

Purpose Of and Need For the Proposed Action

How to Read This Chapter: This chapter defines the action by the Federal Highway Administration (FHWA) and the Maine Department of Transportation (MDOT) that is the subject of this Draft Environmental Impact Statement (DEIS) and establishes the purpose of and need for that action. In addition, this chapter identifies the relevant issues considered in the DEIS. It also lists the federal and state permits and actions likely to be necessary in order to implement the proposed action.

Figures are bound separately in Volume II of this DEIS.

1.1 Introduction

The FHWA and the MDOT have undertaken the Aroostook County Transportation Study to identify transportation corridors that will improve mobility and efficiency within northeastern Aroostook County and that will link this area and other portions of the US and Canada in order to support regional economic growth.

1.1.1 Study Area

The Study Area is located in the northeast corner of the state and is shown in Figure 1-1. It includes the central and northeastern portions of Aroostook County, and is bounded on the south by I-95, on the west by Route 11 and on the north and east by the Canadian border. I-95 terminates in Houlton at the southeastern limit of the Study Area. There is no freeway access to the majority of the Study Area. The Study Area is approximately 160 kilometers (100 miles) long and 40 to 100 kilometers (25 to 60 miles) wide, covering approximately 7,060 square kilometers (2,760 square miles).

Much of the Study Area is sparsely populated, with just over 73,200 residents in 1990. The geography, topography, and settlement patterns within the Study Area define four distinct subregions. The southwest corner of the Study Area consists of dispersed residences and farms along Routes 2, 11, 159, and 212. Residents of this rural area rely on the small town centers at Patten, Island Falls, and Sherman Mills

for community services and basic retail. Houlton, the County Seat, is south of the intersection of I-95 and Route 1. The principal highway connection to Canada within the Study Area is in Houlton.

The western portion of the Study Area consists primarily of unincorporated towns and forest lands, with dispersed residences and small farms along Route 11. Ashland, the major town in this part of the Study Area, is located at the junction of Routes 11, 163, and 227. Ashland provides the primary source of community services and commodities for much of the Route 11 corridor.

The eastern portion of the Study Area, extending north to Caribou and Limestone, is the most densely developed and includes the primary economic and business centers of the region, within a matrix of dispersed farms and residences. The smaller towns of Monticello, Bridgewater, Mars Hill, Westfield, Easton, Mapleton, Washburn, Fort Fairfield, and Limestone provide community services, including community centers, libraries, churches, gas stations, small grocery stores, and cafes. Presque Isle and Caribou are small cities that serve as the shopping, business and employment center for this region. These cities have dense population centers and provide a full range of community resources and services, including educational, medical, civic, recreational, and commercial businesses. Presque Isle, which contains the regional commercial airport, hospital, several hotels and a regional mall, is the major business and tourist center for the outlying smaller communities and residents. Loring Commerce Centre, at the former Loring Air Force Base in Limestone, is viewed as the region's focus for industrial development.

The St. John Valley, the northernmost region of the Study Area, has a strong Acadian culture, and maintains close cultural and family connections across the Canadian border. This area is separated from the central and southern portions of the Study Area by undeveloped forest land, and is connected to the south by Routes 11, 161, and 1. The population of the St. John Valley area occurs primarily in dispersed residences and farms throughout the area north of Route 161 and Long Lake. More concentrated residences occur in St. Agatha and the summer community along Long Lake, and in the town centers of Fort Kent, Frenchville, Madawaska, Grand Isle, and Van Buren. These town centers provide community services, libraries, cafes, medical services, and shops for the dispersed population.

1.1.2 Study History

The initial evaluation of a controlled-access highway in northern Aroostook County was conducted in the 1960s. In 1966, the Interstate Highway System was extended to Houlton and the New Brunswick border, providing a vital link between central Maine, northern Maine, and New Brunswick. In 1968, the Maine Department of Transportation conducted a preliminary evaluation of feasibility of extending the

Interstate north of Houlton, as one of several proposed additions to the Interstate Highway System.

