

DRAFT

U.S. Route 1A/SR 3 Corridor

Holden to Bar Harbor Inventory and Analysis

Overview

The US Route 1A/SR 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, a rising number of commuters, truck freight and local traffic. The economic importance of this corridor to the regional economy cannot be understated. Accordingly, this report seeks to characterize the current status of the corridor and identify trends that will challenge its viability to serve as the principle connection to the rest of Maine.

The axiom that “form follows function” is clearly demonstrated along the Route 1A/3 corridor as it changes function and design over its 41 mile length. In Holden and northern Hancock County the corridor is posted at 55 miles per hours and has a very limited number of access points. As the corridor presses south its design and character shifts dramatically with a particularly urban section through Ellsworth and the village of Bar Harbor. The Bar Harbor portion of Route 3 is designated as an All America Road in the National Scenic Byways program. The heavy traffic volume, easily managed along the limited access sections has generated severe, seasonal congestion in the more urban Hancock County sections. As the functional performance of the corridor deteriorates important questions have been raised about alternatives for improving mobility, including re-establishing passenger and freight rail, increasing bus services, road widening, access management and construction of a bypass around Ellsworth.

This assessment points to several factors that are pushing traffic volumes higher and exacerbating congestion in Ellsworth, Trenton and Bar Harbor. Current regional trends will require either increasing highway capacity or diminishing demand for the highway. By considering the effects of population, the economy, housing and land use, readers are encouraged to look for solutions that will permit the economy to continue developing without creating hardships for current and future residents and visitors.

The corridor assessment includes the following text interspersed with tables. A series of GIS maps has also been prepared to illustrate many of the issues raised in this text. The maps will be made available to readers on the internet at www.hcpcme.org and www.emdc.org.

This study was funded by the Maine Department of Transportation and prepared by the Eastern Maine Development Corporation and the Hancock County Planning Commission. Interested readers are encouraged to contact John Noll (jnoll@emdc.org) for questions about Penobscot County or Jim Fisher (jfisher@hcpcme.org) for questions about Hancock County.

Population

Population growth along the corridor has been brisk. During the 1990s, when Maine grew by 4%, growth in the corridor towns ranged between 8.1% in Ellsworth and 29.2% in Trenton. Since 2000 growth has continued, though estimates seem at odds with past trends, showing faster growth in Ellsworth and a minor reversal in Holden. The Holden reversal is more likely to be the result of inappropriate use of the ratios to county trends to predict this southern-most town.

Population Change by town and region (1990-2003 Census estimated): Population for Route 1A/SR 3 Corridor Municipalities

City/ Town	Population			Change 1990-2000
	1990	2000	2003 Est.	
Holden	2,554	2,951	2,922	15.5%
Dedham	1,219	1,422	1,453	16.7%
Ellsworth	5,975	6,456	6,784	8.1%
Trenton	1,060	1,370	1,409	29.2%
Bar Harbor	4,443	4,820	4,986	8.5%

Source: Census

County population trends are quite different. While Hancock County grew about 2 ½ times faster than the state, Penobscot County experienced a minor population decline. Estimates for 2003 anticipate Hancock County growth continues at a quick clip while Penobscot population recovers to 1990 levels.

Population for Penobscot and Hancock Counties

County	Population			Change 1990-2000 (Rounded)
	1990	2000	2003 Est.	
Hancock	46,941	51,798	52,792	10.3%
Penobscot	146,601	144,919	146,982	(1.1%)

Source: Census

The population density map illustrates the wide range of settlement types along the corridor, with relatively compact areas in Holden, Ellsworth, Trenton and Bar Harbor and very low density areas between village centers. This pattern of concentration and open space is an important element of maintaining good mobility between the population centers.

Economy

The labor force along the Route 1A/3 Corridor has grown significantly during the 1990s and into the 21st century. Holden has saw modest decline during this time period, but in 1990 had the lowest unemployment rate among the corridor towns and may be expected to grow in the future. Annual average unemployment rates mask dramatic seasonal fluctuation in unemployment. While Maine unemployment rates have fluctuated between 4% in the summer and 6% in the winter, Hancock County typically fluctuates between 3% in the summer and 8+% in the winter. The impact of seasonality ripples through other regional systems including housing, retail activity and transportation. Seasonal fluctuations in the Bangor LMA are far less than the most seasonally affected towns like Bar Harbor.

