

 The Fund for New Jersey

CROSSROADS NJ

POLICY CHOICES THAT DEFINE OUR FUTURE

TRANSPORTATION

TRANSPORTATION
MUST AGAIN BE
THE BACKBONE OF
NEW JERSEY ECONOMY



Transportation Must Again Be the Backbone of New Jersey Economy

A strong transportation network is essential for a densely populated corridor state such as New Jersey, where the economy depends on cross-river interstate commuting, regional distribution of goods, and tourism, as well as in-state travel between home and work.

Instead, New Jersey is beset by aging and deteriorating infrastructure that threatens the state's competitive advantages and quality of life.

In recent years, New Jersey's public investment in roads, bridges, and mass transit has failed to keep up with needs. Rather than responsibly educate the public about the value of mobility to the state's prosperity and the need for investment to maintain a robust transportation system, policymakers have dismissed the warning signs and allowed transportation operations to become inadequate and unstable.

The state's transportation system still has the potential to make life easier for New Jerseyans and propel the state economy if policymakers commit to restoring and maintaining its safety and reliability and act with urgency to support important projects.

Necessary steps include:

- Developing, maintaining, and modernizing a robust, financially stable state transportation network
- Prioritizing critical interstate connections, beginning with the Gateway projects
- Streamlining administrative structures to improve planning and increase public engagement
- Embracing new technology to improve safety and reduce costs

The Transportation Trust Fund and Beyond

As the name suggests, the Transportation Trust Fund (TTF) provides New Jersey with a way to pay for the roads, bridges, rail lines, and buses that residents and businesses rely on every day. For more than 30 years, state revenues—prominently including receipts from the state's tax on gasoline—have been deposited into the fund to improve and rehabilitate state-controlled transportation assets.



The political capital spent to secure the gas tax increase did not actually address the problem of constrained resources.

However, contributions have failed to keep up with needs. A pay-as-you-go system became borrow-as-you-go¹ until the summer of 2016, when the trust fund's resources were exhausted.²

Multiple factors caused the TTF's depletion:

- Capital funding, an average of \$1.5 billion per year, had not increased substantially in the past 15 years.
- Except to repair damage from Superstorm Sandy, the federal contribution to transportation infrastructure capital investment increased only modestly.
- All funding streams previously dedicated to specific transportation needs were pledged, for many years into the future, to paying the debt on bonds previously issued for capital investment.

The Transportation Trust Fund desperately needed more resources. In October 2016, the state raised its tax on gasoline to 37.5 cents per gallon from the previous 14.5 cents, the second lowest gas tax in the U.S., a rate that had gone unchanged since 1988. In a referendum in November 2016, voters decided that all the increased revenue from the gas tax would have to go to the uses of the TTF.

The 2016 reauthorization of the trust fund extended New Jersey's annual transportation capital spending for eight years, at a rate of \$2 billion a year.³ However, these new funds barely respond to needs that have compounded after so many years of neglect.

For one thing, the equivalent of 7 cents of the 23-cent increase in the price at the pumps was devoted to relieving the state budget's General Fund of the Transportation Trust Fund debt service obligations incurred since 2010.⁴

For another, the size of the gas tax increase was not based on the state's actual needs. Rather than conduct a strategic assessment of New Jersey's full range of transportation capital needs and objectives and then determine how much money would be needed, legislators and the governor capped the revenue-raising process at a level chosen to satisfy the political imperative of keeping gas prices lower than in New York and Pennsylvania. Ironically, the political capital spent to secure the gas tax increase did not actually address the problem of constrained resources.

A more forward-looking approach is needed.

RECOMMENDATION

Proceed methodically to understand and articulate what New Jersey's transportation aims should be, and why, then realistically determine the amount of public investment required and the resources that could be made available.

New Jersey's last comprehensive transportation capital assessment was conducted 14 years ago. In the 2003 "Blue Ribbon Commission Report, Recommendation for Ensuring a Strong Transportation Network for the 21st Century," a bipartisan group of transportation experts⁵ identified an average capital investment need of \$4.6 billion annually for 10 years, to be spread between the state Department of Transportation and local road work (\$2.8 billion a year), and NJ Transit (\$1.8 billion a year).



The flow of people into the high-paying Manhattan economy plays an ever-increasing part in New Jersey's well-being.

The difference between the annual needs projected in 2003 and current resources is almost \$1 billion annually, a gap of more than 25%.⁶ If additional factors are considered—inflation since 2003, the accelerating deterioration of New Jersey's aging infrastructure from harsh winters and heavy truck traffic, and the legal obligations arising from operating trains on the Northeast Corridor — these factors could add still another 25% or more to the gap.

To make the numbers add up to a transportation system that meets public needs, including paying the state's share of building an additional Hudson River tunnel, New Jersey needs to leverage maximum support from external sources, including bistate and in-state authorities and federal transit discretionary aid. The allocation of Turnpike revenues for transportation capital improvements, which was used in the state fiscal year that began July 1, 2010, should be considered for permanent support of the Transportation Trust Fund.

Even with these steps, it will be difficult to move New Jersey's transportation system from an economic liability to a strength without another increase in state petroleum taxes in the next four years—unless policymakers take such alternative actions as:

- Raising motor vehicle license and registration fees beyond that needed for Motor Vehicle Commission improvements, and devoting part or all of the new revenues to transportation capital needs
- Charging tolls on Interstate highways in New Jersey
- Leasing toll roads to private operators and using the upfront cash to finance road and rail projects that have been on the shelf due to lack of funds
- Replacing petroleum-consumption taxes with mileage fees

