

# Northern Express Transportation Authority Port of Northern Montana

National Infrastructure Investments TIGER Discretionary Grant Proposal











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# **Application at a Glance**

**Proposed Title:** Port of Northern Montana Multimodal Hub Center

**Geospatial Information:** Section 27 Township 32 N Range 2 W, W.M.

48°30'04.55"N

111°50'53.2" W

County Demographics: Population (2009) 5,151

Persons below poverty level:

Median Household Income: \$38,663 Personal Per Capita Income: \$35,445

Unemployment rate as of April 2010: 5.8%

**Congressional District:** Montana 01

**Economically Distressed:** Per the Economically Distressed Area criteria published by FHWA

on August 24, 2009, the City of Shelby and Toole County do not qualify as federally designated economically distressed areas

15.1%

identified by unemployemnt rate and per capita income.

**Special Consideration:** Two (2) economically distressed counties (Glacier and Flathead

and six (6) economically distressed Indian Reservations

(Rocky Boy, Crow, Ft. Belknap, Flathead, Blackfeet and Fort

Peck) are located within the project's 400 square-mile

catchment area.

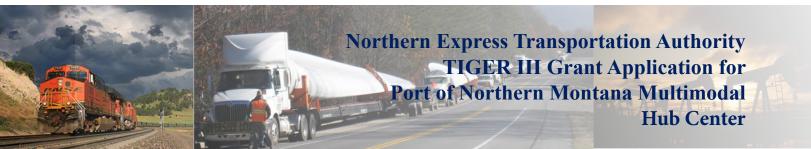
**Project Classification:** Rural

Funding Request: \$9,998,910

**Matching Support:** \$7,346,558

Cost:Benefit Ratio: 1:6.17 at 7% discount and 1:8.67 at 3% discount

**Supporting Documentation:**http://www.pnmshelby.com/tiger iii grant.htm.





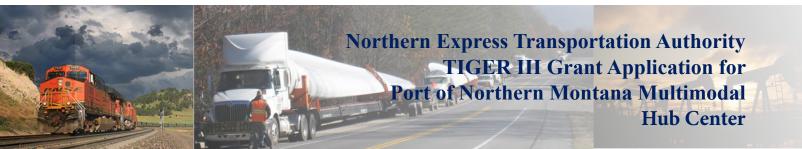
# **I. Project Description**

This TIGER III grant application is for Phase 3 construction of the Port of Northern Montana Multimodal Hub Center (inland port). Requested funds will complete a missing freight rail transportation link between the State of Montana and all ports served by Burlington Northern Santa Fe (BNSF) on the West Coast and Great Lakes. Primary port connections include the Ports of Seattle, Tacoma, Longview and Vancouver in Washington State and the Port of Duluth in Minnesota. Federal funds will be combined with a 42 percent non-federal match and used to complete the construction of an inland port. The federal investment will construct 10,860 lineal feet of track per BNSF specifications to support BNSF's Class 1 intermodal trains, construct an access road to the facility of 3,600 lineal feet and construct a 20-acre laydown yard to stage oversized equipment. 85 percent of the project budget is for construction.

Phase 3 of this project is 100 percent ready to go. The NEPA environmental process is complete. Categorical Exclusions have been approved by the Federal Highway Administration (FHWA) and the Federal Railroad Administration (FRA). Right-of-way has been acquired. A 42 percent non-federal match of \$7,346,558 has been committed to expedite project completion and contract documents will be ready for this \$17,345,468 project to be advertised for construction within 90 days after grant funds are awarded and obligated.

The project represents 21 years of hard work, extensive public and private outreach and involvement, right-of-way acquisition, environmental clearances and construction of a project that began in 1990. The project was officially adopted by the City of Shelby in the 1990 Growth Policy and as a high priority project has been included in all subsequent updates. Since FY 2006, \$7,199,093 in local, state and federal funding has been secured to advance this project toward completion. The existing port, although small, is operating today without an operational subsidy.

The project was split into three phases for financial reasons. Phase 1- completed in 2007, resulted in a FHWA Categorical Exclusion and partial project construction. Phase 2- completed in 2010, resulted in a FRA Categorical Exclusion and partial project construction. With NEPA environmental processes complete, the third and final phase will center on the construction of the remaining rail and road infrastructure needed for this facility to become operational by 2014. The result will be a fully functional inland port capable of accepting and delivering unit trains of containers and project cargo to support regional development and wind energy projects. As the BCA illustrates, the regional and national public impacts of this project are significant and will provide measurable, long-term benefits in the areas of economic competitiveness, safety, environmental sustainability and state of good repair.





## **Transportation Challenge I**

Montana is the fourth largest state in the nation yet, it does not have the ability to ship or receive containerized international cargo due to the lack of an inland port capable of accepting and delivering intermodal unit trains. While three port facilities exist in Montana, specific limitations prohibit Montana manufacturers and agricultural producers from containerizing their cargo at these ports for export delivery to world markets. A description of these three ports can be found at http://www.pnmshelby.com/tiger iii grant.htm.

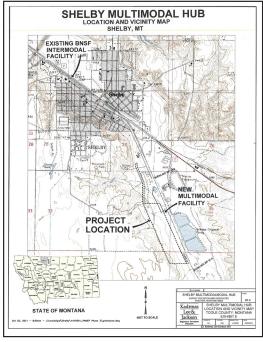
# **Transportation Challenge II**

Built in 1987, BNSF's Intermodal Terminal at Shelby, Montana is located adjacent to residential and business districts and an adjoining AMTRAK Depot. Each day 45-50 BNSF trains pass through this location and train volumes have steadily increased since 2000. Three challenges exist with BNSF's existing facility. First, despite demand, the BNSF facility only averages 1,000 revenue lifts per year because current track configuration cannot accommodate unit trains with a single placement move from the mainline and the facility cannot be expanded without relocating neighboring homes and businesses. Refer to project location map at http://www.pnmshelby.com/tiger iii grant.htm.

