuses on preserving the transportation network in a state of good repair at the expense of system enhancement and expansion. Other than the projects programmed in the FY 2022 TCP, including the Portal North Bridge, there are no expenditures for significant system expansion including critically needed trans-Hudson capacity. To match funding, total expenditures are YOE $101.8 billion (Table 7-5) over the plan period, averaging of YOE $3.5 billion per year, which is 16 percent less than the Plan 2050 Scenario.

The NJTPA prioritizes maintaining a safe transportation network in a state of good repair for all three scenarios. Because of the Limited Scenario's lower level of overall transportation investment, the proportion of expenditures allocated to system preservation and safety through the RCIS categories of

TABLE 7-7: Aspirational Scenario (billions of year of expenditure dollars)

SOURCES	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
All Federal	7.981	22.183	46.216	**76.380**
All State	6.953	16.282	46.250	**69.484**
Other*	0.279	0.325	1.078	**1.681**
Total	**15.214**	**38.789**	**93.543**	**147.546**

EXPENDITURES (RCIS CATEGORIES)	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
Bridges	2.389	5.051	13.652	**21.092**
Road Preservation	2.223	3.434	12.275	**17.932**
Road Enhancement	0.216	1.474	1.471	**3.160**
Road Expansion	0.134	0.200	0.720	**1.055**
Transit Preservation	4.927	6.620	29.373	**40.921**
Transit Enhancement	0.601	0.882	3.646	**5.129**
Transit Expansion	3.312	19.213	16.479	**39.004**
Freight	0.362	0.354	3.134	**3.850**
ITS	0.364	0.459	4.311	**5.135**
TDM	0.122	0.187	2.260	**2.569**
Safety	0.436	0.748	3.948	**5.132**
Bike/Ped	0.128	0.166	2.274	**2.569**
Total	**15.214**	**38.789**	**93.543**	**147.546**

*Other includes Port Authority of New York and New Jersey, New Jersey Turnpike Authority and Metro-North contributions. Overhead expenses are proportionally allocated across Uses.

TABLE 7-8: Aspirational Scenario Annual Averages (billions of year of expenditure dollars)

SOURCES	NEAR-TERM (FY2022-2025)	MID-TERM (FY 2026-2031)	LONG-TERM (FY 2032-2050)	TOTAL
All Federal	1.995	3.697	2.432	**2.634**
All State	1.738	2.714	2.434	**2.396**
Other*	0.070	0.054	0.057	**0.058**
Total	**3.803**	**6.465**	**4.923**	**5.088**

*Other includes Port Authority of New York and New Jersey, New Jersey Turnpike Authority and Metro-North contributions.

bridges, road preservation, transit preservation, and direct safety is higher than the Plan 2050 Scenario. This reallocation results in reduced expenditures for the remaining RCIS categories, which focus on system enhancement and expansion. As a result, under the Limited Scenario, the region will maintain the existing transportation network, but will be less prepared to meet the demands on the transportation system of a growing population and economy. If the region and state face future crises that substantially cut transportation funding capacity, this scenario provides a reasonable "fallback position" for transportation investment.

Aspirational Scenario Capital Expenditures

The Aspirational Scenario is a more robust, yet feasible spending approach for the region. It identifies additional transit, highway, nonmotorized improvements and capacity expansion investments that could potentially be made if significant new transportation funding were realized. To match funding, total expenditures are YOE $147.5 billion (Table 7-7) over the plan period, averaging YOE $5.1 billion per year, which is 22 percent higher than the Plan 2050 Scenario. This scenario includes all the investments assumed in the Plan 2050 Scenario, as well as greater expenditures on projects and programs across most

Red Bank, Monmouth County

transportation categories. Notably, the Aspirational Scenario includes $39 billion in transit expansion (Table 7-7) that supports the construction of the full Gateway Program, as well as a larger list of other prospective transportation projects than is included in the Plan 2050 Scenario, which may be candidates for future federal and state funding assumed in this scenario. The numerous individual projects that make up the Gateway Program are outlined in Chapter 5, as well as other potential future transit projects.

As with the Limited Scenario, transportation expenditure allocations differ from the RCIS allocation targets. Specifically, the additional expenditures available in the Aspirational Scenario (above what the Plan 2050 Scenario includes) are allocated to all the RCIS categories except for bridges, road expansion, road enhancement, and road preservation. These categories would remain funded at Plan 2050 Scenario levels, which are projected to be sufficient to meet the demands on the transportation system of a growing population and economy. The remaining transportation expenditures categories of transit preservation, transit enhancement, transit expansion, TDM, direct bike/ped, direct safety, direct ITS, and dedicated freight would receive considerably more funding than the Plan 2050 Scenario. If the region and state are able to secure additional funding capacity, this scenario provides a reasonable path forward for expanded investment to meet the transportation demands of the future.