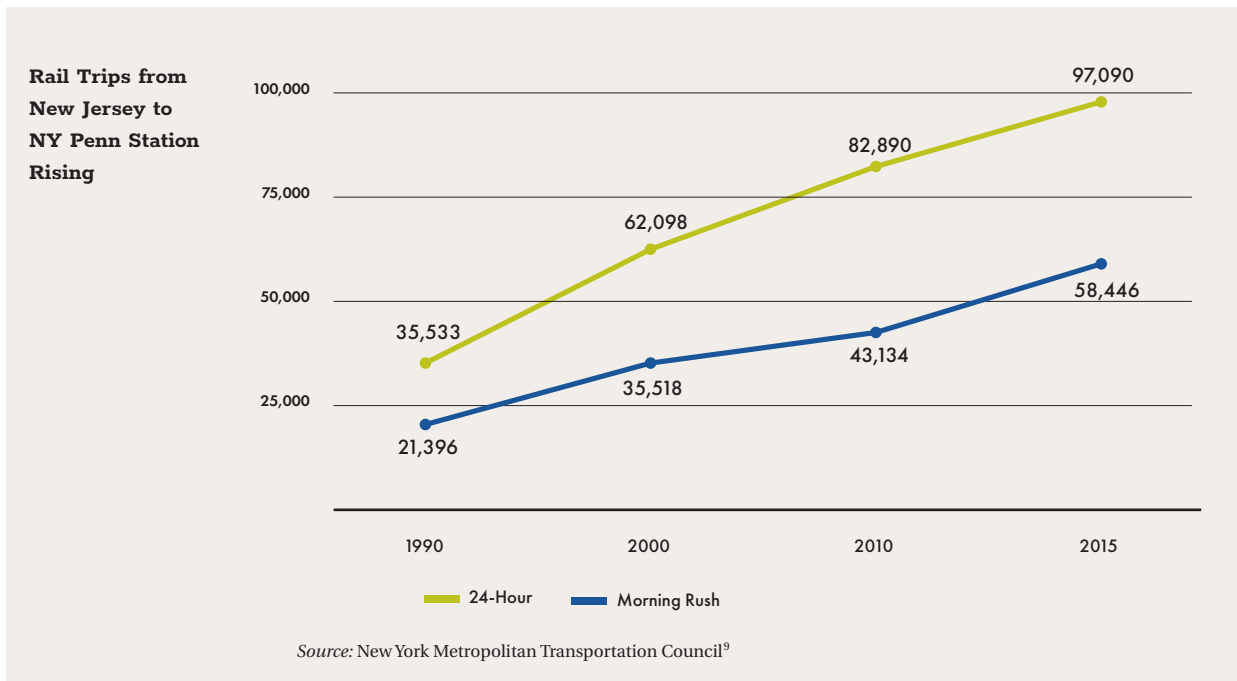
Pivotal Projects for New Jersey's Competitiveness

New Jersey's robust role in the regional service, commercial, and cultural economy is closely linked to the ability to get into New York City as easily as possible. The flow of people into the high-paying Manhattan economy plays an ever-increasing part in New Jersey's well-being. That requires preserving and expanding several key public transit facilities. A major priority will be guiding two trans-Hudson transportation projects to completion: the Gateway tunnel and terminal construction and the Port Authority Bus Terminal replacement/expansion. Without these projects, New Jersey's role in the regional trans-Hudson economy will be stifled. (Other important projects are detailed in the appendix to this report.)

GATEWAY

No transportation capital project is more important to New Jersey's economic future than the Gateway Program to expand and improve the rail line from Newark to Midtown Manhattan. Gateway would rebuild and supplement century-old bridges and tunnels, some of them weakened by Superstorm Sandy in 2012, to facilitate additional and faster train service on tracks shared by NJ Transit and Amtrak.⁷

The need is clear. From 1979 through 2017, NJ Transit ridership into New York Penn Station quintupled to more than 97,000 on weekdays.⁸ With Gateway, the system could comfortably accommodate an additional two-thirds ridership increase.



New Jersey and New York have committed to jointly finance 50% of Gateway's cost, provided that the federal government contributes grant funds for at least the other 50%.

With assists from U.S. Sens. Cory Booker of New Jersey and Charles Schumer of New York, the federal government during the Obama administration agreed to the stipulation, and Congress passed enabling legislation. However, the Trump administration's budget proposal for the federal fiscal year starting October 1, 2017 did not address the early steps needed to advance the project's financing. It is now up to Congress to lay the project's financial foundation.¹⁰

The urgency of Gateway's first phase focuses on NJ Transit's swift completion of a draft environmental-impact study on the railroad tunnel. A draft published in July 2017 included revised cost estimates for rehabilitating the two 106-year-old tubes (\$1.7 billion) and constructing two new ones (\$11.2 billion).¹¹ Corrosive salts left by Superstorm Sandy's flooding are eating away at the concrete walls and electric-traction and signal systems in the tunnel. Engineers project that, in the next 10 to 20 years, each of the two tubes will have to be taken out of service for overhaul. If either tube goes out of service before a replacement is operational (estimated to be in 2026), today's peak commuter and intercity service of 24 trains an hour (21 NJ Transit and three Amtrak) would shrink to six.¹²

The Port Authority of New York and New Jersey took a step toward financing the new Hudson River tubes in February 2017 by allocating \$2.75 billion in its 10-year capital plan for the tube project.

Replacing the Portal Bridge, built over the Hackensack River in 1910, with a higher span means trains on the nation's most important passenger rail corridor no longer will have

to stop for water craft passing underneath. Engineering and environmental work for the project is finished, so construction could begin as soon as funding is assembled. A House Appropriations bill for the next federal fiscal year provides \$500 million from the Northeast Corridor State of Good Repair program toward construction of the new fixed, high-span North Portal Bridge. Senate action is pending. Some \$21 million in state money also has been allocated toward this project.

RECOMMENDATION

Make nurturing Gateway’s array of projects toward their realization the top New Jersey transportation priority.

The projects’ high cost (estimated at \$24 billion to \$29 billion), multiyear construction, and complex institutional relationships and financing will require consistent monitoring.¹³

Pay immediate attention to advancing and financing the lead elements of the first phase: constructing two new rail tubes into New York Penn Station, rebuilding the existing two North River tunnel tubes, and replacing the Portal Swing Bridge over the Hackensack River between Kearny and Secaucus.

Beyond monitoring Phase One, shape, finance, and advance Gateway’s Phase Two as a crucial investment in New Jersey’s economy.

