## Maine State Legislature

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# Report to the Joint Standing Committee on Transportation, 119th Legislature 

# On The Status of The East-West Highway Study 

Prepared by
The Maine Department of Transportation

## Introduction

Chapter 643, Section BB, of the Public Laws of 1997, as passed at the Second Regular Session of the 118 th Legislature, directed the Commissioner of Transportation to study and develop a west-east highway in the State. Further, that the Commissioner make a preliminary report to the joint standing committee of the Legislature having jurisdiction over transportation matters by January 1, 1999, and a final report by March 15, 1999 on matters including, but not limited to:

1. A comprehensive plan to reconstruct to current standards existing west-east highways and existing highways that provide direct access to Canada;
2. Plans to expand highway or bridge capacity to a 4 -lane limited access roadway. These plans must consist of cost estimates, routes, project scopes and improvement schedules as well as early identification of economic, environmental and community issues;
3. An analysis of opportunities to fund the construction of highways along west-east corridors by means of innovative financing, including but not limited to public-private partnerships, tax increment financing and toll revenue financing. This analysis must include discussion of mechanisms used or proposed to finance new highway construction in the Province of New Brunswick as well as a synthesis of innovative financing resources and options provided by the 1998 reauthorization of the Intermodal Surface Transportation Efficiency Act of 1991; and
4. To make application for funds provided by the 1998 reauthorization of the Intermodal Surface Transportation Efficiency Act of 1991 and TEA-21 for the purpose of planning and improving border crossings, border corridors and trade corridors.

In support of this study, the Legislature has directed the State Planning Office, in cooperation with the Department of Transportation and the Department of Economic and Community Development, to conduct a study and report on the economic and trade opportunities that could potentially be realized by the State as the result of an east-west highway.

This report is presented to provide a summary of the status of the Department's responsibilities in carrying out these various study directives. A separate report on the status of associated economic impact studies will be prepared by the Maine State Planning Office and presented to the joint standing committee of the Legislature having jurisdiction over appropriation and financial affairs as well as to the joint standing committee of the Legislature having jurisdiction over transportation matters.

## Internal Study Team

A multidisiplined team of Department staff has been assigned the responsibility of conducting the required study and preparing the study report. The team meets periodically to receive assignments, review study direction, and report on study progress.

## Inter-Departmental Coordination

Representatives of the Department's study team meet periodically with representatives of the Maine State Planning Office and Department of Economic and Community Development to review study goals, schedules and products and to ensure the independent study efforts of the Department of Transportation and State Planning Office are coordinated and consistent with study objectives.

## Professional Review Group

The Department has assembled a list of professionals (Attachment A) with expertise in areas relevant to the study who have agreed to review and comment on draft study materials. This process will positively contribute to the overall success of the study by identifying potential problem areas and anticipating possible reactions of decision-makers.

## Traffic

The Department has retained the services of a transportation planning consultant to enhance the Department's existing statewide travel demand model to incorporate interprovincial, international, and cross-border travel patterns into the model. This effort will examine past trends in the growth of both commercial and auto travel, and forecast potential growth to the year 2015. The forecast will depend to a great extent, on the location and type of economic growth quantified as the result of the State Planning Office economic impact study. Ultimately, the travel demand model will be used to assess the traffic impacts, both on existing and new highway alignments, of various east-west highway corridor improvement scenarios and in the study of toll financing feasibility to estimate the revenue potential of alternative toll rates, tolling configurations, and roadway alignments:

## Existing System Upgrade

One of the requirements in the legislative directive regarding an east-west highway in Maine is for the Department to develop "a comprehensive plan to reconstruct to current standards west-east hightways and existing highways that provide direct access to Canada". In response, a process has been established to guide the assessment and identification of highway improvement needs along these highway corridors. The goal of this effort is a recommended plan of systematic and cost-effective improvements that will result in a safe and efficient highway system that will adequately serve existing and projected travel demand.

To achieve this objective, a set of highway performance standards were established focusing on geometric design (width of travel lanes, width of shoulders, vertical and horizontal alignment), safety, average travel speed and traffic capacity. Existing conditions along selected east-west highways are compared with the established standards to identify highway deficiencies and improvement needs. In
developing this plan, three basic types of improvement will be considered; roadway reconstruction, traffic operational enhancements, and construction of new highway infrastructure.

