

**Maine Department of Transportation  
TIGER II DISCRETIONARY GRANT APPLICATION**

**Project Title:** Aroostook County (Maine) Railroad Preservation and Rehabilitation Project

**Project Type:** Freight Rail

**Project Description:** *"Transportation infrastructure investments such as this Aroostook County Rail project are not only important to the County and the State of Maine, they are critical to the economic recovery and competitive position of the United States in the global marketplace."*

- Governor John Baldacci

The Aroostook Railroad Preservation and Rehabilitation Project will:

- a) Restore a critical component of the national rail system to a state of good repair (SOGR) to remove a major bottleneck in the transportation network of the region and to provide essential freight rail access to and from the heart of Maine's Forest products industry, and
- b) Contribute to the long term sustainability of the economy and the environment in an economically distressed region by providing cost-effective transportation to meet current and emerging markets that require effective transportation alternatives to reach sources and markets throughout North America.

The Project will provide for rehabilitation of some 230 miles of railroad to a state of good repair that will enhance system reliability, increase velocity and capacity, and enable Maine based industries to effectively compete in national and global markets. The TIGER II grant funds will provide capital for track rehabilitation following the state financed acquisition of the railroad corridor. State funds are committed for the acquisition and related project costs.

A companion TIGER II planning project (Aroostook County Rail Corridor Planning & Development project) will enable the State and its partners to identify and address community and regional challenges within the rail corridor leading to increased utilization of the railroad line, with concomitant improvements to highway safety, and reduction of greenhouse gas emissions.

The project is ready for development (NEPA/CE filed and state permit by rule....) and can meet the completion date of February 2012.

**Project Location:** Aroostook and Penobscot Counties, Rural (non-urban area)

2<sup>nd</sup> Congressional District

**Project Period:** October 1, 2010 – February 2012

**Amount Requested:** \$10,546,436. (35%)

**Total Project Cost:** \$29,646,436.

**POV DUNS #: 80-904-5966**

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## Standard Form 424, Application for Federal Assistance

## Project Narrative

### I. Project Description

#### a) Project details and background

The Maine Department of Transportation (MaineDOT) <http://www.maine.gov/mdot/ofbs/index.htm> has consistently sought to protect and preserve critical rail corridors through acquisition and/or public private partnerships. The Madawaska subdivision of the Montréal, Maine & Atlantic Railway (MM&A) (former Bangor & Aroostook Railroad) is a critical rail corridor that connects northern Maine to the North American rail transportation network. This rail corridor plays a pivotal role in meeting Northern Maine's role as a primary access point for goods

moving into and out of the United States. In spite of the importance of this railroad line the MM&A has petitioned the Surface Transportation Board (STB) <http://www.stb.dot.gov/stb/index.html> to abandon the line.<sup>1</sup> Figure I-1 illustrates the region's key location as a link between northern Europe, maritime and mainland Canada, and eastern and central United States. The North American rail network provides a critical link in meeting the mobility needs of this portion of the United States.

Northern Maine is an important source for several of the Nation's key exports – forest products and pulp and paper. Thirty one percent of Maine's exports fall into this category, with Canada and Malaysia being the top consumers of Maine exports. With major deep water seaports close by in coastal Maine and New Brunswick and national rail connections to all of North America, this rail corridor enables the cost-effective transport of goods to and from the state to national and global markets. In today's global economy, international markets represent opportunities for growth for Maine businesses and in turn the Maine economy. It is important for Maine businesses to have access to and the ability to meet demand in these markets. This in turn enhances the competitiveness of the national economy.

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<sup>1</sup> On February 24, 2010 MM&A filed its application (STB Docket No. AB-1043 (Sub-No.1) to discontinue rail service and abandon the Madawaska subdivision (151 miles); Presque Isle subdivision (25.3 miles); Fort Fairfield Subdivision (10 miles); Limestone subdivision (29.85 miles); and Holton subdivision (16.9 miles) for a total of approximately 233 miles in Northern Maine (Aroostook and Penobscot counties).

MaineDOT proposes to conduct railway capital maintenance work that is necessary to restore the Madawaska subdivision (from the Millinocket – Grindstone township line in Penobscot County to the Frenchville - Madawaska town line in Aroostook County) and the four associated branch lines to a state of good repair. Figure I-2 illustrates the project area. The goal of the project is to maintain and grow rail freight use on this 233 mile rail corridor. The Madawaska Subdivision and associated branches are the subject of an abandonment petition by MM&A. As the loss of freight rail service would have a devastating economic impact on this region and the state of Maine the citizens of Maine voted overwhelmingly on June 8th, 2010 to fund the State's acquisition of the rail lines. Rail service is essential to the forest products and pulp & paper industries that are the mainstay of the regional economy.

The proposed state of good repair work program will address deferred maintenance of the existing track structure. Performing these repairs will enable more cost effective operations and reduce annual operating costs. Specific work entails rail tie replacement, surfacing of the existing track, replacement of outdated and deteriorating 100 lb rail, and maintenance of the ditch system to restore proper drainage to protect the track structure. The project will bring the track into compliance with FRA track safety standards. Where necessary to meet track safety standards minor culvert repair and brush cutting will be undertaken. Details of the project are described in Section V, Project Readiness.

The planned improvements to the track structure will correct existing operational deficiencies that in turn will reduce the potential for accidents and derailments. The reduced potential for

derailments provides an environmental benefit to the region. The improvements will reduce the number of slow orders throughout the corridor, resulting in an increase in train velocity and reliability of service.

The current condition of the rail lines is due in part to weakness in the pulp, paper and forest products markets and exacerbated by the current national economic situation. MM&A has stated in their petition for abandonment that traffic on these subdivisions do not generate sufficient revenue to provide for the necessary capital expenditures that are required to ensure sustainability. This negative cash flow situation has resulted in maintenance being deferred. As maintenance is deferred, the trackage conditions deteriorate, resulting in slow orders that lead to a further decline in service reliability, and in turn further loss of business. The downward, self perpetuating spiral has led the MM&A to its decision to abandon this portion of their system. Therefore, external funding is essential to the preservation of the rail lines and rail freight service.

