

**Record of Decision
Federal Highway Administration
Maine Division**

FHWA-ME-EIS-12-01-F

**I-395/Route 9 Transportation Study
City of Brewer and Towns of Holden, Eddington, and Clifton, Maine**

Introduction

The Federal Highway Administration (FHWA), in coordination with the Maine Department of Transportation (MaineDOT), undertook the Interstate 395 (I-395)/State Route 9 (Route 9) Transportation Study to evaluate transportation alternatives to improve regional system linkage, relieve traffic congestion, and improve safety along Routes 1A and 46 and to improve the current and future flow of traffic and the shipment of goods to the Interstate system. The U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (USEPA), National Marine Fisheries Service (NMFS), Maine Department of Environmental Protection (Maine DEP), and Maine Historic Preservation Commission (MHPC) served as cooperating agencies.

This Record of Decision (ROD) completes a thorough and careful planning and environmental decision-making process of the Environmental Impact Statement (EIS) for the I-395/Route 9 Transportation Study. FHWA first authorized this project for preliminary corridor engineering in 1998 and scoping for an Environmental Assessment (EA) began in 2000 to determine the significance of proposed impacts; the EA was elevated to an Environmental Impact Statement by FHWA in October 2005. The EIS process began with the Federal Register Notice of Intent (NOI) to prepare an EIS dated December 01, 2005. The Draft Environmental Impact Statement (DEIS) was approved for distribution by FHWA on March 08, 2012. The Final Environmental Impact Statement (FEIS) was determined legally sufficient and approved for distribution by FHWA on January 20, 2015. The Federal Register published the Notice of Availability for the FEIS on January 30, 2015 with a no-action period that expired on March 02, 2015. The FEIS was prepared and issued in compliance with the National Environmental Policy Act of 1969 (NEPA) (42 USC Section 4321-4351), the Council on Environmental Quality's *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 CFR Part 1500-1508), and FHWA's *Environmental Impact and Related Procedures* (23 CFR 771). This ROD documents the selected alternative, presents the basis for the decision, and summarizes the mitigation measures that will be incorporated into the project.

Decision

Alternative 2B-2, described in the DEIS and FEIS as the preferred alternative, is identified as the environmentally preferred alternative and selected as the build alternative. In compliance with FHWA's segmentation criteria (23 CFR 771.111(f)), Alternative 2B-2 has logical termini, independent utility, and does not restrict the consideration of alternatives for other reasonably foreseeable transportation improvement projects.

Alternative 2B-2 is the environmentally preferred alternative that best:

- Meets the purpose and need to improve regional system linkage, relieve traffic congestion, and improve safety along Routes 1A and 46;
- Meets design constraints; and,
- Meets the USACE Basic Project Purpose and was determined to be the Least Environmentally Damaging Practicable Alternative (LEDPA) by the USACE in July 2013.

FHWA based its decision on the:

- Transportation needs of the I-395/Route 9 study area;
- The results of the DEIS and FEIS;
- Interagency coordination and agency comments;
- Public involvement throughout the process
- Balancing the social, economic, and environmental impacts of the alternatives.

In making this decision, FHWA considered the potential impacts of the project and alternative courses of action in accordance with the Federal statutes, regulations, and Executive Orders stated in Section 1.5 of the FEIS, balancing the need for safe and efficient transportation with national, state, and local environmental protection goals. FHWA has a statutory responsibility under 23 USC Section 109(h) to reach a project decision that is in the best overall public interest, taking into account the need for safe and efficient transportation and public services, while eliminating or minimizing adverse environmental and community effects.

Purpose and Need/Basic Project Purpose

The NOI for the EIS states the EIS will examine alternatives to improve transportation system linkage, safety, and mobility between I-395 in Brewer and State Route 9 in Clifton in southern Penobscot County, Maine. Through public involvement, the logical termini of the project and the purpose and need of the project were refined. The purpose of the I-395/Route 9 Transportation Study is to identify a section of the National Highway System in Maine from I-395 in Brewer to Route 9 in Eddington (the logical termini), consistent with the current American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* to (1) improve regional system linkage; (2) improve safety on Routes 1A and 46; and (3) improve the current and future flow of traffic and the shipment of goods to the Interstate system.

To comply with Section 404 of the Clean Water Act, the USACE prepared a basic purpose statement to determine compliance with the 404(b)(1) (40 CFR 230) guidelines. The USACE determined that the basic project purpose "...is to provide for the safe and efficient flow of east-west traffic and shipment of goods from Brewer (I-395) to Eddington (Route 9), Maine, for current and projected traffic volumes."

The need (i.e., the problems) for transportation improvements is based on poor roadway geometry in the study area combined with an increase in local and regional commercial and

passenger traffic that has resulted in poor system linkage, safety concerns, and traffic congestion.

Alternative 2B-2 will improve system continuity for regional travel between I-395 and Route 9 by providing a new two-lane, controlled-access highway with improved continuity in speeds and roadway geometry. The proposed highway will carry a similar lane configuration throughout the entire length and divert a substantial portion of heavy truck traffic and other through traffic along Route 1A, Route 46, and a portion of Route 9 in Brewer and Eddington.

With Alternative 2B-2, roadway-system performance will improve along Routes 1A and 46 in comparison to the No-Build Alternative. A design year of 2035 was used in the FEIS for the traffic analysis; however, the current design year is 2045 to reflect a more accurate timeframe. The 2035 design year traffic estimates used in the EIS were re-examined by MaineDOT. MaineDOT developed low and high trend lines to 2045 based on historic average annual daily traffic (AADT) using pre- and post- recession AADT figures. The analysis determined that the previous forecast 2035 AADT on Route 9 falls within the trend lines and remain valid. These volumes are well within the capacity of a 2-lane highway for the design year of 2045.

In 2045, the new two-lane highway will carry approximately 20 percent of the total traffic through the study area and a majority of the traffic destined between I-395 and Route 9, thereby reducing traffic volumes and increasing mobility and safety on Routes 1A and 46. The study area will experience reductions of regional-through heavy-truck traffic on Routes 1A and 46 because those trips will use the proposed highway, whereas heavy-truck traffic along Route 9 west of Route 46 will increase with the No-Build Alternative. Alternative 2B-2 will improve the quality of traffic flow at the intersection of Routes 9 and 46. Other physically less intrusive improvements (e.g., adding turn lanes) could be made to the intersection that would further improve the quality of traffic flow at that location. Improvements in Level of Service (LOS) or maintaining existing LOS will occur on each of the key roadway segments in the study area with the implementation of Alternative 2B-2.