Phase Two includes expansion of New York Penn Station’s platforms and tracks to a “Penn South” annex, and construction of the Bergen Loop, a track connection from the Bergen County, Main, and Pascack Valley lines to the Northeast Corridor. Phase Two would be finished in 2030, in tandem with completion of the refurbishing of the existing tubes.

Construction of new tubes alone does not do anything except avert disaster. These Phase Two projects, along with the new Gateway tunnel in Phase One, would enable NJ Transit to run at least 34 trains in peak hours, up from today’s 21. Benefits would include eliminating transfers in Newark and Secaucus Junction for riders on the Raritan Valley, Bergen County, Main, and Pascack Valley lines. And additional capacity would enable other lines to expand service to increase the number of trains on the Northeast Corridor, North Jersey Coast, and Morris and Essex lines.

However, securing future financing for Phase Two will be challenging because of the uncertainty of Trump administration policy, sectional tugs and pulls in Congress, limited Port Authority and NJ Transit resources, and New York state’s grudging participation.

Another facet of the second phase of the Gateway Program should be consideration of a proposal being developed by the Regional Plan Association to design Penn South not as a terminus but as a facility that trains could pass through on their way to other destinations.¹⁴ Penn Station would be retrofitted to have fewer tracks, wider platforms, and new tunnel connections to Sunnyside Yards in Queens. The RPA is advancing this design because it is thought to add eight to 10 trains per hour in trans-Hudson rail capacity.

This expanded capacity would more easily accommodate demand for direct service from northeastern New Jersey (Bergen Loop) and from other lines, service that might not be met by the current Penn South plan.

REPLACEMENT /EXPANSION OF THE PORT AUTHORITY BUS TERMINAL

The second essential trans-Hudson transit project is replacement/expansion of the Port Authority Bus Terminal, which anchors the Lincoln Tunnel corridor. The bus terminal accommodates nearly 50% of the existing daily trans-Hudson transit trips, handling 260,000 riders per day with 7,900 daily bus trips in or out of the terminal. And the bus terminal's role will increase: Port Authority staff have forecast the number of passengers using the Lincoln Tunnel corridor will grow 35% to 50% by 2040.¹⁵

Planning the future of the bus terminal has been contentious.

The Port Authority's Board of Commissioners first determined in 2016 that the terminal, located between Eighth and Ninth Avenues and 40th and 42nd Streets in Manhattan, was near the end of its useful life. The terminal, then 66 years old, could not accommodate the growing demand of commuters; newer buses were having a difficult time negotiating the terminal's ramp system, bus passageways, and platforms; and the concrete slabs supporting buses were predicted to crack and become unusable within 20 years.¹⁶ A study analyzing the feasibility of building a smaller terminal in concert with alternative projects found that no more than 10% to 20% of bus demand could be siphoned off from the replacement facility. The study concluded that a new bus terminal should be designed with ease of expansion in mind.¹⁷

Assuming that rehabilitation of the existing structure would be too disruptive, the board identified a 3½-block site on Ninth Avenue in Midtown Manhattan for a new terminal. (The existing terminal would be re-purposed into an office building, with the proceeds offsetting some of the project's estimated \$10 billion cost.) The choice proved unpopular. Elected officials and neighbors of the selected site opposed the construction of a huge facility there. The proposed relocation also raised concerns about whether riders could easily connect to the subway stations on Eighth, Seventh, and Sixth Avenues, and about lengthened walks to Midtown office destinations.

In response, the board authorized \$70 million in February 2017 to begin a comprehensive environmental planning effort on replacement of the bus terminal as well as support facilities for bus storage and staging. This planning would also examine intermediate bus storage and staging facilities, including Port Authority-owned properties in West Midtown Manhattan and in New Jersey. A decision document is anticipated in 2019.

In parallel, the Port Authority board announced that the viability of a new "build-in-place" facility—the concept it had once ruled out—would be evaluated. The board expects to learn in fall 2017 from an independent consulting engineer whether the option to rebuild on the existing terminal's footprint is feasible, how long it might take, and how much it might cost.

The issue of how to pay for the terminal is also contentious. The Port Authority's 10-year capital program includes \$3.5 billion for the replacement/expansion project, including funds for a bus storage/staging facility that directly connects to the exclusive bus lane.



The importance of a new bus terminal to New Jersey commuters requires focused commitment to guide the project's development—and, possibly, survival

Recognizing that this amount is unlikely to provide for the replacement/expansion of the bus terminal, the Port Authority board authorized retaining a financial consultant to assess available federal funding as well as private capital and investment interest.

Additionally, \$328 million has been authorized in the 10-year capital plan for intermediate measures to improve operations and conditions at the bus terminal. These include making structural and leak repairs, updating building infrastructure, and completing the Quality of Commute program, which includes restroom, elevator, and escalator rehabilitation as well as the addition of cellular and wireless connectivity.

RECOMMENDATION

Pay close attention to every detail of the new Port Authority Bus Terminal project, making sure New Jersey's interests are protected.

The importance of a new bus terminal to New Jersey commuters requires focused commitment to guide the project's development—and, possibly, survival—in the following ways:

- Protect and expand the Port Authority's capital plan commitment to the project
- If necessary, aggressively seek federal support for a portion of the project's cost
- Make sure the project includes an assurance that road links connecting to the Lincoln Tunnel can accommodate the growing number of buses and that convenient connections to the subway system and pedestrian street network are provided

ASSESSING THE PORT AUTHORITY'S FINANCIAL ROLE

Since its founding in 1921, the Port Authority has grown into a major source of funding for important transportation operations in the two states—assistance that, in other major metropolitan areas around the world, often comes from general taxes. To finance construction and major maintenance projects, the Authority borrows money through the sale of bonds and repays the bondholders with revenue from tolls and fees.

It is important for policymakers to realize that the money-raising capacity of this model is eroding. The Port Authority is completing a major sequence of bond-financed projects at the World Trade Center site, and its debt service is affecting its financing abilities. Moreover, today profit-making tunnels, bridges, and airports in large measure subsidize such unprofitable operations as PATH, the Port Authority Bus Terminal, and the World Trade Center. With a four-year sequence of river-crossing toll increases having only recently been completed, the Port Authority no longer can easily "grow the pie" of operating revenues to support new investment.

