



Connecting
Maine

PLANNING OUR TRANSPORTATION FUTURE

**Statewide Long-Range
Transportation Plan
2008 - 2030**

July 2010

MaineDOT

MaineDOT Commissioner David Cole

July, 2010

A Message from MaineDOT Commissioner David Cole:

When Governor Baldacci appointed me Commissioner of Transportation in 2003, he made it clear that I must not only “think out of the box,” but also think *regionally*. I think of transportation as being one of three legs on a stool — the other legs being the economy and environment. In order to meet the needs of the economy and maintain quality communities, we must achieve the appropriate balance. It is therefore critical that transportation, environmental, and economic development objectives are developed in relation to one another. If only one or two of the legs reach the desired results, Maine’s “quality of place,” and hence the quality of life of its citizens, will suffer. All of these elements are developed at the regional level through Maine’s 11 Regional Councils.



More than at any time in the recent past, MaineDOT worked with the Regional Councils over the last five years to conduct regional transportation, land-use and economic development planning. The culmination of this work, which included significant public participation, led to development of 38 Corridors of Regional Economic Significance for Transportation (CRESTs), and transportation, land-use and economic objectives of each CREST. MaineDOT also asked the Regional Councils to identify and prioritize transportation-related policy issues, planning study needs, and the capital investments that would be required to meet their CREST’s objectives. The strategic investments have been incorporated into the needs highlighted in this plan.

The Governor also charged me to ensure that Maine’s transportation system as a whole is managed and operated as efficiently as possible. Before we receive new resources, we must demonstrate to him and the Legislature that we are maximizing the benefits from every taxpayer dollar we already receive. For example, MaineDOT continues to implement the Maintenance and Operations Unit Review. That initiative achieved a number of ongoing efficiencies including the elimination of over 230 full-time-equivalent vacant positions over the last three budgets and the retiring of 53 trucks from our heavy fleet by readjusting plow routes, thereby saving the costs of vehicle maintenance, fuel and replacement costs. MaineDOT is also working with its transportation partners on evaluating ways we can work together to achieve more system savings and efficiencies in the future. Those efficiencies can yield savings that can be invested in the system, and are particularly important as we face difficult economic times and shrinking funding levels, while our investment needs are growing dramatically.

We must also think out of the box and rely on innovation to meet some of our future transportation needs. We are working with our engineering community, the University of Maine, the Maine Composites Alliance, and others on research and development of innovations that can boost our local economy and lessen our reliance on materials like steel, which are becoming increasingly expensive due to global economic forces.

Our ability to maintain and improve the transportation system will depend on long-term funding, and *Connecting Maine*, our long-range statewide transportation plan, discusses the level of resources needed to maintain and deliver the transportation system that we need to grow our economy and preserve our quality of life. *Connecting Maine*, which includes the goals and objectives set forth in Maine statute (P.L., ch. 470, 123rd Legislature, Second Session), will guide our future decision-making to the year 2030. We will monitor Maine’s transportation system through a biennial *Report on Progress* to the Governor, the Legislature and the public to ensure MaineDOT continues to contribute through innovation to Maine’s economy, prosperity and quality of life.

Sincerely,

A handwritten signature in black ink that reads "David Cole". The signature is written in a cursive, flowing style.

David Cole
Commissioner, MaineDOT

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Acknowledgements

Development of this long-range statewide transportation plan would not have been possible without significant assistance from many people and organizations. While it is impossible to list everyone that provided assistance, the following groups played a very large role in providing insight and long-range transportation plans produced by others:

Regional Councils and Economic Development Districts

Early on, MaineDOT recognized that in order to gain support for its vision and goals, it would need to seek and secure the participation and support of local and regional interests¹. To be successful, the vision and goals, initially developed to address statewide transportation interests, needed to be locally and regionally based.

Maine's eleven regional planning organizations and councils of government, collectively referred to as Regional Councils, and its six Economic Development Districts provided significant regional planning input over several years. Working collaboratively together with MaineDOT, these groups developed *Regional Transportation Assessments*, which identified 38 *Corridors of Regional Economic Significance for Transportation* (CREST)², including transportation, land use and economic objectives for each corridor prior to the initiation of *Connecting Maine*. They also developed Strategic Investment Plans for each CREST, consisting of the Policy Initiatives, Planning Study Needs and Capital Improvement Needs required to meet the objectives previously identified for each CREST.

The collaboration of the Economic Development Districts (EDDs) and the Regional Councils represents a marked change in developing the *Plan*. The EDDs develop their own long-range plans, known as *Comprehensive Economic Development Strategies* (CEDS) within each of their respective jurisdictions. The CEDS is a requirement of the U.S. Department of Commerce's Economic Development Administration (EDA). A critical but often underdeveloped section of the CEDS has been the transportation section, the omission of which seriously downplays the full economic significance and impact that transportation investments play in supporting existing and emerging economic opportunities.

The Regional Councils, CRESTs, and CEDS provided vital information so the MaineDOT goals could be transformed into purposeful objectives and strategies. MaineDOT is committed to incorporating these recommendations into its planning activities; it will continue to coordinate its investment decisions with them to ensure that the multimodal investments and connections are completed in a manner that reflects regional priorities.

¹ "Maine's Economic Development Strategy," Governor John E. Baldacci, January 21, 2004. Web Link: <http://www.econdevmaine.com/announcements/details.asp?PressID=4>

² CREST is defined as a contiguous area that depicts the general movement of people and goods from one region to another. CREST includes all transportation modes (roads, railroads, trails, airports, seaports, and various forms of transit) and connections to other transportation modes.

Metropolitan Planning Organizations and Indian Tribal Governments

This *Plan* would be incomplete without the inclusion of the needs identified by other state planning entities. The incorporation of Maine's four Metropolitan Planning Organizations' (MPOs) and Maine's Indian Tribal Governments' long range transportation plans have all been reviewed and incorporated into this statewide long-range plan to ensure that the priorities contained in those plans are incorporated into *Connecting Maine*. Examples of the strategic investment needs identified in this long-range statewide transportation plan are provided in Chapters 7 and 8.

The Maine Turnpike Authority

The Maine Turnpike Authority (MTA) provided valuable partnering assistance throughout the development of *Connecting Maine* and provided MTA's 2004-2013 10-Year long range plan, which also has been incorporated into this long-range statewide transportation plan. It should be noted that the MTA was in the process of updating its 10-Year long range plan while *Connecting Maine* was being finalized. Any resulting inconsistencies between the two plans will be reviewed and modified as appropriate in the next statewide long range plan.

“Future Visions” Workshop Participants

Early into the development of *Connecting Maine*, MaineDOT invited several economists and transportation experts to conduct two workshops in which to present their visions of the obstacles and opportunities that Maine will likely face over the next 20 years.

Public Consultation Participants

Throughout the 45-day public participation period conducted in the spring of 2007, many people and organizations provided meaningful discussions on the preliminary draft of *Connecting Maine* at the more than 20 public meetings and also through the MaineDOT website established specifically for public consultation.

Consultant Activities

MaineDOT undertook three consultant-led activities directly related to the long-range statewide transportation plan. These initiatives were:

- University of Maine - An overview of a nationwide review of sustainable transportation funding presented to the Transportation Committee of the Maine Legislature in 2006, as conducted by the University of Maine, Margaret Chase Smith Policy Center, College of Business, Public Policy and Health in a document entitled *Sustainable Transportation Funding for Maine's Future* (June 2006).
- University of Southern Maine - Modeling of the economic impacts of implementing some of the strategic investments identified in this long-range statewide transportation plan, and also the economic impacts of conducting the capital investments under the current funding scenario. The study and resulting document, prepared by Charles S. Colgan, Associate Director of the Center for Business and Economic Research and Professor of Public Policy and Management, Muskie School of Public Service, University of Southern Maine and entitled *Changes in the Maine Economy from Strategic Investments in the Transportation System* (March 2008) concluded that for every \$1.00 invested in

the strategic investments, a \$3.65 increase will result in the Gross State Product over the twenty-year period (all dollars are present worth). By comparison, investing only those amounts under the current funding scenario, vehicle hours traveled (congestion) would increase by 28.2 million and the Maine economy would suffer a net reduction of 5,800 jobs. Dr. Colgan's report is included in Appendix 3.

- Maine Development Foundation - MaineDOT solicited the services of the Maine Development Foundation to interview a broad spectrum of small, medium and large businesses representing tourism, pulp and paper industries, agriculture, technology, health care and traditional businesses in Maine to obtain their thoughts on the obstacles and opportunities that Maine's transportation system presents to them and how that relates to their ability to survive and thrive in Maine. The published results of that survey are entitled *Connecting Maine Through Transportation - What Maine Businesses Have to Say* (March 2009).

MaineDOT will continue to work closely with the State's eleven Regional Councils, six Economic Development Districts, four Metropolitan Planning Organizations, the Maine Turnpike Authority (MTA) and Maine's three Indian Tribal Governments as they update their respective long-range transportation plans. MaineDOT is also committed to incorporating their recommendations into its planning activities, and will continue to coordinate with them to ensure that multimodal investments and connections are completed in a manner that integrates their collective priorities with those of the State of Maine.

Maine State Legislature

During the course of developing this long-range statewide transportation plan, several legislative actions took place that impact transportation planning and funding in Maine. Those worthy of note are described below:

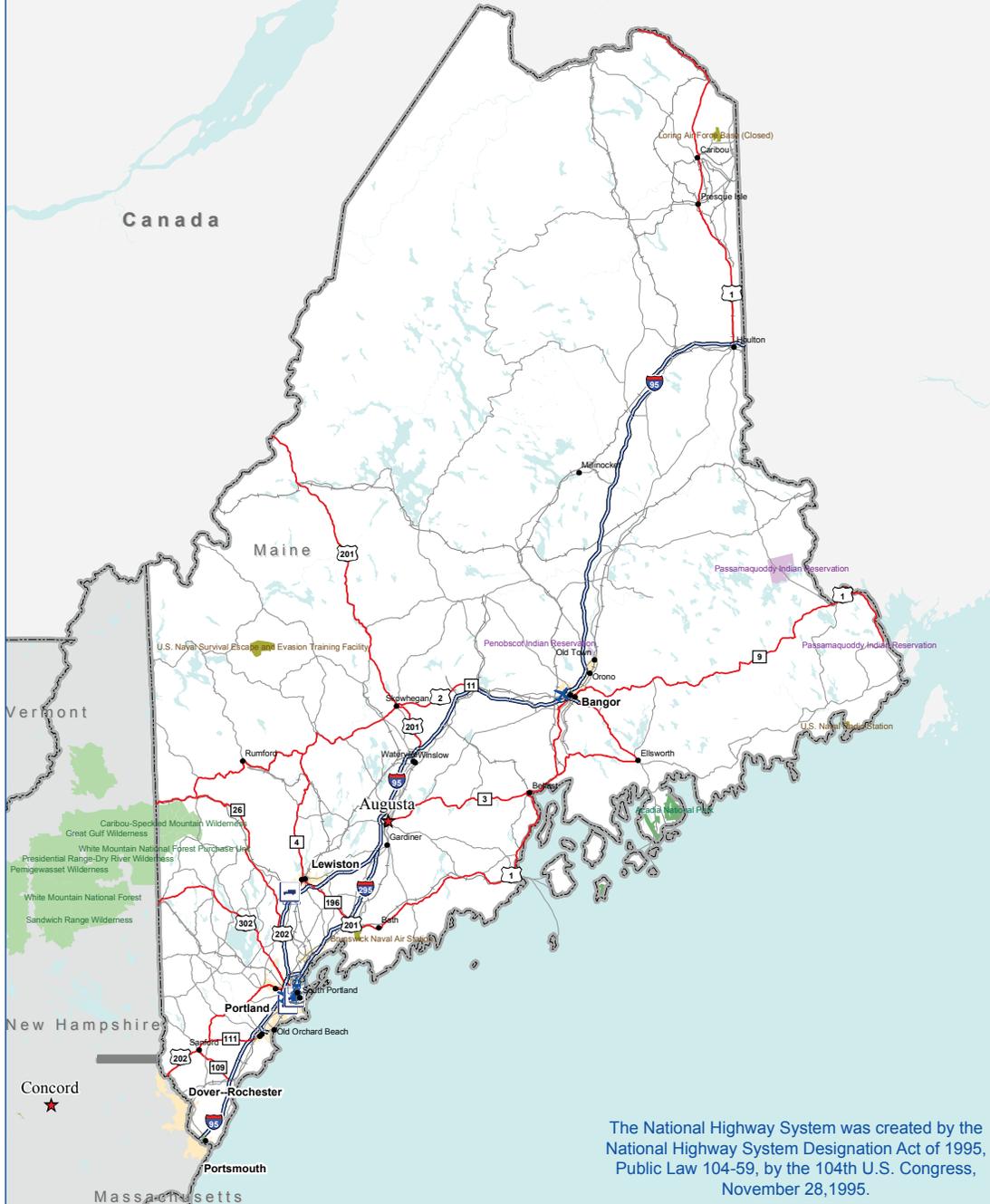
- Public Law 2007, Chapter 470 – also commonly referred to as L.D. 1790 – *An Act to Secure Maine's Transportation Future*, specifies several capital improvement goals with specific timelines attached. It also establishes debt policy for capital improvements in transportation funding in Maine and provides for a TransCap Trust Fund, which would dedicate funding streams for revenue bonds for long range capital investments for all modes of transportation. Chapter 470 also calls on MaineDOT to submit biennial reports on the progress being made on the specified capital improvement goals. Funding sources were not defined, however. MaineDOT has incorporated the L.D. 1790 performance requirements into its investment initiatives. See Chapter 4 for further details.

- Resolve 2008, Chapter 159 – also commonly referred to as L.D. 2165 – *Resolve, Regarding Legislative Review of Portions of Chapter 103: Sensible Transportation Policy Act, a Major Substantive Rule of the Department of Transportation (STPA)*. This is a major substantive rule submitted in January, 2008 by MaineDOT at the request of the 121st Maine Legislature. MaineDOT collaborated with the Maine State Planning Office to coordinate land use planning conducted under the rules of the Growth Management Act with the Sensible Transportation Policy Act, administered by Maine DOT. Under the adopted Rule, MaineDOT will provide project prioritization and funding incentives to communities or multiple communities working together who develop and implement coordinated transportation and land use planning activities. The revised STPA Rules require that alternatives to increasing highway capacity be considered and implemented whenever feasible before highway capacity is increased.

U.S. Department of Transportation

The preparation of this report has been financed in part through grant(s) from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), and under the State Planning and Research Program, Section 505 (or Metropolitan Planning Program, Section 104(f)) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

National Highway System in Maine



The National Highway System was created by the National Highway System Designation Act of 1995, Public Law 104-59, by the 104th U.S. Congress, November 28, 1995.

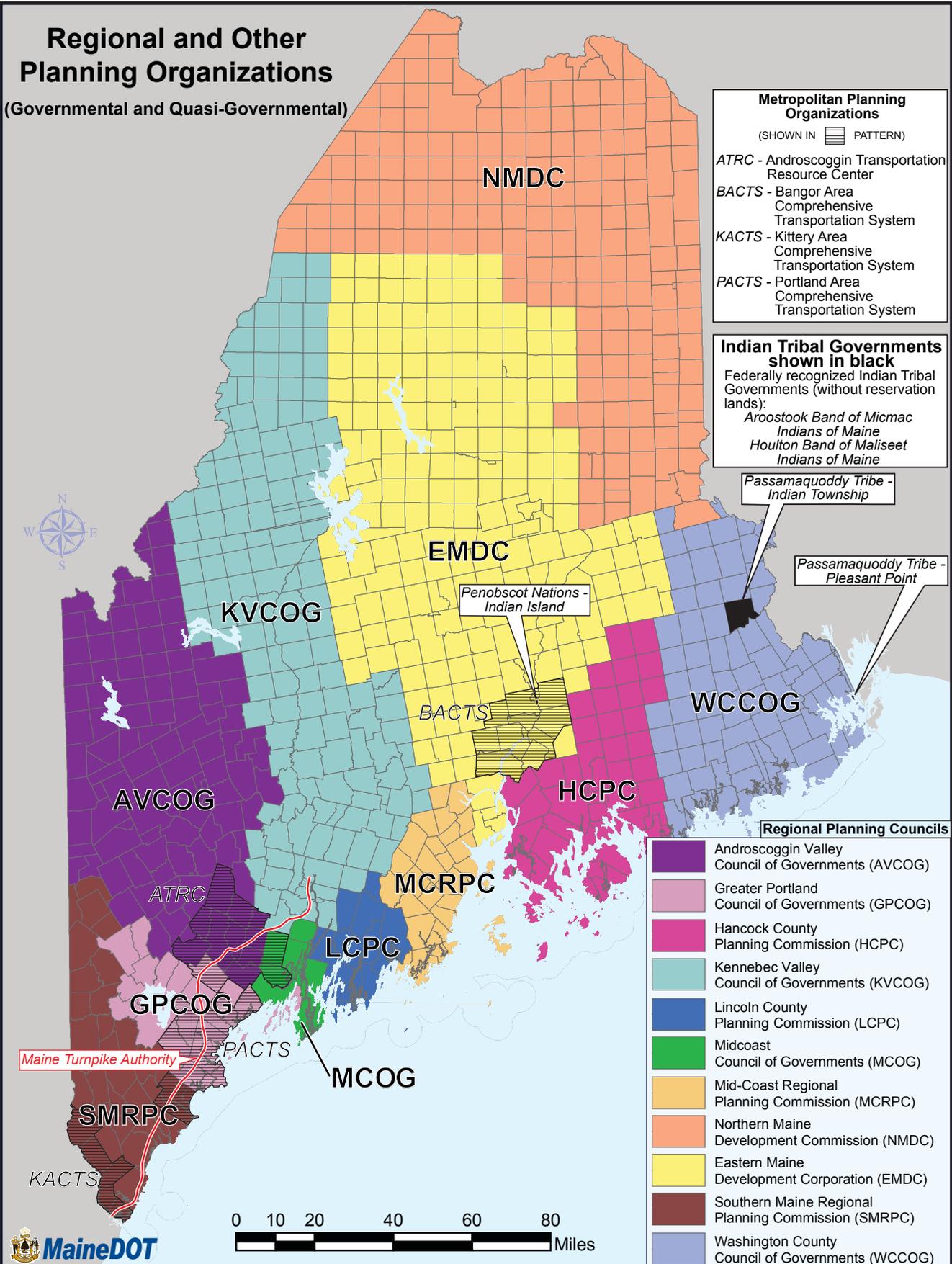
**U.S. Department of Transportation
Federal Highway Administration**

Eisenhower Interstate System	Census Urbanized Areas	Airport	Multipurpose Passenger Facility
Other NHS Routes	Indian Reservation	Intercity Bus Terminal	Port Terminal
Non-Interstate STRAHNET Route	Department of Defense	Ferry Terminal	Truck/Rail Facility
Major STRAHNET Connector	National Forest	Truck/Pipeline Terminal	AMTRAK Station
Intermodal Connector	National Park Service	North Arrow	Public Transit Station
Unbuilt NHS Routes	Water	0 20 40 Miles	
Other Roads (not on NHS)		0 20 40 Kilometers	
Railroad			

FHWA/HEPI-10 :: Mar 2005

Regional and Other Planning Organizations

(Governmental and Quasi-Governmental)



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Executive Summary

Connecting Maine: Planning Our Transportation Future is the state's integrated, long-range, multimodal transportation plan for the next 20 years. The plan is a compilation of the challenges facing Maine's transportation system. Most importantly, however, *Connecting Maine* serves as an outline of the key investments that must be made to Maine's transportation infrastructure to meet the strategic goals identified by its citizens and transportation partners.

Beginning in 2003, the Maine Department of Transportation (MaineDOT) began *Connecting Maine* by conducting approximately 680 phone surveys, which asked users a series of questions focused on overall performance of transportation services. This survey led to a series of focus group meetings, workshops, regional forums and public consultation meetings spanning a five year period resulting in a multi-layered strategy to help guide future transportation planning.

Participants in the development of this long-term plan included statewide and regional planners, transportation experts, leading economists, business leaders, municipal leaders and the general public. More specifically, participants also included the Maine Turnpike Authority, Maine Indian Tribal Governments, Metropolitan Planning Organizations, and Maine's Regional Planning Councils and Economic Development Districts.

Connecting Maine represents a shared vision from the various stakeholders to maintain a healthy economy and enhance the quality of life for Maine citizens. The following five strategic goals were developed as a tool that MaineDOT can use as it examines and prioritizes its transportation investments. The five strategic goals are:

1. Ensure a Safe and Secure Transportation System;
2. Ensure the Sustainability of Maine's Transportation Systems;
3. Promote Economic Vitality and Competitiveness through Transportation Investments;
4. Develop and Implement Transportation Programs that Enhance Quality of Life; and
5. Enhance Public Awareness and Participation.

In 2005, two workshops were held within MaineDOT with the distinct purpose of identifying where Maine could be in 20 years based upon past policy decisions and their effect upon future transportation investments. The challenges discussed included statewide disparities in growth rates and demographics, increases in vehicle-miles traveled, traffic congestion and climate change, improved coordination of human service transportation for the elderly and other transportation disadvantaged populations, workforce and housing shifts, and balancing economic growth with environmental stewardship, as well as federal and state requirements.

As these topics were fully examined, the challenges facing Maine became readily apparent. Diminishing revenues, the rise in construction costs, aging infrastructure, and reduced federal flexibility in spending were noted as major contributors to this challenge. However, no other two issues combined play a more critical role to the future of Maine's transportation system than those of diminishing funding levels and increasing transportation investment needs.

Many infrastructure investments have been made over the last decade, including unprecedented levels of investment of \$100 million in 2007 and \$200 million in 2008. Unfortunately, even that level of investment is not enough to keep up with the increased stress on Maine's transportation system caused by our aging transportation network, the new demands of global trade, technology and increased traffic volumes. To achieve the goals of *Connecting Maine*, an additional \$3.3 billion will be needed over the next ten years alone. The funding gap is even greater for the subsequent 10 years.

Connecting Maine reinforces the thought that transportation infrastructure investment can create opportunities for Maine businesses to better compete in the world economy. Yet the need to maintain existing transportation infrastructure exceeds available resources, and future opportunities to invest wisely in Maine's transportation infrastructure will not be realized if the funding crisis is not addressed. Maine must supplement its current transportation funding with bold, new initiatives that can provide for a transportation system that stimulates the economy and promotes sustained economic growth. Maine must take practical measures to integrate the various modes of transportation to ensure that a seamless, multimodal transportation system evolves in order to best meet the needs of an ever changing world.

Increasingly, policy-makers are asking not only how the underfunding of our transportation system came about, but more importantly, what can be done to assure that Maine is in a position to invest in emerging opportunities. The inability to adequately invest in the transportation system did not develop overnight, nor is it the result of any individual or particular governmental action. It is largely due to changes in the funding formulas and reduced state revenues.

In building upon *Connecting Maine's* goals and recognizing the challenges and forces that influence transportation, the MaineDOT and various regional and economic planners developed new initiatives and strategic plans for the next 10 to 20 years. These initiatives and plans reflect a vision by which Maine citizens can rely on a transportation system that is safe, effective, supports economic vitality, introduces innovation, enhances quality of life, and protects the cultural and natural environment.

The various initiatives and plans from both state and regional perspectives were vetted through a resource allocation analysis that weighed limited resources against system needs, investment for all modes, transportation management and alternatives, targeting resources to highest priorities, and an assessment of social and economic needs. During that process, Regional Transportation Assessments (RTAs) were created, including an identification of 38 Corridors of Regional Economic Significance for Transportation (CRESTs) and their associated transportation, land use and economic objectives.

Connecting Maine summarizes the findings of the analysis and reports on the resulting transportation investment initiatives of MaineDOT and the regional perspectives and priorities, as well as the strategic goals of several planning and economic development organizations. Specifically, MaineDOT investment initiatives reflect careful consideration of the transportation deficiencies that are impacting economic growth and those which address public safety. The key initiatives identified were those in areas such as Highways, Bridges, Multimodal Connections, Quality of Place, Aviation, Economic Connections and Public-Private Partnerships.

In addition, the regional perspectives of the Maine Turnpike Authority, Tribal Governments, Metropolitan Planning Organizations, and Regional Councils/Economic Development Districts have been captured in *Connecting Maine* and serve as a comprehensive view of regional priorities and how they relate to the statewide long-range plan. Specific strategic investment plans were also developed by the eleven regional councils and are summarized and illustrated in the various maps of the six economic development districts (Northern Maine Development Commission, Eastern Maine Development Corporation, Midcoast Economic Development District, Kennebec Valley Council of Governments, Androscoggin Valley Council of Governments and Southern Maine Economic Development District).

Connecting Maine serves as a resource for statewide organizations, policymakers and local communities to use as a way to understand the initiatives, priorities and strategies needed to lead Maine's transportation system into the future. Sharing Maine's transportation vision with the public will assist in developing integrated land use and transportation planning in a way that helps identify the funding needed to gain the best return on transportation investments.

To keep pace with economic needs identified in this long-term strategic plan, substantially more transportation funding will need to be identified and new and renewed investments made. The funding crisis is now; the need to change how we support transportation investment in Maine is immediate. It is essential that the state and MaineDOT take bold and decisive actions to ensure that the infrastructure does not slip further into a deteriorated condition. Without support, Maine's economy will continue to suffer; with support, it can flourish.

The solutions are going to be costly and we know that there is no silver bullet to address these funding needs. However, several options were brought forward throughout our fact-gathering process. These options include exploring additional cost-saving efforts by MaineDOT, increased motor-fuel taxes, long-term borrowing, new alternative financing sources, increased use of tolling, mileage and other user based fees, increased use of public-private partnerships and broadening the base from which transportation revenues are derived. "Doing more with less" is no longer the reality – it is now "doing less with less." *Connecting Maine* tells the story of how Maine is losing ground in the struggle to maintain and improve the transportation system that is vital to its economic well-being.

Connecting Maine provides a sobering look into Maine's future if funding levels are left unchanged and critical infrastructure investments not made. Inadequate public information and disaster response plans will jeopardize safety and security measures needed to protect the public. Similarly, limitations to highway reconstruction and repairs to functionally and structurally deficient bridges will impede safety, economic vitality, mobility and quality of life for Maine citizens. Freight, aviation, and other forms of transportation such as transit, bicycle and pedestrian initiatives will go unrealized and will negatively impact Maine's ability to compete in the global market, not to mention negatively impact local communities.

Despite the challenges, we have an opportunity to get it right. We know that transportation is underfunded and increasing in demand. Most importantly, we also know that transportation is an investment with proven returns. Investment strategies in transportation system maintenance and preservation are increasingly becoming a matter of rationed choice driven by crisis, as opposed to rational choice based on an investment strategy that maintains the system in its entirety. The retrenchment to a preservation-first policy, though sound from the perspective of our absolute responsibility to maintain the public's investment, leaves little funding for system improvement or expansion.

This long-range strategic transportation plan captures the historical and collective efforts of many stakeholders in redefining how the delivery of transportation services can best be achieved knowing that Maine's quality of life and economic future is dependent upon its transportation infrastructure. Despite the complexity of the issues, this plan offers a clear picture that meets the needs and anticipates future demands, showing that multiple modes of transportation must work together seamlessly in ways that they do not today.

Connecting Maine: Planning Our Transportation Future is more than just a blueprint on intermodal and intercommunity connectivity. It is a living document by which MaineDOT can achieve its mission by providing a safe, efficient and reliable transportation system that supports economic opportunity and quality of life. It connects Maine citizens, business leaders and policy-makers with one another and provides a realistic view of the existing transportation system and the future demands that will be unmet unless changes are made - starting now.

Note: *Connecting Maine* complies with various federal and state mandates that require MaineDOT to develop long-term planning, and prioritize transportation investments in an equitable manner. Specifically, the plan meets the Planning Assistance and Standards outlined in Title 23 Code of Federal Regulations, Part 450, the Safe, Accountable Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the Sensible Transportation Policy Act found in the Maine Revised Statutes Title 23, Section 73 and 73-A, as well as other sections of the Maine Revised Statutes, such as Title 23 “Highways”, Title 29 and 29-A “Motor Vehicles.”

Chapter 1 - Vision and Goals

MaineDOT Strategic Plan

Prior to developing *Connecting Maine*, MaineDOT developed and adopted a strategic plan. This plan had a five year outlook that focused on external objectives and internal business practices. The strategic plan established a starting point for stakeholder conversations that led to *Connecting Maine*.

MaineDOT's Vision:

MaineDOT – contributing through innovation to Maine's economy, prosperity and quality of life:

- Investing in safe travel
- Contributing to economic growth
- Connecting and energizing our communities
- Improving Maine's links to the global economy
- Providing equitable mobility
- Creating positive experiences for residents and visitors, and
- Respecting the natural and cultural heritage of Maine.

Maine's transportation vision is largely rooted in the desire to: maintain village and urban centers, connect communities and transportation modes, improve our existing transportation system performance for passengers and freight, provide a safe transportation network, and support Maine's economic vitality through connectivity to internal and external economic markets.

MaineDOT's Mission:

MaineDOT responsibly provides a safe, efficient and reliable transportation system that supports economic opportunity and quality of life.

The *Connecting Maine* goals and objectives were derived from the Department's Strategic Plan. They correlate one-for-one, except that the Strategic Plan identifies an internally-focused goal involving employee support.

Connecting Maine Goals and Objectives

MaineDOT and Maine's citizens recognize that transportation is a critical element in maintaining a healthy economy and quality of life. With that in mind, *Connecting Maine* identifies five strategic goals—essentially, the lenses through which MaineDOT sees Maine's transportation future and the means by which the department can develop investment initiatives.

Goal 1: Ensure a Safe and Secure Transportation System

Every traveler expects a transportation system that is safe and efficient. Following the events of September 11, 2001, transportation security issues have also become an increasingly integral component

of overall safety considerations. With the passage of SAFETEA-LU in 2005, safety and security have become high priorities on a national level as well. SAFETEA-LU introduced new transportation safety and security programs that must be incorporated into Maine’s transportation system.

Goal 2: Ensure the Sustainability of Maine’s Transportation Systems

Maine has invested a great deal in the transportation system. Citizens expect MaineDOT to preserve and maintain the condition and efficiency of the existing transportation system before spending money on additional transportation infrastructure. Maintaining and preserving the existing system, which includes investing in the passenger and freight *non-highway* systems to lessen demands or impacts on the highway system, must be done strategically to maximize operational efficiencies and protect the most critical and vulnerable transportation assets. It must employ techniques such as *travel demand management* (TDM) to promote increased use of the underutilized passenger and freight rail systems as cost-effective, environmentally friendly alternatives to highway use.

Goal 3: Promote Economic Vitality and Competitiveness through Transportation Investments

Transportation is essential to the health of Maine’s economy. Traditional industries, such as forest products, paper, and agriculture, along with emergent economic sectors, such as biotechnology, tourism, service providers, and the “creative economy”, are the backbone of our diverse economy. These economic drivers depend on an effective transportation system built on strategic and innovative investment; the cost of transportation significantly affects these sectors’ abilities to compete successfully in the marketplace. According to Governor John E. Baldacci, “[The] systems of transportation must be improved to minimize any transportation cost disincentives...”¹

MaineDOT must also work to develop new and innovative partnerships with both public and private interests, in order to stretch limited financial resources for maximum effectiveness. MaineDOT’s ability to ensure sustainability of the system is also dependent on the cooperation of local communities, which can create opportunities for transportation efficiencies in their day-to-day land-use decision-making.

Goal 4: Develop and Implement Transportation Programs that Enhance Quality of Life

Quality of life is a difficult term to define, as values differ from person to person and from community to community. Comments during the development of this *Plan* led to several common themes. Repeatedly, participants voiced support for a transportation system that is safe, promotes family and community connections, enhances mobility, supports economic opportunity, and also protects and enhances Maine’s natural environment and cultural resources as well as individual community needs and values. This includes a transportation system that protects and enhances Maine’s natural environment, including native plant and animal habitat.

Goal 5: Enhance Public Awareness and Participation

With limited resources, it is critically important to make wise, strategic investments in the transportation system. MaineDOT will implement new and better ways to communicate with Maine’s citizens, business leaders and decision-makers to help them understand the issues related to developing and maintaining an efficient transportation system. Outreach and education are vital to ensure that the decisions and investments we make truly meet the needs of the traveling public.

¹ “Maine’s Economic Development Strategy”, Governor John E. Baldacci, January 1, 2004.

Web link: <http://www.econdevmaine.com/announcements/details.asp?PresID=4>

Connecting Maine Goals and Objectives

1. Ensure a safe and secure transportation system

- 1.1. Reduce crashes, injuries and fatalities on Maine's highways
- 1.2. Decrease lane departure crashes, injuries and fatalities
- 1.3. Decrease bicycle and pedestrian injuries and fatalities from crashes
- 1.4. Improve work zone safety
- 1.5. Increase airport safety at all 36 publicly-owned commercial and general aviation system airports in Maine, and increase personal security in airport parking lots
- 1.6. Provide a safe transit system with safe and secure intermodal connections
- 1.7. Improve assessment of crash safety needs and provide broader accessibility
- 1.8. Improve security and prepare for disaster response
- 1.9. Ensure marine transit and State Ferry Service safety and security

2. Ensure the sustainability of Maine's transportation system

- 2.1. Preserve and maximize operational efficiency of all existing transportation modes
- 2.2. Develop management plans for key elements of the state's transportation infrastructure (e.g., interstate, key bridges)
- 2.3. Adhere to the Resource Allocation Policy (maintenance- and preservation-first)
- 2.4. Identify new funding sources to support the capital, maintenance and operational costs of strategic transportation improvement programs and investments
- 2.5. Seek and implement cost-effective innovative solutions on a life-cycle basis
- 2.6. Provide an airport system that adequately serves current and forecast demand

3. Promote economic vitality and competitiveness through transportation investment

- 3.1. Invest in highways and bridges key to Maine's economy
- 3.2. Provide freight shipping choices
- 3.3. Invest in airports where air travel is key to the Maine economy
- 3.4. Invest in public transit in support of travel to work, access to business centers, and tourism
- 3.5. Provide transportation options to and within tourist and recreational areas of Maine
- 3.6. Improve transportation efficiencies between areas that support natural resource industries and industrial centers
- 3.7. Promote traditional and emerging business (e.g., research and development) through investments in innovative technologies
- 3.8. Invest in quality community centers
- 3.9. Invest in visitor facilities that are eligible for federal and State highway funding and are associated with *Corridors of Regional Economic Significance for Transportation*
- 3.10. Encourage mutually beneficial partnerships

4. Develop and implement transportation programs that enhance quality of life

- 4.1. Encourage compact land use patterns to maximize transportation efficiency and improve neighborhood environments
- 4.2. Provide transportation and environmental/cultural stewardship
- 4.3. Provide equitable access and choice for all travelers, including Maine's aging population
- 4.4. Provide healthy transportation choices, such as bicycle and pedestrian facilities

4.5. Proactively plan transportation investments to minimize impacts to and by climate change

5. Enhance public awareness and participation

5.1. Ensure early and effective stakeholder involvement in the development and implementation of MaineDOT plans, projects and programs

5.2. Provide effective communication with and information to the public and stakeholders

Refer to Appendix 6 for strategies related to these goals and objectives.

Chapter 2 - Forces Shaping the Future

The global, national, and local environments in which we live are ever-changing. For Maine to develop and maintain a competitive edge in this rapidly expanding global economy and to further enhance quality of life, MaineDOT must provide Maine citizens with the information to understand the context within which transportation decisions are made—specifically, the trends, the constraints, and the potential for opportunities.

Maine is a large, mostly rural state with a dispersed population. The geography of thousands of miles of coastline, islands, lakes, rivers, and mountains make Maine a unique and wonderful place to live and visit, but these features also act as transportation barriers. High-quality, efficient transportation infrastructure is a critical link to keeping Maine competitive in the new, global economy. Investments in transportation infrastructure bring lasting and substantial economic benefits by ensuring the ability to grow the economy, and to create and retain jobs, while maintaining a good quality of life.

While Maine currently enjoys a high degree of mobility, it is clear that mobility demands will increase over the next 20 years as the result of changing demographics, technology, lifestyles, and ways of doing business. These are the major forces that will affect Maine’s future transportation needs.

In 2005, MaineDOT and the Maine Turnpike Authority hosted two internal workshops with noted economists and transportation experts from Maine and New England. The goal of these workshops was to begin a discussion about where Maine is going over the next 20 years, to determine how past trends might impact the future of the transportation infrastructure, and to consider options for how MaineDOT could address those challenges. The following factors, many of which are interrelated and are thus cumulative, play a strong role in shaping MaineDOT’s response to the future.

Demographic Trends

Population Growth

Maine is experiencing a slow statewide growth rate, and demographic disparities in Maine play a role in a particular area’s economic conditions and prospects. Often viewed as having two regions, north and south, economists identified, by history and geography, three distinct regions in Maine: coastal, central, and rim counties. While southern areas of Maine have seen growth due to a number of factors, including proximity to Boston, this growth will probably not extend to Northern Maine.

Maine’s southern and midcoastal counties—Cumberland, Hancock, Knox, Lincoln, Sagadahoc, Waldo, and York—are growing fairly rapidly. This growth can be attributed to in-migration, driven in part by Maine’s attractiveness and desirability for retirement and vacation homes. Increasingly, people are moving into the southern counties and continuing to commute to jobs in New Hampshire and Massachusetts. These coastal counties will increasingly experience congestion, especially in the summer months, and may benefit from congestion-relief actions for non-automobile travel choices, such as passenger rail, intercity bus, and intercoastal and intracoastal ferries, to serve both the seasonal visitor and the year-round resident. MaineDOT’s *Gateway 1* planning study identified opportunities to integrate transportation and land-use planning in the Midcoast region.

The central counties of Androscoggin, Kennebec, and southern Penobscot are located inland and have large “service center” communities. Once reliant on manufacturing industries for employment, the central counties are transforming to service economies. Despite the loss of manufacturing jobs,

industrial output in some sectors is still strong, including the paper industry. The result is that the central counties have a high export base and will likely continue to be reliant on intermodal freight facilities.

The “rim” counties of Aroostook, Franklin, Oxford, northern Penobscot, Piscataquis, Somerset, and Washington are predominantly located on the northern, eastern, and western borders of the state. These principally rural counties rely on the natural resource-based economy—forestry, farming, and fishing. Tourism, one component of natural resource-based industries, is expected to grow significantly in the rim counties, with a related demand for transportation infrastructure to support that growth. Maine residents from these areas are moving either to other areas within Maine, or outside of Maine, to seek job opportunities. Population growth has remained fairly flat or has experienced losses. Average income in rim counties is lower than in coastal and central counties. A recent report from the Maine Center for Economic Policy entitled *Physical Infrastructure Investments in the Rim Counties*, suggests that rim counties might benefit from their proximity to other urban areas, such as Québec City or Edmundston, New Brunswick. Given the reliance of service economy businesses on air travel, some rim counties might benefit from enhanced air service to Boston, as well as to Canadian hubs to the north.

Travel Demand and its Effect on Mobility

Another aspect of population growth to be considered is vehicle-miles traveled (VMT). VMT is expected to continue growing into the foreseeable future, but at a slower pace than historically. Although the rate of population growth is projected to slow in the coming years, other factors, such as people choosing to live outside the communities in which they work, will influence the ultimate demand for transportation services.

According to many studies, fossil fuel-derived VMT causes increases in carbon dioxide (CO₂), which in turn has been proven to result in climate change. For further information regarding climate change see Chapter 4, IV. Quality of Place Initiative. Currently, 93% of annual VMT in Maine is by private vehicles. These private vehicles will remain the primary means of mobility, although they may in the future be technologically different and run on fuels other than gasoline. According to the Federal Highway Administration (FHWA), truck and containerized shipments are expected to double in the next 20 years as the globalization of the economy continues to unfold. Thus, the growing demand on the highway network and increasing congestion and travel delays will make travel less predictable. This will increase the cost of travel for people, goods and services, and will ultimately decrease Maine’s economic competitiveness and quality of life, and significantly contribute to climate change. Therefore, to remain competitive and to positively impact the quality of life, efforts to manage congestion, reduce reliance on fossil fuels and reduce the rate of growth in VMT are needed.

Coordinated Human Service Transportation (Aged, Disabled, Poor, Disadvantaged)

Personal mobility is a crucial tool required for people to enjoy many significant aspects of their lives. A growing number of transportation-disadvantaged people (aged, disabled, poor, other disadvantaged) are imperiled by immobility because they cannot access the most common mode of transportation, a car. Better coordination of health, human service and transportation programs to address transportation services in urban and rural communities for senior citizens, people with disabilities, indigent populations, and health care recipients is needed.

The median age of Maine’s population is among the oldest in the country, and it is getting older. Maine’s future transportation system must adapt to the needs of an aging population, which will demand more travel choices as older drivers seek alternatives to their cars. Urban residents will need expanded transit services and associated health-related infrastructure, such as pedestrian and bicycle trails. Rural residents will require additional transportation services to economic centers to

shop, to seek medical care, and to meet other needs. Transportation services may need to be “door-to-door,” in order to meet special or unique needs. The large number and diversity of specialized transportation programs across many agencies potentially can create inefficient service and problems such as duplication, underutilization, inconsistency, gaps of service, and customer inconvenience. To address these problems, government agencies, human service providers, and transportation planners are advocating for improved program coordination.

In addition, safety will continue to be a dominant transportation theme for the elderly. Road signage may have to be upgraded so it is more readable, and road designs may have to be modified to reflect the needs of older drivers.

Jobs and Workforce Shifts

The loss of manufacturing jobs in rural areas of Maine, among other factors, has increased the number of commuters who drive longer distances in search of jobs. As a result, these workers spend a higher proportion of their income to access employment.² The additional driving distances come at a cost to the commuter, increasing costs and thus reducing take-home pay, and increasing congestion, wear and tear on roadways, and environmental degradation. As jobs concentrate in the service center communities, and as workforce housing and public services costs in them rise, the number of commuters will increase. To make commuting more cost-effective, more alternatives such as park-and-ride facilities and commuter van pools will be needed. Urban transit systems may need to be expanded to more distant areas.

In addition to providing transportation improvements to serve existing residents as they commute greater distances, Maine is working diligently to expand its recognized “*creative economy*,” and to attract new residents. In general, the *creative economy* is idea-driven rather than capital-intensive. In fact, recent trends suggest Maine is becoming a popular base for telecommuters.³ “*Sense of place*” becomes important in order to provide a safe, aesthetically and socially appealing environment in which to telecommute. MaineDOT will likely experience increased demand for programs that address community livability.

Maine’s Economy

Natural Resource-Based Economy

The natural resource-based industries, such as forest products, paper, fisheries, and agriculture will continue to play a vital role in the state’s economy, but in a more capital-intensive, less labor-intensive manner. Infrastructure investments will constitute an important part in supporting those industries and making them competitive in the marketplace. Another key element of the natural resource-based economy is tourism’s expanding role as an economic engine in the non-coastal mountains and forests of the state. Infrastructure improvements to support this emergent economy will be needed.

The mature coastal tourism economy is influenced by traffic congestion that affects both tourists and year-round residents. A challenge for MaineDOT is that its programs must support growth in the tourism sector, while ensuring that the improvements do not negatively affect the unique qualities that make Maine a great place in which to live, work and visit. Non-coastal tourism is shifting from a traditional backcountry or camping excursion experience to one that caters to aging baby boomers, who support sustainable tourism and want a more “luxurious” experience with less physical toil.

² Margaret Chase Smith Center for Public Policy

³ “Charting Maine’s Future”; The Brookings Institute; 2006

Global Trade

Maine and the northeast region of the U.S. stand to benefit from increasing European and Asian trade, thanks to shorter shipping times via the Suez Canal. According to the Maine International Trade Center, international trade by Maine companies grew by 27.5% over the past five years. In 2005, Maine businesses traded more than \$2.3 billion with 160 countries. Maine is situated between Atlantic Canada and the North American consumer markets of Montréal, Toronto and Chicago. Though well-positioned geographically in this emerging global trade corridor, Maine's potential economic opportunities and growth are dependent on transportation infrastructure to support these trade opportunities.

Levels of congestion in the Northeast, particularly along the I-95 corridor, are anticipated to worsen. Closer to home, Maine's border crossings with Canada could potentially turn into chokepoints, due to antiquated border facilities and new homeland security policies. The efficient movement of goods and services depends upon maintaining the existing transportation infrastructure; facilitating transfers between trucks, railcars, airplanes and ports; and addressing bottlenecks. Transportation infrastructure must be improved or developed to effectively connect with new and existing trade networks. The construction of a state-of-the-art border crossing in Calais will reduce delay along this very important trade corridor, which connects Maine and the Canadian Maritime Provinces.

Success in improving international trade opportunities also depends on continued involvement in regional and international coalitions. The *Northeast CanAM Connections: Integrating the Economy and Transportation* study is focused on the potential regional growth opportunities created by the ever-expanding global trade network and on the degree to which transportation deficiencies are inhibiting that potential. The study, led by Maine and involving the states of New Hampshire, Vermont, and New York, and the Canadian provinces of Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador, Québec, and Ontario, will help assure that strategies for regional transportation networks, including seaport development, rail and rail-highway connections, are in place to serve growing regional demand and opportunities.

Technology

Technology is important to Maine's transportation infrastructure. MaineDOT is pursuing a number of technological innovations designed to streamline the movement of people and goods, and strengthen the capabilities of our public safety response services. The next 20 years will be a transition period during which vehicles will take over certain driver roles through vehicle-navigation, vehicle-guidance, and vehicle-control systems. Technological advances will also help us better manage transportation systems through improved traffic-monitoring, traffic-simulation, traffic-management, and traffic-control mechanisms.

Intelligent Transportation Systems (ITS) are already being used throughout the State of Maine on highways, roads, transit systems, and in freight management. FHWA and FTA require that each State using ITS develop a Statewide Architecture Plan in conformance with 23 CFR Section 940 to ensure that ITS projects using funds from the Highway Trust Fund and Mass Transit Account conform to applicable standards.

In 2005 Maine adopted a Statewide ITS Architecture Plan and an associated ITS Operations and Integration Plan. The Statewide Architecture Plan guides development of the MaineDOT ITS program and projects and also lays out the system engineering requirements associated with these projects. The ITS Operations and Integration Plan proposes a series of short, medium and long range projects that are based on the needs of identified stakeholders. Both of these documents are used to help to prioritize projects and guide investment decisions as part of the long term planning process. Individual ITS projects are identified, as appropriate throughout *Connecting Maine*.

An example of successful technological innovation is the Maine Turnpike Authority's *E-ZPass* tolling system. *E-ZPass* is an automated toll-collection system that allows individuals and businesses to pay tolls electronically on the Maine Turnpike and on more than 40 other toll highways, bridges, and tunnels in the eastern United States. The Maine Turnpike Authority is planning as part of its next 10-Year Plan to implement limited use of highway speed tolling at some toll plazas where appropriate and deemed to be cost effective. These plazas will also continue to incorporate toll booths for cash paying customers.

MaineDOT will continue to coordinate and integrate computer and communication technologies within Maine's overall transportation network. These Intelligent Transportation System (ITS) improvements will speed the transfer of information to a broad audience, bringing improved mobility, safety, air quality, and productivity.

Energy

Energy costs have increased rapidly over the past several years, culminating in a two-fold price increase in 2008. Though energy costs have since dropped to three-year lows, they are increasing again and other potential crises involving price and/or availability can be expected in the future. It is therefore imperative that this issue be addressed through the development and implementation of a strategy. During the recent spike in fuel prices, demand for transit went up by an average of 23% for Maine's urban transit providers. While this rapid increase in transit demand can be addressed at present, future public demand for transit alternatives will require a high level of federal support. It is highly recommended that transportation, health, environmental, housing, and planning officials work together to foster improved transit systems to address future energy emergencies and trends. This includes increasing funding for transit systems and collaboratively creating transit-oriented development patterns including compact walkable communities.

In June 2008, with gasoline prices reaching \$4.00 per gallon, Governor John Baldacci established the Pre-Emergency Energy Task Force to investigate escalating heating oil, gasoline and diesel prices in Maine. Governor Baldacci directed the Task Force, representing legislative leaders, transportation industry stakeholders from passenger & freight rail, bicycle and pedestrian, transit, commercial trucking, commuter programs and alternative fuel advocates, to deliberate and recommend steps to help relieve Maine citizens from the negative impacts of rising gasoline prices.

As a result of this effort, recommendations were set forth to mitigate the energy crisis caused by the volatility and uncertainty of fossil fuels prices. Each recommendation began with an overview of the current or anticipated aid program followed by targeted strategies that address the increasing demands for transit/commuter options, prioritized areas of greatest need, and identified potential funding.

At this time, the immediate energy crisis has subsided. Despite that, according to the International Energy Agency's (IEA) World Energy Outlook, released on November 12, 2008, oil prices are predicted to start a steep climb soon, and by 2030 will settle around \$120 a barrel. The IEA predicts that the long-term ripple effects of high oil prices could be far more serious than the \$4-gallon prices that confronted drivers recently.

Land Use

Frequently, transportation infrastructure is simply overlooked during the land-use planning process. Reconciling transportation and land-use decision-making is essential to maintaining mobility, protecting our investments in the infrastructure, and preserving the unique character of Maine. Success requires MaineDOT to take a visible leadership role in supporting planning efforts at the state,

regional, and municipal level to provide more information concerning actions that can negatively affect transportation infrastructure. The impacts of inconsistent and uncoordinated land-use decisions on the transportation infrastructure must be better explained and more fully understood by citizens and their regulatory boards if system degradation is to be avoided.

Many communities have generally well-designed land-use plans. However, problems occur when local land-use decisions are not thought through with regard to transportation. Land-use decisions made in one community often affect the efficiency of transportation systems there and elsewhere. Sometimes, those land-use decisions create transportation system stresses that outpace the ability of MaineDOT to respond. On the other hand, transportation investments can stimulate unanticipated development and growth resulting in unintended consequences. In larger communities, traffic congestion and decreased mobility are often the result of disconnected land-use decisions; rural areas experience incremental development pressure which over time degrades efficiency.

Land-use planning at the municipal level is generally focused on activities occurring within the municipal boundaries, and rightfully so. However, there are activities that extend well beyond municipal boundaries and may extend across many communities, which, if not given consideration, can lead to unanticipated outcomes and costly decisions, especially in regard to the transportation system. Like the river system that spreads across Maine, the highway system belongs to the people. From early in Maine's history to 1976, Maine rivers were the highways used to drive logs and pulp to the mills. The demise of the river drives can be attributed to growing public awareness and concern for controlling surface water pollution. Thus, under the stewardship of Maine Senator Edmund S. Muskie, the federal Clean Water Act of 1972 was enacted. With improved water quality, an increase in development pressures along the waterways was anticipated. People differed in their expectations and in how the resource was viewed. The Maine Legislature enacted the Shoreland Zoning law in 1971 as a way to balance competing interests of public good and private property.

Borrowing the rivers analogy a bit further, densely developed areas adjacent to rivers were allowed to have a wide range of new development. In other areas, development activities were limited to residential uses, and the sparsely developed areas were accorded special status of "resource protection." Zones were established after evaluation of geographic features and cultural and historical patterns of development. Clearly, the intent was to apply a set of criteria throughout the length of the river system, irrespective of municipal boundaries, and to establish zones of protection or development in accordance with those findings. The rivers were to be viewed and managed as a system.

What does this have to do with transportation? The highway system is strikingly similar to the river system, but lacks the consistency of performance standards across multiple jurisdictions needed to ensure the integrity of that system. Maine's Growth Management Law requires communities developing a comprehensive plan to inventory and analyze existing transportation systems, and to develop an implementation strategy that seeks to address the state's goals in addition to their own policies. Too often, the analysis is strictly an inventory of the one community's transportation infrastructure and lacks a full evaluation of the importance of the system, not only to the community through which it passes, but also to neighboring communities and citizens that share its transportation corridors.

Unquestionably, Maine communities are generally eager for development opportunities to expand their municipal tax bases. Often, development that is beneficial to that goal produces consequences that are costly and often difficult to measure. For example, the number of people commuting to jobs is increasing, as is the distance traveled. Time spent in the vehicle is costly, either in quantifiable terms, such as the cost of fuel and childcare, or in qualitative terms, such as lengthening the time on the job and lessening the time spent at home. A similar, but more easily quantifiable cost can be determined

with respect to freight movement. The trucking industry is very aware of the old adage that “time is money.” Thus, communities attempt to gain new revenues through development opportunities, meanwhile adversely affecting the travel time of a large traveling public, including its own citizens and businesses.

MaineDOT is not looking to establish a new regulatory program. It is, however, looking at existing models, Shoreland Zoning being one, which have brought uniformity for development and addressed problem-solving through a systems approach rather than on a case-by-case basis. The *Gateway 1* effort is a landmark, long-term, strategic, land-use-and-transportation planning project for the Midcoast Route 1 corridor in Maine. A collaboration of 21 communities and other state agencies, *Gateway 1* is exploring new ways of combining transportation and land-use decision-making. By doing so, the resulting strategies will balance community growth and local values with transportation services and needs.

Building on the *Gateway 1* experience, MaineDOT, with its Regional Council partners, has identified 38 *Corridors of Regional Economic Significance for Transportation* (CRESTs), and has developed a multimodal corridor planning guide. The Regional Councils are expected to play a significant role in corridor planning by working with communities along various corridors to bring about a better understanding of the relationship between land-use planning efforts and maintaining the integrity of the highway system, and to assess the opportunities for successful development of alternative (non-highway) transportation modes. Other options being evaluated for corridor preservation include the purchase of development rights, which would limit development of acquired parcels to low-impact uses. Incentives are being examined for communities that undertake and adopt land-use ordinances that protect and preserve the highway system, while still allowing for development to occur.

LD2165 – Resolve, Regarding Legislative Review of Portions of Chapter 103: Sensible Transportation Policy Act, a Major Substantive Rule of the Maine Department of Transportation, also offers incentives to individual and multiple communities who collaboratively develop and implement coordinated transportation and land-use planning, either as transportation chapters contained within approved municipal comprehensive plans or separately as stand-alone transportation plans.

“Building on the Gateway 1 experience, MaineDOT, with its Regional Council partners, has identified Corridors of Regional Economic Significance for Transportation (CREST), and has developed a multimodal corridor planning guide.”

An area of interest to be more fully explored by MaineDOT is the use of impact fees to recapture the cost of infrastructure investments made by MaineDOT or developers. Infrastructure investments are often made to reduce congestion and add capacity to a highway system whose traffic volumes have exceeded the limits for which it was designed. The improvements, once completed, free up or create additional capacity. The additional capacity is now available for subsequent developments, which, if the project does not generate traffic volumes that exceed that capacity, are available at no cost to the subsequent developer(s). This has emerged as an equity issue throughout the state.

Another problem occurs when a transportation improvement is made in a community to mitigate existing traffic problems or to mitigate the impacts of development. Projects in communities that do not experience traffic problems within their jurisdiction may contribute to the problems in a neighboring community, thus diminishing the capacity created by the investment of others. By establishing a fair share impact fee, investments could be funded through a combination of private, public, or public-private investments. The investments could complement long-range planning efforts by adding additional capacity to accommodate immediate development, as well as more long-term and regional development.

Today's era of constrained resources will require new models for integrated transportation and land-use planning that offer a highly effective way to protect the transportation infrastructure throughout the state. To make that happen, the MaineDOT must play a stronger role and become more involved in working with local communities, governments, and developers on land-use decisions before traffic problems occur. MaineDOT will continue to work with the State Planning Office, other State agencies, as well as regional and local planning agencies, to incorporate transportation considerations.

Environmental Stewardship

Transportation facilities, like all land-use activities, affect the environment. Whether the environment is natural or man-made, cultural, social, or economic, provision of transportation services often carries an unintended effect that must be managed. An integral part of MaineDOT's Quality Communities Initiative, which includes community livability programs, is a "context-sensitive solutions" philosophy and environmental stewardship efforts. These programs commit to enhance, preserve, avoid, protect, minimize, or mitigate the impact of transportation projects on historic, scenic and cultural resources; wetland, fish, and wildlife ecosystems; and air and water quality. This commitment, however, has its challenges. Regulations and their application change over time; and their effects sometimes compete with one another. These challenges will likely increase in complexity in the future as the values that underlie regulatory frameworks evolve.

Environmental mitigation activities are currently defined in SAFETEA-LU as strategies, policies, programs, actions and activities that over time will serve to minimize or compensate for the impacts to or disruption of elements of the human and natural environment associated with the implementation of this statewide long-range transportation plan. SAFETEA-LU also requires a discussion of potential mitigation activities for each environmental resource affected by the plan. These activities cannot be readily defined at this time, but they will be considered if at the time of project implementation they will adversely affect environmental resources. Mitigation efforts will be determined through consultation and coordination with the Federal and State wildlife and land management agencies. Essentially, mitigation will be conducted in the following order of priority:

1. Avoidance
2. Minimization of Impacts
3. Mitigation of Impacts

Examples of potential mitigation strategies include:

- **Archaeological Impacts**
 - o Design modification so that impacts on archaeology are avoided first or minimized
 - o If impacts can not be avoided, full excavation will be used to preserve the record
 - o Coordination with the Maine State Historic Preservation Commission/State Historic Preservation Officer will continue
- **Historical Impacts**
 - o Design modification so that impacts on historical resources are avoided first or minimized
 - o If impacts can not be avoided, full historical recordation is used to preserve the record
 - o Coordination with the Maine State Historic Preservation Commission/State Historic Preservation Officer
 - o Photo documentation of historical resources when required
 - o Historic archival recording, including photos, plans, etc. as appropriate to preserve historic resource information for the public

- **Watershed/Wetland Impacts**
 - o Design modifications so the impacts to wetlands are avoided first or minimized
 - o Compliance with the Clean Water Act Section 404 and ongoing consultation with the U.S. Army Corps of Engineers
 - o Compliance with the Natural Resources Protection Act and ongoing consultation with the Maine Department of Environmental Protection and the Maine Department of Inland Fisheries and Wildlife
 - o Wetland banking, as required
 - o Wetland restoration, as required
 - o Creation of new wetlands, as required
- **Natural Resource Impacts**
 - o Using “Beginning with Habitat” as a planning tool
 - o Compliance with the Natural Resources Protection Act, ongoing consultation with the Maine Department of Environmental Protection and the Maine Department of Inland Fisheries and Wildlife, and compliance with the agency-approved MaineDOT *Waterways and Wildlife Crossing Policy Design and Guidance*
 - o Buffers, as required
 - o Compensation, as required

The effects of suburban sprawl continue to have a negative impact on the quality of life of Maine residents and also on native plant and animal life, including habitat loss and fragmentation. These issues can be addressed through thoughtful proactive land use planning, including transportation planning. MaineDOT will continue its partnership with the Beginning with the Habitat program and will coordinate with the State Wildlife Action Plan.

Carbon Dioxide (CO₂) Reduction: Preliminary Analysis of Benefits from
Connecting Maine Investments -

“MaineDOT estimates that the strategic investments in the highway and transit projects identified in this Plan will reduce emissions of CO₂ by 26 to 32 thousand metric tons by 2020, and 40 to 48 metric tons by 2030.”

Maine’s transit providers lead the state’s efforts to reduce mobile source emissions. They provide an alternative to driving alone, they reduce VMT, and they lead the state in the transition to cleaner fuels. The Bangor Area Transit System (BAT) uses biodiesel and the *Island Explorer* service on Mount Desert Island uses a completely propane-fueled fleet. With the construction of a compressed natural gas (CNG) fueling station in Portland, not only will the METRO transit system begin conversion, but also other fleets, such as school buses and the U.S. Postal Service, will be able to move to cleaner fuels. Despite the desire to switch to cleaner fuels, the limited availability of these alternative fuels currently hinders the transition to them. MaineDOT will focus on increasing the use and availability of these alternative fuels.

To deal with the much larger issue of climate change, MaineDOT is engaged in many activities and programs, and anticipates that these efforts will need to be increased as the issue becomes more defined. Ambitious initiatives such as the *Maine Climate Action Plan’s* goal to reduce greenhouse gas emissions to 1990 levels by 2010, and to 10% below those levels in 2020 will challenge MaineDOT’s long-range delivery of transportation improvements. The transportation sector represents the largest source of

greenhouse gas (GHG) emissions in Maine at about 28% of total GHG emissions. Under a business-as-usual scenario, GHG emissions will increase 48% from 1990 levels by 2020. By implementing long-range transportation actions such as slowing VMT growth, utilizing low-GHG fuel, and implementing tailpipe emission standards, GHG emissions from 2010 to 2020 can be decreased by 28.8%. Long-range strategies will need to increase the availability of low-GHG travel choices, such as transit, vanpools, walking, and biking. Complementary policies will need to address land use and location efficiency, and create transit-based incentives, to improve the attractiveness of these low-GHG travel choices.

Among the many serious threats presented by climate change, the potential rise in sea level, coupled with severe coastal storms, could adversely affect transportation infrastructure along Maine's extensive seacoast and low-lying areas. These adverse effects will not be limited to coastal areas. Higher intensity and longer duration storms will occur with greater frequency. These major storm events will result in significant damage due to flooding and erosion, as was evidenced by a major rain event in 2007 that washed roads away in western Maine, and other similar major storm events recently. Major storm events such as these may render vital transportation links inoperable for long periods of time and require unplanned and high-cost infrastructure replacements. Adapting to the changing environment will create new infrastructure demands that must be planned for. Increased flood frequency and changes in water levels will also strain culverts and the wildlife that pass through them. MaineDOT has developed guidance on these impacts in its 2008 "Waterway and Wildlife Crossing Policy and Design Guide". For example, all new culverts are being installed with a bottom dimension that is at least 1.2 times the stream width to allow both for increased flows and also to enable wildlife to cross through the culvert on dry ground during normal stream flow periods.

Balancing State and Federal Mandates

MaineDOT investment decisions in response to the transportation needs that drive our economy are guided by numerous laws and regulations. Each has its own objectives and associated processes. MaineDOT attempts to integrate these objectives and processes to arrive at balanced decision-making. A recent law has overarching implications on MaineDOT's efforts.

In 2007, the 123rd Maine Legislature passed LD1790 – An Act to Secure Maine's Transportation Future, which subsequently became Public Law 2007, Chapter 470. This law provides a list of quantifiable capital goals and requires MaineDOT to prepare and submit a biennial report card on progress related to these goals. It also sets and clarifies debt policy for capital transportation investment in Maine and provides for a TransCap Trust Fund, a new funding mechanism that would allow dedicated revenue streams to leverage revenue bonds for long term capital investments in all modes of transportation. This *Plan* incorporates the provisions of this law.

Other Factors Shaping Transportation Decisions

Many factors affect the costs of materials essential to building and maintaining the transportation system. Global trade, while providing relatively inexpensive consumer goods, has turned many countries around the world into economic giants. The industrial engines driving these economies have competed, and will continue to compete, for a substantial portion of the oil, steel, and concrete markets, as well as for other essential materials. The growing demand for these products has caused prices in the United States to rise. Competition has created volatility in the marketplace, resulting in a shorter "shelf life" for transportation project cost estimates.

New technologies for the automobile and trucking industries are focusing on increased mileage rates, higher fuel efficiency, and emission reductions. Although VMT may not be reduced, the increased

efficiencies will have the same positive effect, with respect to air quality, attributed to the reduction in VMT. The rekindled interest in alternative fuels, such as ethanol from Maine trees and corn, is highly promising. Hybrid fuel autos are no longer experimental and are increasing in market share. Electric power and hydrogen are showing more promise for use as a fuel and will likely be developed for mass use within the life span of this *Plan*. This will reduce our dependence on fossil fuels and, with traditional fuel tax revenues continuing to diminish, the result will be less funding available to address increasing transportation infrastructure needs.

The nation relies heavily on the most energy-intensive means of transportation, highway travel and aviation, and it is these modes that will experience the greatest impact as a result of increasing fuel prices. The dependence on foreign sources of fuel will renew interest in alternative fuels, such as electric power, alcohol, hydrogen, and biodiesel. National policies relative to more fuel-efficient vehicles and other initiatives to reduce consumer demand may be enacted. This impact will cause individuals and businesses to rethink travel and transportation options. Transportation investments must enable businesses and individuals to shorten their trip times and use more fuel-efficient modes of transportation.

The goals described in Chapter 1, affected by the forces shaping the future described in the preceding paragraphs, combined with the funding limitations identified in the next chapter, led MaineDOT to develop new initiatives in order to address the future needs of Maine's transportation system and its people.

Chapter 3 - High Priority Objectives and Unmet Needs

Maine's Sensible Transportation Policy Act, first introduced in 1991 in response to public concerns over a proposed Maine Turnpike widening project, established a Resource Allocation Policy. Essentially, the Policy focuses on four guiding principles:

- Meet system preservation needs
- Invest in needs for all modes
- Invest in transportation system management and travel demand management alternatives
- Target limited resources for any new highway and non-highway capacity to the highest priorities

The anticipated revenue that should be available to MaineDOT over the next 20 years has been estimated at \$320 million per year. This estimate includes all anticipated federal, state and other fund sources, including but not limited to Federal Highway Administration, Federal Transit Administration and Federal Aviation Administration funding, State Highway Fund, state transportation bonds, licensing and registration fees and all other fund sources routinely provided to the MaineDOT.

Summary of High-Priority Objectives

Based on this Resource Allocation Policy, anticipated revenues and statewide transportation system needs, the following table illustrates the high priority investments which will be the targets for anticipated funding over the next 20 years.

Top Objectives and High-Priority Strategies

Goal 1 – Ensure a Safe and Secure Transportation System:

1. Reduce Crashes, Injuries and Fatalities on Maine's Highways
 - a. Implement the Strategic Highway Safety Plan
 - b. Create education and outreach programs
 - c. Reduce economic impact of (lane departure) crashes through use of rumble strips, shoulder improvements, clear zones, signing, use of ITS, median guardrails and traffic calming
 - d. Strategically locate crossing structures for large animals
 - e. Implement "Keeping our Bridges Safe" Report
2. Increase work zone safety
 - a. Train MaineDOT workers and contractors
 - b. Coordinate Traffic Control Plans
 - c. Monitor work zone sites
 - d. Improve project scheduling
 - e. Education and outreach
3. Support the Maine Emergency Management Agency (MEMA) in developing evacuation plans
4. Increase safety and security for all passenger systems (air, surface, sea)
5. Provide adequate trucker rest area facilities
6. Operate the transportation system to established levels of service

Goal 2 – Ensure the Sustainability of Maine’s Transportation Systems:

1. Preserve and maximize operational efficiency of all existing modes
 - a. Develop and implement *Corridors of Regional Economic Significance for Transportation* (CRESTs) plans
 - b. Implement State ITS plan
 - c. 50% of transit fleet retains at least 50% useful life
 - d. Implement an updated “*Explore Maine*” plan
2. Develop management plans for key components of infrastructure and for CRESTs
3. Adhere to Resource Allocation Policies
 - a. Meet system preservation needs
 - b. Invest in needs for all modes
 - c. Invest in transportation system management and travel demand management alternatives
 - d. Target limited resources for any new highway and non-highway capacity to the highest priorities
4. Identify new funding sources
5. Use cost-effective innovative solutions

Goal 3 – Promote Economic Vitality and Competitiveness through Transportation Investments:

1. Invest in highways and bridges
 - a. Reconstruct substandard roadways
 - b. Reduce number of miles posted for weight limits
 - c. Improve or replace bridges for safety and economic vitality
 - d. Construct climbing and passing lanes on heavy haul routes that are heavy commuter and tourist routes as well
 - e. Preserve corridor capacity by limiting access points and managing congestion
2. Promote freight shipping choices by implementing the *Integrated Freight Plan*
3. Invest in airports that are key to the state economy
4. Invest in public transit for travel to work, access to businesses and tourism
 - a. Strategically invest in intracity and intercity transit/rail/cruise facilities
 - b. Expand “*Go Maine*” rideshare service
5. Provide transportation connections for visitors and recreationists
6. Invest in support of traditional and emerging businesses, e.g., natural resource industries, including ecotourism
7. Invest in community centers
8. Prioritize investments using economic and environmental factors

Goal 4 – Develop and Implement Transportation Programs that Enhance Quality of Life:

1. Encourage efficiency and environmental quality through compact land use, and incentivize land use activities that create safety, capacity and other operational benefits
2. Promote transportation and environmental/cultural stewardship
 - a. Convert public fleet to clean fuels
 - b. Reduce VMT and related air emissions through provision of commuter options
 - c. Find cost effective environmentally friendly options to using salt for winter operations
 - d. Improve/expand partnerships for more recreational access
 - e. Maintain and improve MaineDOT’s Environmental Management System
 - f. Adopt the Historic Bridge Action Plan
 - g. Maintain and improve the Surface Water Quality Protection Program
 - h. Complete Maine’s municipal sand-salt facility program
 - i. Reduce the impacts to climate change

3. Provide equitable access and choice for aging Mainers and for health and safety needs
 - a. Use shoulder and sidewalk policies
 - b. Use Transportation Enhancements and other sources to fund bike/ped facilities

Goal 5 – Enhance Public Awareness and Participation:

1. Ensure early and effective stakeholder involvement in transportation decisions
2. Provide the public with good information
3. Encourage partnerships at all levels

Examples of Unmet Critical Investment Needs

Based on anticipated available funding, MaineDOT will be unable to maintain the current standards for Maine’s transportation infrastructure. As a result, critical investments in transportation improvements or efficiencies that address economic development and quality of life opportunities will be severely limited. Examples of some critical activities that will not move forward are provided below to illustrate the effects of the anticipated revenue shortfalls.

Safety and Security

- Public information efforts may be dramatically reduced
- No implementation of a disaster response plan
- No new capacity for 511 to assist in incident management and evacuations
- Installation of fully integrated Dynamic Message signs at strategic locations to improve safety and mobility during evacuations not completed
- Unable to effectively address run off road crashes (Maine’s top fatal crash type)

Highways and Bridges

- Limited reduction in number of posted road miles
- No reduction in congestion – congestion will likely increase
- Limited reconstruction of substandard roads – over 45% of state owned roads have never been constructed to modern standards
- Structurally deficient bridges will be replaced at a rate significantly lower than required by Chapter 470
- Functionally deficient bridges that impede traffic flow will be addressed only if also structurally deficient

Transit

- No expansion in capacity of existing intracity transit systems and no new intracity transit systems
- No new development of intermodal passenger facilities
- No new development of commuter rail services
- Very limited expansion of Go Maine rideshare program

Bicycle and Pedestrian

- Limited improvements to the shoulder and sidewalk network
- Few new bicycle and pedestrian facilities in village and downtown areas

Freight

- No investments in freight intermodal connections
- No new rail line purchases
- No new public-private partnerships or infrastructure investments to support the marine highway

Aviation

- Only 40% of system airports will meet a pavement condition index of 70 or greater for primary runways by 2017
- Only 25 of 36 system airports providing fuel will meet National Fire Protection Association guidelines
- Only 23 Level I, II, and III airports will have a business or financial plan
- Only 24 of 36 airports will support “LifeFlight of Maine”

Quality of Life

- No increase in the number of public transit buses running on clean fuels
- No ability to support the unique transit needs of Maine’s growing aging population
- Implementation and expansion of MaineDOT’s Environmental Management System will be limited to MaineDOT maintenance facilities
- No increase in funding for MaineDOT’s Surface Water Quality Protection Program
- No funds to finalize the state’s investment in municipal sand-salt facilities
- Limited financial support for bicycle and pedestrian facilities

Chapter 4 - Investment Initiatives

Many studies demonstrate a strongly positive relationship between transportation infrastructure investments and economic growth. The strategy developed by MaineDOT looked through a number of lenses to determine the extent to which deficiencies in the transportation system are affecting economic growth and development opportunities. These are the areas where investment will be targeted. Priority investments will be focused on those that address public safety and economic benefit.

