

# High Springs Rail Rehabilitation TIGER II Discretionary Grant Application



## Project Narrative & Attachments

AUGUST 2010



## Florida Department of Transportation

CHARLIE CRIST  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

STEPHANIE C. KOPELOUSOS  
SECRETARY

August 19, 2010

Secretary Ray LaHood  
U.S. Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Ave. SE  
Washington, D.C. 20590

Subject: TIGER II Discretionary Grant Application for High Springs  
Rail Rehabilitation Project

Dear Secretary LaHood:

The Florida Department of Transportation (FDOT) in partnership with Alachua County, Florida, is pleased to submit this application for a TIGER II Discretionary Grant from the National Infrastructure Investment funding under Title I of the FY 2010 Appropriations Act (Pub. L. 111-17).

The proposal, the High Springs Rail Rehabilitation Project, will upgrade 13 miles of rail road that serves industrial sites between the cities of Newberry and High Springs in Alachua County, Florida. It supports one of the key goals of the program by maintain the existing transportation infrastructure in a state of good repair. This project allows the continued movement of freight by rail and prevents the shifting of this freight to trucks thereby creating a negative impact to our highway system.

The Department hereby authorizes Alan R. Mosley, P.E., District Two Secretary to apply for and administer this grant.

Sincerely,

Stephanie C. Kopelousos  
Secretary

cc: Alan R. Mosley, P.E., District Two Secretary

**High Springs Rail Rehabilitation TIGER II Discretionary Grant Application**

---

**Table of Contents**

I. Project Description..... 1

II. Project Parties ..... 4

III. Grant Funds and Sources/Uses of Project Funds..... 4

IV. Selection Criteria ..... 5

    1. Primary Selection Criteria..... 5

        a. Long-Term Outcomes ..... 5

            i) State of Good Repair..... 5

            ii) Economic Competitiveness..... 6

            iii) Livability ..... 10

            iv) Sustainability..... 14

            v) Safety ..... 15

        b. Job Creation and Economic Stimulus ..... 18

    2. Secondary Selection Criteria..... 18

        a. Innovation ..... 18

        b. Partnership ..... 19

    3. Summary of Benefit-Cost Analysis ..... 19

    4. Conclusion ..... 20

V. Project Readiness and NEPA..... 21

VI. Federal Wage Rate Certification..... 21

Attachments

- Attachment 1: Benefit Cost Analysis Report
  - Attachment 2: Letters of Support
  - Attachment 3: Project Schedule
  - Attachment 4: Federal Wage Rate Certification
-

# High Springs Rail Rehabilitation TIGER II Discretionary Grant Application

---

## List of Tables

Table 1 – Net Present Value of the Proposed Project .....	20
---	----

## List of Figures

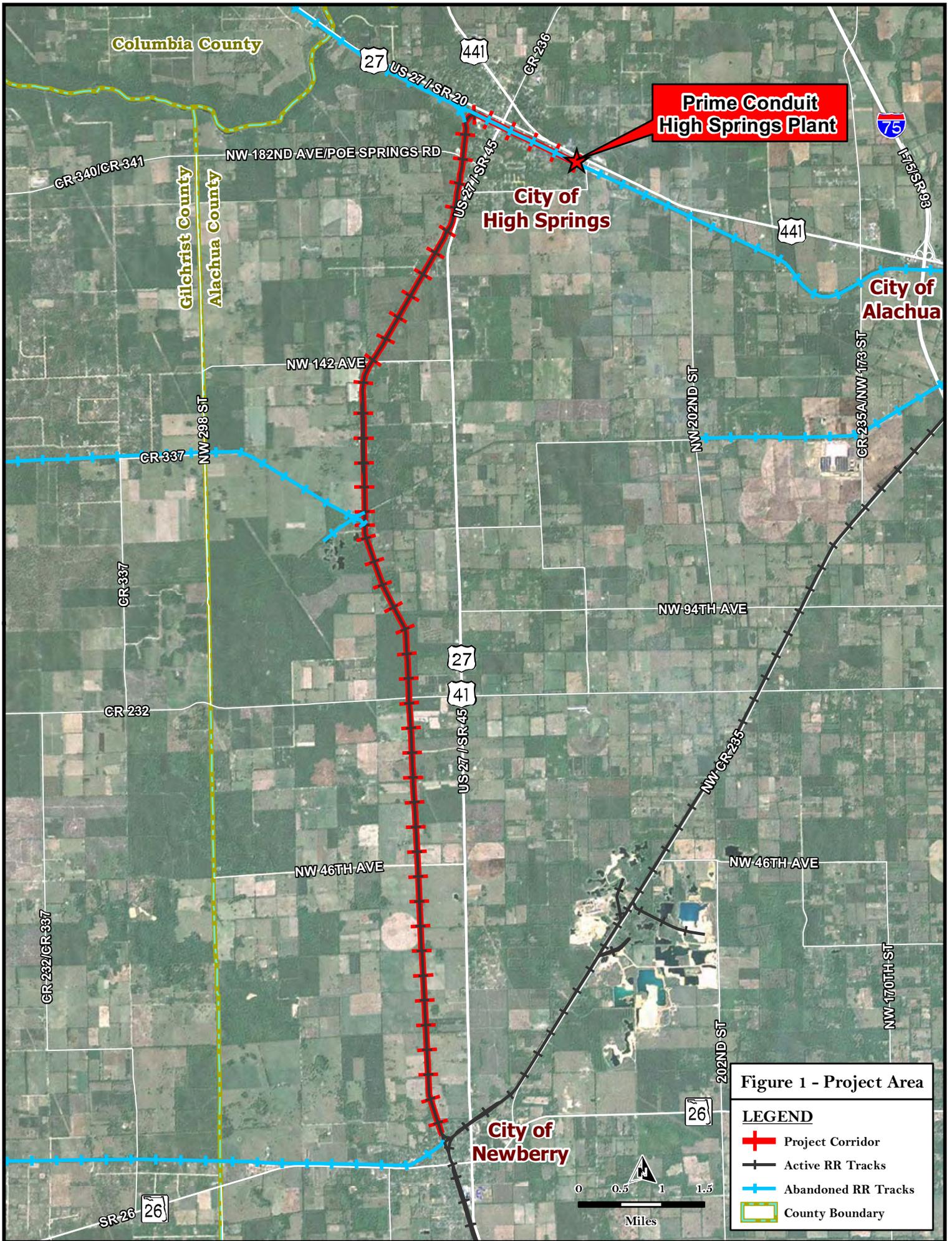
Figure 1 – Project Area.....	2
Figure 2 – Location Map.....	3
Figure 3 – Unemployment Rates in FDOT District Two Counties, June 2010.....	8
Figure 4 – Project Corridor Future Land Use .....	9
Figure 5 – Vehicle Hours of Delay in Florida (1995 – 2006).....	12
Figure 6 – Daily Truck Miles Traveled on Florida Intrastate System (1996 – 2006) .....	12
Figure 7 – Truck AADT .....	13
Figure 8 – Gains in Railroad Fuel Efficiency .....	14
Figure 9 – Crash and Non-Fatal Injury in Florida, 1998 – 2008 .....	16
Figure 10 – Total Florida Highway Fatalities and Fatality Rates, 1998 - 2008.....	16
Figure 11 – Rail Incidents in Florida, 1998 – 2008 .....	17
Figure 12 – Fatalities and Injuries from Rail Incidents in Florida, 1998 – 2008.....	18

### I. Project Description

The project proposes to rehabilitate a 13-mile rail spur between the cities of Newberry and High Springs in Alachua County, Florida. The rail line is operated and maintained by Florida Northern Railroad (FNOR) under a lease agreement with CSX. Figure 1 shows the project area and Figure 2 shows the location of the rail line in northeast Florida regional context. The entire project segment is in a rural area as defined by the US Census Bureau. The rail spur serves the High Springs plant of Prime Conduit Inc., a valued American manufacturer of PVC conduit products for the electrical, telecommunication, utility and sewer markets. The plant has the capacity to produce XXXXX pounds of PVC electrical conduit and targets an annual production of XXXXX pounds given the current market demand. All inbound raw materials are currently delivered on rail to the High Springs plant via Jacksonville, FL, and all outbound PVC products are shipped by truck to a variety of distributor warehouses, public utilities and construction sites within and outside Florida. The industry has been severely impacted by the recent economic recession and the plant produced XXXXX pounds of finished goods in 2010 causing decline in rail freight volumes. FNOR is incurring operating losses on the rail line due to this decline as well as there have not been sufficient other industries added to sustain the operations cost. The plant is undergoing expansion to increase capacity and make the operations more viable in the long term. As of August 2010, Prime Conduit was approved by the State of Florida Governor's Office of Tourism, Trade and Economic Development for Qualified Target Industry (QTI) incentive to expand in High Springs. The plant is in the process of increasing capacity by XXXXX pounds in order to produce PVC-related decking for residential use. The expansion is expected to produce XXXXX pounds of decking products starting in 2011 in addition to producing XXXXX pounds of PVC conduit, creating XXXXX new jobs at an average annual wage of at least XXXXX. Once expanded, all inbound raw materials and all outbound decking products are expected to be shipped by rail. However, the existing track conditions have deteriorated to a point that a major restoration project is mandatory for the rail service to continue. In addition to continual operating inefficiency, a recent derailment incident due to poor track conditions underlined the urgency of the situation.