Gaining a clear view of the financial capacity of the Port Authority of New York and New Jersey will be essential. Taking into account pressures from New York state to commit to projects New York desires (in particular, airport improvements), New Jersey will have to determine (1) how much financing the Port Authority can offer the Gateway Project,



It is essential to reverse the destabilizing impact that state budgeting practices have had on the work of the state Department of Transportation and NJ Transit.

(2) how much funding is needed and can be secured to replace the Port Authority Bus Terminal, (3) what other projects are of special benefit to New Jersey, and (4) how best to take advantage of the Port Authority's potential sale of its real estate holdings that are no longer essential to its mission.

RECOMMENDATION

Reach consensus with New York state on the Port Authority's financial capacity to take on loss-making projects and evaluate what steps are necessary to maintain its ability to self-finance capital improvements.

Relying on operating revenue to issue bonds that finance loss-making infrastructure projects will be difficult in the foreseeable future. Care must be taken to temper expectations that vast Authority resources of the past will be available to support new projects to the same extent.

Strengthening State Agencies Crucial to Transportation

New Jersey gives short shrift to the two transportation entities with the largest roles in delivering a well-run, efficient system:

- The state Department of Transportation (NJDOT), established in 1966 to replace the State Highway Department. Its major responsibilities, broadly defined, include creating and maintaining a master plan for transportation development and building and maintaining the state's system of highways and bridges.
- NJ Transit, a state-owned system of bus, commuter rail, and light rail services that carries the third highest ridership in the U.S. It was created in 1979 to "acquire, operate, and contract for transportation service in the public interest."¹⁸

It is essential to reverse the destabilizing impact that state budgeting practices have had on the work of the state Department of Transportation and NJ Transit.

ENGAGING THE PUBLIC

For years, state leaders have downplayed the severity of New Jersey's transportation funding crisis. They missed the opportunity to build public understanding and support for infrastructure investment and good transportation policy.

As the state's economy and the world of communications technology continue to evolve, years have gone by without NJDOT and NJ Transit launching a public discussion that would lead to a new vision for transportation investment and the state's roles. As a result, the public's constant complaints about traffic congestion, lost time, and gaps in mobility remain unanswered. The state agencies need to engage New Jersey residents and workers on these issues.

The state of Washington offers a good model. Its quarterly publication, the Gray Notebook,¹⁹ reports on transportation performance, including updates on the status of planned projects.

RECOMMENDATION

Create an online information tool to better inform New Jerseyans about transportation issues and priorities, and to help restore public confidence in how the state deploys capital resources.

Public involvement through discussion at traditional “town hall” sessions and in social media could launch more inclusive and interactive transportation policymaking. Results might include grassroots support for pedestrian and bicycle safety and for managing congestion through communications technology, such as more traffic lights on state and county roads that are timed based on traffic flow and more message signs for motorists.

EFFECTIVE LONG-RANGE PLANNING

Over the past decade, NJDOT and NJ Transit have been unable to prepare a long-range transportation plan that bears the governor’s endorsement. Three other organizations that do this kind of work as part of their federal mandates at an acceptable level of quality are the state’s Metropolitan Planning Organizations: North Jersey Transportation Planning Authority, Delaware Valley Regional Planning Commission, and South Jersey Transportation Planning Organization. In fact, NJDOT has assigned to these organizations the responsibility of updating the Strategic Highway Safety Plan.

RECOMMENDATION

Under the leadership of NJDOT, direct the staffs of NJ Transit, the North Jersey Transportation Planning Authority, Delaware Valley Regional Planning Commission, and South Jersey Transportation Planning Organization to jointly conduct long-range planning.

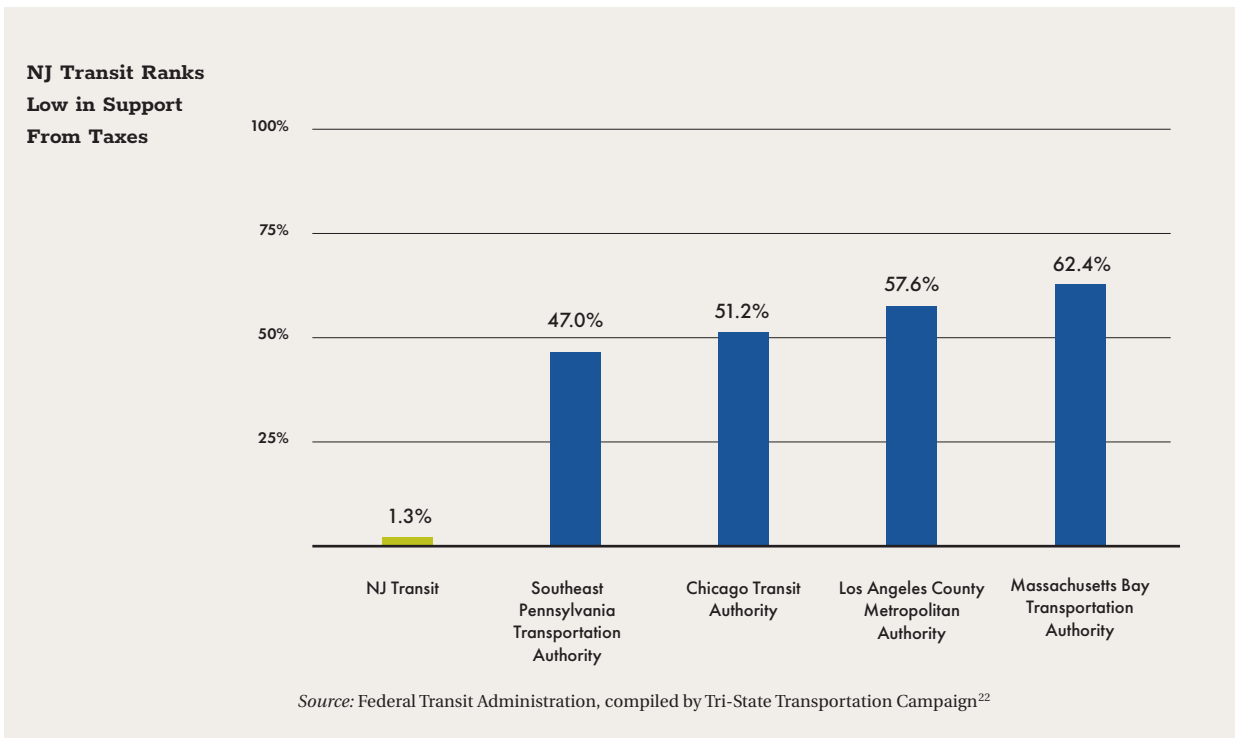
For this model to work, the Governor’s Office would have to be fully involved. A “vision” plan prepared in this integrated fashion would likely increase public participation and attract greater support than have previous plans.