Labor Market Size of US Route 1A/SR 3 Corridor Municipalities

City/ Town	1990				2000			
	Persons 16+ old	In Labor Force	Unem- ployed	Percent	Persons 16+ old	In Labor Force	Unem- ployed	Percent
Holden	2,294	1,651	80	4.8%	2,240	1,500	47	3.1%
Dedham	903	656	28	4.3%	1,140	824	26	3.2%
Ellsworth	4,715	3,034	182	6.0%	5,187	3,377	128	3.8%
Trenton	808	541	17	3.1%	1,084	760	47	6.2%
Bar Harbor	3,617	2,325	108	4.6%	3,982	2,662	223	8.4%

Source: Census

Labor Market Size of Penobscot and Hancock Counties

County	1990				2000			
	Persons 16+ old	In Labor Force	Unem- ployed	Percent	Persons 16+ old	In Labor Force	Unem- ployed	Percent
Hancock	36,826	23,099	1,369	6.1%	41,733	26,826	1,416	5.4%
Penobscot	114,963	72,811	4,861	6.7%	116,139	74,297	4,176	5.6%

Source: Census

Labor Market Areas

Labor Market Areas are based upon patterns of travel between resident and work. The borders are redrawn every 10 years following the decennial census. The Route 1A/3 corridor passes through three Labor Market Areas as defined by the Maine Department of Labor. The two dominant markets are Bangor and Bar Harbor-Ellsworth. While Dedham belongs to the Bucksport LMA, corridor activity is concentrated in north-eastern Dedham, well away from the Bucksport regional center.

Bangor MSA (LMA): Bangor, Brewer, Eddington, Glenburn, Hampden, Hermon, Holden, Indian Island, Kenduskeag, Milford, Old Town, Orono, Orrington, Veazie, Winterport

Bar Harbor-Ellsworth LMA: Amherst, Aurora, Bar Harbor, Bradley, Clifton, Cranberry Isle, Eastbrook, Ellsworth, Franklin, Gouldsboro, Great Pond, Hancock, Lamoine, Mariaville, Mt. Desert, Osborne, Otis, Sorrento, SW Harbor, Steuben, Sullivan, Surry, Tremont, Trenton, Waltham, Winter Harbor and Unorganized Territories

Bucksport LMA: Bucksport, Dedham, Orland, Prospect, Stockton Springs, Verona

Labor Market Size of Bangor, Bucksport, and Ellsworth LMAs

County	1990				2000			
	Persons 16+ old	In Labor Force	Unemployed	Percent	Persons 16+ old	In Labor Force	Unemployed	Percent
Bangor LMA	65,859	39,929	2,959	7.4%	71,416	47,363	2,569	5.4%
Bucksport LMA		5,160	260	5.0%				
Ellsworth LMA		17,320	920	5.3%				

Source: Census

Source: Maine Department of Labor

Occupation

Economic transformation along the Route 1A/3 Corridor is evident in many sectors. Census data between 1990 and 2000 and projections into the future all indicate that traditional, resource extraction industries are employing fewer workers while the service sector, tourism and emerging technology-based enterprises have dominated new job creation. A particular challenge for the Route 1A/3 corridor is the impact that these changes are having on the spatial and temporal organization of work and residence. Note that these data are tabulated by place of residence. The rising tide of commuting across town lines to work means that in many cases jobs on the corridor are filled by people living in non-corridor towns

County comparisons show relatively small differences in most occupations. Penobscot County's greater reliance on extractive industries, forest products in particular, is evident. Yet even in this category only 4.1% of the population is employed, and in Holden the figure is under 1%.

