



**STATE OF VERMONT**  
JOINT FISCAL OFFICE

**MEMORANDUM**

To: Joint Fiscal Committee Members  
From: Nathan Lavery, Fiscal Analyst  
Date: September 10, 2013  
Subject: Grant Request

Enclosed please find one (1) item that the Joint Fiscal Office has received from the administration.

**JFO #2641** – \$8,992,007 grant from the U.S. Department of Transportation to the Vermont Agency of Transportation. These funds will be used for rehabilitation of the Western Corridor rail route.  
[JFO received 09/10/13]

This item will be placed on the Joint Fiscal Committee's September 11, 2013 agenda.

JFO 2641

STATE OF VERMONT REQUEST FOR GRANT (\*) ACCEPTANCE (Form AA-1)

BASIC GRANT INFORMATION				
1. Agency:	Transportation			
2. Department:	Policy, Planning, and Intermodal Development Division			
3. Program:	Rail			
4. Legal Title of Grant:	US DOT FY2013 National Infrastructure Investments TIGER 2013 Grants			
5. Federal Catalog #:	20 933			
6. Grant/Donor Name and Address:	US Secretary of Transportation 1200 New Jersey Ave., S.E. Washington, DC 20590			
7. Grant Period:	From:	9/6/2013	To:	11/30/2015
8. Purpose of Grant:	Western corridor rail rehabilitation. Project will replace 9 miles of old jointed rail with continuously welded rail, as well as new surfacing, ballast, and ties. Project will bring a 20 mile segment of the VT Railway to FRA class III status, which will allow trains to carry heavier loads and operate at faster speeds safely			
9. Impact on existing program if grant is not Accepted:	Improvements would not occur			
10. BUDGET INFORMATION				
	SFY 1	SFY 2	SFY 3	Comments
<b>Expenditures:</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	
Personal Services	\$	\$	\$	
Operating Expenses	\$	\$	\$	
Grants	\$	\$	\$	
<b>Total</b>	<b>\$200,000</b>	<b>\$4,400,000</b>	<b>\$6,592,007</b>	
<b>Revenues:</b>				
State Funds	\$35,740	\$786,275	\$1,177,985	TIB funds (or TF)
Cash	\$	\$	\$	
In-Kind	\$	\$	\$	
Federal Funds	\$160,686	\$3,535,097	\$5,296,224	FRA funds
(Direct Costs)	\$	\$	\$	
(Statewide Indirect)	\$	\$	\$	
(Departmental Indirect)	\$	\$	\$	
Other Funds:	\$3,574	\$78,628	\$117,798	private in kind
Grant (source )	\$	\$	\$	
<b>Total</b>	<b>\$200,000</b>	<b>\$4,400,000</b>	<b>\$6,592,007</b>	
Appropriation No:	8100002300-20155	Amount:	\$8,992,007	
			\$	
			\$	
			\$	
			\$	
			\$	

**RECEIVED**  
SEP 10 2013  
**JOINT FISCAL OFFICE**

**STATE OF VERMONT REQUEST FOR GRANT (\*) ACCEPTANCE (Form AA-1)**

		\$
	<b>Total</b>	\$8,992,007

**PERSONAL SERVICE INFORMATION**

**11. Will monies from this grant be used to fund one or more Personal Service Contracts?**  Yes  No  
 If "Yes", appointing authority must initial here to indicate intent to follow current competitive bidding process/policy.

Appointing Authority Name: Dean R Swales Agreed by: RS (initial)

12. Limited Service Position Information:	# Positions	Title
<b>Total Positions</b>		

**12a. Equipment and space for these positions:**  Is presently available  Can be obtained with available funds.

**13. AUTHORIZATION AGENCY/DEPARTMENT**

I/we certify that no funds beyond basic application preparation and filing costs have been expended or committed in anticipation of Joint Fiscal Committee approval of this grant, unless previous notification was made on Form AA-1PN (if applicable):	Signature: <u>[Signature]</u>	Date: <u>9/9/13</u>
	Title: <u>Secretary of Transportation</u>	
	Signature: <u>[Signature]</u>	Date: <u> </u>
	Title: <u> </u>	

**14. SECRETARY OF ADMINISTRATION**

<input checked="" type="checkbox"/> Approved: <u>9/10/13</u>	(Secretary or designee signature) <u>[Signature]</u>	Date: <u>9/10/13</u>
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**15. ACTION BY GOVERNOR**

<input checked="" type="checkbox"/> Accepted	<u>[Signature]</u> (Governor's signature)	Date: <u>9/10/13</u>
<input type="checkbox"/> Rejected		Date: <u> </u>

**16. DOCUMENTATION REQUIRED**

**Required GRANT Documentation**

<input type="checkbox"/> Request Memo	<input type="checkbox"/> Notice of Donation (if any)
<input type="checkbox"/> Dept project approval (if applicable)	<input type="checkbox"/> Grant (Project) Timeline (if applicable)
<input type="checkbox"/> Notice of Award	<input type="checkbox"/> Request for Extension (if applicable)
<input type="checkbox"/> Grant Agreement	<input type="checkbox"/> Form AA-1PN attached (if applicable)
<input type="checkbox"/> Grant Budget	

**End Form AA-1**

(\*) The term "grant" refers to any grant, gift, loan, or any sum of money or thing of value to be accepted by any agency, department, commission, board, or other part of state government (see 32 V.S.A. §5).



**U.S. Department of Transportation**  
Office of the Secretary of Transportation

1200 New Jersey Ave , S.E.  
Washington, DC 20590

### NOTICE OF GRANT AWARD

Title	<b>US DOT's FY 2013 National Infrastructure Investments or TIGER 2013 Discretionary Grants Program: Capital Grants</b>
DOT Agency Disbursing Funds	<b>Office of Secretary of Transportation</b>
Project Name/Number.	<b>Western Corridor Rail Rehabilitation</b>
Award Recipient	<b>Vermont Agency of Transportation</b>
City/Country/State	<b>, VT</b>
Place of Performance	<b>Rutland, Vermont</b>
State Congressional District	<b>1</b>
Entitle Amount	<b>\$ 0.00</b>
Discretionary Amount	<b>\$ 8,992,007.00</b>
Total Grant Amount	<b>\$ 8,992,007.00</b>
DOT Regional Office/Telephone Number	<b>Natalie Angelo - 202-366-4573</b>