There is also a large body of information showing the effect of delaying maintenance of the transportation system. Deferred maintenance schedules cause an increase in the rate of deterioration over time. One only needs to look at our highways and railways. Failure to fund even basic maintenance activities, such as painting of bridges, lessens the life span of those systems. This is not an anomaly, especially when maintenance is continually deferred. Playing catch-up is very difficult and extremely costly, if it can be done at all.

The initiatives presented here are not simply about maintenance of the existing transportation system, but rather they are MaineDOT's contribution to the much larger debate over the future direction of the state of Maine. The much-discussed benefits of global trade, for example, will not accrue to the state without a much larger discussion of the potential benefits and actions needed to make it happen. Factors such as labor supply and workforce education obviously are not going to be solved by transportation investments alone. But this *Plan* is focused on the movement of commerce into and through Maine, and is working to identify the infrastructure deficit that needs to be addressed to support the existing and emerging opportunities.

For example, to support international trade moving through the Halifax-to-Toronto-and-Chicago trade corridor, improvements will be necessary on both sides of the border; therefore improvements in Maine will be essential if the state is to take advantage of the increased trade opportunities and avoid being bypassed. The public policy discussion in Maine relative to the anticipated growth in international trade begs the question, "What is in it for Maine?" An example of a potential major opportunity to tap into global trade lies in future development and expansion of the Port of Searsport, which is Maine's only seaport connected to a double-stack railway capable of going to the Pacific coast. To realize its fullest potential, it will be necessary to analyze the markets and to develop the appropriate infrastructure to support the niche markets that best benefit the state.

Despite the costs, people and businesses across Maine consistently support transportation funding initiatives because they recognize that the investments are integral to safety, the health of the economy, quality of life, and the environment. Greater demand for system improvements to meet changing times is evident. People are driving more and farther for work and recreation; expanded trade opportunities and freight movement require better east-to-west connections; demand has increased across a varied array of users for more multimodal connections; new or expanded transit services are needed to serve densely populated areas and service center communities in rural areas to service an aging population and changing employment patterns; and improved airport facilities are in demand.

MaineDOT has identified the following initiatives that focus on the transportation systems that are vital to the state of Maine. Some of the initiatives are programs within MaineDOT; others provide a focus on an asset of importance, but draw resources from multiple programs within MaineDOT. Not only do these initiatives highlight the importance of a particular system, but they also highlight the interrelationship of the diverse elements within MaineDOT and provide the platform around which resources (funding, assets, and people) are concentrated to achieve beneficial outcomes. As capital programs are developed, these initiatives are of paramount importance in determining priorities and allocating project funds. These initiatives also should be considered by Maine communities who, as hosts to these network components, can guide land-use decisions that support the state's efforts to

increase economic efficiency and reduce public costs. All costs indicated are in 2007 dollars - no inflation factor has been applied to any of these costs.

In accordance with Public Law Chapter 470, priorities will be set to maximize the benefit to transportation users and to focus on *Corridors of Regional Economic Significance for Transportation* (CRESTs).

I. Highways Initiative

State Highway System – The state highway system is made up of all the roads and related infrastructure in the MaineDOT inventory in every area of the state, but exclude local roads. The system is a capital asset worth billions of dollars and an investment around which most of the commerce in Maine has developed. Indeed, it will remain the critical component of the transportation system well into the foreseeable future. Included in this inventory are the interstate system, the arterial highway system, the major collector highway system, the minor collector highway system, and bridges. Much of the state highway system has never been built to modern standards - this initiative would help address those needs.

Heavy Haul Truck Network – The Heavy Haul Truck Network (HHTN) is a critical subset of the Maine Highway System and defines those highways most crucial to Maine’s economic lifeblood. Comprised of the Interstate system and the arterial highway system, with some major collector highways, the HHTN reaches across the state to provide vital links for a diverse economic base connecting the major service centers to each other and to the surrounding states and provinces. Some HHTN highways are structurally and geometrically inadequate to meet recommended engineering specifications. Significant preservation activities, as well as new capital facilities, are required on an ongoing basis to keep the system in good repair.

Safe Highways – Traveler and worker safety is at the heart of all MaineDOT activities. The department has collaborated with over 25 public and private partners in the generation of Maine’s new *Strategic Highway Safety Plan* entitled “*One is Too Many.*” That plan identifies four primary “emphasis areas”: Safety Belts and Passenger Restraints, Lane Departure Crashes, Younger and Older Drivers, and Aggressive Driving. Two other important areas of emerging concern are motorcycles and impaired driving. To address these issues, *Connecting Maine* identifies a series of objectives aimed at reducing the injuries, deaths, severity of crashes, and economic impacts caused by crashes. Automobile crashes in Maine result in an average of 189 deaths and cost Maine’s economy more than \$1.1 billion per year.

Although all of the initiatives detailed in *Connecting Maine* have safety at their core, additional capital resources must be applied to realize the full potential for meeting the objective of this *Plan*.

10-Year Installment: \$110 million
20-Year Estimated Need: \$220 million

Interstate Improvement and Modernization – The interstate highway system in Maine is the transportation backbone connecting Maine to the U.S. and Canada. With portions ranging in age from 20 to 50 years old, the system is not without growing pains. The mainline and ramps were not designed to meet today’s traffic volumes and are becoming more congested, thereby affecting safety and mobility, and aging pavement, bridges, and drainage structures need rehabilitation or replacement. This initiative focuses on modernizing and maintaining:

- Interstate bridges in good, serviceable condition (cost included under Bridges Initiative)
- Free flow traffic on the mainline and ramps
- Pavement ride (i.e., smoothness) in good or better condition

10-Year Installment: \$640 million
20-Year Estimated Need: \$1.3 billion

Arterial Highway Modernization – The degree to which the interstate system is the transportation backbone, the arterial highway system is the skeleton that supports Maine commerce throughout and connects Maine’s regions to one another. Nearly all commerce interacts with or is dependent upon this network of over 2,175 miles. Of those miles, 535 are considered structurally or geometrically inadequate, resulting in less efficiency and reduced safety in some cases. This initiative focuses on modernizing about 357 miles of inadequate arterial highways by 2017, and the remainder by 2022, as required by Chapter 470.

10-Year Installment: \$870 million
20-Year Estimated Need: \$1.3 billion

Secondary Highway Modernization – Approximately 2,135 miles of Maine’s 3,800 mile collector highway system are structurally or geometrically inadequate. Each spring, over 1,850 miles are posted for at least some period of time, thereby restricting passage for trucks weighing greater than 23,000 pounds. The postings are necessary because many highways cannot support the loads during the spring thaw. Postings have an adverse economic impact on the delivery of goods and raw materials statewide. This initiative focuses on modernizing 1,068 miles of inadequate secondary highways by 2017, and the remainder by 2027, as required by Chapter 470.

10-Year Installment: \$1.3 billion
20-Year Estimated Need: \$2.6 billion

Highway Preservation – Maine has invested hundreds of millions of dollars modernizing its highway network. As with any investment, it is important to protect that investment with an aggressive pavement preservation program. MaineDOT is committed to preserving pavement on modernized segments of highway not only to provide a quality ride experience, but also to preserve the investment on those segments that have been properly built. On segments of highways that are geometrically or structurally inadequate, a seven-year preservation-paving cycle will be employed to keep these roads in serviceable condition.

This initiative focuses establishment of an aggressive pavement preservation program to prevent system degradation.

10-Year Installment: \$870 million
20-Year Estimated Need: \$1.74 billion

Congestion Management – Traffic congestion is a growing issue nationwide and is a drag to a growing economy, in lost time and productivity. Despite its rural image, Maine is not exempt from this problem. Congestion can be found principally on portions of the state highway system. Until recently, vehicle-miles traveled (VMT) was increasing at nearly 3% annually in Maine over the last two decades. The increase in travel delay was more than double the rate of growth in travel. Currently, Maine experiences nearly 40 million hours of travel delay annually on the arterial highway system, at an estimated direct economic cost of \$500 million in lost time.

Congestion also adversely affects air quality and the environment. MaineDOT seeks to reduce delay for highway users caused by congestion by 9.3% to 30 hours per 10,000 vehicle miles traveled by 2030 through better traffic management (including incentives for land-use decisions that promote transportation efficiency), increased modal choices, and expanded highway capacity.

10-Year Installment: \$470 million
20-Year Estimated Need: \$1.0 billion

II. Bridges Initiative

Bridges – MaineDOT owns and manages a network of 2,722 bridges. As of this writing, 280 bridges are at risk of posting, reposting at a lower speed, or closure within 10 years, unless repair, rehabilitation, or replacement is undertaken. At this time, 208 bridges are more than 80 years old, thereby exceeding their life expectancy. At the current replacement rate of 14 bridges per year, bridge life expectancy would need to be 185 years. Even if every bridge had an 80-year life expectancy, MaineDOT would need to replace approximately 32 bridges per year. The current funding is inadequate to maintain bridge serviceability, with only about one-half of the bridges at risk of posting or closure likely to be funded in the 10-year period. This initiative focuses on implementing a more aggressive bridge maintenance program.

10-Year Installment: \$1.6 to \$1.8 billion
20-Year Estimated Need: \$3.2 to \$3.6 billion

III. Multimodal Connections Initiative

Maine's multimodal transportation system includes a network of passenger railroads, fixed-route and on-demand transit (buses), bicycle and pedestrian trails, airports and ferries. The demand for passenger transportation of all types is growing in all geographic areas of the State. With a slowing economy and increased energy costs, the system is in even greater demand. Additional benefits beyond providing direct service to the public include congestion reduction and air-quality improvements.

Intercity Passenger and Commuter Rail – Congestion along the I-95 and I-295 corridors in southern Maine clearly impacts the state's economy, quality of life, and air quality. Passenger rail is one of several important tools in managing traffic congestion along these corridors. The Northern New England Passenger Rail Authority is pursuing intercity passenger rail in the Portland to Brunswick corridor while MaineDOT is pursuing the development of commuter service from Portland to Brunswick and to Lewiston/Auburn after that. If a rail option is not feasible, bus rapid transit will be pursued until such time as a rail option is viable. With the Brunswick-to-Portland intercity link completed, intercity rail connections are in place to support potential future passenger rail service from Brunswick to Rockland. MaineDOT will be pursuing a transit study in the mid-coast to determine the feasibility and type of service needed there.

Also MaineDOT has developed a feasibility study for service on the Mountain Division which suggests that commuter and freight service could be viable to help alleviate congestion between Portland and the suburban and exurban communities along that railroad. Should funds become available to make these necessary improvements, congestion along Maine's high traffic corridors can be alleviated.

MaineDOT will also continue to evaluate the feasibility of extending intercity passenger rail service connections to Montréal. A market survey undertaken nearly a decade ago estimated a potential

visitor market of several hundred thousand people from the Montréal area. The survey did not evaluate the potential ridership of Montréal-bound passengers leaving from Boston, Portland, and other communities along the rail route. Additional information will be gathered to determine the most likely potential ridership for such a service.

10-Year Estimated Need: \$139 million

20-Year Estimated Need: \$139 million

Transit – The demand for passenger transportation services is growing and MaineDOT is working with Maine’s transit providers to operate safe, efficient services. Maine currently provides 18 fixed-route transit (bus) systems, 22 public and private vanpools and more than 50 park-and-ride lots offering at least 2,000 parking spaces and serving over 3 million passengers annually. MaineDOT owns all federally funded transit vehicles in Maine and has a goal of ensuring that 50% of the transit fleet retains more than 50% of its useful life. MaineDOT owns all federally funded transit vehicles in Maine. In addition to replacing aging vehicles, fleets are expanding to provide new or expanded services. Intermodal facilities will also be developed to provide connectivity between transportation modes. In addition, investments are needed to replace aging Maine State Ferry Service vessels and to meet U.S. Coast Guard requirements.

10-Year Installment: \$178 million

20-Year Estimated Need: \$350 million

Freight Intermodal System – Freight movement in Maine is currently conducted in large part (85%) by truck traffic on the state’s highways, which contributes to congestion, safety and maintenance problems occurring along portions of the state highway system. Freight movement by rail and by sea can provide relief for highway safety, consumption and congestion through an interconnected and coordinated freight movement system. Offering Maine shippers more modal choices will also reduce their shipping costs and protect their markets by making them more competitive.

Intermodal transportation involves moving freight between points of origin and destination using two or more modes (e.g., rail, water, air and highway). To work effectively and “seamlessly,” terminal facilities, terminal flows, and land-side access must be adequate to accommodate expected demands. Success requires a focus on system-wide performance rather than performance of any individual mode. This places emphasis on the efficiency and reliability of the entire transportation system. MaineDOT has implemented freight solutions that achieve these results, such as investing in transportation infrastructure at Mack Point in the Port of Searsport, the International Marine Terminal in Portland, the Port of Eastport, and a truck-to-rail intermodal facility in Auburn as well as a system of new rail sidings.

MaineDOT is focusing on improving freight flows within and through the State through Maine-based “trade corridors” that provide connections to major markets. Strategic placement of intermodal facilities along these trade corridors creates focal points for shippers and businesses, and provides cheaper and more reliable access to national and global markets.

To facilitate the movement of trade, and to build on the successful partnership with railroad companies in the development of truck-to-train intermodal facilities in Auburn, MaineDOT is developing several new multimodal investment options consisting of rail, ports, airports, and highway investments that will improve freight transportation in the coming years. Among them is the Freight Rail Interchange Program (FRIP), which will provide Maine rail yards that interchange freight among the different railroads; Danville Junction is an example of this. MaineDOT’s Industrial Rail Access Program (IRAP) has been a successful matching program that provides funds to private businesses looking to upgrade sidings, switches, and other rail infrastructure in order to move product via rail. The state-owned

Lewiston Lower Road rail line (Brunswick to Lewiston) and Mountain Division rail (Westbrook to Fryeburg), once upgraded, would provide the areas' shippers with another modal option. Two recent studies by the Greater Portland Council of Governments and a transportation consultant estimated that more than 25,000 annual truck trips moving gravel can be taken off the road in the area of the Mountain Division via the re-introduction of rail service.

Congress recently identified the East-West Transportation (Priority) Corridor as part of the National Highway System High Priority Corridors Program extending from Calais, Maine, continuing westerly through New Hampshire, Vermont and New York and terminating in Watertown, New York. As a result of the increased interest in economic development and the trade opportunities likely to emerge in this area, Bangor is ideally located to become a major intermodal transportation hub in central and northern Maine. With its central location at the convergence of I-95, U.S. Route 2, and Route 9, and served by two railroads and a nearly 11,000-foot long Bangor International Airport, and with its close proximity by rail or highway to the Port of Searsport, Bangor could play a role in Maine's economy and in the global trade network. MaineDOT will undertake an evaluation of the greater Bangor area's transportation infrastructure to determine the feasibility of establishing an intermodal freight facility.

Recent reductions in the workforce in the paper industry ignore the fact that industry output has not declined, and the long-term economic outlook remains positive. Critical to that success are transportation system improvements to provide for more efficient east-west movement of products and infrastructure improvements to support increased global trade opportunities.

Maine's three principal seaports of Portland, Searsport, and Eastport provide benefit to Maine's economy, and will continue to grow and develop to meet existing domestic needs and emerging global opportunities.

- The Port of Eastport lacks a rail connection from the port. A transload facility in Perry is now being considered. However, the branch line connecting Eastport to Ayers Junction was abandoned over 20 years ago and most of the track was removed. A previous study concluded that to reestablish rail from Eastport to Ayers Junction and rehabilitate the Calais Branch Railroad to Brewer would be very expensive and would not provide a suitable return on investment. The idea of placing new track merits a close evaluation. This idea was explored in a study conducted by MaineDOT in 2009. It evaluated the limitations to growth and determined whether investments to correct those deficiencies will produce a favorable benefit. A new conveyor system is being installed to provide the Port with additional bulk products capacity.
- The Port of Portland's International Marine Terminal (IMT) was in need of rebuilding in order to attract additional container business. The Maine Port Authority took over IMT operations in 2009. Rail freight moving to and from the Port of Portland is limited by infrastructure. MaineDOT evaluated this infrastructure limitation and the effects that it has on freight volumes at the port in 2009. Due to a grant from the American Recovery and Reinvestment Act (ARRA), the IMT is currently being rebuilt.
- The Port of Searsport has the potential to be the state of Maine's most important freight link to global shipping and trade. Expansion activities at the port will provide greater services for traditional Maine commerce and open new trade opportunities that will benefit Maine's economic future. The development of a container port facility, coordinated with the previously mentioned Bangor intermodal development could be the most important transportation investments that Maine could make to support the state's forest products industry, and would also serve to attract a new industrial base to the state.

The Port of Searsport has much of the essential landside transportation infrastructure to support economic growth and development investments. Served by the Montréal, Maine & Atlantic Railroad, the rail has double-stack capacity to Montréal, where connections

are available to North America’s largest rail companies. Seamless connections exist for rail freight from Montréal to Chicago, Vancouver, the Midwest and virtually all major U.S. cities served by these rail companies.

MaineDOT will continue to support the build-out of Mack Point. However, Mack Point may not provide suitable opportunities for the development of a containerized cargo port facility. Therefore, Sears Island will be given consideration as the site for such a container port facility. MaineDOT developed a Request for Interest for expansion of port facilities and will select a developer with good credentials in building and operating a container port and the financial capacity to build a world-class facility.

The Auburn Intermodal Facility is Maine’s only inland port of entry. It provides U.S. Customs Service on site, thereby eliminating the need to transfer international cargo shipped by rail to truck and then transported over the highway system in order to clear customs in Portland. The inland “Port of Auburn” is providing significant rail-to-rail and rail-to-truck accessibility. This presents significant savings in time and efficiency. As a result, the Lewiston-Auburn area has seen an increase in trucking companies and support facilities to service the incoming and outgoing freight at the Port of Auburn. The Port of Auburn is now the busiest non-liquid freight volume port in Maine. New rail improvements are now being made through state bond funding.

10-Year Installment: \$82 million
20-Year Estimated Need: \$160 million

Acquisition and Maintenance of Key Rail Corridors – Rail corridors have historically been owned and maintained by the private sector. However, over the past few decades, many of these corridors have become at risk of abandonment. Many of these corridors would be almost impossible to reestablish today because they travel through environmentally sensitive areas. MaineDOT has acquired over 300 miles of rail corridors that were at risk of abandonment. An additional 230 or so in Aroostook County are now likely to be acquired. MaineDOT will develop maintenance plans and improve facilities as funds allow supporting public use of these rail corridors. It is also anticipated that additional corridors at risk of abandonment will be preserved for use as part of the transportation network. It is a strategic objective of MaineDOT to acquire and maintain key sections of rail corridors at risk of abandonment. A State Rail Plan is under development to maximize opportunities on these corridors and determine the maintenance funding requirements.

10-Year Installment: \$32 million
20-Year Estimated Need: \$64 million

IV. Quality of Place Initiative

Quality Communities Initiative – A number of current initiatives including Community Investment Sharing, Transportation Enhancements, Community Livability, Recreational Access, and Community Gateways assist Maine communities in enhancing transportation corridors and community landscapes. To provide structure and coordination to these efforts, MaineDOT worked closely with the Regional Councils and the Economic Development Districts to develop *Corridors of Regional and Economic Significance for Transportation* (CRESTs). Working collaboratively, these organizations identified the transportation, land-use, and economic development objectives for each corridor. They also identified and prioritized each region’s policy issues, planning activities, and capital needs with respect to state transportation goals.

Building on enhanced project-scoping techniques, MaineDOT will support projects that apply innovative and effective measures toward the creation and maintenance of community enhancements near highways or other transportation facilities. Eligible projects include landscaping, visual access, public space improvements and streetscape improvements. MaineDOT supports downtown redevelopment efforts through investments in transportation-related infrastructure, such as the refurbishment of historic train stations.

MaineDOT is also moving beyond the minimal “public involvement” approach for transportation improvements to a more multi-disciplinary “*context-sensitive solutions*” approach. Context-sensitive solutions (CSS) is a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, habitat, and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will (or does) exist. It fosters new collaborative partnerships with stakeholder groups by combining holistic, collaborative, and inter-disciplinary philosophies for the planning, design, construction, maintenance, and operation of transportation infrastructure.

The United States is the largest emitter of green house gases (GHG) in the world, and transportation in the US accounts for one-third of carbon dioxide (CO₂) emissions, a major component of GHG. It is important to note that it is not the transportation system per se that causes GHG, but rather it is dependent upon how far people live from where they work, the modes of transportation that they use to get there and the fuels that they use. The trend in land development patterns in Maine has resulted in sprawl and thus an increase in VMT and GHG emissions. Policies and programs that are aimed at reducing GHG emissions are therefore needed. In an effort to promote more integration between land-use and transportation planning and decision-making, MaineDOT has modernized Maine’s Sensible Transportation Policy Act rules in collaboration with the State Planning Office. One purpose of this modernization effort is to promote community transportation planning synergy with state and regional objectives in order to achieve efficiencies, reduce or manage public costs, and further enhance municipalities’ efforts to make their communities livable. The rules were approved in 2008 by the Maine Legislature. A community benefit to adopting complementary transportation and land-use strategies is state assistance with implementation efforts.

10-Year Installment: \$68 million
20-Year Estimated Need: \$140 million

Healthy Trails Initiative – MaineDOT strives to make walking and bicycling an integrated element of Maine’s transportation system. Providing safe access for bicyclists and pedestrians on the transportation system and improving village environments are key elements necessary to address the quality of life issues in Maine. MaineDOT policies help ensure that facilities for pedestrians and bicyclists are considered for incorporation into all transportation decisions on the state’s highways and bridges and in village areas. Communities throughout the state have identified needs for off-road bicycle and pedestrian trails that connect communities, neighborhoods, and schools. Bicycle and pedestrian investments can help reduce the need for congestion-relief measures, attract economic development and tourism, lead to healthier lifestyles and help reduce air pollution. Over the coming years, the department, in cooperation with local and regional planning efforts, will develop projects that address these goals.

10-Year Installment: \$42 million
20-Year Estimated Need: \$80 million

V. Aviation Initiative

Aviation Initiative - Maine's aviation system is a key link to the global and national economy. Air corridors act as invisible interstates to the world. Maine's major commercial service airports in Portland and Bangor will continue to grow and change to accommodate Maine's economic future. Portland's recent lower-cost airfares will attract new businesses and residents to the southern region, spurring the already rapid growth along the coast. Maine's six commercial service airports have the runway capacity needed to serve projected growth. To meet projected 2020 demand, however, the terminal and parking areas at the Portland International Jetport will need to be expanded. Ongoing maintenance is also needed to preserve the safety and condition of runways, taxiways, and other aviation facilities. In 2011, the U. S. Navy will decommission the Brunswick Naval Air Station (BNAS). The base offers numerous redevelopment options, including transportation reuse. Redevelopment feasibility studies for the BNAS are currently under way.

The current aviation system allows a passenger to choose between six commercial service airports in the state (Portland, Bangor, Presque Isle, Bar Harbor, Rockland, and Augusta). An additional 30 public airports statewide support local economic development through charter services, private aircraft, and freight service, as well as aviation maintenance activities. With the foreseeable advances in aviation technology, many of Maine's smaller, more remote airports will now be able to provide better access for business development. In the coming years, new aviation technology will improve access to Maine's rural areas via these airports.

10-Year Installment: \$380 million
20-Year Estimated Need: \$760 million

VI. Economic Connections Initiative

New and Improved Economic Connections – MaineDOT, with its partners, including the Maine Turnpike Authority, Maine's Regional Councils and Metropolitan Planning Organizations, and surrounding States and Provinces are evaluating new transportation connections to promote well-planned economic growth in key economic areas throughout Maine. Current examples include the Lewiston/Auburn Downtown Connector, the Aroostook County Transportation Study, the Gorham East-West Connections Study, the Maine-NH Connections Study, the Central York County Corridors Study, and the Northeast CanAm Connections Study. Each of these efforts is evaluating the extent to which economic growth and community preservation could be enhanced with transportation infrastructure investment.

The Brunswick Naval Air Station is in the process of being decommissioned and will be fully closed by 2011. The 1,500-acre mid-town site will be redeveloped into industrial, commercial, residential, educational and conservation uses. The redeveloped land will require new and/or improved transportation facilities and multimodal connections, such as potentially reestablishing and improving rail connections and accompanying warehouse space, continued use of aviation facilities, transit and improved highway access to Routes 1, I-295, 201 and 196. MaineDOT's objective is to support the economic potential of this new resource and its connection to the region's economy through partnerships with the ultimate developers.

MaineDOT will continue its existing partnerships with such groups as the Maine Technology Institute, the Maine Composite Alliance, the University of Maine and new and emerging businesses as well.

10-Year Installment: \$200 million
20-Year Estimated Need: \$400 million

VII. Public-Private Partnerships Initiative

Public-Private Partnerships – Public-Private Partnerships are growing in popularity as a method for funding, constructing, and managing transportation infrastructure in the U.S., Canada and throughout the world. These partnerships range from private entities building and operating new infrastructure under license from state or provincial governments, to private and government interests working together to fund expansions of the infrastructure to meet the needs of government and the private sector. MaineDOT is utilizing Public-Private Partnerships with increasing frequency, but this important tool is still underutilized. Such partnerships are critical if we are to react to changing demographic, social and economic demands on Maine’s transportation systems.

Public-Public Partnerships – This initiative calls for MaineDOT to work with the Maine Turnpike Authority, Regional Councils, Metropolitan Planning Organizations, the State Planning Office, municipalities and others across Maine to develop regional *Multimodal Corridor Management Plans*. These plans will coordinate land-use decisions with transportation improvements and investment. In order for these plans to be effective, transportation improvements must be coordinated with locally-controlled private investments made under MaineDOT’s *traffic movement* and *entrance permitting* processes. These processes traditionally result in localized improvements by individual investors that could be more effective when applied regionally. By pooling state, local, and private resources through mechanisms such as regional impact fees, more regional systems improvements can be made with greater equity and predictability for the business sector.

MaineDOT also uses a federalized State Infrastructure Bank (SIB) in which it makes low-interest loans to communities for federally eligible transportation projects. This *Plan* bolsters the loan program by creating a non-federal SIB and expanding its use to non-federally eligible transportation projects on local roads and rural minor collectors. One example of how this program can be utilized is in the partnership of MaineDOT and municipalities to fund up-front improvements in areas of anticipated development. To recapture the public investment, developers could be assessed an impact fee, based on their fair share of the traffic impacts. One important distinction of SIB investments is that funding from the state is a revolving loan program that can be used repeatedly. Current examples of where these tools are being piloted are Routes 1 and 3 in Ellsworth, Route 1 in North Thomaston, and Route 202/Western Avenue in Augusta.

Several other examples of ongoing MaineDOT programs with Public-Public and Public-Private Partnerships include:

- Rural Road Initiative (a 2/3 state share—1/3 municipal share program focused on minor collectors)
- Small Harbor Improvement Program (SHIP)
- Community Gateways Program and the Surface Water Quality Protection Program
- 511 Travel Information
- Maine Turnpike Authority (several joint projects)
- Industrial Rail Access Program (IRAP)
- *Island Explorer*, *Shoreline Explorer*, and *Mountain Explorer* bus services

10-Year Installment: \$100 million
20-Year Estimated Need: \$200 million

Examples of Public-Private and Other Notable Partnerships

Public Private Partnerships-Highway Ellsworth, Route 1 & Route 3 Triangle

MaineDOT and the city of Ellsworth combined efforts to improve traffic flow through the High Street and Route 3 Triangle area that would allow for economic development opportunities currently limited by traffic congestion. A detailed study identified the optimum traffic patterns and evaluated the amount of retail build-out that could be accommodated by the new patterns. The original estimated cost of improvements was approximately \$2.7 million and the city anticipated investing \$2.1 million toward the project. However, the cost grew to nearly \$3.3 million due to inflation and other increases.

MaineDOT was able to direct approximately \$600,000 that had previously been programmed for work in the target area to aid with the new configuration, thereby reducing the city's cost to \$2.7 million, but MaineDOT could not provide the additional funding needed. The city thus decided to pursue additional funding for constructing the needed improvements and to recapture its investments by adopting an Impact Fee Ordinance, which would assess each eligible development on a per-generated vehicle trip basis. The intent was to build the infrastructure in anticipation of likely growth and to provide for an equitable distribution of the costs of the improvements.

To close the gap between the city's original anticipation and the likely \$3.3 million final cost, Tax Increment Financing (TIF) will be used. Additional infrastructure improvements required by a Traffic Movement Permit are paid by the permit holder and are in addition to the impact fee. TIF is a tool to use future gains in taxes to finance the current improvements that will create those gains. When a public project such as a road or school is carried out, there is an increase in the value of surrounding real estate, and often new investment. This increased site value and investment creates more taxable property, which increases tax revenues. The increased tax revenues are the "tax increment." Tax Increment Financing dedicates that increased revenue to finance debt issued to pay for the project.

The strategy is working. New developments are being built and more are anticipated. The improvements will speed up the development review and construction because the highway improvements will have already been completed. Collectively, we were able to meet this challenge, where individually this would not have been possible. This model for partnership is being discussed with other communities experiencing growth pressures and traffic problems.

Public Private Partnerships – Rail Danville Junction

St. Lawrence & Atlantic Railroad's (SL&A) interline rail traffic with Pan Am Railways (PAR) is interchanged at Danville Junction in Auburn. Due to an increase in inter-business partnering between these two rail companies, interline traffic has grown 68% in four years, from 14,400 carloads in 2002 to 21,000 carloads in 2005. A partnering effort between MaineDOT, the SL&A and PAR at Danville Junction ensued to minimize the need to switch trains at the crossing, which was causing a 2.5 hour delay each day on the two roads.

The resulting project is a public-private partnership under MaineDOT's Freight Rail Integration Program (FRIP) involving Pan Am Railways, the St. Lawrence & Atlantic Railroad, MaineDOT and the Federal Highway Administration. The two railroads and MaineDOT partnered on the entire project

using State bond funds and FHWA Section 130 Crossing Safety Improvement program funds at the highway crossings. The project will:

- reduce travel times for Maine businesses shipping to western destinations by an estimated 36 hours or more
- reduce locomotive and automobile emissions in Danville Junction
- reduce public wait-times at the crossings by 55%.

With a total cost of \$5.2M, the project could not have been completed as designed, and the maximum economic and public benefit could not have been achieved, without all of the partners making significant financial and other contributions to the project.

Public-Private Partnerships – Transit *Island Explorer*

Acadia National Park receives over three million visitors a year, mostly between the end of June and mid-October. The park roads are congested, and parking spaces are inadequate to address this level of use, sometimes resulting in unsafe parking along roadsides. Air quality is also a major concern. In addition, the town of Bar Harbor experiences seasonal traffic congestion and parking shortages. Congestion sometimes negatively affects the visitor experience on Mount Desert Island.

The *Island Explorer* bus service is a public-private partnership. It was originally conceived in 1999 by the Mount Desert Island League of Towns, the four island communities, Acadia National Park and MaineDOT. More than 20 federal, state and local agencies, other organizations, and private businesses now participate through a formal agreement. The *Island Explorer* is a seasonal, fare-free, public transportation system providing service to Acadia National Park and the communities on Mount Desert Island and the Schoodic peninsula. In its first operating season, *the Island Explorer* carried over 140,000 passengers — twice the projected ridership. Ridership in 2009 exceeded 360,000.

The Friends of Acadia (FOA), a non-profit park support group, is supporting MaineDOT and the National Park Service efforts to develop an intermodal center that would combine day use and commuter parking with an information center and a bus-maintenance facility. FOA has purchased the 369 acre Crippens Creek site, located along Route 3 in the town of Trenton. MaineDOT will purchase a portion of this parcel from FOA, with the remainder being land-banked.

FOA and the Mount Desert League of Towns worked with Acadia National Park to develop the *Island Explorer*. Without the support of all participating groups, the project would never have gotten off the ground. Continuing financial support from private businesses has allowed the service to remain fare-free, to increase service and to extend the operating season. The *Island Explorer* is nationally recognized as a success in reducing congestion and air emissions while enhancing the visitor experience and supporting tourism.

More recently, Jackson Laboratories has participated financially in adding capacity to the *Island Explorer*, to help meet the commuting needs of its employees.

Public-Private Partnerships – Coordinated Transportation and Land Use Planning *Gateway 1*

As population growth and development in the midcoast have rapidly accelerated, MaineDOT and residents of the midcoast region served by U.S. Route 1 found that transportation decisions were becoming reactive, rather than being proactive, resulting in worsening traffic congestion in summer months from the heavy tourist traffic and destroying the very fiber by which people wanted to live there in the first place. *Gateway 1* is a landmark long-term strategic land use and transportation planning

project based on collaboration of the 21 affected communities from the town of Brunswick at the junction of I-295 north a distance of 110 miles to the town of Prospect with state and federal agencies. *Gateway 1* explores new ways of combining transportation and land use decision-making, and by doing so, the project will balance community growth and local values with transportation services and needs.

Gateway 1 originated with a number of midcoast residents who had been part of MaineDOT's Regional Transportation Advisory Committees. They believed that a more collaborative approach to addressing the multiple demands on U.S. Route 1 residents, workers and visitors who must use Route 1 for access would be effective, and MaineDOT also wanted to find a better way to work with the communities in the midcoast to plan for the Corridor as a whole.

Gateway 1 was officially launched late in 2004 by MaineDOT, the Maine State Planning Office and the Federal Highway Administration. By the end of 2005, the 21 Corridor towns had all signed a Memorandum of Understanding and appointed representatives to the Steering Committee. Since then, the Steering Committee and the *Gateway 1* Study Team have gathered extensive planning data and agreed on three planning scenarios. A detailed Corridor Plan and a recommended method of implementation received approval from 18 of the 20 remaining communities (the town of Prospect, located at the extreme southern end of the study area, opted out).

Gateway 1 uses a context sensitive approach to transportation decision-making and employs the principles of community impact assessment to make sure that transportation improvements integrate the social, economic, historic, scenic, cultural and natural resource values of a community. What's more, *Gateway 1* will allow the communities along Route 1 to work collaboratively, using accurate, updated, corridor-wide data to improve local land use planning and transportation decision-making in order to support the long term success of the region as a whole.

It is important to note that midcoast Route 1 reflects diverse and sometimes conflicting interests. Individuals who live and work in this area hold differing views on economic development, protection of environmental resources and open space, roadway improvement, and other topical issues of the day. The *Gateway 1* process is designed to hear all of those voices, allowing communities to adjust their own plans to reflect local concerns while providing the information needed to take a broad-based regional approach.

Gateway 1 represents the new way of transportation planning in Maine. It utilizes a spirit of true partnership in coordinated transportation and land use planning. Once completed, the *Gateway 1* process will have developed a long-range master plan for addressing the transportation, land use and quality of life interests of the midcoast region of Maine.

The 123rd Legislature's Goals and Objectives

During the development of *Connecting Maine*, the 123rd Legislature passed "*LD1790 - An Act to Secure Maine's Transportation Future*", now Public Law (P.L.) 2007, Chapter 470. This law:

- Provides long-term goals for certain MaineDOT capital activities
- Requires MaineDOT to report biennially on progress toward those goals
- Provides a statutory-based debt policy for transportation
- Provides a mechanism for dedicated transportation revenue streams to be used to leverage revenue bonding

The long-term goals in P.L. 2007, Chapter 470 are a bit more aggressive than the seven initiatives originally proposed by MaineDOT, but MaineDOT has adopted these goals in *Connecting Maine*. Performance objectives excerpts of the law follow:

Performance goals and reporting. The Legislature establishes the following set of goals to provide overall direction and consistency in delivering a comprehensive transportation capital improvement program that is geographically balanced and addresses urban and rural needs.

- A. All principal and minor arterials must be reconstructed to nationally accepted design standards by 2017.
- B. All major collectors must be reconstructed by 2027 to at least the standards set in the department's state design standards.
- C. The service period remaining before arterials and major collectors need major rehabilitation of drainage or structural features must be evenly distributed across the inventory by 2027.
- D. The service period remaining before non-extraordinary bridges need major rehabilitation or replacement must be evenly distributed across the inventory by 2027 except for low use or redundant bridges.
- E. Extraordinary bridge replacement, removal or rehabilitation projects or new capacity highway projects exceeding \$10,000,000 in cost must receive special consideration as to the most appropriate means of capital financing to avoid disruption to achievement of goals under paragraphs A to D.
- F. Capital improvements must maximize the benefit to freight and passenger transportation users while mitigating, to the extent practicable, energy and environmental impacts.

The department shall report to the joint standing committee of the legislature having jurisdiction over transportation matters, on January 15th of each year, the progress realized in achieving the goals set forth in this subsection. The report must quantify progress realized and time that has elapsed since the goals under paragraphs A to D were established. The department shall recommend any remedial actions, including additional funding, needed to ensure fulfillment of the goals if they are at risk of not being attained.

Extraordinary Corridor Investment Program. The Department of Transportation shall establish priorities and financing plans for significant new capacity projects and extraordinary bridge replacement, removal or rehabilitation projects. The department shall take into consideration all available funding options including federal funds, bonds and public-private partnerships. The department shall consider at a minimum partnerships with the Maine Turnpike Authority, the Maine Port Authority and the Northern New England Passenger Rail Authority.

The department shall identify significant new capacity projects, which must include at least the following: Aroostook North-South Highway; East-West Highway; Gorham connector; I-295 South Portland to Brunswick capacity improvements; I-295 Brunswick to Gardiner rehabilitation; I-95 Bangor capacity and modernization improvements; Lewiston-Auburn I-95 to downtown connector; Portland to Brunswick passenger rail; Sanford connector; Wiscasset bypass; and the department's three-port strategy including the ports of Eastport, Searsport and Portland.

The department shall also identify extraordinary bridge replacement, removal or rehabilitation projects, which must include at least the following: Carlton Bridge in Bath; Route 1 West approach in Bath; Beals Island Bridge in Beals; Knickerbocker Bridge in Boothbay; Frank J. Wood Bridge in Brunswick; Sibley Pond Bridge in Canaan; Deer Isle-Sedgwick Bridge in Deer Isle; International Bridge in Fort Kent; Turner Center Bridge in Greene; Bailey Island Bridge in Harpswell; Penobscot River Bridge in Howland; Piscataquis River Bridge in Howland; Memorial Bridge in Kittery; Sarah Mildred Long Bridge in Kittery; Covered Bridge in Norridgewock; Martin's Point Bridge in Portland; Waldo-Hancock Bridge in Prospect; Maine Kennebec Bridge in Richmond; Veterans Memorial Bridge in South Portland; and New Bridge in York.

Summary of Initiatives and Goals

10-Year Installment and 20-Year Estimate

(Figures in millions of dollars unless otherwise noted)
(Estimates based on 2006 dollars)

Initiative	10-Year Installment	20-Year Estimate
I. Highways		
<p>Safe Highways <i>Funding to further reduce the injuries, deaths, severity of crashes, and economic impacts caused by crashes.</i></p>	\$110	\$220
<p>Interstate Improvement and Modernization <i>Improve and modernize Maine's 20 to 50 year old interstate by adding efficiencies and capacity to congested segments, and rehabilitating aging pavement, bridges, and drainage structures. This is quickly becoming a major safety concern and also impacts productivity and commerce.</i></p>	\$500	\$1,000
<p>Arterial Highway Modernization <i>Modernize the remaining 195 miles of rural substandard sections of this economically important element of the highway system.</i></p>	\$870	\$1,300
<p>Secondary Highway Modernization <i>Modernize and remove annual road postings from 1,850 miles of the most economically important element of the secondary highway system.</i></p>	\$1,300	\$2,400
<p>Highway Preservation <i>Adequately preserve Maine's investment in its highway system and maintain all highways in good serviceable condition.</i></p>	\$810	\$1,620
<p>Congestion Management <i>Improve highway efficiency and capacity to combat growing congestion statewide reducing delay by 9.5% by 2030. Delay caused by congestion costs Mainers \$500 million annually and impacts air quality.</i></p>	\$500	\$1,000
Highways Subtotal	\$3,990	\$7,540
II. Bridges		
<p><i>MaineDOT owns 2,722 bridges. Of that number, 280 are at risk of posting, reposting at a lower weight, or closure within 10 years. At the current replacement rate of 14 bridges per year, bridge life expectancy would need to be 185 years. To achieve the needed 80 year life expectancy, we need to replace 32 bridges per year.</i></p>		
Bridges Subtotal	\$1,300	\$2,600
III. Multimodal Connections Initiative		
<p>Intercity Passenger and Commuter Rail <i>Expand passenger rail services north of Portland including new energy efficient equipment. Develop passenger rail to Yarmouth; and extend services to Brunswick and Lewiston/Auburn. MaineDOT will continue to evaluate the feasibility of extending passenger rail service connections to Rockland and Montreal.</i></p>	\$139	\$139
<p>Transit <i>Replace buses such that 50% of the transit fleet retains more than 50% of its useful life. Continue to transition fleets to clean fuels to improve air quality. Intermodal facilities will be developed to provide connectivity between modes. Replace the aging Ferry Service vessels and meet USCG requirements.</i></p>	\$178	\$350
<p>Freight Intermodal <i>Improve ports, freight rail and freight flows within and through the state.</i></p>	\$60	\$120

Summary of Initiatives and Goals

10-Year Installment and 20-Year Estimate

(Figures in millions of dollars unless otherwise noted)
(Estimates based on 2006 dollars)

Initiative	10-Year Installment	20-Year Estimate
III. Multimodal Connections Initiative (continued)		
<i>Acquisition and Maintenance of Key Rail Corridors</i> <i>Acquire rail corridors under threat of abandonment to preserve and utilize the right of way for future transportation needs.</i>	\$32	\$64
Multimodal Connections Initiative Subtotal	\$409	\$673
IV. Quality of Place Initiative		
<i>Quality Communities</i> <i>Provide for regionalized planning of transportation corridors throughout Maine and implementation of programs aimed at maintaining and enhancing community character, such as: Community Investment Sharing, Transportation Enhancements, Community Livability, Recreational Access, and Community Gateways.</i>	\$68	\$140
<i>Healthy Trails</i> <i>Develop off-road bicycle and pedestrian trails connecting communities, neighborhoods, and schools. Bicycle and pedestrian investments help improve Maine's quality of life, reduce the need for congestion relief measures, help attract economic development and tourism, lead to healthier lifestyles, and help reduce air pollution.</i>	\$42	\$80
Quality of Place Initiative Subtotal	\$110	\$220
V. Aviation		
<i>Maintain Maine's 36 public airports and provide infrastructure for additional demand.</i>		
Aviation Subtotal	\$380	\$760
VI. Economic Connections Initiative		
<i>Implement elements of key economic transportation investments. Current examples include the Lewiston/Auburn Downtown Connector, Aroostook County Transportation Study, Sanford Area and I-95 Transportation Study, Gorham and I-95 Connections Study, Northeast CanAm Connections Study.</i>		
Economic Connections Initiative Subtotal	\$200	\$400
VII. Public-Private Partnerships		
<i>Coordinate land use decisions with transportation improvements and investment, and pool state, local, and private resources to promote regional systems improvements that provide greater equity and predictability for the business sector.</i>		
Public-Private Partnerships Subtotal	\$100	\$200
TOTALS	\$6.5B	\$12.4B

Summary of Needs:

10-Year Transportation Need	\$6.5 Billion
10-Year Anticipated Revenue	\$3.2 Billion
Infrastructure Gap	\$3.3 Billion

Chapter 5 - Transportation Funding and Finance Options

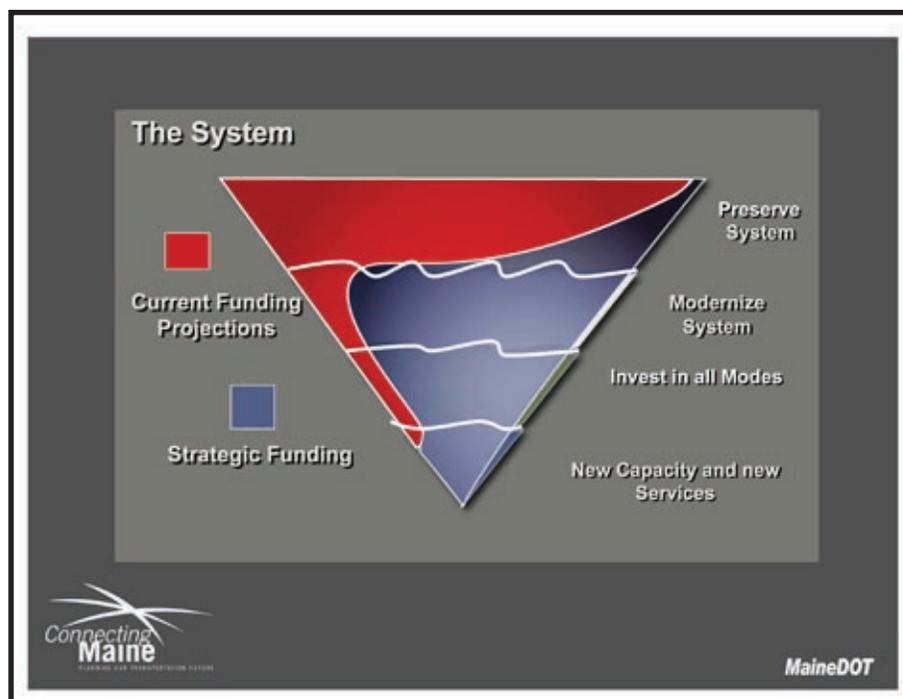
MaineDOT Resource Allocation Policy

Inadequate resources prohibit MaineDOT from succeeding in achieving the goals of *Connecting Maine*. MaineDOT recognizes that completing the transportation improvements and necessary system preservation to support economic development and quality of life will require more funding than is projected under current funding sources. Traditionally, MaineDOT has utilized a Resource Allocation Policy that focuses on four guiding principles:

- Meet system preservation needs
- Invest in needs for all modes
- Invest in transportation system management and travel demand management alternatives
- Target limited resources for any new highway and non-highway capacity to the highest priorities

While this approach has helped MaineDOT maintain its current assets in relatively good condition, this policy does not adequately address or support Maine's social and economic needs into the future. In light of rising costs, increasing demands, and static or declining revenues, the options for distributing funds using the resource allocation policy will continue to be limited primarily to the funding of preservation activities. In short, the likelihood is that without addressing dramatic funding source changes, no additional transportation system capacity or new initiatives will be forthcoming.

The following graphic depicts how the traditional allocation policy was applied in this *Plan*. It illustrates that nearly all funding under the current fiscal environment would very likely be applied to system preservation and system stewardship, such as maintaining bridges, pavement and bus fleets. In fact, it is anticipated that system conditions will continue to degrade under this funding paradigm. Only in a new, more robust fiscal environment would more strategic investments be allowable.



Erosion of Buying Power

In the last decade, vehicle-miles of travel in Maine has increased by 20% as a result of a number of factors, including increases in the numbers of registered motor vehicles and licensed drivers, and sprawling land development patterns. Also, a growing economy and demand for “just-in-time delivery” of goods has increased the percentage of goods transported by commercial vehicles traveling on Maine’s highways from 65% in the early 1980s to 87% today. Increased congestion in some of Maine’s urban and recreational areas also indicates a growing need for new and expanded capacity and transportation services. More recently, the global economic downturn has resulted in stabilization of vehicle miles traveled. This trend is not expected to continue as the economy begins to recover.

While the percentage of Maine state revenues expended on transportation infrastructure has decreased in recent decades, the long-term transportation needs in Maine are growing. Chapter 4 detailed a financial gap of \$2.6 to \$3.8 billion that will need to be found if Maine is to fulfill the strategic investment needs identified in this *Plan* over the next twenty years. Current revenues provided by all levels of government are not sufficient to maintain existing transportation infrastructure, let alone to provide adequate funds to invest in expansion or enhancements necessary to meet the growing demands on the system.

Inflation of Construction Costs

Construction-cost inflation and significant increases in energy costs have also reduced the purchasing power of the motor-fuels tax. The cost of construction materials has significantly outpaced the rate of consumer inflation, due to increased asphalt and fuel costs plus worldwide demand for construction materials. Increasing fuel prices will stimulate new technologies and innovations, such as hybrid vehicles. Sales of hybrid vehicles are growing and as many as 1,000,000 hybrid vehicles may soon be produced annually. As oil prices continue to rise and production declines, a transition to alternative energy sources will occur. As alternative fuels and more efficient vehicles come into greater use, motor-fuel tax revenues will be a less viable option to support transportation improvements. While these changes create cost savings for motorists and benefit the environment by reducing greenhouse gas emissions, they also create reduced revenues needed for transportation financing.

Dwindling Fuel Tax Revenues

The existing motor-fuels tax is no longer adequate to meet current and future multimodal transportation needs. These shortfalls will be exacerbated by decreases in motor-fuels tax revenue from more stringent fuel economy standards, a probable increase in the market share for alternative fuel and hybrid vehicles, the declining purchasing power of motor-fuel tax revenues, and new environmental and energy regulations. And in Maine the dedicated Highway Fund is constitutionally dedicated only to highway and bridge improvements, thereby leaving non-highway modes underdeveloped due to insufficient financial support. However, recent Maine legislative actions are beginning to balance funding for non-highway activities. Examples include P.L. 2007, Chapter 470 (aka LD-1790), discussed in Chapter 4.

In 2005, MaineDOT contracted with the Margaret Chase Smith Policy Center (MCSPC) to research the viability of the motor-fuels tax for funding long-term transportation needs and to identify alternatives to the tax. The MCSPC determined that there is a potential for state motor-fuels tax revenues to decrease by as much as 10% due to improved fuel economy over the next decade.

Long-term inflationary trends have not only caused Highway Fund revenue growth to lag behind that of other state revenues, but it has greatly reduced the user contribution to Maine’s transportation network. In 1927, Maine’s motor-fuels tax was set at 4 cents per gallon. In today’s dollars that would

be equivalent to 42 cents per gallon. While the costs of transportation improvements continue to climb, highway users are actually paying less today to use Maine's highway system than they paid in the 1920s.

As of July 1, 2009, Maine's tax on gasoline was 29.5 cents per gallon, and on diesel fuel it was 30.7 cents per gallon. Maine taxes on internal combustion engine fuels are indexed to inflation using the Consumer Price Index, with adjustments subject to legislative review each biennium.

A 2005 Maine Better Transportation Association report entitled "Losing Ground" shows that the Highway Fund has grown at one-third the rate of other state revenues such as the General Fund, local property tax, and motor vehicle excise revenues.

State Highway Fund Limitations

In addition to the issue of long-term sustainability of Maine's motor-fuels tax, MaineDOT faces issues of sustainable funding for *non-highway-and-bridge* transportation improvements. In the mid-1940s, the Maine Constitution was amended to protect motor fuels tax revenues that accrue to the Highway Fund and to ensure they are expended only for the cost of construction, reconstruction, maintenance, and repair of public highways and bridges; for payment of debt for such construction; for state enforcement of traffic laws; and for the cost of administration.

The Highway Fund is truly a "highway fund," and cannot be used for construction, reconstruction, maintenance, and repair of non-highway-and-bridge transportation improvements and services (e.g., transit, passenger rail, trails, port, and air transportation infrastructure). This means that capital, operating and maintenance costs for non-highway-and-bridge transportation modes must be paid for by other sources. At the same time, and without a fund source, Maine's 1991 Sensible Transportation Policy Act, to which MaineDOT must adhere, requires the department to choose non-highway-and-bridge investment alternatives over adding new highway capacity, whenever feasible.

Aging Infrastructure

While Maine considers whether the motor-fuels tax, the primary source of funding for transportation infrastructure improvements, is sustainable for the long term, the state is also dealing with an aging infrastructure that has growing demands placed on it. Maine has over 4,000 miles of existing highways in need of reconstruction to bring them to modern structural, operational, and safety standards. Of these miles, 1,850 are posted to weight restrictions during periods of spring thaw. Maine is also higher than the New England and national averages in its percentage of aging bridges, of which 40% under MaineDOT's jurisdiction are over 50 years old. This means they are nearing the end of their useful lives. Non-highway-and-bridge transportation infrastructure (e.g., rail lines, airports, and buses) is also aging and contributing significantly to Maine's overall transportation need.

Reduced Federal Flexibility

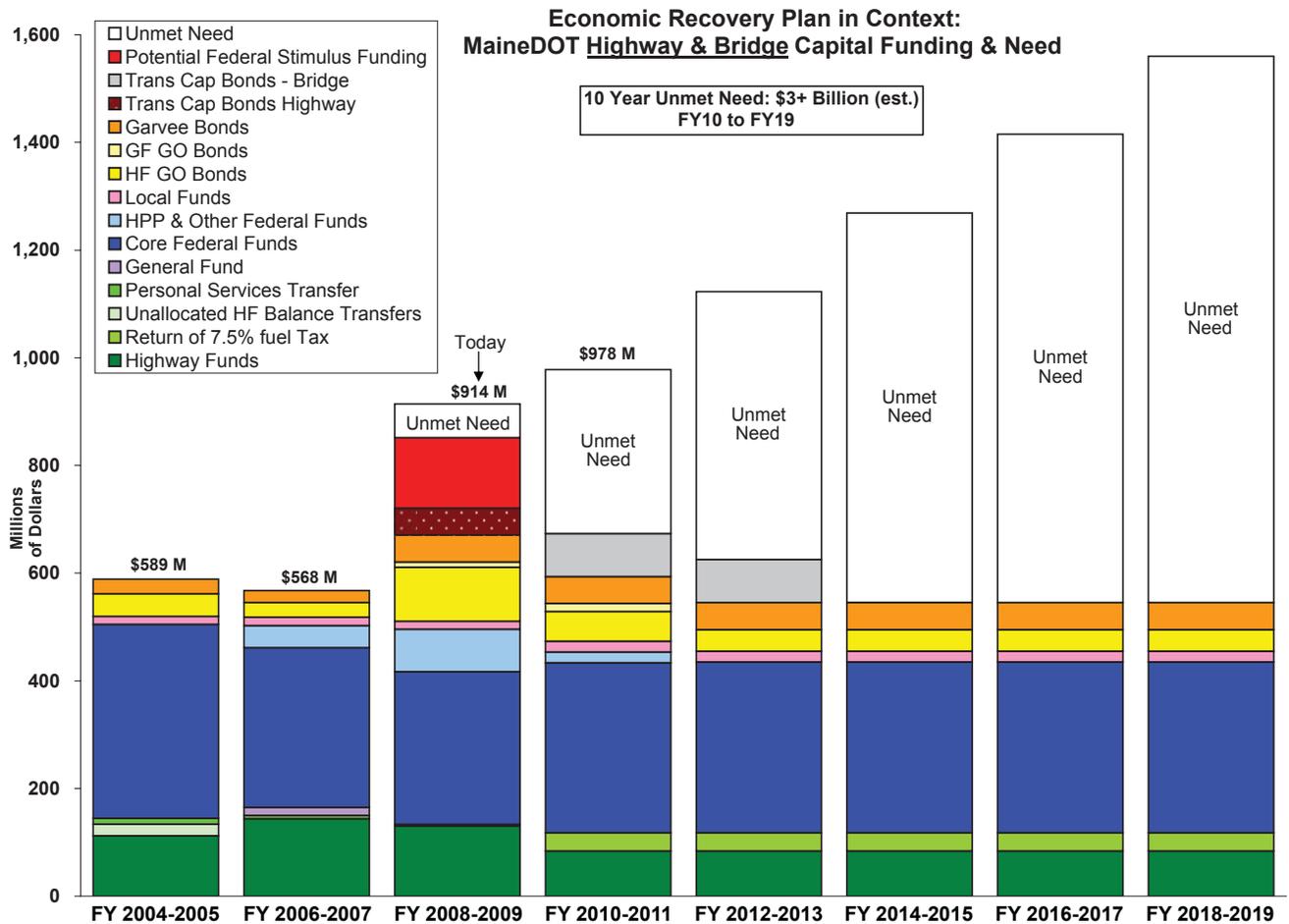
The following chart illustrating expenditures by state fiscal year was published in MaineDOT's *Biennial Capital Work Plan for Fiscal Years 2008-2009*. It measures two factors that have impacted the ability to address highway and bridge needs in our state, the first being construction inflation. Since the FY 2004-2005 biennium, inflation has robbed the state of an estimated \$433 million worth of purchasing power through the FY 2010-2011 biennium due to inflation of 35% in FY 2006-2007 and an additional 11% for the FY 2008-2009 biennium.

Additionally, flexible federal fund expenditures – those funds not earmarked by Congress for specific projects – have declined nearly \$100 million, as compared to FY 2004-2005. This erosion of flexible funds, coupled with the loss of buying power, contributed significantly to the project deferrals experienced in the last biennium, and also limits ability to address highway and bridge priorities established through the MaineDOT and regional planning process.

Federal High Priority Projects (HPP) are important to our transportation system, and those projects in Maine are of great value. However, the next reauthorization act must increase resources to states in order to fund HPP, over and above those flexible core funding programs that MaineDOT depends on to address federally eligible highway and bridge programs. This state is fortunate to have a congressional delegation that understands the importance of transportation to Maine people and the Maine economy. All of our congressional members were supportive of higher funding levels than SAFETEA-LU reauthorization deliberations produced in 2005.

It is time to develop a new national policy for the 21st century. Transportation infrastructure is like an inactive volcano. It is easy to ignore until it erupts. Bottlenecks on our regional highway networks delay goods getting to market, thereby making businesses less competitive; growing traffic on systems unprepared for the rapidly growing volumes create unsafe travel conditions; undeveloped potential in passenger and freight rail systems, due to lack of resources, limits choices for travelers and the ability to reduce transportation's impact on land use and air quality; aging bridges need to be posted or closed before they become unsafe – these are all examples of slowly erupting problems and challenges that will affect our country, our economy and our way of life, if the federal government fails to “step up”.

The 18.3 cent federal motor fuel tax has not been increased in 14 years. When factoring in consumer inflation, the buying power today is equivalent to 12.7 cents. When the construction inflation discussed above is considered, largely driven by the ever-increasing price of oil, our federal buying power is even less. The federal share of our total capital program has been trending downward, as discussed in this section of the *Plan*. We must work with members of congress and our colleagues in the states to enhance the federal funding role, especially in light of our aging infrastructure and inflation.

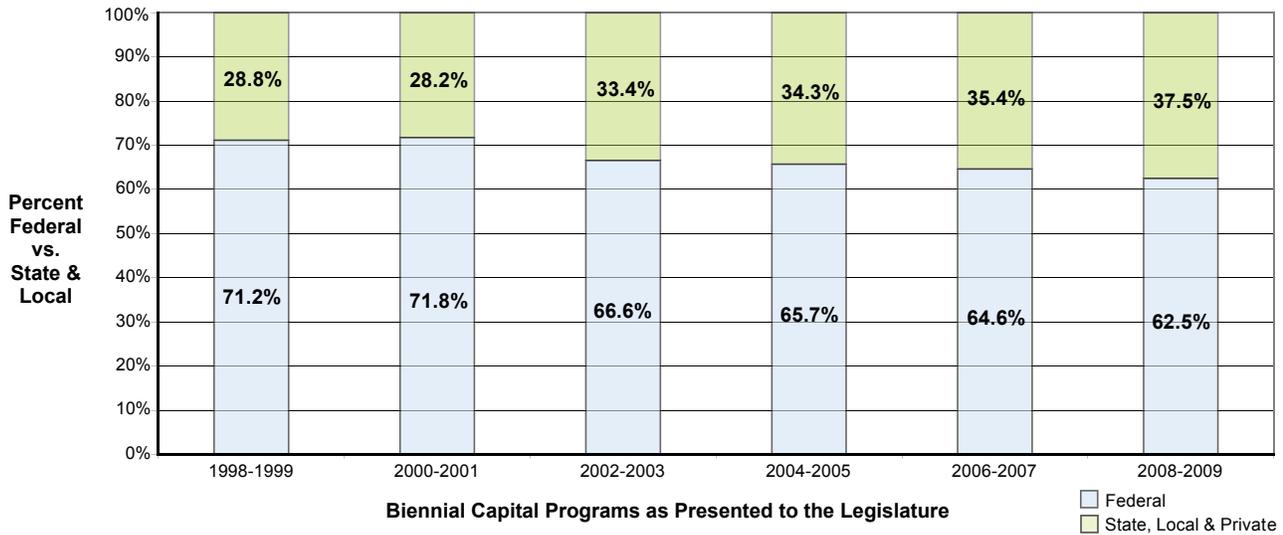


The Federal Role

The American Association of State Highway and Transportation Officials (AASHTO), in its February 2007 study entitled “Future Needs of the U.S. Transportation System,” reported that “Federal highway assistance, which provides nearly half of capital spending, could be in crisis as early as 2008. Unless a solution is found, the program may have to be cut as much as \$11 billion in FY 2009..... It will take the equivalent of a 3-cent federal fuel tax increase to sustain the federal program at the levels approved by SAFETEA-LU.”

This report and several others to be released are being developed to advise the National Surface Transportation Policy and Revenue Commission, formed by Congress under SAFETEA-LU to develop long-range funding recommendations, and to assess the future of the federal government’s role in national transportation funding and policy.

Federal Share of Maine's Biennial Transportation Programs

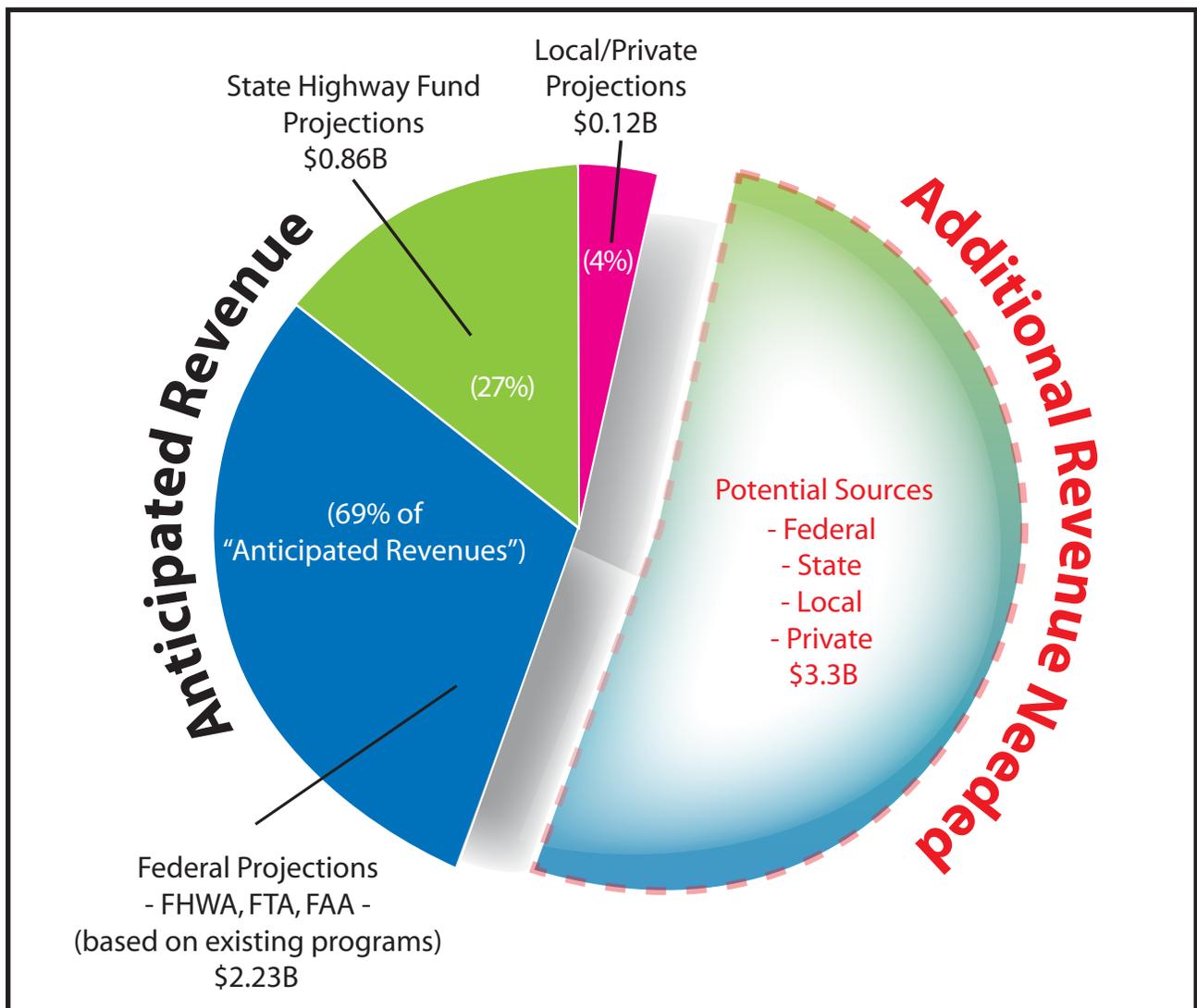


In MaineDOT's *FY 2008-2009 Biennial Capital Work Plan*, federal funding was estimated to make up 62.5% of the funding for MaineDOT's capital program. This compares to 71.2% in the *FY 1998-1999*. These figures include funding from the Federal Highway Administration (FHWA) for highways and bridges, from the Federal Transit Administration (FTA) for transit programs and from the Federal Aviation Administration (FAA) for aviation programs. The federal Highway Trust Fund typically allocates 80% of resources to highways and bridges, and 20% to transit programs.

“For every dollar the federal government fails to raise, the state or local governments will have to replace that dollar, if the strategic level of funding for transportation is to be met.”

Obviously, the federal role in funding Maine transportation needs is, and has been, significant. Any long-range funding strategy must assess and consider the level of federal funding we can reasonably count on, and for which we should advocate. The federal government's resources are facing the very same challenge that State resources are facing—loss of buying power. AASHTO's report stated, "... the value of the 18.3-cent per gallon federal gas tax rate (which hasn't increased since 1993) will decline 55% or to 8.3 cents between 1998 and the end of 2015 if corrective action is not taken to preserve federal capital investment." Although federal apportionments to Maine's transportation system have grown in real dollars over the last three authorization cycles (ISTEA in 1991, TEA-21 in 1998 and SAFETEA-LU in 2005), Maine's transportation capital investment programs' buying power has eroded in both federal and state buying power due to extraordinary construction inflation.

The following pie chart presents a breakdown of where the needed resources could be derived to fund the \$6.5 billion 10-year investment initiatives outlined in *Connecting Maine*. The left side of the pie chart illustrates where and in what proportion the \$3.2 billion in anticipated revenue will be realized, based on current funding expectations. The right side of the pie estimates where the additional \$3.3 billion in new resources could be derived. For every dollar the federal government fails to raise, the state or local governments will have to replace that dollar if the strategic level of funding for transportation is to be met.



Innovative Financing: Options for a New Funding Model

In developing a response to the Maine Legislature's 2004 directive to lead a discussion and report back on the future of transportation funding in Maine, the department commissioned the Margaret Chase Smith Policy Center (MCSPC) of the University of Maine at Orono to conduct research on funding long-term transportation needs and to explore alternative financing options. The MCSPC study identified 16 financing options, their benefits and corresponding concerns. These options fall under four broad categories—*Taxes*, *Direct Pricing*, *Tolls*, and *Fees*. The Maine Turnpike Authority (MTA) also provided significant research with respect to tolling options within its jurisdictional boundaries.

Of the 16 funding options identified, several are not feasible in Maine due to the rural nature of our state. Options that appear to merit further consideration include:

- Mileage-Based Fees
- Value Pricing/Managed Lanes
- Distance-Based (Vehicle) Fees/Price Variability
- State Partnerships with Public and Quasi-Public Entities

- Public/Private Partnerships
- Tolling
- Debt Policy

The MCSPC report concludes that whatever options are considered, equity, suitability and acceptability criteria must be evaluated.

Mileage-Based Fees: The “Oregon Experiment”

The MCSPC report explores a research project in the state of Oregon, which used mileage-based charges to replace the motor-fuels tax, as one of the more promising future alternatives for funding transportation. The report indicates that a \$0.0174 per-mile fee would be needed to maintain current revenue levels generated by motor fuels taxes. Issues of concern with this option include privacy, compliance, and equity between urban and rural travelers, although the current fuel tax model contains similar inequities. Other concerns include charging the same rate regardless of vehicle fuel efficiency and the need for interstate reciprocity to collect fees from out-of-state travelers.

Conceptually, mileage-based fees present a stable revenue source that directly correlates to the number of miles a person drives. Mileage-based fees could be implemented gradually, and the technology is currently available to implement and monitor such a system. The state of Oregon began its mileage-based fee pilot program in 2005, initially involving 20 vehicles, and expanded the program to approximately 200 vehicles in 2006. Oregon published a report on the pilot project in November 2007.

Value Pricing/Managed Lanes

“Value pricing” or “managed lanes” systems allow motorists to buy their way out of traffic by placing a value on their time. Value pricing is primarily practicable on urban highway systems where multiple lanes exist. Congestion is managed by designating specific lanes as high-occupancy vehicles (HOV lanes), on either a toll-free or variable-toll basis. While value pricing would not likely become a major finance alternative in Maine in the near future, it could serve as a supplemental finance mechanism and alleviate congestion in some urban areas where adequate lanes exist or can be built.

Distance-Based (Vehicle) Fees/Price Variability

Under a system of distance-based vehicle fees, the current fixed price of owning a vehicle would be replaced with a variable price—such as variable registration, insurance, and/or title fees—based on vehicle-miles traveled. Under this model, motorists could control their own costs by adjusting their driving habits. This scenario could potentially be advantageous to citizens on fixed incomes, such as the elderly, who typically do not drive great distances.

State Partnerships with Public, Quasi-Public, and Private Entities

There are several ways by which transportation agencies can leverage investments in, and share responsibility for, transportation infrastructure projects. Two of the more likely options are intergovernmental partnerships and public-private partnerships.

For a number of years, MaineDOT has encouraged partnerships through “matching” funding arrangements for certain infrastructure improvements. For instance, transportation improvement projects within the state’s urban areas have required a local cost share. Public-public partnerships also include programs such as:

- **Rural Road Initiative (RRI)**, program created in 1999 to address the capital improvement needs of Maine’s 2,100+ miles of rural “State Aid minor collector” highways. The RRI

Program provides partial funding (67% state share and 33% local share) and incentives for municipalities to partner in capital improvements on State Aid minor collector roads. The local share can come from any municipal funding source, including Urban-Rural Initiative Program (URIP) funds (formerly known as Local Road Assistance). The 2010-2011 MaineDOT Biennial Capital Work Plan significantly reduced the allocation to this program.