**Labor Market Composition by Occupation for
US Route 1A/SR 3 Corridor Municipalities and Counties in 2000 (1 of 2)**

Occupation	Holden		Dedham		Ellsworth	
Employed civilians 16 years and over	1,448	100.0%	1,140	100.0%	3,204	100.0%
Management, professional, and related occupations	530	36.6%	285	25.0%	1,128	35.2%
Service occupations	167	11.5%	98	8.6%	584	18.2%
Sales and office occupations	429	29.6%	229	20.1%	876	27.3%
Farming, fishing, and forestry occupations	9	0.6%	6	0.5%	47	1.5%
Construction, extraction, and maintenance occupations	156	10.8%	82	7.2%	324	10.1%
Production, transportation, and material moving occupations	157	10.8%	95	8.3%	245	7.6%

Source: Census

**Labor Market Composition by Occupation for
US Route 1A/SR 3 Corridor Municipalities and Counties in 2000 (2 of 2)**

Occupation	Trenton		Bar Harbor		Penobscot County		Hancock County	
Employed civilians 16 years and over	708	100.0%	2,439	100.0%	69,846	100%	25,034	100.0%
Management, professional, and related occupations	252	35.6%	914	37.5%	21,156	30.2%	7,688	30.7%
Service occupations	126	17.8%	523	21.4%	11,641	16.6%	4,274	17.1%
Sales and office occupations	150	21.2%	474	19.4%	18,728	26.8%	5,781	23.1%
Farming, fishing, and forestry occupations	15	2.1%	54	2.2%	901	1.2%	1,031	4.1%
Construction, extraction, and maintenance occupations	78	11.0%	266	10.9%	6,844	9.7%	3,292	13.2%
Production, transportation, and material moving occupations	87	12.3%	208	8.5%	10,576	15.1%	2,968	11.9%

Source: Census

**Labor Market Composition by Occupation for
Bangor, Bucksport, and Ellsworth LMAs in 2000**

Occupation	Bangor LMA		Bar Harbor-Ellsworth LMA		Bucksport LMA	
Employed civilians 16 years and over	46,100	100.0%				
Management, professional, and related occupations	15,983	34.6%				
Service occupations	7,697	16.7%				
Sales and office occupations	13,207	28.6%				
Farming, fishing, and forestry occupations	256	0.5%				
Construction, extraction, and maintenance occupations	3,895	8.4%				
Production, transportation, and material moving occupations	5,062	10.9%				

Source: Census

Taxable and Retail Sales

Sales activities along the corridor have increase significantly over time. Like unemployment rates, there are dramatic differences among the towns. Coastal communities, like Bar Harbor and Trenton experience the majority of their taxable sales during the summer and early autumn. Many business board-up and close form more than six months, generating no economic activity during the off-season. Ellsworth, in the middle of the corridor, experiences two important seasons for taxable sales, the summer and the holiday shopping season in November and December. While the latter is not of particular concern for transportation, the summer peak in retail activities is concurrent with some of the heaviest periods of traffic congestion. High levels of traffic congestion can act to discourage discretionary trips into retail centers.

Taxable Sales (in thousands of dollars) for US Route 1A/SR 3 Corridor Municipalities

City/ Town	Total Sales	1999	2000	2001	2002	2003	% Change 1999-2003 (Rounded)
Holden	Consumer	\$26,427	\$26,383	\$28,249	\$31,779	\$31,211	18.1%
	Taxable	27,341	28,267	310,033	34,115	31,988	16.9%
Dedham	Consumer	NA	NA	NA	NA	NA	NA
	Taxable	NA	NA	NA	NA	NA	NA
Ellsworth	Consumer	237,965	243,331	262,257	298,495	287,294	20.7%
	Taxable	248,386	257,524	275,980	311,563	301,154	21.2%

City/ Town	Total Sales	1999	2000	2001	2002	2003	% Change 1999-2003 (Rounded)
Trenton	Consumer	6,712	11,421	13,357	14,652	13,946	107.9%
	Taxable	6,897	11,590	13,582	14,776	14,063	103.9%
Bar Harbor	Consumer	121,935	127,991	127,991	138,165	128,763	5.5%
	Taxable	124,705	130,384	130,441	140,671	131,343	5.3%

Source: Maine Revenue Services

Breaking taxable sales into retail sectors, the pattern contributes to our understanding of the spatial and temporal layout of economic activity.

