

Part 5. Transportation

Transportation Safety and Mobility

Issue Overview

The Highlands regional transportation system uses roads, highways, railways and bridges to move people and goods through various modes of travel, including private automobile, bus, plane, truck, rail, bicycle and walking. In the Highlands, numerous factors including inefficient land use patterns have led to an increased dependence on automobile travel, which has had adverse impacts on natural resources and overall quality of life. By promoting efficient mixed land uses and increasing access to a multimodal transportation system, better protection can be offered to environmentally sensitive areas of the Region.

The Highlands Act emphasizes the preservation and enhancement of the transportation system which integrates transportation and comprehensive land use planning. It emphasizes the promotion of a balanced, efficient and safe transportation system that is consistent with smart growth strategies and principles and which preserves mobility and maintains transportation infrastructure in the Highlands Region.

The Act also provides that the Council recognize projects that promote a sound, balanced transportation system that is consistent with smart growth strategies and principles. A preliminary evaluation of existing and planned transportation studies in the Highlands Region that are anticipated as near-term (5 years), mid-term (5 to 10 years) and long-term (greater than 10 years) projects was performed. The Council received input from State agencies, transportation planning professionals, non-profits and county, municipal and local stakeholders in its evaluation of projects. The projects were evaluated based on input received, research and participation in project studies, the viability of both an anticipated near term project and a longer term project, projects that promote preservation of the transportation system, incorporate transit or multi-model components, serve a significant portion of the Region, reduce vehicle miles traveled, improve mobility and accessibility for residents and visitors and support both the Highlands Act and RMP policies. The currently funded projects and on-going studies selected by the Council to be recognized in the RMP for further evaluation include:

- The Access to the Regions Core (ARC) project, and particularly the Trans Hudson Expansion (THE) Tunnel project, which includes upgrades to the Raritan Valley, Main/Bergen/Pascack Valley and Morris & Essex Lines. This project is anticipated for completion in 2017 and has met funding matching criteria. Highlands Region stations that will benefit include but are not limited to the following: the Montclair-Boonton Line, Mt. Arlington, Dover, Mahwah, Hackettstown and the new Andover station. The operating plan for this project provides a long term opportunity for both commuter and regional tourism activities.
- The Montclair-Boonton Line rail extension project to Andover only, along the existing right of way. The project has been approved for funding by the New Jersey Transportation Planning Authority (NJTPA) and construction is imminent. The project currently includes limited commuter travel service and is anticipated to be implemented within 5 to 10 years. Because information for the

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full Lackawanna Cut-off project is not available for review at this time and will require further evaluation by the Council, the extension beyond Andover is not included in the RMP at this time. When the ARC project comes onboard and is fully implemented it is anticipated that rail service to the Andover station will be enhanced and may serve to support Highlands regional tourism initiatives in bringing residents and visitors further west via mass transit and allow for additional multi-modal connections.

- The Northwest NJ Bus Study, for which 80% of the study area is in the Highlands Region. It will provide in early 2009 a series of recommendations for additional follow up and study that align with the RMP Transportation Safety and Mobility policies for transit enhancement, smart growth principles and reduced vehicle miles traveled. The project provides a transit evaluation in an area that is currently underserved or not served by transit. The study recommendations and next steps will require evaluation by the Council regarding RMP policies and Plan Conformance components.
- The Raritan Valley Line Extension Study from High Bridge to Phillipsburg. This study is anticipated to be completed in early 2009. It has been supported by the I-78 Corridor Study and the rights of ways have been obtained by NJ Transit, however further study is warranted. The study will provide recommendations for stations and park and rides to support rail and Interstate Route 78 transit connections. The project can support RMP smart growth principles; however recommendations for the stations and park and ride locations will require further evaluation by the Council regarding RMP policies and Plan Conformance components.

The Council will continue to evaluate transportation projects with its agency partners and stakeholders and support intra- and inter-regional transportation and transit through Plan Conformance and the Transportation Safety and Mobility Program.

Section 11 of the Act states:

11. a. *The regional master plan shall include, but need not necessarily be limited to...*
- (5) *A transportation component that provides a plan for transportation system preservation, includes all federally mandated projects or programs, and recognizes smart growth strategies and principles. The transportation component shall include projects to promote a sound, balanced transportation system that is consistent with smart growth strategies and principles and which preserves mobility and maintains the transportation infrastructure of the Highlands Region. Transportation projects and programs shall be reviewed and approved by the council in consultation with the Department of Transportation prior to inclusion in the transportation component;*

An assessment of roadway conditions across the Highlands indicates that many of the Region's roads are at or approaching traffic capacity. Some of the major U.S. and State highways have recurring capacity constraints during the AM and PM peak travel periods. In addition, because mobile source pollution is generated by vehicle emissions, this traffic congestion increases emissions of harmful pollutants and adversely affects air quality.

