

**U.S. Department of Transportation**

**National Infrastructure Investments Grant Program**

**“TIGER II”**

**GRANT APPLICATION**

**Project Name:** Sun Belt Regional Short Line Rail Project

**Project Type:** Rural Freight Rail Transportation Project

**Funds Requested:** \$17,265,920

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**Table of Contents**

I. Project Description ..... 1  
    a. Project Schedule.....1  
    c. Transportation Challenges Addressed.....1  
    d. Freight Volumes.....2  
II. Project Parties..... 2  
III. Grant Funds and Sources/Uses of Funds .....3  
    a. Technical Feasibility .....4  
    b. Legislative Approvals .....4  
    c. Statewide Transportation Improvement Program .....5  
    d. Financial Feasibility.....5  
IV. Selection Criteria .....5  
    a. Long-Term Outcomes .....5  
        i. State of Good Repair.....5  
        ii. Economic Competitiveness .....6  
        iii. Livability .....9  
        iv. Sustainability .....12  
        v. Safety .....14  
    b. Job Creation and Economic Stimulus .....17  
    c. Innovation .....22  
    d. Partnership .....23  
V. Project Readiness and NEPA.....24  
VI. Federal Wage Rate Certification ..... 25  
VII. Summary ..... 25  
Federal Wage Rate Certification Statement..... Attached

**Supporting Documentation can be found at: [www.txdot.gov/business/rail/tiger.htm](http://www.txdot.gov/business/rail/tiger.htm)**



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## **I. Project Description**

The project is designed to improve the transportation infrastructure of an often neglected part of the Sun Belt region (specifically a rural portion of northeastern Texas, southwestern Arkansas, and southeastern Oklahoma). The project consists of infrastructure improvements to the Dallas, Garland & Northeastern Railroad (DGNO), the Texas Northeastern Railroad (TNER), and the Kiamichi Railroad (KRR) (collectively referred to as “the short lines”); including upgrades to strategic side tracks and industrial leads to accommodate current and future traffic growth and allow for the use of heavier industry standard 286,000 pound railcars (“286K” railcars). The project eliminates rail joints, replaces crossties, adds new ballast, resurfaces over 30 miles of track, and replaces bridge components. Additional rail improvements will include upgrading rail in curves in key segments to 115-pound rail, the industry minimum needed to safely handle 286K railcars. The project also upgrades key interchanges that connect the short lines to Class I railroads. Additionally, this project will upgrade 286 passive public rural highway-rail grade crossings to meet current Federal standards and provide additional safety protections for highway users.

### *a. Project Schedule*

Each of the individual projects will be started within 60 days of an agreement being signed between the U.S. Department of Transportation and the respective state Departments of Transportation. A detailed project timeline is shown in the Gantt chart attached as Appendix H. All work will be performed within the existing right-of-way; therefore, no permits are needed. The 60 days will be spent procuring materials and hiring labor in the specific regions as outlined above. Each project will be completed 12 months after the appropriate project agreements are executed.

### *b. Transportation Challenges Addressed*

Railroads are extremely fuel efficient, which reduces the nation’s dependence on foreign oil and shrinks its carbon footprint. A freight train, on average, can carry one ton of cargo 480 miles on a single gallon of fuel. According to 2009 fuel receipts, the short line railroads in this application consumed 1,435,229 gallons of diesel fuel. According to the American Association of Railroads (AAR), railroads are four times more fuel-efficient than trucks.<sup>1</sup> Therefore, trucks would haul the same freight using 5,740,916 gallons of fuel—a difference of 4,305,687 gallons each year. Taking into account only the incremental growth that would occur over the next 20 years, the project provides a fuel savings of \$31.98 million using a seven percent discount value over 20 years.<sup>2</sup> Lower fuel costs will enable shippers to pass

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<sup>1</sup> See ASSOCIATION OF AMERICAN RAILROADS, ENERGY AND ENVIRONMENT, <http://www.aar.org/incongress/energyandenvironment/energyandenvironment.aspx> (last visited Aug. 9, 2010).

<sup>2</sup> On a net present value basis, the short lines would consume an additional \$10.66 million in fuel while the trucks needed to move the same amount of freight would require \$42.64 million in fuel.



cost savings directly on to consumers and allows rail to continue to be a competitive mode of transportation. This analysis is conservative because it assumes there is no growth in fuel use between 2011 and 2030 even though the number of carloads will increase significantly if this project is completed. Over the next 20 years, these benefits translate into saving a minimum of 10.30 million gallons of fuel by moving additional freight by rail instead of truck.

### *c. Freight Volumes*

Upon completion of the project, the short line railroads will be able to move an additional 620,625 tons of freight using 6,260 railcars in the first year of improved operations (see Appendix I). This equates to an estimated 24,825 additional trucks being kept off the national highway system in the first year, with additional impacts from subsequent increases in traffic.<sup>3</sup> The American Association of Railroads has calculated that one truck takes the space of approximately four automobiles on the roadway system. This means the number of trucks removed from the highway system is equivalent to an additional 158,880 cars being taken off the road. The immediate benefit is an increase in livability standards for Sun Belt region residents due to a reduction in congestion and improved air quality. States also benefit by saving and reinvesting highway maintenance funds. Each ton of freight moved by rail instead of truck reduces greenhouse gases by seventy-five percent.<sup>4</sup> This fact is particularly important since these short line railroads operate in a region of Texas identified by the Environmental Protection Agency (EPA) as being in non-attainment for National Ambient Air Quality Standards (NAAQS). The short lines currently operating in northeast Texas, a state suffering from non-attainment for 8-Hour Ozone,<sup>5</sup> are helping the region combat pollution. The other two states that are part of the project also will benefit from goods being moved by a more sustainable transportation mode.

## **II. Project Parties**

The railroads in this application are all owned by RailAmerica, Incorporated.

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<sup>3</sup> 4,965 railcars equal 19,860 trucks using a diversion factor of 1:4. However, since trucks would have to travel round-trip, the actual number of trucks removed from the highway is 39,720.

<sup>4</sup> See ASSOCIATION OF AMERICAN RAILROADS, FREIGHT RAILROADS HELP REDUCE GREENHOUSE GAS EMISSIONS, <http://www.aar.org/incongress/energyandenvironment/%7E/media/aar/backgroundpapers/freightrailroadsofferasmarteffectivewaytoreducegreenhousegasemissions.ashx> (last visited Aug. 9, 2010).

<sup>5</sup> According to the U.S. Environmental Protection Agency, the Agency “uses six ‘criteria pollutants’ as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. . . . When an area does not meet the air quality standard for one of the criteria pollutants, it may be subject to the formal rule-making process which designates it as non-attainment.” U.S. ENVIRONMENTAL PROTECTION AGENCY, GREEN BOOK CRITERIA POLLUTANTS, [http://www.epa.gov/airquality/aqportal/pollutant\\_types.htm](http://www.epa.gov/airquality/aqportal/pollutant_types.htm) (last visited Aug. 9, 2010). Also see Appendix E.



The DGNO is a complex terminal operation that serves over 200 customers. It began operations as a short line railroad in 1992 and is made up of a mixture of spur tracks and industrial leads. It operates 337 miles of rail line in Dallas and the surrounding area to the north, using a combination of owned and leased lines as well as trackage rights over other rail carriers. The DGNO interchanges with the Union Pacific Railroad (UP) at Dallas and Denison, Texas; with the Kansas City Southern Railroad (KCS) at Dallas and Greenville, Texas; and with the Burlington Northern Santa Fe (BNSF) at Irving and Sherman, Texas.