Total Taxable Sales by Sector in Thousands of Dollars for Penobscot County

Year/ Quarter	Business Operating	Building Supply	Food Store	General Merchdse	Other Retail	Auto Transport	Restrt & Lodging	Total
1999	169395.3	178863.2	146631.5	354110.1	125538.7	455204.7	200666.3	1630409.8
Q1	41456.1	30642.4	32057.5	66143.8	23755.3	100561.2	41580.5	336196.8
Q2	41240.6	46051.7	35387.0	84495.8	30014.1	123003.3	48953.1	409145.6
Q3	41891.2	51778.1	41074.5	89571.4	30126.8	122341.8	61548.1	438331.9
Q4	44807.4	50391.0	38112.5	113899.1	41642.5	109298.4	48584.6	446735.5
2000	203976.0	209674.0	154119.9	353685.7	128741.8	479562.1	202940.7	1732700.2
Q1	46716.2	36450.8	34163.4	67451.6	25610.8	115758.7	43728.3	369879.8
Q2	52267.7	56471.6	40669.3	83626.1	31795.5	134228.5	50905.0	449963.7
Q3	49935.4	62130.4	40139.8	86701.4	29356.6	122866.6	59445.9	450576.1
Q4	55056.7	54621.2	39147.4	115906.6	41978.9	106708.3	48861.51	462280.61
2001	181166.4	209104.2	134993.7	360934.4	134624.3	507017.1	206032.0	1733872.1
Q1	42495.6	34364.8	31281.5	72962.5	27542.5	105817.8	46789.1	361253.8
Q2	49717.9	55964.3	34384.4	83503.6	31819.2	138030.9	50583.4	444003.7
Q3	44800.9	60097.0	35822.2	90882.1	31615.7	129846.2	58952.7	452016.8
Q4	44152.0	58678.1	33505.6	113586.2	43646.9	133322.2	49706.5	476597.5
2002	195945.7	231320.7	152278.3	411153.1	150958.8	564626.7	232286.7	1938570
Q1	50883.9	47956.4	43971.4	103826.1	33786.8	155630.4	64128.9	500183.9
Q2	49551.5	58910.2	36176.7	95304.5	38047.8	145544.9	53154.0	476689.6
Q3	46578.9	63002.2	37424.7	95739.1	33621.8	14002.2	63729.2	354098.1
Q4	48931.4	61451.9	34705.5	116283.4	45502.3	122449.2	51274.6	480598.3
2003	196194.5	237106.4	142439.1	391889.1	157609.2	567373.4	220560.8	1913172.5
Q1	45623.7	37430.7	33155.1	74526.1	31182.7	121508.6	47756.7	391183.6
Q2	46640.5	63035.0	35983.2	88680.3	38896.7	152486.3	54805.2	480527.2
Q3	499950.3	69369.3	36907.4	98775.4	36264.5	153530.5	65521.4	960318.8
Q4	53980.0	67271.4	36393.4	128907.3	51265.3	139848.0	52477.5	530142.9
Total Change* 99-03	16.4%	32.5%	(2.8%)	10.6%	25.5%	24.6%	9.9%	17.3%

Source: Maine Revenue Services, *Rounded

Total Retail Sales:	Includes Consumer Retail Sales plus special types of sales and rentals to businesses where the tax is paid directly by the buyer (such as commercial or industrial oil purchase).
Business Operating:	Purchases for which businesses pay Use Tax, i.e., for items that are used by the business in its operation (like shelving and machinery) and not re-sold to consumers
Building Supply:	Durable equipment sales, contractors' sales, hardware stores and lumberyards.
Food Stores:	All food stores from large supermarkets to small corner food stores. The values here are snacks and non-food items only, since food intended for home consumption is not taxed.
General Merchandise:	In this sales group are stores carrying lines generally carried in large department stores. These include clothing, furniture, shoes, radio-TV, household durable goods, home furnishing, etc.
Other Retail:	This group includes a wide selection of taxable sales not covered elsewhere. Examples are dry good stores, drug stores, jewelry stores, sporting good stores, antique dealers, morticians, bookstores, photo supply stores, gift shops, etc.
Auto Transportation:	This sales group includes all transportation related retail outlets. Included are auto dealers, auto parts, aircraft dealers, motorboat dealers, automobile rental, etc.
Restaurant/Lodging:	All stores selling prepared food for immediate consumption. The Lodging group includes only rental tax.

Major Employers

Employment in Hancock and Penobscot Counties is dominated by small business, but the medium to larger establishments play a particularly important role in generating demand for secondary economic activity, transportation infrastructure and housing. Some of the major employers have become partners in helping to solve transportation challenges. Jackson Lab now supports workforce buses traveling from Cherryfield, Franklin and Bangor. Other employers encourage carpooling and ridesharing.

The following **draft** tables indicate major establishments sorted by number of employees.

