

# DOWNEAST COASTAL CORRIDOR MULTI-MODAL CORRIDOR MANAGEMENT PLAN

## HANCOCK AND WASHINGTON COUNTIES

June 25, 2010 Version



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## 1 INTRODUCTION

The Downeast Coastal Corridor is one of 38 Corridors of Regional Economic Significance for Transportation (CREST's) identified by the Maine Department of Transportation. In formulating this plan, the Hancock County Planning Commission (HCPC) and Washington County Council of Governments (WCCOG) solicited extensive public input to formulate regional needs and objectives. HCPC and WCCOG developed a series of transportation, land use and economic objectives for the corridor. A series of strategic investments was derived from these objectives. These goals and objectives are summarized in the Region 4 [Strategic Investment Plan for Corridors of Regional and Economic Significance](#) or SIPCRES Report (2007).

This document – the Downeast Coastal Corridor Multi-Modal Corridor Management Plan (MMCMP) – builds on the recommendation of the [SIPCRES Report](#) to define a prioritized list of transportation and other strategies that will meet the regional objectives for the corridor. This MMCMP was developed by an Advisory Committee consisting of the representatives from MaineDOT, HCPC, WCCOG, affected municipalities and others who are interested in transportation, land use and economic development, as well as related quality of life considerations.

This plan is a key regional link to the Maine Department of Transportation's (MaineDOT) *Connecting Maine* report, the state's long-range transportation plan. This statewide document identifies statewide and regional issues and opportunities through the year 2030, establishes goals and performance-based strategies to reach those goals, and identifies the funding shortfalls that must be addressed to keep Maine competitive and to meet the socio-economic and environmental needs of those who live, work and play in Maine.

### 1.1 Purpose and Needs Statement

The purpose of this study is the assembly of relevant, accurate information to promote decisions that are in the overall best interest of the Downeast Coastal Corridor communities, the region and the state. The study builds on previous efforts. While it contains some background information, its primary purpose is to look at what is needed for the future and to formulate detailed, prioritized action plans with achievable implementation schedules. This will allow for efficient investment of limited local, state and federal funds.

This plan presents alternative scenarios for consideration in developing the goals and strategic action plans for the corridor. To ensure broad support, the recommended actions established by the Advisory Committee include a menu of regulatory and non-regulatory measures drawn from local and regional planning efforts. This document will enable MaineDOT and other funding agencies to be assured that broad support exists for all of the items identified in the action plan. This is a critical element necessary for implementing any major capital investments.

The plan addresses several key priorities:

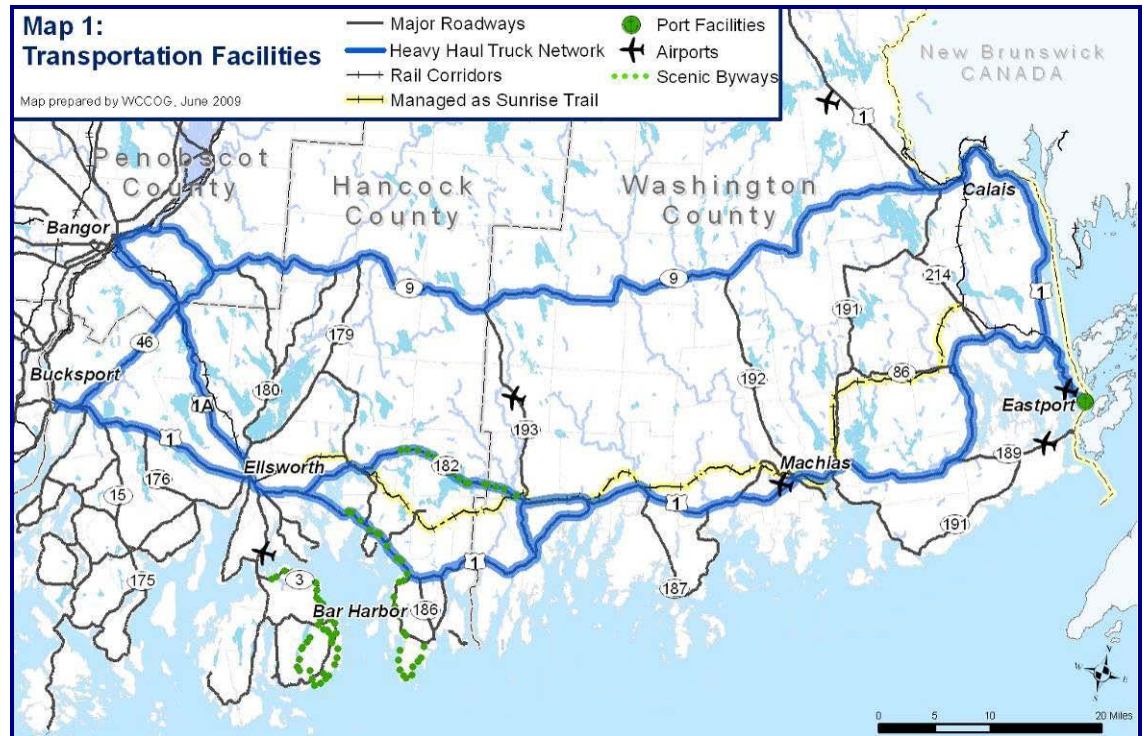
- Promoting roadway improvements and preservation measures that assure that the Downeast Coastal Corridor remains viable for the efficient movement of freight, tourist and commuting traffic;
- Enhancing connections between modes of travel by planning for improvements that address the movement of vehicles and alternative modes such as bicycles and pedestrians to expand the region's tourism base in an environmentally sound manner;
- Undertaking measures that encourage multimodal responses to the needs of area businesses and residents by promoting the fast and efficient movement of people and freight;
- Encouraging future development policies that preserve key natural features and the small town/rural character of most of the corridor while promoting economic prosperity;
- Promoting measures that remove or minimize major traffic bottlenecks to through traffic in the region's service centers;
- Increasing opportunities for multi-town assessment of transportation impacts of large-scale residential, commercial and other forms of development.

## 1.2 The Downeast Coastal Corridor

This plan addresses the major east-west connections crossing Hancock County, southern Washington County and a portion of Penobscot County as a group. Included in this broad corridor are Route 1 from Bucksport to Calais, Route 9 from Bangor to Calais, the Calais Branch Railway from Bangor to Calais as well as major collector highways that serve as connectors and short-cuts (see **Map 1**).

Within the corridor, Route 1 and Route 9 carry different mixes of passenger and freight traffic. Route 1 carries a larger percentage of commuter and tourism traffic and serves as the main street for many corridor communities; whereas Route 9 carries a greater percentage of freight and through-traffic. With planning, the differing roadway functions of these two arterials should prove complementary in meeting the corridor's transportation needs.

Portions of the former Calais Branch Railway, which has been out of service since 1985, are currently being managed as a long-distance off-road trail. As either a mixed-use trail or as a restored railway, this rail corridor has the potential to provide an important third alternative to surface road travel.



### 1.3 Public Participation Plan

HCPC and WCCOG organized a series of public outreach meetings, press releases and web site postings to solicit input for this plan. Outreach included electronic and physical mailings to municipal offices, transportation providers and business development groups. Summaries of meetings are found in **Appendix 1**.

### 1.4 Advisory Committee

The advisory committee consists of a cross-section of municipal officials, representatives from MaineDOT, transportation providers, public safety officials, major employers, chambers of commerce, freight interests and advocates for alternative modes. The full roster of committee members is found in **Appendix 2**.

## 2 AN OVERVIEW OF EXISTING CONDITIONS

This section of the report presents a summary of existing conditions. In the interests of brevity, data are summarized from other reports. Readers interested in more detail may refer to those reports. Topics covered in this section include types of travel on the corridor, transportation facilities, major transportation problems and corridor characteristics.

### 2.1 TYPES OF TRAVEL ON THE CORRIDOR

#### 2.1.1 Vehicle Miles Traveled

Nationwide, the 1990s witnessed unprecedented growth in Vehicle Miles Traveled (VMT). Growth was particularly great in counties with expanding populations and increasing lengths of commutes. There are few programs in place that will slow this trend toward higher VMT, though rising fuel prices has some impact in the middle part of the decade. Fuel prices will eventually affect choices made about travel and fuel efficiency.

<b>Figure 2.a Vehicle Miles Traveled (VMT)</b>			
<b>County</b>	<b>1990</b>	<b>2000</b>	<b>Change (Rounded)</b>
Hancock	561,524,946	702,581,167	25.1%
Washington	367,976,097	421,588,863	14.6%