- **Quality Community Programs**, which currently include Community Investment Sharing, Transportation Enhancements, Community Livability, Small Harbor Improvements, Safe Routes to School, Recreational Access, and Community Gateways, assist Maine communities in enhancing transportation facilities and community landscapes. These programs encourage citizen and community involvement in local livability initiatives. MaineDOT financially supports projects that apply innovative and effective efforts towards the creation and maintenance of community enhancements near highways or other transportation facilities. Eligible projects include small harbor improvements, bicycle and pedestrian improvements, safety improvements, environmental improvements, scenic, historic, and other quality community improvements. In addition, MaineDOT is available to provide technical assistance support to communities developing the transportation chapter of a local comprehensive plan.
- **511 Travel Information**, a 14-state consortium, of which MaineDOT is a member, is sharing the cost to maintain and augment the system. Maine's 511 Travel Information is available to help commuters and travelers access information regarding weather-related road conditions, construction and congestion via the Internet or by phone, 24 hours a day and seven days a week. Alaska, Idaho, Indiana, Iowa, Kentucky, Louisiana, Minnesota, Missouri, New Hampshire, New Mexico, Rhode Island, Vermont, and Wyoming are also members of this consortium, which provides this service to the public free of charge.
- **Maine Turnpike Authority**, a quasi-public agency, has partnered with MaineDOT on the Gray Bypass, the Lewiston/Auburn Downtown Connector Study, the current Gorham East-West Corridor Study and the upcoming Central York County Connections Study, travel plazas and many other activities. MaineDOT and the MTA will continue to explore a broad range of partnership opportunities.

“Public-Private” Partnerships

The structure of public/private partnerships range from the “Design-Bid-Build” method of project delivery, where the public sector retains a high level of the responsibility for finance, operation, and maintenance of the project, to much deeper levels of private involvement. At the far end of the spectrum is a “Build-Own-Operate” arrangement, in which the private sector develops, finances, designs, builds, owns, operates and maintains a transportation facility. Between these two extremes are many different potential levels of partnership and responsibility.

To date, MaineDOT has initiated a few such public/private partnerships, specifically by using the design-build method of project delivery on the Sagadahoc Bridge (Bath-Woolwich), the I-295/Commercial Street Connector (Portland), and the recent Penobscot Narrows Bridge and Observatory (the Waldo-Hancock Bridge Replacement Project). In addition, MaineDOT has partnered with:

- Railroad companies through the Industrial Rail Access Program (IRAP) to support industrial development by providing 50% of funding for industrial rail upgrades. To date, IRAP has invested \$3.82 million in state funds, and leveraged over \$3.82 million in private and local funds to complete 21 rail access projects in 17 Maine communities.
- Concord Trailways to develop the Portland Transportation Center.
- Acadia National Park, LL Bean, and local communities and businesses to support the *Island Explorer* bus service on Mount Desert Island.

- The Bethel Area Chamber of Commerce, Sunday River Ski Area and area businesses to support the *Mountain Explorer* bus service.
- Sprague Energy and the Maine Port Authority to expand development of Mack Point at the Port of Searsport.
- Three private and one public trolley services, and the municipalities of York, Wells, Kennebunkport and Ogunquit to provide the *Shoreline Explorer* trolley service.

Further details and other examples of public-private partnerships are provided in Chapter 4, Section VII – Public/Private Partnerships Initiative.

Tolling

Maine is one of the states with a tolling agency (the Maine Turnpike Authority) already in place. Toll-collection systems and technologies have been in place in Maine since the opening of the Maine Turnpike in 1947. The Maine Turnpike Authority (MTA) has decades of experience and a proven record of success at sustaining and improving a major highway system with toll revenues. The MTA has most recently launched *E-ZPass*, a state-of-the-art electronic toll-collection (ETC) system in 2005. *E-ZPass* is now in use in 11 states along the eastern seaboard, from Maine to Virginia.

In 2006, the MTA and MaineDOT co-authored a report entitled, “The Transportation Funding Crisis: Tolls are the Answer,” in which they discussed tolling innovations in Maine and across the country. The report reviews public-private partnerships, noting that, “...*the earliest and most efficient example of ‘PPPs’ [Public-Private Partnerships] are the independent toll authorities such as the Maine Turnpike Authority. These are seen as more efficient because the rate of needed repayment is only what is necessary without the need for profit....*”

The MaineDOT-MTA report also reviews a number of tolling options, such as High Occupancy Toll (HOT Lanes), Truck-Only Toll lanes, and Fast and Sensible Toll (FAST) lanes. Some of these options may not be readily applicable in Maine, since they require new infrastructure including lane separations, and highway segments with at least three lanes, one for travel, one for passing, and one dedicated to a specific purpose. The MTA has indicated a willingness to play a greater role but has no plans to toll roads other than the Maine Turnpike.

MaineDOT and the Maine Turnpike Authority: Expanding the Partnership

MaineDOT and the MTA have worked together effectively for over 50 years to foster a partnership, one in which the turnpike is recognized as a vital component of Maine’s statewide transportation system. Current federal law imposes strict limitations on the establishment of tolls on existing Federal Aid highways, but innovative financing techniques that may be provided for in the next reauthorization may enable new models for financial cooperation between MaineDOT and the MTA. Such “public/quasi-public” partnerships may yield new financial models.

Debt Policy

Another joint MaineDOT- Maine Turnpike Authority report published in 2006 and entitled “A Report on the Future of Transportation Funding in Maine” presented to the Joint Standing Committee on Transportation of the 122nd legislature also examined alternative financing, including debt financing options for transportation infrastructure, including ongoing efforts to address a \$130 million shortfall in the *MaineDOT Biennial Capital Work Plan* for Fiscal Years 2006-2007. Recommendations included debt financing components that seek to address the short-term funding deficiencies. However, the MaineDOT-MTA report produced findings and recommendations that may also be applicable to Maine’s long-term funding challenges. In particular, various bonding instruments appear to hold promise for addressing long-term transportation infrastructure needs.

As stated in the report, the state of Maine has been conservative in its levels of borrowing for financing long-term transportation improvement projects. The state and the MTA might be able to improve economic opportunities by leveraging capital, if available, and thereby funding long-term transportation infrastructure needs by spreading the cost of improvements over a portion of a project's lifespan. This potential approach will need to be reviewed as the national and state economies change.

Federally enabled "Grant Anticipation Revenue Vehicle (GARVEE) Bonds," and/or new "Conduit Issued Revenue Bonds" could also be considered. Maine is familiar with GARVEE bonds, having used them previously to finance part of the Penobscot Narrows Bridge and Observatory project. GARVEE bonds are secured by future receipt of federal transportation funding. To support the state's capital transportation investments, conduit issued revenue bonds could be used, through "conduit issuers," such as the Maine Municipal Bond Bank, for non-toll bond programs. Conduit issued revenue bonds also provide flexibility and predictability in planning long-term transportation investments. Both rely on stable financial markets.

The essential element to providing predictability would be to identify a source of revenue that could be dedicated to service bond debt. Either bonding option would likely require longer maturity terms of 15 to 25 years to avoid short-term cash-flow problems, and to better reflect capital asset life spans of 50+ years.

While the issuance of either form of bond would mean assuming long-term debt, such costs should be measured against Maine's ability to meet long-term transportation infrastructure needs, the potential for lost economic opportunities, and inflationary pressures that could increase the costs of delayed projects. These forms of debt could be structured so as not to pledge the full faith and credit of the state, while still receiving favorable interest rates in the financial markets.

"...Any new GARVEEs that extended their term to 15 to 25 years would likely carry a mid- to low- 'A' category rating. Conduit Issued Revenue Bonds would likely carry a "mid- to high- 'A' rating, which would result in marginally lower issuance cost than the GARVEE Bonds."

—Working Group Report

Impacts on the Maine Economy

As is noted throughout *Connecting Maine*, transportation is critical to Maine's economic and social well-being. In order to quantify the economic impacts of different levels of transportation investments, MaineDOT contracted with the Maine Center for Business and Economic Research at the University of Southern Maine (USM) to evaluate the impacts of (1) infrastructure investments that reduce congestion and eliminate road postings, (2) transit and passenger rail investments, and (3) freight improvements for railroads and ports. USM's Dr. Charles Colgan headed this effort, using estimated costs and schedules of development for the identified strategic investments. In the 2008 USM publication entitled *Changes in the Maine Economy from Strategic Investments in the Transportation System*, Dr. Colgan utilizes economic modeling to determine that for the identified investments, employment would increase by 2,538 additional jobs by 2030 and the Maine Gross State Product (GSP) would increase more than \$2.5 billion (or on average \$107 million per year) over the same period, compared with an economy in which the transportation system performed no better than today's system. This investment would yield at least a \$3.65 increase in Maine GSP for every dollar invested in the system (costs are in 2007 dollars). By contrast, if none of the identified strategic transportation infrastructure investments were

to occur, and only current spending levels were maintained, the Maine economy would lose more than 5,800 jobs. Because not all of the infrastructure improvements proposed in *Connecting Maine* were included in this research, Dr. Colgan's estimate is considered to be very conservative.

In addition to the USM study, MaineDOT commissioned the Maine Development Foundation to conduct a series of interviews with business leaders throughout the State. A total of 23 business leaders representing the following sectors were interviewed, including tourism, pulp and paper, agriculture, technology, health care, and "traditional" businesses in Maine. Typical areas of concern regarding transportation focused on the costs of transporting people and materials to the business, and of delivering products or services to market in a cost-efficient and time-sensitive manner. The study report entitled *Connecting Maine – What Maine Businesses Have to Say* was released in March 2009.

Chapter 6 - Reflecting the Priorities and Vision of the People of Maine

Overview of the Public Participation Process

From the onset of developing *Connecting Maine*, MaineDOT incorporated Governor Baldacci's goal of regionalism which supports and promotes coordination of economic development with land use, environmental impact management, and strategic transportation planning. To this end, *Connecting Maine* – the policies and initiatives – reflect the vision and priorities expressed by Maine citizens over five years of public outreach. Public involvement and participation of Maine citizens, scholars, economists, legislators, municipal leaders, business representatives, transportation experts, regional councils, metropolitan planning organizations, Indian tribal governments and the Maine Turnpike Authority informed every element of the plan. The final plan and strategies contained in *Connecting Maine* articulates the priorities, vision and goals expressed during these years of public participation. The public process utilized several distinct phases:

- User Survey (2003)
- Focus Group Meetings (2004)
- Regional Transportation Assessments (2005)
- Future Visions Workshops (2005)
- Regional Forums (2005)
- Regional Strategic Investment Plans (2006)
- Public Consultation Meetings (2007)
- Final Draft Public Comments (2008)

The process of gathering public input, which began in 2003 with a user survey, included a series of public and other forums during which the people of Maine said they wanted not only a safe and effective transportation system, but one which supports economic vitality, introduces innovation, enhances quality of life, and protects the cultural and natural environment. *Connecting Maine* is built upon these goals and is a multi-layered strategy to guide the future work of MaineDOT maintaining and improving the transportation system. More recently, a state-wide public consultation period in the spring of 2007 allowed the public to help fine-tune this strategy. This final version of *Connecting Maine* is the culmination of these efforts.

User Survey

Shortly after undergoing a change in leadership, MaineDOT contracted with an independent consultant to conduct a statewide user survey prior to the development of its current strategic plan in 2003. Approximately 680 telephone surveys were conducted with at least 75 from each of the then seven MaineDOT maintenance regions statewide. The survey questions were broken down into several sections that focused on issues such as overall performance, the importance of various MaineDOT services, and the quality and value of these services. In addition, specific questions were asked in order to evaluate respondents' opinions in the areas of economic development, environment, quality, safety, and customer satisfaction and communications. Though not directly related to the development of *Connecting Maine*, the user survey provided information that led to development of MaineDOT's current strategic plan, and the statewide long-range transportation plan relates directly to its vision, mission and goals.

Focus Group Meetings

Early policy development for the long-range plan was conducted by an independent contractor at eight focus groups attended by a total of 77 people and held in April and May in 2004. Five of the focus groups were held with consumers, two consisted of members of the business community and one included a mix of members of the general public and business people. The consumer focus group meetings were held in Lewiston, Portland, Waterville, Bangor, Rockport and Caribou. Business-based focus group meetings were held in Bangor and Portland and the mixed group meeting was held in Caribou.

The purpose of conducting the focus group meetings was to:

- Assess participants' awareness of the MaineDOT and its varied roles
- Evaluate perceptions of MaineDOT and the adequacy of its communications to the public
- Identify transportation needs and priorities for MaineDOT in the next five to ten years
- Learn about participants' knowledge of MaineDOT's budget and sources of funding, and evaluate their level of support for various types of transportation funding sources.

Participants indicated that they want good information on which to base fair solutions to address transportation problems and to invest in the future. They recognize that Maine's economy will benefit from strategic transportation investments, and they support raising additional funds for improvements when MaineDOT can demonstrate that these investments will produce significant public benefits. Additionally, the focus group discussions indicated that:

- Many people are not aware that MaineDOT is responsible for planning, building and maintaining Maine's varied modes of transportation infrastructure
- Participants said they want to have more input into the planning process
- To a large degree they were unaware of MaineDOT's budget and funding sources
- They support gas tax revenues because it is an equitable user payment system
- Tolls were unpopular because they were perceived as slowing traffic and causing road congestion
- If faced with budget shortfalls, the majority of respondents indicated they would support increasing the fuels tax
- The aggregate response of the participants attending the focus groups determined that the ideal fund source breakdown for each Maine transportation dollar would be as follows:
 - \$0.45 state motor fuels tax
 - \$0.13 bonds
 - \$0.23 vehicle licenses and fees
 - \$0.08 tolls
 - \$0.04 other taxes
 - \$0.07 all other sources
 - \$1.00

Regional Transportation Assessments

MaineDOT commissioned the state's regional councils to conduct public processes throughout Maine in 2005 to identify where transportation investments could support regional economic development. The regional councils solicited input from the public and regional stakeholders on transportation, land use and economic development priorities in their respective regions.

Knowledge gained through public outreach and data analysis enabled the regional councils to identify and prioritize *Corridors of Regional Economic Significance for Transportation* (CRESTs) to guide land use planning and transportation investment in the future. This process yielded a total of 38 CRESTs statewide. In addition to identifying CRESTs, the Regional Transportation Assessments

defined the transportation, land use and economic goals of each corridor. These corridors will play an important role in helping federal transportation officials and Maine's congressional delegation as they consider future allocations of federal and state transportation funding. Refer to Chapter 8 for maps and the transportation, land use and economic goals of each corridor as identified in the Regional Transportation Assessments.

Future Visions Workshops

In July and August of 2005, planners, economists, futurists and scholars from throughout the northeast participated in two future visioning workshops held at MaineDOT to help define and clarify the challenges and opportunities the state will face over the next two decades. Following are highlights of the expert opinions on the future of Maine that were heard at the two workshops:

- Maine has an opportunity to improve its urban regions and keep them livable by noting the mistakes made in other states. Quality of life is a major factor.
- Projections are often extensions of past trends and therefore do not always accurately reflect the future or how we would like the future to be. Demand may change if given new choices.
- Bold decisions are needed to address the future. What economic theme does Maine want to pursue?
- Base closings, oil prices, and the housing cost bubble are all short-term issues that will be resolved; aging population, climate changes, and technological changes are long-term. Very little employment growth is being projected.
- Adding vs. managing capacity: What will the private market take care of and what will the public need to address?
- Technological advances will dramatically change transportation – the next 20 years will be a transition period as vehicles increasingly take over driver roles (driverless lanes, etc.). The barriers are not technological as much as they are financial, social, and institutional.
- Factors to consider include: access – physical connections; accessibility – time & reliability; mobility – choices for freight, people and safety.
- Land use is where the battles will be fought. MaineDOT could provide greater design assistance to communities rather than impose land development regulations (broad vs. a potentially controversial, project specific approach).
- Identify ways to retain strong and niche markets. In general market share loss will occur. Look at origin-destination: How can transportation be improved?
- As many people are migrating to Maine from New Hampshire and Massachusetts as are leaving Maine for those states.
- Housing costs are rising rapidly in southern Maine, but are still attractive to New Hampshire and Massachusetts commuters.
- There may be a reversal in sprawl as retirement-age people move to urban areas for access to health care and other facilities.
- Maine is at the center of international trade for the Northeastern US and Canada. Calais is the largest eastern point of entry. Gridlock exists in NY, but there are no FHWA High-Priority Corridors in New England, other than the Maine CanAm Connections East-West Corridor. The northern tier of New England and southeast Canada are economically distressed and also offer high potential for alternative east-west freight movement. The Trans-Canada Highway goes around Maine, resulting in a 2,000 mile road to travel 600 air miles. Trade routes (rail, air, and/or road) could connect to Chicago-Quebec or Boston-Washington.
- Freight ton-miles are growing faster than the population. Highest growth areas are by air (400%) and water (400%), followed by roads (187%) and rail (150%). Air is the mode we can least control. The fastest growth areas will be coastal counties, but that may not be sustainable. High-tech industries are the highest-growth sectors (MA = 10.7%, US = 7.4%, ME = 3.1%).

- Incremental changes should be considered. For instance railroads in northern Maine originally provided significant incremental improvement, but a 4-lane highway might not. A minor incremental difference in average trucking costs can make the difference in a plant being competitive, however.
- Manufacturing, paper-making, forest products and shipbuilding industries are slowing down, while health services, education, construction, leisure, and hospitality are all growing.
- Urban centers will see the bulk of (minimal) growth – Portland, Lewiston-Auburn, and Bangor (and to a lesser extent Augusta, Rockland-Camden, and Waterville).
- Maine has the oldest population in the US, but it is more due to low birth rates than to migration. Younger people are leaving for college. By 2025, 20% of Maine’s population will be over 65 years old and about 25% will be under the age of 24.
- Maine’s population growth is expected to be flat (0.2%), and non-manufacturing growth will increase only 0.7%. Most new jobs are created from spin-offs of existing industry, not from drawing new companies in. TIFs (Tax Increment Financing) may impact an overall negative effect when considering social costs. For further information on an example of a TIF use, see Chapter 4, Section VII, Ellsworth example of public-private partnerships.
- Public transit in rural areas could disappear if Medicaid is lost.
- Skilled populations require a large area to draw from – congestion can reduce the area that can be drawn from.
- Niche ports are driven by aggressive private marine terminal service providers and entrepreneurs such as the late P.D. Merrill, owner of Merrill Marine Services, Inc. (now owned by Sprague Energy Corporation).
- An east-west connector will require international agreements, but could generate new passenger use.

Regional Forums

Following the future visions workshops, seven regional forums were convened in October and November of 2005 to gain input from municipal leaders, elected officials and other decision makers. Approximately 300 people (excluding MaineDOT presenters and attendees) attended the seven regional forums, held in Machias, Jay, Presque Isle, Waldoboro, Scarborough, Waterville and Orono. These forums were held to build on the earlier discussions and focused on regional transportation needs, land use, economic development and transportation funding. The results of the regional forums shaped the plan and policy that was then developed and presented in a draft for statewide public consultation and comment in the spring of 2007.

Following the second regional forum, the format was modified to help ensure maximum public participation. In the last five regional forums, the participants heard presentations by MaineDOT, the respective Regional Council and the Maine Turnpike Authority on the issues and challenges affecting transportation in Maine in the morning session, as was done at the first two forums. However, rather than have an open discussion at large, the groups were divided into four balanced diversified groups, and the presenters went to each group with a list of trigger questions designed to elicit open discussion among the participants. The discussions focused on four areas: statewide and regionally-specific transportation needs, economic development, land use and funding alternatives. The discussions similarly led to four basic principles: Facts; Fixes; Fairness and Finance. These are discussed further in the following paragraphs.

Facts. Participants of the regional forums told MaineDOT that they want to know the facts, including when and where MaineDOT projects will be scheduled, how projects will be financed, what options are available to solve specific problems and whom they can contact with their questions. While there is ample evidence that many of the participants in these meetings take a greater interest in long-range

transportation planning than most Maine residents, their concern for timely and accurate information has been expressed in past outreach efforts, particularly when local infrastructure investments need to be timed with MaineDOT projects.

Fixes. Many of the participants want transportation problems to be fixed for the long term. Regional solutions, such as an East-West Highway, a Northern Highway and expanded Downeaster rail services each had their advocates. Creative solutions to problems were supported and included strategic planning involving multiple transportation modes and user incentives.

Fairness. Fairness in transportation was expressed in several ways by participants.

- Process – the process for prioritizing projects should be rational and explicit.
- Regional equity – MaineDOT should not ignore any regions of the state.
- Rural – urban – MaineDOT needs to provide adequate services to rural populations, recognizing that some services are extremely difficult to provide within current budgetary constraints.
- Special needs – MaineDOT needs to provide services that help people who are disabled, aging or for other reasons unable to own and operate private automobiles.

Many of the Facts, Fixes and Fairness concerns that were expressed at the Regional Forums are addressed in this plan. The issues that arose regarding public education, involvement and notification will be addressed in MaineDOT's upcoming *Public Involvement Plan*.

Finance. Participants understood MaineDOT's central point, that the current funding trajectory includes rising costs and relatively flat revenues and a resulting structural funding deficit. The public forums indicated strong support for maintaining the current transportation infrastructure (aka MaineDOT's Resource Allocation Policy) as a high priority.

Participants also strongly supported raising additional revenues to support strategic initiatives outlined in the long-range plan. Revenue sources included increased tolling, fees, and fuel taxes, generally along the same relative ratios as was observed in the focus groups meetings (see Focus Groups Meetings section previously discussed in this Chapter). Participants want to receive more specific information on funding options, including amounts that can be raised, how these would affect the economy and whether the funds meet some basic fairness criteria.

Following analysis of comments made during public meetings and on the website survey, a general public commentary emerged. People often expressed points of view, and in some cases positions were steadfast, but generally participants said their greatest priority was the development of fair, equitable, feasible and smart solutions to the many transportation issues facing the state of Maine. In this, people called on the department to provide not only thoughtful and appropriate options, but also to present innovative solutions that might be chosen by the people of Maine. Most notably, the public called upon the department to provide more explicit commentary on how application of options would play out in the real world, as well as leadership regarding specific scenarios. Not that the citizens of Maine want to be told what to do. Instead, people want to know which options are available, how implementation of each option would affect their lives and, importantly, what MaineDOT considers to be a viable, feasible and fair scenario. Generally, people seem to want to do something that will correct the situation, improve their lives, improve Maine's economy, and importantly be "fair" for citizens in different regions of the state and in different life circumstances.

Additionally, several specific themes emerged from the more general conversations, notably regarding initiatives from which the public might choose to fill the funding shortfall; means of providing enhanced freight transportation, particularly from Eastport and Aroostook County; and options and

means for providing transportation throughout the state as an alternative to individual automobiles – mass transit for commuters or metro populations and other options for rural, elderly and disabled residents. Responses to these themes have been drafted and included in this *Plan*.

In regard to the serious budget shortfall MaineDOT now faces and anticipates in the future, the public generally accepted the facts of the situation, not as good news, but neither as an insurmountable problem. This accompanied a general acceptance that the situation regarding maintenance of the transportation infrastructure is dire and the need for not only maintaining but also improving transportation systems is substantial.

Regional Strategic Investment Plans

Current and anticipated funding will likely be insufficient to maintain the transportation system in its current state. Significant transportation infrastructure improvements are also needed if Maine is to improve its economic vitality and meet the transportation needs of its citizens. MaineDOT therefore wanted to quantify the high-priority strategic investments needed over the next ten or more years so as to determine the additional funding amounts required to meet those strategic investment needs. The intent of this effort was to provide a sampling of the types and costs of strategic investments needed in each region over the next 10 or more years. Each regional council was thus tasked in 2006 with identifying the policy issues, planning initiatives and major capital investments needed to address the transportation, land use and economic goals they previously identified for each CREST in the development of their Regional Transportation Assessments. The regional councils solicited public input as they developed their respective strategic investment plans for each corridor. The strategic investments that were thus developed are provided in Chapter 8 of *Connecting Maine*.

Public Consultation Meetings

In the spring of 2007, prior to the final drafting of the *Plan*, a statewide public consultation period was held involving 20 public meetings and an on-line public survey to facilitate public feedback to the preliminary draft plan articulated by MaineDOT. One of MaineDOT's primary messages in *Connecting Maine* – that revenues in support of the state's transportation system are not keeping pace with costs – clearly resonated with people attending the public meetings and with survey respondents. This issue was considered the highest priority among over a third of survey respondents and over half put this as first or second priority. The importance of investing in transportation for statewide economic growth was the next priority, with 45% considering it to be among their top two choices. Citizens participating in the on-line survey clearly ranked the idea of limiting MaineDOT activities in response to financial constraints as the bottom option among all choices. These, as well as other public commentaries, are elaborated on below.

A draft plan outlining all substantive aspects of *Connecting Maine* was presented to the citizens of Maine as part of a 45-day public consultation period held in April and May 2007. This process was designed to broaden the participation in this policy conversation beyond the typical participants. Efforts, including establishing a website and a web-based survey, were made in an attempt to reach beyond the typical transportation stakeholders. MaineDOT and its partners created an extensive contact list of businesses, transportation stakeholders, local leaders and citizens for outreach and comment.

MaineDOT received written public comments from Maine Audubon, the Maine Division Office of the Federal Highway Administration (FHWA), and the town of Bar Harbor. Maine Audubon's primary concern was that the department place "more emphasis on and specific reference to avoiding, minimizing or mitigating for impacts of roads on native plant and animal habitat", with specific suggestions for improvements to the plan. These comments are addressed in Chapter 1 (Vision and Goals), and in Chapter 2 (Forces Shaping the Future) regarding environmental stewardship.

FHWA identified editorial and formatting inconsistencies and offered comment on the content of certain sections. The FHWA provided an alternate and objective “view” with which to review the technical details of this *Plan*.

Finally, the town of Bar Harbor provided useful input to the department from a municipal perspective. As a town that serves a significant tourist population, while also home to a number of large employers (Jackson Laboratory, College of the Atlantic, and adjacent to the Acadia National Park), the municipality suggested the state establish funding priorities in a way that recognizes that towns must frequently plan beyond their boundaries. This is a critical component of *Connecting Maine*, and can be found in Chapter 8 (Regional Focus on Planning). The town of Bar Harbor also pointed out the need for financial support to municipalities for the preparation of transportation plans. MaineDOT agrees this is an important planning component. The department contracts with regional councils to provide technical assistance to municipalities seeking guidance or assistance with the development of their transportation plan. MaineDOT has increased funding to the regional councils in the last 5 years. Also, MaineDOT has proposed new Rulemaking for the 2008 Legislative Session regarding the Sensible Transportation Policy Act (STPA), which was enacted. STPA encourages communities and provides incentives for them to develop municipal and multi-municipal transportation plans. Bar Harbor’s last comment requests that the state continue to support and seek additional federal funding in the scenic byways program. MaineDOT agrees this is an important program for preserving the qualities of our roadways while also supporting tourism and economic development. We will continue to pursue any and all funding opportunities in this regard.

MaineDOT staff was also included through town hall style meetings at MaineDOT regional offices. More than 100 MaineDOT employees participated, providing their unique insight into long range transportation needs and opportunities. The draft plan was widely publicized, including direct mailings to potentially interested individuals and groups, communications with municipalities, state and federal agencies and tribal governments. Draft documents were posted to MaineDOT’s website and public meeting notices were published in local newspapers.

MaineDOT also contacted state agencies that have transportation related mandates, including mailings and monthly inter-agency meetings convened by MaineDOT. MaineDOT emphasized the importance and value of state agency input, as well as the opportunities to provide feedback through the on-line survey. More than 20 state agency representatives attended a meeting in which the draft was presented and feedback solicited.

MaineDOT contacted representatives of the Indian tribal governments soliciting comments through mailings announcing the draft plan release and regional public informational meetings. Though attendance records do not document race or ethnicity of participants, attendees raised issues of concern to the tribal communities during the public outreach meetings. One example is a discussion of alternatives for freight movement through Eastport that would reduce traffic, noise and air pollution in tribal lands. MaineDOT will meet with tribal representatives in future discussions regarding transportation planning.

MaineDOT employed multiple channels to inform the public and encourage participation in the public consultation meetings and the online survey, as further described below.

- **PRESS RELEASES:** At the launch of the 45-day public consultation period, MaineDOT announced the draft plan through a press release to media outlets. This announcement outlined the plan, provided details about the public consultation period and provided MaineDOT website links where future information would be posted. Prior to each public meeting, a media alert was sent to regional press to encourage their attendance.

- **POSTCARDS:** MaineDOT mailed more than 2,000 postcards to a “transportation stakeholder” database to encourage participation in the survey and public meetings.
- **ADVERTISEMENTS:** MaineDOT placed advertisements in regional newspapers announcing public meetings and encouraging participation in the internet survey.
- **VIDEO:** MaineDOT produced a video entitled *Transportation Moving Maine’s Economy Forward*, featuring Maine business leaders discussing transportation issues. The video also encouraged the public to participate in the public consultation period. This video was widely aired on cable access stations throughout the state and received an American Association of State Highway Transportation Officials (AASHTO) national award.
- **LEGISLATIVE CONTACT:** All state legislators were invited to attend public meetings in their areas and asked to provide feedback through the online survey.
- **REGIONAL NETWORKS:** Regional councils published newsletter articles, press releases, website pages and letters to town offices to encourage public participation.

Summary of Public Comments to the Final Draft

The Final Draft of *Connecting Maine* was published and released in December, 2008. Comments to the Final Draft were accepted through February, 2009. MaineDOT provided internal comments as the result of changing conditions, and written comments were received from FHWA, the Maine Turnpike Authority, Maine Audubon, the Androscoggin Valley Council of Governments, the Hancock County Planning Commission and four individuals. The comments and the MaineDOT responses to them are summarized in the table below.

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
1.1	FHWA	General	Add Statement on FHWA Funding	Added to Major Contributors and Table of Contents
1.2		Security & Other FHWA Program Areas	Add Table that was included in earlier Drafts	Added Table as Appendix 6
1.3		Mitigation	Specify the types of mitigation that could occur with the projects identified in the plan	Added to Environmental Stewardship section of Chapter 2
1.4		Intelligent Transportation Systems	Discuss Statewide ITS Architecture and Statewide ITS Operations and Implementation Plan	Added language to the Technology section of Chapter 2

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
2.1	MaineDOT	New	Insert Executive Summary	Executive Summary Added
2.2		Foreword	Delete Foreword	Foreword Deleted
2.3		Introduction & Document Overview	Delete Introduction & Document Overview	Deleted
2.4		Major Contributors	Rename to Acknowledgements	Renamed
2.5		Chapter 1 Vision Statement	Revise Vision Statement	Vision Statement Revised
2.6		Chapter 1 Goals & Objectives	Rearrange order of Goals	Goals rearranged
2.7		Chapter 1 Goals & Objectives	Add Objective for Climate Change	Added Objective 4.5
2.8		Chapter 2	Note that effects are cumulative	Added to 1 st paragraph
2.9		Chapter 2	Add statement on VMT effects to CO ₂ and Climate Change	Added under Travel Demand and Its Effects on Mobility
2.10		Chapter 3	Rearrange Goals to coincide with Chapter 1	Goals rearranged in proper order
2.11		Chapter 4 - Investment Initiatives	Add paragraph on Climate Change	Added to Investment Initiative IV- Quality of Place
2.12		Chapter 5	Update Capital Highway & Bridge Funding Chart	Chart Replaced in Chapter 5
2.13		Chapter 6	Summarize Comments Received to the Final Draft	Added Summary of Comments and Responses
2.14		Chapter 8, first page	Add note regarding time lapse between development of Strategic Investment Plans and final version of <i>Connecting Maine</i>	Note added to indicate some Strategic Investment Plan recommendations have been achieved
2.15		Afterword	Delete Afterword	Afterword Deleted
2.16		Appendices	Add Modified TELUS Model	Added as Appendix 4
2.17		Appendices	Add Detailed Goals, Objectives & Strategies	Added as Appendix 6
2.18		Entire Document	Minor edits	Edits incorporated

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
3.1	Maine Turnpike Authority	Acknowledgements - Maine Turnpike Auth.	MTA is updating its 10-Year Plan	The notation has been added
3.2		Chapter 2 - Technology	Barrier-Free Tolling <u>may</u> be implemented at limited locations	Revised reference to Barrier-Free Tolling
3.3		Chapter 5 - Tolling	MTA is willing to play a greater role but has no plans to toll other roads	The notation has been added
3.4		Chapter 5 - Debt Policy	The MTA report did not discuss debt financing options	The reference to debt financing has been revised
3.5		Chapter 5 - Tolling	Tolls in place only since the Turnpike opened in 1947	The notation has been added
3.6		Chapter 5 - Tolling	E-Z Pass was launched in 2005	The date has been added
3.7		Chapter 5 - Debt Policy	Correct reference is "The Future of Transportation Funding in Maine"	The report reference has been corrected
3.8		Chapter 5 - Debt Policy	2006 debt financing recommendations are no longer valid due to recent changes in the credit climate	A statement indicative of the changing economic conditions has been added
3.9		Chapter 7 - Maine Turnpike Authority	MTA does not receive tax dollars	Reference to "quasi-public" revised
3.10		Chapter 7 - Maine Turnpike Authority	MTA is updating its 10-Year Plan	The notation has been added
3.11		Chapter 8	MTA weight limit is 100,000 lbs. from Kittery to Augusta	The notation has been added to all regional plans
3.12		Chapter 8 - KVCOG Priority Corridor No. 1, Capital Investment No. 7	KVCOG need for a new I-95 interchange between Exits 103 and 109 is not in the MTA 10 Year Plan	The notation has been added
3.13		Chapter 8 - So. Maine Economic Development District, Cumberland Co. Central (Corridor Map), Economic Objectives	The Gray bypass has been built, and MTA is evaluating improving the Exit 63 interchange	The notation has been added
3.14		Chapter 8 - So. Maine Economic Development District, Region Wide Investment Policy Initiative	See comment 3.11 (weight limits)	The notation has been added

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
3.15	Maine Turnpike Authority- (continued)	Chapter 8 - Southern Maine Economic Development District Priority Corridor No. 1, Policy Initiative No. 2 and Priority Corridor No. 4, Policy Initiative No. 1	A 2007 report on the Rte.1 and Rte. 236 corridors noted that maintaining consistent overlimit regulations on the entire Turnpike is optimal. Toll plaza and bridge clearances will increase as facilities are upgraded over time.	The notation has been added
3.16		Chapter 8 - Southern Maine Economic Development District Priority Corridor No. 1, Planning Initiative No. 2	Southern Maine Economic Development District policy initiative for a Transportation Redundancy Plan is not unique to MTA, and peak traffic volumes are down.	No changes required - the policy initiative being sought is to improve emergency communications
3.17		Chapter 8 - Southern Maine Economic Development District Priority Corridor No. 3, Planning Initiative	MTA studies have shown that there is minimal truck diversion around the New Gloucester toll plaza.	The notation has been added
3.18		Appendix 1 - References, Publications by Others - Maine Turnpike Authority	Typo in the referenced MTA document	The typo has been corrected

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
4.1	Maine Audubon	Impacts of Climate Change to Wildlife (Chapters 2 and 3)	Bridges & culverts will be inaccessible to wildlife, due to failure caused by floods and water levels	Climate Change language has been added
4.2		Impacts of Climate Change to Wildlife (Chapters 2 and 3)	Reference MaineDOT's July 2008 "Waterways & Wildlife Crossing Policy & Design Guide"	Reference added and included in Appendix 1 - References
4.3		Impacts of Climate Change to Wildlife (Chapters 2 and 3)	Add bullet "i" to Chapter 3 High Priority Objectives and Unmet Needs - Goal 4, Enhance Quality of Life: "Reduce impacts from climate change by increasing wildlife's ability to pass through roads"	Portions of Chapters 1 and 3 and Appendix 6 (Goal #3) have been revised
5.1	Androscoggin Valley Council of Governments	Chapter 4 - Investment Initiatives (first page)	Include need for new and expanded transit services connecting Service Center communities in rural areas	Language has been added
5.2		Chapter 4 - III. Multimodal Connections Initiatives - Intercity Passenger and Commuter Rail	Is there an anticipated timeframe for development of passenger rail to Lewiston-Auburn?	No firm dates are listed, as the improvements are dependent upon funding
5.3		Chapter 4 - III. Multimodal Connections Initiatives - Intercity Passenger and Commuter Rail	Is "rail lanes" a typo?	Corrected to "rail lines"
5.4		Chapter 4 - III. Multimodal Connections Initiatives - Intercity Passenger and Commuter Rail	AVCOG pleased with extending passenger rail	No changes required

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
5.5	Androscoggin Valley Council of Governments- (continued)	Chapter 4 - III. Multimodal Connections Initiatives - Freight Intermodal System	Auburn should be included as a 4th port, and more information presented to show that Auburn is the busiest port for non-liquid freight volume in the state	Added a paragraph on the inland port of Auburn
5.6		Chapter 4 - III. Multimodal Connections Initiatives - Freight Intermodal System	Is there a timeframe for upgrading the Lewiston Lower Road to provide the area's shippers with another modal option?	No firm dates are listed, as the improvements are dependent upon funding
5.7		Chapter 4 - Quality of Place Initiative	Does MaineDOT develop projects that address these goals or are they the outcome of local and regional planning efforts, sometimes done in conjunction with MaineDOT?	The statement was modified to indicate the collaboration with local and regional planning entities
5.8		Chapter 7 - Maine Regional Councils/ Economic Development Districts	The names of the two regional councils are incorrect	The names have been corrected
5.9		Chapter 8 - first page	Northern Maine Development Corporation is an incorrect name	The name has been corrected
5.10		Chapter 8 - Eastern Maine Economic Development Corporation - Title Page	Eastern Maine Economic Development Corporation is an incorrect name for this EDD	The name has been corrected
5.11		Chapter 8 - Strategic Investment Plan for Androscoggin Valley Council of Governments (Map)	The Transit services text box should represent the triangular plan in the AVCOG region between Auburn-Bethel, Bethel-Farmington and Farmington-Auburn.	The map has been revised

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
5.12	Androscoggin Valley Council of Governments - (continued)	Chapter 8 - Androscoggin Valley Council of Governments Recommended Policy and Planning Initiatives and Capital Investments	Change "Western Maine Economic Development District" to Androscoggin County Council of Governments	The name has been corrected
5.13		Chapter 8 - Androscoggin Valley Council of Governments Recommended Policy and Planning Initiatives and Capital Investments, 1st paragraph, 2nd sentence	The Regional Council is the Androscoggin Valley Council of Governments, less two communities. What is meant "less two communities"	The reference to two communities has been removed.
5.14		Chapter 8 - Androscoggin Valley Council of Governments Recommended Policy and Planning Initiatives and Capital Investments, Capital Investments #5	Construct New Taxiway at Auburn-Lewiston Municipal Airport - has been constructed	This capital investment need has been removed.
5.15		Chapter 8 - Androscoggin Valley Council of Governments Recommended Policy and Planning Initiatives and Capital Investments, 1st paragraph	The Kittery Area Comprehensive Transportation Committee is improperly referenced as PACTS - it should be KACTS	The name has been corrected
6.1		Hancock County Planning Commission	Chapter 8 - Strategic Investment Plan for Eastern Maine Development Corporation (Map)	Show proposed intermodal center in Ellsworth (move conflicting text and arrows), Acadia Gateway Center is a few miles north of the airport
6.2	Chapter 8 - Eastern Maine Development Corporation Recommended Policy and Planning Initiatives and Capital Investments		1 or 2 pages missing	The missing pages have been added

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
6.3	Hancock County Planning Commission (continued)	Chapter 8 - Eastern Maine Development Corporation Recommended Policy and Planning Initiatives and Capital Investments	Formatting edits, edits and updates to Planning Initiatives and Capital Investments	The notations have been added per HCPC edits
7.1	Ben Porter, Kittery	US-1 Memorial Bridge	Repair of the Memorial Bridge connecting ME-NH is completely absent	No changes required - Memorial Bridge reconstruction is noted in Chapter 4 - The 123rd Legislature's Goals and Objectives (Extraordinary Corridor Investment Program), the Strategic Investment Plan map for the Southern Maine Economic Development District, and one of two capital investment needs identified by the SMEDD for the #1 priority Route 1 corridor.
7.2		US-1 Memorial Bridge	Concerned that Memorial Bridge and Sarah Long Bridge actions have been pre-defined	No changes required - The ME-NH Connections Study will identify the needs and ultimately the resolution of these two bridges through a public process. The Study is expected to be completed by June 1, 2010.

Comment Number	Comment Source	Chapter or Category	Question or Comment	MaineDOT Response
8.1	Pat Bruce, Windham	Project Request	Add breakdown lanes to 1.6 miles of Route 302 in Westbrook for bicycle access	No changes required - This is a project request
9.1	Michael McDonald	Additional passenger rail needs	Add a passenger rail line through Belfast and Bangor with a connecting line to Bar Harbor	No changes required - This is a project request
10.1	Richard Candee	Piscataqua River Crossing Needs	Memorial Bridge should be scheduled for rehabilitation or replacement in 2010-2015	See response to Comment #7.1 and 7.2

Chapter 7 - Regional Focus on Planning

Regional Perspectives and Priorities

Connecting Maine is the result of MaineDOT coordinating and collaborating with sister long range transportation planning entities. These groups include the Maine Turnpike Authority, Maine's four metropolitan planning organizations, its 11 regional councils, six economic development districts and three Indian tribal governments. The following pages provide a summary of their long-range transportation plans so as to provide a single source for the important transportation investment needs each has identified, as they all tie in with this statewide long-range transportation plan.

Maine Turnpike Authority

The Maine Turnpike Authority (MTA) is a quasi-public entity that owns and maintains through a toll system and other revenues the Maine Turnpike along the southern portion of I-95. With only one known exception, MTA receives no state or federal tax dollars – its capital, operations and maintenance activities are all funded by their toll collections. The exception is that MTA received funding from the American Resource and Recovery Act of 2009 through the Maine Department of Environmental Protection. The MTA generates a ten-year plan, and their 2004-2013 plan was used in developing this statewide plan. Examples of some of the strategic transportation investments provided in the 2004-2013 plan are summarized below:

Examples of Recommended Strategic Transportation Investments

- Maintain existing infrastructure with an aggressive reserve maintenance program, including bridge rehabilitations, intelligent transportation system upgrades, and a 15-year paving cycle
- Modernize and widen through the Portland area
- Replace “Southern End” toll plaza
- Upgrade electronic toll collection (ETC)
- Upgrade park-and-ride lots and add truck parking at service plazas
- Make “Northern End” clear zone and safety improvements
- Rehabilitate the Gray maintenance facility
- Construct the Lewiston/Auburn Downtown Connector interchange

Maine Indian Tribal Governments

Maine's three federally-recognized Indian tribal governments each have developed a long-range transportation plan. The strategic investment needs identified in these long-range transportation plans are summarized below for each Indian tribe in Maine. These needs are included for consultation and to ensure that their priorities are coordinated with those of *Connecting Maine*.

Passamaquoddy Tribe (Indian Township)

- Construct new bicycle and pedestrian paths, and rehabilitate the existing path
- Fix sight distance problems on Grand Lake Stream Road
- Provide multimodal transportation alternatives throughout Indian Township
- Invest in infrastructure to support ecotourism and jobs creation

Passamaquoddy Tribe (Pleasant Point)

- Reconstruct the Rte. 190 Causeway to allow tidal flushing and boat access, or remove the causeway and construct a new bridge on Old Eastport Road
- Install lighting along Rte. 190 to improve bicycle and pedestrian safety
- Monitor potentially significant impacts that may occur in the general vicinity of Pleasant Point if a liquefied natural gas (LNG) terminal or other large scale industrial facility is constructed

Penobscot Nations – Indian Island

- Install consistent signage on the island and a kiosk near the entrance to the island
- River Road access control
- Repave River Road Extension
- Widen and reconstruct Oak Hill Road from River Road to the widened section of Oak Hill Road
- Reconstruct Olamon Lane and Mosquito Lane
- Reconstruct Rolling Thunder Drive, complete with a new drainage system
- Improve drainage on Bear Ridge Road and Extension
- Construct new connector from Center Street to the service center area, primarily for use by commercial vehicles and buses
- Extend Center Street to intersect Oak Hill Road to provide a more direct route to the newer residential areas of the island
- Install sidewalks or provide wider shoulders along Bear Ridge Road and Extension, Burnnurwurbskek Road from Bear Ridge Road to the existing sidewalk and Oak Hill Road from River Road to Pine Grove

Metropolitan Planning Organizations

Maine's four metropolitan planning organizations (MPOs) each have recently developed or upgraded their respective long-range transportation plans. The following paragraphs identify their major transportation investment recommendations for the *Connecting Maine* 20-year planning period. Examples of recommended strategic transportation investments are listed below for each of Maine's four metropolitan planning organizations. The MPOs are listed alphabetically.

Androscoggin Transportation Resource Center (ATRC)

- Construct new turnpike interchanges for downtown Lewiston-Auburn
- Pursue Access Management, Transportation System Management (TSM), and Transportation Demand Management (TDM) strategies
- Provide sidewalks and trails along arterial and collector roads
- Purchase the Lewiston Lower Road rail line from Lewiston to Lisbon Falls and establish the Auburn Passenger Intermodal Facility
- Add and expand transit services to surrounding communities

Bangor Area Comprehensive Transportation System (BACTS)

- Replace and widen the bridge over the Stillwater River on Stillwater Avenue in Old Town
- Complete the reconstruction of Route 1A in Hampden from Hillside Drive to Western Avenue (Route 9)
- Design and construct a new I-95/I-395 interchange including flyovers
- Expand transit service with additional intermodal links and increased hours of service (evenings and Sunday)
- Plan and construct a Penobscot River Valley bicycle/pedestrian trail network

Kittery Area Comprehensive Transportation System (KACTS)

- Support implementation and expansion of the *Shoreline Explorer* transit service
- Establish transit links between Maine and Portsmouth, NH
- Link bicycle and pedestrian corridors and enhance access to schools
- Further develop the *GOMaine* (Transportation Demand Management) program
- Implement Access Management and Corridor Preservation along Route 236

Portland Area Comprehensive Transportation System (PACTS)

- Address congestion and safety at key intersections
- Address mobility and congestion – Portland to western suburbs
- Increase the use of public transportation
- Provide passenger rail service and/or transit from Portland to Brunswick
- Pursue Access Management, TSM, and TDM strategies, including sidewalks

Maine Regional Councils/Economic Development Districts

The new direction taken by the MaineDOT in developing this long-range statewide transportation plan required a public involvement process that would focus not only on transportation but also on its relationship to economic and community development and land use patterns. To achieve a greater understanding of these relationships, MaineDOT engaged the state's eleven regional councils to evaluate transportation assets and needs within each region and to work with the state's economic development districts to ensure that the proposed transportation investments support regional economic development strategies as well.

Examples of the regional councils' recommended strategic investments, listed by their respective economic development districts, are summarized below. The detailed CREST Strategic Investment Plans developed by Maine's eleven regional councils, summarized by economic development district, are provided in Chapter 8.

Northern Maine Economic Development District

- Improve north-south mobility to include projects listed in the *Aroostook County Transportation Study's* Environmental Impact Statement
- Upgrade the Montreal, Maine & Atlantic rail system
- Implement the Northern Maine Regional Airport Service Redevelopment Plan
- Improve access to Maine's seaports
- Provide a new commercial port of entry in the St. John Valley

Eastern Maine Economic Development Corporation

- Increase mobility and safety along coastal Route 1
- Improve I-95 corridor in Penobscot County
- Develop the Acadia Gateway Center
- Upgrade multimodal facilities along the U.S. Route 1 corridor including rail, airports, and ferry terminal
- Develop a Tourism Infrastructure Program for Eastern Maine

Midcoast Economic Development District

- Provide intermodal connections for Brunswick Naval Air Station redevelopment
- Implement the *Gateway I* strategies when they are defined
- Extend passenger rail to Brunswick and establish a multimodal transportation center in Brunswick
- Improve highways to communities in coastal peninsulas (Routes 24, 27, and 32)
- Improve freight rail access

Kennebec Valley Council of Governments

- Make mobility improvements to commuter routes into Augusta (Rtes. 201 and 202)
- Build a second bridge in Skowhegan
- Improve heavy haul truck routes (Routes 2, 15, 43, and 135)
- Expand commuter “high occupancy vehicle” (HOV) opportunities, (e.g., intermodal facilities at I-95 interchanges and other strategic locations)
- Develop the East Coast Greenway and expand the bicycle/pedestrian trail network along the Kennebec River

Androscoggin Valley Council of Governments

- Reconstruct Routes 2, 4, and 26
- Develop a Lewiston-Auburn Downtown Connector to the Maine Turnpike
- Construct a passenger intermodal facility in Auburn
- Extend high-speed rail corridor and passenger rail from Portland to Auburn, and on to Montreal
- Establish daily transit services from Lewiston-Auburn to Carrabassett Valley, Farmington, Rumford, Bethel, and Portland

Southern Maine Economic Development District

- Implement the Interstate Exit Master Plan, and I-295 mobility and safety improvements
- Expand transit service at multiple locations
- Improve Port of Portland marine facilities
- Improve the Portland International Jetport
- Conduct alternatives analyses for east-west transportation from the Maine Turnpike to the Sanford area and north-south travel in the village area of South Berwick

Chapter 8 - Regional Strategic Investment Plans

As has been previously noted, the regional councils developed maps depicting *Corridors of Regional Economic Significance to Transportation* (CRESTs). The development of the CRESTs included a listing of economic, land use, and transportation objectives for each corridor. Inter-regional and trans-regional CRESTs were considered carefully in order to provide for a coordinated evaluation of transportation systems statewide, such that a corridor deemed important to one region would not be deemed of lesser importance by another region's evaluation.

The invaluable contributions made by the regional councils to *Connecting Maine* are contained in the following pages. The summaries are presented for each of the eleven regional councils and consist of the following information:

- Strategic Investment Map, indicating the types and general locations of the strategic investments identified by the regional councils;
- Region map, indicating the general layout of the *Corridors of Regional Economic Significance to Transportation* (CRESTs) identified by the regional councils;
- Corridor Maps for each CREST, including a listing of economic, land use and transportation objectives; and
- Descriptions of each strategic investment identified.

The map on the following page provides a statewide perspective of the CRESTs, and is followed by the regional council materials described above for each of Maine's six economic development districts:

- Northern Maine Development Commission;
- Eastern Maine Development Corporation;
- Midcoast Economic Development District;
- Kennebec Valley Council of Governments;
- Androscoggin Valley Council of Governments; and
- Southern Maine Economic Development District.

This information will provide an important beginning point for municipalities, metropolitan planning organizations, regional councils, Maine Turnpike Authority, MaineDOT, and other agencies such as the State Planning Office, as multi-modal corridor management plans are developed for each CREST. Regional councils will utilize this work to conduct integrated land use and transportation planning that can compliment existing and emerging economic development opportunities and maintain and improve the quality of life for Maine residents. Note that due to the time that has elapsed between development of the regional strategic investment plans and publication of the final version of *Connecting Maine*, some of the recommendations may have already been implemented.

General Movement Patterns



Legend

Maine Highways

- Princ art Interstate
- Princ art Other Frwy. or Expwy.
- Other princ arterial
- Minor arterial
- Major/urb collector

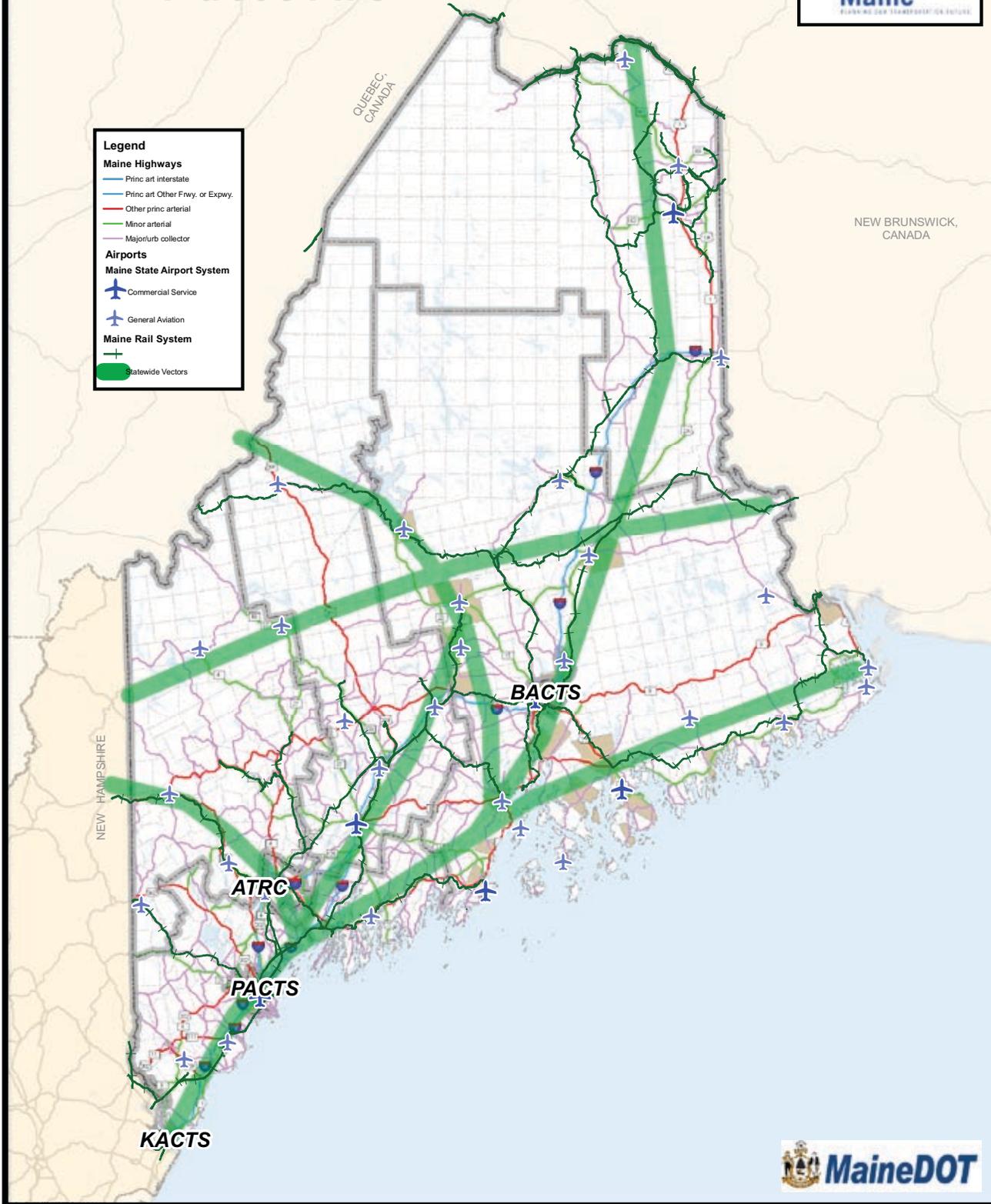
Airports

Maine State Airport System

- Commercial Service
- General Aviation

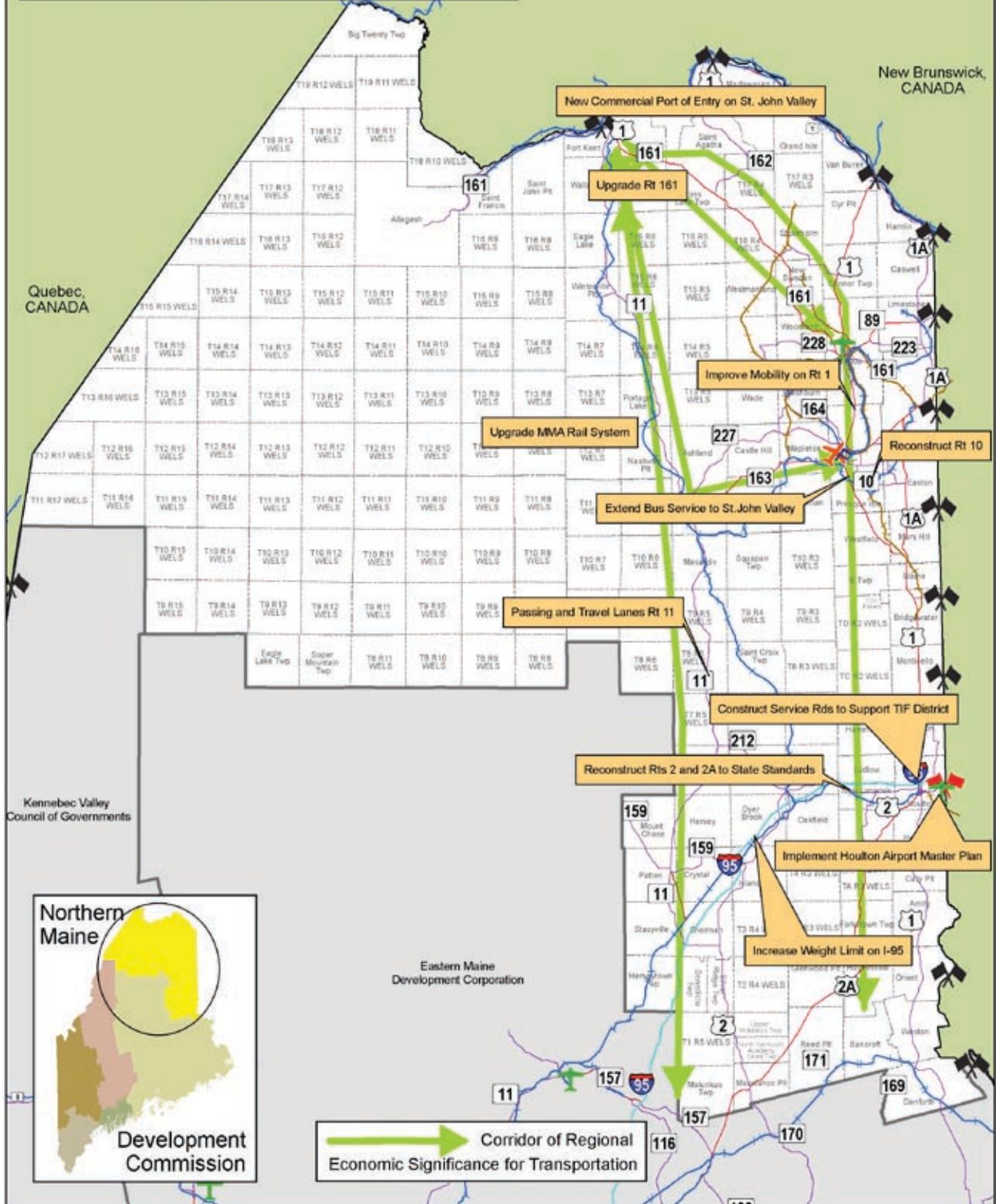
Maine Rail System

- Statewide Vectors



**Northern Maine
Development Commission**

Strategic Investment Plan for Northern Maine Development Commission



Legend

Maine Highways

- Interstate
- Principal Arterial
- Minor arterial
- Major/urb collector

Maine Rail System

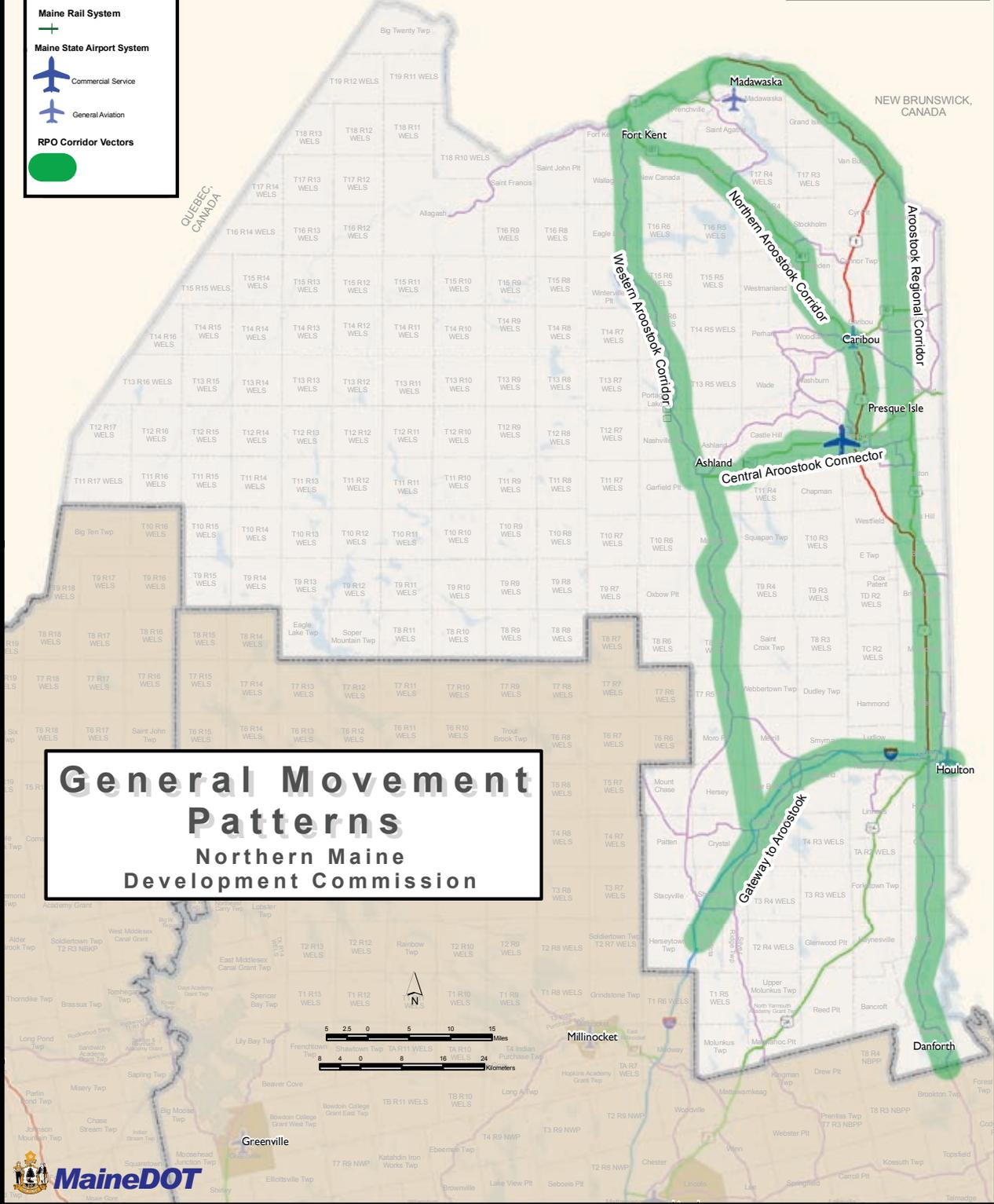
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Maine State Airport System

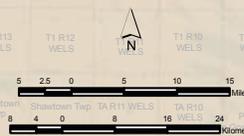
- Commercial Service
- General Aviation

RPO Corridor Vectors

- (Green circle)

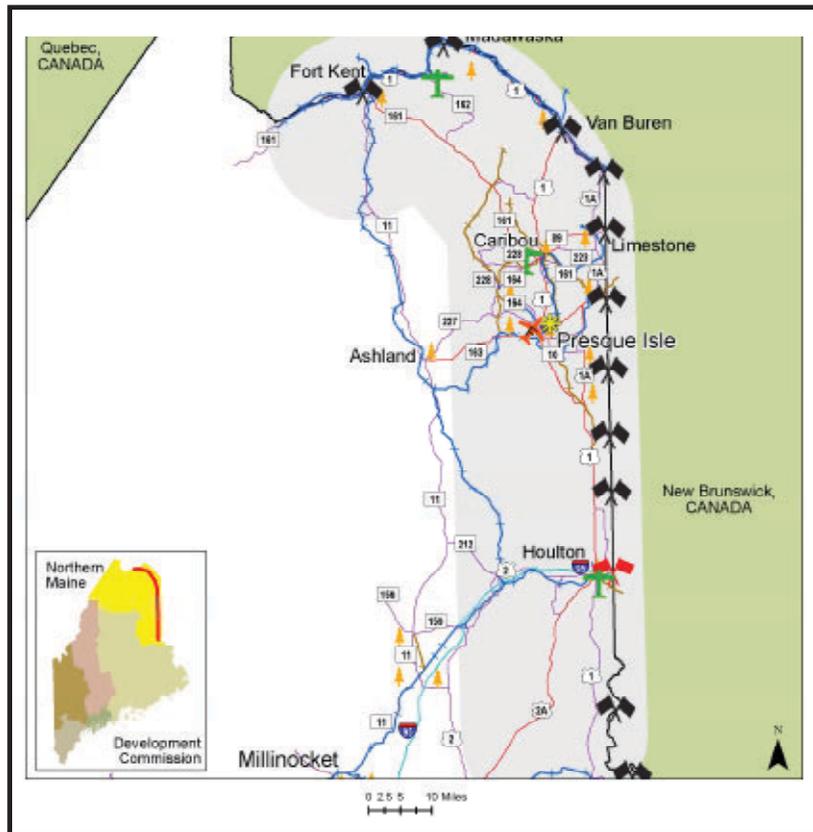


**General Movement
Patterns
Northern Maine
Development Commission**



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Northern Maine Development Commission
Corridor: Aroostook Regional
Regional Priority Rank: 1



The Aroostook Regional Corridor links the St. John Valley with I-95 and Washington County. The primary roads are US Rte. 1 and Rte. 1-A. The Northern Aroostook (Frenchville) and Northern Maine Regional (Presque Isle) Airports are also considered part of this corridor as is the intermodal facility in Presque Isle. The region's only public transit provider (Aroostook Regional Transportation System) is also located in the corridor.

Transportation Objectives

- Maintain mobility throughout the corridor.
- Eliminate retrograde arterial status of the corridor.
- Reconstruct unbuilt sections of the National Highway System.
- Build bypasses around smaller communities (per the Aroostook County Transportation Study).
- Construct paved shoulders for improved safety; bicycle routes.
- Maintain rest area in Orient.
- Invest in public transportation for corridor communities.
- Develop commuter bus service between service centers.
- Improve access to intermodal facility.
- Improve access to regional airports.
- Reduce number of high crash locations.
- Prioritize intersection improvements in corridor communities.

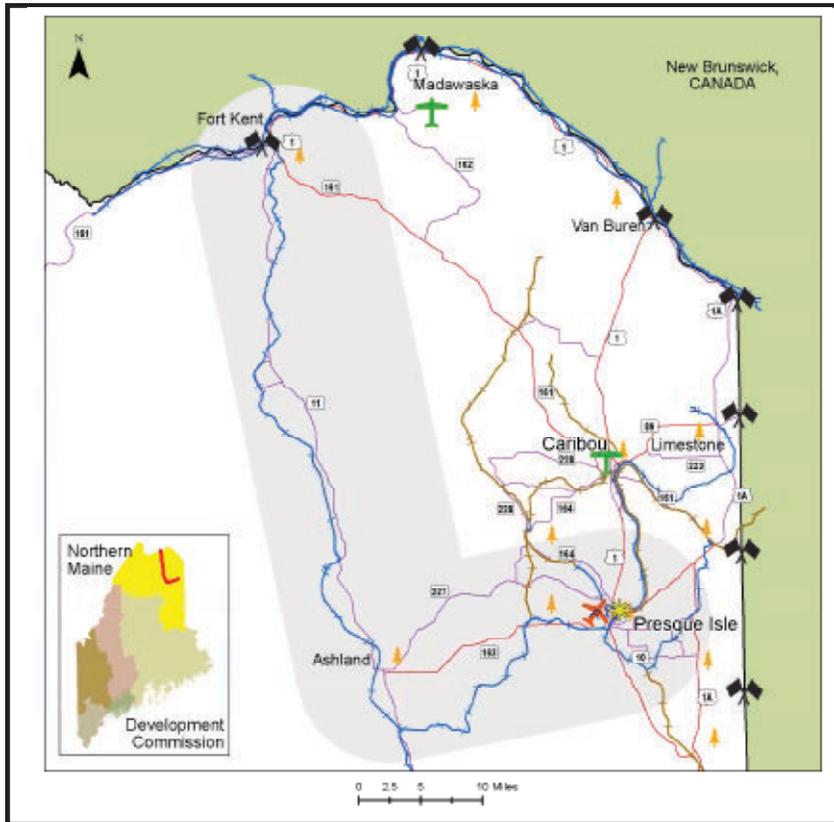
Land Use Objectives

- Develop community corridor management plans.
- Ensure the mobility statute is maintained in communities that have designed "growth areas".
- Provide access management education to communities and developers.
- Plan for smart development with Caribou and Presque Isle.
- Implement the scenic corridor management plan in Weston, Orient, and Danforth.
- Develop comprehensive plans or land use ordinances where none exist.

Economic Objectives

- Partner with major employers, municipalities, local, state and federal agencies to improve the transportation system.
- Seek alternative funding to achieve economic and transportation objectives.
- Continue to support the regional airports and rail service providers.
- Seek the designation of a scenic highway in the St. John Valley.
- Improve the efficiency of the corridor access to I-95.
- Construct a new commercial port of entry in the St. John Valley.
- Improve efficiencies at all border crossings.

Northern Maine Development Commission
Corridor: Central Aroostook
Regional Priority Rank: 2



Transportation Objectives

- Construct unbuilt sections of Route 10.
- Construct truck lanes on hilly sections of Rte. 11 north of Patten to Masardis.
- Ensure that all rail crossings meet state specifications.
- Eliminate turning radius issues at the intersection of Rtes. 163 and 1 in Presque Isle.
- Work with the Maine State Police to reduce speed in municipal downtowns.
- Reconstruct Rte. 1A intersection in Easton so longer trucks can turn efficiently.

Land Use Objectives

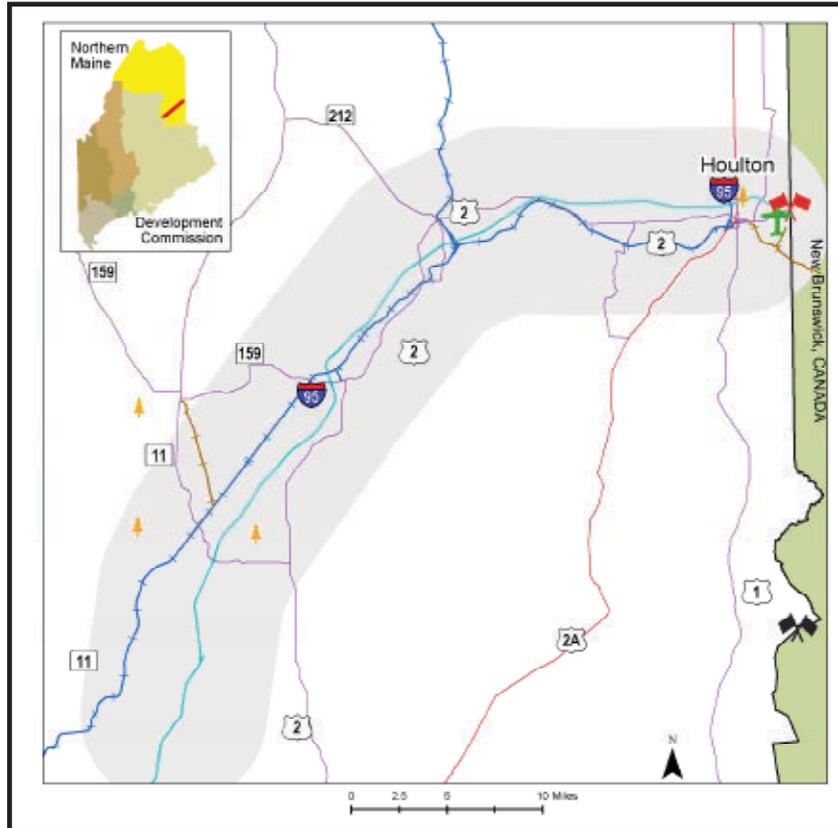
- Develop a corridor management plan for the scenic portion of the corridor.
- Review land use and zoning ordinances to ensure that the portion of the corridor between Presque Isle and Easton remains a viable heavy haul truck route.