Reconstruction - Highway segments not meeting current National Highway System geometric design standards (12 foot travel lanes, 8 foot paved shoulders) will be identified and cost estimated to improve them to meet the standards. This work, designed for a 20 year life, consists of new or reclaimed base, new full depth pavement,
 replacement of drainage structures, rehabilitation or construction of roadway ditches, and modification or replacement of guardrail. This work may also involve minor vertical or horizontal changes in alignment.

Operational Enhancements - Most of the existing highways evaluated in this element of the study provide for one lane of travel in each direction. Efficient mobility is the principal function of major two-lane highways as they primarily serve long-distance travel and are often located in rural environments where there is little traffic control interruption. Consistent high-speed operations and infrequent passing delays are desirable for these facilities. Although most of the two-lane highways to be assessed in this plan carry light traffic and experience few operational problems, there are situations where operational and safety problems do exist for a variety of reasons. In these cases, the frequent result is reduced level of service, increased vehicle queuing, increased delay, unsafe passing maneuvers and driver frustration. Nevertheless, these conditions do not always justify the expense of reconstructing a two-lane highway to a multilane facility. There are a variety of design and operational solutions that must first be considered. This plan will focus on three: truck climbing lanes, passing lanes, and intersection turning lanes.

Truck Climbing Lanes - Generally applied as a spot improvement, most often on steep, sustained grades which cause heavy vehicles to travel at low speed resulting in platoon formation and increased delay.
Passing Lanes - A three-lane roadway design which assigns the third lane to one direction of travel for a short distance and then alternates the assignment of the passing lane to the other direction. In a rural setting, intermittently spaced passing lanes have been demonstrated to be successful in breaking up vehicle platoons and reducing delay. In this plan, passing lanes of approximately 1 mile in length are proposed with a spacing of 5 to 9 miles (as warranted by traffic volume).

Intersection Turning Lanes - To minimize the disruption of turning traffic on through traffic flow, protected turning lanes for both left and right turns at major intersections along the highway corridors have been considered.

New Construction - In situations where the established travel speed performance standard is not met, such as through urban compact areas, consideration will be given to the construction of projects such as new controlled-access highway corridors on new alignments (local and/or regional bypasses), and new highway interchanges. Such facilities will enable the continuous and uninterrupted flow of regional, intrastate and interstate traffic throughout the east-west highway corridor.

Other Considerations - In addition to the physical improvements discussed above, there are a number of additional opportunities that might be considered to provide a well rounded, systematic plan of highway corridor improvement. Among these are:

- A Corridor Preservation Program to protect the corridors against development that might have an adverse effect on efficient mobility.
- An Access Management Program to improve existing entrances onto corridor highways as well as to assure that when new entrances are created they are properly designed and located so as to have minimal effect upon highway safety and traffic flow.
- A Corridor Signing Program designed to give identity and promote the corridor as a viable system designed to support regional and other statewide travel.
- A Program To Improve Intermodal Connectivity between the east-west highway corridor and other significant modal hubs or facilities throughout the state.



## Corridors Studied

- The East-West Highway

As defined in statute - Route 9 and U.S. Route 2 from Calais to Gilead

- The Trans-Maine Trail

Beginning at the Canadian border in Vanceboro, westerly via Route 6, through Linclon, Milo, Dover-Foxcroft and Guilford to Abbot, then westerly via Route 16 to Stratton and via Route 27 to the Canadian border at Coburn Gore.

