



Analysis of South Jersey Rail Expansion Alternatives

New Jersey State Planning Commission
Office of Smart Growth
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Introduction

This analysis is an evaluation of potential commuter rail service expansion in southern New Jersey. The State Planning Act charges the State Planning Commission (SPC) with a number of tasks that include the evaluation of major capital investments in our state. This role is particularly important when considering expenditures that have a direct significant impact on land use. The connection between transportation infrastructure and land use is a major focus of the existing State Development and Redevelopment Plan (State Plan) which will be further highlighted in the 2009 version of the plan.

The SPC has requested the Office of Smart Growth (OSG) perform an evaluation of potential alternative routes for the proposed extension of rail service in Camden and Gloucester Counties. This evaluation measures the various proposals for service extension against the policies and goals of the State Plan. Major capital investments should be consistent with the State Plan and, wherever possible, foster achieving multiple objectives. Coordinating the planning of a transportation service with both existing and anticipated growth patterns and using investment in transportation infrastructure to influence future growth is essential for achieving the highest value for the investment made in that infrastructure.

The primary intent of the State Plan is to chart a sustainable and prosperous future for the State of New Jersey. Sprawling development and disinvestment in the state's historic cities and towns have resulted in environmental, economic and social challenges that are difficult and expensive to overcome. Altering growth patterns to mitigate these effects and to reverse the trends of sprawl development relies heavily on providing appropriate transportation infrastructure to support and encourage desired outcomes. Directing investment in transportation services that will allow for transit-oriented development, facilitate re-investment in existing population and commercial centers, provide for alternatives to automobile dependent land uses and allow for multiple travel choices

between home, work, commerce and entertainment destinations will maximize the value realized from those services and help to attain the goals of the State Plan.

The Project

The Delaware River Port Authority (DRPA) currently operates a very successful commuter rail service in Camden County known as PATCO. The rail line runs between Lindenwold, NJ and center-city Philadelphia. Trains operate on a grade-separated right-of-way through seven Camden County communities and cross the Delaware River on the Benjamin Franklin Bridge. Service runs underground in Philadelphia, before terminating at a station located at 16th & Locust Streets. Existing stations provide access to this service at a mix of station locations that include stops in urban centers, within existing traditional downtowns and Park-and-Ride facilities. PATCO service connects with a light-rail line operated by NJ Transit between Camden and Trenton (the RiverLine) via a transfer at the Walter Rand Transportation Center in Camden. A connection with NJ Transit's Atlantic City to Philadelphia commuter rail service is available at the Lindenwold station.

Increased development and a corresponding increase in population, jobs and traffic in Camden and Gloucester Counties have created a need for additional mass transportation alternatives in this portion of the state. The DRPA has proposed meeting a portion of this need through an expansion of the existing PATCO service. This expansion would be accomplished by adding a branch from the existing line. An extensive study of the area resulted in several proposals for expansion. These have been narrowed to four potential alternatives that have been designated as NJ-1, NJ-2, NJ-2a and NJ-3. Following a series public hearings and the receipt of input on the proposed service, an additional alternative designated as NJ-4 was added.

The Alternatives (From the PATCO Expansion Report)

Alternative NJ-1

From the southern terminus, Alternative NJ-1 would originate as a PATCO type rapid transit service in Williamstown at Route 536 and travel north utilizing the median of the Atlantic City Expressway (ACE). At the point where the ACE merges into Route 42, the service would continue north in the median until reaching the Route 42/I-295/I-76 interchange. Once the alignment reaches the interchange the service will run along the south side of Route 42, I-76 and I-676 until Camden. In Camden the new service would merge with the existing PATCO Speedline for service into Camden and Center City Philadelphia. The alignment would be entirely grade separated along major roadways with access primarily at park-and-ride lots.

Communities served would include: Williamstown, Winslow, Turnersville, Blackwood, Gloucester Township, Deptford, Runnemede, Bellmawr, Mount Ephraim, Haddon Township, Gloucester City, Camden and Center City Philadelphia.