In 1988, the Maine Legislature established a Commission to study the transportation needs of the corridor from I-95 to northern Aroostook County. Recommendations included in the Report to the 113th Maine Legislature on the Feasibility of Improvements to Routes 1 and 11 from Interstate 95 to the St. John Valley (MDOT, 1988) focused on maintaining a viable Route 1. In response to the study, MDOT committed considerable resources to the Route 1 corridor, and more recently has improved a portion of Route 11.

In 1991, the Defense Base Closure and Realignment Commission announced that Loring Air Force Base in Limestone would close. At the time of the announcement, the region was also experiencing a decline in the manufacturing and agricultural sectors. The combination of these impacts resulted in a county-wide population loss. Community leaders and officials developed strategies for base reuse and economic renewal. Recognizing that accessibility is an important precursor to economic growth, the Leaders Encouraging Aroostook Development (LEAD) focused their efforts on the viability of constructing a four-lane, controlled access highway between I-95 and the St. John Valley.

In 1993, a study was conducted to evaluate the economic and development impacts of constructing such a highway. The Economic and Transportation Impact Study in Aroostook County (MDOT, 1994) concluded that it would be beneficial to construct a highway between Houlton and Fort Kent/Madawaska. Subsequent studies (Houlton to Fort Kent Transportation Study, MDOT 1997) further evaluated the engineering, environmental, and economic feasibility of a controlled-access highway and other transportation alternatives between Houlton and the St. John Valley.

Other transportation improvements within the Study Area have been considered to alleviate localized transportation deficiencies. In 1993, MDOT studied the feasibility of constructing a bypass of Presque Isle to separate through traffic from local traffic, easing congestion and reducing the potential for accidents within the Presque Isle Central Business District.

1.2 Purpose and Need

The statement of Purpose and Need was developed in consideration of existing and projected future highway and economic conditions. The Aroostook County Transportation Study's Public Advisory Committee (PAC) assisted in developing this Purpose and Need statement.

1.2.1 Purpose and Need Statement

The **Purpose** of the study is to evaluate transportation alternatives that would improve the region's economy by improving transportation mobility. Aroostook County has an inadequate transportation system that limits access and mobility to, from, and within the county. Poor mobility in turn limits economic opportunity.

Specific elements of the **Need** for transportation improvements include:

- Aroostook County suffers from a long-term loss of population;
- The unemployment rate in the Study Area has been chronically higher than the state average;
- The rate of job growth has been chronically below the state average;
- There has been a lack of diverse job opportunities which would retain and attract workers;
- There is a need to improve transportation access to, from and within Aroostook County and the surrounding provinces to improve access to jobs, reduce long distances and travel times for goods to market, and address issues of transportation system continuity.

Transportation improvements that address economic and transportation needs should meet the following specific **Objectives**:

- Economic Objectives
 - Maintain and expand the Aroostook County economy as it affects population, employment, diversification of jobs, and income;
 - Enhance the marketability of Aroostook County's existing and potential economic assets;
 - Improve access to jobs and services;
 - Improve connections to markets within and outside of Aroostook County including New England, Canada, and more distant areas; and
 - Improve access to multi-modal (air and rail) facilities.
- Transportation Objectives:
 - Reduce travel time to, from and within Aroostook County;
 - Enhance the reliability of Aroostook County's transportation system;
 - Improve traffic flow through Houlton, Mars Hill, Presque Isle, and Caribou;
 - Reduce the potential for crashes;
 - Provide an adequate highway geometry;

- Reduce speed differentials in developed areas, and among highway users;
- Reduce conflicts caused by the varied traffic mix;
- Provide a transportation system that can accommodate higher truck weights within Aroostook County;
- Provide better facilities for all modes of transportation;
- Improve access management along existing highways;
- Mitigate conflicts between wildlife (particularly moose and deer) and the transportation infrastructure; and
- Reduce the perception of remoteness that contributes to the idea that there are “two Maines.”