- Other Highways That Provide Direct Access to Canada

Route 46 - East Eddington to East Holden
Route 1 - Calais to Ellsworth
Route 1A - Ellsworth to I-395 in Brewer
Route 26 - Newry to Upton
Route 27 - Farmington to Coburn Gore
Route 201 - Skowhegan to Sandy Bay
Route 201A - Norridgewock to North Anson

## New Alignments

Two basic conceptual 4-lane limited access highway corridors have been identified which will be the focus of planned economic research, engineering, and environmental assessment. These corridors, which are conceptual corridors and are not to be characterized as highway alignments, were selected based on preliminary economic market and commodity and traffic flow research considering the following criteria;

- Connection to Canadian and Northeast U.S. hubs
- Access to high-traffic corridors beyond Maine's borders
- Capacity to serve existing population centers and local transportation needs
- Probable travel time saving to/from major hubs


## Corridor \#1

A limited access 4-lane highway, predominately on new alignment, with a posted speed of 65 miles per hour. Beginning at the Maine/New Brunswick border, at a location somewhere in the vicinity of Calais/Baileyville connecting to Saint John, Fredericton and Moncton via NB Routes $1 \& 2$. The corridor then proceeds westward along or south of Route 9, connecting with I-95 at or near Bangor, and continues southwesterly along existing I-95, leaving I-95 anywhere between Newport and Augusta. From this point, it continues northwesterly to the Maine/Quebec border at or nearCoburn Gore, linking Sherbrooke and Montreal via Quebec Route 10.

## Corridor \#2

A limited access 4-lane highway, predominately on new alignment, with a posted speed of 65 miles per hour. Beginning at the Maine/New Brunswick border, at a location somewhere in the vicinity

of Calais/Baileyville connecting to Saint John, Fredericton and Moncton via NB Routes $1 \& 2$. The corridor then proceeds westward along or south of Route 9 , connecting with I-95 at or near Bangor, and continues southerly along existing I-95/I-495, leaving I-95/I-495 anywhere between Augusta and Gray. It then continues generally northwesterly to the U.S. Route 2 corridor crossing into New Hampshire at or near Gilead linking New Hampshire, Vermont, and Montreal via US Route 2 and I-89.

Conceptual new highway alignments within these corridors will be identified and evaluated for effectiveness in terms of economic opportunity and potential traffic impact. Associated with this will be planning level cost estimates for project design and construction, a generalized assessment of potential social and environmental impacts, and estimate of traffic usage for both the current year and year 2015.

## Other Corridors

In addition to these two corridors, the economic study being performed by the State Planning Office will also examine, for comparison purposes, the economic impact of reconstructing certain other existing east-west highway corridors. These include:

- An improved and enhanced existing highway corridor from Calais to Coburn Gore,
- An improved and enhanced existing highway corridor from Calais to Gilead along Route 2/9, and
- An improved and enhanced existing highway corridor along Route 6/16/201through Vanceboro, Lincoln, Dover Foxcroft, Bingham, and Jackman.


## Financing

A draft paper has been prepared that addresses innovative opportunities for financing the development and/or improvements to Maine's east-west highways. It examines and presents relative case studies for financing through traditional public sources as well as through public-private partnerships and tax increment financing. To supplement this research, a toll study has been commissioned by the Department. This study will evaluate opportunities for funding all, or part, of the cost of constructing a new limited access highway, or improvements to existing east-west highways, through the collection of toll revenue. Various alternative tolling concepts will be tested in order to determine "order of magnitude" traffic and revenue impacts. Debt service coverage ratios, revenue surplus/shortfall, and bonding capacities will be developed to measure the relative "success" of alternative toll rates, tolling configurations, and roadway alignments. This work will require approximately ten weeks to complete once the conceptual highway corridors have been determined and traffic flows estimated.

## Grant Application

The State of Maine has joined with New Hampshire and Vermont in preparing a tri-state application for funding under the Federal Highway Administration National Corridor Planning and Development Program and Coordinated Border Infrastructure Program, due January 11, 1999. Due to eligibility criteria in federal guidance, funds from this grant will be applied to highway improvements along the Route 9 and U.S. Route 2 corridor through Maine, New Hampshire, and Vermont, the primary east-west connection through this tri-state region. It is estimated that for FFY 1999 approximately $\$ 126$ million will be available nationally for this program. Federal guidance relative to this program discourages applications in excess of $10 \%$ of available funds, therefore the proposed tri-state application will be for $\$ 13$ million. In accordance with an agreement with New Hampshire and Vermont, Maine would receive approximately $\$ 7$ million of the $\$ 13$ million grant request. Public endorsements for this application have been received from the five Canadian Provinces of New Brunswick, Newfoundland \& Labrador, Nova Scotia, Prince Edward Island, and Quebec, and from municipalities, private businesses, and transportation companies located along the corridor. The application is also supported by the Eastern Border Transportation Coalition, the Atlantic Provinces Transportation Commission, and the Atlantic Canada Chamber of Commerce.