*The recent pictures of the rail track are typical of the cross tie conditions*



# GEORGIA

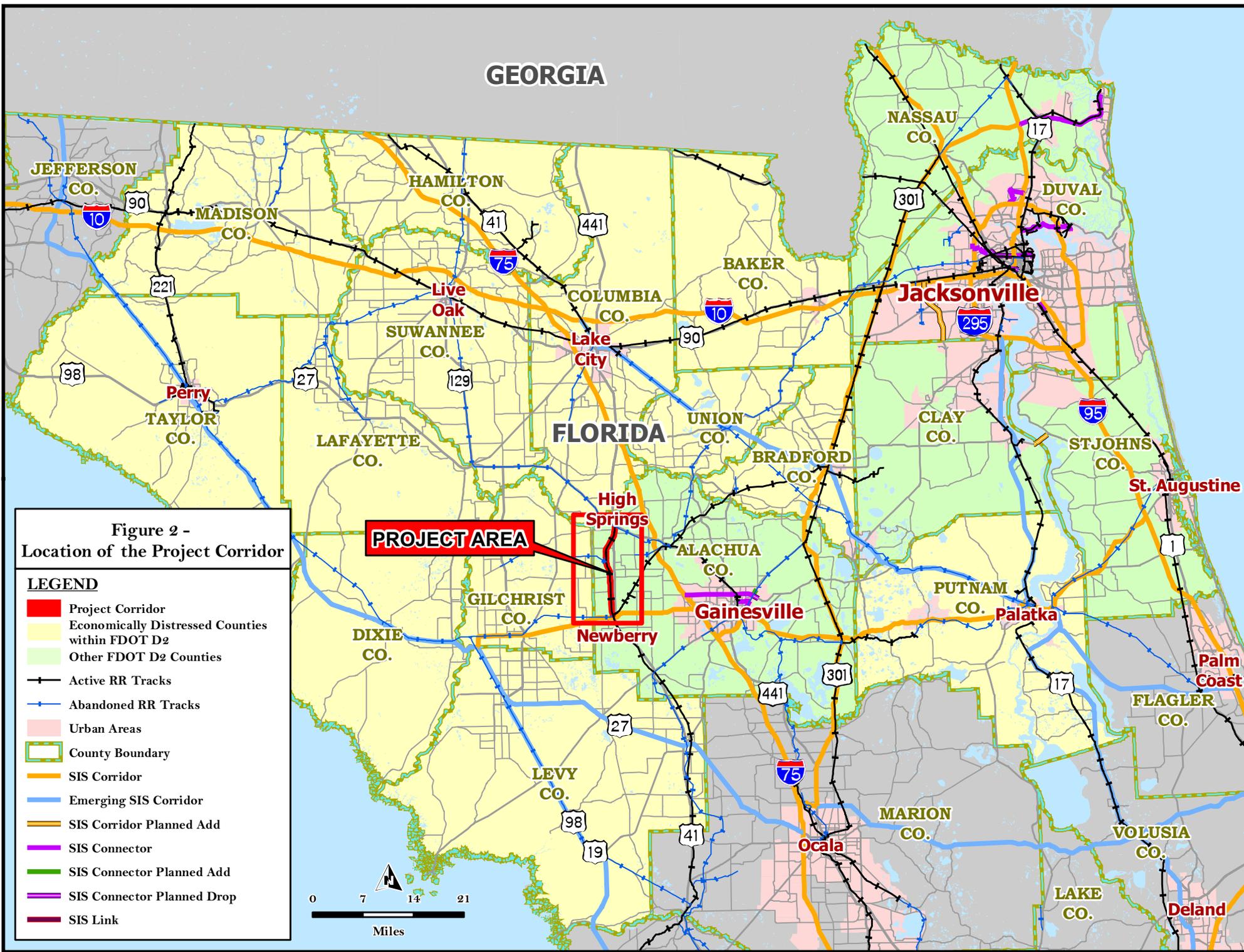


Figure 2 - Location of the Project Corridor



## **High Springs Rail Rehabilitation TIGER II Discretionary Grant Application**

---

The estimated capital cost for the rail rehabilitation project is 1,621,111 in 2010 dollars. FNOR has no incentive to invest in track rehabilitation as they face a negative return on investment today due to the low freight volumes. FNOR has filed a discontinuance of service with the Surface Transportation Board (STB) while concurrently implementing a surcharge to minimize operating losses. The surcharge is now active, and this puts Prime Conduit at a competitive disadvantage while threatening their long term viability as a domestic manufacturer. Without track repairs and upgrades, FNOR will no longer be able to continue to provide rail service to Prime Conduit. As such, the plant will not be able to continue its operations in the long term and will eventually move all operations to another location by 2018. Inbound and outbound transportation using trucks is neither cost-effective for Prime Conduit nor desired by the communities of High Springs, Newberry, and Alachua County given the impacts on the roadway level of service. The utilization of rail as an efficient, cost-effective mode of transportation is critical to the company's business model and competitive position in the marketplace. The relocation of the plant will mean the loss of the 27 current positions and **XXXXXX** potential new positions, which will have devastating economic impacts on the communities of Alachua County and the surrounding "economically distressed" counties (as determined by the American Recovery and Reinvestment Act). Long term viability of rural, domestic manufacturer and rural railroad community business opportunities will be in serious jeopardy, ultimately failing.

On the contrary, if funding is received to rehabilitate the existing rail line, a surface transportation asset will be maintained in a state of good repair, the plant will retain economic competitiveness for the long term, FNOR will achieve profitable operations as plant production increases, communities will forgo detrimental truck impacts on the quality of life and the environment, and the viability of the rail corridor will be preserved for future industrial uses. Most importantly, a modest infrastructure investment will have a significant positive impact on the desirable long term outcomes of local communities, northeast Florida and the nation.

### **II. Project Parties**

The Florida Department of Transportation (FDOT) has partnered with the local governments, the Council for Economic Outreach, and the private sector to identify, develop and ultimately deliver this project. FDOT, along with the Alachua County Board of County Commissioners, the City of High Springs City Commission, Prime Conduit, Inc., Florida Northern Railroad (FNOR, an affiliation of Pinsky Railroad Company) and the Gainesville/ Alachua County Council for Economic Outreach have worked together to develop strong relationships to facilitate the delivery of the project. Should funding be received, the FDOT will contract directly with FNOR for the design and construction of the project. This approach has been used on a number of prior projects and provides an efficient approach to implementing a rail project.

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

The High Springs Rail Rehabilitation project is located in a rural area of Alachua County. As such, this project qualifies for 100% TIGER II funding. It is important to recognize the rural area and the proximity of the project corridor to the surrounding "economically distressed" counties. The region historically exhibited economic distress characteristics and the residents are facing financial hardship in the current economic climate. The region has experienced declines in

## **High Springs Rail Rehabilitation TIGER II Discretionary Grant Application**

---

revenues due to loss of businesses and thereby an increase in unemployment. According to the Labor Market Statistics Center of the Florida Agency for Workforce Innovation, unemployment rate in majority of the counties in the region is greater than 10.4% as of June 2010 (refer to Figure 3). A number of residents in each of the surrounding counties commute to work opportunities in Alachua County. The rural counties recognize the importance of this rail corridor not only for the existing business that is currently served, but also for the long term opportunities for developing additional rail industry type businesses along the corridor. However, the effected rural local governments do not have the necessary local funds to provide as a match. The request for this grant is 100% TIGER II funding.