Alternative NJ-2

From the southern terminus, Alternative NJ-2 would originate as a PATCO type rapid transit service in Glassboro at Exit 50 along Route 55 and travel north utilizing the median of the roadway. At the point where Route 55 merges into Route 42 the alignment would continue in the median of Route 42 until reaching the Route 42/I-295/I-76 interchange. Once the alignment reaches the interchange the service will run along the south side of Route 42, I-76 and I-676 until Camden. In Camden the new service would merge with the existing PATCO Speedline for service into Camden and Center City Philadelphia. The alignment would be entirely grade separated along major roadways with access primarily at park-and-ride lots.

Communities served would include: Glassboro, Harrison Township, Pitman, Mantua, Turners-

ville, Deptford, Runnemede, Bellmawr, Mount Ephraim, Haddon Township, Gloucester City, Camden and Center City Philadelphia.

A possible Phase II extension would be a separate, commuter-oriented service from Millville to Glassboro. Passengers would transfer in Glassboro for travel to Center City Philadelphia. The Phase II service would operate primarily in the median of Route 55, until the alignment reaches just south of the Cumberland Mall. After reaching the Cumberland Mall the alignment would shift onto the existing Conrail railroad right-of-way. Initially Phase II may be operated with a diesel rail vehicle with future plans for electrification to handle a PATCO type rapid transit service with through trains to Center City Philadelphia.

Communities served would include: Millville, Vineland, Pittsgrove, Franklin Township, Clayton, Elk Township and Glassboro.

Alternative NJ-2a

From the southern terminus, Alternative NJ-2a would originate as a PATCO type rapid transit service in Glassboro along the existing Conrail right-of-way and travel north until the right-of-way crosses Route 55 in Mantua. At the point where the right-of-way crosses Route 55, the alignment would shift into the median of Route 55. The alignment would continue north until Route 55 merges into Route 42. At the point where Route 55 merges into Route 42 the alignment would continue in the median of Route 42 until reaching the Route 42/I-295/I-76 interchange. Once the alignment reaches the interchange the service will run along the south side of Route 42, I-76 and I-676 until Camden. In Camden the new service would merge with the existing PATCO Speedline for service into Camden and Center City Philadelphia. The alignment would be entirely grade separated along major roadways with access primarily at park-and-ride lots.

Communities served would include: Glassboro, Pitman, Mantua, Turnersville, Deptford, Runnemede, Bellmawr, Mount Ephraim, Had-

don Township, Gloucester City, Camden and Center City Philadelphia.

A possible Phase II extension would be a separate, commuter-oriented, limited service from Millville to Glassboro.

Alternative NJ-3

From the southern terminus, Alternative NJ-3 would originate as a PATCO type rapid transit service in Glassboro along the existing Conrail right-of-way and travel north to Camden, where it would merge with the existing PATCO Speedline for service to Center City Philadelphia. The alignment could be fully grade-separated similar to the existing PATCO Speedline or partially grade-separated at select locations. Partial grade separation would require a modified PATCO vehicle capable of operating from an overhead power source rather than a third rail. Stations within communities would provide access on foot, bicycle and kiss-and-ride. Park-and-ride stations outside of these communities would provide automobile access

Communities served would include: Glassboro, Pitman, Mantua, Wenonah, Woodbury, Deptford, West Deptford, Westville, Bellmawr, Brooklawn, Gloucester City, Camden, and Center City Philadelphia.

A possible Phase II extension would be a separate, commuter-oriented, limited service from Millville to Glassboro.

Alternative NJ-4

From the southern terminus, Alternative NJ-4 would originate as a diesel light rail service in Glassboro along the existing Conrail right-of-way and would travel north to Camden. In Camden passengers would transfer at the Walter Rand Transportation Center to the existing PATCO Speedline for service to Center City Philadelphia. The alignment could be fully grade-separated or partially grade-separated at select locations. Stations within communities would provide access on foot, bicycle and kiss-and-ride. Park-and-ride stations outside

of these communities would provide automobile access

Communities served would include: Glassboro, Pitman, Mantua, Wenonah, Woodbury, Deptford, West Deptford, Westville, Bellmawr, Brooklawn, Gloucester City, Camden, and Center City Philadelphia.