NJ TRANSIT

The state budget is the main source for bridging the annual difference between transit operating expenses and revenues from such sources as fares and the sale of advertising space on trains and buses. This annual deficit is now at \$1.1 billion.

In the early 2000s, the General Fund of the New Jersey state budget contributed approximately \$350 million toward NJ Transit’s operating deficit. By the fiscal year that started July 1, 2015, that support was down by 90%, to \$33 million.²⁰

Public transit agencies in many other states can depend on annual revenues from the state budget. For example, dedicated taxes contribute between 47% and 62% of operating assistance for systems based in Philadelphia, Chicago, Los Angeles, and Boston.²¹ NJ Transit has no such cushion.



A major byproduct of state budgetary neglect has been heavy reliance on fare increases. A 2015 New Jersey Association of Rail Passengers study reported that NJ Transit riders paid higher fares for a 50-mile trip than passengers of comparable U.S. commuter rail agencies.²³ As of 2012, fares made up 52% of NJ Transit's revenues, compared with 34% to 38% in such comparable metropolitan areas as Chicago, Philadelphia, and Boston. NJ Transit has raised fares five times since 2000, including a record 22% hike in 2010.²⁴

Because of reluctance to raise taxes that would strengthen revenue flows to the state's General Fund (in fact, some state taxes were reduced to win legislative and gubernatorial support for raising the gas tax), competition for allocations has intensified. NJ Transit is a victim of that competition. The agency has persistently lacked resources, resulting in the loss of several key staff members to other regional transportation agencies after almost a decade of no pay increases and creating vacancies in important authorized safety-compliance positions.

One factor contributing to constant scarcity and instability is the longstanding practice of devoting a sizable amount of federal transit capital dollars, in the absence of state operating funds, to preventive maintenance. More than \$400 million annually is diverted in this way, a practice begun in the late 1990s. Restoring this money to its intended use would strengthen a NJ Transit capital budget that remains fragile and insufficient even after the 2016 Transportation Trust Fund re-authorization.



Allocating Turnpike revenues to NJ Transit regular operations both masks the budget gaps and diverts funds that could be used appropriately for NJ Transit capital improvements.

RECOMMENDATION

End reliance on federal capital-to-operating transfers, as has the Chicago Transit Authority and Southeastern Pennsylvania Transit Authority (SEPTA).²⁵

Beyond relying on capital money to pay for operating expenses, NJ Transit's budget suffers from instability caused by temporary fixes that paper over shortfalls.

Drivers might be surprised to find out that the tolls they pay on the New Jersey Turnpike have become a major component of the transit agency's annual operating budget. For three years, some \$295 million per year from the last Turnpike Authority toll increase, originally allocated to the Hudson River tunnel, was used to cover part of NJ Transit's operating budget deficit. This diversion occurred under a provision in the arrangement consolidating New Jersey's toll authorities that loosened restrictions on the use of Turnpike Authority revenues. In the state fiscal year that began July 1, 2017, the Turnpike Authority's contribution was \$204 million.²⁶ Allocating Turnpike revenues to NJ Transit regular operations both masks the budget gaps and diverts funds that could be used appropriately for NJ Transit capital improvements.

The state Clean Energy Fund is another temporary fix for these budget gaps. Intended to promote ways to reduce energy consumption, and derived from assessments on utility customers, the fund increasingly is being used for NJ Transit operations: \$82.1 million in the most recent two budgets and \$62 million two years before.²⁷ Energy-conservation advocates understandably contend that supporting NJ Transit's annual operations is not an appropriate use of utility-bill assessments.

RECOMMENDATION

Eliminate temporary, inappropriate funding sources for the NJ Transit operating budget and the uncertainty that threatens stability and efficiency. Evaluate options for new, stable revenue sources.

Strong consideration should be given to ending dependence on Turnpike Authority revenues to provide stability for NJ Transit's future operating budgets. Turnpike funds could appropriately be used to support NJ Transit capital improvements, but operating support must come from other sources.

Better options for the NJ Transit operating budget include (1) using motor vehicle license and registration fees, beyond sums needed for Motor Vehicle Commission improvements, to support NJ Transit, and (2) devoting to NJ Transit new taxes on real estate transactions or business payrolls, following the pattern of the New York Metropolitan Transit Authority.



Over the past three decades, reliance on funding operations and maintenance from the state's General Fund has turned out to be a bad deal for New Jerseyans who depend on a reliable transportation system.

NJ Transit is governed by a board of directors chaired by the state commissioner of transportation. The other six members are the state treasurer, a member selected by the governor from his or her administration, and four “public” members nominated by the governor and confirmed by the state Senate. The four public members, often business people or lawyers, do not represent any specified constituencies.

The board structure has not changed since it was established in 1979. Now is a good time to revisit that structure, with an eye toward governance that better represents the wide range of New Jerseyans who have interests in a smooth-running public transportation system. For example, people who ride the system could bring sensitivity to users' needs, business people could help guide the operation of a public enterprise, and elected officials who have served on transportation boards, such as the North Jersey Transportation Planning Authority, could offer knowledge of the economy's needs. Such criteria could inform the selection of future board members.

RECOMMENDATION

Change NJ Transit's governing structure to be accountable to the public and representative of everyone with a stake in a strong mass transit system.