The TNER operates west from Bonham, Texas through Bells to Sherman, Texas, and east from New Boston, Texas to Texarkana, Texas. The interchange points for the TNER are at Texarkana and Denison, Texas with the UP and at Sherman and Texarkana, Texas with BNSF.

The KRR operates 261 miles of track based out of Hugo, Oklahoma, and provides rail service for rural counties and important commercial customers in Arkansas, Oklahoma, and Texas. The KRR interchanges with the BNSF in Madill, Oklahoma; the UP in Durant, Oklahoma; the Texas, Oklahoma and Eastern Railroad in Valliant, Oklahoma; KCS in Ashdown, Arkansas; and the UP in Hope, Arkansas.

The maps showing the project locations are available for review on the web site at [www.txdot.gov/business/rail/tiger.htm](http://www.txdot.gov/business/rail/tiger.htm).

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

The \$21,582,400 Sun Belt short line project would be funded by a \$17,265,920 TIGER II grant and \$4,316,480 in matching funds from RailAmerica, Inc., the parent company of the short line railroads. The TIGER II grant would fund 80% of project costs and RailAmerica's matching funds would provide 20% of the project costs. The project includes rail rehabilitation and improvements on three short line railroads (DGNO, KRR, TNER) in three states, making this a project with multi-state support and impacts. The total project estimate is shown below in Table 1. Detailed estimates for each short line are included in the supporting documentation available on the web.



Item	Unit	Quantity	Unit Cost	Total
Remove Joints, Crop Rail, Weld Joints	Each	350	\$501.27	\$175,444.50
Ballast - KRR	Ton	48,000	\$15.00	\$720,000.00
Ballast - DGNO	Ton	24,300	\$24.00	\$583,200.00
Surface Track DGNO/KRR	Mile	161	\$7,126.89	\$1,147,429.29
Turnout Replacement – McKinney/Sherman	Each	18	\$32,655.67	\$587,802.06
Turnout Replacement – Sherman/Garland	Each	4	\$85,148.25	\$340,593.00
Tie Removal & Replacement - McKinney	Each	25,700	\$69.64	\$1,789,748.00
Tie Removal & Replacement - Sherman	Each	91,800	\$55.68	\$5,111,424.00
Tie Removal & Replacement - KRR	Each	33,800	\$61.38	\$ 2,074,644.00
Rail Relay DGNO-Dennison	Track Foot	17,800	\$20.43	\$363,654.00
Extend & Rehabilitate Arkinda Siding	Linear Foot	4,500	\$204.48	\$920,160.00
Relay Acro Lead Track	Linear Foot	24,288	\$51.73	\$1,256,418.24
Relay Curve Rail	Linear Foot	65,164	\$62.70	\$4,085,782.80
Reconstruct 57 Grade Crossings	Track Foot	1,240	\$444.56	\$551,254.40
Bridge Repairs & Upgrades	Lot	24	-	\$896,500.08
Upgrade Road Crossing Signage	Each	286	\$1,500.00	\$429,000.00
Subtotal				\$ 21,033,054.37
Engineering & Contingencies		1		\$ 549,345.63
<b>Total</b>				<b>\$21,582,400.00</b>

**Table 1: Project Quantities and Estimate**

*a. Technical Feasibility*

The short lines have worked with each of the three states and have discussed the proposed project in depth. The project is limited to work on existing railroad right-of-way, and the scope of work proposed is typical railroad rehabilitation or improvement work. There are multiple contractors throughout the U.S. who are capable of completing the construction as planned on time and within budget.

*b. Legislative Approvals*

No additional legislative approvals or authority is necessary for project implementation in Arkansas, Oklahoma, or Texas. Letters of support for the project have been received from numerous businesses and other entities and are available for review on the web site at



[www.txdot.gov/business/rail/tiger.htm](http://www.txdot.gov/business/rail/tiger.htm). The following legislators and elected officials have provided letters of support:

Senator John Cornyn, Texas  
Senator Blanche Lincoln  
Congressman Ralph Hall, Texas  
State Senator Jerry Ellis  
State Representative Larry Phillips

Senator Kay Bailey Hutchison, Texas  
Senator James Inhofe, Oklahoma  
State Representative Dennis Bailey  
State Senator Barbara Horn  
State Representative R.C. Pruett

*c. Statewide Transportation Improvement Program*

The projects are in predominantly rural areas which do not require the approval of a Metropolitan Planning Organization. The projects can be added to the Statewide Transportation Improvement Program during quarterly updates or through an out-of-cycle revision if funding is approved.

*d. Financial Feasibility*

The short lines have developed a detailed cost estimate for the project and have vetted it with an engineering firm and a railroad construction company to ensure that the cost estimates are realistic. In addition, the short lines have committed funds from existing cash flows to maintain the infrastructure improvements for the life of the materials installed. The states of Arkansas, Oklahoma, and Texas continue to support investments in rail infrastructure and other intermodal projects, which will ensure that the short lines continue to have better connections to other modes of transportation over time. The matching funds committed by the short lines are identified and can be expended immediately.

**IV. Selection Criteria**

*a. Long-Term Outcomes*

*i. State of Good Repair*

The short lines were purchased from prior operators just prior to abandonment or after of decades of underinvestment and low traffic volumes. The short line railroads are able to preserve and protect rail service for customers and communities that would otherwise have lost access to the national rail network, primarily because of their lower overhead and streamlined cost structures. However, the struggle to overcome years of deferred maintenance by the prior owners is continuous. Limited revenues from operations result in infrastructure reinvestment that often amount to maintaining the status quo, not making the improvements necessary to increase capacity, traffic, or divert additional truck freight to rail. Many short lines have infrastructure and bridge restrictions that will not permit the movement of 286,000 (“286K”) pound cars, the modern standard for railcar capacity. As a result, shippers are competitively disadvantaged and continue to move their goods by truck



instead of rail. Public-private partnerships created through the administration of federal and state grants are one way to address the infrastructure needs of short line railroads.

This project will provide upgraded infrastructure in the northern Texas, southwestern Arkansas, and southeastern Oklahoma region. The upgrades are expected to last approximately 30 years, though the NPV calculations are done using 20 years as per the TIGER II guidance. The DGNO, KRR, and TNER have committed to keep the infrastructure in a state of good repair during the life of the asset and the ongoing maintenance is included in the overall benefit-cost analysis for this project.

Today, there are 155 slow orders on the short line railroads. This means that there are 155 specific areas along the track where trains must run slower than usual due to current subpar track conditions. This project will improve freight mobility by eliminating 28-35 (eighteen to twenty-five percent) of the slow orders, increasing train velocity, improving safety, and reducing at-grade road crossing wait times for vehicles.

The collection of infrastructure projects being proposed would reduce the lifecycle costs, allowing for funds to be focused on maintaining track conditions instead of temporarily fixing the infrastructure for short-term benefits. The short lines would spend \$4.00 million annually to keep the infrastructure in its current condition with incremental improvements being made over time. However, this upfront capital investment would reduce annual maintenance expenses to \$2.94 million. On a NPV basis, the upfront investment yields an \$10.4 million benefit (\$42.38 million in maintenance costs averted and \$30.39 million in maintenance costs needed to keep the project in a state of good repair).