Source: Maine Department of Transportation

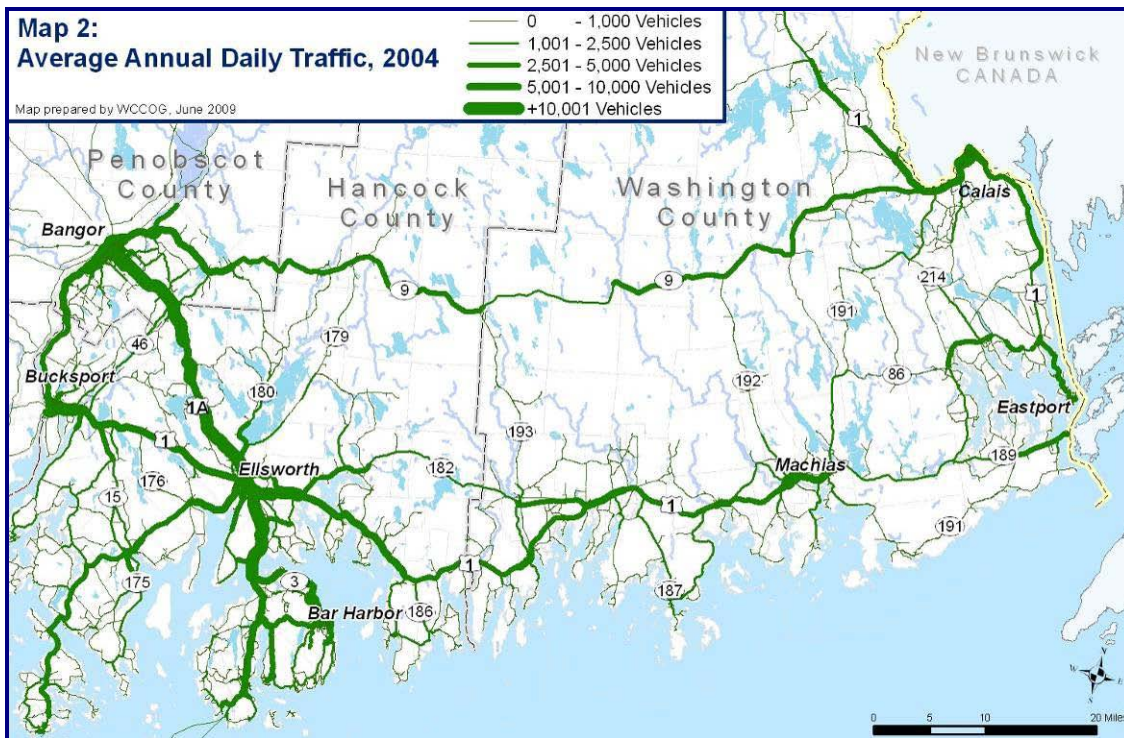
The only permanent traffic counter in the Downeast Coastal corridor is at Route 1 in Hancock (see **Figure 2.b**). Four other locations (three on Route 1 and one on Route 9) provide intermittent data over the 1990-2006 time period. While the Average Annual Daily Traffic (AADT) shows some fluctuations from year to year, there is an overall gradual increase on Route 1 in Hancock and a stable amount of traffic volume on Route 1 in East Machias and Perry. For example, in Hancock the AADT in 1990 was 9,230 compared to 12,550 in 2006.

Factored AADT (estimated based on periodic counts) are available for Route 9. For 2004, the FAADT on Route 9 in Aurora, west of Route 179 was 4,590. This compares to 3,350 in 1999 and 2,790 in 1989. The latter figure predates major shifts in the roadway alignment so is not entirely comparable. However, these data do show that traffic is increasing on Route 9, though it has not reached the volumes of Route 1. Actual counts on Route 9 in Township 22 in 8 out of the 10 years between 1995 and 2005 indicate a modest increase in traffic volume.

Map 2 shows traffic volume for major roadways; thicker lines represent greater traffic levels as measured by average annual daily traffic (AADT).

This map shows a number of significant trends relative to traffic volume and traffic patterns:

1. In general traffic volume is higher in the western portion of the corridor;
2. Traffic volume is generally higher in and immediately around service centers
3. Levels of traffic are higher along Route 1 than Route 9.
4. Both Route 9 and connector roads serve as informal bypasses diverting/dispersing traffic from Route 1.



### 2.1.2 Travel Characteristics

A significant aspect of travel on along the Corridor that is not revealed by AADT or VMT data is that the two arterial highways within the Corridor (Route 1 and Route 9) have different travel characteristics. Truck traffic along Route 9 is significant. For example, in Eddington, it accounts for 11 percent of all traffic.

Route 9, which crosses through lightly populated areas of each county, serves as a major link supporting international trade between the U.S. and the Canadian Maritimes. There are major no congestion problems along most of Route 9 – the exception being limited congestion associated with border crossings on the far eastern end of Route 9 in Calais.

By contrast, Route 1 crosses through the most populated towns of Hancock and Washington Counties. It carries relatively high volumes of passenger traffic and has significant levels of tourist traffic during the summer and early fall.

### 2.1.3 Freight Trucking

In 1999, Eastern Maine Development Corporation (EMDC) and HCPC conducted of survey of trucking firms to identify problems with the road system. The firms did not note any major concerns about Route 1 other than problems with congestion, particularly in Ellsworth and a desire for more passing lanes. Access to Route 1 from some of the peninsula connectors was considered to be difficult due to tight turning

radii, traffic back-ups and poor visibility. Most Hancock County-based firms do not use Route 9 often and did not note any difficulties with this route.

Recommendations for turn-out areas and other freight trucking improvement along Route 1 are included in the [Washington County Route One Mobility & Safety Analysis](#) (WCCOG, 2007).

In Washington County communities and shippers report an increase in freight traffic along connector roads (notably Route 193, Route 192, Route 191 and Route 214) since the completion of roadway improvements on Route 9. Freight traffic on Route 190 also increased over recent years as a function of increased activity at the Federal Marine Terminal in Eastport. Route 189 and 187, which connect Lubec and Jonesport/Beals (respectively) to Route 1 also carry significant volumes of freight traffic and function as important commuter and tourist routes.

### 2.1.4 Commuting Patterns

Through the Downeast Coastal Corridor, most areas along Route 1 are rural, with small employment centers in Bucksport, Ellsworth, Machias and Calais. Morning commuting traffic generally moves without significant delays even during the peak summer months. Afternoon commutes are coincident with higher tourism demand and can experience significant delays in Ellsworth and to, a lesser degree, in Bucksport.

According to Census figures, the number of commuters traveling along Route 9 and the connector roads (notably Route 191 into Machias, Route 190 into and out of Eastport and the eastern end of Route 9 into Calais) increased between 1990 and 2000. However, the overall number remains small. Commuting along Route 9 and the connector roads does not contribute to any significant delays during either morning or evening commute.

Data from the 2000 census indicate that commuting throughout the region continues to be dominated by single occupancy vehicles. Alternative modes are far less often used. Buses carry less than 1 percent of commuters. Biking and walking take up another very small percentage of commuters. The one significant exception to the one-person-one-car pattern is the 10% of commuters who reported car pooling.

Reported commuting time rose sharply during the 1990s for 20 out of 23 towns along Route 1. These increases result from a combination of longer commute distances and slower driving speeds due to congestion or deteriorated road surfaces.

Throughout the Corridor, the number of people commuting into service centers exceeds the number commuting out. For example, nearly 4,000 workers commuted into Ellsworth compared to about 1,200 who commuted out (see **Figure 2.c**).

There is also substantial commuting traffic through the corridor to destinations on Mount Desert Island. In Hancock County in particular, this net traffic flow contributes to congestion during the morning and afternoon commutes.

**Figure 2.c Commuting Patterns for Selected Service Centers**

	Work in town	Commute Out	Commute In
Eastport	484	163	416
Lubec	466	113	355
Jonesport-Beals	493	305	327
Bucksport	907	1321	1,537
Ellsworth	2002	1194	3,946

Source: 2000 U.S. Census

Along Route 1 the data show a tendency for “overlapping” commuter patterns. By contrast in communities along Route 9 and the connector roads, commuting traffic



tends to move from rural areas toward the nearest service center in the morning and back in the afternoon. For example, the overwhelming number of commuters in Northfield (54 out of 79) drove to Machias in 2000, and the overwhelming number of commuters in Alexander were employed in Calais or Baileyville (130 out of 177).

### 2.1.5 Underutilized Transportation Infrastructure

The most significant underutilized transportation infrastructure along the Downeast Coastal Corridor are abandoned rail corridors. There is currently no rail service along most of these rail lines. The only operational line in Hancock County provides freight service between Bucksport and Bangor. The Brewer to Calais line has not been operational since September, 1985. There is presently a proposal for a short-run excursion line from Ellsworth to Dedham. A management plan for the Ellsworth-Ayers Junction portion of this line was adopted in 2006 to renovate and preserve the corridor for rail in the event it becomes feasible. In the interim the corridor is being managed as the Down East Sunrise Trail, a multi-use trail. Regional airports, the marine terminal in Eastport and transit services also operate below capacity, as discussed below.

More information about the Sunrise Trail, including the Corridor Management Plan is available at [www.sunrisetrail.org](http://www.sunrisetrail.org).

## 2.2 TRANSPORTATION FACILITIES

This section examines current transportation facilities, the roles they are playing on the corridor and their overall performance.

### 2.2.1 Highways

Road surface conditions vary dramatically along the corridor. Route 9 has been substantially rebuilt during the past decade. Passing lanes, paved shoulders and smooth driving conditions prevail most of the way between Bangor and Calais.

By contrast, Route 1 has several sections that are still classified as “un-built.” These sections, primarily located in Washington County, significantly impede safety and the capacity of the road to handle freight. For example, after one passing lane in Hancock on Route 1 there are no passing lanes on Route 1 for 100 miles between Hancock and Calais. The lack of passing lanes is a safety issue and an impediment to the separation of freight and commuter traffic.

In Washington County the condition of connector roads, most of which also classified as “un-built,” also present significant impediments to safety and the movement of freight traffic. Natural resource-based industries (forestry, blueberries, wreaths, and seafood) located in Washington County are all reliant on the ability to move freight safely and efficiently. Due to the lack of freight rail, all freight moving through and along the corridor, as well as all freight moving through the Federal Marine Terminal at Eastport must be transported by road. This impedes mobility and contributes to roadway safety concerns. It also increases roadway deterioration, particularly along un-built sections of highway.

Some maps have been included for reference and where they present new information. A more detailed set of maps depicting transportation facilities in the Corridor is available on the [HCPC website](#) as part of the [SIPCRS Report](#).

Recommendations for passing lanes, turning lanes and turn-out areas along Route 1 are included in the [Washington County Route One Mobility & Safety Analysis](#) (WCCOG, 2007).

### 2.2.2 Intersections and traffic control capacity

In Hancock County the major intersection and traffic control capacity issues are in Ellsworth and, to a lesser extent, Bucksport. In Washington County, intersection and traffic control issues occur in Calais in association with the international bridge; and in the center of Machias during commuting hours.

### 2.2.3 Bicycle and pedestrian facilities

Bicycle and pedestrian facilities are primarily concentrated in service center communities. They provide an important transportation option for those without access to automotive transportation. The condition of pedestrian facilities varies greatly from town to town and even within each community. Winter-time conditions of sidewalks are often poor. When sidewalks are not cleared of snow, pedestrians are forced to walk along the edge of the travel lane, creating significant safety issues.