Alternative 2B-2 has a lower crash potential than the No-Build Alternative. The major factor providing an advantage to Alternative 2B-2 concerning potential crash events is the minimization of crossroads and driveway-access points; fewer vehicle conflict points exist with the build alternatives in comparison to the No-Build Alternative. The improved horizontal and vertical grades of Alternative 2B-2 (i.e., fewer sharp turns and hills than the No-Build Alternative) contribute to reduced crash potential. To estimate the potential costs associated with the range and number of predicted crashes, mean cost data were derived as composite results from the FHWA's *Crash Cost Estimates by Maximum Police-Reported Injury Severity within Selected Crash Geometries* using undefined crash-geometry estimates. With Alternative 2B-2, modeled crash costs will provide an approximate 28 percent cost reduction in comparison to the No-Build Alternative.

Monetized benefits for Vehicle Miles Traveled (VMT) were calculated using only typical variable vehicle-operating costs (i.e., fuel and oil, repair and maintenance, and tires) for passenger vehicles and freight trucks. Net present-value cost savings for passenger-vehicle drivers and

freight-truck drivers to travel between I-395 and Route 9 will be approximately six percent with Alternative 2B-2 compared to the No-Build Alternative. The differences in costs are directly attributable to the length of Alternative 2B-2.

Monetized benefits for Vehicle Hours Traveled (VHT) were calculated using variable vehicle-operating costs, fixed vehicle operating costs (i.e., vehicle financing, insurance, taxes, license and registration, and depreciation), and operator-based costs (i.e., value of personal time, considering wages, benefits, and trip purpose). Using VHT as a comparative criterion that considers both the preferred alternative length and travel speed, Alternative 2B-2 will provide estimated cost savings for passenger vehicles and trucks of about 16 percent over the No-Build Alternative.

In 2011 and 2012, truck classification data was collected in and around the study area to determine changes in truck movements with the 100,000-pound weight restriction law change allowing the use of these vehicles on the Interstate system in Maine. The results of the comparison of 2011 and 2012 traffic data did not show a substantial change in 100,000-pound truck use on Route 9 east of the study area, but the data did show a decrease in the volume of these vehicles on Route 9 west of Route 46 in Eddington and an increase in the volume of these vehicles on Route 1A in Brewer, east of its connection with I-395. These changes indicate a shift toward increased use of I-395 by these vehicles.

Traffic volumes, travel times, crash estimates, annual costs, VMT and VHT through the I-395/Route 9 study area will be reduced by the construction of Alternative 2B-2, when compared to the No-Build Alternative, by providing a more efficient travel path for regional traffic.

Distinct differences exist in the direct and indirect impacts from the No-Build and Build Alternatives. These differences help to define the alternatives and assisted FHWA in selecting Alternative 2B-2, the preferred alternative. A full discussion of the direct, indirect, and cumulative impacts from the No-Build Alternative and the Build Alternatives to the natural, social, cultural, and economic environments is in the DEIS and FEIS.

In July 2013, the USACE identified Alternative 2B-2 as the LEDPA.

Alternatives Considered

From 2001 to 2011, more than 70 build alternatives that could potentially satisfy the study purpose and need and the USACE Basic Project Purpose (exhibit S.5 in FEIS) were conceptually designed and analyzed for impacts, including the No-Build Alternative. The build alternatives included controlled-access highways to connect Route 9 to I-395 and were conceptually designed using the MaineDOT freeway-level design criteria.

The environmental impacts analyzed in the study area include potential impacts to streams, aquatic habitat and fisheries, vernal pools, floodplains, wetlands, undeveloped habitat blocks, state-regulated wildlife habitat, federally-listed endangered species, air quality, noise, land use,

right of way and relocations, neighborhoods, community facilities, recreation lands, historic sites, and the economic environment.

In addition to the environmental impacts, the alternatives were analyzed for the transportation benefits of changes in traffic volumes; changes in design hour volume (DHV), highway volume to capacity (v/c) ratio, travel speed, and LOS; crash estimates; changes in VMT and vehicle operating costs; and changes in VHT and vehicle operating costs.

A screening process, undertaken in several stages, was established and used to systematically consider the wide range of potential alternatives and to identify a reasonable number to be retained for detailed analysis. The screening analysis considered alternatives that fit into five broad geographic "families" plus the No-Build, as follows:

No-Build Alternative: The No-Build Alternative serves as a baseline to which other alternatives can be compared.

Family 1: The Upgrade Alternatives. Alternatives that included widening and other improvements to Route 1A (from I-395 to Route 46) and Route 46 (from Route 1A to Route 9) approximately 10 miles long. Although one upgrade alternative was initially considered, six upgrade and five partial-upgrade alternatives were reviewed during the alternatives screening process.

Family 2: The Northern Alternatives. Alternatives that began at the I-395/Route 1A interchange and generally proceeded in a northerly direction to connect with Route 9. These build alternatives were 5 to 10 miles in length, depending on the distance on Route 9 used as part of the alternative. Twelve alternatives in this family were reviewed during the alternatives screening process.

Family 3: The Central Alternatives. Alternatives that began at or near the I-395/Route 1A interchange and generally proceeded easterly through the study area to Route 9 east of Route 46. These build alternatives were seven to 11 miles in length, depending on the distance on Route 9 used as part of the alternative. Using all possible combinations of the six western components, the four eastern components, and a central section common to all, 36 possible central alternatives were initially created. Five other alternatives (for a total of 41) in this family were developed by modifying some of the initial 36 alternatives and reviewed during the alternatives screening process.

Family 4: The Southern Alternatives. Alternatives that began near the I-395/Route 1A interchange and that were south of Route 1A and east of Route 46. These build alternatives paralleled Routes 1A and 46, and intersected Route 9 in East Eddington. These alternatives were approximately 11 miles in length. Four alternatives were identified and reviewed during the alternatives screening process.