A possible Phase II extension would be a separate, commuter-oriented, limited service from Millville to Glassboro.

The State Plan

The State Development and Redevelopment Plan currently contains eight goals and nineteen major policies. The 2009 Update of the Plan will include a ninth goal concerning reduction of Greenhouse Gas emissions, energy efficiency and response to global climate change. There will be one or possibly two additional policies added that relate to this new goal. The goals of the SDRP are a direct response to the mandates put forth in the State Planning Act. Each goal embodies sound planning principles and the policies attached to each goal provide guidance through strategies. The goals, policies, and strategies in the Plan provide a set of metrics that we can use to evaluate development and redevelopment projects within the State. The goals of the State Plan are as follows:

- Revitalize the State's Cities & Towns
- Conserve the State's Natural Resources & Systems
- Promote Beneficial Economic Growth, Development, & Renewal for All Residents of NJ
- Protect the Environment, Prevent & Clean-up Pollution
- Provide Adequate Public Facilities and Services at a Reasonable Cost
- Provide Adequate Housing at Reasonable Cost
- Preserve and Enhance the Historic Cultural and Scenic, Open Space and Recreational Values
- Ensure Sound & Integrated Planning &

Implementation Statewide

- Reduce Greenhouse Gas Emissions and Dependence on Fossil Fuels (Proposed)

Analysis

Funding the expansion of our transportation network simply makes sense – improving connections, increasing connectivity and reducing congestion all help to improve the quality of life for our residents. The construction of a new rail line will be expensive and our state is in a financial crisis, therefore, the choices made in funding capital improvement projects must be cautious and informed. The benefits of an expansion project must be considered in conjunction with any negative effects of the project as well as the financial costs of the project – both initial and ongoing. In addition to obvious improvements, such as a reduction in vehicle trips, the benefits also include harder to measure effects such as encouraging development and redevelopment in more appropriate areas.

Any form of rail-based expansion will benefit the residents and economy of South Jersey. Despite the cost of the RiverLine, the service has contributed greatly to the economies of the river towns of Burlington County, Camden City and Trenton. To ensure the region maximizes the benefits of a new rail line, the proposed alternatives should be scrutinized to ensure that any negative externalities are identified and addressed accordingly. The chosen alternative must serve the transportation needs of the area, but more importantly it must spur development and reinvestment in our communities.

Revitalize the State's Cities and Towns

Of the three proposed alternatives, Alternatives #3 and #4 (the existing north-south rail corridor; the former West Jersey Railroad) stands out as most closely aligning with State Plan Principles. Where Alternative #1 (within the right-of-way of Route 42) and Alternative #2 (within the right-of-way of Route 55) serve

highway corridors and would predominantly feature Park-and-Ride oriented stations, Alternatives #3 and #4 would serve many of Gloucester County's traditional towns, including Woodbury, Wenonah, Pitman, and Glassboro. The Center for Transit-Oriented Development at Reconnecting America refers to mixed-use corridors as "the 'natural habitat' of transit."¹ The combination of amenable land use patterns, density, and transit benefits the place as well as the service. Any rail service provided by DRPA and PATCO would work to alleviate the congestion in the region and provide quick, reliable access to Camden and Philadelphia. There is a distinct difference, however between a rail service that serves towns, employment centers and a large city such as Philadelphia, and a line that serves one purpose: shuttling commuters in and out of a terminal station. A line that serves small communities while also providing park-and-ride services at select stations would provide greater benefits to the citizens of the region and to the service provider.

By extending service to the existing towns, a new rail system would provide economic incentives to the communities it will serve. Extending service to existing town centers will generate increased interest in towns served by connecting rail lines. For example, healthcare professionals and patients living along the current PATCO alignment will now have access to Underwood Memorial as well as Cooper University Hospital. The auto-oriented stations of Alternatives #1 and #2 would not provide such a service. There would be no reason to take this



Conventional park and ride is incompatible with TOD.

new service into the New Jersey suburbs unless it was a return trip. Alternatives #1 and #2 would also act to attract office and retail uses near the stations, however the resulting development would likely produce a land use pattern contrary to transit-oriented design principles. The new office and retail space built on currently vacant land along these alternatives would come at the expense of office and retail markets in nearby town centers.