#### *ii. Economic Competitiveness*

To assess the viability of the Sun Belt Short Line Regional Rail Road Project (the project) for a TIGER II Discretionary Grant, a cost-benefit analysis on the rehabilitation project was completed. The cost-benefit analysis assesses the benefits to society of the project to improve the rail line relative to the costs of the project. For the assessment, the benefits of the project from the rail line improvements are measured relative to a “base” case of the maintenance of the rail line under existing operational conditions. The benefits that have been assessed from the cost benefit analysis result from the improvement in the relative attractiveness of the rehabilitated railway as compared to shipping by truck. As such, under the project improvements, more freight is shipped by rail as freight is diverted from highway transport.

Several public benefits (and dis-benefits) associated with shipping by rail have been identified and quantified over a twenty year period. These effects are measured for both the base case and alternate cases and the net effect (or benefits) monetized. These benefits include:



**Benefit #1 - The reduction in transportation or shipping costs to shippers:** this benefit captures the cost savings experienced by shippers as they ship by rail instead of truck. A given amount of cargo is typically more expensive to ship by truck than by rail. The increased rail capacity stemming from the project allows cargo to be diverted from truck to rail freight, and thus shipped at a lower cost.

**Benefit #2 - The change in inventory costs for shippers:** this benefit category captures the change in shipping time and resulting inventory cost that arises from the diversion of freight from truck to rail. While cheaper, the rail trip may take longer for some shipments.

**Benefit #3 - The highway congestion relief benefits:** as freight is diverted from truck to rail transit because of the project, truck travel will decrease in the region, *ceteris paribus*. A truck takes up more physical space on the road than a car and typically operates at lower speeds depending on grades, tonnage, operating characteristics, and speed limits. Reducing the amount of truck travel will lead to a decrease in highway congestion and an increase in time savings for the regional population.

**Benefit #4 - The highway maintenance cost savings:** heavy trucks put a great deal of physical wear and tear on roads, and the roads must be maintained at the taxpayer's expense. Diverting freight from truck to rail and reducing the amount of truck travel will lead to less required highway maintenance and associated costs. This cost reduction benefit is quantified by taking the difference between the highway maintenance costs avoided if freight is diverted from truck to rail and the expected incremental railroad maintenance costs associated with the increased rail activity.

**Benefit #5 - Safety benefits:** highway accidents should diminish as freight is diverted from trucks to railcars, rail accidents should increase in turn. Rail and truck travel have their own respective accident frequency and associated cost levels, and this benefit category captures the change in safety costs.

**Benefit #6 - Emission savings:** this benefit category captures the emissions quantities that result from the diversion of truck freight to rail.

Other benefits may also accrue to the project improvements such as noise benefits but have not been quantified due to limitations of data.

The benefits streams and project related costs are monetized over a twenty year period the Net Present Value of these streams derived using real discount rates of 7 percent (and 3 percent as an alternative). Table 2 provides a summary of the benefits in total and by benefit category. Total benefits are estimated to be \$30.2 Million with the main project benefits



being transportation cost savings for shippers, safety benefits and highway maintenance cost savings.

Benefit Category	Benefit #	PV Over 20 Years	
		7%	3%
Transportation cost saving from diverting trucks to	1	\$11,686,616	\$16,901,262
Increased inventory cost from diverting trucks to	2	-\$363,687	-\$526,054
Congestion cost saving from diverting trucks to rail	3	\$1,649,569	\$2,386,017
Maintenance cost saving from diverting trucks to	4	\$5,416,787	\$7,833,363
Safety saving from diverting trucks to rail	5	\$10,518,168	\$15,216,544
Emission saving from diverting trucks to rail	6	\$1,269,789	\$1,915,586
<b>Total</b>		<b>\$30,177,242</b>	<b>\$43,726,717</b>

**Table 2: Summary of Project Benefits**

The benefits exceed the total value of project cost and results in a Net Present Value for the project of \$10.4M. The total project benefits are greater than the project costs with a benefit cost ratio is 1.53. The project economic indicators are more much favorable using the 3 percent discount rate as shown in Table 3 with an NPV of \$20.9 M and a Benefit Cost ratio in excess of 2.

Economic Indicators	7%	3%
<b>Total Costs</b>	\$19,728,552	\$20,879,207
<b>Total Benefits</b>	\$30,177,242	\$43,726,717
<b>NPV</b>	\$10,448,690	\$22,847,510
<b>ROI</b>	53%	109%
<b>B/C</b>	1.53	2.09

**Table 3: Summary of Project Economic Indicators**

In addition, for the cost benefit analysis quantification, the \$21.7 million total project cost has been spread equally between 2011 and 2012. Under the 7% discount rate, the project yields a benefit to cost ratio of 1.5 to 1 and a 53% return on investment (ROI).

Cost Categories	Current \$
Funds Requested	\$17,378,720
Total Cost	\$21,723,400
Year 2011 Cost	\$10,911,700
Year 2012 Cost	\$10,911,700

**Table 4: Summary of Project Costs**



The logic and the assumptions behind these benefit calculations are available in the Cost Benefit Analysis at the web site.

While the benefit cost analysis results are quite positive, it is recognized that these estimates are point estimates and do not reflect the statistical uncertainty underlying the assumptions. To test the strength of the benefit cost analysis results, sensitivity analysis is conducted on some of the key assumptions driving the monetization of public benefits. For each of these assumptions, the percent change in the input value required to yield an NPV of zero as opposed to the base estimate of \$10.4 M is estimated. As indicated in Table 5, these input assumptions would have to change drastically to yield a break even NPV. For example, the estimate of carloads diverted to rail would have to be reduced by 35 percent for the NPV to be zero. Similarly, transportation cost savings from rail would have to decrease by 87 percent for a break even NPV.

Variable	Base Value	Value Required for NPV = 0	% Change Required
Percentage reduction in diverted carloads	0%	35%	-35%
Transportation cost savings from rail relative to truck	15%	2%	-87%
Trucks per rail Car	4.00	2.4	-40%

**Table 5: Sensitivity Analysis of Key Model Variables**

### *iii. Livability*

Increasing railroad capacity is a highly effective way to enhance the livability of communities. Each railcar is equivalent to removing approximately four trucks off the highway system. When you account for a roundtrip made by the truck, it is equivalent to removing eight trucks off the highway system. And for certain commodities, such as coal, aggregate, and sand, five one-way trucks are eliminated from the highway. This application assumes all railcars are equivalent to four trucks and that each truck would make a roundtrip. Today, the short lines eliminate the need for nearly 732,856 one-way trucks that would otherwise be on the road. This reduction in truck traffic has a significant impact on congestion in the rural Sun Belt region.

To provide a specific examples, limestone is crucial to the success of commercial and residential construction projects that will occur in and around Collin County—one of the fastest growing counties in the United States. The City of McKinney, Texas (near Dallas), was the nation’s fastest growing city between 2000 and 2007, with a population that doubled according to the U.S. Census Bureau. This growth has created a corresponding increase in traffic congestion in the greater Dallas area. Rail use is an effective way to mitigate highway

congestion and provide a cost effective means reducing congestion. For example, if rail were not available at one of the aggregate terminals served by this project, 39,800 annual truck trips of heavy limestone would have traveled over Texas highways from their Oklahoma origination. Another 39,800 empty return trips would also have been made over the highway system.