Second, the terminal's close proximity to AMTRAK often causes 20-minutes or more passenger delays on AMTRAK's Empire Builder when switching activities require BNSF to utilize the main line that serves the AMTRAK Depot. The

delay is compounded along the entire Empire Builder route. AMTRAK train delays affect the passenger rail customers' satisfaction and the passenger carrier's market share. AMTRAK's Empire Builder on-time performance was only 43.9 percent in 2011 compared to its goal of 80 percent. Additional information on AMTRAK's Performance in this region can be found at http://www.pnmshelby.com/tiger\_iii\_grant.htm.

Public safety and motor vehicle mobility is also jeopardized by commercial traffic driving through residential streets and Shelby's business district to get to the BNSF facility. According to 2009 Montana Department of Transportation data, 4,360 vehicles pass through US-2 near the access point to the existing BNSF terminal each day. In 2010, 109 vehicle crashes occurred in Toole County compared to only nine in the neighboring Liberty County. The majority of the 2010 vehicle crashes in Toole County involved commercial traffic.





## Transportation Challenge III

BNSF does not have any multimodal facilities in Montana that can accommodate the delivery of unit trains of wind tower components or other oversized energy supplies. Currently 11 major wind farm projects are in late stage development today. Developers use commercial trucks, which is not preferential due to road wear and tear, challenges with multi-state jurisdictional length and load limitations and special permit fees. In addition, recent oil shale explorations and new technologies have invigorated the oil production industry in Montana, but each well requires approximately 1,500 tons of imported sand for maximum production. Energy companies are currently transporting totes of imported sand by boxcar into Shelby. Totes of imported sand are removed from containers at West Coast ports and placed in boxcars and trucks because of Montana's inability to receive containers. This time consuming and inefficient process has been known to slow down or halt well production.

## Solution to Transportation Challenges I, II and III

Completing the construction of an inland port in Shelby will enable the State of Montana to ship and receive containerized international cargo. BNSF has committed to operating one intermodal train per week provided there is a suitable facility to accommodate unit trains of containers and sufficient volume to load a full inbound and outbound train. Sufficient volume has been identified and validated by the Port of Northern Montana. Inbound containers will carry energy equipment and supplies to accelerate the construction of Montana's traditional and renewable energy projects. Outbound trains will move regionally manufactured goods and containerized agricultural commodities to emerging industrialized nations.

Relocating the existing BNSF facility into a zoned industrial Tax Increment Finance (TIF) District will also eliminate AMTRAK service delays caused by the conflict between passenger and freight rail movements at the current location. Relocating the existing BNSF facility 1.5 miles southeast from zoned residential and commercial districts to an industrially zoned Tax Increment Finance (TIF) district will enhance commercial access to the facility and increase public safety by decreasing the volume of commercial traffic on residental and downtown business streets.



# **II. Project Parties**

The Northern Express Transportation Authority (Authority) has worked diligently to secure public and private sector stakeholder support for the project. Each entity listed below has provided a financial commitment or a letter of support for the Port of Northern Montana Hub Center project.

<b>Montana Congressional D</b>	elegation	Economic D	evelopment	Organizations			
Senator Max Baucus		Great Falls D	Great Falls Development Authority				
Senator Jon Tester	,	Montana Wo	rld Trade Ce	nter			
Representative Dennis Rehl	perg	Shelby Area	Chamber of	Commerce			
State Departments		Sweetgrass I	Development	Authority			
Montana Department of Co.	mmerce	Toole County	Economic	Development Aut	hority		
Montana Department of En	vironmental Quality	Container C	ompanies				
Montana Department of Tra	nsportation	OOCL					
<b>Committed Facility Users</b>		Associations	/Organizati	ons			
American Pulses	Montana Far	m Bureau Fe	ederation				
CHS	Pasta Montana			Montana Farmers Union			
Columbia Grain	Mountain View Reload	Montana Petroleum Association					
Dick Irvin Trucking	Northern Seeds	Schools Native American Trib		n Tribes			
Green Prairie International	North-West Pork Cooperative	School Distri	ct #14	Chippewa Cree Tribe			
AMTRAK	BNSF	Montana Ci	ties				
Ports		Conrad	Havre		Missoula		
Port of Northern Montana	Port of Grays Harbor	Cut Bank	Helena		Shelby		
Renewable Energy Compa	anies	Great Falls	Kalispell				
Invenergy		Montana Co	ounties				
Montana Wind Resources	Cascade	Glacier	Lewis & Clark	Missoula			
NaturEner	Flathead	Hill	Liberty	Pondera			
		Out of State Cities					
	Coeur d' Alei	ne, Idaho	Spokane, Washi	ngton			

As of October 2011, nine major customers have committed to utilizing the facility and potentially constructing industrial facilities near the proposed port in Shelby. Proposed investments are valued at \$254.5 million and are estimated to create 320 new family wage jobs in north central Montana. The following chart demonstrates these private commitments.

