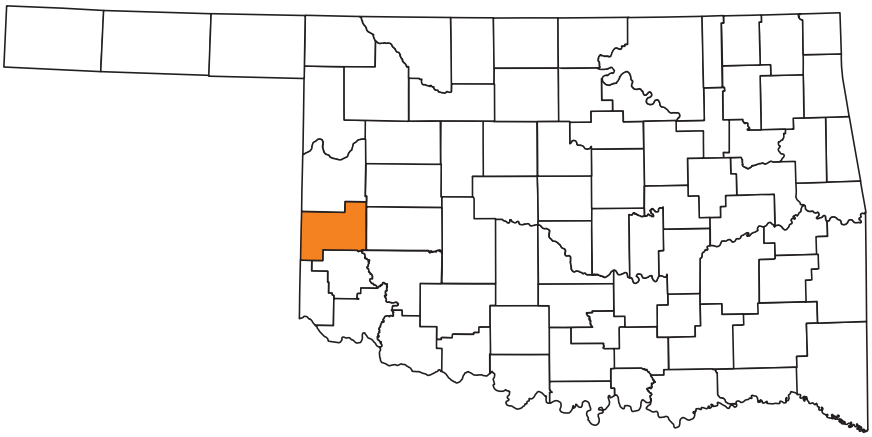
TRANSPORTATION INVESTMENT GENERATING ECONOMIC RECOVERY (TIGER)
DISCRETIONARY GRANT APPLICATION

OKLAHOMA

Erick-to-Sayre Freight Rail Rehabilitation



TIGER

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PROJECT TYPE:
Freight Rail

CFDA # 20.933
FY2013 National Infrastructure Investments

LOCATION:
Beckham County, Oklahoma

Oklahoma Congressional District 3
(U.S. Rep. Frank Lucas)

AREA: Rural

REQUESTED AMOUNT:
$1,831,000

TOTAL PROJECT COST:
$2,621,700

DUNS NUMBER:
824700074

CENTRAL CONTRACT REGISTRATION NUMBER:
339V2

PROJECT WEB ADDRESS:
http://www.okladot.state.ok.us/tiger/tiger_2013_erickbeckham

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EXECUTIVE SUMMARY

As part of its State-Owned Rail Program established to prevent a massive abandonment and removal of railroad track during deregulation in the 1980s, the State of Oklahoma purchased track in western Oklahoma, between the towns of Erick and Sayre, in Beckham County. This was part of a larger purchase, including a corridor that stretches from Erick to Clinton, Oklahoma, which is currently leased and operated by Farmrail Corporation.

The 15-mile segment of track between Erick and Sayre, Oklahoma proposed for refurbishment is currently in very poor condition, rated as "Excepted Track." As such, it can only support limited train movements, carrying no more than five railcars of hazardous materials **at low speeds** (less than 10 mph). Under these conditions it is not feasible to cost-effectively move the vast quantities of crude oil that are being produced near Erick in western Oklahoma and the nearby Texas panhandle. Recent developments in the oil and gas exploration business in western Oklahoma have thrown a spotlight on this fact because the tremendous and ongoing increase in production has created very high demand for freight rail service in the area.

The Anadarko Basin, which lies under western Oklahoma and nearby parts of Texas, has recently been flooded with oil and gas extraction operations as a result of the introduction of unconventional extraction techniques, known as horizontal drilling and hydraulic fracturing. The Oklahoma Energy Department believes production in the area will continue to rise, and the current transportation services, despite recent expansions, are becoming inadequate for meeting such demand safely, efficiently, and economically. The nearest pipeline head is over 200 miles to the east, nearby rail facilities are hitting capacity, and as will be shown, trucking is problematic.

As a result of the forecasting completed for western Oklahoma, the State of Oklahoma would like to upgrade the rail line it owns from Erick, Oklahoma to Sayre, Oklahoma. This line runs directly into the Anadarko Basin, and will reduce the need for moving crude oil – a flammable, hazardous cargo – by truck.

The project described below has **benefit/cost ratio of 4.5 using a 7% discount rate**, and 5.5 using a 3% discount rate. It will not only **benefit the Oil and Gas sector, it will also result in the railroad being able to supply faster and cheaper shipping services for agriculture and manufacturing businesses** for decades to come. It will result in greatly reduced truck traffic, and thus reduced emissions, lower maintenance costs to the highway system, and greatly improved safety overall.

In addition to the transportation and safety benefits, the project also provides numerous benefits to the surrounding communities and the State of Oklahoma through increased tax revenue, increased employment, and a rise in overall business activity as the market needs of incoming workers are met. The energy sector is a growth leader in the Oklahoma economy, supporting one-third of the gross state product.

Erick is a low-income area, with over 29% of its 1,052 residents living in poverty, and a median household income of $24,457. If this project is implemented, private investment will be made in truck-to-rail transloading facilities in Erick, creating short term construction jobs as well as long term employment opportunities in this area.

"This is the kind of economic stimulus sorely needed by rural communities that have difficulty diversifying their sources of employment and income."

— Guy Hylton, Sayre City Manager

The project would also help local manufacturers and agricultural shippers by ensuring competition in shipping. The current high demand for truck drivers has made shipping by truck in this area very expensive. Local businesses that rely on trucking to bring their products to market, including local wheat, cotton and peanut farmers, will become more competitive with the completion of this project.

This serves as a positive example of how rail banking by a state is highly beneficial to its citizens, since it takes infrastructure that would have been removed and returns it to profitable use without the need for building entirely new transportation systems.

Project Overview
Rehabilitate 15 miles of state-owned freight rail line in rural Beckham County to meet the needs of multiple shippers

Amount Requested
$1,831,000

Project Match
$790,700 (30% of total cost)

Support Website
http://www.okladot.state.ok.us/tiger/tiger_2013_erickbeckham

I. PROJECT DESCRIPTION

Recent technological advances in the extraction of oil and gas have created a unique challenge for many places in America – how to move vast quantities of crude oil without pipelines in place to handle the volume, and without generating an endless stream of heavy truck traffic clogging and degrading local, often rural roadways. Fortunately, America's renowned freight rail system has been able to fill the void. By tapping into the extensive network of existing rail lines in America, companies have a safe, efficient, and cost-effective way to move their product to market—a "rolling pipeline."

The use of rail mitigates the endless flow of truck traffic on highways that would otherwise be necessary, thus reducing highway maintenance costs, vehicle emissions, and improving overall safety. As highlighted at the 2011 annual Surface Transportation Board RETAC (Rail Energy Transportation Advisory Committee) meeting, moving crude oil by rail became an almost overnight phenomenon to help meet the needs of the petroleum energy sector in moving rapidly escalating production volumes. It is generating jobs, reducing foreign oil dependency, and making efficient use of an existing transportation resource rather than forcing companies to use expensive truck transportation or to await the construction of costly underground pipeline infrastructure that normally faces lengthy environmental challenges.

While the Bakken Shale formation in North Dakota and Montana is the most prominent example of the dilemma cited above, new technologies such as horizontal drilling and hydraulic fracturing are being utilized in many other locations in the United States. Areas that were previously "played out" and devoid of infrastructure are being brought back into production with sharply rising daily production and limited capacity available to handle it. Western Oklahoma and the nearby portion of the Texas panhandle has been experiencing this growth and the difficulties it brings. The Anadarko Basin is shown in **Exhibit 1**.

Until the advent of hydraulic fracturing, western Oklahoma oil and gas production was in decline, bottoming out in 2009. This decline was part of a national trend. However, new drilling technology "changed the game" virtually overnight, and many revitalized fields are now achieving record output. The Anadarko Basin, for instance, is forecast to produce 200,000 barrels of crude oil per day from western Oklahoma and the Texas panhandle by 2015[1]. As analyzed by the United States Geological Survey, the Anadarko Basin is believed to hold most of its undiscovered unconventional (extraction by horizontal drilling and hydraulic fracturing) resources within "the deep part of the Anadarko Basin in Oklahoma and Texas," which is currently the focus for drilling and production activities in western Oklahoma. Further, the USGS estimates that 79% of the Basin's oil remains undiscovered (see USGS Report on support website).

Erick is located near the center of this area, and will bring rail services closer to production areas in western Beckham County, Oklahoma, as well as Wheeler and Collingsworth counties in Texas. The project presented in this TIGER application seeks to offer a transportation infrastructure solution to support this vast new production.

Exhibit 1: Map Depicting Anadarko Basin and Oklahoma

1 Source: Oklahoma Department of Energy and Chesapeake Energy, 2011.

BENEFITS AND IMPACT OF THE 2011 TIGER GRANT FOR SAYRE, OKLAHOMA

Oklahoma DOT applied for and won a $6.8 million TIGER grant in 2011 to repair the rail yard in Sayre and improve the rail corridor between Elk City, Oklahoma and Sayre (see **Exhibit 2** below). In 2010 and 2011, with oil production volumes rising, oil tanker trucks were clogging roads headed to oil transloading facilities in Elk City and Clinton, Oklahoma (45 miles east of Sayre), or traveling even further east to Cushing, Oklahoma, where pipelines provided a connection to refineries. At the time, there were severe capacity constraints at the rail facilities in Clinton and Elk City, and pipeline capacity out of Cushing was also unable to handle the growth.