In 2009, Ash Grove Cement (AGC) moved 5,164 railcars on the Kiamichi (41,312 truckload equivalents). AGC has indicated that rail movements will increase by 70 percent if 286K upgrades are made. This translates into an additional 28,918 trucks being taken off the regional highway system. On another route, SGC has informed the short lines that it could move an additional 2,000 carloads if the rail line were to have 286K infrastructure and that the average length of its rail hauls would increase from 48 to 76 miles. This would mean an additional 16,000 trucks would be removed from the highway system. Martin Marietta is also be interested in moving over 1,500 carloads of traffic annually from Hugo, Oklahoma to Paris, Texas if 286K upgrades are made. It is a short distance of 28 miles, but it would remove another 12,000 trucks from the local highway system.

Records show that 8,185 carloads of hazardous material ("HAZMAT") were transported on the short lines in 2008. According to the U.S. Department of Transportation, "rail transportation of hazardous materials in the United States is recognized to be the safest method of moving large quantities of chemicals over long distances."<sup>6</sup> Since rail is 16 times safer than trucks, and approximately 99.997 percent of all rail-shipped HAZMAT is delivered safely, it is in the public interest to keep HAZMAT on the rail lines.<sup>7</sup> The short lines plan to continue to capture additional HAZMAT (such as anhydrous ammonia, carbon dioxide, chlorine, phosphorous trichloride, polyethylene, and sodium hydroxide) which will make the rural road system safer. The benefit of keeping HAZMAT off the road system has not been quantified. However, the benefit of having HAZMAT on railroads traveling through rural areas of the country as opposed to the highway system also provides a significant homeland security benefit.

Looking only at the incremental growth that would occur if this project were completed, additional capacity for 4 automobiles would be created annually from diverting truck traffic to rail. The benefit of not having to build additional capacity to accommodate these automobiles is unknown and therefore is not quantified in this application. However, according to The American Road & Transportation Builders Association, the cost to construct a new 2-lane undivided road in rural areas is at least \$2 million per mile.<sup>8</sup>

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<sup>6</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION, HAZARDOUS MATERIALS TRANSPORTATION, <http://www.fra.dot.gov/us/content/137> (last visited Aug. 9, 2010).

<sup>7</sup> Bud Shuster, *The Railroads' Burden*, Pittsburgh Tribune-Review, Feb. 2, 2007, [http://www.pittsburghlive.com/x/pittsburghtrib/news/specialreports/s\\_491336.html](http://www.pittsburghlive.com/x/pittsburghtrib/news/specialreports/s_491336.html) (last visited Aug. 9, 2010).

<sup>8</sup> See AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION, FAQs, <http://www.artba.org/about/faqs-transportation--general-public/faqs/#20> (last visited Aug. 9, 2010).



Therefore, the cost to build highway capacity for these additional vehicles would be significant.

The elimination of truck noise from the road system will also be a benefit to residents in the region. Using a FHWA study that has quantified the cost of noise for every truck-mile at \$0.11, an \$11.82 million NPV benefit exists by ensuring goods move by rail.<sup>9</sup> However, this cost is mitigated by the introduction of longer and/or more frequent trains. A recent measure of the cost per additional rail mile could not be located. One European study calculated that the impact of increased rail noise in rural areas was Euro 0.05 per locomotive-km which today would equal approximately \$0.041 per locomotive-mile.<sup>10</sup> This cost is probably low given recent currency fluctuations; however, the minimum cost of additional rail noise has, at minimum, a NPV of \$921,094.

Highway congestion in the United States costs \$87 billion in wasted travel time (4.2 billion total hours or nearly a full week for every traveler) and results in 2.8 billion gallons of wasted fuel per year. Using conservative numbers, it is estimated that if the project is completed, 1.67 million trucks will be removed from the highway system over the next 20 years. By project year four, these short lines will be able to transport approximately 2.22 million tons of additional cargo by rail. This means that over the next twenty years, 417 million tons of additional cargo could be taken off the highway system. This equates to 2.9 billion truck ton-miles being shifted to rail. According to the 1997 Federal Highway Administration Cost Allocation Study, the congestion savings per truck mile eliminated from the road system is \$0.0278. Therefore, the congestion savings for this project has a NPV of \$1.65 million over 20 years using a seven percent discount rate.<sup>11</sup>

There will be some additional impacts to livability given the increase in train traffic that would flow through the communities. The most significant impact would be increased grade crossing wait times. However, since traffic counts for many of the rural and private crossings are not easily obtainable and would have put a financial burden on the applicant, it is recognized as a cost that has not been quantified.

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<sup>9</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 14.

<sup>10</sup> TRANSPORTATION COST AND BENEFIT ANALYSIS II – NOISE COSTS, VICTORIA TRANSPORT POLICY INSTITUTE, [http://docs.google.com/viewer?a=v&q=cache:9KqrXE4Bpw0J:www.vtpi.org/tca/tca0511.pdf+http://www.vtpi.org/tca/tca0511.pdf&hl=en&gl=us&pid=bl&srcid=ADGEESicZiRsbS8AC-vj2jks5d1Mawvmnbmmg7s\\_DJQ51PIMY92vbQOZCzg00eC\\_V7hQxLlMRYviEgA4T8aolgCYqE0gaI0lkiStfvG6IqallPDhSta\\_OiyD07bRFFWUQN5bFpUJzV6&sig=AHIEtbQay2wySwUxkNsghd9vzPPh\\_2hhLQ](http://docs.google.com/viewer?a=v&q=cache:9KqrXE4Bpw0J:www.vtpi.org/tca/tca0511.pdf+http://www.vtpi.org/tca/tca0511.pdf&hl=en&gl=us&pid=bl&srcid=ADGEESicZiRsbS8AC-vj2jks5d1Mawvmnbmmg7s_DJQ51PIMY92vbQOZCzg00eC_V7hQxLlMRYviEgA4T8aolgCYqE0gaI0lkiStfvG6IqallPDhSta_OiyD07bRFFWUQN5bFpUJzV6&sig=AHIEtbQay2wySwUxkNsghd9vzPPh_2hhLQ) (last visited Aug. 9, 2010).

<sup>11</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 14.



*iv. Sustainability*

The project has significant environmental benefits resulting from moving freight by rail as opposed to by truck. Railroads are approximately four times more fuel-efficient than trucks and are able to move one ton of freight 480 miles on one gallon of fuel. A single truck requires the same highway capacity as almost four automobiles. Additionally, the EPA estimates that for every ton-mile, a typical truck emits roughly three times more nitrogen oxides and particulates than a locomotive.

Based on a Transportation Research Board presentation using EPA Fleet Average Projections for 2010, trucks will produce approximately .63g/ton-mile of NO<sub>x</sub> and locomotives approximately .31g/ton-mile. Currently, federal government studies value the cost of NO<sub>x</sub> reduction to be approximately \$5,590 a ton per year. Using incremental growth that would result from the improved rail infrastructure, over a 20 year period, the reduction in NO<sub>x</sub> emissions could be valued up to \$2.25 million using a seven percent discount value.