**Largest Employers by corridor and region and sector:
Major Employers Located in US Route 1A/SR 3 Corridor Municipalities**

Business Name	Location	Employees	Sector
Jackson Laboratory	Bar Harbor	1,240	Biomedical
Maine Coast Memorial Hospital	Ellsworth	515	Health care
Mt Desert Island Hospital	Bar Harbor	322	Health care
Wal Mart Associates Inc	Ellsworth	191	Retail
Hannaford Bros Co	Ellsworth	161	Grocery store
Mardens Inc	Ellsworth	161	Retail
Kidspace National Center For Kids	Ellsworth	138	Social service
College of The Atlantic	Bar Harbor	131	Education
Shaws Supermarkets Inc	Ellsworth	120	Grocery store
Home Depot USA Inc	Ellsworth	115	Retail
Union Trust Co	Ellsworth	97	Banking
Ellsworth Builders Supply Inc	Ellsworth	88	Retail
Yesterday's Children	Ellsworth	86	Social service
Down East Family Ymca	Ellsworth	82	Community service

Source: Maine Dept. of Labor, 2003

Other Major Employers in Penobscot and Hancock County

Business Name	Location	Employees	Sector
Eastern Maine Healthcare	Bangor	2,772	Health care
International Paper Co	Bucksport	823	Manufacturing
St Joseph Hospital Inc	Bangor	689	Health care
Microdyne Outsourcing Inc	Orono	598	Software support center
Acadia Hospital Corp	Bangor	549	Health care
Community Health And Counseling Svc	Bangor	468	Social service
Lincoln Pulp & Paper Co Inc	Lincoln	444	Manufacturing
Katahdin Paper Company LLC	East Millinocket	438	Manufacturing
General Electric Co	Bangor	421	Manufacturing
Hinckley Boat	SW Harbor	417	Manufacturing
OHI	Bangor	373	Social service
Wal Mart Payroll Department	Brewer	352	Financial
Webber Oil Co	Bangor	317	Energy
M B N A Marketing Systems Inc	Orono	315	Credit card call center

Source: Maine Dept. of Labor, 2003

Housing

Housing is being constructed in towns along the corridor at a quick pace. Rising population, including a significant increase in retirees on the coast, and declining numbers of persons per household are creating demands for new forms of housing, including multifamily units, seasonal and time share housing, workforce housing, mobile homes as well as costly, high cost housing. Seasonal housing in many communities is being converted to year round use by owners who are retiring to the area. Some year-round housing with salt water views is being converted from year round to seasonal use as it is sold to out-of-state buyers and summer residents.

Housing Units and Building Permits for US Route 1A/SR 3 Corridor Municipalities

City/ Town	Housing Units			Building Permits 2000-2003		
	1990	2000	Change	Single Family	Multi- family	Total
Holden	1,333	1,320	(1.0%)	71	25	96
Dedham	964	1,053	9.2%	64	4	68
Ellsworth	3,202	3,442	7.5%	242	87	329
Trenton	670	816	21.8%	46	20	66
Bar Harbor	2,586	2,805	8.5%	192	28	220

Source: Census, U.S. Department of Housing, SOCDS Building Permits Database

The housing density map indicates areas of relative concentration and dispersion along the Route 1A/3 corridor. Recent trends in this region are leading to more dispersed housing patterns, with rural areas converting into low density suburbs. Dispersed settlement is putting additional pressures on un-signalized intersections up and down the corridor. In some instances the newly established residents are calling for additional traffic signals and lowered speed limits to improve their access to the corridor.

Land Use and the Environment

All of the corridor towns have adopted consistent comprehensive plans, but all are passed or soon to be more than ten years old. Ellsworth is currently updating their comprehensive plan. Trenton is working on aspects of their plan with a State Planning Office Challenge Grant. All five towns have adopted town wide zoning, though with changes in their comprehensive plans, the question of changing zoning will follow. Bar Harbor has particularly detailed regulations, with more than 30 different zones.

The State Planning Office has projected significant changes in land use along the Route 1A/3 corridor in future decades. Historically much of the corridor has been characterized as forest and open farmland. Recent trends include expansion of road-side commercial uses fronting the

highway and large lot residential development in the rural hinterland. The projections suggest that the trend toward low density residential development will continue creating a patchwork pattern of suburban residential growth. Zoning and the lack of sewer lines in the rural hinterland are likely to discourage subdivisions with lot sizes less than one acre.