In recent year, many new shoulders have been constructed, facilitating bicycle access between communities. However, an interrupted patchwork of shoulders remains throughout Washington County that inhibits use of roads for bike commuting or touring.

The East Coast Greenway and other designated bike routes contribute to the mix of bicycle and pedestrian facilities. The Downeast Sunrise Trail will be an 85-mile off-road multi-use trail (expected completion in 2010). It starts in Ellsworth and passes through the communities of Hancock, Franklin, Sullivan, Gouldsboro, Steuben, Milbridge, Harrington, Cherryfield, Columbia, Columbia Falls, Jonesboro, Whitneyville, Machias, East Machias, Dennysville, Pembroke and Charlotte.

For more information on Bicycle and pedestrian plans in Hancock County:  
[hcpcme.org/transport.html](http://hcpcme.org/transport.html)

For Washington County:  
[www.wccog.net/transport.htm](http://www.wccog.net/transport.htm)

Ellsworth has recently completed a [Bicycle Pedestrian Plan](#), already under implementation that is making significant improvements. Bucksport completed a bicycle pedestrian plan in 2009. Bicycle and pedestrian inventory and assessments were also completed in the towns of [Milbridge](#), [Lubec](#), and [Machias](#) and in the city of [Calais](#).

### 2.2.4 Transit service

Three providers offer regular fixed route and/or on-demand transit service along the Downeast Coast Corridor: Downeast Transportation, Inc, West's Transportation and Washington Hancock Community Agency (WHCA). Downeast Transportation, Inc (DTI) provides fixed route service to most towns in Hancock County. The Island Explorer, operated by DTI offers fixed route service in some communities along the corridor seven days-a-week in summer months. Other communities in Hancock County are service by one- or twice-weekly fixed route service. DTI fixed route services are supplemented by subscription commuting service to some Washington County towns that serves employers such as Jackson Lab in Bar Harbor. West's Transportation provides seven-day intercity service from Calais to Bangor with stops in Washington and Hancock County as well as weekly service connecting coastal communities.

More information visit:  
[www.downeasttrans.org](http://www.downeasttrans.org)

More information visit:  
[www.westbuservice.com](http://www.westbuservice.com)

More information visit:  
[www.whcacap.org](http://www.whcacap.org)

WHCA service provides on-demand transit service. Ride share programs are offered by the Washington Hancock Community Agency primarily for commuters through Go Maine! In addition to MaineCare and other social service transportation, the Washington Hancock Community Agency provides trips to shopping centers, grocery stores, pharmacies, and medical appointments by a Washington Hancock Community Agency bus in certain communities for seniors. When space is available, the Washington Hancock Community Agency will accommodate other riders and other destinations.

More information about regional transit services, visit the [HCPC website](#).

Taxi service is available in large portions of the Downeast Coastal Corridor in Hancock and Washington Counties. However there are significant gaps along Route 1 that are not currently (2010) served by taxi service; and taxi services are unavailable along most of Route 9. The lack of taxi service in parts of Washington County has been an issue for commuters interested in participating in GoMaine! or other similar employer-based programs that have a “guaranteed ride home” component.

### 2.2.5 Rail facilities and service

There is currently no freight or passenger rail service along most of the corridor. In Hancock County, the only operational line connects Bucksport to the Bangor area. There is presently a proposal for a short-run excursion line from Ellsworth to Dedham.

The (Rail) Corridor Management Plan is available on the [HCPC website](#).

The Brewer to Calais line has not been operational since September, 1985. The segment of the line between Ellsworth and Ayers Junction is currently being managed as a multi-use trail. (Completion of trail conversion work is scheduled to be complete in western Washington and eastern Hancock counties by fall 2010).

In Washington County, existing rail connections to New Brunswick are utilized to move freight across the international border. Developing rail service in Washington County is seen as way to increase activity at the Port of Eastport while also improving roadway conditions and roadway safety by moving freight traffic onto rail. The segment from Ayers Junction to Calais and from Eastport to Ayers Junction was the subject of a feasibility study on Restoration of Freight Rail Service to the Port of Eastport (2009). Federal Marine Terminals in cooperation with Maine DOT have explored a potential transloading facility in Perry (~ 10 miles north of the port of Eastport) and rehabilitation of the rail corridor from that point to Calais. At the same time, the Canadian federal and provincial governments announced in 2009 investment \$18 million (to be matched by an additional \$18 million from the Irving Transportation Group) to upgrade the New Brunswick Southern Railway. This investment will replace and upgrade ties, steel rails and bridges on portions of the rail line that connects to Calais line on the US side of the border.

## 2.2.6 Ports and marine service

The State of Maine promotes development of cargo port facilities at the Federal Marine Terminal in Eastport as part of its Three-Port Strategy (Portland, Searsport, and Eastport). Since 1981 cargo handled at the Eastport facility has steadily grown (from 15,198 tons in 1981 to 363,747 tons in 2004). In 2004, Eastport handled 24% of the cargo tons that passed through Maine's ports. The facility boasts a 64-foot natural channel and is the closest U.S. port to Europe. Shipping activities are confined primarily to exports of Maine and New Brunswick forest products including wood pulp primarily destined for European and Asian ports.

All freight shipped through Eastport must currently be moved by truck. The lack of a rail connection contributes to traffic and safety concerns on Route 190 and Route 1; and is a limiting factor in the potential for the port to accommodate growth, hence the rationale for the study and infrastructure investment noted in section 2.2.5 above.

## 2.2.7 Airports

The only airport in Hancock County offering scheduled passenger service is the Bar Harbor-Hancock County Airport in Trenton. While not on the corridor, it serves corridor communities to a limited extent. It is served by two active runways. They are able to accommodate Gulfstream III's and Cessna 441's. In addition to general aviation flights, it has scheduled commuter service to Boston. According to the 2004 Airport Master Plan, enplanements are expected to increase to 19,500 by 2013. There were a total of 42,500 operations in 2002. This is expected to increase to 50,600 by 2013.

In Washington County, five small general aviation airports are located along the corridor. There is no scheduled air service in Washington County.

**Figure 2.d Washington County General Aviation Facilities**

Facility	Surface	Length
Deblois Flight Strip	Asphalt	4,000'
Eastport Municipal Airport	Asphalt	4,000'
Lubec Municipal Airport	Gravel	2,032'
Machias Valley Airport	Asphalt	2,900'
Princeton Airport	Asphalt	4,005'

Source: MDOT

For more information about the Downeast Regional Airport site selection process, please visit the [WCCOG website](#).

The *Maine Aviation System Update Plan* identifies the need for an all-weather airport to serve the Downeast region. A site selection process was completed in 2009, but since that time, the process of building a Level I replacement airport has stalled.

## 2.2.8 Passenger Intermodal and Park and Ride Lots

There are presently no passenger intermodal facilities in the corridor study area. Initial planning is underway for such a facility in Ellsworth. This facility would serve as a transit point for bus, excursion rail and bicycle and pedestrian traffic. It would connect

the Sunrise Trail to these other services. Other communities have proposed smaller paved trailheads areas near junctions of Route 1 and the Sunrise Trail that may also serve as Park and Ride facilities, if developed. There are no state-recognized park and ride facilities along the corridor.

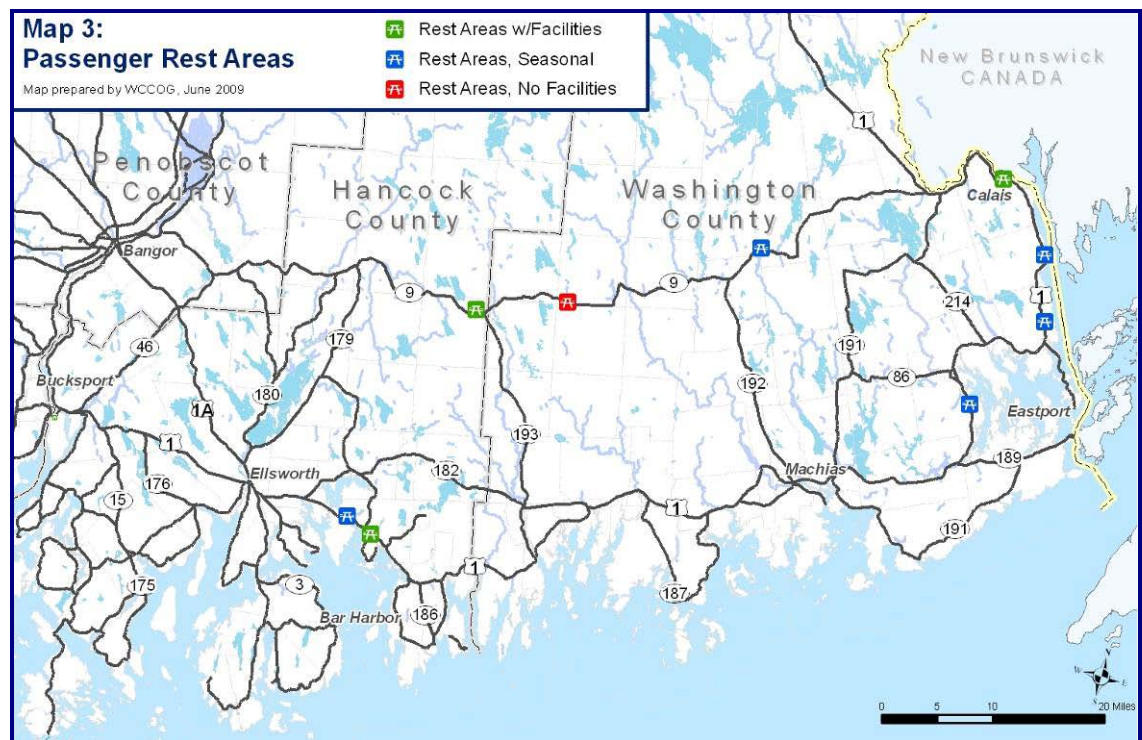
### 2.2.9 Freight Intermodal facilities

There are no rail-truck freight intermodal facilities in the study area. This is a weakness in the State Three Port Strategy as it limits access to the port facility in Eastport (see section 2.2.5 above). According to the 2002 *Maine Integrated Freight Plan (IFP)*, highway access to the facility is limited. The closest railhead is located seventeen miles away and, as mentioned above, the line is not in active service. The IFP sites the port’s lack of intermodal access as preventing it from efficiently serving its inland customers.