Economic Objectives

- Maintain and improve access to the region’s mills.
- Improve signage for the Maine winter sports centers.
- Ensure that road segments are constructed to maintain heavy haul traffic.
- Seek commuting efficiencies to the region’s largest employers.
- Coordinate air and transit services.
- Improve access to the regional airport and intermodal facility, working with the city of Presque Isle to provide matching funds.

The Central Aroostook Connector includes Rtes. 11, 163, and 10. It connects the natural resource based industry with mills in Ashland, Nashville, Portage Lake, Masardis, Presque Isle, and Easton. It is also the central gateway to the North Maine Woods. The Maine Monr?el and Atlantic rail line, Presque Isle’s intermodal facility, and Northern Maine Regional Airport are included with this corridor. Fort Kent, Ashland, and Presque Isle are the three service centers located on this corridor. Like the Western Aroostook Corridor, this route is heavily utilized by freight haulers and connects commercial forestlands with mills in eastern and southern Aroostook.

Northern Maine Development Commission
Corridor: Gateway to Aroostook
Regional Priority Rank: 3



The Gateway to Aroostook corridor includes I-95 and Rte. 2 and extends out of the NMEDD south and west. The corridor begins in Houlton and continues on through Penobscot county. I-95 is the primary route and is utilized by both passenger and commercial traffic. Rte. 2 is heavily utilized by commercial traffic over the 80,000 pound weight limit of I-95. The corridor also includes connections to Maine Montreal, and Atlantic rail line and Houlton International Airport. Houlton is the only service center located on the corridor in the NMEDD.

Transportation Objectives

- Increase I-95 weight limit to 100,000 pounds.
- Develop corridor safety plan to account for the increasing bicycle and horse and buggy traffic in the Smyrna and Oakfield areas.
- Construct unbuilt section of Rte. 2 to include paved shoulders.
- Allow an increase in weight limit from 102,000 (6-axles) to 137,700 (8-axles); weight per axle from 17,000 on a 6-axle to 17,429 on an 8-axle rig.

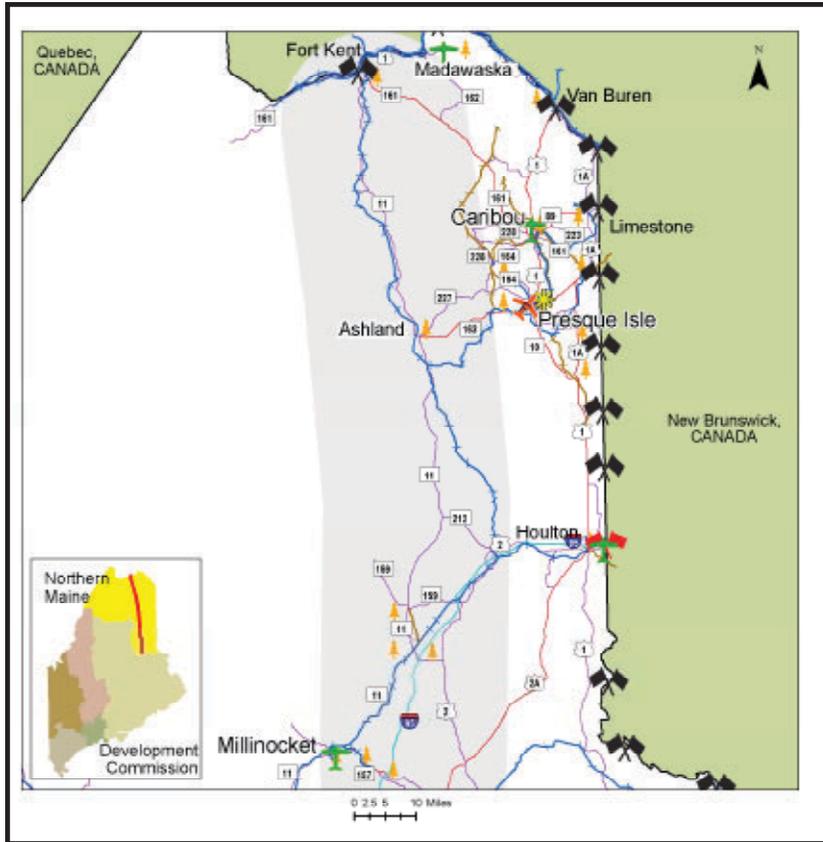
Land Use Objectives

- Increase the number of communities that have modern comprehensive plans and ordinances.
- Ensure that ordinances have adequate access management standards.
- Ensure development at interchanges is done in a responsible manner.
- Develop a scenic resources inventory for the portion of the corridor that may qualify for scenic highway status.

Economic Objectives

- Develop informational signage on the interstate that directs visitors to points of interest.
- Allow an increase in weight limit from 102,000 (6-axles) to 137,700 (8-axles); weight per axle from 17,000 on a 6-axle to 17,429 on an 8-axle rig.
- Reconstruct unbuilt sections of corridor to ensure an efficient movement of freight and people throughout the region.
- Improve rail service to better serve area businesses.
- Market the Katahdin Loop project and other tourism related projects.

Northern Maine Development Commission
Corridor: Western Aroostook
Regional Priority Rank: 4



The Western Aroostook Connector includes Rte. 11 from Fort Kent to Sherman, Rte. 212 from Knowles Corner to Smyrna Mills, and Rte. 158 in Sherman. This is primarily a heavy haul freight route that serves mills in Aroostook and Penobscot counties. The portion of Rte. 11 from Fort Kent to Portage Lake is a state designated Scenic Byway. Also included in this corridor is the Maine, Montréal, and Atlantic rail line from Fort Kent to Sherman and Smyrna. This is MMA’s main line into and out of the region.

Transportation Objectives

- Reconstruct all backlog road mileage in the corridor.
- Increase the 25 mile per hour speed limit on the Maine, Montréal, and Atlantic rail line.
- Construct appropriate passing and climbing lanes along the corridor.
- Improve access to the Maine, Montréal, and Atlantic rail line and sidings.

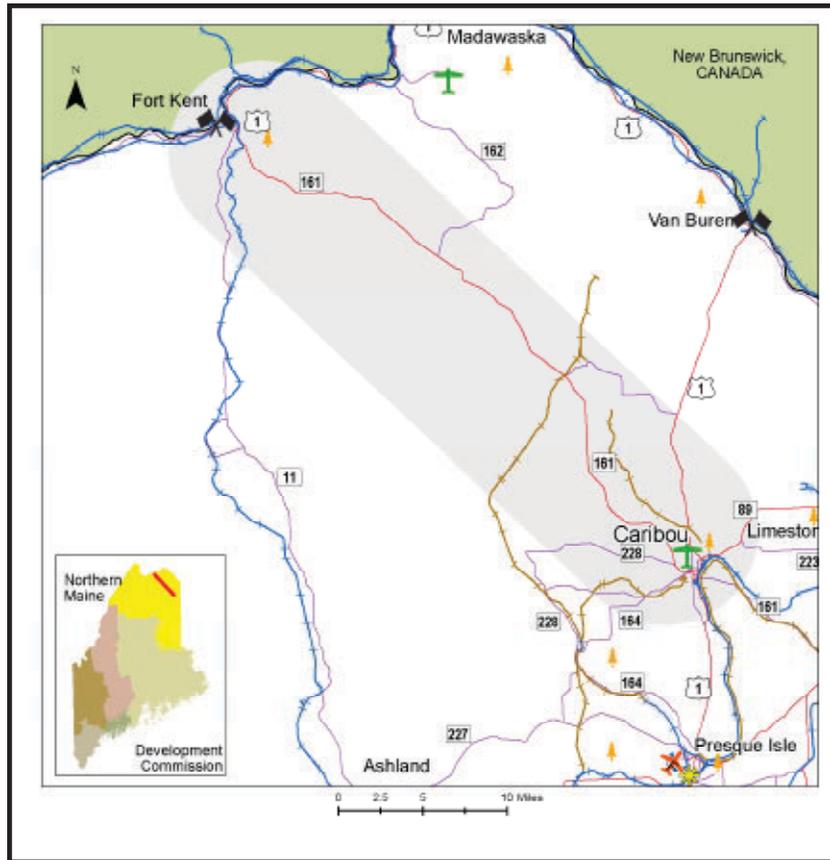
Land Use Objectives

- Increase the number of communities that have modern Comprehensive Plans and ordinances.
- Ensure that ordinances have adequate access management standards.
- Ensure development at interchanges is done in a responsible manner.
- Develop a scenic corridor management plan for the portion of the corridor that may qualify for scenic highway status.

Economic Objectives

- Improve or create destination signage to prominent locations along the corridor.
- Improve access to rail sidings.
- Upgrade portions of Rtes. 11 and 212 having direct access to empowerment zone communities or designated Pine Tree Zones.
- Provide truck and passing lanes along Rte. 11.
- Reconstruct all unbuilt sections of the corridor to state standards.
- Improve access to Baxter State Park.

**Northern Maine Development Commission
Corridor: Northern Aroostook Connector
Regional Priority Rank: 5**



The Northern Aroostook Connector begins in Fort Kent and connects the northwest portion of Aroostook County with the Caribou/Fort Fairfield area. The primary road is Rte. 161 with the secondary being Rte. 162 between Frenchville and Cross Lake. Several major snowmobile trails cross the route, and the Caribou Municipal and Northern Aroostook Airports are located nearby.

Transportation Objectives

- Construct a bypass around the city of Caribou north of Cary Medical Center to Rte. 161 near the public golf course.
- Develop a corridor management plan.
- Construct all backlog roads to state standards.
- Improve rail spur access in Fort Fairfield.
- Upgrade all multi-season multi use trail crossings.
- Construct bike lanes in St. Agatha to include Cleveland Road.
- Seek the removal of housing along corridor near Daigle Pond in New Canada.
- Upgrade section of the corridor between Fort Kent and Allagash to accommodate heavy truck traffic.

Land Use Objectives

- Compare current land uses in service centers with high crash locations to determine if local access management standards are adequate.
- Complete zoning ordinances for all unorganized townships along the corridor.
- Develop comprehensive plan and update zoning ordinances in New Canada (fastest growing town on the corridor).
- Update local comprehensive plans and provide stronger land use controls in Frenchville and St. Agatha.
- Fund implementation strategies in local comprehensive plans that benefit the transportation system.
- Complete comprehensive plans and land use ordinances where none exist.

Economic Objectives

- Designate Rte. 161 from Madawaska Lake to Allagash as a State Scenic Highway.
- Improve or create destination signage to prominent locations along the corridor.
- Work with Caribou and Fort Fairfield to improve access to the new rail spur in Fort Fairfield.
- Upgrade portions of Rte. 161 that have direct access to empowerment zone communities or designated Pine Tree Zones.
- Identify routes and alternatives that remove pass-through heavy truck traffic through Caribou.

Northern Maine Development Commission

Recommended Policy and Planning Initiatives and Capital Investments

The Northern Maine Development Commission (NMDC) has identified its regional transportation needs for policy and planning initiatives and capital investments as noted below. They are listed in priority order as determined by the NMDC based upon the Modified TELUS scoring model provided by MaineDOT.

The following policy and planning initiatives and capital investments were identified by NMDC as being regionally significant and transcend all of the corridor initiatives.

Region Wide Investments

Policy Initiatives

1. Increase weight limits on Interstate 95 north of the terminus of the Maine Turnpike in Augusta. Working with local, state, and federal groups, agencies, and the delegation, the region will work to increase the weight limits on Interstate 95 from 80,000 to 100,000 pounds.

Planning Initiatives

1. Improve North/South mobility to include completion of projects listed in the Aroostook County Transportation Study (Environmental Impact Statement). The most specific alignments are located in the central Aroostook area with no specific north-south corridor from the St. John Valley to I-95 being identified at this time. Projects listed include bypasses around downtown Presque Isle and Caribou, corridor management planning on US Route 1, and potential new intersections on Maysville Road.
2. Develop a Northern Maine Airport Plan which includes seeking regional jet service and improved air service. Airport officials and MaineDOT are working towards the increased marketing of the airport and the services provided. There has been a concerted effort to obtain regional jet service that could potentially open other hub cities for fliers in the region.

Capital Investments

1. Upgrade the Montreal, Maine and Atlantic rail system including infrastructure, service, and intermodal facilities.
2. Improve access to Maine's seaports - Support for construction projects (rail, road and bridge infrastructure) that improve access to Maine's seaports from northern Maine.

The following policy and planning initiatives and capital investments are provided in priority order for each of the five (5) *Corridors of Regional Economic Significance for Transportation* that have been defined by the NMDC.

Priority Corridor No. 1: Northern Aroostook Regional

Policy Initiatives

1. New Commercial Port of Entry in St. John Valley - Provide funding and technical support to initiate an environmental impact statement for the development of a new international bridge and Commercial Port of Entry in St. John Valley.

Planning Initiatives

1. Service Roads in Houlton - Service road(s) paralleling US Route 1 north of Houlton in the TIF District/Empowerment Zone. North Street in Houlton is also a segment of Route 1 and is classified by MaineDOT as a retrograde arterial. This classification requires that additional measures be taken to improve the safe flow of traffic as new development occurs.

Capital Investments

None Identified

Priority Corridor No. 2: Central Aroostook

Policy Initiatives

None Identified

Planning Initiatives

None Identified

Capital Investments

1. Route 10 Reconstruction - Development and funding for construction projects in Presque Isle and Easton that upgrade Route 10 to accommodate longer and heavier truck traffic, including the intersection of Rte. 10 and Rte. 1-A so that longer trucks can turn efficiently.
2. Turning radii issues in Presque Isle - Development and funding of construction projects along Route 1 in Presque Isle at State Street, Academy Street and Route 163 that allow for efficient traffic flow.

Priority Corridor No. 3: Gateway to Aroostook

Policy Initiatives

1. Reconstruct Portions of Gateway to Aroostook Corridor - Construct sections of Route 2 and 2-A to state standards. Sections include portions of Rtes. 2 and 2-A in Houlton.

Planning Initiatives

1. Implementation of Houlton Airport Master Plan (e.g. major runway surface and lighting improvements, new hangar, Navaid upgrade, etc.).

Capital Investments

1. Upgrade of Montreal, Maine and Atlantic rail system – Improvements in the rail line from Oakfield to Houlton, including sidings and the intermodal facility in Presque Isle to allow an increase from the present 25 mph for higher speed traffic and to improve access to the intermodal facility in Presque Isle.

Priority Corridor No. 4: Western Aroostook

Policy Initiatives

None Identified

Planning Initiatives

1. Construct passing and travel lanes at strategic locations on Rte. 11 north of the Mount Chase area - Areas identified for potential projects include T14 R6, Portage Lake, Moro Plantation, Hersey and Mount Chase.
2. Designation of portions of Routes 11 and 159 as a scenic byway in the Kathadin area.
3. Designation of portions of Rtes. 11 and 159 as a State Scenic Byway - This is known as the Grindstone Scenic Byway which connects to Baxter State Park.

Capital Investments

None Identified

Priority Corridor No. 5: Northern Aroostook Connector

Policy Initiatives

1. Extend bus service to St. John Valley - Working with the Aroostook Regional Transportation Systems (ARTS) and Cyr Bus Lines, develop a feasibility study to extend passenger bus service from Caribou to Fort Kent, Frenchville, Madawaska and Van Buren.

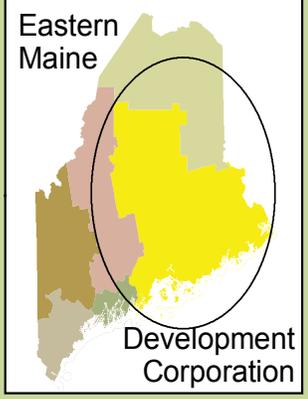
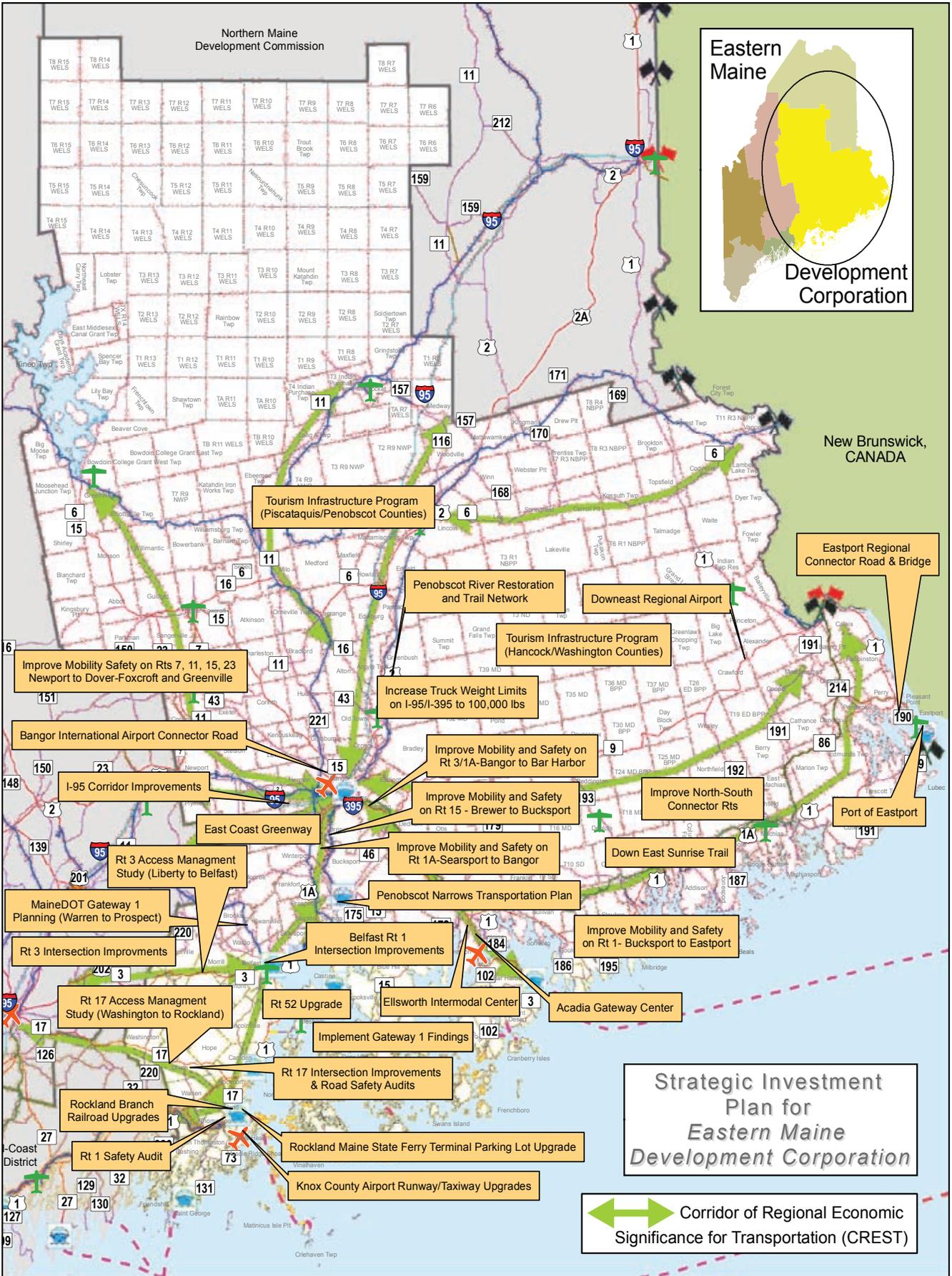
Planning Initiatives

1. Upgrade all multi-season multi use trail crossings - Construct all trail crossings on Routes 1, 161 and 11 to reduce long-term maintenance costs, improve safety and provide the users with pertinent information as to location.

Capital Investments

1. Upgrade Route 161 - Construct portions of Route 161 from New Canada to Allagash so that it can accommodate heavy truck traffic.

**Eastern Maine
Development Corporation**



Development Corporation

Northern Maine Development Commission

New Brunswick, CANADA

Tourism Infrastructure Program (Piscataquis/Penobscot Counties)

Penobscot River Restoration and Trail Network

Downeast Regional Airport

Tourism Infrastructure Program (Hancock/Washington Counties)

Eastport Regional Connector Road & Bridge

Improve Mobility Safety on Rts 7, 11, 15, 23 Newport to Dover-Foxcroft and Greenville

Increase Truck Weight Limits on I-95/I-395 to 100,000 lbs

Bangor International Airport Connector Road

Improve Mobility and Safety on Rt 3/1A-Bangor to Bar Harbor

Improve North-South Connector Rts

Port of Eastport

I-95 Corridor Improvements

Improve Mobility and Safety on Rt 15 - Brewer to Bucksport

Improve North-South Connector Rts

East Coast Greenway

Improve Mobility and Safety on Rt 1A-Searsport to Bangor

Down East Sunrise Trail

Rt 3 Access Management Study (Liberty to Belfast)

Improve Mobility and Safety on Rt 1A-Searsport to Bangor

Penobscot Narrows Transportation Plan

MaineDOT Gateway 1 Planning (Warren to Prospect)

Belfast Rt 1 Intersection Improvements

Improve Mobility and Safety on Rt 1 - Bucksport to Eastport

Rt 3 Intersection Improvements

Rt 52 Upgrade

Ellsworth Intermodal Center

Acadia Gateway Center

Rt 17 Access Management Study (Washington to Rockland)

Implement Gateway 1 Findings

Rockland Branch Railroad Upgrades

Rt 1 Safety Audit

Rockland Maine State Ferry Terminal Parking Lot Upgrade

Knox County Airport Runway/Taxiway Upgrades

Strategic Investment Plan for Eastern Maine Development Corporation

Corridor of Regional Economic Significance for Transportation (CREST)

General Movement Patterns

Eastern Maine Development Corporation



Legend

Maine Highways

- Interstate (Blue line)
- Principal Arterial (Red line)
- Minor arterial (Green line)
- Major/urb collector (Purple line)

Maine Rail System

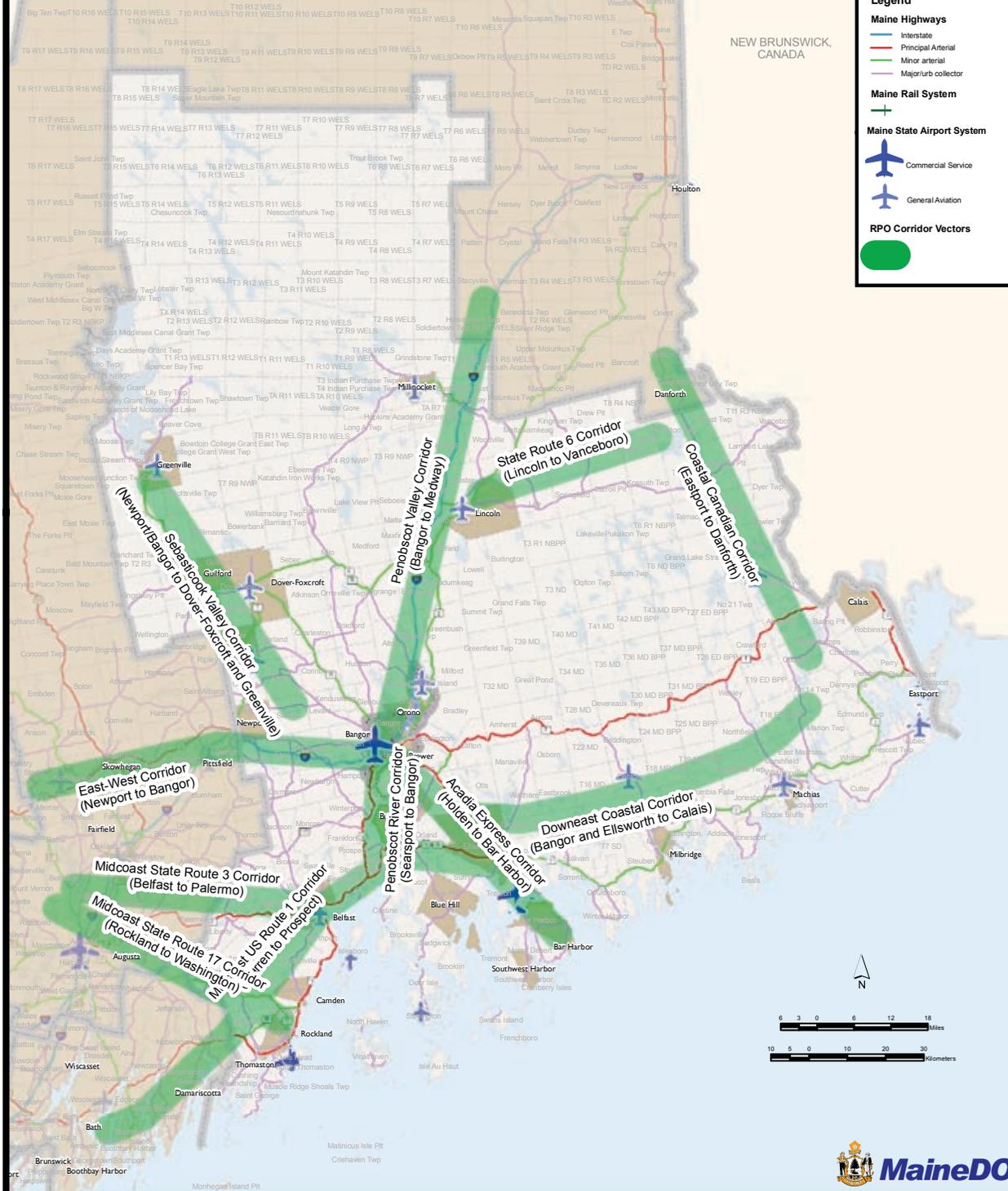
- Green line with cross-ticks

Maine State Airport System

- Commercial Service (Blue airplane icon)
- General Aviation (Light blue airplane icon)

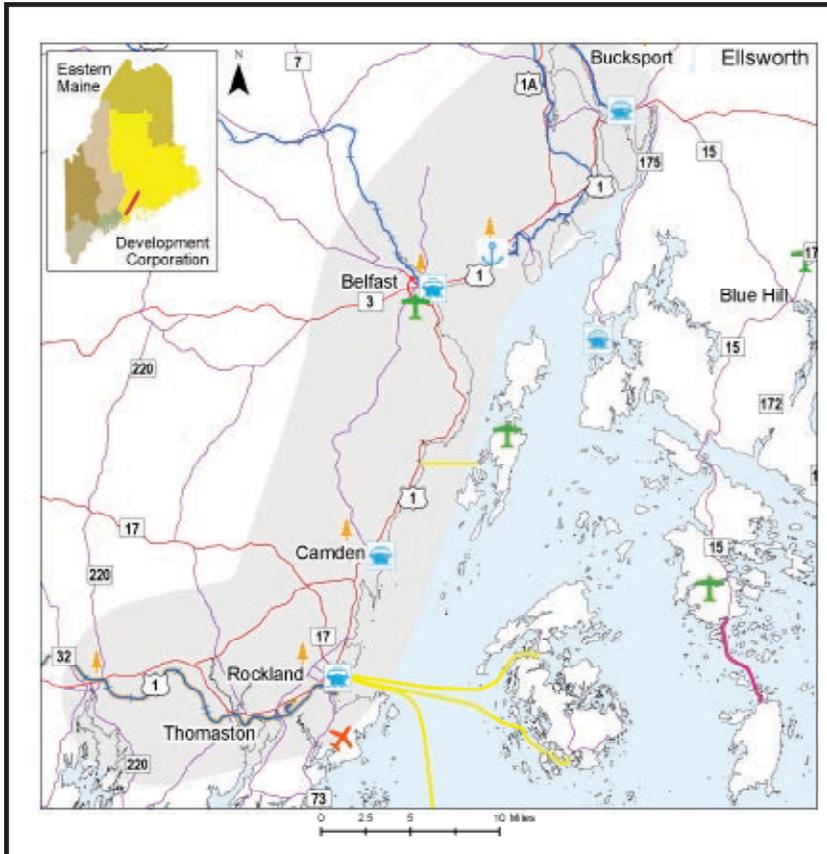
RPO Corridor Vectors

- Green oval



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**Eastern Maine Development Corporation
Corridor: Midcoast US Route 1 (Warren to Prospect)
Regional Priority Rank: 1**



The Midcoast US Rte. 1 Corridor centers on Principal Arterial US Route 1, a two-lane highway for nearly all of its length in the corridor, and includes the municipalities of Warren, Thomaston, Rockland, Rockport and Camden in Knox County, and Lincolnville, Northport, Belfast, Searsport, and Stockton Springs in Waldo County.

Transportation Objectives:

- Ease Rte. 1 congestion through context-sensitive design.
- Improve collector roads accessing Rte. 1.
- Increase use of trains, ferries, and park and ride lots, and develop efficient commuter, tourist bus and rail options.
- Invest in on- and off-road trails linking schools, and residential and recreational areas to encourage non-vehicle tourism options, emphasizing coastal villages.

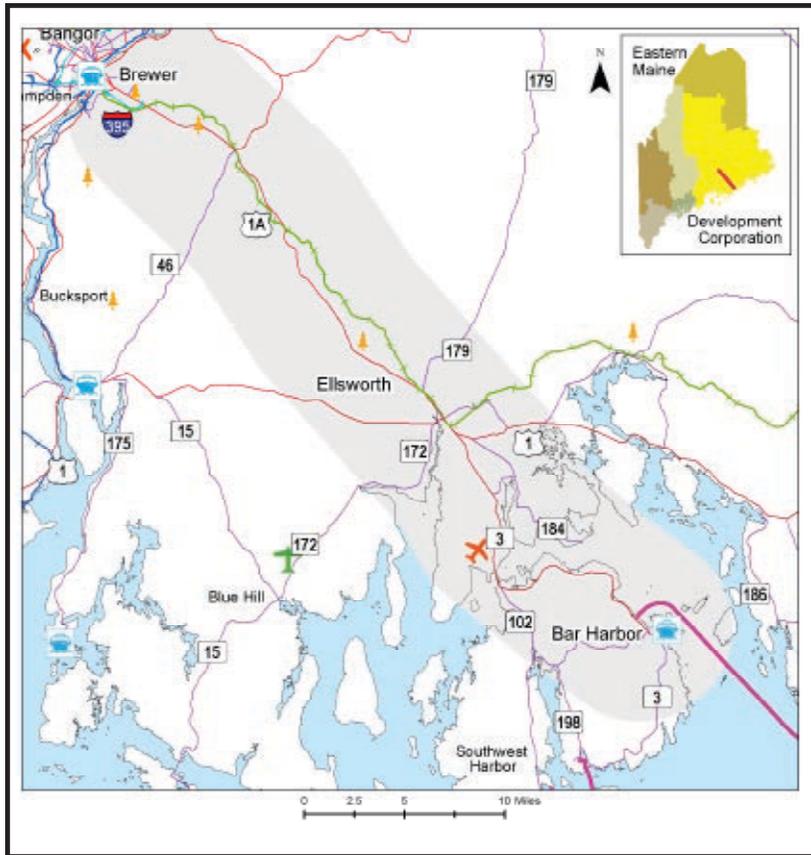
Land Use Objectives:

- Implement Comprehensive Plan land use elements.
- Develop consistent, effective access management and context-sensitive design ordinances for village, urban compact areas.
- Promote municipal and citizen participation in the Gateway 1 Strategic Planning Process.

Economic Development Objectives:

- Improve service center access to employment opportunities through road improvements and commuting facilities.
- Work with service center communities and major employers (100 or more employees) on commuter bus and van options.
- Work with municipalities and businesses to develop impact fees for major projects to fund improvements to maintain corridors while allowing for continued economic development.
- Support working waterfronts and tourism through Small Harbor Improvement Program (SHIP) and other funding opportunities.

**Eastern Maine Development Corporation
Corridor: Acadia Express (Holden to Bar Harbor)
Regional Priority Rank: 2**



The US Rte. 1A/State Rte. 3 Corridor crosses Holden in Penobscot County, and Dedham, Ellsworth, Trenton and Bar Harbor in Hancock County. This corridor is the primary arterial for Hancock County, carrying millions of visitors to Acadia National Park, commuters, truck freight, and local traffic.

Transportation Objectives:

- Reduce congestion delays on Rtes. 1A and 3, particularly in the Ellsworth business district and the Thompson Island Bridge. Alternative strategies include road widening, better access management, and construction of a bypass. Use context-sensitive design.
- Construct additional bike paths and sidewalks in Ellsworth, Trenton and Bar Harbor.

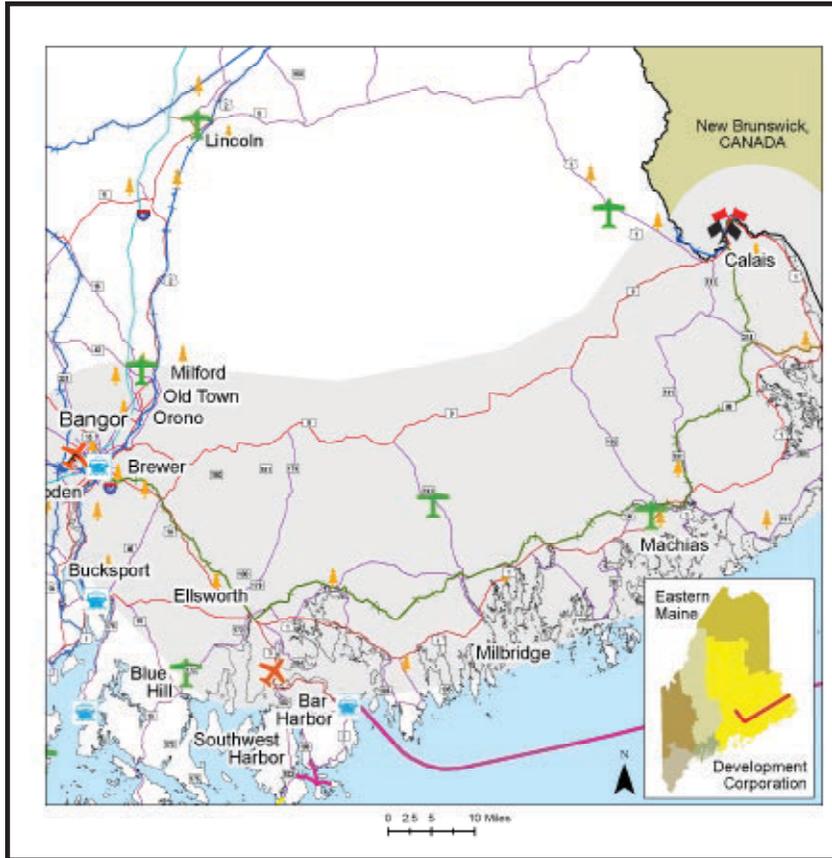
Land Use Objectives:

- Increase access management to improve highway efficiency.
- Reduce congestion along Rte. 1A through Ellsworth and Trenton.
- Construct additional passing lanes in North Ellsworth.
- Protect scenic vistas and other historic resources.

Economic Development Objectives:

- Promote car-free tourism with expanded bus, ferry and bicycle infrastructure.
- Encourage year-round job creation to mitigate the impacts of a seasonal economy.
- Consider extending the Acadia Scenic Byway further into Trenton in coordination with intermodal planning.

Eastern Maine Development Corporation
Corridor: Downeast Coastal (Bangor/Ellsworth to Calais)
Regional Priority Rank: 3



The Downeast Coastal Corridor includes the major east-west connections crossing Hancock and Washington counties as a group. Included in this broad corridor are US Rte. 1 from Bucksport to Machias and on to Calais, State Rte. 9 from Bangor to Calais, the Calais Branch Rail alignment from Bangor to Calais as well as several major collector highways that serve as connectors and short-cuts.

Transportation Objectives:

- Improve Rte. 1, including better travel surface, shoulders, and guardrails.
- Improve Rte. 1 – Rte. 9 connector roads, including Rte. 1A in Hancock County and Rtes. 182, 191, 192 and 193 in Washington County.

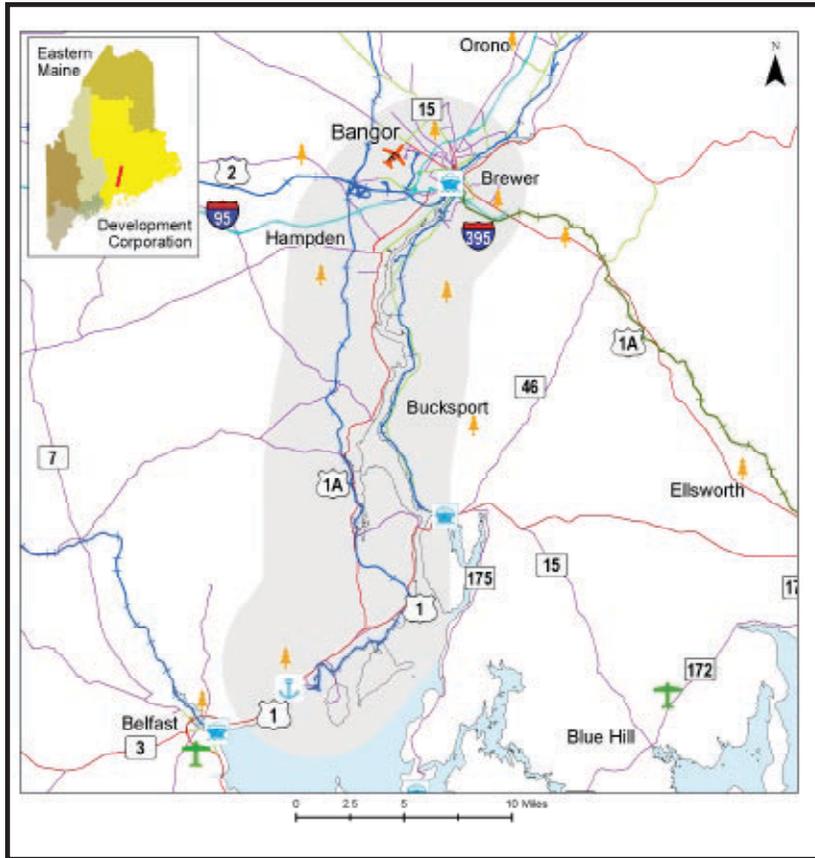
Land Use Objectives:

- Enhance tourism through transportation corridor development. Strategies include creating thematic nature based and history based tours, rail-to-trail conversion, access for walking and bicycling and alternative transportation modes, increase access to marine transportation, and support of scenic byways.
- Improve communications access. There are many locations along these corridors that are dead-zones for cell phones. These dead zones present safety and security concerns for vehicle breakdowns.

Economic Development Objectives:

- Increase access management to improve highway efficiency.
- Add passing lanes at bottlenecks around Ellsworth along Rte. 1.
- Promote car-free tourism with better bus, ferry, and bicycle infrastructure.
- Construct additional infrastructure for tourism, such as scenic turnouts and restrooms.

**Eastern Maine Development Corporation
Corridor: Penobscot River (Searsport to Bangor)
Regional Priority Rank: 4**



The corridor is served by arterial roads, the Penobscot River, and railroads. The highways include US Rte. 1A in Bangor extending to Stockton Springs, US Rte. 202 in Bangor extending (and parallel to US Rte. 1A) to US Rte. 1A in Hampden, US Rte. 1 in Searsport extending to Bucksport, and State Rte. 15 in Bangor extending to Bucksport.

Transportation Objectives:

- Improve safety of Rtes. 15, 1A.
- Improve public transportation to serve the aging population, disabled and limited income populations, including expanded shuttle bus service, bus service from Bucksport to Bangor, volunteer driver and taxi services to rural areas.
- Increase parking at Fort Knox, Verona Island and Bucksport if tourism increases significantly.
- Weight limits on I-95 should be in line with state highways.

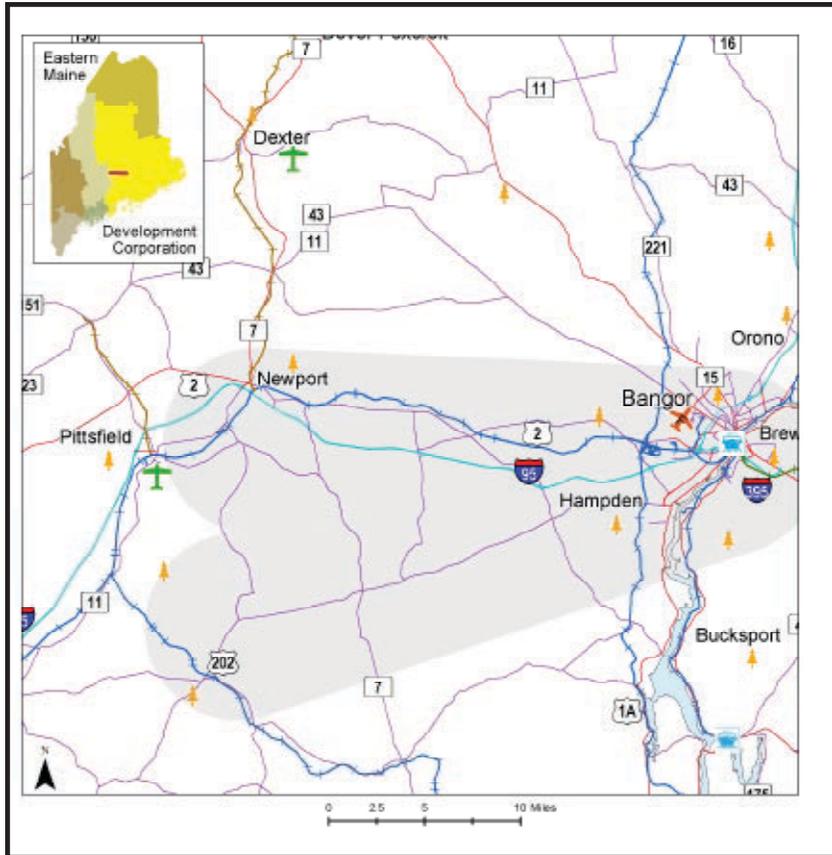
Land Use Objectives:

- Encourage residential and commercial investment in service centers.
- Encourage retention of farmland, forestry, other resource-based land-uses.
- Encourage safe design and location of driveways and entrances to highways to retain arterial corridor mobility.

Economic Development Objectives:

- Provide high quality transportation and communications infrastructure to support traditional industries.
- Improve efficiency of rail service to promote expanded use for freight.
- Expand access to the Penobscot River for recreational and passenger excursions. Make the Penobscot River and Bucksport Bay a tourism destination.
- Develop trails, bikeways and other alternative corridors connecting communities, schools and venues for tourism.
- Promote school/town collaboration in providing community transit services.

**Eastern Maine Development Corporation
Corridor: East-West (Newport to Bangor)
Regional Priority Rank: 5**



The corridor is served by three major and parallel roadways and a railroad that facilitate east-west traffic movements: I-95 extending from I-395 in Bangor to Newport; US Rte. 2 from Bangor to Newport; and US Rte. 202 from Bangor to Dixmont.

Transportation Objectives:

- Increase vehicle weight limits on I-95 to reduce heavy truck impacts to state roads.
- Study I-95 crash patterns and develop a mitigation strategy.
- Improve cross-corridor linkages such as Rtes. 7, 69 and 143.
- Develop more park-and-ride facilities at key points on I-95.

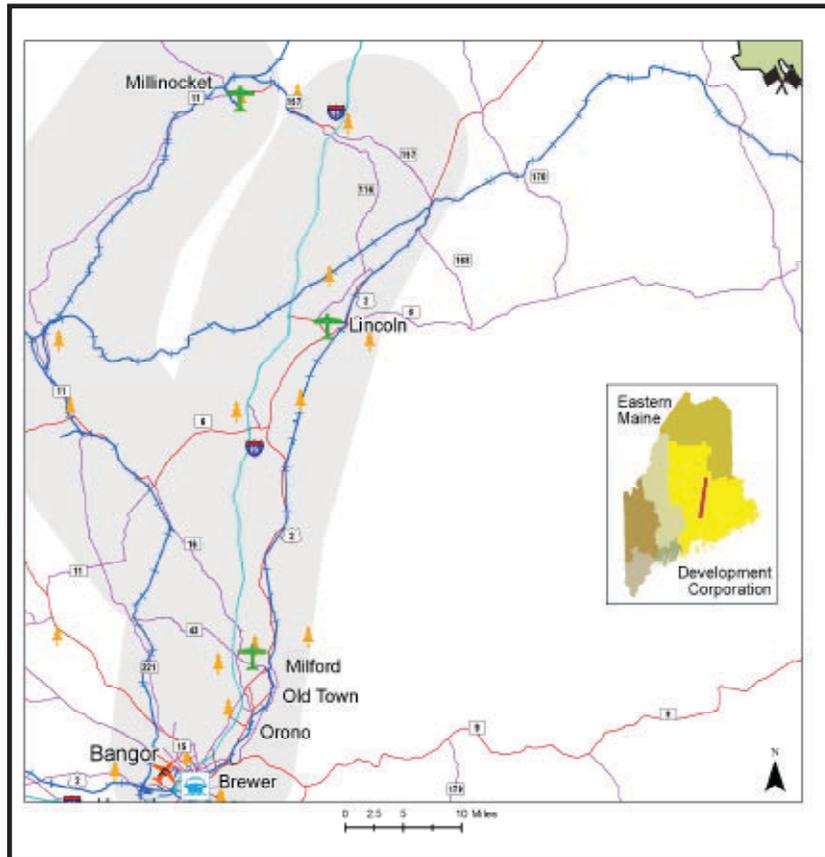
Land Use Objectives:

- Develop consistent comprehensive plans and land use ordinances to discourage inappropriate roadside development.
- Collaborate between MaineDOT, RPCs and corridor communities to implement consistent corridor-wide access management standards.

Economic Development Objectives:

- Locate regional business parks in the most appropriate locations.
- Support the emerging tourism industry by providing adequate visitor facilities.
- Establish employment clusters to reduce commuting.

**Eastern Maine Development Corporation
Corridor: Penobscot Valley (Bangor to Medway)
Regional Priority Rank: 6**



This corridor is served by highways and railroads that link Bangor and all points south to northern Maine and the Canadian Maritime provinces. Highways in this corridor include I-95 in Bangor extending to Medway, US Rte. 2 in Bangor extending to Mattawamkeag, State Rte. 157 in Mattawamkeag extending to Millinocket, State Rte. 11 in Medway extending to Stacyville, and State Rte. 116 in Old Town extending to Medway.

Transportation Objectives:

- Increase vehicle weight limits on I-95 to reduce heavy truck impacts to state roads.
- Develop additional park-and-ride facilities at key points on I-95.
- Study crash patterns on I-95 and develop a mitigation strategy.
- Improve cross-corridor linkages such as State Rtes. 116, 11 and 157.

Land Use Objectives:

- Develop consistent comprehensive plans and land use ordinances to discourage inappropriate roadside development.
- Collaborate between MaineDOT, RPCs and corridor communities to implement consistent corridor-wide access management standards, especially in Millinocket, East Millinocket, and Medway.

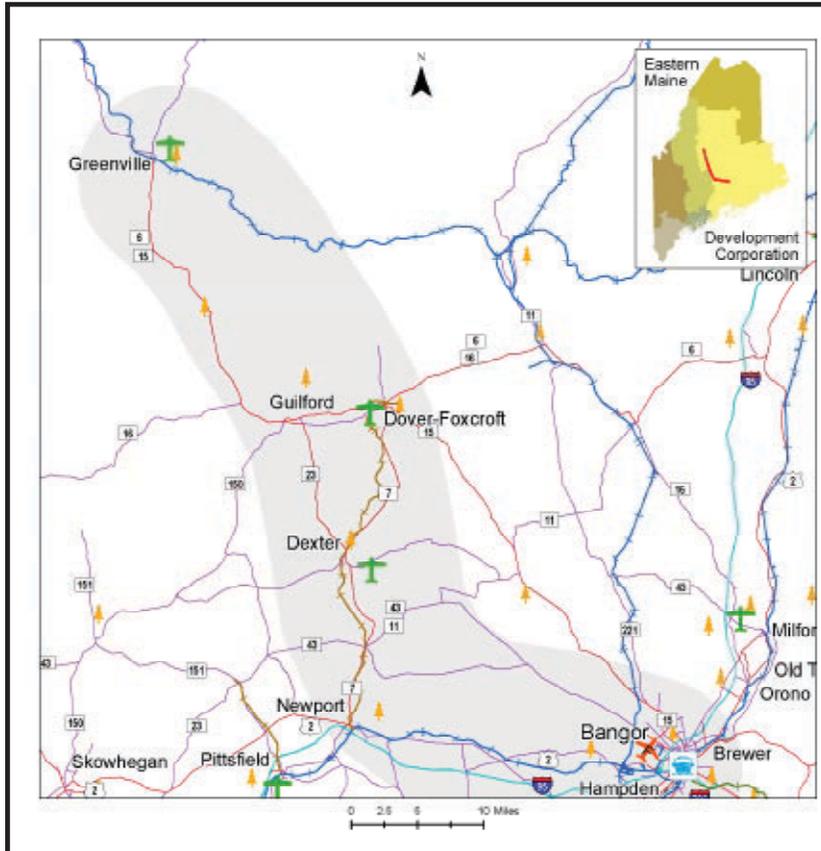
Economic Development Objectives:

- Support bicycle, pedestrian and other infrastructure improvements that would encourage recreational and tourism opportunities in the Millinocket and Lincoln areas.
- Improve highway, rail, air and other international connections to support traditional industries and international trade.

Eastern Maine Development Corporation

Corridor: Sebasticook Valley (Newport/Bangor to Dover-Foxcroft and Greenville)

Regional Priority Rank: 7



The corridor is served by several highways including: State Rte. 15 from Bangor extending through Dover-Foxcroft to Greenville; State Rte. 7 from I-95 in Newport extending through Dexter to Dover-Foxcroft; and State Rte. 23 in Dexter extending to Guilford.

Transportation Objectives:

- Improve safety of State Rtes. 7, 15, and 23.
- Reconstruct section of unimproved State Rte. 15 between Dover-Foxcroft and Guilford.

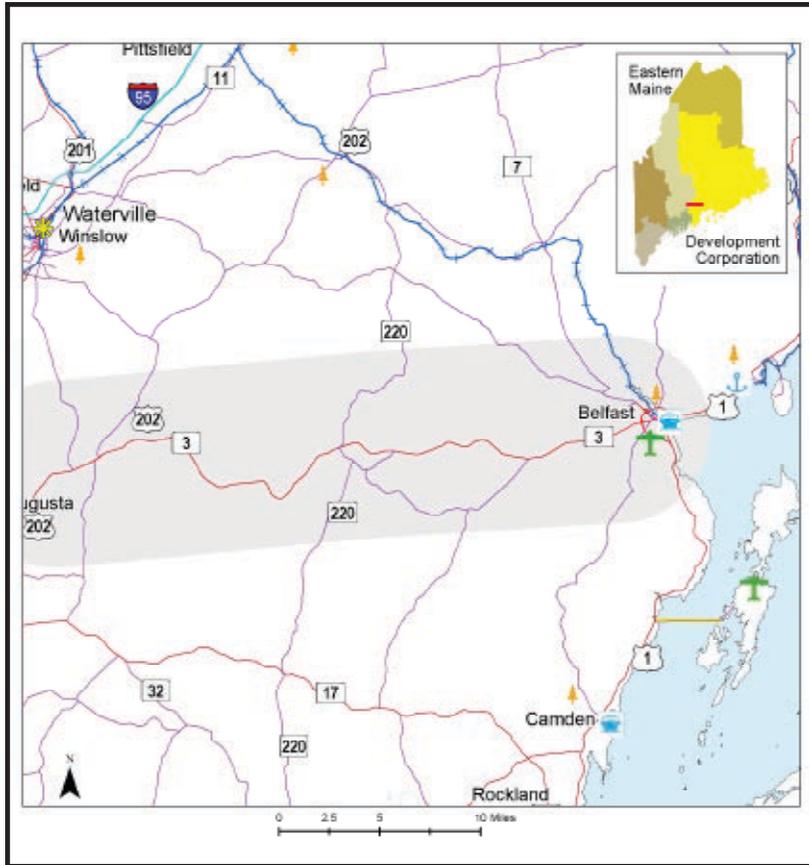
Land Use Objectives:

- Develop current comprehensive plans throughout the corridor.
- Collaborate between MaineDOT, RPCs and corridor communities to implement consistent corridor-wide access management standards, especially in Millinocket, East Millinocket, and Medway, particularly along portions of the corridor that have been designated Retrograde.

Economic Development Objectives:

- Support the emerging tourism industry by providing adequate visitor facilities in the corridor.
- Reconstruct section of unimproved Rte. 15 between Dover-Foxcroft and Guilford.
- Improve corridor highway ride quality to reduce damage to products in transit.
- Improve corridor linkages to support business park developments in Greenville, Dover-Foxcroft, and Milo.

**Eastern Maine Development Corporation
Corridor: Midcoast State Route 3 (Belfast to Palermo)
Regional Priority Rank: 8**



The Midcoast State Rte. 3 Corridor links Belfast and US Rte. 1 with points west toward Augusta. The corridor centers on Rural Principal Arterial State Rte. 3 and includes the municipalities of Belfast, Belmont, Liberty, Montville, Morrill, Palermo, and Searsmont in Waldo County.

Transportation Objectives:

- Improve safety at current and emerging high traffic locations along Rte. 3 through context-sensitive design.
- Improve the quality of collector roads accessing State Rte. 3.
- Invest in on- and off-road trails linking schools and residential and recreational areas to encourage non-vehicle tourism options, emphasizing coastal villages.

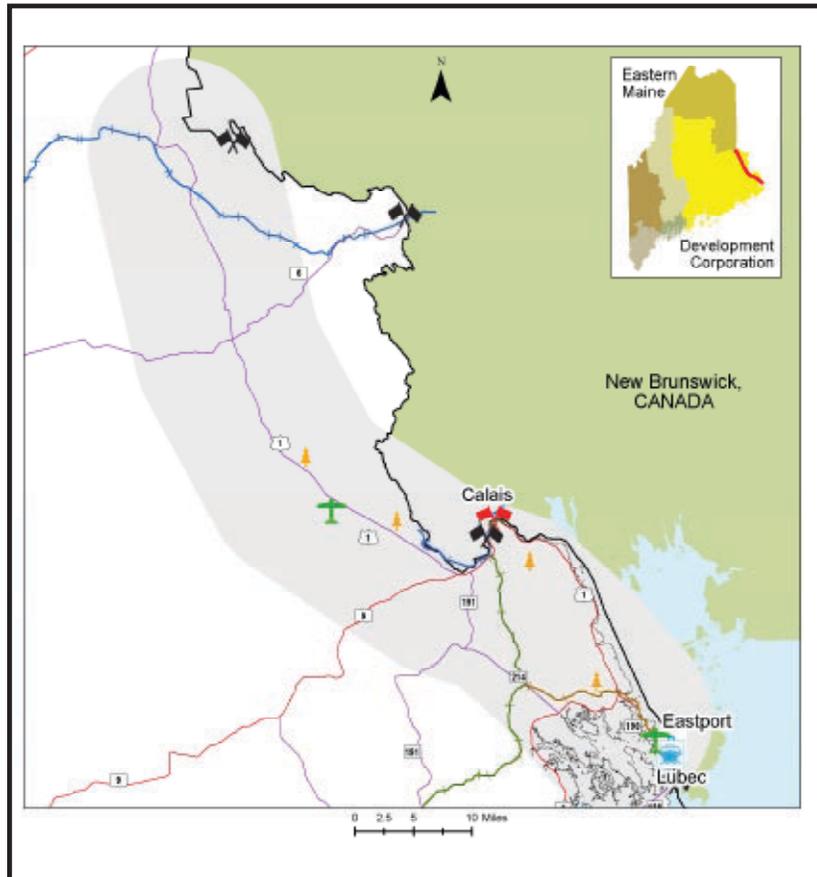
Land Use Objectives:

- Draft, adopt and implement municipal comprehensive plan land use elements.
- Develop consistent and effective subdivision and context-sensitive roadway design ordinance standards.

Economic Development Objectives:

- Improve access to employment opportunities in service centers through road improvements and commuting facilities.
- Develop strategies to work with service center communities and major employers (100 or more employees) to help support commuter bus and van options.
- Work with municipalities and businesses to develop impact fees for major projects to fund improvements to maintain corridors while allowing for continued economic development.

Eastern Maine Development Corporation
Corridor: Coastal Canadian (Eastport to Danforth)
Regional Priority Rank: 9



This corridor connects southern Aroostook County and northern and coastal Washington County: US Rte. 1 in Danforth extending to State Rte. 190 in Perry extending to the port at Eastport.

Transportation Objectives:

- Continue to improve highways in this region with shoulders, drainage, and foundations.
- Pave shoulders when road is improved.
- Improve rail and truck access to the Eastport marine facility.

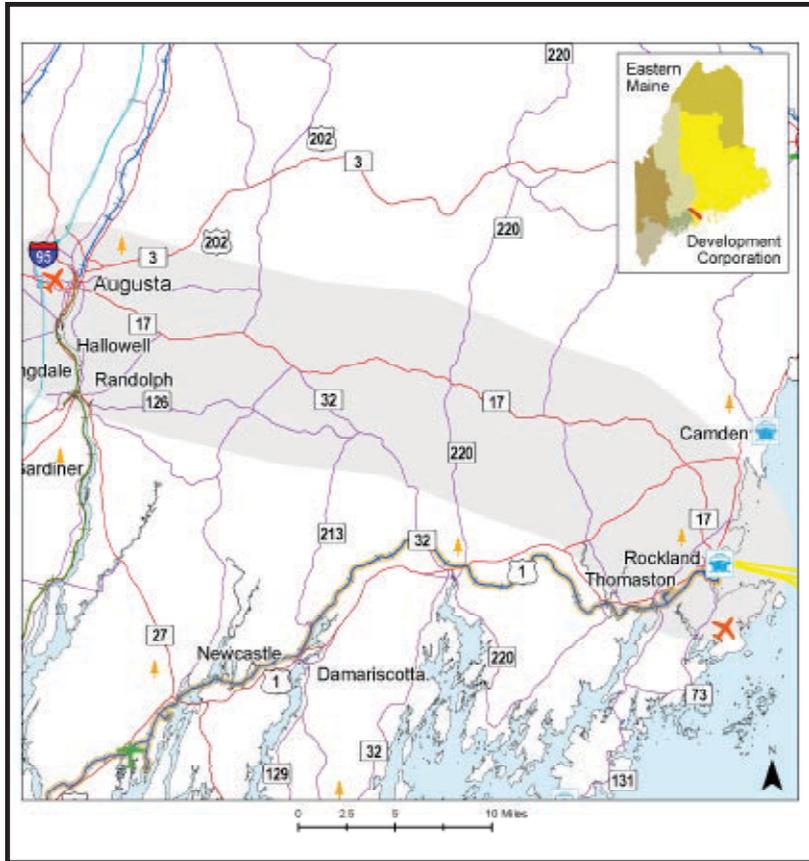
Land Use Objectives:

- Improve identification and interpretation of the watersheds, rivers, bays, ocean inlets and historical sites.
- Encourage retention of forestry and other economic resource-based land-uses.

Economic Development Objectives:

- Promote tourism along this corridor, including the Grand Lakes and the Million Dollar View Scenic Byway.
- Facilitate cross-border trade with the Canadian Maritime provinces.
- Provide rest stops with rest rooms throughout Washington County.

**Eastern Maine Development Corporation
Corridor: Midcoast State Route 17 (Rockland
to Washington)
Regional Priority Rank: 10**



The Midcoast State Rte. 17 Corridor links Rockland with points west toward Augustus. The corridor centers on the Minor Arterial State Rte. 17 and includes the municipalities of Rockland, Rockport, Hope, Union, and Washington.

Transportation Objectives:

- Improve safety at current and emerging high traffic locations along Rte. 3 through context-sensitive design
- Improve the quality of collector roads accessing State Rte 17.
- Invest in on- and off-road trails linking schools and residential and recreational areas to encourage non-vehicle tourism options, emphasizing coastal villages.

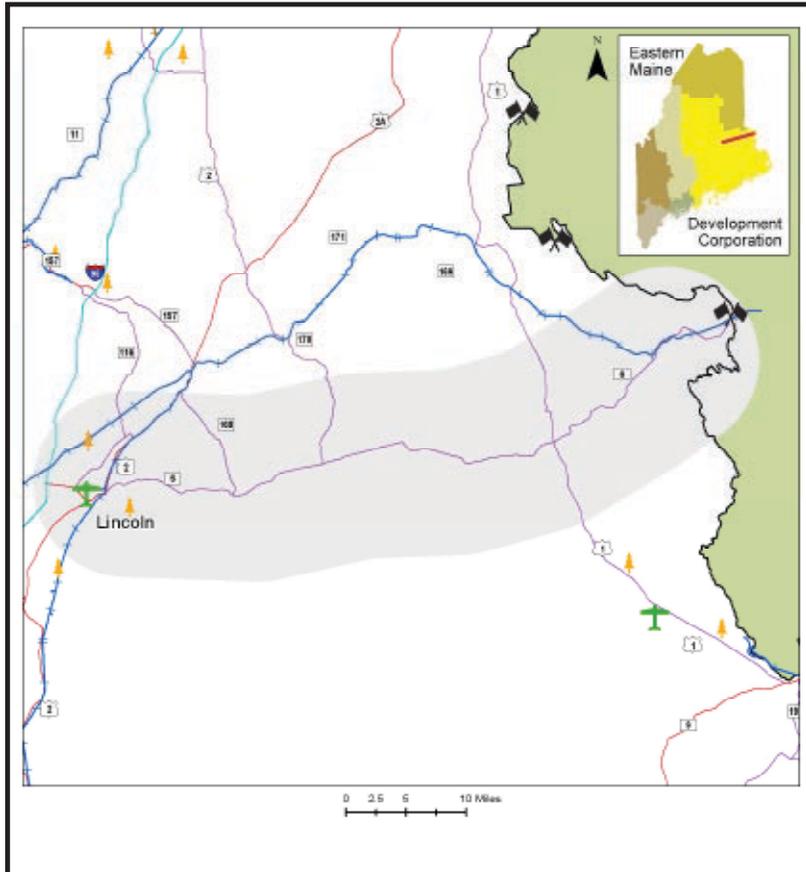
Land Use Objectives:

- Draft, adopt and implement municipal comprehensive plan land use elements.
- Develop consistent and effective subdivision and context-sensitive roadway design ordinance standards.

Economic Development Objectives:

- Improve access to employment opportunities in service centers through road improvements and commuting facilities.
- Develop strategies to work with service center communities and major employers (100 or more employees) to help support commuter bus and van options.
- Work with municipalities and businesses to develop impact fees for major projects to fund improvements to maintain corridors while allowing for continued economic development.

Eastern Maine Development Corporation
Corridor: State Route 6 (Lincoln to Vanceboro)
Regional Priority Rank: 11



State Rte. 6 is an important corridor connecting Lincoln and northern Washington County communities with the Canadian Maritime provinces and, via I-95, the greater Bangor area. The corridor extends from I-95 in Lincoln to Vanceboro on the US-Canadian border.

Transportation Objectives:

- Address basic geometry and grade deficiencies of the highway.
- Pave shoulders when the road is improved.

Land Use Objectives:

- Assist corridor towns to participate in the comprehensive planning process.

Economic Development Objectives:

- Support bicycle and pedestrian facilities that would encourage recreational and tourism opportunities in the Lincoln area.
- Work with Maine Office of Tourism and other regional tourism agencies and service providers to identify infrastructure needs and deficiencies that would support nature based tourism opportunities served by State Rte. 6.
- Improve highway and other international connections to support traditional industries and international trade.

Eastern Maine Development Corporation

Recommended Policy and Planning Initiatives and Capital Investments

The Eastern Maine Economic Development District is comprised of four regional councils and one metropolitan planning organization (MPO). The regional councils include the Eastern Maine Development Corporation (EMDC), the Midcoast Regional Planning Commission (MCRPC), the Washington County Council of Governments (WCCOG) and the Hancock County Planning Commission (HCPC). The MPO in this region is the Bangor Area Comprehensive Transportation System (BACTS). Regional transportation needs for policy and planning initiatives and capital investments are as noted below. They are listed in priority order as determined by the regional councils based on the Modified TELUS scoring model provided by MaineDOT.

The following policy and planning initiatives and capital investments were identified as being regionally significant and transcend all of the corridor-specific initiatives.

Region Wide Investments

Policy Initiatives

1. Increase weight limits on Interstate 95 north of the terminus of the Maine Turnpike in Augusta - Working with local, state, and federal groups, agencies, and the delegation, the region will work to increase the weight limits on Interstate 95 from 80,000 to 100,000 pounds.

Planning Initiatives

None Identified

Capital Investments

1. Bangor International Airport Connector Road.
The following policy and planning initiatives and capital investments are provided in priority order for each of the eleven *Corridors of Regional Economic Significance for Transportation* that have been defined by the EMDC, HCPC, MCRPC, and WCCOG, and BACTS.

Priority Corridor No. 1: Midcoast US Route 1 (Warren to Prospect)

Policy Initiatives

None Identified

Planning Initiatives

1. Maine DOT *Gateway 1* Strategic Corridor Preservation Planning Study - ongoing study with public and municipal participation, and funding of recommendations that are mutually agreed upon by municipalities, federal officials and MaineDOT.
2. Route 1 Safety Audit with focus on high crash locations in Thomaston and Rockland.
3. Maine State Ferry Terminal Rockland - parking lot expansion/structure feasibility study would safely move freight up to Route 9 and facilitate tourism connections with coastal Hancock and Washington Counties.

Capital Investments

1. Rockland Branch Railroad upgrades and improvements - rail line, fencing, grade crossing gates, signs and signals in Rockland, Thomaston and Warren.
2. Knox County Airport Runway/Taxiway Upgrades - for safety and sufficient capacity with consideration of local and regional environmental constraints.
3. Belfast Route 1 Intersection Improvements - safety, mobility and capacity at Congress Street, Route 52 and Route 141 intersections.
4. Route 52 Upgrade in Camden, Lincolnville, Northport and Belfast - to alleviate congestion on Route 1, while respecting Lincolnville Center's historic character, and to improve safety (current posted speed is difficult to drive given poor road surface conditions).

Priority Corridor No. 2: Acadia Express (Holden to Bar Harbor)

Policy Initiatives

None Identified

Planning Initiatives

1. Ellsworth Strategic Transportation and Recreational Intermodal Center feasibility analysis. Study to determine alternatives for location, scale and design of an intermodal passenger transportation facility in Ellsworth.

Capital Investments

1. Improve Mobility and Safety on US Route 1A/Route 3 - Complete highway reconstruction from North Ellsworth to Ellsworth Center. Increase transit services for commuters and visitors. Complete shoulder paving to permit safe use of this corridor by bicycles. Route 1A and Route 3 are mobility corridors with significant retrograde sections. This corridor serves millions of visitors to Acadia National Park each year and generates eastern Maine's most significant traffic congestion.
2. Acadia Gateway Center - Launch construction of phase 1 of an intermodal facility and information center in the town of Trenton to serve visitors to Acadia National Park and surrounding areas. Continue design for phases 2, 3 and 4. The Acadia Gateway Center has been identified as a priority project by the National Park Service, Federal Transit Administration and Maine Department of Transportation.

Priority Corridor No. 3: Downeast Coastal (Bangor/Ellsworth to Calais)

Policy Initiatives

None Identified

Planning Initiatives

1. Eastport Regional Connector Road and Bridge - Reconstruct the former bridge connecting Eastport to the mainland, and improve highway connections to Meddybemps and Route 9. Local and regional comprehensive planning efforts of regional service centers (Eastport and Calais) identified the need to increase port of Eastport access to Route 9 and I-95 and to separate freight and tourism traffic on Route 1.
2. North South Connector Routes - Improve state highways connecting Route 1 with Route 9 including Route 46, Route 193, Route 192 and Route 191. These routes would safely move freight up to Route 9 and facilitate tourism connections with coastal Hancock and Washington Counties.

3. Route 1 Mobility and Safety - Complete road improvements on coastal Route 1 between Bucksport and Eastport. Add passing lanes, turning lanes, paved shoulders and other improvements to facilitate traffic flow and safety. Extensive public and corridor-committee input has stressed the need to facilitate mobility of commuters and freight while supporting an increasing tourism market.

Capital Investments

1. Tourism Infrastructure Program - Implement transportation to enhance visitation to Hancock and Washington Counties including scenic turn-outs, rest areas, wayfinding signage and separation of visitor traffic from commuters and freight. This should include a coordinated effort of multiple state (Transportation, Tourism, Conservation) and regional (Downeast RC&D, WCCOG, SCEC) agencies to ensure that visitors attracted by the abundant nature-based resources find an experience that is matched by equally high quality infrastructure.
2. Downeast Regional Airport - Construct new airport in the greater Machias region to serve regional passenger and freight needs, and re-use the existing airport for mixed use development. The MaineDOT *Aviation System Plan* identified this region as an area in need of a level-one facility (5,000 foot runway).
3. Penobscot Narrows Master Plan - Implement transportation recommendations of the Penobscot Narrows Transportation Plan, including improved water access, transit services, trails and information program.
4. Down East Sunrise Trail - build upon the rails to multi-use trails conversion between Washington Junction in Hancock and Ayers Junction. Add visitor information, way-finding signage, parking facilities and other support infrastructure. Preserve the corridor for future conversion to rail use when it's economically feasible.

Priority Corridor No. 4: Penobscot River (Searsport to Bangor)

Policy Initiatives

Not Identified

Planning Initiatives

1. East Coast Greenway/Penobscot River Trail - Plan an off-road bicycle and pedestrian trail connecting Bangor, Brewer, Orrington and Bucksport. The routing study may designate this trail as the principal East Coast Greenway route between Brewer and Ellsworth. The Towns of Brewer, Orrington and Bucksport have also expressed their support for the concept.

Capital Investments

1. Penobscot Narrows Master Plan - Implement transportation recommendations of the Penobscot Narrows Transportation Plan, including improved water access, transit services, trails and information program.
2. Improve Mobility and Safety on US Route 1A - This project will improve the efficiency and safety of the corridor. The corridor currently accommodates a mix of commuter vehicles and heavy truck traffic associated with the port at Mack Point in Searsport. Improvements may include implementing access management techniques and passing lanes to facilitate more efficient movement of goods between the port and northern and central Maine.

3. Improve Mobility and Safety of Route 15 (Bucksport to Brewer) - This arterial corridor carries significant commuter and truck freight traffic serving the Bucksport Paper Mill, a major fuel shipping facility in Bucksport, the regional waste incinerator in Orrington (PERC), and a number of other manufacturing and service enterprises. Improvements may include constructing improved shoulders, passing lanes and the use of access management techniques. These improvements are a high priority for area towns. Bucksport's role as a regional manufacturing and fuel transshipment center requires additional infrastructure investments to sustain economic growth. Improvements to Route 15 will complement the new Penobscot Narrows Bridge and Observation Tower.

Priority Corridor No. 5: East-West (Newport to Bangor)

Policy Initiatives

1. Increase Truck Weight Limits on I-95 and I-395 to 100,000 lbs. - This would allow heavy truck traffic to legally travel Maine's interstate highway system in addition to secondary roads. This policy project has been a long standing high priority issue at the local, regional and state levels.