It is anticipated that the FFY 1999 grants will be awarded in late spring of 1999. A similar application for FFY 2000 funding will be prepared and submitted in late spring or summer of 1999.

## Other State and Provincial Plans

Maine's study is being conducted with an awareness of improvement plans for highways in other states and provinces which could have an effect on the flow of traffic through Maine. Highlights of known regional plans are as follows:

New Hampshire, Route 2: The New Hampshire Department of Transportation plans to continue to upgrade U.S. Route 2 with shoulders and occasional truck passing lanes. A 1998
study committee of the New Hampshire Legislature recommends in its final report (Attachment C) that Maine, New Hampshire, and Vermont develop Route 2 an international trade corridor (see "Grant Application" discussion on page 7). The report makes no reference to the scope of improvements to the corridor.

Vermont, Route 2: The Vermont Agency of Transportation plans to continue to upgrade U.S. Route 2 with shoulders and occasional truck passing lanes. A 1998 study committee of the Vermont Legislature issued a final report in the form of a draft legislative resolve (Attachment B) for consideration by the Vermont Legislature. That draft resolve recommends that USDOT declare Routes 2 \& 9 in Maine and Route 2 in New Hampshire and Vermont an international trade corridor (see "Grant Application discussion on page 7). The draft resolve makes no reference to the scope of improvements to the corridor.

Vermont/New York, Route 4: Route 4 between Rutland, Vermont, and the New York/Vermont border is a limited access four lane highway. There are no current plans to connect this segment to I-87 in New York, beyond current two lane connections. Plans to connect this segment to I-89 in Vermont, beyond current two lane connections, are controversial due to community issues.

Vermont/New York, northern Lake Champlain: Vermont plans to rebuild the Swanton-Alburg bridge due to structural deficiencies. The New York State Department of Transportation has no identified capacity issues at Champlain or Rouses Point and has no plans for east-west improvements in that region.

Province of Quebec, Route 410 (Sherbrooke): The Quebec Ministry of Transportation plans to build a ten kilometer urban bypass south of Sherbrooke connecting Route 108 to Route 410.

Province of Quebec, Route 212 (Sherbrooke region to Coburn Gore): The Quebec Ministry of Transportation has no plans to improve connections to Coburn Gore.

Province of Quebec, Route 173 (Quebec City to Jackman): The Quebec Ministry of Transportation over the next five to twenty years plans to build in phases a limited access two lane highway between Saint Joseph de Beauce and Saint Georges ( 30 km ).

Province of New Brunswick, Routes 1 \& 2: The New Brunswick Ministry of Transportation reports that $2 / 3$ of Routes $1 \& 2$ connecting Calais/St. Stephen to the Trans Canadian in Sussex is a four lane highway. One segment of this corridor is currently being widened from 2 to 4 lanes. Committed, but yet unscheduled, improvements would make the entire highway corridor four lanes.

## Study Schedule

The final report to the Legislature documenting the findings of this study will be presented in several chapters including; a chapter on the proposed plan to improve existing east-west highways, a chapter detailing the cost, social and environmental impacts associated with a new 4 -lane controlled access east-west highway, and a chapter identifying possible project financing opportunities, including
an assessment of the feasibility of toll financing. At this time it is anticipated that the chapters of the report dealing with the proposed plan for improving the existing east-west highways as well as the plan for a new controlled access facility will be available by the required March 15, 1999, reporting date. However, completion of the chapter on financing depends upon the results of the economic research study being conducted by the State Planning Office which is presently scheduled for completion at the end of April, 1999. For this reason, a complete final study report will not be possible by March 15, but the Department is committed to finalizing its study report and submitting it to the Legislature as close to the reporting deadline as possible.