Family 5: Alternatives Paralleling Existing Utility Easements. Alternatives that began at or near the I-395/Route 9 interchange and proceeded in a northerly direction paralleling the utility easements (to the extent possible) to connect with Route 9 in East Eddington. These build

alternatives were approximately 11 miles in length. Eight alternatives in this family were reviewed during the alternatives screening process.

Alternatives Retained for Consideration

In conceptually designing and analyzing alternatives, MaineDOT and the FHWA consulted with regulatory and resource agencies at the State and Federal level, Tribal Officials, local officials, special-interest groups, and the public. At the end of the process of identifying, developing, analyzing, and screening alternatives, four alternatives, including the No-Build Alternative, were retained for further consideration and detailed study in the DEIS and FEIS (exhibit S.6 in FEIS):

- No-Build Alternative
- Alternative 2B-2
- Alternative 5A2B-2
- Alternative 5B2B-2

The No-Build Alternative proposes that there be no new construction or major reconstruction of the transportation system in the study area, regular maintenance of I-395 and Routes 1A, 46, and 9 would be continued at its present level, and the intersection of Routes 46 and 9 would be minimally improved. The No-Build Alternative would not satisfy the study Purpose and Need, as it would not improve regional mobility and system linkage, would not improve safety, and would not reduce traffic congestion. The No-Build Alternative was retained and used as the baseline for comparison of possible impacts.

Alternative 2B-2 is approximately 6.1 miles of new construction roadway and also includes about 4.2 miles of existing Route 9. Alternative 2B-2 will continue north from the I-395 interchange with Route 1A, roughly paralleling the Brewer/Holden town line, and connect with Route 9 west of Chemo Pond Road. Route 9 will not need to be widened to four lanes within the design year of 2045. The existing I-395/Route 1A interchange will be used to the extent possible and expanded or modified as necessary. Alternative 2B-2 is the environmentally preferred alternative.

Alternative 5A2B-2 is approximately 6.1 miles of new construction and also includes about 4.2 miles of existing Route 9. Alternative 5A2B-2 would start from I-395 for approximately one mile along the southern side of Route 1A in the town of Holden before turning northward, crossing over Route 1A, and paralleling the Bangor Hydro-Electric Company utility easement and connect with Route 9 west of Chemo Pond Road. Route 9 would not need to be widened to four lanes within the design year of 2045. Alternative 5A2B-2 would connect to Route 1A with a new modified-diamond interchange.

Alternative 5B2B-2 is approximately 7.2 miles of new construction and would use about 4.2 miles of Route 9. Alternative 5B2B-2 would continue north from the I-395 interchange with Route 1A before turning east and connecting with Route 9 west of Chemo Pond Road. Route 9 would not need to be widened to four lanes within the design year of 2045. The existing I-395/Route 1A interchange would be used to the extent possible and expanded as necessary.

The cooperating agencies concurred with the range of alternatives retained for detailed analysis and the identification of **Alternative 2B-2 as the Preferred Alternative**.

Description of the Environmentally Preferable Alternative

Alternative 2B-2 will be a controlled-access highway and was conceptually designed using MaineDOT freeway – level design criteria. Two lanes, one in each direction, will be constructed and used for two-way travel within an approximate 200-foot-wide right-of-way. The 200-foot-wide right-of-way provides a sufficient width to allow a future widening beyond the design year of 2045, if needed, and provides a corridor to minimize environmental impacts further during the final design process.

Alternative 2B-2 will bridge over Felts Brook in two locations at the I-395 interchange. Alternative 2B-2 will pass underneath Eastern Avenue, bridge over Eaton Brook, bridge over Lambert Road, pass underneath Mann Hill Road, and pass underneath Levenseller Road connecting to existing Route 9 at a “T” intersection. Existing Route 9 eastbound, west of the proposed “T” intersection, will be controlled with a stop sign.

Alternative 2B-2 will satisfy the system-linkage need beyond the near term (before 2045). Route 9 will not need to be improved, and Alternative 2B-2 will not provide a high-speed, controlled-access connection to the east of East Eddington village. Alternative 2B-2 will satisfy the study need related to traffic congestion and safety and will satisfy the USACE Basic Project Purpose.

Summary of Environmental Impacts of the Environmentally Preferable Alternative as the selected build alternative

Alternative 2B-2 would require the acquisition of approximately 163 acres of land including eight residential displacements; require the construction of five bridges and one culvert that is 212 feet long; impact approximately 26 acres of wetlands; affect about 10 acres of floodplain; affect one vernal pool and approximately 17 acres of its dispersal habitat along with about nine acres of waterfowl and wading bird habitat; remove about 103 acres of vegetation; eliminate two habitat blocks and fragment three other habitat blocks; and affect federally-listed threatened and endangered species and designated critical habitat. Alternative 2B-2 would not affect any historic sites protected under the National Historic Preservation Act or any lands protected by Section 4(f) (49 USC 303).

Streams

Alternative 2B-2 will affect four streams, in six locations, due to bridge and culvert installation. The bridges will span the streams and any in-stream work will be temporary and limited to the immediate area of the bridge/culvert. Alternative 2B-2 will permanently affect a total of approximately 212 feet of streams.

Aquatic Habitat and Fisheries

Alternative 2B-2 will affect aquatic habitats and fisheries through the road-stream crossing and channelization of streams. All new permanent bridge and road approach structures over streams that exhibit perennial flow will be built to a minimum of 1.2 times stream bankfull width with a natural substrate. These road-stream crossing structures that will be designed to meet fully accessible standards within Atlantic salmon critical habitat with either a bottomless structure or a four-sided structure with natural substrate. The results of the designs will maintain or mimic the natural conditions at all perennial flow crossings.

MaineDOT concluded the adverse effect from the construction and operation of Alternative 2B-2 on Essential Fish Habitat (EFH) is not substantial. NMFS does not have any conservation recommendations at this time.

Vernal Pools

Alternative 2B-2 will affect one non-significant vernal pool, approximately 17 acres of dispersal habitat within 250 feet, and approximately 278 acres of dispersal habitat within 750 feet.

Floodplains

Alternative 2B-2 will affect approximately eight acres of floodplains in the Felts Brook watershed and approximately two acres of floodplains in the Eaton Brook watershed, comprising a total of 10 acres impacted of the approximate 3,322 acres of floodplains identified and located within the study area. Alternative 2B-2 will not result in a significant impact to floodplains.