### **IV. Selection Criteria**

This section of the application provides information about how the project aligns with each of the primary and secondary selection criteria outlined in the notice of funding availability for the TIGER II Discretionary Grants.

#### **1. Primary Selection Criteria**

##### **a. Long-Term Outcomes**

##### **i) State of Good Repair**

As the fourth largest and one of the fastest growing states in the nation, Florida is facing the challenges of increasing transportation demand and diminishing funding sources. Tremendous growth of people and goods over the last decade has put immense pressure on the transportation infrastructure needs. With funding shortfalls for capacity improvements and aging infrastructure, the need for maximizing the operational life of the existing surface transportation assets by maintaining a state of good repair has never been greater. The Florida Department of Transportation's *2060 Florida Transportation Plan (FTP)*, which is in the process of creating a shared vision for the future of transportation in Florida involving all local and regional partners, identified infrastructure preservation as one of the primary goals for all levels of government. The *Florida Rail System Plan, Policy Element, March 2009* identifies one of the long range objectives to "preserve, maintain, and modernize the rail system when public benefit can be demonstrated". Also, the North Central Florida Regional Planning Council identifies a regional policy to "maintain and/or upgrade freight rail lines to meet federal and state safety standards" in the *North Central Florida Strategic Regional Policy Plan (SRPP), amended February 2003*.

The subject project perfectly aligns with these statewide and regional goals by proposing to rehabilitate a deteriorated rail spur that has started to threaten the efficiency of goods movement, safety, and economic growth of rural manufacturing industries and railroad companies due to poor track conditions. The track restoration will reduce the annual maintenance cost from \$10,000 per mile to \$3,000 per mile resulting in operating efficiencies. Average travel speed would increase from 8 mph to 18 mph which would save approximately 45-50 minutes of delay for a one-way trip

## High Springs Rail Rehabilitation TIGER II Discretionary Grant Application

---

between the plant and Newberry. Once rehabilitated, the rail spur will continue to be operated and maintained by FNOR through its useful life (15 years).

In addition, the project will also support regional and statewide goals of maintaining existing highways in a state of good repair by reducing the number of trucks on such facilities. The continuation of the rail service in the corridor will divert freight from truck and thereby reduce the highway pavement deterioration. Like every other asset, pavement systems are periodically maintained to extend their service life and reduce life-cycle costs. The cost is borne by the driver population in the sense that the funding for such activities mostly stems from gas tax revenue. By reducing annual truck VMT by 743,198 truck miles, the project would yield an annual pavement cost savings of \$152,876 from 2012 through 2018 (refer to Attachment 1: Benefit Cost Analysis Report for additional details).

Given the discussions, the project contributes to the desired long term outcome of maintaining the existing surface transportation assets in a state of good repair.

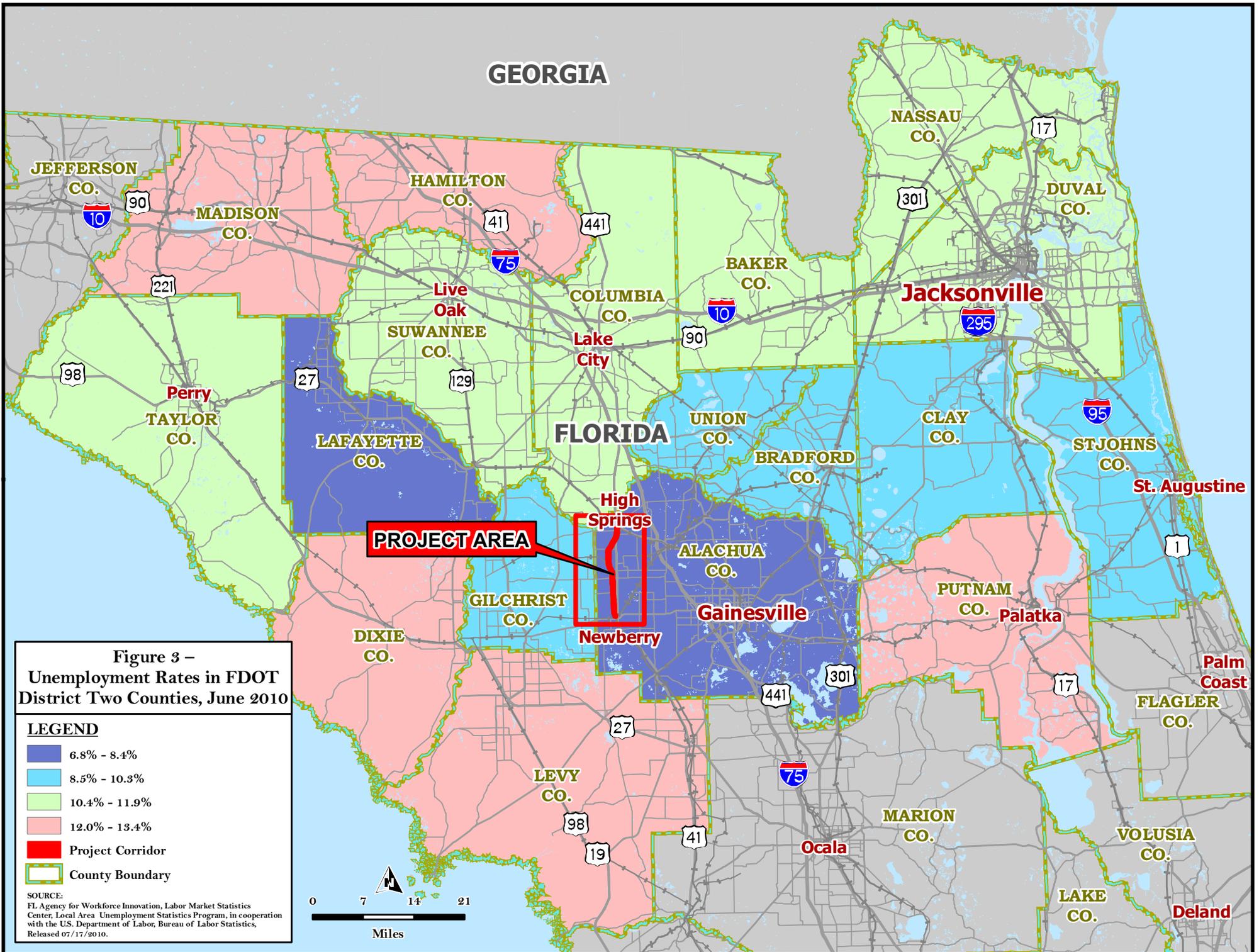
### ii) Economic Competitiveness

Freight transportation is the backbone of the American economy. Approximately 11.1 billion tons of commodities flow in the United States per day. Efficient flow of goods ensures timely delivery of products and reasonable consumer costs. The long term growth in the productivity of the American economy is heavily dependent on the efficiency of the transportation system. If the rail service discontinues due to lack of capital funding to refurbish the track conditions, Prime Conduit will be forced to ship all inbound raw materials and outbound finished goods on trucks for an annual cost of XXXXX. However, if the rail service continues, Prime Conduit will move the same amount of inbound and outbound freight for a lower cost (annual cost of XXXXX). The implementation of the proposed project would result in net transportation efficiency benefit of \$501,646 annually and the cost savings would be, in theory, passed on to the consumers (refer to Attachment 1: Benefit Cost Analysis Report for additional details). Transportation efficiency benefits are critical to the economic competitiveness of the United States in the global market and the proposed project contributes towards the national interest.

