

Executive Summary: Lincolnville/Islesboro Ferry Terminal Upgrades

Maine Department of Transportation (MaineDOT) requests \$17.5 million in Federal assistance from the Ferry Service for Rural Communities Program to modernize two aging, rural ferry terminals linking the town of Lincolnville, on the mainland, to Islesboro, a year-round island community. This project will support the safe and efficient operation of a plug-in hybrid ferry expected to be completed in 2027.

The new ferry – with a battery-powered propulsion system and diesel backup – will be larger than the existing ferry to address current and future demand. The ferry terminal improvements will include expanded docking space for continued safe and efficient loading and unloading, and installation of charging infrastructure to enable the vessel to run on electric power on most of its daily runs.

MaineDOT, through the Maine State Ferry Service, provides year-round essential ferry service to six rural island communities, the farthest being more than 20 miles from the mainland.



A ferry approaches Islesboro, Maine.

The capital investments described herein will rehabilitate the ferry terminals that support service between Lincolnville and Islesboro, 3 miles off the coast. The new ferry for the Islesboro route will replace a vessel at the end of its service life and maintain reliable, sustainable public transportation for the 600 year-round island residents, workforce, visitors and schoolchildren. This project will complement MaineDOT's \$35 million investment in the new ferry by upgrading and modernizing the supporting infrastructure.

Description of the Services Provided and the Area Served

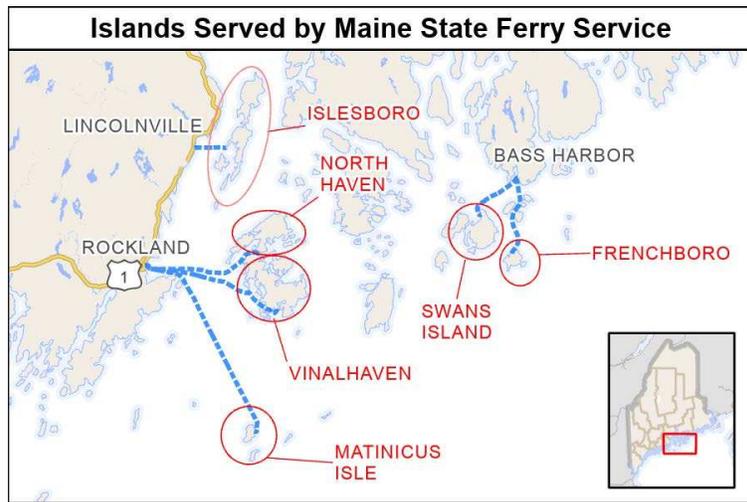
Maine State Ferry Service (MSFS) was established in 1960 as an extension of MaineDOT. The MSFS provides the primary links between the mainland and six rural, unbridged island communities in the Midcoast and Downeast regions of Maine, on the central part of the coast. Residents of Frenchboro, Islesboro, Matinicus Isle, North Haven, Swans Island, and Vinalhaven rely on travel by ferry for access to jobs, schools, and goods and services on the mainland, as well as for emergency medical transportation.

Affordable, reliable public ferry service facilitates the delivery of goods and services vital to these year-round island communities, including food, fuel, mail, building materials, and emergency supplies. The closest island served by the MSFS is Islesboro, 3 miles from the mainland, and the farthest is Matinicus Isle, 22 miles off the coast. Because of the distances, costs for food and energy are high for Maine's rural island communities, contributing to a relatively high cost of island living, overall.

The MSFS owns and operates seven ferries, all of which carry vehicles and walk-on passengers. MaineDOT plans over the long term to replace diesel ferries at the end of their service lives with hybrid vessels, in alignment with community priorities and Maine’s climate-change goals. Maine’s first hybrid-assist ferry is currently under construction. A second vessel – a plug-in electric-hybrid for which this project is being proposed – is now in design.

Serving the ferry fleet are six terminals on the islands and three on the mainland, in Rockland, Lincolnville and Bass Harbor as shown below and in [Attachment 5](#) “Project Location Map.” This project will rehabilitate the Lincolnville and Islesboro terminals to accommodate a plug-in hybrid ferry now in design that is expected to be completed in 2027.

For perspective, Lincolnville is a town of about 2,300 along U.S. Route 1, overlooking Penobscot Bay. It is about an hour from Bangor, Maine’s third largest city, with the closest access to Interstate 95.