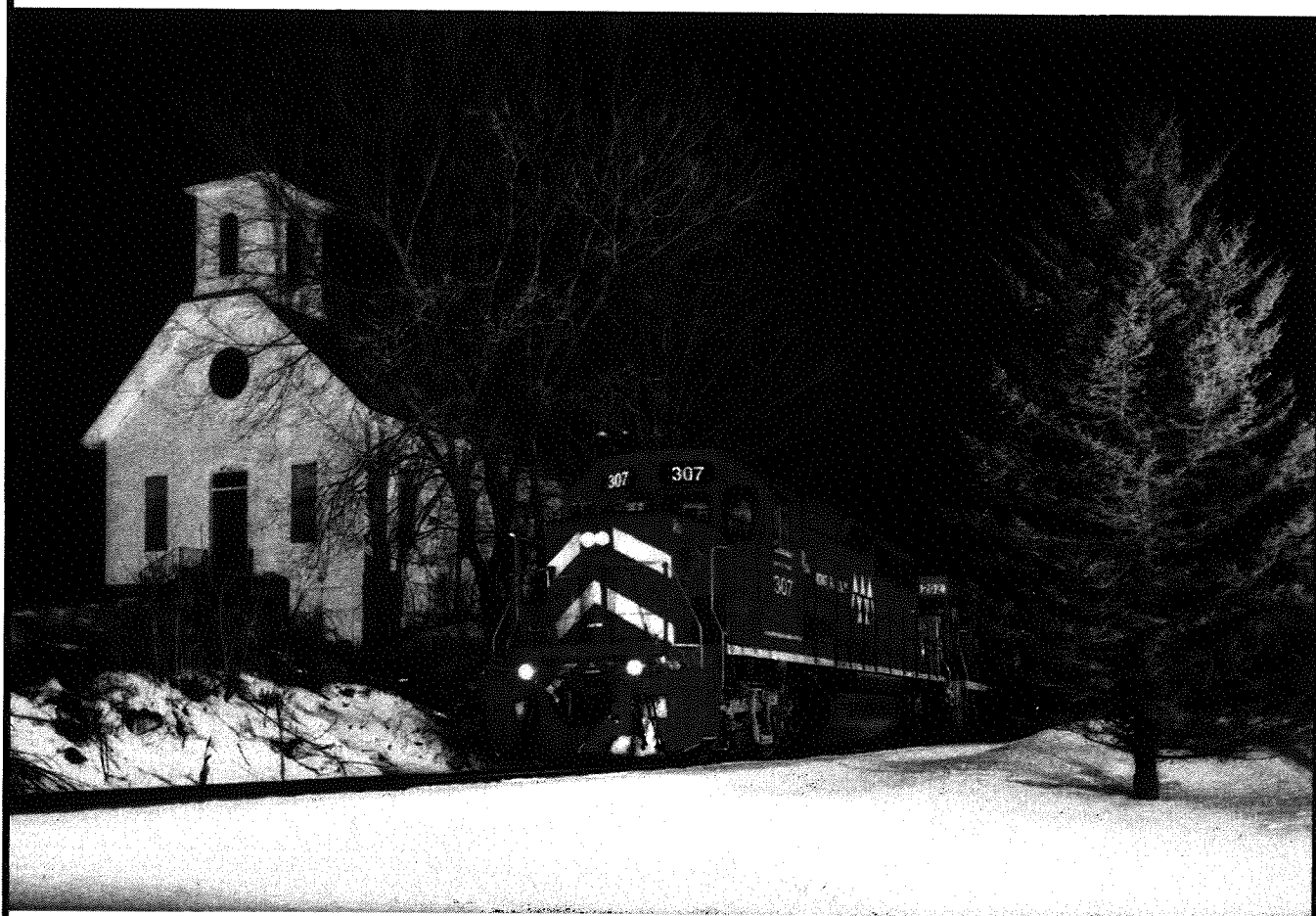
**Description:**

The project will replace 9 miles of old jointed rail with continuously welded rail, as well as new surfacing, ballast, and ties.

The project will bring a 20 mile segment of the Vermont Railway to FRA class III status, which will allow trains to carry heavier loads and operate at faster speeds safely

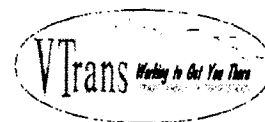
Should you have any questions, please contact the Office of Governmental Affairs (202)366-4573

# Western Corridor Rail Rehabilitation Project



**TIGER V Application**

**May 2013**



PETER SHUMLIN  
Governor



State of Vermont  
OFFICE OF THE GOVERNOR

May 28, 2013

The Honorable Ray H. LaHood, Secretary  
U.S. Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, D C 20590

Subject: Western Corridor Rail Rehabilitation Project TIGER V Grant Application

Dear Secretary LaHood,

I am pleased to write to you in support of the Western Corridor Rail Rehabilitation Project that is competing for Transportation Investments Generating Economic Recovery (TIGER V) Discretionary Grant funding.

The state-owned rail line, operated by Vermont Railway, provides vital rail freight services to communities along Vermont's western corridor. The Project will rehabilitate nine miles of track between Rutland and Leicester with continuously welded rail and accompanying tie and ballast replacement. The project will result in an upgraded class III track, rendering freight operations faster, safer, and more efficient. It also will help prepare the line for eventual passenger rail service to Burlington, Vermont's largest city.

This Project will significantly improve rail infrastructure in Vermont, and create much needed stimulus. In the short-term, the Project will create dozens of new jobs throughout the region. In the long-run, the improvements will spur regional economic development, and promote environmentally friendly transportation.

Knowing that shovel-ready projects are given priority, I believe this Project would be an ideal candidate.

I hope you share my enthusiasm for this application, and I would be happy to discuss its merits with you.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Shumlin", with a long horizontal flourish extending to the right.

Peter Shumlin  
Governor

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## I. PROJECT DESCRIPTION

### PROJECT SUMMARY

The Western Corridor Rail Rehabilitation (WCRR) Project will rehabilitate the Vermont Railway (VTR) Northern Subdivision from Rutland MP 56.27 to Leicester MP 76.99. Project components consist of replacing approximately 9 miles of old jointed rail with new continuously welded rail, surfacing, ballast, and ties (Figure 1). The Project will result in an upgraded Class III track, thereby increasing the efficiency and safety of freight operations. It will also get the State of Vermont closer to meeting Amtrak track requirements for intercity passenger rail to Burlington, the state's largest city and only urbanized area. The Project.

- Has strong long-term outcomes.
- Meets state and national mobility and freight goals.
- Can be completed in 24 months, and has strong support from the State of Vermont, Regional Planning Commissions, and federal elected officials.
- Is expected to result in 192 direct and indirect short-term jobs and 22 long-term jobs.
- Is both regionally and nationally significant, as it is an important transportation corridor that has significant interconnectivity in Vermont and the wider northeast region.
- Supports economic development efforts in Vermont.

The Vermont Agency of Transportation (VTrans) is requesting \$8,992,007 in TIGER V funding as part of an overall financing package for an \$18,502,007 project.

### PURPOSE

Vermont's rail lines are critical to the state's mobility and economic development. The State owns 305 miles of active rail lines (approximately half the state's track miles) and regularly appropriates over \$20 million annually to operate its rail program.

This Project is critical in implementing a number of state goals and policies, including:

- Leveraging transportation assets to spur and sustain economic growth
- Ensure cost-effective shipping options for Vermont businesses.
- Provide an integrated, multi-modal transportation system
- Reduce energy use and greenhouse gas emissions by increasing freight and passenger rail use.
- Serve as a critical component of the National Rail Plan and National Freight Network, currently under development by the Federal Railroad Administration and the Federal Highway Administration.