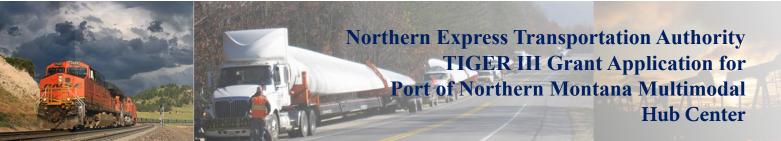


Employer	Product and Destination	Estimated Containers/ Year	Permanent Jobs Created	Pledged Commitment
American Pulse	Peas/Lentils India	2,600	25	\$2 million for American Pulse facility construction near proposed inland port
Malteurop	Malt Barley Canada	520	2	\$500,000 for Euro Malt facility construction near proposed inland port
Green Prairie International	Compressed Hay Japan	1,300	15	\$1 million for Lift Machine
North-West Pork Cooperative	Pork China	5,040	235	\$250 million for pork processing facility near proposed inland port
Pasta Montana	Pasta Japan	780	2	To Be Announced
Halliburton	Frack Sand Wiliston Basin	1,820	9	To Be Announced
Mountain View Reload	Frack Sand Canada	1,040	5	\$1 million for facility construction near proposed inland port
Sanjel Corp	Frack Sand Montana	780	2	To Be Announced
Mountain Grow	Bagged Potassium India	10,400	25	To Be Announced
TOTAL INVESTMENT		24,280	320	\$254.5 Million Plus TBA Commitment

# III. Grant Funds and Sources/Use of Funds

Source	Amount	Percentage
TIGER III	\$9,998,910	58%
Tax Increment Finance District	\$7,346,558	42%

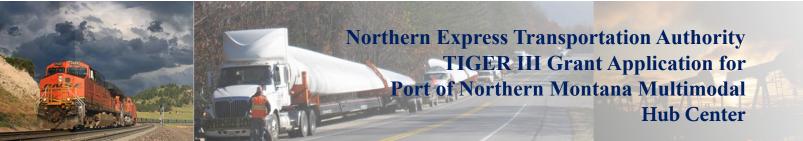
An analysis conducted by the engineering firm Kadrmas, Lee & Jackson indicates the cost to complete the inland port is \$17.3 million in 2011 dollars. A 42 percent non-federal investment of \$7,346,558 has been committed from the City of Shelby's TIF District. The Authority is requesting a TIGER III federal investment of \$9,998,910 (58 percent) to complete the final phase of project construction.



	Tiger Grant III Uses of Project Funds						
Item Description	Additional Info	Unit	TIGER Funds	Match	Total Construction	Engineering/ Admin/Legal and Construction	Total Project Funds
Railroad	3 spurs totaling 10,860	l.s.	\$4,890,770		\$4,144,720	\$746,050	\$4,890,770
Road Front Street	3,600 feet of new road	1.s.	\$1,108,140		\$939,102	\$169,038	\$1,108,140
Laydown Yard	20 acre pad	1.s.	\$4,000,000		\$3,389,831	\$610,169	\$4,000,000
Double Stacker Loft Machine	Equipment	1.s.		\$600,000	\$508,475	\$91,525	\$600,000
Double Stacker Loft Machine	Equipment	1.s.		\$475,000	\$402,542	\$72,458	\$475,000
Natural Gas to Energy Park	4-inch pipe into site	1.s.		\$240,000	\$203,390	\$36,610	\$240,000
Power to Energy Park	Along 13th St	l.s.		\$250,000	\$211,864	\$38,136	\$250,000
Storm Water	Detention/ Culverts	1.s.		\$187,900	\$159,237	\$28,663	\$187,900
Wastewater from Energy Park	9,300 feet of 8-inch pipe	l.s.		\$1,181,638	\$1,001,388	\$180,250	\$1,181,638
Bulk Facility	Expansion	1.s.		\$1,000,000	\$847,458	\$152,542	\$1,000,000
Drinking Water to Energy Park	14,211 feet of 18-inch pipe	l.s.		\$3,412,020	\$2,891,542	\$520,478	\$3,412,020
<b>Total Estimated Cost</b>			\$9,998,910	\$7,346,558	\$14,699,549	\$2,645,919	\$17,345,468

With the NEPA environmental processes complete, the projects third and final phase will construct the remaining rail and road infrastructure needed to enable this facility to become operational by 2014. Eighty-five percent of the total project cost will be spent on construction. The remaining 18 percent will pay for engineering, administration and legal and construction observation.

Since FY 2006, \$7,199,093 in local, state and federal funding has been provided to advance this project toward completion, including \$4,275,093 (59 percent) in local funding, \$2,284,000 (32 percent) in federal funding and \$640,000 (9 percent) in state funding. A detailed funding history chart can be found at http://www.pnmshelby.com/tiger\_iii\_grant.htm.



### IV. Selection Criteria

## A. Long-Term Outcomes

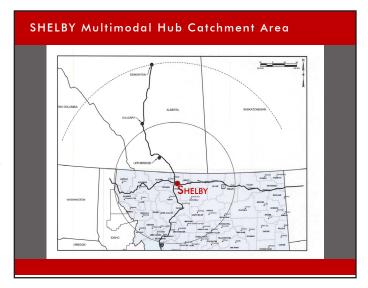
#### i. State of Good Repair

Relocating the current BNSF intermodal terminal 1.5 miles southeast from a residentially and commercially zoned area into an industrially zoned TIF District will increase the inland port's capacity and throughput. The completed project will enable the region to increase its rail usage by meeting the region's high demand for container train service. This project is consistent with the Federal strategy to develop strong freight corridors to improve freight mobility. Moving intermodal containers by rail instead of truck along this corridor will save the states of Washington, Idaho, North Dakota, Montana and Minnesota over \$102 million in road maintenance and preservation costs over the next 20 years. The mode conversion of transporting heavy agricultural and energy components by rail further reduces highway maintenance costs (the conversion is in addition to the benefits estimated in the BCA). The mode conversion will also result in time savings by reducing congestion along I-90 and US-2 caused by oversized machinery moves related to renewable and traditional energy projects. Reduction of heavy highway moves will increase the lifespan of I-90 and US-2.

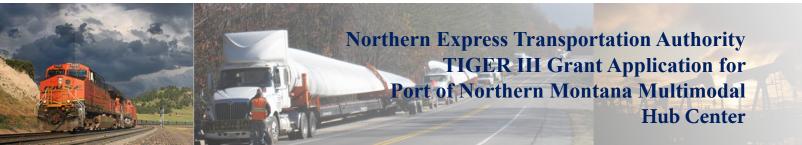
#### ii. Economic Competitiveness

Completing the inland port will contribute to the long-term growth in the productivity of the American economy, resolve a transportation impediment to increasing U.S. exports to global markets and reduce transportation costs associated with moving products to market.