Because railroads provide the lowest-cost land transportation for commodity flows, they are an integral part of the PVC business. If rail service discontinues, Prime Conduit would face a major competitive disadvantage due to the inefficiency of the transportation system. The company will seek to continue operations only in the short term while implementing a short term solution of shipping via truck to the nearest rail trans-load facility located in Jacksonville. The plant will eventually relocate, potentially outside Florida, in 2018 causing a loss of XXXXX jobs. Although the plant relocation would have impacts on the local economy, diversion of economic activity from one region of the country to another, represent benefits to one part of the country but costs to another part, so there are not any benefits from the standpoint of the nation as a whole. However, the proximity of the project corridor with the

surrounding “economically distressed” counties suggests additional consideration. The surrounding counties (Baker, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Jefferson, Lafayette, Levy, Madison, Putnam, Suwannee, Taylor, and Union) qualify for Rural Economic Development Initiative (REDI) status and have been collectively designated as the North Central Florida Rural Area of Critical Economic Concern by the Florida Governor's Office of Tourism, Trade and Economic Development. To qualify for REDI status, a rural county must exhibit at least three of nine economic distress factors as defined in 288.0656 *Florida Statutes* - low per capita income, low per capita taxable values, high unemployment, high underemployment, low weakly earned wages compared to the state average, low housing values compared to the state average, high percentages of the population receiving public assistance, high poverty levels compared to the state average, and a lack of year-round stable employment opportunities. According to the Labor Market Statistics Center of the Florida Agency for Workforce Innovation, unemployment rates in nine of the fourteen counties are greater than 10.4% as of June 2010 (refer to Figure 3). Given the economic characteristics of the region, the loss of XXXXX jobs would have devastating regional economic impacts.

The north central Florida economic base can be characterized as a combination of retail trade, health and educational services, and government employment (state prisons and the University of Florida). Since these industries tend to be low-paying and many involve non-taxable land and structures, this mixture has resulted in below-average median household and per capita incomes, above-average poverty rates, and a below-average local government tax base. Thus, one of the regional economic initiatives is to identify target industries with the greatest potential for creating high value-added jobs, capital investment, and economic benefits in the region. Manufacturing industry, like Prime Conduit, is a target sector and widely supported by the *Economic Element* and *Future Land Use Element* of the *Alachua County 2001-2020 Comprehensive Plan*. The future land use plan designated sufficient area for industrial use in an effort to create adequate supply of land which has the proper zoning already in place with suitable infrastructure including rail access, interstate access, proximity to cargo terminals, and suitable environmental characteristics for such uses. Approximately 602 acres of future industrial land use has been designated along the project segment which is dependent on rail access in the corridor (refer to Figure 4). The rail rehabilitation would sustain the existing manufacturing land use and also support the future industrial use along the corridor translating into long term economic productivity benefits. On the other hand, if the rail line not rehabilitated, future industrial uses along the corridor would be jeopardized. This would mean loss of future jobs and reduction in local wages and personal income. This reduction in jobs, wages, and income may induce a decline in the number of employees in service and service-related industries (local government, retail trade, insurance, public utilities) that the community can support because fewer goods and services are purchased in the community. The community is also adversely affected because the railroad no longer pays taxes. On the other hand, the proposed project will increase the economic productivity of land, capital and labor by preserving the corridor for future industrial uses and enhancing the ability of the region to attract new business.



GEORGIA

FLORIDA

**PROJECT AREA**

High Springs

Newberry

Jacksonville

Gainesville

Ocala

St. Augustine

Palm Coast

Deland



JEFFERSON CO.

MADISON CO.

HAMILTON CO.

NASSAU CO.

DUVAL CO.

Live Oak  
SUWANNEE CO.

Lake City  
COLUMBIA CO.

BAKER CO.

Perry  
TAYLOR CO.

LAFAYETTE CO.

UNION CO.

BRADFORD CO.

CLAY CO.

ST. JOHNS CO.

ALACHUA CO.

GILCHRIST CO.

Gainesville

PUTNAM CO. Palatka

DIXIE CO.

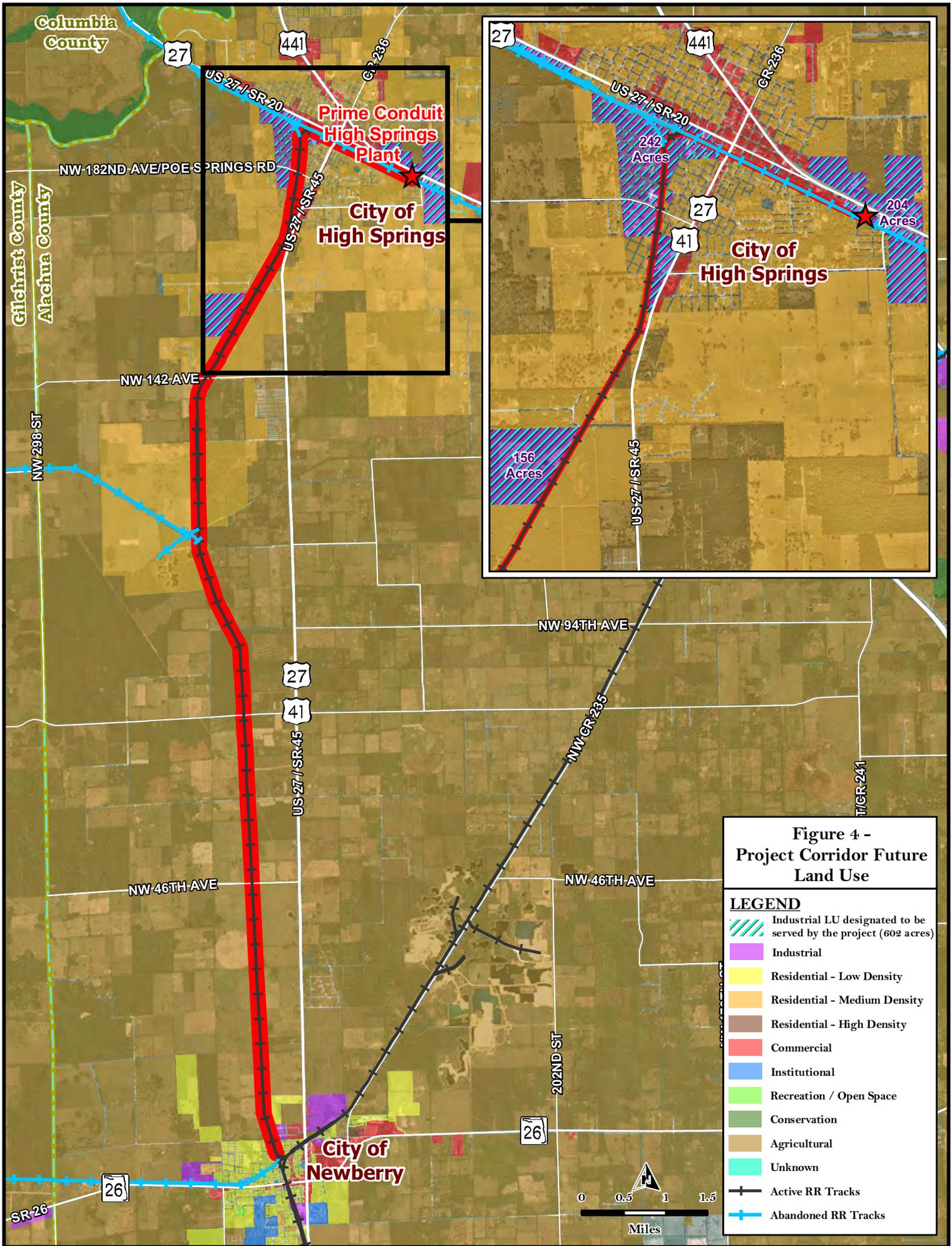
LEVY CO.

MARION CO.

VOLUSIA CO.

FLAGLER CO.

LAKE CO.



**Figure 4 - Project Corridor Future Land Use**

**LEGEND**

- Industrial LU designated to be served by the project (602 acres)
- Industrial
- Residential - Low Density
- Residential - Medium Density
- Residential - High Density
- Commercial
- Institutional
- Recreation / Open Space
- Conservation
- Agricultural
- Unknown
- Active RR Tracks
- Abandoned RR Tracks

## High Springs Rail Rehabilitation TIGER II Discretionary Grant Application

---

Another aspect to consider is the long term impacts of the project on the railroad industry. In addition to the transportation utility provided, the nation's railroads have a direct economic impact of \$21 billion in wages and retirement benefits, and several billion in infrastructure investments. Freight railroads also pay property taxes, diesel fuel taxes, and sales taxes on goods purchased in the nation. Rail dependent long term economic growth in the region would boost the rail company creating future jobs while sustaining the national railroad industry. However, should the rail line be abandoned, it is possible that new jobs will be created in the trucking industry because of the shift of freight from rail to truck. Also, the increase of truck traffic would mean increased user revenues from the trucking industry, including fuel taxes and vehicle registration fees. These discussions may not lead to demonstration of any net benefits of the project in a benefit cost analysis context, however, the trade-offs may still be of considerable interest to the decision makers.