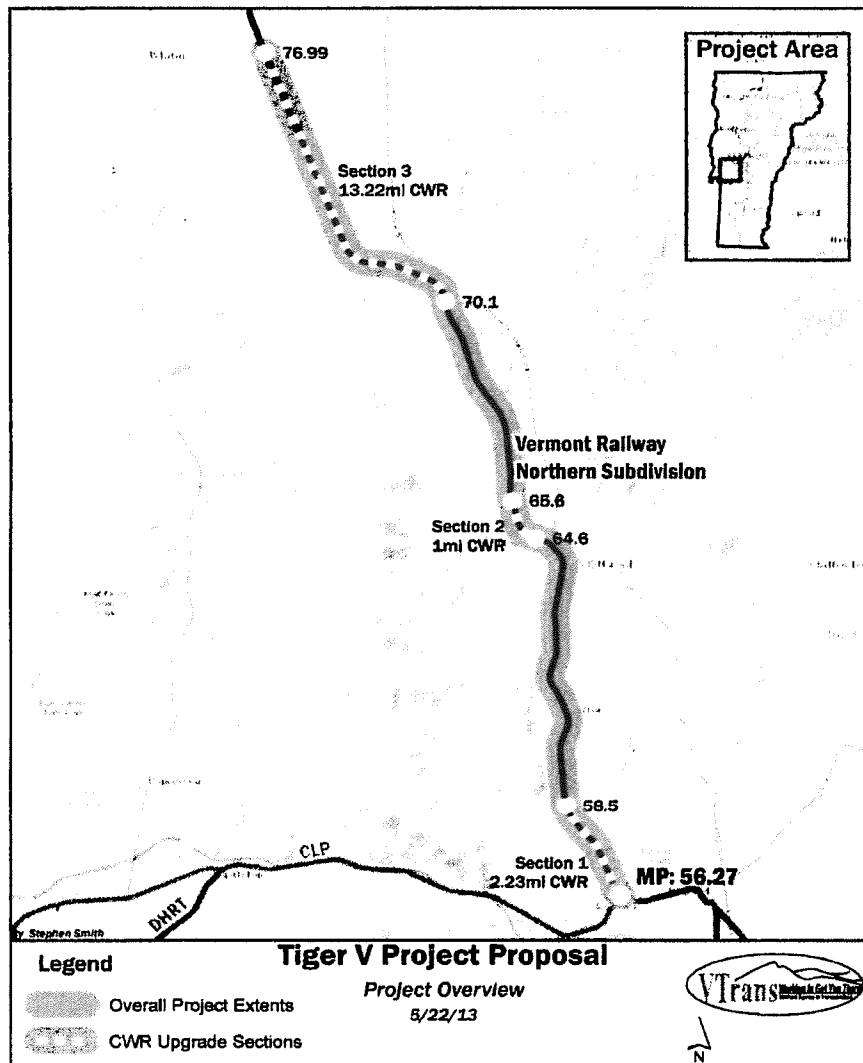


**PROJECT DESCRIPTION**

The Project aims to restore a State of Good Repair to the VTR Northern Subdivision from Rutland to Leicester, and consists of five major elements.

- 1) Replace 9 miles of old jointed rail with continuously-welded rail.
- 2) Surface and ballast 9 miles of track.
- 3) Install 10,120 cross-ties.
- 4) Install 12 mainline turnouts.
- 5) Upgrade 11 farm crossings.

**Figure 1: Project Location Map**

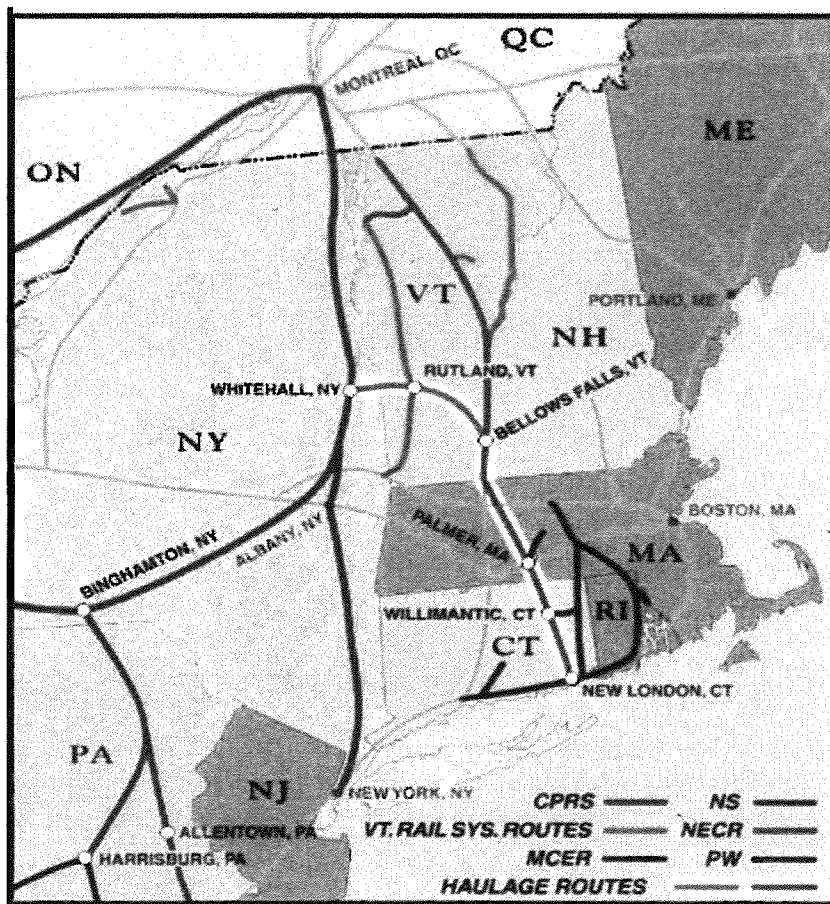


Portions of this corridor already have continuously-welded rail (Figure 1). The 9 miles proposed as part of this Project ensures that the entire Rutland-Leicester segment is upgraded to an FRA class 3 track (from from 25MPH to 40MPH freight and 30MPH to 59MPH passenger) This will allow a substantial increase in operating speeds and remove track-caused slow orders. More detailed project maps are provided in Appendix A

**PROJECT BENEFITS: FREIGHT RAIL**

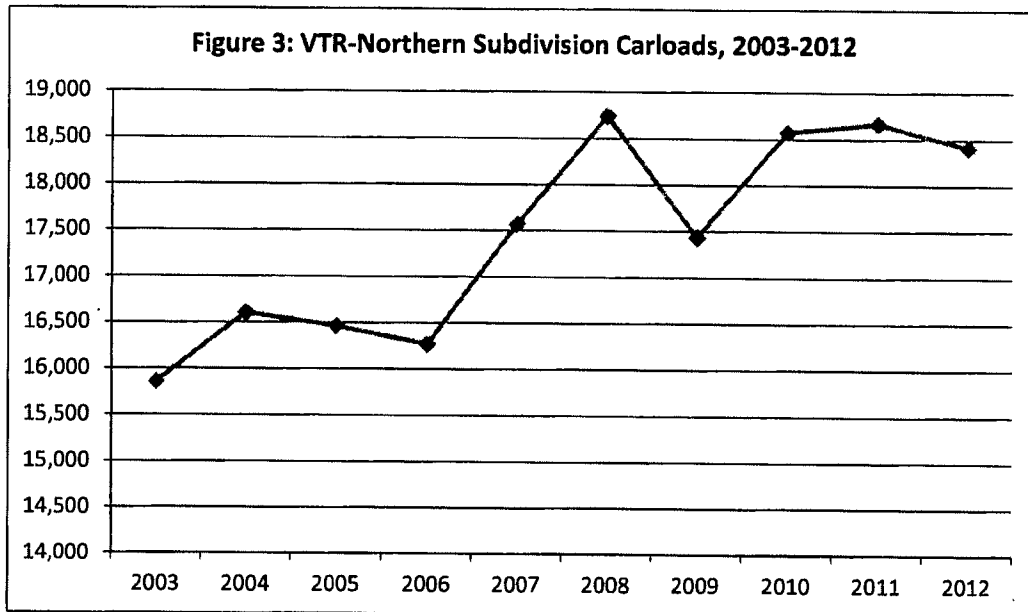
The VTR, operated by Vermont Rail System (VRS), is a vital short-line for Vermont and the northeastern United States. The line not only connects Vermont to outbound destinations, but also handles connecting traffic to various short-lines, regionals, and Class I railroads throughout New York, New Hampshire, Massachusetts and beyond (Figure 2).

Figure 2: VRS Gateways to Wider Northeastern Region



Source: Vermont Rail Systems - [http://www.vermontrailway.com/green\\_min\\_gateway.html](http://www.vermontrailway.com/green_min_gateway.html)

Since VRS began operating the line, volumes have risen significantly. The recession resulted in national freight movement volumes declining sharply, and railroads typically suffered declines in the 15%-30% range. VRS, however, managed to maintain steady freight volumes and even increase them during this period (Figure 3).