### 2.2.10 Traveler and truck rest areas & other freight or passenger facilities

Trucker rest facilities along the corridor are limited. According to the MaineDOT Office of Freight Transportation’s 2003 *Commercial Vehicle Service Plan*, 21 truck parking spaces are needed on the Route 1 between Ellsworth and Calais and there is only 1 known space. 13 spaces are needed on Route 9 between Bangor and Calais and 8 are presently available. Truckers are required by federal law to have mandatory rest periods and are subject to a ten-hour driving limit. This means that truck rest facilities have to be sufficient to allow truck drivers to have a prolonged period of rest. Passenger car rest facilities are also limited, but new sites are being added, including a new year-round rest area with restrooms near the junctions of Route 9 and Route 193.

Recommendations for additional scenic pull-outs that would provide passenger car rest areas are included in the [Washington County Route One Mobility & Safety Analysis](#) (WCCOG, 2007).



### 2.2.11 Designated Byways

There are currently two designated byways along the corridor. The Schoodic National Scenic Byway is a nationally designated byway. It starts on Route 1 at the Hancock-Sullivan Bridge and follows Route 1 to the intersection with Route 186 in West Gouldsboro. The Schoodic Byway then follows Route 186 through Winter Harbor taking a right turn onto Moore Road which becomes Schoodic Road through the Schoodic portion of Acadia National Park. Schoodic Road returns to Route 186 in Birch Harbor and continues on to Prospect Harbor.

The Blackwoods Scenic Byway is a state designated byway. It begins at the western border of Township 10 and Franklin on Route 182, extending to the intersection of Route 182 and the Calais Branch Rail alignment in Cherryfield.

For management plans & more information recommendations and implementation, see the [Schoodic Byway website](#) and [Blackwoods Byway website](#).

Both byways have active Corridor Management Committees. The Corridor Management Plan for Schoodic National Scenic Byway's was last updated in 2000; the Corridor Management Plan for the Blackwoods Scenic Byway was updated in 2005. Corridor Management Plans were completed with the participation of Corridor Management Committees, municipal officials, Chambers of Commerce, planning boards, historical societies and other stakeholders.

Currently (2010) a group of communities in Washington County is preparing to apply for byway designation for portions of Route 1 between Milbridge and Calais as well as Route 187, a portion of Route 191, Route 189 and Route 190.

## 2.3 WHERE & WHEN TRANSPORTATION PROBLEMS ARE OCCURRING

The most significant transportation problems in the corridor fall into several categories including:

1. Restricted mobility on Route 1 in Washington County due to the lack of passing lanes and safe truck turn-out facilities;
2. The lack of rail service in general and to the port of Eastport in particular;
3. Inadequate winter maintenance on the north-south connectors between Routes 1 and 9; and
4. Crash rates associated with congestion and excessive speed.

Restricted mobility on Route 1 is most severe in the late summer when tourist traffic and freight movement are both at their highest volumes. With no passing lanes for 100 miles motorists take greater risks to pass slower moving vehicles. This increases the risk of automobile collisions and discourages economic growth, particularly along Route 1 between Steuben and Calais. The shortage of truck pull-offs contributes, as well. In the absence of formal trucker rest areas along Route 1, long-haul drivers use informal rest areas along shoulders near services, such as the junction of Route 1 and 1A in Harrington and at the triangle in Pembroke. The result is diminished sight distances for other motorists which affect safety at these intersections.

The lack of rail service to the port of Eastport limits growth of this facility and contributes additional truck traffic throughout the corridor. The effects of this are particularly felt in eastern Washington County where connector roads that are not designed to handle heavy truck traffic are used as informal by-passes and short cuts.

Inadequate winter maintenance on the north-south connector roads in the corridor (Routes 15, 46, 179, 180, 181, 182, 186, 189, 193, 192, 191, and 200) contributes to higher crash volumes and reduced economic activity. The demand on municipal finances to keep these roads open is significant even with state aid and is often overwhelmed. The result is road surfaces that are inadequately plowed during and after significant storms and an extension in the length and severity of poor road conditions.

Crash rates along the arterials of the Downeast Corridor are highest in the most heavily congested areas, particularly High Street in Ellsworth. The severity of accidents is higher where traffic speeds are at their maximum, including large sections of Route 9 and open portions of Route 1. The following specific issues have been identified:

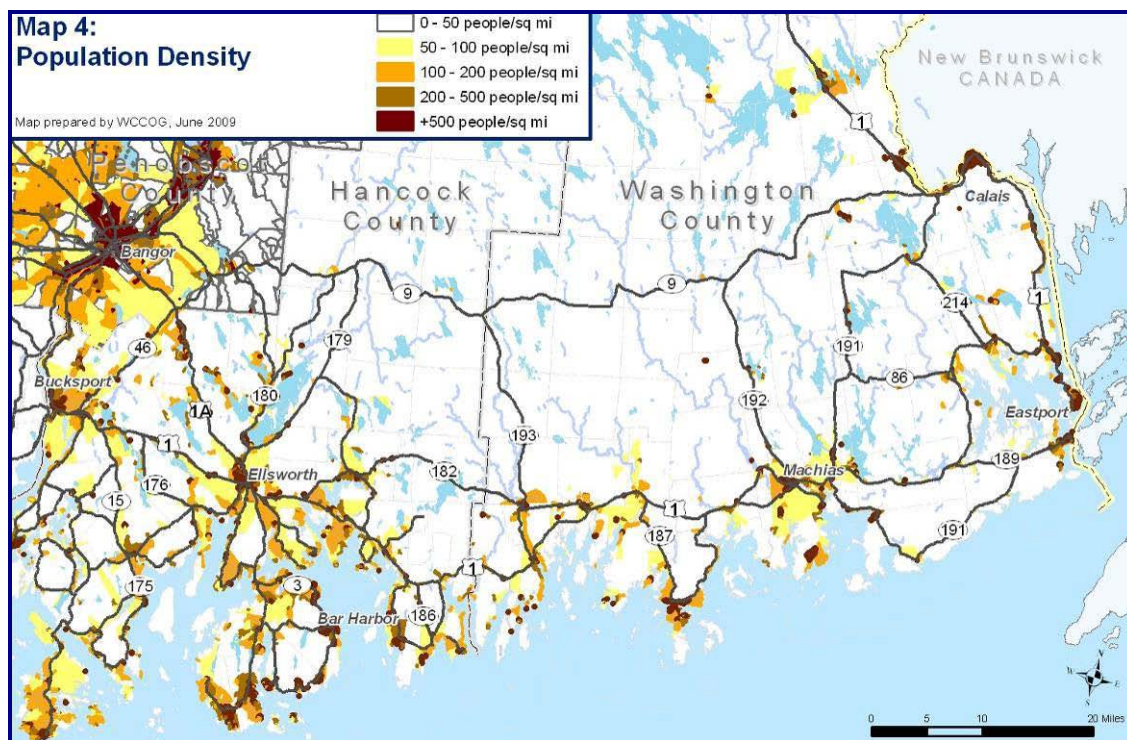
- Operational issues (e.g. signal timing, etc.);
- Passing lanes
- Unsafe intersections
- Signals – Ellsworth
- Speed limits
- Vehicle/pedestrian conflicts
- Cross walks safety issues
- High Street, Ellsworth
- Western Machias – center turning lane
- Bucksport

### 2.3.1 Characteristics that influence the range of possible solutions

Historically, development patterns along the Downeast Coastal Corridor have been characterized by dispersed rural land uses (working forests and farmlands) with small regional service centers located along major roadways. Recent trends include expansion of road-side commercial uses and large-lot (over one acre) residential development in the rural areas.

The projections suggest that the trend toward low density residential development will continue creating a patchwork pattern of exurban residential growth. The absence of excess sewer treatment capacity and/or municipal water in most towns along the corridor will discourage subdivisions with lot sizes less than one acre or other more intensive uses. This means that most development and driveways and other curb cuts will be dispersed.

Map 4 shows a dispersed pattern of residential development with numerous towns and villages distributed along Route 1 between Bucksport and Calais; and much lower levels of population density along Route 9 and the north-south connector roads.



Land ownership patterns across the study area generally reflect population distribution. In the more built-up areas, land ownership patterns are characterized by small (under one acre) residential holdings and larger commercial lots. Lots also tend to be small along and adjacent to water bodies. Outside of downtowns and village centers, lots may be as large as several hundred acres or more. Many larger holdings are agricultural and forestry holdings, including blueberry growers and industrial (large-scale) forests. Large lot, agricultural and forestry holdings are particularly common along Route 9 and the connector roads.



Few communities along the corridor have land use ordinances designed to influence the pattern of development. The only communities with comprehensive, town-wide zoning are Aurora, Baileyville, Beddington, Bucksport, Calais, Cherryfield, Eastport, Ellsworth, Hancock, Milbridge, and Roque Bluffs. Apart from state mandated shoreland zoning, a majority of the corridor towns exercise few land use restrictions.

While regulatory controls are not likely to significantly influence the interaction between land use and transportation in most communities, non-regulatory solutions have played a more significant role. Notably, a combination of public and private land conservation efforts influence the character and spread of development along significant portions of Route 9, Route 191 and parts of Route 1 in eastern Washington County. Though not design as “access management” strategies, conserved lands such as the Baring Division of the Moosehorn NWR reduce sprawl along arterial highways. The potential for conservation projects focused at preserving agricultural and/or working forest lands may prove to be a useful tool in achieving access management, economic development, and transportation goals that are shared at the state, regional and local level.

In addition to political considerations, natural constraints will influence the range of solutions available to policy makers. A review of comprehensive plans indicates a predominance of poorly drained soils. For example, about 56 percent (16,676 acres) of all land in Gouldsboro is rated by the U.S. Department of Agriculture as having a very low potential for low density development. Most other towns have similar constraints.