The Sun Belt short line railroads travel through the following three counties that are currently in non-attainment for the pollutant listed below:

<u>State</u>	<u>County</u>	<u>Pollutant</u>
Texas	Collin	8 hour Ozone
Texas	Dallas	8 hour Ozone
Texas	Rockwall	8 hour Ozone

The DGNO has worked with the Texas Commission on Environmental Quality to procure five ultra-low emitting Generator Set (“genset”) diesel locomotives to help reduce emissions in the greater Dallas area. The DGNO is committed to reducing its carbon footprint through these new technologies and has budgeted for an additional five genset locomotives to be procured by October 2011. Rehabilitating the rail lines would enable more freight to be moved more efficiently by these genset diesels.



A DGNO ultra-low emitting genset diesel locomotive

Pollutants of Concern - Most freight transportation is powered by diesel engines, which are major sources of emissions of nitrogen oxides (NO<sub>x</sub>), Sulfur Dioxide, and particulate matter (PM). NO<sub>x</sub> reacts with volatile organic compounds (VOC) to form ground-level ozone, commonly known as smog. Ground-level ozone can trigger a variety of health problems, including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like asthma, pneumonia, and bronchitis. Many scientific studies have linked breathing PM to a series of significant health problems including aggravated asthma, difficult breathing, chronic bronchitis, myocardial infarction (heart attacks) and premature death. Diesel exhaust is of specific concern because it is likely to be carcinogenic to humans by inhalation and may additionally cause non-cancer respiratory effects.<sup>12</sup>

Freight truck transportation is a major source of greenhouse gas (GHG) emissions, which contributes to global climate change. By far the most important greenhouse gas to monitor is carbon dioxide (CO<sub>2</sub>).<sup>13</sup> In 2003, truck freight accounted for more than three-quarters (77 percent) of freight-related GHG emissions, while rail freight accounted for only 8.7 percent, the balance being from marine and air transportation modes.<sup>14</sup> Several Class I Railroads have CO<sub>2</sub> Emissions Calculators included in their websites for rail versus truck comparisons. For the same freight shipment data above, using CSX Carbon Calculator<sup>15</sup> and a cost of \$33.00 per carbon ton as stated in the Federal Register Notice for TIGER I, the reduction in CO<sub>2</sub> emissions is valued at approximately \$4.27 million over the next 20 years using a seven percent discount value.

Emissions of Sulfur Dioxide and volatile organic compounds also will be reduced through this project. The benefit of reducing these greenhouse gases has not been quantified, but clearly exists.

Fuel Savings - It is important to provide some context to the benefits the short line railroads in this application provide already. In 2009, the short lines burned 1,435,229 gallons of fuel. If all of the freight on the targeted Sun Belt railroads were diverted to trucks, 5,740,916 gallons of fuel would be required—a difference of 4,305,687 gallons each year. This provides a transportation cost savings of \$12.61 million (using an average price of \$2.928/gallon for diesel fuel as of August 2, 2010).<sup>16</sup> Looking at only the incremental

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<sup>12</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, CHAPTER 2: NATIONAL FREIGHT TRANSPORTATION TRENDS AND EMISSIONS, <http://www.fhwa.dot.gov/environment/freightaq/chapter2.htm> (last visited Aug. 9, 2010).

<sup>13</sup> See *id.*

<sup>14</sup> See U.S. DEP'T OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 23.

<sup>15</sup> CSX, TOOLS, [http://www.csx.com/?fuseaction=customers.emissions\\_carboncalculator](http://www.csx.com/?fuseaction=customers.emissions_carboncalculator) (last visited Aug. 9, 2010).

<sup>16</sup> U.S. ENERGY INFORMATION ADMINISTRATION, GASOLINE AND DIESEL FUEL UPDATE, <http://www.eia.doe.gov/oog/info/gdu/gasdiesel.asp> (last visited Aug. 9, 2010).



growth resulting from truck-to-rail diversions, and using Department of Energy estimates for the cost of diesel fuel each year for the next 20 years, the fuel savings is valued up to \$31.98 million using a seven percent discount value (\$10.66 million in fuel needed to move the cargo by rail versus \$42.64 million in fuel needed to move the cargo by truck).

A key goal of the Obama Administration is to reduce America's dependence on foreign oil, which will serve the purpose of increasing the country's energy security, while at the same time reducing the carbon footprint caused by transportation modes. The improvement of air quality in these regions is a direct result of this goal and the "green" nature of rail is a perfect complement to existing policies that address non-attainment regions. The investment to rehabilitate the short lines will directly affect the PM<sub>2.5</sub>, GHG, and Ozone levels in the rural regions in which the railroads operate. The proposed project is one small step towards energy independence and a cleaner environment.

*v. Safety*

A recent 2008 Federal Motor Carrier Safety Administration (FMCSA) study stated that the number of large trucks involved in fatal crashes per 100 million vehicle miles traveled was 1.79.<sup>17</sup> Using an average that one railcar eliminates four trucks from the highway system and that a truck would travel to and from the destination (i.e. make a roundtrip), 117,729,397 truck-miles are eliminated from the highway system over 20 years if this project is completed. Using FMCSA data, the NPV for lives saved would be \$10.5 million. The same FMCSA study stated that in 2008 the number of large trucks involved in crashes that resulted in injuries per 100 million vehicle miles traveled was 29.1. To be conservative, this application assumes that all the injuries would be minor (i.e. Maximum Abbreviated Injury Scale Level 1). The NPV for the value of preventing injuries is \$375,156.<sup>18</sup> This is a conservative number since accidents involving large trucks would result in some injuries that were more than minor. The economic impact of these crashes is \$10,562 per accident, which also assumes that all the crashes are classified as a MAIS Level 1 accident.<sup>19</sup> The benefit of eliminating these crash impacts has a NPV of \$330,199 over a 20 year period.

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<sup>17</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION, 2008 LARGE TRUCK CRASH OVERVIEW, <http://www.fmcsa.dot.gov/facts-research/LTCO2008/2008LargeTruckCrashOverview.aspx> (last visited Aug. 9, 2010).

<sup>18</sup> The fraction of the Value of a Statistical Life used for a MAIS Level 1 accident is .0020. Memorandum from Tyler Duval, Assistant Secretary for Transportation Policy & D.J. Gribbin, General Counsel to Secretarial Officers/Modal Adm'rs (Aug. 2, 2005) <http://ostpxweb.dot.gov/policy/reports/080205.htm>.

<sup>19</sup> See U.S. DEP'T. OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, THE ECONOMIC IMPACT OF MOTOR VEHICLE CRASHES 2000, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.131.9418&rep=rep1&type=pdf> (last visited Aug. 9, 2010).



The DGNO/TNER, and KRR railroads have 286 passive public rural highway-rail grade crossings. Eighty-eight grade crossing accidents have occurred since January 1, 2000. By law, motorists are supposed to interpret a grade crossing signs as a “yield” signal. Over the past two decades, the number of incidents at public highway-rail grade crossings has decreased by approximately 60 percent while the number of incidents at private crossings has decreased by approximately 26 percent. The Federal Railroad Administration continues to focus research funding on developing methods to continue to reduce the number of grade-crossing accidents. Research has indicated that driver comprehension of highway-rail grade crossing signs is poor. Even though signs are clearly visible, the passive nature means drivers do not receive any additional information when approaching or crossing the tracks. As a result, avoidable accidents still occur.