Source: Vermont Rail System

In 2012, VRS handled 18,407 carloads and 1,670,639 tons of freight along the VTR Rutland to Leicester segment, serving dozens of rail freight customers, including OMYA, the state's largest rail shipper. Primary commodities include feed grains, forest products, gasoline, heating oil, fertilizer, limestone, lumber, and salt. International trade accounted for 236,205 tons and consisted primarily of fuel oil, limestone, feed, and lumber. Approximately one-third of all rail cars carry hazardous materials such as propane, diesel, gasoline, and fuel oil.

The VTR serves the regional farming community by delivering significant carloads of agricultural products, such as feed and fertilizer. This helps retain the important farming businesses in Vermont. Several local farm businesses depend on efficient freight service along the VTR.

The outdated track conditions, however, threaten the viability of this route, which can have a detrimental impact on shippers and the state's economy. Dozens of track slow orders plague the line. As major Class I railroads expand guarantee delivery programs, connecting routes, such as the VTR, that are not able to accommodate reliable delivery times are quickly becoming exceptions for freight routing, and placed at a severe competitive disadvantage. Without adequate capital investments, the viability of freight

rail remains in doubt as the line becomes susceptible to traffic erosion and diversion to other shipping modes.

VTrans and VTR has expended millions in the past two decades on capital projects and maintenance to keep the VTR operable. The challenge to rail infrastructure is continued function beyond useful life due to the combination of infrastructure deterioration, and the growing competitive disadvantage which has resulted from federal policies to provide dedicated highway funding. As a result, the rail infrastructure has lost its capitalization and is now in a stage of deterioration, which will require additional investment to remain a viable transportation corridor



VTR tank train along the corridor

The Project is critical to ensure cost-efficient shipper access to markets, including substantial export markets. Via the Clarendon & Pittsford Railroad (CLP), VRS has access to all major northeastern Class I railroads in the Schenectady and Albany areas. Connecting to major international gateways ensures opportunities for Vermont and U.S. businesses, and quality jobs. VRS is also the only rail operator that can provide direct rail access along the western Vermont.

The Project will result in improved freight rail operating speeds and reliability, providing rail access to existing customers and potentially new customers that have a need for rapid deliveries.

The Project is a key step in preserving Vermont's rail network functionality in linking with major regional and national rail routes. This will result in a more sustainable and user-friendly transportation system for the greater northeast region. This Project will also result in an improved and safer rail route for the movement of various hazardous materials.

Providing a state of good repair for the VTR is one of the highest freight rail improvement priorities identified in Vermont's State Rail & Policy Plan and the Vermont Freight Plan – [http://rail.vermont.gov/about\\_us/reports\\_plans](http://rail.vermont.gov/about_us/reports_plans)

In addition to rail benefits, this Project also has substantial highway benefits. The parallel highway to the VTR is U.S 7, one of the most heavily traveled arterials in Vermont, including for truck freight. With traffic volumes exceeding 30,000 AADT in Rutland, congestion mitigation is a major benefit of this Project. Through its lifecycle, the Project is projected to result in 335,772 avoided truck trips, and 40,292,644 truck Vehicle Miles Travelled (VMT).

The Project will restore a state of good repair to VTR's rail facilities, contribute \$70,074,278 in regional benefits over a 30-year period, and has a 3.5 Benefit-Cost ratio.

### PROJECT BENEFITS: INTERCITY PASSENGER RAIL

Intercity Passenger Rail has been a crucial component of Vermont's transportation system. Vermont has long been recognized as a leader in state-supported intercity passenger rail services, supporting two Amtrak trains (the *Vermont* and *Ethan Allen Express*) since the 1990s with approximately \$4.5 in annual operating funding. Beyond the immediate benefit to business travelers and tourists coming to/traveling from Vermont, these trains provide connections from rural areas to major cities such as New York City, Philadelphia, and Washington, D.C.

Providing passenger rail service to Burlington (from its current end point in Rutland) is a top priority for Vermont. Improvements to the VTR line north of Rutland are a critical component of the this service as it would permit operating speeds to double from a currently posted 30 mph with temporary 10 mph speed restrictions to 59 mph, thereby rendering the service time-competitive with automobile travel

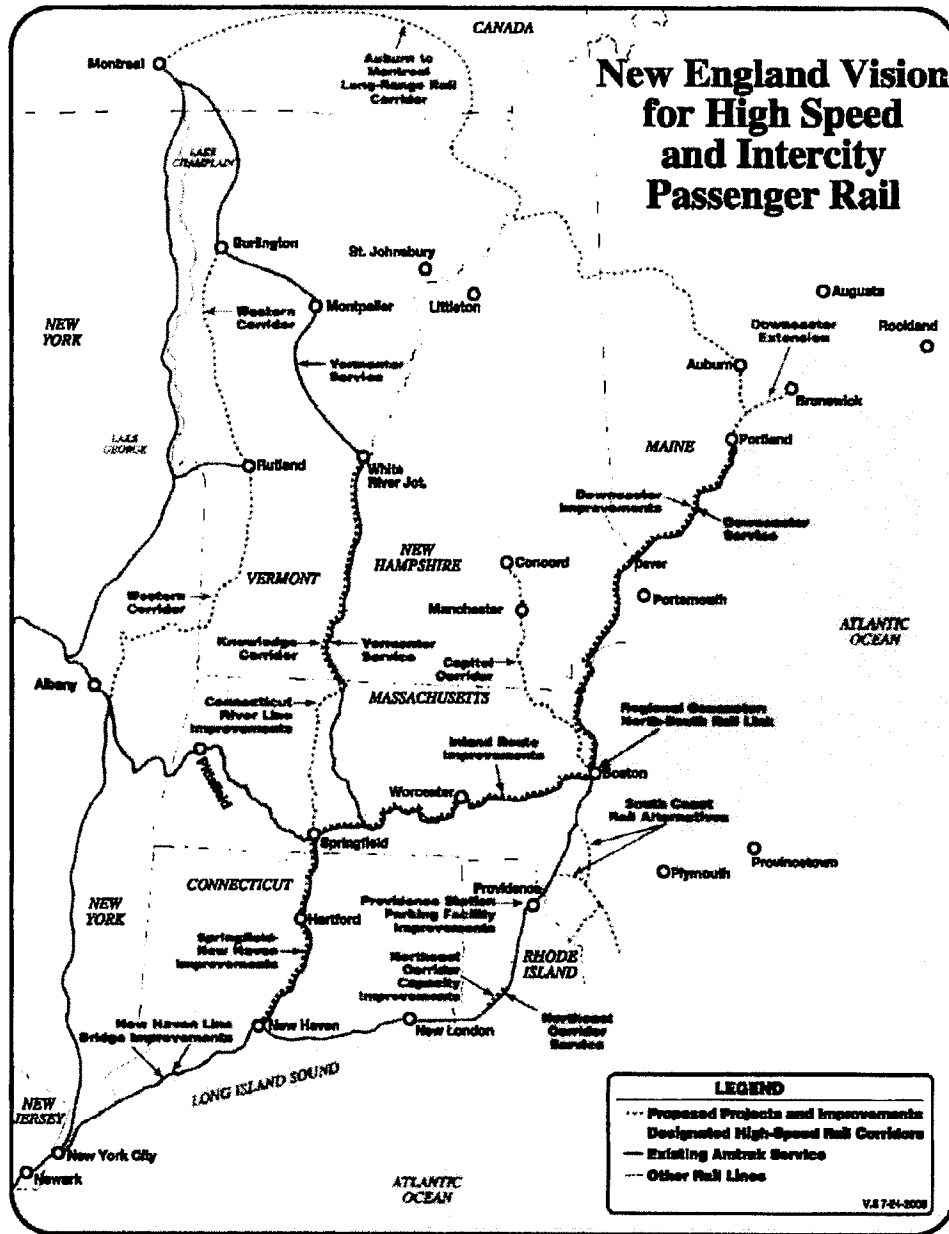


**Intercity passenger rail is a critical part of Vermont's transportation plan**

Amtrak supports this project, and like Vermont, views it as critical to the viability of intercity passenger rail service in the State. Section 209 of the Passenger Rail Investment and Improvement Act (2008) resulted in the elimination of Amtrak operating subsidies for state-supported services. This has placed tremendous financial pressure for states that support passenger rail. Amtrak estimates that ridership could increase by 50,000-60,000 trips if passenger rail service was provided to Burlington, representing a 70% increase in ridership levels.