Wetlands

Alternative 2B-2 will affect approximately nine acres of wetland in the Felts Brook watershed (one acre emergent; six acres forested; and two acres scrub-shrub); 14 acres of wetlands in the Eaton Brook watershed (one acre emergent; 12 acres forested; and one acre scrub-shrub); and three acres of wetlands in the Meadow Brook watershed (three acres forested). The wetlands affected range from small isolated areas to large, expansive areas comprising hundreds of acres. These impacts cannot be avoided and mitigation will be included in the USACE Section 404 permit.

Wildlife and Undeveloped Habitat Blocks

Alternative 2B-2 will affect wildlife through the conversion of wildlife habitat to transportation use and the fragmentation of habitat into habitat blocks of smaller size. Alternative 2B-2 will affect approximately 88 acres of wildlife habitat through conversion to transportation use and fragment 829 acres in seven undeveloped habitat blocks.

Alternative 2B-2 will have two wildlife passage structures, each large enough to pass moose, on either side of Eaton Brook. These locations were identified for wildlife passage because they are

in a remote area with abundant wildlife. The actual final location and number of the proposed wildlife passage structures is dependent upon on-site field survey and current design standards; resource agencies must agree to any change or deviation in location and numbers. Eaton Brook is deep and has a fast current at these locations; the wildlife crossings are outside of wetlands to help avoid the bottoms freezing during the winter and to avoid any additional impacts to wetlands.

State-Regulated Wildlife Habitat

Alternative 2B-2 will directly affect approximately nine acres of inland waterfowl and wading bird habitat along Eaton Brook and its tributaries. Alternative 2B-2 will not affect any known deer wintering areas.

Federally-Listed Endangered and Threatened Species

During Endangered Species Act (ESA) consultation, FHWA determined that Alternative 2B-2 may affect Atlantic salmon and its designated critical habitat through the construction of road-stream crossings and channelization of streams. The USFWS issued a Biological Opinion (BO) with an Incidental Take Statement for the proposed project impacts and the BO is included in the FEIS. The proposed project will not jeopardize the continued existence of Atlantic salmon nor result in the destruction or adverse modification of critical habitat.

FHWA re-initiated Section 7 consultation with the USFWS after the Northern Long-Eared Bat (NLEB) was officially listed under the ESA and after USFWS issued their Final 4(d) rule. On March 09, 2016, USFWS concurred that the proposed project may affect, but is not likely to adversely affect the NLEB. Critical habitat for the NLEB is not designated. The proposed project will not jeopardize the continued existence of the NLEB.

Alternative 2B-2 will not affect other known federal, listed or proposed, endangered or threatened species.

Air Quality

Alternative 2B-2 will result in a reduction in vehicle idling time because the new highway will remove traffic congestion from Routes 1A and 46. Alternative 2B-2 will result in emission reductions compared to the No-Build Alternative, thereby providing an air quality benefit.

Noise

Noise from Alternative 2B-2 will affect fifteen properties: three properties in noise sensitive area (NSA) 4, one property in NSA 5, and eleven properties in NSA 6 (DEIS exhibit 3.25). To estimate noise impacts, the Noise analysis conducted for the EIS used estimated traffic volumes for a 2035 design year. MaineDOT re-examined those EIS 2035 traffic projections and validated the traffic analysis for the design year of 2045. Given the 2035 traffic values are valid for the current design year 2045 traffic projections, the noise impacts estimated for 2035 remain valid for 2045 noise estimates. The projected 2045 noise levels at the properties range from 44 to 66

decibels using an A-weighted frequency filter (dBA); the increase over existing noise levels ranges from 3 to 32 dBA. Noise barriers were determined to be feasible but not reasonable and therefore will not be constructed.

Land Use

Alternative 2B-2 will affect land use through the acquisition of property and the conversion of land uses to transportation use. Alternative 2B-2 will affect approximately 163 acres of land consisting of approximately seven acres of residential land; three acres of commercial land; 21 acres of agricultural land; five acres of transportation, communications, and utilities; five acres of mowed grass; 21 acres of shrub; one acre of dense shrub; 89 acres of deciduous forest; one acre of coniferous forest; nine acres of mixed forest; and one acre of surface water. Alternative 2B-2 will create approximately 38 acres of new impervious area.

Alternative 2B-2 will result in a reduction in tax revenue in Brewer, Holden, and Eddington because the land converted to transportation use will no longer be tax-eligible. Annual tax revenue will decrease by approximately \$37,000 in Brewer, approximately \$7,200 in Holden, and approximately \$20,200 in Eddington.

Relocations

Alternative 2B-2 will displace eight residences. The properties of those displaced residents range from approximately 0.50 acre to 20.19 acres, with the majority between 2.0 and 4.0 acres. The assessed value of displaced properties and residences ranges from approximately \$50,000 to \$340,000. The majority are between approximately \$147,000 and \$323,000. The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (49 USC 4601 et seq.) (Uniform Act) and the Civil Rights Act of 1964. The process for property acquisition is explained in the State of Maine, Department of Transportation, A Land Owner's Guide to the Acquisition Process. No businesses will be displaced.

Community Facilities

Alternative 2B-2 will affect emergency facilities by reducing traffic along Route 1A and provide a corresponding decrease in emergency vehicle response times. Emergency response services (e.g., fire, police, and ambulance) will benefit from a reduction in traffic congestion on Route 1A from Alternative 2B-2.

Recreation Lands

Alternative 2B-2 will affect snowmobile trails by crossing existing trails multiple times. During final design of the selected alternative, MaineDOT will evaluate options for maintaining the integrity of the existing snowmobile trail system.

No Section 4(f) properties or Section 6(f) properties will be affected by this project.

Economic Environment

Construction of Alternative 2B-2 will create direct, indirect, and induced employment. Direct employment includes workers employed at the highway construction site. Indirect employment includes off-site construction workers (e.g., administrative and clerical) and workers in construction supply industries (e.g., steel and cement products). Induced employment includes workers supported throughout the economy when highway construction workers spend their wages.