The strategies and policies for achieving this goal of the State Plan speak directly to the differences between the two alignment types. A rail line that serves multiple residential and employment centers will work to “reduce the barriers which limit mobility and access of city residents, particularly the poor and minorities, to jobs, housing, services and open space within the region.”² The creation of a rail service that would require access by automobile or feeder bus service would reduce the accessibility of such a service. Rail service that serves existing communities with stations that are integrated into the urban fabric would provide a greater quality of life and level of accessibility to the poor, handicapped, and to all others without access to an automobile.

Conserve the State's Natural Resources and Systems

Alternatives #1 and #2 would encourage growth in areas that should be preserved. New Jersey is the most densely populated state within the United States. Approximately one-fourth of the State is in special administrative regions that regulate growth and severely limit development. Much of the Pinelands and Highlands will likely remain undeveloped. Despite this seeming large reservation of land, we must still strive to preserve open space and environmentally-sensitive features in the rest of the state. The second goal of the State Plan puts forth a simple strategy for environmental stewardship:

Conserve the state's natural resources and systems as capital assets of the public by promoting ecologically sound development and rede-

velopment in the Metropolitan and Suburban Planning Areas, accommodating environmentally designed development and redevelopment in Centers in the Fringe, Rural and Environmentally Sensitive Planning Areas, and by restoring the integrity of natural systems in areas where they have been degraded or damaged. Plan, design, invest in and manage the development and redevelopment of Centers and the use of land, water, soil, plant and animal resources to maintain biodiversity and the viability of ecological systems. Maximize the ability of natural systems to control runoff and flooding, and to improve air and water quality and supply.³

These strategies speak to several key issues in the rail expansion project study area. A transportation investment would benefit conservation efforts if it works to promote ecologically sound development, supports the development and redevelopment of Centers, and leverages natural systems to control environmental degradation.

“Ecologically sound development” must take into consideration environmentally sensitive areas that would be impacted by any new development. Non-point pollution sources must also be considered, as preserved land crisscrossed by congested roadways would achieve one conservation goal at the detriment of another. It must also consider the needs of the humans interacting with the development and level of diversity within the project. Ecological Integrity is defined in the SDRP as “the maintenance of the natural function and interactions of a community of plant and animal species with its physical environment.”⁴ Ecology is not limited to the “natural” realm, as there are indicators and metrics to determine the level of diversity and interaction within the human environment. “Ecologically sound” lies at the balance of preserving (or improving) the quality of the natural environment while simultaneously creating or restoring a human environment that is composed from a highly diverse palette of people and uses.

Many of the proposed stations along Alternatives #1 and #2 are located in areas with agri-

cultural significance, unpreserved open space, wetlands, and habitat. As we know, these stations will attract development. There are currently no local level land use protections that will ensure that ecologically sound development will occur near these stations. We also have no assurance that the development will be guided by sound planning.

Focusing development in Centers is a key recommendation often voiced in the State Plan. By concentrating development, the ills associated with urban sprawl are mitigated. Center-based development brings with it a mix of uses and a variety of housing types, an increase in transportation options and a reduction in vehicle miles travelled, and creates a pattern of development that allows for culturally significant and adored towns to develop while conserving the environs for their natural significance. We have seen that highway extensions have allowed sprawl to occur in areas without a nearby urban center. Rail extensions will allow for sprawl to occur, despite the fact that the service does increase transportation options. A rail line through land with typical suburban or sparser densities will result in a landscape of parking lots, residential tract development and big box retail, all linked via automobile. Service on Alternatives #3 or #4 would improve the ability of the towns it serves to compete with this suburban pattern of development. Planners can only regulate to a point; their authority to plan regionally in New Jersey is limited outside of special resource areas like the Pinelands. By encouraging transit-oriented development in existing communities using free market principles coupled with sound planning, we can ensure that the development pattern of the next 50 years is one of proper design and equitable growth.