1.2.2 Study Area Economic and Transportation System Needs and Deficiencies

The regional transportation system of 2-lane highways, often extending through downtown centers, does not provide direct efficient connections between population and industrial centers within the Study Area or to external highways (I-95 or Canadian Route 2). Many highways have geometric and safety deficiencies. Functional conflicts between through traffic (trucks) and local traffic in downtown areas causes congestion and safety problems.

Specific transportation needs and deficiencies can be characterized broadly as needs in system linkage and mobility and as safety and geometric deficiencies. These include:

- Travel times between points within northern Aroostook County, and between the Study Area and external points, are restrictive to the mobility of goods and people;
- Functional conflicts and delays in downtown centers also increase travel times;
- The existing highway system connecting major population and commercial/industrial centers with each other, with I-95 and with Canadian Route 2 (the TransCanada Highway) does not have a consistent cross-section and consistent speed, with dramatic speed differentials between rural and developed areas and between different vehicular types;
- The existing highway system does not consistently meet the appropriate design standards and has geometric and safety deficiencies; and
- The existing highway system does not provide adequate access to jobs and services.

1.2.2.1 Population and Employment

The Study Area, although it contains a large land area and includes 54 populated communities, has a small population base that has declined severely since 1960. The largest declines were associated with the 1978-1981 recession and the 1992-1995 Loring Air Force Base closure. Since 1960, the population has declined from approximately 100,100 to 73,241. Van Buren has suffered the largest decline, losing 44 percent of its population. Fourteen communities in the Study Area have declined by more than 25 percent. The Study Area is projected to continue to lose population through 2005, then increase after 2010, stabilizing at a 2020 population projected to be 2.1 percent higher than current levels (73,241).

There has also been a shift in age distribution with the loss of younger people in the labor force. Approximately 65 percent of the population is within the labor force age range of 15-64, with 19 percent of the population under 15 and 15 percent over 65. The population is also anticipated to continue to shift in age, with the over-55 population increasing by 54 percent as a result of the continued out-migration of younger adults who seek better economic opportunities outside of Aroostook County.

Employment within the Study Area has also declined. The economic restructuring associated with the Loring Air Force Base closure resulted in the loss of 10,700 jobs in the three largest industry sectors (government, manufacturing, and agriculture). Recently, 95 percent of these losses have been recovered by growth in the services and trade sectors (which includes employers such as MBNA, Sitel, Burrell, and Maine Mutual Insurance). Future growth is predicted to be primarily in the service sector, with continued losses (approximately 1,500 jobs by 2020) anticipated in the areas of manufacturing, farming and government.

Income levels of Aroostook County residents were close to the State of Maine average during the 1970s. Recently, however, the rate of income growth in Aroostook County has consistently lagged behind the state as a whole. By 1996, per capita personal income in Aroostook County reached roughly \$16,000, 22 percent below the statewide average of just under \$21,000.

In 1998, all of the communities within the Study Area were below the estimated median household income for Maine (\$31,952). Median household income estimates in the Study Area range from a low of \$17,172 in VanBuren to a high of \$31,576 in Frenchville. The estimated median household income for all communities in the Study Area was slightly above \$24,000 or roughly 75 percent of the statewide median. Commuting times within the Study Area affect income values. The majority of residents travel less than 15 minutes to work, but commuting time increases as salary decreases (i.e., the lowest-paid workers drive longer), and commuting times are generally higher for the second jobs that most of the lower-paid workers require in order to maintain a living wage.

1.2.2.2 Economic Growth

The three major industries in the Study Area are forestry, agriculture, and tourism. An efficient transportation system is essential to the future growth and economic vitality of these industries. The observed pattern of recent reinvestment at Loring Commerce Centre and elsewhere in the region suggests an ongoing geographic concentration of employment growth in and near established centers. For announced plant expansions to succeed, it will become increasingly important for employers to be able to draw labor from larger geographic areas.

Forestry

Aroostook County and northern Penobscot County are among the most heavily forested areas east of the Mississippi River, and forest-related economic activity has been and continues to be one of the cornerstones of the region's economy. In early 1999, 163 forest-related businesses, including lumber and wood products, wooden furniture manufacturing, and pulp and paper manufacturing, accounted for nearly 3,400 employees, or 9.4 percent of employment within the Study Area.