Completing project construction will allow the region to receive energy supplies and export international containerized cargo. The demand for such service has been identified and



validated. The inland port will generate new cargo movements and not displace or relocate current economic activities. Using rail versus truck is estimated to improve the economic competitiveness of the region by \$60.8 million over the next 20 years.





Montana's inland port will improve the region's economic competitiveness by reducing transportation cost to shippers through expanded business opportunities and access to markets. The availability of reliable and timely access to export markets through improved rail transportation to the Ports in the Pacific Northwest as well as Canadian markets will enhance the region's ability to export domestic products worldwide. It will also help the region meet the demand projections for alternative and traditional energy development by staging oversize energy equipment deliveries in an area that is booming with wind farm development and oil and gas activity. The project will be a pillar to create new family wage jobs. Nine private companies have already committed to using the facility and potentially locating new facilities adjacent to the inland port. Transportation sector job opportunities will also be created along the improved supply chain corridor.

By 2035, the use of rail instead of truck will reduce road usage by 92 million miles annually. This is based upon the projections that the new inland port will generate five round trip intermodal trains per week moving 124,800 containers by rail by year 2035. As illustrated in the BCA, the regional and national economic competitiveness impacts of this project are significant and will provide measurable, long-term public benefits to the region and nation.

#### ii. Livability

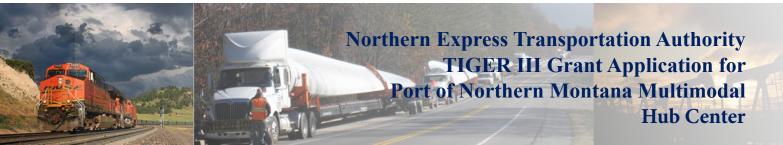
Finalizing the construction of the inland port will improve the quality of life in Montana and across the U.S. The project exemplifies the core livability principles established by the Partnership for Sustainable Communities that are being used by the federal agencies as guidance for project selection.

#### Provides More Transportation Choices

The project will provide more transportation choices for freight movement by relocating BNSF's existing terminal situated in residential and commercially zoned districts to an industrially zoned TIF District large enough to accommodate container trains. It will also enhance passenger rail service by resolving a documented AMTRAK/BNSF conflict. Each year, 16,534 passengers board the AMTRAK Depot at Shelby, located next to BNSF's main line. BNSF switching activities often result in 20-minutes or more AMTRAK passenger delays. This takes a toll on passengers, the community and reduces overall productivity. Providing cost-effective and accessible rail transportation alternatives to the region will also eliminate 1.1 million metric tons of carbon emissions from the environment.

### Promote Equitable, Affordable Housing

The project will relocate current rail switching and loading activities from a zoned residential and commercial area to a zoned industrial area. This will improve the quality of life for the adjacent affordable housing neighborhoods by reducing traffic, noise and safety concerns.



### Supports the Existing Community

The project represents 21 years of hard work, extensive public and private outreach and involvement, right-of-way acquisition, environmental clearances and construction for a project that began in 1990. The project was officially adopted by the City of Shelby in it's 1990 Growth Policy and as a high priority project has been included in all subsequent updates. The inland port will also increase economic opportunities between the U.S. and Canada because of further realization of the goal of NAFTA



## Coordinates Policies and Leverages Investment

The project aligns with federal policies to reduce our dependence on to foreign oil by curbing fuel consumption and creating an opportunity for energy developers ship their equipment and supplies by rail instead of truck. The project is included in the Montana State Transportation Improvement Plan and is a critical component of the City of Shelby's Growth Policy. TIGER III grant funds will be leveraged with an additional \$7.3 million of committed non-federal funds. To date, nine private companies have pledged to expand operations in Montana near Shelby's inland port. The investment is valued at \$254.5 million and is estimated to create 320 family wage jobs.

## Values Communities and Neighborhoods

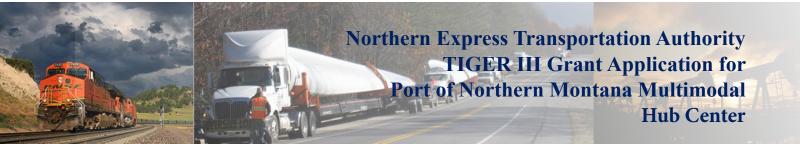
The project will concentrate development funds into a single, multi-phased project to spur economic renewal and revitalization in Montana and within Toole County and the City of Shelby. The project will relocate an existing BNSF facility to an industrial district which will re-route trucks away from the city's residential and business districts. The location change will return local neighborhoods to family friendly, walkable neighborhoods and improve pedestrian access to the city's Main Street business district.



#### iii. Sustainability

## Improved Energy Efficiency and Reduced Dependence on Foreign Oil

Project completion will create an opportunity for Pacific Northwest cargo destined for Montana to be railed instead of trucked. As illustrated by the results of the BCA, this ability to convert modes provides three important benefits: reduction in foreign oil dependence and reduction of highway damage created by oversize and overweight loads and decreased carbon emissions.





Mode Conversion Reduces Dependence on Foreign Oil

BNSF's carbon calculator estimates environmental savings from shifting truck to rail. In the worksheet on page 14, the total number of 20-foot Equivalent Units (TEU's) is converted to 40-foot Equivalent Units (FEU). The total FEU containers are then divided in half to reflect the balanced train operation between the originating point and the destination.

For this application, the team chose a representative round-trip intermodal shipment between the Port of Northern Montana and the Port of Tacoma for a carbon calculation of shipment #1 and #3 below.

Wind energy was chosen as a representative shipment #2, which would move as project cargo on flat cars. The representative movement for this shipment would be from the Port of Northern Montana to the Port of Vancouver.