According to the *Benefit-Cost Methodology for the Local Rail Freight Assistance Program, July 1990* published by FRA, if rehabilitation of a line prevents abandonment of that line and a shipper thus avoids moving the business elsewhere, the relocation costs saved are secondary benefits of the rehabilitation alternative. The relocation cost that Prime Conduit will forgo as a result of this project is considered a net benefit. Also, the relocation of the plant would mean that the XXXXX plant employees will have to search for an alternate job after the plant relocates who would otherwise be employed. The value of the wages earned by these individuals under the rehabilitation alternative constitutes a secondary benefit, but only for the length of time that they would have been unemployed under the abandonment alternative.

In addition to supporting the long term outcomes of economic growth, the project will promote sustainability for generations to come. Freight rail provides several sustainability benefits as compared to trucks including congestion reduction, air pollution reduction, noise reduction, public health benefits, etc. (discussed in detail in the later part of the application).

### iii) Livability

The recent DOT-HUD-EPA Partnership for Sustainable Communities intends to enhance the economic and social well-being of all Americans by creating and maintaining a safe, reliable, integrated and accessible transportation network that enhances choices for transportation users, provides easy access to employment opportunities and other destinations, and promotes positive effects on the surrounding community.

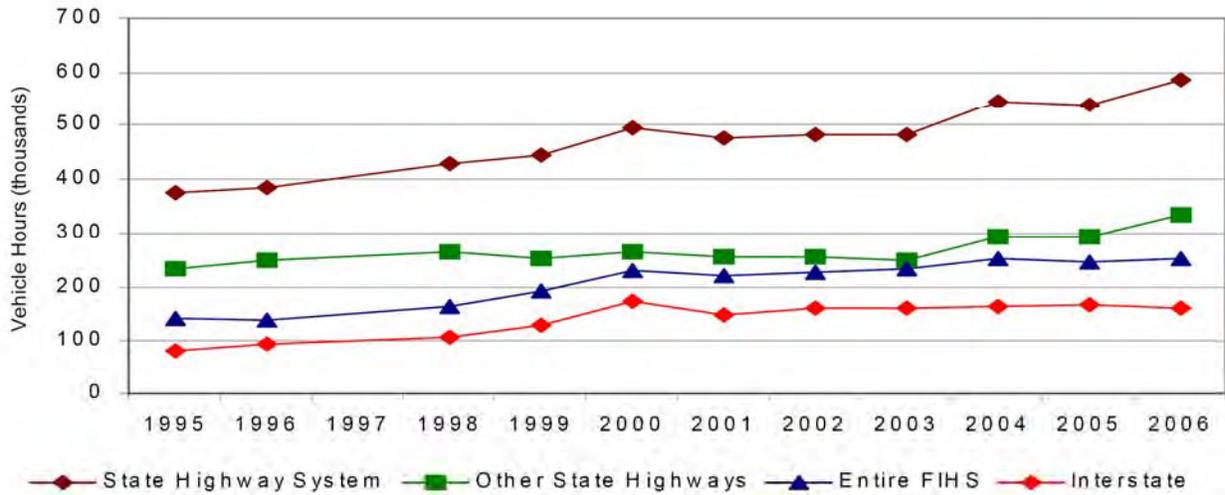
Congestion is one of the key indicators of quality of life influencing people's location choices and is a growing concern in Florida. When travel demand in a corridor reaches a certain threshold, the interaction between vehicles slows the speed of the traffic stream causing travel time delays which impacts business, communities and ultimately quality of life. Overcrowded highways act as an "inefficiency tax" on our economy, seriously constraining economic growth and impacting quality of life.

Freight railroads help relieve this restriction by reducing gridlock, enhancing mobility, and reducing the pressure to build costly new highways. Figure 5 shows the increase of vehicle hours of delay on Florida's roadways between 1995 and 2006. Increased truck travel on such facilities contributed directly to the delay statistics as shown in Figure 6. Reducing congestion and enhancing mobility of people and goods are critical to the economic prosperity of the state and livability of our communities. The communities of High Springs, Newberry, and Alachua County are already experiencing truck traffic congestion, which have historically enjoyed the serenity of rural life and mobility of low volume roadways. Figure 7 shows the daily truck volumes in the region which would further increase and negatively impact the livability measures if the rail service to High Springs discontinues. The proposed project promises to alleviate highway congestion by reducing truck traffic in Florida and outside the state. By reducing 743,198 truck miles of travel the proposed project would yield an annual congestion benefit of \$26,829 (refer to Attachment 1: Benefit Cost Analysis Report for additional details).

Noise pollution is one of the most significant social costs of highway use which impacts public health and quality of life. This cost is borne by both highway users and non-users, i.e. community at large. Excessive traffic noise is one of the most common complaints among American residents. Millions of people are affected by constant traffic noise in their own home. In fact, traffic noise impacts more people than any other environmental noise source. Noise pollution can affect the ability to work, learn, rest, relax, sleep, etc. Excessive noise can lead to mental and physical health problems. This issue is even more critical in the context of this project as the percentage of elderly population in the surrounding communities is relatively high. By avoiding additional truck traffic on the highways, the proposed project would reduce highway use related noise pollution resulting in net annual benefit of \$2,304 (refer to Attachment 1: Benefit Cost Analysis Report for additional details).

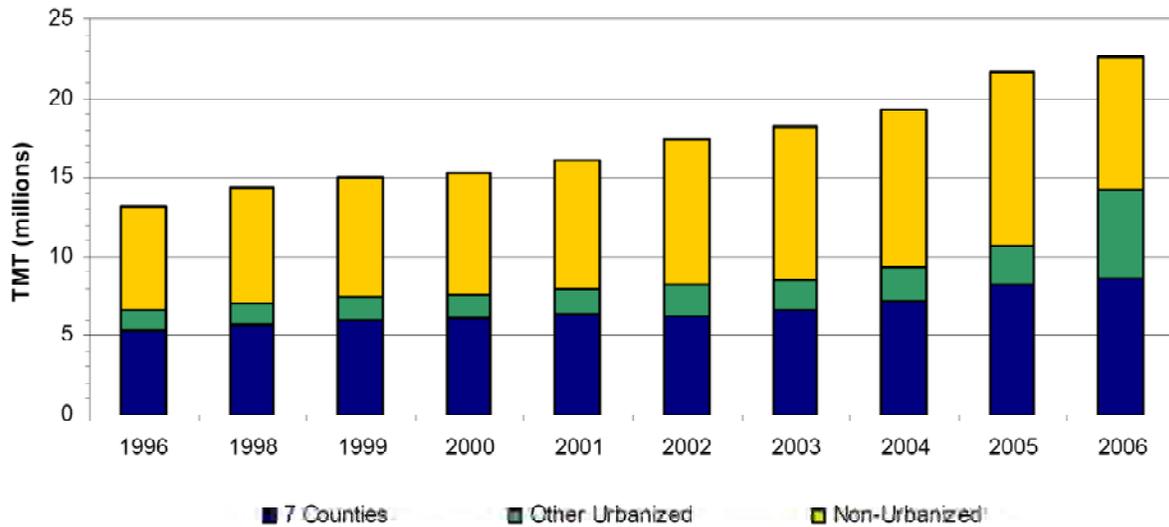
By reducing truck emissions, the proposed project will generate public health and air quality benefits (discussed in details in the later part of the application). In addition to delivering transportation benefits to an economically disadvantaged region, the project promotes a sustainable mode of transportation positively impacting qualitative measures of community life.