Islesboro is a rural community 3 miles off the coast and a 20-minute ferry trip from Lincolnville. The island has two small grocery stores, three boatyards, a central school, a health center, and fire and ambulance services. Islesboro’s comprehensive plan describes it as “a multi-faceted community with a good mix of summer and year-round residents that includes retirees and working people.”

Islesboro has about 600 year-round residents and more than 2,000 in the summer. During peak season of mid-May to mid-October, the ferry makes nine daily round trips Monday through Saturday, with six trips on Sundays and slightly fewer each day in the off-season. Refer to [Attachment 9](#) for the schedules. The ferry is the only public transportation link and the only means of getting passenger vehicles and freight trucks to and from the island. The ferry carries more than 80,000 vehicles and 180,000 walk-on passengers annually.



Town of Islesboro, viewed from the ferry terminal.

About 38 percent of the island’s population is older than 64, putting it in the 97th percentile for the United States. The median age is about 62 – 18 years above the statewide median. The median household income is about \$68,000, slightly above the statewide median of about \$63,000 per household. About 3 percent of island residents live below the poverty line.

The ferry is vital to community and economic development for Islesboro, providing access to jobs and educational opportunities. The island is home to Islesboro Central School, which draws students from the mainland. During the school year, the ferry provides free transportation to and from school for 15 to 20 staff and approximately 50 students. Enrolling children from the mainland, who choose to go to school on the island, helps to keep the 104-student school viable.

The ferry supports students traveling to classes and extracurricular activities on the mainland. Workers heading to jobs on the island and island residents who work on the mainland also rely on the ferry. These workers regularly join the students on the morning and afternoon commutes.



Schoolchildren leave the ferry in Islesboro.

Because the MSFS has crew quarters on Islesboro, where the ferry berths at night, the ferry can take ambulances to the mainland after hours for emergency trips to the closest hospital, in Belfast, about 12 miles northwest of Lincolnville.

Description of the Need for This project

MaineDOT is designing a \$35 million plug-in hybrid ferry to serve the crossing between Lincolnville and Islesboro. It will replace a diesel-powered vessel built in 1987. The new ferry – funded by a \$28 million Federal Transit Administration (FTA) grant and \$7 million in state match – will utilize a battery-powered propulsion system on most daily crossings, with diesel engines as backup. It is expected to be completed in mid- to late-2027.

The ferry terminals in Lincolnville and Islesboro were built in 1959. Although they have had periodic upgrades, the terminals need modernizing to accommodate the new ferry, to safely load and unload passengers, and to equip them with charging infrastructure to support full-electric ferry operation. The terminal improvements will have the same, basic service life as the new ferry – a minimum of 30 years with routine maintenance.



Islesboro ferry terminal.

MaineDOT is designing the new Islesboro ferry to be larger than the current vessel. Based on public comments received during the planning process, the new ferry will carry up to 40 vehicles – 10 more than the existing vessel – with seating for 24 more walk-on passengers (188 total). The added capacity will reduce the number of times the ferry cannot accommodate everyone who wishes to cross, which now requires those left behind to take a later ferry, to use more expensive private transportation, or to absorb the cost and inconvenience of an overnight stay.

MaineDOT plans to expand the berthing space at the Lincolnville and Islesboro terminals to accommodate the new ferry, which will 204 feet long – 37 feet longer than the existing ferry. One of the primary purposes of this project is to ensure that the MSFS has as safe and stable a facility as possible for docking during loading and unloading and while charging the batteries that will enable the new ferry to operate on electricity on most runs.

The work subject to this Rural Ferry Program proposal will upgrade the Lincolnville and Islesboro ferry terminals to handle the added length and weight of the new ferry. MaineDOT plans to build additional concrete mooring structures, known as dolphins, at each terminal. Each dolphin has a foundation of steel piles, with a concrete cap and fenders that help secure the ferry in place. New wave fencing to protect the docked ferry also will be part of this project, since there is no breakwater or other barrier to the open ocean. MaineDOT also plans to add gangways for crew and maintenance workers. The improvements will enable the ferry to be securely berthed and to ensure continued safe docking, with minimal disturbance during loading and unloading of passengers, vehicles, cargo and crew.



“Dolphins” with fenders at the Lincolnville terminal.

To support electric operation of the ferry, MaineDOT must make electrical upgrades at the Lincolnville terminal to accommodate the rapid-charging infrastructure that will re-charge the ferry batteries between runs. Islesboro, where the ferry spends the night, must undergo similar upgrades to enable the batteries to charge overnight for the first morning run to the mainland. This project also will include the majority of the charging infrastructure at both ferry terminals.