This example of three movements would take 27,380 miles off the road and would save 25,591 metric tons of  $CO_2$ .



#### **BNSF Railway Carbon Estimator**

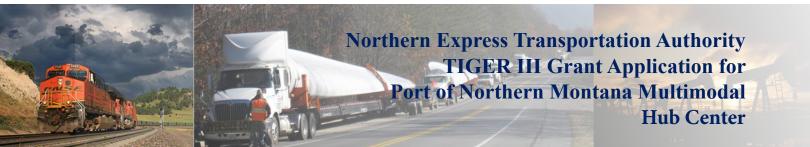
Report for Port of Northern Montana, Shelby created 10/27/2011 12:47 pm

	Shipment #1	Shipment #2	Shipment #3
Commodity			
Commodity Group	Intermodal	Machinery	Intermodal
Commodity Type	Containers	Wind Components	Containers
Tons per Unit	20	62.3	3 20
Rail Volume			
Number of Rail Units:	8,890	9,600	8,890
Geography / Mileage			
Origin:	TACOMA, WA	VANCOUVER, WA	SHELBY, MT
Destination:	SHELBY, MT	SHELBY, MT	TACOMA, WA
Rail Shipment Distance:	718	5 811.6	715
Comparable Truck Volume			
Number of Trucks:	8,890	9,600	8,890
Truck Performance Assumptions			
Highway/Long Haul MPG:	6.5	5 6.5	6.5
Highway/Long Haul Out-of-Route Miles Percentage:	10%	10%	10%
Highway/Long Haul Empty Miles Percentage:	15%	15%	15%
Total Drayage Miles (at Origin and Destination):	79.44	90.18	79.44
Drayage MPG:	6.4	6.1	6.1
Drayage Out-of-Route Miles Percentage:	15%	15%	15%
Drayage Empty Miles Percentage:	35%	35%	35%

	Shipment #1	Shipment #2	Shipment #3
Your Carbon Footprint and Comparison			
Estimated Rail Carbon Footprint (Metric Tons CO₂ equivalent):	5,875.10	10,651.20	5,875.10
Estimated Long Haul Truck Carbon Footprint (Metric Tons CO <sub>2</sub> equivalent):	12,676.50	15,538.30	12,676.50
Using a carload or intermodal rail solution instead of truck only would reduce this shipment's estimated Carbon Footprint by:	54%	31%	54%

#### Please Note:

Actual carbon emissions may vary from the results provided here as a result of variable factors such as topography, weather, unique product characteristics, etc. BNSF's carbon emission estimatorwas formed in collaboration with ClearCarbonConsulting, Inc. to illustrate the estimated environmental benefit that is obtained by utilizing rail as part of your company's supply chain. These carbon estimations rely on data sources including BNSF shipment history and internal shipping metrics, along with assumptions for route mileage calculation, trucking industry averages for empty miles, out-of-route miles, and fuel efficiency (Truck Assumption: 6.5 mpg highway, 6.1 mpg city), and other data sources such as the U.S. EPA's Climate Leaders program emissionfactors (Direct Emissions from Mobile Combustion Sources, May 2008).



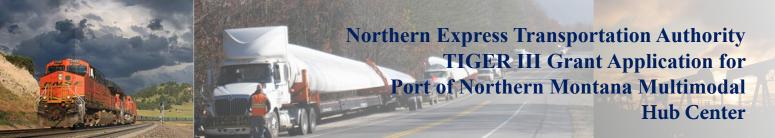


#### **Highway Preservation**

The team has calculated there will be a \$102 million savings to the states of Washington, North Dakota, Idaho, Montana and Minnesota over the 20-year projection period when rail is used in place of truck when moving cargo from the Pacific Northwest Ports to Shelby's inland port. Further savings (not included in the BCA) will be realized by removing heavy shipments from roads. Large vehicle loads involved in wind farm construction greatly exceed the designed capacities of most rural roads.

The gross weight of a truck carrying a wind turbine is 218,000 pounds. The gross weights of trucks that carry tower sections vary from 134,000 pounds to 232,000 pounds. In addition to the movement of the wind components, other supporting equipment and vehicles need to be relocated, such as rough-terrain cranes. Each of these craness typically weighs 100,000 pounds. A single pass by any of these loads can cause major damage to gravel-surfaced roads. In addition many legal loads of concrete, rebar and gravel are also hauled by truck to Montana for wind projects. To compound the matter, in northern climates, wind-power companies want to begin construction as early as possible in the spring—when roads are at their weakest. Heavy movements that can be moved by rail versus truck will reduce road wear and tear. The length of wind-generator blades causes another problem. Blades are up to 120 feet long and 180foot blades are expected to be used in some places in future years. Trucks hauling the blades require much wider turning radii than exist at typical rural crossroads. As a result, corners must be widened. In addition, costs may be incurred if the corners need to be widened such as compensation to land owners, obstruction of drainage ditches and destruction of crops. If wind energy components can be handled by rail from the port of origin (see letters of support from ports at http://www.pnmshelby.com/tiger iii grant.htm) to a rail terminal within close proximity to the final wind farm location, highway infrastructure will be preserved.