The natural resource maps from these plans indicate many development constraints along the Route 1 corridor, including wetlands, shore lands and areas with steep slopes. There are additional constraints related to rare and endangered species and significant wildlife habitats. In some cases, these natural constraints act as a natural barrier to sprawl limiting the extent of commercial development that will occur along Route 1; but they also limit the range of transportation solutions as mitigation costs associated with new infrastructure increase.

### **2.3.2 Projected future development patterns**

Population projections by the State Planning Office indicate that there will be 58,006 year-round residents in Hancock County by 2020 compared to 51,069 in 2000, an increase of 13 percent. By contrast, projections for Washington County show the population decreasing by 7.8 percent from 33,941 in 2000 to 31,090 in 2020 – though population projections indicate a modest level of growth for most coastal communities. Recent annual data suggest that population growth has slowed dramatically and may have reversed in Hancock County in 2007 and 2008. This demographic change may be a short-term consequence of the slowing economy and higher energy costs, but suggests that years of migration-led growth can have short-lived consequences.

Combining population projections with declining household sizes suggests that, construction of additional year-round dwelling units will continue over the next 20

years. Data suggest that second home construction will also continue. Residential development will be accompanied by a corresponding increase in commercial and other service-related development. Based on past trends, residential and commercial development will most likely be concentrated in coastal communities; and in-land communities with available lake frontage.

### 2.3.3 Emerging Trends

One emerging land use pattern is a shift of new development away from the coastal communities to more inland locations. The high price and declining availability of land along the coast has made inland towns more attractive locations for development. Most jobs, however, are located along the coast. This means that more commuting-related traffic from inland towns to the coast can be expected. A related pattern is the sale of large parcels of land previously used for forestry for residential uses.

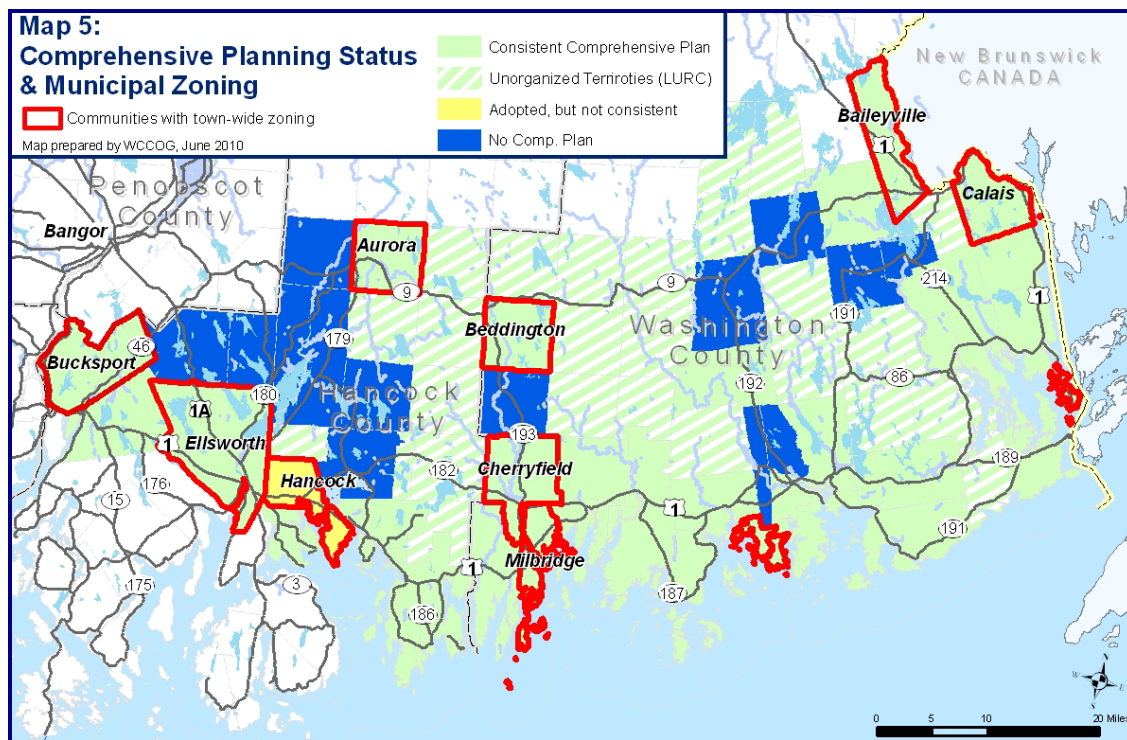
The aging population is having measurable impacts on land use. Both Hancock County and coastal Washington County are popular retirement destinations and most of the population growth is occurring in older age groups. Demands for housing can be expected to increase ahead of employment generation or demand for schools. For example, the 0-19 age group in Hancock County is projected by the State Planning Office to decrease from 12,551 persons in 2000 to 10,609 in 2020, a decrease of 15 percent. By contrast, the age 65 and over age group is expected to increase by 85 percent (7,158 in 2000 to 13,158 in 2020). Demand for elderly-related services such as assisted living units is expected to rise.

### 2.3.4 Review of Existing Local and Regional Plans

More information on the status of Comprehensive Plans is available on the [HCPC website](#) (for Hancock County communities) and the [WCCOG website](#) (for Washington County communities).

All towns immediately along the portion of Route 1 in Hancock County have adopted comprehensive plans since enactment of Maine's Growth Management Act in 1988. With the exception of the town of Hancock, all these plans were deemed consistent with the Growth Management Act review criteria. The plans for Sullivan and Hancock were adopted in the early 1990s. The only Hancock County town on the Route 9 corridor to have adopted a comprehensive plan consistent with the Growth Management Act is Aurora. While the plan was adopted in the early 1990s, there has been relatively little change in town since then. Franklin, lying just north of Route 1 and a significant crossing for the Down East Sunrise Trail, has not adopted a comprehensive plan.

In Washington County all towns along Route 1 have adopted comprehensive plans since the enactment of the Growth Management Law with the exception of Whitneyville. All are consistent with the Growth Management Act. (In Perry and Pembroke, local adoption of 2009 Comp Plan Updates are pending). Route 9 in Washington County traverses 5 unorganized territories and 5 organized municipalities. Three of the five municipalities (Beddington, Alexander and Baileyville) have adopted comprehensive plans that are consistent with the Growth Management Act. The other two (Wesley and Crawford) have no comprehensive plans at all.



Local comprehensive plans address a range of corridor management concerns such as access management and concentrated commercial development. Most also include goals and strategies that promote regional transportation planning. Recommendations included in the final section of this plan draw largely from goals and strategies established in municipal comprehensive plans.

In addition to local comprehensive plans, several county-wide and regional planning documents have also defined goals and strategies for improving regional transportation along the Downeast Coastal Corridor. The most complete regional plan, the 2007 [SIPCREs Report](#), included the following objectives for the corridor:

**Downeast Regional Airport:** Construct new airport in greater Machias Region to serve regional passenger and freight needs. Re-use existing airport for mixed use development. *Region identified by MDOT Office of Passenger Transportation Aviation System Plan as an area in need of a Level-One Facility (5,000' runway).*

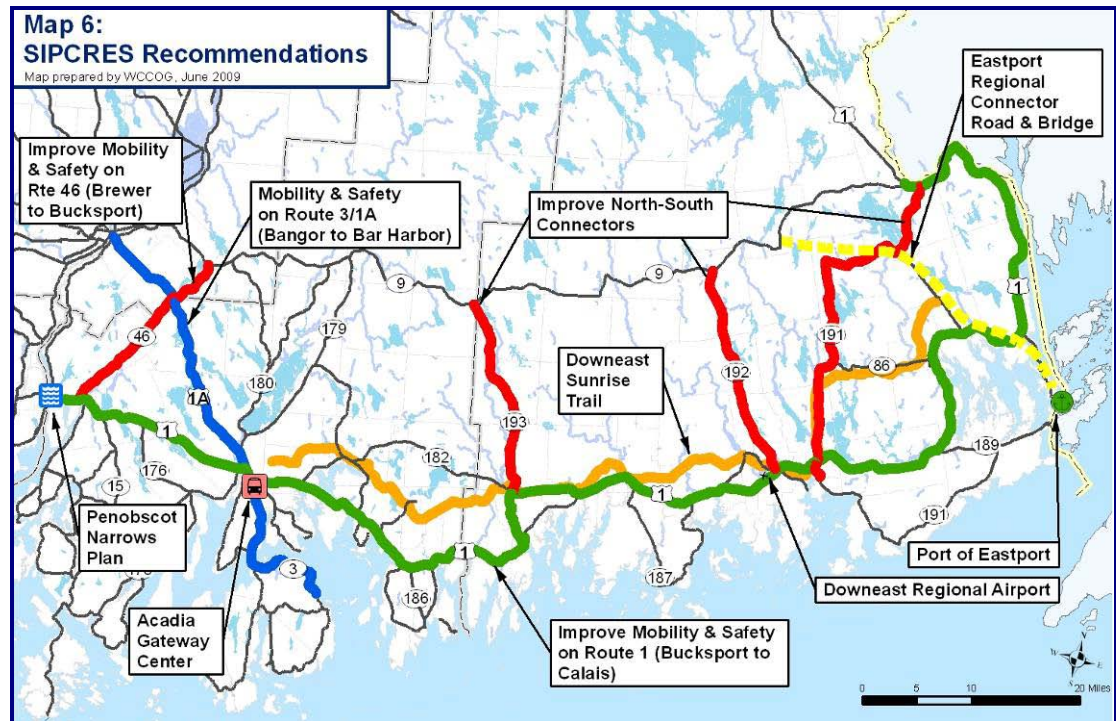
**Eastport Regional Connector Road and Bridge:** Reconstruct the former bridge connecting Eastport to the mainland; improve highway connections to Meddybemps and Rte 9. Local and regional comprehensive planning efforts of regional service centers (Eastport & Calais) identified a need to increase Port of Eastport access to Rte 9 and I-95; and to separate freight and tourism traffic.