With the TIGER 2011 grant, Oklahoma DOT was able to upgrade the 49 miles of track between Sayre and Clinton (through Elk City), allowing much larger volumes of crude oil from western Oklahoma to be loaded onto railcars and brought safely and cost-effectively to Gulf Coast oil refineries via rail service. Oil transloading activity along this line went from 50 carloads per week in 2010 (before the project) to more than triple that today (160 carloads per week so far in 2013).

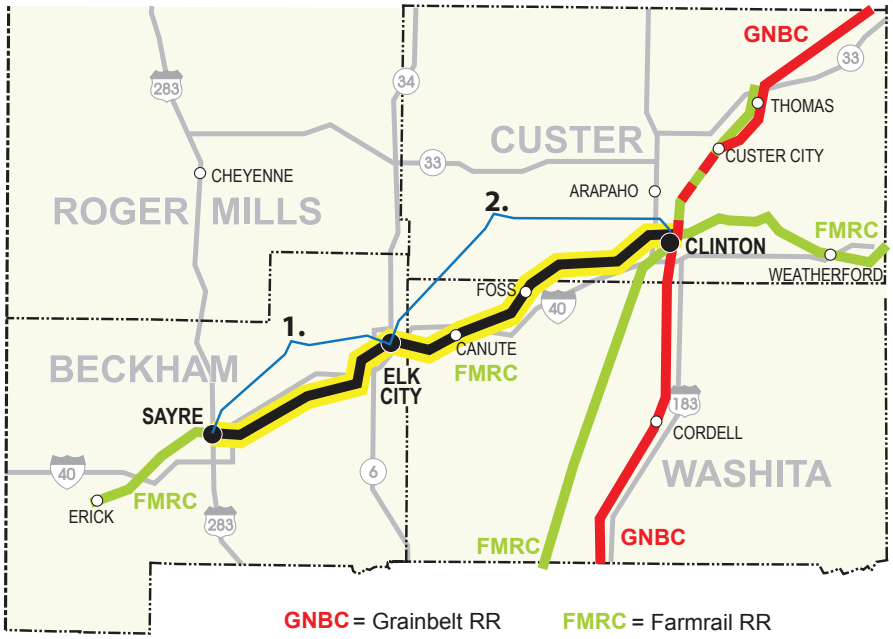
The tracks could handle more railcars, but the recently-improved railyard in Sayre is already (in less than two years) operating at capacity. Transloading facilities built there since 2011 are now loading oil onto railcars 24 hours a day, and the area surrounding the yard tracks in Sayre is built out. Crude oil comes to Sayre primarily from the north and west, from oil fields in Oklahoma, Texas, and even as far away as Colorado.

While demand exists for additional shipments, the railyard site at Sayre is limited, both in width and length, and no new capacity can be built there. With the addition of loading capacity at Erick, the 60-car trains currently running out of Sayre could be connected to 40-car trains arriving from Erick, to be assembled into 100-car "unit" trains, lowering shipping costs further. In general, the more railcars on a train, the lower the per-railcar shipping cost, both for the rail company, and the owner of the goods being shipped.

"We have seen petroleum-related rail traffic grow 40% between 2011 and 2013, and we anticipate even more growthin the future."

— Spokesman, Farmrail Systems, Inc.

Exhibit 2: Railroad Network Serving Beckham County



PROJECT COMPONENTS

The project includes improvements to a 15-mile rail corridor between Sayre and Erick, along with the construction of an industrial siding in Erick to enable the loading and assembly of 40-railcar trains.

The tracks are currently in poor condition (**Exhibit 3**), and require new ties, rehabilitation of grade crossings (**Exhibit 4**), and rehabilitation of two bridges along the corridor.

The tracks at Sayre connect with tracks along the Grainbelt regional rail service, which connect with two Class I railroad carriers, BNSF and UP, which would allow for deliveries from Erick to reach throughout the US and beyond our borders (via port facilities).

The costs of the project components are shown in **Exhibit 5**, below.

Exhibit 3: Current Condition of tracks between Erick and Sayre

Exhibit 4: Railroad grade crossing along the Sayre–Erick corridor

PROJECT PURPOSE

With oil production growing in the area west of Sayre, as well as throughout the Anadarko basin, it is clear that additional rail capacity is needed to bring crude oil from the oil fields to refineries located in other states. A solution to moving this vast production out of western Oklahoma and Texas in a cost effective, safe, and timely fashion which allows for continuous production without delays for pipeline construction, is to establish strategic locations for transloading of locally gathered crude oil from truck to rail, thereby removing large volumes of a toxic commodity from the highways and reducing emissions, congestion, and roadway maintenance needs. One railroad tanker car can hold 27,850 gallons of crude oil (compared to an average of 7,400 gallons for a tanker truck), and a typical train can move as many as 100 railcars at a time, over 2.7 million gallons of crude oil in a single trip.

In addition to expanding rail capacity in general, there is specific demand for rail service to and from Erick. Erick is closer to the production fields to the west, and would reduce the truck trip length for shipments currently headed to Sayre and Elk City. Three companies have indicated an interest in developing crude oil transloading capacity at Erick, and a company that moves oil extraction supplies out of Elk City has indicated an interest in being able to extend the rail portion of their Texas-bound shipments as far west as possible.

An additional benefit of moving the oil out of western Oklahoma by rail is that the oil can go directly to refineries without the need to use trucks on both ends of the product movement. Even where pipeline capacity is in place, pipeline delivery requires additional trucking activity to complete the full transfer from the end of the pipeline to a refinery. Farmrail Corporation, which operates rail throughout western Oklahoma, has already established the rail system connections needed with adjoining rail lines for direct delivery of crude oil to refineries throughout the country.

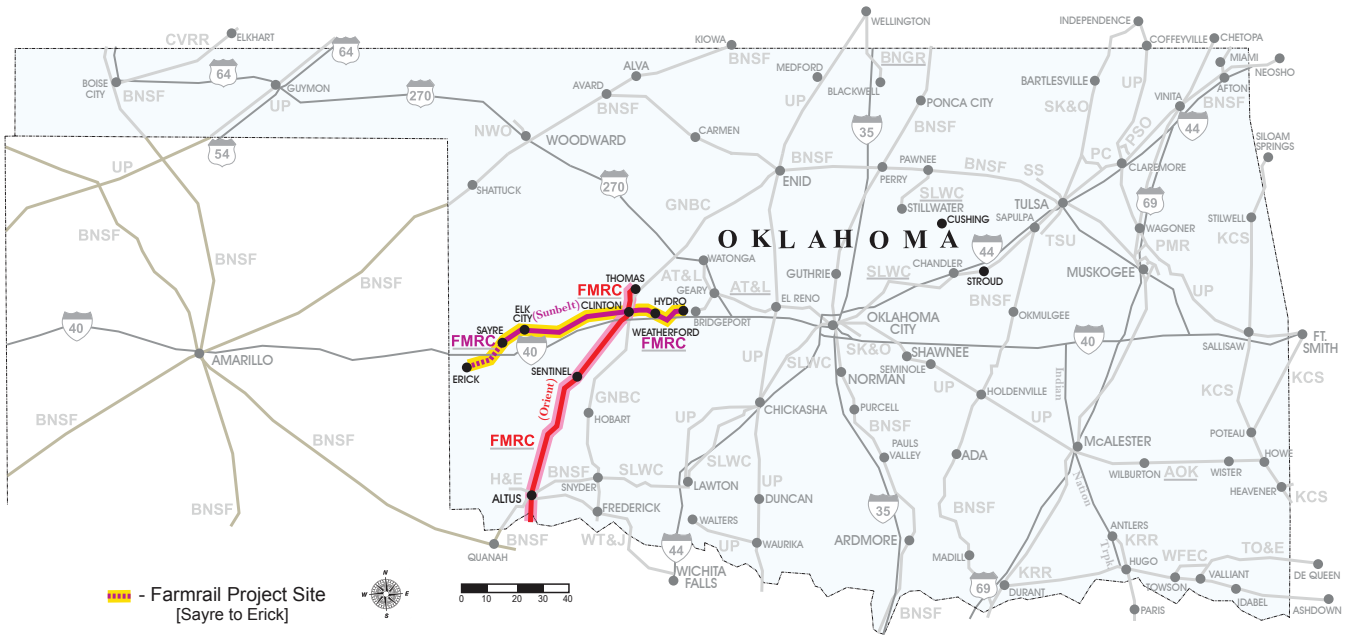
Pipeline vs. Rail

The State of Oklahoma is fortunate to own 161 miles of rail line that terminates within the Anadarko Basin (**Exhibit 6**). It is currently leased to Farmrail in a relationship dating from 1981. Farmrail is a subsidiary of Grainbelt Corporation (GNBC). GNBC also owns and operates a contiguous 176-mile railroad, providing an

Exhibit 5: Project Cost Estimate: Erick (MP 641) to Sayre (MP 629) Rehabilitation to FRA Class 1

Work Items and Units Required	Materials	Labor	TOTAL ($)
Install 19,500 ties	872,781	654,586	**1,527,367**
Rehabilitate 17 grade crossings	209,244	190,222	**399,465**
Brush cutting (13 miles)	–	101,824	**101,824**
Upgrade bridge 631.4	7,833	3,357	**11,190**
Upgrade bridge 632.2	11,190	27,974	**39,163**
Construct Industrial Siding (for loading)	335,685	207,006	**542,691**
Total	**1,436,732**	**1,184,968**	**2,621,700**

Exhibit 6: Oklahoma Rail System with Rolling Pipeline Project Highlighted



extensive rail network throughout the region (**Exhibit 6**).