The final strategy to consider deals with effectively using our natural and human resources to maintain biodiversity, mitigate flooding, and reduce air pollution. One simple method to handle this task is to preserve and manage the remaining viable habitat. Reserving these lands for far-off future development or preserving them outright will ensure that local flora and fauna survive and prosper; areas of

groundwater recharge and land for stormwater management, and plant life that can remove greenhouse gasses, particulates, and other pollutants from the air.

Alternatives #1 and #2 are in the medians of highways that cut through some of the last remaining tracts of open space as they make their respective ways into the Pinelands portions of Atlantic and Cumberland Counties. Even through Camden and Gloucester Counties, there are proposed stations on all three alternatives near wetlands and stream corridors, areas of forest core, and habitat identified in DEP's Landscape Project. Any development to occur near one of the new stations must make every effort to mitigate the impact it will have on the surrounding environs.

Promote Beneficial Economic Growth, Development and Redevelopment and Renewal for All Residents of New Jersey

When evaluating the alternatives to determine the effect they will have on planning efforts, we again look to the type of service and areas served. From an economic growth point-of-view, Alternatives #3 and #4 will work to generate development and redevelopment and spur renewal in the towns it would serve. Alternatives #1 and #2 would not "encourage economic growth in locations and ways that are both fiscally and environmentally sound."⁵ Alternatives #3 and #4 would serve the existing concentrations of population and major employment centers in the region. The creation of a rail service along the existing rail line would provide multiple benefits to the existing towns along its course and is a step towards implementing the strategies put forth in the SDRP.

It is certain, as it is with every major transportation project, that once the new service is complete, the surrounding areas will experience an increased demand for residential and commercial space near the new service. If this increased demand somewhere other than our existing communities, those communities will suffer, as the demand elsewhere will likely come at the expense of demand or inter-

est in those existing communities. We must plan effectively; we must work to “retain and expand business” throughout the State, but at the same time we must ensure that the growth comes in the form of “new, environmentally sustainable businesses in Centers and areas with infrastructure.”⁶ On a micro level, the areas that will experience the most benefit from transit are those that are currently arranged in a land use pattern that is supportive of a transit service. Regionally, a rail line through areas ready to tap into that transportation resource will provide the greatest utility to the region – there is no need to modify the landscape to fit the new transit service and the benefits of a service will be readily apparent. A transit line that would serve low-density areas of the State would require a massive additional investment of road improvements, infrastructure extensions, planning, and development just to begin to capture the true benefits of a rail service.



New and planned development near transit will benefit from the service.

The South Jersey suburbs do not share the same degree of central-workplace orientation as do their Northern counterparts. South Jersey counties have become destination employment centers, a result of which is that the number of commuters to Philadelphia has decreased.⁷ Projections from DVRPC show that in 2035, the number of people employed in Philadelphia will decrease slightly, while the four New Jersey counties under their purview

are to experience 17% job growth (128,479 new jobs).⁸ All of the alternatives all lack the same level of density that the Northern New Jersey rail system serves.

In 2007, almost sixty percent of all trips on transit were for commuting purposes.⁹ A transportation investment in South Jersey cannot serve a single destination; it must provide for the demands of intra- as well as inter-state commuting. To be successful, a new transit system must serve areas of concentrated employment and high residential density.

Protect the Environment, Prevent and Clean Up Pollution

Of the proposed alignments, Alternatives #3 and #4 have the most brownfield sites in close proximity and will cause the least amount of disturbance to the environment. Rail service on the existing rail line would encourage remediation and redevelopment of numerous brownfield sites. There are 19 sites listed on NJ SiteMart in Gloucester City, where the three alignments diverge. There are approximately 65 within a half-mile radius from the proposed stops along the existing rail corridor, while on one-tenth that amount near the stations proposed for Alternatives #1 and #2. Providing a service to Gloucester County on the existing railroad would benefit existing residential and employment centers by providing incentive to remediate and develop the contaminated lands within these towns.