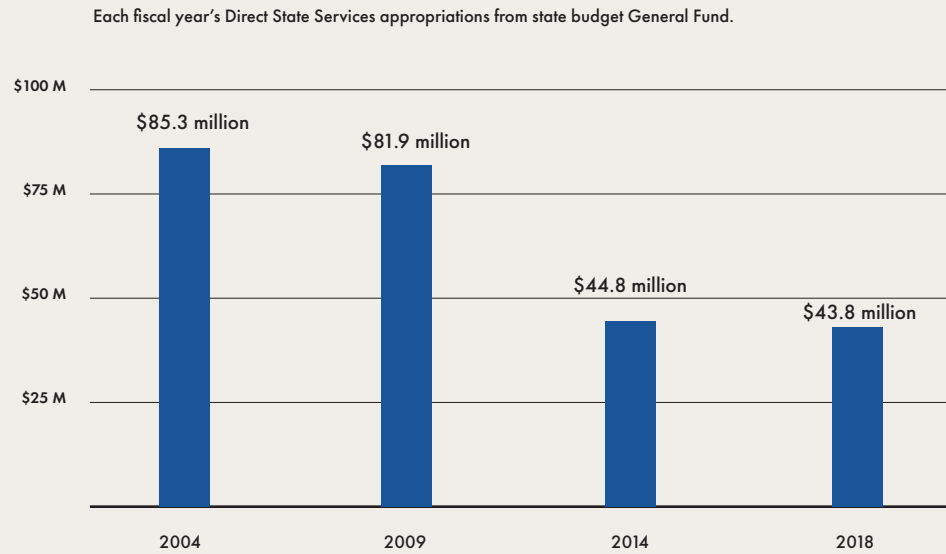
A good start would be creation of a panel to advise the governor on proposed legislative criteria for selection of NJ Transit public board members. The commissioner of transportation should continue to chair a revamped NJ Transit board, and the state treasurer should continue as a member.

N.J. DEPARTMENT OF TRANSPORTATION

In most states, transportation needs (or at least highway needs) are funded from dedicated trust funds, relying mainly on gasoline taxes. These funds support both the capital and operating costs of the agency. New Jersey chose a different model. In the 1970s, after decades of inadequate, unpredictable financial support for transportation, policymakers rejected the idea of a trust fund that would support both capital spending and operations, instead enacting a single purpose fund devoted solely to capital expenditures. Support for daily operations and maintenance needs, as opposed to major construction projects, was left to annual appropriations from the state budget, and this practice continues today.

Over the past three decades, reliance on funding operations and maintenance from the state's General Fund has turned out to be a bad deal for New Jerseyans who depend on a reliable transportation system. NJDOT's allotment from the state budget has been tightly squeezed—from \$85 million in the fiscal year that began July 1, 2003, to only \$43 million in the current fiscal year. This squeeze is even more remarkable when inflation on the purchasing power of the 2003 appropriation is taken into account.²⁸

State Support for NJDOT Drops Precipitously



Source: State of New Jersey Budget Documents²⁹

Gubernatorial administrations, legislators, and policymakers at NJDOT often appear more concerned with the “optics” of expenditures than with efficiency (for example, by publicizing staff reductions as cost savings), leading to chronic staff shortages in key areas, restricting workers’ professional development opportunities, eliminating office administration tools, and other negative consequences.

The continuing squeeze on the NJDOT operating budget can be seen in numerous vacant positions and the resultant designation of “acting managers.” As state appropriations have declined, management salary increases have been rare, leading to a hollowing out of the management structure. Few employees seek management positions, because classified civil service positions hold the promise of salary increases over time and management positions do not. Inadequate numbers of support staff such as accountants lead to project delays and cost increases. Reductions in engineering staff increase reliance on private engineering consultants, which makes road construction more expensive.

A decline in operations and maintenance quality that would correspond to the sharp decline in appropriations is avoided only by shortsighted budget maneuvers, most commonly “capital-to-operating transfers” that divert money from major projects to fund day-to-day expenses. The capital budget, intended for construction projects and major improvements to the transportation system, now includes such items as salaries, preventive maintenance, and purchasing equipment such as roadway lighting. In the past, these routine expenditures came from state General Fund appropriations.

Shifting operating costs to financing through bonded indebtedness is a particularly costly practice. Due to interest incurred over the life of the Transportation Trust Fund’s

long-duration bonds, New Jersey ends up paying nearly double the original cost. More disturbing is the fact that the same activities such as resurfacing or guard rail replacement will be repeated on the same piece of roadway three or four more times before the original bond is retired.

These state budgeting practices contribute to a decline in the overall transportation network by diverting millions of dollars in capital funds for operating purposes and deferring both routine maintenance and intermediate roadway and bridge rehabilitation projects.

While seeking better ways for public investment to meet the state's transportation needs, policymakers have the opportunity to consolidate state transportation entities and take advantage of these entities' organizational, policy, and financial strengths to address system weaknesses.

RECOMMENDATION

Bring the New Jersey Turnpike Authority and South Jersey Transportation Authority into NJDOT. The commissioner of transportation would chair this new super-authority.

Except for the 2003 merger of the New Jersey Turnpike Authority and the New Jersey Highway Authority (which oversaw the Garden State Parkway), the structure of New Jersey's transportation agencies has been largely unchanged for more than three decades.

The skill shortages and resource scarcity that have weakened NJDOT might be best addressed by such a merger. The merged professional and administrative workforce would be subject to the Turnpike Authority's salary and employment regulations, which are more comparable to the private sector. Recruitment efforts could be strengthened through better salaries and broader career opportunities. Efficiency could be enhanced by the flexibility to assign workers where they are most needed, while reducing expenses for administrative functions and duplicative space. New funding streams could be developed through future toll increases.

Embracing New Technology

Two prominent areas of technological advancement should be explored in depth as potential ways to improve transportation in New Jersey: integrating "ride hail" companies into gaps in the state's service infrastructure, and introducing automated vehicle technology.