While pipeline capacity has been added between Cushing and Gulf Coast refineries in recent years, the added capacity will likely not be enough to handle the continuing growth that is expected out of the Anadarko basin. Much of the pipeline capacity in Cushing and nearby Stroud is taken up by the high production levels coming out of other parts of the Anadarko, as well as the Bakken shale areas in North Dakota.

An additional consideration is that pipelines in Central Oklahoma, while providing a low cost and safe transportation system, may not be the ideal solution for getting oil from Beckham County and nearby parts of Texas to market. It is over 200 miles from this area to Cushing, and moving oil between Beckham County and Cushing would require thousands of truck miles daily, adding to the current high demand for long-distance truck drivers, as well as causing wear and tear on roads, consuming diesel fuel, and producing emissions along the way.

Further, the pipelines from Cushing are fixed between Oklahoma and the Gulf Coast. During a severe hurricane or other potential crisis in the Gulf of Mexico, Oklahoma's pipelines would not have anywhere to send their oil. Oil shipments by rail, however, could easily be re-directed in emergencies to bring oil to refineries in other parts of the country.

A near-term benefit of rail expansion plans compared to pipeline capacity expansion is speed. Where rail right-of-way is already in place (as it is for this project), capacity expansion can be permitted, designed, and built in just a few months, with minimal environmental impact, and relatively inexpensively. Constructing a new pipeline is expensive, and typically involves lengthy environmental reviews requiring remediation during construction. Once completed, the pipeline can only carry one type of product. But our proposed rail line improvement project will be able to not only transport oil to refineries, but also transport inbound oilfield materials as well as outbound agricultural products and natural resources. The recently improved, TIGER-funded Sayre-Clinton line has already handled over 1,100 rail carloads of (non-crude oil) materials just since January of this year.

"In addition to the crude oil activity, trains are used to distribute refined oil products, transport fertilizer, etc."

— Guy Hylton, Sayre City Manager

II. PROJECT PARTIES

The grant recipient would be the State of Oklahoma, administered through the Oklahoma Department of Transportation (ODOT). ODOT leases the rail line to a private operator through its State-Owned Rail Program.

Several entities and businesses will participate with non-monetary community and company support to assure the success of this project. ODOT, the Oklahoma Energy Department, and SWODA (Southwest Oklahoma Developmental Authority) are all participating in the proposed project as providers of in-kind support and information to assure the success of this endeavor.

III. GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS

The total project cost amounts to $2,621,700. Of this amount, a 30% match totaling $790,700 is being made by ODOT from state funds. Oklahoma's contribution will be available immediately upon receipt of the award.

Amount Requested From TIGER Fund: $1,831,000, or 70% of the project total.

Uses of project funds are shown in **Exhibit 5** on Page 4.

This project will be constructed primarily in a rural area.

IV. SELECTION CRITERIA

A. LONG-TERM OUTCOMES

i. State of Good Repair

The proposed project will rehabilitate the track between Erick and Sayre to Class 1 condition, which allows operation of trains up to 40 cars long, at speeds up to 10 miles per hour (mph). Currently the condition of the track allows for approximately 5 mph, and trains can pull no more than five cars of hazardous cargo (such as toxic, flammable crude oil).

The track fell into disuse when demand for rail service from the grain elevator in Erick decreased after a bad wheat harvest. Without large volumes, it is usually cheaper for customers to ship by truck, and when total shipping volumes are low, it is not financially feasible for rail operators to maintain service.

Because of the operating economics (i.e., the fact that the more railcars that are in a train, the lower the per-railcar cost), the increase in rail volumes along the Eric–Sayre–Elk City–Clinton line would allow for improved economies of scale, leading to lower costs for the rail owner (in this case the state of Oklahoma), and lead to lower per-railcar shipping prices for all customers along the line. In other words, if oil companies provide the expected new demand of 52 railcars per week from Erick, trains can be longer, and the cost of rail shipping for farmers and other customers will decrease all along the line, from Erick to Clinton.

Further, if this line operates at a profit (as recently as 2011 it was operating at a loss), it will enable Farmrail to further invest in the rail infrastructure that it maintains in this rural, low-income region.

The new investment would thus maximize the utility of the existing rail infrastructure as an energy-efficient transportation alternative to truck transportation.

The project will also improve the life-cycle costs of surrounding roadway systems, particularly I-40, by removing nearly 200,000[2] miles of heavy and long-haul truck travel annually from the highway system. Heavy trucks such as those carrying crude oil are estimated to cause 10.7 cents worth of damage to rural interstates for every mile traveled. Implementation of this project should therefore save over $20,000 annually in maintenance costs for I-40 and other roads in Beckham County.

ii. Economic Competitiveness

Erick and Sayre are located in Beckham County, in southwest Oklahoma close to the Texas border. For decades, this has been an Economically Distressed Area, with low incomes and high poverty. In 1989, the Census recorded Beckham County's per capita income as being 72% of the US average, dropping to 67% in 1999, with a fifth of the population (20%) living in poverty. Sayre's statistics were even worse, with per capita income at 48% of the national average and nearly a quarter of the population living in poverty in 1999 (Source: 2000 Census).

The picture is changing today – thanks to the high price of oil, and the advancements in extraction technology that have led to an increasing volume of oil coming out of the Anadarko Basin. There are a larger number of jobs in the area, including the direct jobs provided by the oil extraction industry (e.g., construction of oil wells, operations

2 While the project will replace a conservatively-estimated 391,285 truck miles from the road, half of those miles will be empty runs back to the oil wells. Empty trucks cause much less pavement damage than loaded ones.

and maintenance, and transportation of the crude oil, and the equipment and materials used to extract it), as well as indirect jobs in the restaurant and retail sectors providing services to the individuals directly employed by the oil industry.

Despite the increase in employment, this remains a low-income area according to 2010 Census data. Over 29% of Erick's 1,052 residents live in poverty, and median household income is $24,457. In Sayre, 16% of the population is below the poverty line and median household income is $33,500. Beckham, the home county for these two communities, shows 16% of the population in poverty, and median household income is$45,726.

While the oil-related growth is welcome, as production expands, the existing crude oil transportation system will be impossible to maintain – rail capacity will soon be reached along this Farmrail line if improvements are not made, oil pipeline capacity has little spare capacity despite recent improvements., and truck shipments are expensive, and damaging to the region's pavement, quality of life, and environment.

Beckham County's economic base also includes farming. The county is home to over 1,000 farms and ranches, tending 53,000 head of cattle and 50,000 acres of wheat fields. These farms produced $38 million in products according to the 2007 Census of Agriculture. Wheeler and Collingsworth counties also have a productive farm economy, producing $129 million and $50 million worth of agricultural goods, respectively, according to the 2007 Census of Agriculture. Much of the agricultural income comes from cattle, wheat, peanuts, and feed crops.

Both oil extraction and agriculture require a strong freight transportation system. Major freight movements into, out of, and within Beckham County include:

- Outflow of oil
- Inflow of materials needed to maintain oilflow at wells
- Inflow of equipment for drilling new wells
- Inflow of feed and fertilizer for ranches and farms
- Outflow of agricultural products (predominantly grain)

The existing transportation system in and around the Erick-to-Sayre corridor is under great strain, as the increase in demand for freight movements has led to an increase in the cost of shipping by truck. National demand for truck drivers has also increased, worsening this trend. This has put a strain on local businesses that rely on truck transportation, ranging from farms and oil producers to local grocery stores.

The proposed project will lessen the pressure on trucking by providing a second option for shippers. As noted above, the project is expected to result in reduced prices for rail shipping along the entire Farmrail line. Prices for shipping along national "Class I" rail carriers that Farmrail connects to can be kept competitive because the line connects to both BNSF and UP. This reduction in shipping costs will make a vast range of businesses in the county more competitive on a national level.

Why Invest in Rail Facilities at Erick?

The Anadarko Basin covers a large area, and there are two other railroads that terminate in the Texas panhandle, not much farther away from this rural part of the country. So why extend this particular rail line?