Many of the strategies for achieving the fourth goal of the State Plan overlap with the second goal, which deals primarily with conservation. This goal differs from the second by encouraging planners, elected officials and developers to take an active role in the cleanup of polluted sites. Many, if not all, of these sites would be considered brownfields. Incentives, direct or indirect, must be in place to encourage cleanup of these sites. The Brownfields Redevelopment Task Force recommends and the Brownfields Interagency Team implements policies and strategies to encourage the private sector and local governments to invest in remediation and

redevelopment of a brownfields site. The redevelopment of brownfield sites is a key element of Smart Growth planning principles. Lands in prime locations that are currently unsuitable for development due to actual or perceived contamination should be cleaned and reintegrated into the urban fabric. Far too often, development occurs on the suburban fringe, as the cost of development is perceived to be lower than the cost of remediating a contaminated site. This pattern of development is not sustainable. Infrastructure service extensions through the existing towns would provide additional incentives to those looking to redevelop a brownfield. Close proximity to mass transit could justify higher densities and rents.

The fourth goal of the SDRP also makes mention of tree maintenance and preservation. The forested lands around the proposed stations on Alternatives #1 and #2 would need to be cleared for the stations and adjacent development. This would have a considerable impact on wildlife habitat and air quality. The increase in property values that would come with a rail service through existing communities could allow for a modest increase in taxes to support an urban tree program or the acquisition of open space.

Provide Adequate Public Facilities and Services at a Reasonable Cost

The cost of constructing and operating a rail service is high. The differences in the capital and operating costs outlined for each of the alternatives is minimal, while Alternative #3 has a higher projected ridership and would be accessible to many more residents and destinations than Alternatives #1 and #2.¹⁰ The projected ridership numbers from the 2005 report show that Alternative #3 would serve roughly 13,000 more riders than a service on Alternative #2. Coupled with the lower cost per-mile, Alternative #3 would provide the greatest return on investment. Presumably, a light-rail service (Alternative #4) would be a less costly alternative to PATCO-style heavy rail, but would come at the cost of compatibility with the current PATCO system.

The additional economic revitalization benefits generated by the rail service should also be considered when weighing the costs of this investment. Furthermore, future development trends point to much greater residential and employment growth in Gloucester County than in Philadelphia.¹¹ The preferred alternative should be chosen based on the greatest population to be served in the future at the lowest cost.

Provide Adequate Housing at a Reasonable Cost

While a new transit service would not directly influence the availability of affordable housing, it would greatly increase the accessibility of those eligible for affordable housing. Reconnecting America has found that in areas with reliable and frequent transit service, transportation costs are roughly half of the national average.¹² Provided the transit service reaches employment centers, two-income households are no longer required to own two automobiles. Mass transit coupled with a transit-oriented pattern of development also reduces the number of automobile-based, non-work trips, as local residents and transit patrons can patronize groceries and dry cleaners on the walk to or from work.

Preserve and Enhance Areas with Historic, Cultural, Scenic, Open Space and Recreational Value

Alternatives #3 and #4 would provide direct access to many cultural and historic assets in Gloucester County. The downtowns and historic districts of Woodbury, Wenonah, Pitman and Glassboro would be within a short walk from the proposed stations. Alternatives #3 and #4 would also serve two of the largest employers in Gloucester County, Underwood Memorial Hospital and Rowan University. The county colleges for Camden and Gloucester are in close proximity to proposed stations on Alternatives #1 and #2. Both of these institutions are oriented towards automobile-based student commuters and a significant investment would be required to construct a safe pedestrian pathway from the highway to the schools and or necessitate additional bus service be-

tween the station and school.

Ensure Sound and Integrated Planning and Implementation Statewide

Although selection of the alignment of this rail line should be based on the facts, the method of selection of this rail line also is extremely important to New Jersey receiving the best outcome. The decision should happen openly, with the inclusion of all stakeholders. Intragovernmentally, agencies should communicate and coordinate their goals for the line. Intergovernmentally, agencies at all levels of government should work toward a shared goal of improving the lives of the greatest number of people. The citizens of New Jersey, and the United States if they help fund this project, should know that their money is being put to work on the most productive alternative available.

This is done by insuring an open process which includes extensive and open meetings, presentations which include advantages and drawbacks of various options and opportunity for input. The ultimate failure of this process would be for the selection of the alignment not only to ignore the facts but to not have used a process in which the interests of stakeholders and the citizens of New Jersey paying for the



Historic and Cultural Centers should receive priority.

alignment were ignored.