Vermont's passenger rail services are also part of a regional network. The New England Vision for High-Speed and Intercity Passenger Rail was formed by the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, to develop a vision for passenger and freight rail (Figure 4). Recognizing the interdependency of our transportation systems, the New England states have come together with a commitment to support collective efforts.

Figure 4: New England Vision for High Speed and Intercity Passenger Rail Corridors



Source: [http://www.massdot.state.ma.us/portals/20/docs/NewEngland\\_HSR\\_Vision.pdf](http://www.massdot.state.ma.us/portals/20/docs/NewEngland_HSR_Vision.pdf)

Seasonal tourism trains also operate along the line. The VTR hosts the Polar Express for the Vermont Children’s Trust Foundation, a major fundraising activity

**II. PROJECT PARTIES**

- Vermont Agency of Transportation - Recipient and administrator of the TIGER V Grant.
- Vermont Rail System – The rail operator; providing in-kind services for flagging and track inspection activities.

**III. GRANT FUNDS AND SOURCES / USES OF PROJECT FUNDS**

VTrans proposes a funding package that includes a combination of TIGER funds, federal appropriations, state funds, and rail operator in-kind services.

VTrans is requesting \$8,992,007 in TIGER V funds, to be supplemented by \$9,510,000 in other funding sources, for a total project cost of \$18,502,007. In addition to \$6,079,450 in federal appropriations, the State will provide \$3,231,000 and the rail operator will contribute \$200,000 in-kind services for flagging and track inspection (Table 1). A line-item budget for TIGER-funded project components is included in Table 2.

VTrans’ programmed federal appropriations projects will be completed concurrently with TIGER project components.

Although projects in rural areas are eligible for up to 100% TIGER funding, the State has made a substantial financial contribution towards this Project. The Project cannot be completed without federal funding. The State and the rail operator have already invested substantial funding to keep the rail line operable. Since 2007, this has included approximately \$2.5 million in bridge and crossings projects, and over \$1,000,000 in maintenance.

**Table 1: Project Fund by Sources**

	TIGER V	Other Federal	State	Other	Total
TIGER V Rehabilitation Project	\$8,992,007		\$2,000,000	\$200,000	\$11,192,007
Bridge 219		\$4,000,000	\$1,000,000		\$5,000,000
Pittsford Crossing (22)		\$1,147,500	\$127,500		\$1,275,000
Pittsford crossing (21)		\$468,000	\$52,000		\$520,000
Pittsford Crossing (21)		\$463,500	\$51,500		\$515,000
<b>Total</b>	<b>\$8,992,007</b>	<b>\$6,079,450</b>	<b>\$3,231,000</b>	<b>\$200,000</b>	<b>\$18,502,007</b>

**WESTERN CORRIDOR RAIL REHABILITATION**

The Project provides independent utility Independent utility will be achieved by improved track conditions, increased operating speeds, reliability, and reduction of slow orders between the rail yards in Rutland and Leicester

**Table 2: TIGER Project Budget**

<b>VTR VERMONT TIGER GRANT SCOPE &amp; ESTIMATED COSTS</b>					
VTR Northern Subdivision from Rutland MP 56.27 to Leicester MP 76.99					
PROJECT COORDINATES					
VTR Northern Sub MP 56.27 Rutland	43 deg 36.32 min N	73 deg 00.81 min W			
VTR Northern Sub MP 76.99 Leicester	44 deg 51.88 min N	73 deg 9.26 min W			
DESCRIPTION OF WORK	MP From	MP To	QTY	UNIT COST	PROJECT COST
Remove and Install Wood Crossties (EA)	56.27	58.50	2,230.00	\$75.00	\$167,250
Furnish and Place Ballast Surface Course (T)	56.27	58.50	1,160.00	\$40.00	\$46,400
Raise, Align and Surface Track (TF)	56.27	58.50	11,774.00	\$4.00	\$47,096
Install 115 Lb CWR to replace 105lb 39' jointed rail (LF)	56.27	58.50	23,549.00	\$75.00	\$1,766,175
Remove and Install Wood Crossties (EA)	64.60	65.60	1,000.00	\$75.00	\$75,000
Furnish and Place Ballast Surface Course (T)	64.60	65.60	520.00	\$40.00	\$20,800
Raise, Align and Surface Track (TF)	64.60	65.60	5,280.00	\$4.00	\$21,120
Remove and Install Wood Crossties (EA)	70.10	76.99	6,890.00	\$75.00	\$516,750
Furnish and Place Ballast Surface Course (T)	70.10	76.99	3,582.00	\$40.00	\$143,280
Raise, Align and Surface Track (TF)	70.10	76.99	36,379.00	\$4.00	\$145,516
Install 115 Lb CWR to replace 100lb 105lb 39' jointed rail (L)	70.10	76.99	72,758.00	\$75.00	\$5,456,850
Upgrade Siding Track in Leicester (TF)	76.26	76.99	3,854.00	\$100.00	\$385,400
Install Plug Bonds at Crossing 851-328D, Union Street (Sets)	70.66		12.00	\$3,500.00	\$42,000
Install Plug Bonds at Crossing 851-298D, VT RT 3 (Sets)	56.62		12.00	\$3,500.00	\$42,000
Install Mainline Turnouts	56.27	76.99	12.00	\$75,000.00	\$900,000
Upgrade 11 Farm Crossings	56.27	76.99	11.00	\$5,000.00	\$55,000
<b>TOTAL CONSTRUCTION COST</b>					<b>\$9,858,631</b>
Admin (Lump Sum)					\$80,000
PE (Lump Sum)					\$200,000
Construction Engineering 6%					\$589,838
Contingency 5%					\$491,532
<b>TOTAL PROJECT COST</b>					<b>\$10,119,001</b>
FUNDING SOURCES					
GRANT REQUEST					\$8,992,007
VERMONT STATE MATCH					\$2,000,000
VRS MATCH IN KIND					\$200,000
<b>TOTAL FUNDING</b>					<b>\$11,192,007</b>



## IV. SELECTION CRITERIA

### PRIMARY SELECTION CRITERIA

#### A. LONG-TERM OUTCOMES

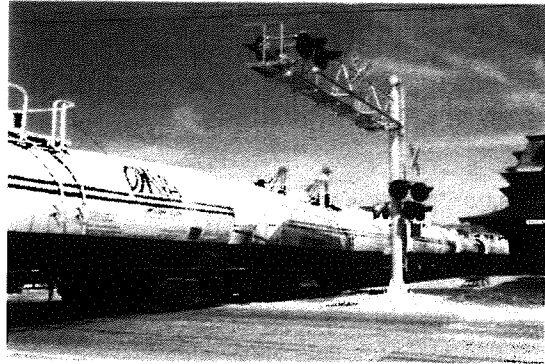
The following Long-Term Outcomes section is intended to provide a description of the long-term framework for the Project, within which near-term results are also described. Both long-term outcomes and near-term results are compared to a “no-build” scenario and without TIGER V Grant funding. The outcome under this scenario would be continued downgrade of infrastructure and associated traffic erosion, and failure to achieve acceptable Amtrak operating speeds for intercity passenger rail. The Project is focused on the provision of adequate infrastructure to enable the region to achieve the goal of increase of rail freight traffic, ensuring connections to the national rail system, and time-competitive intercity passenger rail, all crucial to the economic vitality of western Vermont.