The outlook for the forest products industry in Maine is generally positive. There are several factors that will greatly affect the extent to which the recent relative growth in the northern Maine forest products industry is sustained: raw material supply, labor availability, domestic and foreign market trends, and management and policy decisions. Although the industry appears strong, finding adequate labor may be a serious problem. Periods of high economic growth and low unemployment elsewhere in Maine have already lured forest workers to work in construction and other fields. Maine's logging work force is aging and the population in Aroostook County is declining. Transportation, particularly long commuting times, also affects labor availability. Improved roads that reduce commuting times or distances could help alleviate the labor shortage facing the industry.

The cost of transporting wood products within and out of the Study Area is also a constraint on the economic future of the forest products industry. The trend towards use of the entire tree for production and the steady reduction in the size of harvested trees will increase the amount of high-volume, low-value wood being transported on the region's highway network. Because they will be increasingly competing for larger geographic markets, northern Maine lumber and paper producers will be increasingly concerned about the quality and cost of transportation for both their products to market and for the inbound shipments of raw materials for processing.

Agriculture and Food Processing

The importance of agriculture to Aroostook County extends beyond just local farming operations to include processing, wholesaling, and transporting locally grown crops. According to the 1997 U.S. Census of Agriculture, there were 889 farms located in Aroostook County, occupying nearly 131,580 hectares (325,000 acres) and producing \$109.6 million in agriculture products. Nearly half of the total crop farms

and 45.6 percent of the total harvested cropland in Aroostook County were engaged in potato production. Long-term trends and projections include increased crop diversification, with increases in the production of broccoli, flax, soybeans, and strawberries. Food processing plants are also likely to contribute to employment growth, and the Loring Commerce Centre's ability to support production and processing is likely to attract additional agricultural industries. Efficient transportation within the region, between growing and processing plants, and efficient transportation to external markets, is critical to the continued growth and success of these key industries. This is particularly important for new agricultural products with short shelf lives such as peas, strawberries, and broccoli.

Tourism

Tourism is of growing importance to the Aroostook County economy. Hunting, fishing, snowmobiling, and other wilderness activities draw visitors to the Study Area throughout the year. Although most of the wilderness region is west of Route 11, outside of the Study Area, the Study Area serves as an important "staging area," providing accommodations and other services for wilderness visitors. Within the Study Area, hunting, fishing, camping and canoeing take place on the numerous forested tracts and rivers. Wildlife viewing and ecotourism is also an emerging industry, enhanced by the new Aroostook National Wildlife Refuge in Limestone.

Aroostook County is acquiring a growing reputation in winter recreation, particularly in snowmobiling. There are more than 3,520 kilometers (2,200 miles) of maintained snowmobile trails in Aroostook County, which connect with trail systems to the south in Maine as well as in Quebec and New Brunswick. This extensive trail system has made the Study Area a prime destination for snowmobilers. Alpine ski areas are located in Fort Kent, Mars Hill, and Presque Isle. The Nordic ski industry is being developed with new U.S. Olympic training facilities for biathlon at Presque Isle and Fort Kent. These and other planned facilities could become a noteworthy attraction for tourism from outside the region. Winter restaurant and lodging sales have steadily increased as a proportion of total annual sales, and currently provide approximately 22 percent of annual tourism-related sales for these industries. In addition to winter tourism, other special events are held throughout the year as a means of attracting visitors.

While tourism growth in the Northern Maine District (as defined by the Maine State Planning Office) increased by over 70 percent between 1986 and 1998, the Study Area still lagged substantially behind all other regions of the state, and was well below the state's tourism growth rate of 148 percent. The existing transportation facilities, which constrain travel within the region and between Study Area destinations and population centers outside of the Study Area, are a factor that could inhibit the continued growth of the tourism industry.