Reduce Greenhouse Gas Emissions and Dependence on Fossil Fuels

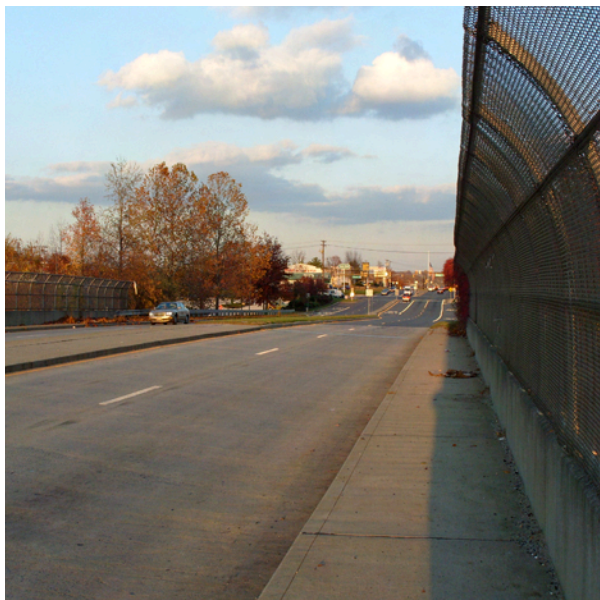
This is a proposed ninth goal currently contained in the draft 2008 State Plan. Additionally, Governor Corzine signed Executive Order 54 in 2007 regarding climate change and reduction of greenhouse gas emissions. The executive order sets aggressive measurable targets for emission reductions. One of the key components of greenhouse gas emissions in New Jersey is motor vehicle exhaust. New Jersey has some of the nation's most congested roadways as well as one of the highest average commute times in the country. Reduction of vehicle miles traveled (VMT) is an essential step in meeting established emission reduction targets. Detailed studies indicate that without significant reduction in VMT, we cannot achieve these goals.¹³ To reduce VMT, alternatives to automobile travel must be available for commuting and other significant trips. Growth patterns must be altered to embrace a multi-modal transportation infrastructure and encourage compact transit-oriented development.

An effective, reliable transit system that serves employment centers will help the State reach those targets. Transportation accounts for one-third of New Jersey's greenhouse gas emissions. If mass transit were available, it is likely that many will rely on the system for commuting. The shift to mass transit would cause a reduction in congestion and in turn, greenhouse gas emissions. The transit service, however, must then serve employment centers in order to reap the greatest benefits described above.¹⁴ If several, if not all, of the stations along a rail line were part of a larger, mixed-use pattern of development, further reductions in emissions could be achieved as the automobile could be removed entirely from the daily commute for many individuals.

All four proposed alternatives will, to differing degrees, address the reduction of vehicle trips. However, alternatives NJ-1 and NJ-2 will only do so by intercepting travelers on either Route 42 or Route 55, dependent upon which might be chosen. In addition, getting to the proposed rail service would necessitate vehicle trips to

park and ride lots located at stations in the respective highway medians. Only alternatives NJ-2a, NJ-3 and NJ-4 address the second and more important components of maximizing usage and encouraging alteration of growth patterns in any manner.

Alternative NJ-2a provides extremely limited opportunity for transit-oriented development in the towns of Pitman and Glassboro on the portion of that proposed route south of Mantua Township. The remaining portion of that alternative has the same limitations as alternatives NJ-1 and NJ-2. Alternatives NJ-3 and NJ-4 would provide service directly to the downtown areas of Glassboro, Pitman, Mantua, Sewell, Wenonah, Woodbury, West Deptford, Westville, Brooklawn, and Gloucester City. Ridership would not be entirely automobile dependent. The number of intercepted automobile trips would significantly exceed any of the other three proposals. These alternatives would provide for generation of intra-county and intra-state travel as well as the New Jersey to Philadelphia market served by the other alternatives. Most importantly however, the additional benefits of encouraging center based transit oriented development, investment in existing communities and providing an alternative for a wide variety of travel needs would be addressed by either NJ-3 or NJ-4.



The pedestrian realm near Alternative 2.