MaineDOT will utilize the skills and experience developed from its prior rail acquisitions and rehabilitation projects, but informed by a more proactive effort with both the railroads and the shipper community to develop new business that will support economic growth in the region. The Northern Maine Development Commission (NMDC) and affiliated development organizations have identified opportunities that may produce additional business that will produce new revenue that in turn will enhance the level and quality of freight rail services. This in turn will produce a growth in rail traffic resulting in new revenue streams to increase

maintenance spending on the lines, thereby reversing the cycle of decline on light density branch lines in rural areas.

This project will complement other MaineDOT rail program initiatives, including the Industrial Rail Access Program and Freight Rail Improvement Program that provide funding to enhance the free flow of goods via rail throughout Maine. The Maine Freight Strategy and the Draft 2010 State Rail Plan have both identified the MM&A rail system as important to the economic viability of the natural resource-based industries of northern and western Maine. The new Rail Corridor Protection Program has been established to purchase, lease or otherwise partner with railroads to improve rail corridors that are at risk of abandonment or deferred maintenance due to reduced traffic levels. The goal of this program is to protect economic assets including paper mills, forest and lumber product facilities and

other manufacturing facilities critical to the state's economy, sustainability and overall quality of life.

These efforts will also enhance the overall transportation network of the region – by diverting truck traffic from the overburdened local and state roadway network – thereby contributing to improved maintenance and operation of the total transportation system. This system is constrained by its capacity limits, and the renewal and expansion of rail freight services will provide relief to the overall transportation network. The long-term outcome of this project will enable local businesses to manage their transportation costs and allow for greater investments in their workforce and productivity. Additionally, the project would enhance the economic competitiveness of the region and increase roadway safety by diverting truck traffic from town centers along the major roadway routes of US Route 1 and Maine State Route 11.

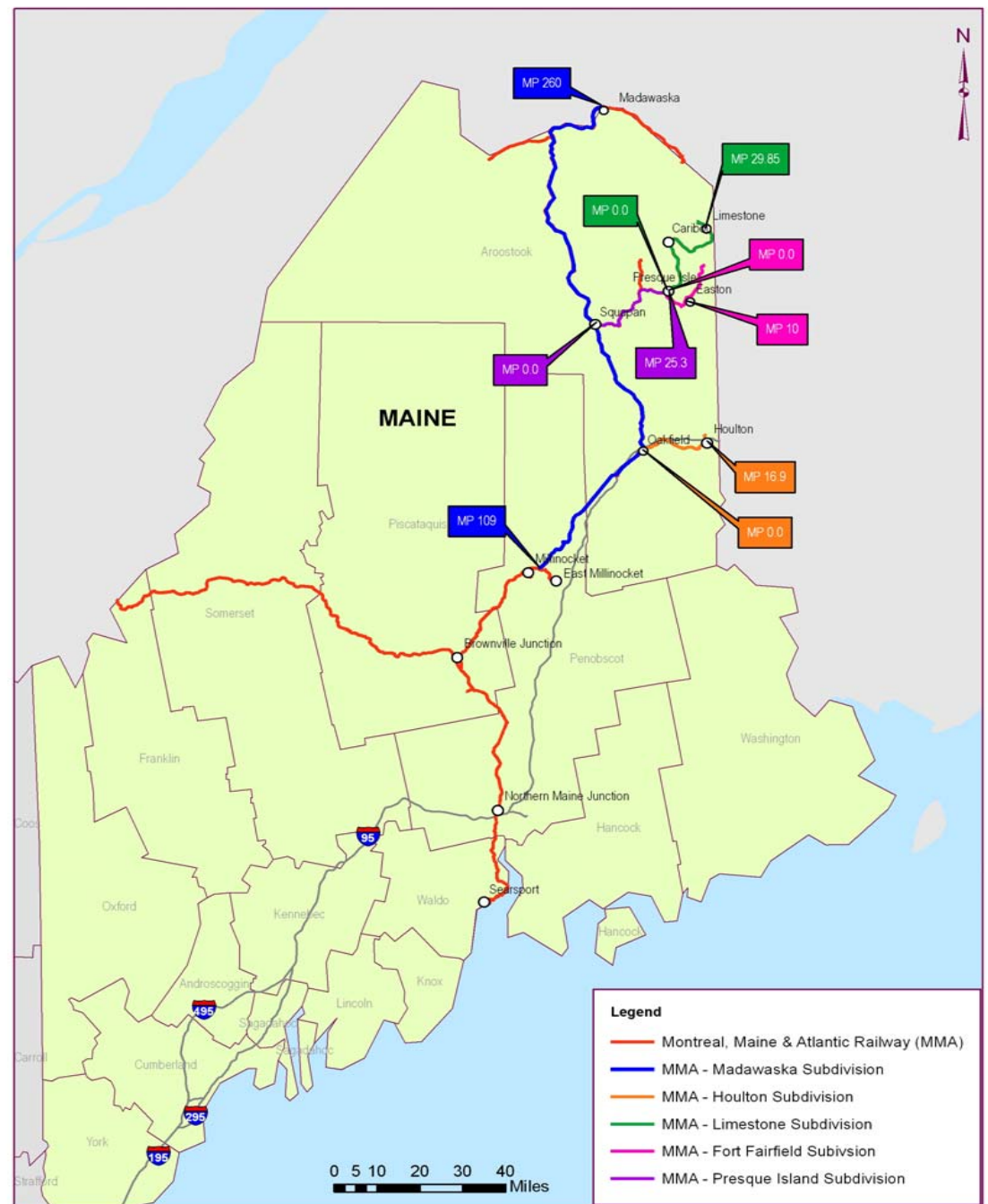
The overarching purpose of this project is to ensure continuation of essential rail freight services along the main line segment and branches in order to enhance the economic competitiveness (and survival) of the region and its communities. This region has already been severely impacted by the national recession and especially the down turn in construction.