Figure 5 - Vehicle Hours of Delay in Florida (1995 – 2006)



Source: FDOT 2006 Highway Data Source Book

Figure 6 – Daily Truck Miles Traveled on Florida Intrastate System (1996 – 2006)



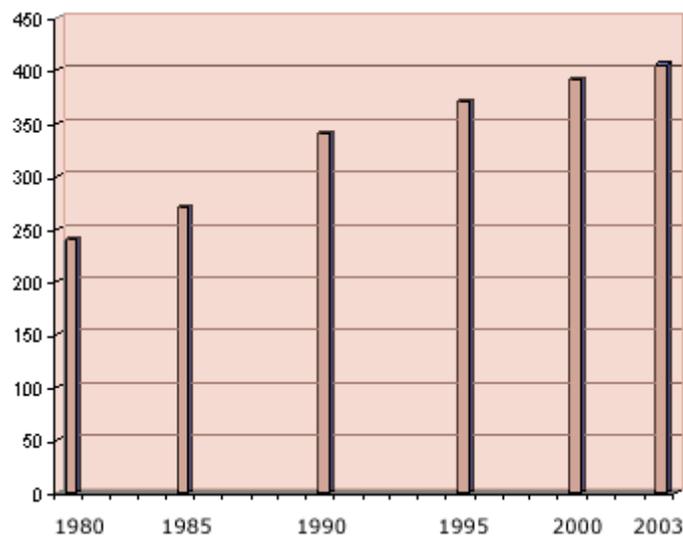
Source: FDOT 2006 Highway Data Source Book



iv) Sustainability

Railroads lead the way to a sustainable future of surface freight transportation. They have major advantages in energy efficiency over trucks. On average, railroads are three times more fuel efficient than trucks, and railroad fuel efficiency has been improving over the years (refer to Figure 8). In 1980, U.S. railroads moved a ton of freight at an average of 235 miles per gallon of fuel. In 2002, the comparable figure was 404 miles, a 72 percent increase. Our national dependence on oil imports has grown over the years. When United States started importing oil in 1910, a mere 557 thousand barrels of oil were brought into the country. Today, approximately 4 billion barrels of oil are imported from over 40 different countries. It is of national interest that we explore energy efficient modes of transportation and reduce dependence on oil imports. The proposed rail rehabilitation project will contribute towards this long term national goal of energy efficiency and independence by reducing 123,000 gallons of fuel consumption annually by means of diverting freight from trucks to rail.

Figure 8 – Gains in Railroad Fuel Efficiency  
(Ton-Miles per Gallon of Fuel Consumed)



*Source: Association of American Railroads*

Transportation sources in the United States account for the highest or second highest levels of emissions for several pollutants of concern for environmental and public health reasons. The transportation sector continues to be a substantial source of air pollutants at the national level, and is responsible for most of the total carbon monoxide (CO) and nitrogen oxide (NOx) emissions, close to half of the total volatile organic compounds (VOC), and a quarter of total particulate matter (PM) emissions. The cost is borne by both highway users and non-users, i.e. community at large. Total social costs of air pollution associated with motor vehicle use are estimated to range from \$30 billion to \$349 billion per year. Most of those costs are associated with premature death and illness caused by particulate matter, including both direct

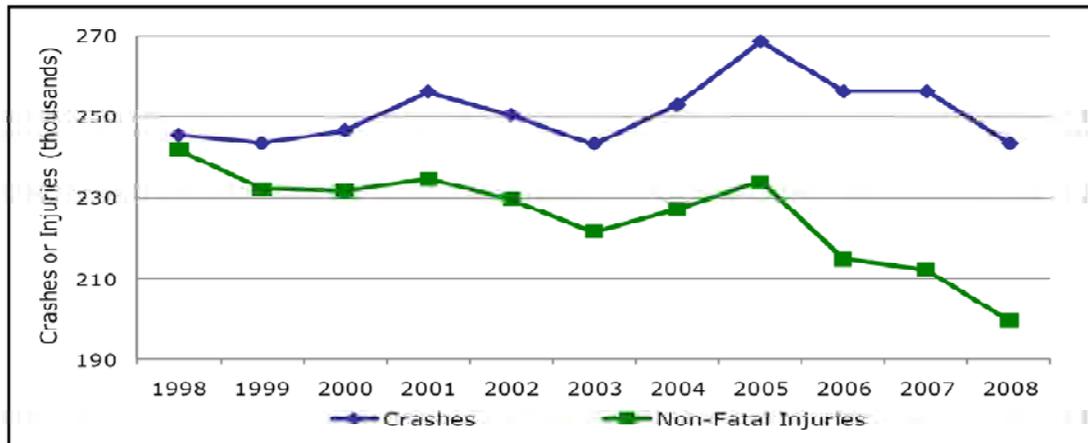
particulate emissions and the secondary formation of particulates from other emissions. Generally, railroads are more environment friendly than trucks. The U.S. Environmental Protection Agency (EPA) estimates that for every ton-mile, a typical truck emits roughly three times more nitrogen oxides and particulates than a locomotive. Other studies suggest trucks emit six to 12 times more pollutants per ton-mile than do railroads, depending on the pollutant measured. Railroads also have a clear advantage in terms of greenhouse gas emissions. According to the EPA, railroads account for just 9 percent of total transportation-related NO<sub>x</sub> emissions and 4 percent of transportation-related particulate emissions, even though they account for 42 percent of the nation's intercity freight ton-miles. Air quality issue is important to Florida as several nonattainment areas have been designated and some more are about to be designated around the state per National Ambient Air Quality Standards (NAAQS). In response to Governor's directive to develop a climate change action plan, the Florida Department of Environmental Protection (DEP) is in the process of tracking air quality and greenhouse gas emissions. The subject project will support these efforts by reducing vehicle emissions and associated air pollution. By reducing annual truck VMT by 743,198 miles, the project will reduce 0.22 tons of volatile organic compounds (VOC) emissions, 10.15 tons nitrogen oxide (NO<sub>x</sub>) emissions, 0.25 tons of particulate matter (PM) emissions, 1.18 tons of carbon monoxide (CO) emissions, and 1,238 tons of carbon dioxide (CO<sub>2</sub>) emissions. The project is expected to yield \$98,740 net annual emission benefits for the society between the years 2012 and 2018 (refer to Attachment 1: Benefit Cost Analysis Report for additional details).

Improving energy efficiency, reducing dependence on oil, reducing greenhouse gas emissions and benefitting the environment align the project with the desired long term environmental sustainability outcomes of the nation.

### v) Safety

For years, all levels of government have indicated that transportation safety is one of the highest priority goals for transportation. Each year thousands of lives are lost, tens of thousands of injuries are suffered, and millions of dollars are spent as a result of traffic crashes on Florida's roadways. Continually improving the safety for users of the roadway system is part of the Florida Department of Transportation's mission. Figure 9 shows the crash and non-fatal injury trends in Florida from 1998 through 2008. Since 2006, there had been a decline in both the numbers of crashes and injuries, with the number of injuries falling 5.9% from 2007.

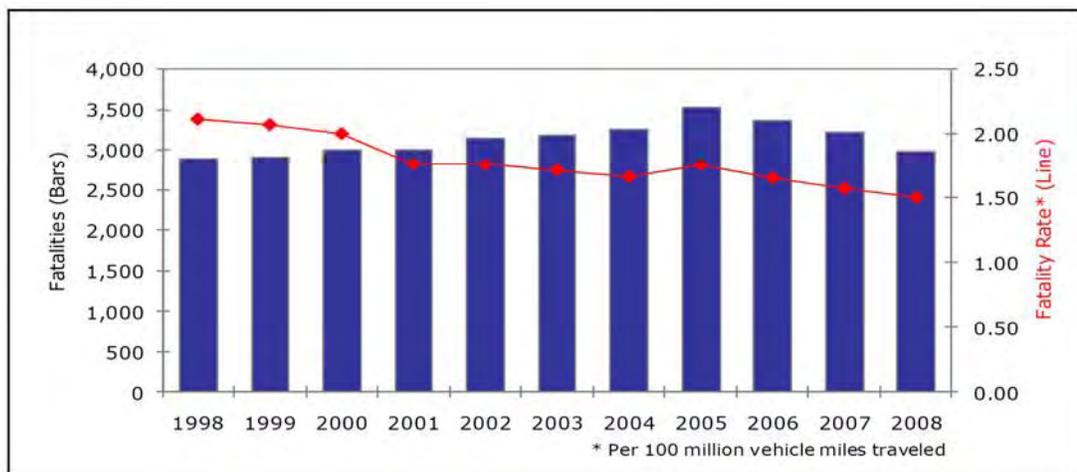
Figure 9 – Crash and Non-Fatal Injury in Florida, 1998 – 2008



Source: Florida Department of Highway Safety and Motor Vehicles, Florida Traffic Crash Statistics, 2008

Figure 10 shows total highway fatalities and fatality rates in Florida between 1998 and 2008. The total number of fatalities followed an increasing trend until recent years. According to the *Florida Strategic Highway Safety Plan*, in 2005 there were 268,605 motor vehicle crashes in Florida in which over 3,500 people were killed. A number of these crashes involved truck traffic. The proposed project would reduce truck traffic on highways within and outside Florida resulting in net safety benefits of \$136, 976 annually for all highway users.