**Comprehensive Plan and Land Use Ordinance Status
for US Route 1A/SR 3 Corridor Municipalities**

City/ Town	Comprehensive Plan			Land Use Ordinance	
	Adopted Locally	State Consistent	Year of Plan	Adopted	Zones or Districts*
Holden	Yes	Yes	1995	Yes	Yes
Dedham	Yes	Yes	1992	Yes	Yes
Ellsworth	Yes	Yes	1992	Yes	Yes
Trenton	Yes	Yes	1991	Yes	Yes
Bar Harbor	Yes	Yes	1993	Yes	Yes

Source: PVCOC and HCPC, *in addition to state mandated shoreland zoning

The Natural Resource Map indicates the many constraints on development along the Route 1A corridor, including wetlands, shore lands, and areas with steep slopes. The Critical Natural Areas map indicates additional constraints related to rare and endangered species and significant wildlife habitats. In most cases development is still possible, but additional mitigation costs are likely.

Transportation

Airport master plan summary inventory

The Hancock County-Bar Harbor Airport, located in Trenton completed a Master Plan Update in May, 2004.

The plan update:

- forecasts usage,
- assesses current facilities including roadway access and parking,
- identifies future needs to meet anticipated demand and federal requirements,
- identifies noise and other environmental impacts and
- describes the stages for implementing demand-driven improvements.

The update includes several large maps identifying current facilities and future expansion possibilities.

This small, regional airport handles about 4.8% of Maine’s total based aircraft. 89% of the planes are single engine, compared with 78% statewide. In 2001 the airport had approximately 40,000 operations. This figure is projected to increase to more than 50,000 operations by the year 2013. The airport has 2 runways, each having two approaches. Total aviation passengers are projected to increase to 115,800 in 2006 and 133,100 in 2013. Commercial enplanements declined from 13,996 in 2000 to 10,056 in 2003. These figures are projected to rebound to 16,100 in 2006 and 19,500 in 2013.

Runway 4-22 is 5,200 feet long, while runway 17-35 is 3,364 feet long. Only runway 22 has approach lights for night landings.

This airport fills an important transportation service for Hancock County. Most usage is for private airplanes, providing executives and summer residents with a convenient intermodal location. Commercial flights are often competitively priced with flights out of the Bangor International Airport, though both airports are significantly more expensive than Portland, Boston and Manchester.

Change in Vehicle Miles Traveled by County

The 1990s witnessed unprecedented growth in 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 will eventually impact choices about travel and fuel efficiency.

Vehicle Miles Traveled (VMT)

County	1990	2000	Change (Rounded)
Hancock	561,524,946	702,581,167	25.1%
Knox	294,037,083	365,940,225	24.5%
Penobscot	1,422,298,519	1,605,714,216	12.9%
Piscataquis	168,348,935	182,917,582	8.7%
Waldo	322,828,645	415,795,411	28.8%
Washington	367,976,097	421,588,863	14.6%

Commuting

Historically traffic congestion in the southern-end of the Route 1A/3 corridor has been dominated by a heavy seasonal influx of tourists and summer residents. This pattern has shifted to include more pronounced periods of congestion related to daily home to work commuting.

The expansion of Jackson Laboratory, Hancock County’s largest employer, and Hinckley Boats operate in shifts, contributing to congestion in the mid and late afternoons.

The table below illustrates the challenge of commuting in a rural region. The rural communities of Holden and Dedham have more than 80% of commuters traveling along in private automobiles. Ellsworth and Bar Harbor are perform somewhat more efficiently, but both have more than 2 of three commuters driving alone. Public transit and walking provide significant relief in Ellsworth and Bar Harbor, but are incidental in the other towns. The trend to alternative modes of commuting are encouraging, but the infrastructure supporting change is insufficient.