Planning Initiatives

None Identified

Capital Investments

1. I-95 Corridor Improvements - Improvements include reconfiguration of the existing clover leaf interchange between I-95 and I-395. The current interchange configuration is insufficient to accommodate increasing traffic levels, causing delays and vehicular accidents.
2. Bangor International Airport (BGR) Connector Road - Construct an access road between I-95 and BGR, providing a more efficient link to the airport. This project will replace the current circuitous route between I-95 and the airport, is a component of BGR's Master Plan and was identified by BACTS as priority for the urban area.

Priority Corridor No. 6: Penobscot Valley (Bangor to Medway)

Policy Initiatives

None Identified

Planning Initiatives

None Identified

Capital Investments

1. Penobscot River Restoration and Trail Network - Develop bicycle and pedestrian trails along both sides of the Penobscot River from Orono to Howland. This trail system will connect with existing bike-pedestrian facilities in the BACTS area and would complement the Penobscot River Restoration's efforts to highlight the importance of the Penobscot River. EMDC and BACTS have identified this interregional project as a priority for the greater Bangor area.

Priority Corridor No. 7: Sebasticook Valley (Newport/Bangor to Dover-Foxcroft and Greenville)

Policy Initiatives

None Identified

Planning Initiatives

None Identified

Capital Investments

1. Improve Mobility and Safety on State Route 7/11/15/23 from Newport to Dover-Foxcroft and Greenville - This project will improve the efficiency and safety of the corridor. The corridor currently accommodates a mix of commuter vehicles, tourists and heavy truck traffic. Improvements may include conducting a safety audit of the corridor and implementing access management techniques to preserve and enhance mobility and safety. This project will address safety and mobility concerns resulting from existing traffic levels and anticipated increases resulting from anticipated residential and commercial development in northern Piscataquis and Penobscot Counties.
2. Tourism Infrastructure Improvements - Improve tourism-related transportation infrastructure in Piscataquis and northern Penobscot Counties such as directional, sight identification, and interpretive signage as recommended by the Piscataquis County Tourism Taskforce. Tourism has been identified as a priority strategy for economic development in Washington County. Transportation infrastructure is identified in the Fermata Study and Flanagan Report as an important element for increasing tourism.

Priority Corridor No. 8: Midcoast State Route 3 (Belfast to Palermo)

Policy Initiatives

None Identified

Planning Initiatives

1. Route 3 access management planning study to maintain mobility/posted speeds, N/S crossings, and development opportunities.

Capital Investments

1. Route 3 intersection improvements - safety, mobility and capacity improvements at Route 220, Route 131N and Route 131S intersections.

Priority Corridor No. 9: Coastal Canadian (Eastport to Danforth)

Policy Initiatives

1. Promote tourism along this corridor, including the Grand Lakes and the Million Dollar View Scenic Byway.
2. Facilitate cross-border trade with the Canadian Maritime provinces.
3. Encourage retention of forestry and other economic resource-based land-uses.

Planning Initiatives

1. Improve rail and truck access to the Eastport marine facility.
2. Improve identification and interpretation of the watersheds, rivers, bays, ocean inlets and historical sites.

Capital Investments

1. Add rest stops with rest rooms.
2. Pave shoulders when the road is improved.
3. Continue to improve highways with shoulders, drainage and foundations.

Priority Corridor No. 10: Midcoast State Route 17 (Rockland to Washington)

Policy Initiatives

None Identified

Planning Initiatives

1. Route 17 access management planning study to maintain mobility/posted speeds, north-south crossings, and development opportunities.
2. Route 17 Safety Audit with a focus on high crash locations.

Capital Investments

1. Route 17 intersection improvements - safety, mobility and capacity at Route 220, Route 131N and Route 131S intersections.

Priority Corridor No. 11: State Route 6 (Lincoln to Vanceboro)

Policy Initiatives

1. Work with Maine Office of Tourism and other regional tourism agencies and service providers to identify infrastructure needs and deficiencies that would support nature based tourism opportunities served by State Route 6.
2. Improve highway and other international connections to support traditional industries and international trade.
3. Encourage retention of forestry and other economic resource-based land-uses.

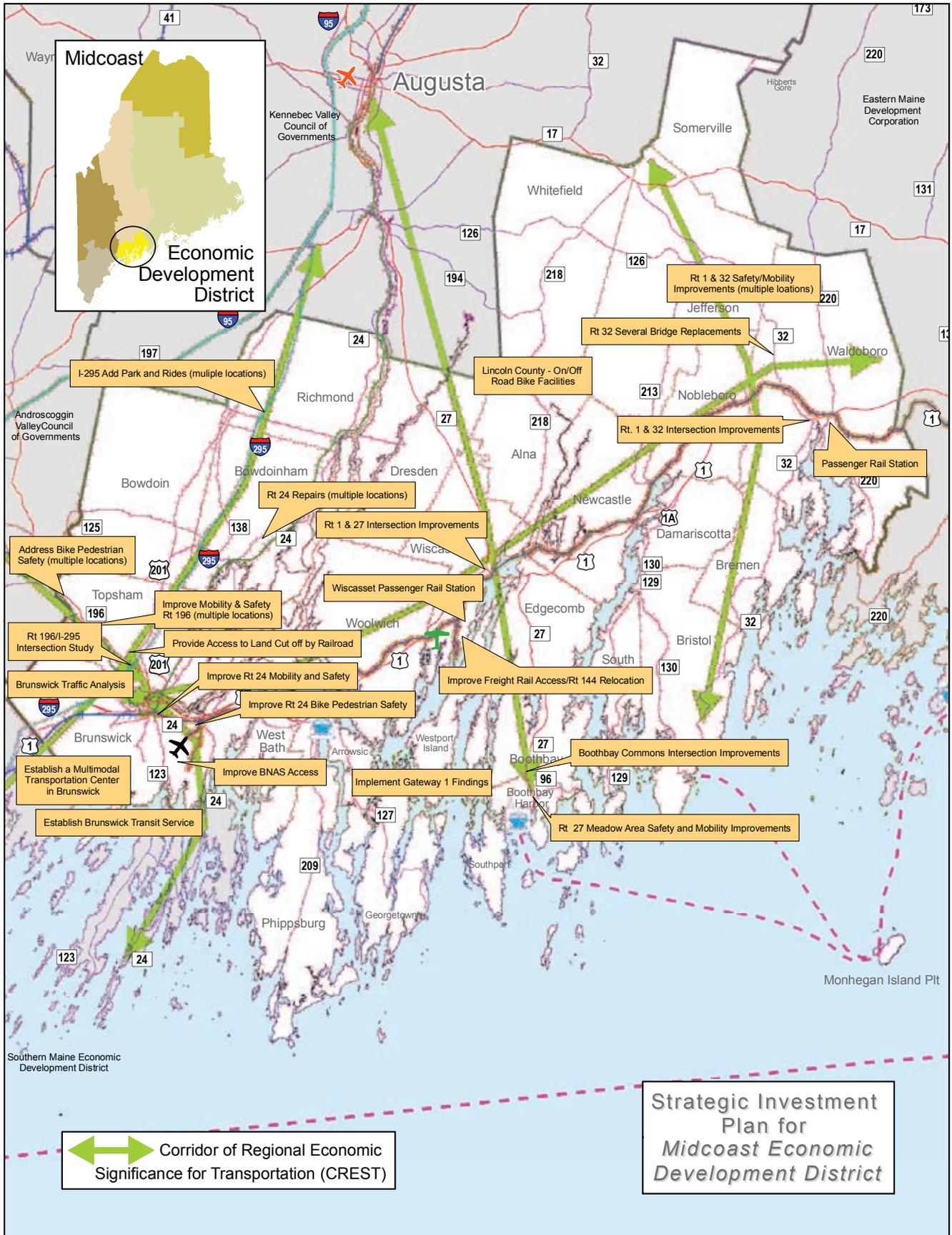
Planning Initiatives

1. Support bicycle and pedestrian facilities that would encourage recreational and tourism opportunities in the Lincoln area.
2. Address basic geometry and grade deficiencies of the highway.
3. Assist corridor towns to participate in the comprehensive planning process.

Capital Investments

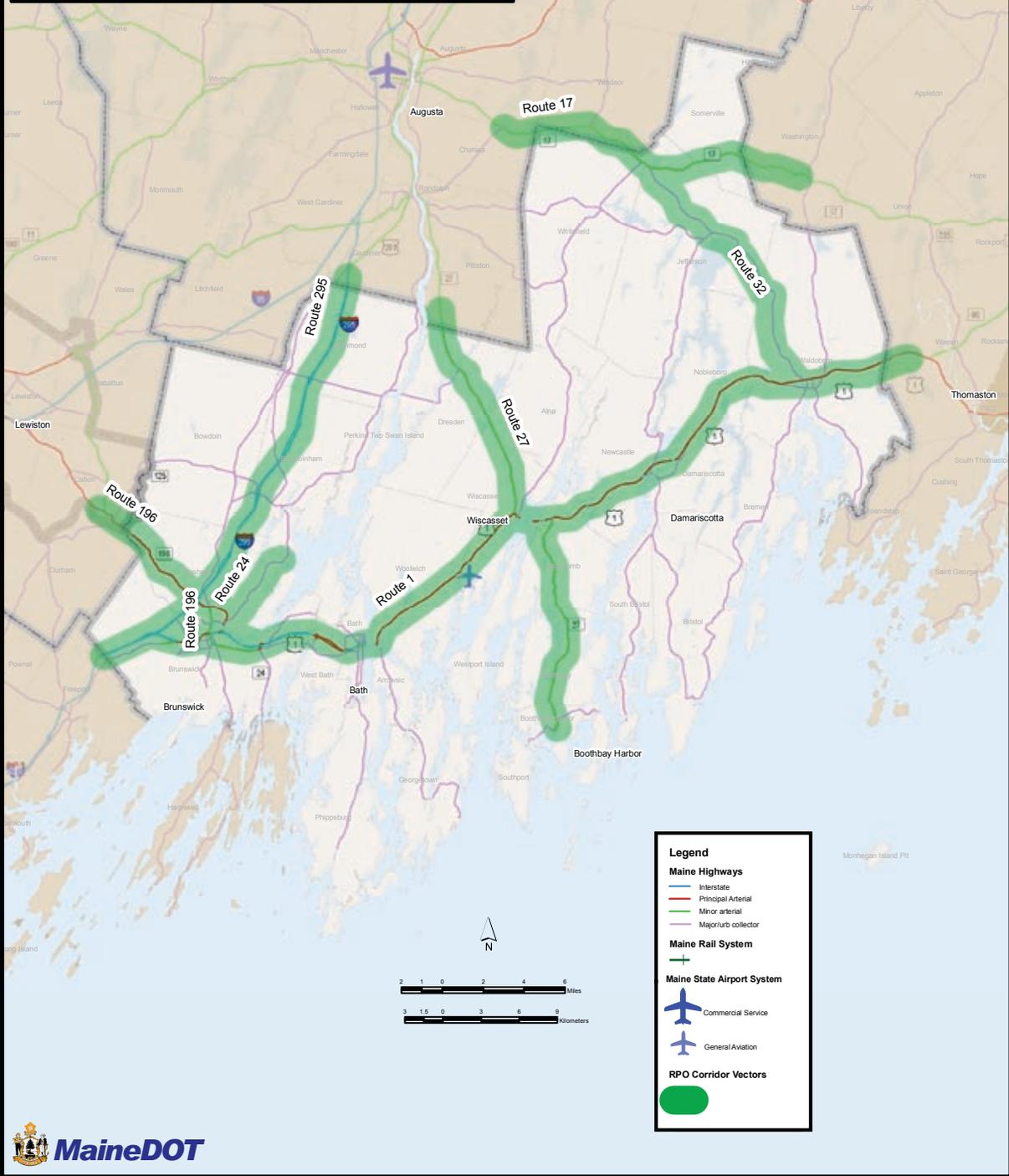
1. Pave shoulders when the road is improved.
2. Continue to improve highways with shoulders, drainage and foundations.

**Midcoast
Economic Development District**



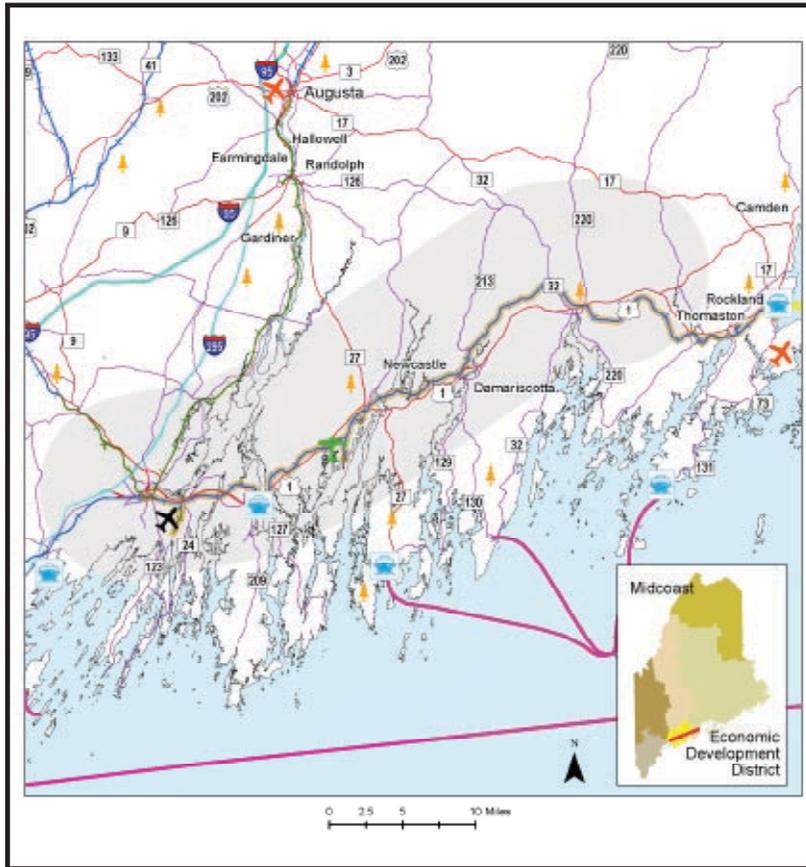
General Movement Patterns

Midcoast Economic Development District



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Midcoast Economic Development District
Corridor: Route 1 (Based on Gateway 1 findings)
Regional Priority Rank: 1

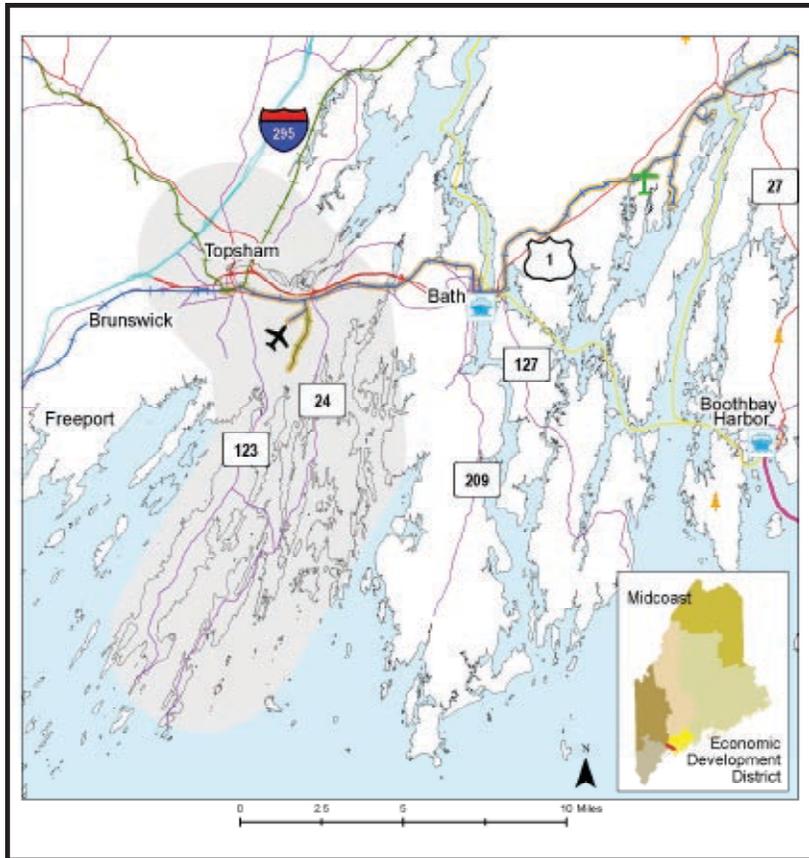


U.S. Rte. 1 is the most important highway serving the Midcoast Region. It is a principal arterial from Brunswick through Waldoboro and is part of the National Highway System. A number of issues identified during Phase 1 of the *Gateway 1* planning effort are common to multiple municipalities in the corridor.

Issues prominently identified by municipalities:

- Setting, visibly posting, and enforcing speed limits.
- Review speed limits in built-up sections of towns.
- Preserve capacity, image, aesthetics, and open space while planning for the need to increase property tax base through growth along Rte. 1.
- Traffic safety at identified intersections and along identified segments of Rte. 1.
- The safety of pedestrians and bicyclists.
- The impact of multiple curb cuts from strip development along Rte. 1.
- Communication between towns on land use decisions affecting multiple municipalities.
- Resolving transportation issues that affect more than one municipality.
- Noise and safety problems associated with truck traffic and lack of alternate freight routes.
- Protect and strengthen the viability and character of downtowns.
- Consider bus, rail, and multi-use path alternatives.
- Promote under-used transportation facilities to help relieve over-used facilities.
- Traffic congestion, where it:
 - diverts traffic onto local residential or secondary roads, and affects several communities, as with the Wiscasset bottleneck.
- Conflicts that arise as the result of:
 - competing goals, e.g., safe, free-flowing traffic vs. quality of life, communications and interactions between MaineDOT and communities and sometimes private developers when making design decisions for transportation or land use projects.

Midcoast Economic Development District
Corridor: Route 24
Regional Priority Rank: 2



Rte. 24 serves as Brunswick’s Maine Street, and provides important links north to Rtes. 1, I-295 and Topsham and Bath, and links east and south including the Brunswick Naval Air Station, Cooks Corner, Bath and Harpswell.

Transportation Objectives

- Consider a major rehabilitation or replacement of the Frank Woods Bridge.
- Re-establish left turn onto Maine Street in Brunswick from the Route 1 off-ramp.
- Improve the condition and safety of the rail crossing on Maine Street, Brunswick.
- Improve the Maine Street/Bath Road intersection.
- Improve traffic flow on the Bath Road portion of Rte. 24.
- Explore ways of improving pedestrian and bicycle facilities along the Bath Road portion of Rte. 24.
- Support transit service.
- Make improvements that will allow the sidewalk under the rail crossing in Topsham to be widened.
- Support safe, inter-connected bike and pedestrian facilities in Brunswick and Topsham.
- Consider ways of improving access to private land that is cut off by the railroad in Topsham.

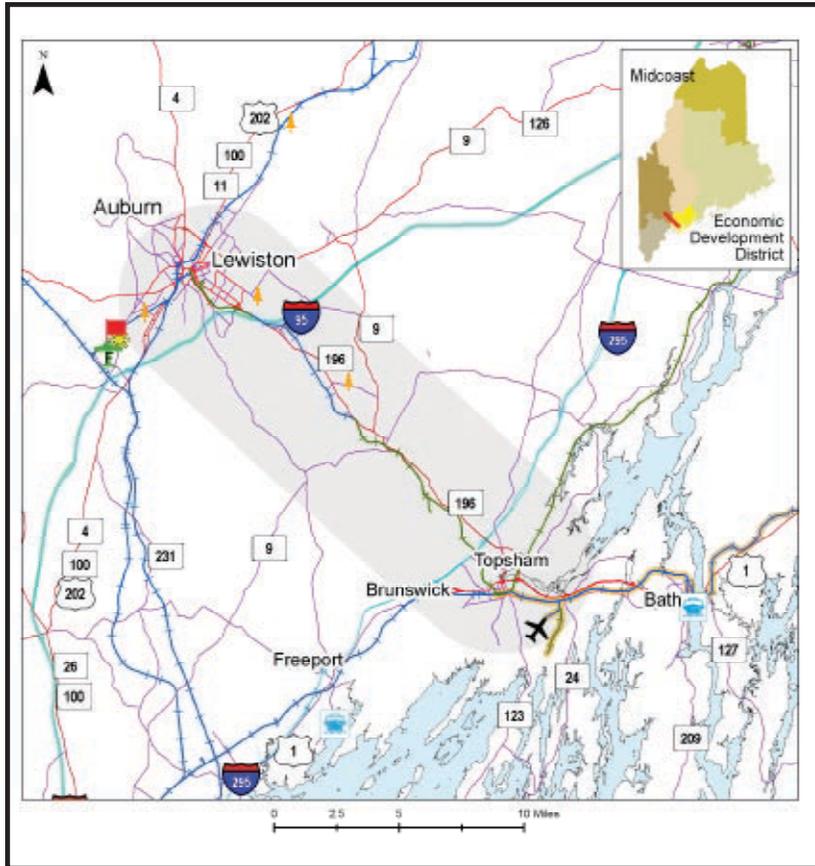
Land Use Objectives

- Slow traffic in downtown areas and improve mobility as additional growth takes place.
- Improve pedestrian and bike facilities.
- Develop impact fee systems similar to Brunswick’s in other communities to fund road improvements necessitated by new development.

Economic Objectives

- Ensure mobility along Rte. 24 as well as safe access to businesses and residences.
- Ensure that transportation improvements preserve the vitality of downtown areas as important locations for civic, housing, retail and commercial growth.
- Invest in track upgrades and safety improvements to support passenger rail service between Portland and Brunswick as well as Brunswick and Rockland.
- Provide for enhanced utility crossings along selected sections of rail line.

Midcoast Economic Development District
Corridor: Route 196
Regional Priority Rank: 3



The Rte. 196 Corridor, including the Coastal Connector, serves a growing volume of through traffic. It is a major link between I-295 and Rte. 1, and between the Lewiston-Auburn area and Midcoast Maine.

Transportation Objectives

- Improve traffic flow on the Coastal Connector.
- Create long term solutions to the pedestrian/bike crossing issue in Topsham.
- Create separate bike lane along Coastal Connector and extend the bike lane out Rte. 196 to Lisbon.
- Consider partially reactivating the Rte. 201/I-295 interchange to provide an entrance from Rte. 201 heading south, and an exit to 201 north to divert traffic from the Rte. 196/201 intersection.
- Consider widening Rte. 196 to a point west of the Interstate.
- Consider expanding the Coastal Connector to four lanes, to handle growing traffic volumes.
- Resolve the ATV/snowmobile road crossing issue in Topsham.
- Prepare a detailed planning study of the I-295/196 interchange in Topsham.

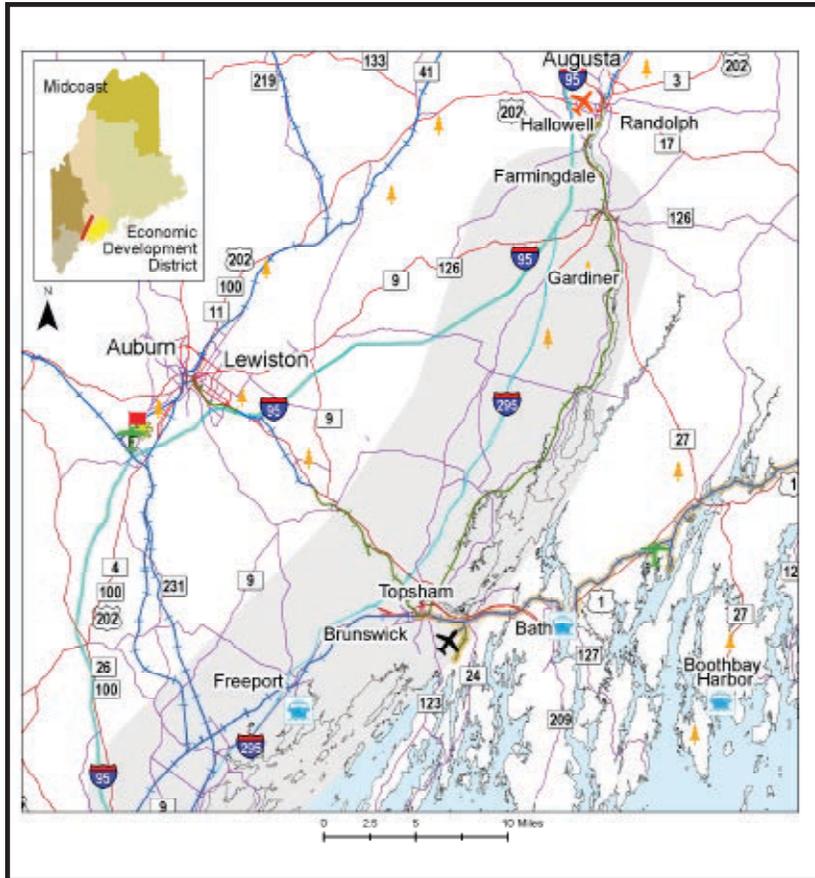
Land Use Objectives

- Work with Topsham on steps the town can take to accommodate growth while minimizing traffic impacts and the need for costly road improvements.
- Plan for future land use near the I-295/Rte. 196 interchange in Topsham.

Economic Objectives

- Ensure that Rte. 196 continues to serve through traffic in an efficient, timely manner.
- Ensure continued mobility as well as safe access to businesses and residential areas in Topsham.

Midcoast Economic Development District
Corridor: Route I-295
Regional Priority Rank: 4



I-295 is the only Interstate highway serving Sagadahoc County. It provides high speed access to Portland and points south as well as Augusta and points north. The towns of Brunswick, Topsham, Bowdoinham and Richmond are served by interchanges.

Transportation Objectives

- Consider re-activating the Rte. 201/I-295 interchange to divert southbound 201 traffic from the Rte. 196/201 intersection.

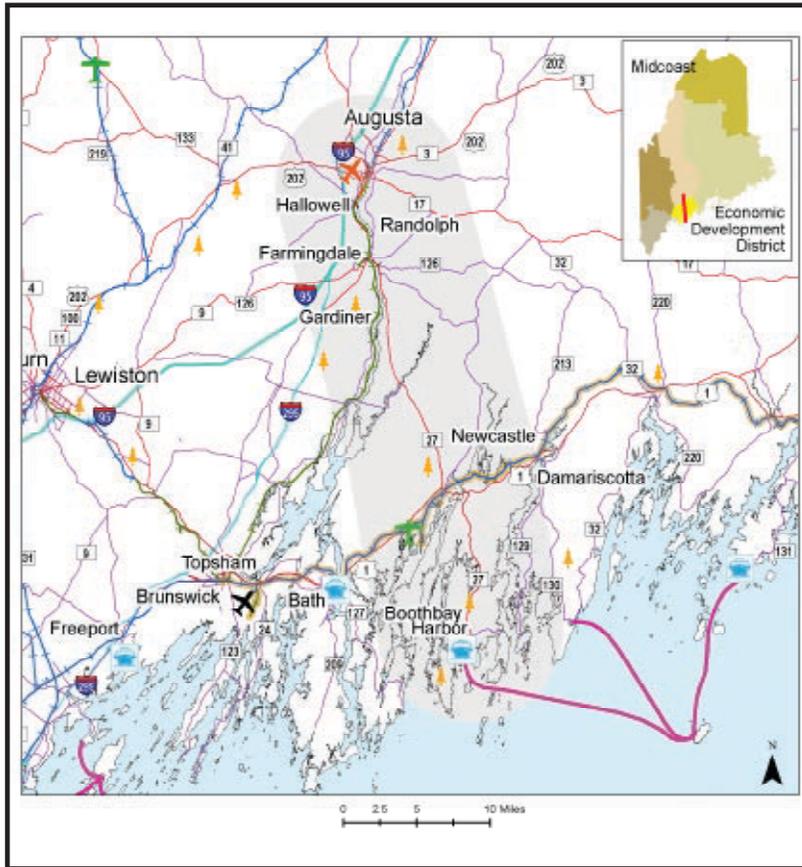
Land Use Objectives

- Work with Richmond, Bowdoinham, Topsham and Brunswick to develop master plans for I-295 interchanges that balance transportation access with economic development needs.
- Utilize land use planning to assist in permit review processes for I-295 interchanges.

Economic Objectives

- Consider taking advantage of growth demands at interchanges by leveraging impact fees on private developers to improve corridors for future and sustainable economic growth.
- Work with Brunswick to review possible changes at the Exit 28 ramp to better accommodate the economic needs of the community.

Midcoast Economic Development District
Corridor: Route 27
Regional Priority Rank: 5



The Midcoast portion of the Rte. 27 corridor begins in Boothbay Harbor and extends through Dresden to the Gardiner/Augusta area. This corridor provides north/south linkages to the five communities through which it passes, as well as access to Rte. 1 and major employment centers along Rte. 1 and outside the MCEDD region.

Transportation Objectives

- Corridor-Wide: Consider installing uniform directional and informational signs. Encourage all communities along the corridor to enact impact fees to fund traffic improvements.
- Wiscasset: Improve the Rte. 27/1 intersection.
- Edgcomb: Consider safety improvements for left-turning Rte. 27 traffic. Evaluate traffic safety at other intersections and work with local officials to make improvements as necessary.
- Boothbay: Evaluate and implement traffic, safety and pedestrian improvements for Railroad Village and Boothbay Common areas.
- Boothbay Harbor: Evaluate and implement traffic, safety and pedestrian improvements in the “Meadow”.

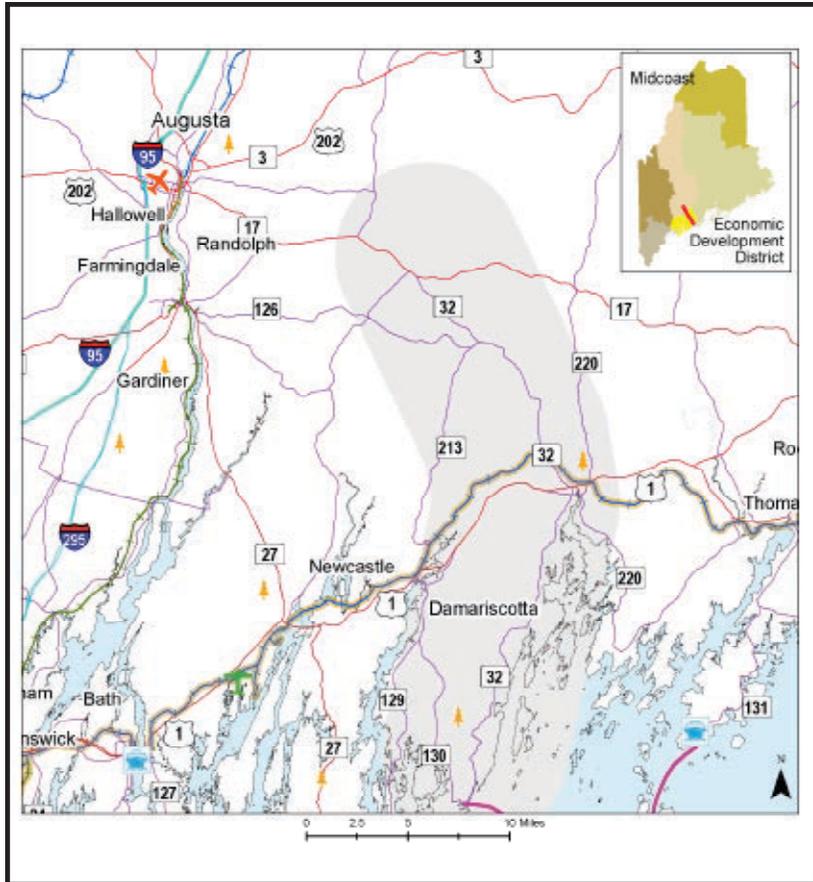
Land Use Objectives

- Continue Rte. 27 corridor planning efforts.
- Encourage communities to locate commercial growth areas away from Rte. 27.
- Develop consistent and effective access management plans that include provisions for common points of access, shared parking, landscaping requirements, and large frontages.
- Continue to work with Rte. 27 communities on providing pedestrian and bike facilities as well as cross walks in village areas.

Economic Objectives

- Ensure mobility and safe access to businesses and residences are maintained along Rte. 27.
- View mobility along Rte. 27 as being essential for the future economic vitality of the area; and reduce growth impacts, such as strip commercial development, that limit mobility.

Midcoast Economic Development District
Corridor: Route 32
Regional Priority Rank: 6



The Rte. 32 Corridor provides an important link between eastern Lincoln County, including Waldoboro and nearby communities, to Rte. 17 and the Augusta area. Although it is not an arterial, it is an important corridor for citizens in this part of the state.

Transportation Objectives

- Improve road conditions and mobility between Rtes. 1 and 17.

Land Use Objectives

- Locate commercial growth areas away from Rte. 32.
- Develop consistent and effective access management plans that include provisions for common points of access, shared parking, landscaping requirements and large frontages.

Economic Objectives

- Ensure that mobility and safe access to businesses and residences are maintained along Route 32.
- View mobility along Rte. 32 as being essential for the future economic vitality of the area; and reduce growth impacts, such as strip commercial development, that limit mobility.

Midcoast Maine Economic Development District

Recommended Policy and Planning Initiatives and Capital Investments

The Midcoast Maine Economic Development District is comprised of two regional councils - the Midcoast Council for Business Development and Planning (MCBDP) and the Lincoln County Planning Commission (LCPC). Regional transportation needs for policy and planning initiatives and capital investments are as noted below. They are listed in priority order as determined by the regional councils based on the Modified TELUS scoring model provided by MaineDOT.

The following initiatives and investments were identified as being regionally significant and transcend all of the corridor-specific initiatives.

Region Wide Investments

Policy Initiatives

1. Increase weight limits on Interstate 95 north of the terminus of the Maine Turnpike in Augusta - Working with local, state and federal groups, agencies, and the delegation, the region will work to increase the weight limits on Interstate 95 from 80,000 to 100,000 pounds.

Planning Initiatives

1. Complete *Gateway 1* Planning Study

Capital Investments

1. Improve freight access - The Route 32 and the Wiscasset-Route 144 Pineland Zones are located immediately adjacent to the Rockland Branch tracks. Historically, businesses on the property shipped products by rail and it is hoped to recruit similar businesses in the future. Critical to improved freight access in Wiscasset is the relocation of Route 144. Route 144 in its current location prevents expansion of the Wiscasset Airport, effectively preventing significant future air freight traffic. In addition, Route 144's alignment is considered an impediment to full development of the Maine Yankee Pineland Zone.
2. Wiscasset passenger rail station - MaineDOT has previously recommended a passenger rail station in Wiscasset in the general vicinity of the Pineland Zone and Route 144. Relocation of Route 144 as described above would enhance tourist and commuter access to the passenger rail station.
3. Corridor-wide on- and off-road bicycle facilities - Many tourists bring bicycles with them when they vacation in the mid-coast. In addition, there are numerous schools on or in the immediate vicinity of Routes 27 and 32. In most instances, bicyclists must use 1-2 foot shoulders or share travel lanes with high volumes of passenger vehicles and trucks. New on- and off-road bicycle facilities would not only improve the safety of bicyclists but also serve as an attraction for tourists while reducing overall vehicle use.
4. Waldoboro passenger rail station - A rail station in Waldoboro in the general vicinity of Moody's Diner could serve as a destination for tourists and improve potential ridership on the Rockland Branch. With the addition of surface parking, it could also serve commuters and day-trippers.

The following policy and planning initiatives and capital investments are provided in priority order for each of the six *Corridors of Regional Economic Significance for Transportation* that have been defined by the MCBDP and LCPC.

Priority Corridor No. 1: Route 1 (Based on Gateway 1 Findings)

Policy Initiatives

None Identified

Planning Initiatives

1. MaineDOT *Gateway 1* Strategic Corridor Preservation Planning Study - ongoing study with public and municipal participation, and funding of recommendations that are mutually agreed upon by municipalities, federal officials and MaineDOT.

Capital Investments

1. Rockland Branch Railroad upgrades and improvements - rail line, fencing, grade crossing gates, signs and signals in Rockland, Thomaston and Warren.

Priority Corridor No. 2: Route 24

Policy Initiatives

None Identified

Planning Initiatives

1. Improve BNAS Access - The Governor's Advisory Committee on the Brunswick Naval Air Station is dealing with a broad array of issues related to the future of this facility. The Transportation Subcommittee has developed recommendations to improve highway access, develop a direct rail link, and address traffic flow in the immediate region. The improvements would enhance the development potential of BNAS and the greater Midcoast region.
2. Undertake a Town-Wide Traffic Analysis in Brunswick - Because of growing traffic volumes, there is a need for a town-wide traffic analysis in Brunswick that would include an analysis and review of traffic patterns, congestion areas and problem accident locations, and strategies for traffic improvements.

Capital Investments

1. Establish Multimodal Transportation Center in Brunswick - The town of Brunswick is working to establish a multimodal center on town-owned land (Maine Street Station) off Maine Street adjacent to the railroad line through Brunswick near downtown. The center would include a passenger rail station on the site as well as a multimodal facility.
2. Improve Route 24 Mobility and Safety in Brunswick - There is a need to improve traffic flow and safety on Route 24 from Route 1 through downtown Brunswick to Cooks Corner. Possible improvements include a left turn lane from Route 1 to Maine Street, improvements to the Maine Street/Bath Road intersection, and a reconfiguration of traffic lanes (or additional lanes) near Cooks Corner and synchronization of traffic lights. These improvements would be aimed at reducing traffic back-ups and congestion.

3. Establish Transit Service in Brunswick - The town of Brunswick is working to establish a transit service in Brunswick to address the unmet need for a public transportation system.
4. Undertake Route 24 Repairs in Bowdoinham - The town of Bowdoinham would like to see improvements on River Road (Route 24) from the intersection of Browns Point Road northerly approximately 6 miles.
5. Address Bike/Pedestrian Mobility and Safety - There is a need to improve bicycle and pedestrian safety along Route 24. Possible improvements include reconfiguring traffic lanes so the bike lane near BNAS is no longer squeezed out, improving the unsafe sidewalk under the railroad overpass in Topsham, extending the bikeway from Merry-meeting Bridge into Topsham between the river and Elm Street, in accordance with the town's feasibility study, and improving sidewalks in Richmond.

Priority Corridor No. 3: Route 196

Policy Initiatives

None Identified

Planning Initiatives

1. Prepare a detailed planning study of the Route 196/I-295 interchange - Study options might include widening and splitting the overpass for the two directions of travel, and/or adding a left turn lane.

Capital Investments

1. Improve Route 196 Mobility and Safety - There is a need to improve traffic flow and safety along the entire Route 196 corridor in Topsham. Growing traffic volumes and turning movements have created congestion, especially at the intersection of Routes 196 and 201, along the Coastal Connector and along the section of Route 196 just west of I-295. Growing congestion coincides with increased traffic on Main Street. Traffic signals between I-295 and the Merrymeeting Bridge are not well integrated and may contribute to congestion. Possible improvements include reactivating the Route 295/201 interchange to reduce congestion at the Route 196/201 intersection, improving signalization, and adding travel lanes, especially along that portion of the Coastal Connector that is currently limited to two lanes.
2. Address Bike/Pedestrian Mobility and Safety - There is a need to improve bicycle and pedestrian safety along Route 196. There is currently a bike lane along Route 196 and the Coastal Connector, but growing traffic volumes raise safety concerns and prevent widespread use. Pedestrian crossing of Route 196 is an ongoing safety issue, especially at the Rte. 196/201 intersection. Topsham's middle and high schools lie north of Route 196, but most of the students live south of it. Possible improvements include a separate bike lane along the Coastal Connector, and safer pedestrian crossings.
3. Provide access to land that is cut off by the railroad - The land between the Coastal Connector and the railroad is currently cut from access to public roads.

Priority Corridor No. 4: Route I-295

Policy Initiatives

1. Increase Interstate Weight Limits

Planning Initiatives

None Identified

Capital Investments

1. Add Park and Ride Facilities at Strategic Locations - One possible location would be at the I-295/197 interchange. This would provide car pool options for people in the Richmond area, thus providing greater access to jobs and reducing traffic and congestion.

Priority Corridor No. 5: Route 27

Policy Initiatives

None Identified

Planning Initiatives

None Identified

Capital Investments

1. Route 1/Route 27 intersection (Wiscasset) - Wiscasset serves as the County Seat and the County Building is almost directly across the highway from this intersection. During many periods in the summer, this intersection fails due to volume and backups on Route 1. In addition, the Wiscasset Police and Fire Departments are located immediately adjacent to the intersection and they have great difficulty accessing Route 27 due to intersection congestion. Both highways are arterials and carry significant truck traffic. Potential solutions include installation of a roundabout or signalization.
2. Boothbay Commons intersection improvements - Five local roads converge with Route 27 and with each other in Boothbay village. Route 27 is a major tourist route and there is significant pedestrian crossroad traffic because the highway separates the town's commons and village retail area from the post office and town office. There are many times during the summer when the roads entering Route 27 operate at service level F. The Route 27 Committee issued a report several years ago that recommended a roundabout to improve traffic safety and flow.
3. Boothbay-Edgecomb Route 27 intersection improvements - Most of the intersections of local roads with Route 27 in Edgecomb and Boothbay are skewed or elevated, resulting in significant safety concerns, including poor sight distance.
4. Boothbay Harbor Meadow Area - Route 27 between Boothbay Commons and Route 96 carries very heavy tourist and local-delivery-truck traffic. The lack of turning lanes and excessive curb cuts creates safety concerns. In addition, there is a significant amount of crossroad pedestrian traffic due to the presence of the high school and the St. Andrews Village retirement complex. The Route 27 Committee recommended landscaped medians with turning lanes, improved pedestrian crossings and elimination of duplicative curb cuts.

Priority Corridor No. 6: Route 32

Policy Initiatives

None Identified

Planning Initiatives

None Identified

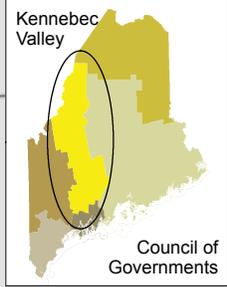
Capital Investments

1. Route 32 Improvements - Route 32 is the principal north-south connection between nine Lincoln County communities and Route 17/Augusta. It is also an important route for tourists traveling to the mid-coast. The highway connects five village areas and is used by bicyclists and pedestrians. It also serves as the only access to a Pine Tree Zone. The existing condition of the travel surface, shoulders and drainage facilities represent significant safety concerns, especially during inclement weather, and discourage use by tourists, trucks, commuters, pedestrians and bicyclists.
2. Route 32/1 Intersection Improvements - Route 32 is the principal access to the easterly side of the Bristol peninsula and, as noted above, is an important connector to Route 17 and Augusta. The intersection of Routes 32 and 1 is skewed, creating safety concerns. In addition, it provides inadequate protection for pedestrians, including schoolchildren walking to the nearby elementary school.
3. Route 32 Bridge replacements - Several bridges on Route 32, including Hoch Brook, are in poor condition and require replacement. These bridges are narrow, discourage pedestrians and bicyclists and contribute to stream sedimentation. Their replacement may be necessary if the highest priority project in Lincoln County, the reconstruction of Route 32, is to be realized.

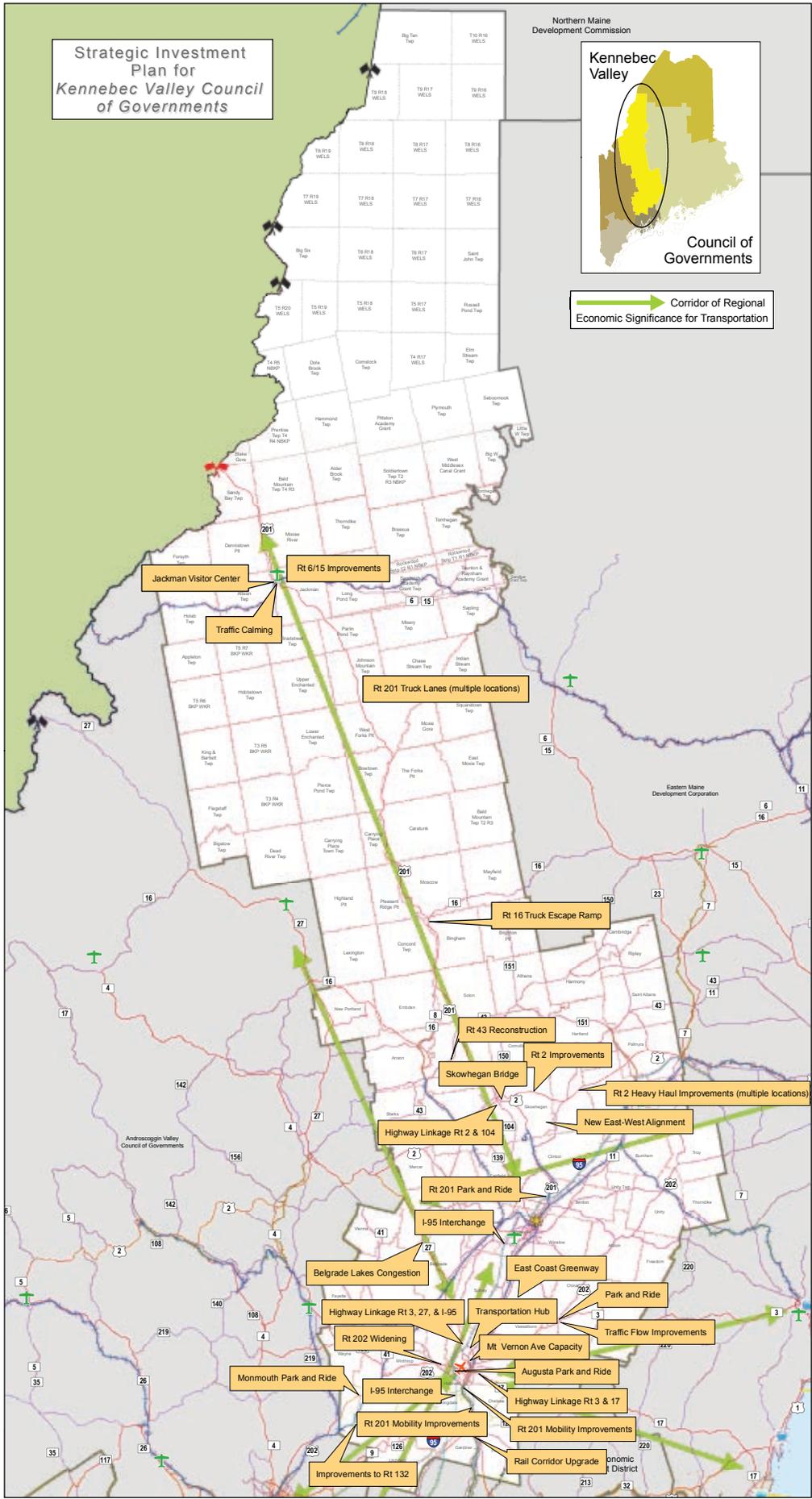
Kennebec Valley Council of Governments

Strategic Investment Plan for
Kennebec Valley Council of Governments

Northern Maine
Development Commission

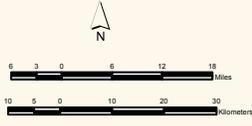


Corridor of Regional
Economic Significance for Transportation



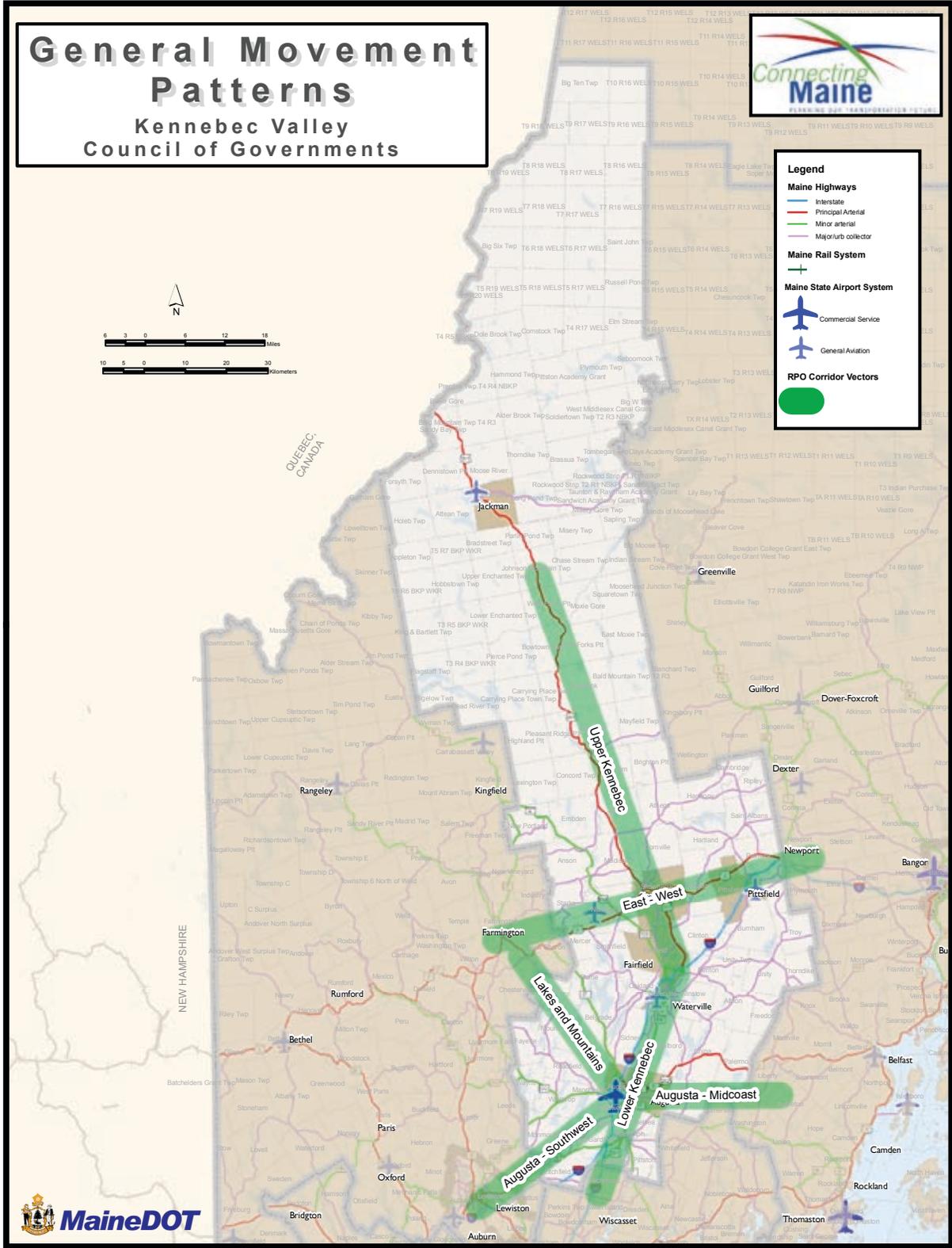
General Movement Patterns

Kennebec Valley Council of Governments



Legend

- Maine Highways**
 - Interstate (Blue line)
 - Principal Arterial (Red line)
 - Minor arterial (Green line)
 - Major/urb collector (Purple line)
- Maine Rail System**
 - Green line with cross-ticks
- Maine State Airport System**
 - Commercial Service (Blue airplane icon)
 - General Aviation (Light blue airplane icon)
- RPO Corridor Vectors**
 - Green oval

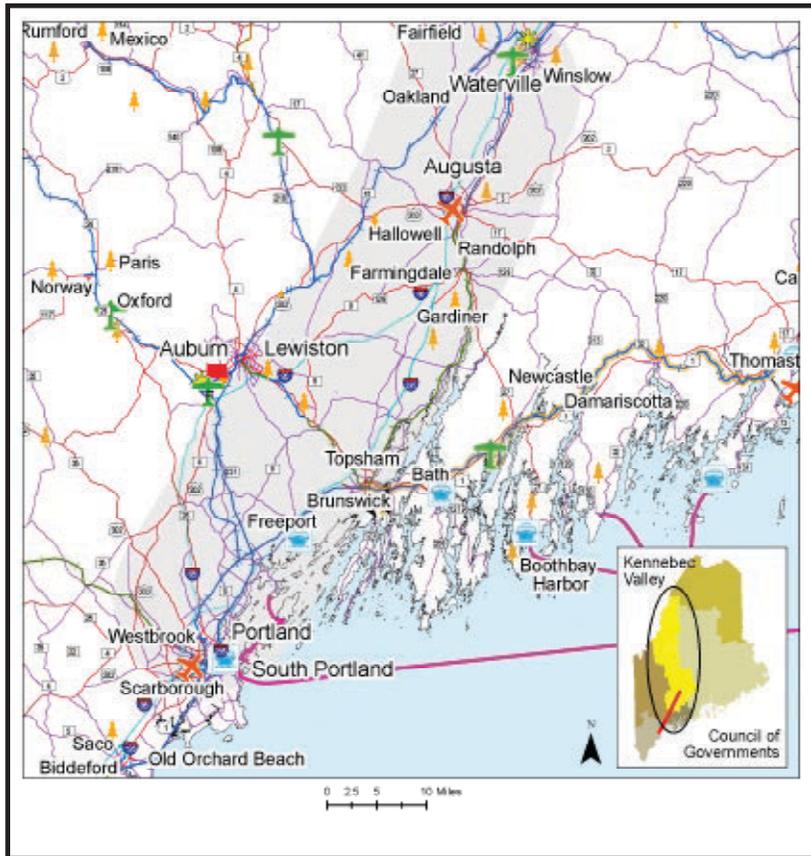


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Kennebec Valley Council of Governments

Corridor Name: Lower Kennebec

Regional Priority Rank: 1



Description: The Waterville Area is the northern terminus of the Lower Kennebec corridor, which extends south to the coast, encompassing Augusta and Gardiner, and terminating in Bath and Portland. The primary route is I-95/295; US 201 is a secondary route. The “Lower Road” rail line is also part of this corridor.

Transportation Objectives:

- Improve access to I-95.
- Alleviate congestion through system management and demand management in urban areas.
- Equalize truck weight limits on I-95 and state highways.
- Emphasize collector road improvements in local growth areas.
- Improve access to alternative modes, including park-and-ride lots, urban mass transit, and bicycle and pedestrian routes.
- Plan for better utilization of the rail corridor, including freight service and potential future passenger service.

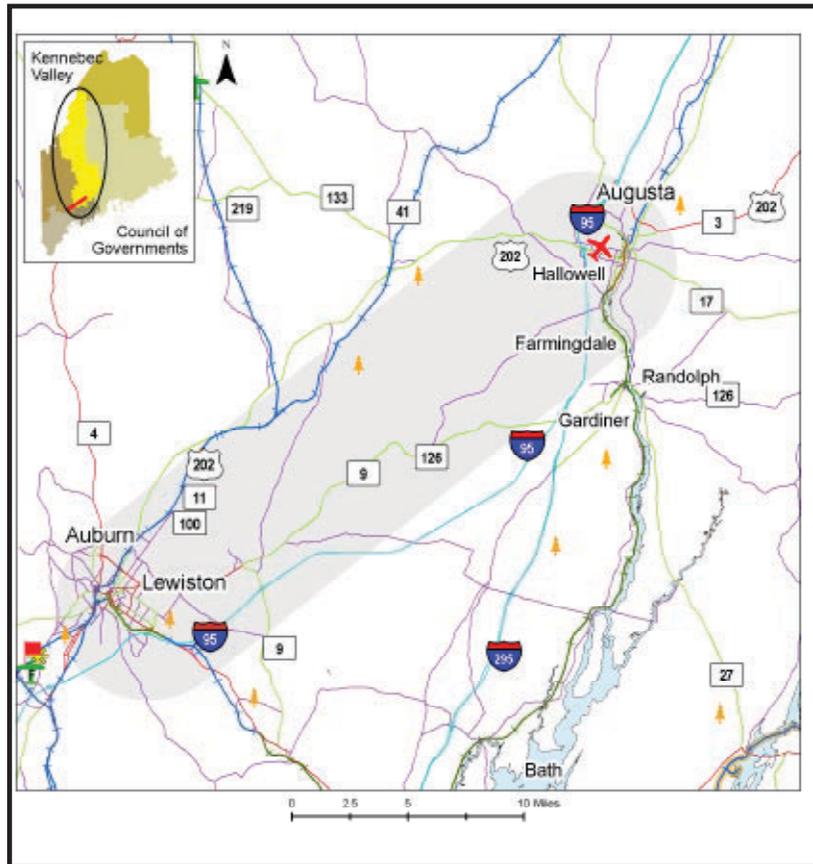
Economic Development Objectives:

- Improve infrastructure for the efficient movement of freight, including equalization of weight limits, alternative modes.
- Utilize improvements in telecommunications technology to reduce travel demand through decentralization of services.
- Increase commuter options via park-and-ride, ride-sharing.
- Assist in managing the promotion and development of recreational travel opportunities.

Land Use Objectives:

- Improve urban transportation infrastructure to reduce congestion and improve access.
- Improve commuter alternatives, facilities in suburban areas.
- Work with suburbanizing towns on methods to preserve mobility and limit access along state roads.
- Develop and promote land use planning to preserve mobility of interchange areas.

Kennebec Valley Council of Governments
Corridor: Augusta Southwest
Regional Priority Rank: 2



This corridor as it lies within the region originates in Augusta and extends southwest to the Lewiston-Auburn area. This corridor receives the heaviest traffic in the region. The primary highway routes include the Maine Turnpike and US Route 202. The “Back Road” rail line lies within this corridor as well.

Transportation Objectives:

- Improve Rte. 202 between Augusta and Manchester to add capacity, accommodate bicycles.
- Improve intersection safety along Rtes. 202, 9/126.
- Increase alternative modes infrastructure along Rte. 202, including park-and-ride and bicycle travel.

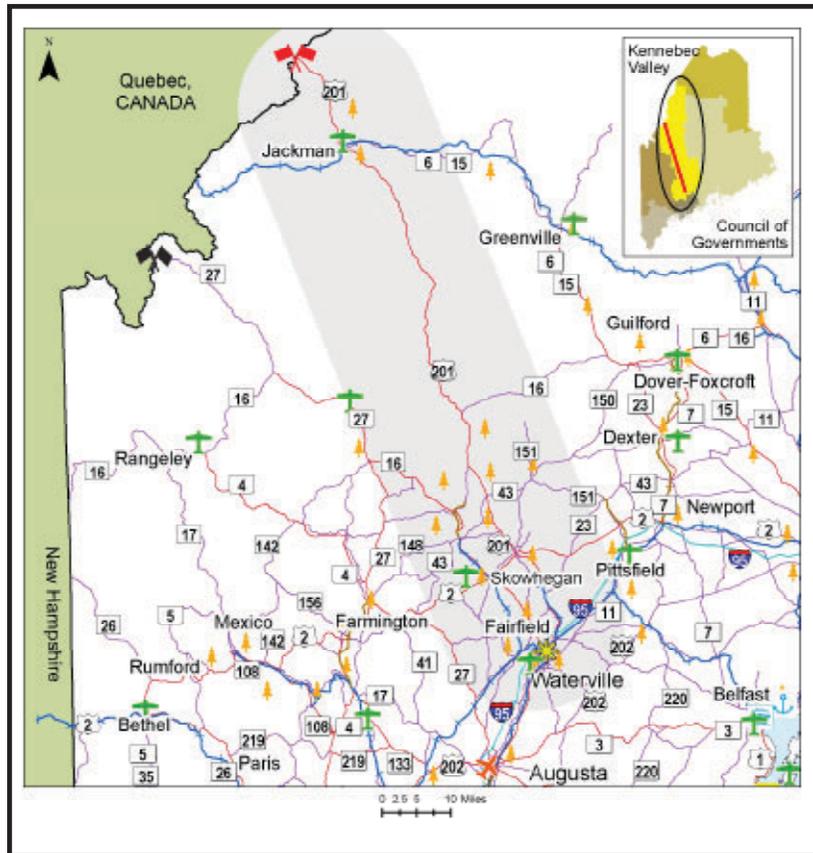
Land Use Objectives:

- Work with towns to better control development and access along state highways.
- Form a Rte. 202 corridor working group to consider growth issues along the corridor and impacts of the Sabattus interchange. (including Androscoggin County).

Economic Development Objectives:

- Improve commuting options, including better access to park-and-ride, and employer programs to stagger work hours, Transportation Demand Management measures.
- Work with communities to minimize strip commercial development along Rtes. 202, 9/126.
- Improve passenger and freight access to Augusta State Airport.

Kennebec Valley Council of Governments
Corridor: Upper Kennebec
Regional Priority Rank: 3



The Upper Kennebec corridor links the Waterville area and I-95 with Canada to the north and southern Maine to the south. It lies entirely within the Kennebec Valley Region. The primary route is US Route 201.

Transportation Objectives:

- Reduce conflicts between heavy freight traffic and recreational traffic in northern segment of the corridor, through Rte. 201 capacity improvements.
- Encourage shifting of freight movements to rail or air within the region.
- Improve travel and support facilities for pedestrian, bicycle and snowmobile travel.
- Expand park-and-ride and ride-sharing opportunities.
- Alleviate congestion within Skowhegan via new capacity (bridge), improved signage, and system management.
- Improve linkages to east-west movements in lower Somerset county and Jackman.
- Improve quality of collector roads for access to rural communities.

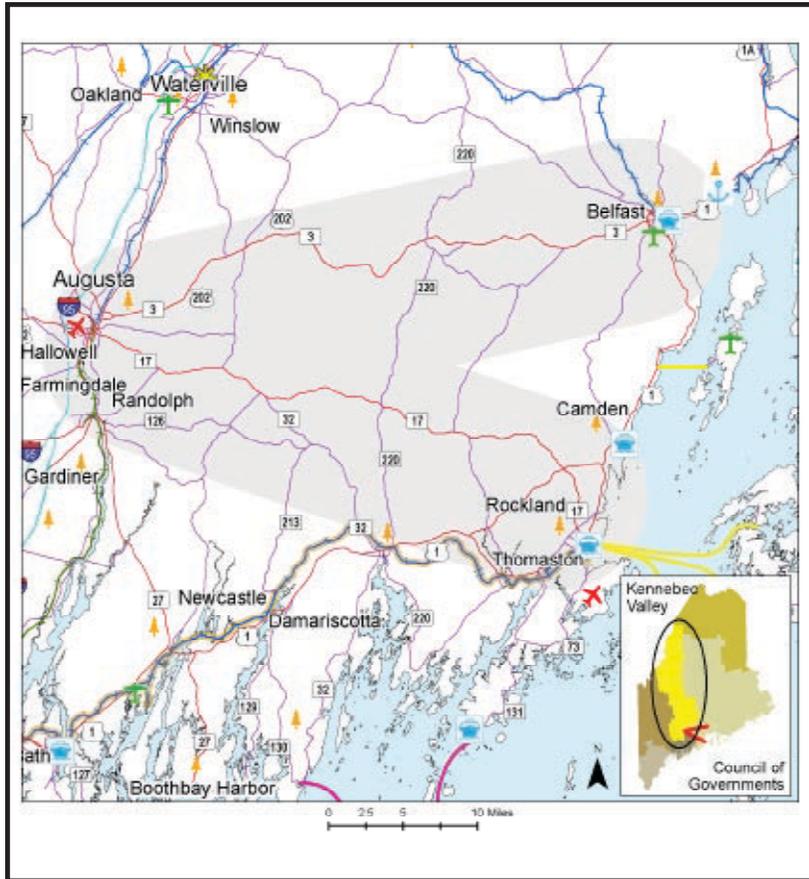
Land Use Objectives:

- Strengthen access management rules and local involvement in roadside development north of Skowhegan: DOT, LURC, and municipal.
- Encourage implementation of local comprehensive plan land use elements.
- Promote implementation of the Old Canada Road Management Plan recommendations for land use.

Economic Development Objectives:

- Encourage growth in the recreation and tourism economy, with adequate facilities for both automotive and car-free experiences.
- Expand and connect the bicycle trail network to support recreational access.
- Provide viable alternative modes for freight movement to support the manufacturing economy in southern Somerset county, including rail and air facilities.
- Improve accessibility to jobs in the service centers and outside of the corridor, through road improvements and commuting facilities.
- Prioritize collector road improvements to emerging business and industrial locations in Skowhegan and Madison.

Kennebec Valley Council of Governments
Corridor: Augusta-Midcoast
Regional Priority Rank: 4



Augusta is the western anchor of this corridor, which encompasses dual routes to the midcoast region. These routes – ME Routes 3 and 17 – connect I-95 at Augusta with Belfast and Rockland. The Augusta “third bridge” is a new element of this corridor, and is changing its characteristics.

Transportation Objectives:

- Make capacity improvements on Rte. 3 to lessen the conflicts between local, recreational, and heavy freight traffic.
- Improve connectivity between Routes 3 and 17 in Augusta.
- Monitor changes in traffic patterns and volumes as a result of the new interchange in Augusta.
- Increase opportunities for commuter options through ride-share and park-and-ride lots.
- Promote bicycle usage along Routes 3 and 17.

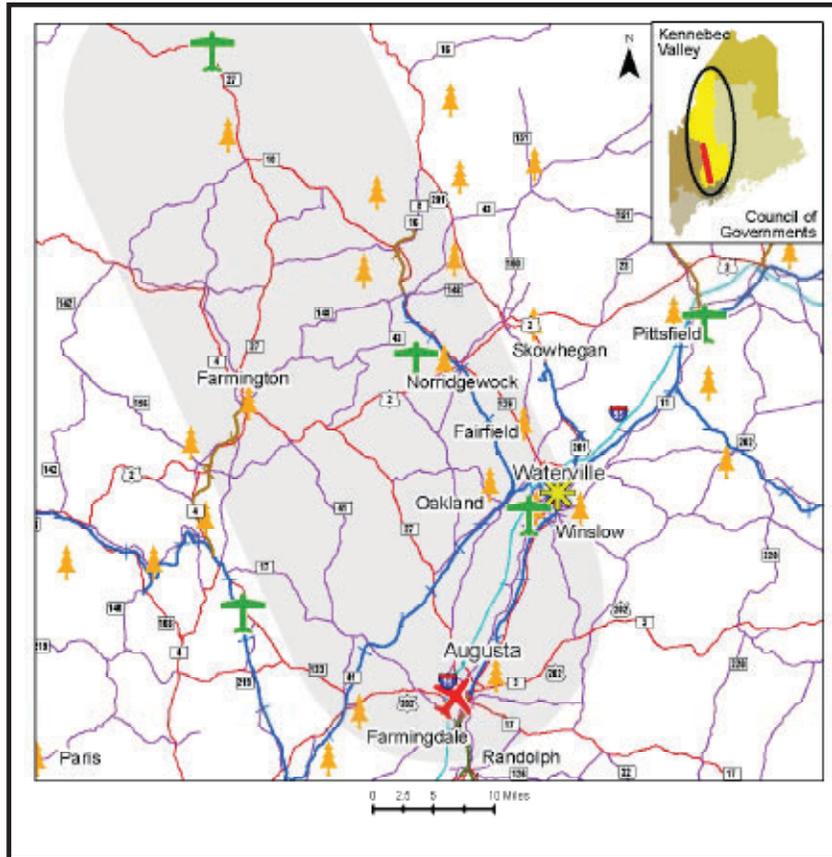
Land Use Objectives:

- Implement strategies of the Route 3 Master Plan.
- Work directly with local governments and landowners on development design and access management along the corridor.
- Improve local and regional communication with eastern (Waldo/Knox counties) portions of the corridor.

Economic Development Objectives:

- Make corridor capacity improvements to alleviate conflicts between recreational and freight traffic.
- Improve commuter options.
- Implement planning for impacts of future commercial development along Route 3 in South China, and Routes 3 and 17 in Augusta.

Kennebec Valley Council of Governments
Corridor: Lakes and Mountains
Regional Priority Rank: 5



This corridor fans out northwest from Augusta, including most of western Kennebec County, accessing Franklin County and the “western mountains.” It connects I-95 and southern population centers with recreation areas in the Belgrade Lakes area and Western Maine. The primary route is ME Route 27, though travel is much more dispersed into collector roads in this corridor than others.

Transportation Objectives:

- Form a public advisory committee or other mechanism for planning to improve vehicular travel through Belgrade Lakes Village.
- Put a high priority on improvements to collector roads that will support heavy trucks as well as increasing commuter travel.
- Use the highest level of environmental standards in road improvements, to protect lake water quality.
- Promote bicycle travel on Route 27 and collector roads with adequate capacity.

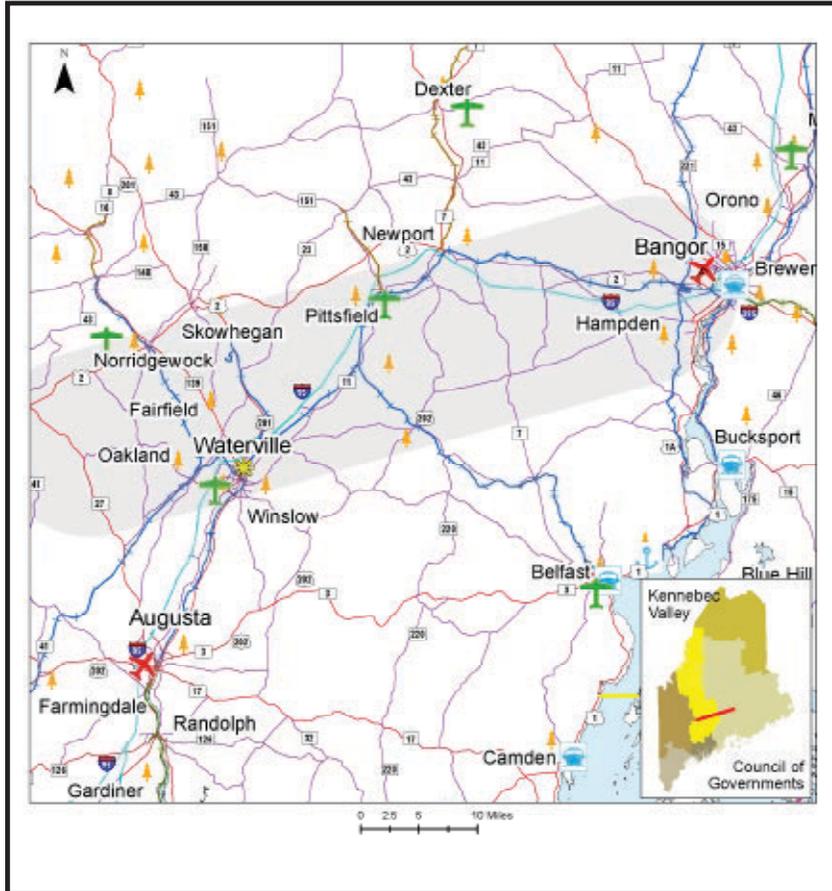
Land Use Objectives:

- Assist towns in implementing local land use plans and limiting access points onto Route 27 and major collectors.
- Work directly with large landowners to assess and influence development planning.

Economic Development Objectives:

- Ensure that collector road and facility improvements are adequate for frequent use by heavy haul trucks.
- Assist in implementing the streetscape plan for traffic calming in Belgrade Lakes Village.

Kennebec Valley Council of Governments
Corridor: East-West
Regional Priority Rank: 6



The East-West Corridor through the region is generally recognized to run through lower Somerset County. Components of this corridor include all of US Route 2 within the region and I-95 from Fairfield towards Bangor. The Montreal, Maine and Atlantic Railroad should also be recognized as an east-west component of this corridor.