“RIDE HAIL” SERVICES

Many New Jerseyans have cars they use mainly to go to and from the stations where they catch trains to go to work. Taking a feeder bus from home to the station, or from the station to the job, is not a feasible alternative because of scarcity of service. Substituting ride hail services for these “first mile” and “last mile” parts of the commute could save commuters the cost of owning and maintaining an extra automobile, protect land from unproductive use as parking areas, and increase access to office sites located beyond walking distance from the station. At the request of the ride hail company Uber, the Alan M. Voorhees Transportation Center at Rutgers University is exploring the economic feasibility of such technology.

Specialized travel for the elderly and for people with disabilities has skyrocketed in cost in many jurisdictions,³⁰ making this another area with potential for ride hailing. Annual costs for NJ Transit’s Access Link service nearly quadrupled from 2004 to 2014, and services are in danger of shrinking because their dedicated funding source—casino tax revenue—is shrinking.

A third costly area of transit operations, lightly used bus routes in low-density suburbs, also deserves scrutiny. Experiments in replacing some bus routes with ride hail services are occurring in some small jurisdictions in the U.S.³¹

RECOMMENDATION

Examine the possible use of ride hail contractors for providing “first mile” and “last mile” specialized transportation services and replacing low-density and special-market bus service.

DRIVERLESS CAR POTENTIAL

Advent of the self-driving car may turn out to be digital technology’s biggest transformative influence. Self-driving cars could have vast implications on the quality of our everyday lives, the shape and texture of suburbs and cities, and the depth and scope of public and private infrastructure investments for decades to come.

In 2016, the U.S. Department of Transportation issued guidance on the relationship between the development and introduction of self-driving cars and government regulation, which emphasized that these groundbreaking vehicles are on the horizon. A leading reason that past leadership of USDOT was receptive to this new technology was the potential for each car to instantaneously transform its operator into an extremely safe driver.

The guidance lists a 15-point safety standard for design and development of autonomous driverless cars. The guidance also recommends that states develop uniform policies applying to driverless cars. A new Governors’ Highway Safety Report delves into the issues that states must face as this technology is introduced onto their roadways.³²



The evolution of the self-driving car provides another opportunity for New Jersey to become associated with a lifesaving concept.

The low concrete dividers that are ubiquitous on the nation's roadways are known to transportation experts as "Jersey barriers" because they were developed here. The evolution of the self-driving car provides another opportunity for New Jersey to become associated with a lifesaving concept.

RECOMMENDATION

Pursue ways New Jersey can lead development of self-driving car technology.

The state's superior higher educational institutions and its quality labor force make this a good place to invent, develop, test, and roll out this technology. For example, Princeton professor Alain Kornhauser, editor of the "SmartDriving-Cars" newsletter, is at the forefront of university involvement and advocacy on self-driving car technology. And New Jersey is home to the North American headquarters of three of the leading automakers invested in this technology: BMW, Volvo, and Subaru. These companies and their suppliers should feel welcome to establish research and development efforts in a crowded state with a four-season climate that would be an excellent test site for the industry.

Some complementary initiatives could be automating the exclusive bus lane to the Lincoln Tunnel to increase its capacity (as recommended in the recent Port Authority Commuter Capacity study report) and making the state's roadways, especially the New Jersey Turnpike and Garden State Parkway, friendly to self-driving cars and trucks.

Conclusion

New Jersey occupies the fifth smallest land area of any state and it is the most densely populated. Put those two statistics together, and the importance of being able to move with ease becomes more than a luxury. Getting from place to place as rapidly, safely, and affordably as possible is essential to New Jersey's economy and its residents' well-being.

Clearly, *not* being able to move people and goods efficiently poses a threat to the state's prosperity and quality of life. And, yet, here we are.

The leaders chosen by our state have the responsibility to restore New Jersey's willingness to make the public investments necessary for a top-quality transportation system and to engage the public in setting priorities and determining how to pay for them.

Endnotes

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Appendix

Other Important Pending Transportation Projects

Several strategic public transit improvements have queued up in recent years due to the scarcity of money. Completing these projects would greatly benefit New Jersey and its residents.

NJ TRANSIT HUDSON BERGEN LIGHT RAIL (HBLR)—NORTHERN BRANCH EXTENSION

The HBLR Northern Branch Extension would bring light rail to Bergen County, adding 10 miles to a much-used line that ends at a station in the Hudson County township of North Bergen. The extension, estimated to cost \$1.2 billion and take four years to build, would run to Englewood Hospital.

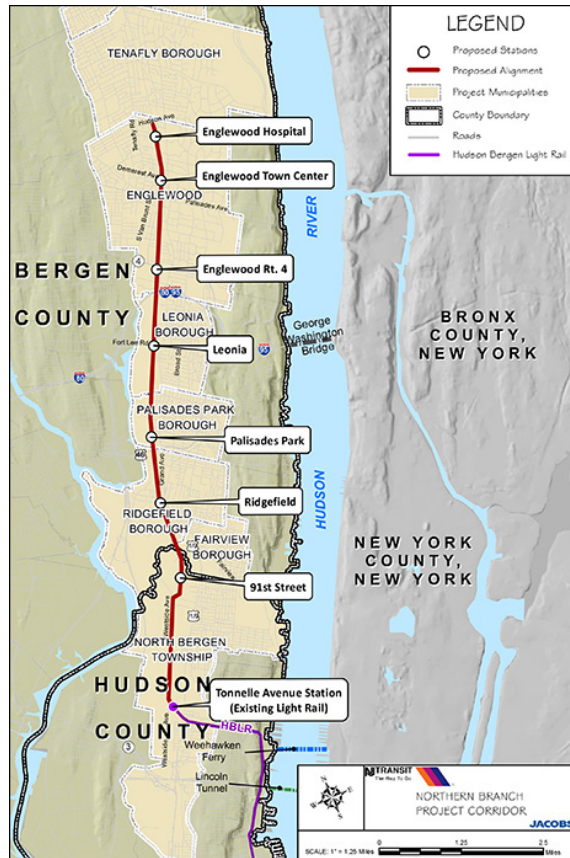
Adding high-quality light rail service between these points would improve commuting options in densely populated, bus- and car-dependent eastern Bergen County. Destinations would include Hudson River waterfront points in Jersey City and Hoboken, Midtown and Lower Manhattan connections via Port Imperial ferries, PATH connections, and Hudson and Bergen County employment centers. Estimated increase in HBLR ridership would be 24,000 trips per day.