The new Islesboro ferry is in design, which will require MaineDOT to coordinate this project with the vessel’s designer, the engineers working on the terminal improvements, local utilities, and regulatory agencies. Based on the environmental permitting requirements for similar projects, MaineDOT anticipates that this Lincolnville-Islesboro project can be permitted at the Categorical Exclusion level of the National Environmental Policy Act (NEPA) process.



Example of a vessel charging station.

NEPA approval at the Categorical Exclusion level will enable the terminal improvements to be advertised for construction in late 2024, at roughly the same time as the new ferry. The terminal upgrades will be undertaken as the new ferry is being built, with both projects scheduled for completion in mid- to late-2027.

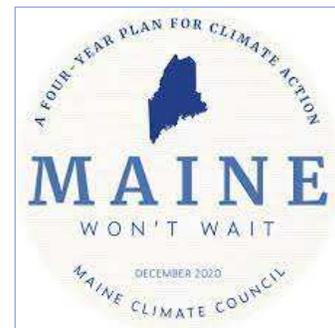
Demonstration of Benefits

Modernizing the ferry terminals in Lincolnville and Islesboro embodies MaineDOT's commitment to invest in essential rural ferry service, reduce transportation emissions, maintain good-paying jobs, and connect communities by preserving access to affordable transportation options.

This project will enhance the safety of the system by accommodating a larger, plug-in hybrid ferry. It will improve the state of good repair of the existing infrastructure by making investments expected to last at least three decades with routine maintenance. The upgrades to the ferry terminals will ensure that the year-round residents of Islesboro will continue to have safe and reliable ferry service as their lifeline to the mainland. The investments will maintain residents' access to jobs, services, goods and medical care. The docking infrastructure to support a larger ferry will enable more passengers to avoid the inconvenience and expense of finding alternative transportation because the ferry is full.

Additionally, the terminal upgrades to facilitate electric ferry operation will benefit nearby communities by improving air quality and reducing fuel use. The existing Islesboro ferry uses about 100,000 gallons of diesel fuel per year, emitting slightly more than 1,000 metric tons of carbon dioxide. Estimating a 90 percent reduction in fuel use with electric operations the majority of the time, the new ferry could curb annual carbon emissions by more than 900 metric tons.

The propulsion and battery storage systems on the new ferry will be designed for full electric operation. Investing in electrical upgrades and charging infrastructure to support all-electric ferry operation will put Maine on a path to meeting the emissions reductions goals in its climate action plan, "Maine Won't Wait," which calls for cutting emissions by 45 percent by 2030.



Besides helping to maintain reliable public transportation to jobs and educational opportunities on and off the island, the improvements to the Lincolnville and Islesboro ferry terminals also will provide a source of good-paying construction jobs subject to Davis-Bacon wages over two seasons while helping to maintain jobs with the MSFS, where employees are free to join a union.

Description of How This project Will Support Program Objectives

This project is the latest example of MaineDOT's commitment to rural ferry service. By continually investing in essential service to six of Maine's rural, unbridged islands – including Islesboro – MaineDOT provides a critical and cost-effective link between the mainland and the 2,500 year-round residents and 8,000 seasonal residents of these island communities.

Ferry users include island residents who commute to jobs on the mainland and those who travel from the mainland to provide essential contracting, construction and educational services on the islands. Island residents, including those on Islesboro, rely on the ferry service to go grocery shopping, get to medical appointments, and shop for a variety of goods, including hardware and building supplies.

The MSFS also provides a vital transportation connection for Maine’s lobster industry, which accounts for around 80 percent of all lobster landed in the United States, according to the National Oceanic and Atmospheric Administration (NOAA). Lobster catches hauled into the islands are delivered to the mainland on freight trucks carried on the ferries.

Furthermore, Maine’s state ferry operations support Rural Ferry Program objectives by providing good-paying jobs. About 90 employees run the MSFS, including highly trained mariners, who are free to join the state employee union, the Maine Service Employees Association (MSEA). During the electrical upgrades at the ferry terminals, MaineDOT may require assistance from personnel from specialty trades where workers have the option to join a union. Once built, the improvements will require ongoing maintenance to be performed by skilled MaineDOT personnel, also represented by a union.

Project Budget: Lincolnville/Islesboro Ferry Terminal Upgrades

Note: Please refer to Attachment 3 for a breakdown of the Project Budget.