Transportation Objectives:

- Reduce congestion and safety conflicts in the Skowhegan and Norridgewock areas.
- Build US Route 2 to arterial standards over its entire length, and include facilities for heavy-haul trucks.
- Begin planning for new highway alignment between I-95 and Route 2 west of Norridgewock.
- Facilitate better coordination of planning in the east-west corridor among affected regions of the state.

Land Use Objectives:

- Manage local growth in proximity to arterials to reduce traffic impacts.
- Improve local access management regulation and limitations on commercial access along Rte. 2.
- Plan for the land use impacts of the second bridge at Skowhegan.

Economic Development Objectives:

- Alleviate congestion and conflict points in the Skowhegan area.
- Provide improved heavy-haul truck infrastructure along Route 2.
- Improve access to rail and air modes for freight movements.
- Improve communications for economic development planning in other regions along the corridor.

Kennebec Valley Council of Governments

Recommended Policy and Planning Initiatives and Capital Investments

The Western Maine Economic Development District is comprised entirely by the Kennebec Valley Council of Governments (KVCOG). KVCOG has identified its regional transportation needs for policy and planning initiatives and capital investments as noted below. They are listed in priority order as determined by the KVCOG based upon the Modified TELUS scoring model provided by MaineDOT.

The following policy and planning initiatives and capital investments were identified by KVCOG as being regionally significant and transcend all of the corridor initiatives.

Region Wide Investments

Policy Initiatives

1. Increase weight limits on Interstate 95 north of the terminus of the Maine Turnpike in Augusta. Working with local, state and federal groups, agencies and the delegation, the region will work to increase the weight limits on Interstate 95 from 80,000 to 100,000 pounds.

Planning Initiatives

None Identified

Capital Investments

None Identified

The following policy and planning initiatives and capital investments are provided in priority order for each of the six *Corridors of Regional Economic Significance for Transportation* that have been defined by the KVCOG.

Priority Corridor No. 1: Lower Kennebec

The Lower Kennebec Corridor extends from Fairfield southward through Waterville, Augusta, and Gardiner. With six of the eight largest communities in the region, and the lion's share of economic activity and development, the chief needs in the corridor are associated with mobility and management. The existing transportation system is well developed for the region, with the region's only passenger air service and public bus system, rail connections and the interstate highway.

Policy Initiatives

1. Expand KVCAP General Transit – Kennebec Valley Community Action Program administers both general transit and demand-response transit services in both the Augusta and Waterville areas. Over the years, opportunities for expansion of routes and ridership have been eschewed, primarily for lack of funding. Expansion of public transit has been recommended by several regional planning studies and reports.

Planning Initiatives

1. Augusta Congestion Mitigation – As a major commuter hub and seat of state government, downtown Augusta has suffered from long-term congestion. Project-oriented planning studies have recommended piecemeal changes to the Cony Circle, Memorial Circle, Western Ave., Water Street and feeder roads. This planning project would integrate

comprehensive improvements with demand management and system management within the urban area.

Capital Investments

1. Route 201 Hallowell to Gardiner Mobility Improvements – Route 201, which is the main artery for Hallowell, Farmingdale and Gardiner, carries over 20,000 AADT. Gardiner and Hallowell downtowns are traditional congestion points, particularly in Gardiner where large trucks are common. Farmingdale, despite the highway being partially reconstructed, has multiple access issues. This project would combine multiple access and intersection improvements with improvements to parallel alternate modes. Individual components of this project have been requested from multiple sources.
2. Rail Corridor Upgrade – The “Lower Road” state-owned trackage extends from Augusta southward along the river. This trackage is still functional but would not support heavy use. A succession of regional reports has recommended the eventual extension of passenger service along this line. This project would provide the necessary improvements to support passenger rail at a future date.
3. Transportation Hub at I-95, Route 3 Interchange – The newly-opened interchange and Cushnoc Crossing bridge north of Augusta provide a prime opportunity for traffic management to serve Route 3 commuters as well as north- and southbound I-95 traffic. At its simplest, a park-and-ride lot could be installed to serve this hub. As Augusta’s bike network and the East Coast Greenway are developed (see #5, below), they could be linked and facilities provided for bike access. It has also been suggested that the rail line passing underneath the bridge’s east side approach poses an opportunity to provide a link to future passenger service if properly oriented. This project is endorsed by Augusta’s comprehensive planning.
4. Link Routes 3 and 17 in East Augusta – Route 17 carries traffic from Augusta to Rockland, but in order to access it over the new bridge from the south and west, traffic must move through Augusta’s east side congestion or take local roads. A new connector would significantly reduce the impacts in these areas. Depending on its alignment, this would consist of approximately 2.5 km of new roadway. This project was identified and preliminary planning done during the engineering phase of the new bridge.
5. East Coast Greenway – The East Coast Greenway Bike Trail identifies the lower Kennebec corridor as part of its “inland branch” through Maine. Development of the Greenway within this corridor can consist of two phases: 1) completion of the partially-constructed Augusta-Gardiner Rail Trail and Messalonskee Multi-use Trail (Waterville Area), and 2) construction of linkage from Gardiner south, from Augusta to Waterville, and from Fairfield east. This project is the combination of several individual bicycle transportation planning efforts.
6. Link Routes 3, 27, and I-95 – The new interchange links Route 3 and I-95, while Exit 112, a mile to the south, links Route 27. This project would extend the Route 3 interchange approximately 500 m westward to intersect Route 27. This would alleviate some existing congestion at Exit 112. This project was suggested and endorsed during the Augusta comprehensive planning process.

7. New I-95 Interchange South of Augusta – A new interchange for I-95/Maine Turnpike has been suggested between Exits 103 and 109. This interchange would be located in either Farmingdale or Hallowell and would change traffic patterns and possibly alleviate congestion along parallel Route 201. This project has been advocated in both the Farmingdale and Hallowell comprehensive planning processes as a means of reducing congestion and opening up areas for development, but MTA has not included this interchange in its 10-Year Plan.
8. New I-95 Interchange in Southern Waterville – A new interchange for I-95 has been suggested for southern Waterville, south of existing Exit 127. An interchange onto one of Waterville’s local roads would open up land for economic development adjacent to or nearby the airport. This project has been discussed and proposed for many years by the city of Waterville.

Priority Corridor No. 2: Augusta Southwest

The Augusta Southwest Corridor is the second-highest priority corridor in the Kennebec Region, and carries the second-highest traffic loads. It is essentially an intercity highway corridor between Augusta and the Lewiston-Auburn area, with arterial Route 202 paralleling the Maine Turnpike. With service centers at either end, much of the development on the corridor consists of suburban residential, and traffic is composed of intercity freight and commuters.

Policy Initiatives:

1. Route 202 Development Controls – The Route 202 corridor towns of Manchester, Winthrop, Monmouth, Leeds and Greene are likely to see accelerated development as a result of improved economic conditions in the L-A and Augusta areas, increased sprawl, and the Sabattus interchange. While much of the towns’ growth will be residential in nature, new development along the highway is more likely to be of the “roadside commerce” variety. It will be important to corridor mobility for towns to be able to manage this form of development. This initiative would help towns to coordinate their development controls with those of their neighbors and the department. ***Manchester, Winthrop, Monmouth, Leeds, Greene***

Planning Initiatives:

None Identified

Capital Investments:

1. Route 202 Widening – Route 202 between western Augusta and Manchester carries some 25,000 AADT and is consistently congested in the morning and evening peak hours. The apparent cause of the congestion is the narrowing of four lanes to two over Pelton Hill. This project consists of a widening with improvements (such as shoulders adequate for bicycle use) and has been engineered and placed in the Work Plan on more than one occasion over the past decade. ***Augusta, Manchester***
2. Park-and-ride Lot at Exit 109 – I-95 Exit 109 of I-95/Maine Turnpike has traditionally been one of the major access points for commuters north- and southbound, and Western Avenue is a major commuter artery. A park-and-ride lot located near this interchange, either on new land or utilizing existing facilities, would alleviate some turnpike traffic. If combined with access to Augusta’s bicycle network and city bus service route, it could also alleviate some traffic on Western Avenue. The Augusta comprehensive planning process evaluated all three I-95 interchanges serving the city and rated this one as the most likely to have good utilization of park-and-ride. ***Augusta***

3. Improvement to Route 135, Monmouth to Wales – As a consequence of construction of the Sabattus interchange onto the Maine Turnpike, Route 135 through Wales and Monmouth is predicted to quadruple in traffic by 2025. This major collector is currently “unbuilt” and several portions are load-restricted during the spring. Improved proximity to the south and large undeveloped blocks of land will stimulate development. This project will improve this road to “built” standard. This project was recommended by a DOT-funded analysis of the impacts of the Sabattus interchange on local transportation and land use in 2003. *Monmouth, Wales*
4. Park-and-ride Lot in Monmouth Area – Route 202 in Monmouth carries heavy commuter flows in both directions. In addition, Route 135 will increase in commuter volume south with increased use of the Sabattus interchange. This unusual confluence of commuter flows suggests utilization of a park-and-ride facility located in the immediate vicinity of the Route 202/135 intersection. A park-and-ride already exists in Winthrop. *Monmouth*

Priority Corridor No. 3: Upper Kennebec

The Upper Kennebec Corridor links Canadian Quebec with I-95 at Fairfield, carrying Canadian commerce and tourists as well as being the economic lifeline to economically stagnant Somerset County. Route 201 is the principal transportation means throughout the corridor; Skowhegan is the only commercial center.

Policy Initiatives:

1. Route 201 Access Management – Although it is a NHS arterial, Route 201 north of Skowhegan is not a mobility arterial under the department’s Access Management Rules. This is not an issue south of Bingham, but unregulated roadside development, primarily linked to recreation, is beginning to accelerate along the Old Canada Road. The Scenic Byway management has identified this as a threat to the byway, but local towns have no regulatory capacity to limit development. Extending a higher classification under Access Management Rules makes sense both from a system management perspective and as a land use tool. *Fairfield, Skowhegan, Madison, Solon, Bingham, Moscow, Caratunk, Jackman, unorganized territory*
2. Snowmobile/ATV Enhancements – The recreational use of snowmobiles and ATVs in the corridor has mushroomed and become a major economic development catalyst. Although there is an extensive off-road network for these vehicles, they share highway space in many critical locations. Perhaps most critical is on bridges. Conflicts between snowmobiles and autos/trucks are becoming more common and creating safety issues. This activity would examine design standards for bridges and trail crossings to reduce the potential for conflicts. This has been included at the request of the Somerset Economic Development Corp. *Corridor-wide*

Planning Initiatives:

1. Corridor-Length Bicycle Trail – A long-distance bicycle trail, utilizing both offroad and on-road alignment, would serve as an alternative to motor vehicle travel for both transportation and recreation use. A new trail would connect the planned East Coast Greenway in Fairfield with the existing Bingham-to-Solon multi-use trail and extend along the Old Canada Road. The town of Skowhegan, which would be served by this trail, has submitted BTIP requests for planning a complementary bike network within the town. ***Fairfield, Skowhegan, Madison, Solon, Bingham, Moscow, Caratunk, Jackman, unorganized territory***

Capital Investments:

1. Route 201 Truck Lanes – Past studies have demonstrated that one of the principal threats to safety and mobility in the upper Route 201 segment is the conflict between heavy freight and recreational traffic. One aspect of this conflict is the differential driving behavior on hilly, winding portions of the highway. This project would target additional road segments between Bingham and the Canadian border for installation of climbing/passing lanes. Addition of these lanes was recommended in a MaineDOT-funded Route 201 Corridor Study (1991), the Old Canada Road Scenic Byway Management Plan (1999) and subsequent regional plans. ***Bingham, Moscow, West Forks, unorganized territory***
2. Skowhegan Second Bridge – The addition of a second Kennebec River bridge in the Skowhegan area has been proposed as a means of increasing corridor mobility and reducing congestion through Skowhegan. Planning studies for an alignment are currently well advanced, with considerable advocacy from the town of Skowhegan. This project includes both the bridge and new linkages to Route 201 north and south of Skowhegan. ***Skowhegan, Madison***
3. Route 201, Jackman Traffic Calming – Route 201 bisects Jackman and, due to alignment and road design, does not encourage traffic to slow down to appropriate in-town speeds. The addition of landscaping, bumpouts, and other traffic calming devices in the urban area would enhance traffic and pedestrian safety and promote commerce in the downtown area. This project has been suggested by the Old Canada Road Management Plan and the Jackman Comprehensive Plan. ***Jackman***
4. Jackman Visitor Center – Although the Route 201 border crossing is 12 miles to the north, Jackman is the first major town encountered by Canadian tourists and the northern gateway to the Old Canada Road. A visitor's center in Jackman would serve as an entry point and an interpretive center for the byway. A location in downtown Jackman would enhance local commerce. Planning for this project is already underway, and it has been endorsed by Jackman's Comprehensive Plan. ***Jackman***
5. Route 6/15 Reconstruction – Route 6/15 extends from Jackman to Moosehead Lake at Rockwood. Its primary economic use is movement of logs and other resource products, with a smaller component of recreational use. It has been proposed for consideration as a scenic byway. This project would bring the road up to a "built" standard to eliminate spring weight restrictions on heavy hauls. ***Jackman, Rockwood, unorganized territory***
6. Park-and-ride Lot at I-95/Route 201 Interchange – Exit 133 from I-95 provides access to the majority of Somerset County commercial traffic. Due to high unemployment in Somerset County, an increasing number of residents are commuters from Fairfield, working to the south. A park-and-ride at the Exit 133 interchange would serve Skowhegan and smaller towns who wish to carpool to Augusta or Bangor. With additional planning, it could also connect with a bike network being planned for the Waterville area. ***Fairfield***

7. Route 43 Reconstruction – The segment of Route 43 in Madison connects Route 201 with downtown Madison. It is not a heavy-haul truck route because it is posted seasonally. It carries primarily farm and forest products, including produce from a major new greenhouse operation. This project would improve the road to a “built” standard. This project was added to the list on recommendation of the Madison selectmen. *Madison*
8. Route 16 Truck Escape Ramp – Route 16 immediately to the east of its intersection with Route 201 in Bingham comes off of a long, moderate grade. On multiple occasions in recent years, heavy trucks have failed to negotiate the grade, resulting in serious crashes. The Bingham selectmen have requested that the department consider installation of an escape ramp for the use of trucks in emergency situations. *Bingham, Moscow*

Priority Corridor No. 4: Augusta-Midcoast

The corridor between Augusta and the mid-coast region consists of multiple highways radiating out from Augusta easterly. Highway travel is currently the exclusive mode. As the mid-coast develops, however, the Augusta State Airport could become attractive as the most accessible for passenger service.

Policy Initiatives:

1. Route 3 Development Controls – Route 3 is a mobility corridor, carrying AADT of 10-12,000 in the rural segment east of Augusta, and significant increases are anticipated partly due to the new bridge in Augusta. The highway and adjacent lands will become increasingly attractive for commercial and subdivision development. The Route 3 Corridor Plan described several strategies for municipal/DOT cooperation in managing development along the road. This project would support Augusta, Vassalboro, and China in creating improved development controls, as recommended in the plan. *Augusta, Vassalboro, China*

Planning Initiatives:

1. Bicycle Network in Augusta – The city of Augusta is seeking to expand its bicycle network on the east side, to connect park areas, government buildings, the new Cony High School, and other destinations. Planning for this project should seek to alleviate congestion in the Augusta urban area, increase alternatives and access within Augusta, and connect to long-distance bike trails. Elements of a city-wide bicycle network have been recommended in several city planning documents and submitted as BTIP project requests. *Augusta*
2. Improve Connectivity to Augusta State Airport – The airport could play a significant role in the economic development of this corridor, with the most accessible passenger service and freight service. However, it is located on the western side of Augusta. This planning activity would examine alternative routes for getting corridor traffic to the airport and support the preferred alternative with routing improvements. *Augusta*

Capital Investments:

1. Route 3 Traffic Flow Improvements in China – Route 3 is a principal arterial linking Augusta with the Belfast/Searsport area. Where it passes through China, it intersects Route 202 and Route 32 and separates South China village from south China and the local high school, creating significant cross-traffic. This project would consist of several, relatively minor roadway intersection improvements recommended by the Route 3 Corridor Master Plan (2003) and endorsed by China’s comprehensive planning. *China*
2. Link Routes 3 and 17 in East Augusta – This project is the same as that listed for the Lower Kennebec Corridor. Its role in the Augusta-Midcoast Corridor would be to connect the primary highway elements east of the Augusta urban area, to alleviate in-town congestion and increase utilization of the new Route 3 bridge. *Augusta*

3. Park-and-ride Lot in South China – The eastern Kennebec/western Waldo County areas are gaining importance as part of the commuter shed for Augusta and other urban centers. Traffic on Route 3 has been growing at about 3 percent per year. The intersection of Route 3 with Route 202 in South China sees a large increase in traffic headed west. A park-and-ride lot at or near this point in the future could be warranted. This project was suggested by the China Comprehensive planning process. *China*

Priority Corridor No. 5: Lakes and Mountains

The Lakes and Mountains Corridor is situated to the west of Augusta and Waterville. It is not associated with a specific highway, because it consists more of a network of interconnected roads serving a dispersed population.

Policy Initiatives:

1. Collector Road backlog – This corridor is criss-crossed with major and minor collector roads, forming an economic network which carries basic commerce, commuters and raw materials. These roads are almost entirely unbuilt, and several are posted in spring. Individually, none of them rise to a priority, but together they serve a crucial economic niche. The policy issue provides a means to improve this network of roads without waiting for each one to be improved in its turn. *Corridor-wide*

Planning Initiatives:

None Identified

Capital Investments:

1. Belgrade lakes Village Congestion Mitigation – Belgrade Lakes Village is a historical tourist mecca as well as a long-time bottleneck and congestion point on Route 27, a mobility corridor. Route 27 carries in excess of 6,000 AADT, with a significant proportion of heavy trucks, through a pedestrian-oriented village. This project would make several improvements within the existing alignment to alleviate congestion and improve pedestrian safety. This project has been endorsed by RTAC reports and Belgrade’s comprehensive plan. *Belgrade*
2. Route 27 (Mt. Vernon Ave.) Augusta Capacity Improvements – Mt. Vernon Ave. in Augusta is a high-traffic, constrained area, impeding development and traffic safety along the link between the downtown and its most rapidly-developing area. The city of Augusta has developed plans and proposed changes to the configuration of the road through this neighborhood. *Augusta*

Priority Corridor No. 6: East-West Somerset

The existing east-to-west flow of traffic through Somerset County gained prominence through the East-West Corridor Study and gubernatorial recommendations for upgrading portions of the route. I-95 provides the principal flow in the eastern half of the county, while Routes 2 and 139 pick up the flow to the west and the MMA rail line through Jackman provides a rail alternative. Skowhegan is the principal urban center and congestion point. Capital improvement priorities will be affected by executive decisions regarding the “east-west highway.”

Policy Initiatives:

1. Equalize Truck Weight Limits – This is a high priority item region-wide, included in this corridor because I-95 parallels Route 2. “Equalize weight limits” refers to an existing policy limiting truck weights on interstate highways to a different extent than state highways, forcing truck commerce to make artificial routing decisions to the detriment of road quality and safety. The new policy has been advocated by all regional transportation reports over the past several years. **Corridor-wide**

Planning Initiatives:

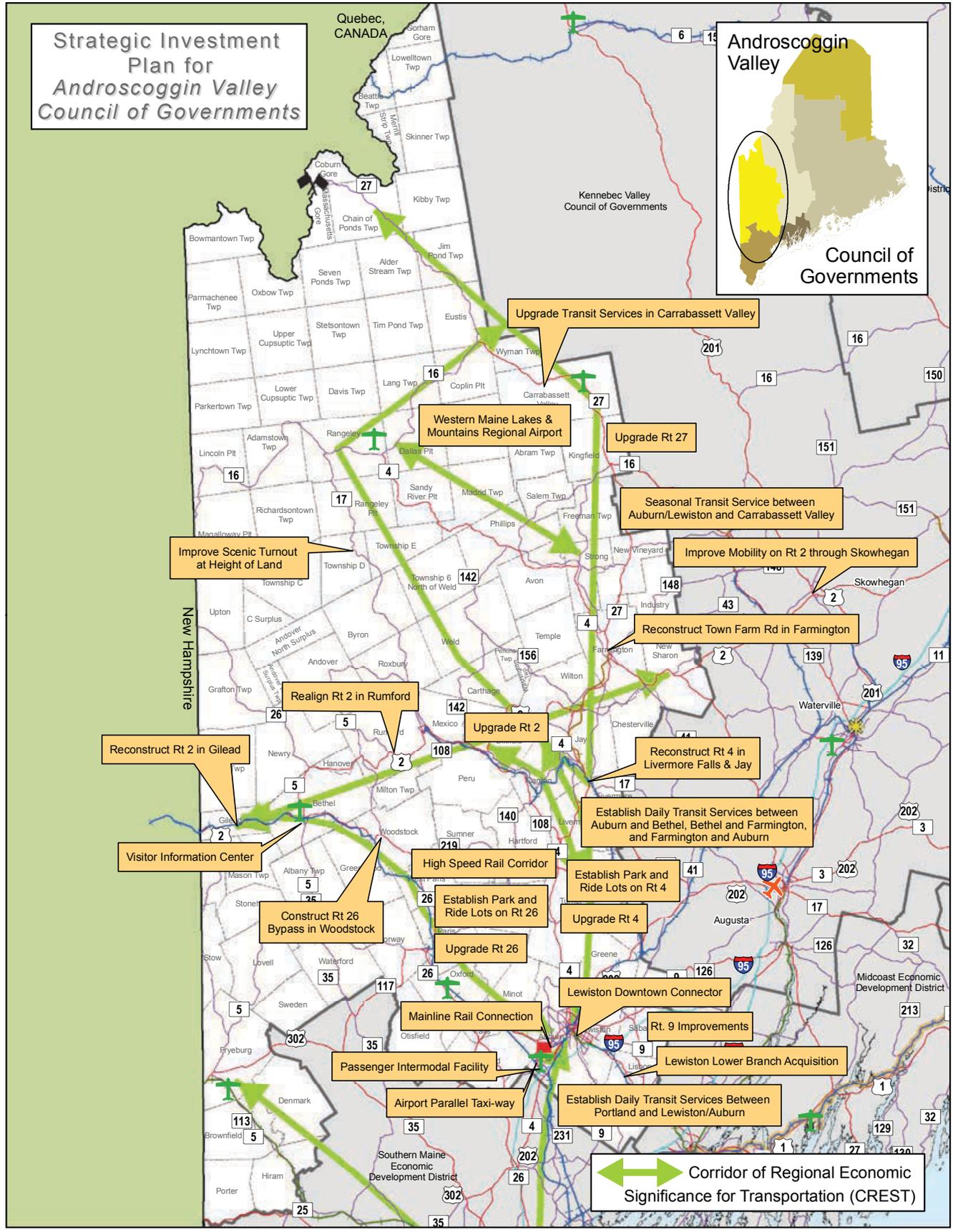
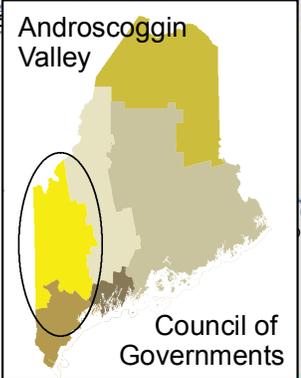
None Identified

Capital Investments:

1. Route 2, Skowhegan to Canaan – Existing Route 2 is a mobility corridor. Portions of the highway route are experiencing structural failure and should be reconstructed. In addition, a number of hill sections have been identified as candidates for slow vehicle climbing lanes to improve overall flow. This project has been recommended by various regional plans and reports, the Route 2 Corridor Committee, and the Town of Skowhegan. **Skowhegan, Canaan**
2. New East-West Alignment – An alignment to be determined roughly between Pittsfield and Norridgewock was proposed by the “east-west highway initiative”. Such a project would create 30 km or more of new arterial highway roughly parallel to existing Route 2. **Corridor-wide**
3. Route 2: Improvements for Heavy Haul Traffic – Route 2 through Somerset County carries a significant volume of heavy trucks in both local and interstate commerce. It is part of the heavy haul network. The Route 2 corridor committee has identified improvements to support heavy haul trucks, including a redesign of the rest area at Pittsfield, construction of a new rest area west of Skowhegan, and congestion improvements in Skowhegan. **Pittsfield, Skowhegan, Norridgewock**
4. Skowhegan Second Bridge – This is the same project identified for the Upper Kennebec Corridor. It is prioritized here for its ability to link east-west traffic flows to bypass Skowhegan and improve mobility. **Skowhegan**
5. Skowhegan Route 201/2 Bypass – The second bridge approach would intersect Route 201 south of Skowhegan, leaving still a portion of congested urban area to traverse to the west. This project contemplates a new alignment linking the approach as designed directly with Route 2 west of town. This could consist of 3 km or more of new roadway, depending on design. The need for this project would be greatly reduced if Item #2, above, is built. **Skowhegan, Norridgewock**

**Androscoggin Valley
Council of Governments**

Strategic Investment Plan for Androscoggin Valley Council of Governments

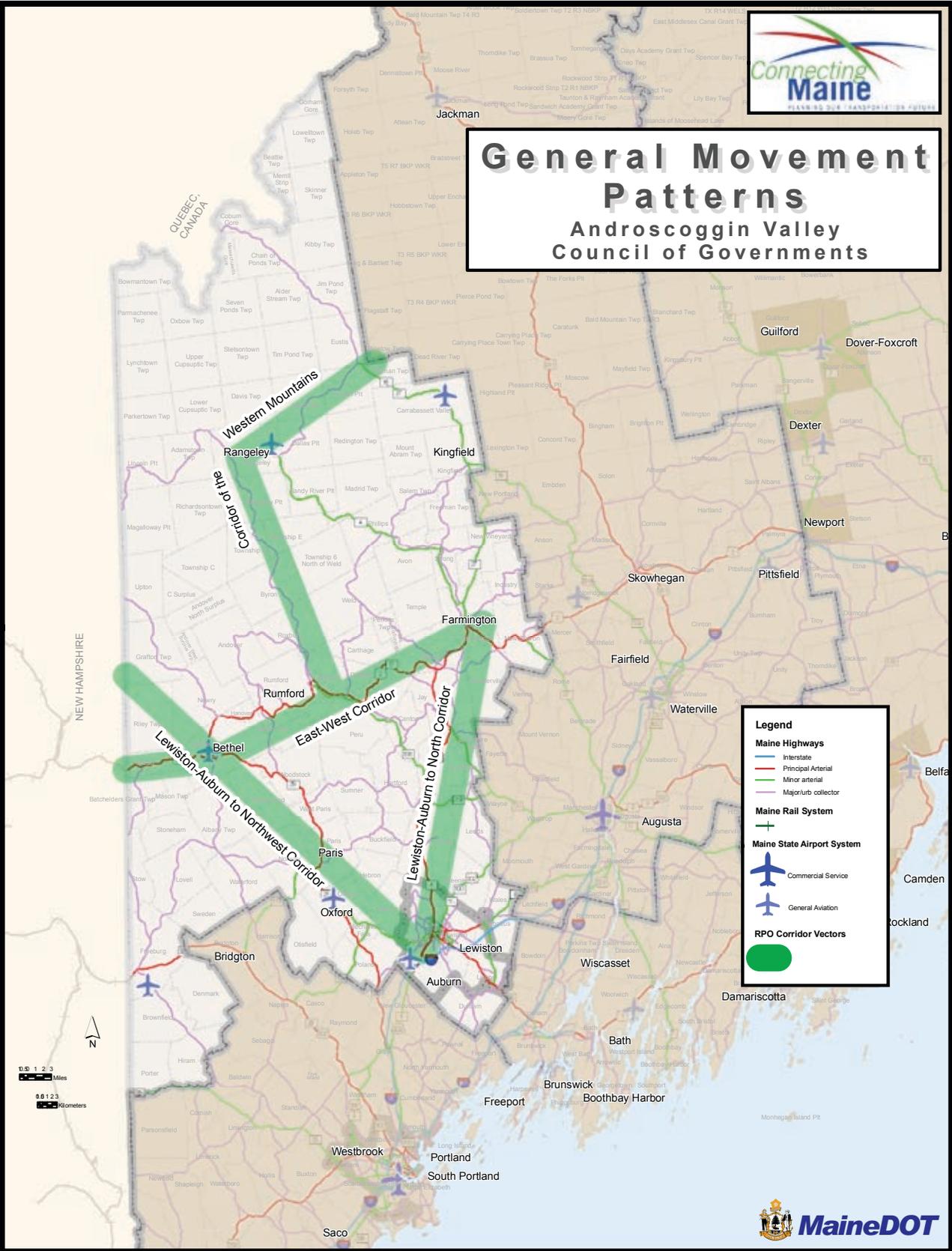


Corridor of Regional Economic Significance for Transportation (CREST)



General Movement Patterns

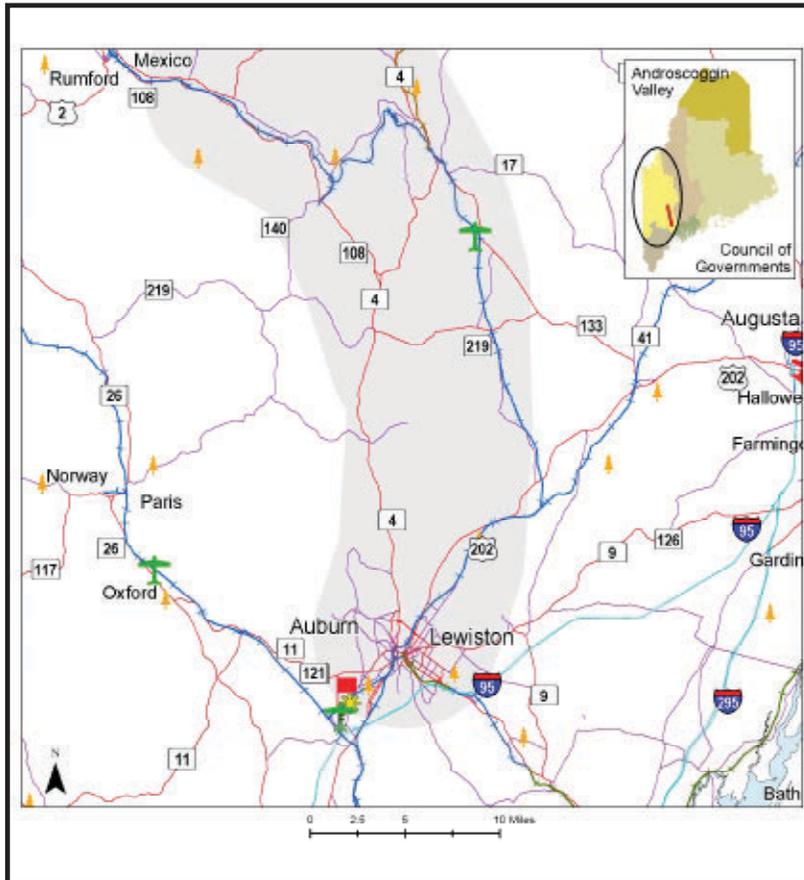
Androscoggin Valley Council of Governments



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Androscoggin Valley Council of Governments
Corridor: Lewiston-Auburn North
Regional Priority Rank: 1



Description: Connects greater Lewiston-Auburn area to the East-West Transportation Corridor. Primary transportation components are Rts. 4, 108, 202, Maine Turnpike, Guilford Rail System, *citylink* fixed-route bus service in Lewiston and Auburn, paratransit services and Vermont Transit's intercity bus service.

Transportation Objectives

- Eliminate rural arterial backlog in 10 years, major collector backlog in 20 years.
- Continue safety improvements on Rt. 4 (between Auburn and Livermore Falls) and consider safety improvements on Rt. 2/4 in Farmington.
- Expand daily transit services between Lewiston-Auburn and Farmington.
- Establish Park & Ride lots along Rt. 4, between Auburn and Farmington.
- Establish local fixed-route or para-transit services between Farmington, Wilton, Jay, Livermore Falls and Livermore.

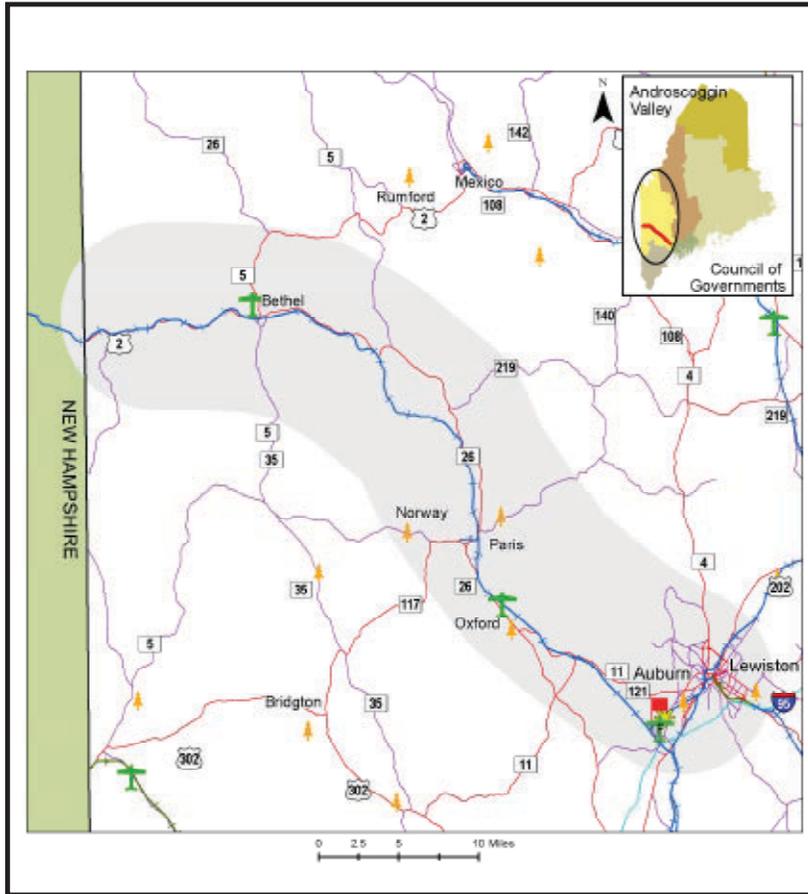
Land Use Objectives

- Context-sensitive design on highway reconstruction projects through villages and downtowns.
- Technical assistance for towns to develop access management plans for urban compact areas.
- Amend Traffic Movement Permit rules to apply to private roads to ensure corridor safety and mobility.
- Develop corridor access management concept designs.
- Educate local officials on access management.
- Develop consolidated access plans for contiguous parcels.
- Develop and institute design standards that ensure multimodal options and connectivity to existing systems.
- Encourage capacity preservation.
- Establish service roads and expanded rights-of-way for service roads.
- Identify opportunities for driveway/entrance consolidation. Acquire land where growth and corridor mobility conflict.

Economic Objectives

- Balance downtown economic development goals with heavy truck through traffic.
- Invest in portions of trail systems that will help facilitate recreational tourism.
- Evaluate transportation capacity to meet the needs of traditional industries, such as pulp, paper, wood products.
- Identify economic development initiatives (e.g. foreign trade zones, technology parks, etc.) and prioritize transportation system improvements to support them.

Androscoggin Valley Council of Governments
Corridor: Lewiston-Auburn Northwest
Regional Priority Rank: 2



Description: Connects greater Portland area and Lewiston/Auburn area with communities along the New Hampshire border. Corridor includes Rt. 11 west of Auburn, Rts. 26 and 121, the St. Lawrence & Atlantic/Genesee & Wyoming Railroad, paratransit services and the seasonal *Mountain Explorer* bus service between Bethel and Newry.

Transportation Objectives

- Eliminate rural arterial backlog in 10 years, major collector backlog in 20 years.
- Reconstruct the Gilead section of Rt. 2.
- Consider a new turnpike interchange in Poland.
- Implement the High-Speed Rail Corridor designation.
- Establish passenger intermodal facility in Auburn.
- Consider passenger intermodal facility in South Paris.
- Provide passenger rail service to Montreal, with stops in Auburn, South Paris and Bethel.
- Expand daily transit services between Lewiston-Auburn and Bethel, via the Oxford Hills area.
- Consider daily transit services between Rumford-Mexico and Lewiston-Auburn.
- Increase frequency and length of seasonal operation of *Mountain Explorer*; to serve Mount Abram Ski Area and Oxford Hills area.
- Establish Park & Ride lots along Rt. 26, north of Gray.

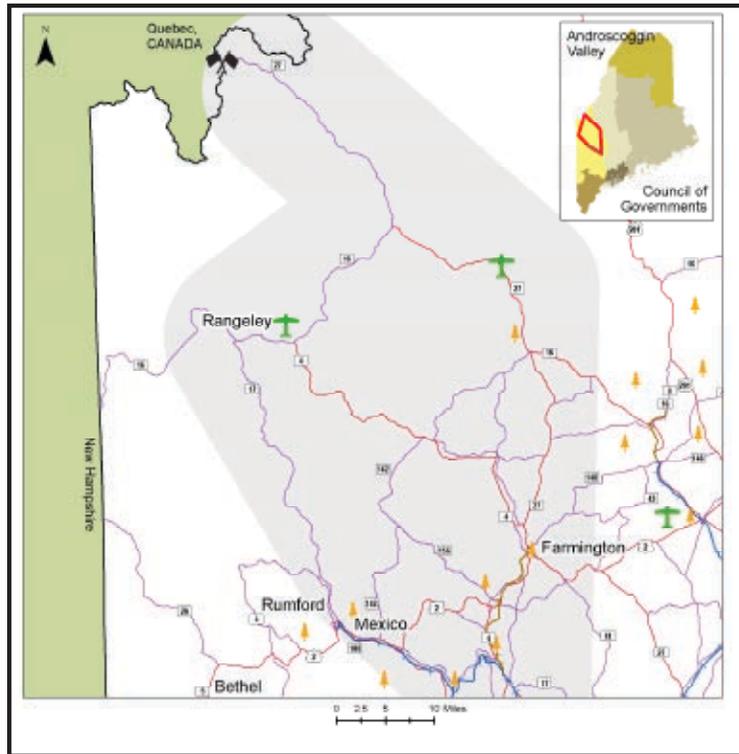
Land Use Objectives

- Utilize context-sensitive design on projects through villages and downtowns.
- Develop corridor access management concept designs.
- Educate local officials on access management.
- Develop consolidated access plans for contiguous parcels.
- Develop design standards that ensure multimodal options and connectivity.
- Encourage capacity preservation.
- Identify opportunities for driveway/entrance consolidation. Acquire land where growth and corridor mobility conflict.

Economic Objectives

- Balance downtown development goals with heavy truck through traffic.
- Invest in portions of trail systems that will help facilitate recreational tourism.
- Evaluate transportation systems capacity to meet the needs of traditional industries.
- Identify economic development initiatives and prioritize transportation system improvements to support them.

Androscoggin Valley Council of Governments
Corridor: Western Mountains
Regional Priority Rank: 3



Description: Connects the service centers of Bethel, Rumford and Farmington to the tourist destinations of Carrabassett Valley, Newry and Rangeley. Includes Rt. 4 (west of Farmington), Rt. 16, Rt. 17 (north of Rumford, Rt. 26 (west of Bethel) and Rt. 27 (north of Farmington). The Appalachian Trail traverses this corridor and crosses Rtes. 26, 17, 4 and 27. This corridor is connected to the rest of the region and the state by the East-West Transportation Corridor and includes paratransit services and the seasonal *Mountain Explorer* bus service between Bethel and Newry.

Transportation Objectives

- Eliminate rural arterial backlog in 10 years, major collector backlog in 20 years.
- Employ ITS and other strategies to reduce moose crashes.
- Provide daily transit services between Farmington and Carrabassett Valley with connections to daily transit services between Farmington and Auburn/Lewiston.
- Consider winter seasonal shuttle services in Rangeley.
- Expand *Mountain Explorer* service, increase trips, extend season, increase routes to Mount Abram Ski area, Rumford-Mexico, the Oxford Hills area and Gorham, NH.
- Support development of the Western Maine Lakes and Mountains Region airport.

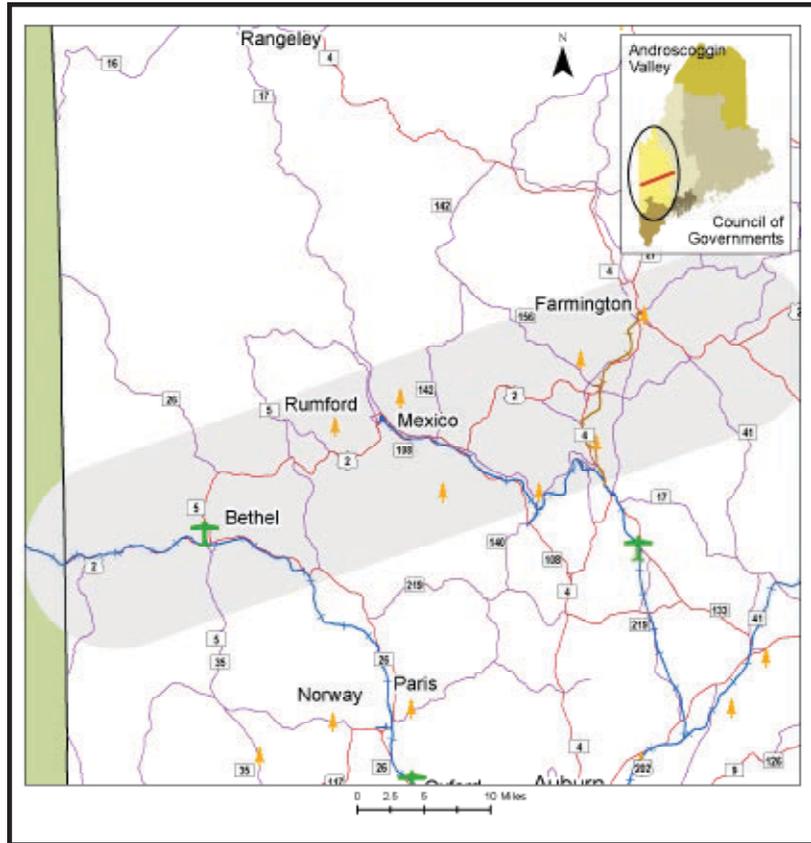
Land Use Objectives

- Use context-sensitive design on projects through villages and downtowns.
- Adopt municipal local access management standards.
- Develop corridor access management concept designs.
- Educate local officials on access management standards.
- Develop consolidated access plans for contiguous parcels.
- Develop design standards with multimodal options and connectivity.
- Encourage capacity preservation.
- Identify opportunities for driveway/entrance consolidation.
- Acquire land where growth and corridor mobility conflict.

Economic Objectives

- Balance downtown economic development goals with heavy truck through traffic.
- Balance the older byways and new program guidelines.
- Invest in portions of trail systems that will help facilitate recreational tourism.
- Support enhancements along the scenic byways that promote tourism.
- Evaluate transportation systems capacity to meet the needs of traditional industries.
- Identify economic development initiatives and prioritize transportation system improvements needed to support these ventures.

**Androscoggin Valley Council of Governments
Corridor: East-West Transportation Corridor
Regional Priority Rank: 4**



Description: This corridor is located in the heart of Western Maine and provides east-west mobility along U.S. Rte. 2, from New Hampshire to Somerset County. Paratransit services are available in this corridor. The East-West Transportation Corridor defined in this report is not intended to be an “east-west highway”. Rather, it is descriptive of the prevailing east-west movement of people, goods and products along the existing transportation network.

Transportation Objectives

- Improve, preserve and enhance the highway and bridge network by eliminating the rural arterial backlog in 10 years and the major collector backlog in 20 years.
- Reconstruct the Gilead section of Rt. 2.
- Consider daily transit services along Rt. 2, between Farmington and Bethel.

Land Use Objectives

- Develop consistent and effective access management plans for urban compact zones.
- Include context-sensitive design on projects through villages and downtowns.
- Develop corridor access management concept designs.
- Educate local officials about access management standards.
- Develop consolidated access plans to minimize corridor impacts.
- Develop and institute design standards that ensure multimodal options and connectivity to existing systems.
- Encourage capacity preservation.
- Identify opportunities for driveway/entrance consolidation.
- Acquire land where growth and corridor mobility conflict.

Economic Objectives

- Balance downtown economic development goals with heavy truck through traffic.
- Invest in portions of trail systems that are likely to help facilitate recreational tourism.
- Evaluate transportation systems capacity to meet the needs of traditional industries, such as pulp, paper, wood products.
- Identify economic development initiatives (e.g. foreign trade zones, technology parks, etc.) and prioritize transportation system improvements needed to support these ventures.

Androscoggin Valley Council of Governments

Recommended Policy and Planning Initiatives and Capital Investments

The Androscoggin Valley Council of Governments is comprised of one regional council and one metropolitan planning organization. The Regional Council is the Androscoggin Valley Council of Governments (AVCOG), and the Metropolitan Planning Organization is the Androscoggin Transportation Resource Center (ATRC). Regional transportation needs for policy and planning initiatives and capital investments are as noted below. They are listed in priority order as determined by the regional council based on the Modified TELUS scoring model provided by MaineDOT.

The following initiatives and investments were identified as being regionally significant and transcend all of the corridor-specific initiatives.

Region Wide Investments

Policy Initiatives

1. Increase weight limits on Interstate 95 north of the terminus of the Maine Turnpike in Augusta. Working with local, state and federal groups, agencies, and the delegation, the region will work to increase the weight limits on Interstate 95 from 80,000 to 100,000 pounds.

Planning Initiatives

None Identified

Capital Investments

1. Downtown Connector to Maine Turnpike - Serves as a regional connector and coastal connector, provides for north/south movement around Auburn and Lewiston. This is the highest priority noted in ATRC's (Metropolitan Planning Area) Long-Range Plan.
2. Reconstruct Route 9 in Lisbon and Sabattus – This road serves as a critical link between Maine Turnpike Exit 86 and the eastern portion of the region. A letter of commitment was issued by previous MaineDOT Commissioner John Melrose to complete reconstruction of this arterial highway in PIN 10017. Addresses statewide or regional priorities including a 1999 legislative mandate to eliminate the arterial backlog in 10 years, and is a high priority project for ATRC.
3. Passenger Intermodal Facility (Kittyhawk Avenue, Auburn) - Increases passenger opportunities for connections between *citylink* (Lewiston-Auburn's intercity transit service), passenger rail service and the Auburn-Lewiston Municipal Airport in the vicinity of the Maine Turnpike. Addresses statewide or regional priorities including RTAC 7's 2002 *Regional Advisory Report* ("development of passenger rail use, including connections to public transit system"), ATRC's Long-Range Plan, and *Executive Order 22 FY 06/07 – An Order to Strengthen the Community and Economic Impact of Amtrak's Downeaster Service*, and to advance plans for passenger rail service north of Portland.
4. Establish daily transit services between Portland and Lewiston/Auburn - New residential growth in Western Maine is causing an increase in the number of commuters traveling between Portland and Lewiston/Auburn. Addresses statewide or regional policies including greenhouse gas emissions and smart growth.
5. Establish rail connection between the Portland train station and Yarmouth Junction - This connection will extend passenger rail along the St. Lawrence & Atlantic Railroad to Auburn and Montreal. A High-Speed Rail designation has been extended to Auburn, so this is a critical investment which supports the proposed Auburn Passenger Intermodal Facility and international passenger rail efforts. Supports statewide or regional policies including

- the RTAC 7 2002 *Regional Advisory Report* (“development of freight rail use” and “development of passenger rail use”), *Executive Order 22 FY 06/07 – An Order to Strengthen the Community and Economic Impact of Amtrak’s Downeaster Service*, and to advance plans for passenger rail service north of Portland.
6. Extend Designation of High-Speed Rail Corridor north of Auburn - In order to reduce both vehicle miles traveled and truck traffic on the region’s highways we need to have a rail line that is constructed to a standard which meets international weight limits. This designation allows for establishment of high-speed freight rail service and high-speed passenger rail service between Portland and Montreal. The SL&A rail line between Portland and Auburn is currently designated a highspeed rail corridor. Addresses statewide or regional policies including reducing vehicle miles traveled and truck traffic on highways, increasing modal choices for freight and passenger movement, RTAC 7’s 2002 *Regional Advisory Report* (“development of freight rail use” and “development of passenger rail use”), ATRC’s Long Range Plan, MaineDOT’s request to the Maine congressional delegation on March 18, 2003 for assistance in extending the high-speed rail designation on the St. Lawrence & Atlantic Line from Auburn to the Canadian border, *Executive Order 22 FY 06/07 – An Order to Strengthen the Community and Economic Impact of Amtrak’s Downeaster Service*, and to advance plans for passenger rail service north of Portland.
 7. Establish rail connection in Auburn, between St. Lawrence & Atlantic Railroad and Lewiston Auburn Railroad - The project involves laying one mile of track to connect the St. Lawrence and Atlantic Railroad to the Lewiston Auburn Railroad. This connection is necessary to avoid current and future operational conflicts and to accommodate the growth of the Port of Auburn and the Foreign Trade Zone. This project is essential to the improvement of the existing Freight Intermodal Facility in Auburn and to the eventual passenger rail service. Addresses statewide or regional policies including ATRC’s Long Range Plan, *Executive Order 22 FY 06/07 – An Order to Strengthen the Community and Economic Impact of Amtrak’s Downeaster Service*, and to advance plans for passenger rail service north of Portland.
 8. Lewiston Lower Branch Acquisition - The Lewiston Lower Branch runs between Brunswick and Lewiston. In 1992, MaineDOT purchased the track between Brunswick and Lisbon Falls. The former owner reserved the freight rights but has not provided service to potential customers. In 1998, MaineDOT announced it would devote \$6 million of a state bond issue to purchase the segment still owned by the owner and restart operation of the rail line from Brunswick to Lewiston. Due to unforeseen circumstances, the bond funds were obligated to another project and the remaining rail line was not acquired by MaineDOT. The Lewiston Lower Road creates a critical east-west link between the St. Lawrence & Atlantic and Guilford rail lines. Addresses statewide or regional priorities including RTAC 7’s 2002 *Regional Advisory Report* (“development of freight rail use” and “development of passenger rail use” – pg 3), ATRC’s Long-Range Plan, *Executive Order 22 FY 06/07 – An Order to Strengthen the Community and Economic Impact of Amtrak’s Downeaster Service*, and to advance plans for passenger rail service north of Portland.

The following policy and planning initiatives and capital investments are provided in priority order for each of the four *Corridors of Regional Economic Significance for Transportation* that have been defined by the AVCOG.

Priority Corridor No. 1: Lewiston/Auburn to the North

Policy Initiatives

None Identified

Planning Initiatives

1. Establish New Daily Transit Services between Rumford/Mexico and Lewiston/Auburn - Provide transit options for commuters, students and medical patients between these service centers. Addresses statewide and regional policies regarding greenhouse gas emissions and smart growth.

Capital Needs

1. Reconstruct Town Farm Road in Farmington to accommodate heavy truck traffic. This road serves as a bypass of downtown Farmington and the University of Maine Farmington campus and would be an ideal truck route if reconstructed to higher functional classification standards. Poland Spring Bottling Company has expressed an interest in using Town Farm Road, rather than traveling through downtown Farmington, to reach its proposed bottling facility in Kingfield.
2. Establish new daily transit services between Rumford-Mexico and Lewiston-Auburn.
3. Establish new daily transit services between Farmington and Lewiston-Auburn.
4. Establish seasonal transit services between Carrabassett Valley and Lewiston-Auburn. This service would connect to passenger rail in Auburn, to the Auburn Passenger Intermodal Facility and the Town of Carrabassett Valley's public transit system. Currently, this seasonal transit system is operated by Sugarloaf USA, with financial support from the Town of Carrabassett Valley. A 2006 feasibility study recommends that this service be transformed into a seasonal, public transit service. Commuter potential exists to Eustis, Farmington and Kingfield. Addresses statewide or regional policies including *Explore Maine*, greenhouse gas emissions and smart growth, and was originally identified for funding in 2006-2008, but was deferred due to insufficient funding.
5. Reconstruct Rte. 4 between Bridge Street in Livermore Falls and Riley Road in Jay - This arterial highway reconstruction project (PIN 10018 and PIN 26826) has been engineered by MaineDOT but construction continues to be delayed. This project is essential to the vitality of Rte. 4 because of the project area's proximity to a major employer (i.e., the Verso Paper Corporation mill) and the fact that Rte. 4 is a commuter route for students and workers. The condition of utilities in the right-of-way are extremely poor and timing and coordination of pipe replacement is essential to making this project cost-effective for the towns of Jay and Livermore Falls. Failure of this road (e.g., sink holes in Lisbon Street in Lewiston in June 2006) is anticipated due to the antiquated stormwater infrastructure in this project area. The towns of Jay and Livermore Falls have lost grant money to assist with replacement of underground utilities in conjunction with this highway project because of construction timing delays. Addresses the 1999 legislative mandate to eliminate the arterial backlog in 10 years.
6. Establish Park & Ride Lots on Rte. 4 between Auburn and Wilton - There are no MaineDOT Park & Ride lots on Rte. 4 between Auburn and Wilton, even though this is a commuter route for employees and students. The informal lots that currently exist in this corridor (in 2004, there were 6 known informal commuter lots on private property) indicates there is a regional demand not currently being met. Addresses statewide or regional policies including *Maine's Park & Ride Lots: Evaluation and Strengthening the System* report prepared for MaineDOT and the Maine Turnpike Authority in January 2004, which recommends "creating new park & ride lots on Route 4 between Auburn and Wilton".

Priority Corridor No. 2: Lewiston/Auburn to the Northwest

Policy Initiatives

1. Extend designation of high-speed rail corridor north of Auburn.

Planning Initiatives

1. Eliminate Arterial and Major Collector Backlog on Rte. 26 between Poland and New Hampshire - This backlog arterial highway is part of the National Highway System and has sections that are in extremely poor condition. This highway provides a critical link between New Hampshire and the greater Portland area. Addresses statewide or regional policies including the 1999 legislative mandate to eliminate the arterial backlog in 10 years.
2. Extend designation of high-speed rail corridor north of Auburn.
3. Establish rail connection in Auburn between the St. Lawrence & Atlantic and the Lewiston-Auburn Railroad.
4. Reconstruct Route 2 in Gilead to National Highway System Standards - This six mile section of National Highway System highway, between Gilead and Bethel, is perched on a steep valley wall between two mountains and the Androscoggin River. Located adjacent to the St. Lawrence & Atlantic Railroad, the highway has deteriorating surface, sharp horizontal curves, northern exposure and is narrow. This reconstruction project (PIN 9184.20) was slated for construction by MaineDOT but was canceled in March 2005 due to the estimated \$20 million price tag. Addresses statewide or regional policies including the *Northeast Can-Am Corridor* and the 1999 legislative mandate to eliminate the arterial backlog in 10 years.
5. Establish new daily transit services between Bethel and Lewiston-Auburn - Provide transit option for commuters, students and medical patients between these Service Centers as well as to the Oxford Hills region. Addresses statewide or regional policies including greenhouse gas emissions and smart growth.
6. Construct Route 26 Bypass in Woodstock - A bypass of Rte. 26, beginning at the top of Merrifield Hill and around Bryant Pond Village, would allow for safer travel on this section of the National Highway System. Current concerns in Bryant Pond include a steep hill into the village from the south with a reduced speed limit at the bottom of the hill, a hairpin turn in the village center, setback encroachments by historic village buildings, unusually close proximity to the St. Lawrence & Atlantic Railroad mainline and overflow parking on Rte. 26 for the local baseball field. Addresses statewide or regional policies including a MaineDOT commitment to funding this study in 2005. This project (PIN 12801) is included in FY 2005-2008 for funding in 2008.
7. Establish Park & Ride Lots on Rte. 26 between Oxford and Bethel (Capital Improvement) There are no MaineDOT Park & Ride lots on Rte. 26 between Oxford and Bethel. This is a commuter route for employees and students. The informal lots that currently exist in this corridor (in 2004, there were 3 known informal commuter lots on private property) indicates there is a regional demand not currently being met. Addresses statewide or regional policies including a report entitled *Maine's Park & Ride Lots: Evaluation and Strengthening the System*, prepared for MaineDOT and the Maine Turnpike Authority in January 2004.
8. Establish Visitor Information Center/Full-Service Rest Area in Bethel (Capital Improvement) - This visitor information center would be a combined facility with the U.S. Forest Service. Bethel is the western gateway to Maine on Rte. 2, is a tourist destination and is in close proximity to the Rte. 26 Scenic Byway. Addresses statewide or regional policies including MaineDOT/DECD's 2002 *A Plan for Maine's State Visitor Information Centers, and per the FERMAPA 2005 Strategic Plan for Implementing the Maine Nature Tourism Initiative*.

Priority Corridor No. 3: Western Mountains

Policy Initiatives

None Identified

Planning Initiatives

None Identified

Capital Needs

1. Upgrade Transit Services in Carrabassett Valley - Currently, this seasonal transit system is operated by Sugarloaf USA, with financial support from the Town of Carrabassett Valley. A 2006 feasibility study recommends that this service be transformed into a seasonal, public transit service. Commuter potential exists to Eustis, Farmington and Kingfield. Addresses statewide or regional policies including *Explore Maine*, greenhouse gas emissions and smart growth.
2. Establish Western Maine Lakes & Mountains Regional Airport in Franklin County - Provides improvement to the region's air transportation system in Franklin County to become an appropriate and effective alternative to automobile transportation. Addresses statewide or regional policies including the *Maine Aviation Systems Plan*, RTAC 7's 2002 *Regional Advisory Report* ("support of general aviation as an important part of the region's air transportation system").
3. Reconstruct Route 2 in Gilead to National Highway System Standards - This six mile section of National Highway System highway, between Gilead and Bethel, is perched on a steep valley wall between two mountains and the Androscoggin River. Located adjacent to the St. Lawrence & Atlantic Railroad, the highway has a deteriorating surface, sharp horizontal curves, northern exposure and is narrow. This reconstruction project (PIN 9184.20) was slated for construction by MaineDOT but was canceled in March 2005 due to the estimated \$20 million price tag. Addresses statewide or regional policies including the *Northeast Can-Am Connections Corridor* and the 1999 legislative mandate to eliminate the arterial backlog in 10 years.
4. Establish Seasonal Transit Services between Carrabassett Valley and Lewiston/Auburn - Provide alternative mode of intercity travel for tourists destined for Carrabassett Valley. This service would connect to passenger rail in Auburn, to the Auburn Passenger Intermodal Facility and to the town of Carrabassett Valley's public transit system. Identified for funding in 2006-2008.
5. Establish New Daily Transit Services between Lewiston/Auburn and Farmington - Provide transit options for commuters, students and medical patients between these service centers. Addresses statewide or regional policies including greenhouse gas emissions and smart growth.
6. Eliminate Arterial Backlog on Rte. 4 between Farmington and Rangeley - This is a backlog arterial highway with sections that are in extremely poor condition where the state is promoting uses that conflict with the natural resource-based truck traffic through promotion of the Franklin Heritage Loop bicycle tour and the federally-designated Rangeley Lakes Scenic Byway. Addresses statewide or regional policies including a 1999 legislative mandate to eliminate the arterial backlog in 10 years.
7. Eliminate Arterial Backlog on Rte. 27 between Farmington and Eustis - This backlog arterial highway is a major tourist route with substandard sections and extremely high volumes of truck traffic (36% northbound in 2005) where the state is promoting tourism through the Franklin Heritage Loop Bicycle Loop and the Rte. 27 Scenic Byway. Addresses statewide or regional policies including a 1999 legislative mandate to eliminate

the arterial backlog in 10 years.

8. Improve Scenic Byway Turn-Out on Route 17 at Height of Lands in TWP D - This project, PIN 8607.20, was deferred by MaineDOT in 2006, but is a critical investment to the Rangeley Lakes Scenic Byway. Addresses statewide or regional policies including the FERMATA 2005 *Strategic Plan for Implementing the Maine Nature Tourism Initiative*.

Priority Corridor No. 4: East-West

Policy Initiatives

None Identified

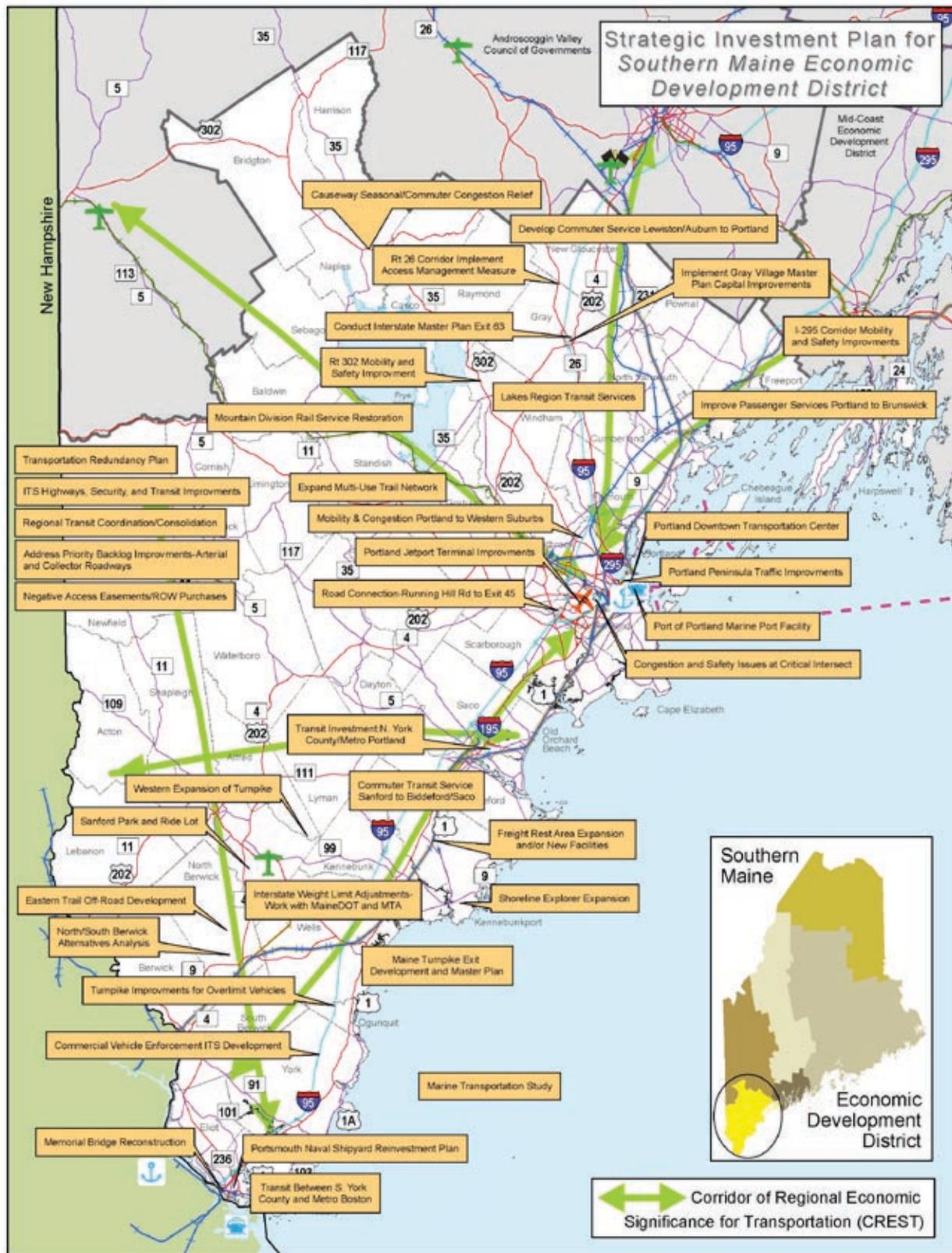
Planning Initiatives

1. Establish New Daily Transit Services between Bethel and Farmington - Provide transit options for commuters, students and medical patients between these Service Centers. Addresses statewide or regional policies including greenhouse gas emissions and smart growth.

Capital Needs

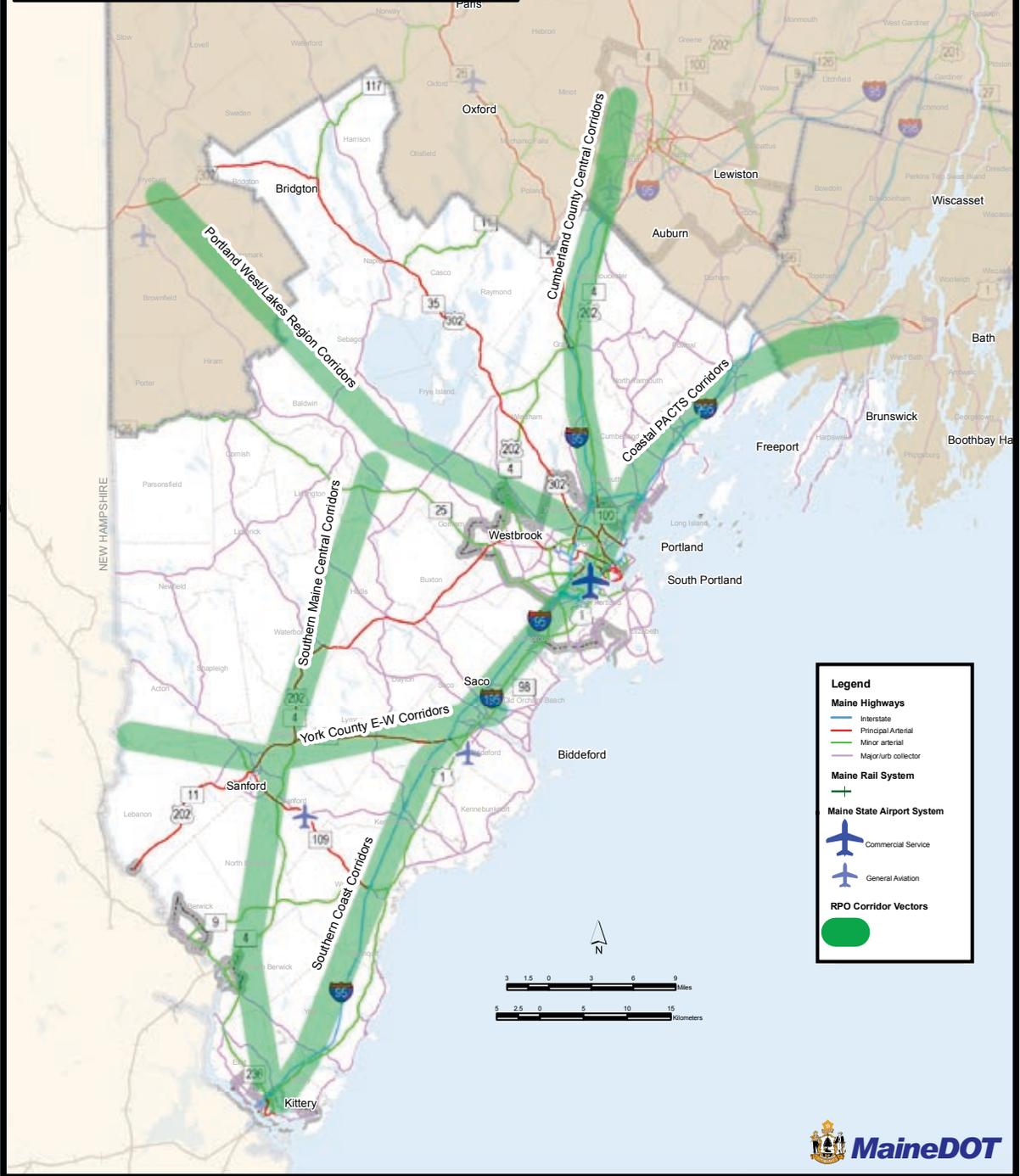
1. Eliminate Arterial Backlog on Route 2 - This highway serves as a lifeline to the region and state for both freight and passenger movement, yet there are substandard and dangerous conditions along this corridor. This highway provides access to the region's largest natural-resource-based employers: the NewPage paper mill in Rumford and the Verso Paper Corp. mill in Jay. The state is promoting the Grafton Notch Bicycle Loop which runs through Rumford on Rte. 2. Addresses statewide or regional policies including the *Northeast Can-Am Connections Corridor* and a 1999 legislative mandate to eliminate the arterial backlog in 10 years.
2. Realign Rte. 2 in Rumford to more efficiently move traffic through Rumford into downtown Mexico - Reroute heavy trucks and through traffic out of the residential neighborhoods on Hancock Street and improve roadway and traffic flow. Addresses statewide or regional policies including the *Northeast Can-Am Connections Corridor* and a 1999 legislative mandate to eliminate the arterial backlog in 10 years.
3. Establish New Daily Transit Services between Bethel and Farmington - Provide transit options for commuters, students and medical patients between these service centers. Addresses statewide or regional policies including greenhouse gas emissions and smart growth.
4. Improve Mobility on Route 2 through Skowhegan - The delays and obstacles created by the existing bridge and highway alignment create limitations and delays to the movement of products and people in western Maine. Addresses statewide or regional policies including the *Northeast Can-Am Connections Corridor* and a 1999 legislative mandate to eliminate the arterial backlog in 10 years.

**Southern Maine
Economic Development District**



General Movement Patterns

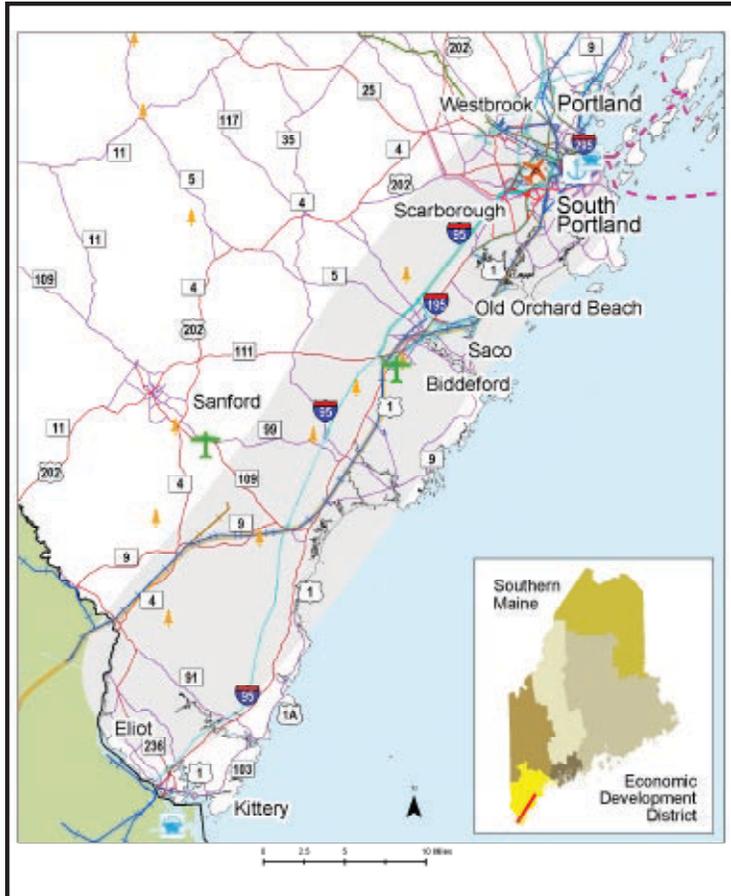
Southern Maine Economic Development District



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**Southern Maine Economic Development District
Corridor: Southern Coastal
Regional Priority Rank: 1**



Portsmouth, New Hampshire/Kitterry to Portland (U.S. 1, I-95, Eastern Trail, Guilford Rail/Amtrak).