Figure 10 – Total Florida Highway Fatalities and Fatality Rates, 1998 - 2008



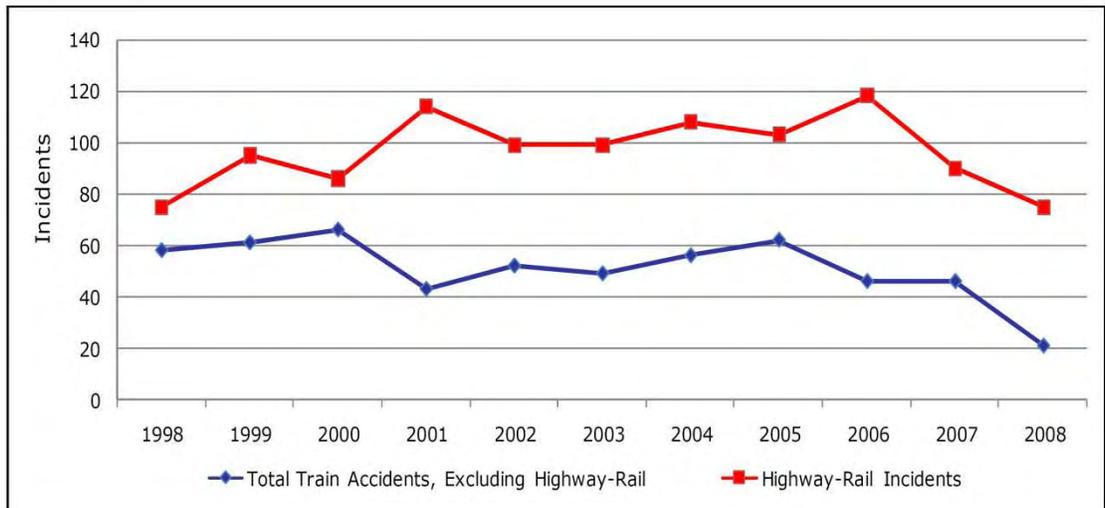
Source: Florida Department of Highway Safety and Motor Vehicles, Florida Traffic Crash Statistics, 2008

## High Springs Rail Rehabilitation TIGER II Discretionary Grant Application

Safety of the rail system is another important consideration for this project. Figure 11 shows rail incidents in Florida between 1998 and 2008. Although the number of incidents declined since 2006, number of fatalities increased as shown in Figure 12. The track condition of the project segment has deteriorated to the extent that operations should be immediately seized for safety reasons. A recent derailment incident due to poor track conditions caused approximately XXXXX of damage, as reported by the Florida Central Railroad. The rail rehabilitation will significantly improve the safety conditions of the track and hence support the long term national goal of achieving a high degree of transportation safety.

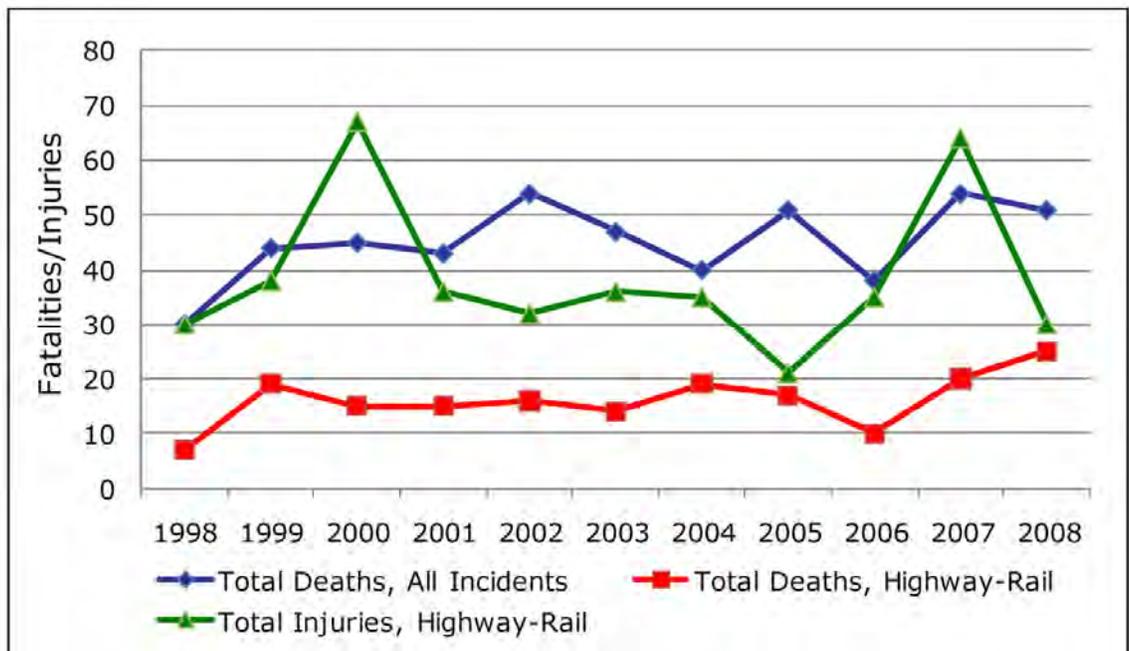
Other safety aspect to consider in the decision making process is the fact that railroads are inherently safer than trucks for transporting hazardous materials. Railroads and trucks carry roughly equal hazmat ton-mileage, but trucks have nearly 16 times more hazmat releases than railroads. If the project corridor is preserved for future industrial uses, having rail access would be the safest way of transporting hazardous materials.

Figure 11 – Rail Incidents in Florida, 1998 – 2008



Source: Federal Railroad Administration Office of Safety Analysis

Figure 12 – Fatalities and Injuries from Rail Incidents in Florida, 1998 – 2008



*Source: Federal Railroad Administration Office of Safety Analysis*

b. Job Creation and Economic Stimulus

The High Springs Rail Rehabilitation project will employ approximately 30 current Florida employees. The work to be performed will take approximately 45 days once construction commences. Given the nature of this type of work, additional design efforts will not be required. A period of approximately 90 days will be necessary to acquire all necessary materials. The results of obtaining this grant will also retain two full-time train crew positions.

2. Secondary Selection Criteria

a. Innovation

The Rehabilitation of the High Springs Rail line is a straight forward maintenance type activity necessary to preserve the existing rail infrastructure. The latest practices for rail rehabilitation will be utilized to minimize environmental impacts and to expedite the construction. The condition of the existing facility dictates that trains travel at a slower speed. This lower speed decreases the efficiency of the system and increases cost. As such, every effort will be made to deliver the project with the latest technologies available that might expedite the project.

### b. Partnership

This project represents a partnership between all levels of government and the private sector. The project will create a partnership between the Federal Government (USDOT), State Government (Florida Department of Transportation), Local Governments (Alachua County Board of County Commissioners, High Springs City Commission, Gainesville/Alachua County Council for Economic Outreach), and the private sector (Florida Northern Railroad and Prime Conduit, Inc.). It is through this partnership that this project has been developed and will be delivered.

The successful partnership for this project allows benefits to be obtained for an area far greater than the 13 mile corridor for which the construction will occur. The opportunities retained for future development along this corridor allows for more job opportunities and thereby provides benefits not only to Alachua County, but also to the adjacent counties. The reduction in the number of large trucks on the highways, traveling through communities, is a benefit that each small community will enjoy. Finally, the continued employment of the XXXXX employees at Prime Conduit, Inc. allows each family member to recognize the benefits of the project. The citizens that will realize the benefits of this project are considered part of the partnership.

This project has received support from each of the local governments, the Metropolitan Planning Organization Advisory Council as well as the office of Congressman Cliff Stearns and Enterprise Florida. Letters of Support from each of the following are included in Attachment 2.

- i) Alachua County Board of County Commissioners
- ii) City of High Springs City Commission
- iii) Metropolitan Planning Organization Advisory Council
- iv) Congressman Cliff Stearns
- v) Enterprise Florida

### 3. Summary of Benefit-Cost Analysis

A benefit cost analysis was conducted following the TIGER II guidelines to systematically compare the benefits and costs associated with the proposed project in order to support informed decision making. This section briefly summarizes the results of the analysis. The Benefit Cost Analysis Report is provided as Attachment 1 for additional information.