FHWA estimates that for every \$1 million in highway infrastructure investment, approximately 28 full-time equivalent jobs are created. These jobs include approximately nine direct jobs, five indirect jobs, and 14 induced jobs. This employment increase represents the total number of jobs created. Although these jobs will not be created necessarily in Penobscot County, it is likely that a small increase in employment at the local and county levels will result. Construction of Alternative 2B-2 will cost approximately \$61 million (2020 dollars), creating approximately 1,700 full-time jobs.

Coastal Zone Management Act (CZMA) and Probable Consistency Determination

The FHWA and MaineDOT determined the proposed action described in the FEIS, Alternative 2B-2, is consistent with the CZMA and the consideration and protections it affords to natural resources and features. A full federal consistency review will be provided with the review and issuance of the Natural Resources Protection Act (NRPA) permit.

Relationship between Short-Term Uses of the Human Environment and Enhancement of Long-Term Productivity

Alternative 2B-2 will have a short-term adverse impact on the human environment but will enhance long-term productivity. The proposed transportation improvements are based on the State of Maine's long-term transportation improvement plan and program, which considers the need for present and future connectivity and traffic requirements within the context of present and future land-use development.

Short-term uses of the human environment will occur during construction. Alternative 2B-2 will require staging areas, stockpiling areas, roadway construction, and a temporary increase in traffic around construction areas. Additional short-term impacts will be air quality degradation from increased emissions from construction activities, noise impacts, and socio-economic and community impacts from construction (e.g., roadway obstruction, traffic detours, and construction debris).

Transportation projects consider state and local comprehensive plans, which acknowledge the present and future traffic requirements based on current and future land-use development. The projected reduction in traffic congestion on Routes 1A, 46, and 9 and the resulting savings in VHT demonstrate that the local short-term impacts and use of resources by Alternative 2B-2 are consistent with the maintenance and enhancement of long-term productivity in the study area.

Alternative 2B-2 will assist in improving the long-term regional connectivity, as well as productivity, of Downeast Maine by linking I-395 and Routes 1A and 9.

Irreversible and Irretrievable Commitment of Resources

Implementation of Alternative 2B-2 involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of Alternative 2B-2 is considered an irreversible commitment during the period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion will ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway-construction materials (e.g., cement, aggregate, and bituminous material) will be expended during construction. Additionally, labor and natural resources will be used in the fabrication and preparation of construction materials. These materials generally are not retrievable. However, they are not in short supply and their use will not have an adverse effect on continued availability of these resources. Any construction will also require a substantial one-time expenditure of both state and federal funds that are not retrievable.

The commitment of these resources is based on the concept that residents and users in the immediate area, State, and region will benefit from the improved quality of the transportation system. These benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services which are anticipated to outweigh the commitment of these resources.

Regulatory Compliance, Permits, and Approvals

Additional statutory compliance permits and approvals are required to finalize the design and to construct the project. Permit applications will be developed and filed at the appropriate stage of project design.

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

- MaineDOT prepared and submitted an Interstate Interchange Modification Report (IMR) to the FHWA that analyzes, documents, and justifies the new highway connection proposed by the I-395/Route 9 Transportation Study. The FHWA determined the IMR is acceptable from an operational and engineering standpoint on February 07, 2013. Final approval of the IMR will not occur until after completion of the NEPA process.
- A USACE Section 404 permit will be required for the discharge of dredged or fill materials into the waters of the United States, and a Section 401 water quality certification will be required for impacts to groundwater. The application for the permit and certification will be submitted during final design and prior to the project proceeding to construction.
- A National Pollutant Discharge Elimination System permit, administered by USEPA and delegated to Maine DEP, for construction activities will be required for stormwater

discharges. The permit application will be submitted during final design and prior to the project proceeding to construction.

- The CZMA Consistency Determination, administered by the National Oceanic and Atmospheric Administration and delegated to Maine DEP, will be submitted at the time the final design is nearing completion.
- Final design of the project will be in accordance with Federal Highway Standards (23 USC 109) as required by FHWA.

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

- Natural Resources Protection Act (NRPA), as administered by the Maine DEP. The project will be designed and built in compliance with the NRPA.
- Solid Waste Management Law (SWML), as administered by the Maine DEP. The project will be designed and built in compliance with the SWML.
- Stormwater Memorandum of Agreement (MOA), December 2007, between Maine DEP and MaineDOT. The project will be designed and built in compliance with the MOA.
- Maine Endangered Species Act, as administered by the Maine Department of Inland Fisheries and Wildlife. Alternative 2B-2 will not affect known state, listed or proposed, endangered or threatened species or state protected essential habitat.
- Maine Sensible Transportation Policy Act (STPA). Alternative 2B-2 fulfills the requirements of the STPA.

Interagency Coordination and Public Involvement

Chapter 4 of the FEIS summarizes the interagency coordination and consultation effort from the beginning of the Environmental Assessment through the issuance of the FEIS. FHWA and MaineDOT solicited the input of other State and Federal agencies through scoping meetings, interagency meetings, and written correspondence. Coordination between Federal and State agencies was performed during the preparation of the DEIS and FEIS to obtain information on environmental conditions, review potential impacts, and obtain agency input.

MaineDOT and FHWA presented information on the progress of the I-395/Route 9 Transportation Study at 14 Interagency Coordination Meetings between 2000 and 2011. Periodic coordination meetings were held with the Cooperating Agencies. The Federal Cooperating Agencies attended scoping meetings and field visits to the study area on several occasions throughout the development of the EIS.

Citizen involvement included public and agency scoping meetings, meetings of the Public Advisory Committee (PAC), a website, information kiosks, two open house meetings during the DEIS comment period and in advance of the DEIS public hearing, and newsletters. The PAC consisted of local officials, business owners, the Metropolitan Planning Organization known as Bangor Area Comprehensive Transportation System (BACTS), and private citizens from the study area and surrounding region. Twenty PAC meetings were held during the study period. The website established for the study (<http://www.i395-rt9-study.com/>) includes study information, summary of agency and public meetings, newsletters, links to related resources,

and frequently asked questions. The DEIS, FEIS, and supporting technical reports and correspondence are available on the website.

The FEIS provides responses to the DEIS comments and includes the written comment letters and emails, and the transcript of the public hearing provided in Appendix A of the FEIS.