Program Summary

The Highlands Act states that a primary goal is to promote a sound and balanced transportation system that is consistent with smart growth strategies and principles and which preserves mobility. The transportation program serves multiple purposes such as identifying roadway capacity constraints, addressing safety concerns,

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**RMP Policies and
Objectives Addressed**

assessing agricultural and freight needs, and promoting efficient land use patterns which look comprehensively at land use and transportation planning. The program also looks to enhance a multi-modal transportation system which facilitates the movement of people and goods without adversely affecting ecosystem integrity and community character. Each program component addresses a specific need area while providing a set of strategies through which the Highlands Council, in coordination with state agencies, local government units and stakeholders, can ensure that RMP goals are achievable.

Policy 5A1. To ensure that the Highlands transportation system provides safe and efficient intra-regional and inter-regional mobility and that critical safety road improvements use design and engineering controls to minimize induced demand and maximize resource protection.

Policy 5A2. To ensure that the Highlands transportation system affords the Highlands private economic sector, including agriculture, cost-effective transportation for raw materials, products and employees.

Objective 5A2a. Encourage the movement of goods from the roadway network to the freight rail network wherever possible.

Objective 5A2b. Evaluate opportunities to increase freight service through the reactivation of abandoned freight lines.

Objective 5A2c. Ensure sustainability of regional airport facilities and appropriately include the role of general aviation in meeting regional transportation planning needs.

Policy 5A3. To improve public safety through implementation of traffic calming measures in areas with high pedestrian activity.

Policy 5A4. To provide for safe and efficient pedestrian connections including features such as sidewalks, proper lighting, signage, shelters and green street initiatives consistent with NJDOT's Pedestrian Safety Initiative.

Policy 5A5. To promote safe routes for children to travel to and from school in support of the NJDOT's Safe Routes to School Program.

Policy 5B1. To promote more efficient use of existing road capacity by appropriate means, including but not limited to increased bus, van, shuttle, and car pool ridership, and non-motorized travelers.

Policy 5B2. To require through Plan Conformance and Highlands Project Review an evaluation of potential growth inducing effects such as substantial new land use, new residents, or new employment that could occur as a result of road improvements for increased motorized vehicle traffic capacity.

Policy 5B3. To prohibit through Plan Conformance and Highlands Project Review road improvements in the Highlands Region in areas for which a Growth Inducing Study, conducted in consultation with agencies including but not limited to the NJ Department of Transportation, demonstrates that proposed improvements do not support the RMP resource protection and smart growth policies and are likely to be growth-inducing for lands with limited or no capacity to support human development without a significant adverse impact on the Highlands ecosystem.

Policy 5C1. To ensure, to the extent practicable, that proposed transportation improvements which are not consistent with the RMP be modified to be consistent or be re-evaluated in the context of state and regional planning goals.

Policy 5C2. To coordinate with NJ DOT, NJ Transit, North Jersey Transportation Planning Authority (NJTPA), counties and municipalities with regard to transportation planning and strategies within both the Highlands Region and the larger 13-county metropolitan planning region.

Objective 5C2a. Highlands Region transportation site development activities will reflect RMP resource protection, development and redevelopment goals.

Policy 5C3. To limit road improvements through local development review and Highlands Project Review where roads are constrained by topography, forested lands or the community character of land uses fronting on the road.

Policy 5C4. To support economic development by ensuring that transportation planning and improvements support regional development, redevelopment, and tourism opportunities.

Objective 5C4a. Increase tourism opportunities through innovative multi-modal transportation measures and accessible transit schedules.

Objective 5C4b. Support regional tourism economy through enhanced street furnishings, directional signage and Highlands Region tourism information.

Objective 5C4c. Support regional tourism through the recognition and protection of scenic resource view sheds along scenic byways and road corridors.

Linking Transportation and Land Use

This program component discusses the critical relationship between transportation and land use in the Highlands Region, and the necessity to incorporate smart growth principles in transportation improvements in order to protect the environment while encouraging economic viability.

Many of the transportation improvements made in recent decades have been in the form of adding roadway capacity, with the intent of relieving or mitigating traffic congestion. It is widely acknowledged, however, that the strategy of adding roadway capacity is not a sustainable solution to the many problems facing the transportation system. By looking at transportation and land use planning comprehensively, a long-term strategy can be developed to better solve the Region's transportation issues. There are several integrated land use/transportation corridor studies currently underway or planned in the Highlands Region including but not limited to Interstate 78, Route 57 and Route 23.