These short lines have embraced the U.S. Department of Transportation’s recent Rural Safety Initiative and understand the importance of improving safety in areas of the country that have suffered from reduced funding during these challenging budget times.<sup>20</sup> The safety benefits of installing additional warning signs to 286 crossings is difficult to quantify, but given that many rail-car accidents result in fatalities, lives could be saved by this safety project. In 2008, 92 accidents took place at passive crossings nationwide, resulting in six fatalities and 17 injuries according to the most updated FRA data.<sup>21</sup> According to the U.S. Department of Transportation, *rural roads carry less than half of America’s traffic yet they account for over half of the nation’s vehicular deaths.*<sup>22</sup> One way this project will help address this growing trend is to provide more commonly interpreted “yield” or “stop” signs in addition to the standard “railroad crossing” sign as directed by state Departments of Transportation.

This project will add and/or update all passive rural highway-rail grade crossings to the current Federal standard pictured below. This will provide an immediate safety benefit in many rural areas throughout northeastern Texas, southeastern Oklahoma, and southwestern Arkansas. The estimated cost for these safety improvements at all 286 passive public rural highway-rail grade crossings is \$429,000 (\$1,500 per crossing).

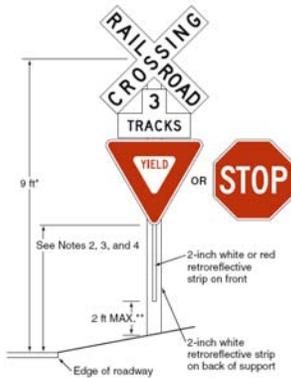
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<sup>20</sup> See U.S. DEP’T. OF TRANSPORTATION, RURAL SAFETY INITIATIVE, <http://www.dot.gov/affairs/ruralsafety/ruralsafetyinitiativeplan.htm> (last visited Aug. 9, 2010).

<sup>21</sup> Cite

<sup>22</sup> See U.S. DEP’T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, PUBLIC ROADS, <http://www.fhwa.dot.gov/publications/publicroads/08july/alongroad.cfm> (last visited Aug. 9, 2010).





The short lines' infrastructure is in poor condition which directly affects safety. Marginal track and bridge conditions exist over the entire project area. Speeds are low and derailments are frequent. Although rail is one of the safest modes of transportation, there have been 80 derailments on the KRR since January 1, 2007. There is a constant focus on reducing the number of incidents, but reductions are difficult when operating on poor infrastructure. The rehabilitation projects proposed in this application will assist in ensuring that the track condition on the short line properties is improved to reduce the possibility of derailments.

There are 104 slow orders currently in effect on the KRR line. The DGNO/TNER has an additional 51 slow orders on its lines. Projected increases in business will only continue to cause velocity and capacity issues. These inherited conditions persist in spite of the fact that the KRR alone is investing 20 percent of its annual freight revenue back into the property. Since January 1, 2004, the KRR has invested over \$16.5 million in capital improvements. This equates to an average of \$11,500 per track mile per year on the KRR (compared with about \$8,000 per mile per year that RailAmerica invests on its other properties).

On the KRR, all 90-lb bolted rail in curves will be replaced with 112-lb or 115-lb continuously welded rail (CWR). CWR will also be added in two switching intensive tangent sections and new rail anchors will be placed on all remaining 90-lb bolted rail sections over a 50-mile segment. On the DGNO, upgrades will be made to the rail in high degree curves at Bells (formerly one leg of a WYE track, now the mainline). These specific track improvements will greatly increase the safety of the short line railroads.

As mentioned previously, short line railroads have suffered from a lack of investment in infrastructure for decades. Rail ties and the track structures have deteriorated creating a maintenance backlog that has been difficult to address with low cash flows. By addressing the underlying track structure, trains will operate over dependable infrastructure.

Bridges and at-grade crossings have their own unique safety requirements. Bridges vary in design (such as concrete, steel or wood structures) and type (such as open deck, ballast deck, thru truss, thru girder, and draw bridges). The structural integrity of bridges is important not only for the safety of railroad employees, but also for the general public. While some

bridges span water, many also span streets and highways. The ability of a bridge to safely support its rail loads requires regular upgrades in addition to routine maintenance.

Grade-crossings require high maintenance due to drainage problems and vehicular traffic, including heavy loaded trucks. The collection of water under crossties and the roadbed causes a pumping action of the crossing resulting in the possibility of derailments and vehicular accidents. Additionally, water draining from ditch lines adjacent to the tracks, local streets, and adjacent highways creates critical safety issues for railroad employees and the public.

A negative impact to safety will be the introduction of more railcar-miles due to this project. Over 20 years, an additional 35.02 million railcar-miles will be introduced to the region. The chance of grade-crossing accidents increases as additional and/or longer trains run on the short lines. The cost of this impact is unknown, but the increased chance of accidents that could result in injuries or fatalities is acknowledged.

*b. Job Creation and Economic Stimulus*

The impact of the project construction expenditures on the economy of the United States was estimated using two different approaches: (i) using IMPLAN economic impact software using 2007 United States data; and (ii) based on the employment impact multiplier recommended by the Council of Economic Advisors (CEA), 1 job per \$92,000 of government expenditures, or 10.8 jobs per \$1 million of government expenditures. To be conservative, we have summarized the lower of the two estimates of job growth below – that recommended by the CEA.

The cumulative impact of the project amounts to 234.67 job-years, including 150.1 direct and indirect job-years and 84.5 induced job-years. During the construction period, the project will thus generate on average 117.3 jobs each year that would last the entire year (Table 6).

<b>Effect Type</b>	<b>Total Job-Years</b>	<b>Average Number of Jobs per Year*</b>
Direct and Indirect	150.1	75.1
Induced	84.5	42.2
<b>Total</b>	<b>234.6</b>	<b>117.3</b>

**Table 6: Employment Impact of Project Expenditures Based on CEA Employment Multiplier, Number of Jobs-Years Created, Total, and Annual Average**

NOTE: (\*) Number of jobs lasting the entire year during the construction period

There are approximately 133 customers that are currently served by these short lines and each is anticipated to be able to increase its production output, creating additional long-term job opportunities. 85 of these companies are considered small businesses. The Sun Belt states in this proposal—Arkansas, Oklahoma, and Texas—will aggressively recruit new distribution centers and production facilities along the rail lines by marketing reliable connections to the national rail network, intermodal terminals, seaports, and airport cargo facilities. In short, the project allows small and middle-sized companies—the companies that will fuel the economy’s rebound—to expand their employment base by accessing new markets quickly.

The short lines provide a great economic advantage to companies that need to move their goods in a cost-efficient manner. Railroads are more reliable than trucks on long distance routes and companies have set up distribution centers along rail corridors to lower inventory costs. Improving the rail infrastructure will allow the short lines to enhance their ability to attract and handle additional traffic. As a consequence, rail transportation will become more attractive to shippers because of improved velocity and more reliable service. Since the principal commodities moved by the short lines are bulk commodities, where rail has a clear economic advantage, improved rail infrastructure and service would divert current truck traffic. The following snapshots of the railroads provide examples of how companies have been able to increase their competitiveness through the use of rail and are illustrative of the future growth that will result from this project being funded.