Comments on the FEIS and responses to those comments are contained within this ROD.

Comments regarding Route 9 truck traffic submitted during the BACTS Transportation Improvement Program (TIP) amendment process are addressed within this ROD.

Measures to Minimize Harm (Environmental Commitments)

Following issuance of this ROD, MaineDOT will begin final design of Alternative 2B-2. During final design, MaineDOT may further refine, where allowable, Alternative 2B-2, within the approved corridor, to further avoid and minimize impacts to resources and mitigate for certain unavoidable impacts.

MaineDOT has committed to mitigate for impacts to various resources that will be affected. The following measures will be employed after potential unavoidable impacts have been further minimized.

Final Design of Alternative 2B-2

Alternative 2B-2 will be a fully controlled-access facility from Route 9 to I-395. All intersections between Route 9 and I-395 will be grade separated and no private driveways shall be permitted. Motorists will be permitted to enter and exit from I-395 in Brewer and Route 9 in Eddington. Westbound bicyclists and pedestrian users traveling along the new Route 9 connector will have to exit the connector at the interchange with I-395.

MaineDOT considers many Best Management Practices (BMPs) for minimizing impacts to environmental resources to be standard operating procedures on construction projects. Specific BMPs, as noted in the MaineDOT 2008 *Best Management Practices Manual for Erosion and Sedimentation Control*, will be developed and incorporated into the final design of Alternative 2B-2 and implemented during construction, in accordance with the MaineDOT policies and procedures indicated in their BMP manual.

MaineDOT will evaluate and implement as needed, green infrastructure and low-impact development practices such as reducing impervious surfaces, using vegetated swales and re-vegetation, and protecting and restoring riparian corridors.

During the final design of Alternative 2B-2, MaineDOT will work to further avoid and minimize the impacts to streams, wetlands, dispersal habitat for vernal pools, floodplains and other features and resources. Further minimization of the impacts may occur through minor shifts in the alignment of Alternative 2B-2 and by increasing the slope of fill material, which could reduce the amount of fill material placed in wetlands and floodplains. Hydraulic analysis to size the culverts would be performed during final design.

Transportation

MaineDOT will improve the intersection of Routes 9 and 46 when the need arises. The improvements to this intersection could be accomplished within the existing rights-of-way of Routes 9 and 46 with minimal impact to the natural and social features adjacent to the intersection. Given the future need and the limited scope of the improvements to the intersection, these intersection improvements are not part of this project and are a future action; a timeframe for these intersection improvements has not been established.

MaineDOT will improve the most heavily congested section of Route 1A from I-395 to Route 46. These improvements could be accomplished within the existing right-of-way of Route 1A.

MaineDOT will work with the town of Eddington to maintain the safety and preserve the capacity of Route 9 in the study area. The range of possible activities that could be considered to maintain the safety and preserve the capacity of Route 9, in accordance with Maine's rules governing access management, are working with the town of Eddington to change zoning, eliminate or minimize existing and future curb cuts, and working with individual landowners to acquire property or development rights.

MaineDOT will work with town officials to evaluate Route 9 for potential safety improvements for pedestrians and bicyclists. MaineDOT will conduct a road safety audit in conjunction with town officials and residents to develop potential immediate and longer term improvements that the town can consider as options to improve safety for pedestrians and bicyclists. Providing safe access for pedestrians and bicyclists along the road system typically consists of paved shoulders, sidewalks in highly developed areas, high visibility crossings where warranted, and signage to help alert drivers of the presence of bicyclists and pedestrians on the road system.

Bicyclists and pedestrians will be allowed to use Alternative 2B-2 between Route 9 and Route 1A. Alternative 2B-2 will function as an extension of existing Route 9.

Land Use

Alternative 2B-2 crosses snowmobile trails maintained by the Eastern Maine Snowmobilers Inc. in multiple locations. These trails exist on private land by permission from the landowner. During final design, MaineDOT will evaluate options for maintaining the integrity of the existing snowmobile trail system in coordination with the club.

Right-of-Way and Relocation

MaineDOT will determine the specific property needs for Alternative 2B-2 during final design of the project. At this time, it is anticipated that 54 individual properties will be wholly or partially acquired. Once parcels are identified, property owners will be notified of the MaineDOT intent to acquire the property and informed of the acquisition process. The Uniform Act guides this acquisition process. The Uniform Act provides for the fair and equitable treatment of persons whose property will be acquired or who will be displaced because of programs or projects financed with Federal funds. MaineDOT will provide last resort housing when comparable

decent, safe, and sanitary housing is not available within the financial means of any displaced person.

Wetlands and Aquatic Habitats

Constructing Alternative 2B-2 will affect approximately 26 acres of wetlands. MaineDOT will mitigate for unavoidable impacts to wetlands and will work with the USACE and the Maine DEP during the design and permitting phase to ensure that a wetland mitigation plan that fully meets Federal and state regulatory requirements is designed and implemented.

Prospective compensatory mitigation opportunities for the unavoidable wetlands impacts from Alternative 2B-2 were identified within the Penobscot River and neighboring watersheds and are detailed in the FEIS. MaineDOT will continue to investigate the feasibility of these mitigation opportunities and will consult with the Federal and state regulatory and resource agencies throughout the mitigation site selection process and in developing the wetland mitigation plan.

During final design of Alternative 2B-2, MaineDOT will further evaluate opportunities to minimize impacts of road-stream crossings and preserve the natural stream bottoms in those road-stream crossings to promote the passage of aquatic organisms. Road-stream crossings will be designed in accordance with the MaineDOT Waterway and Wildlife Crossing Policy and Design Guide, except in cases where the drainage is not a stream. The proposed road-stream crossings will span the streams at a minimum 1.2 times the bankfull width (i.e., 20 percent larger than a full stream) and use either a bottomless structure or a four-sided structure with stream simulation design and natural substrate installed.

The highway drainage and stormwater management system will be designed in accordance with the Maine DEP/MaineDOT/Maine Turnpike Authority Memorandum of Agreement (MOA), Stormwater Management, May 30, 2003. Under the MOA, the MaineDOT is required to meet the General Standards under Chapter 500 to the extent practicable as determined through consultation and agreement with Maine DEP. Under the Chapter 500 General Standards for a linear project, MaineDOT is required to treat 75% of the linear portion of the Alternative 2B-2 impervious area and 50% of the developed area that is impervious or landscaped for water quality. To meet the General Standards, a project's stormwater management system must include treatment measures that would mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts.