Towns: Kitterry, Eliot, South Berwick, York, Ogunquit, North Berwick, Wells, Kennebunk, Kennebunkport, Arundel, Biddeford, Saco, Old Orchard Beach, Scarborough, Cape Elizabeth, South Portland, Portland.

Transportation Objectives:

- Implement safety and congestion improvements to I-95.
- Increase seasonal transportation demand management I-95, Rte 1.
- Support and improve transit service opportunities.
- Support the *Atlantic Shoreline* transit service.
- Improve safety of the on-road Eastern Trail system and invest in off-road portions.
- Work with *Downeaster* to explore improving commuting service.
- Develop preferred heavy haul truck exits and routes with towns.
- Increase coordination and communication with New Hampshire.
- Increase rest area opportunities for truck freight drivers on this corridor.

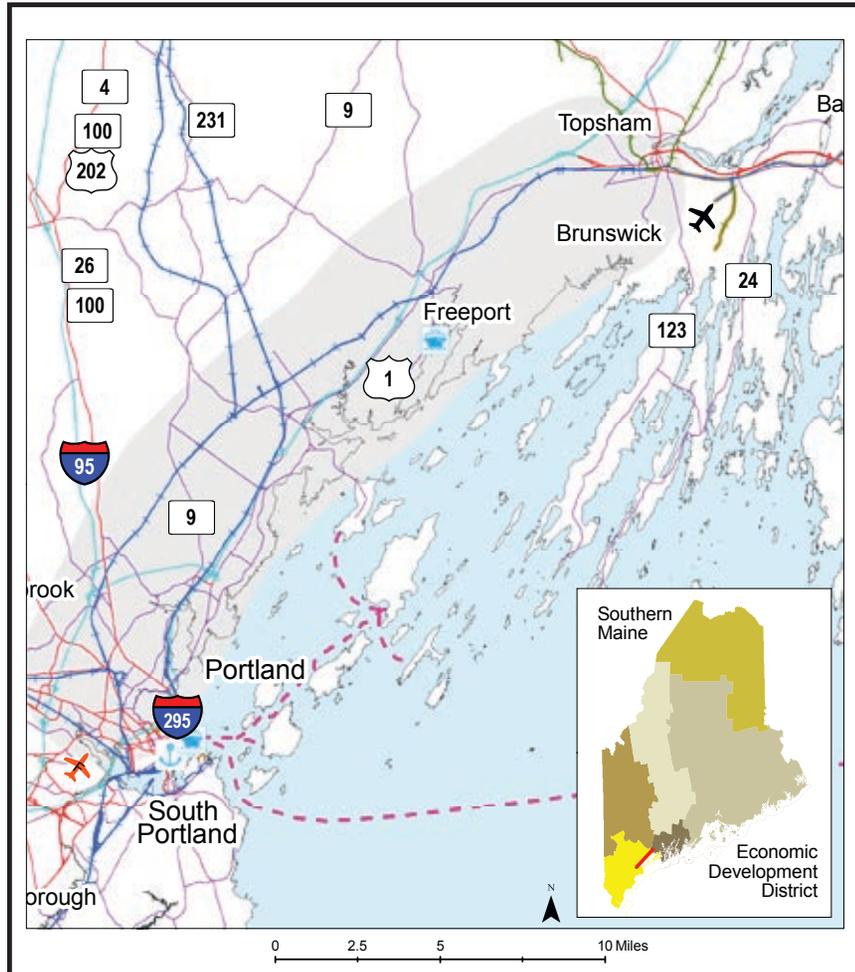
Land Use Objectives:

- Work to develop master plans for I-95 interchanges.
- Develop access management plans in urban compact areas.
- Limit Rte. 1 Driveway and Entrance Rule permit waiver.
- Continue coordination with MaineDOT and affected communities on traffic movement permit processes.
- Encourage towns to pursue transit-oriented development, especially near existing train stations.
- Identify corridors and develop plans to encourage denser development with more open space to facilitate public transit and better land use.

Economic Objectives:

- Support trail/ bicycle/pedestrian facilities to facilitate recreational tourism.
- Continue to support train stations.
- Develop efficient transit options for train riders.
- Support marine infrastructure for tourism and working waterfronts.
- Promote business development to preserve Rte. 1 corridor mobility.
- Work with service centers and the Portsmouth Naval Shipyard to support commuter van and bus services.
- Consider impact fees on private developers to improve corridors for future and sustainable economic growth.

Southern Maine Economic Development District
Corridor: Coastal PACTS
Regional Priority Rank: 2



Portland to Brunswick (US Route 1, I-295, rail facilities)
 Towns: Portland, Falmouth, Cumberland, Yarmouth, North Yarmouth, Freeport, Brunswick.

Transportation Objectives:

- Support TSM and TDM strategies to mitigate congestion on I-295.
- Develop access management in urban compact zones.
- Create incentives for parallel roads, combined driveways, and to preserve capacity.
- Increase transit provider-community talks to maximize services.
- Increase vanpool use with major employers.
- Establish satellite parking lot model in the Portland area.
- Establish passenger rail and/or bus service between Portland and Brunswick and identify location for future intermodal facilities.
- Consider utility corridors in economic development.
- Develop East Coast Greenway from Freeport to Portland along Rte. 1, parallel roads and off-road facilities as appropriate.

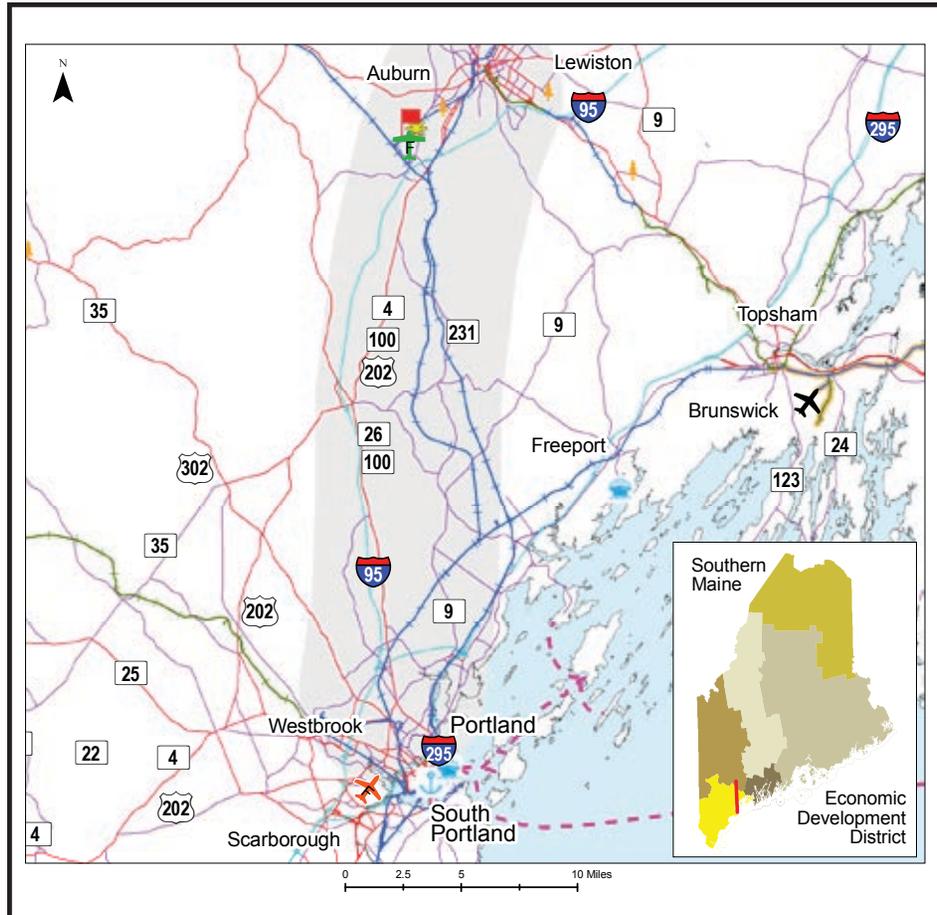
Land Use Objectives:

- Encourage master planning that balances transportation, economic development and population growth needs.
- Assist towns in comprehensive planning and land use regulations.
- Encourage communities to develop consistent, effective access management plans.
- Reinvest in village areas.
- Develop a regional future land use plan with the help from GPCOG and PACTS.

Economic Objectives:

- Support investments in marine infrastructure.
- Preserve coastal access for shellfish harvesting.
- Maintain the vitality of downtown and village centers.
- Encourage development density to support bus and light rail rapid transit along arterial corridors, and integrate system schedules.
- Install track upgrades, stations for Portland-Brunswick passenger rail service.
- Support transit-oriented developments around I-295 interchange exits in Falmouth, Cumberland, and Yarmouth.
- Continue off-road development and local spurs of the East Coast Greenway from Portland to Brunswick.

Southern Maine Economic Development District
Corridor: Cumberland County Central
Regional Priority Rank: 3



Portland to Lewiston (I-95, Route 26/100) – through Central Corridors Coalition.

Towns: Portland, Westbrook, Windham, Falmouth, Cumberland, North Yarmouth, Gray, Pownal, New Gloucester, Raymond.

Transportation Objectives:

- Work with MTA, PACTS on toll reconfiguration to mitigate congestion and improve turnpike access.
- Develop access management in urban compact zones.
- Explore freight, passenger rail and transit expansion from Portland to Lewiston/Auburn and from Windham to New Gloucester (Pineland Center).
- Improve off-road trails and connections from Bradbury Mountain in Pownal and Pineland Farms, New Gloucester.
- Manage/monitor heavy truck traffic movements.
- Improve highway/rail grade crossings.
- Explore “ring” road systems to alleviate traffic congestions in village centers.

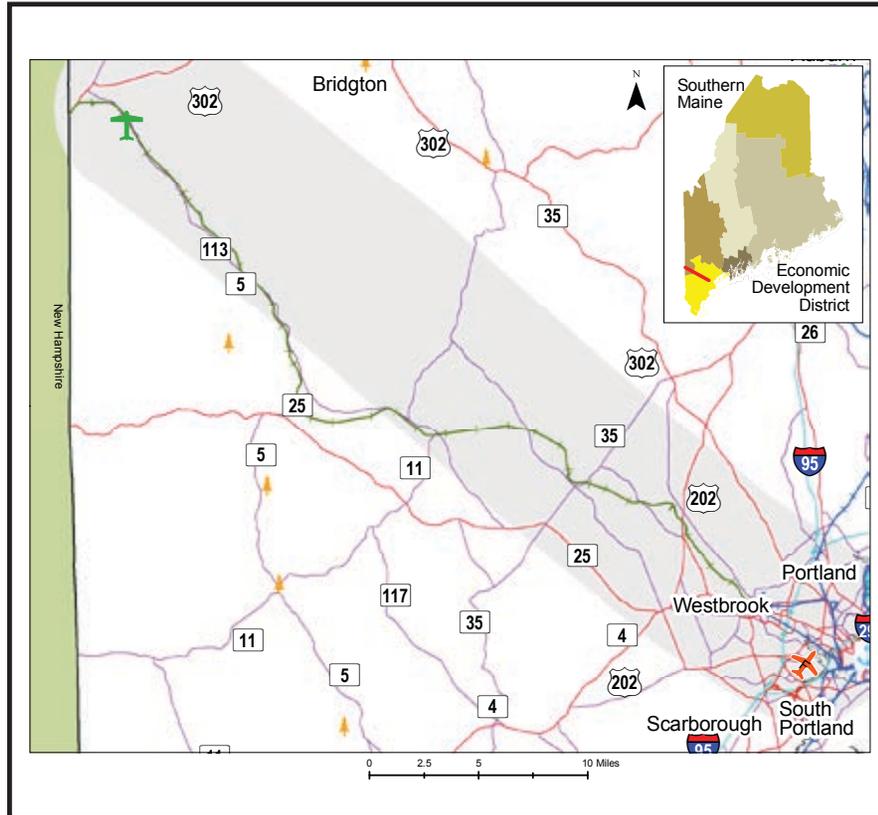
Land Use Objectives:

- Develop Master Plan for Rt. 100/26.
- Plan growth to support existing infrastructure.
- Promote open space plans and habitat preservation.
- Identify regional economic clusters and promote planning that can be supported by public infrastructure and improves tax bases.

Economic Objectives:

- Maintain vitality of downtown and village centers.
- Invest in public infrastructure to support business park expansions at Pineland, Gray, Windham, and Cumberland and business development in the region’s economic clusters.
- Conduct feasibility study for commuter rail/bus service for Portland-Gray-Pineland-Lewiston-Auburn.
- Advocate for full construction of the turnpike bypass in Gray at Exit 63. The bypass has been built and MTA is evaluating potential improvements to Exit 63.

Southern Maine Economic Development District
Corridor: Lakes Region
Regional Priority Rank: 5



Portland to Fryeburg (US 302, Rtes. 113, 114); Portland to NH via Gorham, Standish, Cornish, Porter (Rte. 25) incl. Lakes Region; Mountain Div. Rail/Trail

Towns: Westbrook, Windham, Raymond, Casco, Naples, Bridgton, Harrison, Scarborough, Gorham, Standish, Frye Island, Limington, Sebago, Baldwin, Hiram, Denmark, Brownfield, Fryeburg.

Transportation Objectives:

- Support Access Management, corridor planning.
- Reduce backlog on Rtes. 11, 17, 237, 302, 35.
- Study Portland to Bridgton/Naples commuter bus service
- Study Portland to Fryeburg freight, excursion passenger rail.
- Consider continuous trail Portland to Fryeburg along Mountain Division rail line, off-road facilities.
- Explore opportunities for street inter-connectivity.

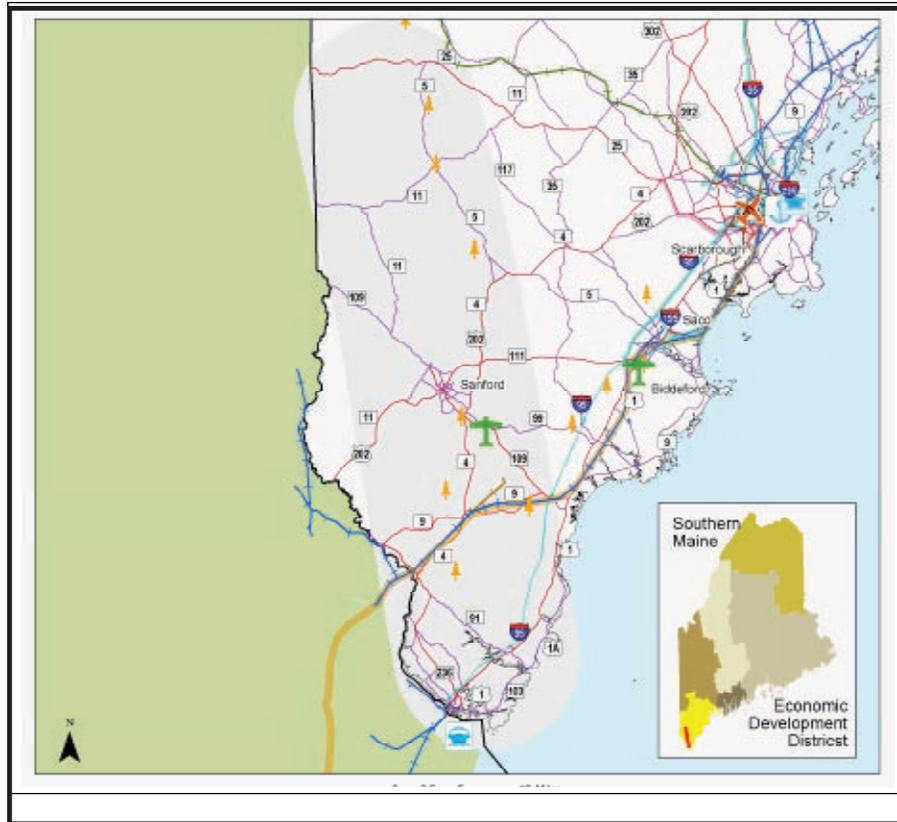
Land Use Objectives:

- Conduct planning to preserve, improve village centers.
- Establish scenic trail from Portland to Fryeburg.
- Support preservation of scenic areas.
- Develop corridor-based access management rules.
- Conserve open space, emphasize regional connectivity and protect natural resources/habitats.
- Create Lakes Region Master Plan.

Economic Objectives:

- Maintain the vitality of downtown and village centers.
- Support development of the Mountain Division for multiuse recreation and freight service.
- Consider Rte. 113 as a national or state scenic byway.
- Ensure public infrastructure supports brownfields redevelopment, business park expansions, business development in economic clusters.
- Expand and centralize local access to higher education and business assistance services.
- Invest in infrastructure to alleviate commuter bottlenecks.
- Develop transportation demand strategies for Rte 236.

Southern Maine Economic Development District
Corridor: York County East-West
Regional Priority Rank: 6



Northern York County to KACTS via Sanford (Rtes. 5, 202, 4, 236, 11, 11A).
Towns: Parsonsfield, Limerick, Limington, Newfield, Waterboro, Acton, Shapleigh, Alfred, Lebanon, Sanford, North Berwick, Berwick, South Berwick, Eliot, Kittery.

Transportation Objectives:

- Continue to support Rtes. 109, 111 corridor committee planning efforts.
- Study commuter transit for Rtes. 109, 111.
- Build park-n-ride lot near Sanford for Rte. 111/202 commuters and Rte. 4, US 202 on Southern Maine Central Corridor System.
- Safety improvements to Rtes. 109, 111, 25.
- Work with police to improve highway safety.
- Monitor heavy truck traffic increases on Rtes. 109, 111, 112.

Land Use Objectives:

- Work with towns to improve access management.
- Provide technical support to towns to improve mobility by planning for new local roads, frontage roads and rear access drives.
- Purchase control of access to protect significant corridors where feasible.

Economic Objectives:

- Leverage impact fees from private developers to improve corridors for sustainable growth.
- Develop local commercial and industrial zoning standards for east-west highway mobility corridors consistent with MaineDOT's access management guidelines.
- Pursue legislation to expand review of economic and mobility impacts on developments of regional, cumulative regional significance.
- Develop transportation demand management strategies for interior York County towns to coastal service centers.

Southern Maine Economic Development District

Recommended Policy and Planning Initiatives and Capital Investments

The Southern Maine Economic Development District is comprised of two regional councils and two metropolitan planning organizations. The regional councils include the Greater Portland Council of Governments (GPCOG) and the Southern Maine Regional Planning Commission (SMRPC). The metropolitan planning organizations include the Portland Area Comprehensive Transportation System (PACTS) and the State of Maine portion of the Kittery Area Comprehensive Transportation System (KACTS). Regional transportation needs for policy and planning initiatives and capital investments are as noted below. They are listed in priority order as determined by the regional councils based on the Modified TELUS scoring model provided by MaineDOT.

The following initiatives and investments were identified as being regionally significant and transcend all of the corridor-specific initiatives.

Region Wide Investments

Policy Initiatives

1. Increase weight limits on Interstate 95 north of the terminus of the Maine Turnpike in Augusta. Working with local, state, and federal groups, agencies, and the delegation, the region will work to increase the weight limits on Interstate 95 from 80,000 to 100,000 pounds.

Planning Initiatives

None Identified

Capital Investments

None Identified

The following policy and planning initiatives and capital investments are provided in priority order for each of the six *Corridors of Regional Economic Significance for Transportation* that have been defined by the GPCOG and SMRPC.

Priority Corridor No. 1: Southern Coastal

Policy Initiatives

1. Maine Turnpike Exit Development** (policy, planning and capital) - On the Southern Coast Corridor several communities continue to request new access points off of the Maine Turnpike including Kittery, Ogunquit, Wells, Sanford, Biddeford and Saco. At the same time, some arterials are currently moving regional traffic through small villages that cannot effectively handle capacity. Some communities have expressed interest in building new roads for heavily congested areas such as Route 1 in Ogunquit and Wells, Route 236 in South Berwick, and Route 1 in Biddeford and Saco. This strategy is a request for MaineDOT, the Maine Turnpike Authority and partners to evaluate these various requests and prioritize where additional capacity is warranted (Maine Turnpike Authority 10 Year Plan, Route One Corridor Committee, Route 236 Implementation Committee, Regional Transportation Assessment).

**This strategy addresses a September 29th town of Scarborough letter which calls for the establishment of a new turnpike interchange in the northern end of Saco.

2. Investment in reconstructing Maine Turnpike infrastructure that does not currently support overlimit commercial vehicles (policy, planning and capital) - Federal policy restricts vehicles over 80,000 lbs to use non-interstate highways. In Maine, the Maine Turnpike Authority is exempt from this rule, because it does not depend on federal funding for the maintenance of that portion of the highway. Therefore, it is an asset to Maine to have Maine Turnpike Authority infrastructure to move heavy loads through the region quickly and efficiently to other parts of Maine. This provides relief to local roads and villages from pavement damage and safety issues relating to heavy truck traffic. While the Maine Turnpike provides this beneficial alternative to trucking companies, it restricts vehicles over 100,000 lbs, over 13'6" high, and 14'6" wide. The recent turnpike modernization project made it possible for overlimit vehicles to travel through the mainline, through toll barriers, and under bridges. However, there are tollbooths and bridges that do not have the dimensional requirements to safely handle overlimit vehicles. Reconstruction of the outlying tollbooths and bridges is needed to allow more overlimit vehicles to utilize the Maine Turnpike. Note: The MTA has indicated that toll plaza and bridge clearances will increase as facilities are upgraded over time (Route 236 and Route One Corridor Committees).

Planning Initiatives

1. Interstate Exit Master Plans (planning and capital) - Development of a land use and transportation plan bound by memorandum of understanding (MOU) or other agreement between MaineDOT, the Maine Turnpike Authority, municipalities, the regional planning agency and other stakeholders as necessary. Master plans would ideally have capital improvement plans. Master plans would have a strong design component with recommendations for transportation system and land use with an emphasis on their compatibility. Exit master plans are suggested for all exits on this corridor, although there are some exits that are higher priority such as Biddeford Exit 32 (Regional Transportation Assessment, PACTS Long Range Plan).
2. Transportation Redundancy Plan* (planning and capital and operational funds) - The major concern with the Southern Coast in the Regional Transportation Assessment was its lack of redundancy...i.e., that all of the eggs in the transportation basket remain in the Maine Turnpike Authority, and when the MTA experiences an emergency incident or peak seasonal traffic, there is not another mode or highway that can handle the volume of passenger or freight traffic. Redundancy is needed not only because the corridor serves the most populous part of the state, but it also serves as the gateway to the entire state. This plan would address intermodal needs and emergency management needs. The goal of the plan is to expand capacity in this corridor, although capacity needs do not necessarily need to be for highways (Regional Transportation Assessment).

*The Town of Saco has noted that a likely candidate for transportation redundancy development is increasing capacity on US Route 1. Saco is one community in particular that has requested widening of Route 1 between Interstate I-95 and Cascade Road but the project was dropped because of excessive right of way costs.

3. Investment in Commercial Vehicle Enforcement and Data Collection Intelligent Transportation Systems (planning and capital) - Truck traffic is expected to double in the state of Maine by 2025. Most of the traffic entering the state travels through the Southern Coast Corridor. Yet the State Police commercial vehicle enforcement division is able to assign only two to three officers to all of York and Cumberland Counties. States across the country are dealing with issues relating to the rise in truck traffic with new technology designed to weigh trucks in motion, photograph noncompliant truck license plates

and other identifiers, and send real-time signals to highway enforcement personnel. New advances in commercial vehicle enforcement technology assist enforcement personnel by allowing them to more efficiently use their resources as well as providing real-time data that the state can use to plan for freight needs more effectively (Route 236 Corridor Implementation Committee, Regional Transportation Assessment).

4. Develop passenger transit connection between Southern York County/Portsmouth, NH and Metropolitan Boston (planning, capital) - Metropolitan Boston is a major job center for southern York County, but many of the towns do not have adequate access to transit services to the area and continue to rely on automobile access. Bus services for this area are an option, but have limited convenience in terms of their origin and destinations. The *Downeaster* Amtrak line has stops in Wells, Dover, and Exeter, but this route bypasses the heart of the KACTS metropolitan area, making rail access to these stations inconvenient for a relatively large urban population. Transit connections between southern York County and Boston, as well as connections between Kittery and Portsmouth, NH have been on the table for a long time. Per the Regional Transportation Assessment, this strategy would include coordination between partners to facilitate more transit-oriented development in this region (KACTS, Route 236 Corridor Committee, Route One Corridor Committee, Regional Transportation Assessment).
5. Investment in increasing non-automobile commuter options in the northern portion of the region (planning and capital and operational funds) - At present, there are nine communities in the Southern Coast Corridor that are regional service centers or parts of regional service centers (e.g., Biddeford, a portion of Eliot, Kittery, Old Orchard Beach, Portland, Saco, Scarborough, South Portland and Westbrook). The northern portion of the Southern Coast Corridor consists of seven of those service centers, which are all contiguous. Currently, a subcommittee of the PACTS MPO is investigating ways in which to improve the coordination of transit services in the area. Per the Regional Transportation Assessment, this strategy would include coordination between partners to facilitate more transit-oriented development in this region. This strategy supports following the recommendations of the PACTS Transit Coordination Study Subcommittee. (PACTS MPO, Regional Transportation Assessment).
6. Reinvestment Plan for Portsmouth Naval Shipyard (planning) - Recently the Portsmouth Naval Shipyard was on the Base Realignment and Closure (BRAC) candidate draft list, but narrowly escaped recommendation for the final list. Like the Brunswick Naval Air Station, the Portsmouth Naval Shipyard could present itself as a tremendous opportunity, particularly for the transportation and economic needs of the state. As the state continues to lose public access on the coast, the infrastructure of the shipyard presents numerous marine transportation opportunities. The nearest Maine port in the state is in Portland, yet there is a highly successful port across the Piscataqua River in Portsmouth. This strategy suggests that MaineDOT needs to have a plan in place to help the state quickly market or invest in the naval shipyard should the shipyard face being placed on a BRAC list again (Regional Transportation Assessment).
7. Expansion and development of additional Freight Rest Area Facilities (planning and capital) - As stated in an earlier strategy, truck freight is expected to double by 2025. The State of Maine Commercial Vehicles Service Plan found that there is a major deficiency in freight trucking facilities (particularly with trucker services) on this corridor. This strategy recommends additional development of freight rest areas and other infrastructure in order to facilitate freight movement and maintain safety in the corridor (MaineDOT Commercial Vehicle Service Plan, Regional Transportation Assessment).
8. Marine transportation enhancement feasibility study (planning) - The Southern Coast, as its name reflects, is a corridor that fronts the Atlantic Ocean, yet highway and rail

dominate transportation in this area—there is very little marine transportation infrastructure. In the northern part of the corridor is Portland, Maine’s premier marine passenger and freight port, in the south is Kittery (Portsmouth Naval Shipyard) and the Portsmouth Port Authority. In between, marine transportation is minimally used for recreation purposes or for small-scale fishing operations. This strategy is a recommendation for development of a marine highway, with considerations for freight and passenger services, serving communities on this corridor (Regional Transportation Assessment).

9. Further Development of the Eastern Trail (planning, capital funds) - Presently, the Eastern Trail is primarily an on-road routing system allowing bikers to travel from Portland to Kittery. This is part of a larger trail system (the East Coast Greenway) being proposed that would stretch from Maine to Florida. Funding should be provided to develop the off-road Eastern Trail so that it can be used by a wider array of users, contribute to the Southern Coast Corridor economy, tourism, health benefits, improved air quality, and increased non-automobile shopping and work related trips (Regional Transportation Assessment).

Capital Investments

1. Memorial Bridge Reconstruction with multimodal accessibility - The reconstruction of the Memorial Bridge at the Kittery/Portsmouth line over the Piscataqua River is a multimillion dollar project that requires funding allocations from both Maine and New Hampshire. The project was recently deferred by MaineDOT. This bridge, located on U.S. Route 1, holds an importance as a gateway to the state of Maine, and is the only pedestrian/biking access point available to two communities that have higher than average populations of walkers.

Priority Corridor No. 2: Coastal PACTS - Greater Portland to Freeport

Policy Initiatives

None Identified

Planning Initiatives

1. Regional Transit Coordination and/or Consolidation - GPCOG and SMRPC Staff are in the process of completing a regional transit coordination study, a high priority in the PACTS Long Range Plan *Destination Tomorrow*. Participants include three fixed route bus providers, two demand-response bus providers, an interstate rail provider and local ferry service. Increased coordination and opportunities for possible consolidation should continue to be explored. Potential benefits include reduced operating costs, shared maintenance facilities, integrated fare collection policies, improved customer trip identification, coordinated ITS investments and coordinated marketing efforts. (Regional Transit Coordination Study 2006 draft, BRT/LRT Technical Memorandum, 2005, PACTS Long Range Plan).
2. Expand Multi-Use Trail Network - The RPOs, MPOs and MaineDOT continue to promote multi-use trail opportunities in southern Maine. Examples include improvements to the Eastern Trail (ET) from Kittery to Portland and the Mountain Division Trail from Portland to North Conway, NH. Participating organizations include the Mountain Division Alliance (MTA) and the Eastern Trail Alliance (ETA). (Mountain Division Feasibility Study GPCOG 1998, ET Feasibility Study 2001).

Capital Investments

1. Address Critical Intersections for Congestion and Safety - One of the Eight Guiding Policies in the PACTS *Destination Tomorrow* plan calls for “eliminating safety and congestion problems at major intersections. These intersection projects are a higher priority than widening roadway segments and other road projects that increase capacity. The plan also calls for these projects to incorporate transit, bicycle and pedestrian enhancements where appropriate and feasible.” While PACTS has established a funding policy that directs PACTS capital improvement funding to intersections, the needs exceed by the far the funds available through normal PACTS funding (2006 PACTS *Destination Tomorrow* plan and many PACTS and municipal feasibility studies during the past decade).
2. Implement I-295 Improvements - Near term improvements to I-295 are planned in the 2006-2007 biennium. Capacity and safety improvements are needed from Exit 3 to Exit 7. Access improvements are needed between Exit 3 and Exit 22. The study characterizes these improvements to develop full interchanges where necessary to improve access and safety. Other recommendations include ITS investments (such as a freeway management system, variable message signs and permanent traffic monitoring) and support complementary initiatives, including partnerships with the Maine Turnpike Authority and differential tolling strategies (MaineDOT I-295 Study, 2006, PACTS *Destination Tomorrow* 2006).
3. Port of Portland Marine Freight Facility - The completion of the Ocean Gateway Marine Passenger Terminal would provide an opportunity for the city of Portland to dedicate the International Marine Terminal (IMT) to full time marine freight use. Portland has leased the IMT to the Maine Port Authority for operations and marketing. In addition to increased container feeder service to Halifax, Nova Scotia, Portland would benefit from a direct rail connection to the IMT and improvements to roll-on, roll-off cargo¹. Currently all the containers arriving at the IMT are trucked to destinations in Maine.
4. Mobility and Congestion Problems Portland to Western Suburbs - PACTS municipalities, MaineDOT and the Turnpike Authority have identified the corridor immediately west of Portland as a high priority for congestion relief through many studies during the past decades. The PACTS *Destination Tomorrow* plan highlights this corridor for continued study of potential major investments (2006 PACTS *Destination Tomorrow* plan and many other regional studies by MaineDOT, PACTS and the Turnpike Authority).
5. Peninsula Traffic Study Improvements - PACTS is just completing the Portland Peninsula Traffic Study, with recommendations including re-routing traffic through Bayside, improvements to Forest Avenue and Franklin Arterial, new traffic circulation patterns around Deering Oaks Park and reconfigurations to State and High Streets. These improvements will require considerable capital investments over many years (Portland Peninsula Traffic Study – in progress, PACTS Long Range Plan, 2006, Portland Transportation Plan, 1993).
6. ITS Transit Improvements - Intelligent Transportation Systems (ITS) technology provides benefits to transit operations and customer service. Proposed improvements include automatic vehicle location (AVL), expanded transportation information display systems (TIDS), electronic fare collection (smart cards), computer-aided dispatch, and automatic passenger counting. Such advances in technology would increase customer confidence in bus and ferry arrival times, improve dispatching and passenger counting capabilities, and improve safety and security (PACTS Long Range Plan, Greater Portland ITS Deployment Plan, 1998, Greater Portland ITS Architecture, 2000, BRT/LRT Technical Memorandum, 2005, Regional Transportation Assessment, 2005).
7. Passenger Bus/Rail/Vanpool Service from Portland to Brunswick – Bus, rail and vanpool service from Portland north would improve commuter choices, reduce traffic congestion

¹Ben Snow, September 2006

- and possibly reduce the need to widen I-295. Passenger rail stations and/or platforms have been proposed in Portland, Falmouth, Yarmouth, Freeport and Brunswick. A park-and-ride lot is proposed at Exit 15 in Yarmouth in conjunction with an Exit 15 reconfiguration. The proposed rail corridor through Portland will require a significant capital investment, including three highway-rail at-grade crossings at Forest Avenue, Preble Street and Franklin Arterial and a bridge over the entrance to the Back Cove. MaineDOT is doubling the size of the vanpool fleet through the *GO Maine* Program, allowing for additional vanpool service between Portland, Augusta, Brunswick and Lewiston² (PACTS Long Range Plan, 2006, Regional Transportation Assessment, 2005, Restoration of Passenger Rail Service to Portland, 1996, Maine Strategic Passenger Transportation Plan, 1996).
8. Portland Jetport Terminal Expansion - The Portland International Jetport Master Plan calls for expansions to the passenger terminal and future parking garage expansions. Currently there are three times as many departures as there are gates for peak hour departures and arrivals at the jetport, causing gate congestion and plane delays. Future jetport expansion plans should be coordinated with nearby airports, including future plans for the Brunswick Naval Air Station (Jetport Master Plan, BNAS Deactivation Plan).

Priority Corridor No. 3: Cumberland County Central - Greater Portland to Lewiston/Auburn

Policy Initiatives

None Identified

Planning Initiatives

1. Work with Maine Turnpike Authority and MaineDOT on village truck traffic. Historically trucks have depended on Exit 63 for access to the Lakes Region, Route 26 and Route 115 and other Maine destinations. The location of the New Gloucester toll plaza has caused some truckers to exit at Gray and travel Route 100 to Auburn before getting back on the Maine Turnpike. Resolving this situation is a high priority for both Gray and New Gloucester officials. Note: MTA notes that its studies have shown that there is minimal truck diversion around the New Gloucester toll plaza.

Capital Investments

1. Implement Access Management Measures Route 26 Corridor - Recent Route 26 improvements include the Gray Connector and bypass around Sabbathday Lake and the Shaker Village. However, access management deficiencies exist along Route 26 from Cumberland to Poland. Suggestions for improvement include better defined turning movements, reduced curb cuts, and managed arterial access to the roadway (Central Corridor Coalition Report, GPCOG, 2003).
2. Address Backlog Arterial and Collector Roadways - Backlog roadways are not built according to standards defined by federal functional classes. Examples of backlog roadways include sections with gravel shoulders, substandard gravel base, poor vertical and horizontal sight distances and excessive drainage problems. Currently Central Corridor towns are competing with projects deferred from Nov 2005 (MaineDOT, 2006).
3. Develop Commuter Bus/Rail/Vanpool Service Lewiston/Auburn to Portland - This could be designed as an express system, multiple stop system, a peak hour commuter service or a combination of the above. Currently one of the *GO Maine* Vanpools provides commuter vanpool service to and from Augusta from Lewiston/Auburn. Proposed bus and/or vanpool

² MaineDOT and *GO Maine*, September 2006

trips from L/A to Portland could stop at the park-and-ride lot in Gray at Exit 63. General benefits of the system are that it would reduce traffic volumes, crash incidents, and air pollution on the Maine Turnpike and Route 100/26, and provide a commuter alternative (Cumberland County Commuter Bus Study, 1999, Regional Transportation Assessment, 2005).

4. Implement Gray Village Master Plan Capital Improvements - GPCOG recommends MaineDOT work with Gray officials to conduct comprehensive traffic counts six months after the collector is open. This would provide base-line data for any proposed traffic improvements to the village area. Proposed improvements include center medians to promote better access management, new sidewalks and bike lanes throughout the village. Gray village is the gateway to the Lakes Region and Pineland and Exit 63 represents the only interchange in the Central Corridor region (Gray Village Master Plan, November 2006).

Priority Corridor No. 4: Southern Maine Central

Policy Initiatives

1. Investment of facility reconstruction of Maine Turnpike Authority infrastructure that does not currently support overlimit commercial vehicles (policy, planning and capital) - This is also a Southern Coast strategy. Federal policy restricts vehicles over 80,000 lbs to use non-interstate highways. In Maine, the Maine Turnpike Authority is exempt from this rule, because it does not depend on federal funding for the maintenance of that portion of the highway. Therefore, it is an asset to Maine to have Maine Turnpike Authority infrastructure to move heavy loads through the region quickly and efficiently to other parts of Maine. This provides relief to local roads and villages from pavement damage and safety issues relating to heavy truck traffic. While the Maine Turnpike provides this beneficial alternative to trucking companies, it restricts vehicles over 100,000 lbs, over 13'6" high, and 14'6" wide. The recent Turnpike modernization project made it possible for overlimit vehicles to travel through the mainline, through toll barriers, and under bridges. However, there are tollbooths and bridges that do not have the dimensional requirements to safely handle overlimit vehicles. Reconstruction of the outlying tollbooths and bridges is needed to allow more overlimit vehicles to utilize the Maine Turnpike (Route 236 and Route 1 Corridor Committees). Note: The MTA has indicated that toll plaza and bridge clearances will increase as facilities are upgraded over time.
2. Stepped up Planning and Policy Development Concerning Resource Extractive Industry Development and Use of Shared Public Infrastructure (policy) - In this region of Maine, major economic development activities are based on resource extractive industries including water extraction, sand and gravel. While the industries provide important jobs and tax revenue to communities in the region, the heavy trucks and frequency at which trucks pass the road appear to cause a disproportionate share of damage to roads, and increase safety and noise issues for the many village centers that are on major resource extractive routes. This proposal suggests the initiation of a multi-stakeholder planning and policy development effort which addresses fair share road damage costs, routing, noise, safety issues, multimodal freight opportunities, and other identified issues (Regional Transportation Assessment).

Planning Initiatives

1. Route 236/4 Bypasses (planning, project) - Several communities feeling pressures of increasing traffic volumes that were originally built to handle that level of traffic volume have expressed interest in bypasses that will take through traffic out of their village centers. As York County's population continues to grow in more affordable areas west of the Turnpike, existing arterials will become increasingly strained by growing traffic

volumes. Currently, several towns on the East-West Corridor have expressed interest in limited access highway solutions. South Berwick and North Berwick have expressed interest in bypasses around their village centers (on Route 236 and Route 4 respectively). (Regional Transportation Assessment, 236 Corridor Committees, North Berwick Comprehensive Plan).

2. Purchasing Right of Way/Negative Easements in conjunction with Town-State Planning for Select Corridors (planning, project) - The focus of this investment would be on purchasing right of way for widening needs, parallel frontage roads, and/or purchase of access rights to better control access for select Southern Maine Central Corridors. This particular proposal would require intensive transportation and land use coordination between MaineDOT, local communities and other stakeholders. Corridors for consideration would be Route 236/4 and 202. Ongoing discussions on funds that could be leveraged for such an effort include corridor based impact fee systems or tax increment financing districts. A planning coalition effort would need to be part of the design of this effort, perhaps something similar to the *Gateway One* project now occurring from Brunswick to Prospect, Maine (Regional Transportation Assessment, Route 111 and 109 Corridor Committees).
3. Commuter Transit Service Feasibility Studies (planning) - This proposal would be a commuter transit feasibility study for service in the Route 236/4 area. There are several large employers and job centers in this area including Pratt and Whitney, the Portsmouth Naval Shipyard, and Kittery/Portsmouth (Route 236 Corridor Implementation Committee, Regional Transportation Assessment).
4. Park and Ride Development for Sanford Area (planning, project) - This is also a York County East-West strategy. Sanford is Maine's 7th largest city and is connected by a number of arterials including Route 4, 109, 111 and 202, yet there are no public park-and-ride lots available to motorists in the urban area. There are several informal park-and-ride locations in the city at gas stations and on road shoulders. Sanford, which provides more workers to the Portsmouth Naval Shipyard than any other town, currently uses a number of these informal park-and-ride lots in conjunction with a private bus service that transports workers to Kittery. (Park and Ride Study, Regional Transportation Assessment, Route 236 Corridor Implementation Committee).

Capital Investments

None Identified, other than as noted above under Policy and Planning Initiatives.

Priority Corridor No. 5: Lakes Region Greater Portland to Bridgton and Fryeburg

Policy Initiatives

None Identified

Planning Initiatives

None Identified

Capital Investments

1. Route 302 Mobility and Safety Improvements - One of the highest priority needs in the Lakes Region is the improvements to Route 302 between Fryeburg and Bridgton and at White's Bridge Road, where five lanes merge to two lanes in North Windham. Expressed

by representatives from eight Lakes Region towns as the most significant areas in the region, improvements would reduce traffic delays and improve safety. The “merge” section is also in need of lengthening.

2. Lakes Region Transit Service - Currently no commuter bus or vanpool service exists in the Lakes Region. Regional Transportation Program, Inc. (RTP) provides senior shopping and other demand-response bus service to Lakes Region towns one or two days/week. GPCOG recommended commuter express bus service between Portland and Windham in 2001 (Windham to Portland Commuter Bus Study, GPCOG, 2001).
3. Mountain Division Rail Service Restoration - The Mountain Division rail line was abandoned in 1994 by Guilford Transportation Industries. MaineDOT acquired the 40-mile ROW between Windham and Fryeburg in 1999. GPCOG conducted a Rail Freight Feasibility Study in 2005. The restoration of this rail line for future passenger rail and short haul rail freight shipments has been a priority for representatives of the 113 Corridor Study (GPCOG and SMRPC, 2006). The most likely commodities include gravel, cement, propane and water bottles. There are numerous gravel pits in Baldwin, Standish and Gorham near the rail corridor. As the demand for gravel increases, construction companies have to travel longer distances for the product. The rail line would require some reconstruction in order for such a service to begin.
4. Naples Causeway Seasonal and Commuter Congestion Relief - The Naples causeway is important to the tourist, transportation and economic development in the Lakes Region. During the summer months, boats travel between Long Lake, Brandy Pond and south through the Songo River to Sebago Lake. The area experiences considerable traffic delays and summer congestion.
5. Implement Priority Backlog Improvements to Arterial and Collector Roadways. Based on recommendations from Lakes Region municipal managers at regular meetings of the Lakes Region Transportation Coalition, the following roadways need to be brought up to arterial or collector roadway standards:

Route 302	Route 35
Route 11	Route 113
Route 114	Route 25

Priority Corridor No. 6: York County East-West

Policy Initiatives

None Identified

Planning Initiatives

1. Interstate Exit Master Plans (planning and project) - Development of a land use and transportation plan bound by memorandum of understanding (MOU) or other agreement between MaineDOT, Maine Turnpike Authority, municipalities, regional planning agency and other stakeholders as necessary. Master plans would ideally have Capital Improvement Plans. Master plans would have a strong design component with recommendations for transportation system and land use with an emphasis on their compatibility. Exit master plans are suggested for all exits on this corridor, although there are some exits that are higher priority such as Biddeford Exit 32 (Regional Transportation Assessment, PACTS Long Range Plan). Recommendations 2-4 might be better expressed as a need for an alternatives analysis for east-west movements for the East-West corridor. The MaineDOT recommendations of its Route 111 study are not included in this Strategic Investment Plan because of the relatively short term improvements recommended in the document. These improvements, which are immediate (not strategic medium or long-term needs), should be part of the MaineDOT Capital Work Plan.

2. Western Expansion of Maine Turnpike Authority Toll System (planning and project) - On the York County East-West Corridor several communities continue to request new access points off of the Maine Turnpike, and others hope for bypasses that will take through traffic out of their village centers. As York County's population continues to grow in more affordable areas west of the turnpike, existing arterials will become increasingly strained by growing traffic volumes. Currently, several towns on the East-West Corridor have expressed interest in limited access highway solutions. South Berwick and North Berwick have expressed interest in bypasses around their village centers (on Route 236 and Route 4 respectively), and Sanford is interested in direct turnpike access. Interestingly, the 13 largest towns in the state have reasonable access to the interstate system, with the exception of Sanford which was the 7th largest city in Maine during the 2000 Census. Sanford is also predicted to rise in population and in state rank by the next (2010) Census. Connections with service and employment centers in New Hampshire, such as Rochester and Somersworth should also be considered (Regional Transportation Assessment, An Economic Development Strategy for York County, Route 109, 111 and 236 Corridor Committees).
3. Establish Transit Service between Sanford and Biddeford/Saco (planning, capital and operational funds) - This proposal could be designed as an express system, multiple stop system, a peak hour commuter service or a combination of the above. General benefits of the system are that it would reduce traffic volumes, crash incidents, and air pollution on Route 111, and provide an alternative that would connect people from two urbanized areas to important shopping and employment destinations as well as to the Biddeford Park-and-Ride, the *Zoom Turnpike Express*, the *ShuttleBus* Tri-town service, and the Sanford *My Bus* System (Regional Transportation Assessment, PACTS MPO).
4. Purchasing Right of Way/Negative Easements in conjunction with Town-State Planning for Select Corridors (planning, project) - The focus of this investment would be on purchasing right of way for widening needs, parallel frontage roads, and/or purchase of access rights to better control access opportunities for select East-West Corridors. This particular proposal would require intensive transportation and land use coordination between MaineDOT, local communities and other stakeholders. Corridors for consideration would be Route 111, Route 109 and Route 25. Ongoing discussions on funds that could be leveraged for such an effort include corridor based impact fee systems or tax increment financing districts. A planning coalition effort would need to be part of the design, perhaps something similar to the *Gateway One* project now underway from Brunswick to Prospect, Maine (Regional Transportation Assessment, Route 111 and 109 Corridor Committees).
5. Park and Ride Development for Sanford Area (planning, project) - Sanford is Maine's 7th largest city and is connected by a number of arterials including Route 4, 109, 111 and 202, yet there are no public park and ride lots available to motorists in the urban area. There are several informal park and ride locations in the city at gas stations, and on road shoulders. Sanford, which provides more workers to the Portsmouth Naval Shipyard than any other town, currently uses a number of these informal park and ride lots in conjunction with a private bus service that transports workers to Kittery (Park and Ride Study, Regional Transportation Assessment, Route 236 Corridor Implementation Committee).
6. Establish a future road connection from the easterly end of Running Hill Road in Scarborough to the Maine Turnpike Approach Road in South Portland, coupled with an

upgrade to the condition and capacity of Running Hill Road from this area west to Route 114 in Scarborough (planning, project). The following excerpt from the Town of Scarborough describes the project in the following way: “The alignment of this road connection could be achieved by way of some undeveloped parcels of land off Running Hill Road in Scarborough through to the Exit 45 entrance/exit ramps and the toll plaza in South Portland. This is an initiative that we feel could have significant regional transportation benefits by: linking motorists from North Scarborough, Westbrook, Gorham, Buxton and beyond to the Turnpike and vice-versa; generally supplementing the planned Gorham bypass in providing much needed east-west connection; and lessening traffic congestion in the Maine Mall area by reducing through trips as well as trips destined for the Turnpike or I-295.” (Maine Mall Area Transportation Plan).

Capital Investments

None Identified, other than as noted above under Planning Initiatives.

Appendix 1- References

MaineDOT Documents

- MaineDOT. Office of Passenger Transportation. *Biennial Operations Plan for Transit, FY 2007- 2008*.
- MaineDOT. Office of Freight Transportation. *Commercial Vehicle Services Plan. June 2003*.
- MaineDOT. *Explore Maine*. <<http://www.exploremaine.org>>
- MaineDOT. *Highway Adequacy 2006 Interim Report*.
- MaineDOT. *Integrated Freight Plan. 2007*.
- MaineDOT. Bureau of Planning. *Keeping Maine Moving 2004-2025 Long-Range Transportation Improvement Plan, January 2004. Technical Amendment*.
- MaineDOT. *Maine's Transportation System – Status and Trend Indicators of Economic Growth and Quality of Life. August 2002*.
- MaineDOT. *One is Too Many – Maine's Strategic Highway Safety Plan. June 2007*.
- MaineDOT. *Progress Report on Implementation of the Stormwater Memorandum of Agreement. 2005*.
- MaineDOT. *Strategic Plan. 2007*.
- MaineDOT. *Transportation Driving Maine's Economy. September 2007*.
- MaineDOT. *Transportation in Maine: The State of the System. 2006*.
- MaineDOT and Maine Turnpike Authority. *The Future of Transportation Funding in Maine*, presented to the Joint Standing Committee of the 122nd Legislature. *April 2006*.
- MaineDOT. *Waterways and Wildlife Crossing Policy Design and Guidance. July 2008*.

Publications by Others

- Charles S. Colgan, Associate Director of and Professor of Public Policy and Management, Center for Business and Economic Development, University of Southern Maine. *Changes in the Maine Economy from Strategic Investments in the Transportation System. May 2008*.
- Federal Register, February 14, 2007 – Part III, Department of Transportation, Federal Highway Administration 23 CFR Parts 450 and 500, Federal Transit Administration 49 CFR part 613, *Statewide Transportation Planning; Metropolitan Transportation Planning; Final Rule*
- Maine Better Transportation Association. *Losing Ground – A Report on the State of Maine's Highway Fund. July 2005*.
- Maine Department of Environmental Protection. *Second Biennial Report on Progress toward Greenhouse Gas Reduction Goals*, Report to the Joint Standing Committee on Natural Resources, Second Session of the 123rd Maine Legislature, *January 2008*.
- Maine Development Foundation. *Measures of Growth in Focus – Performance Measures and Benchmarks to achieve a Vibrant and Sustainable Economy for Maine. 2007*.
- Maine Development Foundation. *Connecting Maine through Transportation – What Maine Businesses Have to Say. March 2009*.
- Maine Turnpike Authority. *Maine Turnpike 2004-2013 10 Year Planning Report. January 2004*.
- Maine Turnpike Authority. *The Transportation Funding Crisis: Tolls are the Answer. 2006*.
- Northeast Climate Impacts Assessment (collaboration of the Union of Concerned Scientists and independent experts). *Executive Summary - Confronting Climate Change in the U.S. Northeast: Science, Impacts and Solutions. undated*.

- Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters and Don Chen. *Growing Cooler: The Evidence on Urban Development and Climate Change*. 2008.
- Strategic Marketing Services. *Report to the Maine Department of Transportation – Transportation Survey*. August 2003.
- Strategic Marketing Services. *Report to the Maine Department of Transportation - Report of Transportation Focus Groups*. June 2004.
- The Brookings Institution. *Charting Maine's Future – An Action Plan for Promoting Sustainable Prosperity and Quality Places*. 2006.
- University of Maine, Margaret Chase Smith Policy Center, College of Business, Public Policy and Health. *Sustainable Transportation Funding for Maine's Future*. June 2006.
- Wilbur Smith. *Economic Impacts of Airports in Maine*. 2006.

Metropolitan Planning Organizations – Long Range Plans

- Androscoggin Transportation Resource Center. *Connecting the Future – Transportation Plan for 2003-2025*. December 2003.
- Bangor Area Comprehensive Transportation System. *Long Range Transportation Plan 2004-2025*. September 2004.
- Kittery Area Comprehensive Transportation System. *Technical Update to the Long Range Transportation Plan 2006-2030*. July 2006.
- Portland Area Comprehensive Transportation System. *Destination Tomorrow – 2006 Long Range Regional Transportation Plan*.

Regional Councils – Regional Transportation Assessments

- Androscoggin Valley Council of Governments. *Regional Transportation Assessment for the AVCOG Region*. May 2005.
- Eastern Maine Economic Development Corporation, Hancock County Planning Commission and Mid-Coast Regional Planning Commission. *Region Four Transportation Assessment Prepared for the Eastern Maine Economic Development Division Comprehensive Economic Development Strategy*. May 2005.
- Greater Portland Council of Governments and Southern Maine Regional Planning Commission. *Southern Maine Corridors Committee Regional Transportation Assessment*. May 2005.
- Kennebec Valley Council of Governments. *Kennebec Valley Regional Transportation Assessment*. 2005.
- MidCoast Council for Economic Development and Planning and Lincoln County Economic Development Office. *MidCoast Economic Development District Regional Transportation Assessment*. 2005.
- Northern Maine Development Commission. *Northern Maine Economic Development District Regional Transportation Assessment*. May 2005.

Indian Tribal Governments – Long Range Plans

- James W. Sewall Company. *Long Range Transportation Plan for the Passamaquoddy Tribe Indian Reservation at Indian Township*. March 2007.
- James W. Sewall Company. *Long Range Transportation Plan for the Passamaquoddy Tribe Indian Reservation at Pleasant Point*. October 2005.
- Penobscot Nations, Indian Island and ASCG, Inc. *Penobscot Nations Indian Island 20-Year Transportation Plan*. March 2009.

Appendix 2 - Air Conformity Analysis Narrative

Air Quality Conformity Determination

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation and buildings.

Areas that do not meet the NAAQS are designated as nonattainment areas and, as a result, are subject to transportation conformity. Maintenance areas are geographic regions that were previously designated as nonattainment, but are now consistently meeting the NAAQS. Transportation conformity requires nonattainment and maintenance areas to demonstrate that all future transportation projects will not hinder the area from reaching and maintaining its attainment goals.

Maine currently has two regions (Portland and Midcoast) designated as maintenance areas for the eight-hour ozone standard and one small area (downtown Presque Isle) designated as a maintenance area for PM10. No carbon monoxide, lead, nitrogen oxides, or sulfur dioxide nonattainment areas have been identified in Maine.

Transportation conformity is required under the Clean Air Act (CAA) and the Clean Air Act Amendments of 1990 (CAAA). The purpose of the transportation conformity process is to ensure that federally funded or approved transportation projects, programs and plans are reviewed and evaluated for their impacts on air quality. Specifically, the projects and other federally funded activities contained in the Long-Range Transportation Plan or Statewide Transportation Improvement Program (STIP) may not cause or contribute to new violations, exacerbate existing violations, or interfere with the timely attainment of air quality standards. The transportation conformity process requires the active participation of all agencies (federal, state and local) that implement federally funded transportation projects and programs within the Portland and Midcoast areas.

The air quality conformity analysis is found in a separate document entitled *Air Quality Conformity Analysis for the 2008-2011 Statewide Transportation Improvement Program and Connecting Maine, Statewide Long-Range Transportation Plan 2008-2030*. The analysis includes all regionally significant transportation projects identified in the 2008-2011 STIP and all regionally significant projects identified in *Connecting Maine* under the "Current Funding" scenario. Projects identified under the "Strategic Scenario" were not included in the analysis because these projects will not be completed unless additional funding becomes available. If any of these projects materialize with the 20-year horizon, MaineDOT will revise the conformity analysis as necessary.

The 2008-2011 STIP and *Connecting Maine* satisfy the conformity requirements of the Clean Air Act Amendments of 1990.

*Appendix 3 -
Changes in the Maine Economy From Strategic
Investments in the Transportation System*



Maine Department of Transportation
and
Maine Center for Business and Economic Research
University of Southern Maine

Charles S. Colgan PhD
Principal Investigator

May 2008

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Executive Summary

This study estimates the changes in the Maine economy which could result from a series of investments in the highway, transit, and freight (port and rail) elements of the Maine transportation system. These investments are part of the Department of Transportation's Long Range Plan. The contemplated investments may be summarized as follows:

- A total of \$1.7 billion over 26 years would be invested. Highway investments would comprise the bulk of these expenditures at \$1.47 billion (84%). Transit investments would total \$122.0 million (7%), and investments in Maine's rail networks and ports would total \$147.2 million (8%).
- The state share of this amount is assumed to be 35% of the total for road and 20% for transit investments. The state would be responsible for all of the costs of the rail and port investments. This would total \$348.3 million over the period for all three components. Federal funds would make up the rest.
- Annual investment spending would average \$139.0 million (both state and federal funds), although this would vary significantly in some years when major projects for transit or ports are undertaken.
- Investments would be made throughout the state, with Cumberland and eastern Maine (Penobscot, Piscataquis, Hancock, and Washington) counties accounting for 56% of investments.

The state share of this increased spending on transportation is assumed to be paid for by raising taxes in the amounts needed each year. Increased taxes are paid both by businesses and households. This "pay-as-you-go" assumption is unlikely to reflect actual practice by the Legislature, but represents a very conservative assumption regarding financing.

These investments will result in significant improvements in the transportation system. By 2030, the highway and transit investments will result in the saving of more than 43.3 million vehicle miles traveled and more than 16.4 million vehicles hours traveled (VHT). There will also be a reduction of nearly 2% in the proportion of travel subject to congestion. Freight investments are estimated to result in an annual increase in traffic of 3% leading after ten years to a 1% reduction in the cost of moving goods to and from Maine over the rail and through ports.

In addition to the investment analysis, an alternative scenario for highway funding is examined. Under this scenario, spending on highway improvements would remain at current levels through the period to 2030. The result would be that economic and population growth would significantly increase highway congestion. By 2030 under this scenario, vehicle hours traveled in Maine would increase by more than 28.2 million.

Changes in the efficiency of the transportation networks were analyzed by first estimating the economic value as changes in costs to businesses and households. Improvements in transportation efficiency lower costs to businesses that rely on transportation to both ship goods out and bring goods into Maine. Improvements also allow households to shift spending on vehicles to other goods and services. Deterioration in the efficiency of transportation results in higher costs for businesses and more spending on vehicles by households.

This analysis was undertaken using an economic model called TREDIS, which is specifically designed to examine the economic impacts of transportation. The economic changes from transportation change were then input to a large scale econometric model of the Maine economy developed for USM by Regional Economic Models Inc. The REMI model produced estimates of changes in employment and gross state product (GSP).

The results of this analysis showed the following:

- Together, investments in highways, transit, and freight transportation will yield an annual average gain of 1,442 jobs over the period from 2007-2030. By 2030, the Maine economy will have 2,538 additional jobs. The Maine Gross State Product is estimated to increase by more than \$2.5 billion over the period, or \$107 million per year. By 2030, the GSP will be \$198 million higher than it would have been in the baseline forecast.
- Highway investments will account for the bulk of the job gains; by 2030 employment growth resulting from highway investments will total almost 2,000. In contrast, if no investments in highways are made and funding is held at current levels, the Maine economy would be more than 5,800 jobs smaller. The difference between the investments and highways is more than 7,800 jobs and \$524 million in GSP in 2030.
- A comparison of the increase in gross state product with the state expenditures on transportation investments over the period shows that the Maine GSP will increase by a present value of \$3.65 for every present value dollar of investments (using a 5% discount rate).
- All regions of the state will see employment and GSP gains, with Cumberland County, eastern Maine, and western Maine (Androscoggin, Franklin, and Oxford counties) showing the largest gains.

The analysis of economic impacts is limited by available data and the long time horizon used in the study. In addition, readers are cautioned that economic impacts represent only a part of the economic assessment needed to fully evaluate investment options. A full cost-benefit analysis, which would account for the economic value of increased safety and the value of time saved, was beyond the scope of this study.

The results of the study indicate that transportation system improvements of the types envisioned by MaineDOT in their long range plan are likely to yield significant improvements in the Maine economy.

Acknowledgements

This study was undertaken by the Center for Business and Economic Research at the University of Southern Maine in cooperation with the Maine Department of Transportation. Dr. Charles Colgan, Associate Director of CBER and Professor of Public Policy and Management in the Muskie School of Public Service at USM was the Principal Investigator for the project and author of this report.

Dr. Bruce H. Andrews, Director of CBER and Professor of Quantitative Business Management in the USM School of Business served as Project Director for USM.

Gerry Audibert of the Bureau of Planning in the Maine Department of Transportation served as Project Director for MaineDOT. Ed Hanscom of the Bureau of Planning provided data on highway

projects and conducted the analysis using the MaineDOT statewide traffic model. Anna Price of the Office of Passenger Transportation and Rob Elder of the Office of Freight Transportation served as lead contacts for the study in these two areas.

Glen Weisbrod of the Economic Development Research Group of Boston provided permission for the use of the TREDIS model for the analysis in this study. Brian Baird of EDRG served as technical advisor for the TREDIS analysis.

1. Introduction

Maine's transportation system has long been understood to be an important element in the success of the Maine economy. But the ability of that system to continue to contribute to the economy is under increasing question as the demands on the system grow and the funding available from the motor fuels tax and the federal government faces severe constraints.

This report examines the economic impacts of investments in the highway, freight (ports and rail) and passenger transit components of the Maine transportation system. The purpose is to explore the changes in the levels of economic activity in Maine over the period from 2009-2030 that could result from different decisions about how much and where to invest in improving these components.

The analysis was undertaken by a partnership between the Maine Department of Transportation and the Center for Business and Economic Research (CBER) at the University of Southern Maine. As part of its Long Range Plan, the Department developed a set of investment scenarios for each element in the system and, for those scenarios affecting highway travel, the statewide traffic model was used to estimate changes in vehicle miles and hours traveled. These scenarios were then used by CBER to translate changes in transportation into changes in the costs of transportation for businesses and households and then into changes in the overall economy that affects employment and the total output of goods and services in Maine. Details of the scenarios and analysis are provided in sections 2 and 3 below. The results are presented in section 4.

This study examines the economic impacts of transportation system investments, but this is only one economic perspective on how transportation improvements affect people. There is an important distinction between economic *impacts* and economic *benefits*:

- Economic *impacts* are changes in the level of economic activity, and are measured by changes in employment, income, and the output of goods and services.
- Economic *benefits* (sometimes called “social benefits”) are changes in the values of goods and services. Values are measured as the difference between what people are willing to pay for transportation and what they actually pay (for consumers) and the difference between the value a business actually receives for its goods and services and the minimum amount it wishes to receive. The most important economic benefits of transportation are the values of time saved and the value of safety.

Safety provides perhaps the clearest distinction between impacts and benefits. Safe travel is clearly something that is desirable (it has a high value), and it has long been shown that people are willing to pay for increased safety. But unsafe roads actually increase the economic activity of the health care industry and its employees (doctors, hospitals, etc.). Investments that increase safety actually reduce the economic activity associated with health care, auto repair, etc., but it would obviously be an error to avoid making safety improvements on the grounds that the economy would be smaller.

The implication is that transportation improvements may be economically justified on the grounds of economic benefits exceeding the costs, but may show little or no economic impacts. This study, which examines only economic impacts, provides only a part of the economic picture needed to fully assess transportation investments.

This is particularly the case with two components of the transportation system, one of which is examined here and one of which is not. Public transit investments often have large economic benefits, particularly when they can affect the value of time saved in transportation. They also have economic impacts, which are estimated here, but these are probably smaller than the economic benefits. Air transportation improvements, which are not examined in this study, also have large economic benefits, but current data systems make it very difficult to estimate economic impacts from air transportation improvements. This lack of data is the reason why the economic impacts from air transportation improvements are not examined here.

2. Approach to Analysis

The analysis proceeded in three stages. First, the Department of Transportation identified a series of investments in the highway, transit, and freight transportation systems and estimated what effects those would have on the flow of vehicles, goods, and services in Maine. Second, the changes affecting the road network (highways and transit) were analyzed using an economic impact model specially designed for assessing transportation projects. This model, called TREDIS, was developed by the Economic Development Research Group of Boston, and was used with their permission. Finally, the economic changes were analyzed using a general econometric model of the Maine economy developed by Regional Economic Models Inc. (REMI) of Amherst, MA and maintained at the University of Southern Maine.

For the analysis of highway projects, three scenarios are examined.

Strategic Investment

The first is a “strategic investment” scenario designed to make key improvements to the transportation system that will result in the year 2030 in a network that is significantly more efficient.

Constant Performance

The second is a “constant performance” scenario, in which the Department invests just enough in transportation to keep the system at the current level of efficiency. There are no gains in efficiency, but also no deterioration from current levels. This “constant performance” scenario is assumed to be equal to the baseline forecast of the Maine economy in the REMI model. The baseline forecast against which changes in transportation are measured is assumed to be one in which the transportation system is neutral with respect to the rate of growth.

Constant Funding

The third is a “constant funding” scenario in which current levels of funding are maintained; this results in significant deterioration in the system’s efficiency as measured by significant growth in vehicle hours and miles traveled.

3. Strategic Transportation Improvements

This section describes the types of investments that are analyzed, as defined by the Maine Department of Transportation. All of the programs and projects included in this analysis are also included in the Long Range Plan which MaineDOT is currently developing in consultation with public and private organizations throughout the state. Bridge repair and replacement, a significant part of the Long Range Plan’s highway expenditure components are not included in this analysis.

Regions

The analysis was conducted for seven regions within Maine. These regions were identified by the MaineDOT as consistent (with some adjustments) to the regions that are used in the Department’s planning activities. These regions are:

Cumberland	Cumberland County
York	York County
Western	Androscoggin-Franklin-Oxford counties
Kennebec	Kennebec-Somerset counties
Midcoast	Sagadahoc-Lincoln-Knox-Waldo counties
Eastern	Penobscot-Piscataquis-Hancock-Washington counties
Aroostook	Aroostook County

Highways

The highway investment scenarios encompassed highway improvement strategies designed to improve mobility or preserve existing mobility on the arterial highway network. Success in achieving Long Range Plan mobility goals on the highway system is, in part, measured in terms of minimizing vehicle-hours of delay for a given amount of vehicle-miles traveled, in other words, managing network congestion. The highway improvement strategies used to manage congestion include the following:

- Access management on existing arterial highways
- New auxiliary (turning) lanes on existing arterial highways
- New passing lanes on existing arterial highways
- New through lanes on existing arterial highways
- New through lanes on controlled access highways (incl. new locations)

Another highway improvement strategy for improving mobility was the reconstruction of collector roads perennially posted to prohibit use by heavy trucks during the spring thaw.

Highway investments not factored into the Economic Analysis include the following:

- Highway safety projects
- Bridge replacement and rehabilitation projects
- Highway reconstruction and rehabilitation projects
- Pavement preservation projects

Transit

Transit projects analyzed include a wide variety of improvements in passenger rail, transit, bicycle and pedestrian trails, ferries and park & ride lots. Table 1 shows the transit investments in each region by year over the planning horizon. The transit investments will be comprised of two types of investment.

1. Expansion of Bus Services. This includes expansion of existing bus services in urban areas as well as summer “explorer areas” in tourist areas.
2. New transit facilities and services. This includes new rail service, new park and ride lots, and terminal facilities.

To examine the economic impacts of transit investments, vehicle miles not traveled in an automobile as well as vehicle hours of travel saved were estimated. Expenditures on vehicles not made because of reduced auto use shifted to consumption of other goods and services. It was assumed that most of the effect of transit would be on commuting activities, except in the case of transit facilities primarily for tourists. In this case, the vehicle savings become additional spending on food, lodging, and other retail goods.

In the development of the impacts from transit investments, only the construction impacts on the Maine economy are considered. New train or bus equipment originates outside of Maine and so has little impact on the Maine economy.

Freight

The Rail data included continuation of the Industrial Rail Access Program, the Section 130 Rail At-Grade Crossings Safety Program, Montréal Maine and Atlantic track rehabilitation and ongoing State-owned track maintenance programs. It also included a new Freight Rail Interchange Program, upgrades and purchases and rehab of the Mountain Division line and the Lewiston Lower Road lines.

The Port data included new channel dredging and a new or expanded container facility at Searport (including equipment such as cranes and warehouses). It also included a new facility at Eastport, and a complete rehabilitation of the International Marine Terminal in Portland.

This section discusses the way in which these effects are estimated, using the TREDIS model. These estimates are then used as inputs to the general econometric model of the Maine economy (the REMI model) which calculates the overall changes in economic activity.

Construction

Total construction costs for all investments were estimated by MainedOT, and a schedule of investment projects over the period 2007-2030 was specified. It should be emphasized that the construction value estimates are based on best professional judgment from information currently available, and should not be considered detailed project cost estimates. Similarly, the schedules of investments, particularly for transit and freight, are based on long range planning assumptions that are obviously subject to substantial modifications in the future.

REGION	2009	2010	2011	2012	2014	2015	2016-20	2022	2024	2026	2028	2030
Cumberland	Rail Portland-Yarmouth	Rail Yarmouth-Brunswick				Rail Yarmouth to Auburn						
		Brunswick Bus	Connection to ME Eastern RR			Park & Ride Lot	Park & Ride Lot	Park & Ride Lot	Park & Ride Lot	Park & Ride Lot	Park & Ride Lot	
			Freeport Bus									
	Fixed Route Bus Expansion											
York						Go Maine Van Pool Expansion						
Western ME							Rail Yarmouth to Auburn					Auburn Intermodal Facility
												Intercity Bus Service
Kennebec		KV Transit										
		Augusta Intermodal				3 Park & Ride Lots						
Midcoast						6 Park & Ride Lots						Boothbay Explorer
												Marine Highway Facility
												Ferries
Eastern ME		Trenton-Ellsworth Isld Expl		Intermodal Ellsworth		Intercity Bus to Bar Harbor						
						Acadia Gateway Center						
Aroostook						Intercity Bus to St. John Valley						

Table 1 Schedule of Transit Investments

4. Direct Economic Effects of Transportation Investments

The investments outlined in section 2 will affect the Maine economy in several different ways. Some of these clearly boost economic activity in Maine, but others have the opposite effect. Both positive and negative effects must be estimated and it is the net effect that must be determined through economic analysis.

The major positive effects are:

- Increased spending on construction
- Reduced costs to firms importing and exporting goods into and from Maine (whether domestic or international goods)
- Shifting household consumption away from spending on vehicles to spending on other goods and services

The major negative effects are:

- Reduced spending by households and tourists on vehicle related services which affects firms in these industries negatively, but the funding shifts to other goods and services.
- Increased taxes to pay for the state share of the transportation investments.
- Increased transportation costs to businesses and households resulting from deterioration in the system in the “constant funding” scenario.

This section discusses the way in which these direct effects are estimated, using the TREDIS model. These estimates are then used as inputs to the general econometric model of the Maine economy (the REMI model) which calculates the overall changes in economic activity.

Construction

Total construction costs for all investments were estimated by MaineDOT, and a schedule of investment projects over the period 2007-2030 was specified. It should be emphasized that the construction value estimates are based on best professional judgment from information currently available, and should not be considered detailed project cost estimates. Similarly, the schedule of investments, particularly for transit and freight, are based on long range planning assumptions that are obviously subject to substantial modification in the future.