Investment in extending the Farmrail line to Erick has three justifications. First, western Oklahoma and the Texas Panhandle are quite remote and freight transport is predominantly

"If the State of Oklahoma can re-open the 15 miles of track between Sayre and Erick, it would allow us to capitalize on the tremendous energy growth in western Oklahoma and eastern Texas by providing another method of moving oil products to market as well as assisting with our agribusiness shipping needs."

— City of Erick official

via Interstate 40 where the share of truck traffic in parts of Beckham County approaches 50%. Access to rail is limited (**Exhibit 7**), and businesses in parts of this area have to travel a distance of 40 miles or more to reach a railhead.

Second, the Basin is large, and is projected to be producing 200,000 barrels per day by 2015. This equates to 307 railcars of oil or nearly 1,200 truckloads daily. Put simply, the region needs as many transportation options as possible. Even with the additional pipeline capacity being added in Cushing, and brand new rail transloading facilities in Sayre, and even if the two other rail lines are investing in similar projects to transport oil out of the Anadarko Basin (to our knowledge, no such plans exist), there will still be high demand for oil to be shipped through the centrally-located town of Erick, particularly as Sayre's transloading capacity is reached.

Third, there is a proven track record of the demand for rail transportation along this Farmrail line. As noted above, there is no room left available at the industrial park adjacent to the rail line in Elk City, and the rail yard built with the 2011 TIGER grant at Sayre is now nearly built out as well. Furthermore, private companies have expressed their interest in building crude oil transloading facilities at Erick, as well as an off-loading facility for materials used at the production sites.

Limitations on other Modes

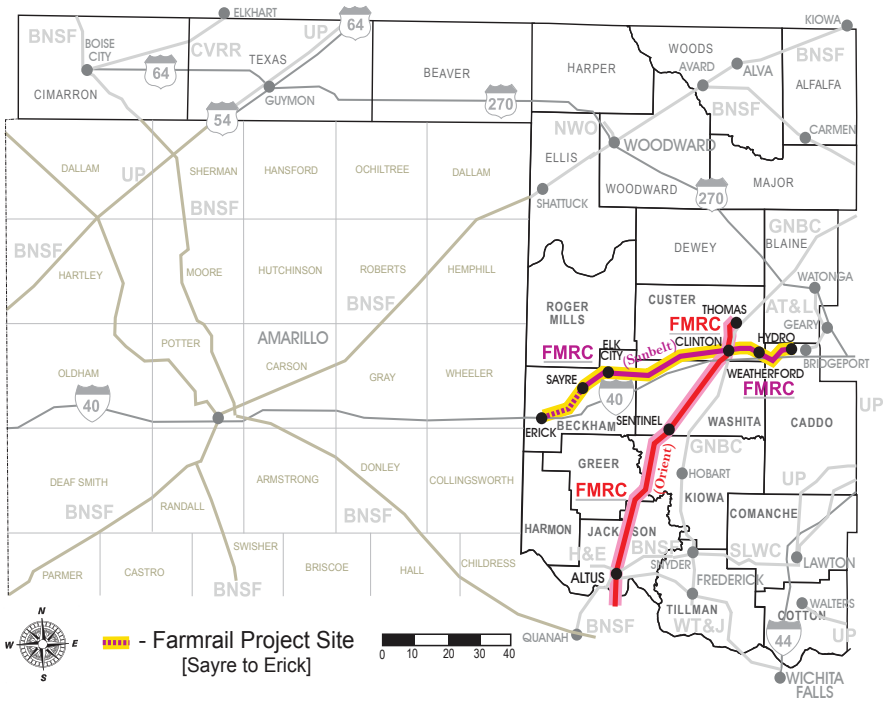
One of the reasons for the demand for rail service at Sayre and Erick is not just the cheaper cost compared to trucking the oil to regional termini and refineries, but also the fact that there are limitations on the growth of truck and pipeline shipments.

Truck: There is a local and national labor shortage for long-distance truck drivers. As oil is produced at the rigs, trucks are needed to bring it to market – either to rail heads (e.g., at Sayre or Erick), or to pipeline intake locations which are located 200 miles to the east. Currently new drivers cannot be trained fast enough to meet demand, increasing truck shipment costs.

Shipping one tanker truck of oil from a rig in western Beckham County to the pipeline and storage facilities in Cushing, and then back for more oil is an entire day's labor for a truck driver. In comparison, a truck traveling from the same rig to a new rail transloading facility in Erick might be able to make three or four round trips in a day, enabling each individual driver to bring 3 to 4 times as much oil to market each day.

Pipeline: At present, the nearest pipeline heads are located in Cushing and Stroud, both of which are 200 miles east of Erick. Cushing is a major pipeline and oil storage area, but there are concerns about how much more crude oil it will be able to handle, despite the recent increase in capacity. Stroud is close to Cushing, and unlike Cushing, is accessible by rail. Unfortunately for Anadarko oil producers, the pipeline head at Stroud has been reserved for oil coming by rail from the Bakken shale formation in North Dakota. No capacity is available at Stroud to accept Anadarko oil.

Exhibit 7: Counties in Western Oklahoma and the Texas Panhandle Have Limited Access to Rail



"The folks in town are beneficiaries because of a boost in local sales taxes… a primary revenue source for Oklahoma cities and towns, and as a result of increased activity, we see more of the employees related to the oil and gas business who eat, shop, and re-fuel in Sayre. All of these mean more sales tax generated for our town."

— Guy Hylton, Sayre City Manager

response costs, as well as saving lives and reducing injuries and property damage.

- **Reduced vehicle emissions:** rail is more fuel efficient and is less polluting than truck travel on a per ton-mile basis.
- **Reduced pavement damage:** heavy trucks such as those used to ship oil in from oil wells are estimated to cause $2.27 of damage to interstate roadways for every thousand truck miles traveled.

In addition to these environmental and livability benefits, one of the main economic needs for the project is to facilitate the flow of oil out of the Anadarko so as not to have the limitations of the existing local transportation system acting as a brake on growth. The expansion of capacity and the lowering of freight shipping costs will have spillover benefits throughout the economy, improving the competitiveness of local businesses and possibly attracting new businesses, helping to diversify the local economy over the long term.

Right now, new oil wells are being drilled, maintained, and monitored across the Anadarko. This has increased employment, which has led to a tight housing market, and new residential construction in Elk City and Sayre, as well as smaller towns in Beckham County. This residential growth has in turn lead to new commercial development – expanded grocery stores, new restaurants, etc. Towns and cities that a few years ago were struggling to meet the basic needs of their citizens can now spend money on improving local infrastructure and services. This effect will continue and expand as long as there is a workable system for getting oil to refineries.

Without the project, growth in Anadarko oil production may slow down or stop prematurely as producers find moving oil out of the area too expensive or logistically difficult compared to oil in other regions or outside the US.

The job and income growth resulting directly and indirectly from the construction of the project is covered in more detail in the Job Creation section, but what must be understood is the economic impact of not building the project. Failure to expand rail capacity at Erick in the next one or two years will significantly hamper opportunities for economic development and job/income growth in Erick, and throughout Beckham County.

National/Interstate Benefits

The project will have a number of national benefits similar to the local benefits.

The project will lower transportation costs for products moving from other states into southwestern Oklahoma, including fracking sands, rig drilling equipment, fertilizer, and grain for ranchers. For any business trying to bring their products to this part of the country, the cheaper rail freight network will enhance their competitiveness, while lowering the cost of business locally.

The project will allow for flexibility in the transportation system, which is currently running into difficulties throughout the Midwestern states related to shipping large volumes of crude oil to refineries located in coastal states. Oil pipelines only reach a limited number of locations. The pipelines out of Oklahoma, which are already straining their capacity, end at Gulf Coast refineries in Texas and Louisiana. With rail, the entire nation is open, and Anadarko oil could reach refineries in California or New Jersey if Gulf Coast refineries start to hit capacity restraints from all the new oil coming from Canada and the Dakotas, or simply in anticipation of a severe hurricane that may limit operations.

Exhibit 8: Although Trucks are Still Needed Locally as Part of the Overall Delivery Process of Crude Oil, Their Highway and Long-haul Use can be Reduced Tremendously by Utilizing Freight Rail

Any project that shifts large volumes of freight traffic from truck to rail will help to provide some relief to the trucking labor shortage problem. The shortage is expected to continue as new hours-of-service limitations continue to go into effect, increasing truck shipping costs which have already been growing over the past few years as a result of fuel prices. It is currently difficult to find truck drivers nationwide, particularly for long-haul trips. By shortening nearly 200 weekly truck trips in southwestern Oklahoma and Texas, the available long-haul truck labor can be reserved for trips that are not so easily shifted to other modes.

The project will help to strengthen the national rail system by maximizing the utility of existing rail infrastructure. Specifically the Erick-to-Sayre extension would add an expected 52 weekly railcars to existing tracks operated by Farmrail, Grainbelt, and BNSF. While incremental, any growth in rail shipments on existing tracks allows for the rail owner to reduce per-carload costs while increasing revenue. This cost savings can be shared with customers and/or used to expand maintenance or capital improvement programs. Either way, this project will strengthen this important and energy-efficient transportation option that is vital to our nation's economy.