## ATTACHMENTS

## Attachment A

## East-West Highway Study Professional Review List

## Contact Person

Dale Hanington
Sandy Blitz
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Tom Martin
Glenn Aho
Pam Person
Carol Blasi
Clyde Dyar

Organization
Maine Motor Transport Association
Maine East-West Highway Association
Eastern Maine Development Corporation
Penobscot Valley Council of Governments
Maine Better Transportation Association
Natural Resources Council of Maine
Dept. of Economic \& Community Development
Route 2 Corridor Committee, Region 7
Route 2 Corridor Committee, Region 4
Route 26 Corridor Committee
Route 1 Corridor Committee
Route 9 Corridor Committee
Androscoggin Valley Council of Governments
Kennebec Valley Council of Governments
Northern Maine Development Corporation
Growth Council of Oxford Hills
Maine Municipal Association
Maine Development Foundation
Bangor \& Aroostook Railroad
Eastport Port Authority
Finance Authority of Maine
Canadian-American Center, UMO
Maine Turnpike Authority
Maine Chamber \& Business Alliance
Hancock County Planning Commission
Route 6 Corridor Committee
Coalition for Sensible Energy
Conservation Law Foundation
Economic Development Director, Fairfield

## Attachment B

## STATE OF VERMONT

## Sec. 13a. INTERNATIONAL TRADE CORRIDOR STUDY COMMITTEE

(a) A committee is created to coordinate efforts between Vermont, New Hampshire and Maine to establish international trade corridor and cross border planning and development opportunities involving each state and to coordinate efforts concerning the feasibility of a Route 2 connector that would create an east-west highway corridor among the three states. The committee shall consist of one member of the house appointed by the speaker and one member of the senate appointed by the committee on committees.
(b) In carrying out its duties under this section, the committee shall seek the advice of the appropriate agencies and departments of the states of Vermont, New Hampshire and Maine and the federal government. The committee shall have the assistance of the legislative council staff.
(c) The members of the committee shall be entitled to compensation and expenses as provided in 2 V.S.A. § 406 for not more than six meetings.
(d) On or before January 15, 1999, the committee shall file a report with the general assembly. The committee's report shall consist of draft legislation that it deems necessary to implement any recommendations of the committee.
(e) For purposes of this section, "international trade corridor" means a transportationroute that connects Canada and the states of Vermont, New Hampshire or Maine, which is essential to the development and expansion of international trade, and its related economic benefits, through the provision of intermodal connections and the carriage of a high percentage of the truck-borne commodities that are transported between Canada and the states of Vermont, New Hampshire and Maine.

Joint resolution requesting the United States Secretary of Transportation to designate a northern New England international trade corridor Offered by:

Whereas, the northern New England states of Vermont, New Hampshire and Maine share a significant border with Canada; in particular, the Province of Quebec and the Maritime Provinces, and

Whereas, the North American Free Trade Agreement (NAFTA) was adopted in 1994, with the purpose of creating a more prosperous North American economy by more fully integrating the economies of Canada, the United States and Mexico, and

Whereas, the three northern New England states of Vermont, New Hampshire and Maine share a unique trans-border heritage with the adjoining Canadian provinces by way of U.S. Route 2, from Alburg, Vermont through New Hampshire to the intersection of I 95 in Newport, Maine, continuing to Bangor on I 95 to I 395 in Brewer, and from Brewer on Route 9 to the United States-Canadian border at Calais, and

Whereas, this international trade corridor serves as a major lifeline for the movement of commerce and persons across Northern New England and Canada, including the Maritime provinces, and

Whereas, the United States Department of Transportation recently recognized the very special significance of U.S. Route 2 as a primary
transportation link when the highway was designated as part of the newly established National Highway System, and

Whereas, U.S. Route 2 and the connecting highways to Calais, Maine serve as a major gateway and connector for northern New England to the entire nation, and

Whereas, the future economic vitality of northern New England, and in particular its trading relationship with Canada, is extremely dependent on the ability of the international trade corridor from Alburg, Vermont to Calais, Maine to adequately serve the region's increasing transportation needs, and Whereas, improving this international trade corridor by making it safer and more efficient will enable Vermont, New Hampshire and Maine to more fully facilitate and realize their vital role in fulfilling the promise of NAFTA, now therefore be it