#### 1. STATE OF GOOD REPAIR

Improvement of existing conditions will be accomplished with the rehabilitation of track infrastructure. Project improvements are consistent with local, regional and state efforts to maintain transportation facilities in a state of good repair, a major goal of Vermont’s State Rail & Policy Plan and Freight Plan -[http://rail.vermont.gov/about\\_us/reports\\_plans](http://rail.vermont.gov/about_us/reports_plans). The infrastructure proposed for improvement is in an unstable condition that, if left unimproved, threatens future transportation network efficiency, mobility of goods, and regional economic growth due to its poor condition. An important aim of this Project is to upgrade the railroad to improve connections to the national rail system, and attaining a state of good repair will create a platform for current demand and future economic growth.

Each element of this Project will significantly reduce the life-cycle costs of the operation and maintenance of the railways by extending their viability by as much as 20 percent. According to benefit-cost analysis conducted by Cambridge Systematics, project improvements will result in approximately \$333,960 in annual maintenance savings in Year 1 and \$7,506,525 through the project’s lifecycle.

Shifting freight from trucks to rail will also reduce the expense of highway wear and tear and the need to build and maintain roads. These benefits are estimated at \$4,794,825 through the project’s lifecycle.



**Vermont’s largest rail shipper will benefit from safer and faster shipments**

VRS has operated the line since 1964 and has a sustainable source of revenue available for long-term operations and maintenance of the project.

**2. ECONOMIC COMPETITIVENESS**

The Western Corridor contributes significantly to the economic competitiveness of the state by retaining strong businesses that benefit from rail shipping options.

The Project is located along five towns, all of which are designated as Economically Distressed Areas (EDAs) according to the definition contained in the Public Works and Economic Development Act (1965), by virtue of having per capita incomes less than 80% of the national average.

**Table 3: Economically Distressed Areas**

	Per Capita Income	% of National Average
National Average	\$27,915	--
Rutland City	\$17,075	61.2%
Proctor	\$18,214	65.2%
Pittsford	\$19,271	69%
Brandon	\$20,516	73.5%
Leicester	\$21,938	78.6%

Source: 2010 United States Census and the 2006-2010 American Community Survey 5-Year Estimates

The completion of the Project is essential to aiding Vermont’s, the northeast, and the nation’s competitiveness. Without the Project improvements, rail traffic is projected to decline significantly over the next 30 years and with it the jobs that benefit from businesses that are directly linked to rail. In addition, there will be no feasible way to meet Amtrak track class requirements to provide intercity passenger rail to Burlington.

Based on the ability to meet current demand and the goal of increasing rail traffic over the 30-year project benefit period, the Project is anticipated to create economic activity and jobs

in manufacturing, warehousing, and services sectors. Twenty-two long-term jobs are projected.



**Agricultural producers are particularly dependent on reliable rail service to reach markets**

The Project improvements will directly increase the efficiency and effectiveness of the transportation system by means of truck and auto trip diversions, interconnectivity via multi-modal connections with the regional and national rail network, and marine freight system. The Project will result in an immediate and enhanced transportation link that will generate a high-value of economic activity as compared to the no-build scenario.

The economic competitiveness benefits are estimated at \$49,035,387 over the project lifecycle.

### 3. LIVABILITY

The Project is part of the overall land planning process for regional development. The Project will provide interconnected rail freight services, help to revitalize rail-conducive industrial uses that complement the rural nature of the community. It will also

- **Provide more transportation choices** - Reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions and promote public health.
- **Enhance economic competitiveness** - Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers as well as expanded business access to markets.
- **Support existing communities** - Target federal funding toward existing communities – through such strategies as land recycling – to increase community revitalization, improve the efficiency of public works investments, and safeguard rural landscapes.
- **Coordinate policies and leverage investment.** -Align federal policies and funding to remove barriers to collaboration, leverage funding and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy

Shifting freight from trucks to rail reduces congestion on the highway system. In *Freight Facts and Figures Report (2010)*, the Federal Highway Administration (FHWA) projects that freight tonnage will increase from 18,581 million tons in 2007 to 27,104 million tons in 2040, an increase of 46%. Current roadway capacity in the region (particularly since there are no interstate highways in western Vermont) cannot handle those levels of truck freight without resulting in further congestion and worsening air quality

Highway user travel time savings benefits are estimated at \$2,926,267 over the project lifecycle.

### 4. SUSTAINABILITY

The Project will provide an enhanced level of connectivity and modal choice, which combined with new commercial development, can produce a significant net modal shift,

thereby reducing energy use, the nation's dependence on oil, and pollutants. The Project's mobility and accessibility improvements will result in a reduction of

- 2,288,232 gallons of fuel
- 11,521 metric tons of CO<sub>2</sub>s
- 4 metric tons of PM<sub>2.5</sub>

The Benefit-Cost Analysis conducted for this application found that the sustainability benefits are \$107,539 over the project's lifecycle.

### 5. SAFETY

The Project will contribute to reducing incidents of derailment. The VTR northern subdivision segment has experienced six track-caused mainline derailments since 2007, four of them within the project area (Table 4). Improvements to the track and sub-grade will result in reducing rail failures.

**Table 4: VTR Derailments within Project Area**

Date	M.P	Description
5/23/2007	60.3	Shoving cars into north end of Proctor Long, rail broken under car causing next car to derail
4/26/2010	76.26	Track issue, south switch in Leicester
8/20/2011	70.4	Surface defect caused lead car to derail
8/24/2012	65.05	Wide Gage

Source: Vermont Rail System

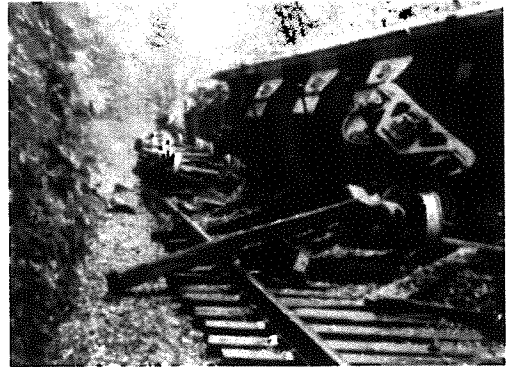
The corridor carries hazardous materials, which account for approximately one-third overall traffic level.

According to the Association of American Railroads, "Rail is the safest method of shipping hazardous materials. The risk of an accidental hazmat release is sixteen times greater for hazmat that is shipped over the roads compared to those shipped by rail"

Railroads are required to carry hazmat. Federal law says that railroads are "common carriers" and must transport hazmat for every customer. Railroads haul 1.7 million carloads of hazmat (including about 100,000 carloads of Toxic Inhalation Hazards (TIH)) each year with 99.996 percent of these carloads reaching their destination without any release caused by an accident.

The Project will contribute to reductions in derailments, crashes, injuries, and fatalities. Shifting freight from trucks to rail reduces the fatality rate on highways. According to a recent RAND Report, the social costs of accidents are nearly 3.5 times higher for truck transportation compared to rail.