Commuting Method for US Route 1A/SR 3 Corridor Municipalities (1 of 2)

Method	Year	Holden		Dedham		Ellsworth	
Workers 16 years+	1990	1539	100.0%	594	100%	2,752	100%
Drove alone		1247	81.0%	498	84%	2,214	80%
Carpool		162	10.5%	65	11%	202	7%
Public transportation		0	0.0%	0	0%	6	0%
Other means		0	0.0%	16	4%	28	1%
Walked or worked at home		131	8.5%	15	4%	302	11%
Workers 16 years+	2000	1,426	100.0%	771	100%	3,196	100%
Drove alone		1,207	84.6%	642	83%	2,366	74%
Carpool		133	9.3%	81	11%	411	13%
Public transportation		0	0.0%	0	0%	0	0%
Walked		3	0.2%	10	1%	194	6%
Other means		22	1.5%	5	1%	46	1%
Worked at home		61	4.3%	33	4%	179	6%

Source: Census

Commuting Method for US Route 1A/ SR 3 Corridor Municipalities (Continued: 2 of 2)

Method	Year	Trenton		Bar Harbor	
Workers 16 years+	1990	513	100%	2,190	100%
Drove alone		390	76%	1,445	66%
Carpool		64	12%	254	12%
Public transportation		0	0%	0	0%
Other means		2	0%	72	3%
Walked or worked at home		57	11%	419	19%
Workers 16 years+	2000	696	100%	2,376	100%
Drove alone		551	79%	1,549	65%
Carpool		81	12%	231	10%
Public transportation		10	1%	64	3%

Method	Year	Trenton		Bar Harbor	
		Count	Percent	Count	Percent
Walked		17	2%	370	16%
Other means		10	1%	40	2%
Worked at home		32	5%	154	6%

Source: Census

Commuting time

Population dispersion into rural areas and rising issues of traffic congestion are contributing to rising average commuting times in all five communities. The additional loss of 2.7 to 6.6 minutes per commute between 1990 and 2000 imposes significant costs on employers, workers and their families.

Mean Travel Time to Work (Minutes) for US Route 1A/SR 3 Corridor Municipalities

City/ Town	Time (in minutes)			Percent
	1990	2000	Change	
Holden	17.5	21.5	4.0	22.8%
Dedham	23.6	27.0	3.4	14.4%
Ellsworth	17.3	23.9	6.6	38.2%
Trenton	19.2	24.9	5.7	29.7%
Bar Harbor	11.2	13.9	2.7	24.1%

Source: Census

Journey to and from work of residents (1990- 2000)

Commuting patterns in 2000 indicate a divide somewhere between north Ellsworth and Dedham, with commuters north of that divide more likely to travel toward Bangor for work and persons living south of the divide to travel south to Ellsworth and Bar Harbor to work.

In addition to movements north and South on the corridor, Route 46 connecting Holden to Bucksport carries a significant number of workers to the International Paper Facility in Bucksport. This corridor accounts for Dedham's membership in the Bucksport Labor Market Area. Recent retail expansion in Brewer is generating additional shopping-driven trips from the Bucksport LMA north on Route 46.

**Journey to work for
US Route 1A/SR 3 Municipalities in 2000 (1 of 2)**

Area	Holden		Dedham		Ellsworth	
Total Commuters	1,426	100.0%	771	100.0%	3,196	100.0%
Work and Reside in Same Town	162	11.4%	55	7.1%	2,002	62.6%
Work in Penobscot CO (other town)	1,129	79.2%	555	72.0%	203	6.4%
Work in Hancock CO (other town)	64	4.4%	131	17.0%	900	28.2%
Work in Other Maine County	62	4.4%	25	3.2%	63	2.0%
Work in Other State	9	0.6%	5	0.6%	19	0.6%

Source: Census

**Journey to work for
US Route 1A/SR 3 Municipalities in 2000 (Continued: 2 of 2)**

Area	Trenton		Bar Harbor		Penobscot County		Hancock County	
Total Commuters	696	100.0%	2,376	100.0%	68,652	100.0%	24,782	100.0%
Work and Reside in Same Town	96	13.8%	1,710	72.0%				
Work in Penobscot CO (other)	26	3.7%	21	0.9%	62,819	91.5%	2,171	8.8%
Work in Hancock CO (other)	552	79.3%	581	24.5%	1,276	1.9%	21,524	86.9%
Work in Other Maine County	11	1.6%	25	1.1%	3,981	5.8%	801	3.2%
Work in Other State	5	0.7%	39	1.6%	576	0.8%	286	1.2%

Source: Census

Roadway Safety: types, causes, costs of crashes (most recent 3-yr period available)

Safety is a significant concern along the Route 1A/3 corridor. Crash rates are high along several sections of the corridor, with high speed accidents in Holden, Dedham and northern Ellsworth, and many more low speed accidents in congested sections such as High Street in Ellsworth.