Other Funding for Transportation

The state and federal investments discussed in this chapter are supplemented by additional investments by other transportation agencies—principally, the Port Authority of New York & New Jersey, New Jersey Turnpike Authority, and the Delaware River Joint Toll Bridge Commission. Their investments will continue over the life of this plan. Key projects planned by the authorities are included in the Project Index. While these agencies fund their capital and operating needs through user fees and other sources of revenue outside the scope of Plan 2050, their transportation investments and services are integral to the North Jersey region and contribute to its mobility and economic growth. The following provides a brief overview of these agencies and their contributions to the NJTPA region's transportation network.

Westwood, Bergen County

PORT AUTHORITY OF NY & NJ

Key facilities operated by the Port Authority within the NJTPA region include Newark Liberty International Airport, Teterboro Airport, the PATH rail system, the port complex in Newark and Elizabeth and major New York-New Jersey crossings—the Outerbridge Crossing, Goethals Bridge, Bayonne Bridge, Holland Tunnel, Lincoln Tunnel, and George Washington Bridge. The agency has built passenger ferry facilities, maintains roadways within its facilities, provides on dock and cross-harbor rail-freight service, and contributes to other key infrastructure elements that access its facilities and aid the movement of goods and people throughout the region. The Port Authority is financially self-sustaining and must raise funds through tolls, fares, rentals and other user charges for capital and operating expenses needed to provide services to the public. Port Authority facilities and financial resources are not included within the definition of the federally supported surface transportation system used to establish the fiscally constrained Plan Scenario.

The Port Authority's 2017-2026 $37 billion capital plan (reassessed in 2019) features investments spread over a broad portfolio of assets and facilities with the goal of keeping them efficient, safe, secure, and reliable. In addition to investing in its own assets, the Port Authority's capital plan allocates up to $2.7 billion in debt service support for the Gateway Program. Major projects include essential state-of-good-repair investments at the George Washington Bridge, the Lincoln Tunnel Helix Replacement Program, Port Wharf and Berth Replacement Program (which includes pier replacement and improvements at Port Newark/Elizabeth and Port Jersey), near-term improvements and the long-term replacement of the Port Authority Bus Terminal, PATH initiatives including capacity, reliability and service frequency improvements, extension to Newark Liberty Rail Link Station and new car purchases. The Port Authority ten-year plan notes that the agency may seek to leverage its capital investments to secure additional discretionary federal funding and financing assistance and public-private partnership financing for major projects that enhance the region's surface transportation capacity.

NEW JERSEY TURNPIKE AUTHORITY

The Turnpike Authority operates and maintains both the New Jersey Turnpike and the Garden State Parkway. The Turnpike is 146 miles long (56 miles in the NJTPA region) and includes 27 interchanges, nearly 500 bridges and 12 service areas. The Garden State Parkway is 173 miles long (121 miles within the NJTPA region) and includes 90 interchanges, approximately 300 entrance and exit ramps and nearly 500 bridges.

The Turnpike Authority's funding comes from toll revenues, which it uses to meet operations and maintenance expenses, finance capital needs, and to contribute to the TTF. The Turnpike Authority's $24.1 billion twenty-year capital improvement program focuses on maintaining the Turnpike and Parkway in a state of good repair and investment in certain capacity improvements including widening the Parkway between interchanges 98 and 163, widening the Turnpike between interchanges 1 and 4 and 14 through 14C to the terminus of Turnpike at the Holland Tunnel, alignment widening between the Southern Mixing Bowl and Interchange 16W, as well as installation of all electronic tolling. On-going investments include pavement preservation and wall replacement. In addition, it provides $22 million per year to the TTF, plus additional funds for feeder road maintenance ($2.5 million in CY 2020 and annually through CY 2024), and additional funds per prior and existing state transportation funding agreements ($129.0 million in CY 2020 and $264.5 million in CY 2021).

AMTRAK

Amtrak owns the Northeast Corridor (NEC) and provides intercity passenger rail service that includes regional and high-speed Acela trains connecting North Jersey with Philadelphia, Wilmington, Baltimore and Washington, D.C. to the south; New York City, Providence and Boston to the north; along with other metropolitan areas throughout the nation.

Amtrak, in concert with NJ TRANSIT, the Port Authority, and the Gateway Development Commission, is planning and developing the Gateway Program, which will allow the doubling of passenger trains on the NEC between Newark Penn Station and New York Penn Station. The Gateway Program consists of numerous individual projects which are detailed in Chapter 5. The recently completed $1.6 billion Moynihan Station Project is not technically part of the Gateway Program. However, it is an essential part of increasing the capacity of New York Penn Station through the renovation of the James A. Farley Building, formerly NYC's main post office building, into a train hall.

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

This commission maintains and operates seven toll bridges and 13 non-tolled bridges over the Delaware River spread out along 139 miles between Bucks County, Pennsylvania, and the New York State line. All Delaware River toll bridges are in the NJTPA region except for the Trenton-Morrisville Bridge. The commission is also responsible for the repair and maintenance of the first seven miles of I-78 in Warren County. The commission relies on its toll revenues to fund operations, maintenance, and capital needs. Capital projects are focused on bridge repair, replacement, and rehabilitation.

Paterson, Passaic County