#### *Dallas, Garland & Northeastern Railroad (DGNO)*

The DGNO provides a flexible seven-day per week service plan. Some customers receive rail service multiple times a day. Major commodities handled include aggregates, scrap metal, lumber, paper, wheat, corn syrup, military equipment, frozen foods, plastic resins and chemicals. The DGNO also serves a number of industrial parks that have prime rail-served property available for future industry to locate, grow or expand in the region.

The DGNO is strategically located just northeast of Dallas, Texas. The rail line is used primarily to deliver limestone from Stringtown, Oklahoma, to an aggregate receiving terminal in Melissa, Texas (owned by Lattimore Materials). In 2009 the Melissa terminal received 9,951 carloads in 75-car unit trains. This facility currently has about 20 employees, but volume is expected to grow in the near future. Upgrading this line segment to accommodate 286K railcars is imperative to accommodate future growth and provide opportunities for new jobs. An over-the-road freight movement would be approximately 100 miles long. This is important because, as mentioned above, the benefits in this application are conservative in that it assumes the average railcar only travels on the DGNO/TNER for 37 miles and therefore the diverted truck movement is only 37 miles instead of the more likely 100 miles.

In addition to the Lattimore aggregate terminal at Melissa, Texas, Encore Wire operates a copper production and distribution facility in McKinney, Texas. This facility receives over



350 annual rail carloads (2,800 truckload equivalents<sup>23</sup>) of copper products that would otherwise move by truck. Other notable customers on the line include Manner Plastics, Foxworth Galbraith Lumber and Stock Building supply. These customers combine to generate another 200 carloads (approximately 1,600 truckloads) of business. These customers have stated that they will increase their business and expand their employee base if the rail infrastructure can accommodate 286K railcars.

The line from Sherman, Texas, to Royse City, Texas, is used primarily to deliver limestone to an aggregate receiving terminal in Royse City opened in 2007 by Lattimore Materials. The Royse City terminal receives approximately 4,000 cars annually in 75-car unit trains from Stringtown, Oklahoma. An over-the-road freight movement would be approximately 125 miles long. The facility has approximately 35 employees and is poised for strategic expansion as the economy recovers. The limestone exists, is scheduled to be mined, and it will need to be delivered in an efficient manner. Rail would provide greater economic benefits than trucks. In addition, the rural region will see benefits in the form of lower transportation costs. This will allow the aggregate mines to market its goods to a wider region of the country since shipping aggregate by truck significantly limits a company's market penetration. In addition, rail movements of aggregate will increase safety, reduce emissions, and reduce congestion.

In addition to the terminal in Royse City, Texas, Fritz Industries in Greenville, Texas, receives, processes, and distributes fracturing sand used by the oil and gas industry. Recent infrastructure improvements allowed this shipper to receive between 600 and 1,000 carloads (4,800-8,000 truckloads eliminated from the highway system) per year. Fritz Industries will benefit from the contemplated 286K railcar improvements as well. Other customers on the line, such as Graham Packaging and SPR Packaging, jointly rely on the railroad to move an additional 200 carloads (equivalent to 1,600 truckloads) annually.

#### *Texas Northeastern Railroad (TNER)*

The TNER effectively acts as a market extension to the UP and the BNSF for local customers. The TNER serves The Red River Army Depot at Defense, Texas, located just west of Texarkana, Texas. Major commodities handled on the TNER include coal, military equipment, wheat, and polyethylene. Rail has significant pricing advantages over trucks when moving these bulk commodities.

#### *Kiamichi Railroad (KRR)*

The KRR's largest customer, Western Farmers Electric Cooperative (WFEC), provides electricity to approximately three-fourths of the homes and businesses (geographically) in the state of Oklahoma, including Altus Air Force Base. Located in Ft. Towson, Oklahoma, WFEC received 16,337 coal cars (the equivalent of approximately 130,696 truck trips) over

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<sup>23</sup> 350 railcars equals 1,400 trucks. The trucks would move in both directions so 2,800 trucks are eliminated from the highway system.



the Kiamichi in 2009. This 82-mile move from Madill, Oklahoma to Ft. Towson, Oklahoma is the only portion of the KRR that has 286K rail infrastructure. The ability to accommodate future growth demands that the entire route east into Arkansas be upgraded to 286K standards. This will provide customers cost-effective access to markets in the east.

Ash Grove Cement recently completed a \$400 million expansion at their Foreman, Arkansas, facility which will increase its annual production capacity by 70 percent (from 1.0 million to 1.7 million tons). This facility serves terminals in Arkansas, Louisiana, and Texas and must compete with other large producers who are already able to take advantage of 286K rates, equipment, and infrastructure. The ability to provide additional rail capacity to Ash Grove Cement will ensure committed growth does not move by truck.

Daisy Farms is currently constructing a dairy facility that will become operational in 2012. This facility will house 10,000 dairy cows that will be producing milk for the production of Daisy Brand® sour cream and cottage cheese. In order to competitively haul grain and feed to Daisy, as well as to other feed and grain dealers like Tyson Foods and Pilgrim's Pride, the Kiamichi must have 286K infrastructure. Dairy Farms has stated it could move up to 520 carloads each year instead of relying solely on trucks if this project were completed. Therefore, this customer could eliminate 4,160 future truckloads from the highway system if these improvements are made.

Campbell Soup, Domtar Paper, International Paper, Kimberly Clark, Sara Lee and Weyerhaeuser are other nationally known companies served by the Kiamichi Railroad. Each one will benefit from the project improvements included in this application. KRR's 33 online customers collectively employ more than 3,000 full-time employees and have a total payroll approaching \$300 million. Meetings with these and other existing customers have confirmed that these infrastructure improvements will create the economic incentive for them to divert additional truck traffic to rail.

There are approximately 133 businesses served by all three short line railroads. As the maps in Appendix C illustrate, the short lines connect to Class I railroads giving these companies and their products access to domestic and international markets through seaports and airports. As mentioned earlier, 85 of these companies are small businesses so access to cost-efficient transportation is a key to their future success. The rehabilitation of these short lines will allow for the diversion of truck traffic to rail by providing time competitive service. Additionally, as evidenced by the support letters from existing shippers, businesses utilizing these short lines will be able to capitalize on significant growth opportunities immediately.

The counties that this project traverses have a combined population of 3,621,806. All of these citizens and the businesses for which they work will benefit from the short lines providing opportunities for additional market penetration. By lowering transportation costs for shippers, U.S. goods will be more competitive in the marketplace and less expensive for consumers.



Enhancing the workforce base in the rural parts of the Sun Belt region is vital to regional economic competitiveness. The RailAmerica recruitment and training program will target this population sector to provide gainful employment within the region. For those with existing employment, the rail construction and maintenance jobs will provide greater wages and therefore be a net benefit for the region.

The elimination of slow orders on the short lines will increase the velocity of service, allowing goods to reach markets more quickly. As our economy has become a just-in-time supply chain model, the increase in velocity will be important for companies who must keep their inventory costs low to stay competitive through this economic downturn.

Each of these projects will create significant, high wage jobs in Economically Distressed Areas. In total, 351,000 work-hours are required to complete the infrastructure improvements. The short lines are committed to doing their part to stimulate the economy; therefore, the short lines will strongly encourage contractors to hire unemployed persons from the regions in which the short line operates. The short lines will also work with local government agencies and community based organizations to identify, recruit, and train workers. There will not be enough rail labor in the region to complete this project; therefore, an added benefit will be the training of workers with a new skill set. At the end of this project, employees who worked on this project will be more marketable due to their additional skills. In addition, each new employee will be certified in railroad safety practices, as required by the Federal Railroad Administration.