The project will help reduce – albeit by a small amount – our dependence on foreign oil by helping reduce the cost of domestic energy sources, strengthening the nation's rail system, and reducing the need for the diesel fuel needed for shipments in and around Beckham County.

iii. Livability

Changes in land use and transportation distribution patterns are expected due to a rise in local businesses needed to meet the service and market demands typically driven by large industrial growth such as that taking place in Sayre, and predicted to a lesser extent in Erick should this project go forward.

In turn this will allow local citizenry to stay close to home and avoid long drives to work and shopping, as their needs begin to be met locally—indeed, the local substate planning district, SWODA (Southwest Oklahoma Development Authority), stated that growth in local business enterprises, including restaurants and new hotels, has been emerging over the past few years a result of the growing energy production beginning to drive service employment.

SWODA also mentioned a recent shift in public life as increased tax revenues have enabled Sayre to begin a sidewalk and lighting installation program and address much-needed city-wide repairs.

iv. Sustainability

The transportation capacity made possible by moving crude oil by train is staggering when compared to truck hauls. The individual railcars are three to four times more efficient than tanker trucks, capable of carrying 27,300 gallons compared to an average of 7,140 gallons for a truck. When multiplied by the number of railcars possible in a single rail delivery (up to 100 railcars) the numbers are huge. A single train can transport as much oil as 382 trucks.

Using estimates of the truck miles saved annually with the project in place, emissions reductions will be in the neighborhood of 169 tons annually, nearly all of which is carbon dioxide (CO_2). This will make our air easier to breathe while reducing the impact of greenhouse gas emissions on climate.

In addition, by using rail instead of truck between Erick and Sayre or Elk City, nearly 41,000 fewer gallons of diesel fuel will be needed.

v. Safety

"Improved rail infrastructure will help diminish the number of heavy trucks carrying hazardous materials traveling on our highways."

— Senator Mike Schulz

Although long-term solutions to the movement of crude oil typically involve the installation of pipelines, as previously discussed, this solution will take a great deal of time and money, and often involves significant issues with gaining environmental clearances. The recent increased need for its use caught the pipeline market by surprise, forcing near-term dependence on truck or rail "rolling pipelines" where available.

When compared side by side, rail makes a compelling case over trucking in the area of safety. In every category measured by the United States government, rail is significantly safer than trucking. Whether it is worker safety, reportable hazmat calls, or accident rates, rail is hands down safer and more reliable than trucking. Since 1980, rail crossing accident rates have declined each and every year. In regards to this specific project, Farmrail has only had two accidents on its entire system in the past seven years, and both were property damage only.

While long-distance truckers who deliver hazardous cargo are typically well-trained, and have a low accident

Railroads are the safest way to transport hazardous materials. Railroads and trucks carry roughly equal hazmat ton-mileage, but trucks have nearly 16 times more hazmat releases than railroads.

— nationalatlas.gov

rate, when you compare the accident potential of one train on a dedicated track vs. 382 trucks traveling at high speeds surrounded by other vehicles, trucks just cannot compete.

Although trucks will still form a vital part of the crude oil production cycle locally, bringing oil from rigs to either railheads or pipelines, the advent of a new, closer, railhead for shipping crude oil will shorten the distance for trucks coming from areas west of Erick, thus reducing truck-miles significantly.

vi. Project Readiness

This project is truly "ready to go," as no new right-of-way will need to be acquired for the long-established rail line, which was originally part of the Rock Island Line. As noted below in Section V, no additional environmental analysis, design, or permitting/ approval is needed. There are no issues that will slow the advancement of this project.

As shown in **Exhibit 9**, the project offers a very quick completion schedule, six months from ground-breaking to operation. The track upgrade and siding construction have already been calculated and engineered, the proposed work can be achieved with "off the shelf" materials and supplies, and contracted track gangs can be mobilized quickly. While the project schedule shows a start-date of January 1, 2014, this date was chosen simply based on the assumption that USDOT commits TIGER funds in the Fall of 2013. Should TIGER awards move forward at an expedited pace, so too can this project be expedited, with the procurement process starting immediately upon notice of award.

Oklahoma DOT is ready to move forward with this project, just as it was ready to proceed quickly with the 2011 TIGER grant received for the Sayre-to-Clinton Farmrail project. In 2011, Farmrail began engineering and procurement as soon as the award announcement was made, and was spending money 60 days after receipt of the award. Within less than a year after the award, the project was partially up and running, and initial demand for the service was even stronger than expected. The project is scheduled for completion in June 2013 and 80% of TIGER funds are expended. Oklahoma DOT also received a 2009 TIGER grant award for the reconstruction of the I-244 bridge in Tulsa. That project was completed on time, and all TIGER funds have been expended.

Regarding future support for rail operations and future track maintenance, that will be covered under Oklahoma DOT's agreement with the operator of the rail line, and is expected to be more than covered by the income received from the companies shipping oil and other products on this line.

Exhibit 9: Project Schedule and Construction Expenditures (in 2012 $)

Task	Q1 2014 (Jan 1 – Mar 31)	Q2 2014 (Apr 1 – Jun 30)	TOTAL
Install 19,500 ties	763,683	763,683	**1,527,367**
Rehab 17 grade crossings	199,733	199,733	**399,465**
Brush cutting (13 miles)	50,912	50,912	**101,824**
Upgrade bridge 631.4	11,190	-	**11,190**
Upgrade bridge 632.2	39,163	-	**39,163**
Construct Industrial Siding	-	542,691	**542,691**
Total	**1,064,681**	**1,557,019**	**2,621,700**

Exhibit 10: Companies are Establishing New Businesses in Western Oklahoma as Part of Expanding Anadarko Basin Operations

B. INNOVATION

"New oil takeaway capacity opportunities increase the incentive to produce domestic crude oil supplies, thereby encouraging a reduced reliance on imports from unstable regions of the world."

— C. Michael Ming, Oklahoma Secretary of Energy

While moving oil by rail is not a new enterprise, the scale of oil being moved in this fashion is a relatively new phenomenon and has resulted in improvements and innovations to the rail infrastructure features utilized for the endeavor—they are becoming safer and more efficient, capable of handling up to 100-car unit trains. Additionally, the large volume of oil being produced now is directly due to innovations in oil and gas production via horizontal drilling and hydraulic fracturing. These two areas combined are generating new production systems capable of more efficiently exploiting existing energy fields and getting products to market faster than ever and at more reasonable rates when rail line densities are raised. Our specific project is not expected to result in any technological innovation, but it will result in the means to move the vast new crude oil production out of the production fields in more efficient methods.

C. PARTNERSHIPS AND DISCIPLINARY INTEGRATION

The State of Oklahoma is working together with the cities and towns in western Oklahoma, the federal government, and private enterprise to make this project a model for cooperative public-private infrastructure efforts in rural America. Oklahoma has a long and rich history when it comes to energy production and agriculture, and this project will enhance the productivity and efficiency of both these economic sectors.

The State of Oklahoma is providing a 30% match for the project. The proposed project has also received support letters from an array of individuals and entities including but not limited to: the City of Sayre, the City of Erick, SWODA, the Oklahoma Department of Energy, and the Oklahoma Department of Transportation.

D. RESULTS OF BENEFIT-COST ANALYSIS

A formal benefit-cost analysis (BCA) was conducted for this project using best practices for BCA in transportation planning, and reflecting all current TIGER grant application guidelines. It is important to note that a formal BCA is not a comprehensive measure of a project's total economic impact, as many benefits cannot be readily quantified or occur under conditions of uncertainty.

However, to the maximum extent possible given available data, the formal BCA prepared in connection with this TIGER grant application reflects quantifiable economic benefits. It covers four of the five primary long-term impact areas identified in the TIGER grant application guidelines:

- **State of Good Repair:** The project funds will be spent on rehabilitating the track on the 15-mile state-owned rail corridor between Sayre and Erick. The track between Sayre and Elk City is currently in poor condition (Excepted Track), which has restricted the speed and carrying capacity of this stretch of railroad to the point where it has fallen into disuse. One this track is rehabilitated, it is estimated that

it will handle 52 rail cars a year, replacing 391,000 truck-miles of travel annually, primarily on I-40.

- **Economic Competitiveness:** This project will have an impact on local, regional, and national economic competitiveness by reducing rail shipping costs for oil shippers, farmers, and industry, allowing them to improve their logistics practices and expand markets for both domestic and international shipments. This will improve the competitive position of local agricultural and business enterprises, while reducing, somewhat, our nation's dependence on foreign oil sources.
- **Environmental Sustainability:** the project will result in a major shift of freight movements within the Beckham County area, from trucks to rail. Rail is much more fuel efficient, and produces anywhere from 30% to as little as 8% of the emissions of trucks per ton-mile carried.
- **Safety:** By shifting freight movements of crude oil, a hazardous material, from truck to rail, this project will reduce the number of vehicle accidents and spills. Trucks transporting hazardous materials have nearly 16 times more hazmat releases than railroads[3]. Further, despite the increase in rail freight tons carried, the addition of one train per week traveling along this line at 10 miles per hour is not expected to increase the incidence of rail accidents.