	MaineDOT	%	Other Federal	%	Grant	%	TOTAL
Preliminary Engineering (PE)	\$750,000		\$0		\$ -		\$750,000
Right of Way (ROW)	\$15,000		\$0		\$ -		\$15,000
Pre-Construction Costs	\$765,000	100%	\$0	0%	\$0	0%	\$765,000
Construction Engineering (CE)	\$4,500,000		\$0		\$17,500,000		\$1,000,000
Construction							\$21,000,000
Construction Costs	\$4,500,000	20%	\$0	0%	\$17,500,000	80%	\$22,000,000
Total Project Cost	\$5,265,000	23.1%	\$0	0.0%	\$17,500,000	76.9%	\$22,765,000

Project Schedule

The ferry terminal improvements subject to this Rural Ferry Program proposal are expected to be fully designed and ready to advertise for construction in late 2024, which would allow for obligation of Federal funds within one year of award. Based on the permitting requirements for similar projects, MaineDOT anticipates that this project will qualify as a Categorical Exclusion under the NEPA process.

Construction would begin in 2025 and take two construction seasons. This project would be completed in 2027, providing the charging infrastructure to support full electric operation of the plug-in hybrid ferry that would berth at the modernized terminals in Lincolnville and Islesboro. Refer to Attachment 6 “Project Schedule.”

Local and Regional Planning Initiatives

This project is consistent with local and regional planning documents and identified priorities. By supporting investments in low- and zero-emissions ferry operations, rehabilitation of the ferry terminals on the Islesboro route meets one of the priorities in the Town of Islesboro's latest comprehensive plan: responding to climate change and sea-level rise. Islesboro has been engaging with MaineDOT and the MSFS to recommend long-range planning policies regarding ferry service, ferry design, and infrastructure.

Investing in ferry terminal upgrades to support full electric ferry operation on the Islesboro route is consistent with Maine's climate action plan, "Maine Won't Wait," which sets greenhouse gas reduction goals of 45 percent by 2030 and 80 percent by 2050. This project supports one of the plan's strategies of shifting energy sources away from fossil fuels and toward electricity, especially in the transportation sector, in part by replacing older, diesel-powered ferries with cleaner vessels.

Furthermore, this project is consistent with priorities in MaineDOT's Statewide Strategic Transit Plan, which emphasized the need to transition to electric and hybrid vehicles. Investing in the infrastructure needed to support a plug-in hybrid ferry on the Islesboro route also touches upon several strategies in MaineDOT's updated Long-Range Transportation Plan, released in 2023:

- Make targeted or strategic improvements to asset condition;
- Position for an electric vehicle future;
- Prepare for climate change; and
- Lead by example.

Refer to [Attachment 8](#) "Links to Planning Documents" for the documents referenced above.

This request for assistance is supported by the Maine State Ferry Service Advisory Board and local advocacy groups. Reference [Attachment 4](#) "Letters of Support" for a full list of letters of support.

Scalability of Project

Rehabilitation of the Lincolnville and Islesboro ferry terminals, as fully proposed, would enable residents who rely on the ferry service to experience the full environmental benefits from the new plug-in hybrid ferry, including rapid charging to allow for full electric operation on most trips. Such operation reduces the noise and air pollution at the dock during loading and unloading.

This project consists of critical components to improve safety and efficacy for the new ferry. Removing any part of this project would have a negative impact on the ferry and its safe operations, resulting in increased operating costs and repairs and a shorter service life for the new vessel. This would also come at a cost to safety and reliability. This project has been scaled as much as it can be at the time of this application.

Legal, Technical and Financial Capacity

MaineDOT is the lead agency responsible for managing and funding all transportation modes statewide. The statewide agency, with about 1,800 employees, expends or disburses more than \$900 million annually, including federal, state and local funds.

As part of its mission, MaineDOT provides regular, reliable ferry service to six coastal Maine islands through the Maine State Ferry Service (MSFS). The operations of the MSFS support the 2,500 year-round residents and thousands of seasonal residents and visitors who rely on ferry transportation for access to services goods, and jobs on the mainland, as well as for emergency medical transport to the mainland.

MaineDOT has a track record of sustainable and fiscally responsible management of its ferry fleets and infrastructure, which makes it well-suited to spearhead the State of Maine's transition to hybrid-assist and battery electric ferries with diesel backup. MaineDOT complies with FTA regulations on funding for formula and discretionary grants, as evidenced by past reviews. Staff have combined decades of experience in meeting and successfully dealing with such requirements. MaineDOT has no outstanding findings from its 2021 State Management Review and is current with all required FTA filings including annual certifications and assurances.