#### b) Maps, geo-spatial information

Figure I-1 Northern Maine Regional Context

Figure I-2 Montreal Maine & Atlantic Railway System in Maine

Figure I-3 Maine Railroad Network, 2010





### c) Data

Rail traffic data:

MM&A rail traffic volumes on the lines subject to the abandonment petition (“the subject lines”) have decreased from 15,128 car loads (929,137 net tons) in the August 1, 2004 to July 31, 2005 time frame to 9,742 carloads (612,193 net tons) over the August 1, 2007 to July 31, 2008 time period. For the twelve months ending September, 2009 traffic on the subject lines totaled 9,168 rail cars, of which only 6,044 had an origin or destination on the subject lines. This decrease in traffic is reflected in statewide rail traffic data that finds a continuing decline in rail’s market share of goods movement to, from and within the State of Maine.

However, the remaining rail customers in Northern Maine are dependent on the cost effectiveness of rail to remain competitive in their markets. Without direct rail service these firms will face higher costs for inbound transportation of materials required for production, or outbound costs of moving products to national or global markets. Those firms that are able will convert rail shipments to truck, increasing wear and tear and maintenance costs on the state and local roadway network in the region. Table I-1 illustrates commodities and shippers/receivers.



**Table I-1**

Commodities	Shippers/Receivers
Paper, Starch, Clay, Talc	Twin Rivers Papers Aroostook Starch Tatermeal, Inc.
Wood Products (lumber, logs, pulp, chips)	Chandler Lake, Inc. Columbia Forest Products Fraser Timer Irving Woodlands Twin rivers Paper Fiber Resource Group Maine woods company New Limerick log yard
Resin, Powder PF, OSB	Huber Engineered Woods Louisiana Pacific
Heating oil, propane, petroleum gasses	Dead River Company GAC Chemicals Pine Tree Propane Maine Energy Maine Potato Growers
Cooking oil, potatoes, soybean oil, fertilizer	McCain Foods Cavendish Agri-Business Maine Foods Company Maine Potato Growers
Aggregate, gravel	Lane Construction, Inc.
Industrial products, Wind turbine components	Skyway Industrial Park

Some of these products are divertible to the trucking mode but at significantly higher cost to shippers. These higher costs constrain these businesses ability to effectively compete in some markets, thereby reducing outputs and employment in the region. Further, when products are diverted to truck there is an increased cost to the state and communities from additional wear and tear on the highway and local roadway network.

#### Existing Conditions:

The Madawaska Subdivision consists of 159 miles of mainline track from MP 107 – MP 260. The timetable speed for the majority of the track is FRA Class 2 and FRA Class 3 condition. However, there are significant sections of 80 lb. to 100 lb. jointed rail that present immediate challenges to maintaining efficient operations. The primary concern is the numerous 39 ft. rail sections of 100 lb. rail that is well over 70 years of age. These sections display significant rail end batter that has caused surface deviations that impact the ability to operate reliably at timetable speed and result in local slow orders.

Tie conditions, while generally adequate to meet minimum track class standards, contribute to delays of service. Slow orders resulting from broken ties and center bound track are imposed over some 10% of the subdivision. These locations generally are found where the roadbed is saturated due to poor drainage. Poor tie conditions in yards and sidings present serious challenges to meeting service schedules.

There is a lack of adequate of rail anchors on this subdivision with many locations where the anchor pattern in track is less than the standard practice of 16 per rail for 39' jointed rail sections or the 22 anchors per rail on CWR. This condition requires careful monitoring to ensure safe operations.

The Presque Isle Subdivision is a twenty five mile branch that connects to the Fort Fairfield and Limestone subdivisions. Timetable speed of this branch line is FRA Class 2 and the line is in fair condition. There remain several segments under 10 m.p.h. slow orders that impact the reliability of service and efficiency of operations. Weights of rail sections on the branch include 80 lb. to 115 lb rail. Some of the slow orders result from surface deviations from rail end batter and the shortage of rail anchors.

The overall tie condition on the main track is fair to good. The average FRA tie defects per mile over the branch averages 950 per mile. Some of these tie conditions result in loss of gage which is a serious problem. The entire branch should be surfaced, and brush cutting and drainage issues addressed.

The Fort Fairfield Subdivision is about 10 miles in length and timetable speeds indicate FRA Class 2 track standards. Rail weights range from older 80 lb. rail to good 112 lb rail sections, all of which is jointed. The yards and sidings range in rail size from 70 lbs. to 100 lb.

Tie condition is generally fair. The branch does have a shortage of rail anchors. The branch will require spot tie replacement and surfacing for the entire route to remove current slow orders. Brush

cutting and drainage improvements are also required to enhance the reliability of operations throughout the year.

The Limestone Subdivision is nearly 30 miles in length, but only the first 15 miles are in current use. This branch line is mostly excepted track, although it generally meets FRA Class 1 track standards. The rail sections are 80 lb. to 112 lb. jointed. The yards and sidings rail are 70 lbs. to 100 lb., jointed rail.

The overall tie conditions are fair to poor up to MP 6 where the excepted tie area starts. The average FRA tie defects per mile over the first 6 miles total 1,050 per mile. From MP 6 to MP 15.5 the track is excepted track and the ties are in poor condition. It is estimated that 1,650 ties per mile are FRA defective.

Given the poor conditions on most of this branch tie replacement, brush cutting and surfacing to enable track speeds of 25 m.p.h. and FRA Class II standards are required to restore this branch to reasonable operating standards.

The Houlton Subdivision runs off the main line and is approximately 17 miles in length. The timetable indicates the line is maintained at FRA Class 2 track standards allowing for 25 mph operations, however there are currently many local slow orders. For current traffic levels the branch does require some minor rail replacement and tie renewal at rail joints and turnouts. There is a need for drainage work to protect the roadbed, and the entire route requires surfacing.