Safety benefits encompass a range of factors, including the value avoided fatal crashes, injuries, and property damage, and the value of avoided derailments. These are estimated at \$7,703,763 over the project lifecycle.



**Derailments are always a safety concern**

## 6. PROJECT READINESS

### A. TECHNICAL FEASIBILITY

Cost-estimates for this Project were developed by VTrans' Rail project development section, and are based on design/cost factors of previous state and federal projects, including:

- FRA HSIPR Track 1 Project (completed), track, roadbed and bridge improvements, \$77 million
- TIGER IV Freight Improvements (underway), track, roadbed, crossings, and bridge improvements, \$10 million
- Western Corridor (completed), 2005-08, track, and bridge improvements, \$7.2 million
- Western Corridor (underway), track, roadbed and bridge improvements, \$23 million

### B. FINANCIAL FEASIBILITY

VTrans has committed to funding the majority of this project with non-TIGER funding (see section III)

VTrans has a long and successful history of administering, managing and constructing large, complex rail projects, in compliance with both Federal and State regulations and procedures. The Agency has a sound track record in working with operating railroads and labor unions.

Examples of recent projects include:

- FRA HSIPR Track 1 Project (completed), track, roadbed and bridge improvements, \$77 million

- TIGER IV Freight Improvements (underway), track, roadbed, crossings, and bridge improvements, \$10 million
- Western Corridor (completed), 2005-08, track, and bridge improvements, \$7.2 million
- Western Corridor (underway), track, roadbed and bridge improvements, \$23 million

VTrans' Track 1 HSIPR project for track, crossing and bridge improvements on the *Vermont* Amtrak route was the second project to begin construction during the initial round of HSIPR funding and was the first one completed, despite the damage created to the track and bridges by Tropical Storm Irene. The experience gained during the implementation of this project will be transferred to the WCRR Project.

VTrans' Rail Section consists of 15 staff members and is responsible for the full range of planning, program management, project management, and technical oversight activities for rail capital projects. The Rail Section currently manages dozens of individual projects and has numerous rail consulting firms on retainer, who undertake design and engineering work.

VTrans' Rail Section is supported by other agency units. The Agency's Finance & Administration Division includes Budget Operations, Financial Operations, Audit Section, Contract Administration Section, and Civil Rights & Labor Compliance Section, totaling 65 employees. VTrans' Program Development Division will support project implementation. The Construction Management Section supervises consultants and field inspectors (14 employees), Materials & Research Section ensures quality and conformance of materials used (15 employees located in the Materials Section only), and Permitting Sections (Right of Way, Utilities & Permits, Survey Sections and Environmental Services & Hydraulics Sections) ensure proper project permitting.

A Project Management Plan has been prepared for this Project, which outlines the management and implementation approach (See Appendix B).

## C PROJECT SCHEDULE

The Project will proceed to construction quickly. Design evaluations and drawings for this work are available and contract documents for this type of project work are standard procedure and available for advertisement. A project schedule detailing project flow by month is provided in Figure 5.

NEPA documentation has been initiated, and a preliminary Categorical Exclusion (CE) has been prepared and submitted with this application (see Appendix C). CE approvals are anticipated to be completed in the next 30 to 60 days. The Project is not expected to have significant environmental impacts.



#### D ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

VTrans' average annual budget exceeds \$500 million. The Agency has sufficient flexibility to shift funding between projects to accommodate unforeseen cost overruns, and can also shift funding between programs if necessary. Adding to this capability is active budget monitoring process whereby finance and budget staff meet regularly with program management staff (monthly at minimum) to monitor expected costs at both a project and overall program level of detail. This careful monitoring allows us to identify in advance when and where potential budgetary adjustments may become necessary, and plan for the changes in advance to avoid sudden and more disruptive funding shifts.

Vermont also recently enacted legislation that adds infrastructure assessments to sales of motor fuels – diesel and gasoline – that are dedicated exclusively to long-term transportation infrastructure investments. These assessments have the additional advantage of serving as a dedicated revenue source to pay debt service on revenue bonds for transportation investments if necessary. The potential for issuing bonds provides additional capacity, if needed, to accommodate unforeseen project and program cost overruns.

The primary non-federal sources for Vermont's transportation budget include transportation motor fuel infrastructure funds (mentioned above) and the transportation fund. Although transportation source revenues have experienced some decline recently, the state typically seeks regular increases in motor vehicle fees – a major component of the fund – on a three year cycle. Thus revenues are regularly increased to accommodate for inflation at a minimum. Moreover, to protect against annual revenue fluctuations, the state maintains a transportation fund stabilization reserve equal to five percent of the prior fiscal year level of transportation fund appropriations.

*Grantee risk:* State governments in general are tasked in these difficult economic times to do more with less. Vermont, and VTrans, is no exception. As such, there is a risk that VTrans will be unable to find adequate human resources to implement this project. The Agency mitigates this risk by actively evaluating business processes that can be streamlined, coordinated, or consolidated to minimize the impact of a reduced workforce. In addition, VTrans has multi-year consultant retainer contracts that can assist in managing workflow.

*Funding risk:* Vermont, like other states, faces the challenge of revenues not keeping pace with the demand to improve transportation infrastructure. This challenge poses a risk that sufficient funding will not be available to address growing needs. Vermont has taken several steps to mitigate this risk. Most recently, as indicated above, the new motor fuel assessments were adopted that provide dedicated additional revenues for transportation infrastructure, and also serve as a dedicated source for issuing revenue bonds if needed to assist in meeting transportation needs. VTrans takes a system-wide view of transportation problems, needs, and opportunities. The rationale is to ensure the



maximum benefit per dollar of investment, while at the same time achieving system-wide performance goals. That system-wide viewpoint is reflected in the annual budget-development process, which includes asset management, performance measures, and project prioritization as a means to maximize limited transportation dollars.

VTrans has been developing system-wide performance measures since 2001, which have become a crucial part of managing the assets and services entrusted to the Agency. Performance measures indicate the Agency's effectiveness in accomplishing its mission and highlight where shifts in funding are needed.

*Schedule risk.* There are several sources of schedule risk. Program timelines pose a risk that VTrans may not be able to deliver the project quickly enough to satisfy obligation and construction schedules. Permitting and other technical requirements add to schedule risk, as does the availability of contractors to bid on and complete the work. VTrans can mitigate this risk by making this grant, if awarded, a top priority and dedicating resources from various parts of the Agency to assist in meeting schedule concerns. An example of this is the Department of Motor Vehicles, which successfully utilized "tiger teams" to employ in areas where workloads backed up to assist in alleviating the problem quickly. Such an approach might prove useful in prioritizing a TIGER grant if need be. VTrans has extremely qualified and competent employees throughout the organization who can be called upon to assist if scheduling does in fact become an imminent risk to the project.

## **B. INNOVATION**

The Project will deploy the most contemporary infrastructure technology to enhance local, regional and national environmental benefits.

## **C. PARTNERSHIP**

VTrans and VRS have partnered to provide the necessary financing to implement this project.

## **D. RESULTS OF BENEFIT-COST ANALYSIS**

A benefit-cost analysis was performed using the guidelines of the Notice of Funding Availability for the TIGER V. Evaluations for the expected benefits with respect to each of the five long-term outcomes specified in the Notice of Funding are presented for the full completion of the project 'alternative case' against a baseline which has been defined as a 'base case'

The base case specifies that there will be no upgrades to the track along the VTR between Rutland and Leicester. To compute the final BCA score, benefits of the project are

compared to the costs of the whole project, including costs paid for by state and private partners other than the Federal government.