1.2.2.3 System Linkage and Mobility

Houlton, Presque Isle, Caribou and Madawaska are the largest economic activity centers in the Study Area, all of which have airports and are important regional transportation centers. Truck-traffic generating businesses in Mars Hill, Ashland, Easton, Fort Fairfield, Van Buren, and Fort Kent, and 16 existing industrial parks, are dependent upon regional transportation connections to I-95. None of the 5 key highways connecting these centers, or connecting them with external markets, provide consistent speeds and highway geometry. While some major industries currently rely on rail to move non-perishable goods, financial problems of the freight rail operator increase the importance of the highway system for connections to external markets. On each highway, there are numerous transitions between wider, high speed highway segments through somewhat remote areas and lower speed segments through more densely developed areas. There is little consistency on these highways for any length of travel - most of the segments between any two major destinations exhibit considerable variation in speed and geometry.

This lack of system continuity contributes to a decrease in mobility for residents and businesses in central and northern portions of the Study Area. These mobility issues can be exacerbated by time of year (due to weather, speed postings, and agricultural activities) and by time of day (due to variations in travel demand).

1.2.2.4 Highway Deficiencies

All of the Study Area highways contain geometric deficiencies – segments where AASHTO and MDOT design criteria are not met for the design speed of the highway. These contribute to increased travel times and reduced mobility as well as reduced safety. Geometric deficiencies are present on all of the Study Area highways, and include:

- Vertical deficiencies (steep sections and long grades) that affect safety and affect truck speeds at greater differential than passenger vehicles;
- Horizontal deficiencies (sharp curves) that affect speed, safety; and may result in inadequate sight distances for stopping and passing;
- Inadequate lane and shoulder widths that affect safety and speeds, especially of trucks (shoulders provide emergency parking and recovery areas, and are also linked to safety); and
- Inadequate pavement condition that affects speed and safety.

1.3 Scope of this Environmental Impact Statement

This Environmental Impact Statement has been prepared in conformance with the requirements of the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations and with the NEPA regulations and guidance documents of the Federal Highway Administration (FHWA). The purpose of an EIS is to provide a full discussion of significant environmental impacts, and to inform decision-makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts. It includes consideration of the existing transportation, economic, physical and biological, and atmospheric environment, and the potential effects of alternatives considered during the study on those elements of the environment. The alternatives and the major environmental issues were identified through a scoping process described below.

1.3.1 Scoping Process

The Scoping Process is an iterative process, conducted throughout the Environmental Impact study, that is intended to meet four major goals:

- To identify concerns of the affected public and regulatory agencies;
- To facilitate an efficient EIS process;
- To define issues and alternatives that will be examined in detail in the EIS; and
- To eliminate from detailed study those issues that are not likely to be significant.

FHWA initiated the scoping process, in compliance with CEQ NEPA Regulations (40 C.F.R 1501.7) by publishing a Notice of Intent to Prepare an EIS. This Notice of Intent was published in the Federal Register during the week of September 16-24, 1999. Public scoping meetings were held on September 14, 15 and 16, 1999 in, respectively, Frenchville, Presque Isle, and Houlton to initiate the scoping process. FHWA and MDOT have also met with federal regulatory agencies to identify issues and review the scope of the EIS. Subsequent public meetings of the Public Advisory Committee (PAC) helped to develop and evaluate corridor alternatives and to refine the relevant issues. Public workshops, held on October 24, 25 and 26, 2000 were also important elements of the scoping process. Chapter 6 of this DEIS (page 6-1) provides additional information on the coordination and public involvement aspects of the Aroostook County Transportation Study.

1.3.2 Relevant Issues

The Scoping Process included a discussion of the Purpose of and Need for transportation improvements in the Aroostook County Study Area. Participants emphasized that excessive travel times resulting from lack of system continuity and highway conditions affect mobility, economic success of businesses, and access to goods and services, including medical care facilities. Safety, including prevention of vehicular collisions with moose, was also seen as an important highway issue.