US Highway Corridors Impacted by Wind Movement					
Origin	Highway Miles				
Port of Longview, WA	WA-4, WA 431, WA 18, I-5, WA 18, I-90, MT 200, I-15, US 2	809			
Port of Vancouver, WA	I-5, WA-14, I-205, I-84, I-82, US 395, I-90, I-15, US 2	779			
Port of Seattle/Tacoma, WA	I-5, I-90, MT 200, I-15, US 2	701			
Port of Duluth, MN	I-35, US 2	1006			
Hutchinson, KS	KS 96, US-281, I-70, I-25, I-90, US 87, MT 3, I-15, US 2	1311			
West Branch, IA	I-80, I-380, US 218, IA 27, I-35, I-494, I-94, I-15, US 2	1340			
Chicago, IL	I-90,I-94, MT 200, MT 13, MT 25, US 2	1437			





iv. Maintain, Protect and Enhance the Environment

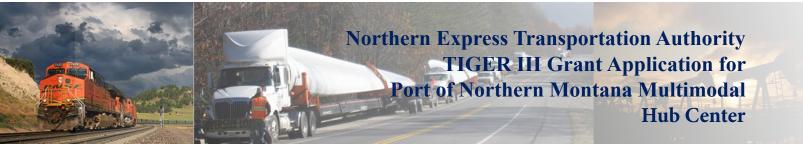
The project will utilize sustainable construction elements to reduce long-term environmental impacts. The first construction element will include the use of concrete railroads ties to specifically handle the oversized and overweight loads anticipated. Reinforced concrete sleepers are stronger and last longer than timber ones, lasting about 30 to 50 years, as opposed to the 20 to 30 year life span of wooden ties. Due to their strength, they can support greater loads or have wider spacing than wooden ties, thus reducing material requirements. Additionally, reinforced concrete ties make stiffer tracks with less resistance than wood, increasing train fuel efficiency by 1.2 to 4.5 percent.

The second design element is Positive Train Control (PTC), which contributes to sustainability in three ways: 1) locomotive fuel savings as a result of reduced delays caused by waiting for operating permissions to occupy the mainline, 2) line capacity enhancement allowing the carrier to operate more trains along the existing infrastructure, with less buffer space between trains and 3) improved efficiency created by real-time location information.

In addition, Shelby's inland port has a local opportunity to use a recycled base material that is washed out of cement trucks after they deliver cement. The City of Shelby receives the material at the city landfill and has used it as a base material for soft spots in roads, railroad tracks and lay down yards. The city has 30,000 tons of this material stock piled at its landfill. The location of the landfill is very close to the inland port and the base material would be provided free of charge to the port from the City of Shelby.

#### v. Safety

The use of rail as a transportation mode for the new cargo generated from the inland port will improve the safety of the transportation corridor on which the cargo is moved. For example, the current fatality rate in Montana is 2.01 per 100 million vehicle miles due to the rural nature of the highway system. It can be estimated that during the next 20 years the use of rail for the cargo movement to and from the Pacific Northwest to this facility will save 4.3 lives or a monetized savings of \$26.4 million due to reduced collisions. Due to the lack of data on less severe accidents, only fatalities were calculated. If all levels of accidents were available, this savings would be estimated at a much larger value since based upon Washington State statistics, fatalities are estimated at less than 0.50 percent of all crash types.



## B. Job Creation and Near-Term Economic Activity

While the TIGER Discretionary Grant program is not a Recovery Act Program, job creation and economic stimulus remain a top priority for the Authority. An estimated 191 family wage jobs are expected to be created during the construction period. Once the new facility opens, it is estimate that the operations activities will generate 4.3 direct jobs per 1,000 containers moved. By 2015, this will account for the creation of 107 new jobs growing to 537 jobs by 2035.

An additional 320 jobs are expected to result from private sector project investment identified by current customer commitments. For example, North-West Pork Cooperative will use the inland port to transport approximately 5,050 40-foot containers of processed pork to the Pacific Northwest for export to China each year. Project completion will also allow the company to begin

construction on a planned and designed \$250 million automated pork processing facility next to the proposed inland port in Shelby and create 235 new full-time family wage jobs.

"As funding applications are evaluated, please consider our pledged support."

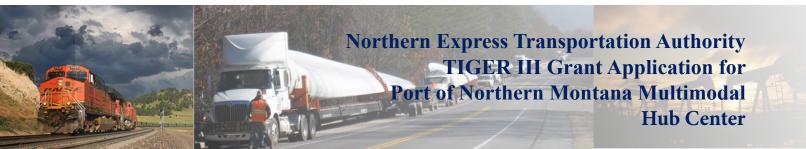
David M. Hofer, North-West Pork Cooperative, Board Chair http://www.pnmshelby.com/tiger\_iii\_grant.htm.

### C. Innovation

The Authority brings innovation in partnerships, funding and vision to the project.

#### Positive Train Control (PTC)

Two PTC switches are included in this application. Benefits of PTC include line capacity enhancement; improved service reliability; faster over-the-road running times; more efficient use of cars and locomotives enabled by real-time information; reduction in locomotive failures; more time for local maintenance workers to occupy track, and fuel savings.





#### A Model for Rural Development

Many rural communities have attempted to develop inland ports but invariably run into barriers to pull all components together: funding, partners, volumes and freight balance, terminal specifications and labor. The project will serve as a model for other rural communities to follow in the development of successful and efficient rural inland ports across the United States.

### **Maximizing Transportation Connections**

The project demonstrates the value of new approaches to safety management, asset management and shared transportation objectives. The inland port will be located at the crossroads of US-2 and Interstate 15 on the CANAMEX corridor, a 1,504-mile corridor that connects Edmonton to Mexico City. Synergies associated with being connected to this corridor include:

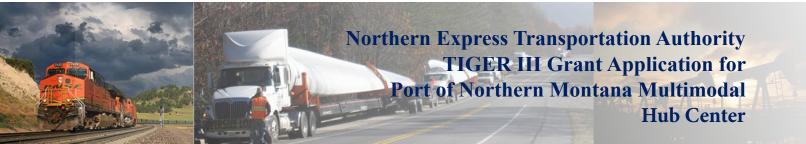
- Smart corridor States operate shared information technology systems which allow for rapid response to hazardous materials and support oversize shipment permitting.
- Telecommunications access for rural areas The CANAMAX corridor telecommunications infrastructure provides a north-south broadband backbone along the corridor which improves carrier communication and transportation data transmissions.
- Smart Process Partnerships Interstate and International cooperation is a key element of the CANAMAX corridor. Integration of e-government services, including an e-signature program is underway with other "borderless economy" innovation.