Endangered Species

The Reasonable and Prudent Measures (RPMs) and Terms and Conditions to implement these RPMs, are listed in the Incidental Take Statement of the BO for this project as issued by the USFWS on September 19, 2014; these are mandatory.

Reasonable and Prudent Measures:

Minimize the adverse effects to and incidental take of Atlantic salmon by employing

construction techniques that avoid or minimize adverse effects to water quality, aquatic and riparian habitats, and all aquatic organisms;

Minimize the adverse effects to, and incidental take of, Atlantic salmon related to aquatic habitat connectivity and fish passage by ensuring that the project is built as proposed;

Minimize changes to stream water quality including stream velocity, turbidity levels and temperature from existing conditions through stormwater management, application of best management practice measures during construction and as part of the roadway operation and maintenance period;

Ensure completion of a monitoring, evaluation, and reporting program to confirm that this project has been effective in minimizing incidental take from the FHWA-funded activity and that the amount of allowable incidental take is not exceeded;

Construction impacts shall be confined to the minimum area necessary to complete the project; minimize effects of runoff from disturbed sites during construction through implementation of best management practices measures for erosion and sediment control;

Monitor project implementation and compliance with conservation and best management practices measures; and,

Construction shall not inhibit Atlantic salmon passage through road-stream crossing structures or degrade critical habitat quality after project completion during the maintenance and operation period.

Terms and Conditions:

1. New impervious surface and discharged stormwater runoff quantity and quality must be treated using best management practices that incorporate water infiltration and/or filtration, avoiding direct water discharge into designated Atlantic salmon critical habitat or any surface waterway that subsequently directly discharges into critical habitat, raising stream temperatures above pre-construction conditions.

2. All applicable conservation measures described in the Biological Opinion will be fully implemented.

3. Monitoring of BMP implementation will be conducted by the MaineDOT to evaluate compliance throughout the construction period. An annual report will be submitted to the Services' Maine Field Office each December for the previous November through October construction period.

4. Site preparation, including cofferdam installation and removal, and temporary access road establishment, will not cause sedimentation and adverse levels of turbid water

discharge into streams following erosion and sedimentation control requirements in the MaineDOT Best Management Practices for Erosion and Sedimentation Control document.

5. Migration/movement barrier/delay due to cofferdam placement will be minimized by limiting cofferdam placement to the time necessary to complete instream activities. The cofferdams will be removed within two days of the completion of instream construction.

6. Instream construction shall occur during the low flow period (July 15 to October 1). If the MaineDOT determines that any instream construction activity cannot be completed prior to October 1, a bypass channel shall be constructed to avoid affecting Atlantic salmon movement in Felts and Eaton Brooks. All bypass channels shall be constructed and operating by October 2 to avoid consultation re-initiation.

7. Hydroacoustic impacts from sheet pile installation (if applicable) will not adversely affect Atlantic salmon. The MaineDOT shall manage noise producing activities to within noise thresholds described in the Biological Opinion. Hydroacoustic monitoring shall be conducted as described and reports shall be submitted to the Service two weeks after completing each pile driving activity, including cofferdam completion or installed bridge piles for each bridge.

8. Disturbance and construction associated with crossing structure placement will not adversely affect Atlantic salmon due to instream construction activities occurring within a cofferdam.

9. Underwater acoustic monitoring will be conducted to track noise levels associated with any sheet pile installation. Acoustic monitoring will be required wherever instream pile driving activities occur in Atlantic salmon critical habitat. A single hydrophone will be placed at 10 meters upstream and downstream of noise producing activity. The MaineDOT shall continually monitor noise levels to assure activities that may approach the published threshold values for potentially injuring juvenile salmonid (183 dB re 1 μ Pa CSEL and/or 206 PEAK dB re 1 μ Pa) will receive noise attenuation measures immediately, assuring the threshold values are not reached. The MaineDOT shall provide monitoring reports to the Service after the completion of each cofferdam installation or immediately after completion of similar activities.

10. All Atlantic salmon mortalities from electrofishing or other related activities shall be reported to the Service within 48 hours of occurrence. Any dead Atlantic salmon shall be immediately preserved (refrigerate or freeze) for delivery to the Service's office in Orono, Maine. If the Service is not available, contact the National Marine Fisheries Service (NMFS) in Orono, Maine to arrange for delivery. Upon completion of each fish evacuation event, the MaineDOT shall report the total Atlantic salmon mortality level, if any, for that event. An event is defined as any single attempt to evacuate all fish from a single

cofferdam. An event is complete when the cofferdam is dewatered and construction activities may begin.

11. Adverse effects to Atlantic salmon's ability to migrate, forage, shelter, and spawn are not expected as road-stream crossing structures in critical habitat will be designed to span perennial streams using a minimal structure horizontal clearance that is 1.2 times each streams' bankfull width.

12. To address potential effects to listed species and critical habitat resulting from fill material acquisition outside the roadway corridor and terminal interchange buffers, the MaineDOT will include language in the construction contract, via a Special Provision, which states the contractor shall avoid all potential effects to listed species and critical habitat when obtaining fill material needed for construction. The Service will receive a copy of this Special Provision for review prior to finalization of the Plans, Specifications and Estimate (PS&E) package. This condition is required because the Service's Biological Opinion and the Incidental Take Statement do not evaluate nor authorize any adverse effects or take associated with fill material acquisition outside the roadway corridor buffer and terminal interchange buffers portion of the action area. If avoidance cannot be achieved, the FHWA should reinitiate consultation or the contractor would have to apply for an ESA section 10 permit to acquire an incidental take permit, a time-consuming process that would likely affect the construction schedule.

13. As described in Appendix B (of the BO) and in accordance with Chapter 500 of the Maine Stormwater Law under the Natural Resources Protection Act, the MaineDOT and the FHWA, for those sections of the proposed alignment that discharge into streams, shall design stormwater management systems that provides the greatest thermal buffering.