The idea of mixing land uses, combining jobs, housing, retail and other uses in a compact, efficient manner, is one approach which can lead to shorter and less frequent trips taken and fewer vehicle miles traveled. These mixed uses, when integrated as a compact, walkable community, can also create and enhance a sense of place and vitality, which may in turn lead to higher property values and lower infrastructure costs. Transit Oriented Development (TOD) is another method that integrates transportation planning specifically by promoting more compact development around existing transportation infrastructure as an alternative to sprawl. Innovative approaches to roadway design can also put greater focus on ecological systems. The NJTransit *Transit Score Program* is an approach for evaluating land use and transit supported links by defining a transit score index. The program evaluates

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the relationship between people, employment and vehicle use as related to land use to improve transit options in local and regional planning.

Green Street approaches seek to design a street system that protects water resources in order to prevent the adverse affects of surface runoff. A concept called “Shared Parking” is used extensively in traditional neighborhood commercial settings and downtowns. In these locations, higher densities and mixed uses often allow people to park in a single spot and then walk from one destination to another, allowing one parking space to serve multiple destinations.

The Highlands Region includes seven regional airport facilities that vary in size and aircraft capacity and they serve to support the regional transportation system.

This program component includes the following:

1. Municipal Plan Conformance includes the development of a circulation plan element in coordination with the land use plan element; that ensures mobility and accessibility, evaluates local Transit Scores in support of connecting land use to transit services and addresses smart growth principles consistent with the goals of the RMP.
2. A circulation plan element must show the location and types of facilities for modes of transportation required for the efficient movement of people and goods, including scenic byways and corridors and regional airports, as well as a municipal evaluation of transit and shared parking opportunities through a comprehensive parking study.
3. Conforming counties shall develop a transportation plan that supports local and regional land use planning, ensures mobility and accessibility, evaluates regional Transit Scores as a means to screen for improved and innovative transit options, promote connectivity, shared service opportunities and long-term transportation network needs.
4. Council shall evaluate the existing and proposed Residential Site Improvement Standards (RSIS) in the context of the RMP and develop recommendations for amendments that would minimize environmental impacts resulting from new residential developments while maximizing utility efficiency from new residential developments in a context-specific manner that addresses community and landscape character.
5. Coordinate with NJ Transit, counties and municipalities to increase the performance of the public and private bus carrier systems, increasing transit rider-ship and the use of multi-modal transportation systems for peak hour travel including the use of shuttle service and innovative car sharing rental options.
6. Encourage development and redevelopment which provides a balance of jobs to housing in close proximity to rail and bus.
7. Ensure sustainability of regional airport facilities and appropriately include the role of general aviation in meeting regional transportation planning needs.

**Regional Transportation
Safety and Pedestrian
Security**

The widespread usage of the Highlands roadway system does not come without certain risks for pedestrians, bicyclists, motorists and bus passengers. Many years of vehicle safety and traffic engineering improvements have resulted in generally safer conditions for automobiles, with fewer fatalities and fewer crashes per vehicle miles traveled. Beyond automobile safety, there has been a growing awareness of the need to protect the most vulnerable road users - pedestrians and bicyclists.

The Act emphasizes the importance of transportation safety and creates certain exemptions which allow for such things as the routine maintenance and

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reconstruction of transportation infrastructure provided that the activity is consistent with the goals of the Act, and does not result in new through-capacity travel lanes. The challenge of improving safety for all travelers in Highlands Region can best be addressed through strategic and coordinated efforts to integrate safety concerns into transportation planning with State agencies, local governments and stakeholders.

This program component emphasizes the following strategies in order to promote transportation safety:

1. Require municipalities to assess local transportation improvement needs and safety concerns as part of their circulation plan element for Plan Conformance.
2. Coordinate with municipalities, counties, NJDOT, NJTPA and NJ Transit in order to increase safety and security of inter-modal transportation for motorized and non-motorized users, and by implementing traffic calming measures in areas with high pedestrian activity.
3. Promote safe routes for children to travel to and from school in a coordinated effort with NJDOT's Safe Routes to School Program. In addition, encourage safe routes to public transportation through NJDOT's Safe Streets to Transit Program.
4. Provide for safe pedestrian connections including features such as sidewalks, proper lighting, shade trees, and shelters consistent with NJDOT's Pedestrian Initiative.

**Mobility of Agriculture
and Freight Access**

Transportation mobility is a vital component to the agricultural industry in the Highlands Region, as farmers rely on a functional transportation system in order to operate farms, ultimately bring a variety of goods to market and support agri-tourism initiatives. In order to ensure the safety and viability of farming as an occupation in the Highlands Region, safe travel routes for farmers need to be coordinated with local governments and state agencies.

Mobility is also critical to the needs of a growing freight industry which continues to use the Region's infrastructure to haul goods to and from the State's major ports. However, a growing number of freight trucks are having a negative impact on the Region's roads. By improving upon existing rail infrastructure and shifting from truck to rail for long-distance transport, more freight can be moved safely and efficiently.