**Figure I-4 Example of center bound track condition**

### **Project meets TIGER II Objectives**

#### Long Term Outcomes

- Preserves and renews critical segment of national transportation system
- Re-establishes vitality of rail system to meet regional goods movement needs

- Fulfills State Rail Plan and State Transportation Improvement Plan objectives

#### Economic Competitiveness

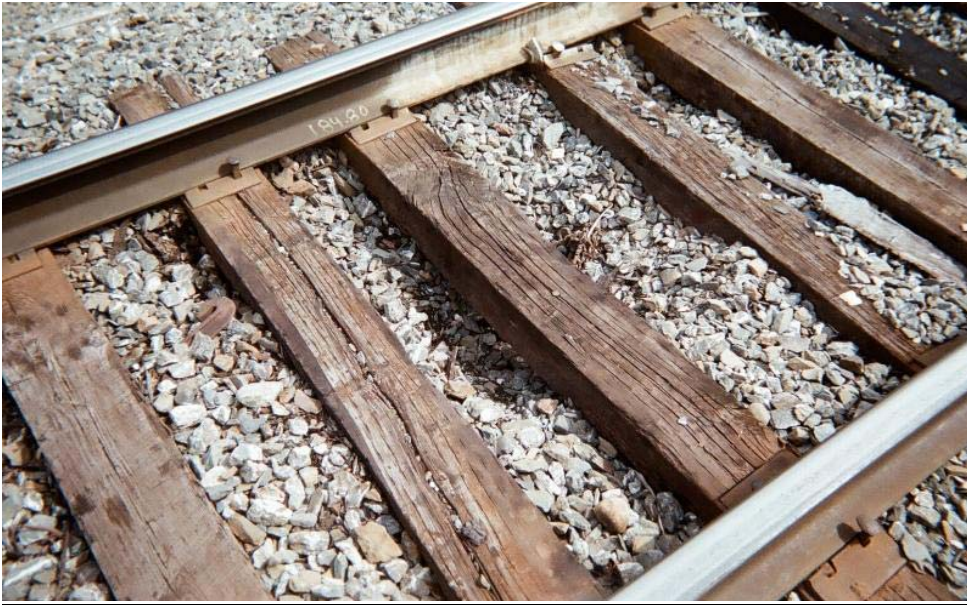
- Opens American forest products to global markets
- Renews velocity of rail system to enhance market reach
- Attracts new investments in plant, equipment and manpower
- Encourages development of new and emerging markets in the region, including biofuels, engineered wood products and wind turbine equipment

#### Livability

- Increases economic opportunities for existing and new industries using freight service
- Enhances quality of life for residents and visitors
- Enables new investments in emerging growth industries
- 66 immediate jobs during construction

#### Sustainability

- Reduces dependence on fossil fuels for goods movement
- Provides stability and predictability
- Enhances capacity of the total transportation network



**Figure I-5 Example of track conditions – missing anchors – Madawaska Sub.**



**Figure I-6 Example of track conditions Limestone Sub.**

### **Community/Regional**

This rail corridor is located within an economically distressed rural area of Maine.

**Aroostook County** has 6,671.5 sq. miles in land area and a population density of 10.7 per square mile. In the last three decades of the 1900s its population declined by 21.4%. Aroostook County's population is 71,488 (2009) as compared with 73,938 (US Census 2000).



Aroostook County is a rural area, known for its potato, beef, dairy, broccoli, organic farms, extensive forests and associated industries, lakes and streams and overall unspoiled scenic beauty. To put the magnitude of Aroostook County's area in perspective, it is larger than the states of Connecticut and Rhode Island combined.

This rural region is eligible for assistance under Economic Development Administration criteria identified in Section 301 of the Economic Development Act of 1965. The Aroostook county per capita income of \$29,817 (2008) is eighty percent (74.2%) of the national average of \$40,166 (2008). The County unemployment rate for 2009 was 9.7% exceeding the state's rate at 8% in 2008.

The poverty rate for people of all ages in Aroostook County in 2009 was at 15.2%, again exceeding both the statewide and national rates of 12.6% and 13.2% respectively.

### **Positive Benefit-Cost Ratio**

- 1.7 B-C
- Improved operations
- Reduced fuel consumption
- Increased asset utilization

### **What if we don't do it scenario**

The alternative to this critical project would be a further deferment of maintenance for the track structure that would lead to a further deterioration of the network and service and the eventual cessation of service. This would mean the loss of critical jobs, no growth in employment and further out migration from the County.

## **II Project Parties**

The Aroostook Railroad Preservation and Rehabilitation Project enjoys broad grassroots support as illustrated by the favorable results of the June 8, 2010 transportation bond referendum in which voters statewide approved the request to finance the acquisition of the rail lines in Northern Maine. Maine's congressional delegation has worked hard to assist MaineDOT in the planning and acquisition of the rail line. This widespread support is further reflected in the partnerships that have developed as a result of the proposed abandonment of freight rail service. The Project has received unprecedented support within Aroostook County as MaineDOT has moved the project forward in cooperation with regional legislators, planning and economic development agencies and the regions businesses and rail shippers. Letters of support for the project can be found at <http://www.maine.gov/mdot/tiger2/index.htm>.

The Maine Department of Transportation is the lead agency on behalf of the state of Maine for this critical transportation infrastructure project. Created by an act of the Legislature in 1972 MaineDOT is a fully integrated multi-modal transportation agency. MaineDOT has responsibility across all modes of transportation including:

- State highways and bridges; airports and aeronautics;
- Ports and marine activity, including the State Ferry Service;
- Railroads;
- Public transit; and
- Bicycle and pedestrian facilities.

MaineDOT is charged with implementing the state's transportation policy and performs a wide range of multi-modal transportation planning and development activities that include the railroad system as an integral element of the state's transportation network.

Within MaineDOT the Bureau of Transportation System Planning (BTSP) is responsible for conducting systematic and comprehensive statewide transportation planning, capital improvement program development, research, and community services' activities in support of the department's overall strategic goals and policies. The Bureau is comprised of the following operating divisions: Office of Freight and Business Services which includes Freight Rail Services and Maine Port Authority; Mobility Management; Program Development and Management; and Statewide Multimodal Planning.