Land Use and Transportation Infrastructure

A major policy focus of the State Plan is and will be to highlight the links between land use and transportation infrastructure. In the 2001 State Plan, transportation investments should receive priority if they promote intra-state travel to important instate traffic generators. Projects that foster mobility within a developed neighborhoods and centers of place should also receive preferential treatment. Funding should also focus on expansion projects that complete coverage to a regional corridor in ways that support compact development and redevelopment.¹⁵

The 2001 Plan has several additional policies that should guide the planning and engineering of any rail expansion project in South Jersey. The Plan emphasizes a strong integration between land use and transportation planning efforts. The ultimate goals behind coordinating planning efforts are to reduce unnecessary land consumption, support public transportation, reduce vehicle miles travelled and overall energy consumption. This can only be achieved through partnerships between the transportation agencies and all levels of government within a region.¹⁶

Using transportation projects as a tool to aid re-investment and redevelopment is recommended in the Plan. Transportation investments not only impact the mobility of the region, but the land use patterns, property values, and the lifestyles of the citizens near the service. Incorporating cross-discipline planning principles into the decision making process is absolutely critical to ensure the benefits from a transportation investment are maximized.

Conclusion

All of the proposed alternatives meet one or more of the State Plan's goals and further any number of the policies contained in the Plan. The final choice of an alternative should meet as many of the goals and policies of the plan as possible. Additionally, the process of selecting an alternative can be informed by the existing successful PATCO service. The current line has stations in existing community centers (e.g., Haddonfield & Collingswood) and Park and Ride facilities (e.g., Woodcrest Station) that provide a variety of service options. Regardless of the option selected, the institution of mass transportation services on any of the corridors will have significant land use implications. The State Planning Commission and The Office of Smart Growth must work with the DRPA and the affected municipalities to institute land use plans and implementation mechanisms that will take full advantage of this new resource. Investments of this magnitude must insure that the return on the investment is maximized in terms of utilization and beneficial results.

Alternatives #3 or #4 as the preferred alternatives meet more of the goals than the remainder of the proposed alternatives. In either form, the rail service contemplated by these alternatives would provide reliable and efficient service to the large population and employment base near the existing rail line. This is essential to promote appropriate sustainable future growth in the region. Restoring service on the existing rail line would reduce congestion within the region and encourage reinvestment in existing communities. Alternatives #3 and #4 would act to link communities and serve as the backbone of the region, a concept that is incompatible with a commuter-oriented, park and ride service. Regionally, this service would alleviate congestion issues and provide additional accessibility to employment for those of lower incomes. Locally, the line would bring interest in revitalizing our local communities, encourage the adoption of plans for future growth that embody sound planning principles, and focus development in existing centers, creating regional destinations and vibrant communities.

Endnotes

- 1 Page 17. Transit + Employment, Increasing Transit's Share of the Commute Trip. Reconnecting America's Center for Transit-Oriented Development, 2007.
- 2 Page 25. State Development and Redevelopment Plan. 2001.
- 3 Page 36. SDRP.
- 4 Page 322. SDRP.
- 5 Page 51. SDRP.
- 6 Page 51. SDRP.
- 7 Pages 20-21. Getting to Work: Reconnecting Jobs with Transit. New Jersey Future.
- 8 Analytical Data Report #14. DVRPC. August 2007. <<http://www.dvrpc.org/data/databull/adr/adr14.htm>>
- 9 Page 17. Transit + Employment.
- 10 Page 16. A Geographic Evaluation of Gloucester County Commuter Rail Corridor Options. John Hasse, Rowan University. <http://users.rowan.edu/~hasse/gloco-rail/GLOCO_Rail_analsysis.pdf>
- 11 Analytical Data Report #14.
- 12 Page 6. Realizing the Potential: Expanding Housing Opportunities Near Transit. Reconnecting America. <<http://www.reconnectingamerica.org/public/reports>>
- 13 Page 4. Growing Cooler: The Evidence on Urban Development and Climate Change, Reid Ewing, Urban Land Institute.
- 14 Page 19. Getting to Work.
- 15 SDRP, page 140.
- 16 SDRP, page 141.