During the scoping process, participants identified the highway corridors likely to provide the greatest transportation and economic benefits, as described in Chapter 2 (page 2-1) of this DEIS, and helped to eliminate from further study those corridors that would provide minimal benefits.

The scoping process also served to identify the environmental resource impacts that would be of greatest concern in the evaluation of corridor alternatives. These included the land use, economic and social environment as well as the physical and biological environment. Resources and issues seen as critical to the Environmental Impact analysis included:

- impacts to agricultural lands, including farmland soils and active farms;
- economic effects on small communities from the diversion of traffic;
- social and community impacts of highway traffic through town centers;
- impacts to wetlands;
- impacts to threatened and endangered species; and
- impacts to deeryards.

Other issues raised during the scoping process included the relationship of the Aroostook County Transportation Study with MDOT's East-West Highway Feasibility Study, and the definition of the Study Area limits.

1.4 Federal and State Decisions and Actions

This DEIS has been prepared to summarize the analyses conducted to date to identify reasonable alternatives and assess their potential transportation, social, economic, and environmental impacts. It is being circulated to solicit comments from federal and state agencies, and from the public, that will assist FHWA in identifying a Preferred Corridor that will be further described in a Final Environmental Impact Statement (FEIS). The rationale for the selection of a Preferred Corridor will be documented in FHWA's Record of Decision (ROD).

Each of the corridors analyzed in this DEIS is a broad band extending from I-95 to Madawaska. Within each of these bands are several potential highway alignments. In subsequent phases of this Study, specific highway alignments within the Preferred

Corridor would be identified and analyzed. Due to the length of the Study Area, it is likely that the Preferred Corridor would be divided into several segments or phases for future analysis. NEPA compliance (which may include a FEIS, a Supplemental EIS, Environmental Assessment, or Categorical documentation) would be required for each phase.

This DEIS also provides the Maine Department of Transportation with the decision-making tool required by the Maine Sensible Transportation Policy Act (STPA), which requires the MDOT to “evaluate the full range of reasonable transportation alternatives for significant highway construction or reconstruction projects.” The STPA also encompasses transportation improvements that provide economic benefits. MDOT actions that may proceed after completion of the EIS review and issuance of the FHWA ROD may include final design, right-of-way acquisition, and construction.

1.5 Applicable Regulations, Required Coordination and Permits

Federal and state statutes and regulations require interagency and public coordination during the preparation and review of an EIS. These programs also require that certain permits and approvals be obtained prior to construction.

Federal statutes and regulations that are applicable to this study include:

- National Environmental Policy Act of 1969 (NEPA) as amended, and regulations found at 40 CFR 1500-1508 and the FHWA NEPA regulations at 23 CFR 771.119-771.121
- Sections 401 and 404 of the Clean Water Act, as regulated by the U.S. Army Corps of Engineers through 33 U.S.C. 1251-1376
- Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303 and 23 U.S.C. 138
- Section 6(f) of the Land and Water Conservation Fund Act of 1965, 16 U.S.C. 460
- Section 106 of the National Historic Preservation Act of 1966
- Endangered Species Act, as regulated at 50 CFR 17
- Executive Order 11990, Protection of Wetlands, May 24, 1977
- Executive Order 11988, Protection of Floodplains, May 24, 1977
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, February 11, 1994
- U.S. Environmental Protection Agency, National Pollutant Discharge Elimination System
- Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. 401

- Magnuson-Stevens Fishery Conservation and Management Act, 50 CFR Part 600
- Uniform Relocation Assistance and Real Property Act of 1970, 42 U.S.C. 61.

State statutes and regulations that are applicable to this study include:

- Maine Department of Environmental Protection, Natural Resources Protection Act, 38 M.R.S.A. § 480-A et seq.
- Maine Department of Environmental Protection, Solid Waste Management Law, 38 M.R.S.A. § 1301
- Maine Department of Environmental Protection/Maine Department of Transportation, Stormwater Memorandum of Understanding
- Maine Endangered Species Act, 12 M.R.S.A. § 7751 et seq.
- Maine Land Use Regulatory Commission, 12 M.R.S.A. § 684.