**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.

**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.*

**Downeast Sunrise Trail:** Convert rails to multi-use trails between Washington Junction in Hancock and Ayers Junction. Add visitor information, way-finding signage, parking facilities and other support infrastructure. *Rail-banking concept will ensure the corridor is available and upgraded for rail use if and when such use becomes economically feasible while creating a world-class tourism amenity.*

**Tourism Infrastructure Program:** Implement transportation improvements to enhance visitation to Hancock and Washington Counties including scenic turn-outs, rest areas, way-finding signage and separation of visitor traffic from commuters and freight. *Coordinate effort of multiple state (Transportation, Tourism, Conservation) and regional agencies to ensure that visitors attracted by abundant nature-based resources find an experience that is matched by equally high quality infrastructure.*



Other relevant documents referenced in this plan can be found online at:  
[www.hcpcme.org/transport.html](http://www.hcpcme.org/transport.html).

### 3 DRIVING FORCES

Driving forces are factors or trends that affect future development along corridors. Changes in the driving forces affect trends along the corridor.

Driving forces identified below are broken into five categories:

- Economy - with sub-categories based on North American Industrial Classification (NAIC )Codes,
- Social Trends,
- Infrastructure and Technology,
- Political, and
- Built & Natural Environment.

For each subcategory, the Advisory Committees determined the likelihood of growth or expansion over the next 20 years; and the impact that growth in that sub-category would have on transportation systems serving the Downeast Coastal Corridor.

Driving forces as described in this document were then used to inform the development of scenarios that address identified problems and opportunities in the corridor and provide problem-solving options.

As shown on the next page, the committee anticipated that growth in natural resources industries, manufacturing, wholesale or retail trade, tourism and arts, and “science, technology and education” will have the greatest impact on transportation. Social trends will have a more limited impact on transportation across the corridor. But notably an increased demand for transit will be driven by higher numbers of retirees.

The greatest impact from infrastructure and technology will be felt through the addition of new local roads; and the deterioration of existing roads. Congestion will continue to have a more significant impact on transportation in Hancock County than in Washington County. In terms of the built environment, downtown infill development has the greatest potential to impact transportation. And in the political realm, reliance on property tax, use of Zoning, school funding challenges all play important roles. Reliance on property taxes, which discourages road funding, is likely to have the greatest impact on the range of transportation solutions, though.

#### **Key to reading the Driving Forces Matrix:**

**H** = Hancock County

**W** = Washington County.

The significance of overall impact is a combined score between 1 and 5 where 1 is HIGH impact and 5 is LOW impact. A high likelihood of growth and a high degree of impact would yield a score of 1 whereas a low likelihood of growth and a low degree of impact yield a score of 5. Based on differences in the likelihood of growth and the impact on transportation in the two counties, scores for overall impact also vary between the two counties.

**Driving Forces Matrix**

Seasonal increases in transportation demand from natural resource based industries coincide with tourism.

Growth in health care and social services is likely to be concentrated in service center communities.

Both the trends for more older retirees and more early retirees will increase demand for transit.

Traffic congestion can be mitigated with increased passing and turning lanes.

Buses reduce auto use. Sidewalks/trails have mixed effects on the transportation system.

Local reliance on property taxes and school funding challenges both discourage road funding.

An important tool.

Driving Force	Likelihood of Growth			Impact on Transportation			Overall Impact	
	High	Med	Low	High	Med	Low	Wash.	Hanc.
<b>1 Economy</b>								
Natural Resource Industries		H/W		H/W			2	2
Manufacturing		H/W		H/W			2	2
Energy (Generation, LNG)			H/W			H/W	5	5
Wholesale or retail trade	H/W				H/W		2	2
Tourism and arts		H/W		H/W			2	2
Science, technology, educat.	H/W				H/W		2	2
Health care & social services	H/W				W	H	3	3
Size of Workforce		H/W			H/W		3	3
Retirees / 2nd homes	W	H			W	H	4	4
<b>2 Social trends</b>								
Young population			H/W			H/W	5	5
Working age population			H/W			H/W	5	5
Older retirees		H/W			W	H	3	4
Pre- and early retirees	H/W				W	H	3	3
<b>3 Infrastructure/technology</b>								
New state highways			H/W		H/W		5	5
New local roads	H	W		H		W	1	1
Deterioration of existing roads	H/W			H/W			1	1
Traffic congestion	H	W		H	W		3	1
Passenger Rail			H/W			H/W	5	5
Freight Rail			H/W		W	H	4	5
Bus / Transit		H/W			H/W		4	4
Sidewalks and Trails	H/W					H/W	4	4
Public water and sewer	H	W			H/W		2	2
Three - phase power		H/W				H/W	5	5
Hi-speed internet	H/W				H/W		2	2
Natural gas		H/W				H/W	5	5
<b>4 Built &amp; Natural</b>								
Residential development		H/W			H/W		4	4
Commercial development		H/W			H/W		4	4
Downtown infill/refill increases	H	W			H/W		3	2
Business parks			H/W			H/W	5	5
Land speculation	W			W				
Public lands, protected lands			H/W			H/W	5	5
<b>5 Political</b>								
Reliance on property tax	H/W			H/W			1	1
Use of Zoning	H/W				H/W		2	2
School funding challenges	H/W				H/W		2	2
<b>6 Other</b>								
Access management	H/W			H/W			1	1

## 4 SCENARIO BUILDING

A scenario is a thumbnail sketch of a possible future. Unlike a projection that shows a predicted future for a particular item, such as future ridership on a bus route, a scenario considers the whole. The scenarios presented here draw on the driving forces matrix. We present here five alternative scenarios that consider how economic development and transportation may interact over the course of fifteen years.

These scenarios highlight the ways which in transportation and land use policy decisions have multiple, cross-cutting affects on the region. They are intended as way for state, county and local level policy makers to consider the potential impact of policy decisions that affect transportation systems along the Corridor; as well as to consider the types of policy decisions (investment, regulation) that may be necessary at various levels of government to achieve desired outcomes.

### 4.1 DOWNEAST COASTAL CORRIDOR SCENARIOS (2025)

#### 4.1.1 Energy Led Development

Hancock and Washington Counties have adapted to the decline of fossil fuel availability with a variety of large and small energy initiatives that have boosted the region through direct, indirect and induced economic diversification.

**Tidal Power** has moved from experimentation to implementation, with several cutting-edge tidal generators operating off of the Washington-Hancock coastline. Tidal power is very predictable, but produces far less close to peak high and peak low tides.

**Wind Power** generators are now located in a number of our windy locations as well as several experimental off-shore wind farms. Wind power is not predictable, and as a result is being balanced by other power generation infrastructure. Surplus power is used to split water into oxygen and hydrogen, helping to support the growing demand from hydrogen fuel cells powering homes and transportation.

**Biomass** generators, primarily burning scrap wood and solid waste provide important balancing assets for the wind and solar systems that operate only under some weather conditions.

**LNG:** A liquid natural gas facility has been constructed and feeds natural gas from tanker ships to a regional gas pipeline. Some of this LNG is used, along with the biomass to balance energy generation with the wind and tidal power facilities.

**Transmission:** Several new transmission lines have been installed to carry electricity from generators to the regional and larger New England pool (NEPool). These transmission lines have also created new corridors for recreational uses.

Surplus energy in the region is marketed to the New England Pool, bringing much needed revenues to eastern Maine. This surplus has also reduced local energy prices making this region more competitive for energy intensive manufacturing, including paper and wood products, granite mining and manufacturing, high-tech greenhouse production and more.

At the same time, geothermal heating systems reduce the need for fossil fuels to meet heating demands; and efficient modal technology as well as improvements to power transmission systems create more flexibility for small-scale electrical generation, allowing municipalities and business to invest in distributed generation from locally available sources including wind, solar, and in-stream hydro-electricity.

The transportation impacts of the first wave of energy development are primarily manifested in transmission wires and gas pipelines. Subsequent demands for transportation infrastructure have included hardened roads to move manufactured goods, particularly wood and granite products and access roads to the facilities. Induced changes are expected to be more significant as winter heating and transportation costs become more predictable.

#### 4.1.2 Tourism and Seasonal Resident Growth and Diversification

Tourism continues to be a major economic activity for Hancock and Washington Counties. Demands from tourists and seasonal residents have changed however. The aging boomer generation created a significant increase in demand for vacation and recreation services, but that is now waning. The subsequent generations of tourists are each expressing their interests in new ways.

Several aspects of eastern Maine continue to draw visitors and seasonal residents.

**Natural resource based recreation:** Traditional activities like hunting and fishing continue, and are complimented by larger numbers of visitors using photography, video-graphy and remote sensing technologies to experience our woods and coastlines. Trail systems provide more opportunities for the younger generations to experience being in nature. Water based recreation is more popular than ever with kayaking, canoeing, sailing, and other boating being made available through local rental businesses. Acadia National Park remains one of the regions primary destinations, but is now better integrated with state parks, public reserve lands and regional trails.

**Heritage Tourism:** Older visitors take more interest in visiting the region to learn about our history and culture. Many historic homes operate as bed-and-breakfast facilities and integrate education with recreation.

Transportation impacts of tourism are no longer manifested through the demand for more and wider roads, but rather the integration of numerous modes and facilities. International tourists are the leading edge of demand for well integrated transit and rental services, but initially reluctant Americans are now using our inter-modal systems



to visit eastern Maine car-free. While most visitors still arrive by private automobile, much of the increase in tourism is coming through expanded transit services, ferries, cruise ships and trail riders.

Seasonality of tourism and residence continue to be a challenge. The Downeast Sunrise Trail provides additional options for winter recreation (notably snowmobiling). And the aging boomers have helped to push the fall shoulder season through October, but tourism still falls off dramatically between November and May. Transportation demands follow suit, with some stress on capacity during peak summer, but underutilization during the winter and spring months. Seasonality is a particularly difficult challenge for transit providers, many of which are learning to operate vehicles in southern tourism centers or winter ski destinations in these off months.