Water Supply

During final design of Alternative 2B-2, MaineDOT will conduct a Pre-Construction Potable Water Supply Characterization Assessment. MaineDOT personnel will strategically collect representative water quality samples from potable water supplies in accordance with internal procedures.

Wildlife Habitat and Connectivity

MaineDOT will build two wildlife passage structures, each large enough to pass moose and deer, on both sides of Eaton Brook. Wildlife passages will be designed in accordance with the MaineDOT July 2008 *Waterway and Wildlife Crossing Policy and Design Guide* and current passage strategies. The actual final location and numbers of the proposed wildlife passage structures is dependent upon on-site field survey and current design standards; resource agencies must agree to any change or deviation in location and numbers.

Air Quality

MaineDOT will ensure that diesel-powered construction equipment complies with the Maine DEP Rules *Diesel-Powered Motor Vehicle Emissions Standards*. Construction-period measures will be employed to mitigate fugitive dust including wetting exposed areas and stabilization to suppress dust generation, cleaning paved highways, and sequencing construction to minimize the amount and duration of exposed earth.

MaineDOT has long-standing and broadly-applied policies in place to mitigate air quality impacts during construction (e.g., idle reduction policy).

Responses to Comments on the FEIS

The Notice of Availability of the FEIS was published in the Federal Register on January 30, 2015. Copies of the FEIS were made available at MaineDOT and FHWA offices, the town halls and public libraries in the study area, were distributed to persons and agencies who had commented on the DEIS, and posted on the MaineDOT website (www.mainedot.gov/mdot). A list of the agencies, organizations, and individuals to whom copies of the FEIS were sent is provided in Chapter 6 of the FEIS. Three comments were received on the FEIS and are noted below; responses to substantive comments are provided below.

USEPA provided one comment, continuing to encourage the use of diesel retrofits, cleaner fuels, and idle reduction measures to minimize emissions from diesel construction equipment.

Response: All diesel powered construction equipment will be required to comply with the Maine DEP Rules *Diesel-Powered Motor Vehicle Emissions Standards*.

Citizen provided comments:

1) A citizen from Eddington provided an opinion on the need for the project and its impact on the community, suggesting the funds should be spent for road and bridge repair at other locations.

2) A citizen from Brewer questioned a) the estimated construction costs and the design criteria for the project as well as b) the design year of the project.

Response: a) Prior to publication of the DEIS, the costs of the alternatives were roughly estimated to range between \$93 and \$121 million. The alternatives presented in the DEIS and FEIS were evaluated using the same design criteria. In an effort to further minimize impacts and reduce costs, the design was changed from freeway level to rolling. The cost estimates presented in the DEIS and FEIS were based on the rolling design criteria and range from \$61 to \$81 million. The DEIS and FEIS have been consistent in the information provided concerning impacts and costs. The record shows that the impacts were presented in the EIS in a fair, comprehensive, and consistent manner and analyzed and presented to the public and stakeholders with input from all affected and interested parties.

b) Since the design year noted in the EIS is 2035, MaineDOT revisited the traffic information for the design year of 2045. The most recent available data for Route 9, a 2014 count, shows an apparent low point in 2012 and an increase in traffic volume in 2014. Further east on Route 9, a permanent count station indicates that Route 9 traffic continued to grow in 2015. These recent developments signal an upturn in future traffic volumes on Route 9.

MaineDOT developed low and high trend lines out to 2045 based on historic average annual daily traffic (AADT) using pre- and post- recession AADT figures. The projected 2035 volume in the EIS for Route 9 east of Route 46, is 10,940 AADT. The low and high trend line estimates for 2045 are 9,460 AADT and 11,470 AADT, respectively. As the AADT for the past 2035 projection falls well within the range of the low and high estimates for 2045, MaineDOT recommends that the 2035 values presented in the FEIS be adopted as the 2045 design year AADT values for the anticipated project.

These volumes are well within the capacity of a 2-lane highway for the design year of 2045.

Responses to Comments on the BACTS TIP Amendment

Comments were received on the inclusion of the I-395/Route 9 Transportation Study via amendment in the MaineDOT State Transportation Improvement Program (STIP) and BACTS' Transportation Improvement Program (TIP) during the public involvement process.

Citizen comments were received on the possible change in traffic composition, specifically the number of trucks, due to recent mill closures in Maine.

Response: MaineDOT revisited the truck traffic projections for Alternative 2B-2 to address comments presented to BACTS during the BACTS TIP public involvement process. The projected 2035 volume of trucks presented in the FEIS is 1,535 AADT. The low and high estimates for 2045 are 1,330 truck AADT and 1,700 truck AADT, respectively. As the truck volume for the past 2035 projection falls well within the range of the low and high estimates for 2045, the 2035 values presented in the FEIS are reasonable to adopt as the 2045 design year truck AADT values for the anticipated project.

Conclusion and Approval

Based on the evaluation of the social, economic and environmental impacts described in the DEIS and FEIS, the environmental mitigation measures proposed, and the written and oral comments offered by Federal and State agencies and the public, the FHWA determines that, in accordance with 23 CFR 771.105:

- The project, to the fullest extent possible, incorporates all environmental investigations, reviews, and consultations in a single coordinated process and complies with all applicable environmental requirements, as reflected in the environmental document required under NEPA;
- Alternative courses of action were evaluated and decisions were made in the best overall public interest based upon a balanced consideration of the need for

transportation improvements; the social, economic and environmental impacts of the project; and national, state, and local environmental protection goals;

- Public involvement and a systematic interdisciplinary approach were essential parts of the development process for the project; and
- Measures needed to mitigate adverse impacts are incorporated into the project.

Based on the information provided in the EIS; consultation with appropriate Federal, state, and local agencies and the general public; and review of comments received on the EIS, the FHWA selects Alternative 2B-2 as the environmentally preferred alternative for this project.

Final Design (under Preliminary Engineering) and right-of-way, the next phases of the project, are identified in the current BACTs TIP and the MaineDOT STIP.

With authorization of design approval, MaineDOT may proceed with the final design of Alternative 2B-2 including measures to mitigate adverse impacts, as described in the EIS and this ROD.

Approved:



Todd D. Jorgensen
Maine Division Administrator
Federal Highway Administration

Date:

June 23, 2016