A benefit cost analysis is used to measure the dollar value of the benefits and the costs to all the members of society (in this context, “society” means all residents of the United States) on a net present value basis. The benefits represent a dollar measure of the extent to which people are made better off by the project—that is, the benefits represent the amount that all the people in the society would jointly be willing to pay to carry out the project, and feel as if they had generated enough benefits to justify the project’s costs accounting for the relative timing of those benefits and costs. The analysis involved establishing the existing conditions, future baseline, and future build alternatives; identifying and quantifying the full range of

## High Springs Rail Rehabilitation TIGER II Discretionary Grant Application

costs and benefits associated with the project including the likely timing of such costs and benefits; establishing appropriate rates and unit cost measures; monetizing and discounting of costs and benefits in a common unit of measurement in present-day dollars; determining a net present value of the proposed project; conducting sensitivity analysis to account for uncertainties associated with the key assumptions; and finally, reporting the results and uncertainties that support informed decision making.

Table 1 shows the monetary value of all costs and benefits associated with the project, discounted to present-day dollars. The present value of the benefits of the project is \$3,115,560. Based on these values, the benefit to cost ratio is computed to be 3.06. As such, the benefits of rehabilitating the rail line greatly exceed the cost. The results indicate that the project is a meritorious project and is expected to yield over three times the benefits than the costs incurred by the society. The estimation is conservative and the analysts exercised adequate rigor to provide confidence in decision making that the benefits of the project will exceed the project's costs on a net present value basis.

Table 1 – Net Present Value of the Proposed Project

Calendar Year	Project Year	Benefits (\$2010)							Costs (\$2010)			Discounted Net Benefits @ 7%	
		Transportation Efficiency Benefit (\$2010)	Crash Reduction Benefit (\$2010)	Emissions Reduction Benefit (\$2010)	Congestion Reduction Benefit (\$2010)	Noise Reduction Benefit (\$2010)	Pavement Cost Savings Benefit (\$2010)	Undiscounted Total Benefits (\$2010)	Discounted Benefits @ 7%	Capital Cost (\$2010)	Undiscounted Cost (\$2010)		Discounted Cost @ 7%
2011	Construction and Opening									\$1,621,111	\$1,621,111	\$1,515,057	-\$1,515,057
2012	1	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$803,015				\$803,015
2013	2	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$750,481				\$750,481
2014	3	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$701,384				\$701,384
2015	4	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$655,499				\$655,499
2016	5	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$612,616				\$612,616
2017	6	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$572,538				\$572,538
2018	7	\$501,646	\$136,976	\$98,740	\$26,829	\$2,304	\$152,876	\$919,372	\$535,083				\$535,083
2019	8												
2020	9												
2021	10												
2022	11												
2023	12												
2024	13												
2025	14												
2026	15												
<b>Present Value</b>									<b>\$4,630,617</b>			<b>\$1,515,057</b>	<b>\$3,115,560</b>

#### 4. Conclusion

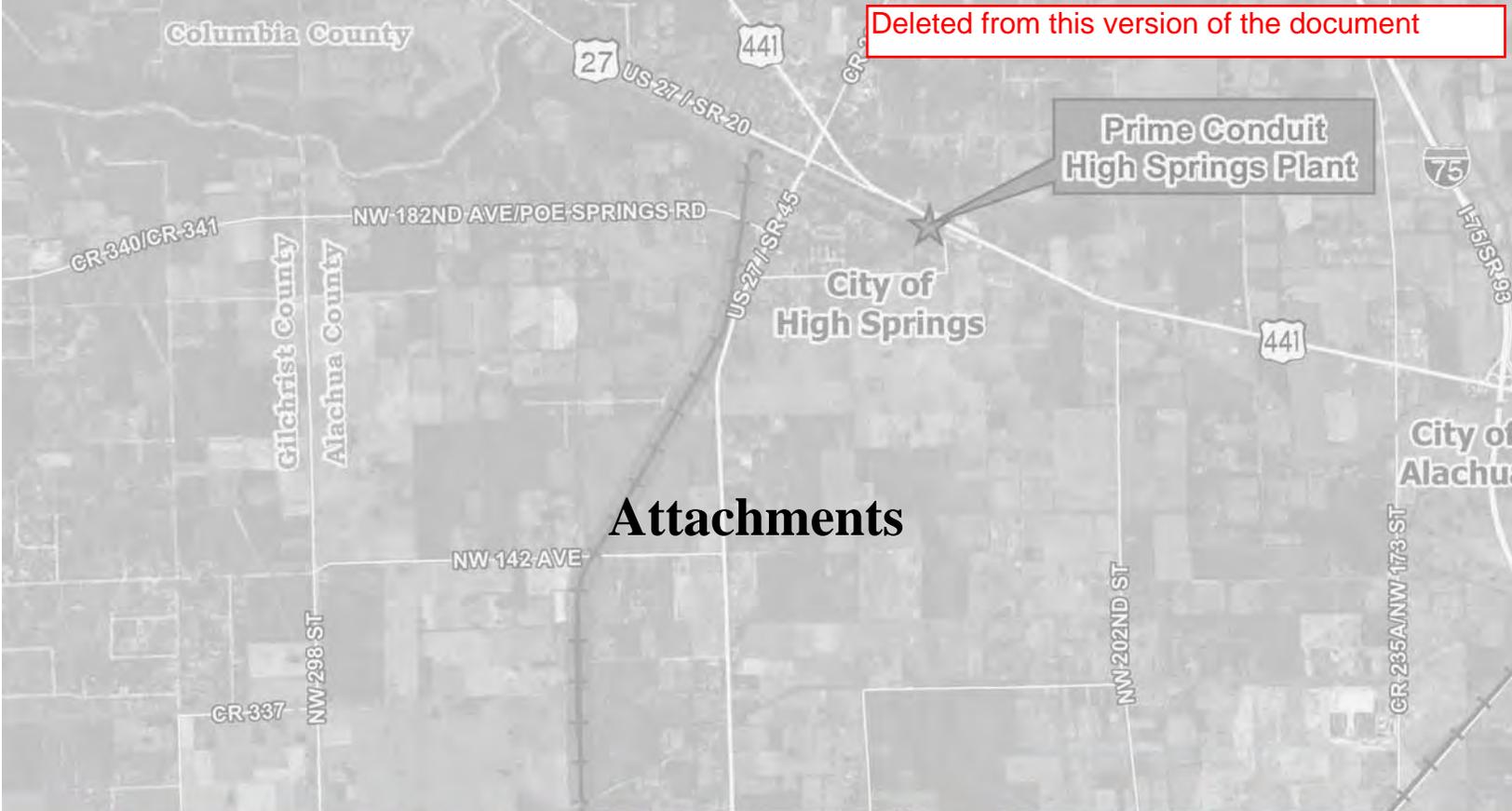
If funding is received to rehabilitate the existing rail line, a surface transportation asset will be maintained in a state of good repair, the plant will retain economic competitiveness for the long term, FNOR will achieve profitable operations as plant production increases, communities will forgo detrimental truck impacts on the quality of life and the environment, and the viability of the rail corridor will be preserved for future industrial uses. Public dollars invested on this project would generate more than adequate public benefits to justify the project. Given the expected returns from this modest infrastructure investment in terms of desirable long term sustainability, safety, economic competitiveness, state of good repair, and livability outcomes for the nation, the Florida Department of Transportation highly recommends this project for consideration for TIGER II discretionary funds.

**V. Project Readiness and NEPA**

The rehabilitation of this rail facility does not require any NEPA actions as this project does not go over any waterways. The Florida Northern Railroad will ensure all necessary permitting requirements, if applicable, are obtained in advance of any work efforts. There are no known permitting activities that are either required or anticipated at this time. The project is anticipated to be constructed within 150 days from the day Federal Authorization is received, refer to the project schedule provided as Attachment 3.

**VI. Federal Wage Rate Certification**

The project will comply 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. The Florida Department of Transportation, District Two Secretary Alan R. Mosley, P.E. provides this assurance. Refer to the Federal Wage Rate Certification provided as Attachment 4.



# Attachments