Given the caveats, the computed benefit-cost ratio for the Farmrail project is 4.5 using a 7% discount rate (**Exhibit 11**). The BCA compares the capital construction costs to the quantifiable benefits of the project for 10 years following construction. After 10 years of use, the railroad will need to again be rehabilitated, so no residual project value was assumed past 2024.

The quantified project benefits are:

1. Reduced cost of expected crude oil shipments
2. Reduced cost of expected fracking sands shipments
3. Reduced pavement damage to highways
4. Emissions reductions
5. Safety benefits (reduced crashes)

Discount Rates

Federal TIGER guidance recommends that applicants discount future benefits and costs to 2012 present values using a real discount rate of 7% to represent the opportunity cost of money in the private sector. TIGER guidance also allows for present value analysis using a 3% discount rate when the funds currently dedicated to the project would be other public expenditures. This is the case for this project, where the entire 30% will come from state funds. The BCA ratio at 3% is 5.5 to 1.0.

The project benefits are generally presented below using the more conservative 7% discount rate to demonstrate that the project's long term benefits clearly outweigh the project's costs.

Measurable Costs and Benefits

Exhibit 11 summarizes the cost and the quantifiable benefits of the project in terms of Present Value. Detailed analysis of costs and benefits, including data sources and methodology descriptions, are available on the project's support website (http://www.okladot.state.ok.us/tiger/tiger_2013_erickbeckham) in the BCA Technical Memo.

As shown in the table, the present value of the project's capital cost (at 7%) is valued at $2.45 million. The benefits have an estimated present value (after subtracting out the ongoing operations and maintenance costs) of $11.0 million over the 10-year period, yielding the 4.5 BCA ratio.

Exhibit 11: Benefit Cost Analysis Summary (in Thousands of 2012 $)

Category	Present Value at 7%	Present Value at 3%
Construction Cost	$2,450	$2,545
Evaluated Benefits		
Rail Maintenance Cost Savings	-$671	-$846
Reduced Cost of Oil Shipments	$10,945	$14,028
Reduced Damage to Roadway	$136	$172
Emissions Savings	$76	$96
Net Safety Benefits	$482	$608
Total Evaluated Benefits	**$10,969**	**$14,058**
Net Present Value	**$8.519**	**$11,512**
BENEFIT/COST RATIO	**4.5**	**5.5**

3 nationalatlas.gov/articles/transportation/a_freightrr.html

BCA Assumptions

The benefits of the project are derived by comparing Build conditions to No Build conditions. Under the No Build, it is assumed that the project is not built, and that trucks continue to be used to ship oil out of the Anadarko basin, and to bring in materials used for oil extraction. To be conservative, it is assumed that this traffic would be traveling to Sayre (in the case of crude oil), and to Elk City for the other materials. This would shorten each truck trip by 30 miles round trip for crude oil headed to Sayre, and by 64 miles round trip for fracking materials headed out from Elk City. In reality, with rail capacity being reached in Sayre and Elk City, it is possible that some of the oil would be trucked further east to other railheads, or even to pipeline heads in Cushing, so the actual truck mileage reduction (and the pavement damage, emissions, and safety benefits that are derived from it) might be greater than that shown here.

To ensure that the analysis did not overpredict demand, an analysis was done to see if it was reasonable to assume that another 40 railcars of crude oil per week would be shipped (from Erick) along the Sayre-to-Clinton rail line in 2016. While Farmrail reports 40% growth in the past two years on the Sayre-to-Elk City line, the assumed additional 40 railcars of crude oil per week coming from Erick would represent an additional 24% increase above today's levels. This analysis was based on the 200,000 barrel per day production estimate from the State Energy Department for 2015, which was broken down into railcarloads. Railcars hold 27,300 gallons or about 650 barrels of oil. Daily production of 200,000 barrels would fill 307 railcars per day, or about 2,149 per week.

The Anadarko field is large, and Sayre and Erick are centrally located within it, so it was estimated that only 30% of the oil would be in Erick's likely service area. Thirty percent of 2,149 carloads is 644 railcars per week, indicating that there should be more than enough demand from producers to maintain the current level of crude oil shipment by rail (160 cars per week) as well as the additional expected 40 rail cars per week, and quite possibly more.

The 200,000 barrels per day production level will not be reached until 2015, so a gradual increase was assumed between the project completion in Summer 2014 and full build in 2016 (see **Exhibit 12**).

The benefits described in detail below were all derived by comparing the cost and impacts of moving the 2016 (full-build) commodity levels (that is, 40 railcarloads of crude oil, and the estimated 12 railcarloads of fracking materials) either by truck, in the No Build, or by rail, in the Build.

In the No Build, oil transloading is assumed to be taking place in Sayre, and No Build fracking material shipments are assumed to be leaving

Exhibit 12: Expected Weekly Rail Traffic Between Erick and Sayre

Year	Crude Oil Shipments	Fracking Sands
2014 (2nd half)	10 cars/week	3 cars/week
2015	28 cars/week	8 cars/week
2016–2024	40 cars/week	12 cars/week

Exhibit 13: Weekly Comparison of Rail and Truck Shipments With and Without the Project

	NO BUILD		BUILD	
Year	Crude Oil Shipments (to Sayre)	Fracking Sands Shipments (from Elk City)	Crude Oil Shipments (to Erick)	Fracking Sands Shipments (from Erick)
2014 (2nd half)	153 truckloads (no railcars)	46 truckloads (no railcars)	10 rail cars & 115 truckloads	3 rail cars & 34 truckloads
2015	153 truckloads (no railcars)	46 truckloads (no railcars)	28 rail cars & 46 truckloads	8 rail cars & 15 truckloads
2016–2024	153 truckloads (no railcars)	46 truckloads (no railcars)	40 rail cars (no truckloads)	12 rail cars (no truckloads)

Exhibit 14: Weekly and Annual Truck-Mile Savings with the Project

	Change in Truck VMT (Weekly)		Change in Total ANNUAL Truck VMT
Year	Crude Oil Shipments	Fracking Sands Shipments	
2014 (2nd half)	-1,138 miles	-760 miles	-98,733 miles
2015	-3,208 miles	-1,976 miles	-269,605 miles
2016–2024	-4,588 miles	-2,936 miles	-391,285 miles

VMT = Vehicle-Miles Traveled

from Elk City, where these material suppliers are currently based. The resulting truck-mile reduction is shown in **Exhibit 14**. Note that due to the capacity differential between trucks and railcars, 40 railcarloads of materials equates to 153 truckloads, and 12 railcarloads equates to 46 truckloads.

Rail Maintenance

This is not a project benefit, but a project cost. On average, to maintain "Class 1" condition on this type of rail line, it costs $6,810 per mile per year. At 15 miles in length, average costs per year (for all years 2015 through 2024) is assumed to be $102,150.

As shown in the summary table (**Exhibit 11**), the present value of this cost is $670,522 at a 7% discount rate, and $845,891 at a 3% discount rate.

Reduced Cost of Oil Shipments

Reduced costs of shipping oil from Erick vs. Sayre or Elk City was calculated using the following cost assumptions:

- The cost of driving a crude oil truck 30 miles round trip between Erick and Sayre would be $131
- The cost of driving a fracking materials truck 64 miles round trip between Erick and Elk City would be $279
- The cost of shipping by rail on Farmrail from Erick to Sayre is $50
- The cost of shipping by rail on Farmrail from Erick to Elk City is $50

The project, as described previously, will reduce Farmrail labor and fuel costs per carload, while bringing in extra revenue from more carloads being moved. The exact benefit is difficult to calculate, as it will depend on total customer volumes, diesel fuel prices, the number of railcars in a train, and other factors, so a $50 additional cost per rail car was assumed for shipments headed from Erick to Sayre.

Following the above assumptions, with the truck and rail traffic levels shown in **Exhibit 13**, the total annual cost savings for shippers would total $1.6 million beginning in 2016. Present value for the 2013–2024 period is $10.9 million.

Reduced Pavement Damage to Highways

The project is expected to handle 52 railcar round-trips each week. As shown in **Exhibit 14**, this would remove 391,000 miles of truck travel from Beckham County roads (primarily I-40) every year starting in 2016.

According to the "Addendum to the 1997 Federal Highway Cost Allocation Study Final Report" (FHWA, May 2000) it is estimated that trucks weighing 60,000 pounds cause $0.044 dollars of damage (in 2012$) for every mile traveled on a rural interstate highway. Trucks weighing 80,000 pounds cause $0.169 dollars of damage on these roads. These two figures were averaged (to $0.107 dollars per mile) for the assumed weight of the truck movements that are part of this analysis.

Because half of the truck miles are empty (e.g., crude oil tanker trucks returning to oil wells from the railheads), this analysis conservatively calculated only the fully-loaded truck miles traveled. In 2016, the 10.7 cents of damage caused per each of the 195,600 fully-loaded truck vehicle miles traveled (VMT) under the No Build, would add up to $20,900 in pavement damage each year, adding to the life cycle costs of I-40 and other roads (e.g., access roads to the Sayre Yard).