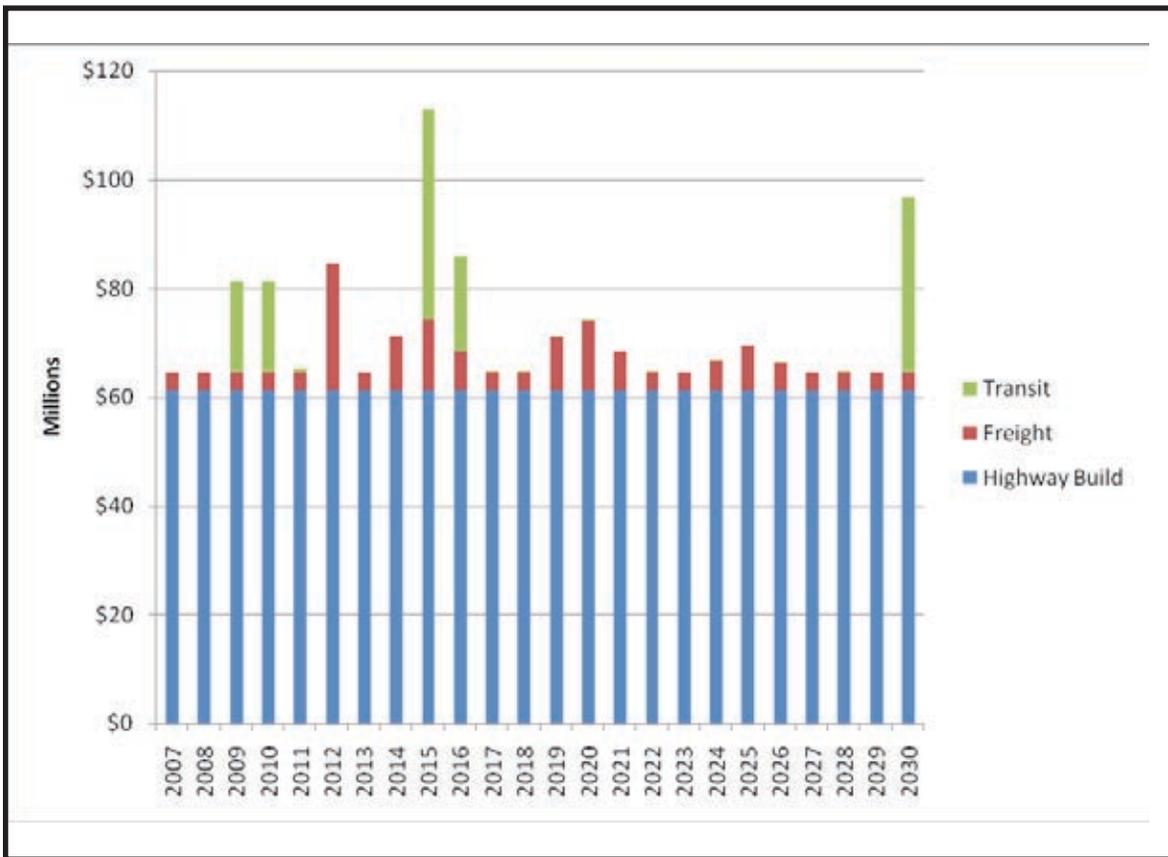


Figure 1 Construction Expenditures by Transportation System Component 2007-2030

Figure 1 shows the distribution of construction spending across the period examined. It is assumed that highway expenditures will be made on a constant basis throughout the period at a level of \$61.34 million per year. This is total spending comprised of both federal and state shares.

Transit investments occur beginning in 2009 and consist of several major projects. Freight rail projects are undertaken on a fairly constant basis throughout the period, with major port projects at Portland and Searsport comprising the period large increases in this component.

All together over the period, the highway investment will total \$1.472 billion (82% of the total) with transit totaling \$184.3 million (10%) and freight totaling \$147.3 million (8%). Spending on strategic investments will average \$75.1 million per year.

Table 2 shows the total amounts over the period for each of the seven analysis regions, and the proportion of the statewide total that would be spent in each area. These figures include all projects in highway, transit, and freight

	Total Expenditures	Percent
Cumberland	\$234.20	38.6%
York	\$57.01	9.4%
Western	\$111.04	18.3%
Kennebec	\$60.35	10.0%
Midcoast	\$78.91	13.0%
Eastern	\$55.69	9.2%
Aroostook	\$8.90	1.5%

Table 2 Distribution of Construction Expenditures by Region

It should be noted that in the scenario which examines the effects of constant spending levels, less construction spending will take place than would be the case in the baseline (constant performance) scenario. This is because the baseline, or constant performance, scenario assumes some growth in transportation spending to accommodate population and traffic growth. MaineDOT estimates that the constant performance spending will equal \$492 million over the period 2007-2030, while the constant funding scenario will mean \$412 million over the same period, a difference of \$80 million. Construction spending is reduced by this amount on an annual basis in the analysis of the constant spending scenario.

Taxes to Support State Share of Construction Spending

The construction expenditures must be paid for, and thus taxes must be raised (or other spending cut)¹ to pay the state share of these expenditures. The analysis of taxes necessarily involves some rather significant assumptions, for no one can reasonably predict what actions the Legislature may take. While the motor fuels tax (both federal and state) has historically provided the vast bulk of funding for the construction and maintenance of highways, the role of motor fuel taxes is likely to change in the future as more fuel efficient vehicles reduce demand for traditional diesel and gasoline. Transit funding comes from a variety of tax and user fees, while freight system funding is derived from a complex mix of revenue sources.

¹Assumptions about how spending might change are inevitably even more complex than assumptions about taxes and so are not used here.

To estimate the taxes necessary to pay for construction of transportation system improvements, it is first necessary to calculate what share Maine taxpayers will be directly responsible for. For highways, it is assumed that 35% on average will be the state share. For the construction costs of transit investments, it is assumed Maine taxpayers will pay for 20% of the construction. Freight system improvements are assumed to be paid entirely from state funds. This may vary from project to project and year to year, but represents an approximate historic average.

Two additional assumptions are needed: how will projects be financed, and what will be the distribution of taxes.

MaineDOT finances construction using a combination of current period revenues and bond financing, in which highway fund revenues are used to repay bond holders. Bonds permit the same revenues to generate additional expenditures sooner (and thus avoid inflation), though at the higher cost of paying interest to the lenders (bond holders). The exact mix of current revenues and bonds depends on a large number of factors which vary from time to time, and make it impossible to accurately forecast the way in which construction will be financed into the future.

The analysis in this study therefore uses a pay-as-you-go assumption. Whatever the construction expenditures will be in a given year, it is assumed that the Legislature will authorize raising that amount in taxes. This is in some respects an unrealistic assumption. The Legislature rarely raises taxes and almost never in the small increments that are implied in this analysis. But this approach does recognize that the state share must be paid for somehow, and permits a simple approach that does not require predictions about how legislatures will choose to approach financing and tax policy twenty years from now.

It also yields conservative estimates of the economic impacts of investments. That is, the restraining influences of tax increases are *overstated* in this approach, and thus the economic impacts from construction are *understated*.

The precise allocation of taxes in this analysis was done as follows: The total state share in each year was divided between the costs to be paid by businesses in the fuel tax and that paid by households. No data is available on this split, so businesses were assumed to pay 25% of the increased costs in the form of the fuel tax, with the balance going to households. The increase in the fuel tax was expressed as an increase in the production costs of the truck and courier industry, which was then passed on to consumers of these transportation services. The increase in production costs was estimate at 0.01% per year based on the proportion of total costs in the trucking industry derived from fuel.

The household share was treated as an increase in the share of personal income going to taxes in the REMI model. The total statewide amount to be paid by households was allocated among the regions based on each region's share of Maine personal income each year. On average, the share of personal income going to taxes was increased by \$28 million per year.

Transportation Cost Changes to Industry

To estimate transportation cost savings to industry, the first step was to estimate the changes in vehicle hours traveled (VHT), vehicle miles traveled (VMT) and the percent of traffic subject to delays (congestion). This was done by MaineDOT using their statewide traffic demand model. These changes in transportation efficiency were then converted into changes in the costs of transportation by industry using the TREDIS model. The results are shown by region in **Table 3**.

The changes in **Table 3** reflect both highway and transit projects resulting in changes in VHT, VMT, and proportion of traffic subject to congestion. However, only highway improvements directly result in changes in industry costs. Over the period, the improvements in efficiency reduce costs to industry by almost \$73 million.

	Change in Vehicle Miles Travelled in 2030 (Thousands)	Change in Vehicle Hours Travelled in 2030 (Thousands)	Change in Percent Travel Congested (2030)	Change in Industry Costs 2007-2030 (Millions)
Cumberland	-167.33	-5,902.67	-1.8%	-\$21.43
York	0.00	-1,694.03	-1.6%	-\$7.83
Western	-697.79	-1,964.12	-1.9%	-\$10.71
Kennebec	-1,558.83	-2,326.05	-1.6%	-\$11.56
Midcoast	0.00	-1,052.93	-1.0%	-\$4.32
Eastern	-1,887.06	-2,011.10	-1.2%	-\$14.87
Aroostook	0.00	-103.64	-0.6%	-\$2.02
MAINE	-4,311.01	-15,054.53		-\$72.73

Table 3 Changes in Travel Efficiency and Industry Costs-Strategic Investment Scenario

It is also necessary to identify the changes that may occur under the “constant funding” highway scenario (see Section 2). These are shown in **Table 4**. In this scenario, there is a substantial increase in vehicle hours traveled and in the congestion. These changes result in higher costs to industry totaling nearly \$100 million over the period.

	Change in Vehicle Hours Travelled in 2030 (Thousands)	Change in Percent Travel Congested (2030)	Change in Industry Costs (Millions)
Cumberland	9,241.55	4.4%	\$29.78
York	4,032.92	1.9%	\$18.13
Western	3,539.91	2.8%	\$12.74
Kennebec	3,635.24	0.6%	\$10.35
Midcoast	2,827.07	0.7%	\$9.26
Eastern	4,688.40	2.2%	\$18.13
Aroostook	293.04	0.3%	\$1.18
MAINE	28,258.12		\$99.58

Table 4 Changes in Travel Efficiency and Industry Costs-Constant Funding Scenario

Reduced costs to industry also result from the contemplated improvements in the freight transportation system. Unfortunately it proved very difficult to estimate what these reductions in cost might be. The detailed data on freight movements and the costs of freight transportation needed to make accurate estimates of these potential cost changes are not available for Maine ports and rail systems, because private companies manage these systems and their cost and volume data are kept confidential.

For purposes of this analysis, the Office of Freight Transportation and CBER developed a set of assumptions based on past performance and the limited information available. It is assumed that as a result of the strategic investments made traffic at Maine ports and on the freight rail network will increase by an average of 3% per year through the analysis period. After ten years of increasing volume, port and rail operators are assumed to be able to achieve some economies of scale and scope that permit them to lower the costs of services to their customers by 1%. This is probably a somewhat conservative assumption, but rail and port operators already operate in a highly competitive environment in which large efficiency gains and price reductions are unlikely.

The increase in volume is analyzed as an increase in the output of the water and rail transportation industries, while the decrease in prices is analyzed as a reduction in the cost of these services to all users of the port and rail systems.

Changes in Household Consumption

Improvements in transportation efficiency result in changing patterns of spending by households. Less time spent on the road or shorter drives reduce spending on gasoline, oil, vehicle maintenance, and related services. These savings are typically reallocated by households to other categories of spending, essentially boosting the sales of a wide variety of goods and services producers (especially as it relates to tourists, who could then spend more on lodging, dining out and recreation). Similarly, a deteriorating transportation system requires more spending on vehicles and related goods and services and less on other things.

In Maine, where a high proportion of vehicle spending is on motor fuels and lubricants, all of which must be imported from outside the state, shifting patterns of consumption can have a definite effect on overall economic activity.

Region	Reduced Spending on Vehicles from Strategic Investments	Increased Spending on Vehicles if System Deterioration Occurs
Cumberland	-\$546.59	\$1,050.98
York	-\$217.92	\$639.82
Western	-\$262.97	\$449.54
Kennebec	-\$211.25	\$365.18
Midcoast	-\$106.13	\$326.86
Eastern	-\$293.43	\$639.82
Aroostook	-\$32.11	\$41.66
MAINE	-\$1,670.40	\$3,513.85

Table 5 Changes in Household Consumption Present Value @5% 2009-2030

Table 5 shows the changes in household consumption estimated by TREDIS based on the estimated changes in vehicle hours traveled (VHT), vehicle miles traveled (VMT), and percent of traffic subject to congestion. The column “reduced spending on vehicles from strategic investments” shows the decline in spending on vehicles; this same amount is then allocated to all other consumption sectors to estimate economic impacts.

The opposite interpretation is placed on the column “increased spending on vehicles”; this increase resulting from deterioration in the highway network is offset by an equal decrease in spending on all other consumption sectors.

Tourist Expenditures

Part of the investments in transit will be for improved bicycle transportation facilities throughout the state. The economic impacts of these improvements are assumed to be derived from increased bicycle tourism activities. An estimate of additional spending of \$17.65 million over the study period is used for these tourism activities, distributed among the regions based on population.

5. Economic Impacts of Transportation Investments

Overall Economic Impacts

Figure 2 shows the estimated statewide employment impacts from the strategic investments identified in the areas of highways, transit and freight. Over the period from 2007-2030, the Maine economy will show an average increase of 1,467 jobs in comparison with the baseline “constant performance” scenario. On average, the economy will be \$113 million per year larger in terms of the gross state product, the total value of goods and services produced in Maine. Over the twenty-six year period, the state economy will be a total of \$2.7 billion larger than it would have been.

In 2030, the economy will have added 2,465 jobs compared with the baseline scenario, and will be producing \$195 million more in Gross State Product compared with the baseline scenario. **Table 6** presents a summary of these estimates.

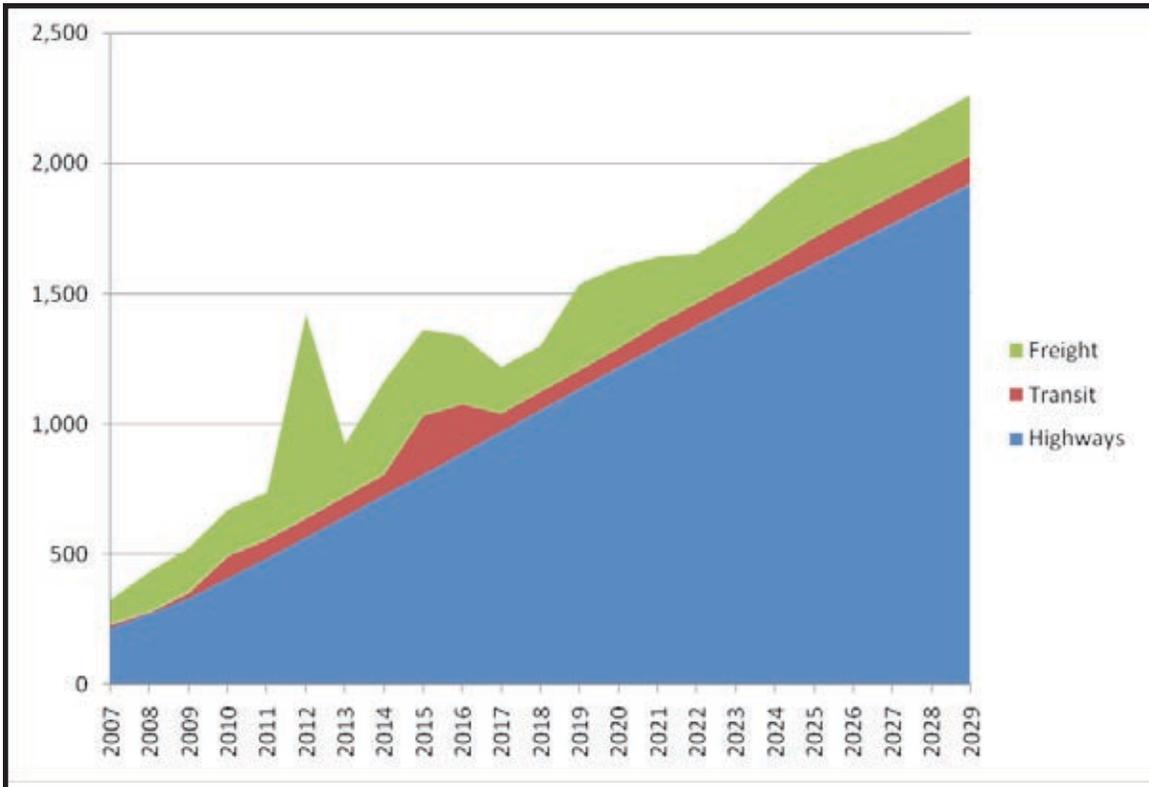


Figure 2 Employment Impacts from Strategic Investments

	Annual Average Change		Change in 2030	
	Employment	Gross State Product (Millions)	Employment	Gross State Product (Millions)
Highways	1,094	\$59.09	1,996	\$132.47
Transit	86	\$3.92	226	\$10.04
Freight	254	\$44.81	242	\$56.08
Total	1,442	\$107.82	2,538	\$198.59

Table 6 Changes in Employment and Gross State Product by Component

Figure 3 shows several features of the assumptions used in this analysis. The changes in highway performance (changes in VHT, VMT, and proportion of traffic subject to congestion) were specified for the year 2030, and it was assumed that continuous investments throughout the period would result in a constant rate of improvement in highway network efficiency. Thus the increase in highway-related employment shows a constant rate of change over the period.

In contrast, both freight and transit investments are much more driven by the construction activity for large projects such as the major investments at the Port of Portland and Seaside in the case of freight and the major passenger rail projects for transit. The result is a much more irregular pattern of change until all projects have been completed.

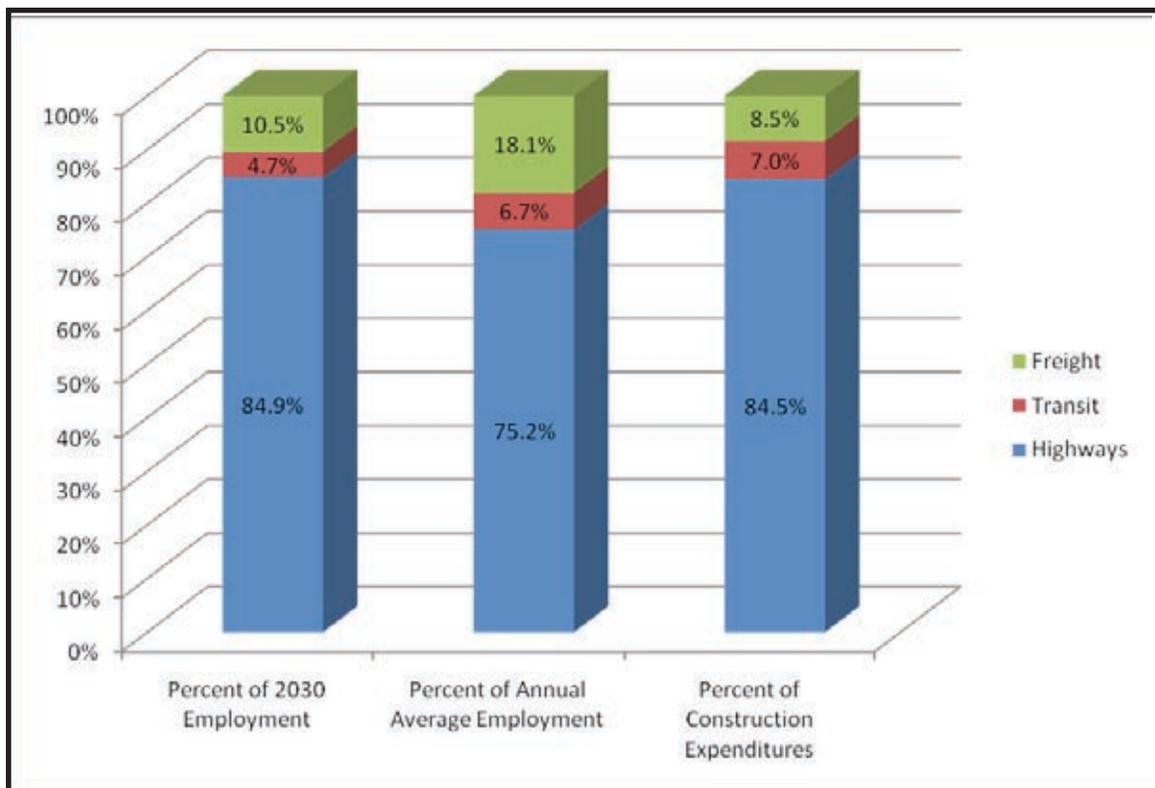


Figure 3 Comparison of Construction Expenditures and Employment Impacts by Component

Figure 3 compares the distribution of employment impacts with the distribution of construction expenditures for the three components of the transportation system. A comparison is made to both the annual average employment impacts and the estimated impacts in 2030. Highway improvements comprise about 84% of the spending, and about the same proportion of impacts in 2030, but a somewhat lower proportion (75%) of annual average employment impacts. This is due to the long build-up time in the improvements in highways. Transit comprises about 7% of expenditures and a slightly smaller proportion of employment gains; as noted earlier, transit improvements are more likely to be larger in terms of economic benefits than economic impacts. Freight transportation in ports and rail make up 8% of expenditures but nearly 10% of employment impacts and, partly due to the smaller share of highway impacts, over 18% of average annual employment impacts.

Economic Impacts of Strategic Investment v. Constant Funding of Highways

As discussed above, the analysis of highways involves three scenarios: a constant funding scenario, a constant performance scenario (equal to the baseline REMI forecast), and a strategic investment scenario. **Figure 4** shows the employment impacts from these three scenarios. The constant performance is shown on the horizontal axis at zero since it is equal to the baseline scenario. The strategic investment scenario shows constant job growth, while the constant funding scenario shows constant job decreases as the highway network becomes more and more congested.

Over the 2007-2030 period, the strategic highway investment scenario yields an annual average of an additional 1,094 jobs, while the constant funding highway scenario shows an annual average decline of 2,973 jobs. By 2030, the strategic investment scenario has produced 1,996 additional jobs compared to the constant performance-baseline scenario, while the constant funding has resulted in a fall of 5,835 jobs. Over the entire period, the strategic investment scenario yields a total of \$1.42 billion in additional GSP, while the constant funding scenario results in a reduction of \$4.07 billion in GSP.

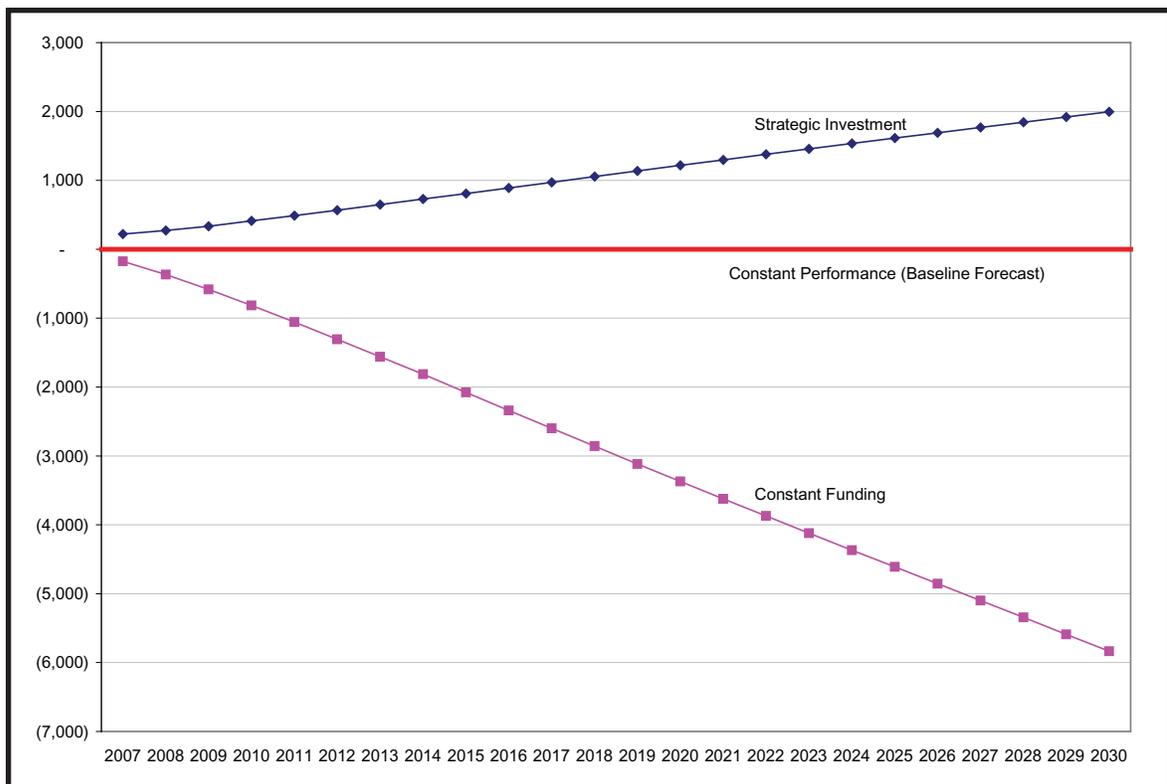


Figure 4 Employment Impacts from Three Highway Investment Scenarios

Economic Impacts by Region

Figure 5 shows the employment gains from all strategic transportation investments by region for the period from 2007-2030. The spikes in the different regions are the result of construction employment growth associated with major transit and port projects. These projects are timed at various stages through the forecast horizon as discussed above.

	Annual Average Employment Change	% of State	Employment Change in 2030	Percent of State
Cumberland	338	22.0%	571	22.5%
York	172	11.2%	262	10.3%
Western	248	16.1%	625	24.6%
Kennebec	205	13.3%	314	12.4%
Midcoast	133	8.7%	158	6.2%
Eastern	397	25.8%	535	21.1%
Aroostook	45	3.0%	74	2.9%

Table 7 Change in Employment from Strategic Investments by Region: Annual Average and 2030

Table 7 shows the average annual employment change in each region and the estimated change in 2030, along with the proportion of the statewide employment change in each region.

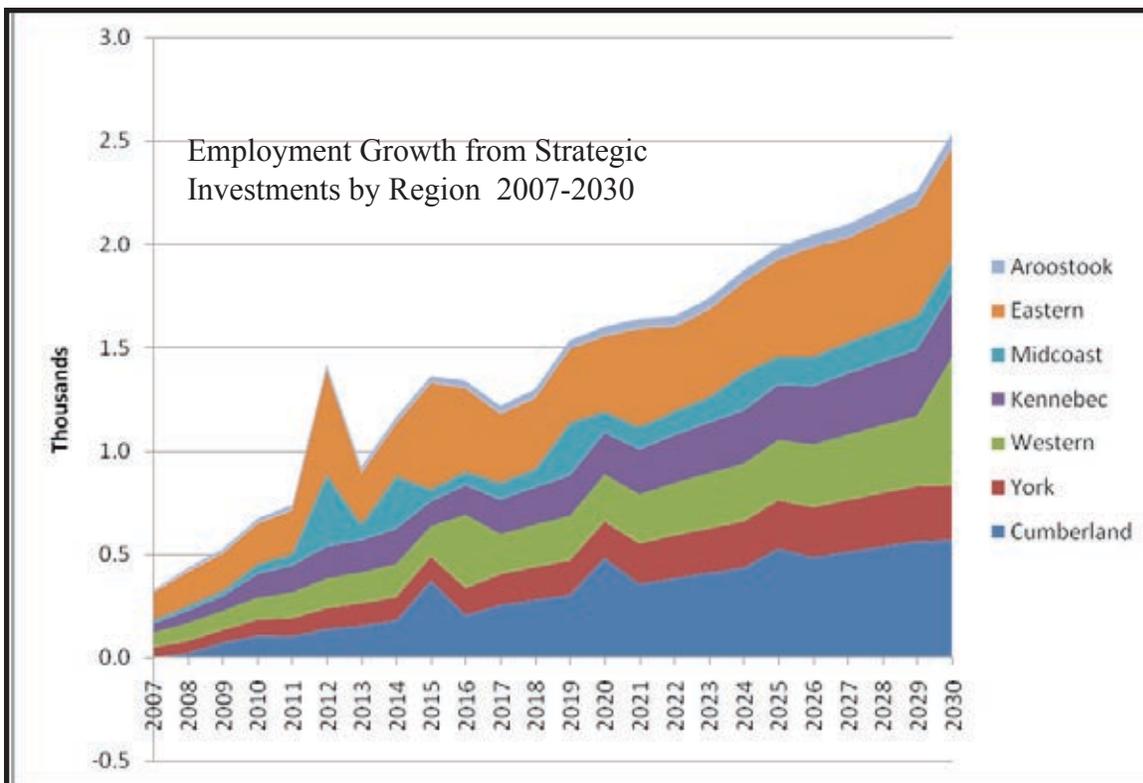


Figure 5 Employment Growth from Strategic Investments by Region 2007-2030

On an annual average basis, the Eastern region of Penobscot, Piscataquis, Hancock and Washington counties has the largest employment gain at 381, or 26% of the annual average statewide gain. This is due primarily to the large investments in highways to avoid posting roads with weight limits in the spring that is planned for this region. However, in 2030, Western Maine shows the largest gain in jobs among the seven regions, at 625, which is 25% of that year’s employment growth.

The regional differences in job growth between the investment and constant funding scenarios for highways are shown in **Figure 6**. **Table 8** and **Table 9** show the distribution of employment and gains and losses in the two scenarios.

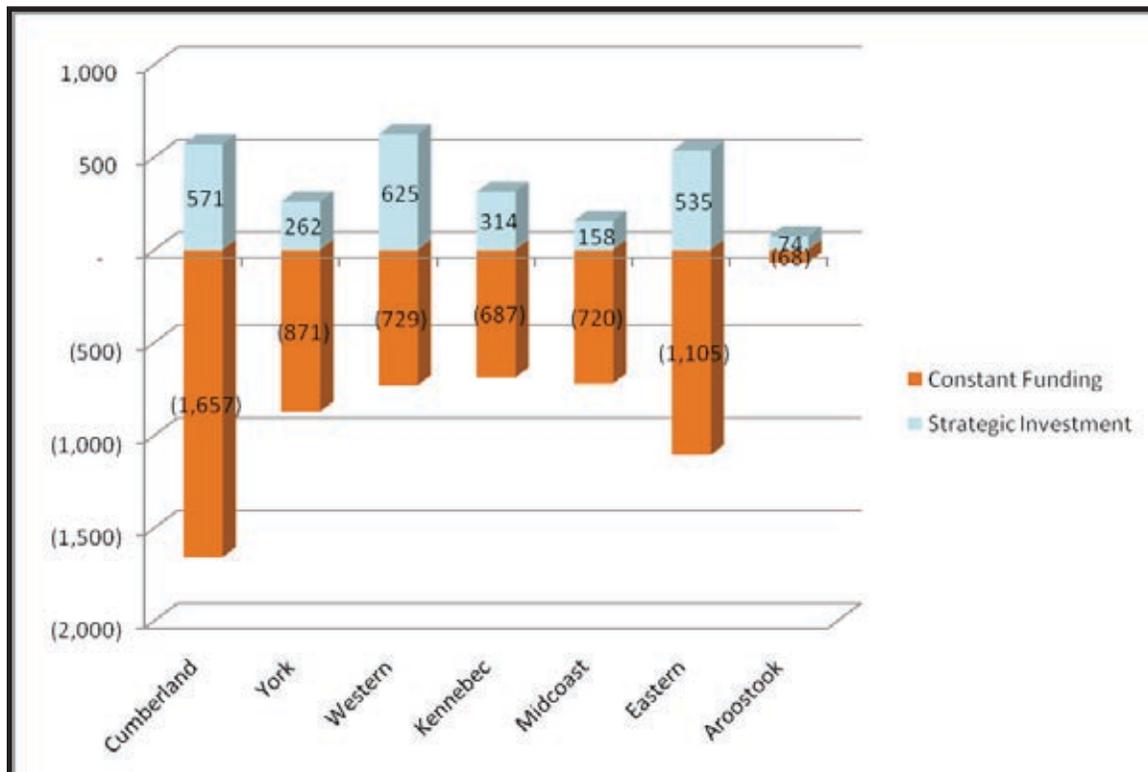


Figure 6 Employment Gains in 2030 from the Investment and Constant Funding Highway Scenarios

	Annual Average Employment Change	% of State	Employment Change in 2030	Percent of State
Cumberland	248	22.7%	519	26.0%
York	126	11.5%	229	11.5%
Western	190	17.4%	324	16.2%
Kennebec	158	14.5%	291	14.6%
Midcoast	72	6.6%	144	7.2%
Eastern	273	25.0%	434	21.7%
Aroostook	26	2.4%	56	2.8%

Table 8 Employment Gains from Highway Investments by Region

	Annual Average Employment Change	% of State	Employment Change in 2030	Percent of State
Cumberland	-835	28.1%	-1,657	28.4%
York	-447	15.0%	-871	14.9%
Western	-369	12.4%	-729	12.5%
Kennebec	-342	11.5%	-687	11.8%
Midcoast	-385	12.9%	-720	12.3%
Eastern	-561	18.9%	-1,105	18.9%
Aroostook	-34	1.1%	-68	1.2%

Table 9 Employment Losses from Highway Constant Funding

The effects of expected increases in congestion on the economy are clearly shown in this analysis. Cumberland County is the largest gainer of jobs by 2030 if strategic investments are made, with 26% of the estimated job gains. But if the highway system is allowed to deteriorate in performance, by 2030 Cumberland County will suffer more than 28% of the job losses.

Return on Investment Analysis

Given the magnitude of investments under consideration (\$1.8 billion over 26 years), it is natural to ask what will be the return on that investment. A true return on investment analysis comparable to that which would be undertaken in the private sector requires a comparison of the economic benefits with the costs rather than the economic impacts². However, it is possible to approximate a return on investment analysis by comparing the present value of the gains in gross state product (GSP) with the present value of the state share of construction expenditures.

²The reason involves technical issues in the measurement of costs and benefits which require that each change in values be assigned as either a cost or a benefit in the accounting. This is not done in economic impact analysis, where employment is counted as a positive impact, but is also a cost to the organization that hires the employee. An employee on a construction project is thus counted as both a cost and a benefit, which makes a meaningful comparison impossible. For this reason the proper return on investment analysis for public sector expenditures is cost-benefit analysis, not economic impact analysis. Such a cost benefit analysis was beyond the scope of the analysis called for in this study.

This is done in **Table 10**, which shows the present value of construction costs over the twenty-six year period and the present value of the net change in GSP from the strategic investments. The discount rate used is 5%, which approximates the State’s long term cost of borrowing. The ratio of these calculations yields the dollars in net GSP gains per dollar of state expenditures on construction.

	Percent Value of State Share of Construction Costs	Percent Value of Gross State Product Gains	Dollars of GSP Gains per Dollar of Present Value Construction Costs
Highways	\$297.26	\$640.77	\$2.16
Transit	\$24.41	\$43.89	\$1.79
Freight	\$86.81	\$587.82	\$6.76
Total	\$348.89	\$1,271.88	\$3.65

Table 10 Return on Investment Analysis

Table 10 shows that there is a positive gain in the size of the value of goods and services produced in Maine for investments in each of the transportation system components. Overall, there is a gain of \$3.65 per dollar invested. Freight investments show the highest gain per dollar invested, at \$6.76. Transit investments show a gain in GSP of \$1.79 per dollar, while highways show a net gain of \$2.16.

It should be noted, however, that the large economic gain associated with investing in transit (compared with the gain from investing in highways) is heavily influenced by the timing of investments in these two sectors. Highway investments, as noted earlier, occur at a constant rate over the period, but take time to have their largest impacts. On the other hand, many of the major transit investments are made in the period 2020-2030. The mathematics of discount rates place a heavier emphasis on the up-front highway costs and a lighter emphasis on the more distant gains in GSP from those investments, while the costs of the later transit investments receive reduced emphasis.

Conclusions

There are some cautions that are in order for this analysis. Detailed data needed to conduct thorough analysis of many parts of the system are lacking either because it is unavailable from any source or because the effects of new approaches to transportation, such as commuter passenger rail north of Portland, are unknown. Throughout this analysis, the best judgment of Department of Transportation and CBER was used to provide realistic estimates. Whenever possible, assumptions of positive effects were understated and possible negative effects were overstated. This results in a conservative analysis of the financial impacts of investing in Maine’s transportation infrastructure. In this case “conservative” means that care has been taken not to overstate the economic impacts. A more realistic financing approach that made more use of bonds would result in a somewhat higher dollar-of-gross-state-product-to-dollar invested ratio over the same period.

A second issue is that this analysis was conducted at a highly aggregate level across projects and regions. The results should not be interpreted as meaning that the economic impacts from every specific project will be positive to the extent implied here.

Finally, to return to a point made at the outset, there is a critical difference between economic benefits and economic impacts. A full economic evaluation of transportation investments requires both. There are very likely to be many projects considered which will have relatively small economic impacts but may have very large economic benefits in the form of increased safety or savings in the most valuable commodity of all: time.

Nonetheless, this analysis shows that the program of strategic investments currently being planned by the Maine Department of Transportation in the highway, transit, and freight systems of the state will have significant positive economic impacts on the Maine economy. This is the case even though very conservative assumptions about the economic effects of those changes are used, particularly with respect to the way in which taxes will be used to fund the state share of investments. Gains in employment and output (GSP) will be realized from investments in all three components, and will occur in all regions of the state.

Moreover, the costs to the economy of allowing the transportation system, particularly the highway network, to deteriorate are substantial. Growth in the economy and population over the next quarter century will put ever-increasing strain on the highways, resulting in much greater congestion on the highways which will bring significant increases in costs, that will result in significantly lower employment and output in 2030 than would occur if investments were made to just keep the system performing at its current level. The difference between gains from strategic investments in highways and losses from maintaining current funding amount to 7,800 jobs and more than \$500 million in GSP over two decades.

The result of this analysis, therefore, is a very strong case for serious consideration of implementing the strategic investments under development by MaineDOT. While the results of this analysis show that implementation of the strategic investments being proposed will provide financial and employment advances for Maine, the results of this analysis clearly indicate that the continuation of status quo or constant performance levels of investment will yield significant and much greater losses to the state, both in employment and in the output of Maine's economy. In other words, the opportunities for important improvements in Maine's economy from carefully planned transportation investments are very real. But so are the risks of significant declines in the Maine economy if only current spending is maintained in the future.

Appendix 4 - Modified TELUS Model

TELUS Scoring System	
Score Value Range:	
- 3 = Major Negative Effect	
- 2 = Moderate Negative Effect	
- 1 = Minor Negative Effect	
0 = No Effect/Not Applicable	
1 = Minor Positive Effect	
2 = Moderate Positive Effect	
3 = Major Positive Effect	
Scoring Parameters	
Economic Vitality - Supports economic vitality by enabling competitiveness, productivity, and efficiency while enhancing the accessibility, connectivity, integration and mobility of the transportation system across and between modes.	
Promotes general economic development - increases # of jobs; retains current jobs	
Improves or enhances tourism - increases # of tourists; enhances tourist spending	
Improves or enhances the movement of freight and services - increases efficiency; reduces costs	
Improves or enhances access to jobs and opportunities - reduces commuter travel time and expenses	
Provides enhanced or new capacity, mobility or accessibility to the transportation system to move people - offers modal choice/diversity	
Enhances the range of freight service options available to local business - improves roads and bridges structurally and functionally; offers modal choice/diversity	
Improves intermodal connectivity for freight - offers modal choice/diversity	
Improves heavy haul truck network, e.g., working forests, farms and waterfronts - improves roads and bridges structurally and functionally	
Impacts Pine Tree Zone - increases new businesses; stimulates economic development opportunities	
Safety & Security - Increases the safety and security of the transportation system for all modes.	
Reduces vehicular crashes - decrease in # and severity of vehicular crashes	
Increases access to crash incidences and/or disabled motorists - improves functional infrastructure; reduces congestion; enhances modal choice/diversity	
Enhances the public safety of motorist and non-motorist - improves structural and functional infrastructure	
Contributes to a reduction in traffic volume - reduces congestion, travel delay and modal conflicts	
Improves the handling of hazardous materials movement - improves structural and functional infrastructure; isolates potential exposure	
Enhancements - Protects and enhances the environment, promotes energy conservation, and improves quality of life.	
Reduces overall vehicle emissions and/or noise - actual net reductions to ambient levels	
Decreases fuel consumption - encourages fuel conservation via design and/or operational improvements	
Protects wetlands or other natural habitats - mitigates high value natural resources	
Decreases water pollution - implements state-of-the-art erosion control measures	
Promotes non-motorized travel - directly provides or links to bike/ped routes	
Improves traffic flow - encourages optimal traffic speeds	
Supports cultural and/or historic property retention or development - minimizes infrastructure "footprint"	
Supports community cohesion and design - provides aesthetic, multimodal transportation links	
Promotes environmental equity - benefits Environmental Justice/Title VI goals	
Enhances development of brownfields - directly encourages reuse of brownfields	
Advances "smart growth" objectives - incorporates land use policies	
Improves intermodal connectivity for people - offers modal choice	
Conforms with local, MPO, regional and State land use plans - provides compatibility with other community, regional and State development plans	
Provides benefits for multiple jurisdictions - maximizes local, regional and statewide benefits	
Improves access and/or enhance vitality of downtown or community/village center - provides aesthetic and economic incentives	
Recreational access to a water body - access directly associated with a public way	
Improves school, healthcare and neighborhood connections - directly links to bike/ped routes	
Improves Scenic Byways - officially designated Federal Scenic Byway	

Transportation System Sustainability - Emphasizes the preservation of the existing transportation system and promotes efficient system management and operation.
Incorporates new Intelligent Transportation Systems (ITS) technology - innovative/integrated use of ITS devices, traveler information, etc. to alert travelers to road conditions, alternate routing, etc.
Reduces transportation costs - favors existing infrastructure vs. new
Contributes to better system maintenance - increased longevity and efficiency are enhanced
Emphasizes system rehabilitation rather than expansion - no new capacity or additional impact "footprint"; maximizes existing capacity; optimizes use of existing infrastructure to enhance service
Encourages public/private partnerships - leverages public/private funding sources
Provides favorable return on investment - life cycle economic benefits surpass life cycle costs of the facility
Promotes public affordability - provides access at reasonable user costs
Provides sustainability - long-term funding will be available to operate and maintain the facility over its life
Maximizes funding availability - meets or exceeds program requirements
Delivers on initial feasibility - demonstrates public acceptability

TELUS Regional Strategic Investments Scoring

Region:						
Corridor Name:						
Scoring:						
-3	Major Negative Impact					
-2	Moderate Negative Impact					
-1	Minor Negative Impact					
0	No Impact or Not Applicable					
1	Minor Positive Impact					
2	Moderate Positive Impact					
3	Major Positive Impact					
		Strategic Investment				
Scoring Parameter		#1	#2	#3	#4	#5
Economic Vitality (-27 to 27 Points)						
Promotes general economic development						
Improves or enhances tourism						
Improves or enhances the movement of freight and services						
Improves or enhances access to jobs and opportunities						
Provides enhanced or new capacity, mobility or accessibility to the transportation system to move people						
Enhances the range of freight service options available to local business						
Improves intermodal connectivity for freight						
Improves heavy haul truck network, e.g., working forests, farms and waterfronts						
Impacts Pine Tree Zone						
Subtotal		0	0	0	0	0
Weighting Factor (25% of Total)		0.93	0.93	0.93	0.93	0.93
Weighted Score		0	0	0	0	0
Safety & Security (-15 to 15 Points)						
Reduces vehicular crashes						
Increases access to crash incidences and/or disabled motorists						
Enhances the public safety of motorist and non-motorist						
Contributes to a reduction in traffic volume						
Improves the handling of hazardous materials movement						
Subtotal		0	0	0	0	0
Weighting Factor (25% of Total)		1.67	1.67	1.67	1.67	1.67
Weighted Score		0	0	0	0	0
Enhancements (-54 to 54 Points)						
Reduces overall vehicle emissions and/or noise						
Decreases fuel consumption						
Protects wetlands or other natural habitats						
Decreases water pollution						
Promotes non-motorized travel						
Improves traffic flow						
Supports cultural and/or historic property retention or development						
Supports community cohesion and design						
Promotes environmental equity						
Enhances development of brownfields						
Advances "smart growth" objectives						
Improves intermodal connectivity for people						
Conforms with local, MPO, regional and State land use plans						
Provides benefits for multiple jurisdictions						
Improves access and/or enhance vitality of downtown or community/village center						
Recreational access to a water body						
Improves school, healthcare and neighborhood connections						
Improves Scenic Byways						
Subtotal		0	0	0	0	0
Weighting Factor (25% of Total)		0.46	0.46	0.46	0.46	0.46
Weighted Score		0	0	0	0	0
Transportation System Sustainability (-30 to 30 Points)						
Incorporates new Intelligent Transportation Systems (ITS) technology						
Reduces transportation costs						
Contributes to better system maintenance						
Emphasizes system rehabilitation rather than expansion						
Encourages public/private partnerships						
Provides favorable return on investment						
Promotes public affordability						
Provides sustainability						
Maximizes funding availability						
Delivers on initial feasibility						
Subtotal		0	0	0	0	0
Weighting Factor (25% of Total)		0.83	0.83	0.83	0.83	0.83
Weighted Score		0	0	0	0	0
Total Raw Score (-126 to 126 Points)		0	0	0	0	0
Total Weighted Score		0	0	0	0	0
Priority						
Strategic Investment Description						
#1						
#2						
#3						
#4						
#5						

Appendix 5 - Internet Survey and Analysis

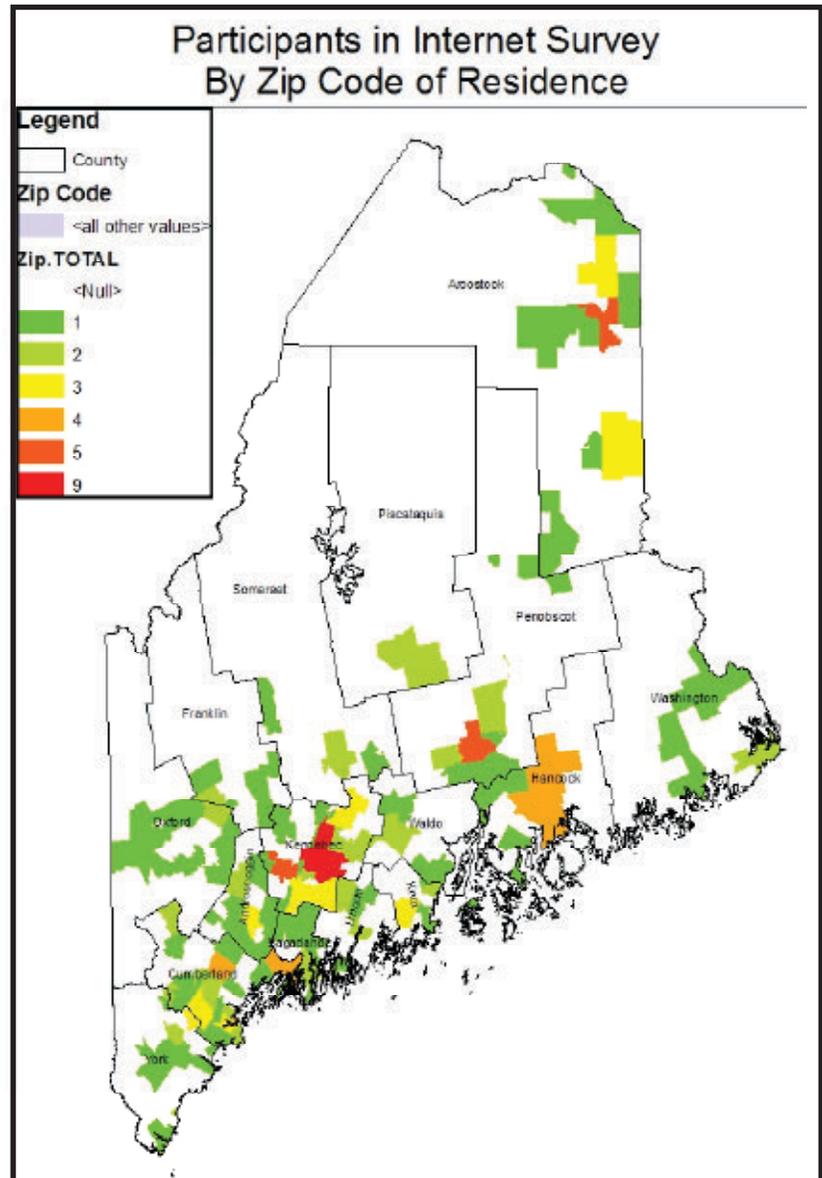
Provided Courtesy of James H. Fisher, Ph.D., AICP
Hancock County Planning Commission
July, 2007

Internet Survey

MaineDOT launched a web-based survey providing easy access to the plan and an additional platform for public comment. The survey guided individuals through the draft plan asking substantive questions related to specific sections that were readily accessible and complimented by a text summary. Incentives were offered to encourage the public to complete the survey. Several hundred people completed the survey, the results of which are analyzed below. A complete tabulation of results is annexed to this report.

Demographics

One hundred and ninety-nine survey respondents are drawn from 118 different zip codes. A few areas with higher concentrations of respondents include Augusta (9), Winthrop (5), Bangor (5), and Presque Isle (5). Participation generally tracks population density, though numbers of participants per zip code area are too small to be considered representative.



Introduction

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
As the Foreword states, Maine is “losing ground” in its effort to maintain and improve its transportation system. By “losing ground” we mean that Maine’s transportation system is wearing out and deteriorating faster than the financial resources allow rebuilding it. How do you feel about this assessment?	65%	27%	5%	3%	0%

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
As a Maine citizens, how concerned are you about the overall deterioration in Maine’s transportation system?	64%	29%	3%	4%	1%

The level of concern for Maine’s Transportation infrastructure is very high, with more than 90% of respondents in the “top two boxes” or response categories.

Visions and Goals

The next set of questions are based on Chapter 1 of *Connecting Maine*.

Goals (Responses sorted by percent saying strongly agree)	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Transportation long-range planning should support quality of life in Maine.	57%	34%	7%	2%	1%
Transportation long-range planning should ensure a safe and secure transportation system.	55%	44%	2%	0%	0%
Transportation long-range planning should support economic vitality.	54%	43%	3%	1%	0%
Transportation long-range planning should support effective land-use planning.	50%	41%	8%	1%	1%

Here again there is widespread agreement around the four goals set forth in Chapter 1 of *Connecting Maine*. While quality of life had the highest percentage of Strongly Agree, Safety and economic vitality have virtual unanimity for the highest “top two boxes” scores.

	Very Important	Somewhat Important	Neutral	Marginally Important	Not Important	No Answer
How important do you think regional coordination is in guiding Maine's transportation future?	68%	22%	8%	2%	1%	1%

Regional coordination is also strongly endorsed by survey respondents. There is a significant degree of correlation between support for regional coordination and interest in coordinating land use and transportation planning. To the (very limited) extent that there is any lack of support for transportation goals, this may be associated with concern about expanding the role of state and regional governmental organizations.

Forces Shaping the Future

The next question is based on chapter two of *Connecting Maine*. Please take a moment to open and read chapter two or its summary. Please rank the statements of policy below from 1 through 6, with 1 being the most important policy direction you think Maine should take, and 6 being the least important from your perspective.

Forces (Responses sorted by percent saying most important)	1 Most Important	2	3	4	5	6 Least Important	No Answer
To increase financial resources to expand the transportation system	35%	18%	10%	7%	12%	18%	1%
To encourage economic growth	22%	23%	21%	17%	11%	6%	1%
To protect the natural environment and cultural heritage	18%	15%	23%	22%	9%	13%	0%
To encourage effective land-use planning	14%	18%	22%	19%	16%	13%	0%
To cap activities in response to limited financial resources	9%	6%	10%	10%	19%	46%	1%
To respond to demographic challenges	8%	19%	23%	23%	20%	8%	1%

MaineDOT's message - that revenues are not keeping pace with costs - has resonated with survey respondents. This issue was considered the highest priority among the choices by over a third of respondents and over half put this as first or second priority. The importance of investing in transportation for statewide economic growth was the next priority, with 45% considering it to be among their top two choices. While responding to demographic challenges did not rank high among first choices, capping MaineDOT activities to respond to financial limitations received the clearest bottom ranking among all choices.

Investment Initiatives

The next question is based on chapter three of *Connecting Maine*. If you had \$100 to spend on transportation, how would you allocate this amount the following initiatives?

Category (sorted from highest to lowest)	Average Amount Allocated
Highways	\$27.23
Bridges	\$19.60
Bus and Rail passenger transportation	\$11.82
Congestion reduction	\$7.09
New or improved economic connections	\$7.02
Freight intermodal systems	\$6.33
Seaport development	\$6.01
Bicycle and pedestrian trails	\$5.61
Airport development	\$5.03
Quality community enhancement	\$3.78

Responses to the survey were quite diverse. The table above averages all responses and then ranks priorities by the amount of funding provided to each. Comparisons between the choices is somewhat complicated as they are neither comprehensive nor mutually exclusive. For instance, investments to reduce congestion can take many forms, including rail, transit, highways and trails. With that in mind, Highways and Bridges are the two top priorities, taking nearly half of all dollars.

Other modal investments, considered separately, place passenger bus and rail service at the top, followed by freight, seaport, bicycle and pedestrian and finally airport investments.

The three remaining choices rank in order congestion mitigation, economic connections and quality community enhancements. Because these overlap with the other investments and with each other, it is difficult to interpret these results other than to say that the respondents are primarily focused on efficient transportation as opposed to initiatives thought to be only indirectly related.

Comparative Funding Scenarios and Future Performance

Which funding scenario outlined in chapter 4 best provides the transportation system that meets your future needs?

1. Current Funding 20%
2. Strategic Funding 80%

In contrast to answers given earlier that appeared to endorse spending directly on highways and bridges, there is an interest in coordinating expenditures for strategic goals. Findings from deliberative polling studies suggest that complex decisions like this can be influenced through an educational process. The materials presented in Chapter 4 as well as other public outreach may encourage some participants to endorse strategic investment programs.

Transportation Funding and Financing Options

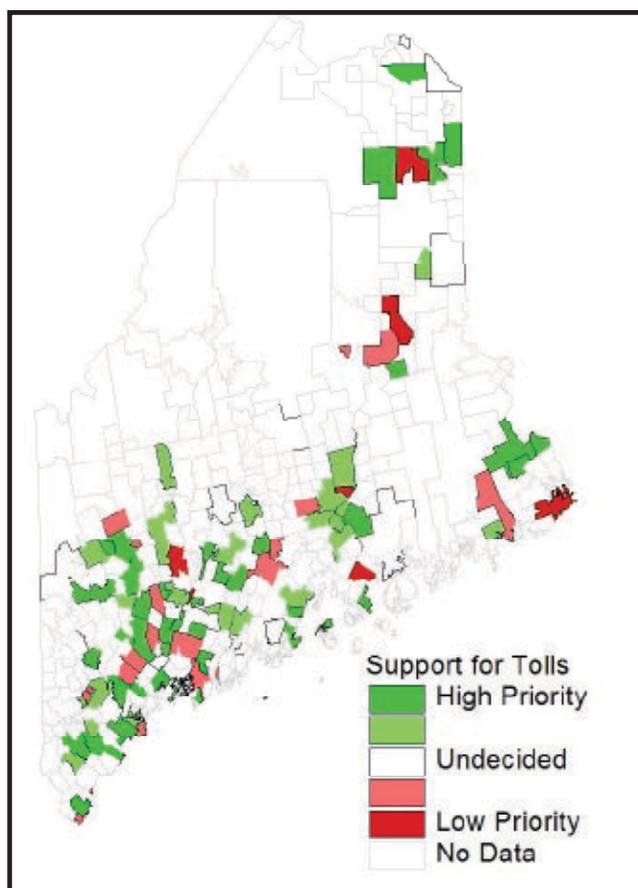
The next question is based on chapter five of *Connecting Maine*. Please rank the following funding methods. How should MaineDOT solve its current and future funding challenges? (RANK 1-6)

Challenge (sorted by highest priority) (modal response in bold face)	1 Best	2	3	4	5	6 Worst
Increasing the gasoline & diesel fuel tax	28%	16%	10%	12%	17%	18%
Borrowing by legislative bond referendum issues, or by borrowing from other sources	23%	16%	14%	15%	15%	18%
Putting limits on spending	17%	9%	15%	17%	14%	28%
Expand use of tolling highways	16%	25%	23%	14%	16%	7%
Public-Private Partnerships	13%	18%	16%	21%	19%	15%
Adopting distance based fees for traveling or using some highways	4%	18%	22%	22%	20%	15%

Survey respondents were most likely to endorse increasing funding using traditional tax and borrowing packages. While tolling was not the first choice for many, it received a plurality of second priority votes, putting it among the more popular, if traditional answers.

Common speculation is that people living in areas without toll roads may be more supportive of raising tolls, presumably on roads that they rarely drive. The attached map suggests very little pattern to the opposition to toll roads. Note that this sample would need to be very large, certainly in the thousands, to have a significant number of respondents in all zip code areas.

Putting limits on spending, as before, received the most significant negative vote. The concept of public-private partnerships receive the least decisive vote with nearly equal percentages in at all levels of priority. Distance based fees also received a lukewarm rejection, with a low percentage of supporters.



How did you hear about this survey?

- | | | | |
|----|----------------|------------|---|
| 1. | Cable TV | 5 people | |
| 2. | Public Meeting | 17 people | |
| 3. | Newspaper | 10 people | |
| 4. | Other | 141 people | (a please specify field was needed here!) |
| 5. | Postcard | 25 people | |

Media and mailings account for approximately 1/4th of all participants. Three fourths stated that they learned from other sources. Unfortunately we cannot determine the sources. In future surveys it is essential to ask people to specify what other sources they relied-upon for notification.

Are you 18 or older?

- | | | |
|----|-----|-----|
| 1. | Yes | 99% |
| 2. | No | 1% |

Appendix 6 - Goals, Objectives & Strategies

1. Ensure a safe and secure transportation system

- 1.1 Reduce crashes, injuries and fatalities on Maine's highways
 - 1.1.1. Reduce fatality rate
 - 1.1.2. Increase safety belt use
 - 1.1.3. Reduce economic impact of crashes to society
 - 1.1.4. Reduce crashes involving large animals; develop action plan
 - 1.1.5. Reduce speed-related crashes
- 1.2 Decrease lane departure crashes, injuries and fatalities
 - 1.2.1. Provide median cable guardrail on sections of interstate highway where vulnerability to head-on crashes exists
 - 1.2.2. Install centerline and edge line rumble strips where crash histories indicate there is a high rate of serious head-on or run-off-road crashes
 - 1.2.3. Provide low cost solutions such as retroreflective signs, reflective inserts on guardrails, improved pavement markings and safety-edge pavement treatment on selected corridors
- 1.3 Decrease bicycle and pedestrian injuries and fatalities from crashes
 - 1.3.1. Reduce bicycle and pedestrian fatalities and injuries
 - 1.3.2. Provide safe access for bicyclists and pedestrians
- 1.4 Improve work zone safety
 - 1.4.1. Provide MaineDOT field worker training in work zone signage and safety
 - 1.4.2. Reduce the number of work zone crashes
 - 1.4.3. Implement intelligent transportation systems (ITS) in work zones
- 1.5 Increase airport safety at all 36 publicly-owned commercial and general aviation system airports in Maine, and increase personal security in airport parking lots
 - 1.5.1. Provide clear approaches on primary runways
 - 1.5.2. Meet all runway and taxiway requirements
 - 1.5.3. Meet runway safety area standards
 - 1.5.4. Provide pavement condition index of 70 or greater for primary runways
 - 1.5.5. Meet National Fire Protection Association guidelines at airports providing fuel
- 1.6 Provide a safe transit system with safe and secure intermodal connections
 - 1.6.1. Develop and implement an accident reporting system
 - 1.6.2. Provide lighting and other safety-related investments at intermodal connections (e.g., parking lots, etc.)
- 1.7 Improve assessment of crash safety needs and provide broader accessibility to data
 - 1.7.1. Work with other agencies to improve data collection to better link crash data -- road conditions, driving record information and injury information
 - 1.7.2. Develop an integrated crash data system with other agencies
- 1.8 Improve security and plan for disaster response
 - 1.8.1. Develop and implement a security and disaster response plan for a discrete list of key pieces of transportation infrastructure
 - 1.8.2. Support the Maine Emergency Management Agency (MEMA) in the development of evacuation plans for areas with limited egress such as Maine's coastal peninsulas and river valleys
 - 1.8.3. Prioritize transportation infrastructure improvements to meet geometric standards on MEMA HazMat routes (including rail), per MEMA survey of hazardous material movements in Maine
 - 1.8.4. Develop protocols and the capacity for 511 to assist in incident management and evacuations
 - 1.8.5. Install fully integrated dynamic message signs at strategic locations to improve safety and mobility during evacuations

- 1.9 Ensure marine transit and state ferry safety and security
 - 1.9.1. Comply with all U.S. Coast Guard regulations
 - 1.9.2. Develop safety and security plans for intermodal connections

2. Ensure the sustainability of Maine’s transportation systems

- 2.1 Preserve and maximize operational efficiency of all transportation modes
 - 2.1.1. Develop and implement corridor management plans for all *Corridors of Regional and Economic Significance for Transportation*
 - 2.1.2. Implement projects in the Statewide Intelligent Transportation Systems Operations and Integration Plan that will improve mobility and safety, and encourage transit usage
 - 2.1.3. Ensure that 50% of the transit fleet still retains more than 50% of useful life at all times
 - 2.1.4. Update the *Explore Maine* transit plan
- 2.2 Develop management plans for key elements of the state’s transportation infrastructure (e.g., interstate, key bridges)
 - 2.2.1. Identify key elements of the transportation network
 - 2.2.2. Develop long-term facility-specific management plans for those elements
- 2.3 Adhere to Resource Allocation Policy (maintenance- and preservation-first)
 - 2.3.1. Maintain the serviceability of substandard portions of the highway network through the application of maintenance surface treatments
 - 2.3.2. Maintain all transportation infrastructure according to established level of maintenance service criteria
 - 2.3.3. Increase the service lives of bridges to the maximum extent possible through maintenance preservation techniques
 - 2.3.4. Replace bridges as needed, focusing first on *Corridors of Regional and Economic Significance for Transportation*
 - 2.3.5. Maintain the state’s investment in sections of highways built to modern standards in a cost effective manner though the timely application of pavement preservation treatments
 - 2.3.6. Maintain state-owned railroads and railroad bridges at a Class III level for passenger service
 - 2.3.7. Support a pavement management program for publicly owned commercial and general aviation airports
- 2.4 Identify new funding sources to support the capital, maintenance and operational costs of strategic transportation improvement programs and investments
 - 2.4.1. Continue to work with the governor’s office and legislative leadership to evaluate methods to secure increased and sustainable funding sources
 - 2.4.2. Investigate and evaluate alternative funding options
 - 2.4.3. Continue to develop public-private partnerships
- 2.5 Seek and implement cost-effective innovative solutions on a life-cycle basis
 - 2.5.1. Review and update the rural state and federal highway classification system
 - 2.5.2. Remove unnecessary and redundant roads and structures from the network
- 2.6 Provide an airport system that adequately serves current and forecast demand
 - 2.6.1. Provide adequate airside capacity at system airports
 - 2.6.2. Provide adequate landside capacity at system airports
 - 2.6.3. Provide adequate auto parking at system airports
 - 2.6.4. Provide adequate terminal/administration buildings at system airports
 - 2.6.5. Provide an airport system that is easily accessible to Maine’s population from both the ground and the air, including special use aviation accessible

3. Promote economic vitality and competitiveness through transportation investments

- 3.1 Invest in highways and bridges key to Maine's economy
 - 3.1.1. Incorporate economic and environmental factors into MaineDOT's long-range planning process
 - 3.1.2. Continue to outline and implement ecological approaches to transportation system development decisions
 - 3.1.3. Reconstruct substandard portions of arterial highways per regional council priorities
 - 3.1.4. Reduce the number of posted roads on key economic corridors
 - 3.1.5. Improve or replace bridges that are impeding free flow of goods, services or people
 - 3.1.6. Implement a targeted program to construct climbing/passing lanes
 - 3.1.7. Develop and implement a corridor preservation program
 - 3.1.8. Manage traffic congestion growth
 - 3.1.9. Develop and implement a "Roads for Jobs" program
 - 3.1.10. Improve the shoulder and sidewalk network for bicycle and pedestrian access
- 3.2 Provide freight shipping choices
 - 3.2.1. Invest in freight intermodal connections
 - 3.2.2. Purchase key rail corridors as they become available and maintain all rail investments
 - 3.2.3. Develop principal truck and rail connections to each cargo port
 - 3.2.4. Support the marine highway through public-private partnerships and infrastructure investments
 - 3.2.5. Invest in cargo port infrastructure including dredging to deepen navigable ways
 - 3.2.6. Invest in improved port infrastructure
 - 3.2.7. Complete and implement the *Northeast CanAm Connections East-West Corridor Study*
- 3.3 Invest in airports where air travel is key to the Maine economy
 - 3.3.1. Protect and support airports that maintain the flexibility to respond to changes in future needs in Maine, while considering the environment
 - 3.3.2. Develop airport master plans as defined by the Maine Aviation System Plan Update
 - 3.3.3. Ensure system airports have compatible land use planning
 - 3.3.4. Ensure system airports are recognized in local comprehensive planning
 - 3.3.5. Provide fueling services at Level I, II & III airports
- 3.4 Invest in public transit in support of journey to work and access to business centers and tourism
 - 3.4.1. Expand the capacity of existing and create new intracity transit systems
 - 3.4.2. Develop commuter rail service
 - 3.4.3. Extend passenger rail services north of Portland to Brunswick
 - 3.4.4. Extend passenger rail services north of Portland to Auburn
 - 3.4.5. Expand cruise ship facilities
 - 3.4.6. Improve connectivity to existing intermodal facilities and construct new facilities
 - 3.4.7. Develop new intercity bus services
 - 3.4.8. Expand *Go Maine* rideshare services
- 3.5 Provide transportation options to and within tourist and recreational areas of Maine
 - 3.5.1. Develop seamless transit connections between service centers, intermodal facilities, communities and major tourist destinations
 - 3.5.2. Implement MaineDOT's *Three Trails of Statewide Significance* Trail Initiative
 - 3.5.3. Reduce seasonal congestion in Acadia National Park
 - 3.5.4. Reduce congestion in travel corridors by implementing transit services
 - 3.5.5. Develop and operate transit routes in the Midcoast Region
 - 3.5.6. Develop new passenger intermodal facilities in Auburn, Augusta, Bangor, Ellsworth and Trenton

- 3.6 Improve transportation efficiencies between areas that support natural resource industries and industrial centers
 - 3.6.1. Expand Maine’s Industrial Rail Access Program (IRAP)
 - 3.6.2. Expand Maine’s Small Harbor Improvement Program (SHIP)
- 3.7 Promote traditional and emerging business (e.g., research and development) through investments in innovative technologies
 - 3.7.1. Continue and expand on partnerships with the Maine Technology Institute, the Maine Composites Alliance and emerging businesses
 - 3.7.2. Continue and expand partnerships with the University of Maine Advanced Structures and Composites Center and the composite industry to develop new and innovative uses of composite technologies in transportation
- 3.8 Invest in quality community centers
 - 3.8.1. Continue to develop strong relationships with Maine’s six economic development districts
 - 3.8.2. Develop relationships with stakeholders and trade organizations representing Maine’s key economic growth centers or sectors
 - 3.8.3. Expand the Community Investment Sharing and Community Livability Studies Programs
 - 3.8.4. Support and administer the Safe Routes to School Program
 - 3.8.5. Implement the Transit Needs Study
 - 3.8.6. Improve access for pedestrians and bicyclists in village areas
 - 3.8.7. Continue to fund the Local Roads Center (LTAP)
- 3.9 Invest in visitor facilities that are eligible for federal and state highway funding that are associated with *Corridors of Regional Economic Significance for Transportation*
 - 3.9.1. Implement the State Visitor Information Center (VIC) Plan
 - 3.9.2. Develop and implement a strategic plan for scenic byways
 - 3.9.3. Continue to implement statewide rest area improvements
 - 3.9.4. Maintain and improve the regional visitor orientation and destination signage
- 3.10 Encourage mutually beneficial partnerships
 - 3.10.1. Continue to work with the Maine Turnpike Authority to identify potential funding and other opportunities
 - 3.10.2. Continue to work with Maine shippers to identify potential funding and other opportunities for rail, port, intermodal connections and other infrastructure improvement investments

4. Develop and implement transportation programs that enhance quality of life

- 4.1 Encourage compact land use patterns to maximize transportation efficiency and improve neighborhood environments
 - 4.1.1. Incentivize land use activities that create safety, capacity or other operational benefits
 - 4.1.2. Continue to fund the Community Gateways Program
- 4.2 Provide transportation and environmental/cultural stewardship
 - 4.2.1. Increase the number of public transit buses running on clean fuels
 - 4.2.2. Adequately fund commuter options and programs that reduce dependency on single occupancy vehicles
 - 4.2.3. Modify MaineDOT’s fleet to run on clean fuels
 - 4.2.4. Pursue research and collaboration to find efficient, environmentally-friendly winter deicing chemicals/practices
 - 4.2.5. Continue to partner with other state agencies to improve recreational access associated with MaineDOT infrastructure
 - 4.2.6. Continue to implement and expand MaineDOT’s Environmental Management System
 - 4.2.7. Develop and adopt a historic bridge action plan
 - 4.2.8. Continue to invest in Maine’s Surface Water Quality Program

- 4.2.9. Finalize the state’s involvement in the Municipal Sand-Salt Facility Program
- 4.2.10. Support forest fire spotting activities at system airports
- 4.3 Provide equitable access and choice for all travelers, including Maine’s aging population
 - 4.3.1. Work with stakeholder groups to develop and implement a plan to support the unique transit needs of Maine’s growing aging population
 - 4.3.2. Review and modify Maine’s Highway Design Guide to address the less acute vision and reaction times of Maine’s elderly drivers
 - 4.3.3. Support “LifeFlight of Maine” at system airports
- 4.4 Provide healthy transportation choices, such as bicycle and pedestrian facilities
 - 4.4.1. Implement MaineDOT’s shoulder and sidewalk policies to provide safe pedestrian and bicycle access throughout the transportation system
 - 4.4.2. Continue to invest Maine’s transportation enhancement funds and seek alternative funding to support bicycle and pedestrian facilities
- 4.5 Proactively plan transportation investments to minimize impacts to and by climate change
 - 4.5.1. Assess the current infrastructure’s ability to handle worst-case climate change scenarios, identify potential threats and weaknesses and plan according to the level of risk
 - 4.5.2. Lower VMT growth by promoting transit-oriented planning to increase transportation efficiencies and reduce sprawl
 - 4.5.3. Increase the use of low-GHG in the MaineDOT truck fleet and other vehicles and invest in low-GHG infrastructure for MaineDOT fleets, and share with other large fleet users (e.g., school buses and other forms of public transit)
 - 4.5.4. Develop policies to reduce the idling of MaineDOT’s truck fleet and other vehicles
 - 4.5.6. Evaluate concrete and other construction product specifications to reduce GHG emissions and improve efficient use of products

5. Enhance public awareness and participation

- 5.1 Ensure early and effective stakeholder involvement in the development and implementation of MaineDOT plans, projects and programs
 - 5.1.1. Update MaineDOT’s written public involvement plan, to include the enhanced role of the economic development districts, regional planning organizations, and metropolitan planning organizations
 - 5.1.2. Develop a tool box for project managers that describes various effective methods of public input and involvement
- 5.2 Provide effective communication and information to the public and stakeholders
 - 5.2.1. Publish report cards on progress toward delivering MaineDOT’s goals in this plan
 - 5.2.2. Encourage mutually beneficial partnerships and increase the benefit of MaineDOT’s programs to Maine’s communities and economy by promoting the coordination of financial resources from other local, state and federal programs