Net benefits are computed using the following methodological assumptions: improvements and upgrades proposed in the Project will allow a specific quantity of freight tonnage transported by rail instead of by truck, and there are inherent shipper/railroad savings generated by having a faster and safer track to operate on. The avoided truck/auto trips and tonnage will generate a reduction of the highway maintenance costs, fuel savings, safety savings and sustainability savings.

The analysis conservatively designates that the distance traveled by trucks/autos would be equivalent to the distance that would have been traveled by rail within the state boundaries of the Project. In reality, highway and rail do not follow exactly the same paths, and commodities that travel through to and from Vermont often travel much farther than the Project's state boundaries. Accordingly, the state line boundary designation in this evaluation necessarily understates the regional benefits beyond the project area.

The total BCA score is 3.5 as presented below

**Table 5: Project Benefits by Category**

<b>Benefit-Cost category</b>	<b>Total Benefit</b>
State of Good Repair	\$12,977,364
Economic Competitiveness	\$53,221,331
Livability	\$3,202,960
Sustainability	\$54,126
Safety	\$8,394,817
Total Benefits (non-discounted)	\$77,850,599
BCA Score	3.5

A detailed benefit-cost worksheet and report are included in Appendix D

## V. PLANNING, NEPA & OTHER ENVIRONMENTAL APPROVALS

### ENVIRONMENTAL APPROVALS

- The infrastructure improvements described within this application fall under the Categorical Exclusion provisions of 23 CFR Sec 771 117(d) that recognize that certain construction activities do not result in significant environmental impacts. Pursuant to 23 CFR Sec 771 117(d) Categorical Exclusions for the Projects are prepared for the process of being filed.
- An FRA Categorical Exclusion Worksheet has been prepared for this Project (see Appendix C), and this Project is viewed to be in a favorable phase with respect to environmental approvals and compliance with the NEPA of 1969 (42 U.S.C 4321).

- There is reasonable anticipation that NEPA requirements will be completed and final documentation received within the next 30 to 60 days.

#### **LEGISLATIVE APPROVALS**

While no specific legislative approval is required for this Project, letters of support have been received from state/federal elected officials and the Regional Planning Commissions (see Appendix E)

#### **STATE AND LOCAL PLANNING**

The Project is also identified as one of the priorities in the Vermont Rail System & Policy Plan and the Vermont Freight Plan ([http://rail.vermont.gov/about\\_us/reports\\_plans](http://rail.vermont.gov/about_us/reports_plans)), and is a priority route in both the Rutland Regional Planning Commission and the Addison County Regional Planning Commission transportation plans.

### **VI. FEDERAL WAGE RATE CERTIFICATION**

VTrans has in place all Federal Wage Rate Certifications to implement this Project (see Appendix F).

#### **JOB CREATION AND ECONOMIC STIMULUS**

The Project will have a job creation impact on the creation of 122 construction and related jobs in the short-term, and is essential to the long-term development of 22 jobs. A more detailed analysis of job creation is attached as Appendix D

#### **JOB CREATION FOR LOW-INCOME WORKERS**

Some of the jobs created from construction and longer-term impacts will benefit lower-skilled general laborers currently residing in economically disadvantaged areas. Approximately one-quarter jobs created from this Project are anticipated for low-income workers.

#### **OPPORTUNITIES FOR SMALL BUSINESSES, MINORITY-OWNED BUSINESSES, AND DISABLED VETERAN-OWNED BUSINESSES**

VTrans has an Office of Civil Rights and Labor Compliance that is responsible for ensuring compliance with all federal and state EEO/AA and labor requirements within the Agency and on all U.S DOT funded projects. The Agency has a number of programs designed to ensure participation in construction programs by socially and economically disadvantaged individuals.

The Disadvantaged Business Enterprise (DBE) Program in, accordance with 49 CFR Part 26, encourages and supports the participation of the companies owned and controlled by

socially and economically disadvantaged individuals in transportation contracts. The program provides a central business directory for transportation-related minority and women-owned businesses, statewide certification to eligible businesses, and technical assistance and training on business development and government contracting. Please refer to <http://www.aot.state.vt.us/CivilRights/DBE.htm> for more information.

#### USE OF COMMUNITY-BASED ORGANIZATIONS

VTrans has an On-the-Job Training (OJT) program that is designed to bring more socially disadvantaged individuals into construction activities. In addition, VTrans participates in youth outreach activities, including partnering with the University of Vermont, Upward Bound for the National Summer Transportation Institute, and the Vermont Youth Conservation Corps. VTrans also engages in significant outreach and recruitment activities, including partnering with community based organizations. Please refer to: <http://www.aot.state.vt.us/CivilRights/EDHC.htm> and <http://www.aot.state.vt.us/CivilRights/Youth.htm>

#### COMPLIANCE WITH CIVIL RIGHTS REQUIREMENTS

VTrans is compliant with all Federal Civil Rights requirements and in strict adherence with Federal Title VI guidelines and procedures. Please refer to: <http://www.aot.state.vt.us/CivilRights/labor.htm> and <http://www.aot.state.vt.us/CivilRights/EEO.htm>

VTrans has an office dedicated to enforcing all state and federal civil rights requirements. The VTrans Office of Civil Rights and Labor Compliance Section has responsibility for administration of all mandatory internal and external civil rights programs, including External EEO/Contractor Compliance, Disadvantaged Business Enterprise (DBE), On-the-Job Training (OJT), Davis-Bacon/Labor Compliance, Title VI, Internal EEO/AA, and ADA/Section 504. The following responsibilities are applicable to all U.S. DOT programs:

- Development and implementation of annual program plans and updates.
- Monitoring and data collection, analysis, and reporting (monthly, quarterly, semi-annually, or annually, as required).
- Training and technical assistance.
- Investigations, audits, site visits, and/or project/contract compliance reviews
- Enforcement.

Other requisite program responsibilities include outreach, public notice and facilitation of public participation and access, networking, assessment and evaluation.

All federal and state civil rights and labor compliance requirements are the subject of VTrans policies and contract specifications that are incorporated in all bidding and contract documents. Contractors are also placed on notice of their compliance responsibilities through the following vehicles:

- Comprehensive pre-construction letter and participation of VTrans Civil Rights staff at the pre-construction conference.
- Dissemination of Contractor Compliance manuals, checklists, and reference guides on the VTrans Civil Rights webpage, at periodic training, and during site visits and compliance reviews.

*Data Collection and Reporting:* The following documents and data are collected and reviewed to ensure compliance with all applicable regulations, statutes, and Executive Orders:

- Weekly certified payrolls, Monthly payments from primes to subs, Monthly utilization reports, Semi-annual DBE participation data, Semi-annual labor compliance data, Annual DBE certification eligibility, Annual bidders list survey, Annual EEO survey

*Monitoring and Enforcement:* VTrans Civil Rights staff routinely employs the following methods for monitoring and enforcing contractor and labor compliance on federally funded projects.

- Site visits and inspections
- Investigations
- Compliance reviews

*Sanctions for Non-Compliance:* VTrans contractors found in violation of civil rights and labor compliance requirements face progressive penalties and sanctions, including reduction, suspension, or revocation of pre-qualification status; withholding of periodic payments; debarment

## VII. LIST OF APPENDICES

- **Appendix A:** Project Location Maps
- **Appendix B:** Project Management Plan
- **Appendix C:** NEPA Documentation
- **Appendix D:** BCA Analyses and Job Creation Data
- **Appendix E:** Letters of Support
- **Appendix F:** Federal Wage Rate Certifications
- **Appendix G:** Track Charts
- **Appendix H:** Detailed Project Cost Breakdown and Schedule