The present value of these project benefits for the 2014–2024 analysis period are thus $136,100.

Emissions Reductions

The 391,285 truck miles removed from the road each year would remove a substantial volume of pollutants from the air, an estimated 241 tons of CO, CO_2, NO_x, SO_x, volatile organic chemicals (VOC) and particulate matter (PM_{10}). The vast majority of these pollutants by weight consist of CO_2. Over the 10-year life of the project, total truck pollutant reductions add up to an estimated 2,395 tons.

Project emissions impacts also have to account for increased rail emissions between Erick and Sayre. While researched turned up a range of rail emissions information, a conservative estimate of 30% of truck emissions per ton-mile was used. This added up to 72 tons of rail emissions annually.

The net emissions reduction is thus in the range of 169 tons per year. Using TIGER guidance to place a dollar value on the emissions reductions, the present value of the net emissions reductions over the life of the project is $76.4 million.

Safety Benefits

As with emissions, safety benefits were evaluated separately for rail and truck travel. The reduced truck miles traveled will have a direct impact on reducing highway crashes. Using state crash data from 2010, along with accident cost values provided in the TIGER guidance, the cost of crashes per million miles traveled in Oklahoma is $188,763 in 2012 dollars.

Using the truck VMT removed from the roadway, the present value of the truck related safety benefits is $481,890.

True accident costs might be larger, as these trucks are filled with hazardous crude oil, which can lead to higher levels of damage, as well as clean-up costs. This cost effect was not estimated for the BCA, except to the extent it is included in the insurance component of the truck shipping costs.

An attempt was made to calculate increased rail accidents that might be expected from the project's growth in rail travel. However, it approaches zero. Currently, the accident rate for Farmrail in this part of Oklahoma is very low – two accidents in the past six years, during which over 31,000 carloads were shipped, most on 25mph track. Both of these accidents were property damage only (no injuries or deaths) and fault was placed on automobile drivers.

Interestingly, though, while the impact of this project on truck travel will be substantial – nearly 200 fewer roundtrips weekly, and 391,285 truck-miles removed annually, train traffic will not grow much. Even at full build in 2016, with an additional 52 rail cars shipped each week, at 40 cars per train, the growth is just one or two additional trains per week. Once these railcars are added to BNSF or other Class I trains, which are often 100 or more railcars long, the increase is less than one additional train per week. At the speeds expected along the Erick-to-Sayre route (10 mph), it is unlikely that any increase in rail accidents resulting from this project would noticeably reduce the safety benefits of the removed truck VMT.

Non-Quantifiable Costs and Benefits

There are a number of other project benefits as well as costs that could not be reasonably quantified for the benefit-cost analysis. Among these are:

- **Benefits to other shippers:** While the benefits of reduced costs for shippers of crude oil and fracking materials is accounted for in the BCA, the impact of this cost reduction for other potential shippers, such as the region's 2,000+ farms and other businesses was not. Freight

transportation cost savings would improve the cost efficiency of all existing businesses, allowing them to be more competitive and make their products cheaper for a wider domestic or international market. The availability of low-cost rail shipping could even attract new businesses to this area.

- **Benefit to Regional Rail:** This project would enable Farmrail and its sister company Grainbelt to take on new business (i.e., the 52 weekly railcars). Because adding additional railcars to existing freight trains would lower cost-per-railcar while increasing revenues, there are two potential effects. First, Farmrail and Grainbelt would be able to lower costs for customers throughout their service area. Alternately, Farmrail and Grainbelt could use the additional profit to improve and better maintain their existing rail infrastructure, providing improved service in this generally low-income part of the state of Oklahoma.
- **Economic Development Potential:** As noted above, the project is critical in making it possible to fully exploit the region's resources and maximize economic development potential for the region. The dampening effect of limiting rail traffic to current levels, while the truck driver labor shortage and the limitations on pipeline capacity make non-rail transportation more difficult, could greatly reduce the potential number of jobs and other benefits that would be possible if the project was in place. These benefits are not just the jobs of those drilling and monitoring the wells, but the jobs at restaurants and grocery stores that will serve these new employees, the builders who would construct their homes, etc.

E. JOB-CREATION AND NEAR-TERM ECONOMIC ACTIVITY

Influence on Economically Distressed Areas

While Beckham County itself is not an Economically Distressed Area (EDA) as defined by the Public Works and Economic Development Act of 1965, the towns of Erick and Sayre are, using the 2011 Census as a guide. While the local oil boom has reduced unemployment rates over the past year, the most recent (2011) Census data indicates that per capita income in Erick is $14,043, and in Sayre is $14,765, close to half the national per capita income of $27,915. Beckham County is 11.8% Hispanic and 2.8% Native American. In addition, jobs in Beckham County draw employees from surrounding counties in Oklahoma and Texas. Of the eight counties surrounding Beckham, five are currently considered EDAs due to their low income levels.

For the Beckham County economy, one of the major benefits of this project is that it could enable Erick, like Sayre, to serve as more than just a pass-through location for oil moving from drilling rigs to refineries in other states. If rail capacity is increased as a result of this project, then expected oil production increases should drive the construction of multiple transloading facilities in the next one or two years. During both construction and operation of these transloading facilities, the local economy will experience the "indirect" effect of increased demand for supporting businesses, like restaurants, fueling stations, and hotels.

It is important to understand that the job and income figures detailed below only estimate the impact of constructing the proposed $2.6 million rail improvement project on the national economy, not the local impact. Many of the direct jobs involved with the construction will likely be done by experienced, specialized track workers from outside the county, utilizing materials, such as ties, that may be brought in from other states. The resulting indirect effects of construction will therefore be partially experienced elsewhere, as these workers spend their earnings in their home counties, with only some of the construction spending impact experienced along the Erick–Sayre corridor.

On a more positive note for Beckham County, the job and earnings figures below do not include the employment that will result from increased Farmrail operations, and from the short-term construction and well as the long-term, ongoing operation of new transloading facilities in Erick. This is what will increase area employment and drive the local demand for restaurants, fueling stations, and other service jobs that will be needed to serve the truckers stopping in Erick. These local jobs will provide great opportunities for a positive near-term and long-term impact on Erick, Beckham County, and surrounding economically-distressed counties.

The ability of this project to bring the portion of the Anadarko Basin surrounding Erick into high-volume production by providing the necessary transportation infrastructure will not only produce the effects just mentioned, it will also aid job creation by producing demand for services and goods related to the employees needed to meet the labor required by a rapidly-growing oilfield. While this impact is not fully accounted for in the tables and bar charts that follow, it would nonetheless be a real impact of the project.

There are technical schools in the area that train local residents in construction and related trades, including diesel truck repair, welding and metal fabrication. The Western

"Rehabilitation of the railway will be beneficial not only to the communities in the immediate project area, but also to all of western Oklahoma and the Texas Panhandle by providing an efficient shipment system to serve the Anadarko basin oil production areas."

— Debora Glasgow, South Western Oklahoma Development Authority Executive Director

Technology Center has locations in Sayre and nearby Burns Flat, and provides training for students as well as for employees of local businesses. This resource will be valuable in preparing local residents for jobs related to the project and the transloading facilities.

Calculation of Construction-Induced Economic Impacts for the Sayre Project

The Erick-to-Sayre project is expected to create near-term economic benefits for Beckham County, the state of Oklahoma, and other parts of the US. The calculated benefits presented in this section are based on a $2.6 million increase in construction spending in the region. These project expenditures would generate a short term increase in demand for construction-related labor and materials.

To quantify the near-term economic benefits of this project, an analysis was conducted utilizing an input-output modeling framework based on multipliers from MIG Inc., the developers of IMPLAN[4]. For this analysis, national level data was chosen. The multipliers estimate two types of impacts:

- **Direct/Indirect Impacts:** Direct impacts represent new spending, hiring, and production by civil engineering construction companies to accommodate the demand for resources in order to complete the project. Indirect impacts result from the quantity of inter-industry purchases necessary to support the increase in production from the construction industry experiencing new demand for its goods and services. All industries that produce goods and services consumed by the construction industry (e.g., rail ties) will also increase production and, if necessary, hire new workers to meet the additional demand.
- **Induced Impacts:** Induced impacts stem from the re-spending of wages earned by workers benefitting from the direct and indirect activity generated by the project. For example, if an increase in demand leads to new employment and earnings in a set of industries, workers in these industries will spend some proportion of their increased earnings at local retail shops, restaurants, and other places of commerce, which would further stimulate economic activity.

This report estimates three types of economic impacts.

- **Employment:** employment is expressed in "person years." As an example, 100 person-years of employment can translate into 50 jobs supported for 2 years or 100 jobs supported for 1 year.
- **Earnings:** All forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income.
- **Output:** Output represents the value of industry production. For manufacturers this would be sales plus/minus change in inventory. For service sectors production equals sales. For retail and wholesale trade, output equals gross margin (as opposed to gross sales).