Primary responsibilities of BTSP include:

1. Preparing MaineDOT's long range planning documents, which include the department's Capital Work Program, the Mid-Range Plan and the Long-Range Plan;
2. Collecting and analyzing highway data information and systems inventory data;
3. Conducting statewide planning and major investment studies;
4. Researching and developing materials; and
5. Administering community related programs.

Maine DOT has well established policies and programs to ensure that the capacity of the state's rail network will be adequate to meet future needs of Maine's industries and rail shippers<sup>2</sup>. The State of Maine rail line ownership consists of active, inactive, and abandoned lines and rights of way. MaineDOT has been actively engaged in the acquisition of railroad rights of way for several decades. The preservation of rail corridors is in the public interest as a means of preserving the integrity

of corridors for future transportation needs. Figure II-1 illustrates the State of Maine's current rail line ownership.

As previously noted MaineDOT has a positive record of successful railroad acquisition and rehabilitation projects. MaineDOT's model for success has been to acquire rail corridors and where rail freight operations are viable, rehabilitate the lines to a level needed to provide efficient rail operations. During or following the rehabilitation, MaineDOT solicits competitive proposals for third party rail operators on its lines, after a careful selection process, MaineDOT leases its State-owned line to the selected operator. An example is the Rockland Branch Rehabilitation project it was a 56 mile, \$30 M rail rehabilitation project managed by MaineDOT. The project rehabilitated this state owned rail line running between Brunswick and Rockland for improved freight operations and the restoration of passenger service. This project included railroad track and bridge renewal, related highway work, ditching, deep culvert replacement and highway/rail at-grade crossings. A major component of the project was the installation of over 260,000 track feet of continuously welded rail along most of the route. The project was conducted so as to maintain freight service on the branch, and to minimize impacts to abutting landowners and residents. The project was rehabilitation project was completed in 2003 with successful freight and seasonal passenger operations since that time on the line with the State's operator Maine Eastern Railroad. Another recent example is reopening to the State-owned Lewiston Lower Road line. The first 8 miles of the line received rehabilitation in 2006-2007 and the first 5 miles of the line resumed freight operations in October of 2009 and continues to operate successfully with traffic volumes growing.

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<sup>2</sup> For example, the State Rail Preservation Policy Act

The MaineDOT looks forward to replicating these successes on the Aroostook County lines, by purchasing the lines from the Montreal, Maine and Atlantic in the upcoming weeks either through negotiations with the RR or through the Surface Transportation Board's Offer of Financial Assistance (OFA) process should an abandonment ruling be granted by the STB. The MaineDOT currently has an OFA meeting the proper guidelines on file with the STB to acquire the lines.

Along with the leadership of the MaineDOT this project will engage the very active participation of key stakeholders from the region. The Northern Maine Development Commission has organized an effective working group that includes both current railroad freight customers and other businesses leaders that recognize the vital role of rail transportation to the region. As previously noted, the legislation that provides the funding for the state acquisition of the rail lines also established a task force to work with the DOT to develop an effective strategy to not only preserve the rail service but to enhance that service and attract new business to the rail lines.

Northern Maine Development Commission is a membership organization comprised of participating communities and counties in the Northern Maine Economic Development District. NMDC provides federal and state services at the regional and local levels, is the regional EDA planning and management entity and serves as the lead agency for the USDA Aroostook County Empowerment Zone. Also participating in the cooperative effort are several independent development organizations including:

Aroostook Partnership for Progress;

Mobilize Maine Leadership Committee;

LEAD (Leaders Encouraging Aroostook Development;

and municipal officials from throughout the region.

This Partnership will be fully engaged in the ongoing development of the region's transportation network as full partners with MaineDOT in the companion TIGER II Planning Grant application – through which the state and its partners will not only protect and preserve the railroad asset, but also develop and implement an action plan to restore the service to the quality and reliability needed to bring back old customers and attract new customers.



**Figure II-1 State of Maine Owned Rail lines - 2010**

### III. Grant Funds and Sources/Uses of Project Funds

#### a) Table showing sources and uses of project funds

Fund Source and Use	Project Amount	Project Percentage
TIGER Discretionary Grant Funds – capital program	\$10,546,436	35.5%
Maine DOT (bond funds) – acquisition of assets	\$19,100,000	64.7%
Total	\$29,646,436	100%

#### b) State committed funds

On April 9, 2010 the Maine legislature passed a bill to provide for a bond issue to go to the Maine voters on June 8<sup>th</sup> that to provide funding for the purchase of the Aroostook rail lines proposed for abandonment by the MM&A. This referendum was approved by the voters and when combined with existing rail resources in MaineDOT has made \$19.1M in State funding available for the purchase of these

lines to preserve the lines and rail service. On April 13, 2010 Governor Baldacci created the Aroostook Rail Advisory Task Force that includes several legislators and other stakeholders to assist the MaineDOT in acquisition and rehabilitation of these lines and soliciting for operators and funding to continue successful rail operations.

Financial Feasibility: The requested TIGER II Discretionary Grant funds will enable MaineDOT to move quickly toward completion of this critical rail preservation project. State funds are available for the first phase (acquisition) but it is essential to restore the line to a state of good repair to execute phase two – selection of a competent operator.

Maine DOT is well equipped to manage this grant having received and managed numerous US DOT grants for highway, railroad and transit programs as well as managing significant rail rehabilitation projects in the past.