Completion of the inland port in Shelby will allow the U.S. to realize the promise of the NAFTA international cargo agreement where cross border truck size and weight movements are harmonized. In July of 1991, Congress authorized an agreement to increase the legal vehicle length and load limits for Canadian trucks entering the United States at the Port of Sweetgrass near Shelby. No other Canadian and U.S. border crossing has harmonized truck size and weight regulations for regional economic benefit. The border crossing operates 24/7 and allows freight to freely flow between the two countries. A link to the Montana-Alberta agreement on vehicle weights can be found at http://www.pnmshelby.com/.

# D. Partnership

i. Jurisdictional & Stakeholder Collaboration

The project involves non Federal entities and uses of non Federal funds. Since FY 2006, \$7,199,093 in local, state and federal funding has been provided to advance this project toward completion, including \$4,275,093 (59 percent) in local funding, \$2,284,000 (32 percent) in Federal funding and \$640,000 (9 percent) in state funding.



The City of Shelby and Toole County have worked in a collaborative effort with the Port of Northern Montana to commit an additional \$7,346,558 in TIF District funding as a non-federal match for this TIGER III grant application.

In addition, financial commitments have been received from the following private entities:

Entity	Purpose	Pledged Commitments	
American Pulse	Construction of a pluse crop processing plant near proposed inland port	\$2,000,000	
Malt Europe	Construction of a Malt Europe facility near proposed inland port	\$500,000	
Green Prairie International	Lift Machine	\$1,000,000	
North-West Pork Cooperative	Construction of a processing facility near proposed inland port	\$250,000,000	
Mountain View Reload	Construction of a warehouse facility near the proposed inland port	\$1,000,000	
<b>Total Commitmen</b>	Total Commitments		

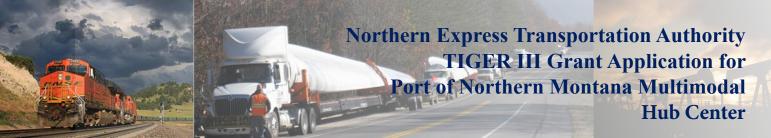


Federal assistance from this TIGER III Discretionary Grant will be the final funding required for this project. The State of Montana recognizes the economic and safety benefits of this project, but does not have sufficient funds available to pay for the final phase of the project in its entirety.

"The 2011 Montana Essential Freight Rail Loan program is a small revolving loan program that has limited funds which are insufficient for the completion of the Shelby Intermodal Hub Relocation project."

Dr. Douglas McBroom
Montana Department of Transportation, Chief of Multimodal Programs
http://www.pnmshelby.com/tiger\_iii\_grant.htm.

No public funds are dedicated to help the Class 1 railroads with PTC deployment. Aside from the TIGER Discretionary grant program, no single Federal funding program exists to help pay for construction of all three remaining project components (rail, roads and utilities). Since FY 2006, the Authority and the City of Shelby have worked with FHWA, FRA and EDA to obtain project partial project funding for individual project components, which has resulted in a project with three incomplete elements – rail, roads and utilities.



Funding history can be found at http://www.pnmshelby.com/tiger\_iii\_grant.htm. This project cannot be readily or efficiently completed without federal assistance from a source like TIGER III, which funds projects that are difficult to fund in whole under other programs.

### ii. Disciplinary Integration

The project is supported by the Montana Department of Transportation, the Montana Department of Commerce and the Montana Department of Environmental Quality.

The project is also supported by numerous public agencies, such as the Sweetgrass Development Authority, the Shelby Area Chamber of Commerce, the Great Falls Development Authority, Toole County Economic Development Authority, Montana Wind Resources, Montana Farmers Union, Montana Farmers Bureau and School District #14. All of these public agencies are pursuing similar objectives and support the completion of the project.



"The project has received all required environmental clearances and is in line with the Montana Department of Commerce's mission to enhance economic prosperity in Montana and promote and enhance Montana's positive national and international image."

Dore Schwinden, Director, Montana Department of Commerce http://www.pnmshelby.com/tiger iii grant.htm.



"Each BNSF train can move one ton of freight 423 miles on a single gallon of diesel fuel. As funding applications are evaluated, I would hope that you would carefully consider the merits of this project."

Richard Opper, Director, Department of Environmental Quality http://www.pnmshelby.com/tiger\_iii\_grant.htm.





"This project will construct Montana's first multimodal facility to facilitate the export of value added food commodities and manufactured products--a noteworthy commercial accomplishment for the region and State of Montana. It will also serve as a model to empower rural communities across the nation to increase their export opportunities."

Allan Merrill, President, Montana Farmers Union http://www.pnmshelby.com/tiger iii grant.htm.

Additionally, multiple types of partnerships are demonstrated by the project:

- Partnership between water ports and inland ports to create an efficient corridor and contribute to the economic competitiveness of the region and the corridor.
- Partnerships between a Class 1 railroad, ocean carriers and inland port operators to keep
  commodities moving in a balanced and orchestrated manner, achieve full utilization reach
  key performance indicators and reduce highway congestion. Mode conversion, especially for
  heavy cargo helps extend the life cycle of our highways and bridges and reduces maintenance
  and replacement costs.
- Partnership between importers and exporters on the use and reloading of equipment.
- Partnership in the relocation of the multimodal facility to improve Class 1 and AMTRAK operations.

Northern Express Transportation Authority
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Hub Center



## E. Results of the Cost Benefit Analysis

The cost-benefit analysis shows that the inland port will provide cost-effective benefits to the region. Even though the land has already been acquired and the right-of-way has been secured, the total project cost includes these elements in addition to project construction and maintenance costs. The benefits used in this monetized analysis include:

<u>State of Good Repair – Savings in Maintenance, Preservation and Roadway Upgrades</u>
Reducing the number of miles traveled by trucks between the Pacific Northwest and Shelby's inland port is estimated to save Washinton, Idaho, Montana, North Dakota and Minnesota a total of \$103 million over the next 20 years in road maintenance, preservation and upgrades.