The construction schedule depends on completing environmental impact studies and cleanup, plus the availability of funding. Approval process for the Supplemental Draft Environmental Impact Statement is underway, with construction to follow after approval and engineering work.

New Jersey has been successful in acquiring federal funding for HBLR, and the project has been expected to score well in the competition for federal “New Starts” funding. New Jersey appropriated \$28.5 million as a down payment, assuming 50% of the project would eventually be federally funded. But the proposed federal budget winds down New Starts. Only projects with a Full Funding Grant Agreement would be eligible, and the planned light rail extension lacks one.

While House and Senate Appropriations transportation subcommittees reduced the amounts available for New Starts, they made clear that the Federal Transit Administration’s structured procedures for evaluating, rating, and approval should continue indefinitely. Future levels of federal funding will remain a crucial subject.

NJ Transit still must negotiate a joint operations agreement with Conrail for the project to go forward, because Conrail operates some freight service on the Northern Branch. Since federal safety regulations prohibit light rail and freight from operating simultaneously over the same track, the parties will need to agree on non-overlapping schedules.



NJ TRANSIT HUDSON BERGEN LIGHT RAIL—ROUTE 440 EXTENSION

Extending the HBLR West Side Avenue branch two-thirds of a mile to a 100-acre brown-fields site on the Newark Bay waterfront in Jersey City is critical to the Bayfront redevelopment plan. Light rail is expected to be as effective in stimulating redevelopment on the Newark Bayfront as it was on the Hudson River Waterfront in Jersey City. There are plans for up to 8,000 residential units and 1.8 million square feet of office and retail space. The extension would start from the West Side Avenue Park-Ride Station in Jersey City and follow the old rail alignment to the Bayfront. It would span Route 440, increasing pedestrian safety. Improved transportation access to downtown Jersey City, PATH stations, and Hoboken Terminal would generate a projected 8,000 trips.

Construction is expected to cost \$173 million and take about two years. The schedule depends on completion of environmental cleanup (expected in 2017) and an indication that redevelopment activity is ready to proceed.

Capital costs are modest compared with overall redevelopment benefits. It is unclear how the project will fare in federal competition for New Starts funds. Some local matching funds will be needed, and are expected to come from the state's revived

Transportation Trust Fund. The project has strong support from elected officials in Hudson County, and \$4 million has been appropriated from the TTF to advance it.

As with the Northern Branch extension, the Trump administration's position on transportation funding complicates prospects. The project's moderate cost provides a potential advantage over more expensive projects elsewhere. The uncertain outcome of congressional funding debate could spur local officials and developers to revive the concept of using private operators or a public-private partnership to finance construction.



GLASSBORO—CAMDEN LIGHT RAIL

The proposed 18-mile light rail line would be built on an active Conrail freight alignment between downtown Camden and Glassboro. The estimated cost is \$1.5 billion, plus however much is needed to acquire Conrail trackage or, if Conrail will not sell, to obtain an easement.

The project is in the Draft Environmental Impact Statement phase. Construction, expected to take about five years, could start in 2018. But the federal funding outlook is unclear. The relatively high cost and modest forecast of 18,000 trips per day mean the project will not rank well in national competition for money. The alternative would be full funding from the state Transportation Trust Fund, but there are other competing claims on that money. Other external sources of funding would have to be investigated to provide momentum.



LEHIGH VALLEY THIRD TRACK

Adding 5.7 miles of separate track to a key two-track rail segment owned by Conrail would aid passengers on NJ Transit’s Raritan Valley Line. The Raritan Valley Line is one of NJ Transit’s most dynamic, with constantly increasing ridership, proliferation of transit-oriented development, and aspirations for expanded one-seat service directly into New York Penn Station.

Two heavily used stations are located on this segment, at Roselle Park and Union Township (Kean University). Growth has been constrained, however, by a trackage-rights agreement that allows NJ Transit to operate a complement of peak-period trains but limits off-peak operations over the two tracks to one train in each direction per hour.

The third track would run from the Aldene connection in Cranford to Control Point NK near Weequahic Park in Newark. A third track would enable NJ Transit to add express peak and off-peak passenger rail service. And Conrail’s co-owners, Norfolk Southern and CSX, could add freight trains. The estimated cost is \$250 million.

Conrail has cooperated in engineering, but offered right of way only as an in-kind financial contribution to the project. NJ Transit has sought unsuccessfully to win competitive federal funding for the project. Eligibility criteria have favored this type of project, but the Trump administration is looking to eliminate this funding category.

HUNTER FLYOVER

A new elevated structure alongside Route 21 in Newark would rise over the Northeast Corridor tracks and connect incoming Raritan Valley Line trains to Newark Penn Station tracks without interference from other NJ Transit and Amtrak trains.

Currently, 27 weekday and 18 weekend Raritan Valley Line passenger trains enter the Northeast Corridor west of Newark Penn Station through interlocking “at-grade” rails. This routing presents many conflicts with other trains and results in delays. NJ Transit, with Amtrak, has engineered the “flyover” solution.

The flyover would give Amtrak and NJ Transit more flexibility in scheduling trains in and out of Newark Penn Station at an estimated cost of \$200 million.

NJ Transit may soon initiate an environmental study on this project.

MID-LINE LOOP AND NORTH BRUNSWICK STATION

The Mid-Line Loop is an overhead rail connector that would enable trains that now originate at County Yard, New Brunswick, for trips to New York to reach inbound New York City tracks without crossing the Northeast Corridor. This connector would eliminate at-grade conflicts between local trains and movements by high-speed and express trains on the Northeast Corridor.

The Mid-Line Loop also would provide access to new tracks that would serve a new North Brunswick station that would include an overhead pedestrian passageway and 1,300 parking spaces. This station would anchor more than 1 million square feet of major mixed-use development. The estimated cost of the loop is \$300 million.

The project was halted after funds ran out in 2015.