A vital part of its mission is maintaining the infrastructure to ensure continued safe and reliable ferry service. MaineDOT has undertaken multiple projects of the size and scope described in this grant application, including in recent years a rehabilitation of the ferry terminals on Vinalhaven island, Frenchboro island, Swans Island and Bass Harbor, a mainland terminal serving the islands off the coast of Mount Desert Island, home to Acadia National Park.

This project could not be included in MaineDOT's latest Statewide Transportation Improvement Program (STIP) because of a lack of funding. If this project is selected for funding from the Rural Ferry Program, it can be added to the STIP before formal grant award.

The FTA can rely on MaineDOT to execute a grant agreement for this project within 12 months of award and fully obligate awarded funds without major risk. There are no other public or private parties involved in delivering this project.

Environmental Justice Populations

Using the EPAEJSCREEN tool, it has been identified that Islesboro is classified as medically underserved, having limited access to healthcare and an exceptionally high population of older adults. Roughly 38 percent of Islesboro's population is over the age of 64, landing it in the 97th percentile in the United States. Since there are no hospitals on the island, having a hybrid-electric ferry on the Islesboro route will provide a cleaner, more reliable means for Islesboro residents to access medical services on the mainland.

Environmental Justice maps are found in [Attachment 7](#) "Environmental Justice Maps."

This project will improve existing transit routes for all users of the transportation system, including pedestrians and bicyclists. It will improve safety and quality of access to and from Islesboro, not only for residents seeking healthcare or other services, but also those who reside on the mainland and provide professional services and supplies to those on the island. The planned ferry terminal upgrades support that mission.

Justice40

While Islesboro does not meet the U.S. Department of Transportation's Justice40 threshold, this project does support Justice40 by reducing air pollution and improving reliable access to medical and quality of life services in a community that the USDOT lists as suffering from a health disadvantage through the Transportation Disadvantaged Census Tracts (Historically Disadvantaged Communities). Additionally, this community has low transportation access (reliance on the ferry), is a Medically Underserved Area per EPA EJSCREEN, and has an aging population with 38 percent of residents over the age of 64.

MaineDOT has garnered community input for the project through the Maine State Ferry Advisory Board and following MaineDOT's Public Involvement Plan and Statement on Equity. In accordance with Title VI and other authorities, MaineDOT is committed to upholding the principles of equal opportunity in all decisions involving employees and contractors/consultants, and to ensuring that the public is afforded access to our programs and services.

MaineDOT used USDOT's interim Historically Disadvantaged Communities tool to determine that this project does not meet the Justice40 Initiative threshold of four or more Transportation Disadvantage indicators. However, Islesboro's Census Tract 440 is indicated as suffering from a health disadvantage. Per the EPA EJSCREEN tool, 38% of the island's population is over the age of 64, which falls into the 97th percentile for the United States. EJSCREEN also identifies Islesboro as a Medically Underserved Area. See [Attachment 7](#) "Environmental Justice Maps."

Low transportation access is evident in light of Islesboro's geographic isolation and limited transportation options. The ferry is the main connection to the island and used by workers, mail and freight services, and other travelers including schoolchildren and staff. It is the single, essential lifeline that provides access to hospitals, services, supplies, and opportunity for the community. Other options, such as travel by water taxi or private aircraft, are limited and cost prohibitive.

Racial Barriers/Access to Opportunity

This project will address barriers to opportunity by ensuring that there is a reliable and sustainable public transportation link for an unbridged island community, which will maintain access to jobs, education and emergency/medical services. Although Islesboro has limited racial diversity, which is common for many Maine communities, planning and design for this project will be conducted in accordance with MaineDOT's tools and policies focused on ensuring that all Maine people have access to safe, reliable transportation options.

MaineDOT's Public Involvement Plan spells out MaineDOT's commitment to providing disadvantaged populations and underserved areas with meaningful opportunities for public involvement during project planning and design, as appropriate. Any person can access the terminal for the ferry.

Additionally, MaineDOT's Statement on Equity states in part that MaineDOT "believes the essence of equity in transportation is to ensure that all Maine people have access to safe and reliable transportation options that support economic opportunity and quality of life regardless of a person's economic, social, ethnic, racial, age, sexual orientation, physical, mental, or geographic circumstance. The MaineDOT is committed to equitable delivery of its programs and services."