## Economic Competitiveness – Reduction in Operating Costs

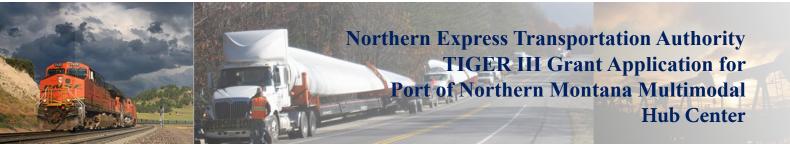
The choice of rail as the transportation mode will save an estimated \$61 million in transportation costs.

#### <u>Project Environmental Benefits – Emission Reduction</u>

CO<sub>2</sub> emissions will be reduced by 1.1 million metric tons due to reduction of vehicle miles traveled that are offset by rail miles, which are more environmentally friendly than truck miles.

<u>Project Safety Benefits – Reduced Fatalities due to Cargo Transport by Rail Versus Road</u> Reducing the total vehicle miles traveled between the Shelby inland port and the Pacific Northwest Ports will save 4.3 lives over the next 20 years and countless injuries.

Selection Criteria	Description	Inputs	Value	Discount Rate 7%	Discount Rate 3%	
State of Good Repair	Consistent with regional plans	Maintenance, preservation and upgrade savings of Highways	\$102 million highway maintenance costs saved between Shelby and PNW Ports	\$47,769,510	\$72,386,632	
Economic Competiveness	Operational cost savings	Saving of rail transport vs truck transport	856 million miles @ \$0.071 savings/mile	\$28,263,626	\$42,828,757	
Environmental Sustainability	Reduced pollution	CO <sub>2</sub> Cost Savings	1.1 million Metric tons of CO <sub>2</sub> saved	\$22,104,270	\$22,104,270	
Safety	Reduced Fatalities	Fatality cost savings of 4.3 fatalities	\$26.4 million saved	\$12,279,061	\$18,606,849	
Total Cost	Total Cost					
<b>Total Benefits</b>		\$110,416,467	\$155,926,508			
Net Present Value	,	\$92,528,398	\$137,940,692			
Cost to Benefit Ra	atio	1:6.17	1:8.67			





# V. Project Readiness and NEPA

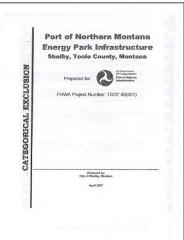
The project is 100 percent ready to go. The NEPA environmental process is complete. Categorical exclusions were approved by FHWA and FRA in 2007 and 2010, respectively. Right-of-way has been acquired.

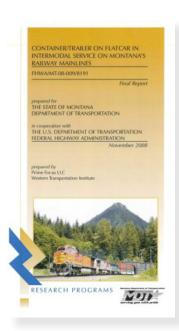
The project is technically feasible. All necessary technical reviews have been completed. Preliminary design was prepared by design engineers and approved by BNSF engineering in 2006. Forty percent of the project is complete and the design team foresees no complicating or project ending factors. The property is flat, with no significant environmental features or concerns.

A 2008 Montana Intermodal Facility Feasibility Study prepared for the Montana Department of Transportation in cooperation with the Federal Highway Administration indicates that Shelby is the most desirable location in Montana for an intermodal terminal based on a quantitative assessment of intermodal terminal locations.

http://www.pnmshelby.com/4W1926 Final Report.pdf.

The project is also financially feasible. The Northern Express Transportation Authority has operated the Port since 1990. See http://www.pnmshelby.com/tiger iii grant.htm for documentation.







Northern Express Transportation Authority
TIGER III Grant Application for
Port of Northern Montana Multimodal
Hub Center



# VI. Wage Rate Certification

The Port of Northern Montana certifies work performed under the contract of this grant will be required to comply with all applicable state and federal laws including but not limited to Subchapter IV of chapter 31 of Title 40 of the United States Code.

See http://www.pnmshelby.com/tiger iii grant.htm.for the certification letter.



"This letter is to certify that the Northern Express Transportation Authority doing business as the Port of Northern Montana will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage requirements), as required by the FY 2011 Continuing Appropriations Act."

Larry Bonderud, Port of Northern Montana, Director http://www.pnmshelby.com/tiger iii grant.htm

# VII. Material Changes to the Pre-Application

Summary of Pre-Application Updates:

Economically Distressed: Consistent with the Economically Distressed Area criteria

published by FHWA on August 24, 2009, Toole County does

not qualify as a federally designated economically distressed area

identified by unemployemnt rate and per capita income.

Special Consideration: Two (2) economically distressed counties (Glacier and Flathead)

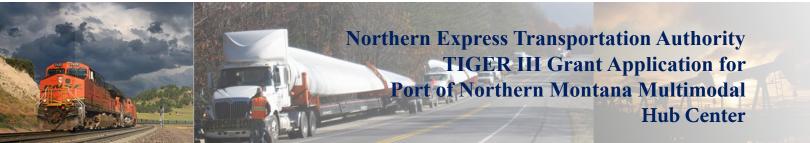
and six (6) economically distressed Indian Reservations

(Rocky Boy, Crow, Ft. Belknap, Flathead, Blackfeet and Fort

Peck) are located within the project's catchment area, as defined by

Burlington Northern Santa Fe Railway.

Project End: 111.84554 W, 48.49442 N





# VIII. Appendix

The following attachments can be found at http://www.pnmshelby.com/tiger\_iii\_grant.htm.

**Funding Commitment Letters** 

Maps

**Technical Information** 

**NEPA** 

Right Of Way

**Federal Wage Rate Certification** 

**Letters of Support** 

News

**Links to Sources** 

**Hub Center**