Costs

The total capital cost of the Erick-to-Sayre project was forecast to be $2.6 million (in 2012 $). The spending schedule for the project is seen below in **Exhibit 15**.

Exhibit 15: Capital Costs for Project (2012 $ millions)

Q1 2014	Q2 2014
$3.1	$15.2

Source: Oklahoma DOT

4 implan.com/V4/Index.php

Results

A summary of the short term economic impacts are shown in **Exhibit 16**.

Assuming the grant is awarded, the project is expected to generate economic impacts for the region beginning in Q1 2014. In total, the project is projected to create 47 job-years of employment, including 19 direct/indirect job-years. **Exhibit 17** shows the number of persons directly and indirectly employed by the project per quarter.

The project will generate an estimated average of 23 direct, indirect, and induced jobs per quarter. This includes 14 direct and indirect jobs, and 9 induced jobs. **Exhibit 18** shows the profile of average quarterly employment generated by the project's expenditures.

Exhibit 19 shows the breakdown of jobs created by industry and type of impact. As expected, the civil engineering construction industry is estimated to receive the largest increase in jobs from the project (19 person-years), almost all of which are direct jobs created. The other industries that will see the largest number of jobs created include retail (5 person-years) professional services (4 person-years), health care and social services (3 person-years), manufacturing (2 person-years), and administrative services (2 person-years).

Exhibit 16: Summary of Near-Term Economic Impacts

Direct + Indirect Impacts	
Employment (Quarterly Average)	14
Earnings (2012 $)	$1,621,758
Output (2012 $)	$4,618,614
Induced Impacts	
Employment (Quarterly Average)	9
Earnings (2012 $)	$901,714
Output (2012 $)	$2,715,709
Total Impacts	
Employment (Quarterly Average)	23
Earnings (2012 $)	$2,523,472
Output (2012 $)	$7,334,323

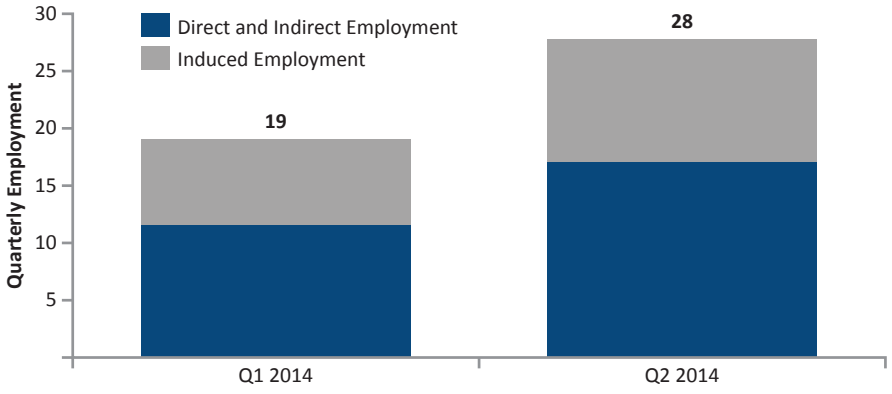
Source: Parsons Brinckerhoff, 2013

Exhibit 17: Direct and Indirect Jobs by Quarter

	Q1 2014	2014 Q2
Direct and Indirect Jobs	12	17
Induced Jobs	7	11
Total Jobs	**19**	**28**

Source: Parsons Brinckerhoff, 2013

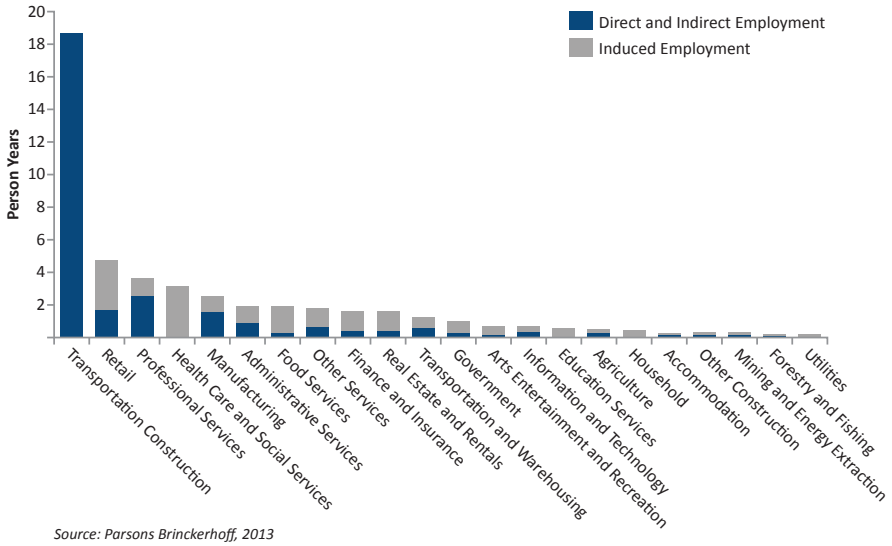
Exhibit 18: Quarterly Employment per Quarter during Construction



Source: Parsons Brinckerhoff, 2013

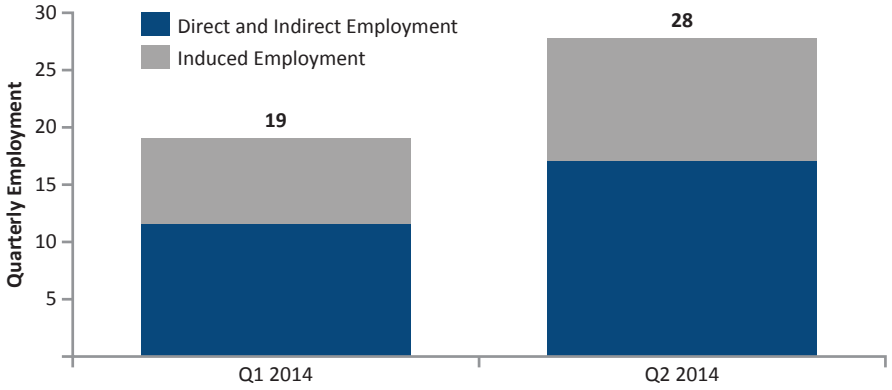
The amount of short-term economic activity generated by the project is shown in **Exhibit 20**. In total, the project would generate $7.3 million in real economic output (measured in 2012 dollars), with $3.0 million dollars of economic output generated in Q1 2014, and $4.3 million generated in Q2 2014. As noted above, these job, earnings, and output estimates do not include any benefits resulting from the construction or operation of the transloading facilities that will be constructed along the industrial siding in Erick, nor the increase in Farmrail operations, nor the potential impact to the regional economy from lowering shipping costs. These figures only show the impact of the project's construction.

Exhibit 19: Breakdown of Job Creation by Industry and Type of Impact



Source: Parsons Brinckerhoff, 2013

Exhibit 20: Breakdown of Economic Output Generated by Quarter



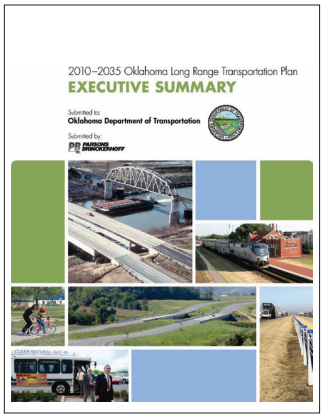
Source: Parsons Brinckerhoff, 2013

V. PLANNING APPROVALS, NEPA AND OTHER ENVIRONMENTAL REVIEWS/APPROVALS

Since the project construction (a) falls within an existing state-owned corridor, (b) is consistent with existing zoning, and (c) no significant noise impacts will occur, an automatic categorical exclusion can be issued for the environmental documentation as written in CFR 23, Subchapter H, Parts 771.117 (c)18 and (d)11.

No legislative action is necessary to proceed with this freight rail project in western Oklahoma. The project is consistent with the 2035 Long Range Transportation Plan (**Exhibit 21**), and with the Oklahoma State Rail Plan which was submitted to the Federal Railroad Administration in May 2012. The project is not included in the State Transportation Improvement Program because it is not fully funded. However, as soon as ODOT receives notice of TIGER grant funds, the STIP will be amended to include the project.

Exhibit 21: The Project is Consistent with the 2035 Oklahoma Long Range Transportation Plan



VI. FEDERAL WAGE RATE CERTIFICATION

OKLAHOMA DEPARTMENT OF TRANSPORTATION

As required in the Notice of Funding Availability for the Department of Transportation's National Infrastructure Investments (TIGER FY 2013) Under the Full Year Continuing Appropriations, 2013, as printed in the Federal Register, Volume 78, Number 81, Friday, April 26, 2013: The Oklahoma Department of Transportation states and assures that it will comply with the requirements of Subchapter IV of Chapter 31 of Title 40 United State Code, the federal wage requirements.

Mike Patterson, Executive Director
Oklahoma Department of Transportation

5/29/13

Date

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