#### **4.1.3 Health and Human Services**

The social and economic fabric of Hancock and Washington Counties is shifting. The most fundamental patterns causing this shift are lower numbers of births, net out migration of young adults, and a steadily aging resident population.

As a result, school enrollments continue to drop putting pressure on rural school districts to merge. The pressure on rural school bus systems continues to increase with longer trips to between widely scattered rural homes and the remaining schools. Some schools are forced to drop bus services to outlying areas, putting pressure on parents to drive their children to school or turn to alternatives such as home schooling or leaving the region.

On the other end of the age spectrum, the population over 70 years of age is growing steadily as baby boomers over-run existing rural health care and social services. This population is also pressing up against the constraints of the rural transit system. Routine trips to Bangor for treatment of chronic diseases cannot be accommodated by the skeletal fixed route regional bus system and puts tremendous pressure on the network of rural volunteer drivers. Higher gasoline prices and the need to work longer hours have reduced the number of people able to be volunteer drivers.

New solutions are needed to solve these compound problems.

The necessity of getting the most out of limited resources has encouraged towns to work together to provide transportation services. School buses are now used routinely to move children and adults whenever possible. Volunteer drivers are far better organized than in the past, and are receiving reimbursements that help them to cover all of their costs. The internet has become a valuable tool for coordinating transportation and social service. Interactive web pages make it easier for people to find transportation services, but also to articulate their needs to transportation providers.

Towns have designated sheltered bus stops where people can wait for regional and school bus services without being exposed to rain, wind and snow. Health care

providers, retirement communities and local voluntary organizations have coordinated their fleet vehicles to provide more frequent scheduled trips and rural point to point connector services.

Health care providers have also increased the breadth of chronic care services available in secondary and tertiary service centers. Regional clinics are supported by area hospitals and provide regular visits from nurse practitioners as well as telemedicine appointments with doctors. Doctors' offices coordinate with patients and regional transportation provided to schedule patient visit at medical facilities in Bangor in coordination with regular, scheduled transit.

#### 4.1.4 Transportation Diversification

Washington and Hancock Counties have seen steadily increasing options for movement of people and freight over the past 20 years.

**Transit:** For passenger movement, a coordinated effort for improved transit operations now provides daily bus service to the Route 1 corridor from Calais to Bucksport and connecting through Bangor and Belfast to points south and west. Regional carriers have streamlined their routes and schedules to avoid competition in favor of collaboration to optimize coverage to service centers. Bus maps and online schedules provide passengers with complete information, including connections among local, regional and intercity transit services. Other communities and the outlying services centers are served through ride-sharing, rural taxi services and on-demand transit for special needs populations. The presently Mount Desert Island-based Island Explorer is a model for low-polluting rural transit services. Multimodal transportation centers now exist in Bucksport, Ellsworth, Trenton, Machias and Calais.

**Trucking:** Ongoing improvements to Route 1 and Route 9 permit easier integration of trucking and automobile use. Additional passing lanes, climbing lanes, pull offs and paved shoulders help truckers to meet tight carrier deadlines. Enhanced use of technology has improved cross border truck trade, reducing drive time and increasing our region's economic connections with Atlantic Canada. In conjunction with the development of improved highway connections from eastern Canada to the Upper Midwest, reduced barriers to cross border truck traffic have also increased the Corridor's prominence as an important segment on cross-continental freight trucking routes.

**Rail:** Freight rail service has been restored connecting the Eastport shipping terminal with Calais through Ayers Junction. This rail connection facilitates movement of bulk goods and container goods, the latter being able to move between the US and Canada through seamless rail connections and technologically advanced, automated security scans.

**Water Transportation:** Passenger services along the water are operating to close a few gaps where water transportation is more efficient. The Bar Harbor to Winter Harbor

ferry service continues to operate and carries commuters as well as tourists. Scheduled water transit services also operate between Lubec and Eastport. On demand water taxi services are available between Belfast and Castine. The year-round outer islands in Hancock County have streamlined ferry services to create predictable seasonal and year round services that can operate in most weather. Calais, Lubec, and Eastport see increasing cruise ship visits during the summer. Bar Harbor retains a strong presence from cruise ship visits.

The “blue highway” concept of interregional shipping is starting to take hold along the eastern seaboard. Eastport and Bucksport have emerged as the two primary freight ports in Washington and Hancock Counties. Sand, gravel, cut granite, wood products and paper drive export shipping while a variety of manufactured goods now arrive by ship. Inter-coastal shipping along the blue highway relieves some of the stress of moving freight through the congested northeast region.

**Air Transportation:** While the Bangor International Airport continues to be the primary airport in eastern Maine, the Bar Harbor Hancock County Airport in Trenton continues to operate as a regional carrier with significant private use and scheduled passenger services. The greater Machias regional airport has opened and offers private and scheduled regional air services.

**Bicycle and Pedestrian:** Energy costs have motivated people to live closer to school and work and to combine use of transit services with walking and bicycling. The Downeast Sunrise Trail has become a regional corridor for bicycle tourism and connects numerous village areas, including Ellsworth, Franklin, Cherryfield, Harrington, Whitneyville, Machias, and East Machias. The service centers have all seen significant improvements to their sidewalk infrastructure, and now encourage children to walk and bicycle to school to the extent possible.

#### 4.1.5 Status Quo

Maine has largely retained its share of national economic growth, but the distribution of growth has been uneven. Hancock County continues to grow on pace with the state, with population increases declining to approximately ½% per year, while Washington County population has grown more slowly with some years of declining population. Both counties continue to experience significant seasonal fluctuations in employment, due in large part to reliance on tourism and summer residence as economic centers.

Transportation demands continue to fluctuate seasonally with moderate congestion in the summer months and underutilization during winter and spring months. Higher fuel prices and consequential lower levels of consumption have reduced somewhat the demands on roads, but have increased demands for alternative transportation services. Lacking public strategic investments, private operators have stepped forward with piecemeal solutions to meeting customer demands. New transit services come and go, with mixed results. The regional airports have struggled for survival, primarily

operating for private owners. Residents wishing to travel by air drive to Bangor, and frequently to Portland and further to seek lower air fares.

## **4.2 Scenarios Summary**

The five scenarios provide alternative visions for the Downeast Coastal Corridor. Each is not necessarily exclusive of any other however a combination of potential futures is likely and desirable.

Driving forces, ranging from changes in global energy markets to local patterns of aging and migration, will push some of these scenarios ahead irrespective of local planning. Local and state policy can make a difference. To this end, the final section of the corridor plan provides recommendations in areas of transportation, land use and development that have been gleaned from our analysis and public input.

## 5 RECOMMENDATIONS

This report has emphasized the importance of integrating transportation, land use and economic development initiatives in order to create long-lasting solutions and promote a prosperous future. Starting at the highest level, the corridor planning staff and advisors recommend six goals that can guide the more specific action items that follow.

**Goal 1:** Promote roadway improvements and preservation measures that assure that the corridor remains viable for the efficient movement of freight, tourist and commuting traffic.

**Goal 2:** Enhance connections between modes of travel by planning for improvements that address the movement of vehicles and alternative modes such as bicycles and pedestrians to expand the region's tourism base in an environmentally sound manner.

**Goal 3:** Undertake measures that encourage multimodal responses to the needs of area businesses and residents by promoting the fast and efficient movement of people and freight.

**Goal 4:** Encourage future development policies that preserve key natural features and the small town/rural character of most of the corridor while also promoting economic prosperity.

**Goal 5:** Promote measures that remove or minimize major traffic bottlenecks to through traffic in the region's service centers.

**Goal 6:** Increase opportunities for multi-town assessment of transportation impacts of large-scale residential, commercial and other forms of development and implementation of measures to mitigate the adverse impacts of such development.

From these six goals, we derived mid-term and long term recommendations, or objectives that can be further articulated into a timeline with milestones and targets for completion.

Successful implementation of the following recommendations will require public investment and coordination among policymakers at various levels of government.

**Appendix 3** presents a "menu" of policy options available to local government officials in support of the regional transportation goals presented in this plan.

Medium and long-term recommendations are presented on the following pages.

#### 4.1 Medium-Term Recommendations

- **Improve unbuilt Sections of Route 1.** There are segments of Route 1 in Washington County that are not built to modern standards. These sections need to be improved including the addition of guardrails, shoulders and additional passing lanes.

The Mobility and Safety Analysis referenced above (and posted at [www.wccog.net/transport/route1.html](http://www.wccog.net/transport/route1.html)) identified 16 locations where roadway improvements for turning access are needed. It recommends that MDOT make necessary roadway improvements for turning access at all 16 identified locations. The report recommends development of four additional scenic pull-outs; and at least four passing lanes in each direction.

- **Improve connector roads between Routes 1 and 9.** These roads are important to the promotion of smooth freight and passenger connections between the two key highways (Routes 1 & 9).
- **Improve multi-modal access to port of Eastport.** There is a need to improve rail access to the port. Restoration of rail service and the development of multi-modal, trans-loading facilities (either at the Port or nearby in Perry) are necessary components. Implementation will require coordination of public and private investment and be supported by local designation of land use districts that allow for creation of appropriate facilities (marshalling and warehousing, trans-loading, etc.)
- **Explore Byway designation for appropriate roadways in Washington County** to reinforce regional assets and visitor experience.
- **Address traffic bottlenecks in Ellsworth and Bucksport.** Traffic congestion in two areas significantly slows overall travel speeds in the Hancock County.
- **Assess the need for transportation enhancements to support development renewable energy project and telecommunications improvements.** Potential use MaineDOT and municipal transportation corridors for electric, telecommunications and gas transmission should be assessed at the regional level in order to identify opportunities for co-use of existing transportation facilities as well as potential impediments/bottlenecks. The assessment should also analyze roads for their capacity to effectively transport related equipment/infrastructure components (e.g. windmill blades) and make recommendations for improvements.
- **Integrate transportation planning with industrial re-development and re-use initiatives.** Where feasible/applicable, integrate Brownfields site assessments and re-development opportunities with transportation needs noted above. (3-year EPA Brownfield Assessment Grants are underway in both counties. 2008-2011 in Hancock County; 2009-2012 in Washington County).