**BENEFIT COST METHODOLOGY USED IS FROM THE FRA'S LFRA PROGRAM**

**CALCULATION OF TRANSPORTATION EFFICIENCY BENEFITS**

BENEFITS	-	-	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Operational efficiency benefits *				\$1,682,494	\$2,559,988	\$2,611,188	\$2,663,412	\$2,716,680	\$2,771,013	\$2,826,434	\$2,882,962	\$2,940,622
<u>Secondary benefits</u>												
Employment**			\$1,265,569									
Reduced Highway Maintenance***				\$17,856	\$35,711	\$36,425	\$37,154	\$37,896	\$38,655	\$39,428	\$40,216	\$41,020
Salvage Value****												
Discount Factor (7%)				0.9346	0.8734	0.8163	0.7629	0.713	0.6663	0.582	0.5439	0.5083
Present Value			\$1,265,569	\$1,589,147	\$2,267,084	\$2,161,246	\$2,060,262	\$1,964,013	\$1,872,082	\$1,667,932	\$1,589,917	\$1,515,569
Sum of Present Value of Benefits			\$17,952,819									
Present Value of Costs			\$10,546,436									
BENEFIT/COST RATIO			1.70									

\*Operational Efficiency Benefits are based on due diligence work performed by Railroad Industries Inc. on behalf of MaineDOT. Benefits include a saving of \$3500/mile annually from the track being put in a State of Good Repair by the rehabilitation project saving \$3500/mile/yr in maintenance costs and increased revenues and profits from 3644 additional carloads which the analysis showed would be added with an operating plan and schedule which can be executed once the rehabilitation project is complete. Half of these carloads are added in 2012 and the full 3644 are added in 2013, in the following years through 2020 an annual growth rate of 2% was added to revenues.

\*\*Employment benefit based on 66 full time rail employees working March-Sept. in 2011 at a average rate of \$15.79

\*\*\*Reduced Highway Maintenance benefit is based on a Pennsylvania Railroad Economic Assessment Study which shows pavement replacement costs exceeding state diesel tax revenue by \$.007 per ton mile nationwide. The benefit is based on removing 12,754 truck trips @ an average of 400miles/trip from highways by adding the 3644 new railcar loads with an average of 25tons/truck.

\*\*\*\*No salvage value included as the value of the rail and OTM would be offset by removal costs and disposal costs of the crossties that are part of the project, costs of ditching/brushcutting/crossing improvements have no salvage value.

**Table II-1 Benefit Cost Analysis**

### c) Benefit-Cost Analysis

While the B-C A calculation shows significant efficiency benefits for freight rail operations we consider the benefit calculation as quite conservative and likely to be much higher. There will be many substantial additional secondary benefits that are difficult to capture accurately in financial terms. These would include reduced fuel usage and reliance on foreign oil by moving more freight by rail as well as the related reduction in emissions. There are also significant safety improvements for the traveling public through a reduction in trucks as well. As this successful rail service grows employment will grow both with the rail shippers and the eventual rail operator.

## IV. Federal Selection Criteria

Introduction – Transportation challenges addressed by the project

The safe, cost-effective movement of goods to and from rural regions of the United States requires that multiple modes of transport be maintained in a state of good repair to provide capacity and competitiveness between modes. The potential abandonment of the Madawaska Subdivision and its connected branch lines would leave Northern Maine without alternatives to commercial trucking to service the key forest products and pulp and paper industries in the region. This situation is not a “local” concern, however, as these industries and this region play a significant role in both national and global markets for these products and natural resources.

### a. Primary Criteria: Long term outcomes

- i. State of Good Repair of the national transportation network requires that each element of the network is able to provide essential mobility, be it for people or

goods or both. The Aroostook Rail Lines are a key link in the chain of freight transportation that serves regional, national and global goods movement requirements.

- **Current Conditions:** Constructed over a century ago, the Aroostook rail network opened the region to national markets for its agricultural and forest products. Changes in the economy and in logistics practices have resulted in some loss of business, and this factor coupled with with a high debt ratio of the current operator has reduced investment in the rail lines. This has led to deteriorated conditions that in turn result in reduced levels of service and subsequent reduction of shipper usage of the railroad.
- **Rehabilitation Plan:** A cost effective rehabilitation plan has been developed that will preserve the rail lines, enhance levels of service, and allow an operation plan to be put in place with a new shortline operator that will encourage constructive participation by stakeholders to recover and grow new traffic.
- **O&M:** The proposed rehabilitation plan will allow for a normalized maintenance program that will provide for safe and efficient operations of the rail lines. MaineDOT’s purchase of these lines will remove debt service on the property and MaineDOT’s experience in managing rail capital improvements projects and railway corridors includes effective asset management techniques to leverage benefits and sustainability and allow for ongoing capital investments by the State in its rail infrastructure.

- Planning Horizon: The expected lifespan of the project is ten years. However, normalized maintenance and anticipated traffic growth will extend the serviceable life of the project for twenty or more years.
- State Transportation & Rail Plan: MaineDOT's long range transportation plan and the draft state rail plan call for preservation and improvement to the statewide railway network. Critical trade corridors are identified in the State Rail Plan, including this Northern Maine network. The Maine Legislature has enacted the Maine Railroad Preservation Act that directs MaineDOT to acquire and invest in rail lines that are in danger of abandonment. The following link connects to this legislative act: <http://www.mainelegislature.org/legis/statutes/23/tit1e23sec7105.html>

- ii. Economic Competitiveness of the nation and the region will be served by the restoration of cost-effective freight rail services that meet the mobility needs of businesses and industries that serve regional, national and global markets. With its key location in the Northeast portion of North America the rail lines provide connectivity to and from eastern Canada and the continental United States via CSX, NS, CN and CP railway systems, as well as to ports in Maine, New Brunswick and other New England states. The ability to reach markets around the globe enables Maine based industries to contribute to the national and state gross domestic product and to the balance of trade, especially with Canada and Malaysia.
- The project will restore modal competition, enhancing the capacity of the regional

transportation network and promoting competitive pricing.

- Improvements in transportation efficiency such as time savings and operating cost savings will translate into long-term economic productivity benefits for forest products and pulp and paper industries, further enhancing the economic stability of the region and the new railroad operator.
- Project investment will increase the economic productivity of this critical rail corridor located in an Economically Distressed Area.
- Project investment will overcome barriers and improve access to more productive employment opportunities for under-employed and disadvantaged populations. The region served by this rail corridor has endured the state's highest poverty rate (15.9% in 2008) far outpacing both the state and the nation.