## Resolved by the Senate and House of Representatives:

That the Vermont General Assembly, in concert with the legislatures of New Hampshire and Maine, most respectfully urges the United States Secretary of Transportation, Rodney E. Slater, to designate the highway corridor from Alburg, Vermont to Calais, Maine as an international trade corridor and as being eligible for Corridor Planning and Development funds under the provisions of TEA-21 Section 1118, and be it further

Resolved: That the Secretary grant priority status to the development of this international trade corridor because of its centrality to the region's domestic and international commerce, and be it further

Resolved: That the Secretary of State be directed to send a copy of this resolution to the United States Secretary of Transportation, Rodney E. Slater, and to the governors and members of the Congressional Delegations of Maine, New Hampshire and Vermont.

# Attachment C <br> STATE OF NEW HAMPSHIRE <br> <br> In the Year of Our Lord One Thousand Nine Hundred and Ninety-Eight 

 <br> <br> In the Year of Our Lord One Thousand Nine Hundred and Ninety-Eight}

AN ACT establishing an international trade corridor and border crossing planning and development advisory committee.

Be it Enacted by the Senate and House of Representatives in General Court convened:
1 Committee Established. An international trade corridor and border crossing planning and development advisory committee is established.

2 Membership and Organization.
I. The membership of the committee shall be:
(a) One senator from Coos county, appointed by the president of the senate.
(b) One member of the senate transportation committee, appointed by the chairperson of the committee.
(c) One member of the house public works and highways committee, appointed by the chairperson of the committee.
(d) Four representatives of the Coos county delegation, appointed by the chairperson of the Coos county delegation.
II. The committee shall choose a chairperson, a vice-chairperson, and a secretary from its membership at the first meeting. The first-named member to the committee shall call the first meeting, and the chairperson shall thereafter determine the frequency of meetings.
III. Each legislative member of the committee shall be appointed to the committee for terms ending when the legislative term ends.

3 Duties. The committee shall coordinate efforts between New Hampshire, Maine, and Vermont for the purpose of establishing international trade corridor and cross border planning and development opportunities involving each state. Toward this end, the committee shall also coordinate efforts between New Hampshire, Maine, and Vermont concerning the feasibility of a route 2 connector in Coos county which would create an east-west highway corridor among the 3 states. The committee shall also investigate issues it deems related or appropriate to this task.

4 Mileage and Compensation. The committee shall not be compensated for its work; however, legislators shall receive mileage at the legislative rate for work on the committee.

5 Report. The committee shall report its findings and specific recommendations for legislation to the governor, the president of the senate, the speaker of the house, the senate clerk, the house clerk and the state library on or before November 1, 1998.

6 Effective Date. This act shall take effect 60 days after its passage.

## FINAL REPORT

## INTERNATIONAL TRADE CORRIDOR AND BORDER CROSSING PLANNING AND DEVELOPMENT ADVISORY COMMITTEE (SENATE BILL 370, CHAPTER 282:1, LAWS OF 1998)

Committee members: Senator Fred King, chair; Senator Burton Cohen; Representative Lynn Horton; Representative Lawrence Guay; Representative Berley Davis; Representative John Thill, Jr.; Representative Gerald Merrill.

The committee to study the international trade corridor and border crossing planning and development has held two meetings. At these meetings the committee heard testimony from many parties interested in an international trade corridor, including officials from Maine and Vermont (see attached minutes). The committee received further written information from the North Country Council Transportation Committee and the East/West Highway Association (attached).

After considering the testimony, and the submitted material, the committee decided to recommend that the entire New Hampshire Congressional Delegation work to ensure that federal funds are available to make US Route 2 from Maine, through New Hampshire and Vermont, and into Canada and international corridor. It is the committee's understanding that legislators in Maine and Vermont will make similar recommendations to their congressional delegation.

The committee recognizes the importance that an international trade corridor means to New Hampshire, and strongly recommends the development of US Route 2 into such a corridor.

Sincerely,