- **Address needed improvements to bicycle and pedestrian facilities.** Work to implement the recommendations from Bicycle and Pedestrian Access Plans, especially in town centers; and to improve access to the Down East Sunrise Trail through development of appropriate trailheads.
- **Support municipally designated land use districts that reinforce regional transportation initiatives** such as trailhead and commercial areas along the Downeast Sunrise Trail and multi-modal (transloading) areas where rail corridors intersect with roads.
- **Address regional needs for improved air transportation.** Development of a regional airport facility will address transportation, economic development and public health issues associated with the current lack of a Level 1 air facility in Washington County and maintain scheduled passenger air service in Hancock County.
- **Address deferred maintenance.** Increased asphalt prices and other road construction and maintenance costs at a time of decreasing gasoline tax revenues mean that maintenance and road improvements are being deferred, increasing long-term costs.

## 4.2 Long term Recommendations

- **Create measures to assure that future road improvements reflect the needs of the major groups of users (truckers, commuters and tourists).** The needs of these three groups must be addressed in a manner that preserves and protect the unique character of the corridor.
- **Promote effective access management policies and other land management measures recognizing resistance to land use controls.** The continued spread of commercial and residential development will be difficult to manage without additional land use controls. The creation of access roads parallel to existing highways should be encouraged.
- **Prepare for increased rates of congestion due to more traffic.** High housing prices relative to income in coastal communities mean more people are commuting to jobs from places further inland. This, along with the popularity of the Downeast Region as a retirement area, will mean continued increases in vehicular traffic.
- **Adjust the transportation system to reflect increased fuel costs.** Measures will be needed to promote ridesharing (such as vanpools and park and ride lots) and public transportation,
- **Address the needs of an aging population.** As the population ages, there will be increased demand for services for the elderly including transportation, assisted living and home-based elder care. This will involve demand for specialized transportation services.



## APPENDICES

### Appendix 1. Corridor Committee and Outreach Meetings Minutes

(Available online at: [www.hpcme.org/transportation/needs/decoastal](http://www.hpcme.org/transportation/needs/decoastal))

### Appendix 2. Corridor Advisory Committee Members

#### Hancock County Members:

Name	Affiliation
Roderick Franzius	Town of Hancock, HCPC executive board;
Michelle Beal	City Manager, Ellsworth;
Roger Raymond	Town Manager, Bucksport
Janet Michaud	Schoodic Futures Committee, HCPC Exec Board
Richard Bishop	County Sheriff's Department
Linda Belfiore	Washington Hancock Community Agency
John Kelly	Park Planner, Acadia National Park

#### Washington County Members:

Name	Affiliation
Dale Crowley	Town of Addison
Barbara Drisko	Town of Columbia Falls
Stuart Shotwell	Town of Cooper
William Attick	Town of Dennysville
Betsy Fitzgerald	Town of Machias
Lisa Hanscom	Town of Roque Bluffs
Rick Tanney	Town of Trescott
Linda Pagels-Wentworth	Washington County
Chris Gardner	Port of Eastport
Eleody Libby	Washington County, One Community
Harold Clossey	Sunrise County Economic Council
Alan Brooks	Quoddy Region Land Trust
Skip Roger	Federal Marine Terminal
Roger McIver	Domtar, Inc.
Dale Crowley	Town of Addison

### Appendix 3: Municipal Policy that Support Regional Transportation Goals

*This appendix pulls together municipal policies supportive of regional transportation goals from Comprehensive Plans that have already been adopted by communities along the Downeast Coastal Corridor. Policies are presented under the heading of the regional transportation goal that they most directly address. That said, it should be recognized that many of the municipal policies presented below address more than one regional transportation goal.*

*These municipal policies are presented on the one hand as an example of the commitment communities along the corridor have already made to supporting regional transportation goals.*

*At the same time, these policies are presented as a “menu” of policy options from which local planners and other municipal officials can draw in developing their own local policies supportive of the regional transportation goals and objectives presented in this plan.*

\* \* \* \* \*

**Goal 1:** *Promote roadway improvements and preservation measures that assure that the corridor remains viable for the efficient movement of freight, tourist and commuting traffic.*

- The town will request that MDOT conduct traffic counts (last done in 1999) on Route 193 as soon as possible to provide information of perceived increases in recent years.
- When Route 193 requires reconstruction or repair the town will request that shoulders be added to improve public safety.
- The city will participate actively in RTAC-Region 2 and Route 1 Corridor Committee meetings and policy development, including improved signage directing travelers on Route 1 to Eastport attractions.
- Support private efforts to provide passenger ferry to Lubec; assist with its promotion
- Support public and private efforts to reinstate car ferry service to Lubec.
- Local access management standards will include such design requirements as: Limiting total number of access points; Directing access to side and service roads; Coordinating access among adjoining properties; Combining subdivision lots onto one access road vs. multiple driveways; Funneling of traffic through one access drive

**Goal 2:** *Enhance connections between modes of travel by planning for improvements that address the movement of vehicles and alternative modes such as bicycles and pedestrians to expand the region's tourism base in an environmentally sound manner.*

- Explore grant opportunities to improve trails and bike facilities.
- Explore connection to East Coast Greenway and State Water Trail System.
- Promote Machias Rail Station (1898) to include park and ride, bus stop, taxi service, walking and cycling trails
- Research need and demand for an intra-county bus transportation system (Eastport-Machias-Calais)
- Explore development of a trailhead proximate to the village for the Downeast Sunrise Trail.
- Explore development a park-ride facility near the Village Center.
- Develop a sidewalk/trail improvement program by evaluating existing systems, identifying the needs of the residents, establishing priorities for improving and maintaining existing sidewalks/trails, and developing a program for sidewalks/trails improvements.
- Develop river walk trail connecting causeway to Bad Little Falls, across the river, then to Stillman Street; include botanical and interpretive elements
- Work with the Washington Hancock County Community Action Agency to assure Calais' residents are getting full benefit of the services offered.
- Research need and demand for an intra-county bus transportation system (Eastport-Machias-Calais)

**Goal 3:** *Undertake measures that encourage multimodal responses to the needs of area businesses and residents by promoting the fast and efficient movement of people and freight.*

- Work with other municipalities and regional groups in the area to obtain better access to Route 1, Route 9 and Interstate system.
- Pursue construction of another bridge/causeway to serve Eastport as depicted on Map 11 and the corridor that it could provide to Ayers Junction, Route 9 and Calais.
- Develop secondary access road(s) and combine accesses among commercial and industrial uses along Route 190.
- The town will consider a local roads ordinance that harmonizes the access of driveways and entrances with the state access management regulations and make the new state regulations available at the town office for property owners.
- Support implementation of Airport Master Plan; continue, or accelerate airport improvements, and consider hangar leasing.
- Consider establishing an impact fee system applied to discourage retail development on Route 190.
- The town will support development of the new Machias Regional Airport.
- Amend the Zoning and Subdivision Ordinances to include access management

provisions aimed at maintaining the traffic carrying capacity on Route 1 at current speed limits, including:

- sight distance provisions
  - common entrances
  - enabling service road development and use
  - spaces between driveways and access points
  - number of access points/curb points
  - deceleration lanes
  - back lot access provisions
- Review zoning ordinance at junction of industrial park and Routes 1/9 to encourage industrial park development and maintain traffic carrying capacity at
  - Support regional port/truck/rail connections between Eastport and Calais including a new bridge from Eastport to the mainland and a non-coastal interior route to Calais.
  - Pursue establishment of marshaling yard and warehousing on the mainland to support inter-modal transfer of freight from Port of Eastport

**Goal 4:** *Encourage future development policies that preserve key natural features and the small town/rural character of most of the corridor while also promoting economic prosperity.*

- The town will participate in CEDS (Community Economic Development Strategy) Transportation sub-committee policy committee.
- To minimize erosion of sediment into adjacent surface waters, erosion controls will be used during road construction or maintenance that causes soil disruption when in the watersheds of the town's lakes, ponds, and streams. These erosion controls will be removed once the disrupted areas have been re-vegetated.
- Columbia will discourage development in its sensitive rural areas through its public investment decisions. There will be no extension of paved surfaces beyond the current extent of paved roads in the towns ownership. In addition, to discourage conversion of existing seasonal camps into year round residences the town will not extend winter maintenance (plowing) beyond its current extent. Therefore, no winter plowing will occur beyond the paved segment of Pea Ridge Road, nor beyond the paved section of the Webb District Road, nor beyond the point on Georgetown Woods Road located 1.6 miles from its junction with Sacarap Road, nor on any private roads, nor on any segment of Schoodic or Cemetery Road.
- Create an attractive pedestrian friendly atmosphere in the downtown by maintaining pedestrian amenities (e.g., sidewalks and cross walks) in good condition, giving pedestrians the right-of-way at crosswalks, and by improving access and signage to parking areas. Encourage businesses to maintain an attractive appearance. Improve linkages from City to trails (bike racks, signage etc.)

**Goal 5:** *Promote measures that remove or minimize major traffic bottlenecks to through traffic in the region's service centers.*

- The planning board will contact MDOT to be advised on the projected traffic impact of proposed major subdivisions, as reviewed by the planning board under the State Subdivision Statute.
- Continue to work annually with the Department of Transportation in the development of the State Transportation in the development of the Biennial Transportation Improvement Program, to ensure that adequate maintenance, upgrading, and traffic flow occurs on City arterials and collectors. Refer applicants to MDOT for necessary state Entranceway Permits

**Goal 6:** *Increase opportunities for multi-town assessment of transportation impacts of large-scale residential, commercial and other forms of development and implementation of measures to mitigate the adverse impacts of such development.*

- The town will participate in regional transportation policy development
- The town will participate actively in RTAC-Region 2 meetings and policy development
- Appoint a permanent transportation committee to study transportation issues.
- Establish a continuing dialogue between communities along Route 1 and Route 9; address maintenance, planning priorities, curb-cuts, and the impact of adjoining development along arterials.