High Crash nodes are located at:

- Route 1A and Route 46 intersection in Holden,
- Several locations on Oak Street and High Street in Ellsworth,
- Intersection of Route 3 and Route 204 in Trenton
- Intersection of Route 3 and Route 102 in Bar Harbor near the Thomson Island Bridge

High Crash Segments are located at:

- Most of Oak Street and High Street
- Thompson Island Bridge between Trenton and Bar Harbor
- Eden Street in Bar Harbor

2002 High Crash Nodes

Town	Location	2002 Crashes	CRF
Holden	Rte 46	12	2.07
Ellsworth	Christian Ridge Road	8	1.81

Town	Location	2002 Crashes	CRF
Ellsworth	Route 179	10	1.83
Ellsworth	Park Street	8	1.50
Ellsworth	Church Street	27	4.87
Ellsworth	Main Street	41	1.16
Ellsworth	Foster Street	11	1.27
Ellsworth	Rte 1	29	3.56
Ellsworth	Short Street	17	2.70
Trenton	Rte 204	10	1.92
Trenton	Rte 102	8	1.46

Source: MDOT

The volume of crashes in high access, high-congestion areas drives these designations. However, speed of accidents and severity of outcome are significant concerns on other segments of the corridor. The crash rate factor at the high crash nodes is highest at Church Street where many drivers attempt to jump off of Route 1A to use an informal bypass around the congested intersection or Route 1A and Main Street in Ellsworth. Another High Crash node is located at the “triangle” of Route 1 and Route 1A.

2,021 crashes are noted in MDOT records from 1997 to 2001 on the Route 1A/3 Corridor in Hancock County. Data for Holden will be updated and added shortly. Ellsworth accounts for over half of the fatalities and serious injuries. Dedham, with mostly high speed section accounts for more than 25% of deaths, but less than 10% of injuries during this time period.

Crashes Occurring on Route 1A/3 1997-2001

Town	Deaths	Serious Injuries	Apparent Injuries	Reported Injuries
Holden				
Dedham	3	11	46	29
Ellsworth	6	37	265	234
Trenton	0	7	68	64
Bar Harbor	2	7	79	72
Not Noted	0	5	81	53
Total	11	67	539	452

Crashes occurring on the corridor took many forms, involving animals, single and multiple cars, bicycles and pedestrians. By far the most common types involved intersection movement, front-end, rear-end, ran off road and side-swipes.

CRASH TYPE	Bar Harbor	Dedham	Ellsworth	Trenton	Not Specified	Grand Total
All other animals			3			3
Bear			2			2
Bike	3		4			7
Deer	61	29	51	30		171
Fire			3			3

CRASH TYPE	Bar Harbor	Dedham	Ellsworth	Trenton	Not Specified	Grand Total
Head-on/sideswipe	28	12	41	13	1	95
Intersection movement	32	8	274	29	110	453
Jackknife			1			1
Moose	1	4	5	3		13
Object in road	8	15	5	3	2	33
Other	2	4	18	7	1	32
Pedestrians	2	1	7		1	11
Ran off road	75	35	114	34	3	261
Rear end/sideswipe	97	25	568	120	122	932
Rock thrown				1		1
Rollover		1		1		2
Grand Total	309	134	1,096	241	240	2,020

Summary

This inventory and analysis is a first step toward identifying and coordinating policies affecting land use, housing, economic development and transportation. The Route 1A/3 corridor presents significant opportunities to increase economic potential for the region, bringing new jobs and connection our communities.

However, current trends suggest that the corridor will experience ongoing degradation of service, safety and enjoyment for drivers and nearby businesses and residents. It comes as no surprise that the 2002 Ellsworth Comprehensive Plan survey found overwhelming concern among residents about traffic congestion on this corridor. Traffic volumes already exceed the capacity of the corridor in several locations, and they are rising. Crashes are numerous and have resulted in fatalities and serious injuries. The cumulative process of commercial and residential growth is creating new high crash locations and congestion bottlenecks. Managing development along the corridor to preserve mobility will require cooperation of local leaders, developers, planners and land owners and others.