### iii. Livability

- The project increases transportation choices for goods movement through the preservation of the rail mode, reducing user costs, and reduction of GHG emissions
- The project locale has a per-capita income that is less than 75% of the national average, has witnessed out-migration rates in double digits for the past several decades, and yet provides prime economic resources for the state and nation.
- The project addresses the six livability principles developed by DOT with HUD and EPA as part of the Partnership for Sustainable Communities:

- Provides effective transportation choices for goods movement, that also enhances the overall transportation system;
- Expands access to affordable housing through enhanced income potential for area residents;
- Enhances economic competitiveness for the region's economic base by expanding access to national and global markets;
- Contributes to revitalization of existing communities and protects rural landscapes by reducing demand for development of greenfield sites for new distribution facilities;
- The project brings together the resources of the federal, state, and local governments to better focus on critical infrastructure;
- Recognizes the essential contribution of this unique rural region as integral to the economy and quality of life of the state and nation.

iv. Sustainability of the region is enhanced through the effective utilization of the rail corridor to provide mobility while concurrently reducing fuel consumption and protecting the human environment.

- The project will restore effective freight rail service, thereby providing more fuel efficient movement of goods to and from the region; and with a new rail operator and ownership of the rail line by the state will restore shipper confidence in using the railroad option of moving their goods effectively.
- Reductions of fuel consumption as a result of the project would exceed 3 million gallons of diesel fuel not used by trucks within the region.

- Diversion of freight from highway to rail will also reduce carbon monoxide, volatile organic compounds and nitrous oxides by a factor of three for each ton-mile diverted.
- The increased level of capital investment and maintenance of the tracks and right-of-way will protect the natural environment by avoidance of potential adverse environmental impacts from accidents and spillage of materials.

v. Safety of goods movement will be enhanced by this project.

- Once restored to a state of good repair the rail lines will provide for safe and efficient transportation of products to and from the region.
- Diversion of highway traffic to rail will reduce overall VMT in the region and statewide contributing to a decline in roadway accidents.
- Improvements to the rail right-of-way will include upgrades to at-grade crossings that will help to improve crossing safety at those locations.

b. Secondary Criteria: Job Creation and Economic Stimulus

- Short term – 766 jobs saved in the forest service industry.
- Mid-term – anticipated service improvements will enable businesses to expand market reach, and therefore increase production and employment. This will allow several businesses to reap return on their investments in plant and equipment made in the last five years that were based on continuing use of a reliable rail network. These include Louisiana

Pacific, Huber Engineered Wood Products and Irving woodlands, who between them have invested more than \$250M in facilities in Aroostook County served by these rail lines.

- Long term - Investment in the transportation network will encourage investment in plant and equipment in the region.

#### c. Innovation

- Maine DOT's "critical trade corridor" planning links key transportation investments with local land use planning. MaineDOT's long running Industrial Rail Access Program (IRAP) has partnered with railroads and the private sector for more than 10

years to foster long-term use of rail for shipping goods in Maine increasing shipping options and reducing transportation costs for Maine businesses.

#### d. Partnership

- Collaboration with shippers, communities and regional development agencies will enable an effective dialogue among stakeholders to:
  - Monitor service levels
  - Identify challenges and opportunities
  - Grow new business in the region
  - Promote continued investments in the rail lines

## **V. Project Readiness and NEPA**

### a) Project schedule

	2010					2011												
Maine TIGER II	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
File Application	x																	
Project Award		x																
Execute Grant Agmt.				x														
Final Work Plan						x												
Complete permitting						x												
Issue Bid documents								x										
Procure materials									x									
Award Bids									x									
Construction Start										x								
Construction Complete															x			
Grant closeout																	x	

### Proposed Project Schedule/Milestones

Project Award: Sept. 30, 2010  
Execute Award agreements: November 15, 2010  
Finalize Work Plan and prepare bid documents: January 30, 2011  
Complete Permitting: January 31, 2011  
Bid materials and work: March 15, 2011  
Award bids: March 30, 2011  
Construction Start: May 15, 2011  
Construction Complete: October 30, 2011  
Grant closeout: January 30, 2012

#### b) Project rehabilitation plan:

This project rehabilitation plan, details of which are available at: <http://www.maine.gov/mdot/tiger2/index.htm> is designed to meet the needs of an enhanced service operating plan developed in the course of MaineDOT's due diligence related to its acquisition of the rail lines. Details of this due diligence effort may be found in the report that is available at: <http://www.maine.gov/mdot/tiger2/index.htm>

The 159-mile Madawaska Subdivision is the largest segment in the corridor. The rehabilitation plan includes the removal of four track miles of one hundred pound rail. The rail will be sold for scrap metal and replaced with new one hundred fifteen pound rail. The proceeds from the sale of the scrap rail will be used as additional funding for improvements in the rail corridor. The new rail will be delivered to the point of installation by rail train in sixteen hundred foot strings and joined together onsite with thermite welds. The right-of-way will be brush cut as required to remove overgrowth near the track structure, mileposts and at roadway grade crossings to comply with FRA track

safety standards. In addition, all of the track in the subdivision will be resurfaced using a crew run production tamper. Defective ties will be replaced, as needed to meet intended class of track or at the rate of one hundred and twenty five ties per mile on average. New rail anchors will be installed at all locations receiving new rail and also at periodic intervals throughout the subdivision. Several private grade crossings will be improved, including the installation of new surface, rail seal and safety signage as appropriate to increase track speeds and safety of the users of the crossings. The proposed rehabilitation will result in a rail corridor with the result of primarily FRA Class 3 track, with the goal of average transit speeds of more than 30mph.

The 17-mile Houlton, 25-mile Presque Isle, 9-mile Fort Fairfield, and 15-mile Limestone Subdivisions<sup>3</sup> will each receive similar rehabilitation. The right-of-way will be brush cut as needed to comply with FRA track safety standards. New rail will be installed in numerous short segments, located as needed to repair deficient rail sections identified by our inspections. Rail anchor replacement will be limited to the segments receiving new rail. An average of fifty defective ties per mile will be replaced and all of the track in each subdivision will be resurfaced. To facilitate drainage, ditches along the right-of-way will be cleaned of debris. Several culverts will be checked for damage, cleaned of debris and repaired if necessary. Private grade crossings will also be improved as required. The proposed rehabilitation will result in returning the subdivisions to a solid FRA Class 2 condition.