The program components include:

1. Coordinate with municipalities, counties, New Jersey Department of Agriculture and NJDOT to identify and support the unique needs of the agricultural industry to move farm vehicles and goods along transportation corridors, and establish safe travel routes for farmers in order to ensure the safety and viability of farming as an occupation in the Highlands Region.
2. Require that all circulation plan elements and county plans, as part of Plan Conformance, evaluate "farm-to-market" opportunities to improve upon the movement of goods from farms and areas of supply to areas where goods are in demand and in support of agri-tourism initiatives.
3. Require that all circulation plan elements and county plan, as part of Plan Conformance, evaluate opportunities to increase freight service through the reactivation of abandoned freight lines.
4. Coordinate with NJDOT on new Comprehensive Statewide Freight Plan

(For more information on agricultural needs see Agricultural Management and

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**Transportation and
Tourism Economy**

Sustainability Program)

As a Region that reflects history, exhibits scenic beauty, and provides outdoor recreational activities, the Highlands offers residents and visitors a variety of recreational and tourism opportunities. A strong tourism industry in the Highlands depends upon a safe and efficient transportation system. The Region also includes scenic resource viewsheds along scenic byways and corridors that require protection.

This component seeks to focus on the relationship between the Highlands transportation system and tourism resources. Are transportation services available so that tourists can travel safely and by a variety of modes? Is information about transportation to tourist attractions and activities available? What are opportunities to expand tourism through transportation-related activities such as rail, bus, hiking trails and signage? By answering these questions, Highlands communities can support enhanced regional economic vitality and contribute to overall quality of life.

This program component includes the following:

1. Coordinate with NJDOT, NJTransit and NJ Division of Travel and Tourism to increase tourism opportunities through innovative multi-modal transportation measures and accessible transit schedules.
2. Support the regional tourism economy in cooperation with NJDOT through a road signage program which identifies significant natural and historic resources and landmarks including scenic viewsheds and byways.
3. Require that circulation plan elements evaluate opportunities to expand tourism through multi-modal transit connectivity, thus promoting the use of transit as a means to access Highlands' tourism resources.
4. Coordinate with NJDOT and NJ Department of Agriculture to promote agri-tourism through enhanced information sharing, education and outreach.

**Overview of
Transportation Project
Review**

The review of transportation projects by Council is a critical step to ensuring that transportation improvements are consistent with the goals and policies of the RMP. The Act states that the Council may provide comments and recommendations on any transportation project undertaken by any State entity or local government unit in the Highlands Region. In the Preservation Area, the Council must establish procedures for conducting reviews of projects that, except in certain cases, involve the disturbance of two acres or more of land, or a cumulative increase in impervious surface by one acre or more. The Act also states that in the Highlands Region the Council has the power to approve, approve with conditions, or disapprove a project, and that except in certain cases no such project can move forward without approval of the Council.

Transportation project review will generally evaluate the following:

1. Consistency with the goals, policies and objectives of the RMP and smart growth planning principles.
2. Determination of net effect on through lane capacity, consistent with the requirements of Policy 5B3.
3. Impact on water quantity and quality, Highlands natural resources such as forests, habitat and open waters and historic and scenic resources.
4. The relationship to surrounding land uses and near and long-term transportation plans for the Highlands Region and the larger 13-county regional transportation planning area.
5. An evaluation of growth-inducing impacts regarding new land use, new

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residents, and new permanent employment which could have secondary growth implications, or greatly expand transportation infrastructure capacity, especially in areas with high natural resource values and limited capacity to support human development.

6. Use of alternative modes of transportation including transit, bus, pedestrian and bicycle.
7. Safety measures such as traffic calming strategies and pedestrian and bicycle safety features.
8. Impact on agricultural and freight mobility.
9. Effect on eco-tourism, agri-tourism and heritage tourism in the Region.

Plan Conformance guidelines and procedures will be developed in support of transportation project review detailing the specific requirements.

Roadway Capacity
Monitoring

The roadway capacity assessment included in the *Transportation Technical Report* provides a detailed assessment of roadway conditions, identifying major origin and destination trips generated in the Highlands for the base year 2002. The Council worked with NJDOT, NJTPA and counties to develop a Highlands Sub-Area model based on information developed from a larger model known as the North Jersey Regional Transportation Model (NJRTM). It is currently the primary analysis tool for transportation planning in the 13 county transportation planning region.

There is a need to re-examine, refine and monitor these roadway conditions and travel patterns, and the impact of future development and land use patterns on traffic conditions. The refined assessment will need to be conducted to a finer Traffic Analysis Zone standard and will require more local traffic count data in order to determine more accurately local roadway conditions by municipality in the Highlands Region. This more refined analysis can better reflect the impact of past land use changes in order to inform future land use decisions, and thereby shape transportation infrastructure improvements. The Council will continue to partner with NJDOT, NJTPA and counties to refine the model for future needs. (More information on the Roadway Capacity Assessment can be found in the *Transportation Technical Report* pg.11)