All machine operators who will be in charge of a rail gang and all foremen will have to complete additional FRA certifications. The test involves issues such as track standards, how to coordinate with dispatchers, and rules on when one can occupy track. In addition, car inspectors, track and signal maintainers, and locomotive engineers will receive a training certificate upon completion of the appropriate courses. These certifications will allow workers to compete for jobs throughout the rail industry after this project is complete.

All materials, such as rail, ties and ballast, will be purchased from U.S. manufacturers to create additional jobs. The median hourly wage of rail transportation workers in 2008 was \$21.12, compared with \$13.14 for all transportation occupations. An unquantifiable number of jobs will be created in the railroad equipment industry since new equipment will need to be purchased to complete these infrastructure projects.

The project will allow economic development groups in the Sun Belt region to compete for new businesses that want to locate along a rail line with limited capital investment in real estate.

The three states that are part of this application are grateful for the short lines commitment to stimulate the local economies. The following community based organizations have been consulted with and are in support of this project:

- Workforce Oklahoma



- Kiamichi Economic Development District of Oklahoma
- Denison Development Alliance

New hires will supplement the short lines' current railroad employee base of 138.

In addition to creating jobs, studies have shown that every \$1 invested in transportation infrastructure generates an additional \$3 in total economic activity. By providing opportunities to site new companies along the rail corridor, communities will be given the opportunity to increase their tax base. This project will save money for highway users by reducing fuel wasted from idling by funding projects that will improve traffic flow at highway-rail crossings (due to the increase in train velocity).

The DGNO/TNER/KRR run through the counties listed below. The unemployment rate in June 2010 is listed below as well.

Arkansas: Little River (6.5%)  
Oklahoma: Choctaw (7.4%) and McCurtain (11.3%)  
Texas: Collin (7.9%), Dallas (9.0%), Fannin (9.7%), Grayson (8.7%), Hunt (9.1%), and Rockwall (7.9%)

As of August 6, 2010, all of the counties listed above (with the exception of Collin, Dallas, and Rockwell) are classified as Economically Distressed Areas by the Federal Highway Administration.<sup>24</sup>

### c. Innovation

As discussed above, the short lines have committed to encourage contractors to hire people from the economically distressed areas in which the project is located to create a unique way to ensure that grant dollars are targeted to those who need it most. This is a major competitive advantage for the application.

The short lines have also been an innovator in environmental stewardship by actively pursuing projects to reduce pollutants from diesel emissions. It is a railroad member of the EPA's "Smartway" business partner program. Membership in Smartway can only be achieved through the creation, implementation and validation of fuel and emission reduction programs through the use of available technology and better operating practices. The short lines have also been an active partner in several Federal and state grant programs designed to promote fuel conservation and emission reduction. The short lines have a goal of equipping their entire locomotive fleet with either Automatic Equipment Start/Stop (AESS) technology in warm weather climates or Auxiliary Power Units (APU's) in cold climates. Both technologies serve to shutdown engines so that they do not idle unnecessarily when not in use. Additionally, as noted, the company has procured new ultra-low emitting genset locomotives in Texas, California and Ohio. Aided by the Carl Moyer program in California,

<sup>24</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 3.



a sister railroad to these short lines recently converted to an “all green” locomotive fleet. The public, community and shipping stakeholders were highly appreciative of the accomplishment. The short lines in this application will continue to pursue the acquisition of additional gensets in Texas in partnership with the Texas Commission on Environmental Quality.

*d. Partnership*

This project meets the goals of producing benefits that have an impact on a region of the United States (i.e. northeastern Texas, southeastern Oklahoma, and southwestern Arkansas). Additionally, the short lines have agreed to provide a 20 percent match for the project.

The short lines have also committed to providing the funds necessary to maintain the improvements in a state of good repair. Support letters from elected officials, shippers, and other entities are available for review on the web site. The short lines have engaged all the major stakeholders while developing this proposal. This includes organizations in the three states that will assist in identifying and recruiting unemployed residents and veterans in the Sun Belt region. This will help ensure the grant’s benefits are targeted to the EDAs.

The short lines have also partnered with economic development agencies to help site new facilities alongside its rail lines. By partnering with these types of agencies, the short lines may be able to help keep additional trucks off the highway. In order for companies to build their distribution facilities near short lines they need assurances that the rail line will be upgraded in order to move 286K railcars, the current industry standard.

**V. Project Readiness and NEPA**

No coordination with federal agencies has occurred since the Surface Transportation Board does not require an environmental review for the rehabilitation of existing track; while the Federal Railroad Administration and Federal Highway Administration do not perform environmental review of an existing track unless they are involved in funding the project. TxDOT believes that the completion and submission of an FRA environmental checklist will result in a finding of no significant impact and a Categorical Exclusion (CatEx) will be granted. Draft FRA CatEx checklists have been completed and are posted on the web site at [www.txdot.gov/business/rail/tigerhtm](http://www.txdot.gov/business/rail/tigerhtm). TxDOT staff will work with Grant Managers in the appropriate federal agency to get the NETPA clearances, Project Summary, Statement of Work, and Assurances and Certifications completed along with any other required information or documentation. Assuming the TIGER grant is approved for \$17,265,920 as requested, the project would be completed within 12 months after the appropriate project agreements are executed.



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

The federal wage rate certification is attached.

## **VII. Summary**

Recognizing there is a premium for projects that are “shovel-ready,” this project is an ideal candidate. No additional permits are needed and all environmental work has been completed. Construction will begin as soon as personnel are hired and trained. Further, materials will be sourced solely from U.S. companies.

This project will change the face of this rural region of America by creating a significant number of long-term jobs. The return on investment for the federal government will include lower greenhouse gas emissions, less dependence on foreign oil, a rail infrastructure in the Sun Belt region that will be an economic engine for growth, improved intermodal connections for businesses, and jobs that will provide an increase in economic confidence throughout the region. These positive results are critical to the Sun Belt region, which has been hit hard by job losses, increased pollution, and a staggering economy.

This project is an ideal candidate for funding through the TIGER II program. It leverages non-federal funds and brings together three states to complete a regional project, a main criteria for the TIGER II program. It creates jobs (e.g., almost 351,000 new work-hours are created), promotes economic recovery (e.g., gives many small businesses access to new markets and the ability to grow their operations), invests in transportation infrastructure that provides long-term benefits to an entire region (e.g., provides dependable intermodal connections by bringing deteriorated rail lines up to a state of good repair), and provides opportunities for those hardest hit by the economic downturn (e.g., the commitment to hire people from EDAs ensures that these funds are targeted to those that need it most).

Additionally, the three states and RailAmerica are committed to satisfying all transparency and accountability objectives mandated by the Obama Administration.



## Federal Wage Rate Certification

The Texas Department of Transportation certifies that it will ensure compliance with the requirements of Subchapter IV of Chapter 31 of Title 40, United States Code (federal wage rate requirements), as required by the FY 2010 Appropriations Act for any projects that receive federal funding under the TIGER II program.



\_\_\_\_\_  
William E. Glavin, P.E.  
Rail Division Director  
Texas Department of Transportation

8/19/10

\_\_\_\_\_  
Date