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<sup>3</sup> The Limestone Subdivision is actually about 30 miles in length, but only the first 15.5 miles are in active use, and this will be the limit of the work.

## Results of the project

The current condition of the track structure of the Madawaska Subdivision results in numerous slow orders that reduce the maximum allowable speed of trains travelling along the Madawaska subdivision. These slow orders significantly increase the point to point travel times in the corridor and force trains to operate in an inefficient manner. To analyze the effect of the rehabilitation plan on the Madawaska Subdivision, a theoretical model was created to compare the corridor travel times under current conditions and proposed conditions. The model was designed under the assumptions that the rehabilitation plan will improve the track conditions to Class III and that trains will travel at the maximum speed allowed in each segment of track. The results of the analysis show that the rehabilitation improvements will be effective in eliminating slow orders and consequently reduce the corridor travel time by nearly twenty percent.

These improvements will result in benefits to the railroad customers throughout the region. As the service levels improve on the Madawaska Subdivision, the main line for the Northern Maine region, the branch lines will also receive more reliable and timely service levels. This will enable the rebuilding of traffic volumes as the efficiencies of rail carriage extend market reach and competitiveness. As rail volumes return, revenue will be available for re-investment into the railroad track and operations, and continued growth.

The improvements also accrue benefits to the region, the state and the nation as the more efficient railroad operations on the main line will reduce locomotive fuel consumption, and lead to modal diversion of tonnage from truck to rail, further reducing fuel consumption and the nation's dependence on fossil fuels for goods movement. The improved track conditions will also increase safety, especially related to the transportation of hazardous materials. The region receives fuel oil and chemicals by both truck and rail. Rail has an

overall better safety record for these shipments, and improved service will enable more of these products to move via rail.

Technical Feasibility: The rehabilitation plan is the result of an analysis of current conditions, recommended improvements by railroad engineering staff and confirmed by independent railroad engineering consultants. To achieve desired results quickly the plan follows standard railroad engineering maintenance procedures and readily available track materials. The plan is ready to be converted to appropriate bid and procurement documents.

### **c) NEPA status**

The Aroostook County Railroad Preservation and Rehabilitation Project is eligible for a Programmatic Categorical Exclusion. The project falls within the following Programmatic Categorical Exclusion category:

*Maintenance of existing railroad equipment; track and bridge structures; electrification, communication, signaling, or security facilities; stations; maintenance-of-way and maintenance of-equipment bases; and other existing railroad-related facilities. For purposes of this exemption “maintenance” means work, normally provided on a periodic basis, which does not change the existing character of the facility, and may include work characterized by other terms under specific FRA programs.*

The Categorical Exclusion Worksheet was submitted to the Federal Railroad Administration (FRA) for review and approval on July 22, 2010. FRA approval is anticipated following notice of award of this project for a TIGER II Grant. Typical review timeframe for a CE Worksheet is less than 90 days.

### **d) Other environmental actions needed**



Some permits may be required in the event the work is performed within or adjoining protected water and wetland resource areas. Prior to construction near any regulated resources areas, applicable permit filings will be performed. Drainage improvements may require coverage under Category 1 or Category 2 of the U.S. Army Corps of Engineers Programmatic General Permit (ACOE PGP) for the State of Maine, and a determination will be made regarding applicability prior to filing for coverage.

Some project work within the Aroostook River and the Penobscot River and tributaries may require screening for impacts to Essential Fish Habitat and may also trigger ACOE PGP Category 2 filing. A determination of this requirement will be made following notice of award by FRA. This process is expected to be completed within 90 – 120 days.

Certain elements of the project work would be subject to review under the Maine Natural Resources Protection Act (NRPA). Under the Maine Natural Resources Protect Act, the project would be covered under a Permit by Rule for a State Transportation Facility, which includes coverage under Section 401 (Water Quality Certification), and this filing would be performed prior to the start of construction activities. This permit-by-rule category applies to the maintenance, repair, reconstruction, rehabilitation, replacement or minor construction of a State Transportation Facility.

Given the limited nature of the planned work, and project limits to work within the railroad track area (toe of ballast) these programmatic general applications are considered to be routine and applications will be made following notice of award by FRA and approval is anticipated within 90 days of filing.

e) Legislative Approval: On April 9, 2010 the Maine legislature passed a bill to provide for a bond issue to go to the Maine voters on June 8<sup>th</sup> that provided funding for the purchase of the trackage proposed for rehab by the State of Maine. This proposal made \$18M in State funding available for the purchase of the lines in question to preserve the lines and rail service. On June 8, 2010 the bond issue was passed by the Maine voters by a large margin. In addition on April 13, 2010 the Governor Baldacci created the Aroostook Rail Advisory Task Force that includes several legislators to assist the MaineDOT in acquisition and rehabilitation of these lines and soliciting for operators and funding to continue successful rail operations on these lines.

f) This project has been added to the MaineDOT Statewide Transportation Improvement Program –STIP for Federal fiscal years 2010-2013.

## **VI. Federal Wage Rate Certification**




JOHN ELIAS BALDACC  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
16 STATE HOUSE STATION  
AUGUSTA, MAINE  
04333-0016

DAVID A. COLE  
COMMISSIONER

#### VI. Federal Wage Rate Certification

Maine Department of Transportation certifies that it will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage rate requirements). These requirements will be included in all contracts related to this grant request.

  
David Cole  
Commissioner

Aug. 18, 2010  
Date

#### VII. There are no material changes to be made to the Pre-Application

Letters of support at <http://www.maine.gov/mdot/tiger2/index.htm>

City of Caribou	City of Presque Isle
County of Aroostook	South Aroostook Dev. Corp.
Fraser Paper	Upper Valley Econ. Dev. Corp.
South Aroostook Dev. Corp.	Presque Isle Industrial Council